DBA thesis

Using a research-based approach to improve organisational performance in Knowledge Exchange: an appreciative inquiry

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Using a research-based approach to improve organisational performance in Knowledge Exchange: an Appreciative Inquiry

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Dedication

This thesis is first dedicated to: my family and friends for their understanding and support for the time I needed to complete this project; my canine office companions Romeo and Cassie; and mostly to my wife Suzie. Thank you for your support, patience, proof-reading, and reminders that "in this house we Oxford comma".

Executive summary

The purpose of this research project was to enhance organisational performance in Knowledge Exchange, through a cultural change to a UK Higher Education Institution; the University of West London (UWL). Arising from being both a work-based project intended to have a transformative effect on the organisation and doctoral level research, an Action Research (AR) approach was taken to integrate the business and research aims. The research was designed to address four challenges identified from literature, by: building on and with the prevailing UWL culture; taking a collaborative approach to embed cultural change; harnessing individual academic autonomy and choice; and including appropriate measures to understand causal links between culture change, entrepreneurial orientation, and performance. These four challenges were addressed through using Appreciative Inquiry (AI) as the form of AR. Phase One of the research identified ways in which UWL could increase its entrepreneurial orientation and encourage academic staff to engage with Knowledge Exchange (KE). Phase Two focussed on delivery of activities linked to four priority themes that arose from the Phase One research: KE Strategy, KE Support, KE Recognition, and KE Reward. This approach built on the prevailing culture by drawing appreciative views of what was working within UWL. Using Appreciative Inquiry meant the approach taken was deliberately collaborative, and activities sought to identify approaches to building and harnessing individual academic autonomy and choice, as well as providing a vehicle for engagement. To enhance evaluation, a collaboratively-developed set of measures were articulated within a theory-of-change framework, to capture and evaluate the outputs, outcomes, and any consequential direct and indirect impacts on UWL performance. Based on a review of whether the project met its business, research, and integrative aims, conclusions and reflections have produced recommendations for both research and UWL practice.

The project generated new understanding that could contribute to the body of knowledge, such as: the relatively novel application of a theory-of-change to enhance Appreciative Inquiry; understanding of practicing AR online; using the Culture web model as a tool for measurement of change; understanding HEI performance, and in particular establishing a set of performance metrics for KE; and that KE could be a basis for competitive comparison in the HE-sector. The research also reinforced previous findings, such as: the criticism of AI being very design-focussed; recognising the role of academic autonomy in order to facilitate engagement in KE; the challenges of evidencing a link between entrepreneurial orientation and performance; and that the entrepreneurial orientation model was descriptive rather than predictive. A key outcome of this project was that it directly led to both development of new ways of managing and measuring KE at UWL. While there were improvements both in terms of historic UWL performance and compared to the HE-sector, this was not clearly driven by this project. However, this research surfaced evidence that an entrepreneurial orientation sat behind this performance. Some limited evidence was found of an increase in the importance of KE, alongside the traditional cultural importance of Enterprise. The act of explicitly measuring KE performance was mainstreamed within UWL's KE Strategy and associated KPIs, an approach which came directly from this project. Additionally, much of the KE Strategy's Implementation Plan arose from this research. Over the timespan of this project KE became increasingly *recognised* as being of importance, albeit not yet *prioritised* within UWL culture. Therefore, importantly, there remained *potential* for longer-term impact to arise from this project.

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Acronyms and initialisms

ACRONYM OR INITIALISM	DEFINITION
AI	Appreciative Inquiry
AILT	Appreciative Inquiry Learning Team
AR	Action Research
AT	Advisory Team
BNU	Buckinghamshire New University
CNMH	College of Nursing Midwifery & Healthcare (UWL academic department)
CGI	Core Group Inquiry
CPD	Continuing Professional Development
CPD/CE	Continuing Professional Development/ Continuing Education
DLHE	Destination of Leavers of HE Survey
DVC	Deputy Vice Chancellor
EHE	Enterprise in Higher Education
EO	Entrepreneurial orientation
EU	European Union
FMD	Film, Media and Design (UWL academic department)
FTE	Full Time Equivalent
GPA	Grade point average
HE	Higher Education
HE-BCIs	Higher Education Business and Community Interaction survey
HEI	Higher Education Institution
HEFCE	Higher Education Funding Council for England
HEIF	Higher Education Innovation Fund
HESA	Higher Education Statistics Agency
IP	Intellectual Property
KE	Knowledge Exchange
KEC	Knowledge Exchange Concordat
KEF	Knowledge Exchange Framework
KEF2	The second iteration of KEF, published in 2022
KPI	Key Performance Indicators
LCM	London College of Music (UWL academic department)
NCCPE	National Co-ordinating Centre for Public Engagement
OD	Organisational development
OECD	Organisation for Economic Co-operation and Development
NSS	National Student Survey
OfS	Office for Students
PAIM	Progressive AI meeting
PAR	Participatory Action Research
PI	Principal Investigator
R&D	Research and Development

RAE	Research Assessment Exercise
RE	Research England
REF	Research Excellence Framework
REOps	Research and Enterprise Operations Department
STEM	Science, Technology, Engineering and Maths
ToC	Theory-of -change
ToR	Terms of Reference
TEF	Teaching Excellence Framework
TTOs	Technology Transfer Offices
TVU	Thames Valley University
UEL	University of East London
UIC	University-Industry Collaboration
UK	United Kingdom
UoA	Unit of assessment (for REF)
URSEC	University Research, Scholarship and Enterprise Committee
URKEC	University Research and Knowledge Exchange Committee
US	United States
UWL	University of West London
VC	Vice Chancellor
VCE	Vice Chancellor's Executive
WQI	Weighted Qualifying Income (for HEIF)

Definitions

TERM	DEFINITION
Organisation	A commercial (business, partnership, sole trader etc.), public sector, charity, or third sector body
The organisation	The University of West London
KE	**Office for Student (OfS):** Knowledge exchange is a process that brings together academic staff, users of research and wider groups and communities to exchange ideas, evidence and expertise (https://www.officeforstudents.org.uk/advice-and-guidance/skills-and-employment/knowledge-exchange/?msclkid=95a9502ab4ee11ecb687b4523e4521be) (accessed 21/4/22) **Research England:** universities and other Higher Education Institutions (HEI's) exchanging knowledge with the wider world, in a way that contributes to society and the economy. (https://www.ukri.org/wp-content/uploads/2022/04/RE-040422-KEReviewStakeholdersEngagementAndEvidence.pdf) (accessed 21/4/22) **The Higher Education and Research Act 2017**, section 93 (4) also provides a definition of Knowledge Exchange: "*For the purposes of this Part, "knowledge exchange", in relation to science, technology, humanities or new ideas, means a process or other activity by which knowledge is exchanged where— (a) the knowledge is in, or in connection with, science, technology, humanities or new ideas (as the case may be), and (b) the exchange contributes, or is likely to contribute, (whether directly or indirectly) to an economic or social benefit in the United Kingdom or elsewhere.*"

1 Research purpose and overview

1.1 Purpose

The purpose of this research project was to develop and evaluate an approach to enhancing organisational performance, through a KE focussed-cultural change to a UK Higher Education Institution (HEI). This research project had aims and objectives, arising from the fact that this was both a work-based project intended to have a transformative effect on the organisation, and that this was also the basis of doctoral level research for which I would be Principal Investigator (PI). This duality is articulated in this thesis as being a business project *and* a research project conducted within the framework of a doctoral research programme with its own specific requirements.

The aim of the transformative business project was to enhance business performance, through seeking to take a more entrepreneurial orientation. To achieve this aim, there were three objectives for the business project. First, to design and implement a set of managerial interventions that enhanced Knowledge Exchange (KE) visibility, mission, policy, and practice. Second, to attempt to foster a culture that supported broader engagement with KE activities. Third, to measure key outcomes and outputs to identify any links to performance improvement within a Higher Education (HE) sector context.

The aim of the research project was to explore cultural change as a means of delivering business improvement. There were three objectives of the research project. First, to critically test and evaluate whether an enhanced culture of engagement with KE (an increased entrepreneurial orientation) could drive business performance in a complex competitive environment such as the HE-sector, where academic autonomy and collegiality were key cultural values. Second, to investigate cultural change in the context of university culture and specific organisational culture. Third, to generate new knowledge on a change to an aspect of professional practice and performance in the HE-sector.

Arising from the duality of aims, and my role within the organisation and research project, was a need to find an integrated approach to meet both business and research aims and objectives. This third integrative aim would allow for clarity and remove scope for confusion or conflict. The objective, therefore, was to review methodological approaches and design a project that used a research approach to deliver organisational change.

1.2 Thesis structure

This thesis begins in Chapter 2 with an exploration of the three layers context for this research project: personal, organisation, and sector. All three of these contexts were complex, and changed over the lifespan of the research. My role and career promotion with UWL were both an expression of the increasing importance of Enterprise and commercial activities, as well as a deliberate strategy to grow this activity. From an organisational perspective, the University of West London (UWL) had diversified from focussing mainly on teaching to developing a culture with more engagement with Enterprise, which was culturally associated with generating income. At a sector level there was a growing focus on the role of HEIs in economic and social development, known in the sector as Knowledge Exchange (KE). At the same time as my role became more important to meet institutional goals on income and

surplus generation, this greater sector level focus on KE provided a context for this project to improve organisational performance in KE.

The third chapter builds on this context and planned approach to enhancing organisational performance, by more precisely defining the aims and objectives of this project. In this chapter I introduce six main areas of discussion on: the nature of competition and specifically competition between HEIs; the nature of KE and if it can be a basis for competition between HEIs; the relevance of the entrepreneurial orientation (EO) model for enhancing performance in the HE-sector; organisational culture as the key variable to change; how to effect change, and cultural change; and how to measure change. In Chapter 4 I explore a range of literature that underpins investigating these questions, and how they raised specific design parameters that needed to be considered in the research methods for this project. First, that any change would need to build on and *with* the prevailing culture. Second, any change needed to be embedded by ensuring stakeholder engagement, a collaborative approach, and the development of a shared language and dialogue. Third, the role of the individual academic as an autonomous professional, with *choice* to engage in KE, had to be central. Finally, the project needed to include appropriate measures to understand, within a conceptual theory-of-change, the intended outcomes, outputs and the causal links between culture change, entrepreneurial orientation, and ultimate organisational performance improvement.

In Chapter 5 a range of different approaches to research are reviewed, and Action Research (AR) selected as the most appropriate methodology. Appreciative Inquiry (AI) was then chosen as the most suitable form of AR to conduct the research. Translating this approach into a research method to deliver the project is the focus of Chapter 6, highlighting the need to ensure: the method was valid; that ethical and organisational issues were addressed; that the potential challenges inherent in both AR, and the specific AI form, were mitigated; and the design addressed the four design parameters identified in Chapter 4: building on and *with* the prevailing UWL culture; taking a collaborative approach to create and embed cultural change; harnessing individual academic autonomy and choice; and including appropriate measures to understand causal links between culture change, entrepreneurial orientation and ultimate organisational performance improvement.

In Chapter 7 the first Phase of this research project is described. In Phase One the plan to deliver the research project was launched and was organised around *defining* the project, followed by *discover, dream, design,* and *deliver* stages of the AI form of AR. A cycle of AI was implemented that explored what was affirmative about KE practice at UWL. While Phase One of the project was planned and structured around the AI model, Phase Two was were deliberately allowed to emerge from the priority themes arising from the research undertaken in Phase One. In Chapter 8 I explore how Phase Two focussed on the four priority themes of *KE Strategy*, *KE Support*, *KE Recognition* and *KE Reward* which were identified in Phase One. In Chapter 9 I address one of the criticisms of AI: that it lacks a clear approach to evaluation. This chapter starts to address this deficiency by describing the approach to evaluation within this project: articulated through outcome measurement against the project theory-of-change.

In Chapter 10 three key area are explored: if the project outputs were delivered; whether the output and activity of the project lead to the planned outcomes; and cumulatively, if this then led to any performance improvement, including performance improvement compared to other HEIs. Finally, in Chapter 11, I build on the evaluation in Chapter 10 and review of whether the project met its combined

business and research aims. Conclusions and reflections are discussed, considering any limitations of the research. Finally, potential future directions for both research and UWL practice are presented.

1.3   Personal development

As a formal requirement of the doctoral study programme, Chapter 11 also covers my personal development during the research project. This was developed as part of reflection on the project. This reflection on my personal development over the project are both in terms of career progression but also, more importantly, how the process of undertaking this research developed and expanded my own managerial practice.

2 Project context

This research was set within three layers of context: personal, organisational, and sectoral. These contexts were complex and changed over the lifespan of the research. As evolving forces, they informed the identification of KE as a potential focus for improving organisational performance. Each context is explored in turn below.

2.1 Personal context

The original purpose of this research was personal: undertaking a doctoral qualification to achieve my career aspirations. I recognised that my own personal context cannot be ignored in qualitative research, and in particular in researcher-practitioner research, such as this project (Breen, 2007). My position as a senior manager, particularly with responsibility for Enterprise, was therefore an important context for this research. My role and responsibilities significantly expanded since originally taking up a faculty-based post at UWL in 2012, as well as during this research project. My career development took me from a senior role in an Academic department to a central management role, to centrally drive and grow Enterprise across the University. This success provided a backdrop to this project. Figure 1 below shows the growth of Enterprise income at UWL, and its proportion of total income, with key milestones. My role and promotion with UWL were both an expression of the increasing importance of Enterprise and commercial activities, as well as a deliberate strategy to grow this activity. In a sense, *driving* culture change, and an expression of the *start and progression* of that culture change. On this basis it seemed most sensible to focus any research on further developing and growing this area of activity: commonly referred to as *Enterprise* at UWL.
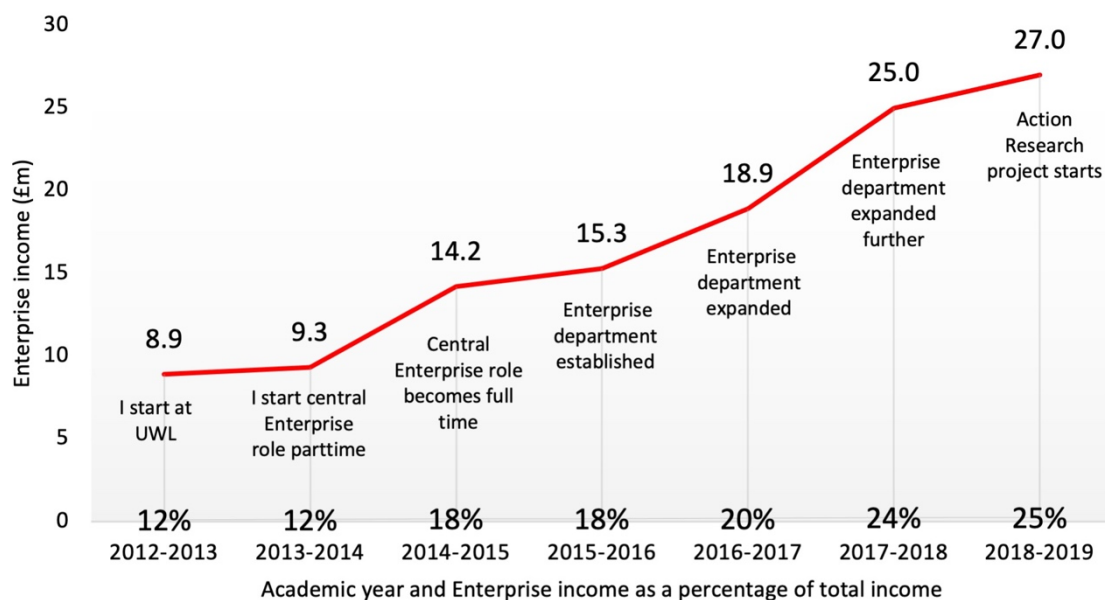
Figure 1: Income growth at UWL and my role

2.2 Organisational context

To understand the range of activity UWL defined as *Enterprise*, it is important to understand the context and history of the institution. The University of West London received its Degree Awarding powers on 26th April 1993[1] from the Privy Council, under its original name of Thames Valley University (TVU). It struggled to operate in a financially sustainable way, and following a successful turnaround campaign, was granted permission by the Privy Council to change its name to The University of West London (UWL)[2] in 2015. This reflected a geographical re-focus on West London, with UWL having de-merged from Reading College and closed its Slough campus: leaving main sites in Ealing and Brentford in West London. Alongside was a refocussing on teaching and the student learning experience as the prime mission, and a strategic focus on bringing the organisations budgets from an annual deficit to an annual surplus. This involved significant cost-reduction, including much of the infrastructure around Enterprise being removed because it was not central to the core student-focused mission. Activities that remained were generally linked to students (placement, internship etc) under a banner of 'Enterprise and Employer Engagement'. However, there remained a need to generate income beyond student fees.

Budget-setting processes resulted in aspirational income targets, with any shortfall between desired turnover and the likely reality of student recruitment (and therefore fee income) set as the Enterprise target. Arising from this, UWL's definition of Enterprise had historically been a synonym for the *income* generated by non-teaching activities, rather than an *activity* itself. While a relatively small percentage of turnover this was easy to side-line as a non-core activity. However, changes to the fee regime (resulting in a slight net reduction on fee income), controls over the number of students HEIs could recruit, and the removal of capital grants (meaning HEIs would need to self-finance capital projects), put a higher priority on generating other revenue. UWL recognised a need to significantly invest into an ageing estate to maintain attractiveness to students, and therefore there was a financial imperative to generate more income and to deliver an annual surplus. The renovation of the Ealing campus (at a cost of around £52m), the purchase of previously leased property in Brentford (for around £50m), and organisational KPIs of surplus generation (10%), meant that Enterprise moved from representing an aspirational, budget-balancing, non-core activity to a significant area of activity and performance. Figure 1 above shows this development and growth in Enterprise income over the five years preceding this research project.

A clearer strategic focus on developing Enterprise activity, as part of organisational financial performance, meant that prior to this research it had grown from 12% of turnover in the 2012-2013 year to 24% in 2017-2018. Enterprise was increasingly seen as the main potential source for meeting ambitious income growth targets. Over this period Enterprise also became more prominent in the updated University strategic plan (Achievement 2023) compared to the previous plan (Ambition

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[1] A copy of the Order of the Privy Council is available at https://www.uwl.ac.uk/sites/default/files/Departments/About-us/Web/PDF/statute.pdf (accessed 13/9/19)

[2] A copy of the Order of the Privy Council made on 10th June 2015 is available at https://www.uwl.ac.uk/sites/default/files/Departments/Aboutus/Web/PDF/Privy%20Council%20Order%2010th%20June%202015.pdf (accessed 13/9/19)

2018). This can be seen as both an expression of, and consequence of, the beginnings of a shift in culture away from '*teaching-only*'. The change in language in published strategic plans was evidence of a broader 'buy-in' from key organisational leaders, and to the positioning of Enterprise as a key part of understanding UWL's performance. It reflected an emerging change in the culture: moving from being almost solely focused on teaching and the student experience, to one which starting to take a broader more entrepreneurial approach. Whilst the process of change had started, the organisational culture remained predominately teaching-focused.
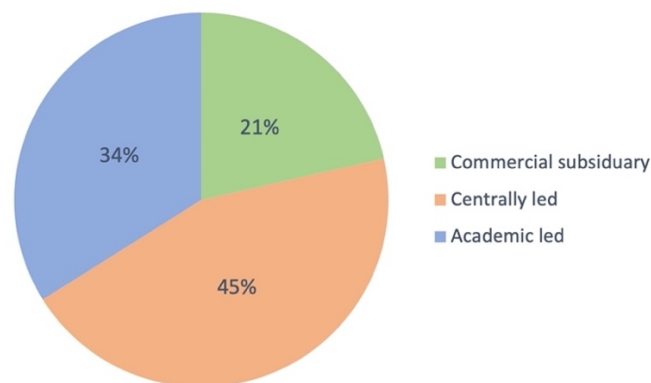
Figure 2: Sources of Enterprise income prior to project (2017-2018 financial year)

A key focus of Enterprise strategy was driving growth centrally, and whilst this was successful, it meant a narrow exposure of academic staff to Enterprise. An analysis of income generated prior to this project (see Figure 2) shows the proportions of income generated by the University's commercial subsidiary company, through centrally led activity, and by academically led activity. While still significant, the level of income generated by individual academics was below that generated through centrally managed activities. Centrally driven activity was successful in raising Higher Education Business and Community Interaction survey (HE-BCIs) reported income to the point Higher Education Innovation Fund (HEIF) funding returned (with growth in funds year-on-year in the years prior to this research project[3]). The growth of Enterprise activity and income indicated some momentum on organisational cultural change was already underway prior to this project, but changes in senior leadership perception had not cascaded down, as the numbers of academic staff involved in Enterprise activities remained in the minority (estimated at around 18% of staff in the 2017-2018 academic year). Accelerating and increasing the growing Enterprise culture needed broader engagement. 'Enterprise as income' remained a predominant paradigm, which potentially created barriers to academic engagement, through the lack of general interest or motivation of academics purely to generating income (Rae, Gee and Moon, 2009). As an organisationally-driven approach, this itself was a barrier to engagement of academics: as a perceived threat to academic autonomy and as a change away from a traditional teaching/research identity of academia (Reichenfeld, 2011). As a managerial approach it also gave rise to potential academic resistance (Anderson, 2008; Bristow *et al*., 2017; Jones, 2021; Siltaloppi *et al*., 2019). This further highlighted that a *different,* more engaging, approach to growing

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[3] UWL ceased receiving main HEIF funds in 2017-2018 following phased reductions.

Enterprise was needed. A sector-wide development of a clearer definition of Knowledge Exchange (KE), and its importance, raised the potential for this to be focus for this research.

2.3 Sector context

The UK HE-sector has traditionally followed a dualistic view of organisational focus: research or teaching. While there is significant acknowledgement of the interplay between research and teaching (Kaplan, 1989; Middlehurst, 2014; Skelton, 2013) this dualistic view was too simplistic. Teaching-focussed institutions research, and research-intensive institutions teach. The difference is the relative value that is ascribed to each, the market positioning, and the framing of organisational strategy; a teaching-focussed HEI might highlight the primacy of the student experience, while a research-intensive HEI may highlight generation of cutting-edge knowledge. This dualism also translated into how academics may see themselves: as teachers or researchers (Skelton, 2013). However, this view of the sector does not align with the development of governmental thinking on the role of the HE-sector.

From a UK government policy perspective, there has been a shift to seeing the role of universities as driving economic development (Middlehurst, 2014); changing from being a social good (generation of knowledge, and education) to an economic good (generation of commercially exploitable knowledge and development of higher-level skills). This shift in perceived purpose has been expressed in numerous policy documents and ultimately in statute; the Higher Education and Research Act 2017. This Act placed employability and employment outcomes as a key metric and performance indicator, aligning what is taught in universities with the skills and knowledge that employers and the economy need. Further, it set the purpose of research to be a driver for the UK economy, directing UK research funding bodies to support the "*development and exploitation of science, technology, new ideas and advancements in humanities*" and 'exploiting' Knowledge Exchange where it "*contributes, or is likely to contribute, (whether directly or indirectly) to an economic or social benefit in the United Kingdom or elsewhere*" (UK Parliament, 2017). This position built on twenty years of Government reports and policy[4].

This focus on economic-impact has been expressed in many ways within the HE-sector: Academic Engagement; Third Stream Activity; Enterprise; Technology Transfer; or Knowledge Transfer. At the start of this research, this had evolved to a broader term: Knowledge Exchange (KE), defined as:

> "*A process or other activity by which knowledge is exchanged where—(a) the knowledge is in, or in connection with, science, technology, humanities or new ideas (as the case may be), and (b) the exchange contributes, or is likely to contribute, (whether directly or indirectly) to an economic or social benefit in the United Kingdom or elsewhere.*" (UK Parliament, 2017).

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[4] Examples of Government documents in which the change in perceived purpose of HEIs is demonstrated over 20 years include: The Dearing Report (Dearing, 1997); The Lambert Review (Lambert, 2003) , The Browne Review (Browne, 2010); The Wilson Review (Wilson, 2012); The Witty Review (Witty, 2013), and more recently the UK Industrial Strategy (https://www.gov.uk/government/topical-events/the-uks-industrial-strategy) (accessed 13/9/19) and University Enterprise Zones Pilot Evaluation (Department for Business, 2015).

This definition of Knowledge Exchange focused on the centrality of universities and collaboration with industry as a driver of economic growth (Rajalo and Vadi, 2017), and recognised the strategic role HEIs could play (Hughes and Kitson, 2012). Reflecting this, Research England implemented a policy of determining HEIs' performance in their impact on economy and society through the development of a Knowledge Exchange Framework (Research England, 2021). Research England built on evidence that investment in this area through the Higher Education Innovation Fund had positive impact (Coates Ulrichsen, 2014). This sought to recognise the variance in the ways in which UK HEIs interact and influence economy and society, and therefore proposed an approach which compared each HEI to a subset of other HEIs with which they had some common characteristics (Coates Ulrichsen, 2018). The intention was: to provide a better evidence-base for the use of KE funds; to demonstrate the impact of HEIs; to give better tools for HEIs to plan and manage performance; and to give business tools to understand how they can engage (Research England, 2019).

From a sector perspective, growth in KE funding came at the same time as several forces came into play that undermined traditional student-related sources of income. First was the decline in the traditional market for HE through a demographic change[5] meaning competition for students (and associated income) became more intense. Government policy relating to control of UK borders and a desire to reduce immigration impacted on the recruitment of international students. The so-called hostile environment[6] made getting a visa more difficult, reduced the attractiveness of the UK as a destination for international students, and placed significant burdens on HEIs to maintain their ability to issue student visas. This resulted in a significant decline in international student visas being issued (from over 220,000 in 2009 to below 140,00 in 2017[7]). Furthermore, at the start of this research there was growing uncertainty over the stability of the student-loan based funding model and pressure to reduce funding, culminating in a report recommending significant reductions and rebalancing of funding from Higher Education to Further Education[8]. With the removal of capital funding as part of funding reform, universities needed to go to financial markets to secure investment for capital projects. This required both space in budgets to make repayments and sustainable finances to make HEIs investable, which teaching activity would not be able to support on its own. Research funding, while significant, was also put under pressure through the competitive nature of grants, uncertainty over access to European Union (EU) funds post-Brexit, and relatively low margins on research activity. The pressure to develop additional income through a 'third' mission increased, providing a key sector-wide context for this research project.

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[5] According to statistics published by the ONS (August 2019) the UK had a reduced number of 18 years old year on year until 2020 when the number of 18-years old was expected to start to rise year-on year (source: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/overviewoftheukpopulation/august2019) (accessed 13/9/19)

[6] Home Secretary, Theresa May, stated 'The aim is to create here in Britain a really hostile environment for illegal migration'.

[7] Source Home Office quarterly migration statistics, from the report from the Migration Advisory Committee on the *Impact of international students in the UK*, published September 2018.

[8] The Augur report: The Independent panel report to the Review of Post-18 Education and Funding, published in May 2019, panel chaired by Dr Philip Augur.

A further sector level context was the tension between generating and diversifying income, and the role of academic autonomy. This dichotomy set increased managerialism in the sector in opposition to traditional views on academic freedom. Paradoxically, academics as autonomous and highly skilled professionals (Perkmann *et al.,* 2013; Thune *et al.,* 2016) needed to *choose* to engage in KE for it to succeed. Resistance to managerialism (Anderson, 2008; Bristow *et al.*, 2017; Jones, 2021; Siltaloppi *et al.*, 2019) was also a sector-wide context to the research project. At the heart of KE is the knowledge and expertise of individual academics, and a way of them using this to generate social or economic benefits. While many of the ways KE was measured were based on the consequential income, as an *activity* KE presented a potential route to engage academics in this area that was not wholly income-driven. As such this reinforced, at a sector-wide level, why KE would be a useful focus for this research.

2.4   Covid-19 context

A further context was the Covid-19 pandemic, which arose after the first Phase of research. This created rapid change to economic environment, ability to engage with businesses, and changes to ways of working driven by social-distancing laws. This resulted in changes to the way the project was conducted, and as an unprecedented period of history undoubtably influenced what could be concluded from the research. The impact of this challenging environmental context is explored in the discussion of Phase Two of the research, and in the project reflections and conclusions.

2.5   Context conclusion

At the same time as my role increased in importance, as a focus for meeting institutional goals on income and surplus generation, there was a greater sector level focus on KE. The alignment of personal, organisational, and sectoral contexts and influences precipitated the creation of this project. As will be explored further in this thesis, a key challenge for this research was evolution and change in on both context and the environment within which is it was conducted. This created both opportunities and challenges to a research project with a proposed focus on increasing organisational performance through finding ways to make UWL more entrepreneurial and increase its KE activity.

3   Research project definition

In Chapter 2, I explored the three levels of context (sector, organisational and individual) for the project and introduced a specific approach to enhancing organisational performance: an increased focus on Knowledge Exchange. In this chapter I build on this context by more precisely defining the aims and objectives of this project. First, what organisational performance for HEIs means is explored, and then more specifically what *aspects* of performance could be improved by a focus on Knowledge Exchange. Second, a model for understanding how an organisational orientation toward entrepreneurship could affect performance is introduced. Third, this leads to expressing the relationships between the project, organisational change, and ultimate performance enhancement as a conceptual theory-of-change. Finally, this chapter concludes with a definition of the project aims and objectives.

3.1   Performance in the HE-sector

An increased requirement from governments for HEIs to be responsive to national needs meant increased focus on their performance (Alexander, 2000). Public funding for HE raised the need for the sector to generate social benefit and required public scrutiny (Alexander, 2000; Taylor and Baines, 2012). However, no single clear metric of performance existed (Johnes and Virmani, 2020). Early attempts at defining performance, from a UK Government perspective, arose from the 1997 National Committee of Inquiry into Higher Education (the Dearing Committee), which recommended introducing a common approach to measuring HEI performance (Draper and Gittoes, 2004). The Dearing report (Dearing, 1997) recommended monitoring key areas of performance: widening participation and broadening access to higher education from across society, particularly from under-represented groups; efficiency, identified through outcomes for learners; and research output (Breakwell and Tytherleigh, 2010; Draper and Gittoes, 2004; Watson, 2002). These, primarily student focused metrics, formed the original benchmarks introduced by Higher Education Funding Council for England (HEFCE) in 1999 (Breakwell and Tytherleigh, 2010) and were later updated to include progression (Draper and Gittoes, 2004); how well students progress through and complete their studies. These stabilised as core annual performance metrics for HEIs (Higher Education Statistics Agency, 2021): widening participation, non-continuation, and employment of leavers. Research output was periodically assessed through the Research Assessment Exercise (RAE) and more lately the Research Excellence Framework (REF) (Breakwell and Tytherleigh, 2010; Broad and Goddard, 2010; Taylor and Baines, 2012).

However, as a means of understanding organisational performance these metrics took a relatively narrow focus, given the breadth of activity of HEIs. Over time, several other dimensions of performance have been introduced by governments, particularly related to national need (Alexander, 2000). Examples include carbon commitments (Breakwell and Tytherleigh, 2010); impact on the performance of the economy (Watson, 2002); or efficiency (Watson, 2002). Specific metrics on Knowledge Exchange were implemented by the Higher Education Funding Council for England (HEFCE) through HE-BCIs, which was continued by one of its successor bodies: Research England. The HE-BCI

survey had been running since 1999[9] and from 2020 fed into the new Knowledge Exchange Framework. The creation of the Office for Students (OfS) as the new HEI regulator also placed greater emphasis on financial sustainability and teaching quality of HEIs[10].

Performance of HEIs can also be looked at in terms of their internal metrics, alongside those imposed from government and regulatory bodies. An example are the metrics used to determine Vice Chancellors' performance, which indicated that recruitment and remuneration decisions by Governors was frequently based on delivery of organisational key performance indicators (KPIs) (Breakwell and Tytherleigh, 2010). Typical KPIs included: performance in the National Study Survey (NSS); position in rankings produced by the media; total income; research income; entry levels; student numbers; staff numbers; and cost (Breakwell and Tytherleigh, 2010; Johnes and Virmani, 2020). The introduction of other approaches to measuring performance in HEIs, such as use of the Balance Scorecard, European Foundation for Quality Management Framework, or aggregated KPIs and Dashboards (Taylor and Baines, 2012) generally sought to balance good financial management and furthering the organisation's mission (Johnes and Virmani, 2020). These types of approach have created significant numbers of KPIs in Universities; in a relatively small study of HEI's approach to the Balanced Score Card, Taylor and Baines (2012) found KPIs ranged from 32 to 69 different metrics. This has been argued as more concerned with *measuring* rather than *managing* performance (Broad and Goddard, 2010), but in terms of this proposed research it highlighted the need to be more specific about which aspects of performance the project could impact.

The various aspects of HEI performance can be collated into three broad categories: two suggested by Johnes and Virmani (2020), *good financial management* and *furthering the institution's mission*, plus *response to national need* (Alexander, 2000; Watson, 2002). Table 1 draws from the literature to identify the range of HEI performance areas, creating a typology of aspects of HEIs performance across these three broad categories. Further, Table 1 indicates which aspects of performance were *likely* to be impacted by the project. When UWL's own KPIs were mapped into this typology, it allowed for a more nuanced view of *specific* organisational performance for UWL. This was further expanded by looking at metrics of performance that arose from my personal interest and role, for example HE-BCIs qualifying income; level of HEIF funding, Enterprise income and apprenticeship numbers. Appendix 1 draws these together into a detailed matrix of metrics of UWL performance based on this typology, including: measures from the UK Government; UWL's internal measures from corporate strategy KPIs and other key organisational targets; and measures relating to my role, targets, and performance objectives. This detailed matrix allowed for a review of what performance aspects the proposed project might influence.

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[9] Further details on HE-BCIs is provided by Research England at https://re.ukri.org/knowledge-exchange/the-he-bci-survey/ (accessed 17/1/21)

[10] Explicit regulatory conditions were introduced by OfS for HEI registration that included: Part B - Quality, reliable standards and positive outcomes for students; and Part D – Financial sustainability https://www.officeforstudents.org.uk/advice-and-guidance/regulation/conditions-of-registration/initial-and-general-ongoing-conditions-of-registration/ (accessed 17/1/21)

PERFORMANCE DIMENSION	PERFORMANCE ASPECT	SOURCE
Good financial management (Johnes and Virmani, 2020)	Income generation	(Breakwell and Tytherleigh, 2010; Johnes and Virmani, 2020)
	Research income	(Breakwell and Tytherleigh, 2010; Johnes and Virmani, 2020); REF
	Cost effectiveness	(Alexander, 2000)
	Working surplus	(Taylor and Baines, 2012)
	Reserves	(Taylor and Baines, 2012)
Furthering the institutional mission (Johnes and Virmani, 2020)	Teaching quality	(Alexander, 2000; Johnes and Virmani, 2020)
	NSS/student Satisfaction	(Breakwell and Tytherleigh, 2010; Broad and Goddard, 2010)
	Widening participation/access	(Alexander, 2000; Watson, 2002; Draper and Gittoes, 2004; Breakwell and Tytherleigh, 2010)
	Entry standards	(Breakwell and Tytherleigh, 2010)
	Teaching output, progression and completion	(Alexander, 2000; Draper and Gittoes, 2004; Breakwell and Tytherleigh, 2010)
	Student numbers	(Taylor and Baines, 2012; Johnes and Virmani, 2020)
	Graduate outcomes (employability)	(Breakwell and Tytherleigh, 2010; Taylor and Baines, 2012)
	Research quality and output	(Alexander, 2000; Draper and Gittoes, 2004; Breakwell and Tytherleigh, 2010; Broad and Goddard, 2010; Taylor and Baines, 2012; Johnes and Virmani, 2020)
	Rankings performance	(Breakwell and Tytherleigh, 2010; Johnes and Virmani, 2020)
	Internationalisation	(Taylor and Baines, 2012)
Response to national need (Alexander, 2000; Watson, 2002)	Economic growth	UK Industrial Strategy; HE-BCIs; KEF
	Research and Development (R&D) investment	UK Industrial Strategy; HE-BCIs; KEF
	Carbon reduction	(Breakwell and Tytherleigh, 2010)

Table 1: HEI performance areas

Table 2 shows the aspects of performance that could be influenced by this project, either directly or indirectly. Narrowing down to *specific* impacts to be targeted by the project needed to be established as a key part of the project. However, conceptually, increasing engagement with Knowledge Exchange could potentially have a positive impact on performance in five aspects of this typology through a direct effect, and on a further four aspects indirectly. This performance impact could be expected in all three dimensions: *good financial management*; *furthering the institutions mission*; and *response to national need*. Where aspects of performance could be indirectly affected by the project the potential metrics from Appendix 1 have been included for clarity. Other metrics were excluded as they were unlikely be affected by KE activities, such as purely student-based metrics, or rankings (which did not use KE data). Table 2 therefore provided a broad framework of potential performance areas that could be impacted by a project to raise KE activity.

PERFORMANCE DIMENSION	PERFORMANCE ASPECT	UWL PERFORMANCE POTENTIALLY ENHANCED AS AN OUTCOME OF THE PROJECT
Good financial management	Income generation	YES – KE income sources
	Research income	YES – Collaborative and contract research forms of KE
	Cost effectiveness	Excluded
	Working surplus	YES – KE income contributes to surplus
	Reserves	Excluded
Furthering the institutional mission	Teaching quality	Excluded
	NSS/student satisfaction	Excluded
	Widening participation/access	Excluded
	Entry standards	Excluded
	Teaching output, progression and completion	Excluded
	Student numbers	Potential indirect impact: KPI#3 Higher and degree apprenticeships numbers; CPD in HE-BCIs
	Graduate outcomes (employability)	Potential indirect impact: KPI#1 Employability of students at 100%; KPI#2 Graduate employability of 80%
	Research quality and output	Potential indirect impact: KPI#11 REF ranking
	Rankings performance	Excluded
	Internationalisation	Potential indirect impact: KPI#16 Overseas and TNE recruitment numbers
Response to national need	Economic growth	YES – specific measure of KE
	R&D investment	YES – specific measure of KE
	Carbon reduction	Excluded

Table 2: Aspects of HE performance that could be influenced directly or indirectly by the project

3.2   Changing entrepreneurial orientation within UWL

Having identified nine aspects of UWL performance improvement the project could impact, the next stage was to determine the mechanism by which change could be undertaken. The central premise of the research was that this could be achieved through enhancing engagement with KE. This would shift UWL's stance toward acting in ways that were more business focused, entrepreneurial and aligned with innovation. This leads to exploring *how* entrepreneurialism or increased innovation can be achieved. One conceptual approach was to understand an organisation's *entrepreneurial posture* or *entrepreneurial orientation.* Covin and Slevin (1991) conceptualised entrepreneurship as an organisational behaviour or posture. Over time Covin and Slevin's (1991) conceptual model was refined and adapted, and the broader term *entrepreneurial orientation* (EO) became more commonly used. For this thesis, I will use the term entrepreneurial orientation as synonymous with Covin and Slevin's *entrepreneurial posture*. An organisation's entrepreneurial orientation is positively related to organisational performance in hostile, dynamic environments (Covin and Slevin, 1991). The HE-sector is increasingly competitive, international, and in the UK faced a government-driven increase in new market entrants[11], so fitted Covin and Slevin's (1991) description of a hostile and dynamic competitive

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[11] Through the Higher Education and Research Act 2017, which facilitated a wider range of organisation to be registered with the Office for Students as provides of Higher Education.

environment. Covin and Slevin's (1991) use of 'entrepreneurship' is not HE-sector specific. In the UK HE-sector, 'entrepreneurship' has generally been used more narrowly to reference business start-up activities; for example, in the definitions for both the Knowledge Exchange Framework (KEF) and HE-BCIs[12], and in the term 'entrepreneurial university' used by authors such as Kalar and Antoncic (2015). A broader sense of entrepreneurialism is not simply the *presence* of innovation within an organisation, it also requires that innovation also be aligned with the objective of rejuvenation: either the organisation itself, or the markets or sectors it operates in (Covin and Miles, 1999).

Entrepreneurial orientation is reflected in three types of organisational behaviour: top-management risk-taking; frequency of product innovation; and a pioneering stance (Covin and Slevin, 1991). It can be described as an organisation having a propensity to make decisions which favour entrepreneurial activities (Lumpkin and Dess, 1996). This orientation, presented in Figure 3, is expressed within a particular environment, with external, strategic, and internal variables. External variables are the basic dimensions that affect the organisation from outside. These are wide ranging and sometimes sector specific and include: technological sophistication, competition, and industry lifecycle. Strategic variables are those that define an organisation's purpose and approach, and include: corporate mission, business practices and operational tactics. Finally, the internal variables are organisational behaviours and include management philosophy and values, resources and competencies, culture, and structure. Collectively, these variables influence an organisational willingness and ability to innovate and be entrepreneurial, it's entrepreneurial orientation. This model recognises that these variables each influence, and are influenced by, the organisation's entrepreneurial orientation. This entrepreneurial orientation in turn influences organisational performance (Covin and Slevin, 1991).
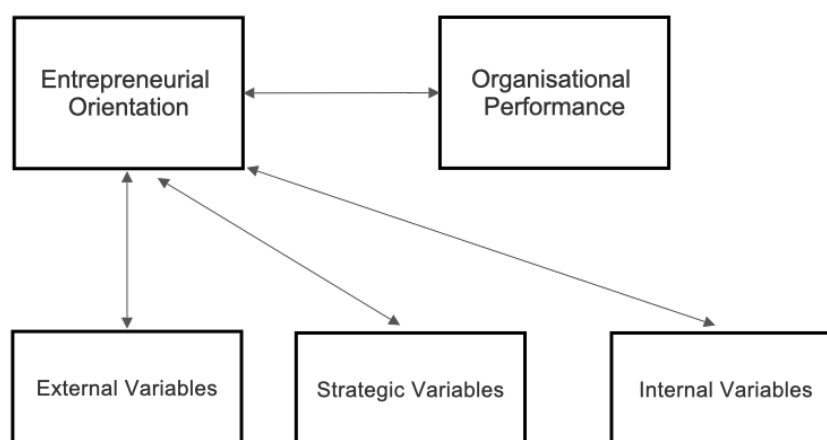
Figure 3: Conceptual model of entrepreneurship as an organisational behaviour (Covin and Slevin, 1991)

For UWL, the key challenge appeared to be how to change its entrepreneurial orientation through a focus on the strategic and internal variables, because the external variables were outside of the organisation's control. As discussed in Chapter 2 it was recognised that external factors existed that would also exert a pressure on all HEIs to increasingly engage with KE. The key strategic variables that could be influenced to change the entrepreneurial orientation, and thereby performance, in relation

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[12] Metrics relating to entrepreneurship can be found at https://re.ukri.org/knowledge-exchange/the-he-bci-survey/ and https://re.ukri.org/knowledge-exchange/knowledge-exchange-framework/ (accessed 13/6/21)

to this project included: clarity and visibility of Knowledge Exchange within the corporate mission; organisational KE Strategy; changed business practices to encourage and reward enterprising activities and approaches; and new KE tactics. Such top-down approaches were within the managerial discretion of the organisation, and within my role. However, there is a significant degree of freedom of choice in the types of activity academics choose to engage with, as autonomous professionals (Perkmann *et al.,* 2013; Thune *et al.,* 2016). If the overarching paradigm of the organisation was one that highlighted the centrality of teaching, then such attempts at top-down change could seem counter-cultural and less likely to succeed or be sustainable. The need was to take this beyond simply fostering innovation to a deeper rejuvenating change (Covin and Miles, 1999), one that would change the culture of the organisation to one more willing and able to engage in KE activity. Such change would be needed to unlock Academic's *choice* to engage in KE activities, given the level of self-direction and freedom that was a context for this project. The right culture fosters enterprise and innovation (Turró, Urbano and Peris-Ortiz, 2014), so the key 'internal variable' that would need to be influenced appeared to be organisational culture, supported by a view that a positive relationship exists between culture and innovation and enterprise (Leal-Rodríguez, Albort-Morant and Martelo-Landroguez, 2017).

This project was therefore intended to change the key internal variable of organisational culture to focus more on KE, building on the pre-existing shift in Enterprise-culture. Alongside were changes to other strategic variables that I had personal influence or control over as part of my role. Figure 4 shows the specific dimensions of the project's approach to increasing entrepreneurial orientation. Key to this project was to understand the complex relationships between: the project and its effect on changing key strategic variables; the project and its effect on UWL culture; culture change and UWL's entrepreneurial orientation; and finally entrepreneurial orientation and any performance enhancement.
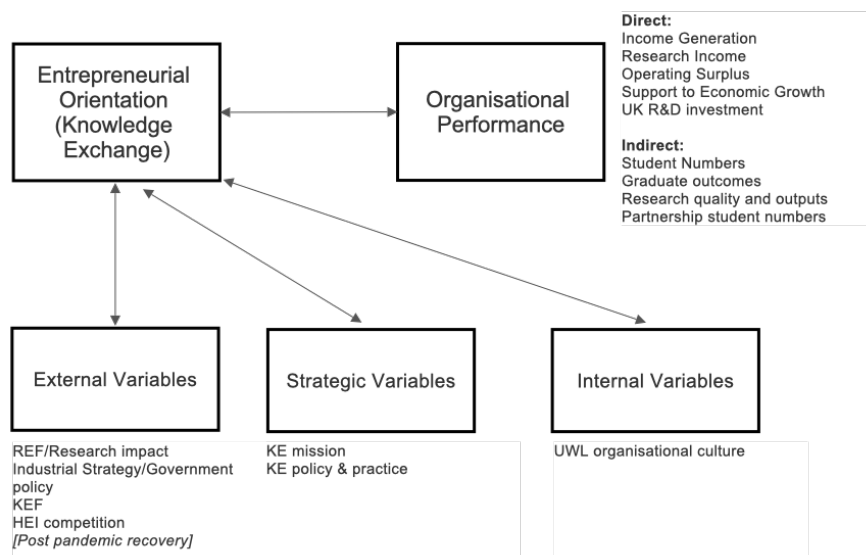
Figure 4: UWL's entrepreneurial orientation - adapted from Covin and Slevin (1991)

3.3 Project theory-of-change

To understand the complex relationships between the project and its effect on changing key strategic variables, it was useful to capture them in a conceptual *theory-of-change* (ToC). The origins of the term 'theory-of-change' come from the field of theory-driven evaluation and aims to provide an explanation of what is being implemented, why, and to make explicit connection between the intervention and its intended outcomes and impact (Reinholz and Andrews, 2020). Theory-driven evaluation holds that the beliefs and assumptions underlying an intervention can be expressed in terms of a phased sequence of causes and effects (Weiss, 1997). This theory is a set of assumptions and causal relationships that explains the mechanisms and reasons behind specific outcomes (Vogel, 2012). Figure 5 below shows this sequence, linking the resources needed for the intervention to the eventual impacts.

INPUTS	PROJECT INTERVENTIONS	OUTPUTS	OUTCOMES	IMPACTS
Resources needed by the project/intervention to succeed	Specific activities that form the project/intervention	Measure of what had been delivered by the project/intervention	Measurable benefits arising from the project/intervention activities	The ultimate changes expected from the project/intervention

Figure 5: A theory-of-change approach

Weiss (1997) recognised that the term 'theory' was being used more akin to 'model' than a more traditional sense of theory; as a generalised set of logical inter-relationships used to explain phenomena. Nevertheless, Weiss saw value in use of the term, as the approach seeks to surface the theoretical underpinnings of the activity, and aims to identify mechanisms by which the activity is related to good outcomes (Weiss, 1997). The theory-of-change for a project can be described as a series of hypotheses about: how change will occur; and how these hypotheses should be investigated and revised as the project proceeds (Reinholz and Andrews, 2020). In other words, providing a mechanism to understand the complex relationships between cause and effect; such as between a research project, its effect on the organisation and its entrepreneurial orientation, and ultimately to performance improvement. The notion that the theory-of-change is not static, and should be reviewed further, aligned with a project where the environmental context was one that was not stable.

For this project, a conceptual theory-of-change emerged based on a logical sequence including a range of measurable outputs that arose from the specific project activities. The specific output measures were to be co-developed as part of the research. The planned outcomes from the project activities would be changes in staff behaviours and attitudes toward KE activity as measured by increased academic's choice to engage in KE activities, creating a cultural shift away from being predominately teaching-centric. This would also be reflected in an increase in UWL's entrepreneurial orientation. These were anticipated to ultimately impact on improved organisational performance. This conceptual theory-of-change is demonstrated in Figure 6. This model was further refined, which is explored further in Chapter 9. This ultimately allowed a framework for exploration of the relationship between these interventions and the impacts of the project.
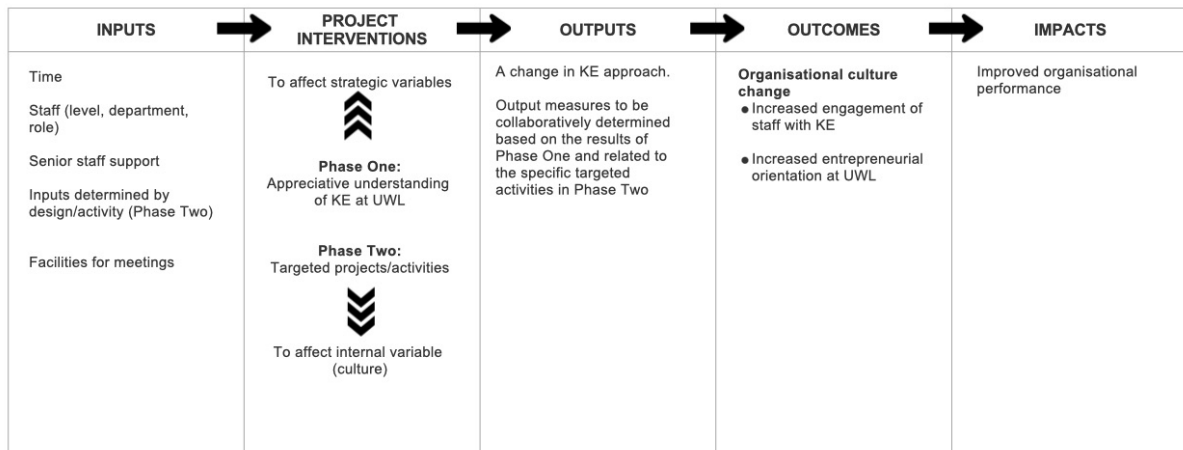
Figure 6: Conceptual theory-of-change

3.4 Project aims and objectives

The overall project aim was to improve UWL's performance in KE, as a focus for improving organisational performance. This research was both a work-based project intended to have a transformative effect on the organisation and formed the basis of doctoral-level organisational research. These two areas were not mutually exclusive, but neither were they synonymous. The challenge of the project was to combine both dimensions together. As such three categories of aims and objectives were identified, business, research, and integrative.

3.4.1 Business aim and objectives

The aim of the transformative *business project* was to enhance business performance, through seeking to increase entrepreneurial orientation. To achieve this aim, there were three objectives for the business project. First, to design and implement a set of interventions to enhance KE visibility, mission, policy and practice. Second, to attempt to foster a culture that would support broader engagement with KE activities. Third, to identify appropriate measures to evidence key outputs, outcomes, and impacts on UWL's performance improvement.

3.4.2 Research aim and objectives

Arising much more from a personal perspective (see Chapter 2) was the *research* aim to explore cultural change as a means of delivering business improvement. There were three objectives of the research project. First, to critically test and evaluate whether an enhanced culture of engagement with KE (an increased entrepreneurial orientation) could drive business performance in a complex competitive environment such as the HE-sector, where academic autonomy and collegiality are key cultural values. Second, to investigate cultural change in a specific organisational and sectoral context. Third, to generate new knowledge on a specific change which enhances an aspect of professional practice and performance in the HE-sector.

3.4.3 Integrative aim and objective

The business and research dimensions of the project were intertwined, in part due to my role as both a senior leader in UWL with responsibilities for KE and as the principal investigator (PI). This created scope for uncertainty or confusion over the boundaries between the business project and research

project. This confusion could have arisen for participants, raising ethical issues where business activities bleed into research. They could also have arisen for me personally, with a potential lack of clarity as to whether I would be making decisions as a researcher or as a manager. It could have created challenges in reconciling potential conflict between what would be best from a business perspective with what would be best from a research perspective. Therefore, the *integrative* aim of this project was to find an approach to undertaking *both* business and research aims and objectives in an integrated way, allowing for clarity and removing scope for confusion or conflict. The objective for this aim was therefore to review methodological approaches and design a project that used a research method as a vehicle for organisational change.

3.5   Research project definition conclusion

In summary the project, following the course of logic within the conceptual theory-of-change, was defined as '*Using a research-based approach to achieve improved organisational performance in Knowledge Exchange*'. This definition of the project's purpose raised five questions that needed further exploration: What is the nature of competition and specifically competition in HEIs?; if KE is a route to competitive advantage, what is KE?; is the entrepreneurial orientation model relevant to enhancing HEI performance?; if culture is the key variable to change, what is organisational culture?; and how to effect change, and in particular cultural change?

4 Discussion points arising from the theory-of-change

As described in Chapter 3, the underlying theory-of-change for this project raised five areas of discussion. These were on: the nature of competition in the HE-sector, KE as a source of performance, entrepreneurial orientation within the HE-sector, organisational culture, and effecting organisational change. In this chapter, literature related to these areas is explored leading to specific parameters that needed to be considered in the research method for this project.

4.1 The nature of competition in the HE-sector

To understand the nature of competition in the HE-sector, an understanding of what competition is was needed. A broad definition of competition is "*The activity or condition of striving to gain or win something by defeating or establishing superiority over others*"[13]. Traditionally, there are two basic types of competitive advantage that an organisation can have: low cost or differentiation (Porter, 1980; Porter, 2004). That is, the ability to sustain a lower price than competitors, or having something that marks an offering as different but importantly provides an additional value to the consumer. These bases for competitive advantage stem from industry structure and result from the ability of an organisation to cope with the forces at work in the market (de Wit and Meyer, 1999). These forces include: threat of new entrants; threat of substitute products or services; the relative power of buyers or suppliers, and the level of rivalry in the market (Porter, 2008).

The traditional view of competition rests on a market domination paradigm, where *sustainable competitive advantage* is seen as an advantage that cannot be copied, eroded by the actions of rivals, or made redundant by environmental change (de Wit and Meyer, 1999). The HE-sector, at the start of this project, had 780 different organisations delivering funded higher education courses[14]. Even this could be considered a myopic view of the market (Levitt, 2008) as it only included English HEIs and ignored: the rest of the UK's HEIs; franchise and other HEI-validated providers of higher education; or international competition. In the UK, competition in the HE-sector was driven by: government policy to promote competition between institutions; high demand for education increasing the range of competitors; new forms of provision and new providers; and a globalised education market (Middlehurst, 2014). Broadening the view of the HE competitive market exponentially grows the potential number of competitors. This would include global competition in HE, other provision for higher learning, and consider the wider range of activities HEIs undertake where competition was not restricted to those that offer higher education. These areas would include, for example: research, consultancy, business-start-up, evaluation, work-based learning, staff development, and continuous professional development. The survival of so many competitors indicated that a market-domination paradigm for competition was unrealistic. Even the most elite of universities would be hard-pressed to make any claim of market domination. An alternative understanding of competition was needed to understand the nature of competition in the HE-sector for this project.

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[13] Source Oxford English Dictionary: https://www.lexico.com/definition/competition (accessed 13/6/21)

[14] Source: HEFCE Register of HE Providers as of August 2017

Competitive strategy can be defined as identifying the fundamental basis on which an organisation can perform *above average* in the long term (de Wit and Meyer, 1999). This is a definition of performance as *relative* to competitors, and for this project, this provided a basis for understanding competition not as competitive advantage (domination) but as *comparative* advantage. So, while the competitive environment was a key external variable for this project, it was not sustained competitive advantage that was sought by UWL. Rather it was *a competitive strategy* to enable UWL to perform comparatively better than other HEIs, in this case through increasing entrepreneurial orientation. This allowed consideration of whether KE could be a source of that sustained above-average performance.

4.2 Knowledge Exchange as a source of performance

To understand if KE could provide an opportunity for comparative competitive advantage, it was important to gain a better understanding of: what KE is; how understanding of KE changed over time; how KE could be a basis for competitive comparison between HEIs; and what could facilitate improved KE performance.

4.2.1 Defining KE and the economic and social impact HEIs

In Chapter 2, I argued that competition in the UK HE-sector did not have to be solely related to research and teaching. The existence of a third aspect to HEI's mission fed into, and from, the governmental policy agenda for universities to be key to driving economic growth. A range of different terms, linked to this third mission, appeared within the academic literature, including Technology Transfer, Knowledge Transfer, University-Industry Collaboration (UIC), Academic Engagement, and Research Commercialisation. Frequently, these described a particular aspect of KE rather than a broad encompassing definition. Understanding what these terms meant was not always straightforward, for example 'Knowledge Transfer' was argued to be '*vague and difficult to define*' (Lockett, Kerr and Robinson, 2008). Knowledge Transfer was often used interchangeably with the term Technology Transfer and focussed on the mechanisms HEIs use to take science-based knowledge and commercialise it, for example though patent, spin-out, or IP (Intellectual Property) licensing (Rajalo and Vadi, 2017). When referring to KE, I will mean the broad range of activities and ways HEIs generate a socio-economic impact, drawing from Research England's commitment to supporting and funding the contribution HEIs make to the economy and society by working with partners. This approach, however, presupposed that HEIs *can* have a socio-economic impact.

It has been frequently argued that universities are an important part of a nation's economy (Carayannis, Campbell and Rehman, 2016; Coates Ulrichsen, 2014; D'este and Patel, 2007; Etzkowitz and Leydesdorff, 2000; Hughes and Kitson, 2012; Motoyama and Mayer, 2017; Reichenfeld, 2011; Schofield, 2013). In the UK, for the academic year 2011-2012, KE generated £2.68b for the UK economy and this was part of a rising trend in terms of income generated (Coates Ulrichsen, 2014). An understanding of this impact has often been based on: an HEI's demand for goods and services, their role as major local employers, and their role in attracting students to a region (analogous to tourists) (Hermannsson *et al.,* 2014). This narrow approach views HEIs in similar terms to any other large business and does not take account of the way HEIs can support economic growth in other ways. Of these other roles HEIs play in the economy, University-Industry Collaboration (UIC) was cited as an important economic driver: contributing to national and regional economic development, spurring

innovation, and responding to government policy (Rajalo and Vadi, 2017). Defined as the interaction between an HEI and industry, UIC was aimed at encouraging knowledge and technology exchange (Ankrah and Al-Tabbaa, 2015), and so included a broad range of KE activities. Proponents of this economic role for HEIs have argued that access to innovation and HEI-generated knowledge are crucial pathways for industry to remain competitive (Schofield, 2013). However, this view on the economic impact of HEIs has been disputed.

Criticism of the view that HEIs can have a significant economic impact are varied. In part, the methodologies behind trying to calculate this impact are open to challenge. Using an input-output model, some studies for the UK have shown significant impact (Zhang, Larkin and Lucey, 2016), however this approach has been criticised for relaxing methodological rigour to inflate perceived economic impact (Hermannsson *et al.,* 2014). For example, they: compared HEI activity in an area versus an unrealistic alternative of there being no activity; didn't always define the local area that was affected; had potential double-counting of expenditure; and often used exaggerated multipliers (Siegfried, Sanderson and McHenry, 2007). Furthermore, frequent use of measures of research commercialisation and broader academic engagement with industry were not *actual* measures of economic impact, although could be a useful proxy (Perkmann *et al.,* 2015). While much has been made of the relationship between basic research and economic performance, the benefits are not always clear or apparent; except for perhaps clinical or health research (Salter and Martin, 2001). Whether HEIs could, or should, have an active role in the economy was also contested. In 2000, the Swedish government suggested HEIs pull back from KE, based on the cost to business of the bureaucracy in HEIs and that research generated in HEIs should flow to them freely to economically exploit (Etzkowitz and Leydesdorff, 2000). This view of KE does not consider the role of research underpinning teaching, or upskilling future and current workforce. While critical, these views were about *scale* or cost of impact rather than if conceptually impact *could* occur.

On the assumption that HEIs can have a socio-economic impact, it has been claimed that KE has become an accepted part of the HE-sector (Reichenfeld, 2011), as part of a shift to a more entrepreneurial orientation or part of an 'entrepreneurial turn' (Goldstein, 2010). However, evidence that academics have embraced this economic development mission has been challenged, based on potential conflict between this mission and other HEI missions as it reduces the availability of academics to students, delays publication, and runs counter to knowledge being an openly accessible public 'good' (Goldstein, 2010). It should be noted that Goldstein's research was conducted in a different national context to this project, the United States (US), and therefore may not reflect the UK HE-sector. His view may be also seen as somewhat outdated, as later research demonstrated that there was an increased acceptance of this mission amongst younger and newer entrants to the academic profession (Freel, Persaud and Chamberlin, 2019). Goldstein's research may therefore have reflected an established viewpoint at the time that could have since changed as a *result* of the 'entrepreneurial turn' in HEI mission that he described. Regardless of whether KE had become an established part of the HE-sector, the belief in the economic impact of HEIs has been foundational in government policy in the UK.

4.2.2   *The development and understanding of KE over time*
The role of HEIs in innovation and economic growth has become a central theme in governmental innovation and science policy (Hughes and Kitson, 2012). This role has been described, for example,

as part of a National System of Innovation (Lundvall, 1988) with the state taking the key role in driving innovation by creating a national ecosystem within which HEIs operate. Alternatively, the Triple Helix model described the more balanced roles between government, HEIs and industry that are separate but linked and overlapping (Etzkowitz and Leydesdorff, 2000). The resulting policy, of HEIs having a role in innovation, included promoting commercialisation of knowledge through science parks, Technology Transfer Officers (TTOs), and university venture capital funds (Motoyama and Mayer, 2017). Just as the incorporation of a research mission changed HEIs in the 19th Century, following the ideas of Wilhelm von Humboldt (Elton, 2008), the transition to KE has changed the nature of HEIs in the 21st Century (Etzkowitz and Leydesdorff, 2000), with government policy and subsequent funding playing a crucial role.

Science has always been driven by both creation of knowledge *and* its use, and this has been accelerated by funding pressures, increased managerialism in HEIs and a broader sectoral acceptance of entrepreneurialism (Freel, Persaud and Chamberlin, 2019). However, the debate on the role of greater cooperation and trust between HEIs and industry was not a 21st Century phenomena. In the UK this debate had its roots in the 1920's, particularly on the role of HEIs producing skilled employees (Lock, 2010). Following World War II, the publication in the United States (US) of the 'Endless Frontier' by Vanevar Bush argued for government investment into research as a means of generating economic benefit through a linear relationship from basic research through to commercialisation (Cohen, Nelson and Walsh, 2002). This linear understanding of the positive impact of science on society underpinned many governments' policy for investment into research until the 1980s. It was replaced with a greater emphasis on HEIs commercialising the knowledge they create, rather than expecting industry to pick up on published research. A foundational example was the 1980 Bayh-Dole Act that placed a stronger responsibility on US universities to commercialise publicly-funded research (Fini *et al.,* 2018). In the US, this led to a proliferation of TTOs, incubators, and courses to promote entrepreneurship as HEIs had clearer ownership of the IP they created.

For the UK, the focus has not solely been on exploitation of research. Early views of the role of academic engagement in the UK focussed on skills, for example J.B Baillie's 1925 address to the Association for Education in Industry and Commerce promoting the benefits of scientifically trained employees, or the 1963 Robins report which included skills for employment as one of the aims for HEIs (Lock, 2010). Later, the 1993 Waldgrave White paper led to the development of the Technology Foresight Programme, emphasising the links between industry and research, and the importance of research in wealth creation (Lockett, Wright and Wild, 2015). The Labour government from 1997 furthered this with the launch of several initiatives: HE Reach out to Business in 1998; Science Enterprise Challenge in 1999; Challenge funds to support HEI spin-out in 1999; and the launch of the Higher Education Innovation Fund (HEIF) in 2001 (Lockett, Wright and Wild, 2015). The Lambert review (Lambert, 2003) concluded that large financial returns from commercialisation were unrealistic and that globally returns from HEI spin-outs were relatively low. This review argued that the value to the economy from interaction between HEIs and industry was broader, moving the government policy from a focus on technology transfer to knowledge transfer. This came with changes in funding to include non-research intensive HEIs and less focus on commercialisation (Lockett, Wright and Wild, 2015), primarily through HEIF. This partially returned to the early understanding of the important role of HEIs in developing employable and skilled individuals for the UK workforce. The early rounds of HEIF focussed on capability building, then strengthening links to industry (Lock, 2010). A formula-

based funding approach was introduced for HEIF 4, and the Higher Education Business and Community Interaction survey (HE-BCIs) moved to the Higher Education Statistics Agency and became a statutory return (Lock, 2010). The HE-BCI survey represented a broader view of KE and included: *"the volume and direction of interactions between UK HE providers and business and the wider community. The survey collects information on the infrastructure, capacity and strategy of HE providers, and also numeric and financial data regarding third stream activity (that is, activities concerned with the generation, use, application and exploitation of knowledge and other HE provider capabilities outside academic environments, these being distinct from the core activities of teaching and research)"* [15]. Eventually, the UK Government took this further using HE-BCIs plus other data sources, including self-reported evaluation of public and community engagement, and co-production of research outputs with non-academics, as part of the Knowledge Exchange Framework (KEF). This change in metrics and measurement echoed the developing understanding of the ways in which HEIs can have an economic impact or engage with industry.

The view of HEIs as vehicles for social and economic good represented a change in academic identity, expanding from research and teaching to incorporating a 'third space'. (Reichenfeld, 2011). Research into the nature of this impact has demonstrated that commercialisation of research (patents, spin-out and licensing) was a relatively small proportion of KE (D'este and Patel, 2007; Hughes and Kitson, 2012; Perkmann *et al.,* 2013; Perkmann *et al.,* 2015; Thune *et al.,* 2016; Veugelers, 2016). Research by Perkmann *et al* (2015) investigated the relationship between industry and HEIs: looking at research commercialisation as well as collaborative research, contract research, consulting, and informal activities such as ad hoc advice and networking. Their research found that fewer academics engaged with commercialisation than other modes of what they called *academic engagement*. For example, less than 5% of academics were patent inventors. For UWL, and this project, a broader definition of KE was of more value than just considering commercialisation of research, primarily due to UWL being teaching- not research-focussed.

Much of the literature, and focus within policy, started with a view of KE as Technology Transfer, with a resulting criticism of focusing too narrowly on commercialisation (patents, formation of spin-out companies and licencing of IP (D'este and Patel, 2007; Fini *et al.,* 2018; Hughes and Kitson, 2012; Motoyama and Mayer, 2017; Rajalo and Vadi, 2017; Veugelers, 2016). Studies into both the motivations of industry and academics to collaborate indicate that engagement around commercialisation accounted for a very low percentage of interactions or motivation (D'este and Patel, 2007; Perkmann *et al.,* 2015). Technology Transfer was just one aspect of KE, with research on UK business demonstrating that collaborations were broad and rich in variety (Abreu *et al.,* 2008). D'este and Patel (2007) argued that too much focus on patents and spin-out obscured the presence of other types of engagement between academics and industry. A further criticism was that there was an over-focus on science, rather than activities such as business performance, management, human resources, and marketing which form core areas of businesses-HEI engagement (Hughes and Kitson, 2012). Much of the literature also focussed on business as the only non-academic partners, ignoring the public sector and charity sectors even though they are major parts of developed economies (Hughes and Kitson, 2012). Perkmann *et al* (2013) defined *academic engagement* as a broader range

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[15] Further details are available at https://www.hesa.ac.uk/support/definitions/hebci (accessed 13/6/21)

of knowledge-related activities undertaken by academics with non-academic organisations, including (but not limited to) consulting, collaborative research, and contract research. They highlighted in their systematic review that the breadth of academic engagement reached much further than commercialisation, with broader motivations for academics to engage. Their findings indicated that commercialisation outcomes were more likely to be a *result* of academic engagement rather than a motivation *for* academic engagement. However, it was easier to measure and quantify commercialisation than broader KE activities.

Measuring commercialisation tended to be relatively straightforward as there were clear financial values attached to such activities, while broader KE activities such as skills enhancement were conceptually different and more difficult to measure (Zhang, Larkin and Lucey, 2016). There were multiple channels by which HEIs could conduct KE: personal mobility; informal contact; consulting; and joint research, for example. As highlighted above, commercialisation was a small part of KE (D'este and Patel, 2007), and the focus on commercialisation was challenging for demonstrating socio-economic impact. This narrow view of KE could result in under-reporting of the impact of KE activity, given it was difficult to measure as it is demonstrated over multiple levels of impact, evolves over time, requires different sets of data to understand, and is challenging to link phenomena (Fini *et al.,* 2018). What was highlighted was academics are motivated by: keeping abreast of industry challenges; seeking access to research funds through collaboration; and developing skills (D'este and Patel, 2007). Companies seek up-to-date knowledge, access to students, and finding solutions (D'este and Patel, 2007). Collaborative activity, informal contact, and industry gaining access to trained and skilled people were more important than commercialisation, which gained the most attention (Veugelers, 2016).

ACTIVITIES CONSIDERED AS PART OF BROADER KE	AUTHOR
Collaborative research, contract research, consulting, ad hoc advice giving and networking	Perkmann *et al* (2015)
Increasing the stock of useful knowledge, training skilled graduates, creating new scientific instruments and methodologies, forming networks and stimulating social interaction, increasing capacity for problem solving, and spin-out	Salter and Martin (2001)
Dissemination of research, training links, research collaborations, consultancy	Thune *et al* (2016)
Collective activity and access to trained human capital	Veugelers (2016)

Table 3: Activities included in broader KE

Beyond commercialisation, the broader range of KE activities has been variously described in the literature, detailed in Table 3 (above). Common themes run through these descriptions, if not necessarily a common language or terminology. As opposed to commercialisation, these approaches provide a means to understand both economic and social impact of HEIs interacting with the non-academic world: both commercial and non-commercial. While the Triple Helix model (Etzkowitz and Leydesdorff, 2000) focussed on economy, it has been further developed into a Quadruple Helix model that brings in society, and a Quintuple Helix that tries to account for socio-ecological transition of society, economy, and democracy (Carayannis, Campbell and Rehman, 2016). This broadening of the understanding of how HEIs can impact both economy *and* society has increased in importance, and as a focus for empirical research, for example research by Schoonmaker and Carayanis (2013) on evidence for the Quadruple Helix model. For UWL's, a wider sense of KE and a role in developing a

skilled workforce, was much more relevant than narrow commercialisation, as supporting employability and graduate skills were core values within UWL mission.

Employability and Graduate Skills have long been a feature of the UK Government's approach to KE. An early UK initiative that sought to increase universities' responsiveness to economic and societal issues was Enterprise in Higher Education (EHE), a targeted initiative in the late 1980's that provided funding to change curricula to reflect the needs of industry (Weil, 1994). Introduced by the Department of Education, the funds sought to shift curricula to inculcate general competencies wanted by employers, rather than just academic knowledge, which included: literacy, IT, communications, social and interactive skills. The scheme was initially viewed with suspicion as a direct ideological intervention into curriculum (Slowey, 1995). Tension was seen to exist between the financial incentives to align curriculum with government policy versus implementing long-desired changes that would widen participation (Slowey, 1995). However, attractive levels of funding meant institutions did bid. Personal experiences of EHE in Slowey (1995) indicated that, despite misgivings, academics that engaged found it a positive experience benefiting from: being allowed or encouraged to take 'ownership'; the number of peers who become persuasive and respected advocates; and the prospect of obtaining additional resources through the scheme.

While the broader sense of KE was important for this research, one of the challenges in reviewing the literature on KE was a heavy emphasis on the relationship between research and KE. While the creation of knowledge is logically a precursor to its commercialisation, it does not necessarily follow that *all* KE must be derived from an HEI's own research, in the same way that not all teaching is derived solely from an HEI's own research. This research-bias was evident in the literature in many ways: seeing KE through a research lens; seeing the benefits of KE in research terms; and focussing on the views of researchers rather than the broader academic community. Each is explored further below.

There was frequently a research-lens by which the HE-sector and those working within it were viewed. This appears both in defining academics as 'researchers' (Bager, 2018; Perkmann *et al.,* 2013; Rybnicek and Königsgruber, 2019) or 'academic scientists' (Perkmann *et al.,* 2015); in describing HEIs as 'research organisations' (Perkmann *et al.,* 2013); or describing industrial organisations involved in KE as 'research partners' (Schofield, 2013). Perkmann *et al* (2013) started by recognising the teaching mission of HEIs, but then solely focussed on the links between academic engagement and research. Bager (2018) expressed KE in research terms, defining KE interactions as researchers applying their knowledge mainly through dissemination, and with KE's value expressed in terms of research output rather than the impact on economy and society.

References to benefits of KE tended towards research funding (Hughes and Kitson, 2012), ignoring other forms of KE funding (e.g., though Innovate UK). The Triple Helix model (Etzkowitz and Leydesdorff, 2000) focused on the function of HEIs to produce and disseminate crucial knowledge, yet it was their *production* of knowledge that was seen as central (Motoyama and Mayer, 2017). The purpose of KE is *exchange*, so dissemination should be seen as just as important. When discussing the Triple Helix model, examples of HEI activity tended towards narrow commercialisation, for example Calvo *et al* (2019) or conflated KE with innovation, which *implies* commercialisation (Etzkowitz and Leydesdorff, 2000). Despite the evidence that Technology Transfer and commercialisation were a relatively small component of KE activity (D'este and Patel, 2007; Hughes and Kitson, 2012; Perkmann *et al.,* 2013; Perkmann *et al.,* 2015; Thune *et al.,* 2016; Veugelers, 2016), some authors such as Hughes

and Kitson (2012) argued that the role of HEIs in innovation and economic growth was primarily through this route. The Sainsbury Review, which underpinned the introduction of HEIF funding for broader KE activity, saw the purpose of KE as the translation of *research* into goods and services, through patent, spin-out, licensing and business consultancy (Sainsbury, 2007). The recognition of HEIs role in building skills was noted, but linked to the STEM agenda rather than broader skills for UK industry. Schoonmaker and Carayannis' (2013) research on the Quadruple Helix, while accepting a societal impact for HEIs, saw HEIs networking with industry motivated by seeking research grants.

This research-bias was not just evident in the way authors conceptualised KE, but was also embedded into their research. Research to understand KE by focussing on researchers rather than a broader cross-section of those in the HE-sector, was likely to yield results that focussed on research-related perspectives on KE. D'este and Patel (2007) surveyed Principal Investigators from Engineering and Physical Sciences Research Council funded research projects to understand academics' motivations for engaging with industry. Perkmann *et al* (2015) surveyed 'scientists' at Imperial College London. The first article not only excluded a wide range of other academics that would see themselves as researchers, but also looked at a narrow field of engineering and physical sciences which have a higher propensity for commercialisation of research as an expression of KE (Freel, Persaud and Chamberlin, 2019; Thune *et al.,* 2016). Perkmann *et al* (2015) focussed on researchers in a single STEM focussed elite university. Schofield (2013), while also surveying individuals engaged with KE for administrative or external roles, focussed on researchers in the same institution as Perkmann *et al* (2015). The KE literature tended to systematic reviews of literature, usually drawing conclusions on future *research* agendas for KE (Perkmann *et al.,* 2013). Frequently, reviews of the literature, especially in systematic reviews, focused on journals such as Research Policy. Much of the literature built on the work of Perkmann *et al* (2013), whose literature review drew heavily from Research Policy (13 out of 36 articles). In Ankrah and Al-Tabbaa (2015) out of 109 articles reviewed, 47 articles were from Research Policy (33), Research & Development Management (11) or other research-related publications (three). Secundo *et al* (2019) deliberately selected articles with a research focus as part of their criteria. The literature therefore contained a bias toward seeing KE as a product of, or only related to, research.

The implication for UWL was that *if* KE was a product of research, then limited research would mean limited potential to engage with KE. However, the literature recognised that commercialisation of *research* was a relatively small proportion of academic engagement (D'este and Patel, 2007; Hughes and Kitson, 2012; Perkmann *et al.,* 2013; Perkmann *et al.,* 2015; Thune *et al.,* 2016; Veugelers, 2016) and other expressions of KE (for example, consultancy, networking, or skills development) are based on subject expertise and therefore not the sole preserve of researchers. Equally, Continuing Professional Development (CPD) and development of human capital are more closely aligned to the teaching-mission than the research-mission of HEIs. Using a broader view of KE justified it as a focus for enhancing organisational performance for UWL as a teaching-focussed HEI. However, whether KE could be a basis for comparative advantage, was more complicated.

4.2.3   *Knowledge Exchange as a basis for competitive comparison*
Knowledge Exchange as a basis of comparison between HEIs has lacked the visibility of measures of comparison unlike the other two missions: research and teaching. For UWL, there has traditionally been high visibility of teaching metrics like National Student Survey (NSS) and Teaching Excellence Framework (TEF), being clear in multiple artefacts of UWL culture such as: the overarching strategic

plan; organisational KPIs; teaching related strategies and policies; the centrality of teaching in academic staff work-loading; and clarity in promotion criteria for academics. These were not only internal markers of performance, but also key aspects of inter-HEI rivalry and competition. In the UK, HEIs were ranked on NSS, both directly and how elements of NSS influenced published rankings. Other bases of comparative comparison were TEF award (bronze, silver, or gold), or student number metrics (numbers applying, numbers enrolling and so on). As well as the rivalry that comes from teaching there was similar rivalry for research, for example: REF results and the consequential Quality Related funding; volume of research output; and the amount of competitive research grants for example. KE grants (HEIF) are relatively small and capped, and generally for research-intensive HEIs funding was derived from collaborative and contract research performance, and so could be seen as being a marker of *research* success rather than *KE* success.

At UWL, KE had traditionally been reduced to Enterprise: a synonym for generation of income outside of teaching grants and student fees. So, while KE played into the competitive positioning around size of total income, it did not go much further. Even the existence of the annual HE-BCIs return and HEIF funding had not been particularly instrumental in raising KE's importance for inter-HEI comparisons. For UWL, the monetary focus of HE-BCIs reinforced the cultural norm that *Enterprise-equals-income*, and therefore this potential reduced KE to an element *within* the competitive comparison of institutional income size. This was further reinforced by teaching-focussed comparisons around widening participation, employability (graduate outcomes, salary), which are aspects of KE that overlap with the teaching mission. This appeared problematic for using KE as a base for competitive performance comparison.

Just as the debate on the nature of KE had broadened, so too had the view of KE performance: moving away from patents, numbers of spin-outs, licences, and job creation to other emergent measures (Miller, McAdam and McAdam, 2018). Evidence suggested that narrow commercialisation accounted for only 11% of academic-industry engagement, with interaction around consultancy, problem solving and developing people being much higher (Hughes and Kitson, 2012). Other factors such as the impact of skills enhancement needed to be recognised, even if they are conceptually different to commercialisation and harder to measure (Zhang, Larkin and Lucey, 2016). With research output considered important within the HE-sector, a barrier to academics engaging with KE has been the limited opportunities for publication in this area (Bager, 2018). However, this was a very myopic view of performance at odds with the increased focus on research *impact* rather than simply *output*. Broader engagement with business needed to be understood as part of the performance of HEIs regarding KE, but this alone was not sufficient as this could exclude engagement with either public and third sectors which are equally important to the economy and society (Hughes and Kitson, 2012). The importance of societal outcomes from KE was recognised within the increased focus on research *impact* with the REF (Fini *et al.,* 2018). The challenge for broader KE as a base for competitive comparison was that: KE has multiple levels of impact; varied timeframes for this impact to materialise; was captured by different sets of data; was highly resource intensive to study; and it was not always easy to link phenomena (Fini *et al.,* 2018). The complexity of KE doesn't fit with simple policy measures (Abreu *et al.,* 2008) making ways to compare much more complicated than, for example, institutional income, student numbers, NSS results or REF results. This would seem to detract from seeing KE as a basis for competitive comparison, if it were not for the role of UK government seeking to understand the value gained from investment into KE, such as HEIF.

In the UK there has been focus on KE performance, developing over time to include annual submission of data on KE through HE-BCIs (Lockett, Wright and Wild, 2015) used in the formula for UK Government funding for KE activities (Lock, 2010). The HE-BCIs metrics recognised a broad range of KE activities, and provided some basis for competitive comparisons, as the data was publicly available via the Higher Education Statistics Agency (HESA). However, the variety of metrics included allowed too many perspectives of performance to provide a useful base for simple competitive comparisons. The use of weighted averages over three HE-BCIs reporting periods to underpin the funding formula for HEIF provided another publicly available metric: size of HEIF funds. While providing some value as a metric, the limitation to increases or decreases annually (normally 10%) meant that it would not necessarily reflect current performance. The development of UK Government views on HE performance eventually evolved, with the launch of KEF.

In developing the KEF, a key driver was to find a better way of understanding *relative* KE performance of UK HEIs. It was recognised by the funding body, Research England, that there was a diversity of HEIs addressing different socio-economic, industrial, technical, and regional challenges and so it needed to understand this variety through comparing HEIs to a subgroup of similar peers. Rather than comparing just sector-wide, KEF built on cluster analysis undertaken by Coates Ulrichsen (2018). The eventual structure of the clustering could itself be seen as a ranking of performance, despite statements to the contrary by Research England (Research England, 2021). The clustering, while descriptive rather than determinant, drew on student numbers, spread of subjects, research grants, research performance (from REF), and capital expenditure (Coates Ulrichsen, 2018); all factors which related to size or income, and in some way could be seen as bases for competitive comparison. Membership of a particular cluster could be seen as a measure of relative strength; however, this would require regular re-clustering for this to be an effective and accurate base for competitive comparison, something RE indicated was unlikely to happen (Research England, 2020). The clustering provided a narrow subset of the UK HE-sector for members to measure themselves against across a range of perspectives of KE. These perspectives took a broad view of KE and included: research partnerships (collaborative research with non-academics); working with business (contract research, consultancy, access to facilities and equipment, and Innovate UK funded activity); working with the public and third sector (contract research, consultancy, and access to facilities and equipment); skills, enterprise and entrepreneurship (CPD, and graduate start-ups); local growth and regeneration; IP and commercialisation (spin-out, licensing and other formal IP earnings); and public and community engagement (Research England, 2020). The KEF included both a comparison to the overall HE-sector and to the specific cluster members, and so allowed a publicly available basis for UWL to use in competitive comparison. Therefore KEF, and to a limited extent HE-BCIs and HEIF funding, provided a basis for KE potentially being a source of competitive comparison.

4.2.4   *Facilitators of improved KE performance*

If, therefore, KE could be a basis for competitive comparison, this naturally led to discussion of how performance in this area can be improved. Motivators for HEIs to engage with industry include policy-based encouragement; access to expertise; access to equipment; placements for students; recruitment of students; increased efficiency; and providing stability (Ankrah and Al-Tabbaa, 2015). Factors that support or enable engagement included: institutional factors such as resources, staff, equipment, organisational structure; relational factors such as frequency of communications, and trust; output factors such as having clear objectives, and effective transfer or exchange of knowledge;

and KE framework factors, such as a supportive environment, clear contracts and IP rights documents, and geography (Rybnicek and Königsgruber, 2019). Strategic alignment of the HEI and in particular its orientation to entrepreneurship (Klofsten *et al.,* 2018) was also a factor that can influence engagement. The barriers to such engagement included: a lack of culture change to embrace KE, fear of risk, where the academic role has not adapted to include engagement, and the slow pace of academic decision making (Reichenfeld, 2011). Lack of alignment of mission, organisational differences such as funding and costs structures, and cultural differences could also act as barriers (Schofield, 2013).

However, by far the most important factor in engagement was characteristics of individual academics and subject areas within an HEI (Thune *et al.,* 2016). Like the earlier EHE initiative (see section 4.2.2), the role of the individual was clearly highlighted as a key enabler of KE. A repeated theme in the literature was the role of the individual academic as independent, autonomous, and highly skilled professional (Perkmann *et al.,* 2013; Thune *et al.,* 2016). The Perkmann *et al* (2013) study found that there was no real correlation between academic engagement and quality of institution, and that by far the most important factors were individual characteristics (age, gender, and subject specialism). A barrier to engagement was the lack of prior experience or knowing 'how to talk to industry' of the individual academic (Reichenfeld, 2011). While much of the literature focused on *researcher* engagement there was evidence that: younger academics, those earlier in their career, those focussed on a teaching mission, or those working in a teaching-focussed HEI were more likely to be positive about the KE mission (Freel, Persaud and Chamberlin, 2019). Similarly, while a range of factors encouraged business to engage, a key was access to individual academics' expertise (Fender, 2010). Not all academics engaged equally (Huggins, 2020), with evidence of some entrenched anti-KE mission sentiment limiting engagement (Freel, Persaud and Chamberlin, 2019). Motivations for individual academics to engage included: access to new ideas, research funds, access to industry skills and facilities, and keeping abreast of industry challenges (Perkmann *et al.,* 2013). Understanding the societal impact from commercialisation and KE, rather than just profit, was a way to resolve potential tensions between academics and businesses, thereby supporting engagement (Fini *et al.,* 2018). Short term outcomes like profit from spin-outs or licensing did not align with academic interest (Fini *et al.,* 2018) and this explains why most academic-industry engagement fell into other categories of KE activity. What was drawn from the literature on academic engagement was that a focus on the individual, rather than organisational structures, would be more likely to support a positive change in performance in KE for UWL. A clear design parameter for the research project would therefore be how to engage individual academics; to motivate them to *choose* to engage with KE.

4.2.5   *Conclusions on KE as a basis of competition*
In a changing context of how universities compare themselves to peers, KE had the potential to move from being merely an element within other bases of competition (income size, employability, research etc) to be a basis of competition itself. Drawing on a wider definition of KE it was therefore reasonable to assume for this research that enhancing KE could result in a comparative competitive advantage. This raised the importance of individual academic engagement as being key to increasing KE activity. This then led to a question of whether the Covin and Slevin's (1991) entrepreneurial orientation model offered an approach that could enhance KE performance comparative to other HEIs.

4.3 Entrepreneurial orientation and the HE-sector

In considering the Covin and Slevin (1991) entrepreneurial orientation (EO) model, general critiques of the model and then its relevance for the HE-sector were reviewed.

4.3.1 Critiques of the Entrepreneurial orientation model

As described in Section 3.2, Covin and Slevin (1991) conceptualised entrepreneurship as an organisational behaviour, or posture, positively related to organisational performance. This orientation reflects external, strategic, and internal variables for the organisation and the environment it operates within. Collectively, these variables influence an organisational willingness and ability to innovate and be entrepreneurial, it's entrepreneurial orientation (EO). This entrepreneurial orientation model, originated by Covin and Slevin (1991) as Entrepreneurial Posture, was not without critique. Zahra (1993) argued that Covin and Slevin did not specify the nature of Entrepreneurial Posture; underestimated the contribution of informal firm-level enterprise; and did not account for the duration of different components of firm-level enterprise. Zahra (1993) raised several specific criticisms of the Covin and Slevin (1991) model. First, the model was ambiguous on managerial philosophy and organisational culture, but recognised the literature was 'messy' in this area. Second, that the model described conditions leading to higher entrepreneurial activities, and so performance. This made the model descriptive rather than predictive. Third, the model suggested a link between organisation entrepreneurship and financial performance. Covin and Slevin (1991) claimed EO can influence a multitude of financial performance indicators, but accepted empirical evidence for that view was light. This made the model conceptual, not empirical. Fourth, it was difficult to isolate the implications for financial performance of EO. Fifth, entrepreneurial activity is not always successful, so not necessarily leading to improvement in growth or productivity. Finally, Zahra raised the non-financial benefits and impacts that could be outcomes of increased EO: employees' motivation and task involvement, staff retention, positive organisational culture, and integrating employee and organisation's needs. However, Zahra acknowledged that these benefits were also conceptual and not well documented.

These critiques of the approach (re-orientating organisational culture to enterprise) did not necessarily mean that the approach had no value. Zahra (1993) suggested some extension of the model; an amendment rather than an outright rejection. He recognised the model was grounded in good theory and past empirical research, but was incomplete. Therefore, *conceptually* changing from a conservative culture to an entrepreneurial culture should foster enhanced innovation, and in doing so raise business performance. Zahra (1993) recognised that further research in this area was needed to provide empirical evidence to support the conceptual model. Wiklund and Shepherd's (2011) research suggested organisations with higher EO tended to be more successful. Generally, several factors seem to moderate the effect of EO (Freixanet *et al.,* 2020) but research has produced increasing empirical evidence for an EO-performance relationship (Ferreira *et al.,* 2021). The focus of the EO model was rooted in a business environment, which raised a need to understand if the model was applicable to the HE-sector.

4.3.2 Entrepreneurial orientation in the HE-sector

Much of the literature looking at entrepreneurial orientation (EO) in the context of Higher Education, did so from perspectives other than the organisation's own EO. The predominant focus of articles on EO in HEIs related to EO of students. Others focused on: the EO of firms and the relationship to

likelihood of engaging with HEIs; the EO of university spin-out companies; or the EO of individual academics rather than *organisational* EO. Of the literature focusing on HEI EO, a limited number of articles related explicitly to the UK context. Nonetheless, they raised dimensions of HEI EO that can be applied to the UK setting or had relevance for this research project.

A theme in the literature was the 'Entrepreneurial University', an HEI which independently seeks to innovate the way they conduct business, changing their organisational character to be more enterprise-focussed (Clark, 1998). Typically, an Entrepreneurial University embraced the relationship between university, state, and business that constituted the Triple Helix model (Alfalih and Ragmoun, 2020). Much of the literature assumed performance benefits from being an Entrepreneurial University (mostly cultural and economic impact) but did not define them. The definition of an Entrepreneurial University automatically implied benefits through the introduction of new services that generated new characteristics and functions for the HEI to enhance local, regional, and economic environment. A range of means to measure whether an HEI was entrepreneurial were evident in the literature, including: content analysis of letters written by HEI leaders to establish their entrepreneurial orientation (Balasubramanian, Yang and Tello, 2015); understanding the relationship with commercialisation of IP and regional business development outcomes (Balasubramanian, Yang and Tello, 2020); use of the Corporate Cooperation Index which looks at citation of HEI research in corporate research papers (Tijssen, 2006); and the relationship between the Research Cooperation Index (co-authored research publications) and patents of the citing HEI (Tijssen, 2006). In a study on Saudi Arabian HEIs, multiple approaches were used, including the Entrepreneurial University Index developed by the Organisation for Economic Co-operation and Development (OECD) (Alfalih and Ragmoun, 2020). The OECD Entrepreneurial University Index (OECD, 2012) used a self-assessment toolkit looking at: leadership and governance; organisational capacity; people and incentives; entrepreneurship development in teaching and learning; pathways for entrepreneurs; external relationships for Knowledge Exchange; the Entrepreneurial University as an internationalised institution; and measuring the impact of the Entrepreneurial University. This approach was a top-down view of the organisation on whether it fit a definition of being an Entrepreneurial University or not. An *aspiration* to be seen as an Entrepreneurial University could therefore influence self-evaluation scores of senior leaders.

One of the most frequently used ways of measuring whether an HEI was an Entrepreneurial University was the adaptation of entrepreneurial orientation measures for the HE-sector. The focus on EO-performance links has given rise to debate on how to determine what an organisation's EO is. A challenge was different conceptual models of EO, and that any measure needed to align to a particular concept (Covin and Wales, 2012). For example, Miller (1983) saw EO as simultaneous exhibition of high levels of risk taking, innovativeness, and proactiveness, meaning a measure of EO would need to look at those three dimensions. The Lumpkin and Dess (1996) concept would mean risk taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy would be the distinct constructs that need to be measured. The ENTRE-U scale (Todorovic, McNaughton and Guild, 2011) was a HEI-specific tool developed from previous models of EO measurement and has been used by researchers to understand HEI EO, such as: Kalar and Antoncic (2015), Riviezzo (2014), Riviezzo *et al* (2019), and Todorovic, McNaughton and Guild (2011). Originally aimed for completion by Department Heads, this raised similar challenges as other self-evaluation approaches concerning a top-down view. Kalar and Antoncic (2015) adapted the tool to understand an HEI's EO and the relationship to

individual academic's engagement in KE activities. This presented a way of measuring EO that aligned with the prime role of the individual academic in KE performance (Fini *et al*., 2018; Freel *et al*., 2019; Perkmann *et al*., 2013; Reichenfeld, 2011; Thune *et al*., 2016).

As with the general EO literature, the relationship to performance was highlighted. However, a number of articles did not attempt to make any link between EO and HEI performance (Alfalih and Ragmoun, 2020; Balasubramanian, Yang and Tello, 2020; Cvijić *et al.,* 2019) or looked at individual academic's motivation to engage based on organisational EO (Hakala, 2009; Meilani and Ginting, 2018). In Cvijić *et al* (2019), the data on Technology Transfer outcomes was acknowledged as lacking for Serbia, and noted that Serbian HEIs did not generally have TTOs, so less well-defined links to 'off campus activities' were used which made links to HEI performance difficult. There was a focus in many articles on EO as a predictor of commercialisation such as patent and spin-out (Boardman and Ponomariov, 2009; Cvijić *et al.,* 2019; Kalar and Antoncic, 2015; Riviezzo *et al.,* 2019; Tijssen, 2006; Todorovic, McNaughton and Guild, 2011; Van Looy *et al.,* 2011). This narrow view of performance echoes the narrow view of KE frequently found in academic literature. However, a criticism of the literature identified was that very little was UK-based. Despite that, some conclusions can be drawn on potential relationships between EO and HEI performance.

Links between EO and performance have been explored in relation to research and the EO of senior leaders. The narrow focus on types of KE activity was extended to contract research in a pan-European study across 105 European HEIs including five UK HEIs: Queens University Belfast; University of Surrey; University of Glasgow, University of Oxford, and University of Warwick (Van Looy *et al.,* 2011). All five were Russell Group or research-focussed institutions, so were not particularly representative of the wider UK HE-sector. Van Looy *et al* (2011) found a positive relationship between EO and patent and contract research, but not for spin-out activity. Hormiga *et al* (2017) found a mixed picture regarding links between EO and performance which was defined as research output. The relationship between EO of senior leaders and the self-reported impact on regional business development outcomes (Balasubramanian, Yang and Tello, 2020) provided insight into another perspective on performance. Their study found a positive link between EO with performance and HE rankings. However, this was a study based solely on US institutions. Similarly, another US survey of Academic Deans found a correlation with self-reported entrepreneurial characteristics and KE aspects of income generation: continuing education, IP, and funding for research centres (Cleverley-Thompson, 2016). While only indicative, this link between EO and performance in the literature provided some conceptual basis to underpin this research.

A further dimension of the EO and performance relationship was the use of the ENTRE-U scale. Despite the focus on ENTRE-U on EO as a predictor of narrow commercialisation performance, some academics have employed the tool to look at broader KE performance. Riviezzo (2014) used the ENTRE-U scale to understand correlations between EO and *perceived* performance, in 103 Italian HEIs. Using *perceived* performance was a very subjective measure, and therefore limited for supporting competitive comparisons. Kalar and Antoncic (2015) looked at academic engagement in entrepreneurial activities: patents, licensing agreements, business activity, collaboration, contract research, industry interactions, industry-sponsored workshops or meetings, and applied research. They found that high EO (measured using ENTRE-U) meant more engagement and less likelihood of seeing technology and knowledge transfer as 'harmful' to academic science. While supportive of the

planned approach for this research, it should be noted their findings were based on a limited study of four European universities, of which only University of Oxford was based in the UK.

Generally, the literature indicated a view that EO was supportive of narrow views of KE performance and that the model was appropriate for the HE-sector. It suggested both a positive relationship between EO and HEI performance and that smaller HEIs (such as UWL) would find it easier to harness their resources in entrepreneurial ways than larger ones (Balasubramanian, Yang and Tello, 2020). Furthermore, the literature highlighted the prime role of the individual academic. Kalar (2020) identified that beyond organisational structures, it was the creativity of individual academics that was central to academic-engagement. This echoed the literature that identified that it was individual academics' choice, as autonomous and highly skilled professionals (Perkmann *et al.,* 2013; Thune *et al.,* 2016), that was key to KE performance (Fini *et al*., 2018; Freel *et al*., 2019; Perkmann *et al*., 2013; Reichenfeld, 2011; Thune *et al*., 2016).

4.3.3   Conclusions on entrepreneurial orientation

In conclusion, the entrepreneurial orientation model appeared appropriate as a basis for enhancing KE aspects of performance within this project. This led to a consideration of how the EO model could inform performance enhancement, through the mediating effect of culture change indicated by the conceptual theory-of-change for the project. However, understanding the role EO could play highlighted the importance of motivating individual academics to engage. This was a key dimension to improving performance that would need to be embedded in the research project design.

4.4   Organisational culture and HE culture

Having established that the EO model provided a conceptual approach to enhancing comparative performance, in Chapter 3 I identified that the key variable to be addressed from the EO model was organisational culture. This required an understanding of organisational culture, and whether any specific features of the culture of HEIs needed to be considered.

4.4.1   Organisational culture

There was debate regarding whether it is possible to talk of corporate culture in the same way we talk of a particular *ethnic* culture (Buchanan and Huczynski, 2010). However, seeing an organisation as a unique culture emphasised the "*customs and traditions, stories and myths, artefacts and symbols*" of the organisation (Hatch, 1997, p54) and was a way of understanding what an organisation is. For this project, culture represented *what* would be changed to achieve performance enhancement.

Edgar Schein developed an influential theory of organisational culture, in which he saw culture existing on three levels: artefacts (surface level); values and behavioural norms; and core beliefs at the deepest level (Schein, 1984; Schein, 2010). Schein's view moved away from models of culture as 'the way things are done' (Deal and Kennedy, 2000); or a collective programming of the mind (Hofstede, 1980). Organisational culture is not static, and cannot simply be 'the way things are' (Senge, 2006). It is the basic assumptions and core beliefs that is the essence of organisational culture (Schein, 2010). While these may drive artefacts to the surface, Schein's view allowed for artefacts to transform the values and assumptions that created them (Hatch, 1997). This theoretical ability to transform provided an

academic underpinning for the potential for organisational culture change, key to this project. To explore this further the nature of organisational culture needed to be considered.

There were two alternative perspectives of organisational culture that were considered: the first that a culture is something an organisation *has*, and the second that a culture is something an organisation *is* (Buchanan and Huczynski, 2010). The first was a functionalist perspective that sees culture as a feature of an organisation: with a set of artefacts, values and meanings that can be measured; is acquired by employees; and so is a lever for senior managers to use (Smircich, 1983). This would imply the potential for cultural change programmes to succeed and therefore influence EO. The second perspective was that culture is a subjective reality consisting of rites, rituals, and meanings (Buchanan and Huczynski, 2010). In this social constructionist view, culture only exists through social interactions and cannot be manipulated by management. However, as managers are *also* part of that organisation's social interaction, it implied that they too could influence it. In this second view the mechanism of culture change is therefore a change in shared understanding, and in collective changes to organisational rites, rituals, and meaning. This still allowed for a culture to change, not by top-down managerial control but by building consensus. Having accepted that the individual autonomous academic was key to KE performance (Fini *et al.*, 2018; Freel *et al.*, 2019; Perkmann *et al.*, 2013; Reichenfeld, 2011; Thune *et al.*, 2016) it followed that taking individual perspectives of culture into account needed to be present in the project design.

A final consideration was that an organisational culture may not be a single entity, but rather a collection of sub-cultures driven by ways in which organisation members distinguish themselves such as profession, location, age, or seniority (Parker, 2000), and for academia also by subject specialism. This fragmented state of conflict between sub-cultures arguably challenges the very notion that a single organisation culture exists (Becker, 1982). This raised a real challenge for this project: change could simply be creating a new sub-culture. However, if there are multiple cultures at work, a broad participant-base could gain a view *across* sub-cultures. This left open the possibility for the development of a strong sub-culture, displaying higher entrepreneurial orientation, still being able to influence overall organisational performance. In this way, questions over the nature of culture or sub-culture did not undermine the conceptual theory-of-change. Organisational culture change could, therefore, provide a means by which EO could be changed. This raised the need to understand the nature of HE-culture and if this still held true.

4.4.2   HEI culture

The literature on HE organisational culture tended to draw heavily on general theories of culture outlined above, but frequently highlighted complexity, collegiality, and academic autonomy as key aspects. In recognising the role of culture within universities, many authors started with presenting the importance of organisational culture generally. Examples of this can be found in the opening paragraphs of work by Tierney (1988), Sporn (1996), Kezar and Eckel (2002), and Deem, DeLotell and Kelly (2015). Sporn (1996) argued that most authors agree on the influence of culture on academic institutions but were uncertain on how university culture functioned.

The literature consistently highlighted the complexity of the HE-sector as an important factor in understanding HE culture, both globally and in the UK specifically. Sporn (1996) argued that universities are complex organisations with unique features: they often have ambivalent goals including teaching, research and providing a range of other services (such as consultancy); they are

people oriented with multiple different stakeholder groups; they have difficulty defining goal attainment as there is not one single standard given the complexity and diversity of activity; they have professionals (academics) with a strong wish for autonomy and freedom, making decision making processes complicated; and they are subject to environmental change.

An aspect of this complexity was the diversity of stakeholders within an individual institution. These diverse interests, or subcultures, within HE institutions (for example, professors and associate professors, university administration.) can have differing values, attitudes, and beliefs (Sporn, 1996), in essence creating differing constructions of the organisation and its culture. Another key aspect of university culture, and its complexity, was academic autonomy and collegiality. The role of autonomy and freedom had already been highlighted as a key part of the context of this research project (see Chapter 2). This autonomy could both support or hinder the ability to facilitate academics to be more enterprising (Rae, Gee and Moon, 2009). As academics have discretion and autonomy to pursue research and professional interests (Rae, Gee and Moon, 2009), change to a more entrepreneurial way of working is not necessarily something that can be imposed. Academic resistance to managerialism (Anderson, 2008; Bristow *et al*., 2017; Jones, 2021; Siltaloppi *et al*., 2019) required engagement and a change to cultural outlook regarding KE. A key challenge to enhancing KE has been that academics frequently mistrust or are suspicious of commercial activity (Birds, 2014), and see it as counter-cultural. The role of enterprising academic can be often overlooked and not culturally valued, especially in research-intensive institutions (Rae, Gee and Moon, 2009). Working within the prevailing academic culture means a role of leadership is to engage in collegial dialogue and to prioritise relational working to effect change (Giles and Yates, 2011). For this project, this again raised the need engage individual academics, as autonomous and highly skilled professionals (Perkmann *et al.,* 2013; Thune *et al.,* 2016).

The notion of an a*cademic culture* implied homogeneity across institutions, however evidence of the link between organisational culture and success in universities also supported the view that different organisational cultures exist in the HE-sector (Deem, DeLotell and Kelly, 2015). This view has led to ways to try and categorise types of university culture, including Baldridge's bureaucratic or political view, Cohen and March's view of universities as anarchies, and finally Mintzberg's categorization of universities as 'expertocracies' (Sporn, 1996). One early approach was developed by Tierney (1988), who identified six key factors in individual organisational culture: environment, mission, socialisation, information, strategy, and leadership. This approach saw these factors as elements that can be used to *change* culture, but did not necessarily recognise the social construction of what organisational culture *is* through shared value and assumptions (Schein, 1984; Schein, 2010). Further, this approach was within a scholarly or collegial understanding of the role of universities as a public good (Jameson, 2012), at odds with the changing governmental view of HEIs purpose as driving economic growth. Tierney's (2016) revisiting of John Henry Newman's 1852 treatise on 'the idea of a university' explored a modern meaning for universities. In doing so he provided a broad argument for 'academic life' or some overarching cultural meaning for what a university *is*. Tierney's view could be seen in part as a reaction to, or against, changes in the view of what universities should be. Of relevance for this research was one of these external forces for such change: the increased focus on entrepreneurship and Enterprise as key to what a university should be (Feldmann, 2014). Tierney's later approach (2016) seemed to reflect a view of a high degree of commonality between institutions within the HE-sector, which was less helpful when considering a change to a *specific* institutional culture rather than to

academic culture. Tierney's view was also unrealistic given the breadth of HEIs and their varied missions and approaches.

Other approaches to categorising HEIs include that of Bergquist (1992) who identified four cultural archetypes for HE institutions: collegial, managerial, developmental, and negotiating. This was further extended to include virtual and tangible cultures (Bergquist and Pawlak, 2008). These culture types highlighted a range of values that underpin types of culture: collegiality and shared decision making; organisation mission and fiscal responsibility; professional development and growth; or equitable and egalitarian approaches to manage diversity of interest (Kezar and Eckel, 2002). However, most HEIs demonstrated some aspect of each of these typologies (Park, 1992), making them a useful lens to look at culture, but one that can mask the individual complexity within that organisation (Kezar and Eckel, 2002). Kezar and Eckel (2002) used Bergquist's (1992) typology of HE-culture and Tierney's (1988) six factors of institutional culture, and attempted to show the links to strategy for change. Looking at the evidence of the links between organisational culture and change Kezar and Eckel (2002) argued for the need to work *with* a prevailing culture for change to be effective. It therefore meant that the project needed to look at UWL culture more closely, to understand how to work *with* that culture to change its entrepreneurial orientation.

4.5   Effecting organisational change

Change was central to this project; both in terms of the internal variable being changed (culture) and the strategic variables need to drive a change in Entrepreneurial Posture. Therefore, locating the project and research within theory for successful change was important.

4.5.1   *Perspectives on organisational change*

Organisational change has been a prominent part of organisational theory: from stability-centred to change-centred views of organisations (Hatch, 1997). There are several models of change that seek to understand how positive organisational change can be *managed,* as the key is not to understand *why* organisations change but *how* this can be deliberately achieved. Hatch (1997) identified six main perspectives on organisational change that were reviewed for relevance for this project: Lewin's change model (Lewin, 1947), the Big Three Model (Kanter, Stein and Jick, 1992), Gagliardi's culture change model (Gagliardi, 1986), Dynamics of Organisational Culture model (Hatch, 1993), the post-modernist perspective (Foucault, 1982), and change through dialogue (Senge, 2006). While no single model provided a blueprint for change, each model highlighted relevant considerations for this project and will be discussed in turn below.

Lewin's 'Unfreeze, change, refreeze' model saw the structural properties of organisations as existing in the *relations* between societal elements: groups and individuals (Lewin, 1947). For Lewin, organisations existed in a state of stalemate between forces for and against change. By 'unfreezing', this equilibrium is unbalanced and allows for change to occur, and by 'refreezing' a new equilibrium is established. The middle 'change' element can be influenced by a range of strategies, such as training, altering reporting arrangements, or introducing new styles of management. This view of change allowed for a clear role for managerial influence in creating change, and recognised the need to embed any changes into the organisation in order for them to be part of a new equilibrium. This model of change highlighted the need for any change to become embedded within UWL if it was to be

considered a *stable* part of culture, leading to sustained changes to EO and consequently in UWL performance.

For the Big Three Model, change was multidirectional and more-or-less continuous, rather than *driven* by managers, and so needed to be harnessed and provoked (Kanter, Stein and Jick, 1992). Critiquing Lewin's model as too linear and static, they saw change driven by macroevolutionary (from the behaviours of other organisations, competition for resources), microevolutionary (relating to the organisation itself, such as age, growth, or decline) and political forces (internal struggles for power or influence). Rather than a single agent of change, they saw change as embedded in the forms these macroevolutionary, microevolutionary, and political forces take within the organisation. For this project, this highlighted the role of KE's importance at a sector or environmental level; the role of organisation levers to provoke or encourage engagement with KE; and the recurring focus on the role of the individual academic in effecting the planned change. The project therefore needed to ensure that engagement and academic *choice* to engage was central to the approach.

Schein's view that culture is assumption, value, and artefact (Schein, 1984; Schein, 2010), was developed further by theorists such as Gagliardi, who saw this extending to *organisational* culture (Hatch, 1997). Gagliardi separated strategy and culture, arguing different strategic activities will have different effects on organisational culture. He argued organisational change comes about in three ways: apparent change, revolutionary change, and cultural incrementalism (Gagliardi, 1986). Apparent change occurs *within* an organisational culture, but without changing it. This arises from, new problems being addressed using existing assumptions, values, and the *primary strategy* of organisation to protecting their organisational identity. Revolutionary change is incompatible with the cultural assumptions and values and is imposed. This is usually through the entry of new people to the organisation with significant power or control; effectively changing to a new organisation culture. Cultural incrementalism sees the assumptions and values stretched to include new ones, which if successful become incorporated alongside the old ones. If the new strategy is a success, then the change it brings about will be incorporated into the organisation's assumptions about itself. The success will be celebrated in organisational storytelling and myth-making. Of these therefore, cultural incrementalism was of most interest to this project. This model highlighted the potential that as long as enhanced performance was *achieved*, and *perceived* to be related to cultural changes that increased EO, those changes to UWL culture could be embedded.

Hatch's (1993) Dynamics of Organisational Culture model focused on the processes that link assumptions, values, and artefacts of culture, and saw *management-driven* change as occurring where the interpretation of a manager's action produces a change in those assumptions, values, or artefacts. Like Gagliadi's (1986) model, Hatch built on Shein's theory of culture as assumption, values, and artifacts (Schein, 1984; Schein, 2010). For Hatch it was the processes that link assumptions, values, and artefacts that were more important. Artifacts and symbols of organisational culture are created in the context of organisational assumptions and values through four processes: organisational assumptions are *manifested* in values; values are *realized* in artifacts; artefacts gain organisational meaning through *symbolisation*; and the *interpretation* of those symbols affects organisational assumptions. This model allowed for a dynamic change as these processes are continuously happening. For change to occur there needed to be a mechanism for ensuring awareness of the *symbolic* nature of my actions as senior manager (as well as researcher) and of other participating

managers' actions. If interpreted consistently, this held the potential for changes in the assumptions and values that formed part of UWL culture.

Drawing from the work of Foucault, the Postmodernist view of organisational change argued that in a socially constructed world responsibility for the organisation was with those who construct it, locating power not in individuals but in the social collective (Hatch, 1997). It is the collective use of power in new and critical ways to innovate that creates new realities or change (Foucault, 1982). Change can occur through either domination, which included use of rhetoric to convince others to change; or more democratic forces facilitated by free and open debate. The democratic approach recognised power still existed, but seeks to use it in critical and more innovative ways to create new possibilities. Given the autonomy of academics to choose, and the success of KE being dependent on individuals, a domination approach to change would have been counter intuitive. For this project, this understanding of change through domination or democracy indicated that a collaborative approach would need to be taken to effect change, to construct a new view of the organisation that would be more entrepreneurial.

Senge (2006) took the Postmodernist argument further by recognising the role of language or dialogue in the creation of reality. This focus on discourse allowed individuals to transcend their own limitations and empower new ideas (and change). Seeing organisations as living systems that have the potential to learn, evolve and heal themselves allowed successful organisational change to occur through conversation or dialogue within a reflective work environment (Senge, 2006). This highlighted the central role of conversation and narrative in effecting change. This further reinforcing the role of the individual and of collaborative activity in the creation of that narrative, and by extension as a key parameter for the research design.

These perspectives on organisational change provided different lenses on what makes change successful. While each highlighted important factors that needed to be considered, no single model was sufficient to act as a template for managing this cultural change project: given the topic of organisational change was one where theorising about organisations was highly context-driven, and fragile and temporal in nature (Hatch, 1997).

4.5.2   Organisational power and change

The conceptual possibility of culture change highlighted the role of power, implicitly in the enforcing or directing change and in the ability to influence. Differing interests are built into organisations (Hatch, 1997) which introduce power and politics into decision-making processes. Organisational politics arises from the acquisition, development, and use of power in order to influence decision-making (Pfeffer, 1981). Pfeffer saw organisations as fundamentally political (Hatch, 1997), and that to ignore the role of power is to ignore that the skills to *get things done* are as important as the skills of understanding *what to do* (Pfeffer, 1992). Power is the extent to which one social actor can get another social actor to do something they otherwise would not do (Dahl, 2013), which implies that power exists within the relationships *between* social actors rather than within the actors themselves (Hatch, 1997). Recognising the role of power, and how it is used, is a key element that leaders must understand if they are to lead change and lead the organisational narrative that underpins culture. For Senge this was seen as 'working in the language' of senior managers (Senge, 2006). Of relevance to this project, was that it was seeking to change culture in the face of competing or differing interests, including more traditional research- or teaching-focuses. As academics have discretion and autonomy

(Rae, Gee and Moon, 2009), this allowed resistance to managerialism (Anderson, 2008; Bristow *et al.*, 2017; Jones, 2021; Siltaloppi *et al.*, 2019) requiring active choice to engage with KE. This gave the academic community, and individual academics, a degree of organisational power within this project. Understanding the role of power and politics to accomplish innovation and change required the skill to develop power, as well as a willingness to use that power (Pfeffer, 1992). The corollary of power is powerlessness; defined as an ingrained belief in our own inability to change, that limits our ability to create the reality we want (Senge, 2006). There is a 'structural conflict' between the creative tension that drives us towards our vision, and our sense of powerlessness or unworthiness that holds us back (Fritz, 1989). To achieve its aims and objectives this project needed to address both use of power in a positive way, and empowering other stakeholders to effect culture change. Again, the centrality of academic engagement and choice to the success of the research was noted.

4.5.3   *Conclusions on organisational culture*

Having a variety of stakeholders with diverse interests, or subcultures, within HEIs (professors and associate professors, university administration, etc.) meant a range of differing values, attitudes, and beliefs (Sporn, 1996), in essence creating differing constructions of the organisation and its culture. The existence of multiple cultures or sub-cultures in HE reinforced the need to understand the varied social constructions of culture in HE environments, such as UWL, to be able to affect change (Baughan, 2012). In relation to this research, these subcultures could have had an explicit effect on the ability to increase entrepreneurialism in an HEI, either to support or to hinder its development (Rasmussen, Mosey and Wright, 2014) and so this research needed to pay careful attention to engaging these varied stakeholders. The various approaches to understanding culture and organisation change contributed to parameters that needed to be addressed by the research design, which needed to:

1. build on and *with* the prevailing UWL culture;
2. take a collaborative approach to create and embed change (to embed change by ensuring stakeholder engagement and the development of a shared language and dialogue);
3. harness individual academic autonomy and choice (to reflect the central role of the individual academic as an autonomous professional with choice to engage in KE).

4.6   Conclusion on discussions raised by the theory-of-change

In Chapter 3, a conceptual theory-of-change was described, based on a logical sequence that the research project should have a range of measurable outputs arising from specific activities to influence culture and to implement changes to KE mission, policy, and practice. This was to lead to a change the culture that would increase entrepreneurial orientation, and in turn improve UWL performance. This conceptual theory-of-change for the project raised a number of questions on: the nature of competition and specifically competition between HEIs; the nature of KE and if it can be a basis for competition between HEIs; the relevance of the EO model for enhancing performance in the HE-sector; organisational culture as the key variable to change; how to effect change, and cultural change; and how to measure change. Exploration of the literature demonstrated that KE could be the basis of competitive comparison in the HE-sector. It highlighted that this would require using a broad definition of KE to align with more than just a research frame of view. It demonstrated that both the EO model was a suitable approach for the HE-sector and had the potential to influence performance.

Culture change was shown to be a viable mediating factor to change EO and raised clear parameters that needed to be considered in the approach needed for the project to achieve its integrated research and business aims. First that any change would need to build on and *with* the prevailing culture. Second, any change needed to be embedded by ensuring stakeholder engagement, a collaborative approach, and the development of a shared language and dialogue. Third, the role of the individual academic as an autonomous professional with choice to engage in KE had to be central. Finally, the project needed to include appropriate measures to understand, within the conceptual theory-of-change, both the intended outcomes and outputs *and* the causal links between culture change, entrepreneurial orientation, and ultimate organisational performance improvement.

5 Research methodology and approach

In Chapter 3 I defined the purpose of this project to improve UWL's performance in KE, as a focus for improving organisational performance. The three aims of the project were introduced: the *business* aim to enhance business performance, through seeking to increase entrepreneurial orientation; the *research* aim to explore cultural change as a means of delivering business improvement; and the *integrative* aim to find an approach to undertaking *both* business and research aims and objectives in an integrated way. This implied that the most appropriate research approach was not simply to *understand* or *observe* that change, but to be instrumental in achieving that change. In Chapter 4 I explored a range of underpinning theory and concepts that demonstrated the design of the research needed to fit with the following four design parameters:

1. build on and *with* the prevailing UWL culture;
2. take a collaborative approach to create and embed change;
3. harness individual academic autonomy and choice;
4. include appropriate measures to understand causal links between culture change, entrepreneurial orientation, and organisational performance improvement.

Chapter 5 describes how my personal constructivist viewpoint, and these four design parameters, were used to review a range of different research approaches to meet the three aims. These then informed my decision on the most suitable research approach.

5.1 Personal, ontological and epistemological perspectives

Alongside the need to consider the four design parameters to meet the business, research and integrative aims of the project, the research approach also needed a methodology that would take into consideration my personal roles within the project. These roles were: an employee of the organisation at the heart of the research; a manager with a degree of power and authority; and the Principal Investigator. It was impossible to separate myself out from being *part* of any socially constructed meaning of the organisation, its culture, and any change. Therefore, any approach needed to be sympathetic to these interrelated roles.

There was also a need for alignment with my ontological position: that organisations are social constructs created to meet some intended purpose (Coghlan and Brannick, 2014). The expression of organisational culture is through artefacts of that culture reflecting the underlying values and shared assumptions (Schein, 1984; Schein, 2010). To address the first three design parameters, it was therefore logical for me to follow a constructivist position which holds that there is not an objective truth: rather reality and meaning are created by interaction. In this case, the stakeholders in UWL would construct the social meaning of the organisation through both their interpretation and through action based on that interpretation (Huberman and Miles, 2002). The type of research approach therefore needed to engage stakeholders in creating new social meaning around the culture and entrepreneurial orientation of the organisation.

My epistemological perspective, or understanding of '*what it is to know*' (Gray, 2014), could be most closely described as interpretivism, which sees the researcher as part of the research, *interpreting*

rather than measuring what they observe. This was in contrast to positivism, which had an underlying idea that the world is external to the researcher and therefore *can* be measured directly. Closely linked to constructivism, interpretivism often deals with the actions of individuals (Gray, 2014). Such a constructivist and interpretivist approach acknowledged that there are multiple perspectives and meanings arising from member's (UWL staff) interpretations of the organisation (UWL), requiring an approach that actively sought wider views and perspectives. The links between aspects of performance that could be enhanced by the research project, and the mechanism by which this could happen, were convoluted. For this project, understanding these links would largely be a process of constructing shared organisational meaning, rather than proving statistical relationships between variables. This further reinforced the need to reflect a collaborative approach in the project design.

5.2   Methodological approach

In considering the business, research, and integrative aims, the two overarching approaches to research that could be considered were *Quantitative* and *Qualitative*. Table 4 below, adapted from Neuman (2014), shows the main differences between qualitative and qualitative approaches to research, and how these influenced a decision about overarching methodological choice for the planned project.

QUANTITATIVE STYLE	QUALITATIVE STYLE	FIT TO PROJECT
Measure objective facts	Construct social reality and cultural meaning	While organisational performance can be quantified and perceived as measurable 'facts', the need to link this to culture change meant the project had to take into consideration the social construction of culture. For this project, the raw data on aspects of performance was less important than understanding that data within the social context (both organisationally and sector).
Focus on variable	Focus on interactive processes and events	As a culture change project, the focus had to be on the individuals and how they interacted to construct meaning and cultural change.
Reliability is key	Authenticity is key	Culture is individual to the organisation, and therefore the research needed to be authentic to that individual culture, rather than designed solely around being an approach replicable in other settings (*reliable*), notwithstanding the approach could be replicated in other organisations.
Value free	Values are present and explicit	Both the analysis of performance and the understanding of the role of culture in performance meant perceptions, personal values and value judgements would need to be identified and acknowledged.
Independent of context	Situationally constrained	The specific organisational context was key to this project.
Many cases and subjects	Few cases or subjects	This research would be based on a specific organisation, therefore a single case or subject existed (accepting there could be divergence or differences between academic departments within the organisation).
Statistical analysis	Thematic analysis	While performance generated quantitative data for statistical analysis, it was unlikely to provide an understanding *how* the performance was changed. More specifically, it was unlikely to uncover understanding of themes in performance and links to culture change.

QUANTITATIVE STYLE	QUALITATIVE STYLE	FIT TO PROJECT
Researcher is detached	Researcher is involved	As a work-based project, with the PI holding a key institutional role relevant to the research, a 'detached researcher' approach was not possible.

Table 4: Quantitative versus qualitative style (adapted from Neuman (2014) page 16)

Table 4 demonstrates that the nature of the topic (culture change) meant the project would need to draw on a range of performance data and research participants (organisational members) personal perspectives to understand culture and culture change. This placed this research more in a qualitative rather than quantitative space. This led to a review of qualitative research methodologies that could be employed to deliver the combined business and research objectives. Reviewing five of the main methodologies did not identify a natural candidate; Phenomenology, Grounded Theory, Narrative research, ethnography, and case study approaches all seemed too static, in that they aimed to observe, review, or analyse data at a specified point in time. The challenge was not just conducting a research project but integrating a research project and business project to *create* culture-change. These approaches would have required a separate business project and then a research project to try and draw meaning out of any change. They also tended to be from a perspective of researcher as observer, creating dissonance with my role as both researcher *and* member of the organisation under research. These approaches would also have created potential dissonance between the business, research, and integrative aims, due to the need to engage stakeholders in the design, in making active choices to engage with KE and in constructing meaning, rather than simply observe them. The need was to ensure the research project would be *part* of the change.

It was clear a different approach was needed that allowed for a more experiential understanding of the process of change. A natural candidate was Action Research (AR). Action Research explicitly linked research and change within its approach. Hilary Bradbury, an AR scholar and practitioner, noted *"it's more satisfying for me to help create desired change, rather than merely observe life go by."* (cited in Brydon-Miller, Greenwood and Maguire, 2003, p20). Kurt Lewin introduced the term 'Action Research' when he sought to combine generation of theory with changing social systems, through the researcher acting on or in the social system (Lewin, 1946). His focus was on the need to find solutions to significant social problems that traditional (positivist) science was not achieving (Lewin, 1946; Lewin, 1947). Positivist science was deficient in its ability to generate new knowledge or to solve organisational problems because: he argued it treated people as objects of research, did not recognise their ability to reflect and generate knowledge as part of being 'researched', and did not take account of the fact the researcher cannot be separated from the act of research (Susman and Evered, 1978). Action Research was a means of correcting perceived issues with positivist science, with six key characteristics: being future oriented and dealing with practical concerns; being collaborative, recognising the interdependence of researcher and the organisation; implying a process that develops the organisation; generating theory grounded in action; recognising its results build on history and previous action; and being situational, understanding how participants define the present based on past situations (Susman and Evered, 1978). Action Research was designed to be cyclical, allowing for change over a longer period compared to a more static approach that observes change between two points in time. This presented a better fit for this project, allowing for potential observation of culture and performance change over time.

Action Research also addressed the 'double hurdles' of being both organisationally-relevant while also producing sound scholarship (Pettigrew, 2001). As such, an AR approach is concerned with making sense of organisational-experience and linking this to wider theoretical understanding, encompassing a wide range of 'ways of knowing' (Reason, 2006). Given that such understanding is socially constructed raised a question as to the fit between AR as a research approach and a constructivist ontology. Again, AR demonstrated a relevance for the need to consider multiple stakeholder perspectives in the construction of meaning.

> *"Action research challenges the claims of a positivistic view of knowledge which holds that in order to be credible, research must remain objective and value-free. Instead, we embrace the notion of knowledge as socially constructed and, recognizing that all research is embedded within a system of values and promotes some model of human interaction, we commit ourselves to a form of research which challenges unjust and undemocratic economic, social and political systems and practices"* (Brydon-Miller, Greenwood and Maguire, 2003, p11).

5.3 Action Research and fit with the project

Action Research was established as a viable approach to deliver the integrative project aim, and in doing so deliver the business and research aims. Eden and Huxam (cited in Checkland and Holwell, 1998) gave a range of characteristics of AR that were used to further evaluate the suitability of Action Research to this research project. These are detailed below, in Table 5, demonstrating the relationship to the project.

AR CHARACTERISTIC	FIT TO PROJECT
The researcher intends to change the organisation	A stated and fundamental purpose of this project
Seeks theory as an explicit concern	A clear fit to these characteristics arose from the research project being part of a programme of study (DBA) and the requirement to ensure that the research project underpinned an academic piece of work. These characteristics were reflected in the research programme devised.
Theory emerges from the data and initial theory	
Incremental and cyclical theory building	
Implications go beyond the specific situation	
Data and theory building in a way that should be explainable to others	
Data; theory exploration and development as part of reporting	
Reporting should acknowledge prescription and description	

Table 5: AR characteristics and fit to the research project (adapted from Checkland and Holwell, 1998)

These initial characteristics of AR by Eden and Huxam are necessary, but not sufficient for research validity. Checkland and Holwell (1998) provided three further characteristics for AR to be a valid approach to a particular research challenge. First, AR is used where other methods are not appropriate, which the review of other approaches in section 5.2 above seemed to corroborate. Second, triangulation should be used if possible. This aligned with the need to gather multiple perspectives over time and use a range of data to understand causal relationships between entrepreneurial orientation and organisational performance. Third, history and context should be given due weight, particularly relevant to individual academic autonomy being crucial, the specific and individual nature of UWL's organisational culture, and the external environment within which UWL was seeking comparative competitive performance. An AR approach was therefore the most likely

methodology for this project, but needed to be critically assessed in order to identify any potential issues with this approach.

Action Research as an approach is not without its criticism. First, AR was highly contextually bound, in that it operated in a collaborative way within the organisation that the researcher was seeking to change (Lewin, 1946). A criticism was that AR would produce little more than an anecdotal account and didn't necessarily tease out serious lessons learned (Checkland and Holwell, 1998), being so bound to a particular context that little of value could be extracted for other contexts. The research strategy, approach and tools may be generalisable, but the 'contingent' context results in challenges to making results generalisable beyond that context (Kock, 2004). The second criticism arose from the relationship between researcher and organisation. Action Research operated collaboratively with participants that are part of the organisation at the heart of the research (fitting design parameter 2, taking a collaborative approach to embed change). An AR approach required a relationship with the values of the organisation (fitting design parameter 1, building on and with prevailing UWL culture), as the inquiry process made research participants party to the change processes. This was unlikely to occur if the process was imposed on them (Noffke and Somekh, 2013) This reinforced the need to engage academics to change UWL culture (design parameter 3, harnessing individual autonomy and choice). The third criticism related to the time challenges of conducting AR, being unclear when the research needs to stop. Social phenomena are not homogenous through time, so when to stop AR can be arbitrary (Checkland and Holwell, 1998).

While providing an insight into AR as a methodology, these critiques did not present any specific challenges that meant AR could not be used to meet the four design parameters. The critiques of AR provided additional elements to be considered and mitigated in the design and *type* of AR used. Identifying Action Research as the most appropriate methodology raised a consideration of the *form* of AR to be used. Multiple approaches were considered as being AR (Herr and Anderson, 2015). What was common across these views was that AR was a form of inquiry that is done *with* or *by* 'insiders' to an organisation, rather than *to* or *on* them, aligning to my role as a researcher-practitioner within UWL.

5.4   Different forms of AR

A review of the forms of AR that could be employed was undertaken. Approaches based on early definitions of AR were discounted, as some of these were defined by the research agenda being set by those both inside and outside of the organisation at the heart of the research. This project was not intended to be an project intervention by an 'outsider'. These early models of AR, building on the work of Lewin (1946), also focussed on manipulating variables, taking a positivist stance (Herr and Anderson, 2015) which would not have had a methodologically sound fit to a constructivist approach. Forms of AR reviewed included: Participatory Action Research (PAR); Teacher-as-Researcher; Student PAR; and Action Science. Frequently, these approaches had an explicit or implicit assumption of the researcher as an outsider working with insiders, which did not reflect my role within both the research and organisation. This appeared to undermine traditional approaches to AR as being a coherent fit with the four design parameters arising from an understanding of key theory and concepts

underpinning the project: building on UWL culture; taking a collaborative approach; harnessing individual autonomy; and understanding causal links to performance.

The main criticism of these ways of delivering Action Research was that they took a problem-centric approach, seeking to 'diagnose' or identify a problem (Boyd and Bright, 2007). Indeed, the first use of the term AR was aligned with the word 'problem' in the article entitled: 'Action Research and Minority Problems' (Lewin, 1946). Boyd and Bright (2007) saw this underlying metaphor of the organisation being *sick* and needing *healing* as problematic because this paradigm: can produce scepticism; reinforces existing practice through triggering fear and resistance to change; and makes people more self-interested and concerned with their own survival. This limits potential change to what can be achieved through existing norms (Boyd and Bright, 2007), whereas culture change implies these norms must themselves be changed (Schein, 1984; Schein, 2010). This meant there was a potential dissonance between a traditional model of AR and this project. While contemporary views of traditional AR approaches raised the possibility of expressing research aims in positive ways (Bushe, 2010; Fitzgerald, Oliver and Hoxsey, 2010; Johnson, P. C., 2013), the underlying approach of traditional AR, and PAR as the primary form of AR, remained to identify a 'problem' to be solved, even if positively expressed. In this particular project, the culture of the organisation was predominantly focussed on the student experience: historically prioritising teaching activities. The purpose of the project (*using a research-based approach to improve organisational performance in Knowledge Exchange)* came with the explicit aim to increase KE activity, generate increased revenue, and diversify income streams. This could easily be seen as a managerial 'problem' and not a 'problem' for an academic concerned with meeting the myriad of targets around student experience (such as feedback deadlines, National Student Survey scores, and recruitment targets). Suspicion and mistrust of commercialism within the broader academic culture (Birds, 2014), would suggest enhanced commercial activity would not be seen as a priority and therefore the lack of it as not necessarily a 'problem'. If academics did not perceive the need for more KE activity as a problem, they would therefore be unlikely to be invested in finding 'solutions'. Furthermore, academics' previous choices to not engage in Enterprise or KE could easily be interpreted *as* the problem. They would be unlikely to use their discretion and autonomy to solve something that would implicitly define *them* as the problem. With a project seeking cultural change and to engage academics to exercise their professional autonomy to *choose* to engage in KE, the 'problem-solution' paradigm of forms of AR such as PAR (identifying a 'problem'; designing and implementing a 'solution'; and then evaluating if the problem has been removed) was not the most appropriate approach. While not detracting from the applicability of Action Research as a methodology, the specific form of AR needed to be more nuanced. Other approaches to AR needed to be considered, and Appreciative Inquiry (AI) emerged as an approach that offered the best fit to the project aims, a constructivist ontology, and the four design parameters.

5.5   Appreciative Inquiry

Appreciative Inquiry was frequently listed as a *form* of AR within the literature (Boyd and Bright, 2007; Coghlan and Brannick, 2014; Herr and Anderson, 2015; Mishra and Bhatnagar, 2012). With AR seen as an umbrella term for a range of research practices (Herr and Anderson, 2015), or a generic term for a range of approaches (Gray, 2014), this would allow AI to fit within this broad definition. Appreciative Inquiry is an approach that seeks to build on what is positive or affirmative about an organisation,

using a collaborative approach (Bright, Cooperrider and Galloway, 2006). The 4D model of AI (Bright, Cooperrider and Galloway, 2006) illustrated in Figure 7 below, has four distinct stages: *discover*, appreciating what gives life; *dream*, envisioning what might be; *design*, determining what will be; and *destiny/deliver*, planning and delivering what will be (Bright, Cooperrider and Galloway, 2006). This was a positive, and non-problem-centric, approach that set the scene for a successful organisational change outcome (Bush and Korrapati, 2004).
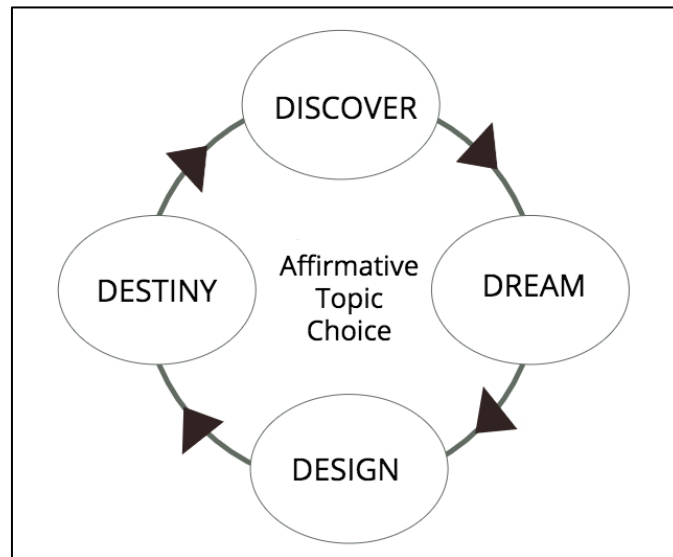
Figure 7: The 4D model of appreciative inquiry, adapted from Bright, Cooperrider and Galloway (2006)

The first task in AI is to establish what is being studied, or the Affirmative Topic, which is crucial as organisations move in the direction of what they focus on (Whitney and Trosten-Bloom, 2010). Topic choices should be: stated in the positive; something there is genuine curiosity about within the organisation; and move in the direction the group wants to (Cooperrider, Stavros and Whitney, 2008; Whitney and Trosten-Bloom, 2010). Following this, a choice of AI mode is needed, as there are a range of different ways AI can be deployed (Bushe, 2011; Whitney and Trosten-Bloom, 2010). Once a project has established the topic (the *Affirmative Topic*) and the specific AI approach, the research goes through 4 stages in the cycle. The first is the *discover* stage, where the primary task is to identify and appreciate "what is" (Cooperrider, Stavros and Whitney, 2008), to identify what works well in the in the organisation relative to the appreciative task. Frequently, this is conducted in the form of interviews with research participants based around identifying what is affirmative (affirmative interviews). This flows to the *dream* stage, where learning from what works well or is positive in the organisation (the *positive core*) is used to identify an ideal future state. The next stage is to identify how this dream can be achieved in the *design* stage. Finally, the *destiny/deliver* stage sees this design implemented. Theoretically, this then allows further *discovery* to emerge, either looking at where the organisation has moved to or other potential opportunities that developed from the implementation of change. Learning from the initial cycle, either from the specific project or from the process of using AI, allows continued development. In some cases, this can be through self-initiated implementation groups or through a conscious embedding of AI as an organisational tool for (Whitney and Trosten-Bloom, 2010).

5.5.1 Relevance to the project

Beyond the fit of AI to the project in terms of a non-problem centric approach, there was synergy with five underpinning principles of AI (Cooperrider and Srivastva, 1987; Mishra and Bhatnagar, 2012): the *constructivist principle* that our thoughts about the world are based on interpretations and construction of reality and so will differ from person to person; the *principle of simultaneity* that both inquiry and change happen simultaneously; the *poetic principle* that members frame their view of the organisation on the basis of interest and choice, so *what* is chosen is important; the *anticipatory principle* that an organisation member's perception of the future for the organisations influences their current behaviour; and the *positive principle* that the more positive questions are asked the more organisation members are engaged, making change more lasting. These five principles of AI were relevant to the research aims of this project because: they reflected a constructivist ontology; aligned with the need to mobilize academics' professional autonomy; and highlighted the potential for the organisation to change in the direction of any AI project's focus (Whitney, 1998). By recognising the cultural and behavioural drivers (such as power and politics), AI can deal with complex social systems. This also made the approach highly relevant for use in an HEI, given they are complex organisations (Sporn, 1996) operating in a challenging environment (Kezar and Eckel, 2002). A key aspect of AI was the focus on organisational narrative and its power to engender transformative change (Coghlan and Brannick, 2014). This project sought to accelerate cultural change at UWL, and culture is articulated through surface level cultural artefacts (Schein, 2010) such as organisational narrative. The AI approach to Action Research therefore had a coherence with the project aims, not just my ontological position.

The affirmative focus of AI (building on what is affirming or positive in the organisation) meant some see it as a fundamentally different approach to AR. While AR must be directed to some issue in order to plan what *action* is needed to affect change (Coghlan and Brannick, 2014), traditional AR expresses the approach to the issue (research aims) as a 'problem'. There is nothing, however, that excludes that 'problem' being constructed in positive terms. For example, in this project the 'problem' could be defined as a *lack* of KE (negative) or wanting to increase the KE (positive). However, defining a 'problem' in a positive way is not the same as an affirmative approach: '*Appreciative'* is not simply '*positive',* although frequently misrepresented as such (Bushe, 2010; Fitzgerald, Oliver and Hoxsey, 2010). However, taking a positive stance to a 'problem' or identifying what works well is not excluded from any traditional AR cycle, they are just not *explicitly* part of the approach. If an affirmative approach was a basis for seeing AI as fundamentally different to AR it would suggest that AI could not be used to address negative aspects of an organisation. However, AI can be used to address organisational problems and negative or 'shadow aspects' of the research topic (Bushe, 2010; Fitzgerald, Oliver and Hoxsey, 2010; Johnson, 2013), just doing so in an affirmative way. The *dream* being a vision of what the organisation *could* be as a positive inverse of any perceived negative state. This *appreciative* approach aims at addressing an issue or organisational need, which could be interpreted as a 'problem'. However, unlike PAR as the primary form of AR, it does not use an overt 'problem-solution' approach. Given the centrality of academic autonomy in institutional culture and in KE (Perkmann *et al.,* 2013; Thune *et al.,* 2016), and the ability of academics to broadly pursue professional interests with some discretion (Rae, Gee and Moon, 2009), culture change needed to work within the existing university culture (Kezar and Eckel, 2002). Motivating academics by affirmative possibility was more *likely* to build this engagement than an approach emphasising the need to solve an organisation 'problem', even if that problem could be expressed in positive terms.

There was a danger that lack of prior academic engagement with KE could be interpreted as 'the problem', which would have been counter-productive. A criticism of traditional AR, such as PAR, was that managers frequently use the process to blame employees for problems (Egan and Lancaster, 2005). To avoid this, the project needed to value the contribution of academics throughout the processes and to avoid a 'problem-solution' paradigm. On this basis AI appeared to be the most suitable form of AR for this research.

5.5.2 Criticisms of AI

After selecting AI as the form of AR, further consideration was given to how any criticisms of AI could be mitigated. The key criticisms were: AI excludes valuable negative views through an over-focus on the positive; its ability to transform declines over time; AI has a focus on design not delivery; and it lacks evaluation and feedback. These will be discussed in turn below.

The argument that the AI approach is over focussed on the positive has led to criticism that: participants can feel anger and frustration with a positive approach; difficult inter-personal situations may remain unidentified, challenging the success of the group-activity; and dissatisfied organisation members withdraw from the process as they feel excluded (Bright *et al.*, 2013; Egan and Lancaster, 2005). These criticisms of AI argued that by focussing on *positive* views it excludes negative organisational experiences or struggles to incorporate these views (Bright *et al.,* 2013). For this project, this raised the potential that participants could view the project and organisation cynically, dominated by negative image and sentiment, and would not then engage (Bright *et al.,* 2013). Such cynicism could perpetuate toxicity in organisational relationships (Frost, 2004) and focus people on survival and so they rely on more narrow instinctive behaviours (Fredrickson, 1998). For this project, that could be retreating into a teaching focus, or seeing teaching workload as so much of a barrier that it would preclude engagement with other activities. These negative emotions can carry more impact than positive ones (Fredrickson and Losada, 2005) and cynicism could divert attention from possibilities that are more positive (Bright *et al.,* 2013), undermining the affirmative approach. Further, notions of 'positive' or 'negative' can be seen in AI to have an intrinsic meaning, which is counter to a social constructionist view where any meaning of 'positive' or 'negative' is created by those in the social system (Bushe, 2011). This arguably made the central AI notions of appreciative, or positive, problematic. As Bushe (2011, p10) noted "*just as AI theorists argue that behind every negative image lies the positive, social constructionists would argue that behind every positive image lies a negative one*". However, AI can be argued to nurture *generativity* not *positivity* (Bright *et al.,* 2013; Bushe, 2011). It is overly simplistic to translate '*appreciative*' as '*positive*' and misses the point of what the AI approach intends to achieve (Fitzgerald, Oliver and Hoxsey, 2010). Negativity and cynicism allow dialogue and therefore can be an entry point to a 'transformative dialogue', as negative images are relative to assumptions about positive images of what '*should be*' (Bright *et al.,* 2013). Through using an approach that facilitated collaborative engagement, even if the project participants had negative views, this could be translated into *generativity*: enabling people to see positive change possibilities even in a negative mind-state (Bright *et al.,* 2013). This generative capability of AI creates a new set of shared assumptions, in effect changing culture (Bushe, 2013), the explicit purpose of this project. This criticism, while noteworthy, did not therefore preclude AI from being the most appropriate form of AR for this project.

A second criticism was AI's ability to transform can diminish over time. This occurs predominantly as discussion of strengths, and affirmative statements about the organisation, become commonplace (Bushe, 2011), for example through repeated use of AI to facilitate organisational change. In the case of this project, AI was to be a new and novel approach for the organisation, meaning such affirmative discussions were unlikely to be commonplace prior to the commencement of the project, if happening at all. The focus on KE as a basis for competitive comparison and performance improvement, an area that had traditionally been less visible, also implied that discussion of this facet of UWL was also likely to be novel. This crisis of diminishing change over time was therefore unlikely to be relevant, at least during the lifespan of this research project.

A third challenge came from the nature of the language of the 4D model of AI, with much of the focus on planning and identifying an affirmative future (*discover, dream* and *design*) but limited focus on *achieving* this (*destiny/deliver*). The word *destiny* also conjured images of a potential, unrealised, reality. The original version of the AI model used *deliver* instead of *destiny*, and was later changed by David Cooperrider, as for him it evoked more traditional ideas of change management (Bushe, 2011). For this project, it was important to ensure that the co-constructed affirmative 'dream' was translated into a new reality, for without this there would be no change. On that basis the fourth 'D' used in this research was the original term *deliver* rather than *destiny*, and this thesis will use that terminology from this point forward. Bushe (2011), noted that in AI the energy and enthusiasm for change can be high in the *design* phase, but less so in the *deliver* phase. For engagement with the research to be translated into change for UWL, there needed to be a clear focus on implementation.

A fourth critique of AI was the lack of assessment, feedback, and evaluation which can be found more clearly in traditional Action Research approaches (Egan and Lancaster, 2005). Although portrayed as a cycle, there is little focus in the AI literature on how *deliver* feeds back into any subsequent *discover* stage. The main approach appeared to be organisations embedding AI as a way of addressing *different* organisational opportunities (Whitney and Trosten-Bloom, 2010). Applying the technique to a series of opportunities, rather than a cycle of improvements to a single opportunity. By not clearly addressing how cycles build on each other, evaluation of what has been achieved is missing. While the *discover* stage of any subsequent cycles should implicitly build on previous action and outcome, this is not a strong enough evaluation of that outcome. Egan and Lancaster (2005) proposed a model that tried to combine AI and traditional AR, but acknowledged their proposed model was ambiguous and difficult to use in a practical sense. For this project, it was clear that AI needed to be enhanced through a structured approach to evaluating and learning from both the process and outcome of the research.

5.5.3   *Final choice of form of AR*

As an approach, AI had limitations and weaknesses, but this could be said of all research methods. Ultimately, the appreciative approach of AI seemed to align more closely with the autonomy and professional discretion that academics have (Rae, Gee and Moon, 2009). For this project to achieve performance improvement through a change in culture this required active engagement and behavioural change from academics. This could have suggested PAR as the most appropriate form to create participation. However, as the Principal Investigator, I did not believe this would be motivated by defining the need for more engagement with Knowledge Exchange as a 'problem', as many academics would not perceive this to be *a* problem (or *their* problem). An appreciative approach would appeal to academics' insight into what a positive and supportive organisational culture could

be and would include them in making this a reality. This felt more likely to motivate individuals to exercise their autonomy to increasing KE than an approach where their previous limited engagement could be defined *as* the problem. While AI had limitations, as Bushe (2011) argued, more research was needed to explore and build the evidence base for good AI-based change, and this project sought to contribute to this. However, it was acknowledged that evaluation needed to be more clearly included (Egan and Lancaster, 2005), so that the approach could meet the need to understand impact on organisational performance. Therefore, the AI form of AR needed adaptation to incorporate a clearer approach to evaluation, while retaining an appreciative rather than 'problem-solution' approach.

5.6   Research methodology and approach conclusion

The need to integrate the business and research objectives of the project, by using a research-based approach to achieve improved organisational performance in Knowledge Exchange, led to four clear design parameters. The research approach needed to: build on and *with* the prevailing UWL culture; take a collaborative approach to create and embed change; harness individual academic autonomy and choice; and include appropriate measures to understand causal links between culture change, entrepreneurial orientation, and ultimate organisational performance improvement. Action Research was selected as the most appropriate methodology and within that Appreciative Inquiry as the most suitable approach to the research. This needed to be translated into a specific delivery plan for the project, considering: the need to ensure negative viewpoints were not excluded; a focus on action and delivery not just design; and enhancing the approach through rigorous evaluation.

6   Overarching Appreciative Inquiry project design

In the last chapter, it was concluded that Action Research (AR) was the most suitable research methodology for this project, integrating both research and business objectives. A range of AR approaches were considered, which led to the selection of Appreciative Inquiry (AI) as the form of AR to be taken. This was primarily to avoid an overt problem/solution paradigm. Translating this into a research method to deliver the project required planning to: ensure the approach was valid; that ethical and organisational issues were addressed; that the potential challenges inherent in AR, and the specific AI approach, were mitigated. Additionally, the research method needed to address the four design parameters of: building on and *with* the prevailing UWL culture; taking a collaborative approach to create and embed cultural change; harnessing individual academic autonomy and choice; and including appropriate measures to understand causal links between culture change, entrepreneurial orientation and organisational performance improvement. This led to an overarching Action Research design, which is explored in this chapter and covers: ensuring validity of approach, addressing ethical considerations, and developing a research plan.

6.1   Ensuring validity of approach

The first stage of translating the AI model into a plan for this project was ensuring that the approach itself would have academic validity. Validity can be defined as the degree to which research claims correspond to reality (Cho and Trent, 2006). While this could raise issues regarding a constructivist ontology, where reality is understood as a social construct, it was nevertheless important that any conclusions from this project were robust and valid. Validity in qualitative research, such as this project, is an essential necessity for good practice (Seale, 1999), even though it often involves personal observation, small sample sizes and individual case studies (Gray, 2014). As approaches to validity traditionally come from positivist approach (Herr and Anderson, 2015), there is an argument that AR requires its own paradigm for understanding validity (Coghlan and Brannick, 2014), as it comes from a different tradition. Quality in AR, including AI as a form of AR, rests on the researcher: internally understanding their research choices; understanding the implications and articulating those choices clearly and transparently (Reason, 2006); and reflection on what is happening to inform a choice about what to do next (Coghlan and Brannick, 2014).

Various models existed that aid in ensuring validity of AR (Coghlan and Brannick, 2014), and these are discussed below. The first is that as the researcher constructs reality, validity is assessed as the researcher's: empirical account being plausible; their claims being credible (as we cannot access the social world they created to test); their evidence being adequate; and the research has a contribution to the body of knowledge (Hammersley, 2008). This places the researcher at the heart of validation, as it relies on their credibility, integrity, dependability, trustworthiness, and self-discipline (Neuman, 2014). Herr and Anderson (2015) proposed a framework with five types of validity: being aimed at and grounded in practice; being actively participative; drawing on a wide range of ways of knowing; being 'significant'; and moving to a new and enduring infrastructure. Herr and Anderson (2015) called these five validity criteria: outcome, process, democratic, catalytic, and dialogic. This project's plan sought to address each of these criteria. First, it was grounded in practice, with an expected outcome beneficial to the organisation. Second, process validity was designed-in by constructing the project

over a multi-year period to allow ongoing learning over phases of research. Third, democratic validity was inherent in the project, because the plan was to be actively participative. Fourth, the approach sought multiple perspectives and drew on a wide range of ways of knowing, allowing catalytic validity by empowering participants to understand the cultural reality of the organisation to change it. Fifth, dialogic validity was to be achieved through dissemination and publication of the findings. Similarly, Reason (2006) identified four criteria for quality of research, in which he saw validity as: pursuing worthwhile purposes, being democratic and participative, including many ways of knowing, and allowing the research to develop and emerge over time The first three align with Herr and Anderson's (2015) outcome, democratic and catalytic criteria. The fourth of Reason's criteria, allowing research to emerge over time, supports a cyclical research approach such as AI.

6.2 Addressing ethical considerations

The second stage of planning was addressing any organisational and ethical considerations. Organisation support was given to the project from my line manager, UWL's Deputy Vice Chancellor (DVC), and embedded into my objectives as part of annual appraisal. In this way, the project reflected the organisational and individual layers of context (see Chapter 2) by addressing institutional requirements to grow and enhance KE performance and my own personal development and responsibilities. Beyond the institutional approval, there was also the requirement for formal ethical approval. Ethical implications and challenges were identified, acknowledged, and addressed in the AR plan and presented as part of the Ethical approval processes within both Middlesex University and UWL. The project proposal, and ethics documentation, was submitted to Middlesex University as part of the process of seeking approval for the topic. As the locus of the project was itself an academic institution this raised the complicating factor of needing ethical approval from that organization as well. Formal approval was therefore sought, and granted from both institutions by August 2018.

6.2.1 Ethical design

Management of potential ethical issues was embedded into the design, primarily by following Emanuel, Wendler and Grady's (2000) seven requirements for ethical research: value, validity, participant selection, risk-benefit, independent review, informed consent, and respect for participants. The overall ethical approach taken is demonstrated in Figure 8 below. For Phase One the research plan was clear, but the collaborative approach taken meant Phase Two planning would arise from Phase One findings. Therefore, continued reflection on the ethical position was necessary as each subsequent phase of activity was planned.

The *Value* requirement was inherent in the project because it aimed for specific potential benefits for the organisation and broader stakeholders, through enhanced business performance and development of a model for comparative advantage based on KE, rather than research or teaching. Other organisations could benefit from any learning arising from the application of the entrepreneurial orientation model. Other HEIs, engaging with Knowledge Exchange activity, could benefit from: lessons learned; identified areas of good practice; and potentially an evidence base that would align performance with a focus other than teaching or research. From a policy perspective, there was the potential benefit to increased understanding and performance in the economic-impact purpose for HEIs. As a researcher-practitioner, there was significant potential benefit for me in terms

of: reputation; career enhancement; increased job satisfaction and enrichment; and from the intellectual challenge and accomplishment. However, this *value* to me also raised ethical considerations which are addressed later in this chapter (see section 6.2.2).
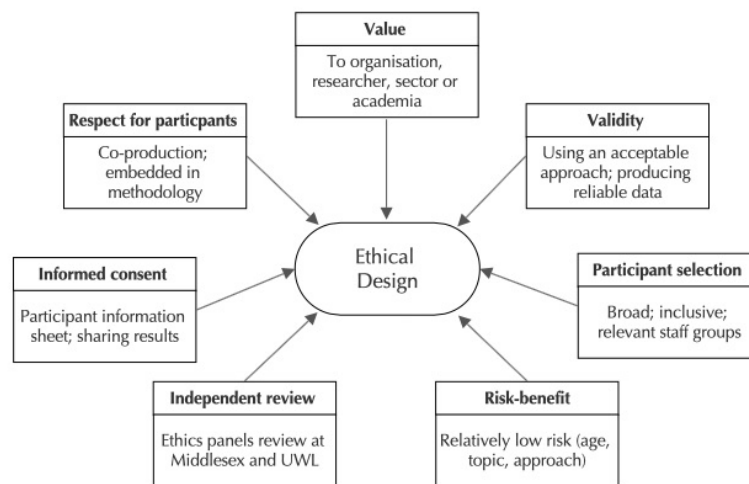
Figure 8: Ethical design diagram

The *Validity* requirement meant there needed to be an acceptable and valid scientific approach to produce reliable data (Emanuel, Wendler and Grady, 2000). This project followed a known model of AR: Appreciative Inquiry. The phrase 'scientific' approach could appear to draw from a positivist stance, which could be problematic for a constructivist ontology. However, from this constructionist stance the approach (both Action Research itself and AI) was a valid methodology.

Fair *participant selection* aimed to ensure that: research participants were not stigmatised, vulnerable individuals were not targeted by risky research; and that those in more powerful positions were not overly favoured for potentially beneficial research (Emanuel, Wendler and Grady, 2000). As this project did not focus on vulnerable individuals, this was less of an issue but differential power and position of participants, albeit only *within* the organisation, did need to be addressed. In Phase One this meant seeking to recruit a broad range of participants (in terms of role and department) across both the Advisory Team and the interview participants (discussed later in this chapter, see section 6.3.2). This minimised the potential for the research to be dominated by individual voices, and to ensure that no group was deliberately excluded. In Phase Two of the project, participants were much more likely to be self-selecting based on the nature of the activities that were to arise from Phase One. This, therefore, required reflection and embedding into the planning for Phase Two activities.

The *Risk-benefit position* meant risk should be minimised and any risks to the individual to be proportional to the benefits to both individual and society (Emanuel, Wendler and Grady, 2000). Conducting the research within a normal work setting and being a relatively non-contentious subject area meant the potential risk in this area was low. Additionally, by taking an *appreciative* approach, focussing on positive and generative possibility rather than negative work experiences, would minimise potential for emotional distress. There was to be minimal risk compared to the potential *value*.

The requirement for *independent review* by an expert with no affiliation to the project (Gelling and Munn-Giddings, 2011) was achieved through the submission to ethical approval panels at both Middlesex University and University of West London. These processes ensured that: any conflicts of interest were identified, the risk-benefit ratio was favourable, and that there was a level of accountability for the research (Emanuel, Wendler and Grady, 2000).

Informed consent consists of consent from 'whom' and consent to 'what' (Williams, 1995) and for Action Research this can sometimes by unclear (Gelling and Munn-Giddings, 2011). This plan for the project made explicit my role as manager-researcher, the purpose of the research, and the change being sought using a Participant Information Sheet and signed Consent Forms (see Appendix 2). Furthermore, through discussion, I tried to be consistent and clear that the project had a dual purpose: both to enhance KE and that the project was the basis of my own personal studies. Being in an academic environment this was not perceived to be unusual and generated additional interest and discussion, particularly from academic participants in Phase One.

Ethical research required that individuals were treated with *respect* throughout the research process (Emanuel, Wendler and Grady, 2000). Participants were considered as central to this project's approach, as part of the purpose was to engender more engagement with a specific aspect of the UWL's activity (Knowledge Exchange). Without respect, there would be a risk that a person's perspective, judgements, views and opinions would not be taken into account. The plan for addressing the elements of participant respect (Gelling and Munn-Giddings, 2011) is summarised in Table 6 below, and cover protecting participant confidentiality, disclosing risks and benefits, how participants could withdraw from the project, ensuring participants safety and wellbeing and sharing findings with participants.

ELEMENTS OF RESPECT FOR PARTICIPANTS	PLAN FOR MANGING IN PHASE ONE
Protect participant confidentiality	Ensuring that the consent form allowed participants to choose to be anonymous. A consent form that detailed how any sensitive information would be managed and treated within the project. Ascribing pseudonyms to ensure anonymity, and safely storing electronic data in a password-protected folder. Not keeping a hard copy of data beyond an appropriate data retention timeframe.
Disclosure of risks and benefits	Providing details within consent form. The research presented minimal risk and was limited to activities that could reasonably be expected in normal working practices.
Withdrawal	Participants being able to withdraw at any time. Participation in one AI Phase did not require participation in any future AI Phase(s).
Ensuring safety and wellbeing	Ensuring all research activities was to be undertaken within a normal work environment. While the project had the potential to change roles, and ultimate purpose was to enhance and improve business performances which would increase job-security. Any changes to roles would be within parameters of existing job descriptions
Sharing findings with participants	Share the output of each AI Phase with all participants. Share the output and findings from the whole project with all participants.

Table 6: Managing respect for participants, adapted from Gelling and Munn-Giddings (2011)

6.2.2 *Ethical challenges*

As with any research, this project had specific ethical challenges that were considered at inception and planning stage. As the PI, I was responsible for all ethical issues regarding researcher-participant interactions (Williams, 1995) and considered seven ethical challenges: the manager-led culture

change paradox; role-based bias; unequal power of participants; culture-change versus behaviour-change; accommodating negativity; confidentiality, and the project being of benefit to me.

This was designed as a culture-change project that took the 'organisation as culture metaphor' (Buchanan and Huczynski, 2010) as an underpinning assumption. Arising from this was the challenge that the manager can be seen as a *symbol* of the organisation: a storyteller and bearer of tradition (Hatch, 1997). This presented an ethical challenge, as I could easily be seen as representing exactly what I was seeking to change; potentially creating a paradox for some participants. I would be symbolic of the organisation, yet seeking to change it. This had the potential to lead to a sense of dissonance for participants. This would be addressed through ensuing clarity of understanding of: my role; the role of the Advisory team; the explicit culture change aspirations for the project (albeit directing the existing Enterprise-based culture change to focus on KE); and demonstrating why change would be positive for the organisation. This was embedded in the documentation for the project (for example, the KE Inquiry Plan, Participant Information Sheet, and Consent Form).

The second ethical challenge was role-based bias. Breen (2007) identified relevant challenges for researcher-practitioner of over familiarity with both organisation and participants, potentially leading to: a loss of objectivity; misinterpretation of similarities in findings; research participants assuming I knew the answer and therefore not providing complete data/responses; and participants saying what they think I want to hear. This was addressed through planned collaborative research, including: agreeing topics and interview questions; members of the Advisory Team conducting interviews; and shared evaluation of research findings.

The third ethical challenge was the potential for unequal power relationships within the organisation, with some 'voices' tending to be more influential given participant's status. This created a potential problem of some participants being marginalised or input skewed to what participants *perceived* may be the 'right' view. This power dynamic raised the potential for abuse of power, in terms of coercion of participation. Power has been demonstrated to be crucial in terms of social construction of the organisation, in culture, and in effecting change (discussed in Chapter 4). Power has the potential to be coercive, with organisational change becoming a vehicle for domination (Hatch, 1993). While recognising the power-dynamics, and positionality between participants, this project sought to minimise this issue through taking a collaborative approach with a broad range of staff working as equals, with different roles and positions within UWL. This included myself, as PI, acting as a *facilitator* rather than *leader*. A further challenge arose from the power inherent in my own position of seniority within the organisation. There was potential for participants to perceive themselves to be in a junior position to myself, and therefore of holding less power. This issue would be less present with participants who would be considered my management peers, but senior sponsorship of the project could have been perceived as a basis for further power in relation to this project. Again, recognising this positionality, this project sought to minimise ethical issues through taking a collaborative and democratic research approach. Ultimately this led to an Advisory Team decision to exclude views from members of Vice Chancellor's Executive (VCE), given the various routes they already had for decision making and direction of the organisation. The inclusion of research-active academics offset any perceived power I may have had, based on their expertise and experience in research (an area where I could freely admit to being a novice).

The fourth challenge was of culture change (organisational-level) versus behaviour change (individual-level). If organisational culture is socially constructed partly through members' *behaviour,* this had the potential for the whole project to be fundamentally coercive, particularly if the change were to be top-down and not collaboratively generated. Appreciative Inquiry is intended to create change, and facilitation of change *in other*s could be deemed patronising (Williams, 1995). This raised an issue regarding informed consent: as AI is intended to create change as part of the process, participants needed to be sufficiently aware of the potential change to provide informed consent (Williams, 1995). This could have been exacerbated by the involvement of different participants (Gelling and Munn-Giddings, 2011) across an evolving research direction. This was managed through a reflective approach across the length of the project, and through clarity in documentation underpinning informed consent.

A fifth ethical consideration was ensuring negative voices were incorporated into an appreciative approach. As identified in the criticisms of the AI methodology (Bright *et al.*, 2013; Egan and Lancaster, 2005) there is potential for the approach to marginalise negative responses. The counter to this criticism is that AI is intended to be *generative* rather than simply positive (Fitzgerald, Oliver and Hoxsey, 2010). Using a planned facilitative approach, the focus could be moved from what was perceived to be wrong/bad/negative to what the inverse *could* be, a better/improved/positive future.

The sixth ethical challenge was that participants could potentially reveal information of a personal nature, or information and views they may not want publicly sharing (especially with line-manages or other senior staff). The plan to manage this was through: the use of informed consent; the planned anonymisation of transcripts from the Phase One interviews and group activity; pseudonymised data; and separation of recording the data from any personal identifiers. Secure data storage ensured that anonymisation could not be compromised, with all data to be deleted in line with appropriate retention practice.

The final ethical challenge was the need to acknowledge that I was myself a potential beneficiary of the project. That would inherently mean I could be biased in decisions made, or in my analysis. I would have a clear vested interest in the project being a success. This was to be mitigated in part by the collaborate and democratic approach, and through transparency in documentation and discussion about my role. The most telling mitigation was that performance improvement (the ultimate project goal) would be difficult to be subject to a biased interpretation, particularly if the metrics of that change were to be collaboratively determined.

6.3   Research project plan

Having selected AI as the most form of AR, this led to a plan for delivering the research project. Figure 9 shows the planned initial cycle (Phase One), how this determined the activities in Phase Two, and an overarching approach to evaluating outcomes and impact. This evaluation approach evolved into a theory-of-change, that articulated the desired relationships between the project and its impact on organisational performance, which is explored in Chapter 9. The overarching research model was presented as part of an Inquiry Strategy in the initial project proposal, and eventually developed into the *Knowledge Exchange Inquiry Plan* collaboratively developed and agreed as part of the project (see Appendix 3).
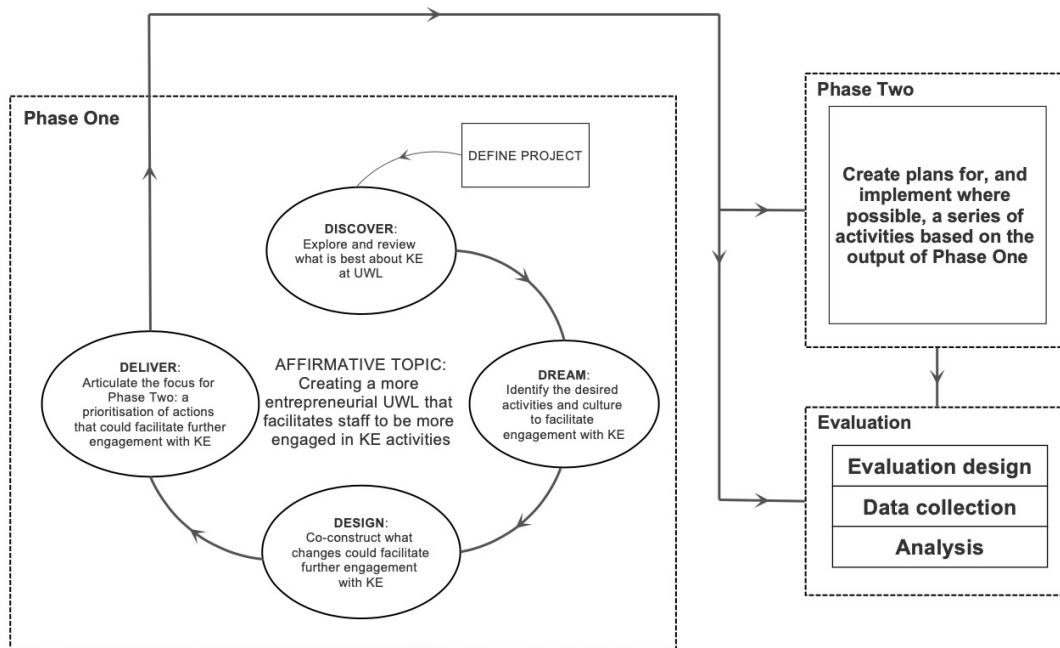
Figure 9: Overarching AI Research model, adapted from Bright, Cooperrider and Galloway (2006)

This model arose from the selection of Appreciate Inquiry as the form of AR to be used, and the need to consider: ensuring negative viewpoints were not excluded; a focus on action and delivery not just design; and enhancing the approach through more rigorous evaluation. It was therefore an attempt to reconcile several factors: the need to enhance AI with a clearer evaluation phase (Egan and Lancaster, 2005); recognising and accommodating the lag between activities to change culture and the ultimate impact on organisational performance; and recognising that subsequent AI cycles could feed into evaluation both in their *discover* and *deliver* stages.

6.3.1   Defining Phase One research

Following selecting the AI model, there needed to be a *define* or planning stage, which involved the selection of the affirmative topic choice. While not addressing this explicitly as a 'stage', Bright, Cooperrider and Galloway (2006) identified the need for a range of planning and preparatory activity prior to the *discover* stage. Other AI theorists and practitioners, such as Delgadillo, Palmer and Goetz (2016), Tschannen-Moran and Tschannen-Moran (2011), Van Wyk and Pretorius (2013), and Watkins, Mohr and Kelly (2011) identified this planning and preparatory activity as a distinct *define* stage. Regardless, for an AI project to be successful, appropriate planning and preparation was needed. According to Bushe (2011), defining a clear affirmative topic was essential to the success of an AI project. This project's affirmative topic was "*Creating a more entrepreneurial UWL that facilitates staff to be more engaged in Knowledge Exchange activities*" (see Appendix 3). While a pre-selected topic (the topic did not arise from collaborative activity) this was not necessarily in contradiction to the AI approach, as there was evidence of success with preselected topic choices for AI research projects (Cooperrider, Stavros and Whitney, 2008). Having identified a topic, the next stage was to determine the most appropriate mode of AI engagement.

There were several different ways for the 4D model to be delivered, and eight modes of AI engagement were reviewed: Whole System 4D Dialogue, AI Summit, Mass-mobilized Inquiry, Core

Group Inquiry, Positive Change Network, Positive Change Consortium, AI Learning Team, and Progressive AI meetings. The mode of AI used needed to reflect the type of inquiry being undertaken, and the organisation (Whitney and Trosten-Bloom, 2010). Table 7 below presents the eight modes of AI engagement reviewed and their fit to the project.

ENGAGEMENT MODE	SCOPE	TYPICAL TIMEFRAME	DOES IT HAVE A CLEAR STRUCTURE	WAS IT RELEVANT FOR PHASE ONE OF THIS PROJECT
Whole System 4D Dialogue	Whole organization and stakeholders. All sites and locations. All staff involved, but groups formed for particular purposes, to set AI Topic. Works systematically through the 4Ds.	2-12 months	Yes, as the 'main' approach documented in various places	No: difficulty in getting large scale attendance over time. Perceived priority or importance of KE versus Teaching or Research. No intent to get 100% engagement with KE so limited relevance for many staff.
AI Summit	Large scale meeting, with reps from across the organisation. Typically, more than 50 participants. Narrow focus on a topic for 4D inquiry and flows through the 4D stages over the summit.	2-4 days	Yes	No: difficulty in getting large scale attendance over multiple days (teaching commitments versus presence in summer). Level of priority of KE would challenge buy-in or attendance.
Mass-mobilized Inquiry	Cascade of interviews with each interviewee being trained and becoming an interviewer. High levels of reach and especially good form community socially responsible project.	Undefined	No	No: mass engagement not the objective, and not community-based.
Core Group Inquiry	Small scale introduction. For a quick start or result, or building a base of enthusiasm for scale up. Scaled down version of the Whole System 4D Dialogue, 5-50 participants. Crafts questions and is interview based.	Undefined	No	Potentially: builds engagement and can be small scale. Drawback is lack of clarity over process.
Positive Change Network	Train large numbers of staff to initiate their own AI projects to improve and change the way the organisation dos business Whole system approach or large organizations. Grass roots approach.	Undefined	Yes in the sense of training then letting participant's self-initiate.	No: 'unstructured' in the sense of how it can be targeted, builds form grass roots – so needs initial level of engagement. Whole organisation and project not intending to get 100% engagement with KE, so limited relevance for many staff.

ENGAGEMENT MODE	SCOPE	TYPICAL TIMEFRAME	DOES IT HAVE A CLEAR STRUCTURE	WAS IT RELEVANT FOR PHASE ONE OF THIS PROJECT
Positive Change Consortium	Cross organisational approach, with shared change agenda. Especially useful from community initiatives.	Undefined	No	No: single organisation (UWL) so not appropriate.
AI Learning Team	Small scale approach, good for integrating AI into mainstream activity. Natural fit to creating in *deliver* stage of initial AI cycle. Good for stimulating innovation, developing staff, working in cross-functional ways.	Undefined	No	Potentially: better fit to Phase Two as output from the *deliver* stage for mainstreaming output from Phase One.
Progressive AI meetings	Small scale and built around a core team following a series of meetings.	Undefined but clear structured process.	Yes	Yes: structured small scale approach, so presented a clear path to follow. Did not require mass- or whole-system engagement.

Table 7: Matrix of modes of AI engagement

The first approach was the *Whole System 4D Dialogue*. This mode was intended to support change across a whole organisation by engaging the entire organisation and as many stakeholders as possible in the 4D cycle. Different staff could be involved at different stages, but ultimately mass engagement from across the organisation was required. While a powerful approach to organisational change, the intention of this project was never to achieve universal engagement with KE as that would have been unrealistic and irrelevant to many teaching or professional services staff.

The *AI summit* takes many staff through the 4D cycle over two-to-four days. This tended to be focussed on a narrow topic, so could have been relevant to this research. The challenge for UWL would be to release a significant number of academics over two-to-four days. Teaching and other commitments would have significantly reduced the numbers that could possibly attend during term-time, and vacation periods were equally challenging due to leave and annual recruitment activities such as clearing[16].

Mass-mobilized Inquiry was an approach that cascades Appreciate Interviews, with each interviewee being trained and conducting an Appreciative Interview. This facilitates mass-engagement and building a broad perspective on a topic. This approach was particularly suited to community-based projects, rather than organisational change projects such as this research. Additionally, mass-engagement with KE was not the intent, and the concern was lack of understanding and engagement in KE would itself be a barrier to this approach with any cascade of interviews petering out.

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[16] Clearing is part of student recruitment, where following the release of A Level results universities fill spaces on their undergraduate degree courses.

The *Core Group Inquiry* mode had potential. This was a scaled-down version of the Whole System 4D Dialogue, working with a smaller group of participants. It was good for building engagement, and therefore had a potential fit with the project. The main issue was that there was no clear structure to follow, which for me as a novice researcher felt challenging.

The *Positive Change Network* mode involved training large numbers of staff from across the organisation in the AI approach, allowing them to self-initiate projects. As with the Whole System 4D Dialogue this was a powerful tool for whole organization change, and mass-engagement. This had the potential to facilitate lots of projects which could enhance KE. However, the reality was that it would have required a level of understanding of, and engagement with, KE that appeared lacking in UWL. As with the Whole System 4D Dialogue and mass-mobilized inquiry, organisation-wide engagement with KE was not a stated aim of the project.

The *Positive Change Consortium* facilitated inter-organisational working on a shared agenda. This was useful for community-based projects where there may be multiple stakeholder organisations. That did not describe this project, and while there could be some future potential in HEIs working collaboratively on KE in this way, that was not the purpose of this project.

The *AI Learning Team* was a simpler mode of AI in which a small group is trained in the AI approach and use it to address specific topics. It was good for embedding AI into teams as a means of improvement and change ongoing work. While not seeking mass-engagement, the project was seeking to engage staff in KE from *across* the organisation, making the team-based focus less fitting. The links to mainstreaming did raise the potential that this could work for Phase Two activities, but it was less clear this was the right approach for Phase One of the project.

The final engagement mode was the *Progressive AI meeting*. It was a more clearly structured approach, that would take a small group through the 4D cycle over a series of meetings but could still seek wider organisational views through appreciative interviews. This approach of having a series of engagements, rather than a shorter more intensive activity, fitted the varied demands on academic staff time. One of the stated benefits was the ability to engage staff in the AI project and change without significant interruption to their normal day-to-day activities (Whitney and Trosten-Bloom, 2010). The structured approach also felt more certain for me as a novice researcher.

Based on this analysis, reflection on the aims of the projects, and my status as a novice organisational researcher, I selected the Progressive AI Meeting (PAIM) mode for Phase One of the research. While the Whole System 4D Dialogue and Inquiry Summit were the most prevalent forms of AI (Bushe, 2011), the approach of using an Advisory Team for a structured series of Progressive AI Meetings, was used primarily due to its applicability to a smaller scale approach. As a smaller scale mode of AI, it allowed groups to work together over a series of meetings to create and deliver a change agenda, especially as part of normal organisational life (Whitney and Trosten-Bloom, 2010). This felt like a strong fit to the purpose and aims of the project. This mode of AI engagement was the most suitable to build engagement with KE, and as a structured approach supported me as a novice researcher. Subsequent modes of AI engagement for Phase Two were not set at the outset, to allow an approach to develop that best fitted with UWL and those engaged with the project, in line with AI best practice (Whitney and Trosten-Bloom, 2010).

A draft AI plan (the *Knowledge Exchange Inquiry* Plan (see Appendix 3) was developed, for amendment and formal adoption by the Advisory Team (AT) once in place. This plan was adapted using tools from Bright, Cooperrider and Galloway (2006), Cooperrider, Stavros and Whitney (2008) and Whitney and Trosten-Bloom (2010). This plan proposed: a description of the Affirmative Topic; the focus for each of the 4D stages; and how the activities could be spread over the AT meetings. Within this plan, therefore, the project start-up, purpose, and activities for each AI stage were articulated. This led to the next step; identifying participants, and in particular the AT that would work collaboratively to take the project forward.

6.3.2 Participant recruitment for the Advisory Team

The aim was for participation in the AT to be as representative of UWL as possible, to facilitate drawing organisation-wide conclusions. A key challenge was changing the level of engagement with KE. As this project initiated from a starting point of relatively low levels of engagement, this seemed to indicate a selective approach would be problematic because it could limit engagement. Participant recruitment (including AT membership) was therefore designed to include staff from across the organisation to ensure a broad view, and was based on interest and willingness to engage. Rather than select (and by inference exclude) participants, it was planned to monitor the breadth and diversity of participation. The level of engagement in Phase One, across both the AT and other research participants, could therefore aid understanding of engagement with KE and the entrepreneurial orientation of UWL.

AT MEMBER	ROLE	ACADEMIC OR PROFESSIONAL SERVICES
Facilitator (PI)	Head of department	Professional service
AT01	Finance manager	Professional service
AT02	Professor	Academic
AT03	Enterprise coordinator	Professional service
AT04	Head of professional services team	Academic
AT05	Professor	Academic
AT06	Head of academic department	Academic

Table 8: Core Advisory Team membership

Following ethical approval, and approval from the Executive Sponsor, the project was formally initiated in September 2018. Recruitment of the Advisory Team (AT) was conducted through a range of email invites (to Heads of academic and professional services departments for circulation) and directly to staff who had indicating from personal contact with me that they would be interested in participating. While the latter was most productive in terms of recruiting volunteers, this did raise the potential that participants could feel either obligation or a degree of coercion to participate. A mix of volunteers and invitees participated, ultimately with a diversity of levels of engagement across Phase One. It was fair to assume that those who were more engaged were able to make a choice to do so or not, limiting any risk that the participants in the AT felt in any way coerced. The AT consisted of staff from across the institution, both in terms of role (academic and professional services staff) and different department. Initially 17 members of staff indicated that they would be interested in participating in the Advisory Team. This eventually reduced to a core team of seven (including myself as facilitator) via self-selection that provided some diversity in terms of role and seniority, see Table 8 above. Following recruitment of the AT Team the collaborative stages of the research Project could begin. The AT met on 17th October 2018 for the initial session of the Progressive AI Meeting approach.

6.3.3 *Completing the define stage*

The AT meeting on 17th October 2018 followed a pre-circulated agenda. The session started with an exploration of Appreciative Inquiry, and the PAIM mode of engagement. Participants agreed to proceed with involvement, and each signed a Participant Information Sheet giving their consent. The mode of AI engagement was presented to the AT for formal agreement. The team then reviewed the Terms of Reference for the group, and the draft Inquiry Plan, which had been circulated to the group prior to the meeting to allow more time for consideration. The remainder of the session was focused on mini-interviews, drawing on resources from Cooperrider, Whitney and Stavros (2008). These mini-interviews paired team members to gain insights and their perspectives on KE and the current entrepreneurial orientation of UWL. Following feedback from each pair, the group discussed the 'change agenda' for the Appreciative Inquiry and agreed the agenda for the second AT meeting. A small number of the team were unable to attend this first meeting, and were asked (via email) to contribute by considering "*If you had a magic lamp and three wishes that could be granted to make UWL a better, more entrepreneurial and innovative organisation, what would they be?*". This was based on consensus from AT members that this reflected the part of the mini-interviews that the group felt drew out the most pertinent responses. Those unable to attend provided signed consent forms at a later stage (prior to the next meeting). At this early stage, it was clear that AI was a new approach for both the AT members and myself. This required more prompting and facilitation from me, and my concerns about how much I was, or would be driving, the research was documented in my reflective log.

The group reconvened on 31st October 2018 for the second AT meeting and reviewed the actions from the previous meeting and confirmed the amended Terms of Reference. The group identified the key themes that came from the mini-interviews and the responses to the "*three wishes*" email. The key themes the group considered to have emerged from the data were agreed as: Efficiency, Investment, Recognition, and Support. The group then turned its attention toward the inquiry plan, and in particular discussion of the precise wording of the Affirmative Topic. The group considered what interview questions they would want to use to draw out staff views on the key themes. The group discussed which staff members should be interviewed and who in the group wanted to conduct interviews. The group agreed to provide further email feedback on the interview approach, which I agreed to collate for review at the next meeting. This made up the main item for the third meeting agenda and marked the transition from the *define* to *discover* stage of the project.

6.4 Addressing the four design parameters in the plan

The plan needed to address the four design parameters identified in Chapter 5. The plan sought to building on and *with* the prevailing UWL culture by drawing appreciative views of what was working within UWL to inform activities for Phase Two. Using AI meant the approach taken was collaborative. Phase One research was aimed at seeking ways of building and harnessing individual academic autonomy and choice within Phase Two activities. Identification and design of measures to understand causal links between culture change, entrepreneurial orientation and organisational performance improvement formed a separate stream of activity to run alongside Phases One and Two.

6.5 Conclusion of the overarching AI project design

Drawing from understanding the organisational and sectoral context, the limitations of AR and AI, and the design parameters for the project, a plan was developed to deliver the research. The first stage of the project included recruiting an Advisory Team who delivered the *define* stage: designing an ethical and valid research approach. While focussed on Phase One of research, it deliberately allowed space for subsequent phases to emerge in a collaborative way. The following chapters address how the reality of the organisational research developed in Phase One and Phase Two, and the development of rigorous approach to evaluation through a theory-of-change for the project.

7 Phase One AI Research

In Phase One the plan designed to deliver the research was launched, drawing from an understanding of the organisational and sectoral context and the limitations of AR and AI. In doing so, the intention was to ensure the project delivered: the *business* aim to enhance business performance, through seeking to increase entrepreneurial orientation; the *research* aim to explore cultural change as a means of delivering business improvement; and the *integrative* aim to find an approach to undertaking *both* business and research aims and objectives in an integrated way. In this chapter Phase One of this research is described, which was organised around *defining* the project, followed by the 4D stages (*discover, dream, design* and *deliver*) of the Appreciative Inquiry (AI) form of Action Research (AR).

Progressive AI Meeting	Purpose	AI Stage	Planned timeframe
Advisory Team Meeting 1	To agree the drafted Terms of Reference for the Advisory Team (AT); to introduce Appreciate Inquiry to AT members; To conduct mini-interviews between AT members to gather initial data/perspectives on KE; To develop the wording of the 'Affirmative Topic'.	Define	October 2018
Advisory Team Meeting 2	To agree the Affirmative Topic for Phase One; To discuss and agree Interview questions for participants; To agree the approach to participant selection.		
Advisory Team Meeting 3	To agree the interview plan and format of interviews with participants in order to gain broader perspectives on KE To finalise the interview questions.	Discovery	November 2018 to January 2019
Interviews	To conduct interviews following the agreed questions.		
Advisory Team Meeting 4	To identify stories & best practice emerging from the interview data; To agree a plan and approach to dissemination of any good practice.		
Advisory Team Meeting 5	To collaboratively make meaning of all interview data; To map and articulate the 'Positive Core' of the organisations approach to KE through identification of themes.		
Large Group activity (AT and open to all participants).	Through collaborative working and Dream Dialogue: (an Experiential Activity to reveal images of future): To clarify the collective Dream; To creatively enact the Dream; To identify common themes and opportunities; To create an Opportunity Map.	Dream	February 2019
Advisory Team Meeting 6	To reflect on the group Dream Dialogue (see Large Group Activity) above and document the Dream.		
Advisory Team Meeting 7	To connect the affirmative topic to the Design target (Dream) through defining a Provocative Proposition (describing the ideal approach to KE); To agree definitions of KE; To begin identifying Phase Two activities or areas of priority; To designing potential metrics of change (for Evaluation).	Design	March 2019
Advisory Team Meeting 8	To recognise and celebrate success generated by the project through gathering stories of what has been learned and any transformations that have arisen as part of the Phase One; To agreeing and delivering the process and plan for their dissemination.	Deliver	March to April 2019
Advisory Team Meeting 9	To agree and prioritise action through agreeing the list of campaigns or areas of focus for Phase Two		

Figure 10: Planned Progressive Appreciative Inquiry Meetings and purpose

7.1 The AI plan

A draft AI plan (the *Knowledge Exchange Inquiry Plan*, see Appendix 3) was agreed by the Advisory Team (AT), adapted from tools in Bright, Cooperrider and Galloway (2006), Cooperrider, Stavros and Whitney (2008) and Whitney and Trosten-Bloom (2010). The plan contained: a description of the Affirmative Topic, the proposed focus for each of the 4D stages, and how the activities were to be spread over the AT meetings. The meeting timeframe for this plan, extracted in Figure 10 above, articulated the project start-up, purpose, and activities for each 4D stage. This was a planned transition from the *define* to *discover* stages, and began in November 2018. Each of these are described in turn below.

7.2 *Discover* stage
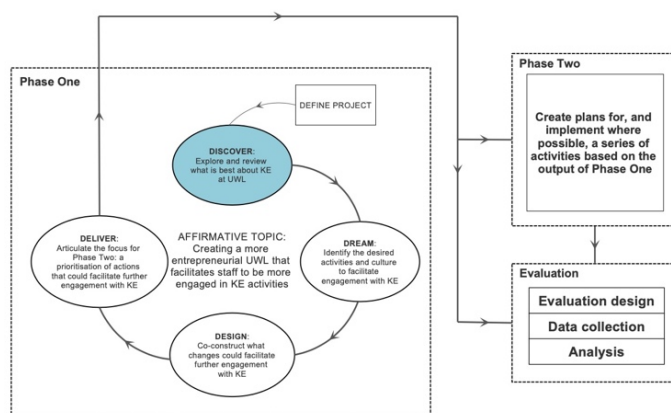
The third Advisory Team Meeting was held on 21st November 2018. Following a review of actions from the previous meeting, the group confirmed the Inquiry Plan and the Affirmative Topic wording. The interview plan, format and questions were discussed, and the group felt that more work was needed to refine and finalise these. Up to this point I had undertaken most of the work, and this increased AT engagement allowed the design to emerge in a more collaborative way. While recognising that it is often easier for groups to work from a draft rather than a blank page, up to this stage my reflections had raised concerns about how much this project was being driven by myself. To maintain progress, the consent document and Participant Information Sheet for interviewees were reviewed and approved at an additional ad hoc meeting held in November 2018. The AT also signed off the Interview Plan (see Appendix 4) and reviewed the agreements for allocating interviews. This allowed AT members further opportunities for engagement, making the project more collaborative in nature. It would, however, introduce variability into the process given different interviewing styles and approaches. I felt this was a reasonable compromise, as my reflections on how much the project was being driven by myself would have been compounded if I had conducted all the interviews. The group agreed to additional meetings to review progress with interviewing, outside of the planned meetings. These occurred between December and July (when AT meeting four was held). While this diverged from the planned timetable and structure, the group felt it was a pragmatic way forward to allow collaborative oversight of the project's progress.

The focus of group activity switched to the interviews. Interview participants were drawn from across UWL, reflecting the organisation as much as possible. Participants were recruited by a mix of personal contact from members of the AT or myself, or general email invites sent out within academic departments from AT members. In total, 25 participants were recruited and interviews were conducted by myself and five members of the AT. The breakdown of the participants and interviewees is presented below in Table 9, which includes the participant code for the AT member that conducted

the interviews. This demonstrated that interviewees were drawn from across the university and from different roles, and from across seven of the nine academic departments.

CODE	INTERVIEWEE JOB ROLE	ROLE TYPE	INTERVIEWER CODE
P01	Head of Library Services	Professional Services Manager	PI
PO2	Research Coordinator	Professional Services Staff	AT03
P03	Lecturer	Academic	AT03
P04	Senior Research Officer	Professional Services Staff	AT03
P05	Head of Academic Department	Senior Academic Manager	AT04
P06	Head of EXPERT Academy	Senior Academic Manager	AT04
P07	Head of Academic Department	Senior Academic Manager	AT04
P08	Head of Academic Department	Senior Academic Manager	AT04
P09	Head of Careers	Professional Services Manager	PI
P10	Lecturer	Academic	AT03
P11	Finance Manager	Professional Services Manager	AT01
P12	Associate Professor	Senior Academic	AT03
P13	Lecturer	Academic	AT06
P14	Lecturer	Academic	AT06
P15	Head of Subject	Academic Manager	AT06
P16	Senior Lecturer	Academic	AT06
P17	Associate Professor	Senior Academic	AT06
P18	Head of International Office	Professional Services Manager	PI
P19	Head of Academic Registry	Professional Services Manager	AT05
P20	Head of Placement & Employment Services	Professional Services Staff	AT03
P21	Head of Student Services	Professional Services Manager	PI
P22	Customer Experience Manager - IT	Professional Services Manager	PI
P23	Customer Experience Librarian	Professional Services Staff	AT03
P24	Lecturer - FMD	Academic	AT05
P25	Head of Communications and Events	Professional Services Manager	AT03

Table 9: Appreciative Inquiry interviewees, role, and interviewer

As demonstrated in Table 10 below, staff in academic roles (ranging from lecturer to senior academic managers) constituted just over than half those interviewed (13) with the remainder from professional services (12). There was also a range of levels of seniority demonstrate across senior leadership (5) middle management (10), with the remainder lecturing or professional services staff (10). Members of the Vice Chancellors Executive were not interviewed as the AT felt this could skew the findings by introducing a 'top down' view on what was positive about KE at UWL.

CATEGORY OF STAFF	JOB ROLE TYPE	NUMBER
Senior Leader	Head of Academic Department	4
	Head of Subject or Deputy Head of Academic Department	1
Academic Management	Professor and Associate Professor	2
Academic	Senior Lecturer or Lecturer	6
	Head of Department and Manager (Grade 6 -10)	8
Professional Support	Officer, Coordinator, or Administrator (Grade 3 -5)	4

Table 10: Interviewee numbers by type of role

The interviews also demonstrated a relatively strong representation from across academic departments. As shown by Table 11 below, only two academic departments were not represented out of nine. The remainder of the interviewees were drawn from professional services departments.

AREA	NUMBER OF PARTICIPANTS
London College of Music	0
School of Computing and Engineering	2
School of Human and Social Sciences	1
College of Nursing, Midwifery and Healthcare	0
School of Film, Media and Design	1
Expert Academy	1
Claude Littner Business School	1
School of Law and Criminology	5
London Geller College of Hospitality and Tourism	2
Professional Services Departments	12

Table 11: Interviewee numbers by department

The Interview Plan started with an explanatory statement to be provided to interviewees. It confirmed that the interview would be recorded and transcribed, encouraging participants to be concise. It also reminded interviewers that negative answers should be used to seek an affirmative, to draw out a vision of the ideal as an inverse of the negative view stated. Participants were also provided with a copy of the KE metrics developed by Coates Ulrichsen (2014) for HEFCE (see Appendix 5) to focus their answers on KE as much as possible.

The questions drew from the broad themes that emerged from the initial AT meetings and sought to elicit positive or affirmative views of KE. The first set of questions focussed on the level of understanding of the interviewee of KE and Enterprise. This led to seeking views of when UWL was at its best: both in general and around KE. The next set of questions related to the themes that emerged from the mini-interviews conducted in the early AT meetings (as part of the *define* stage): recognition, efficiency, investment, and support. These questions explored: participants' self-reflection related to these themes within KE (*What motivates you? What would motivate you to engage more in Knowledge Exchange activities?*); UWL (*When UWL is at its most efficient, what does this feel and look like?*); and what an appreciative future could be (*If you could ask for one new thing at UWL to enhance support to Enterprise or enable you to be more enterprising, what would it be?*). The concluding set of questions focussed on what enhanced KE would look like, and how that could be measured. This was a start to exploring how to evaluate change and impact on performance.

One member of the AT agreed to act as a coordinator, booking rooms for interviews where needed and supporting the distribution of digital recorders. Interviews all occurred face-to-face on university premises during working hours between January and March 2019. They occurred either in rooms booked for the purpose or in individual offices if available. This process took longer than anticipated (as indicated by the planned timeframe in Figure 10 above). In total, 25 interviews were conducted by six different interviewers resulting in a total of 770 minutes of audio recordings, stored in MPEG-4 or Waveform audio formats. These were transcribed using a combination of automated audio translation (using Happy Scribe[17]) and manual amendment (by PI) and checking (by interviewer). Following transcription, the group reconvened on 10th July 2019 for the fourth AT meeting, and anonymised electronic copies of the transcripts were circulated prior to the meeting for review. Combining the analysis of the transcripts undertaken by each AT member, and further collaborative analysis at the

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[17] Further details available at https://www.happyscribe.com (accessed 20/2/21)

meeting, the group started identifying good KE practice they wished to highlight, and a plan was agreed on how to disseminate this within UWL as a way of promoting ways to engage with KE. This included discussion of the use of social media through Twitter and LinkedIn channels, and one of the AT team agreed to generate content for these channels. The group agreed to re-read the transcripts and each undertake a narrative analysis, focusing on the story that came through the interviews collectively. This included understanding both the key stories being told and any that particularly resonated with them. It was stressed that this was also not just about the frequency of themes arising within the narrative, but also the impact, emotional pull, or resonance.

On 14th August 2019, the group met for the fifth AT meeting to consolidate the individual narrative analyses. The key 'plot lines' from each AT members analysis were noted on a flip chart. The group collaboratively analysed the themes that were emerging and drew together areas of overlap and linkages. Following the meeting, I translated this into a 'Map of Opportunity' and circulated to the group for comment. This map highlighted key areas of interest, and where relationships between opportunities lay (see Appendix 6), demonstrating six interlinked themes arising from the interviews: beneficiaries, development, infrastructure and support, investment, reward, and strategy. The identification of areas to explore further, building on what was affirmative within UWL, marked the end of the *discover* stage.

7.3   *Dream* stage
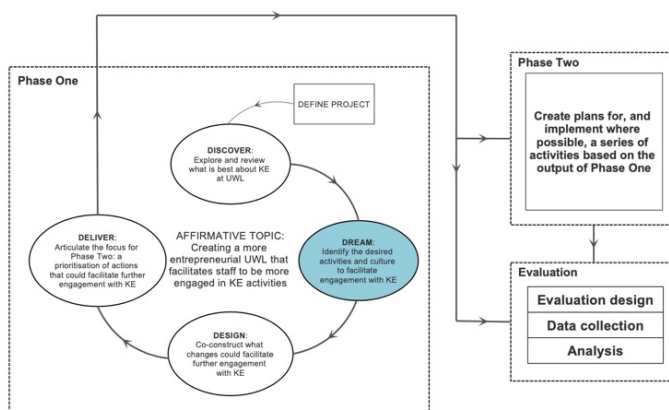
The *dream* stage built on what was discovered in the initial mini-interviews between AT members, and the main Appreciative Interviews. The purpose was to identify the desired KE culture and aimed to draw from a range of perspectives from different levels of the organisation: senior managers, academic managers, academic staff, and support staff. An experiential activity involving the Advisory Team, interviewees, and other stakeholders was planned. This group activity, or 'Dream Dialogue', was held on 30th October 2019 and sought to map opportunities for change, related to the affirmative topic and drawing from the positive core of UWL's approach to KE. This event was delayed from September, to reduce the potential for the start of the new academic year to impact participation. Despite the change in date, the level of attendance was low.

The participants that did attend were a mix of Advisory Team and interviewees, with me as facilitator. The group was deliberately widened from the AT membership to gather broader perspectives. The activity started with an introduction and participants were asked to reflect on "*What would a more entrepreneurial UWL look like?*". This was followed by group discussion and feedback on these reflections, allowing the group to articulate what they wanted UWL to be like in the future. The group was then tasked with coming up with a creative enactment of that future 'dream'. This approach was

adapted from worksheets from Cooperrider, Stavros and Whitney (2008) and intended to harness creativity to develop an understanding of the ideal future approach to KE at UWL. The output from this exercise tended to be a mix of prose and drawings, and generated a number of common themes (see Appendix 7, Group Activity Output). Following this, the group held a facilitated discussion on the themes coming from the group activities and reflection on the 'Map of Opportunity' (see Appendix 6). This was an intentional link back to the output of the interviews, to ensure discussion did not drift too far from the initial research findings. The group started to identify activities and projects that would create the desired new UWL approach to KE.

A week later, on 6th November 2019, the Advisory Team reconvened for AT meeting six to review the group activity, reflecting on both the process and output. The group agreed how this reflection would be documented and started to define potential Phase Two projects. Finally, the notion of a 'provocative proposition' was re-introduced to the group. A provocative proposition is a statement describing the idealised state of the organisation relating to the AI topic (Cooperrider, Stavros and Whitney, 2008). They were asked to reflect on this in preparation for the next meeting as the activity transitioned from *dream* to *design*.

7.4 *Design* stage
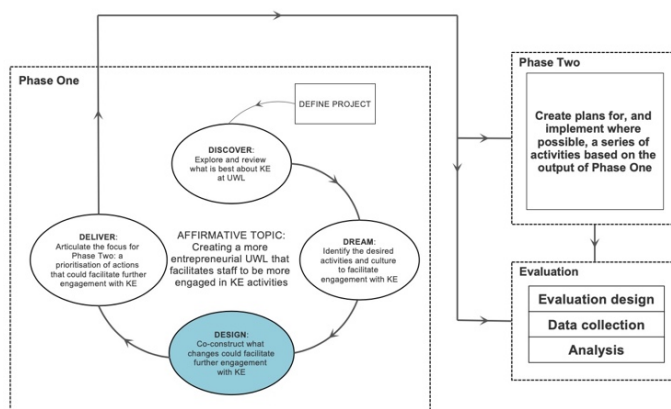
In the *design* stage data from the *discover* and *dream* stages was used to articulate the desired future state of UWL (the provocative proposition) and activities to enact that change. This design process included participants co-producing and identifying the mechanisms to deliver this 'dream' as well as identifying ways of measuring progress and culture-change.

Advisory Team meeting seven was intended to be held on 20th November 2019, but ultimately attendance became a challenge as the date clashed with a re-arranged Graduation ceremony. Updated documents were circulated electronically, and it was decided to allow members to work independently and feedback comments rather than progress the research through a meeting. This had some, but perhaps limited, response. However, this asynchronous approach would provide a basis for Phase Two activity in response to the Covid-19 pandemic (discussed further in Chapter 8). The group was asked to review the group activity output, the list of potential projects, and to consider what would be an appropriate 'provocative proposition'. Feedback was requested so this could be collated in time for the Advisory Team meeting eight[18].

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[18] As AT meeting seven was not held the subsequent meetings have retained their original numbers for ease of understanding.

For this project there was a blurring of the language of *design* and *deliver*, as the output from the *deliver* stage was arguably a 'design' for Phase Two. The key output from the *design* stage was the 'provocative proposition': an articulation of what the AT wanted UWL to become. Against this proposition, activities to make this a reality would be identified and agreed on as part of the *deliver* stage. On 4th December 2019, the group met for Advisory Team meeting eight and a draft 'provocative proposition' was reviewed. The group felt the description (provocative proposition) was not entirely in keeping with the language used at UWL. It was therefore decided it was better described as a 'statement of intent'. The draft was amended, and it was agreed this could be signed-off at the final meeting. Consequentially, in AT meeting nine, held on 18th December 2019, the AT agreed the final 'Statement of Intent':

> *UWL is set for an exciting and entrepreneurial future, where all staff feel able to contribute to its success. They understand our three missions of teaching, research, AND Knowledge Exchange. We collectively use our resources efficiently to support staff to engage in KE activities at a range of levels. They feel rewarded and recognised for their efforts to support economic and social development inside and outside of UWL.*

It was against this statement that the priorities and projects for Phase Two would be determined as part of the *deliver* stage.

7.5   *Deliver* stage
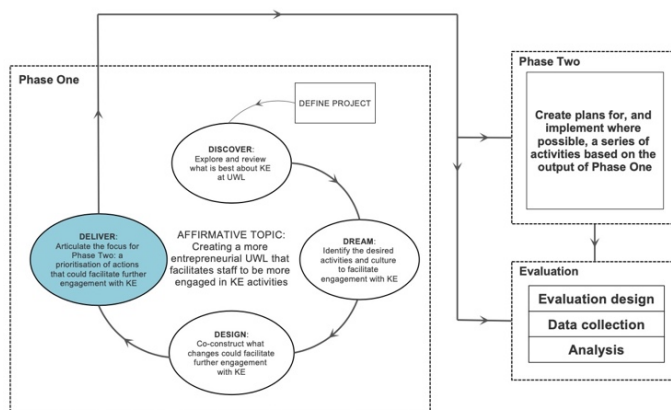
The *deliver* stage anticipated a range of activities would arise from the research and focus on enhancing KE culture (or entrepreneurial orientation) in specific ways. The plan was therefore that the output of Phase One (*deliver* stage) would be used to inform the research direction and the activity undertaken in Phase Two. The *deliver* stage was designed to focused on the transition from design to implementation.

While part of AT meeting eight looked at the statement of intent, most of the meeting focussed on reviewing and analysing the output of the group activity, and cross-referencing this with the themes coming out of the interviews, and linking back to the *design*. This was to ensure the collaborative research approach kept returning to the source data for verification. The links and overlap between themes were distilled into seven distinct areas of activities, which the group documented, see Table 12 below. These were discussed and the group agreed that four areas, around strategy, support, reward, and recognition, should be refined further. Three were seen as having less potential for Phase Two: development of a dedicated space, increasing financial autonomy, and a KE skills audit. These were seen as requiring significant resources and investment, did not wholly fit and work with UWL culture, or aimed to get a much broader level of KE engagement than was realistically sought. The group reflected on what had been learned, and any specific areas of practice that they wanted to

highlight and disseminate. They concluded that much of this could be captured with a renewed KE Strategy (which was one of the likely Phase Two projects).

POTENTIAL PHASE TWO AREAS OF ACTIVITY	PRIORITISED	RATIONALE FOR PRIORITISATION
Develop the next KE Strategy using a consultative and collaborative approach (building from current KE Strategy) as a mechanism of building engagement and buy-in from staff	Yes	Key challenges around understanding what KE is (communication), how we support it, how we measure that it is effective (KPIs and visibility in academic department annual reports) and how we build buy in at academic department leadership and academic staff levels The requirement to develop a new 2020-25 KE Strategy (to underpin HEIF) gives both a requirement for this activity and opportunity to use the process of strategy development to further engagement.
A review of KE support available and development of new support services or activities	Yes	The facilitating (central) role was appreciated but felt could be enhanced. Several common themes of areas for support came up that could be explored, around KE seed funds, KE Champions, enhanced KE training, and streamlining some KE support processes.
A review of models to formally recognise individual's success in KE activities, both to motivate the individual and encourage others to engage	Yes	A key motivator that came through the research was formal recognition of staff's engagement and achievement in terms of KE engagement.
A review of other models of reward that operate in the sector and of the KE promotion criteria introduced Summer 2019 (and staff awareness of this route)	Yes	'*What's in it for me*' in terms of staff prioritising and choosing to engage in KE (as opposed to teaching or teaching and research) was a recurring theme. The rewards for good teaching or engaging in research seem clear, but less so for engaging in Enterprise. Providing a clear framework of reward was seen as a key to facilitating academic choice to engage in KE activities.
Development and build of a 'creative space' as a focus for Enterprise and developing KE projects	*No*	*Deprioritised due to limited benefit in relation to cost, and challenges to both secure the significant capital investment needed, and identify suitable and available space.*
Increasing autonomy and delegated decision making around KE and KE budget to Academic Department or individual academics	*No*	*Deprioritised as counter to the perceived approach at UWL, and the DVC's desire for KE activities to have increased central support and coordination.*
Undertake a university wide KE skills audit	*No*	*Deprioritised as: the intention was not to have 100% of staff engaging in KE, just increasing the number; limited understanding of KE and therefore individuals recognising and understanding the required skills they may have; and breadth of KE meaning different (and yet to emerge) KE activities would require different skills.*

Table 12: Potential projects emerging from Phase One that could deliver the Statement of Intent

The ninth and final meeting of the AT group on 18th December 2019 closed Phase One of the research. The group reviewed the four next phase areas that they had prioritised (see Table 12) and agreed the proposals to be presented for senior approval through the DVC. Following feedback these were approved as four priority themes: *KE Strategy, KE Support, KE Recognition,* and *KE Reward*. Table 13, below, shows the final agreed priority themes and their description. Finally, the group spent time reflecting on the process of the Appreciative Inquiry and drew three areas of conclusion: length of time, primacy of teaching, and unexpected examples of good practice, which are reviewed below as part of the reflections that fed into planning for Phase Two.

PRIORITY THEME	DESCRIPTION
KE Strategy	Develop the next KE Strategy using a consultative and collaborative approach (building from current KE Strategy) as a mechanism of building engagement and buy-in from staff.
KE Support	A review of KE support available and implementation of new support services/activities.
KE Recognition	A review and implementation of models of to formally recognise individual's success in KE activities, both to motivate the individual and encourage others to engage.
KE Reward	A review and implementation of other models of reward that operate in the sector and of the KE promotion criteria introduced Summer 2019 (and staff awareness of this route).

Table 13: Phase Two priority themes

7.6 Reflections on Phase One in preparation for Phase Two

While reflections on the project are considered in Chapter 11, reflections on the delivery of Phase One were used to inform the development and delivery of Phase Two. These consisted of reflections from the Advisory Team and those I captured during Phase One as part of my reflective log.

The first reflection from the AT regarded the length of time it had taken to complete Phase One. Setting aside preparatory work the research had taken 14 months. The group reflected on their conflicting priorities which resulted in their difficulties in being able to attend meetings regularly. While the data ultimately captured was considered very rich, the clashes of other priorities and turn-over of staff meant that participation could have been better. With hindsight, this reflection was not surprising, given a noted challenge with the Progressive AI Meetings approach was that it can *"lose momentum as people inevitably miss meetings and become absorbed in other priorities"* (Whitney and Trosten-Bloom, 2010). However, given the findings of the research around lack of prioritisation of KE, the *process* of the research itself reinforced this finding.

The group also reflected on the nature of university life, and how the teaching cycle was very much the prime focus alongside an increased focus on research in preparation for the forthcoming REF. The group felt the UWL institutional cycle of activity was not aligned well to KE activities. Space to focus on KE was constrained by activities relating to teaching (semester starts, timetabled teaching, marking, exam boards, graduation, recruitment, and clearing). The group further considered the changing nature of UWL, it's growth in reputation and ranking, but how the cultural paradigm remained teaching-focussed. This view was borne out by the interviews where often interviewees interpreted KE as being related to teaching:

Participant P13 on what KE activities meant to them, activities "*…students and staff that UWL as a whole can get involved with to promote learning in the real world environment*"

"*Knowledge Exchange is something very different. There I would view it as for an example …..the embedding of employability into the law syllabus*" Participant P15

The third AT reflection was on the unexpected amount of KE activity uncovered through the research. While considered positive, it was felt there were too few examples institutionally. The group concluded there was a need to highlight and identify this good practice as a means of increasing engagement. The role of social media was highlighted as a potential mechanism from 'spreading the KE message' internally, as a key element of both understanding and securing engagement. Drawing on this reflection, the approach to Phase Two was discussed. It was agreed a different mode of engagement for AI should be used that would allow more rapid progress.

My reflections on Phase One highlighted the limited understanding of KE within UWL. A key part of UWL, and indeed broad academic culture, was the level of autonomy in academic roles. This required activities that would encourage, facilitate, and ultimately reward academics for choosing to undertake KE. However, limited understanding of KE acted as a barrier to engagement. The risk to the project was that the very opportunity the project sought to build on (increasing engagement with KE) could be undermined by the (lower) level of existing engagement with KE. At a sector level, changing terminology (third stream, Enterprise, technology transfer) had not helped clarity of understanding, nor had UWL's association of Enterprise as a solely financial activity. Collectively, this was reflected in a poor understanding of KE demonstrated by some of the interview participants:

"*Enterprise to me [is] more sort like more like business. … Knowledge Exchange it's more like uh for for educational purposes*" Participant P23

"*But I would say in general I don't think Knowledge Exchange has a very good understanding. Like not just in UWL ….. it's a bit of a weird concept*" Participant P25

Generally, while understanding of KE was poor, there was *some* understanding of KE demonstrated. As Teaching, Research and KE are not mutually exclusive concepts, this provided scope to work on a cultural understanding of research and teaching to expand to areas that intersected with KE. For example, highlighting collaborative research or research impact, or for teaching employability, all of which are parts of the KE landscape. Therefore, there was some evidence of understanding and valuing of *elements* of KE evident in the interviews and in the broader UWL culture. Therefore, Phase Two needed activity to increase the understanding of what KE is, reflecting the need for a shared language and dialogue as part of culture (Senge, 2006).

Culture change requires a need for broad engagement with stakeholders (Kanter, Stein and Jick, 1992) and Phase One was just the start of increasing engagement of UWL stakeholders with KE. The research approach was deliberately collaborative, as a core feature of both AR and AI. The creation, and participation of the AT, their enthusiasm to conduct interviews, and to recruit interviewees felt genuinely collaborative. However, at times my reflective log highlighted a concern that I was driving the project too much (rather than just facilitating). Too often in Phase One there would be a collaborative review of documents I had drafted, or proposals I had made. While it was naturally easier for a group to work from a draft document or idea, this did not necessarily mean it always needed to

be initiated by myself. Given my role, and being transparent about the research being part of my doctoral study, I clearly had the strongest vested interest. Also, arguably all groups need a leader, and given inconsistent attendance I provided continuity across the AT meetings. So, while the approach *was* collaborative, there *was* co-design and sharing of workload, there was also a counter element. My positional power and authority could be perceived to be undermining the collaborative nature slightly. My reflective log also noted the challenge of participation, both in terms of clashes with specific events or participants not prioritising project activities over other demands. These challenges to participation could be seen to reflect both the lack of understanding of KE, or the perception of its potential importance. Equally, however, it can be seen as an *expression* of that autonomy and choice by academics. Phase Two projects therefore needed to allow scope for more autonomy for sub-groups to take activities forward, and to build opportunities for wider engagement.

I also reflected on progress towards the business, research, and integrative aims. Of the three objectives to support the *business* aim (to enhance business performance, through seeking to increase entrepreneurial orientation) the first, to design and implement a set of managerial interventions that enhanced KE visibility, mission, policy, and practice, was the express purpose of Phase One. The second business objectives, to foster a culture that supported broader engagement with KE activities, would be the focus of Phase Two. The third objective, to measure key outcomes and outputs to identify any links to performance improvement, was a separate stream of activity (discussed in Chapter 9). The aim of the *research* project was to explore cultural change as a means of delivering business improvement. There were three objectives of the research project. First, to critically test and evaluate whether an enhanced culture of engagement with KE (an increased entrepreneurial orientation) could drive business performance in a complex competitive environment such as the HE-sector, where academic autonomy and collegiality are key cultural values. Second, to investigate cultural change in the context of university culture and specific organisational culture. Third, to generate new knowledge on a specific change to an aspect of professional practice and performance in the HE-sector. Phase One was contributing to each of these by establishing the specific activities of Phase Two that could lead to impact on performance (as articulated by the theory-of-change). The objective for the *integrative* aim was to review methodological approaches and design a project that used a research approach to deliver organisational change, through using a research-based approach (Appreciative Inquiry) as the vehicle for delivering change.

Drawing from these reflections were three implications for Phase Two. First, was a need to understand different ways to manage the research to ensure consistent engagement and timely completion of activities. This became of increased significance as the project moved into delivery of Phase Two activities at the same time as the challenges of the Covid-19 pandemic. Second, engagement from the team and broader stakeholder engagement was not consistent. Therefore, building engagement into more activities, and finding ways to get a wider range of staff involved in KE was needed. This would include broadening understanding of KE as a pre-cursor to engagement. Finally, was the need to be careful to monitor how much I would be driving Phase Two projects and how much autonomy staff would take. Collectively, this would be essential if UWL culture was to be changed, and to ensure the project had action not just intent.

7.7 Conclusion on Phase One of the research

In Phase One a plan for a cycle of AI was implemented that explored what was affirmative about KE practice at UWL. Through a series of interviews with staff, managed through an Advisory Team, themes were identified that could support improved engagement with KE. These were drawn together into four priority themes: *KE Strategy, KE Support, KE Recognition* and *KE Reward* that were the basis of activities in Phase Two. Reflections on Phase One meant Phase Two needed: to reduce my level of control or drive; broaden KE engagement; and to find ways improve levels of *consistent* engagement.

8 Phase Two Research
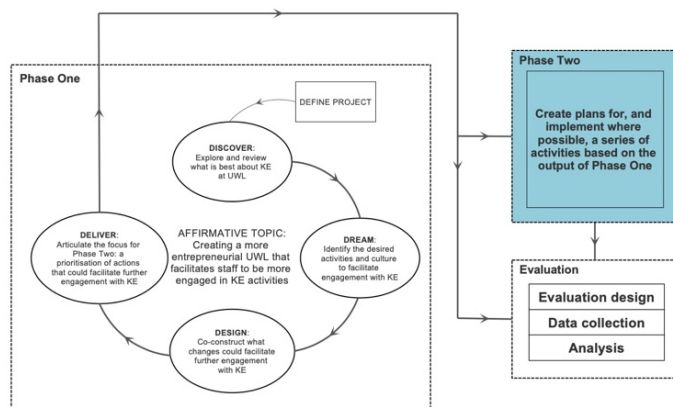
While Phase One of the project was planned using a pre-selected Affirmative Topic, Phase Two emerged from the priority themes arising from the research. Phase One was design-oriented and Phase Two was intended to be more action-oriented, and focussed on achieving the business, research and integrative aims of the project. Phase Two focussed on the four priority themes of *KE Strategy*, *KE Support*, *KE Recognition* and *KE Reward,* identified in Phase One. This chapter describes the planning and initiation for Phase Two, which was more fragmented, less linear, and had to adapt to respond to both regulatory changes and the Covid-19 pandemic. A timeline of key activities in included in Appendix 8 to aid understanding of the chronology.

8.1 Phase Two initiation

Planning for Phase Two followed the completion of Phase One and reflections with the Advisory Team (AT). I held an initial discussion with the DVC, the project's senior sponsor, on the four key themes that emerged. The DVC agreed to my proposal that UWL should create a formal KE working group to oversee KE activity, both as a recognition of the growing importance of KE and the need to engender buy-in from academics (in line with the findings from Phase One). This was announced in University Research, Scholarship and Enterprise Committee (URSEC) on 13th November 2019. On 14th January 2020 the DVC approved Phase Two to commence, which coincided with the formal release of decisions on KEF, made by Research England (RE) on 16th January 2020. A further announcement on the KE working group was also made at the Senior Manger Group meeting in January 2020, as part of an update on KEF.

The working group (named the KE Growth Group) would have a dual role. It was planned to act as an Innovation Team, which Whitney and Trosten-Bloom (2010) describe as volunteers to "*move the organisation towards its newly articulated dream and design*". It was also a means of managing KE at UWL, embedded into the governance structure of the University as a designated subgroup of URSEC. Invitations for representation were circulated to the heads of academic departments in January 2020, with the first meeting set for 5th February 2020. Initial membership of the KE Growth Group was drawn from all eight academic departments (later including a representative from a new School of Biomedical Sciences), a representative from the Professoriate, a representative from the Finance Department, a KE Officer from the Research & Enterprise department, and myself as Chair. Within this group, there was some continuity from the Phase One AT (myself, the KE Officer, the Professoriate representative, one academic department representative and the Finance Department representative). Over time, turnover of staff resulted in some membership changes. This reduced the number who had been on the AT from five to three, but increased Academic Department representation when the School of

Biomedical Sciences was launched. By creating the KE Growth Group, participation in KE at UW was broadened, which contributed to meeting the aims of the project.

The first meeting was held on the 5th February 2020 as planned, with the discussion on the Terms of Reference (ToR) (see Appendix 9), the background to the formation of the KE Growth Group, and the priorities that arose from Phase One research. A *task and finish* subgroup approach was agreed to address the priority themes. Other aspects of KE were discussed, including the forthcoming KEF and the announcement of a KE Concordat. The Terms of Reference were agreed at the next meeting on the 4th March 2020 and covered the group's purpose: to oversee UWL's approach to KE, proposing initiatives and changes to structure, process, or policy that would support growth; to provide oversight of KEF submissions; to continually review and implement UWL's commitments and action plan related to the KE Concordat; to engage with university stakeholders to promote the UWL's role in economic and social regeneration and growth; to regularly inform key internal stakeholders in the University of any changes in policy or requirements of external agencies that underpin KE provision; and to monitor performance against targets.

8.2   Phase Two planning

The four priority themes (see Table 14 below) were refined by the KE Growth Group into projects that would address the opportunities identified in Phase One. The KE Growth Group constituted an overarching steering group, providing a source of coordination of the arising subgroup *task and finish* activities (both emergent and from the Phase One research) and for overseeing growth of KE at UWL. The four priority themes arising from Phase One are set out in Table 14, and were: to develop and revise the organisation's KE Strategy (*KE Strategy*); to develop a range of KE Support initiatives to support KE engagement (*KE Support*); to put in place process and systems for staff recognition for engaging in KE activities (*KE Recognition*); and enhance rewards for staff engaging in KE activity (*KE Reward*).

The first, *KE Strategy* was focussed on the development and articulation of strategy, as well as creating an Implementation Plan, drawing from the *dream*, *design* and the Statement of Intent from Phase One. This activity also needed to consider alignment to KEF, use of HEIF funds, and the KE Concordat. I envisaged this as a more collaborative approach to developing KE Strategy than would have been my natural approach. This aligned with a requirement to: grow KE activity; produce a new strategy for using HEIF funding (2021 onwards); review UWL's current practice and develop an improvement plan in response to the KE Concordat; and improve KEF performance.

KE Support responded to the need, identified in the research, for facilitating roles, resources, systems and processes. The proposal was to review potential activities, such as a seed fund to pump-prime KE activities, and appropriate KE-related policy. *KE Recognition* drew on the research, which identified a need to recognise both achievement and engagement with KE. The plan was to review practice in other HEs and other sectors, leading to a proposal for what could be implemented at UWL. Areas identified for review included a KE Champion role within academic departments, an award scheme, a conference, embedding KE in appraisals, and recognition of staff-generated IP. *KE Reward* drew on the need to reward staff for choosing to participate in KE, identified in the research. The plan was to review practice in other HEIs and to create a proposal for what financial and non-financial rewards

could be implemented at UWL. KE *Support, Recognition,* and *Reward* all linked to the development and implementation of the KE Strategy, so it seemed appropriate to design and run a series of small interventions rather than a single activity. There was an assumption that a mode of AI would remain appropriate for these interventions, but was not predetermined. Each project would identify an area of potential improvement, but there was no constraint to only following ones that came from the research. This was to allow scope for projects to emerge as part of the ongoing work of the KE Growth Group.

PRIORITY THEME	DESCRIPTION	ACTIVITIES
KE Strategy	Develop the next KE Strategy using a consultative and collaborative approach as a mechanism to build engagement and buy-in from staff (building from current KE Strategy).	Development and articulation of UWL's KE Strategy, aligning with: KEF, the KE Concordat, and UWL's Accountability Statement for HEIF.
KE Support	A review of KE support available and implementation of new support services/activities.	Development and implementation of KE seed fund proposal; development of KE-related policy.
KE Recognition	A review and implementation of models of to formally recognise individual's success in KE activities, both to motivate the individual and encourage others to engage.	Development and implementation of approaches to recognising success in KE activity including: KE Champion; KE Awards scheme; an Annual KE Conference; embedding KE in staff appraisals; and a Staff IP policy
KE Reward	A review and implementation of other models of reward that operate in the sector and of the KE promotion criteria introduced Summer 2019 (and staff awareness of this route).	Develop and implement financial and non-financial reward for engagement with KE: review the Academic Promotion criteria; identify reward for staff whose research generates commercialisable IP; and reward for staff who secure or deliver consultancy

Table 14: Priority themes and planned activity

This design also needed to ensure the project was still reflecting the four design parameters identified in Chapter 5. The Phase Two plan sought to building on and *with* the prevailing UWL culture delivering activities developed from appreciative views of what was working within UWL. Through the development of the KE Growth Group and continuing to develop Phase Two using an research-based approach, the project continued to be collaborative in nature. Phase Two activities were expressly aimed at seeking ways of building and harnessing individual academic autonomy and choice (both in the design of new initiatives and as a vehicle for engagement themselves). Identification and design of measures to understand causal links between culture change, entrepreneurial orientation and organisational performance improvement formed a separate stream of activity to run alongside Phases One and Two, and is discussed in detail in Chapter 9.

An alternative AI engagement mode was proposed for Phase Two projects, arising from team members reflecting on: the process of using the Progressive AI meeting (PAIM) mode of AI and the length of time taken for Phase One; the challenges for consistent attendance; and the competing priorities for academics. A more intensive approach to the AI approach was planned for three of the themes (*KE Support*, *KE Recognition* and *KE Reward*). The work involved in *KE Strategy* was embedded within the ongoing terms of reference for the KE Growth Group but aligned to the requirement to submit to KEF by 15th May 2020 and to complete work for the KE Concordat. A broad plan was therefore in place, a timeline established to respond to external deadlines (HEIF Accountability, KEF,

KE Concordat), and engagement secured from across the institution. With this in place, the second phase of the project started to pick up momentum. However, a major external event threatened to disrupt the project and its continuation; Covid 19.

8.3   Moving to online AI as a result of the Covid-19 pandemic

Phase Two was launched in a challenging context; just as the Covid-19 pandemic began in the UK. Following the outbreak, and the resulting legislation[19] to manage the pandemic, UWL moved to remote working. Campuses closed from March 2020 until a full return to onsite working from July 2021. This had a considerable impact on the planned delivery of Phase Two projects, as it was envisaged that staff would meet face-to-face. A facet of the teaching-focus of UWL was an expectation from senior staff that as students were on campus, so should staff. This culture of expected 'presenteeism' meant that remote working was culturally unusual, and consequently UWL lacked tools and established models of working. The pandemic forced many HEIs to pivot their activities (Noble and Spanjol, 2020); UWL was no exception and rolled out tools to support this, such as Microsoft Teams. Eventually conducting meetings via Microsoft Teams became normalised, but at the start of Phase Two this was a new way of working. The KE Growth Group moved to meeting via Microsoft Teams and continued to plan and implement Phase Two projects.

At this point in time, literature on online Action Research (including AI as a form of AR) was limited, and did not offer a significant amount of insight into how Phase Two could be managed online. A recurrent theme in the literature was on using AR to understand and improve things happening online (particularly online learning and education). In other words, AR to understand things in the 'virtual' world, rather than virtual AR to understand things in the 'real' world (accepting that from a socially constructed view of reality 'virtual' can be just as real as 'real'!). Examples include: Green and Huntington (2017) on using AR to look at online CPD activities; Kock (2005) on using AR to research e-collaboration; or Swinglehurst, Russell and Greenhalgh (2008) on using AR to look at peer observation of online teaching.

While limited, literature on online AR provided some useful considerations for this project. It indicated that using synchronous approaches (communication occurring at the same time) to online communication and Action Research would be most appropriate for three reasons. First, one of the features of online AR described was that there was more potential for online groups to voice conflict (Stowell and Cooray, 2017). This was particularly where communications were asynchronous rather than synchronous. Second, according to DeLuca and Valacich (2006) where consensus is sought higher levels of synchronicity are needed, with asynchronous activities better suited for complex problem solving. As the purpose was engagement and academic buy-in, consensus rather than complex problem solving was the most appropriate paradigm. Third, reflecting timeframes in Phase One impacting on participation, the literature suggested online AR could have high levels of participant drop-out (Egan *et al.,* 2004). This reinforced a need to find more time-intensive ways to deliver AI activities to maximise engagement. The literature also highlighted a concern that the use of technology can be 'closed' (Schmidt-Jones, 2017) potentially limiting or controlling participation.

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[19] Coronavirus Act 2020 (https://www.legislation.gov.uk/ukpga/2020/7/contents/enacted) (accessed 20/3/22)

However, as mass-engagement was not desired, this was not perceived to be a barrier to use of online technology for this project. The adversity of Covid-19 presented an opportunity for a better understanding of AR using digital technology, and in particular the AI form of AR.

The KE Growth Group decided to undertake a trial of a shorter AI approach, focussing on a smaller *task and finish* project. The KE seed fund, which was part of the *KE Support* priority, was bounded enough to establish whether an online approach would work. A group was convened online using Microsoft Teams and an AI approach was adopted to meet the requirement from Phase One of reducing the length of time taken. This is discussed in more detail below in section 8.4.2, but the approach was considered to have worked successfully. Therefore, the activities of the KE Growth Group could continue broadly as planned, just through a different medium.

8.4   Phase Two projects

Following the successful trial for KE seed fund design, the KE Growth Group agreed to focus on further *task and finish* activities, alongside the *KE Strategy* development activity that was part of the core Terms of Reference for the group. The *KE Strategy* formulation activity was conducted over an extended period and adapted to reflect external factors including changes to RE's approach to HEIs' accountability for the KE funds they received. The progress of the four priority themes of *KE Strategy*, *KE Support*, *KE Recognition*, and *KE Reward* are each discussed in turn below.

8.4.1   KE Strategy

It was evident from Phase One research that staff, particularly academic staff, did not have a strong sense of: what KE was, what counted as KE, why it was important, how it could offer career opportunities, or how to get involved. A key challenge for increasing engagement with KE was therefore making it more understandable and relevant to staff. Providing this clarity through collaboratively developing a new KE Strategy, and how that could be implemented, was part of the *dream* arising from Phase One*.*

A major factor in the timescale and approach to creating the UWL KE Strategy were external pressures arising from the regulatory environment the strategy needed to both reflect and address. As part of the increase in HEIF funds available for Research England (RE)[20] to fund KE, there was a requirement for enhanced accountability. Research England's approach integrated this accountability into three activities: the roll out of KEF to provide a better sector-wide understanding of KE performance; HEIs signing up to a KE Concordat, a set of underpinning principles for good KE; and HEIs producing an accountability statement on their planned use of HEIF funds. Each of these informed the KE Strategy, and the approach to each was also informed by the output of Phase One.

First, the launch of KEF and the results had implications for the formation of the UWL KE Strategy. Much of the data for KEF was pre-existent, either in prior HE-BCIs returns, data held by Innovate UK,

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[20] HEIF funds grew from £160m in the 2016-17 allocation to £210m for 2018-19: sources
https://webarchive.nationalarchives.gov.uk/ukgwa/20180322111500/http://www.hefce.ac.uk/pubs/year/2016/201616/ (accessed 15/4/22) and https://webarchive.nationalarchives.gov.uk/ukgwa/20180801134611/https://re.ukri.org/news-events-publications/publications/guide-to-research-and-knowledge-exchange-funding-2018-19/ (accessed 15/4/22)

or produced by Elsevier (using the Scopus database to identify research outputs co-produced with non-academics). This data underpinned six of the seven KEF perspectives, with HEI's required to produce and submit three narrative statements to supplement this data. The first narrative statement was an overarching description of the HEI to provide context for the data. The second was a narrative statement on the contribution to local growth and regeneration. The final narrative was on the HEI's public and community engagement. Templates were provided for all three by RE, and the public and community engagement template included self-evaluated scoring using a framework provided by the National Co-ordinating Centre for Public Engagement (NCCPE).

The KE Growth Group coordinated evidence gathering for the narratives, collecting information on relevant activity from peers in their academic departments and from the Outreach, Marketing & Communications, and the Alumni & Development teams. Once collated, the KE Growth Group undertook an exercise to identify themes of activity within each narrative area and an iterative process was used to refine these, using asynchronous communications and some online meetings. A consensus was sought for self-scoring against the NCCPE-based evaluation of community and public engagement. The three narratives were submitted in October 2020, and KEF was published by RE in March 2021. Following publication, I analysed UWL's performance and presented this as a report to both the Senior Management Group (May 2021) and to URSEC (June 2021). Accompanying this analysis was a proposed action plan for addressing areas where UWL's performance could be enhanced, which would need to be reflected in the KE Strategy. The point of the project (and the KE Strategy) was to seek to improve performance by changing UWL culture to be more entrepreneurial, increasing engagement with KE, which should then be reflected in positive impact on the KEF metrics. Therefore, while relatively tactical in nature, the KEF action plan needed to be incorporated into any subsequent KE Strategy Implementation Plan.

The second part of RE's approach to KE accountability was the KE Concordat. Developed through collaboration between RE and the HE-sector, the KE Concordat[21] (KEC) listed eight 'guiding principles' of good KE and suggested *key enablers*. These provided both a high-level understanding and suggested processes and approaches for effective KE. Longer-term, RE anticipated sign-up to the KEC would become a pre-requisite for receipt of HEIF funds. However, for the first year it was seen as voluntary. Organisations that chose to sign-up to the KE Concordat were required to then undertake a self-evaluation against the principles. Using this self-evaluation, HEIs were required to develop an action plan of their top five actions to address gaps between the KEC principles and their current state. Each HEI's self-evaluation and action plan would be submitted for peer-review. At the November 2020 meeting, URSEC agreed the KE Growth Group recommendation for UWL to sign up to the KE Concordat. In January 2021, UWL formally signed up to the KE Concordat, noted in the minutes of URSEC for February 2021.

Following this formal commitment, the KE Growth Group shifted its focus to the KEC self-evaluation, as detailed by the Phase Two timeline (see Appendix 8). This work was undertaken through a series of online meetings, as well as KE Growth Group representatives seeking views and evidence from their own academic departments. In addition, further views were captured from other departments (Outreach, Marketing & Communications, Legal, and the University Secretary), and the self-evaluation

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[21] Further detail is available at https://www.keconcordat.ac.uk (accessed 15/4/22)

also drew heavily on the work undertaken by the KE Growth Group as part of developing the KEF narratives. The group looked to identify gaps against the KEC principles and the indicative enablers (see Appendix 10). The KE Growth Group reviewed potential action, then prioritised five, to address the gaps identified. *Action one (KE Strategy & Articulation)* was to enhance and clarify the KE mission in UWL through formal approval of a new KE Strategy developed through wider consultation, with associated objectives and a clear Implementation Plan. *Action two (KE Policy Development)* was to develop and expand the policy framework to support KE. Where appropriate this would include formal approval of new policy (for example, Consultancy, Staff IP, and ethical integrity) or where activity was limited in scope as a shorter 'policy statement' within the KE Strategy. *Action three (KE Support)* was to provide enhanced support to KE activities through two new initiatives: KE Champions and KE seed funds. The KE Champions would provide localised support and resource to develop new initiatives and support academics to engage with a range of external partners to exchange with industry, public sector, and the third sector. This initiative sought to provide both additional capacity and enhanced capability. The KE seed fund would provide pump-prime funding for activities that could have the potential to lead to KE outcomes that would enhance UWL's HE-BCIs or KEF returns. These initiatives also included planned evaluation of outcomes. *Action four (KE Employment)* was enhancement and improved understanding of KE within academic job descriptions and promotion criteria. Finally, *Action five (KE Performance Management)* was the development of a suite of KE metrics to evaluate the success of the KE Strategy. This would include clear key performance indicators (KPIs), including a regular survey of staff to better understand UWL's entrepreneurial orientation.
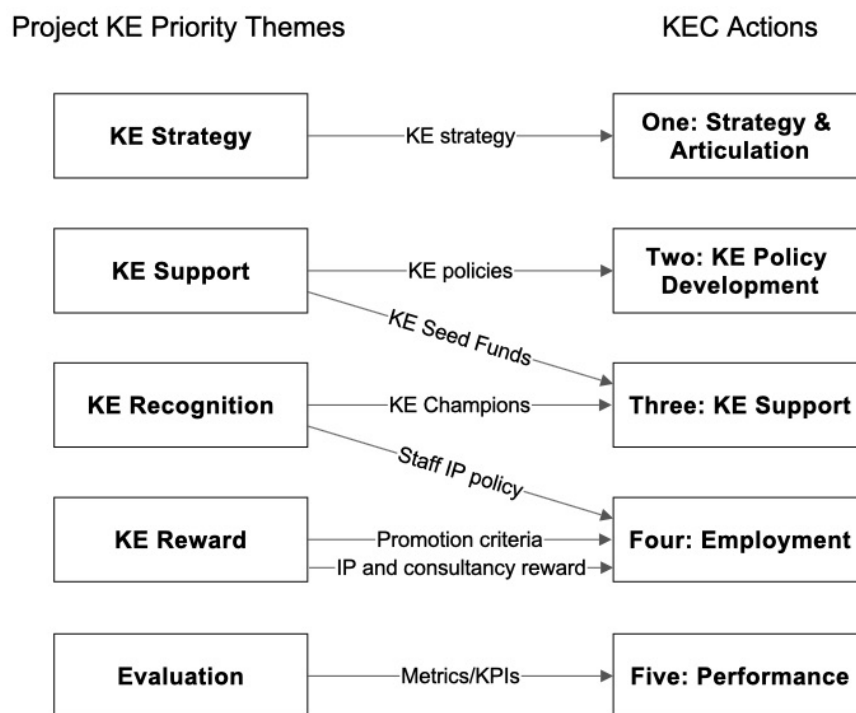
Figure 11: How the project priority themes mapped to KEC actions

Phase One research contributed heavily to the KEC self-evaluation, with the KEC actions reflecting the project's KE priority themes, but were not identical to them (see Figure 11 above). KEC actions one (KE Strategy & Articulation), two (KE Policy Development), three (KE Support) and four (KE

Employment) mapped to the *KE Strategy*, *KE Support*, *KE Recognition*, and *KE Reward* priorities, but not necessarily in a binary way as some priority themes had potential to link to multiple KEC actions. The fifth action, on performance, did not fit to the AI project priority themes but did link to establishing metrics for performance which formed the evaluation part of this project (discussed in Chapter 9). While not using the KEC principles as a frame of reference, Phase One was an research-based form of self-evaluation of UWL's KE approach. Indeed, reference was made to this project as part of the UWL submission, on how the self-evaluation was developed. In July 2021, the KEC action plan and self-evaluation was submitted to the National Centre for Universities and Business. Feedback from peer-review was received in October 2021. This was reported to URSEC in November 2021, and it was noted that the peer-review found that the submission was clear and well-defined. The evaluators highlighted some areas of strength, including:

> *"A high level of ambition that would have a significant impact and "shift the dial" for the institution if implemented; a people focused strategy drawing on a good understanding and articulation of institutional culture; building on a previous research project that gives an evidential focus for progress; and open acknowledgement of challenges with a plan for overcoming them*." (KEC evaluator feedback)

The five key actions for the KEC plan needed to have a conceptual fit to the emerging KE Strategy (that was itself referenced as being a key priority) and had to be incorporated into a broader plan for implementing the strategy. This work to self-evaluate against the KE Concordat, and to agree the KE Strategy and its accompanying Implementation Plan, provided both a vehicle to promote the project aims and a focus for collaborative activity. This allowed recognition of this research within the KE Concordat self-evaluation and its action plan, which then contributed to the KE Strategic Plan. These formalised key outputs of the research project both internally (the KE Strategy and KPIs) and externally (the commitment to the KE Concordat action plan).

Running almost in parallel with the KEC activity was a request from RE that HEIs submit an Accountability Statement for use of their HEIF funds, announced in a circular to heads of HEIs in April 2020[22]. Further detail was provided on what RE expected Accountability Statements to address in July 2020[23], confirming a requirement for each HEIF-funded HEI to describe: the activities that HEIF would support and the way HEIF funds would be used to deliver these; to estimate how HEIF expenditure would map to various types of KE activity; to demonstrate how activities would deliver the Government's priorities and support both RE and OfS strategic objectives; to demonstrate alignment of HEIF use to HEI strategic objectives; and to provide detail on how HEIF funded activity would be managed and monitored. This statement needed to closely relate to the developing KE Strategy, but was not a strategy *per se*. The Accountability Statement reflected: the developing principles and key aims of the KE Strategy, gaps identified against the KEC, and the priority themes identified in Phase One. The UWL's HEIF Accountability Statement was submitted in May 2021. It expanded on the

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[22] Research England provided further clarification as part of its circulation of information to HEIs, see https://www.ukri.org/wp-content/uploads/2021/10/RE-05102021-CircularLetter160420-KEaccountabilityFunding-CovidRevisedTimetable.pdf (accessed 15/4/22)

[23] Priorities for use of HEIF were provided by RE, see https://www.ukri.org/wp-content/uploads/2021/08/RE-06082021-HEIF-policies-and-priorities-PDF-for-webpage-Aug-correction.pdf (accessed 15/4/22)

previous HEIF strategy by inclusion of three new objectives (alongside the existing ones of: anchoring local talent development, driving business start-up and growth, and leveraging the physical and intellectual resource of UWL). First, was a greater focus on visibility of KE at UWL, drawing from the findings of Phase One research. Mirroring the aims of this project the KE visibility objective was:

> *Broadening the engagement of staff in KE activities through raising KE's profile in terms of: visibility; its value to UWL and our stakeholders; and deepening staff's understanding of what KE is, and how it is relevant to their roles.* (UWL HEIF Accountability Statement)

Second, was enhancing KE support, and this objective explicitly linked to Phase Two activities by setting an objective of:

> *Providing appropriate resources to support staff to successfully engage in KE activity through: developing new methods of encouraging engagement through support resources, models of reward, and recognising success; building a broader and appropriate suite of policies & procedure; fostering a culture of continuous improvement; and implementing an enhanced measurement of KE activity and performance, using this data to inform future action.* (UWL HEIF Accountability Statement)

Third, was a more explicit recognition of the civic role of the University, addressing a gap that was identified in the KEC self-evaluation and in co-creating the KEF narrative for public and community engagement.

The work on the HEIF Accountability Statement, KE Concordat self-evaluation, and subsequent KEC action plan, allowed underpinning principles for the KE Strategy to emerge. These principles, and associated aims, were refined by the KE Growth Group and presented for feedback at the URSEC meeting of June 2021. Following feedback these were incorporated into a final version of the KE Strategy, formally approved by URSEC in November 2021. The UWL KE Strategy included an Implementation Plan and an outline set of KPIs. This strategy, and in particular the Implementation Plan, implicitly and explicitly drew from the Phase One research and the emerging Phase Two research and activity. This assisted in establishing and embedding a new approach to KE for the institution by using an AR strategy.

The UWL KE Strategy drew heavily upon this project in three ways. First, the objectives built on the wording of the objectives in the HEIF Accountability Statement (see above). Second, the development of an Implementation Plan to support the KE Strategy explicitly formalised key project activity (KE seed fund, KE Champions, KE promotions criteria). It also included actions from the HEIF Accountability Statement, KEC action plan and KEF that in turn had each been developed from this project and research. Third, the KPI Framework for the KE Strategy drew directly from the approach developed to evaluate the impact of this research project.

These externally driven changes meant that developing the KE Strategy was an iterative approach, reflecting evolving requirements from the regulatory body (RE). However, this requirement from Government to use funds appropriately and effectively was also a useful tool to ensure this research project, and its output, was taken seriously within the organisation. As development of strategy would be iterative and both reflect and inform the developing Phase Two projects, it was decided that momentum should be maintained through tackling specific projects. These would encourage more

staff to engage with KE activities, alongside the KE Strategy development. This approach was articulated in the KE Strategy and Implementation Plan. The development of the KE Strategy therefore formed a backdrop against which the other activities in Phase Two progressed. However, at the same time a focus on the KE Strategy was also a distraction and delayed that progress. This is reflected in the discussion of the three other priority themes of *KE Support*, *KE Recognition* and *KE Reward*, below.

8.4.2   KE Support

The *KE Support* priority theme had two main activity streams: KE seed funds and KE-related policy. The first to be addressed by the KE Growth Group was the KE seed fund, identified in Phase One interviews as a potential motivator for academic staff to engage with KE. The initial decision for designing the KE seed fund, was to use a mode of AI that would be shorter, compared to the Progressive AI Meeting mode used in Phase One. According to Whitney and Trosten-Bloom (2010), the AI approach should be allowed to develop within an organisation, so dogmatic adherence to a particular form of engagement was not a requirement. Rather, the engagement mode should be allowed to be adopted, altered, and develop in ways that are appropriate to that organisation.

ENGAGEMENT MODE	SCOPE	TYPICAL TIMEFRAME	DOES IT HAVE A CLEAR STRUCTURE	WHAT WAS THE RELEVANCE FOR PHASE TWO OF THIS PROJECT
Core Group Inquiry	Small scale introduction, or quick start or result, or building a base of enthusiasm for scale up. Scaled down version of the Whole System 4D Dialogue, 5-50 participants. Crafts questions and is interview based.	Undefined	No	Small scale approach, scaled down so could be delivered over a shorter timeframe. Interview based so not necessarily the right approach for some of the Phase Two proprieties. Aimed at identifying things for scale-up which may not fit to projects.
AI Learning Team	Small scale approach, good for integrating AI into mainstream activity. Natural fit to creating in *deliver* stage of initial AI cycle. Good for stimulating innovation, developing staff, working in cross-functional ways	Undefined	No	Small scale approach so could be delivered over a shorter timeframe. Aimed at integrating activity into mainstream, (therefore becoming part of UWL culture). Good for working across departments and for stimulating innovation.

Table 15: Appreciative Inquiry engagement approach for Phase Two

The modes of AI engagement (see section 6.3.1) were reviewed to see what could offered a condensed approach. Many of the AI modes that were ruled out for Phase One (for example due to being aimed at mass participation) continued to be inappropriate for Phase Two, and the mode used in Phase One seemed protracted. The two remaining modes, Core Group Inquiry (CGI) and AI Learning Team (AILT), were therefore reviewed for suitability for *task and finish* activities identified for Phase Two. Of these, the CGI mode was interview based, which did not necessarily fit a shorter timeframe. Furthermore, it was identified as being good for piloting activities for scale-up, which did not seem to be the most appropriate approach. The AILT mode fitted the need to innovate within culture and to be able to

progress more quickly. As focus on generating output that could be mainstreamed, in other words become part of UWL culture, provided additional suitability. Table 15 above outlines the review of the two modes of AI.

Following selection of the AILT mode, the research therefore continued to employ a mode of AI. The *deliver* stage, for the KE seed fund design, would be documented in the form of a recommendation or proposal, as ultimately the approval to progress would need executive sign-off. Participants for this activity were drawn from volunteers from the KE Growth Group and included nine academics and professional support staff, covering four academic departments and two professional support departments. Figure 12 below shows the plan for the AI, delivered over two online meetings (synchronously), with time in between to reflect and work on the KE seed fund proposal offline (asynchronously).

Activity	AI Cycle	Content	Output
Meeting 1 (4/5/20)	Intro	- The 4-D model - Adapting to online - Plan for the T&F group	
	Discover	- Review small funds (Research Seed fund etc) they have tried/aware of to identify what worked. - What Themes fit with what could work at UWL	Ideas on themes/ideas of how a seed fund could work at UWL
	Dream	Group activity to review models/themes and test applicability/relevance to UWL (4 Qs) Introduce the 14 design questions	Ideas capture on Microsoft Teams
TEAMS Collaboration	Design	14 Design questions: upload thoughts models, max value, types of spend etc (link back to 'Dream' decisions) - Team to go in and highlight the things they agree with (pick a colour!)	Design spec
Meeting 2 (18/5/20)		Agree design parameters	Outline proposal
	Destiny	Draft Proposal and implementation plan	
Offline		Agree proposal document	Proposal for DVC

Figure 12: Knowledge Exchange seed fund AI plan

The online research started with a session to ensure participants understood the AI model, and to discuss adapting the 4Ds to an online approach. The plan for the two sessions was discussed and agreed. As the start of the *discover* stage, participants discussed examples of similar small funding initiatives, either at UWL or other HEI's they had worked at. From this, several themes were drawn out via discussion and a mind map was co-created using the whiteboard functionality of Microsoft

Teams. This articulated what had been positive and contributed to the success of these initiatives. Moving into the *dream* stage of the research, the group looked at four key questions to help focus the development of the dream. These were: *should the purpose of the KE seed fund be focussed on broad KE, or narrow impact on HE-BCIs metrics or KEF?; should the fund support developing potential external collaboration, or focus on projects with a clear external involvement?; should the funds be prioritised for achieving clear outcomes or promote more blue-skies thinking and activity?;* and finally *should the ultimate external engagement be broad or targeted?* This led to the co-creation of an ideal KE seed fund. The group agreed that the KE seed fund should: prioritise activities with the potential to impact on metrics (both HE-BCIs and KEF); be broad enough to allow for *potential* KE outcomes to be able to fund longer-term goals; have a mixture of outcomes that could be achieved, to allow 'softer' KE activities like community engagement to be included; and to allow applicants scope to choose the varied targets for ultimate Knowledge Exchange. In preparation for the second meeting, the group were presented with 14 design questions to consider. They were encouraged to annotate an online document (on Microsoft Teams) with their thoughts, including responding to other members comments and highlighting where they agreed or disagreed. Table 16 details these 14 tactical design questions.

QUESTION TOPIC	QUESTION WORDING
Length of projects	How long should each project be?
Maximum values	Should the fund amount or number of applicants be capped?
Types of expense	What could seed funds be used for: e.g. buy-out of teaching; equipment (non-capital); equipment (capital); travel; consultancy/partners; consumables; IP protection costs; events; other?
Outcomes and impacts	What outcomes or impacts should be prioritised?
Timeframe for return on investment, impact or outcomes	Over what timeframe should any impact be seen?
Total number of projects and budget	How many seed fund applications should be supported?
Decision making (who)	How should decisions be made? What should the role of senior managers be?
Voucher scheme approach	Should an Innovation Voucher approach be included as part of the scheme?
Roll-over of unused funds	How should unused funds be managed between financial/budget years?
Multi-disciplinarity preferred	Should multi- or interdisciplinary projects be prioritised?
Decision making and approval (how)	Should the decision making be based on a holistic view of the application or scored against a set criteria?
Reporting and monitoring approach	What should the reporting and monitoring framework be?
Launch approach and timings	When should the seed fund be launched (subject to formal approval)
Forms and modelling cost	How much support should be given to draft applications (particularly costing) or should a simpler approach be used?

Table 16: The 14 Design questions

A gap of two weeks between the two meetings allowed participants time to reflect and use the shared document functionality in Microsoft Teams to upload thoughts, ideas, and to indicate where they felt a particular affinity with ideas posted by other participants. On 18th May 2020, the participants met online for a second time and narrowed down the reflections on the 14 questions to form a clear set of design parameters that the KE seed fund would need to incorporate. Collectively, this refining process formed an articulation of the KE seed fund *dream* (see Figure 13 below]. The key features desired were that the KE seed fund: would be broad enough to cover KE activity that could impact on

KEF; that it would be easy to access and not have an overly bureaucratic approach; that it would focus on best practice that could be shared across UWL; that it would be open to all staff; that it would drive increased HEIF through improving the HE-BCIs metrics; that decision making would be clear and transparent; and that it would be designed to allow staff running projects to spend the funds easily.
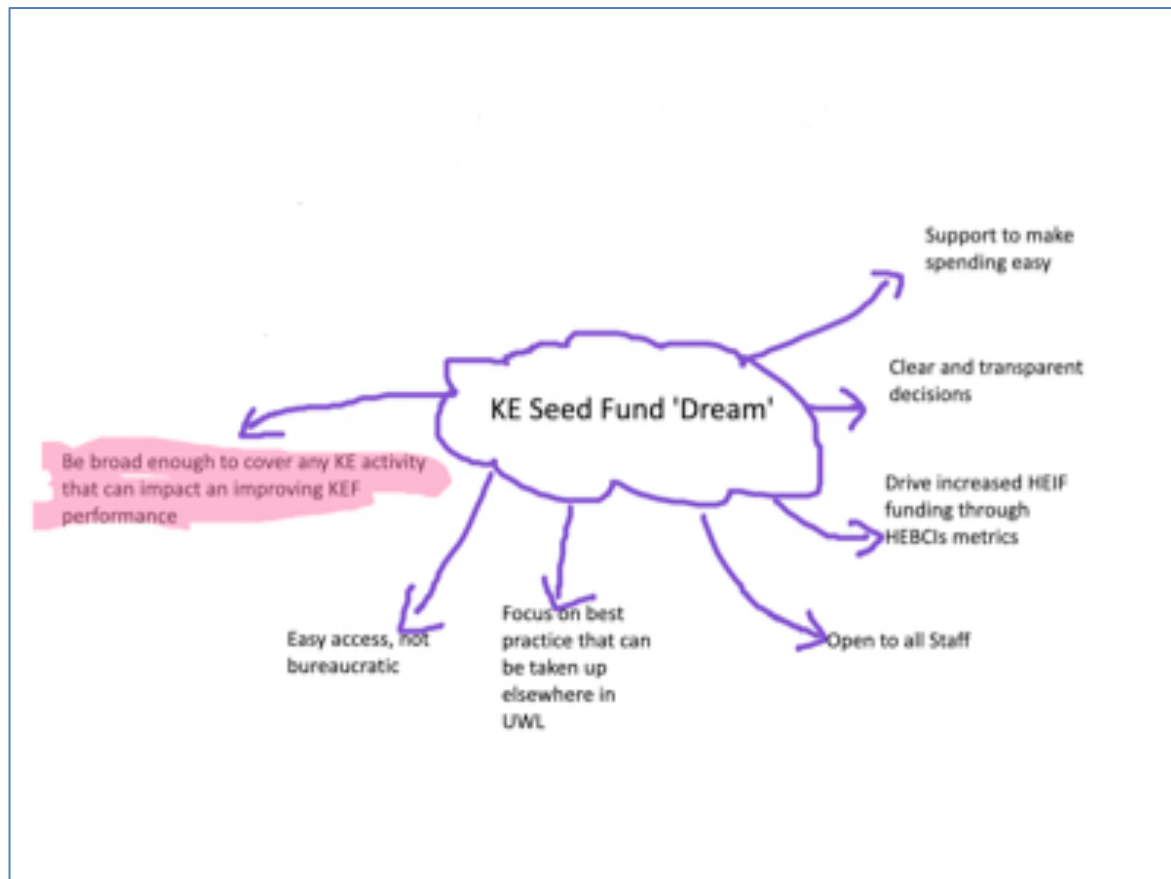
Figure 13: Knowledge Exchange seed fund *dream (extracted from Microsoft Teams whiteboard)*

Using these agreed parameters, the final *deliver* stage of the research process was the creation of a draft KE seed fund proposal incorporating the co-design, which I produced and shared with the wider KE Growth Group. Following modification over the following KE Growth Group meetings and via email exchanges, a final draft was agreed encapsulating the key features, such as: maximum amount of funding, key criteria for award, and decision-making process. This was eventually presented to the DVC in November 2020. Progress on implementing the KE seed fund was further delayed due to financial concerns relating to the pandemic, meaning a decision on the required investment was deferred. During the Covid-19 pandemic, with uncertainty over income, it was not prudent to invest into a new initiative. This was not a 'no', just a concern at saying 'yes' at that time. Having secured indicative support from the DVC in November 2020, attention for the KE Growth Group switched to the self-evaluation against the KE Concordat Principles. This temporarily put progress on the KE seed fund on hold, but the group noted that it would address some gaps identified through the KEC self-evaluation, such as level of understanding of KE and limited reward for KE engagement. An explicit commitment to the KE seed fund initiative was embedded into the KEC action plan, approved for

submission by the DVC. Additionally, the work on the KE Strategy and Implementation Plan further established the commitment of the organisation to this activity.

As described above (see 8.4.1), the KE Strategy and the associated Implementation Plan (including the KE seed fund) was formalised at URSEC in November 2021. At this same meeting, the KE seed fund was discussed as part of my routine reporting of KE activity and a copy of the Application Form was shared for dissemination as part of the meeting papers. This approval of the KE Strategy therefore allowed for the KE seed fund to formally progress. The seed fund was formally announced through notices sent out via the central Communication Teams, as well as direct emails to heads of academic departments, representatives on URSEC, and the KE Growth Group members. This was to encourage engagement through both formal and informal channels. This resulted in 45 applications, involving 54 staff, received by the January 2022 deadline.

Following receipt of the applications the KE Growth Group distributed them between themselves to review. As PI, I allowed the review process to be initiated by the group, rather than impose a process. This was a conscious decision to counter previous reflections on how much was driven by myself, and I excluded myself from the initial reviews. This process appeared slightly unstructured and demonstrated differing levels of either available time or commitment in terms of the numbers of applications reviewed by each KE Growth Group member. Therefore, following a suggestion at one review meeting, I intervened to allocate applications to members to ensure each application had two independent reviewers and implemented a basic rubric (developed by a KE Growth Group member) to ensure the reviews focused on the criteria the group had previously set. Following review, each application was briefly discussed. Applications that had been unable to clearly demonstrate a fit to KE were excluded. Eventually, 12 projects were confirmed as demonstrating they could potentially lead to KE outcomes. A few projects were borderline, and KE Growth Group representatives were given the opportunity to flag any that they would want to have a further review. This review process included the opportunity for clarification of aspects of the proposals with applicants. Nine reviews were undertaken by the Head of KE and Business Engagement, a new post reporting to me and a formal member of the KE Growth Group. This further review resulted in four of the nine projects being considered suitable for funding. In total, 16 applications were funded for a range of projects (see Appendix 11) with more than £45k of funds made available. The lead applicants for the 16 successful projects were notified in February 2022. Those not successful were provided with feedback on how their application could have been improved and made more relevant to the selection criteria. Each project started with a meeting with the newly appointed Head of KE and Business Engagement in March 2022, and were all eventually completed by December 2022 (coincidentally, when the decisions on the second round of applications for KE seed funds were made). The evaluation of these projects fell outside the timeframe for this research, but as part of embedding outcomes from this project, a commitment to evaluation was included in the KE Strategy Implementation Plan (mirroring the commitment also made in the KE Concordat action plan).

The KE seed funds, as a means of providing enhanced support to KE, was a landmark for moving KE forward. Previously, similar funds had only been available for teaching (Learning & Teaching awards) or research (the Vice Chancellors Seed fund, which supporting the generation of research outputs for REF). Additionally, the KE seed fund was established on the basis that it would be an *annual* programme, both to support KE initiatives and to provide a pool of future KE Champions. This explicitly

sought to create and maintain momentum on KE, while other funds had been more ad hoc, or one-off initiatives (for example, the VC Seed Fund only ran in 2018).

A further planned elements of *KE Support* was development of KE-related policy, which was included in the KE Strategy Implementation Plan. This had a delivery timeframe outside of the scope of the AI project. This provided an indication of how the project could have lasting influence on the approach to KE at UWL. The need for KE-policy was evident in some form in the interviews and activities of Phase One, and therefore provided a 'line of sight' from the Phase One research to the ongoing activity and plans for KE at UWL.

8.4.3   *KE Recognition*

The Phase One research identified a role for champions in academic departments to provide a local focus for KE, in recognition of the importance of KE and the individual's past engagement. The KE Champion would be a named member of staff within an academic department with responsibility for supporting colleagues to develop KE initiatives, provide a focus for promoting KE, and use their own experience of KE to encourage others to engage. The expected outcome would therefore be increased levels of both engagement and activity within their academic departments. KE Champions could, however, be positioned either as a recognition of staff's KE engagement, a reward for engagement, or even as a form of KE support. The group generally felt that this fitted as part of recognition, in that it linked to the 'recognition' enabler within KE Concordat Principle 6 (recognition and rewards) and so it was placed in the *KE Recognition* theme. Due to the potential to impact on other themes, this *task and finish* project was prioritised.

Participation in the KE Champions *task and finish* team was primarily through self-selection from KE Growth Group members. This was augmented by invitations to other academic department representatives and the REF Manager to provide a link to research impact. Following the reflections on Phase One, and discussion within the KE Growth Group, the group decided to keep the AILT approach, but condense it into a single session. Feedback from the pilot KE seed fund work indicated that shorter interventions would be preferable.

The *task and finish* group met online via Teams on 11th September 2020 and followed the 4D approach, moving between *discover*, *dream*, *design,* and *deliver* stages within a single meeting. The agenda is detailed below in Figure 14. To prepare for the event, the four participants were asked to review previous relevant feedback and the comments captured as part of the Phase One interviews. The *discover* phase involved considering similar roles (either within UWL or in participants' previous HEIs) for relevance for the KE Champion role. The team identified three main roles at UWL to review: Quality Lead, UWL Flex Champion and REF Lead. In reviewing these, it highlighted what had previously *not* worked, for example: lack of clarity over workload allocated to roles; lack of clarity over responsibility; perception of additional work for no reward or recognition; or unlimited timeframes for roles. The *discover* phase also focussed on considering 'Big Questions' about what a KE Champion should be, for example: if the role should automatically be linked to being a representative on the KE Growth Group; what would be an appropriate length of time for someone to be a KE Champion; how the role should be reflected in workloads; clarity on how the roles would be funded; how roles should be evaluated (for example what output or outcomes should be measured); and finally whether there should be an explicit link to Research Impact (to support future REF).

Tasks	
Discover	Review previous roles (Quality etc) they have been tried at UWL (or elsewhere) to identify what worked Review previous feedback Explore 'Big Questions'
Dream	Group activity to review models and test applicability/relevance to UWL
Design	Agree models and role descriptions (and KPIs) and role sustainability
Delivery	Outline draft Proposal for VCE

Figure 14: Knowledge Exchange Champion AILT meeting agenda

A set of parameters to identify what a KE Champion at UWL should be and do was created, drawing on what was perceived to be positive about similar roles and using participants' experience of what had worked (or conversely not worked) previously. The generative approach of AI allowed negative perceptions of other roles to be used to identify the inverse as an ideal for the KE Champion. A model for the KE Champion role was discussed and considered against participants' perceptions of a fit to UWL culture (the *dream* phase). The discussion resulted in the *design* phase activity, where ideas were narrowed down. The *design* stage resulted in agreement that the KE Champion role needed five characteristics: recognition in workloads; to be perceived as being valued and rewarded; to be able to access some (small) funds to run activities; for there to be opportunities to 'rotate' staff rather than an additional role becoming a permanent feature of someone's job; and for there to be opportunities to share good practice across academic departments. Balanced against this was the need to ensure: there would be a return on the investment of any staff time recognised in workloads; that the workload recognition would be commensurate with the level of KE activity aimed at being achieved; and that KE Champion activity would lead to clear outputs and outcomes that enhance KE activity. The final stage was to translate this into a proposal for executive sign-off. The KE Champion proposal went through several iterations at the KE Growth Group. Finally, an agreed wording was approved in March 2021 (see Appendix 12).

The KE Champion proposal was reviewed by the Deputy Vice Chancellor (DVC), but rather than manage this as a separate process it was determined that formal approval would be agreed through the emerging workstreams of the KE Concordat and development of the KE Strategy. The self-evaluation against the KE Concordat saw the implementation of the KE Champions role emerge as part of the resultant action plan and was embedded into KE Strategy. This signed off the purpose of the role and established a recognised workload for KE champions (formalised with a 10% workload allocation). In line with the KE seed funds, both the KE Strategy Implementation Plan and KEC action plan made a commitment to evaluation. As with the KE seed funds, this KE Champion evaluation fell outside the timeframe for this project. Funding, via HEIF, was confirmed and became part of the reporting against HEIF use in the Annual Monitoring Statement from the 2021-2022 academic year onwards (submitted February 2022 to Research England).

While the focus of the *KE Recognition* workstream was the KE Champions, other aspects were also taken forward and embedded in the KE Strategy. This included commitments: to develop recognition of the value of KE through a KE Awards scheme and an annual KE Conference; to embed KE in staff appraisals to achieve parity of understanding of KE allocations to research allocations within workloads as part of appraisal; and to better recognise the value of staff-created IP through development of a Staff IP policy.

8.4.4   KE Reward

The final priority theme, *KE Reward,* reflected the need to address KE Concordat Principle 6 "*We recognise and reward the achievements of staff and students who perform high quality KE activities."* Within the original Phase One research it was identified that there was a need to enhance the reward perceived by staff for engaging with KE. Within Phase One three areas were identified that could address this: a need to review the Academic Promotion criteria to ensure parity between KE and Research in decisions; to identify better ways to reward staff whose research could generate commercialisable IP; and to explore methods of reward for staff who secure or deliver consultancy projects. The development of self-evaluation against the KE Concordat, and subsequent action plan, embedded these three areas of rewarding KE engagement into the wider KE Growth Group activity. These three areas were further embedded through the approval of the KE Strategy Implementation Plan.

Progress on all three areas was limited during the project timeframe. The review of the KE element of UWL's Academic Employment Framework and promotions criteria at UWL was an area that did not progress far during the project. Within both the KEC action plan and KE Strategy Implementation Plan, the responsibility for implementing this review rested with Director of HR. As an outcome, this effectively broadened the responsibility for enhancing KE, or at the very least raised its profile as a university-wide responsibility. In addition, this activity was clearly linked to a KPI for the research strategy which was the responsibility of a Pro-Vice Chancellor, that sought to increase academic promotions based on KE activity. The planned activities for creation of a Staff IP Policy and Consultancy Policy were delegated to the Head of KE and Business Engagement to progress in discussion with the University Secretary and Head of Legal Services. Activity in this area started in April 2022 following the recruitment to this new post, but was further delayed following the resignation of the University Secretary (who had formal responsibility for policy development and approval) in summer 2022.

8.5 Knowledge Exchange Strategy: a transition from research to embedded practice

One of the known challenges with AR projects, including AI as a form of AR, was identifying an endpoint (Checkland and Holwell, 1998) (see section 5.3). Phase One had a clear end with the generation of four priority themes to take KE forward at UWL. Phase Two consisted of multiple strands of activity that took forward elements of the output from Phase One, by the KE Growth Group which was a newly established sub-group of the main University committee (URSEC). This group could itself be seen as progress in terms of KE culture at UWL. It provided a vehicle for carrying forward activities to promote KE, while at the same time acted as a visible indicator of the increased importance of KE. It did however blur the boundaries between what could be considered an AI 'Innovation Team' for

embedding a process for improvement and change, and the governance and management structures of UWL.

Given the criticisms of AR in the literature on the challenges of identifying an endpoint for the research (Checkland and Holwell, 1998), I decided upon two significant milestones to mark an end to the project. The first milestone was the formal acceptance of a new KE Strategy and accompanying Implementation Plan and set of KPIs (see section 8.4.1 above). This document represented a formalisation of the work from both Phase One and Phase Two. This formalisation, in November 2021, marked the end of the organisational element of the project, but identifying any impact needed to be conducted over a longer period. The second milestone was therefore the final point of data capture. The meeting of URSEC, in February 2022, saw the first presentation of KPIs for the KE Strategy, marking the start of regular reporting of KE performance against these metrics as an established part of the URSEC agenda. These KPIs drew heavily from the work of the project, and embedding them into the KE Strategy meant they became part of the ongoing organisational management of KE performance. In terms of the AI project and the timing of final data capture, this is explored further in Chapter 9. While Financial Account data for the academic year 2020-2021 was released by HEIs by January 2022, the end date for data collection was the release of sector data by HESA in July 2022. This timeframe also allowed additional data to be captured from the launch and initial submission to the new KE seed fund and other streams of activity. With this final data release, the AI project was brought to a close with many activities transferring from the project into 'business-as-usual' activity, to be taken forward in the delivery of the KE Strategy Implementation Plan.

8.6 Conclusions on Phase Two of the research

Phase Two consisted of a range of activities designed to address the business, research, and integrative aims of this project. Progress was mixed across the four priority themes of *KE Strategy*, *KE Support*, *KE Recognition* and *KE Reward,* identified in Phase One. However, the project can be seen to 'live on' through its aims, aspirations, and activities being embedded into UWL through the KE Strategy and its implementation. While the end of the project was marked by the last collection of data for the project, the approach to seeking to understand the links between performance and entrepreneurial orientation, primarily through change in culture, was to continue. In the next chapter, the approach to addressing an enhanced evaluation within AI is described. The chapter explores the creation of a theory-of-change to link KE performance with entrepreneurial orientation, and how the evaluation approach ultimately fed into the KPIs for the new UWL KE Strategy.

9   Enhancing AI through a structured evaluation approach
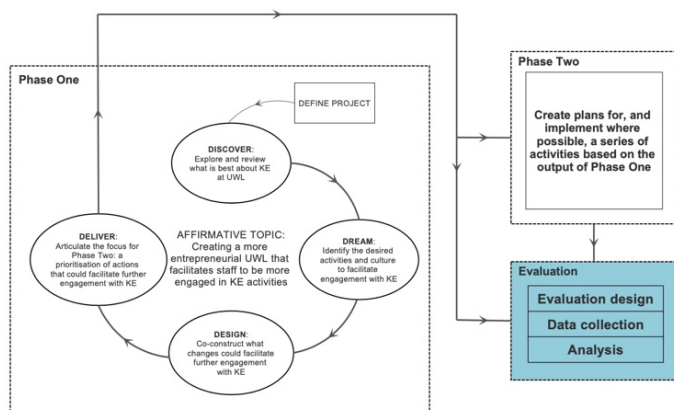
In Chapter 5, one of the criticisms of AI identified was the lack of evaluation inherent in the approach (Egan and Lancaster, 2005). In this chapter, the approach to evaluation within this project, developed in response to this criticism, is described. This approach was articulated as a theory-of-change and provided an insight into the various measures of performance that were developed to evaluate the project. During Phases One and Two, a collaborative approach was taken to developing a set of metrics to underpin evaluation. The metrics developed were intended to identify whether the project had achieved: the *business* aim to enhance business performance, through seeking to increase entrepreneurial orientation; the *research* aim to explore cultural change as a means of delivering business improvement; and the *integrative* aim to find an approach to undertaking *both* business and research aims and objectives in an integrated way. To do this, the metrics sought to evidence outputs, outcomes, and impacts from the project.

9.1   Phase One: developing an evaluation design

A starting point for understanding how the impact of the project could be measured, was identifying what data was needed to link performance improvement to cultural change. Seeking wider views on organisational performance and its measurement was included as part of the Phase One interviews. These interview responses were reviewed by the AT as part of trying to establish an agreed approach, but generally responses focused on broad areas of performance, rather than specific metrics. Appendix 13 highlights some of the areas raised by interview participants in relation to their understanding of performance. Some responses demonstrated limited understanding of KE, such as citing student numbers, or frequently were an implied rather than an explicit measure. Several participants, when asked what increased entrepreneurial orientation would be like and how could this be measured responded in a very general way. This included recognition that KPIs would be useful, while not necessarily being able to articulate what they could or should be. Income, financial metrics, some sense of 'culture', and some existing areas covered by HE-BCIs or KEF were raised by some participants. While not providing a coherent set of metrics, this work laid the foundation for exploring and refining potential areas of measurement.

The AT discussed a range of organisational data that could be collected that would demonstrate change and performance impact, with a proposal presented on 4th December 2019 as part of AT meeting eight. This approach to understanding the outcomes and potential performance impact of the project was framed within a conceptual theory-of-change (ToC), as described in Chapter 3, Figure 6. Enhancing the AI approach through co-creating an evaluation framework allowed an emerging

theory-of-change to be more fully developed. Figure 15 presents the final Project ToC which includes specific details outputs, outcomes, and impacts.
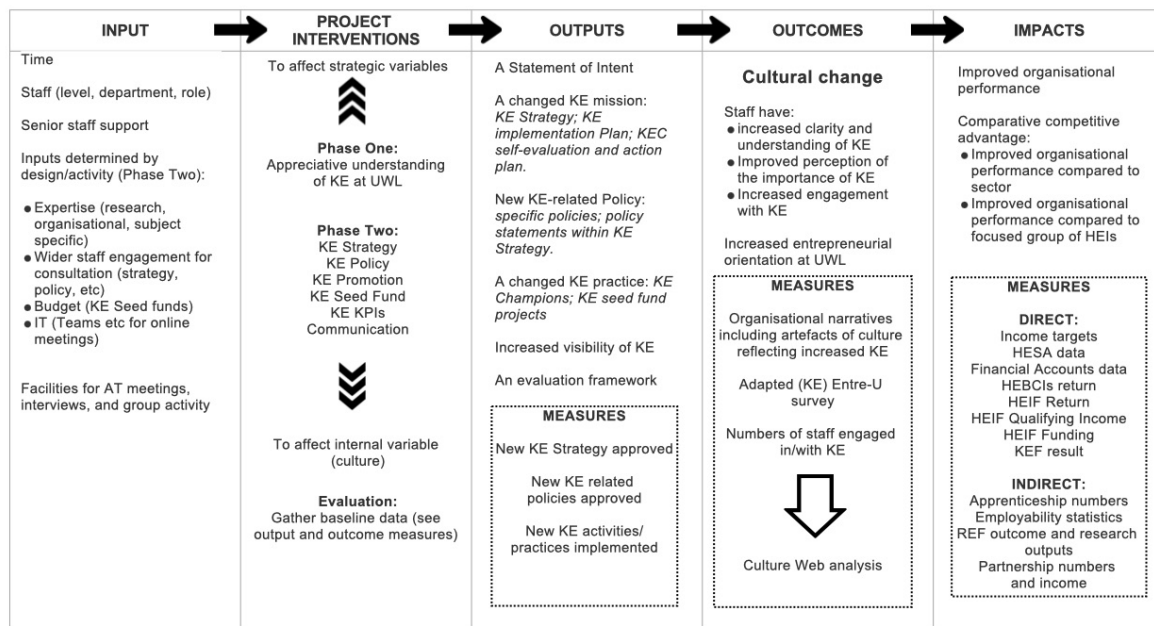
Figure 15: Project theory-of-change

As indicated by Figure 15 above, the project was expected to have a range of outputs resulting from both Phase One and Phase Two. The output would be from activities influencing both strategic variables and the internal variable of culture, as depicted in the entrepreneurial orientation model (Covin and Slevin, 1991) introduced in section 3.2. Within the Project ToC, this change in entrepreneurial orientation should lead to improved organisational performance. This performance improvement would be apparent in areas directly and indirectly impacted, as can be seen in Figure 15. The direct measures of performance improvement included: UWL's performance relative to previous years; comparison of performance to the whole UK HE-sector; and comparison to a narrower peer-group of similar HEIs. Finally, those metrics that could be indirectly impacted by the project were also looked at. Each of the elements of the Project ToC (output, outcome, and impact) are discussed in turn below.

9.2   Project outputs

The first area of measurement within the Project ToC was capturing the outputs from both Phase One and Phase Two. In Phase One, the main output was documenting of the Statement of Intent and the priority themes arising from the research. Phase Two was more fragmented (see Chapter 8) and elicited a wider range of outputs. These included: a changed KE mission, articulated through the KE Strategy, KE implementation Plan, and the KEC self-evaluation and action plan; new KE-related policy, documented in specific policies as well as policy statements within KE Strategy; and a change in KE practice, including: KE Champions and KE seed fund projects. Collectively, these outputs also raised visibility of KE at UWL. A final output was an evaluation framework; the Project ToC. These outputs

were the tangible evidence of the project and its streams of activity in Phase Two, the outcome of which was designed to be KE-cultural change.

9.3   Outcomes: organisational culture change measures

Project outcomes were the identifiable changes created by a project. The prime outcome from the project was intended to be cultural change that would be reflected in an increased entrepreneurial orientation. This would be aligned to staff having increased clarity and understanding of KE, improved perception of the importance of KE, and increased engagement with KE activities. Measuring this change required identifying changes in artifacts of UWL culture, to expose underlying organisational values (Schein, 1984; Schein, 2010). Artefacts of culture to be reviewed included: strategic plans, communications, using a KE orientation survey, and levels of staff engagement with KE.

The first aspect of measuring culture was to establish how prevalent KE was within expressions of organisational narrative, such as Strategic Plans. This was intended to set a benchmark to provide a broad sense of where KE sat in terms of the prevailing culture, using the strategic plans to understand what the organisation considered of importance. However, such documents are written by leaders and can be skewed towards their views, and indeed have been described as carefully crafted statements of *aspiration* which should be used with caution (Johnson, Whittington and Scholes, 2013). Therefore, for this project there was a need to identify other ways of measuring culture to provide a broader understanding. In addition to reviewing the previous strategic plans, the AT agreed to include specific questions within the Phase One interviews to draw out views on UWL culture. These were both in general terms and other questions specific to KE. As the interviews were at the start of the project, this supported identifying a baseline sense of UWL culture.

Beyond the strategic plans and Phase One interviews, the AT agreed that tracking KE prevalence within other cultural artefacts would allow both indication of change over time and a more immediate view of what was deemed important. Unlike Strategic Plans, which were static, other more dynamic forms of expression of what was culturally important were discussed by the AT group. These ranged from expressions formally approved by senior staff (announcements, and staff newsletters) and the emergent themes from social media postings. A review of UWL's social media output indicated activity on Facebook was almost entirely a channel for university-to-student communication, so not linked to KE. Multiple UWL channels on Twitter and LinkedIn were dedicated to a specific purpose or activity. Each was controlled by different departments, who communicating for specific purposes. These were predominately related to student recruitment, student communications, and managing the student experience. Therefore, these were not relevant to KE. This fragmented social media output seemed unlikely to provide a coherent lens into overall UWL culture and rather indicated the relative importance specific departments placed on social media. On this basis, social media output was excluded from the metrics.

A better approach was adapting the Kalar and Antoncic (2015) version of the ENTRE-U survey to be more relevant to KE (and less research-focussed). In Chapter 4, ENTRE-U was found to be overly linked to research in a way that would not necessarily reflect KE at UWL. Therefore, the questions were edited slightly to make them more relevant to other expressions of KE, that were not limited to those arising out of research. This survey activity, undertaken as part of Phase Two, was promoted as a KE

orientation survey (see Appendix 14). This was launched following the KE Growth Group meeting in February 2021 and publicised through email staff announcements and dissemination by members of the KE Growth Group. Participation rates and findings from the survey, which closed in June 2021, are discussed in Chapter 10.

A final dataset for organisational culture was to track the number of staff involved in delivering KE activities. The aim was to try and ascertain from financial records (given most metrics on KE were financial) the number of staff engaging with KE activity. The intention was to understand if, and how, this changed over the life of the project. Given academic autonomy, increased numbers choosing to engage could be indicative of increased importance of KE within UWL culture.

One way to draw this data together, to evaluate a specific organisational culture, was through the Culture Web developed by Johnson (1993). To understand the existing culture and its effect it needs to be analysed and the Culture Web model shows the "*behavioural, physical and symbolic manifestations of a culture*"(Johnson, Whittington and Scholes, 2013 p98). The Culture Web brings together perspectives of the organisation's culture. The organisational *Paradigm* is the core of the web, it is the set of assumptions held in common and taken for granted in the organisation and the collective experience applied to a situation to make sense of it and inform a likely course of action. *Routines* are the way things are done on a day-to-day basis, common across the organisation. At their best they lubricate the organisation, but also represent an assumption about how things should happen. *Rituals* reinforce what is important in the organisational culture. *Stories* are told by organisation members to each other, reinforcing and embedding views on the organisation's history, flagging important events and personalities. They become a way of communicating what is held to be important. *Symbols* are events, people or acts that convey or create meaning over and above their functional purpose and include types and ways of using language. *Power*, is the ability of individual or groups to coerce or convince others to follow a particular course of action. *Organisational structures* include roles responsibilities and reporting lines and relationships. These often reflect power structures and how they manifest themselves. *Control systems* are formal and informal ways of monitoring and supporting people within and around the organisation. This includes measurement and reward systems. The Culture Web was a way of surfacing and describing the dominant culture (or a particular subculture) but not *how* it changes. Nevertheless, it provided an opportunity to analyse UWL culture and provided a mechanism to understand UWL culture prior to, and after, the project. This was intended to support identifying links between any culture change and impacts on performance.

9.4 Impact

Having sought to establish a means of understanding *whether* UWL Culture had changed to be more entrepreneurial, the next stage in the Project ToC was to understand impact on performance. Impact is longitudinal, and therefore measurement could only be at a specific point in time. For this project this focussed on: UWL's performance relative to previous years, using key institutional data sources; comparison of performance to the whole UK HE-sector; and comparison to a narrower peer-group of similar HEIs. Each set of measures is discussed below.

9.4.1 Comparison to UWL historic performance

Knowledge Exchange revenue was recorded to measure change in organisational performance over time. This was both total income and changes in relative proportion of total UWL turnover. To link changes more closely to culture change, data would also be collected on the proportion of Enterprise income which was based on academic-led activities. This would support identification of other drivers of performance improvement, other than those linked to the project and driven by culture change. This data was collected from the 2012-2013 financial year (based on available data) and up to the release of data for the UWL performance in the 2020-2021 Financial Year (the final full year available). Analysing UWL's organisational performance over time would allow for trends to be identified. What was sought was *comparative* competitive performance, therefore reviewing UWL's performance in isolation was insufficient. There needed to be ways of looking at performance compared to other HEIs.

9.4.2 Comparison to sector-wide performance

The first level of analysis of competitive performance was to compare UWL's performance to available data on the UK HE-sector. This therefore defined the UK HE-sector as organisations required to submit data to HESA. This data allowed a comparison against sector trends, to understand if any UWL performance uplift could be explained by the overriding external environment. This would be the 'deadweight', or improvement to UWL performance that could be expected purely from changes in the competitive environment affecting all HEIs. Data was downloaded from HESA[24] on the financial performance of all HEIs in the UK. The specific datasets selected as a basis for comparison included: total income; non-teaching income as a percentage of total income; surplus; and staff cost as a percentage of income. These were selected because they mirrored internal UWL KPIs, and as part of the regulatory reporting of HEIs provided a consistent set of open data over multiple years.

Sector-wide data was also used to find a benchmark for more specific KE performance, drawing from HE-BCIs[25]. Ten tables were selected to give an overview of UWL's performance in key areas, relative to HEIs as a whole: Table 1 Collaborative Research Income; Table 2a Contract Research Income; Table 2a Consultancy Income; Table 2a Facilities Income; Table 2b CPD/CE Income; Table 3 Regeneration Income; Table 4a Number of IP disclosures; Table 4d IP income; Table 4e Number of new Spin outs; and Table 4e Number of Graduate Start-ups. The HE-BCIs data provided a consistent and standardised set of data, publicly available through the HESA. Sector-wide financial and KE data from HESA was collected from the 2016-2017 to the 2020-2021 academic years. This enabled a longer view on the main trends in the sector.

9.4.3 Comparison to peer-group performance

The second level of comparative performance measurement was to look at a narrower group of HEIs, that could be considered a peer-group for UWL. This involved identifying suitable HEIs and their performance across data published by individual HEIs, HESA, and Research England. The starting point was taking advantage of clustering analysis used as part of KEF. The development of the KEF by Research England included the use of a clustering methodology (Coates Ulrichsen, 2018) to allow for comparison of KE performance between HEIs based on a degree of similarity. The KEF cluster

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[24] Data from https://www.hesa.ac.uk/data-and-analysis/finances/kfi (accessed 18/11/22)

[25] Data from https://www.hesa.ac.uk/data-and-analysis/business-community (accessed 6/2/22)

methodology placed UWL in Cluster M (Research England, 2019). From this group of 18 HEIs, five comparator institutions were selected based on similarity of size to UWL (see Table 17 below). The smaller and more specialised HEIs were excluded as they lacked the breadth and scope of activity of UWL. However, to broaden the comparator base, two further institutions were added of similar size, background, and mission to UWL. These were both from Cluster J (Research England, 2019) and based in the same geographical region as UWL (Greater London). For this focussed comparator group, the data collected included: turnover and a KE income proxy measure drawn from financial data in each institution's annual reports; HE-BCIs published by HESA; HEIF funding and weighted qualifying income published by RE; and KEF. Each is discussed in turn below.

HIGHER EDUCATION INSTITUTION	CLUSTER	INCLUDED IN PEER-GROUP	REASON FOR INCLUSION/EXCLUSION FROM PEER-GROUP ANALYSIS
Bath Spa University	M	Yes	Relatively similar size to UWL
Bishop Grosseteste University	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
Buckinghamshire New University	M	Yes	Relatively similar size to UWL
Edge Hill University	M	Yes	Relatively similar size to UWL
Falmouth University	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
Leeds Trinity University	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
Liverpool Hope University	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
Newman University	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
Solent University	M	Yes	Relatively similar size to UWL
St Marys University, Twickenham	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
The University of Chichester	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
The University of Winchester	M	Yes	Relatively similar size to UWL
The University of West London	M	Yes	Focus of research
University College Birmingham	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
University of Cumbria	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
University of St Mark and St John	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
University of Suffolk	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
York St John University	M	No	Turnover less than 70% of UWL turnover (Financial Year 2017-2018)
London Metropolitan University	J	Yes	London-based and with similar turnover to UWL
The University of East London	J	Yes	London-based and with similar turnover to UWL

Table 17: Peer-group selection

Financial accounts provided a publicly available data source and an insight into the performance of each of the peer-group HEIs, but this required developing a proxy measure to try and draw out performance related to KE. For UWL, elements of Enterprise income were disaggregated into multiple

reporting lines in the audited accounts, with the same for the peer-group who all used relatively standardised headings. In addition, each HEI's definitions of what would be comparable to UWL's definition of Enterprise income was not publicly available. The proxy measure, developed to mitigate this, included: funding from the Education and Skills Funding Agency, indicating the level of funding for apprenticeships; Research income, given the overlap with KE in terms of collaborative and contract research income; Other operating income, which would include entrepreneurial and commercial income; Endowments and investments as this covered benevolent funds, and income generated from IP; and short course income (as a metric of delivery of CPD/CE). While not a complete set of data relating to KE activity it would allow some comparison of performance over time and how each organisation's proxy KE income compared to the overall organisational turnover (available in each set of accounts).

More KE-specific data was included by using the specific peer-group data from within the HE-BCIs dataset, in line with the sector-wide analysis (see above). For further triangulation, the amount of HEIF funding data each HEI received was included to compare specific KE performance. Research England (and HEFCE before it) used the three most recent years of HE-BCIs data, weighted 2:3:5[26] (the first year's data had a multiplier of two, the second-year data a multiplier of three, and the most recent year's data a multiplier of five) to give a Weighted Qualifying Income (WQI) used to determine HEIF funding allocations. However, this weighting meant year-on-year comparisons masked current performance because of the influence of the previous year's data. The subsequent HEIF funding per institution was also used but, because institution's allocations were limited to maximum annual increases or decreases (normally 10%), this would also not necessarily correlate to performance for the corresponding period nor make comparisons between HEIs simple. For example, the weighted qualifying income for UWL in 2018-2019 was more than twice that of Buckinghamshire New University (one of the peer-group), but HEIF funding was broadly similar. The following year, UWL's weighted qualifying income had grown to a similar level to Southampton Solent University (also in the comparator set), but UWL received half the HEIF allocation. Changes in performance over time therefore did not have immediate effects on funding allocated based on the WQI. While this metric raised issues, it did retain some value as it provided an indication of longer-term performance and trend.

The implementation of the KEF in 2020 not only provided a means to identify a peer-group, but also provided further data for understanding comparative performance. The KEF predominantly drew on HE-BCIs data, but this was supplemented with other data (such as percentage of publications co-authored with non-academics). The key difference KEF provided to the HE-BCIs data was each HEI's data was normalised by either their total income or research income. This provided a different perspective, as HE-BCIs reported gross income. For a large HEI, a significantly high income in a single HE-BCIs area (e.g., collaborative research) could disproportionately impact WQI and therefore HEIF funding. However, the HEI could be comparatively *less* efficient at doing this than a smaller HEI. By normalising using HEI's turnover, KEF provided an additional perspective on relative effectiveness and efficiency in KE activity.

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[26] See https://www.ukri.org/wp-content/uploads/2021/08/RE-06082021-RE-How-we-fund-HEPs-FINAL.pdf (accessed 15/5/22)

For the peer-group annual financial accounts, the data was collected for the same time periods as the sector-wide data (see 9.4.2 above). This was from 2016-2017 up to the results for the 2020-2021 academic year. For data on qualifying income and the consequential HEIF fund allocations, published by RE, this was the data for the 2017-2018 to the 2021-2022 allocations (based on available data). This broadly drew on the same financial data, as the 2016-2017 financial data underpinned the calculations and the HEIF funds for the 2017-2018 year. For KEF, a single dataset was available, from the first release in February 2022.

9.5 Measures of indirect impact

While less obvious, there was also potential for the project to have wider impacts that could also be measured as part of evaluation. In section 3.1 organisational performance in KE was discussed, and a range of potential ways of understanding, or measuring, were explored. Within this were a set of non-KE performance areas which potentially could be indirectly improved as a by-product of an increased entrepreneurial orientation. This included apprenticeship income and student numbers, graduate employability outcomes, income and student numbers in academic partnerships, and REF results, and each is explored below.

9.5.1 Apprenticeship data

Apprenticeship data was excluded from HE-BCIs, despite being an industry-HEI engagement that supported organisations to access the skills and talent they need (an aspect of KE). Indeed, legislative changes to apprenticeships in England (through the Enterprise Act 2016) displaced some previous HEI-Industry activity, as corporate degree programmes were converted to degree apprenticeships. Apprenticeships sat outside of the nationally agreed measures of KE, however, increased engagement with business for apprenticeships could still result from an increased entrepreneurial orientation. Identifying what was as result of KE culture change would be difficult, given the existence of specific marketing and recruitment activities for apprenticeships. While perhaps *indicative* of an increased entrepreneurial orientation, apprenticeship performance (student numbers and income) would not be identifiable as a *consequence* of the activities of this project, but included as part of the wider set of indirect impact measures.

9.5.2 Graduate outcomes

Graduate Outcomes were the measures in place from UK Government to understand a return on investment into the student loan through levels of employability and graduate-level employment. As with apprenticeships, this area of activity fell outside of the narrow scope of the KE metrics. However, employability and enhancing the UKs skills base did constitute part of the KE landscape but identifying what role the project would have on these *directly* was not clear. An increased entrepreneurial orientation logically could create more opportunities for engagement with business, and consequentially this could lead to positive input into curricula, work experience opportunities, and graduate employment relationships. Therefore, this area was included as part of the indirect impact measures.

9.5.3 Academic partnerships

Working in partnership with other organisations to deliver UWL degrees *could* logically be increased through UWL being more entrepreneurially oriented. A willingness to engage with other organisations

to meet mutual objects is part of entrepreneurial orientation in its broadest sense. While similar, any direct links to this project were unclear. As with apprenticeships and graduate outcomes, academic partnership provided another lens to understand entrepreneurial culture at UWL, but as an indirect measure.

9.5.4   Research Excellence Framework

There was a clearer link between research performance and KE, as HE-BCIs and KEF included metrics related to research (collaborative research income, contract research income, and co-production of research outputs with non-academics). An additional highly relevant research-measure could have been the outcome of REF. The REF drew from research outputs, research income, and impact case studies, many of which pre-dated the project. The result would not necessarily allow identification of how or why these changed over time, to be able to determine if the final REF result was directly influenced by this project. However, with the enhancement of impact as a measure of research excellence (which is an expression of KE) this did provide insight into KE. Therefore, these aspects were worth considering in a more rounded assessment and analysis of UWL's entrepreneurial orientation and as such are discussed as part of the project analysis (see Chapter 10).

9.6   Process of evaluation

In Section 3.1, I introduced three ways that performance for HEIs could be considered: *good financial management*, *furthering the institution's mission*, and *response to national need.* This discussion included a range of potential metrics that could be used to understand performance (see Table 1: HEI performance areas). While this provided a broad framework to understand impact, the selection of measures for the ToC and ultimately for UWL's KPIs for KE, was through collaborative discussion and agreement. This was in the Advisory Team (AT) and KE Growth Group respectively. As described in Section 9.1, identifying measures of performance started with analysing responses to the Phase One interviews, following which the AT held discussions on what to include or exclude. This process refined the impact measures to those presented in Section 9.4: total income and the proportion that could be considered KE; levels of surplus; KE-specific data from the annual HE-BCIs survey, HEIF funding and the underpinning Weighted Qualifying Income, and KEF results. In addition, other areas of performance were identified that could be indirectly impacted: apprenticeships, graduate outcomes, academic partnerships, and REF. These were not specifically measures of KE, but were considered similar in that they reflected activities that did not relate to traditional teaching, and that had an element of external engagement (or exchange). Measures of student performance (including international recruitment) were excluded as not sufficiently related to entrepreneurial orientation, or the cultural change this project sought to introduce.

These key measures reflected where a shift in entrepreneurial orientation, arising from a new approach to KE, could either directly or indirectly impact performance. In understanding if the entrepreneurial orientation had changed, the ToC, and subsequent KPI framework needed to measure entrepreneurial orientation. This was to identify evidence of cultural change, as this was the key mediating variable the project sought to influence in order to enhance entrepreneurial orientation. This was expressed in the ToC as the outcome measures, discussed in Section 9.3: analysis of key cultural artefacts; collaborative analysis of Phase One interview responses; use of an adapted form of

the ENTRE-U survey; tracking engagement of academics with KE; and to draw this together through use of the Culture Web model. This collectively formed the measure of outputs, outcomes and impact within the ToC that were used as parameters for evaluating this research project. Much of the collaborative activity on the evaluation was focused on design of the metrics. The majority of the actual evaluation fell to me, with use of the KE Growth Group as a forum for discussion, clarification, or confirmation of my findings. For example I conducted the Culture Web analysis and cross-checked my analysis with the KE Growth Group. The results of this analysis are presented in the next Chapter.

9.7   Conclusion on evaluation approach

Running alongside Phases One and Two of this project was a deliberate attempt to enhance the evaluation aspect of the AI model, to directly address the criticism of that form of AR. Through a collaboratively developed set of measures, articulated within a theory-of-change, an approach was established to try and capture and evaluate the short-term outputs, outcomes, and any consequential (longer-term) direct and indirect impacts on performance. Establishing these metrics provided a framework to analyse the data arising from this project, presented in the next chapter, and to attempt understand if the project succeeded in its combined business and research aims, which is discussed in Chapter 11.

10 Analysis and evaluation

In Chapter 3 the business, research and integrative aims of the project were introduced: using a research-based approach to achieve improved organisational performance in Knowledge Exchange. This led to two Phases of research and the development of a project theory-of-change (ToC) to understand whether these aims had been met. In this chapter, I explore the evidence for outputs, outcomes and impacts of the project, as described in the Project ToC, to evaluate the success of the project.

10.1 Project theory-of-change

As indicated by the Project ToC diagram (see Figure 15 section 9.1) and as described in Chapter 9, a range of measures of performance were identified to try and understand direct and indirect changes that could be attributed to the project. Using the Project ToC for the collection of evidence to address: whether the project delivered the planned outputs; whether the project outcomes were achieved; and cumulatively did this lead to any comparative performance improvement. Each of these areas of the Project ToC are discussed in turn.

10.2 Project outputs

A starting point for evaluating impact from the project was to determine whether the project activities lead to the planned outputs. Table 18 shows the range of expected project outputs and whether they were delivered.

PHASE	ACTIVITY	OUTPUT	DELIVERED
One	AI cycle	Provocative Proposition	Yes (as a Statement of Intent)
		Priority themes agreed	Yes
Two	KE Strategy	KE Strategy approved	Yes – approved by URSEC
		KE Implementation Plan	Yes - approved as part of regular reporting at URSEC
	KE Support	KE seed fund	Yes – KE seed fund launched and 16 projects started
		KE-related policies and policy statements	Initiated
		KE in appraisals	Discussed but pending implementation on online approach (delayed by UWL to beyond project timeframe)
	KE Recognition	KE Champions	Yes
		KE Awards	No
		KE conference	No (but was subsequently held in March 2023)
	KE Reward	Academic promotion criteria	No
		IP policy	No - activity commenced but not completed
		Consultancy Policy	No - activity commenced but not completed
Evaluation	Enhance approach of AI	Evaluation framework developed	Yes (Project theory-of-change model)

Table 18: Expected outputs from the project

As can be seen from Table 18, the project did not deliver on all the intended outputs. The key outputs for Phase One were delivered, which in turn led to the planned outputs for Phase Two. These consequential outputs for Phase Two activities were not all completed within the project timeframe.

Those that were completed included: the key outputs of an agreed KE Strategy, implementation of local KE Champions, and the launch of the KE seed fund initiative. Others were started (for example, IP policy and Consultancy policy) or not yet started within the project timeframe (such as, KE Awards, and a KE conference that was eventually held in March 2023), as discussed in Chapter 8. While not all completed, there were sufficient outputs to reasonably conclude that the project had *potential* for these outputs to lead to the outcomes detailed in the Project ToC. On this basis, this allowed for the next step of the evaluation; to see if the project activities led to outcomes that evidenced organisational cultural change.

10.3 Outcome measures: organisational change

Having determined the project outputs, the next stage was to understand the extent to which outcomes were met. These included identifying evidence of change over time, starting with setting a baseline understanding of organisational culture using a review of artefacts of UWL culture. The results were drawn together using a Culture Web analysis, allowing conclusions to be reached about change.

10.3.1 Establishing a baseline understanding of UWL organisational culture.

Gaining an understanding of the importance of KE in UWL was initiated by reviewing the two most recent strategic plans, as key artifacts of culture in place as the project started. *Ambition 2018*[27] provided the strategic plan and direction for UWL from 2014 to 2018, and therefore provided an historical view of what was important to UWL. The following plan, *Achievement 2023*[28], built on *Ambition 2018*. Launched towards the start of this project, *Achievement 2023* provided more context to organisational culture at the time of the project. *Ambition 2018* heavily focussed on building from a strong teaching base that had been established as part of the turnaround from TVU's failings. As part of this turnaround, Enterprise was seen as a distraction and the infrastructure supporting it had been removed prior to this plan. However, with a clear focus on employability emerging as part of the student experience narrative for UWL, there was a strategic role for engagement with outside organisations (an expression of KE). Teaching, Research, and KE are not mutually exclusive categories, with considerable overlap. In analysing the narratives within *Ambition 2018,* the focus on the student experience was evident. For example, the four aims were to: consistently be the best modern university in London; be ranked in the top 100 universities in the UK; be the university with the highest graduate employment rate in the UK; and have three academic areas of international standing. While the fourth of these, and to an extent rank positioning, reflected research, there was very little link to KE. Analysis of the narrative themes showed references to anything that could be considered KE were frequently expressed as associated with teaching. For example, narratives around 'business engagement' could be seen as KE, but the subtext was the value of these relationships was to the student experience or student employability.

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[27] Published in 2013

[28] Published in 2018

In *Achievement 2023,* the language and narrative themes changed but the underlying approach was still focussed on the student experience and employability. Comparing the themes to those in the previous strategic plan, *Ambition 2018,* there was overlap. However, there was explicit reference to KE as opposed to just Enterprise or Knowledge Transfer found in *Ambition 2018*. A simple count of themes and their frequency of appearance (see Table 19 below) shows that most of the focus was on teaching or areas of KE related or linked to teaching. The links between KE and research (the growing agenda around research impact) were notably absent. While the gross number of KE-specific references were lower, the proportion rose for *Achievement 2023.* Also, there were more explicitly named themes (KE, innovation, IP, incubation, and entrepreneurship) or activities that could arguably be KE (such as apprenticeship). Within the 10 objectives was a clearly articulated KE goal of '*being an engine of innovation and enterprise*' and other goals referenced elements of KE; for example, apprenticeships in the objective to '*provide exceptional work-related career opportunities*'. While much of this links to Enterprise or income generation, there was some sense of value placed on (some) KE activities. Again, much was linked to the student experience; for example, incubation and support to business start-up was in reference to students' participation in the (then) newly launched Westmont Enterprise Hub (an externally funded incubator).

COUNT OF REFERENCES		TEACHING	TEACHING-RESEARCH	TEACHING - KE	KE	KE-RESEARCH	RESEARCH	TEACHING-RESEARCH-KE	TOTAL
Ambition 2018	n	54	3	28	37	0	15	0	137
	%	39%	2%	20%	27%	0%	11%	0%	
Achievement 2023	n	18	1	16	33	0	10	0	78
	%	23%	1%	21%	42%	0%	13%	0%	

Table 19: References to Teaching, Research or Knowledge Exchange in UWL strategic plans

The interviews in Phase One also contributed to a baseline understanding of KE in UWL culture. The findings demonstrated that there was a poor understanding of KE, and a confusion with Enterprise (with the UWL cultural interpretation of this being solely linked to generating income). The interviewers asked participants about Enterprise and whether they felt Enterprise was different to KE. Most participants were able to articulate Enterprise as relating to income generation, commercial activity, or developing business (76%). When it came to an understanding of KE, even after being shown a diagram of what KE included, only three participants were able to articulate a clear understanding (P5, P6, P14). The most accurate articulation was:

> "*Enterprise gives you that idea that it is income generation in its terminology whereas the Knowledge Exchange is a far more holistic approach to everything else that a university might do in the way of imparting knowledge to the community*" Participant 5

Seven participants (P1, P9, P10, P15, P19, P22, P25) were able to provide some examples of KE, but without providing clarity that they fully understood the concept. Of the 10 participants who were able to articulate some understanding of KE, all but two were in management positions. Other views were solely teaching focused (P2), as a form of outreach (P17) or saw KE as the same as Enterprise (P8). Other participants (P11, P19) saw KE as similar to Enterprise but without income, or a non-income bearing activity that could *lead* to Enterprise, for example:

> *"…Enterprise normally can be like … income driven and these sorts of activities… Knowledge Exchange probably is a very basic or the initial stage of anything can build on from that."* Participant 11

> *"I can see where there are congruences between Knowledge Exchange and Enterprise. I guess I think of Enterprise as being primarily an income generating function whereas Knowledge Exchange you may not have an economic element to it. It might just happen without the need for any financial stuff going on."* Participant 19

One participant's view of KE demonstrated a lack of understanding that KE is about *impacting* on economy and society:

> *"I think Knowledge Exchange can sometimes be stagnant and if it's not I think it's there and you can exchange but how it's actually being used and I see entrepreneurial activities actually using that to do something."* Participant 20

Overall, most participants either were very unclear, or did not address KE in their answer to the question. While only a small sample of staff at UWL (25 from up to 760 staff), it supports the baseline view of a cultural understanding of Enterprise as income related, and no clear understanding of what KE meant. This was particularly apparent amongst academic participants, the key group that would need to be engaged and understand KE in order to increase academic-led KE activity.

This collectively presented UWL as being very teaching-focussed, but was starting to recognise the value of KE activities strategically. This was not solely as an adjunct to the student experience as with *Ambition 2018,* or only framed around the financial value of Enterprise. Using Schein's three levels of organisational culture (Schein, 1984; Schein, 2010) discussed in Chapter 4, the translation of the developing strategic view (as a surface level artefact of culture) to core belief expressed through ways of behaving (in this instance understanding and engaging with KE) was less apparent and still very much aligned to primacy of the student-experience paradigm. This provided a useful benchmark against which to understand shifts in culture.

10.3.2 Evidence of change in artefacts of UWL culture

A new strategic plan, likely to be called *Impact 2028,* was in development toward the end of the project, and had the potential to provide a useful gauge on changes in importance of KE in UWL culture. However, the timing of the next strategic plan did not allow for a view of change from pre- to post-project. Therefore, other artefacts of culture needed to be reviewed for any emerging evidence of increased importance of KE or changes in entrepreneurial orientation. To get a wider picture of the importance or increased focus of KE in UWL culture, aspects of UWL culture were reviewed: three key cultural artefacts of formal announcements, documents and publications, and UWL structures; results from the KE orientation survey; and staff engagement with KE activities.

The first artefacts of culture were formal email announcements over the project timeframe. All formal announcements had to be approved at a senior level, and so only reflected an executive view of importance of various aspects of UWL culture. However, there were no internal message-boards or other means by which staff could communicate across the organisation (in a documentable way), so it wasn't possible to capture a bottom-up view through communications. Using a simple analysis of

key messages in formal announcements, from the start to end of the project, indicated some increase in the visibility of KE (see Appendix 15).
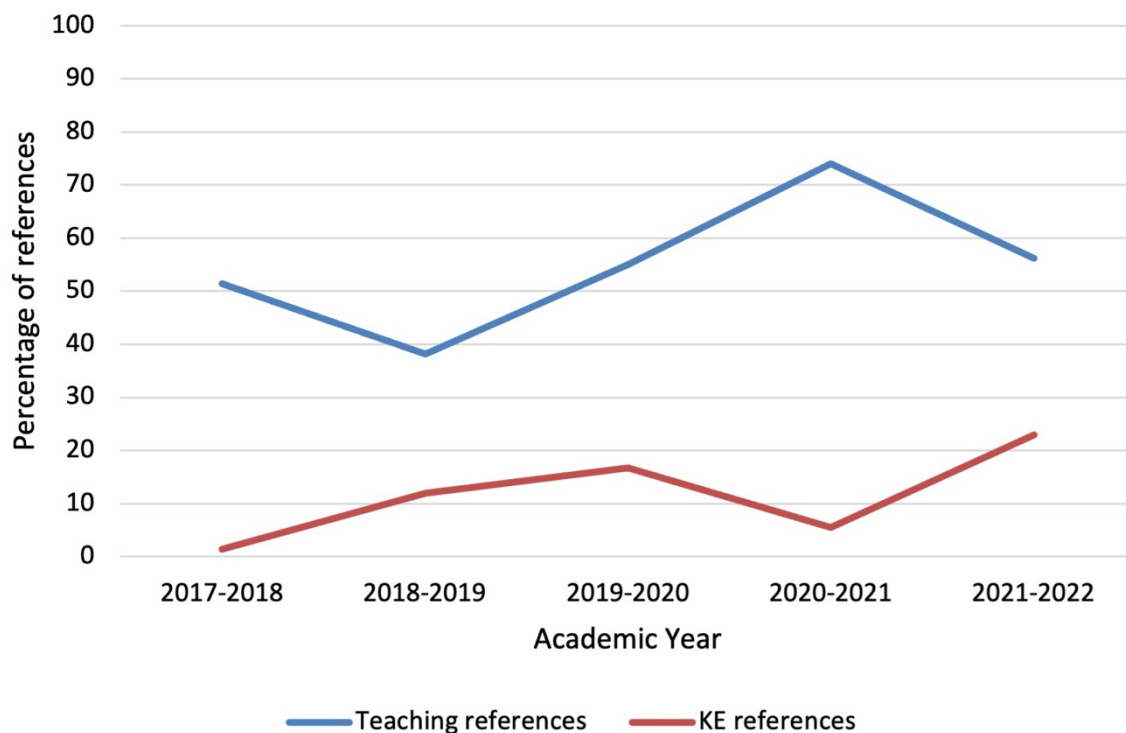
Figure 16: Percentage of messages in formal announcements relating to Teaching or Knowledge Exchange

The highest proportion of messages related to general organisational issues (such as opening times, announcements on pay or other HR issues, or information on IT system issues) which ranged from 55.6% of messages in 2021-2022 to 79.1% in 2018-2019. Excluding these general messages, announcements relating to teaching was the most prevalent (see Figure 16 above). However, at the same time messaging relating to activities that fell within the KE landscape increased, from 1.4% of messages (once general messages were excluded) in 2017-2018 to 22.9% in 2021-2022. While Figure 16 could be interpreted as evidence of increased importance of KE (at least at a VCE level), the volumes of data fluctuated (108 messages in 2021-2022 compared to 226 in 2017-2018 and even 267 in 2018-2019), reflecting the volume of messages in some years relating to the Covid-19 pandemic. This may perhaps explain the rise in teaching-related messaging in 2020-2021, as the organisation had to pivot to new ways of working and communicate these changes to staff. Further limitations to this data was that the identification of themes was undertaken by myself, and I took a broad view of KE in line with the model used by RE and its predecessor (HEFCE) created by Coates Ulrichsen (2014) (see Appendix 5). This does mean that I included as KE some areas perhaps more traditionally associated with teaching (such as volunteering) or research (public engagement with research) as part of the broad KE landscape. While these areas t*echnically* are KE, they could be viewed through a different (teaching or research) lens in terms of UWL *culture*. Overall, however, this analysis indicates increased awareness or importance of KE, but still within an organisation that was primarily still teaching-focussed.

A second artefact of culture that was reviewed was a broader range of other formal documents, which included minutes of the formal committees, most importantly for Academic Board. This was the prime committee for UWL, to which all other formal committees report. Its agenda was historically very heavily focussed on teaching, receiving reports from several committees that provided governance for the student experience. These included the Education Committee and Academic Quality and Standards Committee. However, it was in the reports from academic department Boards that explicit reference to KE started to appear. A prime example was in the Academic Board of January 2022, where alongside reflecting the increased importance of KE in URSEC minutes, verbal reports (documented in the minutes) showed four of eight heads of academic departments choosing to raise KE activities as the single key thing to highlight from their academic department Board minutes. Another lens on KE was the explicit nature of links to KE made within a research strategy that was launched towards the end of the project. This strategy took the role of KE in research much further than a simple articulation of research impact as a form of KE. This strategy expressly included targets for areas more closely associated with KE, such as amount of collaborative research funding, industry-funded PhDs, and academic promotions based on KE activity. While encouraging, these KE-related artefacts of culture existed within a broader range of documents, minutes, and strategies that continued to reflect the overarching cultural paradigm of teaching as the prime purpose of UWL.

The third artefact of culture that was reviewed was internal structures of UWL. One key development that appears to indicate a change in the status of KE at UWL was the proposal to rename URSEC to become the University Research and Knowledge Exchange Committee (URKEC). A proposed name change with a clearer focus on KE (as opposed to Enterprise) was circulated in August 2022, and adopted through a revised Terms of Reference at the URSEC meeting in November 2022. In terms of other structures, another indication of increased importance of KE could be observed in the increase in resources for the central team providing support to KE. This increased from 6.6 Full Time Equivalent (FTE) staff (a headcount of seven) in 2017-2018, up to 16.5FTE (a headcount of 17) for 2021-2022. This change was explicitly linked to growth in Enterprise (see 10.4.1 below) and therefore could be a result of the growth of Enterprise *income* rather than KE. This also included increase in posts directly linked to KE, where income also increased (for example, revenue from hire of resources or HEIF funding). In this way, KE maintained some cultural association with (or as) Enterprise. Observation of cultural artefacts alone was not sufficient to determine if there was any change, and therefore further data was needed to attempt to understand this part of the Project ToC.

An explicit way to measure change was the fourth area of analysis using a staff survey. As part of the Phase Two activities, a version of the ENTRE-U tool (Todorovic, McNaughton and Guild, 2011) was used. Adapted from the Kalar and Antoncic (2015) version of ENTRE-U, the language was adjusted to move away from a research focus, to one that recognised broader expressions of academia (for example in line with the OfS definition of KE[29]). This KE orientation survey had a very low participation rate, with just 15 responses from a total staff population of 823 staff[30]. Of the participants, 12 were academics, two were in professional services roles, and one respondent in a management role. A

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[29] See https://www.officeforstudents.org.uk/advice-and-guidance/skills-and-employment/knowledge-exchange/ (accessed 6/11/22) for further details

[30] taken from Senior Management Group HR report dated 16th February 2021

breakdown of responses is included as Appendix 16. The survey, run using the JISC online survey tool, included supplementary questions to understand perception of change in areas addressed by ENTRE-U over the two years prior to the survey. Two respondents were recent joiners to UWL, meaning this element of the survey drew on the views of 13 staff members. Of the 13 respondents, 73.3% felt they understood KE and 26.7% felt that this understanding had improved in the last two years (during the project lifetime). Most respondents felt UWL encouraged a range of KE or innovative activities, but across the range of these questions the predominant response was non-committal (neither agreeing nor disagreeing). Across the range of questions looking at UWL approaches to KE activities, there was a small indication that this had improved in the two years prior to the survey (20%) with no respondents feeling this position had declined. One outlier response was on a question about how UWL developed policies (a standard question in ENTRE-U, and one which linked to the Phase Two activities in developing KE-policy). The majority (60%) felt UWL did not develop policy from drawing on feedback from all levels of the organisation. Overall, the low response rate meant no firm conclusions could be drawn about UWL's entrepreneurial orientation.

CATEGORY OF STAFF		UWL POPULATION AT TIME OF INTERVIEWS	PARTICIPANTS	PARTICIPATION RATE
Senior Leader	Head of Academic Department	9	4	44.4%
Academic Management	Head of Subject	22	1	4.5%
Academic	Professor or Associate Professor	29	2	6.9%
	Senior Lecturer or Lecturer	276	6	2.2%
Professional Support	Head of Department or Manager	156	8	5.1%
	Officer, Coordinator, or Administrator	268	4	1.5%
Total		760	25	3.29%

Table 20: Participation of staff in the Phase One interviews

The fifth approach to measure change was levels of engagement by staff with KE. Increased levels of engagement were a targeted outcome of the project, as this could reflect increased cultural importance of KE. Engagement with KE was looked at in three ways: engagement with this project; engagement indicated by financial records; and engagement with the KE seed fund. Engagement with this project included participation in the Phase One interviews, the KE orientation survey, engagement with the AT, and as part of the subsequent KE Growth Group. The first of these, participation with interviews, was described in Chapter 7. Table 20 above shows a spread of participation amongst academic departments, and at a variety of different levels of the organisation. This demonstrated a relatively low participation rate amongst academics, and a higher level of participation amongst those in a managerial position. The participants were therefore not wholly representative of UWL's demographics, but does demonstrate some willingness to engage, and as data on any similar (teaching or research related) activity was not available it was not possible to draw any comparative conclusion from this.

Participation in Phase Two activities were generally coordinated through the KE Growth Group, with invitations to other staff that could be considered stakeholders. Alongside the challenges of the pivot as part of the student-focussed organisational response to the pandemic (Noble and Spanjol, 2020),

this meant that participation for Phase Two was also not a strong indicator of engagement with KE. The KE orientation survey conducted in 2021 had potential to provide evidence of engagement, discussed above (see 10.3.2 above). However, the KE orientation survey did not generate sufficient data to be able to draw any firm conclusions, due to low participation. What it could have demonstrated was a level of disengagement with KE. This was not conclusive as it could potentially have been disengagement with UWL or surveys at UWL, but as one respondent wrote:

> *"Navigating five semi-broken and disjointed admin programs supposedly designed to support students through the tutorial model (Civitas, CMIS, Columbus / Unit-e, SAM, Blackboard) significantly impacts on time available for exchange of ideas and research"*

The timing coincided with the prioritisation of teaching and adapting all curricula to be delivered online (taking a substantial amount of academic time), which may have been a factor. The final element of engagement with the project was through the evolution of the Advisory Team to the KE Growth Group. This demonstrated a core of academic staff willing to participate their time and energy to the project, and choosing to remain part of the KE infrastructure through taking on roles as representatives from their departments on the KE Growth Group. While more formalised, this demonstrated at least some staff perceiving KE to be important: by academics *choosing* to use their work time for KE, and by their managers agreeing to this in their workload.

	2017-2018	2021-2022
Total academic staff (headcount excluding HPLs)	311	348
Estimated headcount of staff engaged with Enterprise	53	105
Estimated headcount of staff engaged with KE	33	56
Estimated percentage of academic staff engaged with KE	11%	16%

Table 21: Academic engagement with KE from financial records

The second way of trying to establish an increase in the level of engagement was an analysis of financial records regarding Enterprise activities (reported monthly to an Enterprise Executive Group). Table 21 above details changes between 2017-2018 and 2021-2022. Using 2017-2018 as a baseline, KE income generated from within academic departments (in other words, academically led) accounted for approximately 9.6% of Enterprise income. This figure excludes income that was not KE (academic partnerships and apprenticeships for example) and KE income managed and developed centrally (such as from facilities use). While not an exact measure of engagement, it gave a baseline to understand future performance. Generally increased income would require increased engagement to either develop or deliver that activity. This baseline data indicated around 11% of staff (33 from 311, excluding hourly paid academic staff employed solely for teaching) had some involvement with KE activities that generated revenue. This excludes non-monetised KE activities (such as employability and outreach), and non-KE academic such as academic partnerships or apprenticeships, which are included in the engagement with Enterprise figure (53 for 2017-2018). By 2021-2022, an estimated 56 out of 348 academic (16%) staff had some form of engagement with income generating activity (excluding partnerships). This would appear to be indicating an increased level of KE engagement; however, this was estimated from financial records, rather than based of firm data, so can only be seen as indicative rather than authoritative.

APPLICANTS	NUMBER
With prior experience of KE	10
Without prior experience of KE	44
Total	54

Table 22: Prior experience of KE for Staff (both applicants and co-applicants)

The final way of understanding KE engagement was via the KE seed fund, which was one of the interventions in Phase Two of the project. Arising directly from the Phase One research, the KE seed fund presented a new opportunity for UWL staff to engage with KE. As described in Section 8.4.2, applications were received from staff across the institution. In total, applications for funding involved 54 different members of academic staff. Of these the majority (80%) had no prior experience of undertaking a KE project (see Table 22 above).

ACADEMIC DEPARTMENT	APPLICATIONS BY ACADEMIC DEPARTMENT	CLARITY OF UNDERSTANDING OF KE DEMONSTRATED (N, %)		CLARITY OF LINK TO KEF/HE-BCIS METRICS (N, %)			IDENTIFIED NON-ACADEMIC PARTNER/ COLLABORATOR (N, %)	
		No	Yes	No	Partial	Yes	No	Yes
Claude Littner Business School	5	2	3	4	1		4	1
		40%	60%	80%	20%	0%	80%	20%
College of Nursing, Midwifery and Healthcare	6	2	4	3	1	2	6	
		33%	67%	50%	17%	33%	100%	0%
Film, Media and Design	2	2		2				2
		100%	0%	100%	0%	0%	0%	100%
School of Law	1	1		1			1	
		100%	0%	100%	0%	0%	100%	0%
London College of Music	11	3	8	4	4	3	3	8
		27%	73%	36%	36%	27%	27%	73%
London Geller College of Hospitality and Tourism	2		2	2			2	
		0%	100%	100%	0%	0%	100%	0%
School of Biomedical Science	1		1			1	1	
		0%	100%	0%	0%	100%	100%	0%
School of Computing and Engineering	11	4	7	3	4	4	4	7
		36%	64%	27%	36%	36%	36%	64%
School of Human and Social Sciences	6	2	4	2		4	4	2
		33%	67%	33%	0%	67%	67%	33%
TOTAL	45	16	29	21	10	14	25	20
		36%	64%	47%	22%	31%	56%	44%

Table 23: Knowledge Exchange seed fund applications

Analysis of KE seed fund applications indicated that most applicants understood what KE was (64.4%). Table 23 above shows the applications from each academic department, and how well applications demonstrated an understanding of KE. Of the 35.6% that did not demonstrate an understanding of KE, there was at least *some* link or understanding displayed. Compared to the data for the Phase One interviews this was encouraging, given that in the interviews few participants demonstrated real

comprehension of KE. More than half of the applications for the KE seed fund could make some link to specific metrics of KE (either HE-BCIs or KEF). Several applications (44.4%) already had an external organisation identified to collaborate or to exchange knowledge with. Within the KE seed fund applications comprehension of KE appeared to have improved, to the extent that even those with a limited understanding were able to demonstrate a *better* understanding of KE than the vast majority of Phase One interviewees. However, these applicants were self-selecting, were provided with links to further information on KE (HE-BCIs, KEF etc) and had support from KE Growth Group representatives. This would suggest that a better understanding of KE could be expected. Therefore, direct comparisons between the two datasets was not necessarily appropriate. However, this provided further insight into a growing evidence base *indicating* improved understanding, and some direct *evidence* of KE engagement.

Levels of engagement differed by academic department, and there appeared to be some link to level of proactivity by KE Growth Group representatives. For example, the representative for the London College of Music (LCM) appeared to be the most engaged and active representative (through activities described and email correspondence I was copied into). While anecdotal evidence, this seems to have translated into a higher number of applications from LCM. The School of Computing and Engineering representative on the KE Growth Group organised a specific academic department event to look at, and ultimately coordinate, applications. Again, this more intense engagement translated into more applications and understanding of KE. A similar approach was taken by School of Human and Social Sciences, supported by two representatives (one for the School and another School member as the representee from the Professoriate). In contrast the school of Film, Media and Design (FMD) had a lower application rate, despite a very engaged representative. This may be symptomatic of the views expressed by the Head of School at the time on volume of teaching (alongside staff turnover) that meant within FMD, time for research and KE was not prioritised. It was noticeable in terms of revenue performance that this school was almost wholly reliant on academic partnerships for meeting income targets for Enterprise, with no monetised KE activity. While the same could be said for LCM (except for some small research grants) this perhaps indicated that within LCM there was a *desire* to engage, whereas with FMD (which was also a creative arts faculty) this was less apparent. This analysis was based on my perception of engagement of KE Growth Group representatives, and as such was clearly subjective. However, it does raise the possibility of differing entrepreneurial orientations within parts of an organisation, linking to the view of organisational sub-cultures existing (discussed in chapter 4).

The planned evaluation of the first tranche of KE seed fund projects, and if they translated into KE outcomes and impact on metrics, was outside the scope and timeframe of this project. This was less important to this project than how the KE seed funds acted as a catalyst for engagement. While the projects came with funding, which was highly attractive, it was clear that these projects needed to be conducted *within* workloads (as buy-out of teaching time was not a permitted project cost). Nevertheless, despite the potential for a seed fund activity to be seen as more work, 15.5% of academics chose to be involved (as leads or members of application teams). Using the engagement level from the financial analysis above, this could be evidence of an increased level of engagement with KE. As motivating academics to choose to use their autonomy to engage in KE was one of the four design parameters for this project, this demonstrated some level of success.

A final lens on culture change was through the embedding of the measures from the ToC within the KPIs for KE at UWL. This meant that the process of ongoing evaluation also became embedded through periodic reporting and discussion at URKEC. A further consequence of this project was that these metrics became monitored as part of the ToR for the KE Growth Group, which developed from the AT for this project. This development and embedding was a clear indication of change initiated by this project, and could also be seen as an element of cultural change. Prior to the project, the way of measuring KE was extremely limited, and subsumed within the core measurement of Enterprise. This did not truly reflect KE, rather it was the income generated by a range of activities including many that were not KE. While the annual HE-BCIs reporting of KE data did have some visibility, this did not form a clear part of any KPIs. Following this project, a KPI framework (see Appendix 22) was implemented that had a range of elements to understand underpinning culture, and measurements of KE performance compared to both the sector and a group of peer-HEIs. Moving from an Enterprise-focus to a clear KE-focus for these metrics, reported to a main UWL committee, became a new artefact of UWL culture and a direct consequence of this project.

10.3.3 *Culture Web analysis*

Using a Culture Web analysis (Johnson, 1993) at the start and end of the project provided a further way to understand UWL culture change. The Culture Web model was described in section 9.3 and analysis of UWL prior to the project identified a clear cultural paradigm associated with UWL's teaching mission (see Appendix 17). This paradigm was manifested across the routines, rituals, myths, stories, and symbols of UWL culture. Reflecting on the same aspects of organisational culture identified several areas of change in relation to KE (see Appendix 17). Following the project, the core paradigm remained one of teaching, and this was reinforced during the Covid-19 pandemic. However, there were changes in the view of the strategic importance of research (including impact) and in the key role Enterprise played in underpinning financial stability and growth over this same period. Evidence of shifts in some aspects of culture seemed to show an increased importance of KE. This manifested in new routines developing and the approval of new, more KE-relevant, strategies. The key rituals around the way things were done at UWL shifted slightly, in particular the way KE performance was measured. An emphasis on KE appeared in URSEC, and new rituals were created around the emergence of the cyclical KEF and the start of a cyclical KE seed fund process. Other key symbols of culture changed, not least in my role and increases in KE related staff (both number of posts and seniority). While not indicative of a *major* shift in culture, these appear to indicate a shift in the perception of KE's importance within UWL culture.

It was apparent in this analysis that I was explicitly *looking* for change, and therefore was not an unbiased observer. While this could be seen as a very subjective approach, this analysis using the Culture Web model (Johnson, Whittington and Scholes, 2013) was cross checked with members of the KE Growth Group who had been employed prior to the start of this project. This was to validate the analysis and broaden any perspective on change from purely my own. Ultimately, the other analysis and views of culture at UWL fed into the Culture Web analysis. In that way, it provided a useful means of summarising the changes in culture at UWL. This in turn fed into the Project ToC in terms of understanding whether the outcomes expected from the project had been achieved.

10.3.4 Culture change conclusions

From across the range of ways of looking at culture, there was no strong evidence for a wholesale shift in culture towards being more entrepreneurial or engaged with KE. It would be reasonable to conclude that there was an increase in engagement and participation with KE activities, and improvement in understanding KE. There was some indication of KE being perceived as having increased in importance. As an organisation, the priority remained teaching and the student experience. This was particularly apparent during the Covid-19 pandemic, where this was clearly articulated by senior managers as being the prime focus. This acted as a constraint on KE, as effort was prioritised to ensure students continued to have a worthwhile learning experience. However, a clear secondary messaging was UWL needed to survive what could be a problematic financial climate. Therefore, there was also a prioritisation of diversifying income, exploiting any opportunities, and growing any income lines possible to offset areas which were expected to reduce. While this was a reinforcement of the cultural *Enterprise-equals-income* paradigm, the development and understanding of KE at UWL was still culturally and structurally aligned to Enterprise.

There was the potential that a subculture was developing around KE. This *could* ultimately be sufficient to be able to have a performance impact. As stated previously, the aim was not engagement by *all* staff with KE, but rather that the numbers choosing to engage in KE would increase enough to have a performance impact on KE metrics. The project timeframe saw a growth in *understanding* of KE, evidenced by the responses to the KE seed fund. This could therefore be the basis for longer-term performance enhancement. However, it could be claimed that this analysis was based on having looked very hard for evidence of change; confirmation bias leading to seeing change where it may not exist. It should be acknowledged that I was not an unbiased observer of any organisational phenomena. However, across the range of analysis a picture developed of some indicative signs of increased perception of importance and engagement. This could be interpreted either as the development of a subculture or a small shift in culture. Either way, looking at organisational performance change allowed an analysis of whether any performance improvement could be directly or partially linked to these limited signs of increased entrepreneurial orientation.

10.4 Direct performance impact

Whilst there was no strong evidence of a significant change in the entrepreneurial orientation of UWL towards KE, there were nonetheless sufficient indications of change to justify analysing performance. As described in Chapter 9 the Project ToC focussed on potential direct performance impacts of the project in three ways, comparing UWL to: its own historic performance; sector-wide performance; and to the performance of the narrower peer-group of HEIs.

10.4.1 Comparison to historic UWL performance

The first stage of the analysis was to understand the performance of UWL, prior to and during the project (using data from 2013-2014 to 2020-2021). Overall financial performance over this period saw substantial growth in income. As shown below in Figure 17 overall income at UWL grew from just

below £80m to £145m in the final year of the project. Projections for the 2021-2022 financial year anticipated that this growth trend would continue, with income expected to be more than £160m[31].
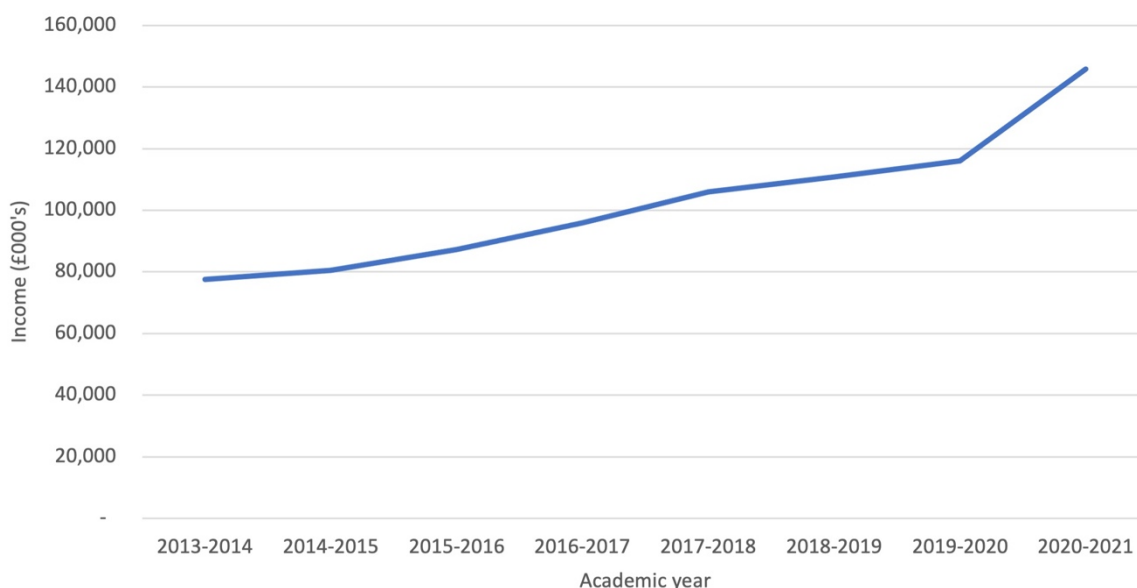
Figure 17: The income growth (in £000's) of UWL

Understanding the constituent parts of UWL's income-generating activities provided insight into this growth. While there was growth in the number of students, particularly higher fee-paying international students, the proportion of this income that related to Enterprise increased. Table 24, below, shows the total income, the reported Enterprise income and what proportion this was of the total income. This clearly shows that while overall income was growing, Enterprise was growing at a faster rate. This indicated that from a financial perspective, the performance of UWL was improving, and within that the performance in terms of Enterprise was central to that growth. Enterprise at UWL was not, however, necessarily co-terminus with a definition of KE. Further analysis of the Enterprise income was required to understand whether there was also an increase in activities deemed KE.

FINANCIAL YEAR	TOTAL INCOME (£M)	ENTERPRISE INCOME (£M)	PERCENTAGE
2016-2017	95.9	18.2	19.0%
2017-2018	106.1	24.5	23.1%
2018-2019	110.8	27.0	24.4%
2019-2020	116.0	28.2	24.3%
2020-2021	145.8	42.3	29.0%

Table 24: The financial performance of UWL

The way that the information on financial performance was recorded did not necessarily make for a simple analysis of what was KE and what was not. Using income reported to HE-BCIs, a subset of the overall Enterprise income that was reportable as KE to HESA, provided one way of understanding performance. This indicated that while Enterprise may have grown, the proportion that was KE was

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[31] UWL's audited accounts eventually recorded an overall income of £172.9m for 2021-2022

more volatile. Table 25 shows the income reported to HESA through the HE-BCIs. From the 2016-2017 financial year to the final year of the project (2020-2021) there was a significant increase (by 48%). Some of this related to concerted efforts to ensure all income was reported as part of my increased role in overseeing Enterprise activities at UWL. For 2019-2020, the volatility was perhaps unsurprising given the overall economic impact of the Covid-19 pandemic. This affected activities such as facilities hire, as social distancing restrictions meant use of UWL premises and physical resources was prohibited. What was noticeable was most areas (and indeed the overall KE income) had increased in the 2020-2021 financial year, despite the ongoing effects of the pandemic.

HE-BCIS INCOME CATEGORIES	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Collaborative Research	-	160	563	793	978
Contract Research	884	571	890	150	236
Consultancy	22	134	322	53	225
Facilities	697	1,550	1,866	1,515	949
CPD	2,807	3,814	2,918	2,744	4,012
Regeneration	1,470	1,771	2,422	3,139	3,988
IP	1,821	2,405	2,076	1,229	1,020
TOTAL	*7,701*	*10,405*	*11,057*	*9,623*	*11,408*

Table 25: University of West London HE-BCIs reported income (£000's)

The overall picture was therefore one of significant increase over time, albeit with variance in how that overall income was generated. Being *entrepreneurial* is to an extent how able an organisation is to react to opportunity. This variation may be indicative of the variability in opportunity over time, and UWL's ability to exploit these different opportunities to maintain overall performance. However, this strong financial performance could simply have been the result of the environment faced by all HEIs. This leads to considering whether this increased financial performance was comparative to the performance for HEIs more generally, and to specific HEIs that comprised a peer-group for UWL.

10.4.2   Comparison to sector-wide performance

Using open data available from the Higher Education Statistics Agency (HESA) allowed for UWL's financial performance to be compared to the whole sector performance. Sector-wide performance measures, as described in Chapter 9 included: average income as a percentage of income; average surplus; staff-costs as a percentage of income, HE-BCIs data, and the first KEF result.

First, the trend in UWL's overall income was compared to that of the average for the sector (see Figure 18). Using the mean average income per-HEI for 2015-2016 to 2020-2021 demonstrated that the performance for UWL showed year-on-year increases, over a period where the overall sector trend was decline. The sector saw an upward income trend to 2018-2019, following which there was a sharp decline. Regulatory changes between 2015-2016 and 2020-2021 saw the number of institutions reported in the HESA data grow, from 164 HEIs in 2015-2016 data to 274 in 2020-2021. Most new institutions were private organisations, generally with a lower level of income, which skewed the average income. Also, the distribution of income was not linear, with the top 20 institutions (from a total of 274 institutions) in 2020-2021 generating 44% of the sector-wide income of £44bn. Using the median average (see Figure 19) to try and mitigate these extremes shows UWL moved from below the median for the period up to 2018-2019 to above the median income from that point onwards.
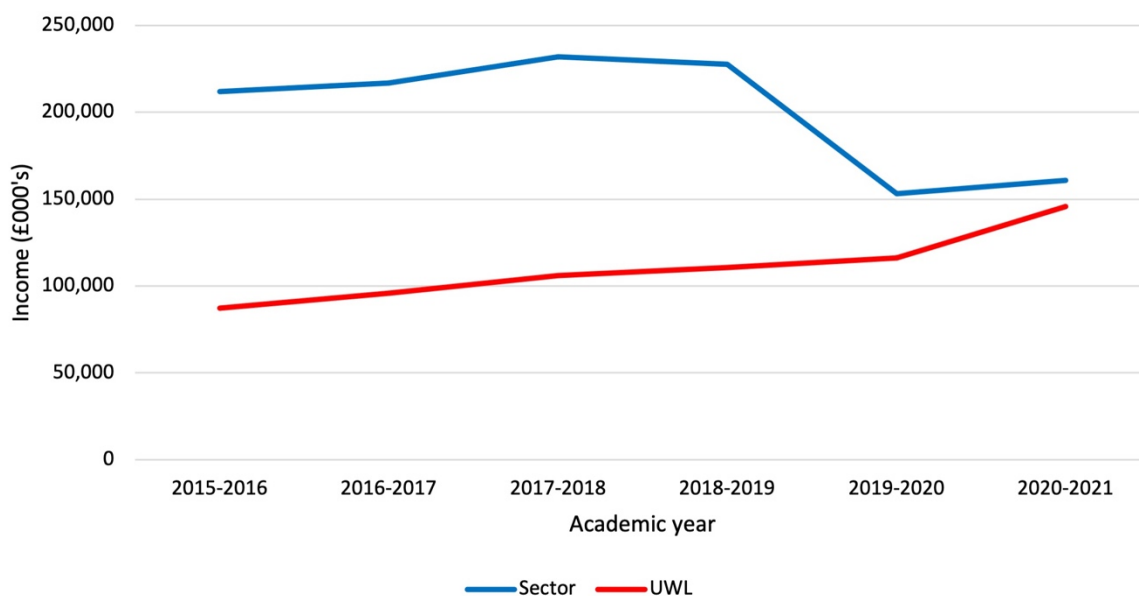
Figure 18: Income performance: UWL versus sector mean average income
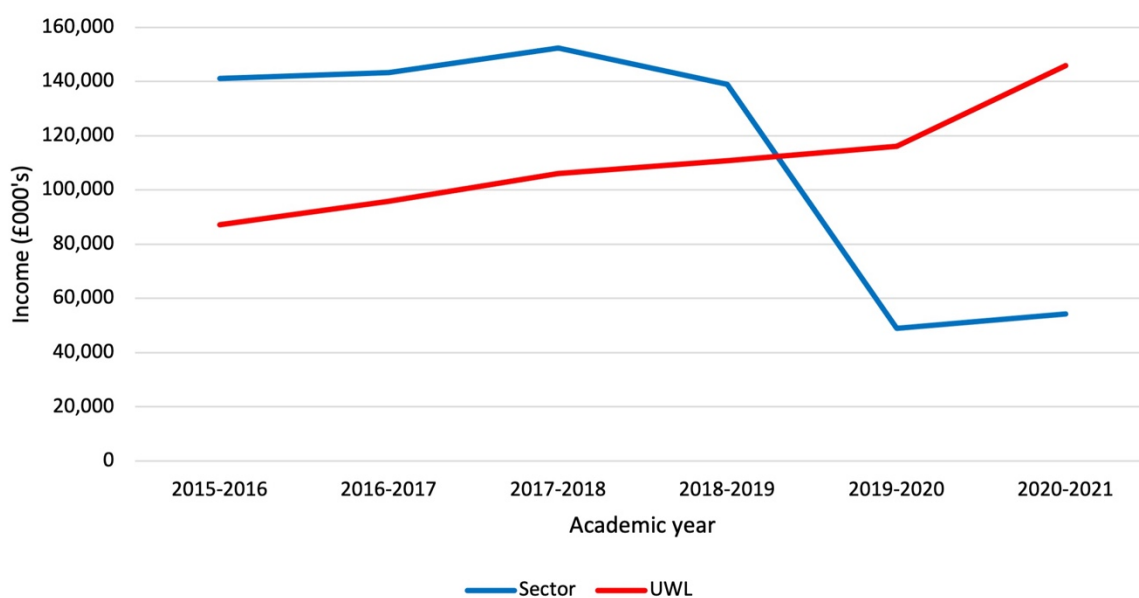
Figure 19: Income performance: UWL versus sector median average income

One of the organisational narratives about UWL's engagement in Enterprise activity was how this affected the overall financial picture, in particular how the surplus generated from Enterprise activities allowed for reinvestment into the student learning experience. It was therefore useful to look at how UWL's performance in surplus generation over the project time period related to the sector. Outliers in the data meant the mean average position was significantly skewed, for example the loss or surplus (as a percentage of income) data for 2021 ranged from -47,766.7% to +49.7%. As with the sector income data, the influx of new providers skewed this data. On this basis, the median, rather than

mean, average surplus was a better way of comparing performance (see Figure 20, below). The overall picture for surplus showed a consistently high perfomance for UWL, above the median average, and UWL's surplus for 2020-2021 was in the top 11% of HEIs.
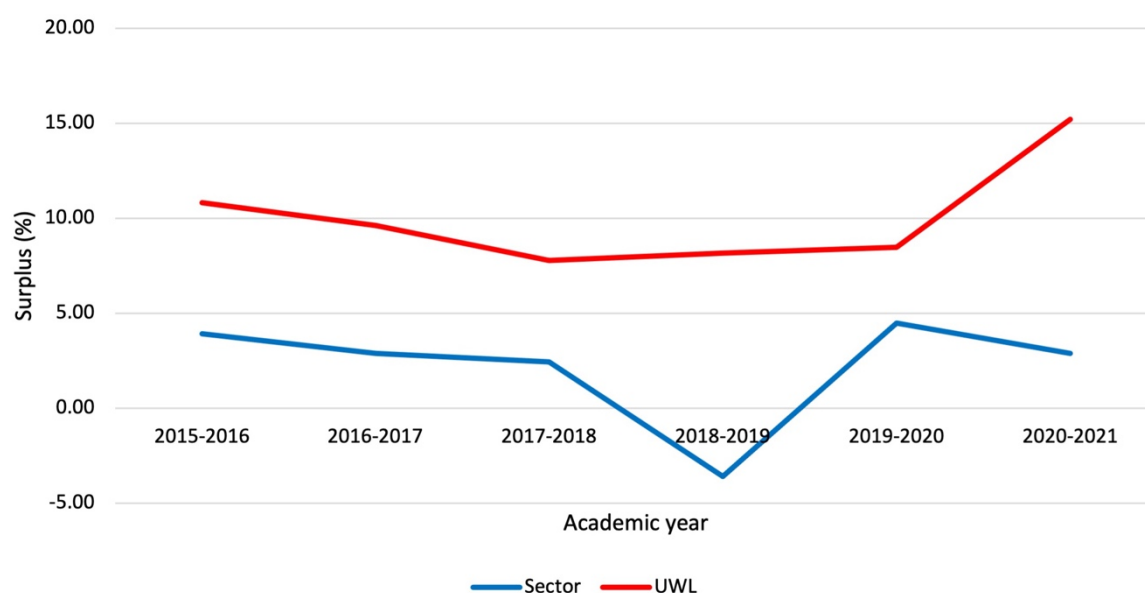
Figure 20: Surplus as a percentage of income: UWL versus sector median average

It was therefore apparent that UWL's financial performance was not simply the result of environmental factors, demonstrating consistent competitiveness against sector averages. Against this general backdrop of sector performance, the next level of sector comparison was against KE performance. Table 26 below, shows HE-BCIs reported income between the 2016-20017 and 2020-2021 academic years. This demonstrated consistent improvements in UWL's HE-BCIs performance from 2016-2017 onwards (full data is available in Appendix 18). Analysis of the HE-BCIs sector-wide data was skewed by extreme outliers, for example of 213 institutions returning data to HESA for 2020-2021, data for collaborative research showed 82 HEIs recorded zero income in this category. For IP revenue for the same year, more than half of the HEIs returned a zero value. The HE-BCIs data was also skewed by the size of some organisations; for example, 72% of total collaborative research income recorded was generated by just 10% of the HEIs. Due to these outliers, the median rather than mean average was used to gauge UWL's position relative to the rest of the sector. A picture of growth emerged in key areas against a backdrop of sector-wide decline (collaborative research income; consultancy income, facilities income, CPD/CE income), smaller falls than the sector (contact research income), or better than sector growth (regeneration). The one area where UWL declined more than the sector was IP income, and UWL was still performing better than the sector average (where the median average figure was £0). This indicated UWL's performance in KE was exceptional in terms of a sector-wide comparison.

HE-BCIs Categories (£000's)	2016-17 ACADEMIC YEAR		2020-21 ACADEMIC YEAR		CHANGE	
	UWL	Sector Median	UWL	Sector Median	UWL	Sector Median

	2016-17 ACADEMIC YEAR		2020-21 ACADEMIC YEAR		CHANGE	
Collaborative Research Income (£000's)	0	1400	978	512	978	-888
Contract Research Income (£000's)	665	1288	236	365	-429	-923
Consultancy Income (£000's)	22	648	225	243	203	-405
Facilities Income (£000's)	697	289	949	36	252	-253
CPD/CE Income (£000's)	2807	2202	4634	1002	1827	-1200
Regeneration Income (£000's)	1470	94	3988	100	2518	6
Number of IP disclosures	0	3	0	0	0	-3
IP income (£000's)	1821	12	1020	0	-801	-12
Number of new Spin outs	0	0	0	0	0	0
Number of Graduate Start-ups	0	7	1	3	1	-4

Table 26: Income performance of UWL in HE-BCIs metrics

However, simple comparisons were not necessary that helpful due to significant outliers in all categories of data in HE-BCIs. Understanding the level of gross income versus how *effective* HEIs were at generating this level of income was part of the reasoning behind moving to alternative ways to look at sector-wide KE performance, such as the KEF. UWL's published KEF performance was released in March 2021 and the format for KEF is shown in Figure 21 below. This shows the seven perspectives on KE and UWL's performance (by decile) in each. On this diagram, UWL's performance against the national picture for all HEIs that took part informs the seven coloured segments. The darker lines in each segment represent the average for the Cluster UWL was part of (Cluster M). As a relatively small institution, with limited research, any performance in the top half of HEIs nationally was considered a positive result (details of comparison to peers is discussed further below in section 10.4.3).
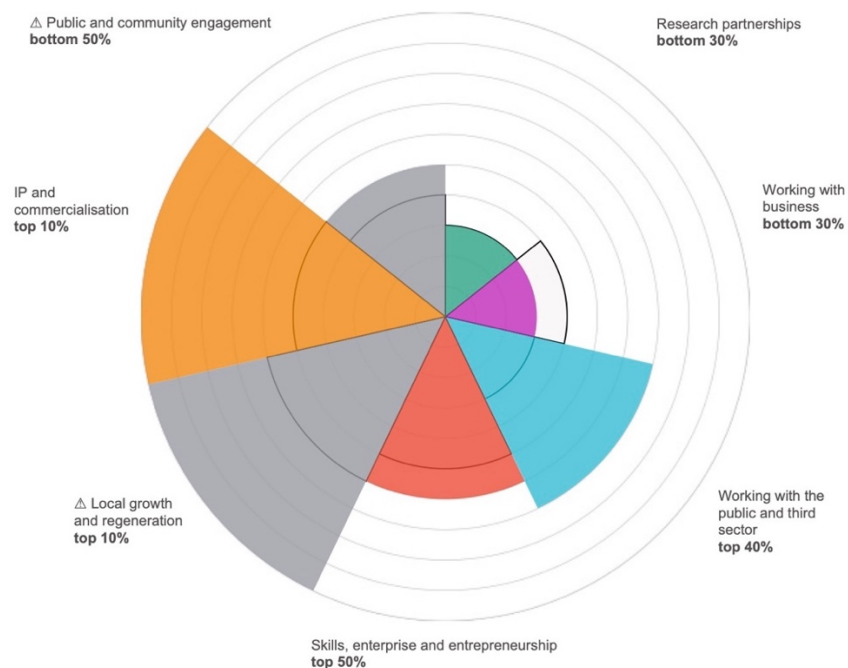
Figure 21: Extract of UWL's performance in KEF (*source: www.KEF.ac.uk*)

The results from KEF showed UWL ranked in the top decile nationally (of HEIs that took part) in two areas: *IP and commercialisation,* and *local growth and regeneration*. This performance was a result of IP earnings, a strong level of investment in start-ups, reasonable turnover from those start-ups, engagement in projects funded by European structural funds, and historic regeneration activities. For the *skills, enterprise, and entrepreneurship* perspective UWL ranked in the top 50%, a performance mainly driven by CPD income (for which UWL was in the top 20% nationally) but overall affected by a weaker performance in CPD learner days and rates of graduate start-up. For *working with the public and third sector*, UWL ranked in the top 40% of HEI nationally. A track record with both consultancy, facilities hire and contract research with non-commercial organisations underpinned this performance. For the *public and community engagement perspective performance* UWL was ranked in the bottom 50%. This perspective was based on a self-evaluation with five aspects scored between one and five: one being not yet in place and five being fully implemented across the institution. The self-evaluation for the perspective was impacted by not having an existing strategy for this area of engagement, and relevant activity was disconnected across UWL. The performance for the *research partnerships perspective* (ranked in the bottom 30%) was not unexpected when compared to research intensive HEIs, where this metric was perhaps one more likely to be advantageous. UWL's performance in this area was significantly better in terms of collaborative research income as a percentage of public funds (top 30%), but performance lagged on publication with non-academics (bottom 30%). This was perhaps due to the source data being biased towards STEM subjects (science, technology, engineering, and maths): areas that UWL had limited research output in. For the *working with business perspective* UWL ranked in the bottom 30%, despite strong performance in consulting and facilities hire (for both SME and non-SME business) which were in the top 30% and top 40% respectively. However, overall ranking in this perspective was impacted by comparatively low rates of contract research (bottom 30%), and levels of Innovate UK income (bottom 50%).

While providing some insights into UWL's KE performance, the KEF data was unable to show any trend or direction of travel. As the first publication (in March 2022), this data provided a benchmark against which any future changes could be judged. KEF data was presented in reference to the whole sector, so year-on-year comparisons would only demonstrate if an HEI's rate of improvement was better or worse than the overall sector. However, this was a feature of much of the way the sector compared performance, for example league table positions. Comparison against the whole sector always brings with it the challenge of the diversity of organisational missions. This was implicit in the design of KEF, where RE stated:

> *We recognise that the English HE sector contains a wide variety of institutions, with diverse missions and other characteristics which will shape the type of Knowledge Exchange activities they will undertake. We are proposing to take into account these structural differences by creating clusters of institutions based on their assets and capabilities to undertake Knowledge Exchange.* (Research England, 2019)

As a consequence, HEIs frequently compared themselves to those they see as most similar, or aspire to be similar to, rather than to the whole sector. For example, while all HEIs compete for students it was perhaps stretching to suggest that for a classic's degree, St Andrews in Scotland and the University

of Lincoln genuinely compete for the *same* student[32]. The same was potentially true for KE where regional location (Rybnicek and Königsgruber, 2019) as well as reputation played a part in engagement decisions by outside entities. Therefore, a narrower view of comparative competition may be more beneficial for analysis of performance.

10.4.3 Comparison to peer-group performance

There are several perspectives that can be used for competitive comparisons. As discussed in section 9.4.3, a peer-group of HEIs was selected for comparison. These were: Bath Spa University (Bath Spa), Buckingham New University (BNU), Edge Hill University (Edge Hill), London Metropolitan University (London Met), Solent University (Solent), the University of East London (UEL), and Winchester University (Winchester). Analysis of UWL's comparative performance was undertaken by analysing: income trends, surplus, KE proxy income, HEIF funding, weighted qualifying income, HE-BCIs data, and KEF.

The first level, as with the sector-level analysis, was on income trend. Full data is provided in Appendix 19. The performance in regard to overall income trend demonstrated that UWL was outperforming both the sector average (see 10.4.2 above) and against most of the comparator peer-group (see Figure 22 below).
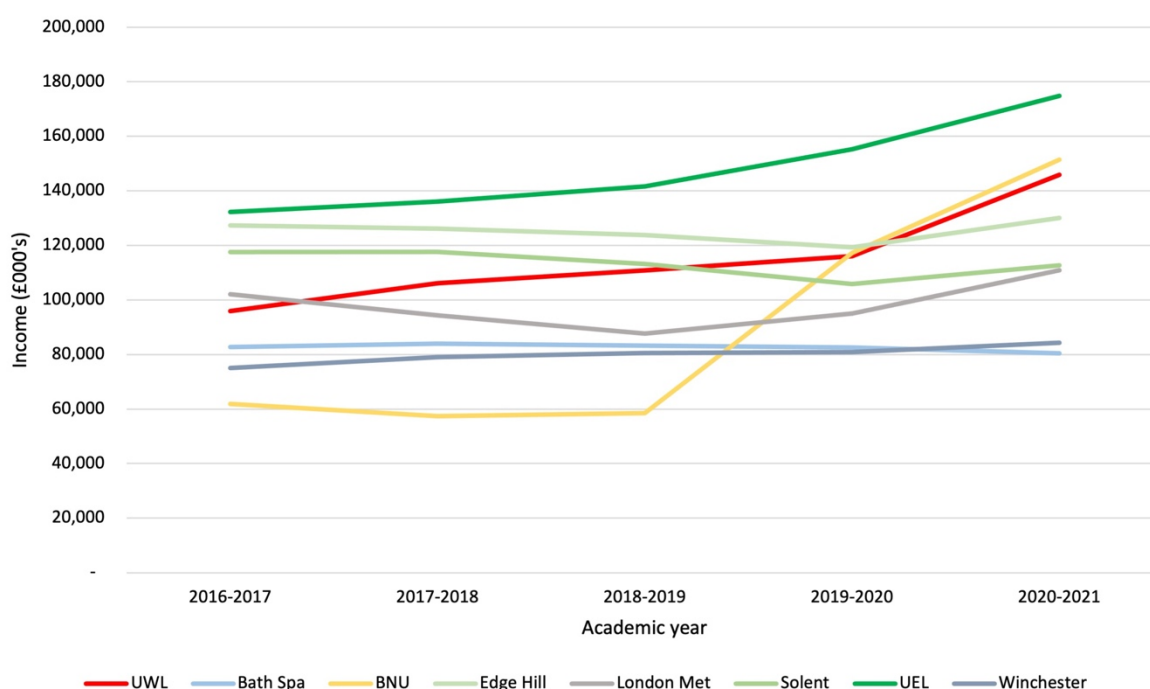
Figure 22: Peer group income trend (£000's)

Table 27 below, shows this trend in terms of percentage change in income from 2016-2017 to 2020-2021. The University of East London (UEL) maintained a steady increase, seeing a 32% increase in

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[32] In the Guardian League table for 2022, for Classics St Andrews was ranked 1st and Lincoln was unranked but cited as having a degree in this subject area (source: https://www.theguardian.com/education/ng-interactive/2021/sep/11/the-best-uk-universities-2022-rankings) (accessed 6/11/22)

income between 2016-2017 and 2020-2021. In the same period, UWL saw a 52% growth. For two institutions (Bath Spa and Solent), income was less in 2020-2021 than in 2016-2017. The outlier was BNU which saw a 145% increase. In part, this relates to changing the way they accounted for academic partnerships. This saw 2018-2019 income restated in their 2019-2020 accounts by over £30m. This was not applied retrospectively to 2016-2017 accounts, so the overall percentage increase was likely to have been inflated.

TOTAL INCOME	PERCENTAGE CHANGE BETWEEN 2016-2017 AND 2020-2021
UWL	52%
Bath Spa	-3%
BNU	145%
Edge Hill	2%
London Met	9%
Solent	-4%
UEL	32%
Winchester	12%

Table 27: Change in income for the peer-group between 2016-2017 and 2021-2021 financial years

Drawing data from HESA for the peer-group (as a subset of the sector data presented in 10.4.2 above) demonstrated that the peer-group saw a slight increase in average income over the timespan of the project. The data showed UWL starting below the average for the group and ending above (see Figure 23 below). With a smaller dataset, and fewer outliers, the mean average was used for comparison, rather than the median value (median values show an almost identical picture to the mean values).
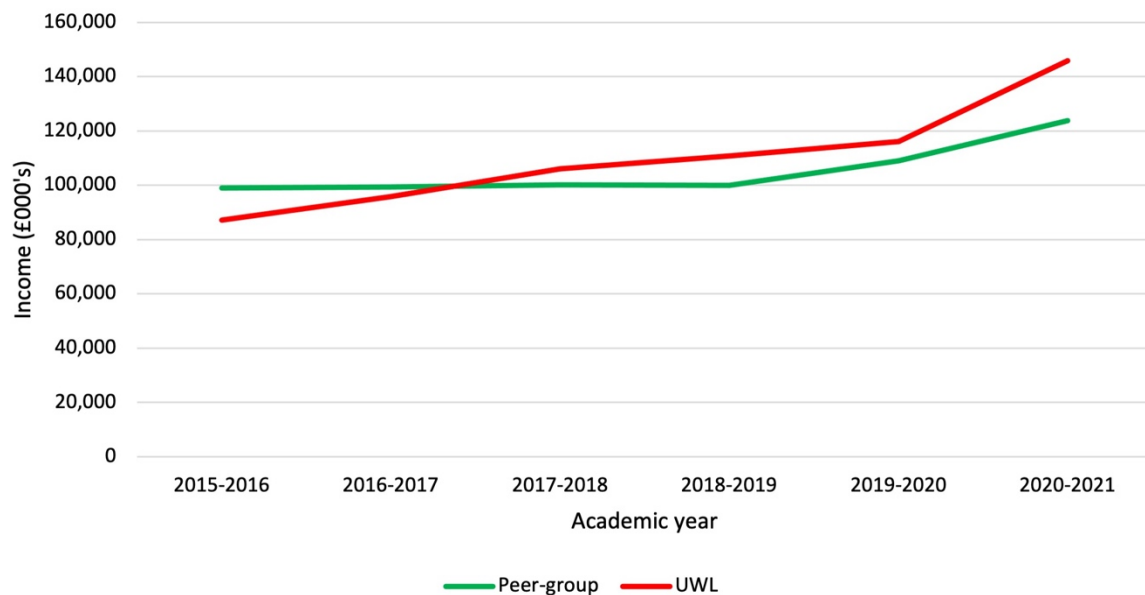
Figure 23: Income performance: UWL verses peer-group mean average

Figure 24: Surplus as a percentage of income: UWL versus peer-group mean average

As with the sector-wide analysis it was also useful to look at the surplus, not just the gross income generated. Figure 24 above, shows UWL made relatively consistent surpluses (against a KPI of 10%). For the peer-group, the average financial position declined significantly. In 2019-2020, half of the peer-group made a loss and no other HEI made more than 5% surplus, compared to UWL's performance of 8.5% surplus. While overall average performance improved for 2020-2021, UWL's surplus performance remained significantly higher than the average. This appeared to demonstrate that against both the sector and the peer-group not only was UWL able to maintain income growth, but was able to do that *sustainably* by continuing to generate surplus (at a time many other HEIs were making losses).

	2016-2017		2017-2018		2018-2019		2019-2020		2020-2021	
	KE proxy (£m)	KE proxy %	KE proxy (£m)	KE proxy %	KE proxy (£m)	KE proxy %	KE proxy (£m)	KE proxy %	KE proxy (£m)	KE proxy %
UWL	18.8	20%	23.5	22%	25.5	23%	21.7	19%	30.5	21%
Bath Spa	15.4	19%	14.5	17%	15.5	19%	12.9	16%	11.1	14%
BNU	10.4	17%	10.2	18%	11.7	20%	9.7	8%	9.7	6%
Edge Hill	18.7	15%	17.5	14%	25.6	21%	17.7	15%	17.5	13%
London Met	8.0	8%	6.5	7%	7.0	8%	7.1	7%	6.4	6%
Solent	25.7	22%	27.0	23%	29.0	26%	19.2	18%	16.0	14%
UEL	19.4	15%	19.4	14%	24.3	17%	20.7	13%	19.2	11%
Winchester	16.6	22%	17.9	23%	17.7	22%	14.6	18%	13.3	16%

Table 28: Knowledge Exchange proxy income

Income growth, and surplus generation, showed UWL's financial performance was strong against the peer-group. An understanding of KE performance within this overall performance picture was also needed. As described in section 9.4.3, information was extracted from the public accounts to act as a KE proxy. Table 28 shows how the proxy income for UWL, and the proxy income as a percentage of

total income, developed over the course of the project. This showed consistent year-on-year growth of KE proxy income at UWL, while all other competitors saw a decline over this period. For KE proxy as a percentage of overall income, again all other HEIs in the peer-group saw a decline while UWL's percentage stayed reasonably stable. Given the declines in overall income (see above) the drop in KE proxy and percentage were expected, but where competitors grew (BNU, UEL) the decline in KE proxy demonstrated that growth was occurring in other areas of activity, rather than KE. As with sector-wide comparisons, UWL's performance seemed to be highly competitive.

While useful, the KE proxy metric was not without its limitations and challenges. Changes in accounting practice, minor changes in groupings of income, and restating of accounts meant the data source was not stable over time. A further issue was that this was a *proxy* metric, or a best attempt to extract from accounts a reasonable picture of what could be construed as KE. For UWL, this differed from the internally produced metric of Enterprise income, but there was a strong positive correlation coefficient between the two (r=0.92). However, comparing the KE proxy to other sources of data on the peer-group provided a less convincing picture. For example, the correlation with Weighted Qualifying Income (WQI), used to calculate HEIF funding, was a weak positive (correlation coefficient of r=0.30), as was the corelation to HEIF funds (r=0.17). However, the HEIF fund had a lag to performance built in through the maximum and minimum increases in funding between years (normally 10%) and the WQI was constructed by weighting three years of data (see Section 9.4.3 for further detail). By comparing the relationship between KE proxy (weighted in the same way as the WQI metric) the correlation improved to a moderate positive correlation (r=0.43). This still presented a challenge for using KE proxy for understanding KE performance. There were either other factors at play within the KE proxy or some disconnect to the income reflected in HE-BCIs and by extension the WQI.

Looking directly at the KE funding (HEIF) and the WQI metrics gave another view of performance. As discussed in Chapter 9, HEIF itself provided a useful lens on performance, but the lag in increases or decreases in funding meant there was a disconnect to current performance. The HEIF funds allocated to the peer-group during the project changed over time. Table 29 below, shows the changes for each HEI year-by-year. This showed a year-on-year increase in UWL's funding, each time by the maximum permitted. At the same time Bath Spa never reached a level of WQI to be eligible for funds, and Edge Hill's funding ceased in 2021-2022 for falling below the minimum threshold. Three HEIs (BNU, London Met, and UEL) saw declines in funding. Winchester remained relatively stable, and Southampton Solent saw an overall increase, but a decline in funding between 2022-2021 and 2021-2022. On this basis, UWL's performance trend seemed to demonstrate some advantage over its competitors.

	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
UWL	283.01	367.91	404.70	465.41	511.95
Bath Spa	-	-	-	-	-
BNU	386.95	348.26	313.43	282.09	253.88
Edge Hill	435.36	329.18	296.26	266.63	-
London Met	846.95	859.81	835.93	821.29	739.16
Solent	1,275.23	1,324.35	1,359.84	1,562.41	1,406.17
UEL	315.07	283.56	276.46	301.16	305.45
Winchester	260.38	268.51	257.00	259.92	269.32

Table 29: Peer-group HEIF funding

The picture was similar for WQI (see Table 30 below), which for 2018-2019 was derived from the HE-BCIs returns for the years between 2015-2016 and 2017-2018. Again, UWL's performance showed a strong year-on-year increase, significantly above most other HEIs in the group. While Bath Spa demonstrated growth, the HEIF funding position demonstrated that this position was still below the funding threshold. Declines for BNU, Edge Hill, and London Met mirrored the consequential decreases in funding, and the relatively stability of Winchester's WQI accounted for the relative stability in funding. Solent's peak in WQI for 2020-2021 linked to the increase in funding, and the drop in performance the following year was likely to result in a further drop in funding in future. This appeared to demonstrate that, for the period being reviewed, UWL seemed to have a better sustained performance compared to the peer-group.

	2018-2019	2019-2020	2020-2021	2021-2022
UWL	40.56	56.63	73.40	72.63
Bath Spa	2.50	5.64	8.78	8.28
BNU	19.19	13.26	14.58	15.76
Edge Hill	23.60	17.04	14.50	12.28
London Met	62.10	59.44	57.59	48.50
Solent	90.66	96.69	109.57	92.28
UEL	20.35	19.66	21.12	21.68
Winchester	19.39	18.27	18.23	19.11

Table 30: Weighted Qualifying Income (WQI)

The WQI metric was used by Research England for allocating HEIF funds, and on that basis it would seem a strong metric to use to look at performance. If it was deemed robust enough to be used to allocate £328m of public funds for 2022-2023, it would appear to have some merit from the Government's perspective. However, the weighting across multiple years meant that it slightly masked *current* performance. A review of the HE-BCIs data that underpinned WQI provided further insight into KE performance.

Table 31 below shows the change in HE-BCIs metric for the peer-group, between 2016-2017 and 2020-2021. In most areas, UWL's performance in 2020-2021 was above the average for the peer-group, with the exceptions being consultancy income, and number of spin outs. The full data (see Appendix 20) showed some variations over the years, but broadly either improvement or a consistent performance. Indeed, for consultancy, where UWL's performance was below the peer-group average, for 2020-2021 UWL's performance had grown while the average income had declined.

There are limitations to this analysis. The use of average was effectively determining if performance was better or worse than the midpoint, rather than demonstrating the 'best' performance. As HE-BCIs was a broad set of measures, strategically which ones were perceived as most important would drive what each organisation would perceive as 'best'. Unless being best in all categories (which may not be feasible) was the aim, then this level of analysis may not lead to firm conclusions. While the selection of the peer-group meant some of the sector-wide challenges over the scale of some HEI's activity were reduced (see 10.4.2), they were not entirely eliminated.

| HE-BCIs categories | 2016-17 ACADEMIC YEAR | | 2020-21 ACADEMIC YEAR | | CHANGE | |
	UWL	Peer-group mean	UWL	Peer-group mean	UWL	Peer-group mean
Collaborative Research Income (£000's)	0	318	978	262	978	-56
Contract Research Income (£000's)	665	242	236	220	-429	-22
Consultancy Income (£000's)	22	406	225	298	203	-108
Facilities Income (£000's)	697	248	949	248	252	0
CPD/CE Income (£000's)	2807	2711	4634	2321	1827	-390
Regeneration Income (£000's)	1470	200	3988	720	2518	520
Number of IP disclosures	0	0	0	0	0	0
IP income (£000's)	1821	228	1020	258	-801	30
Number of new Spin outs	0	0	0	0	0	0
Number of Graduate Start-ups	0	23	1	39	1	16

Table 31: Performance in HE-BCIS: UWL versus peer-group

The challenges of trying to draw comparisons from the HE-BCIs data was part of the reason RE moved to trying to better understand KE performance by drawing together themes and strands of this data into *perspectives* on KE. As with the sector-level analysis (see above section 10.4.2) UWL's performance in KEF was compared to the peer-group, as well as against the averages for Clusters M and J, the cluster the two additional HEIs were drawn from (as discussed in Chapter 9). Table 32 below, shows UWL's performance for *IP and commercialisation perspective performance* ranked in the top 10% of HEIs that took part in KEF, and not surprisingly was above the average for both Clusters M and J, with only Solent relatively close (in the top 80%). The average for Cluster M was in the bottom 50% and for J in the bottom 40%. For *Local growth and regeneration* UWL's performance in the top 10%, ranked well above that for Cluster M (top 50%) and for Cluster J (top 40%). Solent was also in the same decile and the performance of UWL and Solent was likely to have contributed to a high overall cluster average, given the lower performance of other HEIs in the cluster. UWL also had the best performance in the *working with the public and third sector perspective* (top 40%). This compared to a Cluster M average of bottom 30% and a Cluster J average of bottom 50%. For *public and community engagement* UWL exceeded the Cluster M average of bottom 40%, with a rank in the bottom 50%. The average for Cluster J was slightly higher, top 50%, and within this peer-group London Met matched their cluster average while UWL was in the top 10% nationally. UWL ranked in the top 50% for the *skills, enterprise, and entrepreneurship perspective*, above the Cluster M average (bottom 50%), and in line with Cluster J's average. UWL's performance on the *research partnerships* was in line with its cluster (bottom 30%), but low compared to Cluster J (average of bottom 50%). For the *working with business* perspective UWL ranked in the bottom 30%, being below both Cluster M and J averages. Most of the HEIs in the peer-group would be able to identify specific perspectives in which they performed well. Solent might stake a claim for the best performance overall with three perspectives in the top 10% of HEIs, however at the same time its performance on three other perspectives ranked in the bottom 20%. As with the HE-BCIs data that underpinned KEF, strategic choices, and realties of local economy, can drive perceived importance on the various metrics. This allowed a localised and individual HEI view on what the 'best' performance may be.

	IP AND COMMERCIALISATION	REGENERATION AND LOCAL GROWTH	PUBLIC AND COMMUNITY ENGAGEMENT	RESEARCH PARTNERSHIPS	SKILLS, ENTERPRISE AND ENTREPRENEURSHIP	WORKING WITH BUSINESS	WORKING WITH THE PUBLIC SECTOR
UWL	10	10	5	3	6	3	7
Bath Spa	7	3	6	2	2	2	2
BNU	3	5	7	3	8	3	6
Edge Hill	3	5	3	4	5	5	4
London Met	3	3	6	3	9	9	3
Solent	9	10	2	2	10	10	2
UEL	3	3	10	5	5	5	3
Winchester	3	5	2	2	4	2	3
Cluster M Average	5	6	4	3	5	4	3
Cluster J Average	4	7	6	5	6	6	5

Table 32: Peer-group performance in KEF (decile, 10 = top 10% and 1 = bottom 10%)

While multiple perspectives created challenges to rank HEIs, UWL was above the Cluster M average for five of the seven perspectives, equalled the cluster average with one, and was below in a single perspective. For Cluster J, a cluster UWL would aspire to be in, UWL performance met or exceeded the cluster average for four of the seven metrics. While this demonstrated UWL's performance had some degree of competitiveness over some of the cluster HEIs, it does not necessarily provide a strong evidence based for claiming a sustained comparative advantage *over* competitors. As with the sector-wide analysis this represent a useful benchmark, but until KEF2 was released did not provide a view of change over time.

10.4.4 *Direct impact conclusion*

These three views on competitive performance collectively seemed to indicate that there was performance improvement for UWL, both in terms of overall income and in a range of KE metrics. UWL performed equal to, or better, than the sector as a whole and against the peer-group of HEIs. UWL's financial performance was very strong. While KE-related activity grew, the key area for growth was non-KE Enterprise activity, such as academic partnerships. Therefore, for UWL, KE had grown and contributed to the overall performance improvement, but arguably did not *drive* it. On this basis it was not possible to conclude the overall performance was a *consequence* of any interventions of this project as it focussed on KE rather than broader Enterprise. In terms of KE performance, again the emerging signs of culture change appeared late into the project, and therefore were unlikely to have contributed to any improvements in KE performance. This was particularly due to the relatively small increases in academic-led income and activity, and lags in some metrics (such as WQI). At the same time, this project built upon the growing UWL focus on Enterprise (with KE as a constituent part) which is likely to have been an influenced this performance.

10.5 Indirect performance impact

As discussed in section 9.5, an additional level of understanding of impact was to look at any general increase in other related activities. The four main areas of potential indirect impact of apprenticeship performance, REF result, Graduate Outcomes, and Partnership activity are each analysed in turn below.

The first area of potential indirect impact for this project was apprenticeships. Apprenticeship numbers and financial value saw year-on-year increases from the start of the project, as detailed in Table 33 below. Income for this activity was tracked as part of the monitoring of academic department performance against income targets, and against a central apprenticeship strategy that identified KPIs of: recruitment, attendance, retention, achievement, and income. While not aligned to this project, this area of activity fell directly within my department. However, most new business was identified by the Apprenticeship Team rather than being academically-led. Therefore, generation of performance was mostly central, while operational delivery was localised in academic departments as part of normal workload allocations. While this may seem to indicate no links to the project, it was not the case that all new programmes developed were identified centrally. There were instances of academics *actively* seeking to develop new programmes, even if ultimately recruitment (the measurable part of organisational performance) was centrally managed. Of the 14 programmes developed and marketed over this period, two were initiated by individual academic staff choosing to engage in this activity and a further six programmes arose from historic relationships between the College of Nursing Midwifery & Healthcare (CNMH) and NHS organisations. While arising from an academic department, these were driven by senior CNMH managers rather than the interests of individual academics. However, translating the opportunities identified by academic-managers into new programmes required significant investment of time to meet regulatory requirements and validate apprenticeship degrees. This indicated a degree of increased engagement, given academic autonomy, that *potentially* could be linked to an overall increase in entrepreneurial culture.

	2018-2019	2019-2020	2020-2021	2021-2022
Apprentices	503	807	811	943
ESFA Income	£2.0m	£3.4m	£3.9m	£4.4m
New programmes validated	7	1	0	1
Academically initiated	4	1	0	1

Table 33: Apprenticeship performance for UWL between 2018-2019 and 2021-2022 academic years

The second area of potential indirect impact was on Graduate Outcomes (see Chapter 9). While theoretically a useful area to look at, detailed analysis of graduate outcomes was ultimately not practical. Data collection for graduate outcomes saw considerable change, when the Destination of Leavers of HE Survey (DLHE) was replaced. Under the DLHE survey, there were two main metrics, which included input from each HEI to gather the data. The first was the Employment Performance Indicator measuring the percentage of graduates who were in work or further study out of the total respondents to the survey. The second was the Graduate Employment or Further Study indicator, measuring the percentage of graduates who were in graduate-level work or further study out of the total respondents. These were sector-recognised metrics, used by HESA and frequently used as part of the metrics that underpinned league tables. A change to a new approach called Graduate Outcomes meant that by the time of publication there was no equivalent sector-recognised metrics produced by

HESA, with data only available for one year's worth of graduates. The Higher Education Statistics Agency noted that:

> *Graduate Outcomes was a new survey for 2017-2018 graduates, conducted differently from previous surveys and producing different information. These new experimental statistics are not comparable with the results of the earlier Destinations of Leavers from Higher Education (DLHE) survey.* (source: https://www.hesa.ac.uk/data-and-analysis/graduates)

League tables have each produced their own metrics for this area and to further complicate this, the OfS plans to use a different metric. Effectively the methodologies have changed, are no longer consistently used, and historic data cannot be used for ongoing comparison to current data therefore no conclusions can be drawn in terms of any impact from this project.

The third area of potential impact was the results of REF, published in May 2022. Using the Times Higher Education GPA ranking[33,] which was typically used to compare REF performance in the sector, UWL's performance from the previous REF improved. Using this GPA calculation, UWL rose from 126th place to joint 99th (see Table 34 below). As a teaching-focussed institution, UWL would not expect to compare to the larger research-focussed institutions, and therefore this was seen as a success (achieving the target set by the Governors to be placed in the top 100). Using the peer-group as a basis for analysis provided a better lens for comparison. Using the GPA ranking, UWL was one of four of the peer-group to improve, and saw the largest improvement in ranking place. Within the peer-group, UWL moved from bottom for REF 2014 to joint second in REF 2021.

	REF14 RANKING	MOVE FROM REF14 TO REF21	REF21 RANKING	REF21 PERFORMANCE			
				Impact Average >2*	Rank within Peer Group	Impact Average >3*	Rank within Peer Group
UWL	126	⇑	99	75.00	=6	57.14	5
Bath Spa	96	⇑	94	98.14	1	57.40	4
BNU	109	⇓	121	73.50	8	45.67	7
Edge Hill	109	⇑	99	89.75	4	69.87	1
London Met	96	⇓	103	82.14	5	65.47	2
Solent	127	⇑	124	75.00	=6	16.67	8
UEL	70	⇓	106	96.15	2	52.57	6
Winchester	104	⇓	109	90.98	3	57.64	3

Table 34: Peer-group performance in REF 2021

UWL's performance was significantly affected by improvement in research outputs, but with less clear performance around research impact, which was directly related to KE. Using the REF result for the

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[33] Institutions are, by default, ranked according to the grade point average (GPA) of their overall quality profiles. GPA was calculated by multiplying its percentage of 4* research by 4, its percentage of 3* research by 3, its percentage of 2* research by 2 and its percentage of 1* research by 1; those figures are added together and then divided by 100 to give a score between 0 and 4. Source: https://www.timeshighereducation.com/news/ref-2021-times-higher-educations-table-methodology (accessed 18/11/22)

scoring of impact case studies allowed for comparison to peers in this area. Using the percentage graded at 2* or above (recognised internationally in terms of originality, significance, and rigour or better)[34] UWL ranked joint sixth in this peer-group. Using the percentage graded as 3* or above (internationally excellent in terms of originality, significance, and rigour but which falls short of the highest standards of excellence or better)[34] UWL's performance improved slightly to fifth. For both 2* and 3* metrics, this demonstrated a weaker performance than most of the peer-group. There are limitations to this data, not least in the different strategies for submission of staff, recorded as full time equivalent (FTE) number. Higher levels of FTE's submitted required more impact case studies. Despite relative similarity in size or organisation, the numbers submitted ranged from 30.00 FTE for BNU to 259.41 for Edge Hill, while UWL submitted 75.00 FTE of staff. Another factor was the number of units of assessment (UoA) submitted to, which influenced the number of Impact Case studies required to be submitted. Again, numbers varied, with UWL submitting to seven UoA's. Solent submitted to three, while the UEL, Edge Hill, and Winchester all submitted to 13. Each HEIs' approach to submission (staff or units) was an unknown factor. One approach was choosing to limit the submission and therefore try to submit fewer staff and case studies of a higher quality. However, as the consequential funding would normally be based on staff numbers, submitting a larger FTE could result in higher levels of funding[35]. Such attempts to manipulate the result were limited by RE through the rules around who was to be submitted, but the requirement for those submitted to have a 'significant responsibility for research' did allow some selection if clearly justified. The result could therefore also be affected by submission strategy as well as the quality of impact (KE) undertaken. Given the timeframe of REF2021, it was unlikely that this project could have had much impact on the REF metrics, as they would substantially pre-date the project. While not all KE is research impact, all research impact will be an aspect of KE. This provided a future potential to look specifically at the impact measure in the next REF as a metric. Research impact scores could be directly influenced by culture change to increase entrepreneurial orientation and thereby KE performance (in the use of organisationally generated knowledge).

The fourth area of indirect impact was partnerships. Partnership income in 2017-2018 was £3.9m, by 2020-2021 this had risen to £22.8m, see Table 35 below. In addition, the unaudited result for 2021-2022 at the time of writing this thesis was £46.0m. This growth was generated by four main ways. First, there was a growth in both in the number of UK and transnational partnerships. Second there was a growth in the number of programmes being delivered by partners, including broadening relationships so they were no longer linked to a single academic department. Third, there was a strategic decision to increase the validation fees charged (for both existing and new partners). Fourth, was the increase in subcontracted provision for the UK, where student fee income (directly paid fees or fees paid via student loan) came into UWL to be passed to the partner in full. In this way, the fee income was reportable in UWL's Enterprise income. There was a clear performance improvement, and anecdotally there was an increase in partnerships identified for initial review from academic departments, such as the London College of Music and Claude Littner Business School. Both academic

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[34] Further details can be found at https://ref.ac.uk/2014/panels/assessmentcriteriaandleveldefinitions/ (accessed 6/11/22)

[35] https://www.ukri.org/councils/research-england/how-research-england-funding-works/funding-we-allocate/how-our-funding-is-calculated/#contents-list (accessed 6/11/22)

departments saw significant growth in partnership numbers and income from the start to the end of the project (see Appendix 21).

	2017-2018	2020-2021
Partnership Income	£3.9	£22.8m
Number of partner organisations	22	35

Table 35: Academic partnership income for UWL between 2017-2018 and 2020-2021 financial years

Overall, given that the evidence of KE culture change was limited, and improved performance could not be directly attributed to this project, it was also not possible to conclude that performance in these indirect areas was influenced by the project. However, ultimately the purpose of tracking these areas was to understand other aspects of performance (not specifically KE) which could reflect a more entrepreneurial orientation. So, whilst not attributable to the project they could be seen as *indicative* of entrepreneurial activity (within which KE would also be defined) being seen as more important and even within some academic departments *prioritised*. The performance is likely to have been influenced by the increased focus on Enterprise this project sought to accelerate and direct towards KE.

10.6 Analysis and evaluation conclusion

There were three areas of the evaluation: whether the project delivered the planned outputs; whether the project outcomes were achieved; and cumulatively did this lead to any comparative performance improvement. Generally, the project delivered enough of the outputs to have the potential to lead to the desired outcomes. Evidence of some change in the culture, or at the least the potential development of a KE subculture, was starting to emerge. There was some evidence of increased understanding of KE, and higher levels of staff engagement. While not prioritised, there seemed to have increased perception of importance of KE over the project lifespan. Across the range of direct and indirect measures, UWL saw significant performance improvements. This was not only in relation to historic performance but also compared to both the wider HE-sector and a narrower peer-group of HEIs. However, there was no strong evidence to demonstrate that this performance was driven by this project. Therefore, the project can be seen to have directly developed or resulted in activities that enhanced KE (KE Strategy, KE seed funds etc), built engagement, and provided a framework for continued growth in this area. It also demonstrated that it was possible to generate interest and grow the number of academics willing to participate in KE activities. So, whilst it wasn't a whole cultural change, the aim was to try and influence the organisation's entrepreneurial orientation, and there was evidence that this started to happen. This did leave open the possibility of future performance being influenced, for example by the output of the project being embedded into the way UWL managed, delivered, and measured KE activity. This leads to discussion of: whether the project still met its business, research and integrative aims and objectives; the conclusions that could be drawn; any limitations to these conclusions; and proposed next steps both in terms of research and for UWL.

11 Discussion and conclusions

In this chapter the project's business, research and integrative aims are reviewed to consider whether they were met. Then, reflections on the research project are explored. Finally, implications are identified for future research and practice, within the context of the limitations of the research findings.

11.1 Summary: Project aims and objectives

In Chapter 3 the overall aim to improve UWL's performance in KE, as a focus for improving organisational performance for the project was introduced. The aim of the transformative *business project* was to enhance business performance, through seeking to increase entrepreneurial orientation. The *research* aim was to explore cultural change as a means of delivering business improvement. Finally, the *integrative* aim of this project was to find an approach to undertaking *both* business and research aims and objectives in an integrated way.

11.1.1 Meeting the business project aim and objectives

To achieve the business project aim, to enhance business performance, through seeking to increase entrepreneurial orientation, there were three objectives. First, was to design and implement a set of interventions to enhance KE visibility, mission, policy, and practice. The output of Phase one, delivered in Phase Two, met this objective through creating a KE Strategy as a framework for moving KE forward. Within the project specific approaches to enhancing KE at UWL were designed, approved, and ultimately implemented (KE seed funds, KE Champions role). Second, was to attempt to foster a culture that would support broader engagement with KE activities. The key word here was 'attempt'. Some evidence of KE culture change was found (see Chapter 10), and there was both an explicit attempt to do so and indications of increasing KE engagement. Third, was to identify appropriate measures to evidence key outputs, outcomes, and impacts on UWL's performance improvement. The development of a project theory-of-change met this objective. This was furthered by embedding this approach in the design and measurement of KPIs for the KE Strategy. While the goal of influencing UWL's comparative competitive performance could not be argued to have been driven by this project, the business aims and objectives to attempt this were delivered and have laid the foundations for improved KE performance.

11.1.2 Meting the research aim and objectives

There were three objectives of the project to achieve the research aim, to explore cultural change as a means of delivering business improvement. First, to critically test and evaluate whether an enhanced culture of engagement with KE (an increased entrepreneurial orientation) could drive business performance in a complex competitive environment such as the HE-sector, where academic autonomy and collegiality are key cultural values. While no strong evidence was found that this research intervention produced performance results, it was clearly an *attempt* to do so and to draw conclusions that contribute to knowledge in this area, which are discussed further below (see section 11.2). Second, was to investigate cultural change in a specific organisational and sectoral context. Again, the project deliberately explored this aspect of the organisation, seeking to both influence and measure culture. Third, was to generate new knowledge on a specific change to an aspect of professional practice and performance in the HE-sector. This was met by this research leading to reflections,

implications, and possible future directions for both research and practice which are explored in this chapter.

11.1.3 Meeting the Integrative aim and objectives

The integrative aim of this project was to find an approach to undertaking *both* business and research aims and objectives in an integrated way. The objective for this aim was to review methodological approaches and design a project that used a research method as a vehicle for organisational change. Utilising an Action Research approach facilitated both the business and research aims being addressed simultaneously. Chapter 5 described how the review of approaches led to selecting AI as the form of AR. This approach met the objective by seeking to create the desired organisational change through a research methodology.

11.1.4 Addressing the four design parameters

In Chapter 5 four design parameters were introduced that were drawn from the literature underpinning this research. These were: building on and *with* the prevailing UWL culture; taking a collaborative approach to create and embed cultural change; harnessing individual academic autonomy and choice; and including appropriate measures to understand causal links between culture change, entrepreneurial orientation, and organisational performance improvement. These were evident in the way the research was conducted over both Phases. The overall design of the research project sought to building on and *with* the prevailing UWL culture by drawing appreciative views of what was working within UWL. This was both within Phase One to inform activities for Phase Two and within specific Phase Two activities (for example in the design of KE seed fund and the KE Champion role). Using Appreciative Inquiry meant the approach taken was deliberately collaborative, as this was a core feature of the research method. The design and delivery of research activity sought to both identify approaches to building and harnessing individual academic autonomy and choice (in terms of the output) as well as providing a vehicle for engagement. The need to identify and design of measures to understand causal links between culture change, entrepreneurial orientation and organisational performance improvement was the express purpose of using the Project ToC to provide focus for evaluation.

11.1.5 Creation of change

In addition to understanding if the project met the stated aims and objectives, it was also important to understand whether the project made any real difference. Evidence was emerging that level of engagement with KE grew, with clear links to this project through the creation of KE Champion roles as well as through the KE seed fund applications and approved projects. There was also growing evidence that understanding of KE had started to improve, again evidenced by KE seed fund applications. The existence of the role of KE champion allowed KE activity to be driven at a local and academically-led level. This was particularly apparent in the approach taken by some of the KE Champions, proactively working to prepare colleagues for KE seed fund applications. Additionally, the naming of a key committee changed to reflect KE rather than Enterprise, and the ways of measuring and reporting KE activity to that committee also changed. These moved from purely income- and enterprise-focussed, to a more sophisticated approach that was clearly and explicitly KE-focussed. The approval of a new strategy, created in a collaborate way, moved from a previous approach that centred on types of activity to focus more on building engagement and a KE-culture in order to grow those activities. The project could, therefore, clearly be seen as a catalyst for change. While early in

the process of change, this project laid foundations for future impact through directly influencing the way KE would be managed, monitored, and performance judged at UWL.

11.1.6 Aims and objectives conclusion

While the project cannot be seen to have driven organisational performance through increasing entrepreneurial orientation, the research project did create an opportunity to generate new understanding that could contribute to the body of knowledge. This included the relatively novel application of a theory-of-change to enhance Appreciative Inquiry and delivering AR online. These aspects of the project, and other refection's on the project, are expanded on below to explore their implications for research and practice.

11.2 Project reflections: practice and research implications

In terms of reflections, captured within my reflective log, I have considered Schön's definition of reflection-in-action (Schön, 2013) that includes reflection: on knowing-in-action, as post-mortem, and during action. All three types of reflection have informed implications for research and practice. These can be themed into 10 areas of reflection, on: Action Research, and Appreciative Inquiry; the use of a theory-of-change; online AR; engagement and representation; the entrepreneurial orientation model; measuring entrepreneurial orientation; culture change; the Culture Web model; Knowledge Exchange as a basis for competitive comparison; and on the mainstreaming of aspects of the research project. Each of these are discussed in turn below.

11.2.1 Action Research and Appreciative Inquiry

This project was an example of deploying AI, as a form of AR, for organisational change and as such added to the body of knowledge on its use. There are limitations, as addressed later (see section 11.3), in the application being within a specific organisational context. However, this project provided insight into criticisms of both AR and AI.

These criticisms were instrumental in the way the project was designed, with a conscious effort to try and address them (see sections 5.4 and 5.5). The general criticisms of AR were: that any results are contextually bound (Gray, 2014; Kock, 2004); the challenges of knowing when an AR project has finished (Checkland and Holwell, 1998; Gray, 2014); and the relationship of the researcher to the organisation can mean that results are at risk of being interpreted in ways that suit the organisation (Kock, 2004; Noffke and Somekh, 2013). What can be drawn from this project reflected some of these criticisms. This was a specific instance of research, in a specific organisational and sectoral context. While no strong evidence was identified for having influenced performance, this does not necessarily mean this approach would not work in other HEIs or in UWL in the future. The indications of increased importance of KE in UWL still left the potential to influence *future* performance. While this could be reduced to meaning that it did not work in this specific HEI at this specific time, such a conclusion is far too simplistic. To extrapolate beyond that would be problematic, however the underpinning logic of the project, to drive KE performance through cultural change, retained viability. The second reflection in this area linked to the criticism of knowing when AR has finished. Beyond the impact of the Covid-19 pandemic, there were other factors and external changes that made it tempting to extend the end point to get more data, for example to extend to the point when the next strategic plan would be published. Acknowledging that there is always more data over the horizon that *could*

show a KE-based performance impact, risked the project never ending. However, embedding approaches to KE from this project into strategy and ongoing performance measurement allowed for this picture to emerge (or not) over time. This was perhaps a key success of this project; moving from an isolated project to something that became part of the fabric of the organisation allowed for AR to be time-bound. This boundary may be fuzzy, but through mainstreaming the output of AR it provided a real possibility of the project still being a catalyst for change. The final reflection on criticism of AR was the potential that, as PI, I misinterpreted the research findings to suit my, or the organisation's view. However, the absence of strong evidence of performance being driven by change to the cultural importance of KE would be an indication that this has not occurred, as I would be seeking a more concrete result.

Criticisms of the AI approach also fed into the design of this project. These included the potential to exclude valuable negative views through an over-focus on the positive (Bright *et al.*, 2013; Egan and Lancaster, 2005); AI's ability to transform declining over time (Bushe, 2011); that the approach focused on design not delivery (Bushe, 2011); and perceived lack of evaluation and feedback (Egan and Lancaster, 2005). This project demonstrated that AI does not necessarily exclude negative viewpoints, as demonstrated by some of the responses to the interviews in Phase One, and Phase Two activities. For example, participants' negative perspectives of similar initiatives fed into the design of both the KE seed fund and KE Champions role. This reflects the counter-view that AI is generative (Bright *et al.,* 2013; Bushe, 2011) and not simply positive in approach; negative perspectives assisting in the generation of an alternate approach. The challenge of AI's ability to continue to drive change over time implies multiple cycles (with the same affirmative topic) or an embedding of the AI approach into the way an organisation approaches change; this was not necessarily relevant in this project. It limited what could be drawn from this, other than perhaps reinforcing the cyclical nature of AI is often theoretical rather than practical. The way Phase Two ran differed from Phase One. Being more fragmented meant it followed a less linear path, making it less clearly identifiable as a single AR activity. Rather than interpret this as being the *deliver* stage of Phase One, another way to conceptualise this was that it was Phase Two of the *whole* AI project, rather than a second phase of the initial AI cycle. Some activities followed the AI model while others less so. In the AI literature, there was reference to self-initiating groups that either take the delivery forward, or that use AI to identify other opportunities for change[36]. These groups embedded AI as an *approach* to improvement change and, to an extent, this project reflected that description. In this thesis, I have deliberately used 'Phase' rather than 'cycle' because Phase Two built on Phase One, but was not a second cycle focussed on the *same* activity (that is, the same Affirmative Topic, see section 6.3.1). This was not untypical for AR approaches, for example a review of AR in music education concluded that few AR projects were cyclical (Cain, 2008), and reflections often limited to "*one turn of the Action Research cycle*". A feature of AR is the ability to allow flexibility and for research direction to emerge, meaning rigidly following a strict model or cycle could limit that opportunity (Koshy, Waterman and Koshy, 2011). A better way to conceptualise this research was as a process to deliver actions: as a spiral, rather than circle, taking the project forward in a dynamic environment.

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[36] Examples of such AI projects can be found in Whitney and Trosten-Bloom (2010) and Cooperrider, Stavros and Whitney (2008)

What was apparent was the approach was more focused on planning, rather than doing. Phase One of this project was very design-focussed, with the outcome being a *design* for Phase Two activities. Phase Two remained very design-focussed: a *plan and design* for KE seed funds, a *design* for a KE Champion role etc. This reflected the emphasis in the model on identifying and planning; *discover*, *dream* and *design* leading to more active *deliver/destiny* stage. Cooperrider, Whitney and Stavros (2008) define *destiny* as a stage where participants "*...begin the planning and implementation process...create action plans and assign responsibility commitments'*. This can be contrasted to the *plan-act-observe-reflect* cycles of PAR (Herr and Anderson, 2015), where the focus on action appears earlier and more explicitly. So, while the intention was to focus on implementation, the reality was the implementation tended to be delivered though embedding the outputs of the research into ways of managing KE (including *after* the research project ended). Change was therefore a consequence of the project, even if not within its timeframe. As that change was the objective, the chronology of when it happened was less important.

The steps in the cycle also drive the criticism of the lack of evaluation. While there was a second phase within this project, it was not conceived as a second cycle of the same affirmative topic. Appreciative Inquiry is not always cyclical, which means that the loop back to evaluate any outcome or impact could be missed in AI. While PAR has *observe* and *reflect,* AI appears to only have this element if the research loops back to have a second *discover* stage. This perhaps explains the lack of evaluation perceived in AI, as it only happens *if* there is a second cycle. Therefore, to have a robust view on any change and impact from an AI project an explicit approach to evaluation had to be included.

The creation of an approach to AI, including evaluation, has been addressed previously in the literature. Cady and Caster (2000) proposed a DIET model (diagnose, intervene, evaluation and transfer) to integrate what they saw as new organisational development (OD) approaches, predominantly AI, with AR. Cady and Caster (2000) saw AR as problem-centric, and complex due to the variety of different forms or models of AR that existed for practitioners to try and navigate. Their model was proposed as a way to improve or enhance *AR,* unlike my approach which was to improve AI. Another approach was provided by Egan and Lancaster (2005). They researched the views of OD practitioners and sought to integrate the best aspects of AR and AI, combining both affirmative and problem solving approaches. Egan and Lancaster (2005) saw AI and AR as 'associated' but differing fundamentally in philosophical assumptions and practices. While a view of AI as a form of AR creates a fundamental dissonance for *combining* them, seeing this as a way of combining two *forms* of AR (AI and PAR, for example) makes more sense. On this basis, my approach and Egan and Lancaster would appear very similar. However, my approach drew from theory-driven evaluation, and did not seek to incorporate the 'evaluation' element from traditional AR. In Egan and Lancaster's model it could be interpreted as evaluation of, or in PAR a *reflection* on, the *outcome* of the research rather than longer-term impact. For example, Egan and Lancaster's model focused on evaluating adoption or cessation of the change created by the research intervention. The use of a theory-of-change provided an explicit approach to *impact* evaluation for this project. In doing so it also articulated a logical description of how the AI project would facilitate change. This may not necessarily be suitable for all projects, but did provide a mechanism to enhance AI (and indeed any project) by having clear parameters to analyse and evaluate impact. A simplistic evaluation might just look at output or outcome and not link to a longer-term impact. Using a ToC identified output, outcome and impact *and* their relationships, and forced an evaluation; an attempt to reconcile the model with understanding that it has made a

difference, not simply observing and reflecting on change. This approach has been shown to work with AI, but equally it could be used as a tool within PAR's *observe* and *reflection* that provides a framework for identifying longer-term impact. In terms of the practical application of AI for organisational change, it provides a template for other practitioners to follow. From a research perspective, it also opens a further area that could be explored and potentially used to refine the AI model. This leads to reflections on the specifics of using a ToC within this project and what lessons or implications can be drawn from that.

11.2.2 Theory-of-change

As introduced in Chapter 3, a Project ToC was used to describe the logical model and the pathways to outcome and impact. The use of the Project ToC appeared to be relatively novel within AR literature and was the basis of some reflections on its use within this project as a means of enhancing the evaluation-aspect of AI. In a literature search for other examples, none were found linking a ToC to Appreciative Inquiry. There were limited examples of using a ToC in other forms of AR. Thorpe *et al* (2022) used what the authors describe as Action Research, but did not confirm use of any particular form of AR. The purpose of this research was to explore using a ToC as a means of understanding effectiveness of using multi-stakeholder platforms for agri-food sustainability. In other words, the ToC was the *subject* of the research, not a means of understanding if the research met its change goal. Similarly, Bertella *et al* (2021) and Jocson and Martinez (2020) both followed a PAR approach to *develop* a ToC, rather than use a ToC to identify the intended impact of the research and if it was achieved. One example that was perhaps more like this project was from Apgar *et al* (2017) and Douthwaite and Hoffecker (2017). Both articles focus on the same programme of research, a PAR programme on agricultural innovation systems using a ToC to try to better understand and explain how development change can be produced in agricultural systems. What this seems to demonstrate was that use of a ToC was an area of Action Research that could warrant further exploration.

The Project ToC provided a useful structure for analysis and evaluation. It forced a focus on: the expected project outputs, the outcomes these would drive, and ultimately impact on the organisation. This structure provided opportunities to measure, and promoted an understanding of, the intended logical links between them. That strong evidence of impact was not found does not invalidate the model, or indeed necessarily invalidate the logic within this specific Project ToC. Organisation culture change is more likely to appear over longer time periods (Elsmore, 2017). Therefore, there was still *potential* that this project could have the desired impact, through its subsequent embedding into the way KE was managed at UWL. KE is likely to grow in importance at UWL, as more individuals start to identify opportunities and use their autonomy to engage. Embedding the priorities, and the way of measuring change, could allow for evidence to emerge over time. Indeed, in the writing process of this thesis, further data became available, such as the results of KEF2 in 2022, demonstrating further comparative performance improvement in KE for UWL.

One of the practical features of theory-driven evaluation (Weiss, 1997) is the notion of 'deadweight'; what would have happened anyway without the intervention. This provides a useful frame for discussion of this project (or indeed any project). In one sense, limited evidence of impact meant discussion of what impact may have happened without the project is moot. However, in terms of outcomes, or other changes to the organisation, this was not the case. The external drivers (HEIF accountability statement, KE Concordat submission and action plan, KEF narratives) would have

required a response anyway. However, the approach to developing these could have been very different. They each drew on the Phase One research, and involved a wider group. It is highly likely that I would have generated these solely on my own, if not for this research project. It was feasible that I could have arrived at similar conclusions about what was needed, for example a clearer understanding of KE and an articulation of strategy. However, this would have been without the underpinning theory, in particular the role of academic autonomy and the need to engage. The *process* of arriving at the priorities was itself an important point of engagement. Without this, anything developed (policy or strategy, for example) would have played into a narrative of top-down development as highlighted in responses to the KE orientation survey (see section 10.3.2) or engendered academic resistance to managerialism.

A criticism of this Project ToC evolving over the project timeframe, could be that it was merely a post-hoc rationalisation. It was true that the model was not constructed *prior* to the research intervention. However, the Project ToC emerged over the course of the research as a way of making sense of, and articulating, the links between entrepreneurial orientation and performance. These conceptual links were identified within the project's development and were implicit (and indeed often explicit) in the purpose of the research. It was the detail and the specifics of the links, the outcomes, and the ways of measuring that emerged through collaborative activity. Collectively, it was these elements that formed the ToC for the project. It is therefore not a particularly robust criticism that this specific language, or approach to articulation, only coalesced as the research developed. One of the features of AR is that theory should emerge from the data and the initial theory, and that this should be a cyclical process (Checkland and Holwell, 1998). In that sense, the later formalisation of the Project ToC should not be seen as problematic. The Project ToC articulated and provided a structure for understanding the links between the project design and the intended impact inherent in the design, and in doing so provided a framework for evaluation.

This evaluation used a collaboratively-developed set of metrics. The process of refining these highlighted that identifying clear measures of KE was not straightforward. While HE-BCIs presented a range of data, particularly on financial aspects of KE, other KE-specific measures like HEIF income and WQI had in-built approaches that tended to mask current performance. The first iteration of KEF meant there was not historic data to identify or understand change in performance. These KE metrics were also in isolation to broader HEI performance. Measuring overall income, to provide this context, broadened out the metrics to therefore include things that were clearly not KE. For example, overall income would include revenue from student fees, a significant part of most HEIs income that was not related to KE-activity. To counter this, a proxy for KE income was developed as a surrogate measure. This was a pragmatic approach, based on available data (in financial accounts) but was not just a measure of KE. One measure initially considered, but that proved less useful during the evaluation, was on staff costs as a percentage of income. As a core KPI for UWL, and part of the publicly available HESA data, it initially seemed another useful lens on overall HEI-performance. However, in practice it added little to the overarching performance picture to the income and surplus metrics. Other metrics that were excluded, via discussion, included those more closely related to students. This included international recruitment, where some external relationship would exist with agents. However, as with other student recruitment, an HEI's entrepreneurial orientation was unlikely to be a visible factor in decisions made by students. Another student-related metric that was considered worth retaining was Graduate Outcomes; as this could reflect a willingness to engage with industry it could be affected

by entrepreneurial orientation. In practice changes to the way this was measured at a sector-wide level, made the metrics impractical to use. Measuring the mediating outcomes of both entrepreneurial orientation and culture also proved problematic. Low responses to the ENTRE-U survey, an entrepreneurial orientation specific measure, meant this *could* have been a useful part of the evaluation but ultimately could not provide much insight. Measuring culture itself would always be challenging based on a social constructivist view, limited to what was visible as artefacts of culture and behaviours, rather than the deeper underpinning level of beliefs. Capturing a wide range of ways to build a sense of culture was aided by using the Culture Web as a means of analysis, but would remain a fairly subjective analysis.

Another practical challenge with using a ToC was finding a way to measure *comparative* competitive performance. No single metric or measure was sufficient, and so what was developed was a more complex and nuanced approach with multiple metrics. While providing a depth of understanding, this added a complexity to understanding performance. A range of perspectives on performance creates scope for subjective choice of what measures are important. As with KEF and HE-BCIs, institutions can rationalise their focus of metrics to those that fit their approach to KE, or indeed to rationalise their KE-mission to those metrics they happen to do well in. The lack visibility of KE in financial accounts (unlike teaching or research) highlights a key challenge for KE practitioners: it is important but difficult to articulate, hard to fully measure, and is hampered by changing nomenclature over time. This lack of visibility, or the broadness of what was included, meant in some areas using a proxy measure. While this allowed some insight, ultimately it cannot be clearly seen as KE performance, merely *indicative* of performance. Comparative data, available from HESA, did provide a better view of performance, but was limited by the extreme outliers and breadth of types of organisations within the data. While KEF provided a sense of effectiveness, this was limited by lack of historic data. A logical approach to this challenge of measuring, was to use a wide range of measures to compensate for each individual metrics' shortcoming. However, if used sector-wide it would also allow for a post-hoc rationalisation of mission based on performance, rather than mission *driving* performance. If each organisation can select the metrics that present them in the best comparative light, then this could undermine KE being a source of competitive comparison. What was unclear is if KEF, moving to an annual approach, will become a source of comparative comparison in the UK HE-sector. For the use of a ToC, this highlighted the need to find clear metrics to identify links between the project, any outcomes, and eventual impacts. Therefore, while a useful tool, a ToC is not without challenges in integrating into AR or AI projects.

11.2.3 Online Research

The third area of reflection was on the potential to conduct AI online (rather than face-to-face). The second Phase of this project demonstrated that AI can be conducted using both synchronous and asynchronous online approaches. Phase Two was more varied in the approach, with small-scale AI projects rather than a single larger activity. However, this showed that online AI was possible at least for smaller-scale projects. This was not just as a means of capturing data, but to facilitate all processes with the AI cycle. When the pivot to online occurred due to the Covid-19 pandemic, there was very little in the literature on online or virtual approaches to AI specifically or AR more generally (see section 8.3). One approach to an online delivery of an AI project was by Guix and Font (2022). They used asynchronous and synchronous approaches (online workshops, consultation via Google Forms) for online stakeholder engagement. They lay claim to being the first study to conduct a materiality

assessment online, and saw this as a substantial methodological contribution to their area (stakeholder consultation, and more narrowly around tourism research). However, much of their conclusion focused on a novel use of AI, not that the AI approach was online. This did demonstrate the potential for AI to be conducted online, and therefore provided a rationale for this project's adapted approach for Phase Two.

Following the end of the research, further review continued to show limited literature on using online methods to conduct AI specifically, or AR more generally. There was some emergent literature on using online approaches as part of AR. Primarily this was to gather survey data using online tools (Auerswald *et al.,* 2022; Ayling and Luetz, 2022; Netthong, Kane and Ahmadi, 2022; Ruest *et al.,* 2022). Yang *et al* (2022) used an online survey, as well as some online "brainstorming" sessions to look at stress of clinical staff during the Covid-19 pandemic. Their approach also included individual and group meetings face-to-face, so it was unclear how much of the Action Research was online, and no discussion or conclusions were drawn on how any online element affected the research process. Similarly, Sheeran *et al* (2022) used an online survey plus focus groups where participants were offered ether face-to face or online ways of engaging. Their research was not clearly articulated as AR, and no conclusions were drawn about the impact of online focus groups. Arfensia *et al* (2021), used an online webinar to work through the four stages of AI, looking at insecurity in competing for jobs during the pandemic (in Indonesia). Again, no real conclusions were drawn about any effect or impact of this being online. Perhaps the most similar experience was reported by Ball *et al* (2022), who augmented face-to-face approaches with online meetings with participants. Like this research project, this was a pivot from a planned face to face approach due to the Covid-19 pandemic. They found that the online approach reduced cost (removing venue hire or travel costs) and allowed more frequent meetings, adding flexibility. Additionally, they found that the online approach increased participation. What was not clear was, outside of engaging with participants, if the research team met online.

With limited conclusions in the literature about using an online AR, it could be seen as the research simply transitioning to being online as a pragmatic response to social distancing, like many other day-today activities. As a natural response, it potentially does not merit particular consideration. However, new ways of working that developed during the pandemic appear to have continued. For this project, the various teams continued to meet online, despite the removal of social-distancing restrictions and requirements from UWL for staff to be on-campus as much as possible. This leaves room for further exploration of AR conducted within organisations wholly through online (synchronous and asynchronous) methods. Potential impacts on efficiency, relationship-building, time, and participation rates are aspects of AR approaches to organisational change being conducted online that could merit further investigation.

For this project, Phases One and Two were inherently different, so it was not appropriate to draw conclusion on participation between an in-person Phase One and an online Phase Two. However, anecdotally the online approach seemed to address the issues in Phase One over length of time taken by AI. The ability to reduce the time taken was demonstrated both by the trial approach looking at KE seed Funds and in the KE Champions *task and finish* activity. However, the scope of topics for AI activity in Phase Two were more limited or tightly defined, and this itself would have contributed to the process taking less time. While the online process worked well, this was a novel approach and some of the functionality of the tools used in Microsoft Teams were not always well understood by the

participants. This reflected where UWL was at the start of the Covid-19 pandemic, as there was no prior organisational approach to remote working. This manifested itself in the absence of a clear set of organisational norms or protocols for example, for working on shared documents. As remote working and online collaboration became more established, this became less of an issue both organisationally and for this project. Indeed, on return to onsite working some online practices continued, such as the activity on reviewing KE seed fund applications and ongoing meetings of the KE Growth Group. There was also a different dynamic between the Advisory Team for Phase One and the KE Growth Group that emerged as part of the outcomes of Phase One (notwithstanding some continuity in membership). The former was by voluntary participation while the later included representing an area or academic department. Therefore, while participation in the KE Growth Group seemed more consistent, this cannot just be put down to it being logistically easier for participants to attend online. This project provides some limited contribution to the scarce literature on online AI and online AR, and highlights some areas that could be the subject of further research into the dynamics, efficiencies, and challenges of conducting wholly online AR.

11.2.4 Engagement and representation within the project

A recurrent theme in reflections across both Phases, was on the level of engagement, and how much of the project consequently was driven by myself. For key elements (KE orientation survey for example) there was a low level of participation, and the project at times needed more than just facilitation for me to move the research forward. Engagement was inconsistent, in part linked to length of time and staff turnover. Even in self-selecting groups (KE Growth Group and volunteers for *task and finish* subgroups) the level of engagement with KE differed. This was perhaps more evident with later members (as staff turnover changed representatives over time) and less so with those that had participated since Phase One. This could potentially be viewed as negative. However, each new engagement, each new representative, and each new academic exposed to KE, was part of changing KE culture. If organisational culture is created by the members, then the more exposed to KE the better. This may seem at odds with previously stating that mass engagement was not sought (for example in the selection of mode of AI), however mass exposure is not the same as mass engagement. The more staff that were *aware* of KE, the more some would choose to engage with KE more actively.

The creation of the metrics was predominately drafted by me and presented to the AT team for comment, review, and agreement. In Phase Two, alongside the mainstreaming of elements of this project, the metrics and consequential KPIs were presented both to the KE Growth Group and URSEC. At both stages there was agreement and sign-off, but not necessarily significant debate. While performance metrics are something I believe in, I fully accept that they may not be of quite the same interest to my academic colleagues. This may mirror some of the debate in KE more generally about what inspires and motivates academics to engage. Generally, it is not managerial intervention, or generation of income for their institutions (Fini *et al.,* 2018). A metrics-based approach to performance, using KPIs, is a highly managerial tool and less engaging given the resistance from academics to managerialism demonstrated by Anderson (2008) or Jones (2021). This stance was typified by the response of one of the interview participants:

> *"But I think our obsession for measuring things and for metrics and data ….. tends to crush the more creative side of things. And I do worry that perhaps we are too quick to shut things down*

or to take action on things … because we are focused on measuring success and outputs."
Participant P19

From a project perspective, a broad agreement that these metrics were an appropriate way to evaluate and understand the potential outcomes of the project seemed of more importance than the level of co-creation apparent in their development. What may be of importance, particularly moving beyond the project, was whether any lack of engagement demonstrated an underlying lack of engagement with KE rather than just how it could be measured. While symptomatic of lower levels of engagement with KE, this was perhaps not surprising given the cultural definition of Enterprise as solely focussed on income generation, echoing the literature that this does not motivate academics (Fini *et al.,* 2018). However, counter to this narrative was the development of KE as part of the mission of HEIs. This grew during the project timeframe, with sector-wide initiatives providing a useful external impetus. The level of interest in the KE seed fund, and the development of the KE Growth Group out of the project Advisory Team, both demonstrated some increased buy-in to KE.

A consequence of levels of engagement was how much I was driving the research. However, that reflection also led to deliberate action (or perhaps more accurately *inaction*). At times I allowed the groups to self-direct and to not intervene. A key example was the KE seed funds, where I realised there was potential for me to drive the process too much. Therefore, I chose not to intervene, but rather to play a more facilitative role. A further aspect of the amount of drive or control from myself, was where or with whom responsibility lay for various aspects of the delivery of the Phase One *dream*, and the consequences for potential inaction or delay. One example was the location of the responsibility to take forward a review of the KE elements in promotion. In the KE Concordat action plan (and therefore subsequently in the KE Strategy Implementation Plan) this was clearly identified as the remit of the Director of HR. This review was not in place for the 2021-2022 promotions round, although one member of the KE Growth Group did apply for successful promotion based on KE activity. While recognising the need for a review, this activity did not seem a high priority for the HR Director and was still not completed by the end of the project. Similarly, development of IP and Consultancy policies stalled with the resignation of the University Secretary. This was accepted as needed, but not considered a high priority for the temporary (and part-time) interim replacement. Collectively, these were indicative of KE becoming increasingly *recognised* as being of importance, but not yet *prioritised* within UWL culture.

A linked reflection was on how much buy-in the project genuinely had. While growing engagement with KE from academics was welcome, what was never so clear was the buy-in from senior academic managers. With sponsorship from the Deputy Vice-Chancellor (DVC) for this project, someone with both positional and personal power in the organisation, self-interest and being seen to conform may have played a part in the growing reference to KE (for example, at Academic Board), willingness to put forward representatives to KE Growth Group, or participation in this research. Evaluation of the first iteration of the KE Concordat reinforced the need for Senior Managers to engage and review KE (Universities UK, 2022). The evaluation highlighted 'increased' awareness of KE by senior leaders in HEI as a positive outcome, which implicitly indicated potentially low engagement and understanding prior to the KE Concordat. As a less-known HE-sector mission, compared to research and teaching, this was perhaps not surprising. As the direction of Government policy (including in Teaching and Research) has reflected the KE mission (employability outcomes for teaching and research impact)

increasingly self-interest in terms of perceptions of academic department performance started to include a clearer visibility of KE. At UWL, KEF performance was far more visible (and reported) than the HE-BCIs metrics on which it built. This indicated a direction of travel that may see KE being more visible in strategic plans, organisational narrative, and priorities. In other words, more culturally important. This in turn could generate more academic interest and engagement.

One aspect of engagement was levels of understanding of KE, as a precursor to engagement. In Phase One a limited understanding of KE was identified and while there was some improvement demonstrated around staff understanding in Phase Two, many staff still did not fully understand KE. This was evident from broad discussion around the KE Concordat self-evaluation and within the KE seed fund applications. This knowledge of the poor understanding within UWL of KE was an important and useful outcome of the research. What was encouraging was the broadening of engagement with KE, and particularly the role of the members of the KE Growth Group (who went on to take on more formal roles as KE Champions). What seemed evident was a correlation between those representatives most active in their academic departments and the volume of KE seed fund applications. This demonstrated the validity of the inclusion in the strategy and the mainstreaming of both the KE Growth Group and KE Champion roles as ways of collaboratively enhancing KE at UWL.

A limitation, arising from levels of engagement, was how representative were the participant views identified by the research. While research participation was perhaps more conventional in Phase One, but still relatively confined, Phase Two saw opportunities to engage in other ways. The first iteration of the KE seed funds demonstrated a significant willingness to engage, but further research would be needed to try and understand the motivations behind this. The results from future KE orientation surveys (scheduled for 2023) could provide further insight into both the entrepreneurial orientation of UWL and the level of KE engagement. While beyond the scope of this project, this was a further feature of how this project could have a legacy within UWL through the mainstreaming ways of understanding and measuring KE.

11.2.5 Entrepreneurial orientation

Reflecting on this research, and that it was perhaps too early to judge culture change or change to entrepreneurial orientation (EO), raises questions about the reliability of the model. There was clear performance improvement, but not evidentially arising from this attempt to change the EO at UWL. However, the entrepreneurial orientation model still provided some insight for analysis. During the project, UWL saw a strong financial performance and in particular growth in Enterprise income. Alongside this were entrepreneurial activities, such as buying a local drama school (Drama Studio London), buying Ruskin College in Oxford, launching and growing apprenticeships, developing new academic partnerships, and the creation of a new School of Biomedical Science. Such activities indicated UWL's willingness to take risk, to invest, and to innovate: all aspects of entrepreneurialism. This mirrored the behaviours of top-management risk-taking, product innovation and taking a pioneering stance that Covin and Slevin (1991) saw as typical of an organisation with an entrepreneurial orientation, or that Lumpkin and Dess (1996) saw as a propensity to make decisions which favour entrepreneurial activities. Using Covin and Slevin's (1991) EO model provided an insight into the factors that underpinned UWL's performance, see Figure 25 below.

Looking at the external variable changes in regulatory regime, government policy toward education and growth in a range of other private HEIs in the market created opportunities to grow (for example

new apprenticeship funding, growth in academic partnership opportunities). There was relative stability in the strategic variable, such as continuity in terms of strategic direction provided by Achievement 2023, stability in key leadership roles and the continued focus on growing top-line income. This provided a platform that aligned to taking advantage of opportunity. Internal variables, such as the focus on income growth as a means of reinvesting into the student experience, fed by clear messaging from the top of the organisation, created opportunities to grow in areas aligned to the overall core cultural paradigm of student experience (apprentices could be seen as a different type of student, and extending student experience by working in partnership with other organisations). Continuity and track record of performance supported the creation of a culture willing to invest to drive growth. This was apparent through the purchase of two other educational institutions (Drama Studio London and Ruskin College Oxford) as well as investment into Enterprise related staffing; growing capacity and capability to extend and underpin Enterprise income-generating activities.
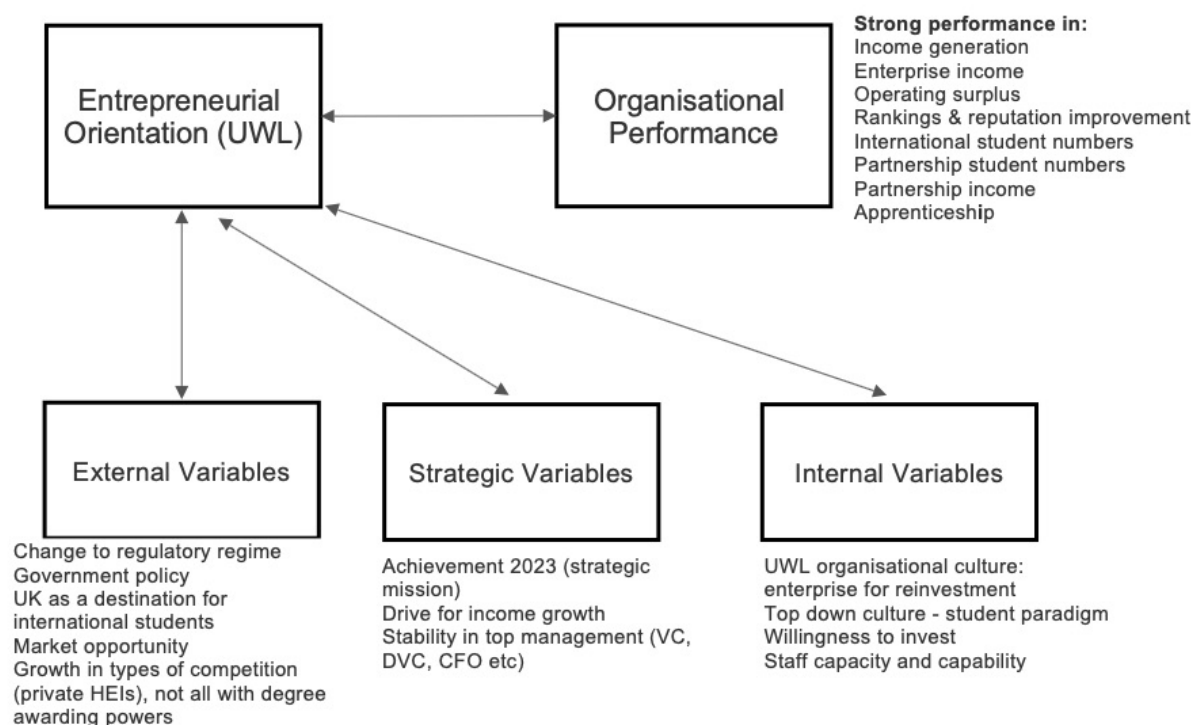
Figure 25: The entrepreneurial orientation of UWL

Therefore, taking a view of EO not just as KE but as Enterprise more generally, it appeared that there was a conceptual link between UWL's EO and performance. Testament to this was the shift in percentage of income generated by Enterprise; 29% in 2020-2021, whereas in 2012-2013 when I joined UWL it was just 12%. Enterprise was demonstrated to be culturally important at UWL, and this research showed KE was aligned with Enterprise if not synonymous with it. In other words, KE being part of Enterprise, but not providing large enough opportunities (yet) to be seen as distinct and important in its own right. This could be indicative of the scale of KE versus the more well-established opportunities that UWL identified and exploited as part of Enterprise.

The EO model provided insight into UWL's performance, but the influencing factors the model identifies were perhaps not necessarily levers UWL could use to change its EO. Organisations are far

more complex, and as highlighted in the criticism of entrepreneurial orientation by Zahra (1993), the model is descriptive rather than predictive. Covin and Slevin (1991) recognised empirical evidence to support a clear relationship between EO and financial performance was slight. This project reinforces this gap in the literature; while the conceptual links remain logical, the evidence was not forthcoming. This research demonstrated an implication for practice that the entrepreneurial orientation model was suitable as an analytical tool to understand the organisation, but did not provide a tool for *change*. For research, the implication was that further work on the links between EO and performance was still needed. This leads to a further reflection on *measuring* entrepreneurial orientation.

11.2.6 Measuring entrepreneurial orientation: ENTRE-U (KE)

While entrepreneurial orientation itself provided analytical insight into UWL's performance, the specific way of trying to measure entrepreneurial orientation in HEIs (the ENTRE-U tool) also provided a basis for reflection. While the ENTRE-U tool has been validated, and demonstrated a correlation with narrow commercialisation types of KE (Kalar and Antoncic, 2015; Todorovic, McNaughton and Guild, 2011), as discussed in Chapter 4, it was highly framed around *research* (not just the research-linked elements of KE). While not fundamentally changing the questions asked, the adjustment of the focus to be more clearly aligned with broader KE, and KE at a teaching-focussed institution, does raise a question about whether this undermined the validity of the tool (even if a highly pragmatic approach). The results from the survey highlighted the general low level of understanding of KE by staff UWL, and this was one of the underpinning rationales for a new KE Strategy that came out of Phase One. Furthermore, the use of the EO model to understand UWL's performance demonstrated that even looking at links to KE performance may still be too narrow. However, exploring links between EO and the broader measures of KE would still provide a useful strategic resource for HEIs. This presents new avenues for research in this area, to test correlations between survey results over time and various elements of KE performance. Here data collected annually, and publicly available, provides a potential starting point. Planned changes to HE-BCIs may complicate this, but potential exists for exploration of the use of ENTRE-U across a range of HEIs to explore EO. If EO is relatively stable, recent HE-BCIs data could be used to understand potential correlations. If repeated over time this could build a strong picture of where any correlations between EO and specific parts of KE performance exist. Such an approach could start to validate the KE-adapted tool more widely, and potentially be used to identify links between entrepreneurial orientation in HEIs and specific areas of KE performance.

11.2.7 Culture change

Part of the underpinning logic of this research was looking at culture change, as a key variable in the entrepreneurial orientation model that could be changed to impact performance. While the entrepreneurial orientation model, as a predictive tool was questionable (see above section 11.2.5), this project still raised implications regarding cultural change within organisations. One potential area this research could have contributed to was whether programmes of organisational culture change are even possible, something which was the subject of academic debate (Elsmore, 2017; Hatch, 1997). As there was not yet strong evidence of KE cultural change coming from this project, it limited what can be concluded in this area. However, this does not mean that change is not possible. This project demonstrated that changing culture, measuring that change, and doing so within a set timeframe is challenging. This leads to reflecting on whether this project was too big, too ambitious, or realistically achievable. Culture change is not something that can be achieved quickly and frequently attempted as top-down initiatives.

The achievement of organisational cultural change cannot sensibly be set up as a short-term or perhaps even medium-term goal. If organisation culture is about the deeply held values and beliefs of organisation members that they seem to cling to, almost no matter what their senior managements direct, then the slow speed of change that is attested to here is inevitable. (Elsmore, 2017)

This was change initiated from the middle, whereas frequently only change initiated from senior managers makes a difference, regardless of whether the attempt to change is located in the top, middle or bottom of the organisation (Bate, 2013). With some indication of increased importance of KE within UWL culture, there was still the possibility of a legacy of this research being more visible culture change. The embedding of approaches to measuring culture started by the project may allow this to emerge over time. The project was able to demonstrate how visible the core paradigm of organisational culture can be, and how adversity can reinforce that core culture. Two key aspects were the cultural association of KE with Enterprise, and by extension income generation, and the overarching teaching-paradigm.

The cultural Enterprise-equals-income paradigm meant the financial aspects of KE maintained a strong link to Enterprise. This was reinforced by the predominance of financial metrics of KE. However, the number of KE seed fund applications that drew on the social impact (rather than economic impact) side of KE showed this was an area academics felt encouraged to engage with. This link and the confusion in interviews between KE and Enterprise, questioned whether UWL's broadened culture change should be limited to some areas of KE activity or continue to focus on the wider Enterprise mission of UWL. The answer may lie in the desired performance. Enterprise culture was delivering strong financial performance, but KEF and HE-BCIs still had areas UWL could improve. The UWL Enterprise-equals-income paradigm, facilitating investment into student experience, meant that the financial side was more likely to be prioritised. However, growing external visibility of KE creates space for more strategic focus on this area. The two are not mutually exclusive, as the increased HE-BCIs performance was a consequence of improved Enterprise performance. This culture change project was not in isolation, as it built on the growing cultural importance of *Enterprise* that I was very much at the centre of. The planned change was to *focus* that change to KE. The switch needed was to improve KE performance driving *further* income generation (and Enterprise performance) in other areas to diversify income generation.

The prevailing culture at UWL was teaching focussed, raising some challenges regarding 'working with' that culture to change it. In the Phase One interviews, there was frequently a confusion around KE, with a tendency (particularly amongst academics) to more closely associate with KE activities that were related to teaching activities, such as student employability. There was some understanding of the links between KE and research, including research impact. This was possibly a consequence of the growing research culture in preparation for submission to the REF. However, this did not necessarily evidence a clear understanding of KE, rather responses seemed more routed in a research culture. This was particularly expressed in terms of perceived workloads and the association of KE as an adjunct to *research* workload allocations.

"If UWL do want to invest in Knowledge Exchange activity it means that they do need to give more time to their staff members to do research". Participant P14

"I think I think there's a tendency that it this would sort of fall into the research category where this is another thing that you do …in your own time" Participant P24

However, working 'with' a culture is deeper than aligning to a broad teaching or research paradigm. Other facets of the UWL culture include strong direction from the executive leadership, values expressed within corporate structures (such as committees), and a strong organisational narrative around financial stability and growth (underpinned by Enterprise growth). This was perhaps a subtler message than just the overt value or organisational purpose of teaching. With the refocus on teaching as a response to Covid-19 and the prioritisation of developing new approaches to teaching (UWL Flex), this presented a strong counterweight to attempts to broaden UWL culture to include more focus on non-teaching (and specifically KE) activities. Time for other activities was reduced for staff as attention was directed to rapidly pivoting to online teaching, with regular reporting and set milestones for conversion of face-to-face teaching into online materials. Rolling out these materials, as part of an online pedagogy, was almost a 'just-in-time' approach as materials development was frequently weeks (if not days) ahead of scheduled delivery. As the pandemic progressed, and the Government pressed HEIs to bring students back onto campus, UWL Flex changed from a fully online approach to a supplement for those unable to attend (for example, due to self-isolation or inability to travel to UK). This changed the pressure on staff; maintaining online and face-to-face approaches simultaneously. This was not uncommon across the HE-sector (Noble and Spanjol, 2020) and slow normalisation saw a return to other activities (such as research and KE). Had the pandemic not happened, the project may have made more headway with increasing cultural importance of KE and greater levels of academic engagement. Again, the embedding of approaches may allow evidence for this to emerge over the next few years.

This demonstrates that organisational culture is not independent of its environment. While the Covid-19 pandemic may have provided resistance to cultural change, other external factors assisted with the project. The growing evidence (such as the renaming of URSEC to URKEC) of increased importance, if not prioritisation, of KE was supported by external factors such as: KEF, KE Concordat, Government policy, and approaches to funding through HEIF. As discussed above section 11.2.2, there was a deadweight question regarding this increased importance; how much was driven by this this project compared to how much was external factors forcing a higher visibility. While the approaches and responses to these external factors built on the research, it could also be argued that this was a distraction and fed into 'more planning and less doing' that is a criticism of AI. The requirement for the Accountability Statement and Annual Monitoring of HEIF ran slightly ahead of the creation of a clear KE Strategy, which was itself one of the propriety actions identified in the Phase One research. In that sense, the external environment may have determined the pace of this element of the project; which was central to culture change. Building clarity of understanding of KE was needed to then enable staff to understand what KE was and to know how they could engage.

While external environment played a role, there were also key internal structures that influenced the research such as the University Research, Scholarship and Enterprise Committee (URSEC), the structure of academic departments, and REOps as a central supporting department. One aspect was the organisational power and influence of the Vice-Chancellor (VC). One of the facets of UWL culture was the organisational story of his leadership of turnaround; his role in taking what was Thames Valley

University (TVU) to be a stronger and more reputable and higher ranked institution[37]. This was a far cry from TVU frequently languishing at the bottom of rankings and perennially on HEFCEs financial at-risk list. This was the genesis of the student experience paradigm, and the VC was *the* prime driver behind the clear messaging during the Covid-19 pandemic on ensuring students had every opportunity to succeed despite the environment. While allowed to proceed, the project had no visible and clear buy-in from the most senior person in the organisation. This could have acted as a barrier to success, or a limit to the appeal of engaging with KE as opposed to teaching. However, organisational change is not just at the whim of the most senior person. Leadership is a system not a person, senior leaders can influence but not necessarily single-handedly change culture, with individual charismatic leaders' ability to create change often over-exaggerated (Bate, 2013). Therefore, any lack of demonstrable support from the VC should not be overstated, and the project did still have senior sponsorship from the DVC.

A final reflection was on the nature of organisational culture, and in taking a social constructivist approach to understanding culture. This raised philosophical questions on trying to measure culture. As discussed above (section 11.2.4), levels of engagement in the project were limited. This meant any attempt to measure culture could only be a lens on *some* members understanding of culture. While a broad approach to the data was used to get a sense of culture, it did not remove the challenges inherent in measuring something that is intangible and created through shared meaning. It assumes that members of an organisation share perspectives, and this is not always the case. What is shared is almost certainly the 'core' paradigm, but this leaves space for the creation of sub-cultures. From the start, this project never intended to create universal engagement with KE. Therefore, creating a strong sub-culture or sub-set of academics willing to engage may be sufficient to drive the desired performance results. The project did demonstrate increased engagement, providing mechanisms for ongoing funding (KE seed fund), ability to gain promotion, and ability to gain recognition for undertaking KE roles and activities. If culture is a social construct, then increases in aspects *within* that culture creates new meaning. A strong KE subculture could therefore influence the importance of KE within the overall culture. That may be a key legacy of this project. The development of a KE (rather than Enterprise) subculture created opportunity for KE to become more broadly recognised as important, if not necessarily yet prioritised.

11.2.8 Culture Web

Beyond debates over nature of culture change, or indeed if it is possible, this project did try to find ways to understand culture. For this project, the Culture Web model provided one means of analysing and understanding culture, but could be criticised as being highly subjective. It only draws out the views of those people within the organisation that participate in the analysis, and collaboratively developing the analysis is open to bias, influence, or group-think. However, if organisational culture is a social construct (Buchanan and Huczynski, 2010) rather than just a *feature* of an organisation (Smircich, 1983) any attempt to measure culture could face the same criticism. Within this project, there was an attempt to understand culture through multiple lenses (see Chapter 10). This triangulation recognised that no single lens into UWL culture would be sufficient. By using a variety of

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[37] UWL was ranked 23rd by Guardian 2023, and 40th by Times good university guide 2023 during the writing of this thesis.

data and approaches there was, at least, an attempt to try and find a way of measuring and understanding the UWL social construct of its own culture.

While not extensive, there was evidence in the literature of other researchers using the Culture Web as a framework for performing organisational cultural analysis. Freemantle (2013) used the model to look at dysfunctional culture in a maternity ward to identify what needed to be changed, basing their recommendation on the need to consider *"the dominant cultural paradigm … in order to ensure that change is timely, appropriate and effective, with clear benefits".* Mossop *et al* (2013) used the model to understand implicit, or hidden, aspects of professionalism within veterinary medical curricula. Doherty and Stephens (2020) used the framework to construct recommendations for enhancing work-based learning within HEIs, coincidentally an expression of KE although not explicitly recognised as such in this literature. Handscombe (2003) discussed concerns about growing entrepreneurialism changing the culture of UK HEI's. He proposed using the model to understand and challenge assumptions inherent in this concern, and to use it to develop a vision of future HEI culture. This could imply that the Culture Web could be used to measure a change to that future culture. Overall, this appeared to place this research in a gap in the literature; using the Culture Web model to understand an HEI culture and identify change within that culture. This indicated there was further opportunity to explore research using this model to identify culture change, not just analyse an organisational culture at a particular point in time.

11.2.9 *Knowledge Exchange as an area of competitive comparison*

Using KE as a basis for competition has not historically been that apparent within the HE-sector. Knowledge Exchange metrics had not traditionally fed into rankings of UK HEIs, unlike teaching and research. For example, NSS, TEF, and REF have been used as part of the mix of factors in ranking produced by UK media (such as The Times and The Guardian rankings). Consequently, UWL's improved REF and NSS performance led to improvements in the Times Good University Guide 2023 and Guardian Guide 2023 rankings. Neither of these included any factors that would be clearly considered KE, limiting how KE performance could impact on traditional ways HEIs compare themselves to their competitors.

HEI	AVERAGE	RANK
The University of Southampton	4.57	1
Imperial College of Science, Technology and Medicine	4.43	=2
The University of Birmingham	4.43	=2
The University of Lancaster	4.29	=4
The University of Leicester	4.29	=4
King's College London	4.14	=6
The University of Essex	4.14	=6
The University of Leeds	4.14	=6
The University of Manchester	4.14	=6
The University of Oxford	4.14	=6
University of Hertfordshire	4.14	=6
University of the West of England	4.14	=6
The University of Cambridge	4.00	=13
The University of Central Lancashire	4.00	=13
The University of Hull	4.00	=13
University College London	4.00	=13
University of Chester	4.00	=13

Table 36: Top HEIs in an indicative KEF2 Ranking

The introduction of KEF allowed the possibility of competitive comparison. However, changes to methodology meant comparison between KEF and KEF2 performance would be difficult, while comparison to competitors within each remained possible. A common approach to rankings for REF was use of a GPA, and the same approach *could* be used for KEF. No external organisation had yet taken a ranking approach to KEF (as Times Higher Education did with REF), even though the underpinning data was there to do so. A simplistic attempt to do this demonstrated that with whole quintile scores and only seven perspectives, not enough differentiation in score existed to provide a wholly satisfactory ranking; with too many HEIs sharing ranking positions. This can be shown by the top of the indicative ranking, see Table 36 above, where most ranking positions are jointly held. However, there was potential for using the data behind the quintile scores to produce something more granular. If this were to develop, KEF and KE could potentially become a more widespread basis for competitive comparison. Using this simple GPA approach for KEF2, UWL would have been joint 47th place out of 122 HEIs.

One reason why no organisation was yet to take up publication of KEF-based rankings was potentially the continued low level of visibility of KE, as well as lack of clarity on who would be the ultimate consumer of this information. For example, REF is very sector-specific in terms of how the release was perceived, while teaching-based rankings are consumed more widely, for example by perspective students and their parents. This was reflected in the sorts of publications that then produce rankings; REF by Times Higher Education (effectively the trade press for the HE-sector) or teaching-based rankings by mainstream press (Times and Sunday Times, Guardian). Research links to student perception, for example being taught by the experts in the field related to their degree choices. This legitimises the inclusion of research metrics in teaching-related rankings. Knowledge Exchange does not necessarily have a natural audience and therefore less demand for consumption of rankings. There is scope for HEIs to build businesses engagement with KEF or a KEF ranking. However, it is more likely both business and HEIs would be interesting in specific engagements of mutual advantage, rather than businesses understanding a general picture of how well an HEI engages with KE. Additionally, such engagement-building would likely be with local business, and general evidence seemed to show businesses tend to work with organisations that are relatively local to them anyway (Ankrah and Al-Tabbaa, 2015; Rybnicek and Königsgruber, 2019). Therefore, they are unlikely to be swayed in engagement choices by a specific KE ranking, any more than they would other forms of ranking. However, KE highlights a different expertise, *application* of knowledge; not just the ability to create knowledge through research, but to use it for some economic or social good. This alignment with Government policy leaves room for this area to increase in focus, and potentially form another aspect of competitive comparison. This may only happen if, like other aspects of HEI competition, there is a viable means to compare. RE deliberately selected the presentation of KEF results to *not* imply a ranking, and therefore on the face of it this creates a barrier. However, the underlying data does allow for a ranking-approach and this could arise from trade press but only if it becomes a clear matter of importance for the HE-sector. Paradoxically, it is unlikely to be ranked *until* it is important, but may not be important until it is ranked.

11.2.10 Mainstreaming of project

This project was designed to change the approach to managing KE within UWL, with the longer-term aim that this would have a positive impact on organisational performance. While limited evidence of a link to performance improvement has been discussed, what was clear is that this project did

generate change in terms of the *way* UWL approached KE. This project led to approaches and ideas arising from the research being embedded into the organisation; becoming the UWL way of understanding, managing, and measuring KE performance. Drawing from the outcome measures for this project, the ongoing approach to understanding KE culture at UWL explicitly and purposefully built on the work of this project, through: the definition of KE Strategy KPIs; measuring academic engagement with KE; and understanding financial performance.

As part of the KE Strategy that arose from this research, there was also a KPI framework introduced to measure its success (see Appendix 22). These KPIs were approved by URSEC in February 2022, to be part of the ongoing reporting to the committee around KE activity and performance. These KPIs explicitly built on the measures with the Project ToC, and were grouped into five areas: understanding and engagement with KE; financial performance; comparative performance; KE activity; and research strategy metrics. The *understanding and engagement* metrics included year-on-year improvements on staff perception of KE, using the adapted ENTRE-U tool (KE orientation survey) defined by this project. The KE Concordat action plan and KE Strategy, both collaboratively developed (see Chapter 8), also included an explicit commitment to run the KE orientation survey on an annual basis. The *financial performance* metrics used the project measurements of HEIF qualifying income, year on year improvement to HE-BCIs performance, achieving annual income targets, and maintaining levels of HEIF income. Metrics for *comparative performance* in part reflected the project regarding KEF performance, but more explicitly the third metric in this area used the KE proxy and comparator set from this project. The *KE activity* metrics also drew from this project, in that it made the number of KE seed fund projects (an outcome of Phase One) a KPI. The only exceptions to KPIs explicitly linking back to project measurements were four metrics derived from the UWL *Research Strategy*, but still related to KE: percentage of promotions based on KE (although this clearly had links to opportunity identified with Phase One); number of KTPs; level of Innovate UK income (in HE-BCIs); and consultancy income (which was also explicitly a HE-BCIs metric). The UWL research strategy demonstrated the increase in organisational understanding and valuing of KE, as these performance indicators were arguably KE rather than research. A further level of mainstreaming of the project *approach* was evident in the commitment to developing a theory-of-change for the UWL KE Strategy, which was explicit both in the KE Strategy itself and in HEIF Annual Monitoring Statement submitted to RE in May 2021. In this way the research approach, to use culture change to drive performance improvement, was continued and embedded into the UWL approach to KE. It therefore made sense for the commitment to understand culture and entrepreneurial orientation to also continue, resulting in a continuation of ways of measuring from this project. This demonstrates the *potential* for an AI project to have a lasting impact on an organisation even if the prime purpose was not achieved within the project timeframe.

11.3 Limitations

As with all research, this project took place in a specific context with boundaries as to how far conclusions and reflections could be transferred to other settings. The limitations for this project broadly fell into five categories: those relating to the specific context of UWL; those arising from the extreme change to the environment the project was conducted in; those arising from how representative participation in the project was; those arising from the design-focus of the AI approach; and those arising from my position within the project.

The first set of limitations relate to UWL being a single organisation within the UK HE-sector, introduced in Chapter 2. Given the diversity of types of HEI and mission (reflected in the clustering for KEF (Coates Ulrichsen, 2018)) this limited what could be extrapolated to other UK HEIs, let alone what could be applicable to non-UK HEIs, or to other types of organisation. Within this diversity, UWL would typically be described as a post-92 institution, so there could potentially be applicability to others in this grouping. However, this typology could be questioned as this reflects changes in the UK HE-sector from 30 years ago, and was not necessarily still relevant for description of mission-types. Therefore, while lessons can be learned from this research they must be caveated by recognition of the specific organisational culture, mission, and values that existed that would be different for other organisations.

A further limitation was that this research was conducted at the time of an unprecedented upheaval. The Covid-19 pandemic provided an environment that significantly affected the research. This meant that UWL, like many other organisations, reacted and acted in different ways. As organisational research, it can be argued that this research did not see UWL in a normal state, but in an emergency mode. However, the refocussing onto the student-experience did emphasise the primacy of the teaching-paradigm with UWL's culture, exposing the deep-seated values and priorities that made a shift towards KE more challenging. This underlying cultural paradigm would have existed with or without the pandemic, and so those forces of cultural inertia would still have been a barrier for the project to try and overcome.

A third general limitation was on the level of engagement from members of the UWL community. This limited how representative any views expressed were, and as a limited size meant that bias or unrepresentative views could be given greater weight in the project. As organisational culture was considered in this research as a social construct, the understanding of UWL culture was in largely constructed from the views of participants. However, participation in the research was limited and therefore interpretations of UWL culture could well have been skewed. Similarly, understanding of what would motivate academics to engage was drawn from a limited group of UWL staff, and therefore may not have been truly representative of the views of majority of UWL academics.

A fourth limitation arose from the design approach taken. As discussed in 11.2.1, this research reflected the criticism that the AI approach is design-focused. While design could be considered an 'action' it is not one that can directly create change. Rather, it is a precursor to other actions that could create the desired change. In this project, the research laid a foundation for UWL's approach to KE; the design of that approach more than the implementation. This limited, therefore how much change could ever be attributed to this project within the timeframe of the research.

A final limitation was that as a researcher-practitioner at the heart of the research, it was not possible to extract 'me' from this project. This does mean that the conclusions and discussion are potentially subject to bias. In Section 6.2.2, I raised seven potential ethical challenges arising from me being a researcher-practitioner that the project design needed to address,: the manager-led culture change paradox; role-based bias; unequal power of participants; culture-change versus behaviour-change; accommodating negativity; confidentiality, and the project being of benefit to me. The majority of these were not problematic, probably due to the collaborative nature of the approach. A manager-led change approach could potentially have created dissonance for participants. However, by aligning to existing culture and using collaborative approach this meant no issues were raised or identified

regarding a paradox of me being representative of the very culture I sought to change. Similarly, the collaborative approach mitigated role-based bias and any inequalities in power. What was perhaps more challenging was the potential for the project to be coercive in that it sought to change academic staff behaviour; to get them to undertake more KE activity. However, in practice, the project sought to *encourage* engagement, rather than force it given the role of academic autonomy and choice. This project sought to create a culture that could encourage academics to choose to engage with KE; to facilitate rather than coerce that engagement. While negativity and negative experiences were raised in the project, this was in the context of how those insights could inform a more affirmative approach. This was particularly apparent in the design of the KE Champions role, where negative experiences were raised in a safe and confidential environment to inform what a better design for this role should look like. While there was always transparency over the benefit of the project to me, it did raise an issue of any findings being the result of my, rather than collective, activity. While tempered by collaboratively exploring the data and seeking meaning from the research, the amount I drove the project and my vested interest in terms of my doctoral study does need to be acknowledged and recognised.

11.4 Lessons learned

Building on both the reflections in Section 11.2, and the limitations in Section 11.3, this raised a question of what would I do differently. This could be looked at both in terms of what would I do differently if I were to re-run this research and what might I have done differently with the benefit of hindsight.

If this research were to be run again, it would be doing so in a different context. As a consequence of the project the level of engagement with, and understanding of, KE grew. This would make the starting-point markedly different. This could well mean that levels of engagement of KE with the action research would be higher, which could facilitate a range of other approaches being used, for example to address the time taken or address the criticism of AI being too focussed on design. As highlighted by the criticism of AI's ability to transform diminishing over time (see Section 5.5.2) the value of re-running the whole project could be limited. Key drivers which would present an opportunity to gain value from re-running the research could be a need to refresh UWL's KE strategy or if ultimately no KE performance impact occurred and a new approach would therefore be needed. Therefore, an alternative question is what with hindsight would I have done differently.

With hindsight, the length of time taken for Phase One, linked to the known criticisms of AR, could have been better addressed in the design and approach taken. Subsequent AI activities demonstrated that the cycle could be condensed. With more experience as a researcher, a different more time bound mode of AI would be possible. This would have used ways of gathering data other than interviews, which contributed to the length of time Phase One took. However, this would be more relevant to *re-running* the research rather than reflecting what I may have done differently. Given my limited research experience, the PAIM model gave me a clear structure to follow which other modes of AI did not. It is also worth reflecting that while this approach did take time, this allowed for a richness of data in the interviews that could have been missed. Reducing time may have allowed for a wider level of engagement, given academic staff are often time-poor and have conflicting demands to manage.

This could have been addressed through the mode of AI used, for example an AI Summit could have been a large single event, or a Mass-mobilised Inquiry would have used cascading interviews (each person interviewed then interviewing others). This would have allowed a larger number of staff to be involved for a shorter period of time. However, the pre-existing low level of understanding and buy-in to KE may have both reduced the richness of data and limited those willing to be involved. A better approach could have been a more systematic campaign to get responses to the Entre-U survey, and a more open invitation to the Phase One Large Group Activity event (see Section 7.3). Both of these may have increased the participation, but again low levels of engagement or understanding of KE were likely to have still limited engagement.

The criticism and limitation that the project was overly design-focussed could, with hindsight, have been addressed through choice of AR approach. However, I stand by my decision to use AI in order to avoid a problem-centric approach that could have limited engagement by defining academics and their previous choice *as* the problem. Additionally, engagement in the design stage was a way of engaging staff with KE. Engagement with subsequent activity (the *Act* stage of PAR) was not necessarily in my authority to approve, given the need to seek approval to move forward with activities that came out of the research. Using a traditional approach, such as PAR, could have meant the project and research could have become stuck at between the *Plan* and *Act* stages. This could have limited the ability to *Observe* and then *Reflect*. The KE seed fund was, perhaps, one area where a different AR method could have been used. The first call for projects was run, and funds awarded, within the timeframe for this research project. This could have therefore allowed a full PAR cycle. However, the affirmative design of the KE seed fund did make it different to previous seed funds in UWL. What was designed was a reflection of what was perceived to work well at UWL. While this could have still been a result using PAR, it would not have been implicit in that approach.

11.5 Potential next steps

The reflections on this research indicated some potential next steps, notwithstanding these limitations. Some reflections provide a basis for further research, and potential research agendas which could have benefit to the UK HE-sector. Other reflections are more specific to UWL directly in terms of practice implications, but could also be of interest to the wider HE-sector.

11.5.1 Next steps for further research

From a research perspective reflection and learning from this project raised several areas for future exploration:

- This project provided some insight into conducting Action Research (in particular the AI form) online, and this could be taken further by investigating online approaches to understanding potential impact on participation, efficiency of time, costs, and consequences.
- The project was relatively novel in the use of a theory-of-change to explain the underpinning logic of the research intervention and to articulate expected outcomes and impacts. This opens potential for further research in the use of a theory-of-change. First, on the use of a theory-of-change to provide a rationale and explanation for how and why an Appreciative Inquiry project could create an intended change. Second, on the use of a theory-of-change to fill the perceived gap in evaluation within Appreciative Inquiry, as a specific form of Action

Research. Finally, this should be developed prior to commencement, to avoid any criticism of it being a post-hoc rationalisation.

- This project raised ways Knowledge Exchange could be, or is, a growing facet of inter-HEI competition. While HE-BCIs has not historically been used as a way of identifying performance versus competitors, KEF moves in this direction. With a commitment for KEF to be ongoing, and potentially linking to distribution of future HEIF funds, this area could grow as a means by which some (if not all) HEIs compare their performance. That could form the basis of research within the HE-sector.

- The project contributed to research on entrepreneurial orientation, within the HE-sector. While it built on existing research, there is more that could be done to investigate over a longer period the links between entrepreneurial orientation and performance. This could include both broad financial performance and diversification (what UWL calls Enterprise but is likely to have different nomenclature at each organisation) or the specific links to various aspects of Knowledge Exchange. This could be at an individual organisational level or could be the basis of collaborative work by a range of different mission-group HEIs to explore relationships between entrepreneurial orientation, performance, and prime mission. This could include a review of successful HEIs to understand how they have developed KE. Similarly, KEF clustering could provide another dimension of entrepreneurial orientation-performance relationships to explore. There is clear potential here to use the historic data from HE-BCIs to investigate any correlations between entrepreneurial orientation and areas in HE-BCIs.

- Linked to this, therefore, is measuring entrepreneurial orientation as a precursor to identifying correlations. The use of an adapted (KE version) of the ENTRE-U tool provides a potential research agenda to explore and validate a broader, less research-focussed, view of HEI-entrepreneurial orientation and its measurement. This could expand beyond the established link between research and commercialisation aspects of KE, and could support the above research agendas to establish correlations between HEI-entrepreneurial orientation and a broader range of KE performance.

11.5.2 Next steps for UWL
For UWL, the project raised areas for further consideration or opportunities to build on the findings.

- There is potential for building on the KE seed fund. While embedded into UWL's KE approach as an annual call for projects, there is scope to develop this activity further, through in-depth evaluation and research to investigate whether KE seed fund projects ultimately link to improvements in KE outcomes or metrics.

- Similarly, the role of KE Champions was a new initiative, and further evaluation of the impact and outcomes would be useful. As the role carries a workload, some analysis of the institutional return on this investment would support longer-term commitment and potential expansion.

- Having demonstrated the value in using a theory-of-change for a specific project there is scope to embed this approach into any change initiatives, to better determine both the expected outcomes and find ways to measure impact. This could be particularly useful as an approach linked to research, to ensure research projects have a clear understanding of their outcomes

and the potential impacts, rather than just the outputs. In this way measuring impact, for example for the next REF, may be facilitated.

- Given the challenges of trying to measure culture change and entrepreneurial orientation impact on performance over a short time-period, further research and evaluation over a longer time could produce more organisational-level insight. While this is implicit in the KPIs and Implementation Plan for KE at UWL it could be the basis of more in-depth study (including potentially through a sponsored PhD). In this way, UWL could see a legacy or long-term impact of this project. Such activity could also feed into a sector-wide research agenda on HEI-entrepreneurial orientation and KE performance (see above).

- At a more tactical level, the project highlighted potential for further diversification of income by growing specific strands of KE income (consultancy, research-related KE, and Innovate UK income) within the Enterprise mission, which was implicit and sometime explicit within the KE Strategy.

- Finally, the absence of a ranking for KE could be addressed internally, through using the underpinning metrics for KEF. This would allow understanding of UWL relative competitive position at a sector-wide level, as well as in each individual perspective. Such an approach, if shared with other HEIs (such as through sector-networking groups like PraxisAuril) could form the basis of higher visibility for KE, and potentially provide an impetus for an external (and more objective) approach[38].

11.6 Finding 'me' in the project

In my reflection on this project, I wondered if the outcomes and potential impacts of this project could have been achieved by me in other ways. The answer is possibly yes, recognising that project deadweight could also include what would have happened if I have taken another route and not attempted change through an research approach. Clearly responding to the calls from Research England for plans and strategy around HEIF use, committing to the KE Concordat and subsequent activity, are all things that would have happened anyway. Even writing a KE Strategy was likely to have happened, even if only as a reaction to the next UWL strategy following Achievement 2023. Within this activity, tactical elements such the seed fund, strategy, champions role could have been developed. However, what was important was not just their existence and implementation, but the more collaborative approach taken. Ultimately, it is not these artefacts of KE at UWL that matter, but the engagement and *choice* by academics to engage that was important. Returning to the key element of autonomy and academic choice (Perkmann *et al.,* 2013; Thune *et al.,* 2016), that is key to KE performance (Fini *et al*., 2018; Freel *et al*., 2019; Perkmann *et al*., 2013; Reichenfeld, 2011; Thune *et al*., 2016), little would have been achieved by me writing a strategy with actions that realistically only I would have had ownership of. The vehicle of doctoral study forced me to think more broadly about how to achieve the aims of this projects and to do so in ways that pushed me out of my managerial comfort zone. In doing so, I tried new things; including *not* doing as well as doing! The design of the

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[38] During the writing of this thesis, UWL joined the University Alliance. As part of the KE network within this alliance, some discussion of granular use of KEF data arose, that provides a further opportunity to explore this recommendation with other HEIs. At least one other HEI was using the underpinning KEF data to understand comparative performance on individual perspectives, to inform how much improvement could be needed to change their score for that perspective.

doctoral programme deliberately made me more reflective of my practice. It also forced me to find space and time for that reflection; not always easy in a busy role, with increased and more varied responsibility, and with an increasing team size. I had the advantage of owning two wonderful dogs and found that dog walking provided a great time for reflection (and a mobile phone great for recording thoughts!).

Reflecting on the start of this project, I am aware that the structure of the doctoral programme was geared to more traditional forms of AR. There was perhaps an element of AI's fit to me in my choice to use it. I consider it a pragmatic approach to implementation that fits with my perception of what may have driven my past success for projects or activities: building on the positive, working with what works or has worked rather than to take a more adversarial approach. However, this wasn't a conscious factor in my selection of AI; so was either subconscious or just luck. However, the approach has made me more conscious of how I approach other challenges, working from an appreciative model; seeking a collaborative approach; and looking for opportunities to embed AI as a management change tool. This has changed my practice to consider collaborative approaches as a means-to-an end, rather than a default top-down approach. One consideration is what would I now do differently. Besides not trying to run a culture change project during a pandemic, I would perhaps have been more mindful of timeframes and pro-actively sought approaches for greater engagement with the KE orientation survey. Also, with hindsight, I would have articulated the logical-model as a ToC at the start of the project to avoid any criticism that it was merely a post-hoc rationalisation.

During the presentation of this project's proposal, one of the panel members asked, "*but where are you in the proposal?*". I confess, this struck me as an odd question. However, I cannot be removed or extracted from the project. I was lead, facilitator, co-producer, participant, co-data-analyser, and part of the social construct that was at the heart of the research; UWL. I had significant influence, power, and authority in areas that were co-terminal with this project. That was not unsurprising, as I chose a topic with direct relevance to my work! That the project was part of a doctoral study was obvious, but perhaps the implications for me were not. I did not fully appreciate how much of the process was not just testing an idea in practice, but also testing and stretching *my* practice and about *my* development and change. At some level, I think I approached the research as a practical and managerial 'task', but one that could be measured more robustly in terms of outcome. Having been through the process, and reflected on my journey, that question does not seem odd at all. I recognise significant change in myself, I still found writing about 'me' in this thesis uncomfortable but on reflection recognise how a significant part of the project was always about me.

11.7 Conclusion

On a personal- and organisational-level this project was beneficial. A successful outcome was that this project directly led to both development of new ways of managing and measuring KE at UWL and that these became adopted as core approaches within the organisation. The timeframes could be stretched (forever) to continue to seek evidence of impact (as impact is long term) but importantly the *potential* for impact still exists. There were performance improvements both in terms of historic UWL performance and compared to the HE-sector. While not driven by this project, this research surfaced evidence that an entrepreneurial orientation sat behind this performance. What was less

clear was whether UWL could shift its entrepreneurial orientation to be more narrowly directed at promoting KE (the target of this project). Some limited evidence was found of an increase in the importance of KE, alongside the traditional cultural value of Enterprise. The act of explicitly looking for and measuring KE performance was mainstreamed within the KE Strategy and associated KPIs, this approach came directly from this project and much of the KE Strategy's Implementation Plan arose from this research. Over the timespan of this project KE became increasingly *recognised* as being of importance, albeit not yet *prioritised* within UWL culture. The strong overarching cultural paradigm of teaching, identified by this research and intensified by the Covid-19 pandemic, is unlikely to be replaced. Organisations move in the direction of what they study (Whitney and Trosten-Bloom, 2010). Making KE a focus of investigation, seeking to link culture to performance, and succeeding in embedding the resulting ways of managing KE as part of UWL's governance, means a legacy of this project *should* be further movement of UWL towards KE. Only time will tell.

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Appendices

Appendix 1   Matrix of HEI performance

Performance Area		Marco (Government/Sector)	Meso (UWL)	Micro (PI)
Good Financial Management	Income Generation	OfS Financial Monitoring	Budget agreed with Governors and OfS KPI#17 Alumni/development income	Role of Research & Enterprise income in achieving target
	Research Income	REF	Budget agreed with Governors and OfS KPI#9 Research and Enterprise income	Role of Research & Enterprise income in achieving target
	Cost Effectiveness	OfS Financial Monitoring	KPI#13 Staff costs as a percentage of income	?
	Working Surplus	OfS Financial Monitoring	KPI#12 Operating surplus	Role of Research & Enterprise income in achieving target (as high surplus generating activities)
	Reserves	OfS Financial Monitoring	Budget agreed with Governors and OfS	-
Furthering the Institutional Mission	Teaching Quality	TEF	KPI#7 TEF performance	-
	NSS/Student Satisfaction	TEF	KPI#5 NSS satisfaction rate KPI#14 Estates grade A/B condition KPI#15 IT performance	-
	Widening Participation/Access	HESA	Access & Participation Plan linked to Recruitment Plan	-
	Entry Standards	OfS Monitoring	Recruitment Plan	-
	Teaching output, progression and completion	HESA	KPI#6 Completion rate	-
	Student Numbers	OfS Monitoring	Recruitment Plan (linked to Budget agreed with Governors and OfS)	Higher and degree apprenticeships numbers and income

			KPI#3 Higher and degree apprenticeships numbers KPI#16 Overseas and TNE recruitment numbers	
	Graduate Outcomes (employability)	HESA	KPI#1 Employability of students at 100% KPI#2 Graduate employability of 80%	Business engagement and KE relationships underpinning Employability
	Research Quality & Output	REF	KPI#10 Percentage of academic staff with doctorates KPI#11 REF ranking	Funded research activity (income and outputs)
	Rankings Performance	-	KPI#8 Aggregate League table position	-
	Internationalisation	-	KPI#16 Overseas and TNE recruitment numbers	TNE income as an element of Research & Enterprise income reporting
Response to National Need:	Economic Growth	HE-BCIs KEF	HE-BCIS return KPI#4 Number of businesses incubated KEF	HE-BCIs return HEIF Funding level KEF
	R&D Investment	Research Impact (REF)	Research Impact (REF)	Research commercialisation
	Carbon Reduction	-	KPI#18 Eco Campus grading	-

KPIs for UWL for Achievement 2023 (https://www.uwl.ac.uk/sites/default/files/Departments/About-us/Web/PDF/strategic_plan/achievement_2023_a5_28pp_booklet_july_2018_v2_web.pdf):

Appendix 2   Participant Information Sheets and Consent Forms

MIDDLESEX UNIVERSITY/UNIVERSITY OF WEST LONDON

PARTICIPANT INFORMATION SHEET (PIS) – ADVISORY TEAM

Participant ID Code:…………………………………………

1.   **Study title**

Enhancing the Entrepreneurial Posture of a UK HEI: An Appreciative Inquiry Approach

2.   **Invitation**

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

This study is being undertaken as part of a Doctor of Business Administration at Middlesex University.

Thank you for reading this.

3.   **What is the purpose of the study?**

The purpose of this research is to explore how taking a more entrepreneurial stance could be a way of enhancing the University's performance.

The focus of the proposed project is to explore enhancing organisational performance, through a cultural change that increases the entrepreneurial posture of the organisation. Using an Appreciative Inquiry approach, the project will focus on some centrally facilitated projects to provide vehicles for 'enterprise engagement'. These campaigns will collectively support the desired business and performance outcomes, which arise through the research approach.

The desired organisational performance is expected to be predominately financial, but will also have positive affect on recruitment/retention of academics. The HE-sector has traditionally had a competitive positioning of either a research-focus or a teaching focus. Research funds are limited and highly competitive. When coupled with uncertainly over Brexit, and its impact with regard to the current flow of EU research funding to UK HEIs, this could make a research-focus for competitive positioning and growth problematic. Equally, the demographics in the UK show a declining market for the mainstay of teaching: undergraduate programmes. With governmental constraints on International students and questions over the status of EU students' post-Brexit, this is also a problematic basis for positioning and growth.

This project seeks to explore the 'third' aspect of University activity as a potential focus: Enterprise. This focus is ill defined, inconsistently understood between institutions, and overly broad in remit. It is, however, probably the best source of business growth and improved business performance. It is also one that aligns with the direction of travel in terms of Government perception of the role of the HE-sector in economic growth and recovery.

4. Why have I been chosen?

You have been invited to participate because your role at the University is one that gives you an insight into the way the University works, and what is good about current Research & Enterprise practice that could be enhanced.

5. Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a

consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. If you do decide to withdraw from the study then please inform the researcher as soon as possible, and they will facilitate your withdrawal. If, for any reason, you wish to withdraw your data please contact the researcher within a month of your participation. After this data it may not be possible to withdraw your individual data as the results may have already been published. However, as all data are anonymised, your individual data will not be identifiable in any way. Choosing to withdraw will have no consequences in terms of your employment at the University of West London.

6.   What will I have to do?

The first Action Research cycle is designed to identify: a base line for understanding what 'entrepreneurial posture' is and means; an understanding of what UWL's current entrepreneurial posture is; potential metrics for measuring change in entrepreneurial posture; a co-produced aspiration for future 'entrepreneurial posture'; an understanding of potential links between enterprise engagement, job-enrichment and intention to stay (reduced staff-turnover); an understanding of what 'enterprise engagement' means and 'looks like'; and an appreciative understanding of what would help achieve greater 'enterprise engagement'. This last objective will help inform and identify future Action Research phases.

It is proposed that this initial Action Research cycle will be completed in a 3 months period and will then lead into other action research cycles looking at specific centrally-facilitated campaigns that form the basis of future Action Research phases.

As part of this you have been invited to provide your views and input through:

☐ Participating in an Individual Interview:

-   It is anticipated that individual interviews will last up to 1 hour.
-   Interviews may be recorded (audio only) in order to aid transcription
-   The interview will take place on University of West London premises

☐ Participating in an Advisory Team.

- It is anticipated that the focus group will conduct Action Research over a series of 9 meetings.
- The Advisory Team will be asked to document their collective views through flipcharts and collective actions and agreements will be captured on meeting notes
- Audio or video will **NOT** be used to record the sessions, but as part of some group you may collectively **chose** to use these media
- The Advisory Team activities will take place on University of West London premises

☐ Participating in a Group Activity:

- It is anticipated that the group activity will last a maximum of 3 hours.
- Focus groups will be asked to document their collective views through flipcharts or other creative media. This may include audio or video if the group collectively **chooses** to use such media
- The Group Activity will take place on University of West London premises

You may be invited to participate in future Action Research Phases, but the choice to do so is entirely yours. Participating in this phase does not require or imply participation future phases and activities.

Please note that in order to ensure quality assurance and equity this project may be selected for audit by a designated member of an appropriate committee at Middlesex University. This means that the designated member can request to see signed consent forms. However, if this is the case your signed consent form will only be accessed by the designated auditor or member of the audit team.

7.   **Will I have to provide any bodily samples (i.e. blood/saliva/urine)?**

No.

8.   **What are the possible disadvantages and risks of taking part?**

Activities undertake as part of this research form part of normal working practices, and therefore present minimal risk to participants. Appropriate risk assessments for all procedures have been conducted, and will be followed throughout the duration of the study.

9.   What are the possible benefits of taking part?

The purpose of this project is ultimately to improve the business performance of the University of West London, both in terms of income generation, but also hopefully job satisfaction. The research approach is an appreciative one, in that it seeks to highlight a, affirm, and build on what is best in the organisation. The benefits therefore, should be both enhanced job security for all, and additional resources to invest into facilities and the student experience.

9.   Will my taking part in this study be kept confidential (Data Management and Storage Statement)?

Any contribution made through individual interview will be confidential. A number of procedures will be in place to protect the confidentiality of participants. You will be allocated a participant code that will always be used to identify any data you provide. Your name or other personal details will not be associated with your data, for example, the consent form that you sign will be kept separate from your data. All paper records will be stored in a locked filing cabinet, accessible only to the researcher and all electronic data will be stored on a password-protected computer. All information you provide will be treated in accordance with the UK Data Protection Act and the General Data Protection Regulations. Data will be kept for 2 years after completion of the Doctor of Business Administration.

10.   What will happen to the results of the research study?

The results of the research study will be used as part of a Postgraduate dissertation. The results will also be used to inform a report to senior managers on the potential for using an enhanced entrepreneurial posture to drive business performance. The results may also be presented at conferences or in journal articles. However, the data will only be used by members of the research team and at no point will your personal information or data be revealed.

11.   Who has reviewed the study?

The study has received full ethical clearance from the Research ethics committee at Middlesex University who reviewed the study. In addition the Graduate School Research Ethics Committee at University of West London has scrutinized the study.

12.   Contact for further information

If you require further information, have any questions or would like to withdraw your data then please contact:

Matt Snowden (matt.snowden@uwl.ac.uk)

Thank you for taking part in this study. You should keep this participant information sheet as it contains your participant code, important information and the research teams contact details

CONSENT FORM

Title of Project: Enhancing the Entrepreneurial Posture of a UK HEI: An Appreciative Inquiry Approach

Name of Researcher: Matt Snowden

1. I confirm that I have read and understand the information sheet dated ....……………..…for the above study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

3. I agree that this form that bears my name and signature may be seen by a designated auditor.

4. I agree that my non-identifiable research data may be stored in National Archives and be used anonymously by others for future research. I am assured that the confidentiality of my data will be upheld through the removal of any personal identifiers.

5. I understand that any interview I participate in may be taped and subsequently transcribed.

6. I agree to take part in the above study.

Name of participant	Date	Signature

Researcher	Date	Signature
Matt Snowden		

1 copy for participant; 1 copy for researcher;

MIDDLESEX UNIVERSITY/UNIVERSITY OF WEST LONDON

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please inform the researcher as soon as possible, and they will facilitate your withdrawal. If, for any reason, you wish to withdraw your data please contact the researcher within a month of your participation. After this data it may not be possible to withdraw your individual data as the results may have already been published. However, as all data are anonymised, your individual data will not be identifiable in any way. Choosing to withdraw will have no consequences in terms of your employment at the University of West London.

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☐ Participating in an Individual Interview:

- It is anticipated that individual interviews will last up to 1 hour.
- Interviews may be recorded (audio only) in order to aid transcription
- The interview will take place on University of West London premises

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- Focus groups will be asked to document their collective views through flipcharts or other creative media. This may include audio or video if the group collectively **chooses** to use such media

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Matt Snowden (matt.snowden@uwl.ac.uk)

Thank you for taking part in this study. You should keep this participant information sheet as it contains your participant code, important information and the research teams contact details

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Name of Researcher: Matt Snowden

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3. I agree that this form that bears my name and signature may be seen by a designated auditor.

4. I agree that my non-identifiable research data may be stored in National Archives and be used anonymously by others for future research. I am assured that the confidentiality of my data will be upheld through the removal of any personal identifiers.

5. I understand that any interview I participate in may be taped and subsequently transcribed.

6. I agree to take part in the above study.

Name of participant	Date	Signature

Researcher	Date	Signature
Matt Snowden		

1 copy for participant; 1 copy for researcher;

Appendix 3   Knowledge Exchange Inquiry Plan

Knowledge Exchange Inquiry Plan

Inquiry Strategy: Progressive AI Meetings

Key:	
AI	Appreciative Inquiry
PI	Principal Investigator
AT	Advisory Team
ToR	Terms of Reference

This Inquiry Plan has been developed and adapted from (Bright, Cooperrider and Galloway, 2006), (D. K. Whitney and Trosten-Bloom, 2010) and (Cooperrider, Stavros and Whitney, 2008).
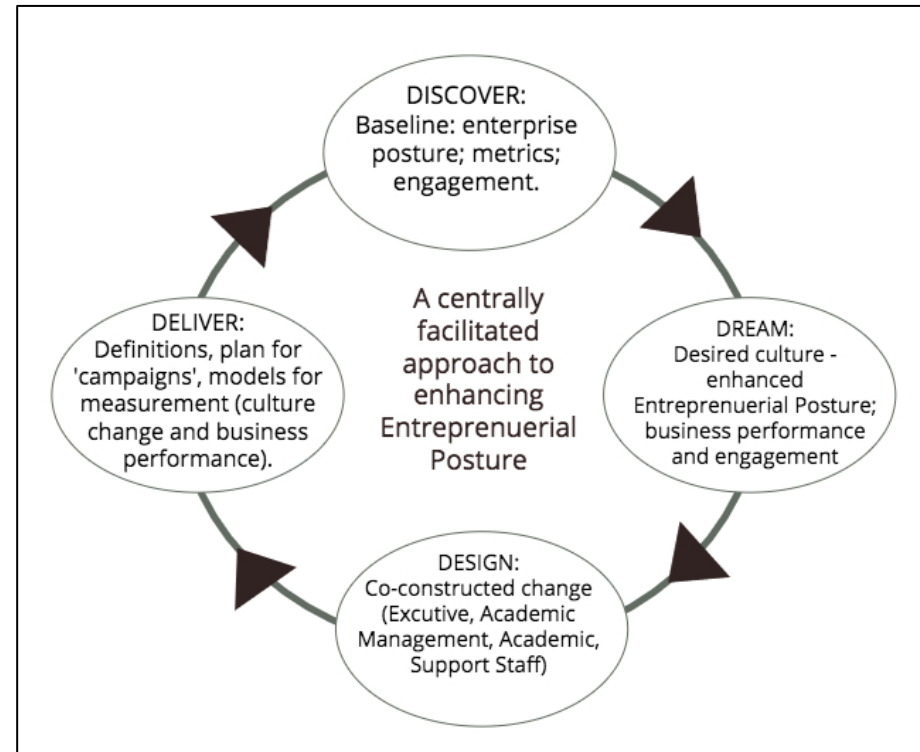
Affirmative Topic: *Creating a more entrepreneurial UWL that facilitates staff to be more engaged in Knowledge Exchange activities*

Stage	Element	Activity	Approach	Output
Start-up	Recruit Advisory Team (AT)	Recruitment of key (core) stakeholders to AT by PI. This is expected to include academic staff (as the key demographic the project seeks to engage) from across subject-disciplines and level of seniority (Lecture to Professor) with other relevant support staff. It is not explicitly intended to include heads of schools as this may inhibit some participation.	Direct Contact	Agreement to participate in AT
	AT Terms of Reference and understanding of AI approach	Introduce AI approach

Agree ToR, drafted by PI which will broadly cover the purpose (delivery of Phase One Action Research cycle); the membership of the AT; the role of the PI; the structure of Progressive meetings (as detailed in this plan); timeframes; and expected output (see Deliver). | AT Meeting 1 | Agreed ToR |
| | Mini-interviews between AT members | Paired group activity: Focus on perception of current Entrepreneurial Posture, appreciative perceptions of engagement with Enterprise, and exploring ways this could be measured. The purpose is to engage the AT members with the start-up phase of activity | AT Meeting 1 | Agreed Change Agenda |

	Define change agenda	Discuss and agree change agenda based on output from mini-interviews	AT Meeting 1	
	Affirmative Topic	Discuss, refine and agree the draft Affirmative Topic proposal	AT Meeting 2	Agreed Affirmative Topic
	Agree Questions	Discuss and agree initial scope for Interview questions, and create first draft. These questions are intended to gather broader organisational perspectives of current Entrepreneurial Posture, appreciative perceptions of engagement with Enterprise, and exploring ways this could be measured.	AT Meeting 2	Agreed Interview Questions
	Participant Selection	Discus and agree participant selection and identify stakeholders. It is expected this will include a wider range of stakeholders including senior managers, heads of Schools, heads of Central Departments, academics from across subject-disciplines and level of seniority (Lecture to Professor) and support staff.	AT Meeting 2	Agree participation plan
	Recruit participants	Secure participant engagement	PI	Signed participant consent forms
Plans, mini-interview templates, worksheets and meeting agendas will be adapted from (Cooperrider, Stavros and Whitney, 2008)				

Stage	Element	Activity	Approach	Output
Discovery	Interview Plan	Agree plan and format of interviews (with participants selected in AT Meeting 2 and recruited by PI – see above), plus further review of questions.	AT Meeting 3	Interview Plan
	Appreciative Interviews	Data gathering - Interviews of participants using questions set by AT & PI as part of AT Meeting 2	Interviews of participants by PI	Interview transcripts
	Dissemination of stories and best practice	Analysis of Interview data to identify stories and best practice around Enterprise activities, central-facilitation, and Entrepreneurial Posture.	PI initial analysis supported by AT (AT Meeting 4)	List of stories/best practice
		Agree and action dissemination approach	AT Meeting 4	Disseminated stories
	Process for making meaning of data	Group work to collaboratively make meaning/sharing results of interview data	AT Meeting 5	Map of Positive Core
	Map positive core	Group work to articulate Positive Core (about UWL Entrepreneurial Posture)	AT Meeting 5	
Plans, interview templates, worksheets and meeting agendas will be adapted from (Cooperrider, Stavros and Whitney, 2008)				

Stage	Element	Activity	Approach	Output
Dream	Envision Possibilities - Experiential Activity to reveal images of future	Individual reflection on focal question: what should UWL look like with an enhanced Entrepreneurial Posture	Large Group activity (AT and open to all participants). Facilitated by PI.	Opportunity Map
	Engage in Dream Dialogue	In groups, 30 minute open-ended discussion followed by group feedback. Facilitated by AT members		
	Clarify the collective Dream	In groups collectively articulate what future organisation looks/feels like		
	Creatively enact the Dream	Plenary: Groups creatively enact their dream.		
	Determine common themes and opportunities	In groups discuss and identify themes.		
	Create Opportunity Map	Plenary feedback to identify opportunities for potential Entrepreneurial Posture enhancement		
	Defining outcome of dream	Document the Dream	AT Meeting 6	Articulated Dream
Worksheets and meeting agenda will be adapted from (Cooperrider, Stavros and Whitney, 2008)				

Stage	Element	Activity	Approach	Output
Design	Connect Change Agenda to Design the target proposition describing the ideal organisation	Craft and agree provocative proposition regarding enhancing UWL Entrepreneurial Posture	AT Meeting 7	Articulated Provocative proposition
	Definitions	Agree relevant UWL definitions (Enterprise, etc)	AT Meeting 7	Agreed set of definitions
	Design campaigns	Identify and agree potential campaigns that can enhance Entrepreneurial Posture	AT Meeting 7	Agreed set of potential campaign area
	Design metrics of change	Identify options for how positive cultural change and organisational performance uplift will be measured.	AT Meeting 7	Agreed set of metrics to measure impact of change
Worksheets and meeting agendas will be adapted from (Cooperrider, Stavros and Whitney, 2008)				

Stage	Element	Activity	Approach	Output
Deliver	Recognition and celebration of what has been learned	Gathering stories of what has been learned and any transformations that have arisen as part of the Action Research cycle. Agree process and plan for dissemination.	AT Meeting 8	Disseminated stories
	Celebrate	Delivery of dissemination plan	AT Meeting 8	
	Self-organising action definition	Agree list of campaigns (further AI cycles) that will form the Deliver stage of the overarching Action Research project.	AT Meeting 9	Agreed and prioritised set of campaigns (basis for further AI cycles)
	Support to ongoing success	Identify AT's and inquiry plans for each agreed campaign (mirror to Start-up phase for AI Cycle One)	AT Meeting 9	Inquiry Plan for each campaign
Worksheets and meeting agendas will be adapted from (Cooperrider, Stavros and Whitney, 2008)				

Appendix 4   Interview Plan (anonymised)

Entrepreneurial Posture Advisory Team

![University of West London - The Career University]

Interview Plan (*anonymised*)

Participants & Interviewers

Category of Staff		Target Range	Recruitment	Interviewer
Senior Leader	Head of School	3-4 (of 9)	Invite from [PI] to all HoS (excluding AT06 as member of Advisory Team). Specific follow up: *[names redacted]*	AT04
Academic Management	Head of Subject	5-7(of 22)	[PI] to send invite via Heads of School	[PI] to contact Advisory Team re availability & allocation of interview
Academic	Professor & Associate Professor	15-18 (of 51)	AT02 to contact and ensure spread across subjects & Schools [PI] to support with names/contact details	AT02
	Senior Lecturer & Lecturer	20-22 (of 276)	[PI] to send invite via Heads of School	[PI] to contact Advisory Team re availability & allocation of interview
Professional Support	Head of Department & Manager (Gr6 -10)	4 (of 156)	Targeted Invites ([PI]) to: *[names redacted]*	[PI]
	Officer/ Coordinator/ Administrator (Gr 3 -5)	10 (of 268)	Targeted Invites ([PI]) to: *[names redacted]*	[PI] to contact Advisory Team re availability & allocation of interview

- AT02 to provide Audio Recorders
- Meeting on 9th Jan as progress follow up (Interviews undertaken vs Target, interviews booked, shortfall/gaps identified)
- Completed by AT meeting 4 (February)

Affirmative Topic	Enhanced Knowledge Exchange	
Lead in	This interview is focussed on looking at how UWL can be better at Enterprise and Knowledge Exchange. Looking at the model you can see there is a lot of different things that fit in KE that may not be the same as how Enterprise has been traditionally seen. With KEF coming along we have a great opportunity to re-imagine and create something new in this area. This action research project is looking to get your input into what this should looks like, in particular working wherever possible from things that are already working well. [*Description and provision of KEF Metrics model*]	
Questions:		**Follow-up**
General (stage setting):	• What does Enterprise mean to you? Does Enterprise differ from Knowledge Exchange? Should it? • Thinking about your past experience, when do you feel UWL is at its best in this area, and in general?	Check if drawing from pre-UWL experience
Theme1: Recognition	• What motivates you? What would motivate you to engage more in Knowledge Exchange activities? • Can you recall a time where your achievement and performance was recognised and rewarded? How was that expressed? • What KE activities do you think should UWL recognise and reward? What could be meaningful as reward or recognition?	If not UWL what could be implemented at UWL
Theme 2: Efficiency	• When UWL is at its most efficient, what does this feel and look like? • What would an effective and efficient Knowledge Exchange activity look like? • How would you want to organise your time to be more effective?	
Theme 3: Investment	Imagine UWL plans to invest into supporting Knowledge Exchange activity: what would you want this to look like? How should it be managed and decisions made?	
Theme 4: Support	• Can you think of a time when you were able to really achieve something new: what were the things that made this possible? • What support from senior managers would facilitate staff to be more entrepreneurial and engaged with Knowledge Exchange? • If you could ask for one new thing at UWL to enhance support to Enterprise or enable you to be more enterprising, what would it be?	

		Allow multiples if volunteered
Concluding questions:	If enhancement was achieved what would it look like? How could level of entrepreneurship be measures? What 3 key changes could be made to help get UWL there?	
Notes	• Remind interviewees that this will be recorded and transcribed, so concise answers appreciated • If answers are very negative seek to understand the affirmative mirror (i.e. what would an idea version be)	

Appendix 5   Knowledge Exchange metrics diagram

Leadership, Strategy and Institutional Structures

Leadership and governance | Organisational systems | Strategy | Institutional culture | Incentives and rewards

Building internal capability within the HEI

KE staff — Internal / external courses, Best practice networks, Recruitment

Academics — Internal courses, Workshops / seminars, Mentoring, Informal networks

Facilitating the research exploitation process (non tech transfer)
Access points for external orgs
Business development
Corporate Relations
Consultancy support
Press / communications
Marketing
External fundraising for research

Skills and human capital development
CPD / short courses
Lifelong learning
Careers services
Work placements / project experience
Joint curriculum development

Knowledge networks / diffusion
Provision of public space
Alumni networks
KE professional networks
Staff exchanges
Academic – external organisation networks

Entrepreneurship and enterprise education
Social Enterprise
Enterprise and Entrepreneurship Training

Commercialisation (tech transfer)
Technology transfer
Patenting / IP advice
Investment funds
Contracts / legal support

Exploiting the physical assets of HEI
Science Parks
Incubators
Facilities/ Equipment

Supporting the community / public engagement
Outreach
Volunteering
Social cohesion / community regeneration
Widening participation
Awareness raising / knowledge diffusion
Involving public in research

T Coates Ulrichsen 2014

Appendix 6   Map of opportunity
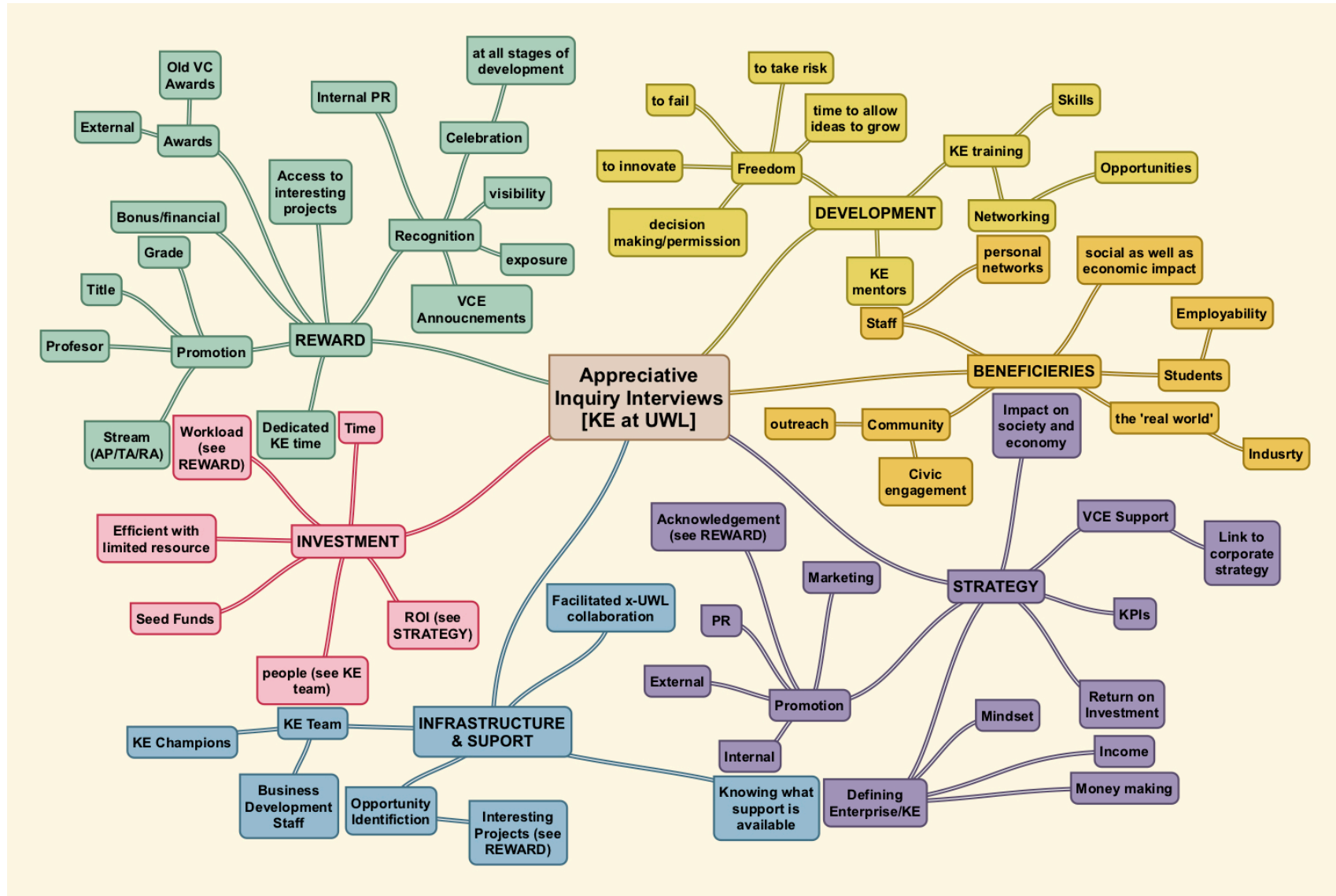
Appendix 7 Group activity output

Participants (codes)

P02; P09; P18; P21; AT03; AT04 (partial) AT06; PI (from 30 invitees, excluding those who have left UWL)

1	Intro: Individual reflection on focal question "What would a more entrepreneurial UWL look like?
2	Group Discussions & feedback

Group 1: AT06/P18

- Responsive
- Flexible
- Willing to go where the competition won't
- Decision making
- Incentivise
- Revisit employment contract
- Across the board
- Outward looking

Group 2: P09/P21

- Flow of knowledge – in and out of UWL
- Embedded in the community (all areas)
- Individual module offering – pubic
- Work shadowing – in /out UWL
- Specialist practitioners sharing expertise:
    - Good recruitment practices
    - Equality/diversity in workplace
    - Disability/accessibility in workplace
    - Consultancy
- Flexibility offer
- Collaborative bids – industry
- Internal knowledge transfer
    - Skills   co-ord/
    - Events   join up

Group 3: P02, AT03 and AT04

Entrepreneurship:

- Professional support
- Staff training
- Up selling
- Confidence
- Simplified decision making
- Access to resources
- Speedy access to decision makers
- Checklist pre-action
- Risk - bold

PI notes:

Common themes – flow, training, responsive vulture, flexible not rigid, decision making. Risk and innovation, know what our strengths are; constraints; inclusive; resource; across the board; outward looking; consultancy; collaborative culture, specialist practitioners – sharing knowledge; upskilling; sharing knowledge equality & diversity expertise;

From feedback discussion:

- Big picture, strategy
- Not just (always) about UG
- "stuck in the dark ages' need to be flexible in delivery
- Mindset
- Market responsiveness

What is entrepreneurial:

- Google, amazon
- Discussion re Entrepreneurial orientation being about new markets and new products – innovation.

3	Group articulate what they want UWL to be like
4	Creative enactment of dream

AT03:
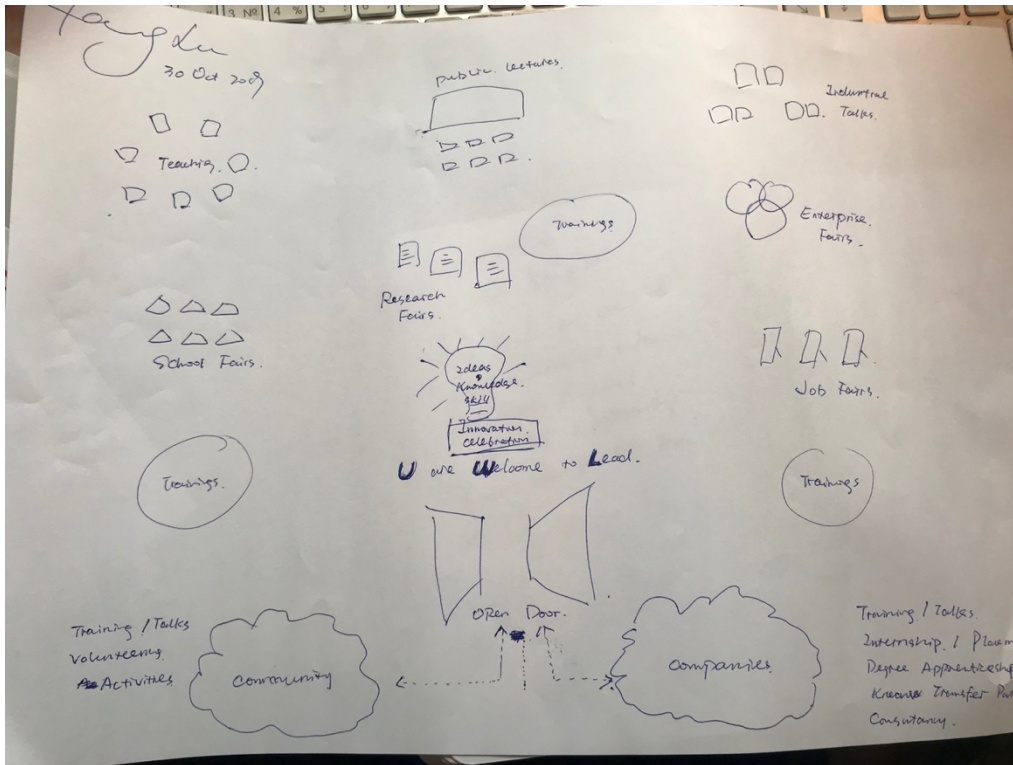
AT04:
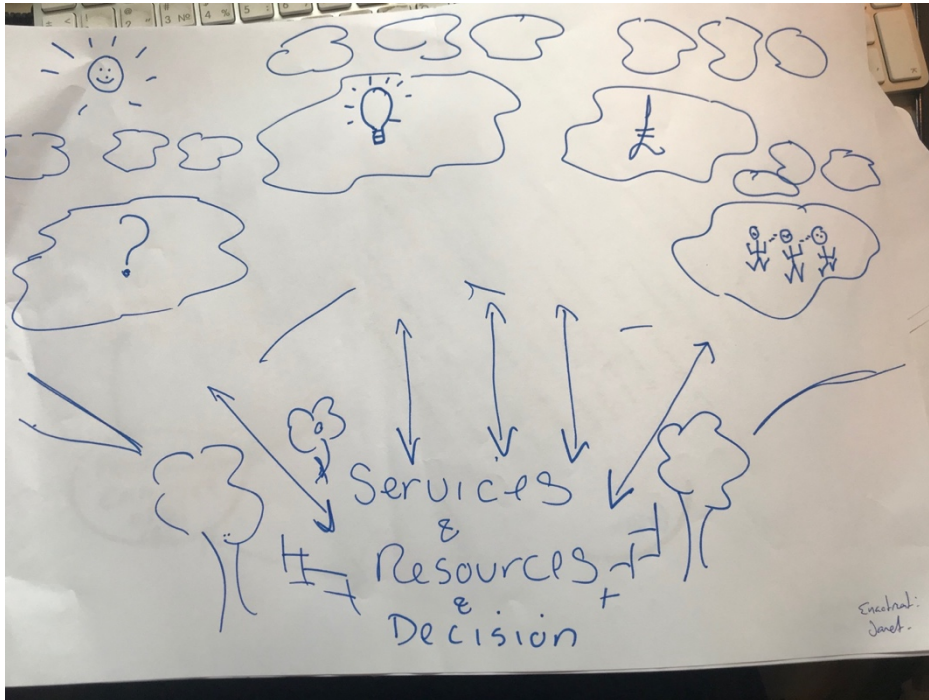
AT06 & P18

P09 & P21

AT02

BUILDING BRIDGES
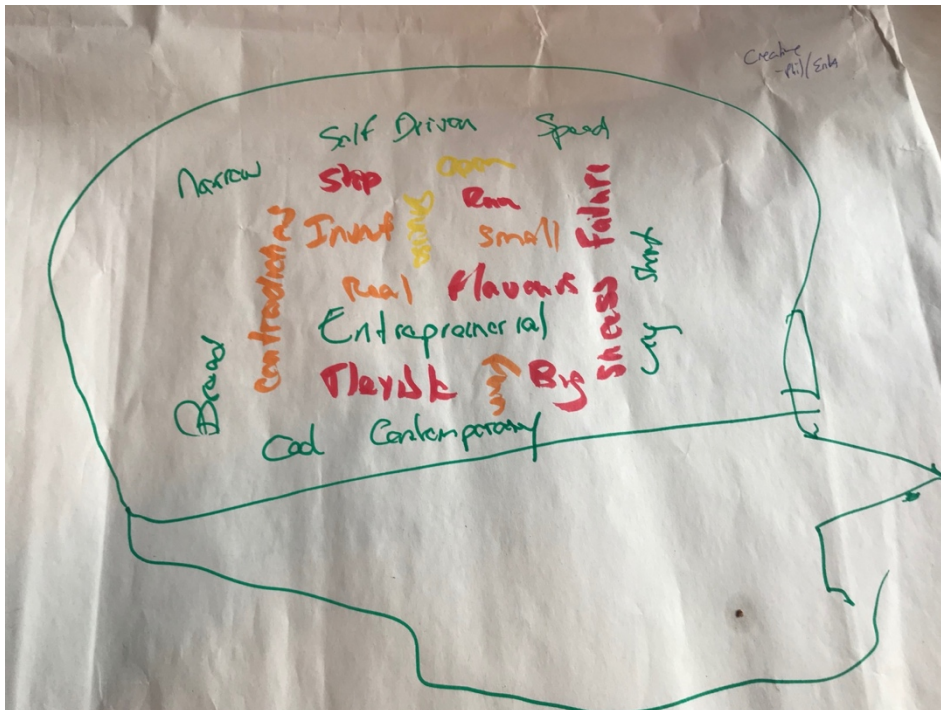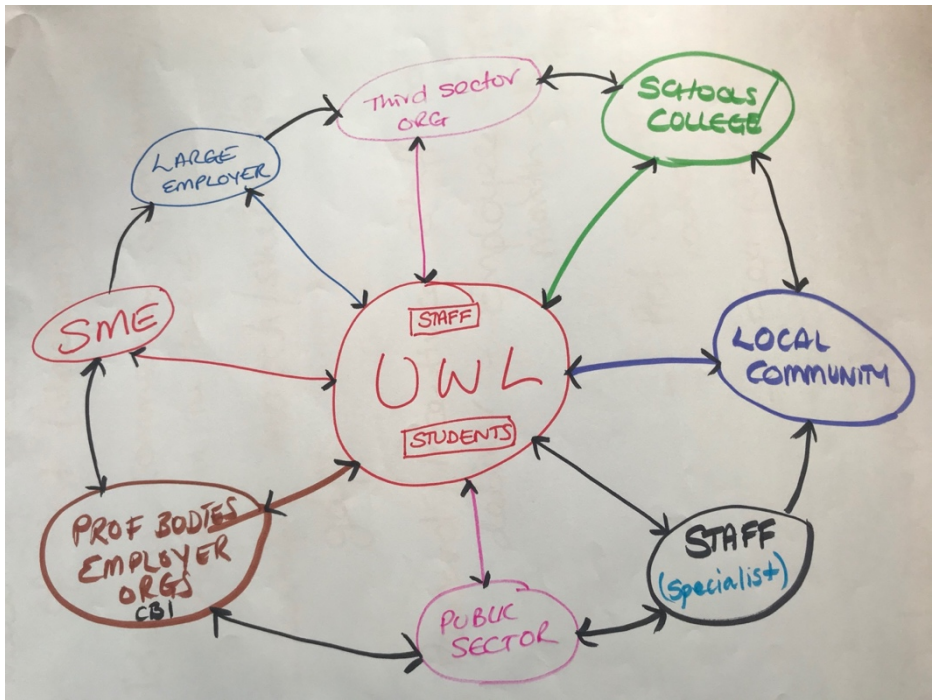
5	Group discussion of themes from earlier activities and cross over with the map of opportunity - identifying activities and projects that will create this new UWL
6	Feedback on opportunities to create the ideal UWL

	Project/Activity Idea	Source
A	Seed funds to encourage innovative ideas • Can lead to finding a company that would be good collaborating candidate • After researcher have used seed fund to develop this research, an award ceremony could be organised to celebrate seed funded researchers (awardees) • Industrial/commercial companies would be invited to encourage collaboration	P02/AT03
B	Showcasing staff members research to celebrate their achievement - invitation	P02/AT03
C	Public lectures – to promote knowledge, benefit to society, channels for collaboration with industry, training opportunities.	P02/AT03
D	Award ceremonies	P09/P21
E	Information project • Intranet • Dedicated • Internal communications	P09/P21
F	Process for supporting and presenting ideas and space/place to do it [PI nots: discussion re WIH and creativity]	P09/P21
G	Training in Enterprise ('entrepreneurship')	P09/P21
H	Create a decision making process	P09/P21
I	Pay academics for consultancy	P09/P21
J	Audit of skills and expertise of staff (sharepoint)	AT06/P18
K	Identify commercial opportunities/needs/gaps in the market	AT06/P18
L	Identify match/skills to gaps	AT06/P18
M	Reward/Incentivise staff to deliver: • Employees of the month – KT/Enterprise [PI note: rollout of Student Services model/pilot] • Professional services promotional round • Flexi work environment	AT06/P18
N	Ideas platform (same as E and F?)	AT06/P18
O	Develop YAMAR (again see E)	AT06/P18
P	Consultancy process and support	Discussion
Q	Promotion of staff – showcase on UWL web	Discussion
R	KE Champions	Interviews

S	[From Development Theme] training in KE (e.g. networking; using networks effectively; opportunity identification; 'sales'; KE skills)	Interviews
T	[From Development Theme] Freedom – freeing up decision making and autonomy through small project funding (seed funds) – see A	Interviews
U	[From Strategy Theme] – define KE as part of collaboratively developed KE strategy. Clear KPIs for KE	Interviews
V	[From multiple Themes] Communications: • Internal to promote what KE is and share expertise & best practice • External to promote UWL	Interviews
W	[From Support Theme] KE champions in Schools/Faculties, including dedicated time (also links to reward, recognition)	Interviews
X	[From Support Theme] Central opportunity identification and brokerage – providing access to 'interesting projects'	Interviews
Y	[From Investment Theme] – Seed funds (see A)	Interviews
Z	[From Reward Theme] Dedicate KE time in workloads and recognition of work that ultimately has a RoI (developmental not immediate return)	Interviews
AA	[From Reward Theme] KE promotion route – L to Prof	Interviews
AB	[From Reward Theme] Financial reward for KE (links to I)	Interviews
AC	[From Reward Theme] Celebration and awards (links to D)	Interviews

Appendix 8   Phase Two timeline

	2019		2020												2021										
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
KE Growth Group	Established	Activity																							
Covid-19					Lockdown						Phased return		open		Lockdown #2			Phased return		Open					
KE Seed Fund					AI Activity	Proposal refined by KE Growth Group						Submitted													
KE Champions											AI Activity	Proposal refined by KE Growth Group					Submitted								
KEF					KE Growth Group collates activities for KEF narratives development							Narratives submitted					KEF Published	Action plan	SMG Report	URSEC Report					
HEIF Accountability Statement						Announced	KE Growth Group works on themes										Submitted								
KE Concordat												Sign-up agreed			Sign-up	KE Growth Group works on self-evaluation				Submitted			Feedback received	URSEC Report
KE Strategy																		Aims and priorities agreed	URSEC report	Strategy developed and written, agreed by KE Growth Group					URSEC Report
KE Strategy Implementation Plan																				KPIs developed and agreed by KE Growth Group					URSEC Report
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	2019		2020												2021										

Appendix 9   Knowledge Exchange Growth Group Terms of Reference

Knowledge Exchange Growth Group

Terms of Reference

1) To oversee UWLs approach to Knowledge Exchange (KE), proposing initiatives and changes to structure, process of policy that will support growth.

2) To provide oversight of KEF submissions.

3) Continually review and implement UWLs commitments and action plan related to the KE concordat.

4) Engage with University stakeholders to promote the University's role in Economic and social regeneration and growth.

5) Regularly inform key internal stakeholders in the University of any Changes in policy and/or requirements of external agencies that underpin KE provision.

6) To monitor performance against targets.

2.   Remit

The remit of the KEGG is to

- Note
- Receive
- Consider
- Support
- Recommend

3.   Membership

The apprenticeship operations and compliance group shall comprise:

Ex-officio and nominated members

Head of Research and Enterprise Operations –Matt Snowden

School and Department Representatives

[REDACTED]

Secretary:

[REDACTED]

In attendance

As required representative from other departments not represented

4   Chairmanship

Head Research and Enterprise Operations

5. Frequency of Meetings

Six times per year

6. Reporting Procedures

Report to: University Research, Scholarship and Enterprise Committee (URSEC)

Groups feeding into AOCG

& Finish groups as periodically created.

Effectiveness and lifespan

Lifespan ongoing. Effectiveness reviewed five-yearly as part of the Academic Board effectiveness review.

Actions that may be taken by AOCG

The KEGG may:

- Note
- Receive
- Consider
- Support
- Recommend

Most appropriate minuting style

Action Points and decision minutes.

Resources

Secretary	Apprenticeship Administrator
Officer	Head Degree Apprenticeships
Meetings	Six times per year

Appendix 10   Knowledge Exchange Concordat principles and key enablers

PRINCIPLE	DETAIL	KEY ENABLERS
Mission	Knowledge exchange is a recognised part of the overall institutional strategy and is valued for the social, cultural and economic outcomes it helps us achieve. We have a clear understanding of the institutional role and the purpose of KE, including the recognition of the needs and interests of potential and current partners and beneficiaries, ensuring a commitment to inclusivity and equality. Clarity of mission is essential for efficient and effective KE. Staff, students and external organisations need to understand the aims and priorities of the institution's senior leaders and governors in relation to the whole range of KE activities undertaken by the institution.	**STRATEGY** A strategy relating to KE is developed in consultation with staff, students and key partners and is accountable to senior leaders of the institution. It will be regularly reported on and updated following institutional consultation and approval by governing bodies. **PRIORITISATION** A clear statement exists concerning the modes of KE that are a priority and hence supported in the context of an underpinning institutional strategy and priorities; the statement explains how the benefit will be maximised for wider social outcomes at local and national levels and social and cultural benefit should be considered alongside economic benefit. **STATEMENT** Where this is a KE objective, a published statement is made on the nature of the civic/ regional leadership role of the institution within its place-based contexts, including its role in bringing together public, private and third-sector organisations into a wider KE ecosystem. **ACCOUNTABILITY** A defined approach to both academic and professional leadership roles within the senior management team, and how institutional accountabilities relating to KE are overseen by the institution's governing body. **EVIDENCED APPROACH** An evidenced approach to sustainable institutional investment to meet agreed institutional KE objectives that demonstrates full consideration of maximising opportunities for the efficient, effective and shared use of both human and capital assets. **COMMITMENT** A clear commitment to provide routes and support for students to engage with all aspects of KE, including Enterprise and entrepreneurship, with due consultation with students on the approach. **RECOGNITION** A clear recognition of the role of key partners in KE and the reciprocal benefits this can bring to all parties involved through co-creation of strategy and approach.
Policies and processes	Where appropriate, we have **clear policies** on all types of KE that we undertake and work with staff, students, collaborators and beneficiaries so that the policies are understood	**EXPLOITATION** Exploitation of intellectual property (IP), including licensing and spinouts, shareholdings, revenue-sharing, and support available **ACCESS** Accessing specialist facilities, including costing and pricing, access and availability, and attendant support. **CONSULTANCY**

PRINCIPLE	DETAIL	KEY ENABLERS
	and operationalised. A well-defined set of relevant policies ensures that all parties engaged in KE have a good mutual understanding of how the institution values KE activity. Institutions could provide evidence of a clear set of policies covering those areas of KE central to the institution's mission and values, and consistent with its charitable status and aims.	Consultancy and advice, including formal policies on the provision of advice by individual academic staff on a private or institutional basis.
		ACTIVITIES Engagement of, and with, the public on research and the broader activities of the university.
		REGENERATION Regeneration and local business support, including policies on preferential access to services and facilities, institutional collaboration locally, and partnership with local authorities and local and regional economic development structures and/or devolved administrations.
		DEVELOPMENT Continuing professional development (CPD) and employer engagement in course development and delivery, including a clear approach to accreditation and quality assurance, and potential for customised provision.
		STATE AID State aid, liability insurance, research and development tax credits and other technical and legal matters.
		MECHANISM Mechanisms for ensuring awareness and compliance with these policies within the institution.
Engagement	We build effective relationships by having clear routes to access information and expertise in the university with engagement mechanisms and policies developed to suit the needs of a wide range of beneficiaries and partners working with institutions as publicly funded bodies.	**DEFINED** A clear route for external parties to access a defined point of initial contact.
		ENQUIRIES Published guidance is available on how formal enquiries are triaged and responded to within effective timescales.
		INFORMAL RELATIONSHIPS Published guidance is available on how informal relationships should be managed in the context of internal policies, including when formal agreements should be explored.
		EXTERNAL RELATIONSHIPS Published guidance is available on how relationships with external parties are managed to professionally accepted standards in order to deliver high levels of partner confidence.
		AGREEMENTS Formal agreements (in plain language) to cover any substantive KE work undertaken to ensure that everyone's rights and responsibilities are clear, and everyone is clear about what to expect from each other.
		ARRANGEMENTS Formal arrangements for timely and efficient execution of agreements and mechanisms to monitor this to inform improved service delivery.
		SUPPORT Support systems are in place to ensure that arrangements are used effectively.
		UNDERSTANDING

PRINCIPLE	DETAIL	KEY ENABLERS
		A formal approach exists to understanding and growing the depth and breadth of relationships with particular partners, sectors and stakeholder groups, and the management of relationships with multiple institutional touch points.
Working transparently and ethically	We make sure that our partners and beneficiaries understand the ethical and charitable regulatory environments in which our institution operates, including a commitment to inclusivity and equality, and we take steps to maximise the benefit to them within that context.	**COMMUNICATION** Communication to beneficiaries on the institutional approach to KE and collaboration as publicly funded institutions is clear and within legal guidelines and requirements. **TRANSPARENT** Published and transparent policies on intellectual property rights (IPR), liabilities and warranties in relation to access by third parties as a result of licensing agreements or the outcomes of collaborative research. **REQUIREMENTS** Where relevant, there is clear communication to partners and/or beneficiaries on the requirements upon it as a charitable organisation to use IP arising from KE for non-commercial teaching, research or professional practice, also stating the importance of publishing the outcomes of research and KE, supported by public investment. **ETHICAL** Published mechanisms used to assure the ethical integrity and quality of its research, teaching and KE, and which reserve the right to decline work that cannot meet these standards. **OPPORTUNITIES** Formal mechanisms are in place to ensure that where we cannot provide solutions that we can refer opportunities to those in our networks who can **RESPECT** There is respect for partner confidentiality, including in the use of appropriate formal agreements.
Capacity building	We ensure that our staff and students are developed and trained appropriately to understand and undertake their roles and responsibilities in the delivery of successful KE.	**QUALITY** Established institutional approaches are used to obtain full value from developing and fostering a diverse workforce in an inclusive environment **FOR ACADEMIC STAFF AND STUDENTS** 1. KE policy and practice form part of new staff induction and ongoing staff development programmes. 2. Accessible and appropriate training supports KE activities, including due consideration of staff induction and formal academic practice development programmes. 3. There is accessible and appropriately promoted professional and administrative support to academic colleagues in furtherance of their KE activities. 4. There is accessible and appropriately promoted support for staff and students wanting to establish and grow new enterprises or activities.

PRINCIPLE	DETAIL	KEY ENABLERS
		5. Accessible and appropriately promoted skills training exists for students who are expected to engage with non-academic partners on behalf of the institution as part of their curricular or non-curricular activities.
		6. Approaches for the development of KE and entrepreneurship skills in curricular and non-curricular student activities are clearly identified, for both undergraduate and postgraduate students.
		FOR PROFESSIONAL STAFF SUPPORTING KE
		1. Appropriately experienced and/or qualified and/or accredited KE professionals are recruited who demonstrate aptitude and the ability to broker and manage KE activities and an understanding of commercial and academic drivers.
		2. There is a commitment to, and evidence of, continuous development of KE staff at all levels of their career through formal training, mentoring, sharing best practice and engagement in relevant networks and communities.
		3. Regular reviews of performance take place, including feedback from external partners
		4. There is a clear and evidenced approach to ensuring the professional standards of staff members within professional KE teams, e.g. through processes for accreditation, peer review and staff exchange
Recognition and rewards	We recognise and reward the achievements of staff and students who perform high quality KE activities.	**INDICATORS** Clear indicators of what is considered high-quality KE within the context of the institution's strategy and good practice standards.
		CRITERIA Defined approaches to recognising and rewarding successful and innovative KE activities and outcomes within promotions criteria and reward processes for academic and professional services staff.
		POLICIES Defined approaches to institutional recognition of successful KE by academic staff and students via processes other than formal promotion and reward, such as revenue-sharing policies, staff prizes and the celebration of success stories.
		RECOGNITION A published approach to how KE activities are recognised within workloads and rewarded with time allocations appropriately.
		CELEBRATION Approaches towards recognition and rewards that celebrate institutional achievements as well as those of individuals.
		PROCESSES

PRINCIPLE	DETAIL	KEY ENABLERS
		Clear reporting processes allow the institution to know whether its policies are being followed.
Continuous improvement	We proactively strive to share best practice with our peers and have established processes for learning from this.	**FEEDBACK** There is a formal approach to the use of beneficiary and partner feedback to drive improvements in KE performance.
		SUPPORT Active engagement takes place with national and international organisations in order to support sharing of best practice.
		APPROACH There is a defined approach to learning from outside the higher education sector by engagement with public and private stakeholders, including government, local authorities, enterprise partnerships and industry/business representative bodies, including through their representation on advisory and institutional governing bodies.
		MEASURES A commitment is made to recognising and using objective benchmarking measures to improve KE performance, including the Knowledge Exchange Framework (KEF) in England, and other appropriate evidence-based international benchmarks and quality standards.
		QUALITY Published mechanisms show how the institution manages the quality of KE, taking into account the range of KE activities that the institution has prioritised, including use of recognised quality management processes, formal procedures on how feedback is used to improve KE quality, complaints procedures, and arrangements for the timely and efficient execution of agreements and mechanisms.
		EXTERNAL PEER REVIEW A commitment is made to considering the role of external peer review of KE performance improvement, informed by KE performance as described in England by the KEF.
Evaluating success	We undertake regular institutional and collective monitoring and review of our strengthening KE performance using this concordat and through regional, national or international benchmarks to inform the development and execution of a programme of continuous improvement	**SELF-ASSESSMENT** A commitment to carrying out regular self-assessment against the concordat and development of an improvement plan covering: • Regular reporting on KE activity to the institution's governing body • Benchmarked evidence of scope and scale of services (for example using KEF metrics) • Third-party evidence of the value of interventions, such as that derived from customer satisfaction surveys • How KE policies are being promoted and followed across the institution

PRINCIPLE	DETAIL	KEY ENABLERS
	so that KE becomes more effective.	
		• The quality of service delivery derived from meeting management benchmarks or targets.

CONTRIBUTIONS

Third-party evidence of the contributions that institutional KE makes at local, national or global levels.

REVIEW

Periodic governing body review and approval of KE policies and KE performance and improvement plans, and assurance of their efficacy via established institutional programmes such as internal audit.

(source: https://www.keconcordat.ac.uk)

Appendix 11   Knowledge Exchange seed fund applications data

Staff (applicants and co-applicants) prior experience of KE

STAFF	NUMBER
With prior experience of KE	10
Without prior experience of KE	44
Total	54

KE seed fund application data

ACADEMIC DEPARTMENT	APPLICATIONS BY ACADEMIC DEPARTMENT	CLARITY OF UNDERSTANDING OF KE DEMONSTRATED		CLARITY OF LINK TO KEF/HE-BCIS METRICS			IDENTIFIED NON-ACADEMIC PARTNER/COLLABORATOR	
		No	Yes	No	Partially	Yes	No	Yes
CLBS	5	2	3	4	1		4	1
CNMH	6	2	4	3	1	2	6	
FMD	2	2		2				2
Law	1	1		1			1	
LCM	11	3	8	4	4	3	3	8
LGCHT	2		2	2			2	
SBS	1		1			1	1	
SCE	11	4	7	3	4	4	4	7
SHSS	6	2	4	2		4	4	2
TOTAL	45	16	29	21	10	14	25	20

Appendix 12   Knowledge Exchange Growth Group proposal for KE Champions role

Knowledge Exchange Champions

1   Purpose

1.1   The KE Champion role is designed to facilitate enhanced levels of engagement across Schools in KE activity. Providing resource and focus at a School/College level is aimed at enabling further growth in KE activity with consequential financial, HE-BCIs and KEF returns on the investment in time.

1.2   KE activity is defined as activity that supports economic or societal development and growth. Specifically, for the purposes of the KE Champion role it is activity that can impact on the measures of KE that include (bit are not limited to):

- HE-BCIS (collaborative research that includes at least one non-academic partner; contract research; consultancy; use of UWL facilities by outside organisations; CPD; IP protection or licensing; creation of spin-out companies or graduate start-ups; and funded regeneration projects);
- KEF (including Innovate UK funded projects, regeneration projects; and civic engagement).

2   Review of Options

2.1   Existing models of 'Champions' or additional responsibilities exist in UWL that could be adapted to create a focus for growing KE activity within Schools (Quality Lead, UWL Flex Champions; REF Leads).

2.2   Across all of these models the challenge is ensuring that:

- There is recognition of the role (e.g. in workload);
- The role is not perceived as extra work for no real reward;
- There is a need to be able to access some (small) funds to run activities;
- There needs to be opportunities to 'rotate' staff rather than an additional role becoming a permanent feature of someone's job description;
- There are opportunities to share good practice across Schools & Colleges.

2.3   Balanced against this is the need to ensure:

- There is a return on the investment of any time recognised in workloads;
- Workload recognition is commensurate with the level of KE activity aimed at being achieved;
- Activity leads to clear outputs and outcomes that enhance KE activity.

3   Proposed Design

3.1   The recommendation is for the establishment of a 'KE Champion' within each School/College.

3.2   This role should have an agreed minimum workload allocation (with discretion of Heads of School to increase where this is expected to achieve agreed targets for KE activity and income).

3.3   This allocation of time will be the equivalent of £3000 per Champion per year, set against HEIF Funds.

3.4   All KE Champions will also have access to funds managed by the Head of Research & Enterprise Operations (drawn from HEIF funds), with a simple form to capture requirements and expected outcomes to ensure there is value for money and potential for return on investment. This is anticipated to be a budget of £3000 p.a.

3.5   The focus of the role will be aligned to local School/College needs, but generally would include activities such as:
   •   Focusing on engaging individuals in KE activity rather than mapping/reporting on activity;
   •   Running activities and events that encourage engagement at a School/College level (including encouraging Seed fund applications[39]);
   •   Actively promoting (e.g. through social media channels) School-level KE activity to external stakeholders;
   •   Co-ordinating and facilitating cross-School/College activity with other KE Champions;
   •   Supporting staff to develop KE links externally;
   •   Undertaking business development activities that develop potential to work with outside organisations (leading to KE outcomes);
   •   Actively supporting meeting (and exceeding) School/College Enterprise targets, particularly through broadening the range of income generation activity that is undertaken;
   •   Participating in regular activities to share best practice, and contribute to delivering at least one Brown Bag Lunch session per academic year.

3.6   Each KE Champion will hold the role for a 12-month (extendable) period.

3.7   For the first year, the recommendation is KE Growth Group Members take on this role. For future years, the role can pass to volunteers, KE Group reps or KE Seed Fund winners[1]. This allows rotation of staff, fresh ideas, and broadens the engagement of staff with KE intertest/roles.

3.8   There will be a clear link to the Academic Employment Framework, so that success in the KE Champion role can support career progression (both promotion and career development).

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[39] Subject to KE Seed Fund Proposal approval

4   Estimated Costs & Funding Source

4.1   It is anticipated that 9 roles will require support to £27k of staff time, plus an estimated non staff budget of £3k shared across all activity. The estimated total (£30k) can be set against increased HEIF funding.

4.2   **Return on UWL investment:**
- Higher levels of engagement with KE
- Potential to develop KE staff capability & capacity
- Financial returns from KE activity
- Increased revenue reported in future HE-BCIs, potentially driving increased HEIF funding
- Enhancement to KEF through HE-BCIs or Narratives
- Meets Research England requirements form explicit uses of HEIF funding.

Matt Snowden

Head of Research & Enterprise Operations

KE Growth Group

March 2021

Appendix 13   Approaches to measurement of KE drawn from interviews

PARTICIPANT	AREAS OR TYPES OF MEASUREMENT OF KE (ITALICS INDICATED THIS MEASURE WAS IMPLICIT RATHER THAN EXPLICIT)
P01	Visitors to Exhibition Numbers participating in outreach activities
P02	Change in Culture Financial metrics
P03	KPIs – Financial KPIs (unspecified) non-financial
P04	Research Outputs Networking events *Collaborations with external stakeholders*
P05	KPIs Outreach Volunteering KEF
P06	Income *International profile*
P07	*Incubated businesses* More innovation
P08	*PhD student numbers*
P09	Having a Volunteering Hub Events
P10	Income generation Outreach
P11	Industry input into student projects *Funding*
P12	Company survival Internships PR/Media output
P13	KE in teaching (external speakers)
P14	[participant not able to answer]
P15	Income Student placements & work experience
P16	Money Recognition (staff)
P17	Levels of academic community activity
P18	*Income* *Income diversity* KPIs
P19	[Disagreed with measurement as an approach]
P20	Employer input into curriculum (Industry Boards, input into modules)

	Income	
P21	KPIs	
	Start-ups	
	Student numbers	
P22	KPIs (amount of External Hire; number of businesses engaged)	
P23	*Events*	
	Recognition	
	Research publications	
P24	Income	
	Work commissioned by companies	
	Graduate employment	
P25	Start-ups	
	Engagement with business	
	Social media engagement	

Appendix 14   Knowledge Exchange Orientation Survey

UWL KE Orientation Survey (adapted from Kalar & Antonic (2015)	Kalar & Antonic (2015) (adapted from Todorovic *et al* 2011)	Todorovic *et al* 2011
Research mobilization	**Research mobilization**	**Research Mobilization**
UWL encourages graduate students to engage in research with significant implications for industry or society	Our department encourages graduate students to engage in research with significant implications for industry or society	RM1 We encourage our graduate students to engage in research with significant implications for industry or society
UWL encourages students to seek practical applications for their research	Our department encourages students to seek practical applications for their research	RM2 We encourage students to seek practical applications for their research
In UWL we emphasize applied research for industry	In our department we emphasize applied research for industry	RM3 Faculty members in our department emphasize applied research
Compared to other similar Universities in the UK, UWL has a reputation for its contribution to industry or society	Compared to other similar departments in this province, our department has a reputation for its contribution to industry or society	RM4 Compared to other similar departments in our province, our department has a reputation for its contribution to industry or society
Many of us conduct research in partnership with non-academic professionals	Many of us conduct research in partnership with non-academic professionals	RM5 Many of our faculty members conduct research in partnership with non-academic professionals
At UWL it is expected to make substantial contributions to industry or society	At our department it is expected to make substantial contributions to industry or society	RM6 Our faculty members are expected to make substantial contributions to industry or society
Industry collaboration	**Industry collaboration**	**Industry Collaboration**
UWL is recognized by industry or society for its flexibility	Our department is recognized by industry or society for its flexibility	IC3 We are recognized by industry or society for our flexibility and innovativeness

UWL is recognized by industry or society for its innovativeness	Our department is recognized by industry or society for its innovativeness	
Our graduate students often secure high quality industry positions	Our graduate students often secure high quality industry positions	IC5 Our graduate students often secure high quality industry positions
UWL is highly regarded by industry	Our department is highly regarded by industry	IC2 Our department is highly regarded by industry
UWL encourages industry involvement in our research activities	Our department encourages industry involvement in our research activities	IC1 We encourage industry involvement in the research activities of our faculty members
It is believed that UWL should build relationships with industry	It is believed that our department should build relationships with industry	IC4 We believe that our department should build relationships with private or public sector organizations
Unconventionality	**Unconventionality**	**Unconventionality**
Compared to other similar Universities in the UK, we at UWL are good at identifying new opportunities for collaboration with industry	Compared to other similar departments in this province, we are good at identifying new opportunities for collaboration with industry	UC6 Compared to other similar departments in this province, we are good at identifying new opportunities
UWL supports us in collaborating with non-academic professionals	Our department supports us in collaborating with non-academic professionals	UC7 We support our faculty members collaborating with non-academic professionals
UWL tries to generate off-campus benefits from research projects	Our department tries to generate off-campus benefits from research projects	UC5 We try to generate off-campus benefits from research projects
UWL seeks significant funding from sources other than the UKRI research councils to undertake research & Enterprise activities	Our department seeks significant funding from sources other than the national research agencies to strengthen research work	UC3 We seek significant funding from sources other than the Tri-councils
Cooperation with organizations outside the university significantly improves our research activities.	Cooperation with organizations outside the university significantly improves our research activities.	UC1 Cooperation with organizations outside the university significantly

		improves our research activities
We often seek research opportunities outside the traditional university environment	We often seek research opportunities outside the traditional university environment	UC2 Our faculty members often seek research opportunities outside the traditional university environment
Compared to other similar Universities in the UK, staff at UWL are known as very efficient researchers	Compared to other similar departments in this province, we are known as very efficient researchers	UC4 Compared to other similar departments in our province, our faculty members are known as very efficient and productive researchers
		UC8 When we come upon an unconventional new idea, we usually let someone else try it and see what happens (reverse coded)
University policies	**University policies**	**University Policy**
It is felt that research policies at UWL contribute substantially to our department achieving its goals of research work	It is felt that research policies at this university contribute substantially to our department achieving its goals of research work	UP1 We feel that university-wide policies at this university contribute substantially towards our department achieving its goals and objectives
Compared to most other universities, our university is very responsive to new ideas and innovative approaches	Compared to most other universities, our university is very responsive to new ideas and innovative approaches	UP3 Compared to most other universities, our university is very responsive to new ideas and innovative approaches
Our university policies are best described as developed "bottom-up" using feedback from all levels of the university	Our university policies are best described as developed "bottom-up" using feedback from all levels of the university	UP2 Our university policies are best described as developed "bottom-up" using feedback from all levels of the university
		UP4 Our department is given significant latitude when evaluating faculty members performance

Appendix 15   Themes in formal announcements

TYPE OF ANNOUNCEMENT	2017-2018			2018-2019			2019-2020			2020-2021			2021-2022		
	No.	%age	%age excluding organisational messages	No.	%age	%age excluding organisational messages	No.	%age	%age excluding organisational messages	No.	%age	%age excluding organisational messages	No.	%age	%age excluding organisational messages
Knowledge Exchange	1	0.44%	1.39%	5	2.49%	11.90%	10	3.75%	16.67%	3	1.66%	5.56%	11	10.19%	22.92%
Organisational	154	68.14%	N/A	159	79.10%	N/A	207	77.53%	N/A	127	70.17%	N/A	60	55.56%	N/A
PR	1	0.44%	1.39%	4	1.99%	9.52%	3	1.12%	5.00%	4	2.21%	7.41%	4	3.70%	12.50%
Public Engagement	17	7.52%	23.61%	10	4.98%	23.81%	6	2.25%	10.00%	1	0.55%	1.85%	0	0.00%	0.00%
Research	16	7.08%	22.22%	7	3.48%	16.67%	8	3.00%	13.33%	6	3.31%	11.11%	6	5.56%	56.25%
Teaching	37	16.37%	51.39%	16	7.96%	38.10%	33	12.36%	55.00%	40	22.10%	74.07%	27	25.00%	8.33%

Appendix 16   Knowledge Exchange Orientation Survey results

1, I work in

1. London School ol Film, Media and Design	**1** (6.7%)
2. The Claude Littner Business School	**0**
3. School of Computing and Engineering	**0**
4. London Geller College of Hospitality and Tourism	**1** (6.7%)
5. School of Law	**0**
6. London College of Music	**9** (60%)
7. College of Nursing Midwifery and Healthcare	**0**
9. School of Human and Social Sciences	**0**
10. School of Biomedical Sciences	**0**
11. Drama Studio London	**0**
12. Professional Support Services	**4** (26.7%)

1a, My main role is

1. Academic Practioner	**2** (13.3%)
2. Teaching Academic	**7** (46.7%)
3. Research Academic	**3** (20%)
4. Professional Services Role	**2** (13.3%)
5. Management Role	**1** (6.7%)

2, I understand what Knowledge Exchange means at UWL
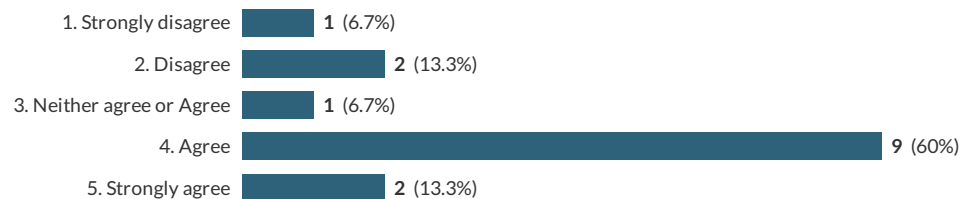
1. Strongly disagree	**1** (6.7%)
2. Disagree	**2** (13.3%)
3. Neither agree or Agree	**1** (6.7%)
4. Agree	**9** (60%)
5. Strongly agree	**2** (13.3%)

0. Have not been at UWL for +2 years	**2** (13.3%)
1. Less	**0**
2. Same	**9** (60%)

4. Agree · **9** (60%)

5. Strongly agree �— **2** (13.3%)

2a, Compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years — **2** (13.3%)

1. Less — **0**

2. Same — **9** (60%)

3. More — **4** (26.7%)
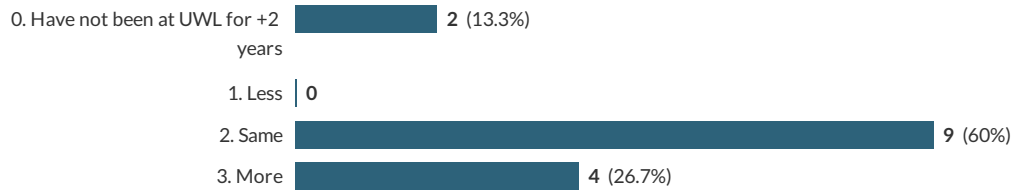
3, UWL encourages graduate students to engage in research, teaching and enterprise with significant implications for industry or society
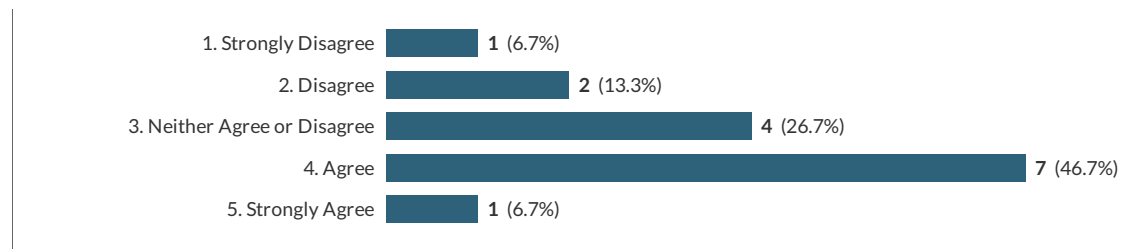
1. Strongly Disagree — **1** (6.7%)

2. Disagree — **2** (13.3%)

3. Neither Agree or Disagree — **4** (26.7%)

4. Agree — **7** (46.7%)

5. Strongly Agree — **1** (6.7%)

3a, Compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 — **2** (13.3%)
0. Have not been at UWL for +2 years — **2** (13.3%)

1. Less — **0**

3. Same — **10** (66.7%)

4. More — **3** (20%)
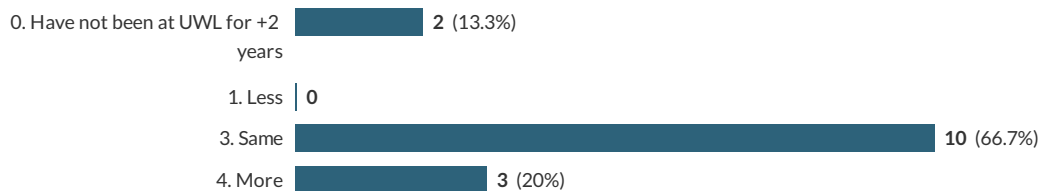
4, UWL encourages students to seek practical applications for their learning or research?

1. Strongly Disagree — **0**

2. Disagree — **2** (13.3%)

3. Neither Agree or Disagree — **3** (20%)

4. Agree — **9** (60%)

5. Strongly Agree — **1** (6.7%)

4a, Compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 — **2** (13.3%)
0. Have not been at UWL for +2 years — **2** (13.3%)

DB⸱ 1. Less — **0** 3

3. Same — **11** (73.3%)

4. More — **2** (13.3%)

0. Have not been at UWL for +2 years — **2** (13.3%)

1. Less — **0**

3. Same — **11** (73.3%)

4. More — **2** (13.3%)

3. Same — **11** (73.3%)

4. More — **2** (13.3%)

5, In UWL we emphasize applied research for industry

1. Strongly Disagree — **1** (6.7%)

2. Disagree — **1** (6.7%)

3. Neither Agree or Disagree — **7** (46.7%)

4. Agree — **5** (33.3%)

5. Strongly Agree — **1** (6.7%)

4. Agree — 5 (33.3%)

3 / 15

0. Have not been at UWL for +2 years — **2** (13.3%)

1. Less — **1** (6.7%)

3. Same — **9** (60%)

4. More — **3** (20%)

4. More — **3** (20%)

4. More — **3** (20%)

6, Compared to the past (2 years ago) is the statement more or less reflective of UWL

1. Strongly Disagree — **0**

2. Disagree — **3** (20%)

3. Neither Agree or Disagree — **4** (26.7%)

4. Agree — **6** (40%)

5. Strongly Agree — **2** (13.3%)

5. Strongly Agree — **2** (13.3%)

6a, Compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years — **2** (13.3%)

1. Less — **0**

3. Same — **10** (66.7%)

4. More — **3** (20%)

4. More — **3** (20%)

4. More — **3** (20%)

7, N   ademic
prof

- 1. Strongly Disagree | **0**
- 2. Disagree — **1** (6.7%)
- 3. Neither Agree or Disagree — **2** (13.3%)
- 4. Agree — **10** (66.7%)
- 5. Strongly Agree — **2** (13.3%)
- 4. Agree — **10** (66.7%)
- 5. Strongly Agree — **2** (13.3%)
- 4. Agree — **10** (66.7%)
- 5. Strongly Agree — **2** (13.3%)

7a, Compared to the past (2 years ago) is the statement more or less reflective of UWL

- 0. Have not been at UWL for +2 years — **2** (13.3%)
- 1. Less | **0**
- 3. Same — **11** (73.3%)
- 4. More — **2** (13.3%)
- 3. Same — **11** (73.3%)
- 4. More — **2** (13.3%)
- 4. More — **2** (13.3%)

8, At UWL it is expected to make substantial contributions to industry or society

- 1. Strongly Disagree — **1** (6.7%)
- 2. Disagree — **1** (6.7%)
- 3. Neither Agree or Disagree — **6** (40%)
- 4. Agree — **6** (40%)
- 5. Strongly Agree — **1** (6.7%)
- 4. Agree — **6** (40%)
- 5. Strongly Agree — **1** (6.7%)
- 5. Strongly Agree — **1** (6.7%)

8a, Compared to the past (2 years ago) is the statement more or less reflective of UWL

- 0. Have not been at UWL for +2 years — **2** (13.3%)
- 1. Less | **0**
- 3. Same — **11** (73.3%)
- 4. More — **2** (13.3%)
- 4. More — **2** (13.3%)
- 3. Same — **11** (73.3%)
- 4. More — **2** (13.3%)

5 / 15

5 / 15

5 / 15

1. Strongly Disagree	**2** (13.3%)
2. Disagree	**2** (13.3%)
3. Neither Agree or Disagree	**5** (33.3%)
4. Agree	**5** (33.3%)
5. Strongly Agree	**1** (6.7%)
5. Strongly Agree	**1** (6.7%)
4. Agree	**5** (33.3%)
5. Strongly Agree	**1** (6.7%)
4. Agree	**5** (33.3%)
5. Strongly Agree	**1** (6.7%)
0. Have not been at UWL for +2 years	**2** (13.3%)

9a,

1. Less	**0**
3. Same	**10** (66.7%)
4. More	**3** (20%)
3. Same	**10** (66.7%)
4. More	**3** (20%)
3. Same	**10** (66.7%)
4. More	**3** (20%)
4. More	**3** (20%)

10,

1. Strongly Disagree	**1** (6.7%)
2. Disagree	**2** (13.3%)
3. Neither Agree or Disagree	**6** (40%)
4. Agree	**5** (33.3%)
5. Strongly Agree	**1** (6.7%)
4. Agree	**5** (33.3%)
5. Strongly Agree	**1** (6.7%)
4. Agree	**5** (33.3%)
5. Strongly Agree	**1** (6.7%)
4. Agree	**5** (33.3%)

10a,

5. Strongly Agree	**1** (6.7%)
0. Have not been at UWL for +2 years	**2** (13.3%)
1. Less	**0**
3. Same	**10** (66.7%)
4. More	**3** (20%)

1. Strongly Disagree	**1** (6.7%)
2. Disagree	**3** (20%)
3. Neither Agree or Disagree	**5** (33.3%)
4. Agree	**4** (26.7%)
5. Strongly Agree	**2** (13.3%)

0. Have not been at UWL for +2 years	**2** (13.3%)

DB

1. Less	**0**
3. Same	**11** (73.3%)
4. More	**2** (13.3%)

4. Agree — 4 (26.7%)

5. Strongly Agree — 2 (13.3%)

11a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years — 2 (13.3%)

1. Less — 0

3. Same — 11 (73.3%)

4. More — 2 (13.3%)

3. Same — 11 (73.3%)

4. More — 2 (13.3%)

12, UWL is highly regarded by industry

1. Strongly Disagree — 0

2. Disagree — 3 (20%)

3. Neither Agree or Disagree — 6 (40%)

4. Agree — 5 (33.3%)

5. Strongly Agree — 1 (6.7%)

5. Strongly Agree — 1 (6.7%)

12a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years — 2 (13.3%)

1. Less — 0

3. Same — 11 (73.3%)

4. More — 2 (13.3%)

3. Same — 11 (73.3%)

4. More — 2 (13.3%)

7 / 15

7 / 15

1. Strongly Disagree — 1 (6.7%)

2. Disagree — 3 (20%)

3. Neither Agree or Disagree — 4 (26.7%)

4. Agree — 5 (33.3%)

5. Strongly Agree — 2 (13.3%)

4. Agree — 5 (33.3%)

5. Strongly Agree — 2 (13.3%)

13a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years — 2 (13.3%)

1. Less — 1 (6.7%)

3. Same — 11 (73.3%)

4. More — 1 (6.7%)

4. More — 1 (6.7%)

1. Strongly Disagree — 0

2. Disagree — 0

14, It is believed that UWL should build relationships with industry

1. Strongly Disagree — 0

2. Disagree — 0

3. Neither Agree or Disagree — 2 (13.3%)

4. Agree — 5 (33.3%)

5. Strongly Agree — 8 (53.3%)

0. Have not been at UWL for +2 years — 2 (13.3%)

14a

1. Less — 0

3. Same — 9 (60%)

4. More — 4 (26.7%)

4. More — 4 (26.7%)

3. Same — 9 (60%)

4. More — 4 (26.7%)

3. Same — (60%)

4. More — 4 (26.7%)

15, Compared to other similar Universities in the UK, we at UWL are good at identifying new opportunities for

1. Strongly Disagree — 2 (13.3%)

2. Disagree — 0

3. Neither Agree or Disagree — 6 (40%)

4. Agree — 5 (33.3%)

5. Strongly Agree — 2 (13.3%)

5. Strongly Agree — 2 (13.3%)

4. Agree — 5 (33.3%)

5. Strongly Agree — 2 (13.3%)

5. Strongly Agree — 2 (13.3%)

15a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years — 2 (13.3%)

1. Less — 1 (6.7%)

3. Same — 10 (66.7%)

4. More — 2 (13.3%)

3. Same — 10 (66.7%)

4. More — 2 (13.3%)

3. Same — 10 (66.7%)

4. More — 2 (13.3%)

16, UWL supports us in collaborating with non-academic professionals

1. Strongly Disagree — 2 (13.3%)

2. Disagree — 4 (26.7%)

3. Neither Agree or Disagree — 3 (20%)

4. Agree — 3 (20%)

5. Strongly Agree — 3 (20%)

9 / 15

4. Agree — 3 (20%)

9 / 15

9 / 15

16a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years	2 (13.3%)
1. Less	3 (20%)
3. Same	8 (53.3%)
4. More	2 (13.3%)

17, UWL tries to generate off-campus benefits from research, teaching and enterprise projects
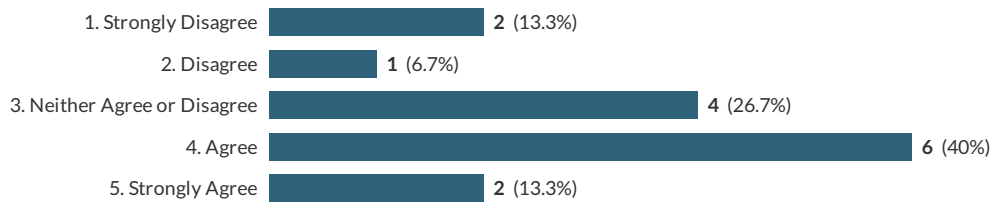
1. Strongly Disagree	2 (13.3%)
2. Disagree	1 (6.7%)
3. Neither Agree or Disagree	4 (26.7%)
4. Agree	6 (40%)
5. Strongly Agree	2 (13.3%)

17a, compared to the past (2 years ago) is the statement more or less reflective of UWL

|	
0. Have not been at UWL for +2 years	2 (13.3%)
1. Less	0
3. Same	10 (66.7%)
4. More	3 (20%)
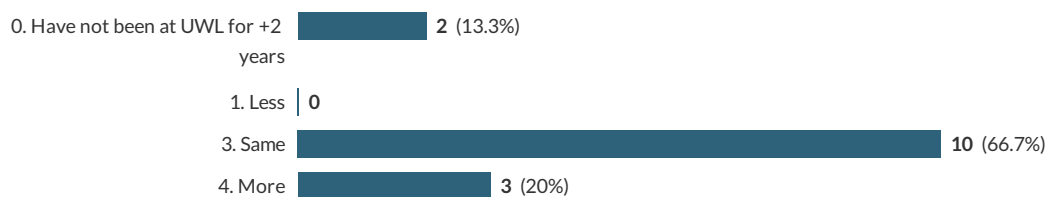
18, UWL seeks significant funding from sources other than the national research agencies to strengthen research, teaching and enterprise work
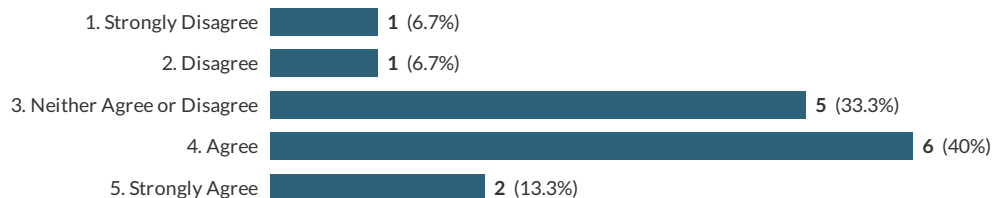
1. Strongly Disagree	1 (6.7%)
2. Disagree	1 (6.7%)
3. Neither Agree or Disagree	5 (33.3%)
4. Agree	6 (40%)
5. Strongly Agree	2 (13.3%)

18a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years	2 (13.3%)
1. Less	0
3. Same	9 (60%)
4. More	4 (26.7%)

0. Have not been at UWL for +2 years — 2 (13.3%)
1. Less — 0
3. Same — 9 (60%)
4. More — 4 (26.7%)
4. More — 4 (26.7%)
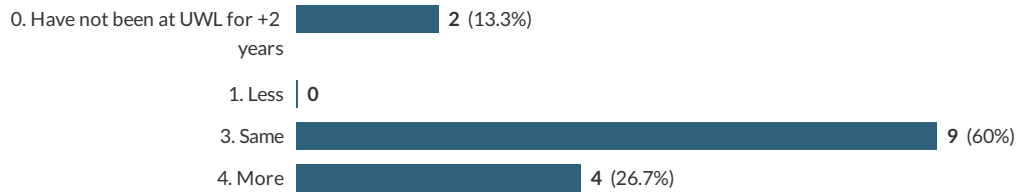
19, Cooperation with organizations outside the university significantly improves our research, teaching and enterprise activities.
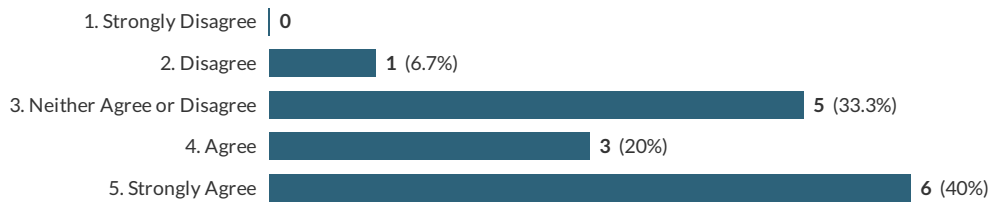
1. Strongly Disagree — 0
2. Disagree — 1 (6.7%)
3. Neither Agree or Disagree — 5 (33.3%)
4. Agree — 3 (20%)
5. Strongly Agree — 6 (40%)
5. Strongly Agree — 6 (40%)

19a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years — 2 (13.3%)
1. Less — 0
3. Same — 9 (60%)
4. More — 4 (26.7%)
4. More — 4 (26.7%)
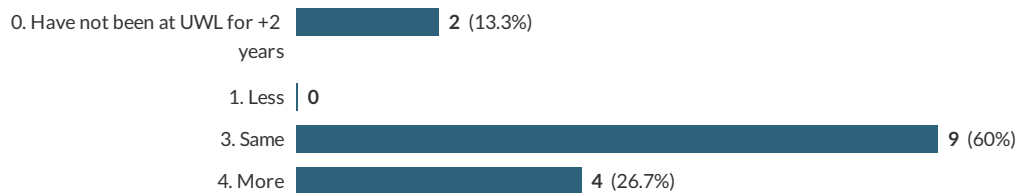
20, We often seek research, teaching and enterprise opportunities outside the traditional university
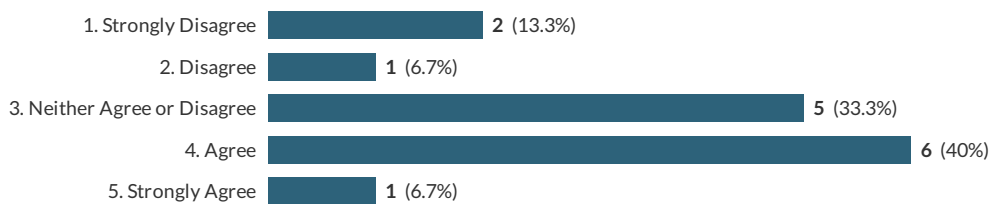
11 / 15

1. Strongly Disagree — 2 (13.3%)
2. Disagree — 1 (6.7%)
3. Neither Agree or Disagree — 5 (33.3%)
4. Agree — 6 (40%)
5. Strongly Agree — 1 (6.7%)
4. Agree — 6 (40%)
5. Strongly Agree — 1 (6.7%)

20a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years — 2 (13.3%)
1. Less — 0
3. Same — 10 (66.7%)
4. More — 3 (20%)
4. More — 3 (20%)

1. Strongly Disagree — 1 (6.7%)
2. Disagree — 1 (6.7%)

3. Same **10** (66.7%)

4. More **3** (20%)
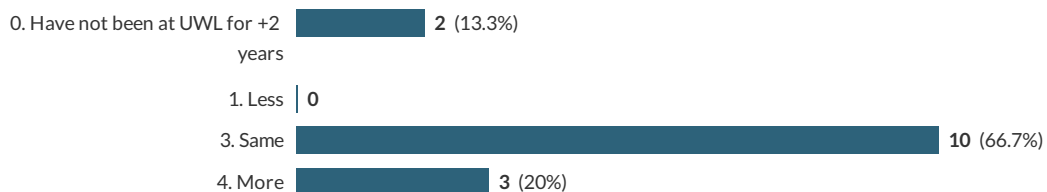
21, Compared to other similar Universities in the UK, staff at UWL are known as very efficient at research, teaching and enterprise
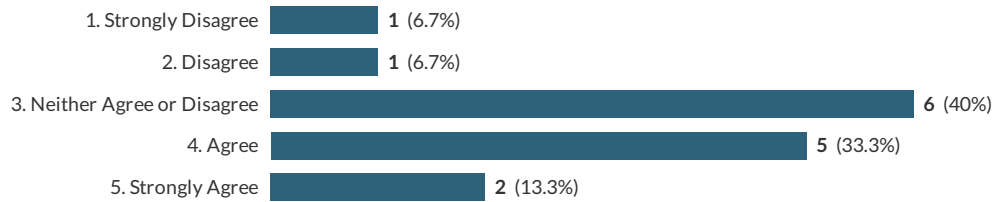
1. Strongly Disagree **1** (6.7%)

2. Disagree **1** (6.7%)

3. Neither Agree or Disagree **6** (40%)

4. Agree **5** (33.3%)

5. Strongly Agree **2** (13.3%)

21a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years **2** (13.3%)

1. Less **0**

3. Same **9** (60%)

4. More **4** (26.7%)

3. Same **9** (60%)

4. More **4** (26.7%)
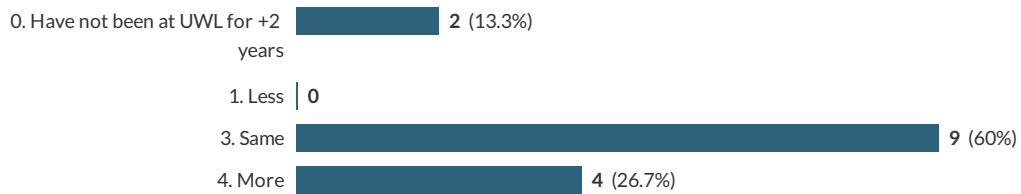
22, KE/Enterprise policies at UWL contribute substantially to our department achieving its goals of research, teaching and enterprise work
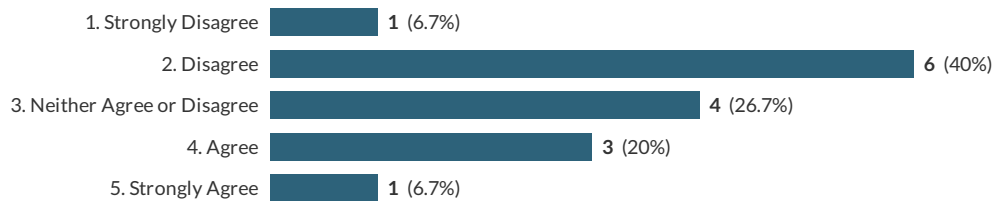
1. Strongly Disagree **1** (6.7%)

2. Disagree **6** (40%)

3. Neither Agree or Disagree **4** (26.7%)

4. Agree **3** (20%)

5. Strongly Agree **1** (6.7%)

4. Agree **3** (20%)

5. Strongly Agree **1** (6.7%)

22a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years **2** (13.3%)

1. Less **1** (6.7%)

3. Same **10** (66.7%)

4. More **2** (13.3%)

4. More **2** (13.3%)

1. Strongly Disagree **0**

2. Disagree **5** (33.3%)

3. Neither Agree or Disagree **5** (33.3%)

4. Agree **4** (26.7%)

5. Strongly Agree **1** (6.7%)

4. Agree **4** (26.7%)

5. Strongly Agree **1** (6.7%)

DBA   L

3. Same	**10** (66.7%)
4. More	**2** (13.3%)

23, Compared to most other universities, our university is very responsive to new ideas and innovative approaches

1. Strongly Disagree	**0**
2. Disagree	**5** (33.3%)
3. Neither Agree or Disagree	**5** (33.3%)
4. Agree	**4** (26.7%)
5. Strongly Agree	**1** (6.7%)

23a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years	**2** (13.3%)
1. Less	**2** (13.3%)
3. Same	**10** (66.7%)
4. More	**1** (6.7%)
3. Same	**10** (66.7%)
4. More	**1** (6.7%)

24, Our university policies are best described as developed "bottom-up" using feedback from all levels of the university

1. Strongly Disagree	**7** (46.7%)
2. Disagree	**2** (13.3%)
3. Neither Agree or Disagree	**4** (26.7%)
4. Agree	**1** (6.7%)
5. Strongly Agree	**1** (6.7%)
4. Agree	**1** (6.7%)
5. Strongly Agree	**1** (6.7%)

24a, compared to the past (2 years ago) is the statement more or less reflective of UWL

0. Have not been at UWL for +2 years	**2** (13.3%)
1. Less	**2** (13.3%)
3. Same	**10** (66.7%)
4. More	**1** (6.7%)
4. More	**1** (6.7%)
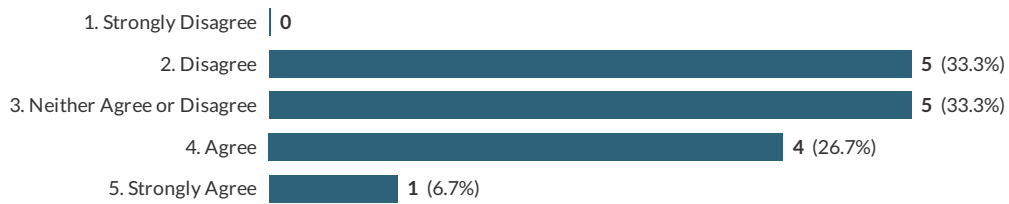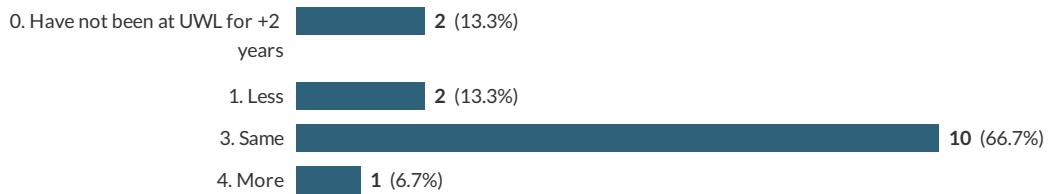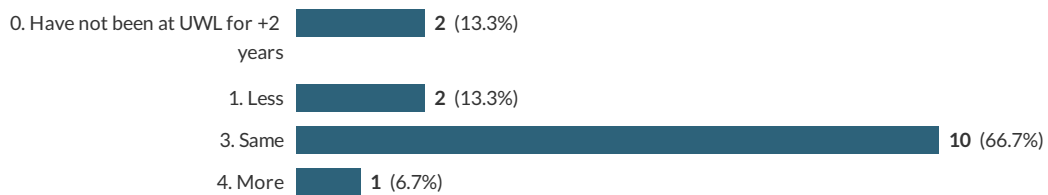
25, Please comment on anything else you think may be relevant.

It is difficult to answer these questions accurately, since while one is aware of some of one's own school activities, the questions are all framed at an institutional level – we were not asked to offer a school-specific perspective. I have a range of levels of understanding of what happens in different schools, and that ranges from zero to not very much. As such, I am not sure how authoritative my answers are...

N/A

Navigating 5 semi-broken and disjointed admin programs supposedly designed to support students through the tutorial model (Civitas, CMIS, Columbus / Unit-e, SAM, Blackboard) significantly impacts on time available for exchange of ideas and research.

Appendix 17 Culture Web analysis

	Description	Pre-Project (baseline)	Evidence	Post-project
Paradigm:	*core of the web – it is the set of assumptions held in common and taken for granted in the organisation – it is collective experience applied to a situation to make sense of it and inform a likely course of action.*	Core paradigm is 'student experience'	'Career University' Strategy (Ambition 2018 and Achievement 2023)	Core paradigm is still 'student experience' which was reinforced during the Covid-19 Pandemic, But: • stated importance of REF and more focus on Impact. • Assumption that Enterprise income underpins financial growth and financial security **Core paradigm: What will emerge from post A23? Next Strategic plan is in development.**
Routines:	*the way things are done in a day-to-day basis, common across the organisation. At their best they lubricate the organisation but also represents an assumption about how things SHOULD happen*	Predominately teaching focused	Awarding degrees, Regulations (including cyclical updating) Policy & Process (teaching focussed), Timetabling, Boards, Committee structure, Academic Calendar; annual VC update (focus on teaching – new school, library, sports facility, performance space)	Most routines still teaching-related. Some change during REF – new ways of working to enhance REF (VC funds, REF delivery & ops), KE Growth Group established New policies – Apprenticeship strategy, a very KE-heavy research strategy, new KE strategy etc

Rituals:	*reinforce what is important in the org culture,*	Teaching Focused annual 'rituals'	Graduation; Award Boards; Academic Board predominately focused on teaching/regulation/ etc	URSEC change/slight refocus on KE, KEF, New cycle (KE seed funds)
Stories:	*told to org members to each other, reinforcing and embedding particular views on org history – flagging important events and personalities. A way of communicating what is held to be important.*	TVU to UWL turnaround Finance strength Focus on 'core business' The Student comes first	Focus on teaching – getting it right to stabilise the finances; focus of annual updates by VC; Enterprise to generate surplus to reinvest into student experience (so KE a means to an end, not an end in and of itself); 'post 92'/ 'modern' University positioning Strong narrative around UWLs financial stability – Future Campus Project funded from surplus. Emerging narrative of income growth underpinned and often driven by Enterprise growth.	Enhanced narrative: financial security (surplus generation, and income growth that is highly completive related to peer HEIs, Enterprise underpins this: Growth of Enterprise to 1/3 of turnover, so a shift to more value on Enterprise – financial performance and growth underpinned by Enterprise growth BUT also rise in (teaching related) league Tables, NSS etc New narrative: Partnership and its growth in importance – but this could be argued to be Teaching (even if the narrative is linked to Enterprise growth). New narrative: Expansion & acquisition – DSL, Ruskin College both teaching focussed. Creation of innovate@uwl is KE.

Symbols:	*object events, people or acts that convey or create meaning over and above their functional purpose. Inc types and ways of using language*	Symbolic representation of the prime importance of our students VC as symbol Renaming to UWL Annual League & NSS results REF 2018	Branding - The Career University frames engagement with business around student employability (moved away from 'ConnectEd'); investment into space & faculties (teaching-related…studios, labs, performance space); investments (DSL; systems) based on student-related ROI.	New symbols emerging… • My role, growth in responsibility and visibility • REOps department growth (numbers of staff, budget) • KEF • KE Growth Group • URSEC ToR amended to increase focus on KE
Power:	*the ability of individual or groups to coerce or convince others to follow a particular course of action*	Teaching based hierarchy; VCE – teaching focussed structure	Senior roles with a teaching focus e.g. PVC Job titles/roles; constitution of SMG; Heads of Subject (limited R or KE roles in school hierarchies); few Research Centres with an indistinct identity outside of Schools, INSPIRE etc. Putting research staff back into schools (not income generating so should be teaching…i.e. don't manage them to do KE/funded research…they have more(?) value teaching)	VCE – remains a teaching focussed structure. Delayed of replacement for PVC with Research responsibility, but new PVC with a focus on partnership, apprenticeship, employability and spin-out.. However: My career change & promotion; KE Champions and emerging KE roles in Schools
Org structures:	*roles responsibilities and reporting lines and relationships – often reflect*	Predominantly teaching structures	Schools Colleges, PSD's, often hard to direct to Enterprise activities (non-core)	Broadly the same: e.g. Me reporting to DVC. But: • Growth in REOPs team

			Me reporting to DVC	• Enterprise as core activity (PEQF, Apprenticeship, Partnership)
	power structures and how the manifest themselves		Small REOPs team Only on Enterprise focussed. Employer Engagement sitting in Student Services & careers (employability prime focus)	
Control systems:	*formal and informal ways of monitoring and supporting people within and around the org Includes measurement and reward systems*	Work loading, HR (pay, policies etc) focussed on rewarding teaching	Appraisal, AEF, KPIs (A'23) Focus on teaching (w/l) or *sometimes* research (not necessarily funded/KE); promotions teaching (L-SL, SL) or research (SL-AP, AP-P)	KE in reward (planned) KE KPIs

Appendix 18 Comparison of UWL's HE-BCIs performance from 2016-2017 to 2020-2021 to median HE-sector performance

HE-BCIs Categories	2016-17 ACADEMIC YEAR		2017-18 ACADEMIC YEAR		2018-19 ACADEMIC YEAR		2019-20 ACADEMIC YEAR		2020-21 ACADEMIC YEAR	
	UWL	Median	UWL	Median	UWL	Median	UWL	Median	UWL	Median
Collaborative Research Income	0	1400	160	1308	563	1564	793	752	978	512
Contract Research Income	665	1288	571	1364	890	1361	151	661	236	365
Consultancy Income	22	648	134	648	322	731	53	318	225	243
Facilities Income	697	289	1550	249	1866	267	1514	125	949	36
CPD/CE Income	2807	2202	3814	2089.5	3507	2062	2969	1405	4634	1002
Regeneration Income	1470	94	1771	245.5	2422	214	3138	127	3988	100
Number of IP disclosures	0	3	0	3	0	3	0	0	0	0
IP income	1821	12	2405	17	2076	19	1229	1	1020	0
Number of new Spin outs	0	0	0	0	0	0	0	0	0	0
Number of Graduate Start-ups	0	7	0	7	6	8	10	3	1	3

Appendix 19   Comparator income data for peer-group of HEIs

KE proxy income as a percentage of total income

HEI	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
UWL	20%	22%	23%	19%	21%
Bath Spa	19%	17%	19%	16%	14%
BNU	17%	18%	20%	8%	6%
Edge Hill	15%	14%	21%	15%	13%
London Met	8%	7%	8%	7%	6%
Solent	22%	23%	26%	18%	14%
UEL	15%	14%	17%	13%	11%
Winchester	22%	23%	22%	18%	16%

KE Proxy income (£000's)

HEI	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
UWL	18,756	23,465	25,546	21,652	30,479
Bath	15,448	14,548	15,489	12,919	11,097
BNU	10,351	10,215	11,732	9,697	9,689
Edge Hill	18,707	17,462	25,628	17,703	17,473
London Met	8,006	6,541	7,018	7,088	6,359
Solent	25,699	26,993	28,978	19,155	16,023
UEL	19,403	19,383	24,300	20,711	19,168
Winchester	16,605	17,878	17,705	14,572	13,258

HEI total income (£000's)

HEI	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
UWL	95,865	106,051	110,771	116,017	145,810
Bath Spa	82,791	83,954	83,256	82,495	80,454
BNU	61,911	57,335	58,525	117,267	151,458
Edge Hill	127,365	126,231	123,774	119,296	130,100
London Met	102,078	94,341	87,660	95,102	110,892
Solent	117,634	117,682	113,203	105,808	112,635
UEL	132,310	136,083	141,711	155,275	174,851
Winchester	74,986	78,982	80,533	80,911	84,358

Appendix 20 Comparison of UWL's HE-BCIs performance from 2016-2017 to 2020-2021 to mean peer-group performance

HE-BCIs Categories	2016-17 ACADEMIC YEAR		2017-18 ACADEMIC YEAR		2018-19 ACADEMIC YEAR		2019-20 ACADEMIC YEAR		2020-21 ACADEMIC YEAR	
	UWL	Group Mean	UWL	Group Mean	UWL	Group Mean	UWL	Group Mean	UWL	Group Mean
Collaborative Research Income	0	318	160	240	563	234	793	300	978	262
Contract Research Income	665	242	571	229	890	354	151	212	236	220
Consultancy Income	22	406	134	276	322	285	53	150	225	298
Facilities Income	697	248	1,550	365	1,866	421	1,514	354	949	248
CPD/CE Income	2,807	2,711	3,814	2,597	3,507	2,622	2,969	2,031	4,634	2,321
Regeneration Income	1,470	200	1,771	537	2,422	901	3,138	718	3,988	720
Number of IP disclosures	0	0	0	0	0	0	0	0	0	0
IP income	1,821	228	2,405	339	2,076	404	1,229	302	1,020	258
Number of new Spin outs	0	0	0	0	0	0	0	0	0	0
Number of Graduate Start-ups	0	23	0	25	6	27	10	30	1	39

Appendix 21   Partnership number growth from 2017 to 2022

ACADEMIC DEPARTMENT	2017-2018	2021-2022
Claude Littner Business School	5	12
College of Nursing, Midwifery and Healthcare	5	6
London College of Music	7	13
London Geller College of Hospitality and Tourism	1	3
School of Biomedical Science	N/A	0
School of Computing and Engineering	1	6
School of Film, Media and Design	5	7
School of Human and Social Sciences	1	3
School of Law and Criminology	1	1

Appendix 22   Knowledge Exchange Strategy KPI matrix

Area 1: **Understanding and engagement with KE**
Metric 1: Annual KE Survey: year on year improvement to staff perception of KE at UWL.

Area 2: **Financial Performance**
Metric 1: HEIF Qualifying income > £50m
Metric 2: HE-BCIs income targets – year on year growth
Metric 3: Annual Enterprise Target achieved
Metric 4: No reduction in HEIF income

Area 3: **Comparative Performance**
Metric 1: To be in the top quartile across all KEF, metrics compared to Cluster-M members
Metric 2: To at least match average performance on all KEF metrics for Cluster J
Metric 3: To outperform competitor institutions (Bath Spa, BNU, and Solent from Cluster M, plus London Met and UEL) in KE Proxy income as a percentage of turnover. KE Proxy income is drawn from statutory accounts, 'Education and Skills Funding Agency' income, research income, other operating income, endowments & investments and short course/exam income

Area 4: **KE Activity**
Metric 1: To support 20 KE Seed-Fund Projects p.a.
Metric 2: Minimum of 5% of promotions are based on KE route 2022 and 30% by 2025 (see Research Strategy 10.5)

Area 5: **Research Strategy Metrics**
Metric 1: Have a minimum of two Knowledge Transfer Partnerships in operation at all times
Metric 2: Grow Innovate UK income reported in KEF/HE-BCIs to £200k p.a.
Metric 3: £0.4m of Consultancy reported in HE-BCIs