Annex 1: IKC and Stakeholder Topic Guide Summary

Academic leadership

A: Project goals, aims and activities
What is your role in the project? How long has your involvement been?
We have provided some high-level narrative about the funding. Would you like to comment in this, in terms of whether it is complete, timings, what the funding was used for and the sources of the matched funding?
What aspects of the Centre are innovative or have been developed specifically for this project?
What are the goals and aims of this project? Have they changed significantly over the course of the project? If changed, probe for details on project inputs, activities, outputs, and long term goals
Do you think the project would have been realised to the same scale and timing without UKRI funding? Was UKRI funding crucial for getting private/ third sector funders on board? Try to get more than a yes/no answer here, let them describe the counterfactual, if possible.
B: Centre timeline

We have provided a timeline to the project identifying a few milestones from our review of Centre documents to discuss. They are deliverables or events that we thought might assist in discussing impacts, and how Centre outputs have delivered desirable outcomes. What was your involvement in these?
C: Academic outputs and impacts

Focusing on major research excellence outputs, could you summarise the inputs, outputs and impacts on (tailor this list to interview partners and goals stated in bid documents):
Pipeline of talent, PhD and destination, recruitment, training for workforce; Academic outputs, e.g. pipeline of publishable papers, conferences and academic inputs, e.g. staff recruitment or retention; Commercialisation aspects and scale of translation effect; Collaboration with HEIs or researchers; Attracting other streams of research funding; Tease out additionality of the impacts.

Did you already notice an impact of the project even before completion, e.g. was academic staff attracted to your university/ department/ centre, because of the prospect of working in the new facilities?

What facilities were previously used for similar research instead of the Centre (in the UK, abroad)?

Did the project change your long-term ability to receive more funding for research from industry or other sources? Did any of this already occur before project completion? E.g. networks that were developed, spinout projects?

D: Impacts on commercialisation of research outputs and collaboration with industry
Has funding initiated new collaborations with industry, charity or public partners?

What impact has the project had on translational activity? Is the development of marketable products part of your work? Has technology readiness improved as a result of the project? Can this be described in TRLs?

Describe the key stages to the translation of research for the deliverables and events discussed earlier.
- For SME: We would be keen to find out about the events associated with a successful translation of research excellence, covering aspects such as spinning out, early business development (incubation), IP development, funding rounds.
- For larger partners: Did you receive capital or in-kind contributions from co-funders? Do you think you achieved a good mix?

What are the wider economic or social impacts of the project? Probe depending on project: productivity, technological leadership, environmental, health, public policy

E: Lessons learned

If you were to undertake a similar project again, what would you do differently? What difficulties (if any) did you face and how did you overcome these? What went well?

Are you satisfied with the overall project outcome? Are there any lose ends to pick up or remaining problems?

Were there any surprises, things that went better than expected or steps you needed to take?

Looking at the Centre in terms of comparable other research bodies, in the UK and abroad, are there comparable research efforts?

F: Future plans and impact
Do you have plans for expansion or diversification of the project? In terms of funding, have you looked for further funding?

What is the anticipated future plan for the project, and what is the trajectory for achieving these?

How do you plan to continue to measure the impact of the project?

What do you think the future benefits will be?

Concluding questions

Is there anything you would like to talk about that we haven't covered yet?

Industry partners (of IKCs)

Interview content should be tailored to the partner, e.g. operational or strategic involvement in IKC project.
A: Your involvement in the project
How has your business contributed to the project? Probe on role in organisation and project development and realisation, length of engagement and percentage of overall time committed to project.
Was this a new or existing partnership?
What will be your continued involvement with the project?
Looking forward, would you collaborate with this or other universities again? Why, why not?
If applicable: Did you also benefit from collaborating with other project partners?
B: Benefits to your business
What are the benefits to your business of the collaboration? Would you have undertaken a similar investment without HEFCE funding? Would you have involved the university?
In particular, what are the benefits to your business in terms of…
Access to skills, Access to innovative facilities, Ability to develop new products, or develop them quicker, national and international competitiveness?
Did all the benefits that you anticipated when entering the project materialise? If not, explain why?
What do you think are the wider benefits to UK industry of this project? If necessary, probe in terms of Productivity (e.g. markets, networks, spillovers), Skills base, Technological leadership
UKRI requires that research outputs and/or facilities are accessible to the public. Does this raise issues about the security of your intellectual property for you? Were any processes set up to secure IP while being as open and collaborative as possible?
C: Lessons learned
If you were to collaborate in a similar project again, what would you do differently? What worked well?
Do you think the university was prepared to undertake a project of such a scale?
Were there any supply chain problems to realise the project? E.g. finding the right contractors, suppliers of specialised equipment.
Were there any unexpected outcomes, things that went better than expected?
Are you satisfied with the outcome of the project? What exceeds your expectations and what remains to be achieved?
Concluding questions
Are there any other issues you would like to talk about that we haven't covered yet?

UKRI leadership (policy)

A: Project goals, aims and activities
What is your role in the project? How long has your involvement been?
What are the goals and aims of this IKC Centres? Have they changed significantly over the course of the project? If changed, probe for details on project inputs, activities, outputs, and long term goals
For UKRI, what aspects of the Centre programme are innovative or have been developed specifically for this project?
How were the goals, aims and activities of the Centres programme linked to wider UKRI, BEIS and government policies? Try to discuss dependencies out with programme.

B: Centre Programme scoping

What insight can you give about the scoping of the Centres, such as the technologies expected to be covered, scale and form of the investment?

If you have a lead or focus on one of the six Centre technologies, could we take your views on:

What contextual work helped the policy design, e.g. reviews of Eight Great Technologies, independent reviews, roadmaps

What analysis drove the scale of the opportunity at an aggregate level?

What helped scope the study at a technology (readiness level)?

Looking across the six Centre technologies, could we take your views on operating models and what works well and why:

Leadership and governance: key academics, involvement of partner universities, wider sectoral input

Consortium aspects: wider research programmes, regional clusters

Facilities and expertise: facilities for incubation, demonstrators

C: Impacts from investments

Looking at the logic, we've identified the strands of impacts as thematically on research excellence, knowledge exchange, commercialisation, people/skills, R&I, firm/sectors. Would you want to comment on these and their completeness?

Perhaps looking across the Centre and at one or two of these themes, how has the Centre investment turned into impacts, indicating successes in Centres?

Prompt: what were the blockages/gaps in a technology area, examples of how the Centres' outputs have met that gap, what early outcomes confirmed that

Looking across, are you satisfied with the outcome of the project? What exceeds your expectations and what remains to be achieved?

D: Beyond the programme

Looking beyond the programme, are there UKRI investments that complement or have similar aims to the Centres?

1. Nationally, what clusters or technology focused investments may be comparators
2. Internationally, what has influenced UKRI Centres Programmes, has the Centres Programme influenced others?
3. Are there near comparators to these investments abroad?

Concluding questions:

Are there any other issues you would like to talk about that we haven't covered yet?

Investors (focusing on Cleantech/low carbon climate impact sectors)

A. Background of Respondent:

Name/Position/Organisation:

What is the Relevant experience of you and your organization in working with:

Cleantechs/green SMEs, Impact (environmental) Investors, Relevant Government Programmes (e.g. funding mechanisms/instruments/programmes- and associated public and private support)?

Re -Organisation – Re -Individual –

B. The UK early-stage pre-seed and seed investment market:

What is your knowledge of the current/recent UK pre-seed and seed investment market for Cleantech? And how are you defining Cleantech?

What is the role of UK universities and more specifically IKCs in the early stage Cleantech investment market?

- Probe on whether had any specific contacts with universities and more specifically IKCs?

- Probe on knowledge exchange, how well do universities reach out to investors? - the roles of universities as pipelines for spin-outs, new Cleantechs and perceived value of TTOs and university seed funds

C. Impacts of IKCs on early stage investors

Have you any knowledge or experience in working with or investing in IKC related ventures/spin-outs, and more specifically Cleantech?

Where specific engagement, probe on what they add to the role of knowledge transfer, TTOs and university seed funds? What works well or less well and why?

D. Future plans

Do you have future plans to engage with IKCs and invest in the early stage Cleantech markets?

What can universities do better to improve the pipeline of viable investible early stage cleantechs?

What is the role of government policy in developing the early stage cleantech investment market?

Overall, what are your recommendations for improving the operation of the early stage cleantech investment markets in the UK?

Concluding questions

Are there any other issues you would like to talk about that we haven't covered yet?