**Successful and unsuccessful radical transformation of multinational mobile telephony companies. The role of institutional context.**

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Abstract

A number of prominent European multinational mobile telephony companies (MNMTCs) have their origins in state-owned monopolies that successfully undertook radical transformation in the late 1980s to late 1990s. Not only did they face liberalization of their domestic markets but they also moved from fixed-line telephony to mobile telephony prior to rapid expanded overseas. Our study focuses on Telenor whose operations currently span the Nordic region and Southeast Asia. Like other MNMTCs, Telenor currently faces another period of radical change as global digital services providers are set to ride on the connectivity MNMTCs supply thereby reducing them to "dumb-pipes". Our study indicates that Telenor has abandoned radical transformation for "modernization" of its extant operations. For an understanding of why this second radical change is proving arduous for MNMTCs, we argue that there is a need to take into consideration institutional change.

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**The role of institutional context.**

**Introduction**

European multinational mobile telephony companies (MNMTCs) emerged in the late 1980s to late1990s with the advent of mobile telephony; initially an addition and then an alternative to fixed-line telephony.  This technological change took place in the broader context of institutional change as European countries liberalized their national telecom markets (Eliassen & Sjovaag, 1999). The loss of monopoly status of state-owned companies that took place in this period was a radical change that affected incumbents such as British Telecom (UK), Telefónica (Spain) and Telenor (Norway) differently.  British Telecom largely failed to transform itself into a MNMTC. Its mobile arm O2 was spun-off and eventually absorbed by Telefónica. Vodafone, a non-incumbent, emerged as the leading UK MNMTC. However, both Telefónica and Telenor did succeed in radical transformation and went from being state-owned monopolies to being listed companies that were not only competitively successful in their deregulated home markets, but that evolved into becoming MNMTCs. In addition to operations in Europe, Telefónica established operations in Latin America and Telenor in Southeast Asia.

Just as national monopoly fixed-line telephony companies faced radical change some thirty years ago with some succeeding in transformation and others not, MNMTCs are confronting a new form of radical change. In an overview of the mobile global MNMTC industry, the Financial Times (2019a) refers to the "souring" of the MNMTC dream:

"Telecoms has been one of the worst performing sectors for investors over the past five years as global bets have failed to pay off. That has left companies with huge debts even as they are under intense pressure to invest in new 5G and full-fibre networks both in their home markets and across their still-sprawling networks. Dominance of the communications market instead passed to a different breed of companies — led by Google, Apple and Facebook — that have used the pipes and masts installed by telecoms companies around the world to capture the lion's share of digital profits…"

In the same critique, Chris Gent, the former Vodafone chief executive who ran the company during its globetrotting heyday, argues that the telecoms industry had had the opportunity to "conquer the world". However, while hardware players including Nokia and Huawei created international companies and captured scale advantages on telco hardware, it was the platform companies such as Facebook and Google and not the telecoms companies that developed software and apps with global appeal for consumers and that captured scale advantaged on software services.

'The customer felt connected to the iPhone but not to a particular network," (Chris Gent) says. "The networks didn't differentiate themselves…'"

To compound the situation, MNMTCs face a period of significant investment in the transition to 5G that will require densification of networks and acquisition of new software platforms.  However, the Economist (2019:56) is sceptical about the potential of 5G to generate "huge profits" for MNMTCs concluding: "it is not clear who will make much money from it."

If MNMTCs fail to transform their business models so that they become providers of digital solutions – this will involve developing the capabilities to apply enabling technologies such as IoT, Advanced 5G slicing, Network Function Virtualization - for other businesses or public services, they will become "dumb-pipe" suppliers offering an undifferentiated and price sensitive utility. While supplying connectivity may be profitable when scarce spectrum can be favourably rented from governments through auctions a significant part of value will migrate to actors such as born-global suppliers of digital services to consumers (Dasi et al, 2019) and/or MNMTC-equipment manufacturers such as Nokia, Huawei, and Ericsson offering their technologies as a service to companies.

This view of radical change affecting MNMTCs and their need to engage with radical transformation emerged around 2015. The consensus across the industry is that relative stability is ending as global digitally based firms with huge scale advantages – some known and many unknown – increasingly challenge the position of established MNMTCs not just in degree, but also in kind (Shwartz, 2017; Torrance, 2018).

In this study, our focus is on Telenor. We first examine how Telenor succeeded with a "disrupting cycle" that led to radical transformation in the 1990s enabling it to move from being a state monopoly operating exclusively in Norway to a MNMTC with operations in 14 countries. We then examine a new disrupting cycle that for Telenor started in 2016. By 2017, Telenor had retreated from its ambition on radical transformation and by 2020 the ambition has not resurfaced. We explore why a successful radical transformation in response to the 1990s "disrupting cycle" was more viable than the post-2015 disrupting cycle. Our conclusion is that a

significant factor is rooted in changes to the regulative institutional context (Scott, 1995) in which MNMTCs operate.

Initially we define the concepts of disrupting cycle, radical transformation and the generic approaches to facilitating it. Drawing on an extant study, we present the early successful radical change at Telenor during the 1990s. Then using data from Telenor internal documents and interviews with Telenor managers we explore why current radical change is unsuccessful.

**The Disrupting Cycle**

Mees-Buss et al., (2019:1521-1522) argues that:

"A *disrupting cycle* occurs when the (top management team) concludes that the key selection criteria of the past – hitherto believed to be critical for success – is no longer viable due to changes in the environment of the MNC. This kind of choice point can be considered a 'break point', because the new selection criterion breaks with the past: at least part of the old recipe for success is explicitly renounced. Ensuring decision-makers throughout the organization follow the new selection criterion requires not just far-reaching changes to the selection system but also the active selecting out of people, resources, capabilities which previously had been regarded as critical."

One should not expect that an initial disrupting cycle results in linear change. Instead, Mees-Buss et al. (2019) observe experimentation, trial and error and expected outcomes only partly achieved followed by the need for reinforcing cycles that aim at furthering the entrenchment of the new selection criterion.

**Radical transformation**

We define radical or transformational change as being "of sufficient depth to require a shift in the central assumptions and beliefs that the members of an organization hold about the organization, the nature of its environment and the competition and how it competes. It encompasses a fundamental shift in the business model of the organizations, touching all cultural and structural aspects of the organization" (Balogun, Hailey & Gustafsson, 2015:4). It is distinct from continuous or incremental change. It may be forced or reactive in the sense that a new competitive threat forces the organization to respond. Equally, it may be proactive in recognition of a need for pre-emptive change and it may involve developing radically new businesses understood as new services and products or radically transforming the core business.

There are various external drivers of radical change. Jacobs, Van Witteloostuijn and Christe-Zeyse (2013) observe that the strategic management literature identifies five generic drivers: political (P), economic (E), societal (S), technological (T) and legislative (L). In terms of this so-called PESTL approach to distinguishing sources of change (Johnson and Scholes, 2000; Johnson et al., 2005), we focus on technology (T) driven radical change.

**Organizational approaches to radical change**

The literature on the management of radical change delineates a number of organizational solutions that while not sufficient for radical transformation are necessary (Stensaker, 2019). Stensaker makes a distinction between organizational solutions that are internal (within firm boundaries), including the ambidextrous solution and the agile solution and external organizational solutions including, spinouts, acquisitions and ecosystem alliances that take place

outside of the firm boundaries and thus typically involve others. In addition to organizational solutions within the radical change literature, adopting a dynamic capabilities perspective (Teece, 2007), Elter et al. (2019) argue that "legacy removal" is a critical factor in the context of radical technology driven change. We now briefly describe each of these prior to examining the roles they have played at Telenor in two phases of radical change.

**The ambidextrous solution**

In established firms, radical change requires the ability to continue to exploit existing business while simultaneously exploring new opportunities that potentially cannibalize existing ones. An extensive body of literature has addressed the ambidextrous solution both theoretically and empirically (for an overview see e.g. O'Reilly & Tushman, 2013). It involves setting up a separate organizational structure (e.g. a new unit) charged with radical innovation while the remaining organization focuses on the existing business. This allows for specialization whereby existing units create efficiencies and exploit the current business, while the new unit explores and innovates. A key feature of this solution has to do with securing sufficient autonomy for the new unit, thus allowing for the development of a separate identity with distinct processes and capabilities. The ambidextrous solution equips established firms to handle pressures for efficiencies parallel to innovation. In other words, it permits both exploitation of various businesses that are incompatible to organize in a single integrated unit and exploration of new business opportunities (Tushman & O'Reilly 1996; O'Reilly & Tushman 2004, 2016).

**Agile organization**

Organizational agility refers to "an enterprise's ability to quickly respond and adapt in response to continuous and unpredictable changes of competitive market environments" (Sherehiy & Karwowski. 2014: 466)**.** For practitioners, the term agile, which emerged from the software development industry, came into common usage with the publishing of the "Agile Manifesto" (2001). Since then it has become a more widespread way of organizing work. Typically, an agile solution involves setting up autonomous cross-functional teams of roughly ten persons with a clear purpose/goal, customer orientation and tight deadlines of for example ninety days (McKinsey, 2019). The solution tends to be depicted as non-hierarchical and as breaking down bureaucracy and organizational silos, yet some initial research suggests that the solution itself is quite formal and rules-bound.

**Spin-outs**

This solution involves complete separation from the established firm through a *spinout,* where a new venture is created. According to Christensen and Overdorf (2000), this solution is beneficial if a firm embarks on radical change that requires a different cost structure, such as when an established firm competing in the high-end of a market pursues new opportunities in the low-end of the market. In contrast to the ambidextrous solution, a spinout does not have to compete for resources with the established firm. A recent study of a Norwegian media corporation showed that spinning out products/services that the established firm uses in its core operation can secure innovation while generating both cost savings and quality improvements (Harlan, 2018).

**Acquisitions**

This solution involves securing radical change by *acquiring a firm* that possesses innovative and explorative capabilities (Christensen & Overdorf, 2000). This allows the firm to rapidly obtain necessary capabilities, but it also requires competence in organizational integration, as well as knowledge about when to avoid tight integration, as this may stifle the very capabilities deemed as valuable.

**Ecosystems**

In broad terms, ecosystems are groups of firms that produce products or services that together comprise a coherent solution (Adner, 2017). More precisely, after conducting a systematic review of ecosystems research, Bogers, Sims & West, (2019:2) propose that, "an ecosystem is an interdependent network of self-interested actors jointly creating value. This definition includes four components, linking three operational constructs — interdependence, network and self-interested actors — to the most commonly described success criterion for an ecosystem: to jointly create value in a way that no single actor would be able to do."

Li, Chen, Yi, Mao and Liao (2019) argue that the ecosystem perspective is particularly applicable to digital platform organization structures where firms from different industries specialize in different domains of expertise such as hardware devices, networks, software services, or content.  Their view is that:

"The platform firm coordinates the activities of the ecosystem participants via loosely coupled cooperative relationships centred on the platform (Kapoor & Agarwal, 2017;

Tiwana, 2014). The internationalization of digital platforms largely depends on whether platforms can attract ecosystem participants in local markets and align their goals with those of the platform (Ojala, Evers, & Rialp, 2018)… We view ecosystems as a governance mechanism for cooperative relationships."   (Li et al., 2019:1453)

**Legacy removal**

Elter et al. (2019) define legacy removal as "a managerial dynamic capability that implies an understanding of which current resources are not core for the new environment and which ones managers need to transform or adapt." With reference to the current MNMTC industry, Poulus (2019) observes that more and more MNMTCs are defining their passive infrastructures as non-core and are looking at selling parts of this, not least mobile towers. This does not appear to be resulting in substantial resistance. However, Elter et al. argue that there may be a political component to legacy removal. Dealing with negatively affected stakeholders – employees, other managers, trade unions, politicians and so on – may be challenging and could compromise current performance.

**Radical Change at Telenor**

In this study, we examine the organizational solutions employed in two cases of radical technology-driven transformation at the Norwegian multinational enterprise (MNE), Telenor. The first case is historical and involves Telenor's forced transformation in the 1990s from a monopoly fixed-line telephony operator to a mobile MNMTC in a competitive environment.

However, between 1995 and 2000 although at that point formally an independent company, Telenor was able to continue to draw on the resources of its owner, the Norwegian state. The developments that took place in this era prior to becoming a listed company in 2000 and being subject to new EU competition legislation laid the foundations for Telenor's successful transformation from a domestic operation into a MNMTC with business units in Scandinavia, central Europe and south East Asia.

The second case is ongoing and involves a pre-emptive effort by Telenor to go beyond being a provider of connectivity to being a provider of digital services and content. By digital services, we mean services that are developed with software and that uses the internet as infrastructure for distribution and transmission of information. By digital content, we mean video, sound, text and pictures that use the internet to be distributed on demand (that is uni-casting opposed to multi-casting as is used for broadcasting of TV content). It is future looking and comprises a number of initiatives that aim at equipping Telenor for the impending 5G era.  It is noteworthy that the network technologies utilized to offer voice, messaging and connectivity historically involved on premise hardware with proprietary software technology. The new generation telco-technology architecture available in recent years has adopted principles from the IT industry and internet cloud-technologies that separates the hardware and software layers and allow services to be developed by software.

The decision to transform Telenor to a digital services and content provider was taken by Sigve Brekke in early 2016 after six months into his new position as CEO of Telenor. He stated:

> "We want to become a more digital service provider. We are going to move from being a mobile operator and into the digital world" (*Dagens Næringsliv*, 2016a).

This, Brekke further stated, would require "completely different business models" (*Dagens Næringsliv*, 2016b). Underlying this call for a new "recipe for success" was an analysis by top management that if Telenor did not develop digital services then its future was that of a utility or dumb-pipe supplying internet connectivity (Dasi et al., 2019).

It became apparent in conducting our study of radical change post-2016 that despite employing a variety of organizational solutions that Telenor in 2020 is not succeeding with radical transformation. Arguably, even more significantly, our study indicates that Telenor retreated from the ambition of radical transformation after little more than twelve months. On one level, this was because it became apparent to management that Telenor lacked the capabilities required for taking a digital services and content position. However, underlying this is the regulative institutional context in which it currently operates that constrains it from acquiring or developing these capabilities. According to the "rules of the game" (North, 1990) Telenor has to abide by as a listed company in a deregulated market overseen by the EU competition authority (Eliassen & Sjovaag, 1999), the capital investment that the Norwegian state had provided pre-2000 is no longer accessible. Further, the financial markets are not willing to make long-term investment decisions. By the end of 2019, rather than radical transformation Telenor's ambition had become one of "modernizing" the core business through legacy removal and the application of new digital technologies within its established operations. Telenor's reasoning is that business model "modernization" will enable it to enter into partnerships and new eco-systems.

Initially, drawing on the work of Elter (2004), we examine the deployment of organizational solutions during the first radical change undertaken by Telenor. Thereafter we discuss the on-going radical change that Telenor is confronting. We present our methodology we employ in order to investigate the organizational solutions Telenor is employing in the current disrupting cycle prior to describing these solutions. The methodology section also discusses how we conducted interviews with six senior managers at Telenor's global headquarters in order to gain an insight into their perspectives on current radical change. In the final section of our study, we discuss our findings.

## Radical change 1: From local monopoly to MNMTC

Founded in 1855, through until 1995 Telenor was part of the Norwegian state administration charged with delivering basic telephony services to the country. During the 1990s, Telenor went through a fundamental transformation driven mainly by technological changes, but also by institutional changes (Elter, 2004). In 1987, a EU Green Paper called for the liberalization of the European telecom industry. Deregulation began to take place during the late 1980s; by 1998, national telecom monopolies in Europe had gone.

For Telenor deregulation meant that it had to radically commercialize its operation and develop an entirely new business model.  In 1991, Telenor appointed as its CEO, Tormod Hermansen, a former politician and senior civil servant. Hermansen communicated immediately a "disrupting cycle" statement that either Telenor changed radically or it would dissolve. Transformation meant significant cuts to tariff charges and staffing levels and a complete reorganization of Telenor (Thue, 2005). Even though fixed-line telephony was dominant,

Hermansen declared that mobile telephony tariffs also needed to be reduced to such an extent that potential "competitors would think twice" before attacking Telenor on its home territory (Thue, 2005:289: our translation). More positively, he launched a "project for innovation and renewal" (Thue, 2005:291) that would be realized through decentralization and the establishment of stand-alone, live-or-die units (Thue, 2005). Beyond, the notion that fixed line internet, digital content and mobile telephony were the most promising options for future growth, each unit had the freedom to experiment with a range of new technologies.

**Legacy removal**

The first activity Telenor's managers had to engage with was to persuade Norwegian politicians that it could no longer continue as part of the public sector with its employees effectively civil servants. In 1994, the state converted Telenor into a limited company and major transformation could commence. Its change program, labelled "P-98" [1], undertook from 1995-1998 a reengineering of all major business processes within the legacy organization with the aim being to increase the efficiency of the traditional core business that delivered fixed line voice and data lines. Two major international consultant companies were engaged to guide the transformation. During this period, Elter (2004) documents a number of variants of legacy removal.

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[1] Project 98 (P-98) referred to the year 1998 when the Norwegian government was to liberalize the national telecommunication market.

**Eliminate redundant employees and competences**

In 1995, the consultants concluded that some 15 percent of employees, 1,600 in all, would have to leave and at least as many would have to be retrained for the new business model. In terms of the civil service, labour union dominated culture that had existed at Telenor for more than a century this was unprecedented. After intensive negotiations, Telenor managers and unions agreed a collective package. Surplus employees were placed in a separate unit that provided career assessments, training for new positions within Telenor, assistance in finding employment outside Telenor or early retirement. By 1997, of about 4,300 people who been in the placement unit, nearly 40 percent had left Telenor, nearly half had received training to take on new positions in different Telenor units, and about 10 percent had taken early retirement.

**Closing-down products, services and functions**

Telenor management also removed the resources that underpinned the legacy services. For example, existing transmission lines were closed down in favour of new internet connectivity. The first generation analogue mobile telephony and pager service were wound-down in favour of GSM telephony with in-built-SMS services. The fixed-line business was upgraded to connect consumers and companies to the internet. ADSL internet lines with fixed monthly subscription price replaced the ISDN service with use per minute price. The X-400 e-mail was discontinued and substituted with internet-based e-mail.

**Cost-cutting and process efficiency**

Managers at Telenor had a focus on process improvement and cost cutting. They applied multiple process improvement techniques such as 'business process reengineering' (BPR), Quality Assurance – ISO-9000, and 'Lean-thinking' to remove processes that did not add to customer value.

**Centralization to remove duplication**

During the 1990s, Telenor managers consolidated its seven regional operations into one national operation.

In addition to legacy removal, Elter (2004) also observed the use of various generic organizational solutions.

**Organizational solutions**

**Spinning-off business units.**

Another, for Telenor, unparalleled aspect to "P-98" was that managers distinguished core from non-core activities such as assembling radio masts and mounting fixed lines. Managers span off non-differentiating functions into separate, stand-alone functions that were eventually sold.

**Acquisitions and ambidexterity.**

During the 1990s, for the first time in its history Telenor started an extensive broadening of its portfolio of products and services by buying stakes in multiple adjacent industries such as external content providers, IT companies, and system integrators. Within Telenor, the ambidextrous solution was also employed. By 1995, there were 60 new venture units governed as a portfolio of start-up-companies. These autonomous start-ups provided services such as fixed-line internet connectivity services, new media and directory services, IT services, software companies, cable TV, and satellite TV communications. One particular advantage these units had was that they could draw on the capabilities that Telenor's state funded strong research department with 400 researchers had developed over a thirty year period The department has particular strengths within mobile telephony and satellite communications,.

**Radical transformation**

When Telenor entered the 2000s, the mobile business emerged as the most successful of the new ventures, and Telenor accelerated the selling off or closure of less profitable businesses. Telenor Mobile offered mobile telephony services starting with 2G and at later stages, 3G and 4G. Telenor also started expanding internationally with fixed-line and internet services but, more significantly with mobile operations. A substantial part of this internationalization took place prior to Telenor becoming a listed company in 2000. Hermansen was able to use his political contacts to ensure that the Norwegian state provided the necessary financing to establish operations beyond Norway. Thue (2005:342) reflects that, "Had Telenor become a listed company in 1995 instead of 2000, it is uncertain as to whether the company would have been

able to…engage with what was a risky international investment strategy" (our translation). In other words, the financial markets would have been significantly less willing to invest in what by 2000 had evolved into a MNMTC. The radical transformation of Telenor that played out during the 1990s, fundamentally transformed the company into a MNMTC that captured the massive growth in international mobile industry during the first decade of the new millennium.

**Discussion**

During the 1990s, Telenor seized new business opportunities by using structural ambidexterity when diversifying to ensure that each venture swiftly could pursue new business opportunities and to ensure that the major transformation of the fixed-line core business did not hamper the new ventures. Nevertheless, building the new would have been insufficient without the dynamic capability of legacy removal. Otherwise, Telenor would have been yet another "Kodak" story (Lucas & Goh, 2009).

However, underlying the emergence of Telenor as a MNMTC are two factors both of which are products of Telenor's regulatory or institutional context that enabled it to draw on the resources of the Norwegian state. The first of these was Telenor's research department that provided many of the key capabilities for radical transformation. In 2000, it housed 400 full-time researchers; by 2015, after 15 years as a listed company this number was reduced to about 50. The second factor was the availability of state finance for Telenor's international expansion. For regulatory reasons, that source of finance disappeared after 2000.

## Radical change 2: Transforming the MNMTC

Telenor in 2020 operated as a vertically integrated multi-domestic MNMTC. With more than 180 million customers, it had a portfolio of mobile operations in Norway, Sweden, Denmark, Finland, Thailand, Malaysia, Myanmar, Pakistan and Bangladesh. Worldwide, Telenor has in the region of 20,000 employees and achieved NOK 110 billion in revenues in 2018. During 2018-2019, it outperformed the benchmark, STOXX Europe 600 Telecommunications index by 2 percent.

However, the underlying picture is less sanguine. The impact of competition from global internet players' services, such as iMessage, WhatsApp and Messenger on revenue from mobile voice and messaging services has left Telenor dependent on replacing voice with internet connectivity as its core revenue generating service so that by 2018, 97 percent of its revenues came from connectivity. This service is exposed to increasing competition from other connectivity providers such that for the first time in its recent history, the group financial results suffered negative organic revenue growth of -0,6% in 2018 (Telenor financial report 2018). However, of much greater significance is that with the imminent introduction of 5G and e-sim, global digitally based firms such as Facebook and Netflix threaten to reduce MNMTCs to utilities supplying connectivity to serve their business models (Dasi et al., 2019).

Responding to this radical change, in April 2016, Telenor's CEO Sigve Brekke stated:

"We are faced with the need to change rapidly. We will see a dramatic reduction in income from voice. We (therefore) need to embark on a journey from being a traditional mobile operator to being the preferred deliverer of digital services. This will involve putting into place completely different business models to those we have today. We cannot deliver every digital solution ourselves—for the most part, we must do this in partnership with others." *(Dagens Næringsliv,* 2016b: our translation*).*

Failure to respond to this development would mean Telenor ending up as a "dumb-pipe", limited to selling connectivity based on a semi-redundant industry platform and dependent on national regulators in its various markets continuing to guarantee oligopoly by limiting the number of operators able to acquire licenses.

From the perspective of an evolutionary framework for organizational change Brekke's statement is signalling the start of a "'disrupting cycle' (in the sense of) a decisive break with the selection criterion" (Mees-Buss et al., 2019:1521) sustaining the extant MNMTC business model. By selection criterion is meant the critical factors that are considered to be key to competitive advantage and that underpin all decision-making in the organization.

**Methodology**

At the point-in-time of our research, late 2019 to early 2020, we sought to investigate the progress of the disrupting cycle at Telenor that its CEO, Sigve Brekke, communicated early 2016.  Using one of the co-author's access to Telenor company documents,

we performed a preliminary mapping of the current organizational initiatives within Telenor. We later supplemented these insights with two interviews with managers responsible respectively for Telenor's holding company and an innovation ecosystem alliance. We distinguish initial organizational solutions that preceded early 2017 when Brekke moderated his view on what Telenor was capable of in terms of radical transformation and post-2017 solutions.

After the preliminary mapping, we interviewed six senior Telenor managers (see appendix 1), one of whom had recently retired from the company. Each interview was semi-structured and divided into two main segments (see appendix 2). We firstly requested that they read and respond to Brekke's 2016 start of a 'disrupting cycle' statement (see above). In the next segment, we sought their views on how Telenor is engaging with radical change. We presented them with a list of organizational initiatives that had been instigated at Telenor following the 'disrupting cycle' statement and requested that they select and discuss the five most significant of these.  Then, we listed the five generic organizational solutions for change we have discussed above and legacy removal and asked them to select and discuss the five most important.

All eight interviews we conducted were recorded and transcribed.

**Initial organizational solutions**

**Acquisitions.**

Even before his announcement of the need for radical transformation, in the fall of 2015, Brekke formed an internal project labelled "Thor" comprising experts on acquisitions and digital services. The Thor project presented Brekke with a list of 300 potential acquisition targets and of

these in February 2016, he made the decision to acquire the US company, Tapad for NOK 3 billion. Tapad's business was the tailoring and targeting of classified advertisements for mobile devices and personal computers and Brekke declared that, "Tapad has world class competence in what we require." (*Dagens Næringsliv,* 2016a). At the same time, he acknowledged that "the digital is unknown for us" and that therefore engaging in such acquisitions was "immensely demanding". In the course of 2016, Tapad's classified market in the US shrank resulting in a year-end write-down of NOK 1 billion. By late 2017, Telenor had completely written off the Tapad investment.

Another initiative was the establishment of Telenor Digital Business located in Singapore tasked with acquiring smaller innovative companies that could provide Telenor with digital service and content provider capabilities. However, due to capital constraints, during 2017 Telenor discontinued this initiative.

**Partnerships**

Telenor has multiple partnerships with vendors, distributors and co-developers of services including Facebook, Google and Ant Financial. Furthermore, Telenor engages in partnerships with academic institutions including The Norwegian School of Economics (NHH) and The Norwegian University of Science and Technology (NTNU). To take the latter, in the fall of 2016 Telenor announced that it would invest NOK 50 million over five years in an artificial intelligence (AI) partnership. According to Brekke, the motivation for this partnership was not that Telenor was seeking to compete with major actors in AI such as Google, Facebook or Amazon, but that Telenor needs "to understand what the possibilities are and how (AI) is

developing" (*Dagens Næringsliv*, 2016c). By the standard of Telenor's annual investment of

about NOK 4 billion in mobile networks in Norway, this investment was characterized by

*Dagens Næringsliv* (2016c) as "microscopic".

**Post-2017 Organizational Solutions**

      **Ambidextrous solutions and legacy removal.**

      In mid-2018, Brekke established Telenor Group Holding in order to lodge extant

activities that, with the exception of Global Wholesale, are not a part of Telenor's current core

activities. Figure 1 is an overview of this organizational structure as it was in January 2020.
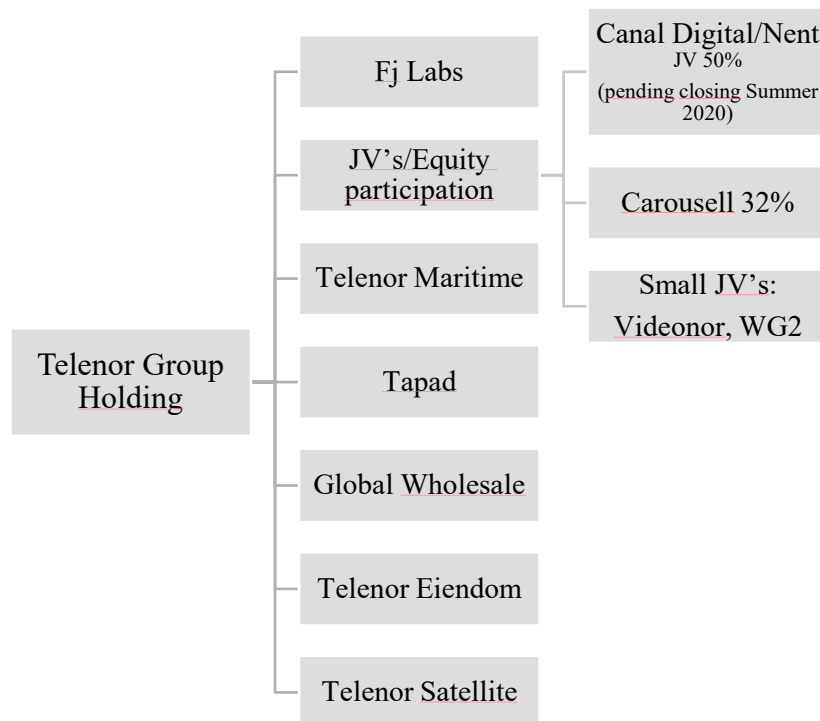
Figure 1: An overview of Telenor Group Holding (January 2020)

There is no intention that there should be any interaction or synergies between the businesses: they are unrelated stand-alone businesses in an internal "private equity" system that determines how much investment in each of them there should be. Our interview with the head of Telenor Group Holding revealed two distinct functions. One is the housing of businesses that constitute an ambidextrous solution. For example, Telenor Maritime serves cruise and ferries. Recently this unit has started piloting solutions within IoT services for oil platforms and shipping and is using its latitude as part of Telenor Group Holding to develop novel services that are viewed as having future relevance for Telenor.

The other function is to house legacy businesses that Telenor plans to off-load as soon as their value has been developed, the timing is right, and suitable buyers are located. For example, Telenor Eiendom that oversees the ownership of Telenor's various real estate is viewed as surplus for Telenor's core activities going forward. Some businesses such as Tapad in this category are too recent to be considered as legacy business, rather they are failed experiments.

In January 2020, Telenor established a new consolidated unit that operates Telenor's entire passive infrastructure in Norway. This includes mobile masts and base stations, radio and tv masts, cable and fibre networks and the buildings that house these activities.

**Innovation ecosystem alliances.**

Since 2018 Telenor has been lead partner in an EU "Horizon 2020" research and innovation program, "5G-Verticals Innovation Infrastructure" ("5G-VINNI").  By Telenor

standards, the project's total budget of NOK 1 billion, is substantial. In addition to Telenor, 5G-VINNI involves partners in Spain (Telefonica), UK (BT), Greece (University of Patras), Portugal (AlticeLabs), Germany (Fraunhofer FOKUS and Huawei Germany). According to the 5G-VINNI website, the aim of the project is "to develop a viable business and ecosystem model to support the 5G-VINNI project during and beyond the span of the project." The essence of the program is "to explore with prospective industry customers of the 5G infrastructure the relevant key performance indicators for this network facility, including technical and functional requirements from multidisciplinary backgrounds of vertical sector industries. This is expected to lead to clear operational and business key performance indicators (KPIs) which should be met in order to stimulate business innovation over future 5G infrastructures."

Each country has its unique projects. For example, in Norway, Telenor is cooperating with the three globally leading and competing providers of 5G network equipment, Huawei, Nokia and Ericsson. Collaboration is also carried out with other companies important for 5G use-cases. For example, Sealab, a Norwegian manufacturer of underwater cameras for remote real time monitoring of fish farms, is also part of the consortium. The aim of the use-case is to deploy sensors and cameras to monitor fish farms. Data are transmitted over 5G to cloud servers, where AI solutions treat the substantial amount of data to enable fish farms to identify and assess for lice, stress and nutritional requirements of each individual fish, regardless of the murkiness of the water.  At the end of 2019, Telenor's 5G-VINNI coordinator acknowledged that issues around the future ownership of any solution including the 5G base stations was unresolved and requires more applied research on the role and positions of the actors in the innovation ecosystems.

**Spinouts.**

Since 2017, Telenor has spun out two new ventures: "Whereby" a video call solution and "Working Group 2 (WG2)" that offers mobile operators a platform to leverage cloud infrastructure. Although Telenor remains a part owner, both operate independently of Telenor in partnership with others.

**The agile solution.**

Not only has Telenor Norway implemented agile work practices in a selected number of departments and teams, but across Telenor's foreign business units Telenor provides extensive training of senior managers and professionals in agile ways of working.

**Managerial perspectives on current radical change**

**The disrupting-cycle statement**

All six managers we interviewed recollected Brekke's disrupting-cycle statement in early 2016. Alexander recalled it as creating a spirit of engagement and top-down mobilization and reflected:

"Telenor was setting off on a journey to become a global and digital internet company inspired by Google. The problem was though that Telenor lacked "Google-style" capabilities. The upshot was an identity crisis – "who are we?"

Carl remembered the disrupting-cycle statement as "a dramatic call for change" underscored by the acquisition of Tapad. Telenor began to attract digital talents. Dennis still viewed the disrupting-cycle statement as resting on a correct analysis of external developments.

**The retreat from radical change**

All six informants agreed that after less than a year Telenor effectively announced that it was abandoning the disrupting-cycle statement at the annual capital markets day in January 2017. At that point, it was clear to Telenor and the markets that the investment in Tapad was failing and likewise the ambition to use Singapore as a base for acquiring smaller innovative companies. From then on, Fritjof commented, "the need to reduce costs has reasserted as the overriding concern." His colleague, Even, had a similar view arguing that cost reduction and modernization of MNMTC technology at that point reasserted itself "as the overriding logic of Telenor precluding radical change". Alexander remembers "the pendulum as swinging away

from the disrupting-cycle statement to a focus on cost reduction through increased efficiency". Carl recalled that as the notion of Telenor as a provider of digital services "came to an abrupt halt and cost consciousness driven by the need to quarterly report to the markets reasserted itself as the dominant logic", the digital talents departed.

According to Alexander, the drive for efficiency since 2017 had been palpable. One part of this drive – the "Bridge" program – aimed and achieved a 30 percent cost reduction including 30 percent reduction in the number of employees in all staff function globally over 18 months. Another part – the "Epsilon" program – aimed at the enhancing the efficiency and role of HQ. It led to a central reduction from 800 to 500 employees. Alexander had observed that Telenor since January 2019 had engaged with "structural modernization" that was designed to drive efficiency and cost reduction to the MNMTC business model across all business units. Despite some local resistance usually grounded in local business challenges, by the end of 2019 Alexander could observe the contours of "a more efficient sales machine".

However, Alexander pointed out that none of this addresses the need for radical change that underpinned the 2016 disrupting-cycle statement. Further, despite structural modernization revenues from Telenor's core offerings, voice, messaging and connectivity, were unaffected. Additionally there is an impending need to invest in 5G and spectrum/license. The other managers held similar views. Fritjof thought it highly likely that Telenor's fate is to be a supplier of connectivity but as competition is set to increase "Telenor must be damned good at this" if it is to compete even as a utility.

**The impact of post-2017 organizational solutions**

While all six managers recognized that the initial organizational solutions that had aimed at enabling Telenor to become a digital services provider had been unsuccessful, none viewed any of the post-2017 organizational solutions as offering a new viable path to radical change.

With the exception of Dennis who could perceive some limited progress in terms of developing AI capabilities there was not even much awareness of them. To the extent they were aware of them they did not associate them with radical transformation.

**Explaining the retreat from radical change**

The six managers had various explanations for why Telenor chose to retreat from radical change. We distinguish two overriding factors:

**Lack of capabilities**

Over and above, questioning whether Telenor's top management has sufficient vision and the capabilities to engage with the radical transformation as outlined in the disrupting-cycle statement, the assessment of the six managers is that Telenor in general is lacking in the core capabilities to engage with radical change. For example, Alexander viewed the notion of Telenor "becoming a global and digital internet company inspired by Google" as implausible because "Telenor lacks 'Google-style' capabilities." Even argued that with so much focus on efficiency at Telenor, potential recruits with the type competencies needed to develop radical change capabilities view Telenor as an unattractive prospective employer. Similarly, Dennis and

Benjamin reported a general lack of digital competencies within Telenor and were doubtful whether Telenor could acquire these except through partnering with external actors.

### The financial markets

The six managers were all doubtful about the willingness of the financial markets to finance the acquisition of the capabilities needed for radical change. Carl pointed to the "obvious barrier" of Telenor having to continue to fulfil its shareholders' dividend expectations. Likewise, Even did not view the disrupting-cycle statement as "plausible" because the position of Telenor as a listed company and the pressure from the financial markets mitigates against any "grand vision". Dennis also pointed to the share listing of Telenor and investors' lack of willingness to take a long-term view: "Telenor is therefore under pressure to focus on cost cutting rather than investing in the capabilities (that the disrupting-cycle statement requires)". Therefore, Dennis suggested that the only possibility of engaging with radical change is the de-equitization of Telenor so that the Norwegian state by some means could reacquire its ability to invest in "a key national technology enterprise".

## Discussion

Based on their in-depth longitudinal study of Unilever, Mees-Buss et al. (2019:1534) argue that transformative change is triggered by a break point at which the top leadership decides that the established selection criterion is no longer working and initiates a new one. The

disrupting cycle that follows involves de-selecting or de-prioritizing of established "recipes for success" (Mees-Buss et al. 2019:1538). Our study of Telenor spans the successful radical transformation of the 1990s and the unsuccessful radical transformation of 2015-2020. Both were characterized by disrupting cycle statements. Whereas the first resulted in Telenor becoming a MNMTC, our study indicates that the second was abandoned after little more twelve months.

In conjunction with the second era of radical change, our interviews with managers indicate not just a lack of the relevant capabilities for Telenor to take a digital services position but also a regulatory context that had cut Telenor off from the source of long-term finance provided by the Norwegian state during the 1990s. As a result, by the end of 2019 the transformation ambition had been reduced to one of "modernizing" the core business.

One limitation to the second part of our study is that it may be premature to conclude about radical transformation. Mees-Buss et al. (2019:1534) observe that the transformative change of an MNC is "less a progression of stages than a non-linear and ongoing succession of evolutionary cycles…. Without awareness of this…the early stages of transformative change risk being interpreted as failure, not only by participants but also by those observing it" (Mees-Buss et al, 2019:1535-1536). " It is possible that our study of Telenor's second attempt at radical change is premature. Although the managers we interviewed were unconvinced, we have observed that after 2017 Telenor contains various initiatives. As well as legacy removal, there are spinouts, ambidextrous solutions, an EU supported ecosystem alliance and experimentation with the agile solution. These may yet contribute to creating a context that is conducive to radical transformation. Equally though, it is also feasible that because of its regulative institutional

context that is significantly determined by EU competition law Telenor will be unable to access the long term investment in digital services and content capabilities that it needs for radical transformation.

Another limitation to our study is the issue of generalizability that can only be resolved by conducting further studies of European MNMTCs. However, another European MNMTC, Telefónica, is clearly experiencing similar challenges in relation to radical change:

"José María Álvarez-Pallete, chairman and chief executive of Telefónica, said the telecoms company needed to reinvent itself in an age of technological disruption. 'Our sources of revenue are exhausted, he said. 'Technology is changing everything . . . we have to build our own road forward.'" (Financial Times, 2019b).

In 2020, that road is unclear beyond the unwinding of "its sprawling global telecoms network" (Financial Times, 2019b). With €38bn of net debt and its shares having fallen by more than half since the summer of 2015, Telefónica is scaling back its global presence. Except for Brazil, Telefónica plans to withdraw from Latin America in order to focus on its domestic market, Brazil, the UK and Germany. Mr Álvarez-Pallete commented that, "The traditional way to grow is no longer valid . . . we're looking at all options" (Financial Times, 2019b).

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34

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# Appendix 1

The names of the informants have been changed to maintain anonymity. Six managers were interviewed (informant 1-6 in table below) about radical change. In addition, two informants were interviewed to provide supplementary details of the current organizational initiatives (informant 7-8):

| Alias | Date of interview |
|---|---|
| | |
| Informant 1, Alexander | November 27 09.00-10.30 |
| Informant 2, Benjamin | November 27 – 13.00-14.30 |
| Informant 3, Carl | November 27 14.30-16.00 |
| Informant 4, Dennis | November 28 10.00-11.00 |
| Informant 5, Even | November 28 11.30-13.00 |
| Informant 6, Fritjof | November 28 14:00-15:00 |
| Informant 7, Geir (5G-VINNI) | December 19 12.15.-12.45 |
| Informant 8, Henriette (Telenor Holding Group) | December 19 13:00-14.00 |

**Appendix 2**

**Interview guide:**

**Background**

We would like to learn about the five most important efforts Telenor has initiated over the last few years to maintain a solid company in the future. Then we would like to learn about how Telenor carry out change and organisational the important efforts. The purpose is to investigate how companies can become better at change in highly uncertain and complex environments.

What is the imminent major change Telenor faces?

In April 2016, the CEO of Telenor, a leading multinational MNMTC, Sigve Brekke stated:

> *We are faced with the need to change rapidly. We will see a dramatic reduction in income from voice. We (therefore) need to embark on a journey from being a traditional mobile operator to being the preferred deliverer of digital services. This will involve putting into place completely different business models to those we have today. We cannot deliver every digital solution ourselves—for the most part, we must do this in partnership with others. (Dagens Næringsliv, 2016: authors' translation).*

Do you basically agree? Or would you completely rephrase the major change Telenor is facing?

Given your view of the future…. What are the five most important efforts to secure the company's future?

- What do you consider the five most important efforts the last years?

- Why are these important, what happened when working on these areas?
- Here a list of suggestions. Please add to, change and remove the following suggestions so the list consists of what you believe are the five most important efforts:

**Changes in customers and markets served**

1. Serve new market segments (e.g. business market in Asia and a new B2B market for solutions where IoT and 5G will be introduced).
2. Acquire companies outside footprint to expand the market (e.g. DNA in Finland)

**Customer channels and relations**

3. Develop and operate digital customer interaction to compliment and potentially substitute physical distribution. Personalize the customer journey using digital technologies including AI.
4. Develop new capabilities to be able to sell to and serve the business market.

**New service offerings**

5. Implement and offer 5G services.
6. Develop new IoT and business solution services.
7. Develop new digital services for consumers as standalone revenue generating services and/or to bundle with connectivity to differentiate the core offering.

**Improved operations / capabilities**

8. Reduce cost and simplify the organisation to be able to continue to make profit when demand/ prices are declining. Remove obsolete technologies (e.g. 3G and copper network).
9. Spin off areas such as Working Group 2 and Appear.in. Sell off operations such as in CEE.

10. Carry out structural changes such as carving out towers and establish this as a separate business area.
11. Introduce cloud based network operations with APIs that replaces the traditional network operation technologies (e.g. Common Delivery Centres)
12. Investments in AI-lab Trondheim.

**Develop partnership models**

13. Find (sourcing) partners to take over non-differentiating parts of the value chain or to compensate for lacking internal capabilities.
14. Establish new partnerships to develop and offer new services to consumers and businesses.
15. Establish a separate procurement company in Singapore.

Telenor has also made efforts that are either scaled down or terminated, what is your view on efforts such as:

16. Investment in Tapad
17. Establish Digital in Singapore.

**Organizing change**

Now we would like to discuss how Telenor is organizing the change to make a robust future. We anticipate that different organizing principles are used over time. E.g. an initiative may start as a project then evolve as a separate unit or spin-out. We would like your views on how Telenor is changing and organizing and what you view to be the five most important initiatives. Here follows a non-exhaustive list of organisational solutions examples.

***The ambidextrous solution.*** In established firms, radical change (e.g. digital transformation) requires the ability to exploit existing business while simultaneously exploring new opportunities that potentially cannibalize existing ones. It has been shown that by setting up a separate organizational structure (e.g. a new unit) charged with radical innovation, the remaining organization can focus on the existing business. This ambidextrous solution equips established firms to handle pressures for efficiencies parallel to innovation. In other words, it permits both exploitation and exploration.

***Agile organization.*** Organizational agility refers to "an enterprise's ability to quickly respond and adapt in response to continuous and unpredictable changes of competitive market environments" (Sherehiy & Karwowski. 2014:466). Typically, an agile solution involves setting up autonomous cross-functional teams of roughly ten persons with a clear purpose/goal, customer orientation and tight deadlines of for example ninety days (McKinsey, 2019). The solution tends to be depicted as non-hierarchical and as breaking down bureaucracy and organizational silos, yet some initial research suggests that the solution itself is quite formal and rules-bound.

***Spin-outs.*** This solution involves complete separation from the established firm through a *spinout,* where a new venture is created. According to Christensen & Overdorf (2000) this solution is beneficial if a firm embarks on radical change that requires a different cost structure, such as when an established firm competing in the high-end of a market pursues new opportunities in the low-end of the market. In contrast to the ambidextrous solution, a spinout does not have to compete for resources with the established firm. A recent study of a Norwegian media corporation showed that spinning out products/services that the established firm uses in its core operation can secure innovation while generating both cost savings and quality improvements (Harlan, 2018).

***Acquisitions.*** This solution involves securing radical change by *acquiring a firm* that possesses innovative and explorative capabilities (Christensen & Overdorf, 2000). This allows the firm to rapidly obtain necessary capabilities, but it also requires competence in organizational

integration, as well as knowledge about when to avoid tight integration, as this may stifle the very capabilities deemed as valuable.

*Ecosystems.* In broad terms, ecosystems are groups of firms that produce products or services that together comprise a coherent solution (Adner, 2017). More precisely, after conducting a systematic review of ecosystems research, Bogers, Sims & West, (2019:2) propose that, "an ecosystem is "an interdependent network of self-interested actors jointly creating value. This definition includes four components, linking three operational constructs — interdependence, network and self-interested actors — to the most commonly described success criterion for an ecosystem: to jointly create value in a way that no single actor would be able to do."

*Legacy removal.* Elter et al. (2019) define legacy removal as "a managerial dynamic capability that implies an understanding of which current resources are not core for the new environment and which ones managers need to transform or adapt." They argue that there is a political component to legacy removal that involves dealing with affected stakeholders— employees, other managers, trade unions, politicians and so on—in the divestment process and managing the timing of the process in a way that does not compromise current performance.