

<b>Institution:</b> University of Leeds		
<b>Unit of Assessment:</b> 17 - Business and Management Studies		
<b>Title of case study:</b> Helping Ericsson AB to Create New Businesses: Enabling Corporate Innovation		
<b>Period when the underpinning research was undertaken:</b> 2010 to 2020		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b>	<b>Role(s) (e.g. job title):</b>	<b>Period(s) employed by submitting HEI:</b>
Professor Krsto Pandza	Professor	01/01/2006 - present
Dr David Larkin	Marie Curie Fellow	01/09/2016 – 30/09/2019
Dr Anna Plotnikova	Marie Curie Fellow	01/09/2016 – 30/09/2019
Dr Fathiro Putra	Marie Curie Fellow	01/09/2016 – 30/09/2019
Dr Adam Uhrdin	Marie Curie Fellow	01/09/2016 – 30/09/2019
<b>Period when the claimed impact occurred:</b> 2017 to 2020		
<b>Is this case study continued from a case study submitted in 2014?</b> No		
<b>1. Summary of the impact</b> (indicative maximum 100 words)  <p>Research by <b>Pandza</b> and the Centre for Technology Innovation and Engagement (C-TIE) at Leeds has shaped the development of organisational capabilities for corporate innovation at technology giant Ericsson AB (Ericsson). The research has supported the creation and growth of new businesses within Ericsson that explore emergent technologies in nascent markets. Ericsson managers have used the research findings from a collaborative EU-funded project to: i) improve the development of complex new products requiring integration of technological, service and business model innovation; ii) strengthen corporate entrepreneurship and create capabilities for breakthrough and disruptive innovation; iii) change strategy processes and practices through digital technology to increase diversity of participation and improve the market and technology intelligence required for implementing emerging business initiatives. Broader influence of the research has been achieved by a Massive Online Open Course and tailored Executive Education for B Braun Medical Limited.</p>		
<b>2. Underpinning research</b> (indicative maximum 500 words)  <p>Ericsson is a multinational telecommunications company, ranked number 704 in the Forbes list of The World's Largest Public Companies 2020 with net revenue of GBP19.8bn in 2019. The company established a dedicated business unit, <b>Business Area Technology and Emerging Businesses (BTEB)</b>, with 3,600 employees and net sales of GBP190m in 2019. BTEB innovation managers are tasked to develop new types of businesses that go beyond Ericsson's traditional core business of mobile networks by exploring opportunities such as Internet of Things, Digital Manufacturing, Connected and Autonomous Vehicles and Edge Computing.</p> <p>Like other large technology corporations, Ericsson faces conflicting strategic demands between innovating to sustain their core and established business, and creating new business offers outside their existing technological expertise and business models. There are multiple new approaches to managing innovation for radically new businesses. However, managers have no evidence base for how to integrate novel approaches into an effective innovation strategy and evaluate their success as conventional Key Performance Indicators (KPIs) would rule out investment in many radical innovation initiatives.</p> <p>The partnership between C-TIE and Ericsson was supported by the EU COINS project awarded in 2015 (ii). This project enabled the co-production of research with Ericsson managers and was implemented by a group led by Professor Krsto <b>Pandza</b> and Dr Saeed Khanagha (Senior</p>		

Researcher at Ericsson). It included four Early Stage Researchers (**Larkin, Plotnikova, Putra and Uhrdin**) who were seconded to BTEB in Stockholm for 18 months to work on specific projects.

The Ericsson collaboration is a continuation of a body of work by C-TIE on corporate innovation that includes a major EU project, ManETEI (i), led by **Pandza**. This gave the impetus for a research agenda centred on the multifaceted phenomenon of how managerial, organisational and institutional factors shape strategies for exploring emergent technologies. **Pandza's** research suggested that: diversity of collaboration networks increases innovation, but also exposes significant managerial challenges [1]; identity and ethical considerations are important foundations of managerial actions for development of innovation capabilities [2, 3]; and intergroup tensions, inability to embrace contradictory demands and lack of leadership negatively affect growth of entrepreneurial ventures [5]. This underlying research provided the body of knowledge on which to base the partnership with Ericsson. The collaborative research investigated three main topics, which were later integrated into a holistic model for corporate innovation with recommendations for strategy, development of organisational capabilities and changes of innovation practices.

#### **a) Developing Capabilities for Introducing Complex New Products**

This research stream focused on organisational capability for developing complex new products and services for nascent industrial ecosystems (**Pandza, Larkin and Putra**). Key problems are a) combining technological with business model innovation and b) making radical innovation comprehensible to customers and other stakeholders in an emerging ecosystem. **Pandza's** research on the role of managers in shaping capability development [2, 3] provided the conceptual foundations to engage with the above problems. The role of innovation managers is typically neglected in the management literature, which often focuses on technology inventors, R&D groups and corporate entrepreneurs. **Pandza's** two-year field research identified the important role played by managers in influencing organisational capability development [2]. His research [3] further revealed that under conditions of high uncertainty which applies to introducing complex new products, managers develop new organisational capabilities through collaboration with a wider set of stakeholders. This research [2, 3] laid the foundation for the collaborative research with Ericsson, contributing to new understanding of how managers at Ericsson, that historically used a product-centric business model, developed a multisided platform business model by managing their emergent innovation ecosystem. The research also found that innovation managers skilfully combine technology expertise with cultural resources (i.e. organisational identity) to build a competitive advantage in emerging industries (i.e. smart manufacturing and smart cities).

#### **b) Corporate Entrepreneurship and Disruptive Innovation**

This investigation addressed the deployment of an internal corporate accelerator, Ericsson ONE using the findings from [1, 5] as a basis to understand collaborative networks and the role of managers in entrepreneurial ventures. Ericsson ONE is an integral part of BTEB with objectives to spur entrepreneurial activity and to find, select, incubate and commercialise promising entrepreneurial projects. The underpinning research studied collaborative networks and role of managers in entrepreneurial ventures. *On collaborative networks*, the research found that EU research networks on emerging technologies were characterised by institutional and international diversity and this implies that the creation of emergent technologies needs to integrate knowledge across national and institutional borders [1]. This point that is further supported by multiple levels of analysis in the edited book [4]. *On the role of managers in entrepreneurial ventures*, the research revealed managerial actions that jeopardise and negatively affect the development of high-growth ventures. The research (**Pandza and Uhrdin**) investigated processes and practices at Ericsson ONE and how these could be improved to create disruptive innovation by developing new businesses beyond Ericsson's existing core markets. It identified two characteristic learning phases through which managers develop an effective internal corporate accelerator. It also developed a model with criteria to consider when making decisions about highly uncertain innovation projects.

### c) Open Strategy for Emerging Businesses

This research stream examined the integration of IT-enabled open strategy practices (i.e. an online strategy community) within the formal strategy process in order to create and implement emerging business initiatives (**Pandza** and **Plotnikova**). The researchers worked closely with the Strategy and Partnership Group (in BTEB) in order to facilitate changes to strategy practices and processes with the aim of making them more inclusive and agile. This collaboration resulted in a publication [6] that identified the three main decision areas that strategy and innovation managers have to consider carefully in order to increase the quality of strategy processes for emerging businesses: a) the design of an online strategy community structure, b) cooperation of internal and external actors with diverse expertise and from different hierarchical levels, and c) formulation of adequate strategic content.

The process of engaged research has benefitted Ericsson and this has been achieved through an intensive and iterative process of field research, dissemination of insights through four internal workshops and major open strategy workshops organised within the Strategic Management Society ([Anticipating Evolutions of a Networked Society](#), 2016; [Navigating the Platform Business Model: Strategies, Challenges and Best Practices](#), 2018).

### 3. References to the research (indicative maximum of six references)

- [1] **Pandza**, K., Wilkins, T. and Alfoldi, E., (2011). Collaborative diversity in nanotechnology innovation system: Evidence for the EU Framework Programme. *Technovation*, 31(9), pp. 476-475. <https://doi.org/10.1016/j.technovation.2011.05.003>. [Addresses collaboration in networks and the managerial challenges for network members in sharing knowledge.]
- [2] **Pandza**, K., (2011). Why and how will a group act autonomously to make an impact on the development of organizational capabilities? *Journal of Management Studies*, 48(5), pp. 1015-1043. <https://doi.org/10.1111/j.1467-6486.2010.00952.x>. [Examines how a group of managers engage in proactive and autonomous actions to accelerate and shape organisational capability.]
- [3] **Pandza**, K. and Ellwood, P., (2013). Strategic and ethical foundations for responsible innovation. *Research Policy*, 42(5), pp. 1112-1125. <http://dx.doi.org/10.1016/j.respol.2013.02.007>. [Examines managerial experiences of ethical and responsible innovation and conceptualises the link between strategic and ethical agency.]
- [4] Assimakopoulous, D.G., Oshri, I. and **Pandza**, K., (2015). *Managing Emerging Technologies for Socio-Economic Impact*. Cheltenham: Edward Elgar. ISBN: 978 1 78254 787 7. [Offers multiple levels of analysis of the management of emerging technologies across sectors.]
- [5] Es-Sajjade, A., **Pandza**, K. and Volberda, H., (2020). Growing pains: Paradoxical tensions and vicious cycles in new venture growth. *Strategic Organization*. First Published June 2020. <https://doi.org/10.1177/1476127020929003>. [Investigates the role of leadership in managing innovation contradictions in a high-growth technology firm.]
- [6] Plotnikova, A., **Pandza**, K. and Cavalcante, H., (2020). How strategy professionals develop and sustain an online strategy community. *Long Range Planning*, First Published July 2020. <https://doi.org/10.1016/j.lrp.2020.102015>. [Explores inclusive practices of IT-enabled strategy-making that foster identification and implementation of innovation initiatives.]

### Grants

- (i) **Pandza**, K., European Union PEOPLE Work Programme 2008, Marie Skłodowska Curie Initial Training Network. **GBP3,496,880**. 01.02.2010 – 31.01.2014. Management of Emerging Technologies for Economic Impact (ManETEI). Principal Investigator. Proposal Number: 238382.
- (ii) **Pandza**, K., European Union HORIZON 2020, Marie Skłodowska Curie Initial Training Network. **GBP1,246,622**. 01/10/2015 – 30/09/2019. Complex Open Innovation for Network Society (COINS). Call: H2020-MSCA-ITN-2015; Topic: MSCA-ITN-2015-EID, Action: MSCA-ITN-EID Principal Investigator. Proposal Number: 675866.

**4. Details of the impact** (indicative maximum 750 words)

The three strands of research each led to the development of innovation strategy, organisational capabilities and new managerial practices in BTEB. The Head of Technology Strategy at Ericsson gave an overview of the research contribution: *“The holistic model of Corporate Innovation developed by the LUBS research team influenced the framework we at Ericsson use to identify future opportunities as part of developing Vision for the period 2025-2030.”* [A]

**a) Developing Capabilities for Introducing Complex New Products**

The research helped Ericsson to implement a systemic approach for developing complex new products that require combining technology innovation with new services and platform business models. It enabled Ericsson’s innovation managers to: effectively identify appropriate markets for emergent technology; engage with key members in the innovation ecosystem (as opposed to focusing only on customers); develop a multisided platform business model to commercialise Internet of Things and blockchain; and use a combination of large-scale prototyping (e.g. product demonstrators) and communication techniques (e.g. innovation narratives) in order to better communicate the value of emergent technology to multiple audiences [B and C].

One specific application of the above was Ericsson’s commercialisation of a platform-based business model for roaming settlement services based on blockchain technology. The Innovation and Strategy Execution Manager at Ericsson confirmed: *“The research has enabled us to develop a viable business case and to devise a pricing strategy to incentivise service providers in adopting this platform-based service. This innovative platform-based service has now been adopted by three European communication service providers serving approximately 150m customers in total and will enable Ericsson to disrupt USD4bn (05-2019) international roaming settlement.”* [B]

The research findings related to the strategic challenges of corporate innovation informed Ericsson’s decision to establish a dedicated unit focused on smart manufacturing (predicted global market size of smart manufacturing platforms is USD12.2bn by 2025: source CGAR data on PR Newswire). In line with the research recommendations, the smart manufacturing unit was set up with a specific set of performance indicators and the resources to explore business opportunities in this emerging field. Ericsson Head of Advanced Industries commented: *“This reorganisation allows us to develop new products and services faster and in accordance with customer preferences. The smart manufacturing unit has been selected as one of the best performing teams in Ericsson and has successfully launched new offerings of ‘Industrial Connectivity’ with USD13bn market potential.”* [C]

**b) Corporate Entrepreneurship and Disruptive Innovation**

The research has informed the Ericsson ONE strategy in identifying, incubating and commercialising disruptive innovation through intensive collaboration across Ericsson and with external collaborators such as customers, industrial partners, the business start-up community and academia. The outcomes of this research, which highlighted inconsistencies in the way ideas are evaluated and selected, helped Ericsson to improve their evaluation and selection of entrepreneurial ideas; develop the managerial competency to promote intrapreneurship and manage their engagement with different types of external collaborators in order to build successful innovation teams.

The Head of Ericsson ONE Hub Sweden commented on the research: *‘It prompted us to change certain evaluation criteria to reduce bias against disruptive and radical innovation when selecting among internal projects for Ericsson ONE. In particular, we decided to reduce the weight of criteria linked to evaluating alignment to existing go-to-market channels and technology capabilities in the early stages of innovation as these criteria were leading to potential bias against new markets and radical technologies.’* [D]. The new criteria have become part of the training for members of the Ericsson ONE network and the new ideas evaluation panel now draws from a wider pool of expertise within Ericsson [D]. The Senior Researcher at Ericsson ONE commented: *“Through this collaboration, the COINS project offered several valuable inputs, for example how to set KPIs for early innovation activities and how to organize the global*



corporate venturing sub-units. This input was pertinent in redefining and improving the structure, processes, and practices that Ericsson is now using for the corporate innovation activities.” [E]

### c) Open Strategy for Emerging Businesses

The Strategy and Partnership Group responsibilities include integration of relevant analysis and insights for setting the company’s future direction, aligning Business Units’ strategies and identifying strategic initiatives for corporate transformation. Improvements in these strategy practices are needed because of the increased pace of technological and social changes. The research has improved the group’s ability to collect and rapidly analyse dispersed technological and market intelligence that drives strategic transformation at Ericsson [F]. The Vice-President, Head of Strategy & Partnerships commented on the open strategy adopted: *“On the basis of these recommendations [by Pandza and Plotnikova] we significantly increased participation of employees across Ericsson in identifying future strategic opportunities. We increased the number of collaborative strategic workshops with domain experts and strengthened our capacity for direct engagement with strategic customers. The research had impact on the way Strategy and Partnership Group identify strategic opportunities by linking technological trends, customers’ needs and internal capabilities.”* [G]

The research recommendations also improved the design of a bespoke online platform and determined the practices of managing the online strategic community. The Director of Strategic Analysis at Ericsson commented: *“The bespoke framework developed by LUBS enables us to more effectively integrate insights obtained on the online platform (open strategy) into the formal strategy process. The framework enables us to sustain a high level of participation on the platform and more effectively integrate input for variety of participants.”* [F]

Broader influence of the research has been achieved through a Massive Online Open Course (MOOC) on ‘Managing for Innovation’ developed in collaboration with IBM which has been taken by 11,530 individual learners [H]. The feedback from learners is extremely positive [H]. Pandza delivered four, two-day sessions on corporate innovation to 44 managers in a tailored Executive Education leadership programme with B Braun Medical Ltd [I]. Subsequently, B Braun has integrated the innovation road mapping tool into their strategic processes and practices, resulting in better alignment between their customers’ needs, products, services and organisational capabilities for innovation. A Divisional Manager for B Braun commented on the leadership programme: *“The seminars and research-based approach gave us a structure for managing innovation and systematically analysing links between costumers, our product and organisational capabilities. This allowed us to follow a methodical process with the confidence that we would produce an output with specific activities to benefit the B. Braun business in the UK. The structure of this innovation approach is now firmly embedded within B Braun UK.”* [I]

### 5. Sources to corroborate the impact (indicative maximum of 10 references)

- [A] Letter from Head of Technology Strategy at Ericsson AB (06.03.20) confirms the importance of the model for Corporate Innovation for formulating a long-term strategy at Ericsson AB.
- [B] Letter from Innovation and Strategy Execution Manager, Ericsson AB (20.05.19) confirms COINS work with BTEB on strategies for digital platforms and business models.
- [C] Letter from Head of Advanced Industries at Ericsson AB (28.02.20) confirm the work on developing managerial practices for innovations in smart manufacturing.
- [D] Letter from Head of Ericsson ONE Hub Sweden (11.10.19) confirms the work with corporate accelerator Ericsson ONE.
- [E] Letter from Senior Researcher and liaison for COINS project at Ericsson AB (18.10.18) explains the origins of the project and gives an overview of the different streams.
- [F] Letter from Director of Strategic Analysis (18.10.18) confirms the work in the first two years of the project and in particular the open strategy approach.
- [G] Letter from Vice President, Head of Group Strategy and Partnerships, Ericsson AB (03.02.20) confirms the work with the strategy and partnership group.
- [H] Statistics and feedback of individuals taking 9 waves of the MOOC since March 2017.
- [I] Letter from Chief Executive of B Braun Medical Ltd (received 17.06.20) confirms the value of Executive Education on innovation for the company.