Understanding an Enterprise Architect's Business Capability Modelling Practice Through the Lens of Actor-Network Theory

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ABSTRACT

Drawing on actor-network theory, its four moments of translation, and the concept of epistemic objects, this study obtains an in-depth understanding of the actual practice of business capability modelling of an enterprise architect at a Crown Entity in New Zealand. The data were extracted from a series of qualitative interviews and document analysis to explain how different actors were involved and how their interests evolved in the four moments of translation: problematisation, enrolment, interessement and mobilisation of allies. The results of this study highlight the active role of artefacts in the practice and the socio-political nature of enterprise architecture practice.

Keywords: *Business capability modelling, business capability model, business capabilities, enterprise architecture, enterprise architect, actor-network theory, translation process, epistemic objects.*

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ATTESTATION OF AUTHORSHIP

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements) nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

1st December, 2020

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CHAPTER 1: INTRODUCTION

An organisation is a complex and dynamic network of highly integrated systems, processes, functional units, information, and people. As an organisation grows in size and complexity, achieving and sustaining the strategic alignment across the organisation becomes increasingly challenging. The notion of 'strategic alignment' is defined as the coalignment between an organisation's business strategy and IT strategy (Preston & Karahanna, 2009) to ensure that IT investments deliver value in alignment with business strategy (Shanks et al., 2018) which, in turn, leads to improved organisational performance (Chan et al., 2006). Luftman, Papp, and Brier (1999) identify several reasons that make business-IT alignment challenging. These include, amongst others, a lack of linkage between IT investment and business strategy, a lack of alignment between IT and business priorities, and a lack of understanding by IT of the business.

Contemporary organisations often turn to enterprise architecture as a means to realise business-IT alignment (Kappelman, 2007; Luftman & Kempaiah, 2007; Niemi & Pekkola, 2017; Ross, 2003; Sidorova & Kappelman, 2012, 2011; Tamm et al., 2011). Enterprise architecture bridges and facilitates the communication and alignment between business and IT by providing a holistic view and insights of both current and target state of business which supports strategic management and planning (Kotusev, 2017; Niemi, 2007; Niemi & Pekkola, 2017; Simon et al., 2013; Tamm et al., 2011). One of the most broadly adopted practices in enterprise architecture is the business capability modelling (Aleatrati Khosroshahi et al., 2018; Kotusev, 2019b), which provides business leaders with a tool called a business capability model (BCM). A BCM is a blueprint of all the business capabilities within a given organisation, which are logically grouped into different categories (The Open Group, 2016). Generally speaking, a given business capability identifies a specific part of the *what* a business does or can do.

The production and continuous development of a BCM is not necessarily straightforward. At least four roadblocks have been identified: (1) a lack of support across an organisation due to a lack of understanding and awareness on the use and benefits of BCMs, (2) confusion over who should be responsible for creating and managing the business capabilities, (3) high creation and maintenance effort, and (4) stakeholders focus on the *how* (processes) instead of *what* (capabilities) too early in the discovery process which causes the business capability modelling effort to derail (Aleatrati Khosroshahi et al., 2018; Luftman & Kempaiah, 2007).

Despite its significance and value, a review of the literature shows that both the enterprise architecture practice and the business capability modelling practice have not been extensively investigated by empirical research (Bondel et al., 2018; Foorthuis et al., 2016; Kotusev, 2019). To address this gap, this study draws on actor-network theory (ANT) as a theoretical framework using its concept of four moments of translation, and the concept of epistemic objects as sensitising devices to examine in-depth: How does an enterprise architect pursue the development of a BCM?

The structure of this study is organised as follows: The next chapter presents related work in the literature covering the basics of enterprise architecture, the concepts related to the BCM development process, ANT, and the concept of epistemic objects. The methodology chapter describes the case study approach and background information of the participating organisation and their BCM initiative. Next, the findings chapter presents the process of BCM as a translation process consisting of four moments. The discussion chapter relates the findings to the literature and discusses the theoretical and practical contributions of the study. The paper ends with a conclusion chapter with a discussion on the limitations and future research directions.

CHAPTER 2: LITERATURE REVIEW

This chapter provides relevant literature on enterprise architecture practice, business capability modelling, the theory of actor-network and its translation process, and the idea of epistemic objects.

2.1. Enterprise architecture and its practice

A universally accepted definition of enterprise architecture does not exist in either academic or industry contexts (Ross, 2003). One of the reasons for the lack of a shared definition is that the discipline is evolving and expanding (Bredemeyer et al., 2003; Malan & Bredemeyer, 2005). The origin of enterprise architecture can be traced back to, at least, the 1970s when the IBM's Business Systems Planning system development methodology was developed (Harrell & Sage, 2010; Sidorova & Kappelman, 2011). In the late 1980s, enterprise architecture emerged as an independent practice thanks to the work of John Zachman (1987) on 'A Framework for Information Systems Architecture'. The term 'enterprise architecture' was coined by Steven Spewak (1992) in the early 1990s (Hjort-Madsen & Burkard, 2006). Since then, enterprise architecture has evolved from a system planning practice to become a management practice that integrates technology, business, and strategy (Bernard, 2006).

Although multiple definitions exist in the literature, the majority of them have common characteristics. That is enterprise architecture (1) provides a holistic view of an organisation, (2) includes both of the organisation's current state and target state, (3) covers four domains: business process, data, software application and technology, (4) aims to support the decision-making process (5) by the production and uses multiple architectural artefacts such as roadmaps, BCMs, and context diagrams.

Enterprise architecture practice implies a range of disparate activities (Kurnia et al., 2020) which involve toolkits, methods, and artefacts in an attempt to facilitate the decision-making process and improve business and IT alignment (Kotusev, 2017). The practice helps with identifying, understanding, recording and optimising different components of the organisation (i.e. data, process, people, IT systems) and their interactions to adapt and transform the business to meet its customer needs.

Some of enterprise architecture practices include: (1) IT roadmapping, (2) solution designs, (3) data modelling, among others (see Table 1 for a summary).

***Table 1**. Typical enterprise architecture practices.*

Adapted from (Kotusev, 2019b, p. 108).

Practice	Description	Practical usage	Key purpose
IT roadmapping	Structured graphical views of all planned IT initiatives of a purely technical nature with no visible business impact	Developed collaboratively by enterprise architects and other senior IT stakeholders, used to plan and schedule necessary technical improvements in the organisational IT landscape and periodically updated according to the evolution of the landscape	Reduce the dependence on legacy systems and technologies as well as to improve the technical efficiency and reliability of the IT landscape
Solution design	Preliminary high-level technical and functional designs of specific approved IT solutions	Created by enterprise architects and project teams in the beginning of the implementation stages of IT initiatives, used to agree on the tentative implementation plans, confirm previous time and cost estimates and then converted into full-fledged actionable solution designs	Ensure that IT initiatives can be actually implemented as expected in a way that are approved by senior business leaders, for example, according to their agreed high-level solution overviews
Data modelling	Definitions of the main data entities critical for the business of an organisation and their relationship	Developed collaboratively by enterprise architects and business leaders, used to align all new IT solutions to organisation-wide information requirements and periodically updated according to the changes in the business and its operations	Achieve better global data consistency and uniform handling of information in all IT systems

As an evolving practice, enterprise architecture has been perceived differently among organisations (Gilliland et al., 2013; Malan & Bredemeyer, 2005). Some organisations have a narrow view of enterprise architecture as an IT capability limited to infrastructure and systems design (Graves, 2007; Kappelman, 2009; Richardson et al.,

1990, Salmans & Kappelman, 2010; Spewak & Hill, 1992). Alternatively, some organisations embrace a broader view of enterprise architecture as an extension of strategic planning.

In the next section, a literature review on business capability modelling practice, which is an important enterprise architecture practice, is presented to provide an overview of some related key concepts and challenges.

2.2. Business capability modelling practice

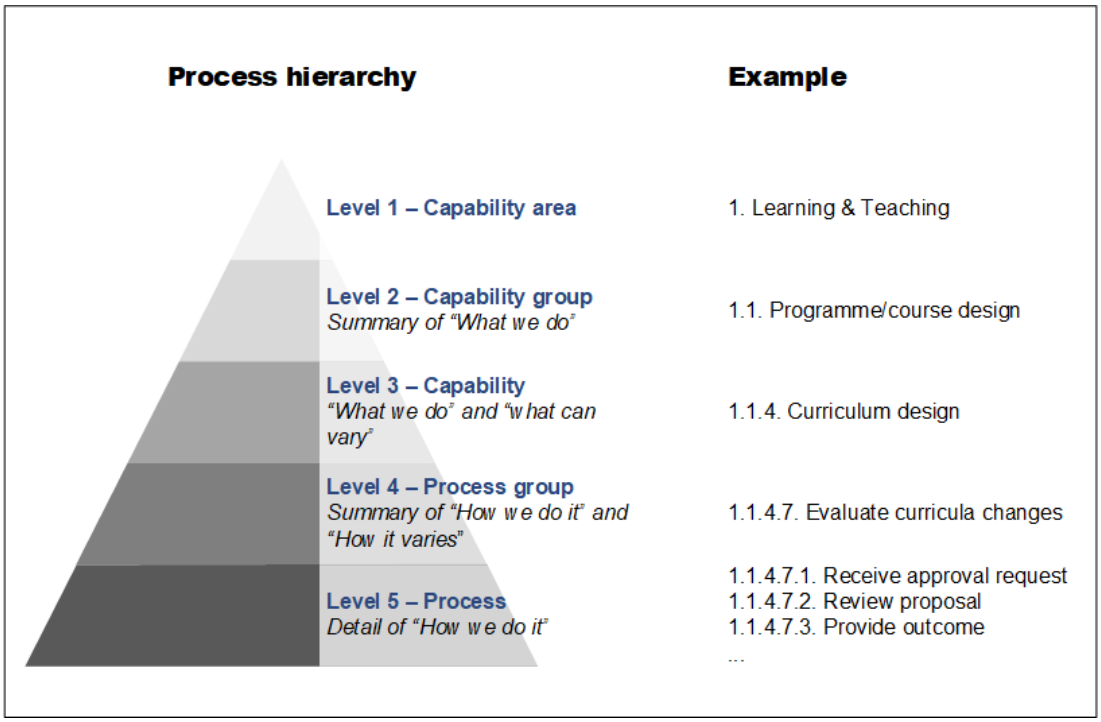
2.2.1. Defining business capability

A business capability, or simply a 'capability', describes what a business does or possesses to achieve a specific purpose or outcome (Homann, 2006); it does not communicate *where*, *why*, or *how* something is done (The Open Group, 2016; Ulrich & Rosen, 2011). By focusing on business capabilities and omitting other details of the business (i.e. technology used, people involved, system employed), complex business matters can be readily digested by both IT and business, and executives and planning teams (Ulrich & Rosen, 2011).

Business capabilities are characterised as being (1) hierarchical and decomposable, (2) non-overlapping (Bondel et al., 2018; Kalex, 2011; Ulrich & Rosen, 2011) and (3) not being equally important (The Open Group, 2016). First, capabilities are hierarchical and can be broken down into more granular capabilities and processes (Bondel et al., 2018; Schlosser et al., 2015). In other words, the capabilities form a hierarchy of nested capabilities also known as process hierarchy (see Figure 1). The number of levels is not predetermined (Grant, 1996a); typically, a business capability model has between four and six levels. Generally, the top three levels (levels 1 - 3) are used for planning purposes and levels 4 - 6 are used for detailed business/IT mapping (Ulrich & Rosen, 2011). At the base of the hierarchy are granular capabilities called processes that held the specialised knowledge of individual organisational members. When moving up the hierarchy, the capabilities become less task-specific, less volatile in terms of change over time, and more abstract. At the top level are the general functional capabilities (Grant, 1996a). Second, a capability must be unique and non-overlapping regardless of how many business units claim to perform that particular capability (Ulrich & Rosen, 2011). The third characteristic is that not all capabilities are equally important to the business. Some capabilities directly generate revenues and add strategic value to the business while others capabilities incur as a result of doing business (Ulrich & Rosen, 2011). For example, a university has many different capabilities such as "teaching", "performing research" and "IT management".

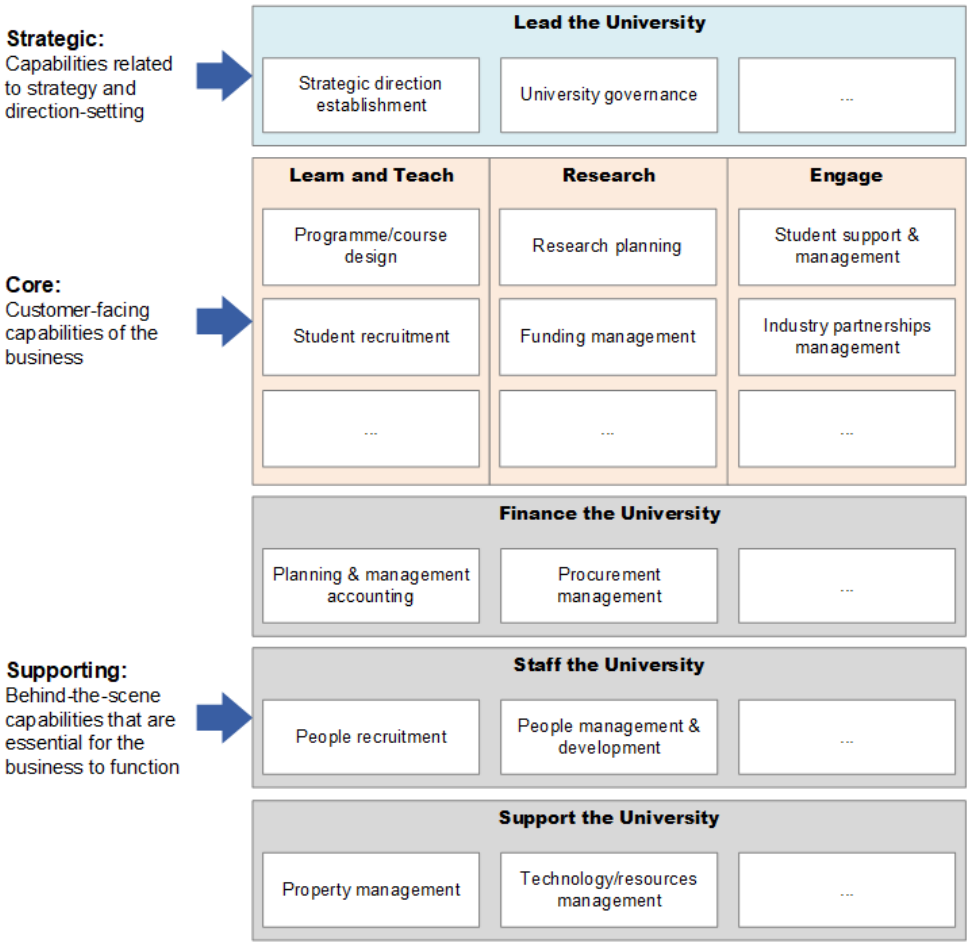
“Teaching” and “performing research” are considered core capabilities contributing towards revenue for the university. Whereas, “IT management” is a supporting capability that enables the core capabilities. There is no fixed way to group business capabilities. In fact, the Open Group (2016) suggests three capability categories, e.g. strategic, core, and supporting (see Figure 2).

Figure 1. *Business capability model hierarchy or process hierarchy.*
Adapted from the Enterprise Architect’s presentation deck [1]used to present to the ELT.



[1] A collection of slides are put together in one PowerPoint presentation file.

Figure 2. *Three categories of business capabilities.*
Adapted from Ulrich & Rosen (2011).



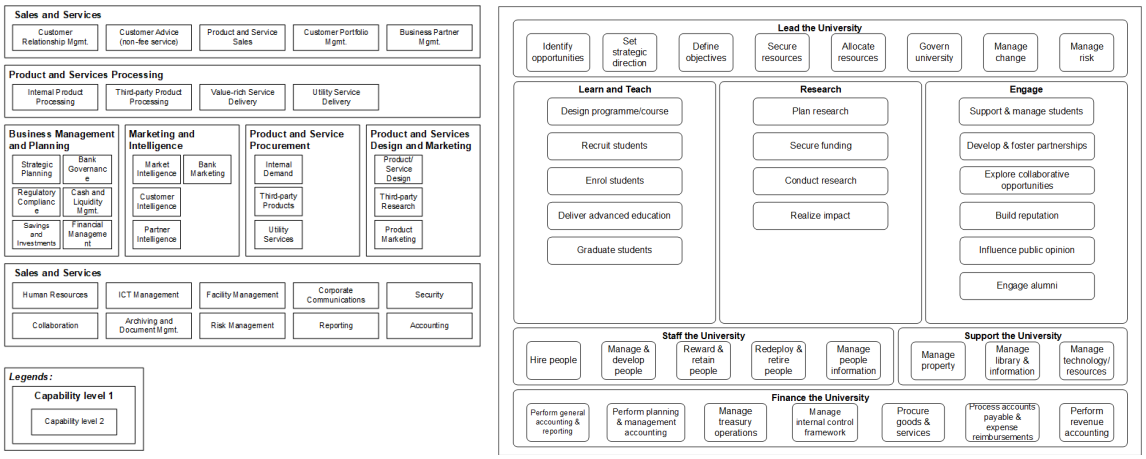
2.2.2. Business capability model (BCM)

Business capability models (BCMs) provide graphical representations of an organisation's business capabilities, their dependencies, and hierarchy (Scott, 2009; Swindell, 2014). A typical BCM captures the capabilities from the top level down to level 3 across most of the level 1 capabilities, and perhaps goes down to level 4 or 5 in a select few (Rosen, 2014). Compared to an operating model that can change quite drastically or a process model that can have variations and substantial change, a BCM is relatively robust because it is typically quite stable unless an organisation expands or scales down its business (Bondel et al., 2018; Rosen, 2010). Organisations can use a BCM to represent their current state or future state capabilities. BCMs are usually recorded on a one-page document (Kotusev, 2019b), as demonstrated in Figure 3 (see Appendix C and D).

***Figure 3**. Two exemplary business capability models.*

Adapted from the website: https:/eam-initiative.org and provided by the Enterprise Architect.

Company on a page ***University on a page***



When being put in a logical grouping, business capabilities can be a powerful communication tool to bridge the gap between different business units across an organisation. There should be only one BCM for a business (Ulrich & Rosen, 2011). BCMs provide business executives and enterprise architects an essential communication and collaboration medium which can be utilised by different teams for multiple purposes such as prioritising investment opportunities, visualising spending across organisation and understanding end-to-end impacts of changes (Aleatrati Khosroshahi et al., 2018b; Kurnia et al., 2020; Ulrich & Rosen, 2011).

2.2.3. Related work on business capability modelling practice

Business capability modelling practice has not received much attention in the enterprise architecture literature (Kotusev, 2018). Previous studies have primarily focused on presenting ways to develop a BCM in the context of business architecture layer of enterprise architecture (not in the context of information/data architecture, application architecture, and technology architecture).

Beimborn, Martin, and Homann (2005) propose a modelling paradigm for representing business functions and processes. Their approach includes two main stages: (1) Identification of business capabilities, and (2) Enrichment of a business capability model. The identification stage begins with the identification of the highest-level capabilities (level 1 capabilities). The next step is breaking down each level 1 capability into more capability groups (level 2 capabilities). Then, these capability groups are broken down into more granular capabilities. After recording the business capabilities in the capability model, it is enriched by adding the process flow connectors between the capabilities and processes to represent their interactions.

Bondel et al. (2018) also provide a detailed description of a top-down approach for developing a BCM in an empirical setting. As a starting point, this study adopts the approach proposed by The Open Group (2016). The guide outlines three stages of business capability modelling: (1) Identification of business capabilities, (2) Structuring of BCM, and (3) Enrichment of BCM or BCM applications. Building on these three stages, Bondel et al. (2018) implement and describe an eight-step process, including: (1) Problem identification and case study motivation, (2) Kick-off workshop, (3) Creation of BCM, (4) Workshop to align the BCM, (5) Enrichment of BCM, (6) Workshop to align BCM enrichment, (7) Identification of actions, and (8) Final workshop. Artefacts produced in the process are also presented (i.e. draft version of the BCM, business capability description template). The researchers conclude that the involvement of the whole management team can result in better alignment between business and IT, a common shared language, and a better understanding among the business units. In addition, they argue that BCM is a suitable tool for strategic alignment and communication. Overall, this study provides sufficient details of a BCM modelling process. However, although the artefacts involved in the process are mentioned, their role is not discussed. In addition, the implementation is executed by the strategy department who had not had prior experience in the capability modelling practice.

In an executive report, Ulrich and Rosen (2011) outline a normative top-down ten-step process, comprising of (1) Obtain an industry template (if possible), (2) Draft an organisation-specific Level 1 BCM, (3) Finalise Level 1, (4) Publish the Level 1, (5) Establish Level 2 capability decomposition priorities, (6) Decompose Level 2 capabilities, (7) Establish Level 3 capability decomposition, (8) Decompose Level 3 capabilities, (9) Socialise and refine the BCM, and (10) Publish the BCM. The process details the activities to be taken and suggests inputs, facilitated sessions, and important stakeholders. This process could be a good guide for practitioners to develop a BCM; however, the important role of artefacts and how to involve and work with stakeholders are not discussed in this study.

In summary, although previous studies have investigated and offered some insights on a business capability modelling process, knowledge gaps persist. First, empirical-based studies are sparse. Second, most of the previous work pay attention to capture what people do instead of the actual practice. Third, the socio-political aspect of enterprise architecture practice is often overlooked. Lastly, although the artefacts produced and used in the modelling process are mentioned in passing, their roles and contributions in the modelling process are not explicitly theorised.

2.3. Actor-network theory (ANT) and four moments of translation

ANT was originally developed by Michel Callon, Bruno Latour, and John Law within social studies of science (Murdoch, 1997). ANT was initially concerned with the sociology of science and was used to describe and understand the mechanics of power and organisation (Law, 1992; Walsham, 1997). ANT is also known as the sociology of translation (Law, 1992). A central idea behind ANT is the 'analysis of ordering struggle' (Law, 1992, p.5):

> *How actors and organizations mobilize, juxtapose and hold together the bits and pieces out of which they are composed; how they are sometimes able to prevent those bits and pieces from following their own inclinations and making off; and how they manage, as a result, to conceal for a time the process of translation itself and so turn a network from a heterogeneous set of bits and pieces each with its own inclinations, into something that passes as a punctualized actor.*

Put simply, ANT focuses on examining how networks and power are constructed, maintained, or fall apart (Bijker & Law, 1992; Brown & Duguid, 1994; Hetherington & Law, 2000; Hughes, 1987; Singleton & Michael, 1993; Star, 1991). The theory has been adopted widely in multiple disciplines such as managerial and organisational studies (e.g. Bloomfield & Danieli, 1995; Bruni, 2005; Scarbrough, Panourgias, & Nandhakumar, 2015; Whittle & Spicer, 2008), cultural studies (e.g. Prior, 2008; Yaneva, 2009), and information systems (IS) (e.g. Díaz Andrade & Urquhart, 2010; Sahay & Walsham, 1996; Yoo et al., 2005). The broad adoption of ANT in the IS field has been acknowledged in the literature (Díaz Andrade & Urquhart, 2010; Hanseth et al., 2004; Walsham, 1997). This is because ANT offers a rich set of concepts and ideas for investigating the nature of the socio-technical interaction (Hanseth et al., 2004; Walsham, 1997). In other words, when applying ANT to IS research, the development, implementation and use of IS in a social context can be better understood (Hanseth et al., 2004). Doolin and Lowe (2002) also argue that ANT's strong focus on empirical inquiry is helpful for generating detailed and contextual empirical knowledge about IS.

The metaphor of a heterogeneous network lies at the heart of ANT theory. ANT theorists argue that the social is "patterned networks of heterogeneous materials" (Law, 1992, p. 2) comprising of people, machines, ideas, and all the rest. In fact, our interactions are shaped and mediated by a network of both people and objects, and the social is capable of recursive reproduction through the materials involved in the network (Callon & Law, 1997). Hence, ANT puts emphasis on the significance of the

active nature of artefacts and objects (Miettinen, 1999) and calls upon researchers to treat humans and non-humans with the same conceptual apparatus (Walsham, 1997).

A major empirical focus of ANT is the effort to establish a network through the process of translation (Sidorova & Kappelman, 2011). As defined by Johnson (1988), translation refers to “displacement, drift, invention, mediation, the creation of a link that did not exist before and that to some degree modifies two elements or agents” (p. 32). A translation process shows “the capacity of certain actors to get other actors – whether they be human beings, institutions, or natural entities – to comply with them” (Callon, 1986, p. 201). In the study of scallops and fishermen in St Brieuc Bay, Northern France, Callon (1986) describes how the scientists enrol different groups of actors into their network to solve the problem of the dwindling stock of scallops.

The goal of a translation process is to align the interests of other actors with that of the focal actor (Sidorova & Kappelman, 2012). A translation process consists of four moments: problematisation, interessement, enrolment and mobilisation (Callon, 1986). In reality, a translation process is not linear but iterative and the moments can be overlapping (Callon, 1986). In problematisation, the identification, interests, and roles of a set of actors are defined by the focal actor in a way that makes the focal actor to be indispensable in the emerging actor-network. The interessement stage describes a group of actions the focal actor takes to impose and stabilise the identity of other actors which are predefined in the problematisation stage. In enrolment, multilateral negotiations and tricks that enable the interessements to be successful are described. Lastly, the moment of mobilisation involves a set of methods and a series of transformations that lead to the designation of the focal actor as the sole and ultimate spokesman of the network. This study employs ANT’s four moments of translation to analyse an enterprise architect’s BCM practice.

The concept of the translation process is particularly relevant and helpful to apply in this study because tracing the history of the translation process allows us to observe how the BCM process is carried out in practice, how human and non-human actors interact, and how certain outcomes come about. In addition, Smith, Rose, and Hamilton (2010) argue that the theoretical framework of translation facilitates a structured analysis from a single narrative account of a focal actor. For example, in this study, the business capability modelling process is told from the account of an enterprise architect.

Although ANT recognises the role of non-human actors in the making of the social world, the theory does not provide detailed guidelines on how to analyse the role of

non-human actors in the formation of a network (Yoo et al., 2005). Therefore, the concept of epistemic objects (Knorr-Cetina, 1997, 2001) is applied to theorise non-human actors' characteristics and behaviours in a network. The epistemic object concept and its associated ideas such as 'partial objects' and 'structure of wanting' are presented in the next section.

2.4. Epistemic objects as non-human actors

Under the lens of actor-network theory (ANT), non-human actors or epistemic objects are not only constructed in an actor-network (Thompson et al., 2017) but also they enact and actively participate in the making and holding together of that network (Pels et al., 2002). Non-human actors are not merely as a means of achieving a particular end (Werle & Seidl, 2015). The power of epistemic objects is well-conveyed in Knorr-Cetina's (1997) words:

> *objects of knowledge… are the goal of expert work; and they are also what experts, scientists, etc. regularly profess themselves to be interested in, attracted by, seduced into and attached to.* (p. 12)

The concept of epistemic objects offers a particularly fruitful analytical device to explicate the practice of business capability modelling and how the intended business capability model and their instantiations as non-human actors dynamically involve and evolve in a network.

Originally, the term 'epistemic things' introduced by the historian of biology Rheinberger (1997, 2005) to emphasise the powerful role of material objects in knowledge development (Nicolini et al., 2012). An object becomes an epistemic object when it becomes unavailable or problematic. Knorr-Cetina (2001) gives an example of a car. When you are not driving, a car and you are distinct entities. When you are driving and absorbed into the practice of driving, the car becomes a taken-for-granted instrument that you do not think about. That is, to say, the car disappears while you are driving it, as Knorr-Cetina (2001, p. 187) elaborates "[The car] becomes an unproblematic means to an end rather than an independent thing to which I stand in relation". However, when the car malfunctions or breaks down, you start to pay attention to it. The car now stands out as a separate entity vis-à-vis yourself and becomes your object of investigation. Your actions are "deliberately looped through [the] object and the reactions granted by [the car]" (Knorr Cetina, 2001, p. 175) as you attempt to figure what the problem is.

Epistemic objects are “objects which embody what is not yet known, provide a motivation for the creation of new knowledge” (Scarbrough et al., 2015, p. 199). They are characterised by incompleteness and partially expressed in multiple instantiations and continuous evolution (Ewenstein & Whyte, 2009). In addition, these objects are known to “have the capacity to unfold indefinitely” (Knorr-Cetina, 2001, p. 190). Also, they are always “in the process of becoming materially defined” (Rheinberger, 1992, p. 310).

Another helpful concept built on the notion of epistemic objects is that of ‘partial object’. Epistemic objects frequently have multiple instantiations or representations which exist in a variety of forms (Knorr-Cetina, 2001). These instantiations are termed ‘partial objects’. For example, in their studies, Ewenstein and Whyte (2009) and Whyte et al. (2008) conceptualised, the project as an epistemic object; whereas, visual representations such as drawings, models and prototypes which are produced in their project-based work are referred to as partial objects materially representing the project. Similarly, Werle & Seidl (2015) identify artefacts such as pictures, figures, and sketches that are produced during the exploration process as immediate representations or partial objects of the strategic object under investigation. In this study context, a range of objects with conceptual, physical, or digital properties are involved and produced in the business capability modelling process. They include business capabilities, draft models, and the presentation deck.

Partial objects are always inadequate and incomplete. They identify shortcomings or signpost areas for further exploration. In other words, they generate a ‘structure of wanting’ that leads to continual development. As a result, there is no such thing as a ‘complete’ final knowledge object because the idea of structure of wanting implies that interest in knowing is continually renewed and can never be obtained. For example, in the case of software development, the to-be-built software is an epistemic object. In order to communicate to the development team about the possible functions and features of the to-be-built software, user experience designers usually produce several versions of wireframes or visual representations of a user interface. These wireframes partially represent the final product, but they are not the final product per se. They are the current instantiations of the final product. By interacting with these instantiations over time, the development team incrementally learns about what needs to be done to deliver the final complete software. Regardless of how much effort is made, that ‘final’ version of the software can still be improved; hence, we can have unlimited updated versions of that software in the future.

CHAPTER 3: METHODOLOGY

3.1. Research setting

3.1.1. The participating organisation:

The organisation studied in this research is a Crown Entity charged with running the New Zealand lottery. Their headquarters are located in New Zealand. The company operates nationwide with around 1600 retail outlets across New Zealand. They employ approximately 140 full-time staff. IT staff accounts for about 30 full-time staff. There are also around 60 contracting staff who were employed to work on multiple technology capital projects at the time this research was carried out. Prior to this research, the organisation had not engaged in any business capability modelling initiative.

The organisation has a centralised enterprise architecture function that consists of Solution Architects and an Information Architect. It is managed by the Enterprise Architect (EA), who reports directly to the Chief Information Officer (CIO). With the addition of the full-time Enterprise Architect, this IT architecture function has evolved from a purely technology-focused solution delivery function to an enterprise-focused architecture function. Changes from both internal and external forces, which are discussed shortly in the next section, were the trigger for this change. As a result of this evolution, the EA was employed in mid-2019.

Overall, the Enterprise Architecture Team is responsible not only for ensuring that an IT platform is capable of reacting effectively and at pace to change within the organisation, but also for organisation-wide strategic architecture planning. From an organisational perspective, the focus of the enterprise architecture function consists of four domains: business process, software application, data and technology.

3.1.2. The BCM initiative:

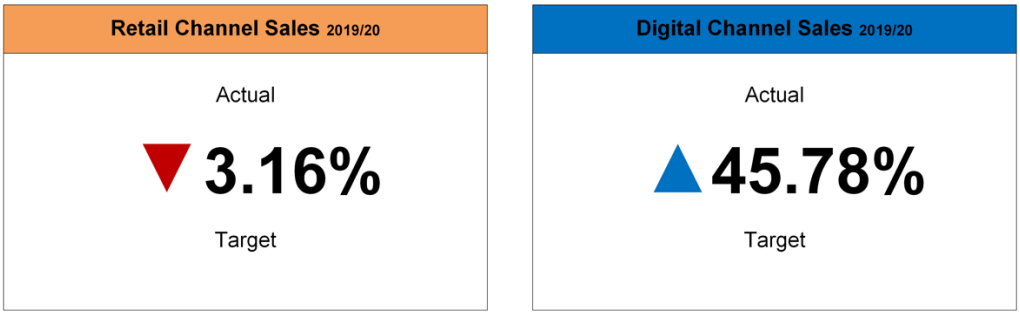
As a regulated organisation, the participating organisation's strategy and operation are constrained by internal and external forces. The external forces include changes to regulations and legislation, gaming legislation, and customer behaviours, particularly as a result of COVID-19. As a Crown Entity, the organisation is mandated to refresh its business strategy every four years. It also has to abide by New Zealand government mandated models and frameworks, such as the NZ Information Security Model (NZISM). In addition, as the business has grown, so has its complexity, especially when new products have been introduced to maximise the value from their online sales channel. The traditional B2B relationships, with their licensed retailers, was disrupted during COVID-19 lockdowns, and was not able to generate revenue. As the only viable

channel, the online channel experienced considerable growth. However, the organisation was not structured to support the demand from the online channel, nor could the existing functional units, that operated in silos, support the desired online customer experience.

As a result, the organisation realised the immediate need for a new business strategy that can react at pace to internal and external drivers and enable them to seize opportunities as changes in these drivers arise. To do this, it is necessary that staff and external partners have a clear idea of the organisation's business capabilities, the processes, and services that support them. Hence, the CIO outlined a new initiative and worked closely with the EA to launch the BCM initiative, which consisted of three stages: (1) record the existing business capabilities from the top-down, (2) demonstrate the use of the BCM and the value of the architecture tool to the CIO, and (3) define and share the capabilities with the rest of the organisation. It is important to note that the COVID-19 pandemic happened at the end of stage 2 of the initiative. The pandemic has had a significant impact on their operations. In particular, the closure of retail stores during the Alert Level 4 lockdown substantially impacted their sales performance (see Figure 4). As a result, the BCM initiative has unexpectedly become timely and more critical because it provides the management with a map/view of capabilities to navigate through such crisis.

Figure 4. *Impacts of COVID-19 on the annual performance of the case organisation in 2019/20.*

Source: Provided by the Enterprise Architect.



Stage 1: Record the existing business capabilities from top-down

The first stage was defined by the production of the 'Organisation on a page' artefact which was the intended BCM. It started with an initial draft version of the intended BCM created by the EA. This stage ended when the intended BCM was reviewed and approved by the Executive Leadership Team (ELT). During this stage, the EA worked with each member of the ELT to model the high-level business capabilities of the organisation (levels 1 and 2). Several meetings and workshops took place. Multiple

artefacts were produced and used in this stage, such as the draft BCMs, and a presentation deck.

Stage 2: Demonstrate the use of the BCM and the value of the enterprise architecture tool to the CIO

The second stage was defined by a combination of the top-down and bottom-up approaches to populate the process hierarchy i.e. the level 1 – 5 processes. The main goal of stage 2 was to demonstrate the value of an enterprise architecture tool called ARIS (Architecture of Integrated Information Systems) as well as the power of the BCM, and gain consensus for the purchase of the ARIS tool to manage the resulting architecture artefacts. This demonstration of use of the BCM required the EA to pick one of the level 1 capabilities and through a process of repeated refinement, model the lower-level capabilities underneath it. The EA selected the Human Resource (HR) capability because HR capabilities are among the common capabilities (i.e. Finance, IT) which are well-known, easily relatable, relatively stable and standardised in most organisations.

Following this top-down refinement approach, the EA produced a draft version of all the organisation's level 3 HR capabilities. For the bottom-up approach, several related level 5 processes were modelled by the Business Analyst. These process models were then summarised in a level 4 process that directly mapped to a specific level 3 capability. This stage ended when there was sufficient collateral to demonstrate the value of the enterprise-wide architectural tool to the ELT. Many workshops took place in order to achieve this. Also, the majority of artefacts produced in this stage were the draft models of the level 1 – 5 capabilities and process flows.

Stage 3: Define and share the capabilities with the rest of the organisation

The third stage will be defined by the implementation of the architecture tool. The main goal of this stage is to provide functional business units with appropriate training, especially where strategic values are generated, so that they can model their own processes listed under the documented capabilities. Simultaneously, these documented business capabilities and their associating artefacts would be curated and published, using the architecture tool, by the architecture team, for the benefit of the whole organisation.

At the time of this research, stage 1 and stage 2 have been completed. Stage 3 is in progress but has not yet been implemented. As such, this study focuses mostly on stage 1 and stage 2 for the analysis.

The key events related to the BCM initiative can be found in Table 2:

***Table 2**. Key events associated to the BCM initiative at the case organisation.*

KEY EVENT	DATE
Enterprise Architect was hired	August 2019
CIO approved the BCM initiative	November 2019
CEO approved for the BCM initiative to be executed	December 2019
STAGE 1	
The first workshop[2] with ELT	January 2020
'Organisation on a page' artefact was approved by the ELT	February 2020
STAGE 2	
Meeting with HR Manager to map lower level HR processes	February 2020
Lower level (L1 – L5) HR capabilities and process flows were in place	February 2020
Demonstration of the use of the BCM and the value of the enterprise architecture tool to the CIO	March 2020
COVID-19 first lockdown	March 2020
The consensus for the purchase of the ARIS tool was obtained from the CIO	April 2020

3.2. Research method

3.2.1. Data collection

Since the focus was on understanding a work practice, the descriptive case study methodology was used (Myers, 1997; Walsham, 1993) to guide the data collection and analysis process. The focus on a single case seems appropriate and feasible given that this study aims to obtain a deep understanding of the practice of business capability modelling as it unfolded within a set timeframe (Dougherty, 2002).

The data were mainly drawn from two primary sources, semi-structured interviews conducted at the studied organisation and documentary materials/artefacts provided by the EA. The use of multiple sources of data adds rigor, validity, and credibility to this study as well as minimising the bias that may have existed from a single source of data collection (Patton, 2002). In addition, different sources of data ensure data triangularity and allow for rich data for analysis.

Access to the research site was obtained thanks to the professional relationship between the researcher and the EA. Eventually, he became the research champion

[2] A formal meeting at which the Executive Leadership Team engaged in intensive discussion and activities to map, review and confirm the organisation's capabilities and processes.

and provided support such as negotiation access and interviews throughout the research process.

Since the data collection involved face-to-face interviews, one possible ethical issue in this study is the confidentiality of the participants' identity information. Thus, appropriate measures were put in place to ensure their confidentiality. To be specific, the interview data is stored and only accessible to the researcher and her supervisor; the participants' personal information is not used in the data analysis process of the study; and the organisation and participant's personal information are not revealed in the dissertation report and future publications.

Six interviews were conducted from May – June 2020. The participants were selected based on two criteria. First, they were involved in modelling BCM. Second, the respondents were available to participate in the study. Participants included the Enterprise Architect (EA), the Chief Information Officer (CIO), an HR Manager, and a Business Analyst. All interviews were recorded and transcribed verbatim. The interviews focused on understanding what the interviewees had done and their use of material artefacts during the modelling process. Gift cards were given to all participants as a token of appreciation. The interview with the Business Analyst was not used in this analysis as her involvement was considered out of scope for this analysis.

As the interview data was collected after the events had happened, the researcher also adopted the 'Interview to the Double' technique (Gherardi, 2013; Nicolini, 2009) in my semi-structured interviews to obtain rich data. This technique requires interviewees to imagine that they have a double who will replace them the next day at work. The interviewees were then asked to give detailed instructions that would help the double to do the job and not get unmasked. This technique is adopted because it helps to capture tacit knowledge through reflection (Nicolini, 2009). For example, one of the questions was raised to the EA was:

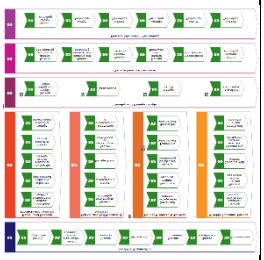
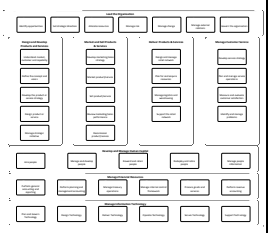
> *Imagine I am new here [in the participating organisation]. But you need me to create a business capability model from scratch. Could you please tell me everything I need to know in order to do it?*

Relevant artefacts used and produced in the modelling process were requested from the EA and received in April 2020. The collected artefacts were utilised in the interviews with all the participants: (1) as a tool to aid memory, because the modelling activities were carried out prior to the interviews, and (2) as an interview prop by showing an interviewee an artefact and asking him/her to explain to the researcher

what that particular artefact was about and how it was produced with the contribution of the interviewee. Not all provided artefacts were used because some of the artefacts were produced in the latter stages, which were considered as out of scope for this study.

Table 2 shows a summary of data sources.

Table 3. *Data sources.*

Data source	Interviewee/Type	Length/Description
Semi-structured interviews	• Enterprise Architect (x3 interviews)	45mins, 38mins, and 35mins respectively
	• Business Analyst	36mins
	• Chief Information Executive	19mins
	• HR Manager	22mins
Artefacts	***Presentation deck***	The presentation deck named 'Value of process hierarchy' consists of 14 slides (the title page is excluded). This deck is produced specifically for the executive leadership team. See Appendix B for details. 
	'Organisation on a page'	This artefact provides the visual depiction of the high-level business capabilities (levels 1 and 2 in this case), logically grouped into different categories. When a BCM is approved by the senior executive team, the Enterprise Architect calls it 'Organisation on a page'. 
	First draft of the BCM	The first iteration of the 'Organisation on a page'. 

3.2.2. Data analysis

The data analysis followed the iterative theory-building process as described by Orton (1997). The data analysis consisted of four stages. In the first stage, the researcher read all the interview transcripts to gain an overall understanding of the case and its context to decide on the scope of the analysis. The second stage involved multiple

rounds of reading of the interview transcripts to (1) highlight quotes, (2) assign each moment to the quotes, (3) identify relevant artefacts, (4) assign moments in which a particular artefact was produced or used, and (5) record how each of the artefacts was used especially by the EA in the modelling process. In the third stage, the highlighted quotes and identified artefacts were grouped by the moments with which they were associated. To gain a rich interpretation of the data, the researcher analysed the data with reference to existing literature. As a result, the work on epistemic objects (Knorr-Cetina, 1997, 2001) was identified as helpful for understanding the effect and role of the artefacts in the development of the BCM. In the fourth stage, the role of artefacts as epistemic objects in the four moments of translation was examined. In particular, the researcher scrutinised the interactions between the material artefacts and the interviewees to understand better how those relationships influenced the dynamic association among the actors and the development of the BCM in each moment.

CHAPTER 4: FINDINGS

This analysis applies ANT's four moments of translation and the idea of epistemic objects to the BCM development at the participating organisation. Before discussing each moment in detail, a brief description of the BCM initiative is presented as a reminder of the research context.

In August 2019, the CIO knew that the organisation had to orientate itself differently due to the changes from internal and external forces, as discussed previously. The need for change was accelerated by the impact of COVID-19 on customer behaviours. To orientate differently means to challenge the established business model:

> *… often when you've got quite successful businesses, it's quite hard to change... So, we don't want to change those. We almost want to protect those because those are the things that have worked very well and they have good value for us. But you need to start to challenge some of those when you can see they're not working in delivering the value you need and becoming a bit of a hindrance.* [CIO]

In addition, the internal capabilities and processes had never been formally recorded. Consequently, depending on one's specific role and hierarchical level within the organisation, each staff member has a unique and possibly different mental model about what the organisation does. For example, senior management would have an abstract view of the business while others, particularly the operating-level staff, know their tasks in detail; but without much knowledge of how their tasks align or are linked with others' to contribute to the overall business outcomes. As a result, the interdependencies between different parts of the business are often not fully understood. For that reason, making strategic and associated operational changes becomes difficult and risky:

> *… things are so complex now. Everything sort of intertwined. That end-to-end process view… from one end of the business to the other which used to be more siloed. Back in the day when we had things… like when we just had Retail doing retail, we had Marketing doing marketing and we had Technology supporting systems. It's now so intertwined because of the customer view in the relationship we had that touches on every single department… 'cause these are omni-channels so all of that stuff starts to link together, those processes.* [CIO]

To facilitate such strategic reorientations, the CIO hired the EA and commissioned him to start an initiative and named it the Business Capability Model (BCM) initiative. The initiative is also a stepping stone to pave the way for the introduction of the enterprise architecture capability into the business. Using ANT lens and concepts, the researcher conceptualises the BCM initiative as an emerging actor-network that must be established and stabilised.

The EA is the focal actor to be followed through the moments of translation to “trace the emergence and involvement of a number of different actors” (Hansen & Clausen, 2017, p. 360) and to understand how the emerging network was constructed. Although Latour (2004) puts emphasis on the importance of providing good descriptions, which do not require further explanations, this paper would do both because the researcher wants to present her own interpretations to the described phenomena. In the following sections, each moment starts with a brief explanation of what the moment is, followed by the analysis of each moment in the BCM development process.

4.1. Problematisation

The initial problematisation involves defining and negotiating who should be enrolled in the project and identifying their interests. In particular, the focal actor must try to convince other actors that their interests will be fulfilled by accepting the proposed programme or passing through the Obligatory Passage Point(s) (OPP) (Callon, 1986). OPP is used to refer to common interest (Hansen & Clausen, 2017). The outcome of problematisation is the formulation of the problem and the determination of a set of actors, and their identities and interests while the focal actor renders himself indispensable in the emerging network.

4.1.1. Identify actors to be enrolled

The initiative officially began only after the Chief Executive Officer (CEO) approved for it to be executed. The CEO was enrolled, without any resistance, because he was the owner of the initiative. Hence, the translation of the CEO was not included in the analysis. In the case of the CIO, it should be noted that the CIO played two roles in this initiative as the initiative sponsor and a member of the ELT. As the initiative sponsor, his enrolment was a given. Therefore, the CIO was mainly considered as a member of the ELT in the rest of the analysis.

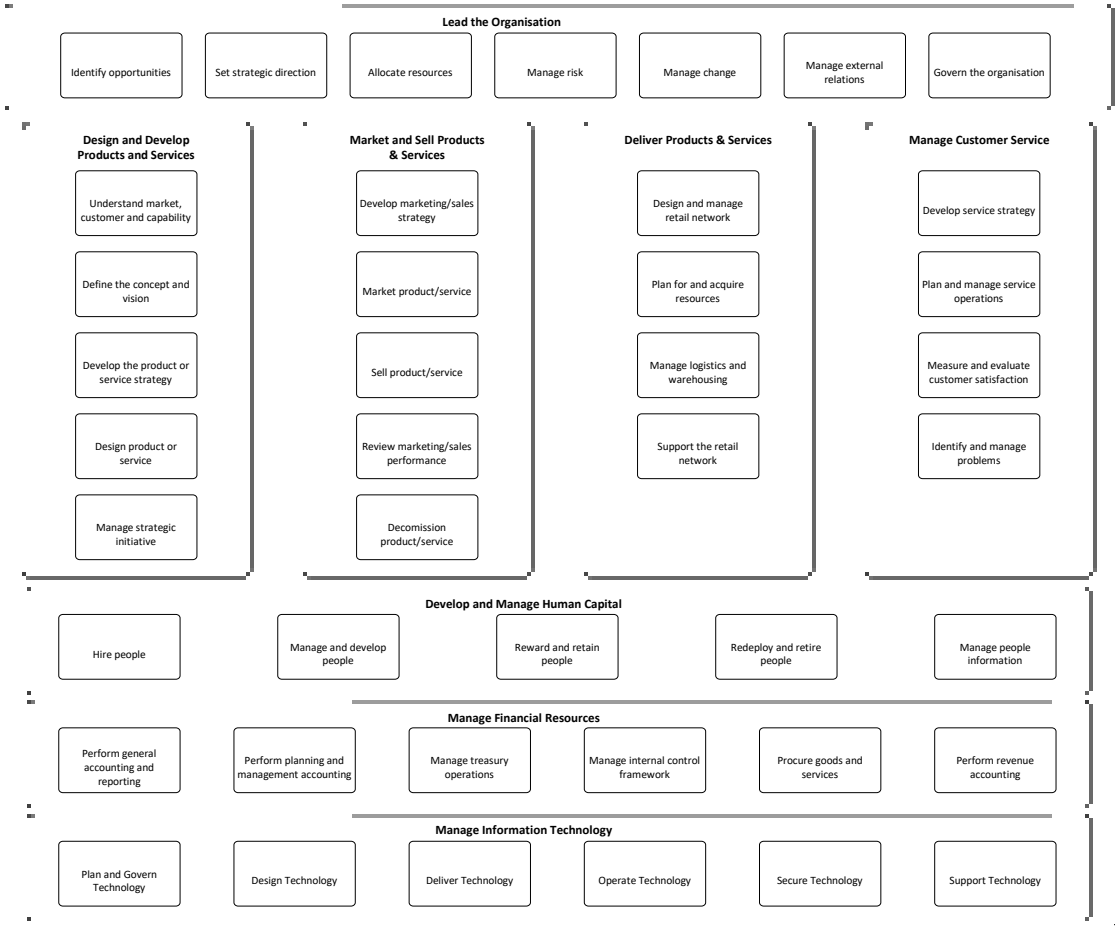
After identifying the high-level business capabilities and the ELT as actors to be enrolled in the network, the EA defined their interests and relationships in a way as to establish himself or herself as indispensable in the network he was constructing:

The Enterprise Architect (EA) – the focal actor: The EA reports to the CIO. He is perceived by others in this initiative as a representation expert with years of experience in different business sectors. Enterprise architects usually have a 'toolbox' of models and modelling methods to choose from to produce an effective representation of the enterprise. His interest lies in the procurement of an enterprise-wide architecture tool called ARIS (Architecture of Integrated Information Systems). He intended the tool to be primarily a knowledge repository to promote common understanding and support organisational change impact analysis. It is also intended to support modelling, enabling the easy sharing and secure storage of architecture models, such as process models, while at the same time providing stakeholders with reports and viewpoints on the often complex relationships between the various objects represented in the models. The introduction of such a tool is a crucial step towards the maturity of the enterprise architecture capability because it helps with the standardisation of the architecture vocabulary and practice within the organisation.

The high-level business capabilities: 'High-level business capabilities' is a term used to refer to the level 1 and level 2 business capabilities in the process hierarchy and are representative of all of the business capabilities and processes (BC&P) of the organisation. Different levels of capabilities and processes are discussed shortly after.

Business capabilities have always been abstract concepts but given meaning by staff in their daily activities. However, the high-level business capabilities had not been formally recorded and socialised across the organisation. Although the high-level business capabilities are not capable of verbalising their wants, the capabilities have the ability to give off signs of their lacks and wants to those concerned. As epistemic objects (Knorr-Cetina, 1997; Rheinberger, 1992), the capabilities always want to be materialised into more stabilised forms instead of remaining as abstract concepts or ideas in people's heads. To be materialised, the abstract high-level business capabilities give off signs of their lacks and wants via their instantiations. The instantiations, in this case, are the multiple iterations of the draft models of the intended BCM (see Figure 5). Therefore, each of the draft models is inherently incomplete and tends to signify its lacks to direct the attention and efforts of concerned actors for further exploration and modification (Knorr-Cetina, 1997, 2005). Eventually, the later drafts (if any) are often more improved and complete compared to the earlier versions.

Figure 5. *The first draft model of 'Organisation on a page'.*
Source: Provided by the Enterprise Architect.



Executive Leadership Team (ELT): The team consists of the heads of functional units (Human Resources, Finance, Information Technology, Marketing, Customer Service, Retail, Digital, and Strategy and Communications) who report directly to the CEO. Individually, each ELT member is a representative of all the staff in his or her department. At an operational level, they are responsible for the operational performance of his/her function. At an enterprise level, as a group, they are responsible for the enterprise business strategy, which informs the enterprise architecture. Their support of the initiative is crucial because they have the knowledge of the high-level business capabilities, and they are the providers of resources and information required to implement the initiative further. The roles of the ELT in this initiative are defined as the subject matter experts cum capability owners.

As the business has grown quickly, the ELT felt the pressure to reorientate and structure themselves differently to respond effectively to the changes and complexity. Their challenge was the difficulty in understanding and communicating about the

impacts of changes. Their priority is to continue delivering on the strategic values and communicating changes more effectively.

4.1.2. Formulate the problem and establish the OPP:

The initiative revolved around one question: What is the value of recording the current BC&P? The EA addressed this question in one of the slides in a presentation deck, which he created to educate the ELT about the initiative. The presentation deck was named ‘Value of process hierarchy’ and the slide was titled ‘Where’s the value?’ (See Figure 6).

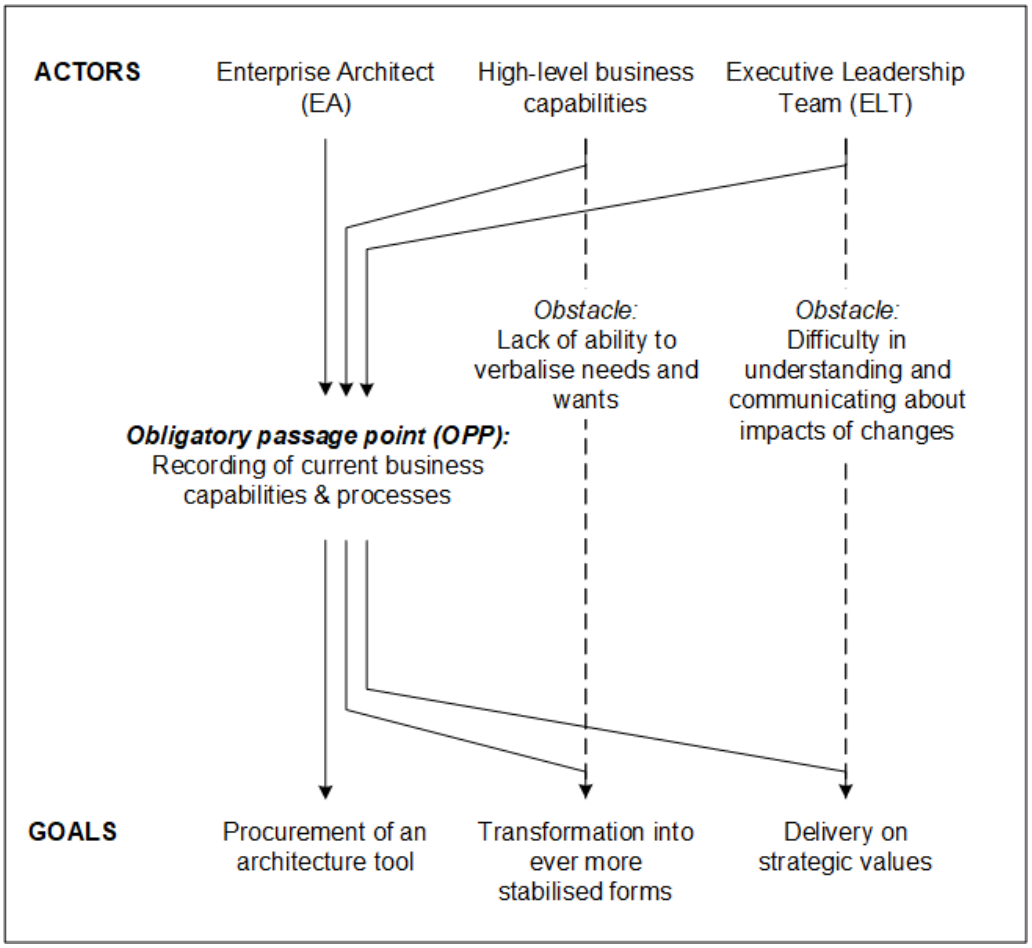
Figure 6. *The slide communicates the problem to be solved by the BCM initiative. Source: Provided by the Enterprise Architect.*

In this slide, the EA referred to the BCM as ‘a key communication tool’ and highlighted its key values to the organisation, such as “focus investment where it will have the greatest impact” and “identify areas impacted by proposed business change” among others. By addressing some of the potential use cases of the BCM, the EA invited the ELT to pass through the Obligatory Passage Point (OPP) where all the interests would be aligned and fulfilled. This meant that the ELT would be equipped with a powerful tool for delivery on strategic values; the high-level business capabilities would be materialised; and the EA himself could procure the architecture tool.

Figure 7 shows how the different interests among actors (i.e., EA, high-level business capabilities and ELT) were converged and passed through the OPP, which was “recording of current business capabilities and processes”. The diagram also shows the alternative paths (the dashed lines) in which the actors could pursue their interests and

goals individually and have to encounter the obstacles on their own. For example, in the case of the current business capabilities and processes, their obstacle was lack of the ability to verbalise their needs and wants; and in the case of ELT, if they did not want to pass through the OPP, they would have continued facing the difficulty in understanding and communicating about the impacts of existing and incoming changes.

Figure 7. *Actors and the problematised Obligatory Passage Point (OPP).*



4.2. Interessement

In the problematisation stage, the solution to record the BC&P was proposed as the OPP, actors were identified and their interests were defined. However, these hypothetical identities and interests had not been validated. As Callon (1986, p. 208) elaborates, “to interest other actors is to build devices which can be placed between them and all other entities who want to define their identities otherwise”. During the process of interessement, the properties and identity of the actors are refined, consolidated, and stabilised through multiple strategies and interessement devices adopted by the focal actor (Callon, 1986).

The devices used to interesse other actors are called interessement devices. Each of the interessement devices attempts to interrupt all potential competing associations and to construct a system of alliances. For example, in Callon's (1986) analysis of the attempts by three marine biologists to resolve the problem of a dwindling stock of scallops in St. Brieuc Bay, the towline and its collectors is an archetype of an interessement device because they physically disassociated the larvae from current and predators (starfish) that try to exterminate and threaten the larvae's growth and existence. Interessement devices can take several forms, including narratives, icons, workshops, and concepts. (Hansen & Clausen, 2017). In this study, the two interessement devices adopted in the interessement moment are: (1) the layout of the first draft BCM, and (2) the content of the PowerPoint presentation deck.

This section describes a group of actions by which the focal actor attempts to lock the identity of the other actors through the use of two mentioned interessement devices. These actions are (1) capturing and structuring the high-level business capabilities in a logical and meaningful way to interesse the capabilities, and (2) compiling a presentation deck in a way that interesses the ELT.

4.2.1. Interesse the high-level business capabilities

Both the scallops in Callon's study (1986) and the business capabilities are epistemic objects (Knorr-Cetina, 2001). On one hand, the natural entities such as scallops are known for being recalcitrant:

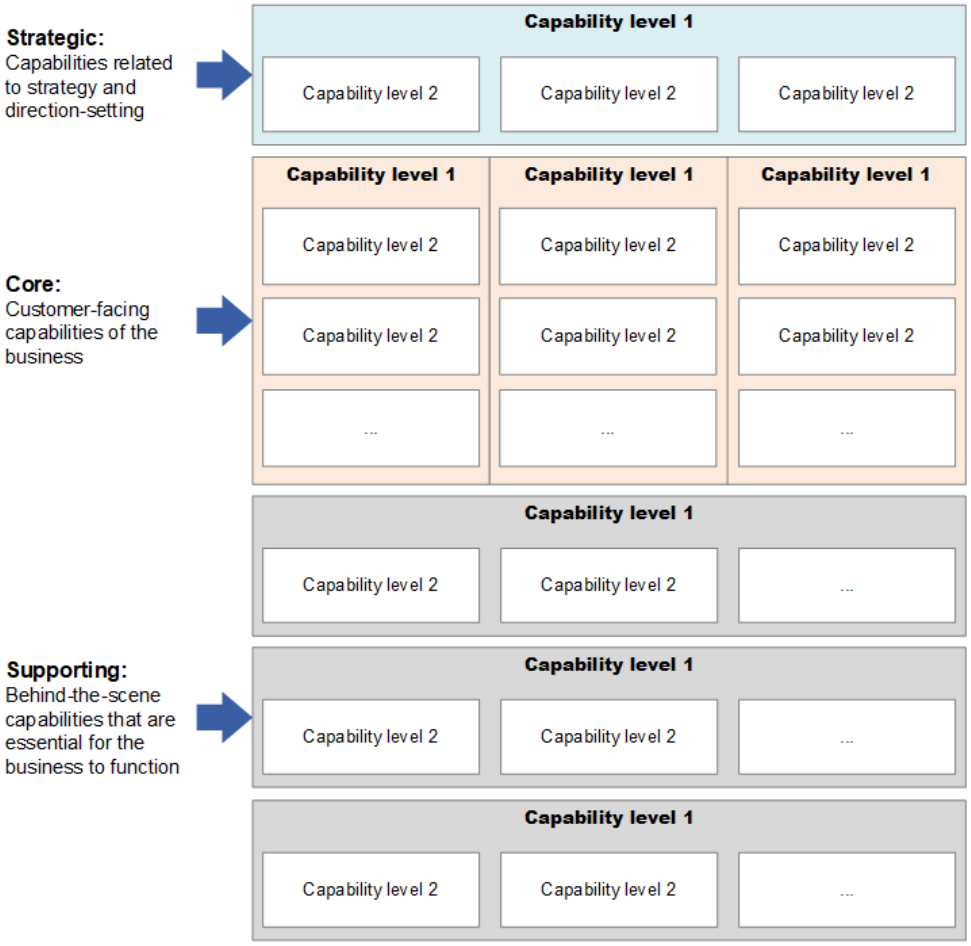
> *Natural objects are naturally recalcitrant; the last thing that one scientist will say about them is that they are fully masterable. On the contrary, they always resist and make a shamble of our pretensions to control.* (Latour, 2000, p. 116).

On the other hand, the business capabilities are open and, through their instantiations (i.e. draft models) give off signs to other actors for materialising them further (Knorr-Cetina, 2001). Although being open, the business capabilities did not reveal themselves easily. To interesse the high-level business capabilities, the EA was required to demonstrate that he knew the way to make the capabilities valued in the eyes of the ELT and other to-be-enrolled actors so that the capabilities could 'come to life.'

The EA started with doing research on the organisation's capabilities by reviewing some existing organisational documents, and looking at the American Productivity & Quality Center's (APQC) business process reference models to find if there was an available model that was similar to that of the organisation. Next, he built up a 'straw

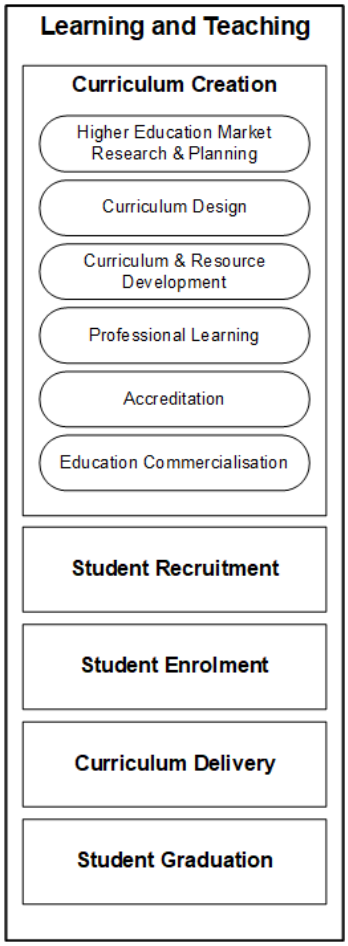
man' model, which was the first draft BCM consisting of the business capabilities at levels 1 and 2. The layout, (see Figure 8) in which the capabilities were housed, was the interessement device the EA used to interesse the high-level business capabilities.

Figure 8. *First interessement device – BCM layout.*
Adapted from Ulrich & Rosen (2011).



Thanks to the BCM layout, the high-level business capabilities were extracted from the existing organisational documents, and transformed from abstract concepts into a digital artefact (a model created on computer) then into a physical artefact (a printout). In addition, the layout not only housed the capabilities but also arranged them in a meaningful way. For example, in the first draft model, each level 1 business capability is refined into several lower-level capabilities to communicate capabilities in more detail. Refinement and levelling of the capabilities was necessary to communicate the appropriate level of details to different intended audiences and to ensure consistency in detail at any given level of abstraction. While senior executives might only be interested in the abstract information of high-level capabilities, the operational staff might expect to see more details of the *how* expressed in the business process models (The Open Group, 2016) (see an example of levelling in Figure 9).

Figure 9. *Example of levelling of "Learning and Teaching" capability.*
Adapted from the CAUTDIT's Higher Education Business Reference Model and the Open Group (2016).



A poor representation of the business capabilities that fails to signify their potential value would threaten the opportunity for the business capabilities to be materialised further. Therefore, the layout that the EA chose was effective in the sense that it locked the high-level capabilities in their place and made the business capabilities understandable and meaningful to other actors.

4.2.2. Interesse the ELT

After creating the first draft model, the EA scheduled a workshop with the ELT. Before the workshop took place, the EA approached each member of the ELT, showed them the first draft model of the BCM (see Figure 4 above), and asked for their feedback on the high-level business capabilities associated with their particular domain of responsibility.

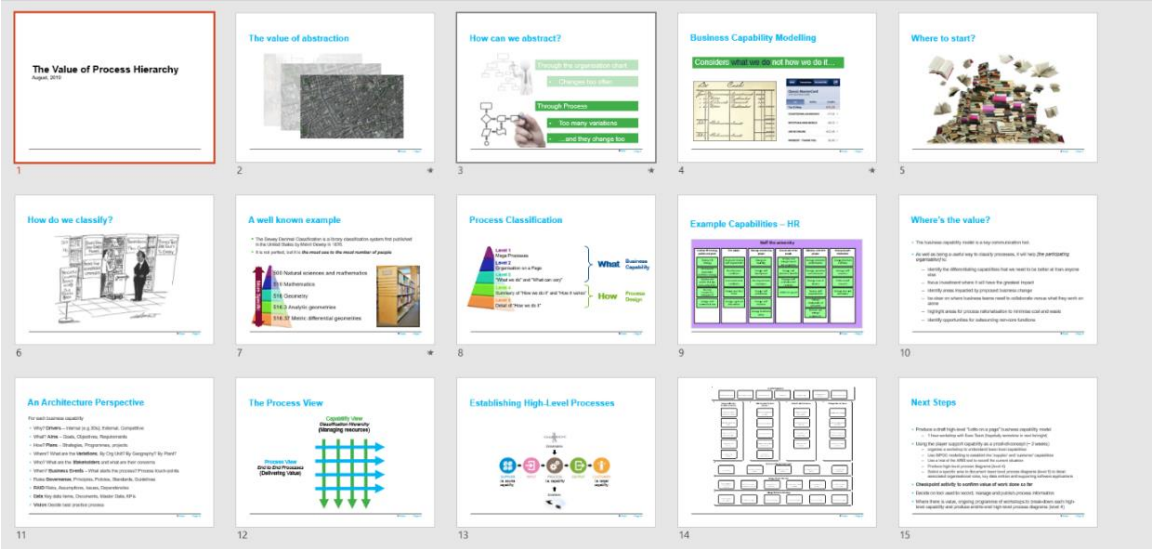
The EA knew that the first draft model would draw the ELT members' attention because the high-level capabilities represented a view of what the ELT did. Hence, the

ELT would want to ensure they were right. As the EA recalled about the encounter with the Head of IT/CIO:

> *So, it was good to get his feedback on it [the first draft model]. But he [CIO] was especially interested in the IT aspect of it.* [EA]

The use of the first draft model was a way to interesse the ELT in the intended BCM, but their interest in the whole BCM initiative was the ultimate goal. Hence, the second interessement device employed was the content embedded in a PowerPoint presentation deck. The presentation deck (see Figure 9, also see Appendix B) was named ‘Value of process hierarchy’ consisting of 14 slides (the title page is excluded).

Figure 10. *Slides in the presentation deck.*
Source: Provided by the Enterprise Architect.



The goals of the presentation were (1) ensure that everyone has a shared understanding of the initiative, (2) convince the ELT that the initiative is beneficial to the organisation, and most importantly (3) address the ELT’s interests and concerns. The EA explained what he attempted to achieve with the presentation:

> *[At] the very beginning you need to tell them why you’re doing what you’re doing… So, it’s a presentation to say: What are we doing? Why do we need to do it? And then how’re we gonna do it?* [EA]

To address the ELT’s interests and concerns, the EA first needed to seek to understand what their interests and concerns might be. In fact, he already got that information when he approached the ELT members individually to ask them to help with validating the first draft model. On the workshop day, the EA presented the BCM

initiative, introduced some BCM-related concepts to the ELT (i.e. process hierarchy, business capability modelling, Supplier, Input, Process, Outcome, and Customer (SIPOC) model), and implicitly address the ELT's interests and concerns. At the end of the workshop, the ELT members agreed to support the initiative.

Thanks to the two interessement devices, which were the layout of the first draft model and the presentation deck's content, the ELT better understood the initiative and their role in it. At the same time, the high-level business capabilities' identity was finalised and stabilised after a few rounds of modification.

4.3. Enrolment

At this stage, the actors (i.e. high-level business capabilities and ELT) might understand and be interested in the BCM initiative. However, no actual enrolment could be guaranteed. The EA was required to negotiate with the ELT and the high-level business capabilities in order to define and coordinate their roles within the network. As Callon (1999) defines:

> *It (enrolment) designates the device by which a set of interrelated roles is defined and attributed to actors who accept them… To describe enrolment is thus to describe the group of multilateral negotiations, trials of strength and tricks that accompany the interessements and enable them to succeed.* (p. 211)

The enrolment is successful when the actors accept their defined roles in the initiative (Callon, 1986). In the case of the high-level business capabilities, since their interest and that of EA were aligned, the capabilities were enrolled without any resistance. In fact, they forged alliances with the EA and assisted him in negotiating with the ELT. Therefore, for the most part, the negotiation between the EA and the ELT took place with the support of the high-level business capabilities.

This section will discuss two strategies employed by the EA in order to get the ELT's buy-ins. These strategies are (1) coordinate the roles of the ELT and the high-level business capabilities in the initiative, and (2) achieve cooperation of the ELT via the use of draft models. The two strategies address the fundamental challenges of coordination and cooperation that most organisations encounter during the implementation of cross-functional initiatives similar to the BCM initiative (Grant, 1996b).

4.3.1. Strategy 1: Coordinate the roles of the ELT and the high-level business capabilities.

It is important to note that the roles of the ELT and the high-level business capabilities and their relationship were not formally documented in any organisational artefact. Because, as the EA explained, the participating organisation is a small enterprise so that they do not have formal governance. For that reason, the two groups of actors could have perceived their roles and their relationships very differently from what the EA had defined for them. Therefore, this strategy was needed to coordinate and promulgate the defined roles of ELT and the business capabilities.

In every informal and formal encounter with the ELT members, the EA always brought with him a draft model, whether it be the first draft, second draft etc. The EA shared his intention in those meetings as followed:

> *So then what you do is speak to each of those first of all. Asking them generally what they think of the model and getting their feedback and specifically on the areas that they are accountable for. So like speaking to the head of Marketing and say "What do you think about this representation of Marketing?", speaking to the head of Finance "What do you think about this representation of Finance?". Okay? Because you've then done that you've incorporated people's feedback. You show them and then you bring them all together and you show them what you've come up with…* [EA]

Asking for feedback, incorporating the feedback to iterate the draft models, showing the improved model, and asking again for feedback etc. was the way the EA made the ELT feel their opinions heard and valued as experts in their accountable areas. In other words, the EA implicitly attributed the defined role of subject matter experts to the ELT. The more the ELT members contributed to refining their accountable capabilities on the drafts, the more they felt a sense of ownership towards those business capabilities. As a result, the ELT were willing to accept their attributed roles as subject matter experts and capability owners in the initiative. The EA commented:

> *And what you'll find is that because they're all stakeholders now because they've contributed to the model, they've bought in and will want to get it right and they will defend the areas that they've come up with.* [EA]

Conversely, imagine what would have happened if, in those encounters, the EA did not ask for the ELT's feedback. Instead, if he had presented his own interpretation of the business capabilities to the ELT and asked for their support, they might have perceived

themselves differently as mere voters and failed to realise the importance of their involvement as the capability experts and owners. It would also likely have led to resentment of the EA for trying to tell them how their areas operate without consulting them. Consequently, the business capabilities might have faced the risk of not being materialised further.

Table 4 illustrates the possible different outcomes in the dynamic of the actors' associations among the EA, ELT, and the capabilities in the initiative when the ELT perceive themselves as subject matter experts (SMEs) compared with when the ELT would not perceive themselves as SMEs.

Table 4. *Illustration of two possible scenarios when the ELT perceived themselves as SMEs and not as SMEs.*

Actor(s)	**Role perceived**	
	"ELT as SMEs" scenario	**"ELT are not SMEs" scenario**
EA	A representation expert	A representation expert-cum-SME
ELT	SMEs, capability owners	Mere voters, unwilling spectators, active opposers
High-level business capabilities	Incomplete entities which required to be owned and further refined	Owned by the EA and perceived as complete entities which required no further refinement

To conclude, the coordination impacted positively on the dynamic of the relationship between the ELT and the business capabilities. Therefore, depending on the strategies used and their success, the coordination might lead to the formation of a coalition or its collapse. In this case, the formation of the coalition was accomplished.

4.3.2. Strategy 2: Achieve cooperation of the ELT.

Different possible ways can be adopted to achieve cooperation such as the use of incentives, use of authority, and transaction. This second strategy was about how the EA built the ELT's willingness to work with him to produce the BCM.

To model a BCM, an enterprise architect has an option to create it with relevant stakeholders from scratch (Bondel et al., 2018), or create an initial draft of the BCM (The Open Group, 2016) and work with the stakeholders to refine it. In this case study, the EA went with the latter. He justified his choice:

> *The first thing is never try to do it from scratch, okay?... because people find it very hard to visualise things. They are intimidated by blank pieces of paper. So, if you go to a room and say "Ok, everyone, let's come up with the [business] capability model for our organisation.". Everyone will go "Er? Don't know what*

> *you're talking about.". So, the best way to do it is, for anything like this, is to take something, a straw man as I call it.* [EA]

The EA knew that blank pieces of paper might diminish the ELT's interest. To make cooperation more achievable, a draft model or 'a straw man' should be used:

> *… to take something in which is an early version and allow people to criticise it, and allow people to say "Doesn't apply to us", or "You've forgotten this" … And that way people are much happier about building something or criticising something rather they are starting from scratch…* [EA]

By taking a draft model to every meeting and workshop with the ELT, the EA strategically attempted to accrue emotional investment from the ELT with the help of the business capabilities. As epistemic objects, the business capabilities in the draft models enabled "a deep emotional investment in objects" (Knorr-Cetina, 2001, p. 196) in the ELT by signifying their lack to the ELT. The emotional investment would eventually lead to emotional attachment, which urged the ELT to act to get it right, as the EA concluded:

> *And what you'll find is that because they're all stakeholders now. Because they contributed to the model, they are bought in and will want to get it right and they will defend the areas that they've come up with and created.* [EA]

As a result, the ELT contributed to the development of the BCM and also agreed to support the whole initiative later on.

In summary, by making use of the draft models and appropriate strategies, the EA solved the fundamental challenge of any cross-functional initiative - the challenge of coordination and cooperation.

4.4. Mobilisation

Mobilisation is the stage in which the reduction in the number of representative interlocutors occurs and results in the designation of the focal actor as 'a sole and ultimate spokesman' of the network (Callon, 1986, p. 219). In the interessement and enrolment moments, a few representatives speak in the name of their network in negotiation with the focal actor, whether these be the high-level business capabilities representing all the current BC&P, or the ELT representing their respective departments. A mobilisation is successful when the masses follow their representatives

and do not interrupt the negotiations between the focal actor with their respective representatives (Callon, 1986).

In the case of the ELT, initially, they were not aware of the BCM initiative. While contributing to the production of the BCM, they were eventually transformed into active supporters of the initiative. Their support was marked by their approval of the final BCM version called ‘Organisation on a page’ artefact (see Figure 11).

Figure 11. *'Organisation on a page'.*

Source: Provided by the Enterprise Architect.

The artefact inscribed not only the ELT's agreement to support the initiative but also their designation to make the EA their official spokesman. That designation was put to test in the stage 2 of the initiative when the EA was required to work with other staff in the departments to capture the lower-levels of BC&P. For example, in the first workshop with the HR Manager, the EA brought and presented the 'Organisation on a page' artefact to the HR Manager to communicate what had been done with the ELT. Without the physical presence of the ELT, the HR Manager listened to the EA presenting about the high-level business capabilities on the 'Organisation on a page'. In other words, the HR Manager perceived the EA as a credible spokesman because she knew that the ELT had approved the 'Organisation on a page' artefact. That meant the EA successfully represented and spoken in the ELT's name in the meeting with the HR Manager:

> *I kind of got shoulder-tapped and told [by HR Director] we going to do this enterprise mapping… the executive team had already gone through and identified this kind of level one and two things… So, we [HR Manager and EA] kind of talked it through…* [HR Manager]

Contrary to the human actors, the high-level business capabilities cannot themselves express what they want verbally. However, as discussed earlier, as epistemic objects, they give off their lacks and needs via their instantiations - the draft models. The draft models were first created by the EA. To produce the first draft model, the EA investigated the trace of existence of those high-level business capabilities through research and asking other colleagues. From that initial research and his professional experience, he was able to translate the traces of those capabilities and inscribed his translation into the first draft model.

The first draft model shows how the EA was the official translator of the capabilities. When he mobilised and socialised the draft models (first draft, second draft, and so on), he always represented and spoke in the name of the business capabilities. For example, when the first draft model was completed, the EA brought it as a printout to meet with the CIO to ask him to review and validate IT-related capabilities. As the CIO agreed and made no changes to the IT capabilities, the same printout was mobilised and socialised to the CEO to gain his support. Then, the EA followed the same process with each of the ELT members. Eventually, after a series of interactions between the EA with the CEO, CIO and the ELT, the final model called 'Organisation on a page' was produced.

To conclude, at the end of the translation process in stage 1 and stage 2, the high-level business capabilities were materialised and existed in more stabilised forms; the ELT recognised the values of BCMs and were willing to support the initiative; and the EA becomes an authentic spokesman of the network he was building. Put in Callon's language, the EA translated the business capabilities and the ELT.

Although the initial execution of the initiative has achieved some success, more work is still required to prevent the initiative from being in vain because as Callon (1986, p. 196) notes "translation is never a completed accomplishment" and Law (1992, p. 385) warns "punctualization is always precarious, it faces resistance, and may degenerate into a failing network".

CHAPTER 5: DISCUSSION

Since its introduction in the late nineteen-eighties, enterprise architecture has evolved from a system planning practice to become a management practice that enables strategic alignment within complex organisations (Bernard, 2006). Enterprise architecture provides a holistic view of the organisation, which captures the essentials of the business (i.e. data, process, people, IT systems), their relationships, and their evolution (Jonkers et al., 2006). In doing so, enterprise architecture practice helps to optimise an organisation's IT investments in alignment with business strategies and translates abstract business strategies into feasible technology solutions (Jonkers et al., 2006). One of the enterprise architecture practices that has been broadly adopted is business capability modelling (Aleatrati Khosroshahi et al., 2018; Kotusev, 2019b). The business capability modelling practice aims to capture a view of '*what* a business does'. The resulting artefact is called a business capability model (BCM).

Over the past decade, the business capability modelling practice has become an important means for business analysis and planning because it helps to facilitate business communication, collaboration, and, more specifically, business-IT alignment (Ulrich & Rosen, 2011). Despite its significance, the practice of business capability modelling has not received much attention in the mainstream enterprise architecture literature. A review of literature results in four observations: (1) empirical-based studies are scarce, (2) most of the prior studies focus on presenting normative processes rather than examining the actual practice of modelling business capabilities, (3) the socio-political aspect of enterprise architecture practice is often overlooked, and (4) the active roles and contributions of artefacts are not explicitly theorised. To address these gaps, this study examines how an enterprise architect pursues the practice of business capability modelling.

Informed by the relational lens of actor-network theory (ANT), the sociology of translation (Callon, 1986), and the concept of epistemic objects (Knorr-Cetina, 1997, 2001), this study addresses the research question: How does an enterprise architect pursue the development of a BCM? The data were drawn from documents (i.e. presentation deck, business capability model, and its draft models) and semi-structured interviews with key stakeholders in the modelling process conducted at a regulated lottery organisation in New Zealand. By following the iterative theory-building process as described by Orton (1997), this study described the four moments of translation in the context of business capability modelling and examined the active role of artefacts.

Prior studies on business capability modelling have mainly proposed normative models of how to produce a BCM. The proposed normative models can be standardised to include some or all of the following five stages: (1) identification, (2) structuring, (3) validation, (4) socialisation, and (5) enrichment. The typical information embedded in most proposed models are: the modeller's activities, inputs, involved stakeholders, resulting artefacts and events. Most studies (e.g. Bondel et al., 2018; The Open Group, 2016; Ulrich & Rosen, 2011) acknowledge the importance of the leadership team's involvement and support in the practice and the value of BCMs in support of strategic analysis and planning activities. Similarly, this study covers the first four stages, from the identification of business capabilities to the socialisation of the BCM. In contrast to previous work, the focus of this study is not on presenting a normative model of how to develop a BCM. This study pays close attention to how an enterprise architect pursues the practice of business capability modelling. To do so, the ANT lens is employed as a theoretical framework to guide the analysis. In addition, this study highlights the active role of artefacts in the accomplishment of the practice. Furthermore, whereas previous studies acknowledge the important role of the leadership team but do not provide details on how to obtain the leadership team's support, this study describes how each stakeholder was involved and how their interests evolved in the practice.

This study extends one of the findings derived from the work of Bondel et al. (2018). The authors conclude that the active support and involvement of the leadership team creates a feeling of shared ownership towards the resulting BCM artefacts among the involved stakeholders. This study extends their finding by demonstrating the mechanism in which the feeling of shared ownership is realised with the contribution of the artefacts. This study also shows that accrual of the shared ownership feeling or emotional attachment can be a powerful strategy to obtain and sustain the involved stakeholders' support and commitment.

The following sections of this chapter present the theoretical contributions. The chapter ends with the presentation of practical implications derived from this study.

5.1. Theoretical contributions

This study makes three main contributions to the body of knowledge. First, this study zooms in on the actual practice of an enterprise architect and presents a rich empirical analysis of a business capability modelling process, which is one of the enterprise architect's practices. Second, through the analysis of various stakeholders involved in the process, the socio-political nature of enterprise architecture practice is revealed.

Finally, with careful attention to artefacts' role, the artefact-mediated process of business capability modelling is explained.

5.1.1. Rich empirical study of enterprise architect's practice

There is a dearth of empirical research on enterprise architect's practice. The literature search identified only one empirical-based study by Bondel et al. (2018). In their study of the implementation of a BCM initiative at an organisation, Bondel et al. (2018) find that (1) involvement of the business leadership team results in a better alignment between business and IT, a common language, and a better understanding among business units; and (2) a BCM is a suitable tool for planning strategy development. Whereas, this study extends the understanding of the practice of business capability modelling by shifting the focus from merely capturing what practitioners do to describing how an enterprise architect needs to forge alliances with other involved actors by aligning their interests with his interest. This process is referred to as a translation process in actor-network theory (Callon, 1986). In particular, this study pays careful attention to the socio-political nature of enterprise architecture work and foregrounds the role of non-human actors in the accomplishment of the practice.

5.1.2. Approaches to overcome the socio-political nature of enterprise architecture practice

Enterprise architecture practice often involves cross-functional efforts. However, its socio-political characteristic has often been overlooked in the literature (Sidorova & Kappelman, 2011). When implementing enterprise-wide initiatives such as the BCM initiative, many organisations find that gaining the necessary coordination and cooperation, among individuals and groups with divergent goals is often challenging (Grant, 1996b). Most of the studies in the literature put emphasis on the importance of having the involvement and active support of the leadership team in BCM development efforts (e.g. Bondel et al., 2018; The Open Group, 2016; Ulrich & Rosen, 2011). For example, Bondel et al. (2018) argue that the leadership team's involvement and active support led to a sense of shared ownership of the BCM artefacts, a better alignment between business and IT, and a better understanding among business units. To gain that support, involved stakeholders had to have an aligned understanding of the BCM implementation process. Similarly, the Open Group (2016) suggests that senior leadership can help with the identification and ratification of top-level business capabilities. Whereas, Ulrich & Rosen (2011) emphasise the importance of having appropriate levels of management and business professionals to review, validate and sign off the BCM.

Previous studies seem to suggest using authority by involving and getting buy-ins from the leadership team as an approach to overcome the problem of coordination and cooperation in a business capability development process. In fact, this strategy is acknowledged as an “effective mechanism for coordinating a complex system comprising specialized units” (Grant, 1996b, p. 117). However, the results of this study show that the use of authority is effective but not sufficient to achieve purposeful, active and committed actions from stakeholders. Apart from the use of authority, the EA in the case study employed two complementary strategies: (1) alignment of interests and (2) accrual of emotional investment. First, to align with other actors’ interests, an enterprise architect sought to understand the interests of individual actors. He talked to one of the ELT members, the CIO, to understand what his interests and concerns might be. Then, the EA went away and created the presentation deck to address those interests. It is important to note that the aligned interest must be consistent with that of the EA to make the EA indispensable in the network. Second, the EA used the draft models to assign the roles of subject matter experts and capability owners to the ELT. That led to the ELT’s active contribution in improving the BCM and, in turn, their support for the whole initiative. To conclude, this study extends our understanding of business capability modelling by explicating the socio-political nature of EA practice and demonstrating the skilled use of effective mechanisms to overcome socio-political challenges in practice.

5.1.3. The active role of artefacts in the accomplishment of the EA’s practice

This study argues that an investigation of enterprise architecture practice would result in an incomplete understanding of that practice if the involvement of the artefacts is not explicitly theorised. Previous studies treated the resulting artefacts as mundane instruments or merely a means to an end (e.g. Bondel et al., 2018; The Open Group, 2016; Ulrich & Rosen, 2011). Consequently, the artefacts produced and used in the modelling process were either not mentioned (e.g. Beimborn et al., 2005) or mentioned in passing (e.g. Bondel et al., 2018) in the literature.

In contrast, by applying symmetrical treatments to human and non-human actors, this study illuminates the active role of artefacts as network actors and interessement devices. On the one hand, as network actors, the business capabilities interacted with the EA and later with the ELT to urge them to materialise the business capabilities. As a result, the BCM development process could get off the ground. In addition, as interessement devices, the presentation deck helped the EA to (1) develop a shared understanding of the ELT members about the BCM initiative, (2) obtain buy-ins, and (3)

align interests of the ELT members. Finally, the drafts of the intended BCM helped the EA to accrue emotional investment from the ELT so that the ELT got interested in the BCM and actively contributed to providing input on the various drafts and, as a result, became committed to the whole initiative.

Table 5 provides a summary of the findings to illustrate the interplay between the EA and different artefacts in the modelling process.

Table 5. *The interplay between the EA and the artefacts.*

STAGE	ACTIVITIES	
	Enterprise Architect (EA)	**Artefacts**
(1) Identification of level 1 & 2 business capabilities	- Conduct research to understand what the organisation does by reviewing the business process reference models and existing organisational artefacts.	*Reference models & organisational artefacts* - Give off traces of the identity of level 1 & 2 capabilities.
(2) Structuring capabilities	- Create the 1st draft.	*BCM layout* - Structure capabilities in a logical and meaningful presentation. - Lock capabilities' identity into place. *1st draft* - Inscribe EA's translation of capabilities.
(3) Validation of capabilities	- Meet with each ELT member to validate the capabilities that the member is accountable for. - Seek to understand ELT's interests and concerns.	*1st draft* - Signify incompleteness to ELT members. - Accrue ELT members' emotional investment.
	- Revise the initial draft to produce the 2nd draft based on ELT's feedback.	*2nd draft* - Inscribe ELT's knowledge about level 1 & 2 capabilities.
	- Compile a PowerPoint presentation of the BCM initiative in a way that addresses ELT's concerns and interests.	*Presentation deck* - Inscribe EA's knowledge about the initiative. - Inscribe common interest (OPP).
	- Present the initiative to the ELT using the presentation deck to educate ELT about the initiative and address their interests. - Ask ELT to validate & sign off the 2nd draft.	*Presentation deck* - Enable communication between EA and ELT. *2nd draft* - Accrue ELT members' emotional attachment and support. - Inscribe ELT's agreement to support the initiative.
(4) Socialisation of BCM	- Communicate BCM with the rest of the organisation.	*BCM* - Exercise the authority granted to EA by ELT.

5.2. Practical implications:

This study has three main practical implications. First, organisations, especially those that have not had records of their current business capabilities and processes, might want to consider having their current business capabilities and processes documented. On the one hand, the capability view of the business provides strategic levers to dynamically adapt to competitions, changes in regulations, and changes in customer behaviours. On the other hand, it is equally important for organisations to put efforts to develop a shared understanding and commitment from all stakeholders including executives and functional units in documenting and maintaining the business capabilities and processes of their organisations.

Second, enterprise architects should be mindful of their use of artefacts in the modelling process (i.e. draft models, presentation slides, sketches). The artefacts can be a powerful communication and alignment tool when being produced and used effectively. Enterprise architects can use these artefacts to align understanding, address interests, and build up coordination and cooperation of involved stakeholders during the course of the modelling process.

The third practical implication is that novice practitioners should be mindful of the socio-political nature of enterprise architecture work. To obtain stakeholders' agreement to support an enterprise-wide initiative is critical, but that is only the beginning. More work is required to sustain the stakeholders' engagement and commitment to the initiative. Novice practitioners might want to consider the strategies employed by the enterprise architect in this study as a starting point to overcoming any political challenge that may arise, including alignment of interests and accrual of emotional investment.

CHAPTER 6: CONCLUSION

For the last few decades, enterprise architecture has been recognised by both practitioners and academics as a tool for organisations to realise business-IT alignment. Enterprise architecture practice helps organisations identify, understand, record, and optimise different business components (i.e. process, data, software applications and technology) and their interactions to adapt and transform the business to meet evolving customer needs and remain competitive. Although several claims of benefit have been made in the literature, few empirical studies theorise how enterprise architecture work has been carried out in practice. As a result, there is a lack of understanding of challenges associated with enterprise architecture practices and effective mechanisms to ascertain how enterprise architecture creates value for organisations. This study improves an understanding of the enterprise architecture practice by zooming in on one of its practices of business capability modelling to examine what is involved in the process.

This study was guided by the research question: *How does an enterprise architect pursue the development of a BCM?* Drawing on actor-network theory (ANT), the four moments of translation, and the concept of epistemic objects, this study shifts the focus from describing what an enterprise architect does to explaining how the actual practice is pursued. Guided by an iterative-theory building approach, the analysis of interview transcripts and documents reveals a translation process of an enterprise architect that involves interest alignments in an attempt to build a network with relevant stakeholders and highlights the role of artefacts in the practice. The translation process consists of four moments including problematisation, interessement, enrolment, and mobilisation. The findings illuminate the socio-political nature of the process and foregrounds the indispensable role of artefacts in enterprise architecture practice.

This study has some limitations. First, although a single case study resulted in richly contextualised findings, it also might result in bias and have limited generalisability. The generalisability and rich insights can be enhanced by extending this study to multiple organisations in different sectors. Second, the data in this study limit to interviews and documents; other ethnography methods, such as observations or video recordings of meetings and workshops, may help obtain hidden knowledge about work practices (Gherardi, 2013; Molly & Whittington, 2005; Nicolini, 2013). These additional data would have provided a primary source of information, rather than a second-hand account of how the process was carried out. However, due to time constraints and the fact that the first two stages of the BCM initiative had been done before the research

took place, observations of how business process modelling process happened were not feasible in this case. Future research may consider ethnographic observational methods to obtain the tacit knowledge of enterprise architecture related practices. Finally, although the ANT lens offers a set of helpful concepts and arguments to understand and explain social and organisational phenomena, future studies may incorporate other practice-based theories in conjunction with ANT to gain more insights on enterprise architect's work practices.

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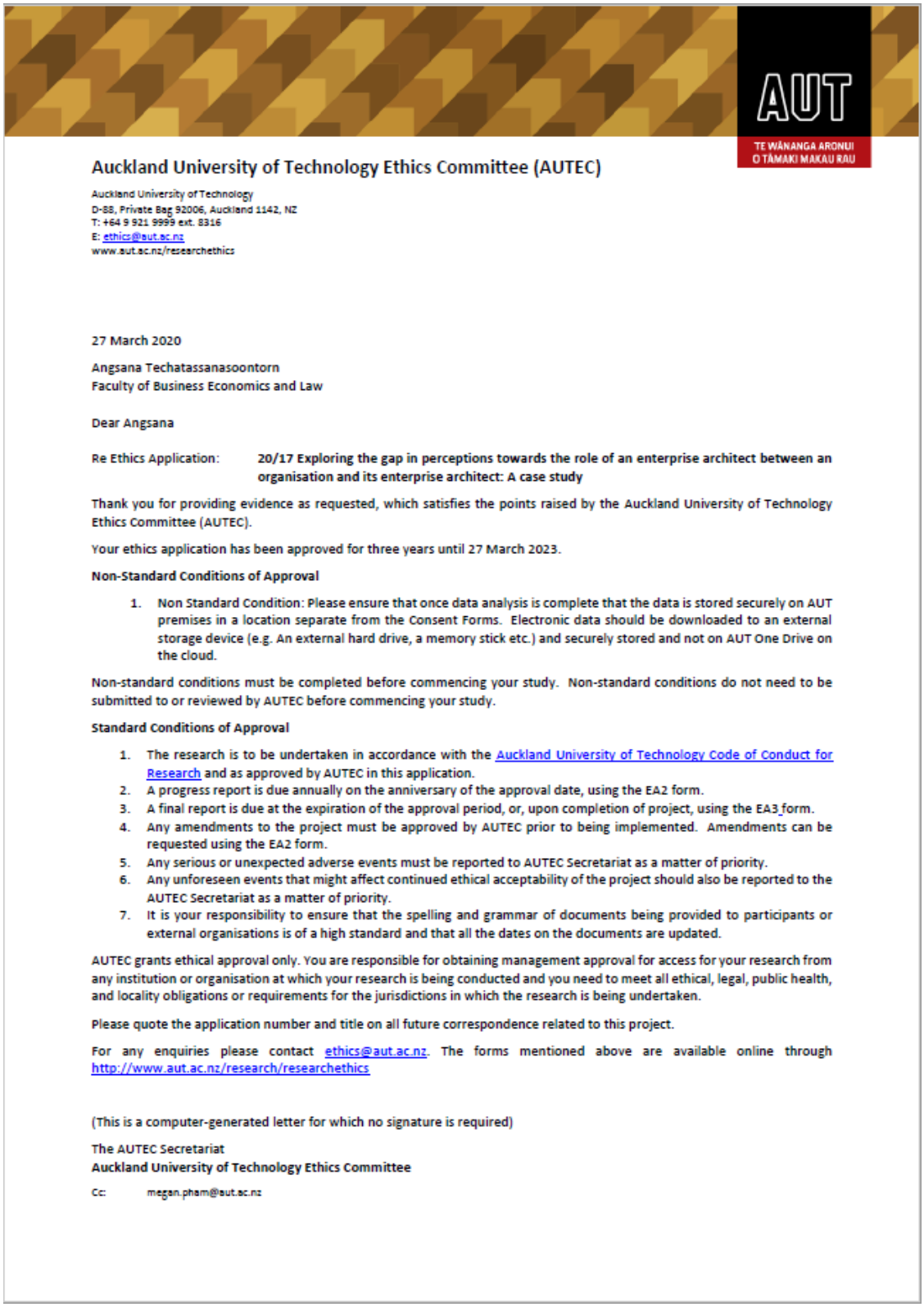
Appendix A: AUTEC approval letter



Auckland University of Technology Ethics Committee (AUTEC)

Auckland University of Technology
D-88, Private Bag 92006, Auckland 1142, NZ
T: +64 9 921 9999 ext. 8316
E: ethics@aut.ac.nz
www.aut.ac.nz/researchethics

27 March 2020

Angsana Techatassanasoontorn
Faculty of Business Economics and Law

Dear Angsana

Re Ethics Application: **20/17 Exploring the gap in perceptions towards the role of an enterprise architect between an organisation and its enterprise architect: A case study**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 27 March 2023.

Non-Standard Conditions of Approval

1. Non Standard Condition: Please ensure that once data analysis is complete that the data is stored securely on AUT premises in a location separate from the Consent Forms. Electronic data should be downloaded to an external storage device (e.g. An external hard drive, a memory stick etc.) and securely stored and not on AUT One Drive on the cloud.

Non-standard conditions must be completed before commencing your study. Non-standard conditions do not need to be submitted to or reviewed by AUTEC before commencing your study.

Standard Conditions of Approval

1. The research is to be undertaken in accordance with the Auckland University of Technology Code of Conduct for Research and as approved by AUTEC in this application.
2. A progress report is due annually on the anniversary of the approval date, using the EA2 form.
3. A final report is due at the expiration of the approval period, or, upon completion of project, using the EA3 form.
4. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form.
5. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
6. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.
7. It is your responsibility to ensure that the spelling and grammar of documents being provided to participants or external organisations is of a high standard and that all the dates on the documents are updated.

AUTEC grants ethical approval only. You are responsible for obtaining management approval for access for your research from any institution or organisation at which your research is being conducted and you need to meet all ethical, legal, public health, and locality obligations or requirements for the jurisdictions in which the research is being undertaken.

Please quote the application number and title on all future correspondence related to this project.

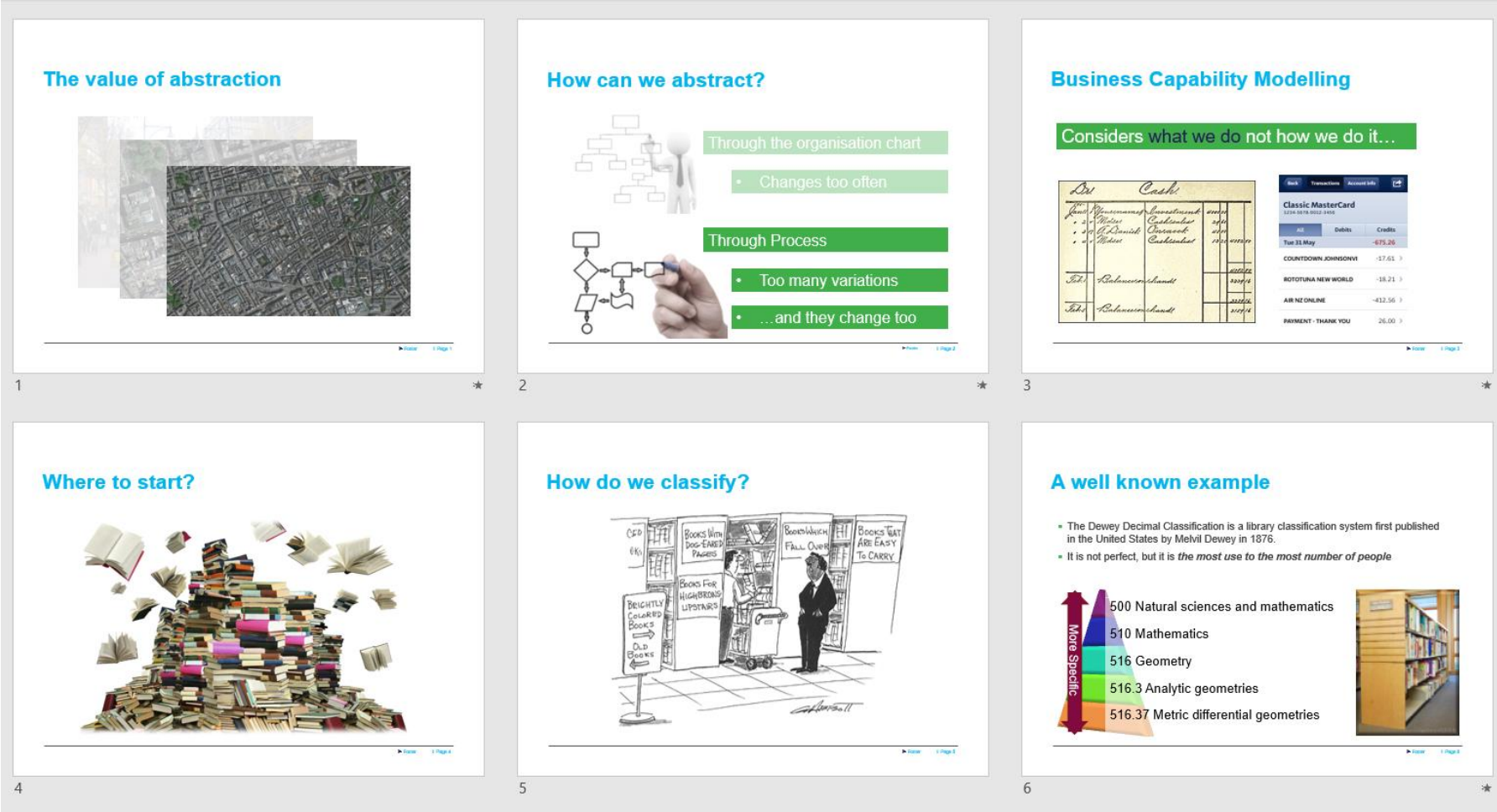
For any enquiries please contact ethics@aut.ac.nz. The forms mentioned above are available online through http://www.aut.ac.nz/research/researchethics

(This is a computer-generated letter for which no signature is required)

The AUTEC Secretariat
Auckland University of Technology Ethics Committee

Cc: megan.pham@aut.ac.nz

Appendix B: PowerPoint presentation deck named ‘Value of process hierarchy’



Where to start?

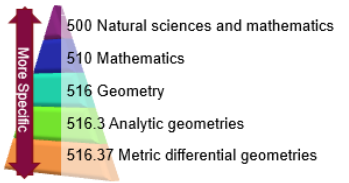
4

How do we classify?

5

A well known example

- The Dewey Decimal Classification is a library classification system first published in the United States by Melvil Dewey in 1876.
- It is not perfect, but it is ***the most use to the most number of people***



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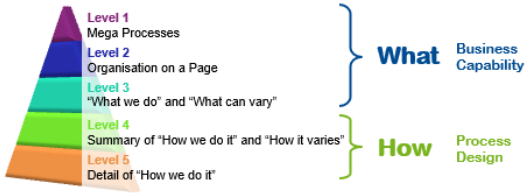
Process Classification



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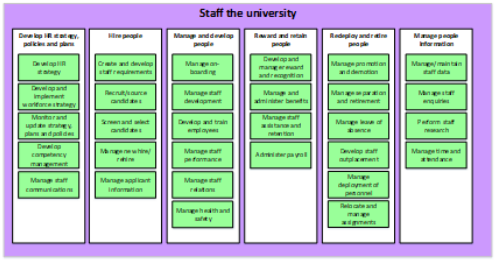
Example Capabilities – HR



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Where's the value?

- The business capability model is a key communication tool.
- As well as being a useful way to classify processes, it will help *[the participating organization]* to:
  - identify the differentiating capabilities that we need to be better at than anyone else
  - focus investment where it will have the greatest impact
  - identify areas impacted by proposed business change
  - be clear on where business teams need to collaborate versus what they work on alone
  - highlight areas for process rationalisation to minimise cost and waste
  - identify opportunities for outsourcing non-core functions

9

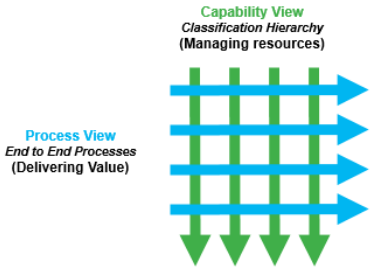
An Architecture Perspective

For each business capability

- Why? **Drivers** – Internal (e.g.3Ds), External, Competitive
- What? **Aims** – Goals, Objectives, Requirements
- How? **Plans** – Strategies, Programmes, projects
- Where? What are the **Variations**, By Org Unit? By Geography? By Plant?
- Who? What are the **Stakeholders** and what are their concerns
- When? **Business Events** – What starts the process? Process touch-points
- Rules **Governance**, Principles, Policies, Standards, Guidelines
- **RAID** Risks, Assumptions, Issues, Dependencies
- **Data** Key data items, Documents, Master Data, KPIs
- **Vision** Decide best practice process

10

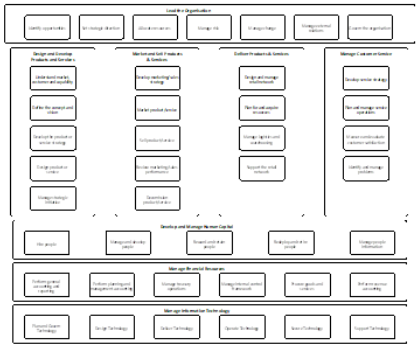
The Process View



11

Establishing High-Level Processes

12



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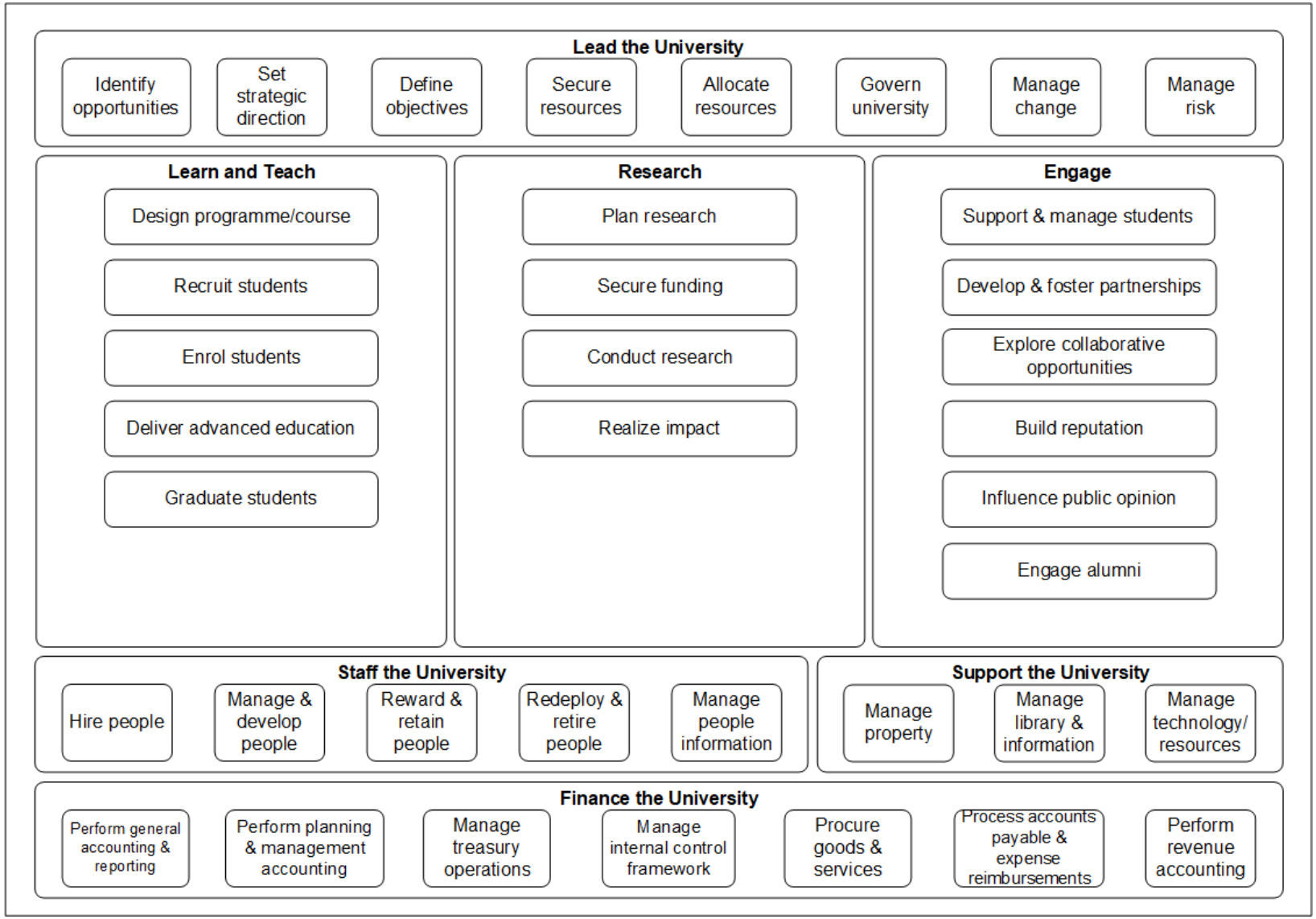
Next Steps

- Produce a draft high-level "Organisation on a page" business capability model
  - 1 hour workshop with Exec Team (hopefully sometime in next fortnight)
- Using the player support capability as a proof-of-concept (~ 2 weeks)
  - organise a workshop to understand lower level capabilities
  - Use SIPOC modelling to establish the 'supplier' and 'customer' capabilities
  - Use a trial of the ARIS tool to record the current situation
  - Produce high-level process diagrams (level 4)
  - Select a specific area to document lower level process diagrams (level 5) to detail associated organisational roles, key data entities and supporting software applications
- **Checkpoint activity to confirm value of work done so far**
- Decide on tool used to record, manage and publish process information
- Where there is value, ongoing programme of workshops to break-down each high-level capability and produce end-to-end high-level process diagrams (level 4)

14

Appendix C: 'University on a page'



Appendix D: 'Organisation on a page'