

Assessing Alignment Between Business and IT Strategy: A Case Study

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Abstract

Strategic alignment between business and IT is a topic of high importance to modern businesses, but it remains problematic to implement structured methods to improve and assess alignment in many organisations. This study investigates how organisations can better leverage published strategic alignment theory and methods, finding that previous research has not sufficiently considered the different dimensions of strategy and that such considerations would help enterprises improve strategic alignment. The study proposes a framework for understanding strategic alignment in hierarchical business-led organisations, exemplified in a case study of Trafikförvaltningen, the Stockholm public transport authority.

Keywords

Strategic Alignment, Framework Development, Use Case Study

1. Introduction

The rapid development of information technology with new innovations and solutions on the market creates opportunities for companies, but also difficulties¹. If a company wants to stay competitive within their field, they have to be able to change and improve their business in the same pace as the technical development. To be able to meet these kinds of requirements, companies set up business and IT strategies. Strategies enable the company and its employees to have a clear view of where the business is heading and how to get there [1].

A properly designed IT-strategy can help companies to avoid get stuck in inefficient and outdated IT-infrastructure and enables the business for technological transformations. As a complement to the IT-strategy, Enterprise Architecture (EA) could be used [2], which provides a way to manage current business structures as well as plan for the future. By having a detailed description of the EA, it is easier to find possible improvements [3, 4]. When improvements in the architecture are defined, target architecture and transformation plans can be designed [5, 6]. However, to ensure IT improvements are achieving the business objects, companies would need some kind of model or framework to validate that the IT solutions are aligned with the strategies.

Achieving strategic alignment between IT and business functions is a key objective in many organisations today. Yet, it has proven problematic to implement theoretical models for strategic alignment

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¹https://www.protiviti.com/sites/default/files/7th-annual-it-audit-benchmarking-survey-isaca-protiviti-final_0.pdf

in practice, as differences between enterprise contexts require significant adaptation to make solutions effective. There are several models and frameworks for IT-business strategic alignment, however, it can be difficult for organisations to adapt a specific model to their business. Furthermore, there is a gap between the theoretical concepts of strategic alignment and the applied industry frameworks used for managing architecture.

The purpose of this work is to adapt principles and knowledge in strategic alignment to be more easily implemented in organisations. We aim to synthesise academic publications, industry frameworks, and insights from a case study of an organization to illustrate the drivers and obstacles in implementing strategic alignment thinking in practice. Further, we aim to produce actionable recommendations for the case company on how strategic alignment could be strengthened in the specific company context, leading to our research question:

RQ What principles and knowledge of strategic alignment theory can help organisations to better facilitate the strategy implementation?

The rest of this work is structured as follows: After presenting related work, we continue with sketching our applied research method. Next, we extract the key aspects of an alignment framework based on the shortcomings of existing frameworks. These key aspects are developed further to the dimensions of the framework and the assumptions we make. Afterwards, we present our framework and demonstrate its application in our case study. Finally, we discuss validity and reliability of our framework, before concluding our work.

2. Related Work

Strategic IT alignment has been subject to research since the late 1980s, and it is expected positive effect on business performance when the IT resources are well aligned with the business objectives [7, 8]. The need arose as IT became a larger part of organisations and transformed from a mere supporting, back-office role to a strategic role that could significantly affect the business [9].

Although measuring alignment can carry value, it is not immediately clear how or what should be measured or quantified. Venkatraman [10] proposes six different perspectives on how to measure strategic fit and claims that, depending on what perspective one takes while analysing the strategic fit, a very different conclusion can be reached. Other studies affirmed that a lack of specificity of what type of alignment is desired can lead to different conclusions of the status of the IT alignment [11].

From 1984 to 1992 MIT had a research project on the topic called “MIT90s”, aiming to assess the impact of IT on an organisation. A result was the “MIT90s Framework”, used to model relationships between strategy, structure, technology, people, and management processes [7]. Henderson and Venkatraman [12] built upon parts of that framework when developing what is arguably one of the most well-known models in this field - the Strategic Alignment Model (SAM) [9].

Critiquing previous models for only identifying misalignments without correcting them, Chen et al. [13] provide the Business IT Alignment Method (BITAM). To identify and correct any misalignments, a twelve-step method is provided. Maes et al. [14] critique the existing frameworks for achieving strategic alignment on a number of points and proposes a new framework to address this criticism. The criticism includes, among other things, ambiguous definitions of alignment, lack of consideration of alignment at different levels, and a need for measurability. The framework is partially based on SAM, or rather evolved versions of SAM, but includes a few additional dimensions.

Moreover, EA is often related to business IT alignment [15]. One of the most prominent frameworks for EA is The Open Group Architecture Framework (TOGAF) [16]. TOGAF includes the Architecture

Development Method (ADM), which tries to support the business IT alignment by a circular process of eight phases that develop the organisation's architecture along the layers of business, information systems, and technology. These layers follow an architectural vision and are regularly controlled against the desired future structure of the organisation.

3. Research Method

This study has followed an abductive approach, with an iterative process between a literature review for theoretical context, collection of empirical data, and the simultaneous building of a framework to address issues of the case [17]. The study consists of two parts. One part is an explorative case study to find how existing frameworks can or fail to address the issues of the case company [18]. The other part is an illustrative case study of how these issues can be addressed. The abductive exploratory approach was suitable as not enough knowledge about the problem could be gathered to establish a descriptive theory for a descriptive case study, which otherwise could have been suitable [19].

Interviews and meetings have been held with five persons both within and outside the company. The three persons from the company were from the IT department and worked as senior architect, architect, and domain architect. The two persons from outside the company were enterprise architects and worked for a company in the construction sector and for a company in the energy sector, respectively. The stakeholders explained some part of the operations, processes, or tools, with questions as in an unstructured interview [17]. Some interviews were also done with external stakeholders in a semi-structured manner. The purpose of the external interviews was to get a wider scope of input to further understand the context, challenges and possibilities of the company, and methods used in other contexts.

Documents gathering was done to get a foundation of knowledge of the company structure, background and strategies. Documents were collected both from the company itself, but also from the governmental entities and its parent companies.

The literature review was done to establish a solid knowledge base of what research had previously been done in some key areas of relevance to this study. As this study is concerned with the alignment of strategy and management of the IT architecture at the company, the areas of enterprise architecture, IT strategy, and strategic alignment were chosen. The review was carried out by searching for the relevant articles within the respective fields, as well as on extension and other phrasings of the fields. A bias was given to works with more citations as well as literature reviews, to help identify widely used methods and frameworks within each field. Ultimately a selective search was done to find the background, frameworks and models that best fit the realm of the research question. The reason for this was to assess if there exist frameworks that could be easily adapted to fit the context of this study or, just as importantly, if no such frameworks could be found.

By synthesizing the knowledge from the literature review with the contextual background, the frameworks from the literature have been analysed to find problems they can solve and what shortcomings they have. That has been done by examining what the literature highlights as points to focus on, combined with the points of concern from the case company, and how the existing frameworks manage those points. With the basis in that analysis, a number of keys for achieving strategic alignment are identified. Subsequently, these keys, together with other learnings from the analysis, are used to develop a conceptual framework to resolve some issues with existing frameworks. Finally, the conceptual framework is used upon the case itself to illustrate how the conceptual entities can be matched with a real-world scenario.

4. Requirements for an Alignment Framework

The existing literature stresses the importance of communication [7, 8, 20], but few frameworks adequately address the problems associated with it. The SAM discusses ‘fit’ and ‘integration’, terms that have since not been used in an unambiguous way, and it does not concern how communication should be handled in the different settings [9, 12]. The frameworks that address the need for communication address the alignment only within a certain time frame rather than visualising a continuous process [13]. The existing frameworks have to balance between generalizability, applicability, and specificity. Some of the more general frameworks can struggle with applicability due to being too generic.

In the frameworks for strategic alignment, the focus is essentially exclusively on alignment between different business functions. Alignment within each business unit is assumed, even if it is highlighted that different entities can exist within them. In the SAM [12] some entities within each unit are named, but it is not elaborated upon and achieving internal alignment within a business unit is not mentioned. A similar issue can be seen in the other frameworks, such as with BITAM [13]. The assumption is that business strategies and drivers are all going to align in both time and specificity. Even for the development of IT strategy [21] the business strategy is assumed to be internally aligned.

In previously published frameworks, there are frequent attempt to construct a model that is generally applicable to all enterprises. However, as there are wide differences between contexts for enterprises [22, 23], such models become very general and hard to implement in practice. There is also little differentiation of different types of strategies.

5. Framework Dimensions and Assumptions

Based on the shortcomings of the existing frameworks a set of keys for working with strategic alignment can be identified. Most importantly, communication within and across units of the company is needed to work towards a common goal. It is stressed by many other studies as a key factor [7, 8]. Processes that encourage such communication and foster mutual understanding of priorities and abilities will support a dynamic achievement and maintaining of alignment.

The second key is incorporating feedback into processes as a vehicle for improving and making explicit requirement. The reason for that is that whenever a new initiative or strategy is formulated it needs to be aligned with whatever strategy or policy is superjacent, and that should be ensured by mutual understanding of the respective entities [20].

That mutual understanding is connected to the third key, which is one of the clear requirements from superjacent entities. If the requirements from one part of a company cannot be understood by the other, the risk for misalignment increases [24].

The fourth key is to have clear requirements from superjacent entities in the strategy processes. As misinterpretation can create a misalignment in the enterprise strategy and operations, a key method to limit such events is to build processes that force clear consensus on all stakeholders [20]. Clear and explicit requirements documented at the time of strategy formulation create both traceability over time and ensures stakeholder consensus.

5.1. Business and IT

IT is often separately considered from the business in research. This is both a construction as studies focus on IT and an axiomatic principle that IT is differentiable on basis of facts. However, there has also been extensive research on the linkages between business and IT in research [8]. In this work,

we differentiate between IT and business both in terms of organisation and, more importantly, in function.

As a function, IT is separable from business as being the processes, directives and activities that deliver IT services and capabilities. In this sense, all staff or processes working towards these ends can be seen as part of the IT function, which often overlap with an organisational unit. Separate from IT, we define business as the core business activities of the enterprise. The core business is those processes and activities essential to the enterprise's purpose and delivering the principal value propositions of the enterprise.

We assume a hierarchical structure of purpose where ancillary activities are given their purpose from supporting the core activities. In such a model, each non-core function is unidirectionally aligned towards core business. This allows us to treat the alignment of IT and core business in separation, without considering alignment towards ancillary business units.

5.2. Strategy and Operations

In business strategy and management theory, the distinction between strategy and operations is a key feature. The general distinction is that strategy is an abstract process planning and setting directions for an enterprise, while operations are the processes of delivering the value proposition to the enterprise's customers. In this work, we approach strategy as the directional decisions planning the future of the company creating a plan for what should be done to bring about desired outcomes [25, 26]. Operations refer to the activities and processes, within both core and non-core functions, creating value in the enterprise and can simply be described as the actual work being done in the organisation or the implementation of putting the strategy into effect.

Differentiating strategy from operations allows us to focus our analysis on the more abstract strategy processes. While the ultimate goal is to achieve alignment between business and IT in operations, the framework focuses on achieving alignment on a strategic level between business and IT. If strategies are not formulated in alignment, any effort within operations will be counteracted by the implementation of the misaligned strategies.

5.3. Fundamental Strategies and Strategic Initiatives

Differentiating between types and characteristics in business strategy makes up an extensive literature and applied practice within research [27, 28, 7]. We differentiate between fundamental strategies and strategic initiatives and define this as the correlated composite across four key dimensions: dignity, time frame, action-orientation and level of detail.

Dignity The strategies in an enterprise are often not equal in importance. For example, the statutes of an enterprise might overrule a direction given in a yearly strategy if they contradict. By differentiating between strategies of more and less dignity these inconsistencies can be resolved by aligning towards the strategies with the highest dignity.

Time Frame Strategies commonly have different time frames within which they are to be enacted. In the context of alignment, time frames need to be considered with the objective of preserving consistency over time, as alignment can, assuming a stable context, only be expected to last the duration of the shortest-lived strategy. By aligning long-term decisions towards short-lived strategies lock-in effects can be created where future strategies risk making the IT infrastructure misaligned with business goals or become locked in by the technical considerations.

Action-orientation Strategy encompasses both governing rules and action-oriented directives. We understand rules as passive descriptions of how or when actions should be carried out. Rules

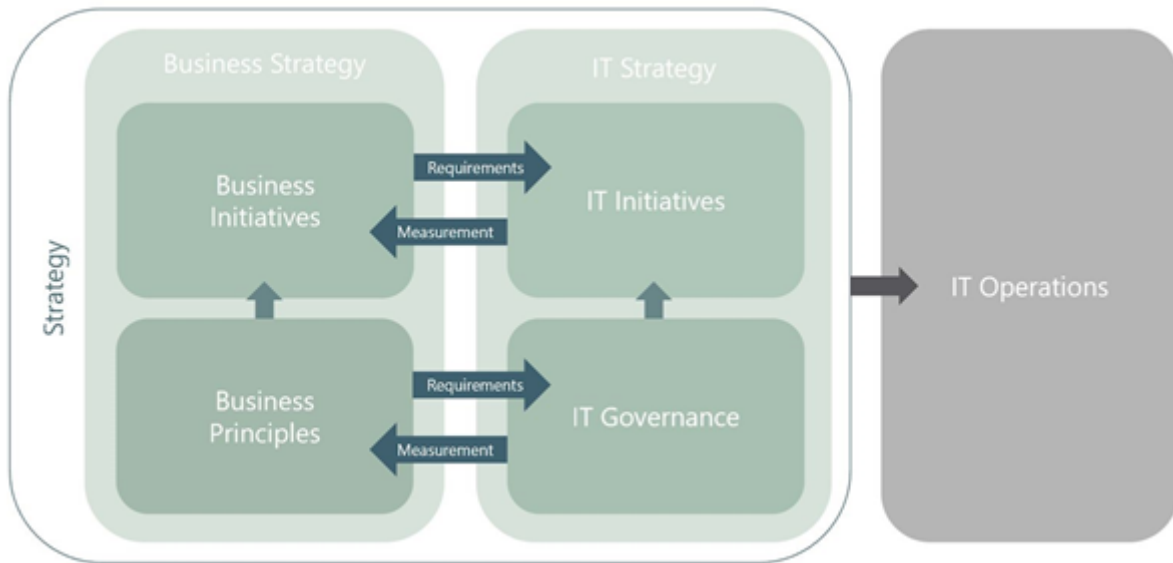


Figure 1: A sketch of the proposed framework.

can be both formal and informal and can carry much of an enterprises identity by shaping what activities can or cannot be performed. Rules typically contain logic of how the enterprise is allowed to act. Action-oriented directives, however, are prescriptive orders of actions to be done, such as an enterprise deciding to build new services. Such directives carry both prescription, what should be done, and prioritisation when it is to be done and so differs from rules.

Level of Detail The strategy process spans from the general purpose of an enterprises existence to how the value can best be created and delivered to intended recipients, thus covering a wide range in level of detail. Fundamental strategies describing often have a high level of abstraction to be accessible to the reader, while development plans for operational excellence need a significantly greater level of detail to be actionable in practice [29]. In alignment, the level of detail is valuable to consider, as the systematic alignment of strategies to strategies of a greater level of detail is likely to produce inconsistencies.

6. An Alignment Framework

By combining the proposed dimensions for understanding strategic alignment from the previous sections, we construct an explanatory model for strategic alignment. While the dimensions can be combined in several ways, we visualise this based on task and scope, constructing a framework for understanding alignment between core business and IT strategies in figure 1.

We argue that strategic alignment between core business and IT requires alignment on the strategic level needs to be achieved before it can permeate into operations. As strategic alignment is achieved, the alignment of operations to the enterprise’s strategies becomes the focal point for continued efforts [12]. When combining this with the scope of a single enterprise and the assumption of a hierarchical organisational model, we argue that strategic alignment should first be differentiated between strategy and operations and then divided into functions, modelling an integrated strategy process.

Fundamental Business Strategies: Business Principles The fundamental strategies make up the focal point of strategic alignment in the unidirectional model, as it is at the top of the hierarchy.

We call these the business principles as they constitute the purpose of the enterprise. The business principles consist of high-level and long-term strategies that are relatively stable over time. Being the “source” of strategy in the enterprise, strategic alignment can be explained as an indication of how well units of strategy or operations are aligned to these principles.

A risk throughout the chains of translations and adaptations in the strategy processes is the unintentional mistranslation of a strategy. The implications of any such mistranslations are much larger at the top of the strategy hierarchy as it will affect the lower echelons of the strategy and thus risk putting a larger part of the enterprise on an unintended course. It is thus important that the fundamental strategies in the business principles are effectively communicated and made easily accessible to agents in the enterprise.

Strategic Business Initiatives Strategic business initiatives are driven by the business principles, but also by the environment and industry where the business operates. A business initiative is typically limited to a specified time frame and has a specific intended outcome. Strategic alignment of the business initiatives is achieved by aligning them towards the business principles and facilitating the alignment of supporting initiatives outside. The alignment of business initiatives in the research and principally builds on effective communication, clear requirements, and efficient feedback mechanisms.

As IT gains an increasingly protracted role in many organisations many strategic initiatives are supported or co-owned by the IT function. These parallel initiatives across functions must be coordinated and aligned both to each other and with the business principles. This process is multilateral but often characterized by IT enabling the initiatives in the core business.

Fundamental IT Strategies: IT Governance Fundamental strategies within IT are the rules and strategies managing the shape and direction of the IT function and capabilities in the enterprise. The fundamental IT strategies are often stable over time when compared to the continuous strategies, but their development is driven both by the core business interest and the rapid development of IT. They are often on a high level of abstraction and typically have long timeframes.

In the enabling role, the fundamental strategies are generally equivalent to the core strategic practices in the discipline of IT governance [30]. We use this name for the fundamental business strategies to emphasise the link to the applied field of IT governance where tools such as the COBIT framework can be used as reference [31]. In the frame of strategic alignment, the fundamental IT strategies align toward the business principles and restrict as well as enables IT initiatives. IT governance must be directly aligned towards the business principles to achieve adequate stability over time as aligning them towards business initiatives can result in lock-in effects as initiatives change or expire. IT governance also creates the frames and preconditions for the enabling of business initiatives through IT initiatives. Strategic alignment is in this aspect improved through strengthening the digital core [32].

Strategic IT Initiatives Strategic IT initiatives typically have an action-oriented emphasis on implementation, with limited time frames. While a strategic initiative is not the same as an IT project in operations, many strategic initiatives can be expected to trigger and constrain such projects as strategies are moved into practical implementation or effect.

Strategic IT initiatives align internally towards IT governance principles as these provide and shape the technical and strategic opportunities for the efforts. The initiatives must also align with any business initiatives it is meant to enable so that the core strategies and business principles might be implemented successfully. The alignment between IT initiatives and IT governance is characterised by IT governance providing the rules, resources and capabilities, as well as maintaining adaptability in extant systems, for IT initiatives. The initiative is also given its principal direction from either IT governance processes or from business initiatives.

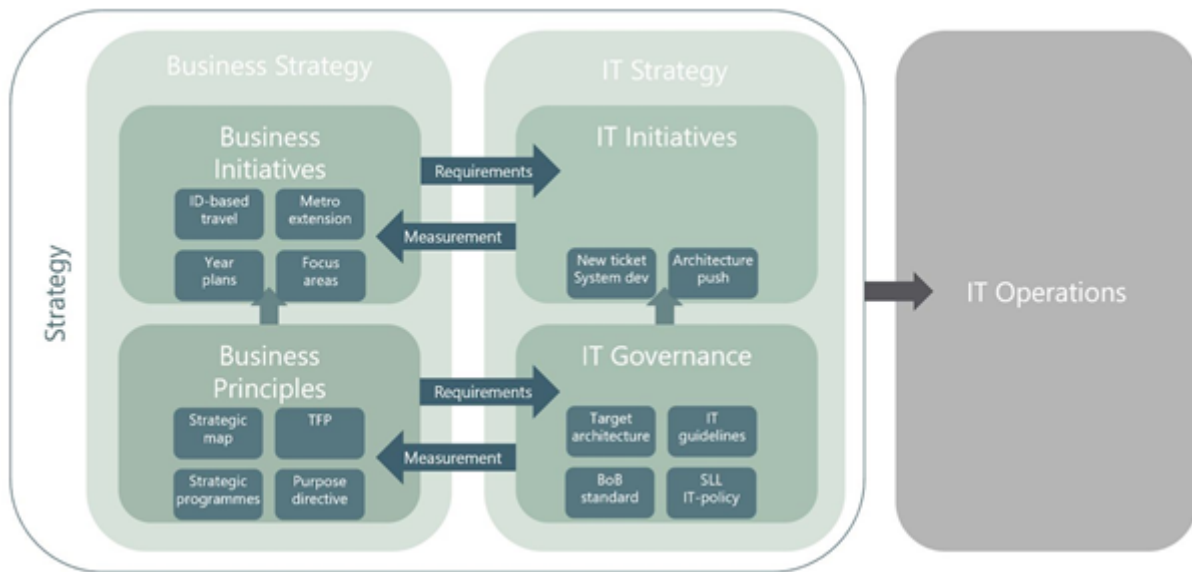


Figure 2: The framework in the case environment.

7. Strategic Alignment at Trafikförvaltningen

Trafikförvaltningen is part of Stockholm’s County Council (Stockholms Läns Landsting) and the salaried professional branch supporting the Traffic Committee, the County Council’s political committee for all matter relating to public transport². Trafikförvaltningen is tasked with preparing and operationalising the decisions of the traffic committee and is thus the operational provider of public transport in Stockholm. It has around 800 employees working within five administrative areas³. While the day-to-day operation of public transport is procured from private providers, Trafikförvaltningen owns and supports the infrastructure and several supporting administrative and strategic processes.

7.1. Results

For this case study, the framework is applied on the domain of Tickets and payments and is presented in figure 2.

Business Principles The core of the business strategy of Trafikförvaltningen comes from the owner structure of the enterprise. It is controlled by the county council and receives its strategic direction in the form of the Traffic Supply Plan, the strategic programs detailing the regional development plan, and the strategic map, as well as other appurtenant strategic programs. All these documents that Trafikförvaltningen cannot make efforts to align these documents with any other part of the strategy, as they are at the top of the strategy hierarchy. However, comparing the information within these documents to assess their alignment should be done. Misalignment between them would otherwise likely have larger implications further down in the strategy hierarchy, and the risk of such misalignment among the business principles increase due to the fact that there are such a large number of sources indicating the strategic direction on an enterprise level.

The Strategic map contains a set of long-term goals, values and the vision of the company, but

²<https://cutt.ly/PfEuZyW>

³<https://cutt.ly/BfEuC5n>

the goals are very abstract and although they in theory arguably could be measured against some real-world phenomena it would be difficult to do so in practice. Rather, it sets an ambition for the company, but that ambition can be fulfilled in a number of different ways.

Business Initiatives The strategic business initiatives of Trafikförvaltningen comes both from decisions from the county council and the heads of the departments and directors. The initiatives include organisational matters like the merging of the previous IT departments, or the strategic initiative of replacing the existing ticket system with one that can offer identity-based travel.

As such initiatives have influence from entities residing outside of Trafikförvaltningens business core, the risk of misalignment increases. However, the design of the initiatives is still done by Trafikförvaltningen, and thus the business principles are aligned. Another example of a strategic business initiative is the expansion of the metro, which consists of many smaller business initiatives. This initiative has a long-time frame and relatively low level of detail that may only become precise in several years. However, it has the important trait in that it is action-oriented and is created explicitly to support the business principles.

IT Governance Forming the fundamentals of the IT strategy, one finds a set of policies reminiscent of the fundamental business strategy in that they are sourced from both internally and externally, creating potential problems of alignment. The IT-policy for the Stockholm County Council is part of the IT governance as an external source, and although the source is the same as for some of the IT principles, thus it increases the risk of misalignment.

The IT guidelines, on the other hand, are set internally and are owned by the CIO, thus creating the possibility to adapt them to fit the requirements that come from the business principles. All of these documents span long time frames and have a relatively low level of detail. It is important to notice that the implementation of the standards is not within IT governance but should rather be mirrored by an IT initiative with requirements set upon it from the IT governance. These are all principles that support the IT department in decisions, prioritization, and investments.

Also carrying the characteristics of the IT governance in that it is not action-oriented and has implications with a reasonably long-time frame is the target architecture. The importance of alignment for the target architecture is additionally high, as it has a central role for all other work within the IT strategy domain and the alignment with business principles as well as within the domain it resides carries extra weight. As it has a higher level of detail it also becomes more controlled by the other entities within the domain of fundamental IT strategies, which further heightens the need for internal alignment.

IT Initiatives The temporary strategic IT initiatives include the in-house development of the new ticketing system and the work towards more and better architectural work within the organisation. These two differ in that they are created from two different sources, where the work for an improved architecture is an initiative created due to a need from the IT governance whereas the work with ticketing system is the result of a business initiative. All the same, both are in heavy need of alignment against the IT governance, as for example the ticketing system may be created as an initiative due to a decision from the business strategy, but still very governed by the ticketing standard that it is to follow that resides in the IT governance. It is important to point out that the IT initiatives is not actual work and operations as they still reside within the strategic domain and will subsequently set requirements on the implementation of the respective operations.

7.2. Managerial Implications

Formulate and document IT strategy While there are several documents at Trafikförvaltningen that contain aspects of IT strategy the lack of an explicit IT strategy makes it problematic to assess the

strategic alignment of IT. As there is no clear point of reference that can be used to align IT initiatives and IT operations towards, there is no clear source of instructions for IT professionals to use as direction for IT projects. The lack of an explicit IT strategy and directives from business stakeholders also prevents stakeholder sign-off processes on IT governance strategy, which we believe can limit the insight and understanding of IT opportunities and potential enabling. We recommend that an explicit IT strategy with a focus on fundamental governance-type strategies are formulated and made available to business stakeholders and professionals within the IT function. By facilitating mutual understanding and the building of communication-enhancing structures, we believe that it would improve the strategic alignment at Trafikförvaltningen. It would also provide a valuable basis for formulating enterprise architecture, which in turn could be used to improve IT strategy over time.

Formulate and agree on clear requirements for IT on governance and initiative levels The need for requirements and communication permeates the area of strategic alignment. The formulation, agreement and subsequent sign-off on clear requirements will make it easier to work towards alignment as well as identifying misaligned intentions. Implementing processes for handling requirements on IT, both in terms of generating and verifying the validity of the requirements, will help the cross-company understanding of capabilities and ambitions. We recommend that processes for collecting business requirements on IT are introduced as part of the standard processes in launching IT initiatives. We further recommend that explicit mechanisms for capturing stakeholder requirements are included in the processes to update IT governance strategies and artefacts.

Stronger engagement from stakeholder executives in enterprise architecture There is an overarching need to increase the communication and stakeholder engagement around IT's role in the organisation. There does not appear to be a clear consensus over business requirements in IT at present or in the future. That problem exists in both the IT strategy and business strategy domains, as well as on different levels of specificity. Today the target architecture is built around capabilities taken directly from abstract business principles without the participation of stakeholder executives, which creates the risk of the mistranslation of requirements and strategy. We recommend investigating how to involve business stakeholders more explicitly in the creation and updates of the target enterprise architecture.

Align IT architecture towards long-term strategy and purpose The IT architecture has been based on relatively short-term strategy set in the strategic map. As the life span of many of the components that are developed within the scope of the IT architecture exceed the time span of the strategic map, aligning these two entities increases the risk for misalignment in the future. To ensure long-term alignment and viability of the target enterprise architecture, we recommend that strategies of comparable time frames are used to provide the business directional input.

8. Validity and Reliability

In order to ensure the validity of the study, the research questions and purpose have been revisited during the work, as well as reformulated to realign the purpose, research question, results, and conclusions [17]. Additionally, the meetings with persons at Trafikförvaltningen not only provided empirical material but also informed the research by defining the problems of Trafikförvaltning and continuously providing new aspects on both theory and case. Ensuring reliability was a more challenging task, in that sufficiently large data sets were difficult to secure. Primarily, the internal sample population for meetings and interviews was not large enough and it was not possible to make a comparative study or benchmark. Furthermore, the sample population was heavily influenced by the existing contacts of the researchers. Care has been taken to consider this in the analysis and conclusions, and

weight was given to the more objective data gathering and literature review.

9. Conclusion

Synthesising published literature on strategic alignment and the case study of Trafikförvaltningen, we conclude that effective communication is the key driving force in achieving strategic alignment in an enterprise. By building mutual understanding across the strategy processes, clear requirements and integrated feedback, enterprises can ensure alignment throughout their collections of strategies.

Strategic alignment needs to be considered across several dimensions. Frameworks differentiate between IT and business as well as strategy and operations. In this work, we argue that in order to create models for strategic alignment that better facilitate implementation into practice, different types of strategy must also be differentiated between in order to provide actionable insight. The relevant differentiation between strategies is believed to be sensitive to the specific context. Therefore, we suggest separating fundamental strategies from strategic initiatives based on factors of dignity, time frame, action-orientation, and level of detail but recognize the need for further research.

By combining these drivers and dimensions, we propose a framework for hierarchical business-led organisations. We propose that strategic alignment between business and IT can be improved through facilitating the alignment between fundamental business and IT strategies, between business and IT strategy initiatives and through facilitating internal consistency in business and IT strategies. Enterprise architecture can be a valuable tool to achieve alignment between fundamental business and IT strategies and for ensuring initiative compliance to fundamental IT strategy.

In this work, we considered just one organisation. However, to create more founded results, our suggestion should be applied to more organisations. Thus, a sound evaluation of the approach will be possible. Further, it should be researched how our approach can benefit from existing means like enterprise (architecture) modelling [33, 34] and automatized model maintenance [35].

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