

Connecting Enterprise Architecture with Strategic Planning Processes

Case Study of a Large Nordic Finance Organization

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Abstract—The business environment is changing faster than ever before. Successful navigation in these treacherous waters requires both business agility and capability to govern strategy-driven business transformation. Enterprise Architecture (EA) is an approach providing insight and overview to manage the complexity of an organization and to aid strategic decision-making. Studies have tried to bridge the gap between EA and strategy, but very few empirical studies have been published on the subject. In this exploratory case study, we provide an empirical view of how EA can be connected to the strategic planning process and bring value to an organization. The findings are based on 13 interviews conducted in a large Nordic financial services group. This study strengthens the view that although EA could provide significant value in the strategy formulation phase it is still mainly a tool for translating the strategy into actions. EA can thus provide the most value in the strategy implementation phase of the strategic planning process.

Keywords—strategic planning, business transformation, enterprise architecture, enterprise engineering

I. INTRODUCTION

The current business environment is changing rapidly due to on-going developments such as globalization and introduction of new technologies. As a result, enterprises have to be more innovative and be able to adapt to changes much faster than before. Especially the increasing importance of information technology (IT) within enterprises creates pressure to make correct strategic decisions that take into account both business and IT needs.

Enterprise architecture (EA) is an approach to provide insight and overview in order to manage the complexity of an organization and to aid strategic decision making [1]. Originally, EA was developed as a tool for information systems management [2], but during the past decade the concept has evolved more towards an instrument for business IT alignment [3].

EA has included business goals and strategy as elements since it was first introduced by Zachman [4] in the late 1980s. Moreover, EA is more and more attached to strategic planning and business transformation [2, 3, 5]. However, a survey of the state of EA programs shows that a great number of IT professionals think that business-oriented EA is implemented on a much smaller scale than it would be required [6].

Additionally, EA is most often associated with IT consolidation, business IT alignment and IT landscape management, which shows a lack of focus on the business architecture layer of EA [3, 7].

The lack of focus on business architecture seems to indicate a gap between EA and strategic planning. The contemporary literature includes very few examples of how EA can be linked with strategy [8]. The foundation for execution approach presented by Ross et al. [5] is one of the few models that link EA with strategy.

In this exploratory study, we attempt to identify how EA can be connected to strategy and how it can bring value to strategic planning processes in large organizations. We aim to identify where in the strategic planning process EA could be utilized and hence bring the most value to an organization.

Following contemporary case research practices, we conducted 13 interviews within a large Nordic financial services group to gain an understanding of how EA can be connected to strategic planning processes.

This paper is structured as follows. First, the theoretical background of the study is introduced by reviewing the academic literature on the subject. Second, the research method is described. Third, the findings from the empirical case study are presented. Fourth, the findings from the empirical study are discussed and connected to the academic literature. Finally, the results of the study are summarized.

II. STRATEGIC PLANNING PROCESS

The concept of corporate strategy and strategic planning has its roots in the 1950s when organizations first started formal corporate-wide development planning programs [9]. Generally, the strategic planning process can be divided into three phases: strategy formulation, strategy implementation and strategy evaluation [8, 9, 10, 11].

The strategy formulation phase includes setting the vision and mission of the organization, assessing the external and internal environment, comparing alternate strategies and finally making strategic choices [9]. In the strategy implementation phase, the organization sets annual objectives, creates business policies, allocates resources, and matches structures with the chosen strategy that links individual incentives to the strategic

goals. During the evaluation phase, the strategy is reviewed, the outcome of the strategy is evaluated and finally corrective actions are taken based on evaluation [9]. Fig. 1 summarizes the strategic planning process and the three phases of the process.

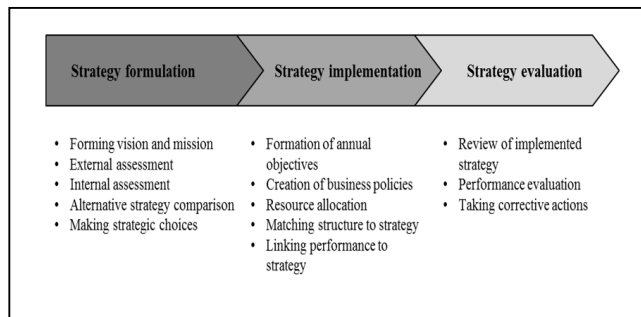


Fig. 1. The strategic planning process [9]

Simon et al. [8] show that EA could support the strategic planning process in several phases. According to them, EA would be most valuable in the strategy formulation and implementation phases, when assessing the readiness of the organization for transformation and deciding on how to execute the chosen strategy. Furthermore, they show that EA is least valuable in the strategy review phase. This is because the final performance can have been impacted by a variety of soft factors such as the employee resistance to change, which cannot be measured with the aid of EA. However, in contrast to the extensive applicability of EA suggested by Simon et al. [8], Butler [12] proposes that EA is more a tool for breaking down the strategy into IT requirements. Thus, EA would not facilitate the strategic planning discussion, but only function as a tool for implementing the strategy by aligning the organizations IT structures with the chosen strategy.

A. Strategy formulation and EA

The first step in the strategic formulation phase is to create the business vision and mission after which the external and internal environment is assessed. According to Simon et al. [8] EA could be greatly utilized in the strategic analysis process by providing a rigorous tool for describing the hard factors needed for the analysis such as structure and systems. However, they mention that EA is not well suitable for determining the soft elements in the analysis such as shared values and staff skills.

Parker [13] adds that EA could supply the information needed for the analysis. Especially internal data about the company resources and capabilities could be provided by EA in a coherent and accurate manner. EA frameworks such as TOGAF provide complete methods for the strategic analysis process [14]. The benefits of using EA in the external and internal assessment phase of strategy formulation are improved business capabilities identification and improved understanding of the business context along with improved strategy documentation and validation [8].

According to Ross et al. [5] EA can also clarify the strategic limits of an organization in terms of what initiatives a company has capabilities to implement. EA can facilitate the internal assessments of the organization and thus enable better

decision-making. However, Mykityshyn and Rouse [15] point out that EA might not be applicable in the strategy formulation phase because the process relies heavily on analyses of the external environment. EA may only restrict the high-level strategy formulation if the analysis inputs are derived from lagging indicators such as organizational data collected by EA.

The outputs from the internal and external assessments are consecutively used to compare alternative strategies and decide on what strategies to pursue. The role of EA in the strategic decision phase is to facilitate the decision-making process with systematic models [8]. Parker [13] suggests that EA should function as a feasibility sounding board, which provides relevant information for the decision. This will aid the organization to select strategies that are feasible to implement and avoid the risk that strategies are selected in a vacuum.

B. Strategy implementation and EA

The strategy implementation phase translates the chosen strategy into concrete actions. This is often done through business models, which are conceptual blueprints of the strategy and describe how an organization creates and delivers value [16]. According to Simon et al. [8] EA could bring value to the strategy implementation phase by facilitating the breakdown of the strategy into business models, operating models, business processes and organizational structures. Butler [12] supports this view by explaining that the role of EA in strategic processes is to translate the strategic inputs to architectural structures. Moreover, Hoogervorst [17] states that EA is the key element in formally integrating strategy formulation and implementation.

The business model concept relates closely to the business architecture layer of EA. Versteeg and Bouwman [18] explain that the role of business architecture is to structure the most important business and economic activities of an organization. They describe that business architecture is constructed after the strategy formulation phase and used to embed the strategy into the organization by making it more concrete.

Ross et al. [5] explain that the key with successful EA is to communicate the organizational vision in a clear way in order to create the required business processes and IT structures. They suggest that this is done through core diagrams, which include elements specific to the company's operating model and reflect the realization of the organizational vision. Furthermore, Ross et al. [5] note that the linkage between the individual performance and the chosen strategy should be done through an IT engagement model. The model coordinates different company levels and aligns the company's business and IT activities. Thus, the linkage mechanisms should ensure that the implemented strategic initiatives are accounted for in the operating model and the enterprise architecture

Simon et al. [8] add that EA improves the feasibility assessment of the business transformation. This is one of the greatest value creation opportunities for EA, since it reveals the complexity of the current IT landscape, thus making the assessment more reliable. According to Wolfenden and Welch [19], one key aspect of business architecture is that it can be used to explore dependencies within the organization, which helps to assess and prioritize strategic opportunities. Moreover,

Simon et al. [8] acknowledge that EA can bring structure to the prioritization of strategic initiatives. It can facilitate the decision-making by systematically assessing the strategic importance of the project proposals.

Parker [13] summarizes that EA enables clearer strategy communication, improved strategic action planning and dynamic strategic progress reporting in the strategy implementation phase. EA can improve the strategic communication since it presents the strategy and business models in standardized views that all the stakeholders can understand. Furthermore, EA can facilitate the action planning by providing a structure for the prioritization of activities. Finally, through continuously updated as-is descriptions of the business, the EA aids the organizational progress reporting. Thus, the benefits of utilizing EA in the strategy implementation phase include improved strategy decomposition, better business/IT complexity assessment, more systematic prioritization of projects and improved project dependency analysis [8].

C. Strategy evaluation and EA

In the strategy evaluation phase, the implemented strategy is reviewed, the performance is assessed and the results of the assessment are used to make corrective actions to the strategy. Op't Land et al. [1] mention that EA would allow traceability back to the strategic choices and increase knowledge of what corrective action to take. However, Simon et al. [8] show that even though the strategic decision is traced, it cannot be known if the poor performance occurred due to the strategic choice or because of inadequate implementation. Hence, they conclude that EA has the weakest value creation opportunity in the strategy review stage of the strategic planning process.

However, the on-going strategy governance can be facilitated through EA. Parker [13] explains that EA can be used as a benchmark against which future decisions are made. It helps the tracking of strategic initiatives and gives guidelines to how the resources should be managed in the future.

Previous literature was assessed using a systematic literature review method. The review process consisted of multiple steps designed to ensure relevant coverage of the previous literature. Relevant parameters of the search were defined based on objectives of the study. Only articles written in English were chosen for the review, but no other regional, business sector, or time restrictions were applied. The database search was initially limited to peer-reviewed academic journals and conference proceedings to gain both high quality publications and contemporary content. Additional books and other relevant publications were added to the review based on a citation analysis of the initially chosen articles. The final sample included 24 academic journal articles, 10 papers published in conference proceedings, 11 books, and 9 nonacademic publications

Based on results of the literature review above, we selected two authors [8, 13] whose approach provided most comprehensive coverage for different phases of strategic planning process in which EA was expected to potentially create most value. Ross et al. [5] was selected due to the fact that the case company is using their framework for EA work.

Table I summarizes where in the strategic planning process EA could potentially create most value according to the views of selected authors.

TABLE I. STRATEGIC PLANNING PROCESS PHASES

Strategic planning process phase	Selected authors		
	Simon et al. (2014)	Parker (2011)	Ross et al. (2006)
Strategy formulation			
Forming vision and mission			
External assessment			
Internal assessment	x	x	x
Alternate strategy comparison	x	x	
Making strategic choices	x	x	x
Strategy implementation			
Formation of annual objectives	x	x	x
Creation of business policies			
Resource allocation	x	x	x
Matching structure to strategy	x	x	x
Linking performance to strategy			x
Strategy evaluation			
Review of implemented strategy			
Performance evaluation		x	
Taking corrective actions		x	x

III. CASE STUDY

A. Case company

The case company is a Nordic financial services group, which provides banking, non-life insurance and wealth management services for its corporate and private customers. The case organization consists of multiple subsidiaries and business segments that are centrally governed. The company has quite recently experienced a major organizational transformation with the objective to shift more of the control from the subsidiaries and business segments to the group level. The structural change is expected to result in more centralized decision-making and a stronger focus on group performance.

B. Case study

This study is based on six semi-structured and seven in-depth interviews conducted in a large Nordic financial group. The study was conducted as a case study in order to create an in-depth understanding about the phenomenon in a bounded system [20]. In addition to the interviews, the study consisted of observations at the case organization's strategic planning and EA-related business meetings, and of discussion and conversation with several key stakeholders and executives inside the case organization. This rich field engagement has provided a good foundation and understanding for the researcher to analyze the empirical data in relation to actual problem in real empirical context. The study can be characterized as a holistic exploratory single case study.

C. Data collection

The number of interviews and the respondents to be interviewed were determined by the method of theoretical sampling [21]. All the interviewees were employees of the case company and the respondents were selected based on their role and position in the organization. The role is divided into business and IT, whereas the position is divided into three levels: enterprise level, business unit level and project level.

The objective was to find respondents with a diverse set of backgrounds and roles in order to get a holistic view of the issue. The interview process started with six semi-structured interviews with equal portions of interviewees in business and in IT roles. After this initial round of predetermined interviews with key informants new participants were chosen for in-depth interviews to further develop the categories found in the analysis. In accordance with the theory, new interviewees were added until theoretical saturation was reached [21]. Table II illustrates the roles and positions of the interviewees.

The structure of the interviews was divided into four themes: (1) EA and its role in the case company; (2) strategic planning and development processes in the case organization; (3) the management system of the case company; and (4) the definition of key concepts and their relationships. The themes were discussed in the presented sequence, but the focus of the discussion was adjusted based on the background and expertise of the respondent.

All the interviews were conducted on a one to one basis by meeting with the participant. Each interview lasted from 50 to 120 minutes and all the interviews were audio recorded as well as transcribed to a written form. Moreover, notes were taken during the interviews to record the most important issues of the discussion. After the interview, a brief summary was written to record the main thoughts and insights from the interview. This reflection allowed the analysis of the interview data to begin directly after the interview.

TABLE II. THE ORDER OF INTERVIEWEES

Interview	Interview design	
	Role	Position
1	IT	Enterprise level
2	Business	Business unit level
3	Business	Enterprise level
4	IT	Enterprise level
5	IT	Business unit level
6	Business	Business unit level
7	Business	Enterprise level
8	Business	Enterprise level
9	Business	Project level
10	IT	Project level
11	Business	Enterprise level
12	Business	Project level
13	Business	Enterprise level

D. Data analysis

The data from the interviews was analyzed in parallel with the data collection, according to contemporary case research methodology [22]. The analysis was conducted in four steps. First, the set of semi-structured interviews was analyzed by open coding of all potentially relevant and interesting issues. The interviews were coded using terms emerging from the data and terms used by the interviewees and the codes from the first interviews were grouped into tentative categories by an axial coding process [23]. In the second step of the analysis, the groupings from the first set of interviews were compared with the subsequent interviews in order to examine if the same categories were present in both datasets. In the third step, the interview transcripts were re-coded with the final categorization derived from the first two analysis steps. Finally,

in the fourth phase the interview data was segmented and analyzed by category. The final empirical case report was subsequently written based on this final analysis. In line with the current case study interview research practice, the report includes several quotes from the interviews in addition to the empirical narrative [24].

IV. FINDINGS

The company's current EA work is very IT-focused. The company has a well-defined enterprise wide IT architecture practice, which develops and maintains target descriptions for the IT solution architecture of the company. The case organization has previously completed one EA project where the objective was to develop a more business-oriented EA practice for the group. The project successfully demonstrated that business segments claiming to have unique characteristics share more than 80 % of their functions and would thus benefit from a more unified business-oriented EA. The project was finished, but the implementation of a continuous business-oriented EA work failed to gain traction in the organization. The key challenge was that the defined framework was not understood as a high-level construct of the business model but instead there was a strong focus on what potential implications the new model would have on the organization chart i.e. how the structure of the company should be changed to match the new model. This finding emphasizes the need for taking care of social aspects in transformation, not just focusing on the construction of the model.

A. Strategy formulation process

The strategic planning process of the case company can be divided into three main parts: the group strategy process, the annual planning process and the development planning process. The group strategy process reflects the strategy formulation and evaluation phases, while the annual planning process and the development planning process reflect the strategy implementation phase of the generic strategic planning process. Fig. 2 summarizes the strategic planning process of the case company.

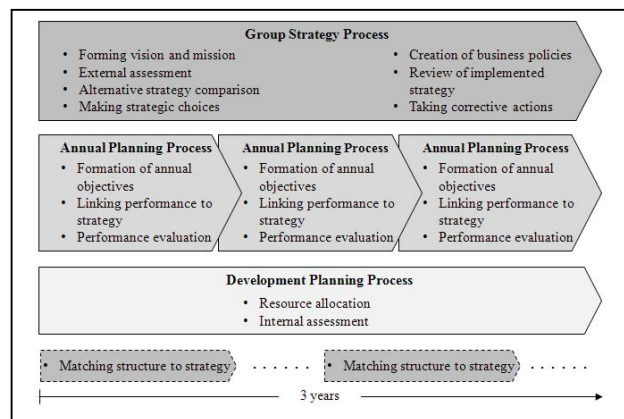


Fig. 2. The strategic planning process of the case company

The group strategy formulation phase plays a key role in creating a unified high-level business vision and mission. This is especially important in a group of multiple subsidiaries with partially individual decision rights. The group strategy covers

all the business units and subsidiaries of the case company. Additionally, some of the business units derive their own strategy from the more general group strategy. This however, is not part of the group strategy process but a separate process within the business unit itself.

The group strategy process includes the main elements of the generic strategy formulation phase. The process comprises of forming the vision and mission of the organization, assessing the external environment, comparing alternate strategies, and making strategic choices. Furthermore, the process includes the creation of business policies of the generic strategy implementation phase as well as a review of the strategy and taking corrective actions elements of the generic strategy evaluation phase.

The annual planning process consists of setting objectives, budgeting, and resource planning. The planning is based on the current strategy and organization structure. The annual planning process includes formation of annual objectives, linking performance to strategy and performance evaluation elements of the generic strategy implementation phase.

The development planning process includes the planning of concrete initiatives to implement the group strategy. The development portfolio is used as a tool to manage all major development activities including both IT and business initiatives. Individual development activities are implemented according to a separate development process. The development planning process and development process are tightly interlinked. These processes have similar characteristics as the motioning system introduced by Proper [25], development planning process as the steering system and development process as the running system. The assessment of the capability to implement the group strategy is performed within the development planning process. Thus, the development planning process includes resource allocation and the internal assessment elements of the generic strategy planning process.

Matching structure with strategy occurs from time to time as a separate exercise within the organization, but it is not explicitly linked to defined processes within the strategy implementation phase.

B. Strategy formulation and EA in the case organization

According to the respondents, the strategy formulation phase should be a creative and visionary process rather than overly analytical. Interviewees perceived it as a major risk to create strategy based on internal assessments, because the external environment has such a huge impact on company performance. Instead, it would be more valuable to formulate strategy based on an external assessment of the competitive environment and of the forward-looking indicators.

EA was considered as an overly restrictive element to be connected to the strategy formulation phase. Some interviewees mentioned that relying too much on EA generated internal assessments could prevent the organization from seizing new and innovative opportunities.

Furthermore, the respondents did not see EA as a valuable concept within the strategy formulation phase of the group strategy process. EA was not seen valuable because it was

perceived as a lagging indicator, describing the current situation rather than generating new innovative strategies.

According to the interviewees EA is a relatively rigid tool that could not undergo modifications to fit the changing requirements of the strategy process. Thus, it would not be suitable to compare alternative strategies through EA or use EA to aid high-level strategic decision-making. One interviewee commented as follows: *“I would say that linking EA to the more concrete level would be better in our company. This is because the strategy is renewed every three to four years. And if it links back there too much, then the whole concept will be renewed. [...] Whereas in the development planning we have the business models and operating models. Basically what we are developing. [...] So I would say that [EA] should be connected closer to the level where the work is done, rather than at the really high level.”*

C. Strategy implementation and EA in the case organization

The interviews revealed that the most promising link between EA and strategic planning could be found in the development planning process, which is the implementation phase of the group strategy process.

However, a link between EA and the annual planning process, which is also a part of the strategy implementation phase, was not seen equally desirable. The reason for this was that the annual planning process is heavily focused on breaking down financial business targets, which according to the interviewees is not the primary task of EA. This finding implies a potential mismatch between two strategic planning processes, the annual planning process and the development planning process. If these processes are considered to be separate and if interlinking tools are not in place the strategic goals and day-to-day operation might not be synchronized.

According to the respondents, EA could bring value to the development planning process in several areas. First, information created by EA could be used to translate the chosen strategy into business and operating models in a more structural manner. This would allow the organization to match its structure with the strategy and build an efficient organization. One interviewee summarizes the value of EA as follows: *“[EA] would bring here to the senior management a kind of understanding, a common understanding, of the business logic or the logic of our group. That we have these kind of structures, these kinds of layers, which are connected to each other like this. And when the understanding is acquired we can, based on that understanding, build an efficient organization. An organization that would work best with our specific structure.”*

Furthermore, EA could help identify where to allocate development resources: *“[EA] would help to allocate the development funds and bring a new structure to it. Currently we have a kind of a structure, which has some challenges. We would like to identify the focus of the development better. That somehow, we should get [the EA] process there where we manage the development process.”* EA would also assist in building development roadmaps, which would include the current state and the target state of both projects and the whole business. Moreover, EA could provide a structural approach for

sequencing and prioritizing the change efforts, which supports strategy implementation.

The respondents mentioned that EA would provide increased transparency of the organization, which facilitates internal assessment of dependencies, risks and inconsistencies within the business. The identification of these factors could increase the probability of successfully completing projects and strategic initiatives. Additionally, EA would work as a tool for outlining the target state of the projects, which show what part of the organization the project is changing: *“If this enterprise architecture description would exist, it would help us identify what this will affect when something is changed. So that would be the value. I think it is more a tool for managing the whole rather than managing a single development project.”*

Moreover, the interviews revealed that information created by EA could be used to support when making project investment decisions. Interviewees commented that the members of the development committee that makes the investment decision would utilize the information created by EA: *“When the investment plans are compared the decision-making body should have an architectural description that facilitates the discussion. [...] The architectural description would then help to find the correct prioritization criteria.”*

Finally, EA could be used to support tracking and monitoring of strategic projects. The interviews revealed that EA could be used to describe the target state of projects with more accuracy, which would enable the creation of better measurements to track the projects. Consequently, the steering group would be able to follow the projects more easily and to link performance to the strategic initiatives: *“The enterprise architecture could help in that we should remember that the objective with this project was to achieve this business change, which meant these results. In a way, these business representatives and the project’s steering group’s chairman should use these tools. [...] And as I said about the measurements, the [steering] group tracks them and makes corrective actions if needed.”*

D. Strategy evaluation and EA in the case organization

EA was not seen as particularly beneficial in the strategy evaluation phase of the group strategy process. The interviewees mentioned that EA could create value in the evaluation phase of single projects, but not necessarily in the evaluation of the group level strategy. This was evident as the interviewees associated the concept of EA heavily with information systems and IT architecture. Thus, EA was considered more as a tool for IT management rather than a tool for strategic management.

V. DISCUSSION

Based on the findings from the literature review, EA could bring most value to the strategic analyses in the strategy formulation phase and to the strategy implementation phase as a systematic tool for translating the chosen strategy into actions [8]. The empirical case partially supports the findings from the literature review. The respondents perceived the greatest value of EA in the development planning process, which corresponds to the strategy implementation phase, but they did not see EA as a valuable tool in the strategy formulation phase.

According to Moisander and Stenfors [26], strategic tools, which are designed for individual problem solving and rational decision-making, may fall short of what the organization needs to support its practical strategy work. This is especially true in organizations where the production of knowledge is largely based on consensus-building.

A deliberate strategy is only effective if the organization is capable to implement the formulated strategy. The current state and target state defined in the strategy should not differ more than what can be achieved with the resources available. As Ciborra and Hanseth [27] point out, the existing environment typically comprises of numerous information systems and pervasive IT architecture thereby setting boundaries on what can be aligned according to a new strategy. EA can clarify the strategic limits of an organization in terms of what initiatives it has capabilities to implement. Thus, the value of EA in the strategy formulation phase depends greatly on the role of strategy in the organization. The value of EA is lower in an organization where the strategy is formulated as general vision and mission than in an organization where strategy is formulated as a plan ready to be executed.

The difference in findings between the literature and the empirical case can be due to the way strategic processes are organized in the case company in comparison to the generic strategic planning process. The group strategy process of the case company takes its inputs largely from external assessments and not so much from internal current state analyses, in which EA would be beneficial. Additionally, respondents perceived EA more as a restrictive element in the strategy process than as an element that would enable new competitive strategies. The findings from the empirical case are similar to the view of Butler [12] and of Mykityshyn and Rouse [15], who see EA mainly as a tool for implementing the chosen strategy. The findings from this study support that the view of Simon et al. [8] of how EA can deliver value to the strategic planning process might be overly optimistic.

Nevertheless, EA was seen beneficial in the internal analyses regarding the assessment of strategy implementation feasibility in the case company, which is according to Simon et al. [8] the phase in which EA can bring the most value. In the case company, this assessment was an element of the strategy implementation phase, and it was performed within the development planning process. This reflects the high-level nature of the group strategy of the case company. Due to the communicative nature of the group strategy it was widely understood that it is not expected to be fully implemented, and same topics recur from strategy to strategy. The group strategy is more of a guideline to the development planning and annual planning processes, which make the strategy more concrete. To some extent, the development planning process possesses similar agile strategy implementation capabilities as in emergent strategy [10] or even bricolage [27]. However, in the case company agility is limited within the boundaries of the high-level group strategy and new development activities typically originate from within the topics of the group strategy not completely outside of it. EA was seen more beneficial within the development planning process, which translates the strategy into concrete actions. Table III summarizes the findings from the literature and the empirical case.

TABLE III. SUMMARY OF SUPPORTING EMPIRICAL FINDINGS

Strategic planning process phase	Selected authors			C A S E
	Simon et al. (2014)	Parker (2011)	Ross et al. (2006)	
Strategy formulation				
Forming vision and mission				
External assessment				
Internal assessment	x	x	x	x
Alternate strategy comparison	x	x		
Making strategic choices	x	x	x	
Strategy implementation				
Formation of annual objectives	x	x	x	
Creation of business policies				
Resource allocation	x	x	x	x
Matching structure to strategy	x	x	x	x
Linking performance to strategy			x	x
Strategy evaluation				
Review of implemented strategy				
Performance evaluation		x		
Taking corrective actions		x	x	

VI. CONCLUSIONS

This study provides an empirical view of the role of EA in the strategic planning process and how it should be applied to potentially gain value to an organization. Some studies have tried to bridge the gap between EA and strategy [5] but very few empirical studies have been published on the subject [8]. Findings of this study strengthen the view that EA is still mainly considered as a tool for translating the strategy into actions and can thus provide most value in the strategy implementation phase of the strategic planning process.

The relative importance of different elements in the strategy formulation phase determines the role that EA can play in this phase. However, the elements included in this phase depend on the role that strategy plays in the organization. Is it a tool for communicating the high-level vision and mission or actionable plan for future operations? If the ability to implement is a priority, the focus should be on the following three elements; internal assessment, alternate strategy comparison, and making strategic choices. The linkage between internal assessment and EA is crucial since existing architecture often defines the boundaries for new strategic initiatives. A solid foundation for a deliberate strategy can be built by including internal assessment as an essential element in strategy formulation phase and utilizing EA in this assessment. We argue that the ability to implement is the key capability when evaluating the performance of the organization and effectiveness of a deliberate strategy.

The findings from the empirical case are to a great extent limited to large organizations in information-intensive industries. Moreover, since this study was conducted in one case company, the details of the identified connection between EA and the strategic planning process are case specific. However, some aspects of the connection can be generalized to other organizations such as in which phase of the strategic planning process and on what level the connection could potentially bring the most value. These findings are general in nature and can thus be applied in other organizations.

Currently, the literature is virtually void of empirical research in the gray area between strategic management and the role of EA enabling the strategic digital transformation. More empirical studies of how EA could be linked to strategic planning would be required in this area to create larger samples that could result in wider generalizations. In particular, studies focusing on which elements in the strategic planning process EA could bring the most value to and how the value could be realized. One interesting avenue for future work would be to investigate how the role of strategy in the organization affects the potential of EA in the strategic planning process.

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