How to Achieve Sustainable Business IT Alignment – Designing a Circular Organizational Structure at SAAB

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Abstract
To achieve sustainable business IT alignment (BITA) requires firms to create a circular organizational structure that enhances interactions of major stakeholders. We aim to explore the issue, and in our study of SAAB, we find three viable components to design the organizational structure so it can foster the accomplishment of sustainable BITA: (1) Strong top management initiates the management boards so stakeholders across IT and business, and at different organization levels can participate in IT planning and decision making; (2) Business managers propose and engage in business related IT initiatives so they define critical requirements and needs, and they are responsible/accountable for BITA; and (3) CIO facilitates and coordinates planning, decision making, and implementation of ICT initiatives at ICT boards with a clear strategic focus on realizing business values. The paper explores unique insights of designing a circular organizational structure and its impacts on BITA, and contributes knowledge to IT management and practice.

1. The influence of organization structure on achieving BITA

Business IT alignment (BITA) has been one of the top management concerns of enterprise executives, especially, information technology (IT) executives for the last 30 years [e.g., 1, 2]. Academic researchers and business practitioners have conducted numerous studies and contributed to a rich literature and guidelines for achieving BITA [2, 3, 4]. The positive impacts of BITA on firm’s performance are widely acknowledged both in practice and research [2, 3, 4]. Among the preconditions that influence BITA, organization structure is of great importance for accomplishing BITA [5, 6].

BITA is a complex issue and a uni-dimensional phenomenon that needs continuous endeavor, communication, and commitment among stakeholders from all the levels (IT, business unit, corporate) in an organization. Research shows that informal organization structure [6] or “social alignment” between the business and IT people [7] are important for improving alignment. Maes et. al [8] also emphasizes that alignment should have special concern on human interaction. Lufman and the others [9, 10] have also asserted that communication, partnership are the important factors to measure the BITA maturity.

However, research has rarely pointed out how to design and sustain informal structures for conversation and interaction or preserving social dimensions of alignments. In their recent meta-review of BITA research, Gerow et. al. [2] point out that although research has indicated that the BITA depends on firm’s organization structure, “it remains unclear what type of structure positively impacts alignment” [p.1162].

In addition to this “unclear” question, we have seen, in today’s business environment, more and more organizations that are driven by competitive pressure to change their structures radically and frequently. The changes usually influence the “informal structure” or “social alignment” in organizations. As main stakeholders of BITA may be “re-positioned” or assigned “new roles” during the changes. This may make the “informal structure”, established “social alignment”, and organization structure for BITA being disappeared. This results in an “unsustainable” BITA. Which in turn will deteriorate the performance of the organization.

Chief Information Officers (CIOs) are usually assumed to be responsible for BITA in organizations since they hold IT budget. There is little argument that IT is playing more and more important role in business. Moreover, managers from different business units and functions fight for IT budget with the aim of realizing their own business plans. Because CIOs possess the power and authority of IT planning and decision making, the distribution of IT resources/budget becomes a “conflict zone”. CIOs have difficulties to prioritize the business plans and
needs [11]. The communication, and mutual trust are largely missing between IT and business managers. Notably, Kaarst-Brown [12] argues that CIO’s position and status can be further impaired by organizational structure and reporting relationship with top management. Thus, CIOs face tremendous changelings in solving the conflicts and achieving BITA.

Companies need to establish a stable “formal organizational structure” in order to address these organizational issues for BITA, and enhance the interaction of all stakeholders (e.g., IT and business managers) during IT planning, decision making, and implementation processes. Ackoff [13] has proposed the design of circular organization structure as the general solution for participation in planning and decision making in organizations.

The circular organization is designed with management boards that primarily handle the internal integration and coordination between functions, and business units at different organizational levels (Corporate, management, operational, and regional). Key stakeholders’ participation to the boards is the cornerstone of this structure. This board-based organization creates communication, understanding, and commitments between stakeholders of business and IT [13, 14]. A circular organization can therefore be a design for participation of the stakeholders to accomplish and sustain BITA.

In this paper, we aim to explore how to design a circular organization, and what the impacts are of a circular organization structure on sustaining BITA. The evidence is based on the management practice at SAAB, a defense and security company headquartered in Sweden.

2. Sustainable BITA requires circular organization structure

We define sustainable BITA as the viable process by which those responsible and accountable for managing/developing IT and the stakeholders from the rest of a firm interact. The focus is how they integrate and coordinate their work to achieve long-term development of the firm.

This concept is theoretically explained by system thinking and a systems approach to the management of today’s complex organization. Ackoff [13] defines an organization as (1) a purposeful system that is (2) part of one or more purposeful systems, and (3) parts of which, people, have purposes of their own. According to Ackoff it is therefore important to engage as many of the corporations stakeholders as possible in the planning process.

Winograd and Flores [15] has also emphasized the important to build a “network of commitment” in an organization for creating conversation, understanding, and interaction among stakeholders. They stress that much of the work that managers do is concerned with initiating, monitoring, and above all coordinating the networks of speech acts between stakeholders. The problem is not information technology, but the common sense understanding of processes for conducting business. Every manager is primarily concerned with generating and maintaining a network of conversations for action – conversations in which requests and commitments lead to successful completion of work.

Interactionism, as a methodology of management and planning is further proposed by Ackoff [13]. Interactive planning is carried out based on three operating principles: the participative principle, the principle of continuity, and the holistic principle.

The participation principle give the members of an organization a possibility to develop and acquire an understanding of the organization. The most important reason for continuous planning is the fact that its principal benefit derives from engaging in it. The holistic principle has two parts: the principle of coordination and the principle of integration. The principle of coordination states that no part of an organization can be planned effectively if it is planned independently of another unit at the same level. The principle of integration states that planning done independently at any level of an organization cannot be as effective as planning carried out interdependently at all levels.

When the principles of coordination and integration are combined, we obtain the holistic principle, which states that the more parts of a system and levels of it that plan simultaneously and interdependently, the better results can be achieved.

In order to achieve such interactions and participation of all stakeholders in decision processes, firms need to redesign the organization and introduce a circular structure, argued by Ackoff [13, 14]. The central idea in a circular organization is to introduce management boards across functions, business areas, and/or at different organizational levels. By doing so, every person in a position of authority - each manager and supervisor - is provided with a board. Through their “compulsory” participation on various boards, managers can interact directly with other stakeholders from other units or different organizational levels. The needed coordination and integration of management can thus be achieved by such interactions. The operation of boards is characterized by consensus. The advantage of consensus over split decisions are apparent. The principal advantage is that it removes the
possibility of the tyranny of the majority creating a dissatisfied minority. Consensus design should create agreement, not in principle but in practice. Thus, consensus increases “buy-in” of decisions and commitments in implementation. Since participation is the cornerstone in the planning process. A circular organization can therefore be a design for participation of the needed stakeholders to create BITA. A circular organization has positive effects on firm’s readiness, willingness, and ability toward change. Therefore, a firm’s culture is changed for promoting participation, interaction, and democracy. These are the foundations for sustainable BITA [e.g. 16].

In our study of SAAB, we have found that in order to achieve sustainable BITA, firms need to build an organizational structure that can enhance interactions among stakeholders. The circular organizational structure reinforce integrated and coordinated planning and decision making across functions and business areas at the different levels of the organization in a dynamic and democratic way.

3. Circular organization structure at SAAB

SAAB is a company with a business focus within Defence and Security. The headquarter is located in Stockholm, Sweden. SAAB is today organized in 6 Business Areas (BA) and 6 Market Areas (MA) (See Figure 1). The company has approximately 14,000 employees and sales were 2014 around 24 Billion Swedish Crowns.

The company delivers a wide range of complex products for example the Gripen fighter system, AEW (air born early warning systems), radar systems, C4I systems etc. Product development and R&D are therefore core capabilities in SAAB.

SAAB competes in an international market, which requires a strong international presence. Therefore, SAAB has established market areas (MA) around the world, which are Asia Pacific, Europe, Middle East & Africa, North America, Latin America, Nordic and Baltic.

3.1 Organization structure changes at SAAB

Beginning in the early 2000, SAAB undergone a variety of reforms and organizational changes for realizing operational efficiency [17].

In year 2009/2010 a new organizational matrix was introduced at SAAB, where almost 20 Business Units were organized within 6 Business Areas (Figure 1). A new corporation operational excellence function was built with COO as the responsible. This function has responsibilities for operational excellence both at the firm level as well as BA’s operational level.
Figure 2 The Circular Organizational Structure at SAAB

Figure 2 shows the circular organizational structure that was designed at SAAB for establishing the foundation for sustainable BITA. The boards are introduced at corporate, ICT management/operation, and regional ICT management levels. Both IT and business Managers and representatives from different organizational levels can participate in various board activities, interact with each other, coordinate and integrate their tasks and works. The total number of people participating in boards are 450-500, with 40-50 people in ICT related boards and councils. Managers participate 1-3 boards with regular meetings once a month. Top strategies and major functional efforts like consolidation of applications are decided on top level with cross-functional implementation responsibilities through ICT boards.

ICT boards (Figure 3) are organized and centralized by ICT personnel, a consolidation of former CIO office, ICT shared service centres and local ICT organizations. The CIO reports to the head of Operational Excellence Board (OEB), which is the COO. It was also decided that cross-functional decision forums within the ICT boards should be organized where needed in order to ensure cross-functional decision and preparations for major decisions to corporate OEB level. CIO became chairman of ICT board with clear global mandate. ICT boards had members from different corporate functions and senior management from all business areas.

Figure 3 Interactions at ICT Boards

Today most decisions are taken at ICT board level as a clear strategy and frameworks have been set on group management or operational excellence board (OEB) level. ICT boards meet every month and also make up the steering committees for major change projects. In addition, reference groups and decision forums are also used for facilitating communication and interaction across business and function areas.

The senior managers from each BA in an ICT board is called IBO (Information Business Owner) and is also responsible for general relations and demand on ICT as well as ICT implementation at each BA. That role set-up also creates engagement and commitment within each BA. Within the ICT organization there is a BRM (Business Relations Manager) who works...
closely together with IBO (Information Business Owner) from each Business Area to ensure engagement and information sharing within each BA. Figure 3 further illustrates the interactions between the IT and business managers at ICT boards.

In a later stage regional sub-boards were set up to increase the global participation and buy-in to the overall changes, services as well as integration with local adaptations and needs.

3.2 Achieving sustainable BITA

The setup of a circular organizational structure, with ICT boards and Operational Excellence Board (OEB) has so far worked very well, and has been continuously improved during the implementation. Decisions and Buy-In have paced up dramatically and lead times from good common ICT initiative to actual decision and implementation has been reduced. The amount of common ICT initiatives has also increased.

Generally the cross-functional boards have created a strong fundament/commitment for IT change management. The corporate CIO articulates that “At first there is always a risk that when you are appointed a board role you only take participation on actual meetings. But through the established interaction model IBO/BRM and IBO in boards as well as a clear responsibility for IBO to drive change within each BA, we have achieved much more”.

The CIO further underlines the importance of the organizational structure and participation by saying: “My personal reflection is that a strong management support and a cross-functional buy in are essential when driving major changes into your business. I believe that we have achieved a lot by setting up the structure as described but the organizational structure is nothing without participation by engaged and experienced people.”

The ICT board meetings are characterized by many agenda items handled efficient and with high integrity of all members. Critical areas are well prepared on pre-meetings by ICT councils to ensure understanding and keep decision focus on the actual board meeting. All material for decisions is available well in hand of the meeting and follows clearly defined templates for all aspects of the decision. The strict rules of these meetings have been helpful in creating trust within the boards.

Most of the agenda points arises from the ICT function organization and are prepared through the ICT management team/councils. More and more agenda items are proposed from the Business representatives (IBO) at the business areas.

Experiences from the SAAB case indicate that ICT boards, which are cross-functional and cross business areas, have been essential to handle large amount of changes. Usually IT development follows IT processes but in its implementation effects business processes in a positive or negative way. Cross functional boards have in the SAAB case been part in both ensuring the right outcome from a business process perspective on the actual IT change projects but also the organisations awareness of the implementation of the change.

The CIO summaries the benefits of the ICT boards by saying: “I strongly believe that by engaging people and functions/areas that are effected by change you create the necessary commitment, but then you need to communicate and involve all the way on each initiative.”

“I also believe that business alignment is achieved through cross-functional and cross areas work in ICT board meetings and activities. Our design for participation helps us understand the need for business integration and coordination first and foremost for addressing the business-IT alignment questions.” The CIO states.

4. Explaining the Success at SAAB: the three viable components

In the study of SAAB, we find three viable components to build the circular organizational structure so it can foster the establishment of sustainable BITA:

1. Strong top management initiates the management boards so stakeholders across functions, business areas, and at different organization levels can participate in planning and decision making. The operation of the boards is based on mandatory participation (including top/group management), and consensus decision making.

2. Business managers propose and engage in business related ICT initiatives so they can define critical business requirements for ICT development/management. Business leaders are responsible/accountable for BITA.

3. CIO facilitates and coordinates planning and decision making of ICT initiatives at ICT boards with a strategic focus for shaping ICT for business value realization.
Figure 4 depicts how these three components have built up a solid foundation for achieving sustainable BITA at SAAB during the five years (2009-2014). The interaction between IT and business/functional managers is made possible by the board meetings and activities. Mutual trust and understanding between IT and business are largely improved and enhanced by such interactions. The coordination and integration of decision making and IT initiative implementation are further achieved. This has led both to significant reduction in lead time from ICT initiatives to implementation, and stronger support of the viable processes for accomplishing BITA.

Corporate CIO reflects that “I believe that a set-up of boards as the case indicates ensures buy-in on several layers in the company steering structure. When a company is governed in a federated model with several IT-organizations this creates a structure to handle global and regional decisions with the right stakeholders involved. It might be viewed as driving administration costs but my experience is that with clear rules and clear decision authorities these are absolutely manageable”. He continues to emphasize that, “important of course is that decision points are well prepared, assessed and presented. If a company succeeds the actual implementation of the projects work is easier and stakeholders are part of the change.
4.2 Business responsible for BITA

SAAB has restructured its business into six business areas and six market areas. The aim is to respond to the changes of the business environment as quickly as possible, and to deliver customized products and services that satisfy the “local” customers. In this circumstance, business leaders are more sensitive than IT leaders regarding the market changes, as well the customer demands. Moreover, they know more than others what are the critical business requirements and needs for IT development that are demanded by a specific business and market area. The IT initiatives should, in this way, be proposed by the business. The business leaders know the answer to the question “what business are we in?” and what IT we need for the business. Instead of searching IT solutions from third parties, the business related ICT proposals can be prepared and discussed in the ICT boards. Well discussed and formulated IT initiatives will then be presented to the operation excellent board, where the strategic decision will be made based on the censuses among the group management, business leaders and IT leaders. With the coordination from the ICT boards, and IT managers, business leaders are responsible for implementing the initiatives in the business, function or market areas. Because the IT initiatives are proposed and demanded by the business, business is well prepared for the implementation. Therefore resistance to change is reduced. Furthermore, the implemented IT has higher potential to realize more business values. BITA has therefore become more coordinated and integrated at SAAB, especially, business is required to be responsible/accountable for BITA.

4.3 CIO’s role as facilitator and coordinator

IT within SAAB is governed in a combined centralized and federated model where some IT organizations are part of the BA organization while some are consolidated and more centrally organized at the CIO office. The IT organizations in Sweden were organized together with the CIO office as part of SAAB Corporate group functions. By introducing ICT boards, the CIO facilitates and coordinates IT planning and decision making across business areas and functions. The ICT boards, both at corporate and regional levels, follow the same rules for operating the board meetings and preparing IT proposals to boards at the higher level.

Since CIO owns the IT budget, which is a significant percentage of the total corporate budget, he has enormous responsibility for a successful IT management and development for SAAB in general, and shaping IT for realizing business values in particular. The CIO coordinates the needs and demands from different business and functions, and makes plans and policies for IT management at different organizational levels. After the decisions are made at the operational excellence board (OEB), the CIO is responsible for implementing the board decision together with business and functional area managers. Through ICT board meetings, as well working with
IBO from business areas, CIO and IT managers are able to in depth understand the needs and requirements from the business.

5. Guidelines for Fostering Circular Organizational Structure

Reflect upon the practice and experience from the SAAB case, we discuss the following guidelines for those who are interested in building the circular structure and achieving sustainable BITA.

Guideline 1: Strong top management initiates and designs a circular organizational structure. This is a top-down endeavor, and not likely to be established by a bottom-up approach.

Hierarchy structure is usually constructed in most of organizations. It is designed for clarifying decision making roles and work activities. Ackoff [13, 14] points out that a circular structure does not change this hierarchy. The introduction of boards into the hierarchy is aimed to improve participation and interaction in the process of planning and decision making. Management remains the leading power and authorities in this new structure. Moreover, the decision making is based on consensus which will ensure the buy-in of decisions and smooth implementation of them across the organization. Ackoff further stresses that managers cannot effectively implement their decisions unless they understand that they are confronted with two kinds of power – “power over” and “power to” and how these relate to their ability to implement decisions successfully. Power to is the ability to get people to do things voluntarily what ones want them to do. On the other hand power over is the ability to get people to do things that they do not want to do, that they would not do voluntarily. To exercise the first kind of power is to lead. The second kind is traditionally command. However, the more educated a population or work force is the more negatively correlated is power over and power to. The circular structure and the introduction of the boards can address this problem, by more stakeholders participating in planning and the consensus decisions making. Since the decisions are made by the stakeholders, they are ready, and willing to implement the decisions that they have accepted in the boards. In addition, these stakeholders develop a better holistic view of the organization by working with each other at the boards. They can largely extend their view of organizational development by overcoming the limitations of their own tasks and roles, and by understanding better of others’ functions and needs in the same environment.

This is the top management responsibility to lead the firm into a sustainable future. Top management has the power to “command” compulsory participation for interactive planning and decision making. No others in the organization have this power. Therefore, we argue that only top management can make the initiative. In order to ensure organizational wide participation and interaction, it is important to introduce group management governance into the boards. Top management involvement and participation in board meetings are crucial for the structure to function viably and normally.

Recommendation 1: Top leaders should change mindset to improve the participation and interactive planning in organizations. The need for interactive planning must be emphasized from a strong top leadership. The operation of the boards should be based on compulsory participation. Top management participation in board meetings is crucial.

Guideline 2: Business and IT are two important elements in organization. The planning and decision making regarding business/IT issues should be made simultaneously and interdependently.

Keen [19] argues that competitive, technical, organizational, economic, and management choices and consequences now are so interdependent that they cannot be handled in isolation from one another. To be effective, business design through IT must balance the interplay among these elements. If you want to lead the business initiative that depends on IT you must manage the decision process for IT otherwise you can end up in a situation where you have delegated important business issues to IT people [19]. Since business knows better of market change and customer demands than IT, all business related IT initiatives should be proposed by business in dialogue with IT. Moreover, the implementation of ICT initiatives should also be managed by business leaders in their respective areas/functions.

Recommendation 2: Business leaders should change their assumption that IT is merely the responsibility of IT people. Business leaders must be responsible/accountable for BITA, they must propose and engage in business related IT initiatives.

Guideline 3: CIO is responsible for IT development and management at corporate level.

Because business leaders propose IT initiatives for their business with a clear focus on business development for meeting customer needs, CIO can communicate the business needs and IT concerns thoroughly at the ICT boards. This interaction ensures that CIO develops a deep and better understanding of the firm’s business. This knowledge will support
him/her tremendously when coordinating/integrating the IT planning simultaneously and interdependently across functions and business areas. CIO gets therefore the mandate for shaping IT for business value realization.

**Recommendation 3**: CIO must work exclusively on strategies of shaping IT for business value realization.

Guideline 4: The circular structure has created a “network of commitment” environment that enables the CIO to work with other chief officers and business managers with mutual trust and understanding.

In the circular organization, CIO is able to facilitate and coordinate IT planning and decision making with other leaders from different business areas or functions. The interaction among the leaders at ICT boards and operational boards has greatly improved the understanding and collaboration among the leaders. CIO’s role in the organization is enhanced as mutual trust from other leaders are obtained in the interactive planning and participation in the boards meetings. More importantly, both CIO and business managers develop a holistic view of “One company” version, and they make commitment for accomplishing a common goal, instead of focusing only on their own business objectives. The CIO says that “I have never felt any threats/conflict from other leaders. I and my colleagues communicate well and develop better understanding of each other’s role and responsibilities for the long term development of our organization. Threats and conflicts are never an issue for me”. This implies that CIO gains stable status in corporate management, and keeps good relationship with both business managers and top management.

**Recommendation 4**: CIO should engage in the design and implementation of a circular organizational structure. This will strengthen CIO status in corporate management and avoid “conflicts” from other chief officers and business managers.

### 6. Conclusion

In this paper, we explore the practice of designing the circular organization at SAAB, and obtain insights of its impacts on achieving sustainable BITA. The evidence shows that the circular structure creates the participation and interactive planning/decision making between IT/business. The structure builds up the foundation and commitment for achieving sustainable BITA.

The concept of circular organization is nothing new in corporate planning and management, but the focus on its impacts on sustainable BITA is relatively unique. This paper explores the practice and examine the insights from a CIO’s perspective. The circular structure is operated on top of the existing hierarchy structure, and creates a formal “interaction” structure for the major stakeholders from both business and IT in planning and decision making. This formal structure is relatively stable and will not be affected by the complex and frequent changes of the existing organization structure. More importantly, this structure facilitates the communication, understanding, and commitment among different stakeholders. Such “network of commitment” is essential for operating business and IT. Consequently, this structure can become part of the organization culture and persist in long term effects on sustainable BITA.

We have limited evidence to conclude that the success at SAAB may take place in other culture. Swedish business culture is characterized by participation, democracy, and consensus in planning and decision making [20]. This may cultivate the design of a circular organization structure for achieving BITA. Collecting evidence from other culture is worthy of doing in future research.

### 7. References

8. Appendix: The research study

We adopt a case research methodology for this study [21, 22]. This method is particularly useful because knowledge and practice of designing a circular organizational structure for achieving sustainable BITA is not well explored in information systems research. We thus need a deep understanding of the phenomenon which is something a case study can definitely provide. We chose SAAB for the case study because the researchers have personal contact with the CIO of the company. Pettigrew [23] defined it as planned opportunism in conducting field research in companies. The researchers were informed of the organization change and implementation of the new organizational structure. This gives us a unique opportunity to explore how to design the circular organizational structure, and how this structure creates a sustainable BITA at SAAB.

The research data is collected by a continuous personal communication between the researchers and the CIO since autumn 2012. The data includes also reflections and comments from corporate chief quality officer and chief business officer at SAAB. The researchers arranged more than 10 meetings with the CIO, both formal and informal, as well several writing sessions for describing and analysing what has been done at SAAB. Conversation notes, memos were documented for the research purpose. In addition, we read relevant internal documents at SAAB.

In these three years endeavour, we, both the researchers and the CIO, were committed in the discovering process for getting better understanding of the design and implementation of the circular structure at SAAB, as well as the impacts of this on the firm’s establishment of sustainable BITA. This process is principally guided by the hermeneutics framework [24]. Through the hermeneutics process from understanding via explanation to interpretation, both the researchers and the CIO were able to share the meaning and knowledge of the circular organizational structure and the impact on the sustainable BITA, as well as the firm’s performance. Our self-revealing and self-reflection of the phenomenon are also entwined in the process. The paper is a product of “engaged scholarship” [25].