Impact of Agility on the Business IT Alignment

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Abstract: A strategic alignment with a strictly constant rhythm assumes stability. There are several factors that influence this stability. The strategic alignment must be evolutionary, long-term, and dynamic in spite of those factors. In our case we opted for the agility. Agility has a global impact on the internal and external environment of an organization. Agility concerns the future of the organization/company. It is this concept which became a standard for business models since the rhythm of the change in companies accelerates. The current article reflects this idea, by describing the nature of the relation between the factor of agility and the strategic alignment in the determination of various types of agility. Furthermore, we try to establish in this article if an aligned system can stay so, by transforming the company into an agile one. A transformation on all the levels of abstraction is going to maintain the alignment on the long term and will give an added value, and a way the changes can be detected in reality and be gradually integrated within the framework of the strategic alignment.

1 INTRODUCTION

Over the years, particularly during the last two decades, there has been a fast technological advancement which has changed the way in which firms behave. They need to try to get the excellence and remain competitive in a world that is stimulated by the same advancement in Information Technology (IT). A key success factor for a successful business in a dynamic business environment is an effective and efficient IT strategy capable of supporting the strategies and processes (Henderson and Venkatraman, 1993). A situation has therefore arisen, asking for a strategic integration of trades with the IT. It is because of this that most current agencies are trying to implement IT governance with the model's support variables, in order to be able to reach one of the ultimate objectives, namely the alignment between business strategy and IT.

If this alignment is inadequate, the enterprise processes would not take full advantage of the technological means invested (Henderson and Venkatraman, 1993). In effect, the changes often influence the organization in its entirety, concerning the business processes in the information system.

However, it is important for organizations if they aim at staying competitive, to respond quickly and flexibly to anticipated changes. In previous studies and research, it was observed that the strategic alignment is affected by several factors, to cite only a few of them: communication between IT and strategy, the sharing of knowledge between IT and strategy, the flexibility of environment, the agility of the system, the ambiguity, and so on. For this study, we have put the emphasis on agility due to some reasons which will be mentioned further on in the current article. In a chaotic environment in which markets are emerging, evolve and die, one of the main success determinants of a company is agility, the ability to remain flexible in the face of new developments, continuously adjusting the strategic company direction and developing innovative ways of creating value. The competitive environment has significantly evolved over the past few years. Companies should adapt fast to unpredictable changes.

However, recent research also indicates that organizations can fall into a trap where the inflexible rigidity may impede or delay the ability of an organization to respond to environmental changes (Benbya and McKelvey, 2006) (Tallon and Pinsonneault, 2011).

It is challenging for any business to anticipate changes and adapt quicker and more effectively. What is underlying with regard to agility is: change.

Therefore this article has developed an adequate response to the following question: : "How can long-term dynamics be facilitated through strategic alignment, by detecting change, assuming business agility?" For this, we have established that an aligned system is to be able to move to the challenges of change. For this, the system is to allow transformations while keeping the alignment of information systems with the business process.

The remaining of the paper is organized as follows: Section 2 will present a state-of-the-art analysis. Section 3 will consider relevant approaches. Section 4 presents an analytical discussion. Section 5 concludes the article.

2 LITERATURE

2.1 Agility

We define agility concerning an organization /company as a set of processes which allow the organization to detect changes in the internal and external environment, respond effectively in a timely and efficient manner, and learn from previous experience to improve the organizational skills.

2.2 Business IT Alignment

Since the beginning of the nineties, the business alignment with IT was becoming an issue for increasing organizational performance and has received much attention in literature for example: (Thevenet, 2009). The business IT Alignment relates to the alignment between the company and the IT strategies, and between the organizational information systems and infrastructure (Henderson and Venkatraman, 1993). It is defined as "the extent to which the framework of the mission, objectives and plans of support, and are supported by, the mission of the organization, objectives and plans" (Hirschheim and Sabherwal, 2001). This alignment creates an integrated organization where each function, unit, and person are centred on the organization and its competitiveness.

2.3 Relationship Between Business IT Alignment and Agility

Chung et al. (2003) find a strong correlation between the agility of the IT infrastructure and the strategic Business IT alignment. They conclude that IT must be closely aligned with the organizational strategy

with a view on the computer infrastructure to be able to facilitate the agility of the company. This close alignment means that the IT infrastructure must be flexible, because the agility of the IT infrastructure enables the company to develop new processes and applications quickly, which allows the agility of the company.

If there would be a proper relationship between the strategic company alignment and the enterprise agility, those two would impact one another and give an added value that is the nature of the relationship between them.

Previous research shows that knowledge sharing facilitates the business-IT collaboration and this makes it easier for businesses to detect changes before deciding to a common line for the best way to react (Barki and Pinsonneault, 2005; Tallon and Pinsonneault, 2011).

The resulting alignment between IT and the enterprise strategy can activate the agility since essential changes in the strategy can be easily communicated to IT managers. In this way, the path of dependencies and routines provided by the alignment can allow to increase the adaptability and innovation (Zahra and George, 2002).

Resources for business process integration and concerning vicinity with regard to the locus of change mean that, in addition to facilitating the alignment, firms are more likely to be agile to respond to change (Tallon, 2008).

If it is proved that the use of environmental assessment allows an alignment, it can be assumed that it will also allow the organization to be more flexible while working effectively (Tallon and Pinsonneault, 2011; Obitz et al., 2009) and to anticipate the changes to come in order to be ready for them. The agility is perceived as a result or an advantage of alignment (Tallon and Pinsonneault, 2011).

2.4 Enterprise Architecture and Agility

The architecture of enterprise is defined as the whole of the primitive and of descriptive artefacts which constitute a knowledge base of the company (Zachman, 2005).

Moreover, a survey conducted by Infosys in 2009 shows that the key objective of an enterprise architecture is the Business IT alignment.

Type of Agility

Agility can be incorporated in each layer of the architecture of the organization / enterprise or in the enterprise as a whole. The main challenge for the

achievement of agility is to obtain the alignment through the different layers and components of the enterprise architecture. We have tried to define each type of agility by report to the whole layer of the enterprise architecture.

Strategic / Business Agility which encompasses: business architecture as well as the process.

- The ability of an enterprise to develop and exploit it's inter and intra-organizational capabilities.

Operational / IT Agility which includes: functional architecture, and application technique. Reconfiguring or replacing your information technology systems when new marketplace realities change the way you have to do business.

Agility is analysed in the perspective of structural design within the enterprise architecture as a whole and in the different layers of the enterprise architecture.

3 STUDIES OF APPROACHES

In literature, several approaches are relevant to the problem of the business IT alignment (Couto et al., 2015; Engelsman et al., 2011; Doumi et al., 2013). Without taking into account the business agility, other researchers (Tallon and Pinsonneault, 2011; Wirattanapornkul, 2012) have determined the relationship between the agility and the alignment and in concluding that the agility is perceived as a result of the alignment. Others (Lemrabet, 2012) have developed service-oriented approaches that focus on business process management and service-orientation with the strategic alignment, by making the business agile.

This part is intended to define a multi-dimensional grid, which encompasses all the approaches which speak of the set of strategic alignment and agility which are refined by the criteria of a general definition "A company is called agile when its operational components work together in synergy and in addition: if one happens to have a system that **anticipates and detects the change in order to allow the integration and reactivity**". Anticipation, detection of change, and the reactivity, have two sub-levels: level of abstraction and the nature of the reactivity to determine the impact of agility on the strategic alignment.

3.1 Analytical Grid

According to the analytical grid, Tallon and Pinson-

neault (2011) have made a comprehensive study on how strategic alignment would have a positive or negative impact on agility, "Agility is perceived as a result or benefit of alignment".

Oosterhout (2010) has designed a model that anticipates what could happen and thus detect changes internal or external that can disrupt the system. Further, Oosterhout considers this extensively as factor which will thus concern the changes in the system.

Agility and strategic alignment can be measured together to see whether their co-habitation is what it is necessary for the architecture of the company or not.

Detection of change should be considered explicitly as well as its impact on all levels of the model, and we consider several criteria for that. First of all, information on changes is to be collected. Secondly these changes are to be analysed in the framework of the enterprise information system. Thirdly, the agility under the influence of IT is to be evaluated with respect to the strategy of the company. Fourthly, the design changes are to be validated as it concerns the changes collected.

4 DISCUSSION

It is assumed that a system is aligned when each level of the architecture is in correspondence with the various levels of abstraction. Agility can give us an added value for this system and thus we can consider agility to be a level of maturity for the alignment, a model which will thus make the system aligned and agile any by measuring the agility, we can establish that.

What would be the impact of agility on an aligned system? Perhaps an evolution? In this section we quote essential points concerning the possibility of transforming an agile business, knowing that its system is still aligned and dynamic. The alignment is the connection between the entities. When there is a change it is the whole system that is affected. We argue that change is rarely considered as a concept in itself. It is therefore seldom represented.

In effect, it is difficult to reason on a concept if it is not clearly formalized.

When there is a change environmental factors which affect the aligned system, the first thing that must be done to change it is the strategy of the company which has its turn determine the key objectives which must be consistent with the objectives regarding the IT.

Approach / Criteria		Rabab Imach et al., 2012	Tallon and P.P, 2011	Oosterhout et al., 2007	Bonnet 2009	Bradley et al., 2011
Anticipate		Yes	Yes	Yes	Yes	No
Detect of change	Yes/NO	Yes	No	Yes	No	No
	Types of uncertainty	Implementation the strategic standby	NaN	Factor of change establish	NaN	NaN
	Nature of uncertainty	Change intern and external. These changes are analyzed in the Urbanization IT	NaN	Identification of six factors of change between change internal and external	Nan	Nan
Correction action	Level	All the level abstract to project POIRE	NaN	Between Business and IT	NaN	Enterprise Architecture (All of the level)
	Nature	The necessary adjustments are implemented at each level identified for each dimension of the project POIRE Process of continuous improvement	NaN	BAN-NEED-BAR-Readiness-BAG-GAP	NaN	Impact maturity EA in an assign-ment business IT for an agile enterprise

Therefore, for an agile transformation one must arrive to take the best decisions, as quickly as possible as well remaining aligned.

The firms are more likely to be agile to respond to change. In addition, a flexible system can keep a scalable enterprise in the long term.

In summary, the world is facing a new change paradigm and it is necessary to mobilize the human capital of enterprises to respond to adequately.

The business of tomorrow will be agile. It will be aligned as well: there will be a symmetry between the promise made to collaborators and to clients. It will mutate in passing from a stable state to an unstable state, since there is no solution defined on the transformations that must be integrated.

When there is a harmonization between several entities and each entity has its relations and its links, it is largely difficult to modify a relationship that is in relationship with another relationship. Therefore, it is largely difficult to manage an entity that is in relationship with another from the strategic level to the operational level (no matter if this goes bottom up or top down). Then, when agility is back, this dependency can pose a problem, beyond what concerns the transformation itself. Hence, agility will change the strategy that in turn will change the process which in turn will change the IT.

5 CONCLUSION AND FUTURE WORK

In conclusion, we consider it not so useful to have an approach that just enforces transformation towards agility. We are more interested in agility as quality of something else – with regard to "things", which have matured in the sense of becoming more agile over time. From a practical point of view, it is also important that we can even measure this. Given that, companies are more likely to be agile to respond to change, especially in the long run.

REFERENCES

Barki, H., Pinsonneault, A., 2005. A model of organizational integration, implementation effort, and performance. Organ. Sci. 16, 165–179.

Chung, S.H., Rainer Jr, R.K., Lewis, B.R., 2003. The impact of information technology infrastructure flexibility on strategic alignment and application implementations. C AIS 11, 44.

Couto, E.S., Lopes, M.F.C., Sousa, R.D., 2015. Can IS/IT Governance Contribute for Business Agility? IST, 2015 October 7-9.

Doumi, K., Baïna, S., Baïna, K., 2013. Strategic Business and It Alignment: Representation and Evaluation. J.T.A

Engelsman, W., Quartel, D., Jonkers, H., van Sinderen, M., 2011. Extending enterprise architecture modelling with business goals and requirements. Enterp. Inf. Syst. 5, 9–36.

Henderson, J.C., Venkatraman, H., 1993. Strategic alignment: Leveraging information technology for transforming organizations. IBM Syst. J. 32, 472–484.

Hirschheim, R., Sabherwal, R., 2001. Detours in the path toward strategic information systems alignment. Calif. Manage. Rev. 44, 87–108.

Lemrabet, Y., 2012. Proposition d'une méthode de spécification d'une architecture orientée services dirigée par le métier dans le cadre d'une collaboration inter-organisationnelle.

Oosterhout, M., 2010. Business agility and information technology in service organizations. (ERIM).

Tallon, P.P., Pinsonneault, A., 2011. Competing perspectives on the link between strategic information technology alignment and organizational agility: insights from a mediation model. Mis Q. 35, 463–486.

Wirattanapornkul, S., 2012. Effect of IT Capabilities and Business-IT Strategic Alignment on Business Agility. UTCC.

Zachman, J.A., 2005. Enterprise Architecture Artifacts vs Application Development Artifacts. Zachman Inst. Framew.

Zahra, S.A., George, G., 2002. The net-enabled business innovation cycle and the evolution of dynamic capabilities. Inf. Syst. Res. 13, 147–150.