Holistic Management in a Context of Enterprise IT Management and Organizational Leadership

An Approach to Sense Making and Intelligent Business

There are probably many different ways to gain sense in each of al of the many different enterprises and organizations across the planet. This particular paper investigates one particular approach question the validity of the data and the selected approaches to articulate strategies and plans. This should give you (the reader) an idea on how to develop better plans that in turn would give the enterprise a better system.

In order to make proper decisions on how to develop the enterprise it becomes a necessity for the enterprise to deal with the question of sense making. How does the specialists and systems that have been applied in order to analyze data from the enterprise's environment? How does the systems adapt to the trends the data indicates might be developing? How do the specialists question and tests the data they have collected and analyzed?

The three step approach to organizational learning and data collection is in its origin based on Weick's approach, though I've taken some liberty in order to create a synthesis in order to specify the ideas that Weick presented in his book (Making Sense of the Organization, 2000) to an Enterprise Architecture approach in order to enable enterprises with crystallizing competitive advantages. By crystallizing competitive advantages the enterprises could avoid situations that in other cases would have forced out of business. This leads to the first part of the process that Karl Weick introduced in his book.

Scanning for Data

It is of importance of all enterprises to scan its environment in order to gain an understanding of how the stakeholders (competitors, suppliers, government etc.) will be acting in potential future scenario. This is usually a rather good component in articulating a corporate strategy and all of the subsequent strategies like the IT strategy, financial strategy, organization planning etc.

The scanning process includes the situation for the internal environment and for the external environment. The internal environment consists of an other set of stakeholders than with the external environment, but these are just as important. Likewise is the internal environment connected to the the external environment.

The data is usually based on several different sources and as such the data that the specialists and systems collects are of different qualities and as such the data and their sources have to be questioned. The questioning is in a way a process to ensure that the specialists who collects the data should question the ways they identify the data and how to be able to deal with the way the data is

analyzed. This is discussed in detail in the interpretation.

Interpretation

While analyzing the data the specialists works with a validation technique that in turn tries to investigate how or if the enterprise can make use of the data. The interpretation is likewise a fundamental element in the way the data is applied in the strategy development process.

The interpretation can be used to ensure that the strategies could be easier to implement, and as such the strategies could lead to the desired state of the enterprise. As such the focus of the planning would have to avoid what Mintzberg (Mintzbegr 2009) defines as the planning school, that is characterized by applying a lot of resources to the articulation of planning but as such it usually emphasize planning too much and implementation too little.

Learning

The specialists and the systems would have to learn from the articulated strategies, otherwise will they fail in adapting to the new situations of the environment that they analyze.

The learning process is likely the most important step of the entire process since the enterprise's specialists would have to adapt their analytical models to understand how the environment.

The result of the learning phase is in itself a form of knowledge sharing and it impacts the framework of how the enterprise operates.

Learning and knowledge sharing are two sides of the same issue and as such the specialists and decision makers have to think in how to transfer the knowledge to one another. For this a specialized repository can be applied. In order to share knowledge across the enterprise the individuals would have to a common understanding of what knowledge is about and who to interact within in order to gain access to the information and knowledge that they assume they would need in order to make better decisions and better plans for how the enterprise can gain competitive advantages.

In order to gan a further understanding of how the enterprise can create value through planning it becomes a necessity that the cycle is documented and the cycle is transparent for all of the stakeholders that interacts with top level planning.

The Cycle

The process is cyclic and that is essential that it is build upon a cyclic structure in order to the

specialists to make their predictions more reliable. More reliable plans can be used by the decision makers to enable the enterprise to achieve its goals.

Furthermore can cycle be enhanced with the enterprise, if an Enterprise Architecture Program is established and that the decision makers makes use of the data that the Enterprise Architecture program has been able to produce.

The illustration below shows how the enterprises can make use of the sense making process to achieve a more coherent, better aligned and more agile enterprise. As it is illustrated the Enterprise Architecture Program is used to enable the decision makers to align the various conceptual sections of the enterprise. In the diagram below there are three conceptual sections of the enterprise. The decision makers articulate a strategy.
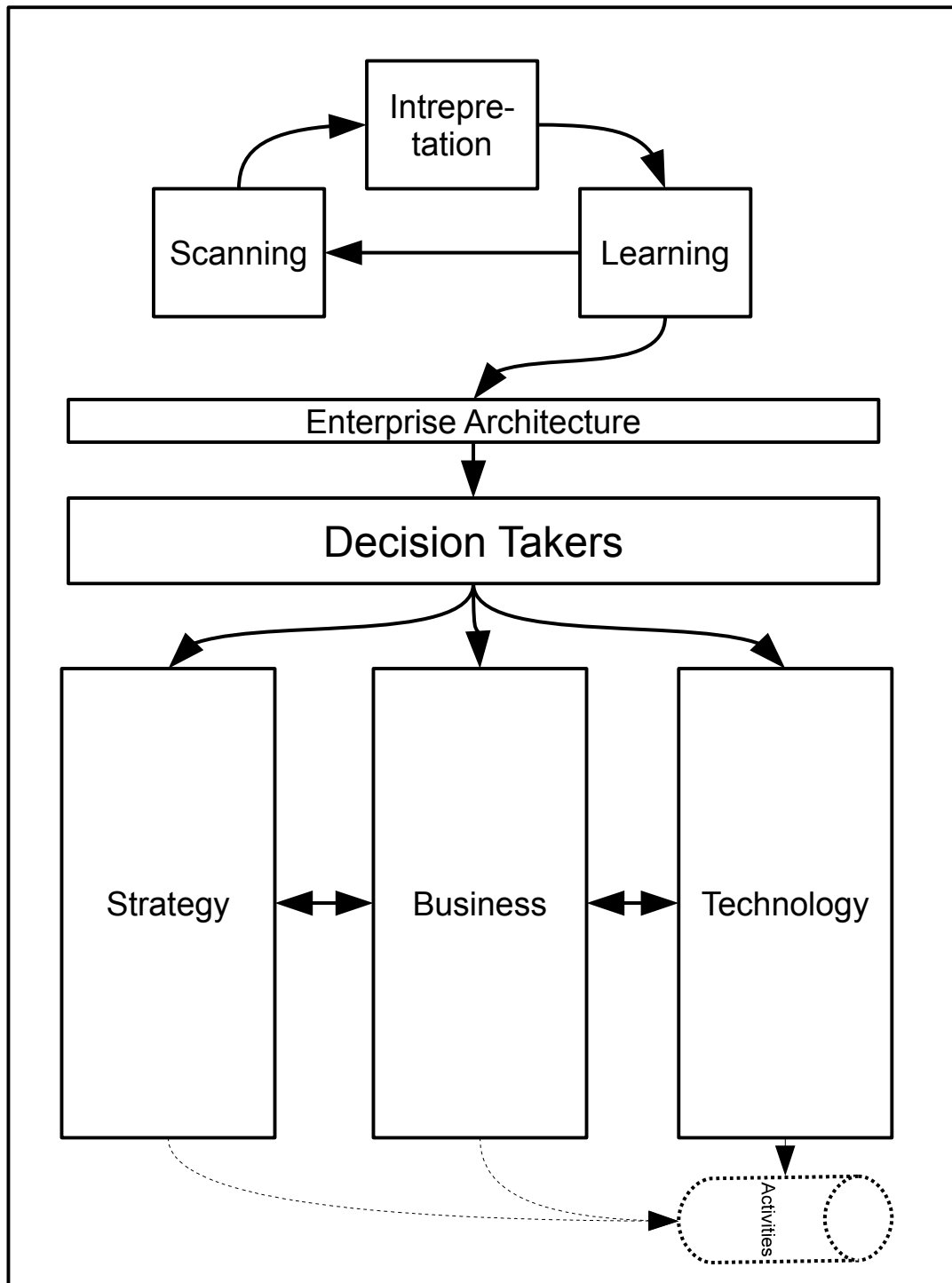
The experienced reader would note that the definition of what Enterprise Architecture impacts is derived form the EA3 Cube framework that Bernard (2005) proposed. The approach is based on the concept of Enterprise Engineering (Sjoelin 2011a) and as such it is the opinion of the author that the focus of the .

Assessing the Business Processes

The chief architect should evaluate the business processes, and it is a necessity to evaluate the

primary business processes, business model/operating model (Ross & Weil 2009, Ross et al. 2006, Ross & Weill 2004, Finkelstein 2006) and support processes (Porter 1985).

In this particular paper the concept of primary processes is defined on what processes that are essential in order for the enterprise to deliver value to its customers. The chief architect should naturally apply a multi perspective analysis method to understand the underlying principles of the enterprise and its social systems. For this the chief architect and his associates (the enterprise architects, solution architects, business architects) should investigate the operating model and business model of the enterprise in order to gain an understanding of how the enterprise's internal environment will change in the near future. The scanning of the internal environment should uncover the processes that aren't fully supported by IT and the processes of which the enterprise would be able to identify a series of projects that could change the enterprise to a desired and more competitive enterprise.

The chief architect or one of his or her associates have identified which of the business processes that do support the business in achieving its goals. He or she would have to go into a process of identifying those processes that would have to be obliterated (Hammer 2000) (re-designed completely). In the process the chief architect and associates would have to re-thing the support processes in order to avoid the pitfalls of an unstructured and incoherent enterprise architecture. The chief architect and his associates would have investigate how the various processes could be grouped and how the various projects can be implemented in order for the enterprise to harvest synergy. The primary business processes should be organized into "clusters" along side the support processes that clearly can be associated with each of the primary processes and as it has been mentioned earlier in this paper it is a necessity to organize the various business relates activities and processes in order to maximize the potential synergies. However there are some pitfalls that the chief architect and his associates might fall into for example is complexity a factor that can't be ignored. The more complex a particular segment or domain of the enterprise is the more likely it is that the particular system in the enterprise can't be generalized into an "Enterprise-Wide" platform, or rather the meaning of doing so is lesser relevant in the sense of information systems design.

Connect the Business Processes and the Information Systems

The chief architect and his associated would have to apply a structured methodology in order to ensure that the enterprise is able to establish and understand how the enterprise and its underlying architecture works. In this paper the author assume that this can be done through the establishment of a formal group that is in charge of investigating and defining the enterprise's architecture. The

method can be based on formal Enterprise Architecture framework and as such be a part of the structured methodology that the decision takers decides to apply.

The author's definition of Enterprise Architecture is:

"Enterprise Architecture is a set of principles, standards and methods for achieving informed governance. The models derived from the standards and methods have an impact on how the enterprise is able to align each of the elements of the enterprise with one another. The alignment will enable enterprise governance and agility for adaption and assurance." - Peter F. T. Sjoelin (2011a)

It is the author's opinion that the framework is the set of standards that dictates how the various artifacts that would be documented and stored in the repository are to be defined. In other words the framework is alpha – omega in order lay the foundation for an enterprise ontology (Dietz 2006, Bernard 2005, Hoogervorst 2009).

The framework could eventually give the chief architect the advantage of winning over stakeholders that are skeptical towards the concept of Enterprise Architecture, and likewise does the author assume that the framework would have a significant impact on the value of the repository that contains the descriptions of the artifacts. The value is derived from how well the various stakeholders in the enterprise are able to connect to the repository and understand the value of these.

As earlier mentioned the author expressed his views on that business processes and IT rarely generates synergies due to the lack of obliteration of processes that were designed for the pre-computer and Internet age. It is necessity for the chief architect and his associates to investigate the enterprise's current usage of information technology and information systems. The chief architect and his associates should be working with a methodology that documents the various information systems, platforms, applications, devices that the enterprise applies in order to provide the various stakeholders (executives, middle managers and employees) the proper information in order to make them understand how the social system works. The chief architect would have to make sure that the business processes and the information systems are evaluated before and after the change process has been initiated in order to give the decision makers the best possible overview of how the enterprise has changed after the implementation of the new approach to business processes and information systems.

It is the opinion of the author that in order to ensure that the enterprise would be able to gain an advantage in governance by focusing on the enterprise's approach to investing in its technology, assets, people and systems (Potts 2008). The investment process is essentially the embodiment of

both the corporate strategy, the IT strategy, the financial strategy etc. After the chief architect and his associates have worked with their analysis of the enterprise's corporate strategy it is almost certain that a road map should be articulated so the focus could be shared among the members of the Enterprise Architecture group and later on among the various decision makers in the particular enterprise.

It is the author's opinion that the investment approach would have to be connected with the the enterprise's program management. It will become a necessity for the enterprise to deal with its approach to enterprise investments and program management since it is the decision makers who are responsible for the allocation of resources to the projects and systems that the enterprise are able to invest in the projects that will change the enterprise. According to Bernard the the enterprise would have to change by the many different projects alter and mature the architecture of the enterprise.

The author is of the opinion that the desired architecture (TO – BE) should be described in a transition plan that should be used as a document to communicate with the stakeholders and the decision makers in order to communicate and evaluate the each of the projects that would have to be allocated resources to and implementation of projects. Likewise is it the author's opinion that the transition itself has to be guided by the principles that the chief architect and the decision makers have articulated.

As the author has mentioned earlier in this paper the complexity is a barrier that can't be ignored if the synergies of enterprise architecture and enterprise governance should be harvested.

Group the Business Processes and the Information Systems

The social systems have to be identified and as such it becomes a necessity to group the systems into various domains of specialisms. Each of these domains would have to generate synergy among the social systems and the information systems in order to justify their existence. The domains are a necessity in order to cope with the question of complexity.

Complex organizations can very well own processes and departments that are specialized to the degree that it constitutes a silo. In those cases, the silos can't be viewed as negative issue, as long as the employees, middle managers and executives in charge of the various processes communicate and interact with one another on regular basis.

In order to ensure that the changes by grouping the various information systems and social systems, the managers would have to allocated resources in order to facilitate communities of practices that

would enable the stakeholders in the enterprise with understanding and adapting to the new situation in the enterprise. It is pivotal that the decision makers allows the various members of the enterprise to make use of their time at work and in the change process to form such social networks. A community of practice is defined by Wenger (1999, p. 47) as **"***Such a concept of practice includes both the explicit and the tacit. It includes what is said and what is left unsaid; what is represented and what is assumed. It includes the language, tools, documents, images, symbols well-defined roles, specified criteria, codified procedures, regulations, and contracts that various practices make explicit for a variety of purposes***"**.

It is likewise a necessity to make use of the social networks to create an understanding of how the enterprise works since that would add value to the ontology of the enterprise.

The social networks are likewise pivotal in order to enable the change process that occurs within the enterprise, and as such the chief architect and the decision takers who are in charge of the enterprise have to identify change agents and motivate the various social networks to adapt to the changes and work alongside the goals that the decision takers have articulated for the enterprise. In this light the decision takers would have to trust that the members of the enterprise works for the best of the enterprise and to some extend allow the employees to self-organize and prioritize the various tasks at hand.

I would recommend a form of hybrid of a top down (Kotter 1995) and bottom up approach (Hamel 2007) to solve the problems with anchoring the changes in the enterprise. The approach is dealt with in detail in table 1: The suggested approach to change management.

Step	Description	Impact
1	Establishment of the an active network within the executive group.	The executive group and middle managers (who aspire to become executives).
2	Identification of change agents in the enterprise that would stay among middle managers and employees.	The entire enterprise and on all levels of the enterprise. There should be found agents as many places as possible.
3	Establishment of an office or department for internal communication in the enterprise. This office has to be located close to the change leader and his position so it is clear that what is sent to the employees in the organization is the words and intentions of the leading coalition.	The upper end of the middle management. Eventually it will impact the rest of the enterprise since the communication from this office should be directed to all parts of the enterprise.
4	Establishment of scope, goals and mission clearance. Stakeholder alignment is a necessity to create the proper dynamics.	The change coalition (all agents on all levels of the enterprise should be involved in this).
5	The change leader should make sure to attend meetings and conferences with the other managers on how the change effort is planned to impact the enterprise.	Executive group and middle management.

6	Plan workshops with employees that focus on identifying issues that needs to be dealt with in the particular devisions, departments, processes and projects.	All members of the enterprise.
7	Enable feedback channels where the executives, managers, and employees can report if departments or processes don't work as intended. In this case IT / IS is a part of the concept of processes.	It will impact all levels of the enterprise in order to achieve that all members of the enterprise are able to add information to what needs to be re-configured.
9	Initiate the implementation process.	All members of the enterprise will be impacted as a result of the change program.
10	Keep on changing the architecture in order to achieve agility and adaption the changing environment of the enterprise.	In the long run it will impact all members of the enterprise on all levels. In the short run small sections of the enterprise will be changed.

Table 1: The suggested approach to change management.

The managers needs the information that they can gain access to in the social networks through their insight to the networks. When it comes to the diffusion of knowledge it is very likely that the segments of the enterprise that are too complex. If the knowledge is too complex it is evident to investigate if the particular domain can be handled by enterprise-wide systems or for that matter enterprise-wide business approaches. Nonetheless the most important thing is that the any new employees, managers or executives can be introduced to the persons who have some idea on how to deal with the problems, tasks, activities and processes in each of the domains that are likely to be too complex. What is important for the enterprise is that the executives, middle managers and not to forget the employees support a culture of knowledge and information sharing. The IT systems should be developed to support their particular processes. These information systems could eventually be connected, but there is as such no need for enterprise-wide information systems that standardize the workflows. Knowledge can be hard to standardize and as such the various stakeholders of the enterprise can't be expected to know everything about the same topic. In other words it is very likely that the chief architect and the decision takers would have to challenge their assumption on process standardization.

Create Value Through Grouping of IS and Business Processes

The chief architect and his associates would have to investigate how the enterprise can generate value through grouping the social systems and information systems.

The approach that the chief architect and his associates should work with a projects that will enable change for the various projects that would change the enterprise.

The progress for each of the projects will be impacting the enterprise's architecture and thereby

transform the architecture from the AS – IS situation (Bernard 2005) which is the current state for the enterprise's architecture to the desired state which Bernard names the "TO-BE" state. The transition plan is the document that communicates what kind of projects that would have to be initiated and implemented in order to mature the enterprise's architecture and through that enable the enterprise to reach its goals. The transition plan also works as a kind of plan that can be communicated to the various stakeholders who would have to back the enterprise in the maturation of the particular situation. The maturation process has to be evaluated before the chief architect and his followers initiates the change program. It is very likely that the stakeholders will be easier won over if they can see a logical plans that includes economical estimation of how the plan impact the enterprise's economical situation. It is needless to say that the enterprise's decision makers would have to have an insight on how well the enterprise can process the various resources it has at hand and thereby produce the products and services that its customers want to purchase.

The evaluation process is likewise a part of how the enterprise scans its internal and external environment and as such the Enterprise Architecture program should work as the platform for the construction of a shared ontology across the enterprise. The chief architect should keep in mind that in departments or segments that can be characterized as being characterized as complex it is rather likely that their particular views can't be generalized into an enterprise ontology if such can be formulated.

In order to get the information that the chief architect and the decision makers need in order to plan and allocate resources to the transformation the enterprise would have to go through. They would have to go into detail with how the various social networks and communities of practices and search for the information and knowledge in order to gain a firm understanding of how the enterprise works and thereby how it can be changed. In this light the chief architect and his associates would have to decide if they should apply a top-down or a bottom-up approach. The approach chosen would eventually become a part of the debate that the members of the enterprise on what has to be done. Will the decision makers tolerate increased autonomy or if they would prefer increased centralization. As earlier mentioned it seems like that the tendencies for the development organizations.

Change the Enterprise
The chief architect and the decision makers would have to go further with the change of the enterprise. The change process would have to be a part of the overall Enterprise Architecture program and it will certainly impact the enterprise and how it works. In order to do so the chief

architect would have to influence the stakeholders (decision makers, the middle managers and for that matter the employees). The changes are caused by the the questioning of the how the enterprise is able to collect the data needed in order to take the decisions needed to achieve the goals that was set for the enterprise. The author is of the opinion that the grouping of information systems and social systems in order to harvest the synergies with each one of them and among each of the clusters The clusters can most likely produce synergies for each of the areas that shows the amount of gravity that produce a barrier of complexity.

Before the chief architect and the executives commit themselves to changing the enterprise they would have to understand how the enterprise and its architecture works. In order to achieve this the chief architect would have to choose an Enterprise Architecture framework, adapting the framework to the particular enterprise and implement the framework. Thereafter should the chief architect and the enterprise architects work with identifying the various artifacts, and organizing them in an Enterprise Architecture repository. While working with the identification of artifacts and organization of artifacts in the EA repository it is important that the chief architects understands that there might be barriers to create define an unified ontology and as a result of that there might be a necessity to create several different sub-units of the EA repository. The chief architect work with an assumption that each of the specialized operations of the enterprise should be mapped as a separated entity and as a separate mini architecture of the enterprise.

The author is of the opinion that it is possible to convert extremely specialized knowledge for each of the specialized processes to other parts of the enterprise without a lot of the meaning of each of the artifacts is lost. It is better that there is a platform for informed governance for each of the segments than a system that doesn't adapt to the entire enterprise. The managers of each of these segments should in the long run participate in the community of practice that shares knowledge and know how with one another. The chief architect can at some extent work as the change manager would would have to convince the various stakeholders in the enterprise to support the changes and in the same time enable them to take the changes even further.

The change manager would have to ensure that the office of internal communication is located and positioned as a part of management and it symbolizes the foundation of management for all other segments of the enterprise. It is pivotal that the change efforts are supported by the middle managers since they act as the approvers of each of the employees time and effort to commit to the particular change system. If the middle managers ignore the call for change and disapprove of the changes that the employees suggests then it is very likely that the changes will come to a still and eventually fail. Likewise would the commitment of the employee be of great importance since it is

likely that each of the employees have specialized knowledge of how the work processes interacts.

Conclusions

The author is of the opinion that the organization have to work with several different approaches to challenge their particular views on how the enterprise collects the data that are used by the decision makers. Likewise is it likely that the various decision makers of the enterprise would have to deal with identifying segments of the enterprise that are too complex to be adapted to generalized business processes. The author is of the opinion that the chief architect and his associates would have to deal with the challenges of adding value to the enterprise by applying the standardized business activities and business processes, but in the same time be able to identify where it wouldn't make sense to apply standardized systems since that wouldn't provide the enterprise with any kind of advantages.

The focus of the members of the Enterprise Architecture team would have to include the concept of complexity to the concept of enterprise ontology and as such should the repositories that would be able to connect the various sections of the enterprise and communicate the meaning meaning of how the enterprise works to the decision makers and other stakeholders who would have to make use of the knowledge that is represented in the repositories.

Likewise is it a necessity for the decision makers and the chief architect would have to investigate the various elements of the enterprise in order to achieve better insight into how the enterprise works and from that enable better decision making in order to achieve the objectives for the enterprise.

Bibliography

Bernard, S., A., 2005. *An Introduction To Enterprise Architecture: Second Edition* 2nd ed., AuthorHouse.

Dietz, J.L.G., 2006. *Enterprise Ontology: Theory and Methodology*, Springer.

Hamel, G., 2007. *The Future of Management*, Harvard Business School Press.

Hammer, M., 1990. Reengineering Work: Don't Automate, Obliterate. , Harvard Business Review no. 68.

Hoogervorst, J.A.P., 2009. *Enterprise Governance and Enterprise Engineering*, Springer.

Kotter, J.P., 1995. Leading Change: Why Transformation Efforts Fail. *Harvard Business Review*, (March - April 1995), p.9.

Wenger, E., 1999. *Communities of Practice: Learning, Meaning, and Identity* New Ed., Cambridge

University Press.

Mintzberg, H., Ahlstrand, P.B. & Lampel, J.B., 2008. *Strategy Safari: The Complete Guide Through the Wilds of Strategic Management* 2nd ed., Financial Times/ Prentice Hall.

Porter, M.E., 1985. *Competitive Advantage: Creating and Sustaining Superior Performance*, New York: Free Press.

Potts, C., 2008. *fruITion: Creating the Ultimate Corporate Strategy for Information Technology* illustrated edition., Technics Publications, LLC.

Ross, J.W., Weill, P. & Robertson, D.C., 2006. *Enterprise Architecture as Strategy: Creating a Foundation for Business Execution* illustrated edition., Harvard Business School Press.

Weill, P. & Ross, J., 2009. *IT Savvy: What Top Executives Must Know to Go from Pain to Gain*, Harvard Business School Press.

Weill, P. & Ross, J.W., 2004. *IT Governance: How Top Performers Manage IT Decision Rights for Superior Results*, Harvard Business School Press.

Weick, K.E., 2000. *Making Sense of the Organization*, WileyBlackwell.