The Selection and Training Framework (STF) for Managers in (e-)Business Innovation Transformation Projects
The Business Transformation Manager's Profile

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Abstract. *One of the riskiest factors in transforming a traditional Business Environment (BE) into an innovative and dynamic BE is the role of the business and (e-)business Transformation Manager (BTM). The basic profile of such a manager has not been sufficiently investigated in a holistic and educational manner. The specification of the optimal BTM profile is the main goal of the authors' research. This paper deals with the profile of a preferred BTM that has to cope with complex automation projects. These projects need specific skills for the difficult implementation phase; these skills must encompass the knowledge of real-time business environments, organizational behaviour knowledge and implementation phase know-how. The researchers recommend technocrats as a base profile for such projects that need cross-functional skills.*

Keywords. transformation business managers profile, innovation, failure rate, e-business.

1. Introduction

In this second article of a series related to the process of business innovation, the focus is on the BTM's profile [18]. The Selection and Training Framework (STF) framework is being designed [23] to assist in the selection of a BTM who will be able to reuse as much as possible of the existing business environment and of existing knowledge base. This framework will propose to project managers and human resources specialists, a standard BTM profile, such that has to be carefully selected, followed and trained [4][17].

Knowing the fact that only around 12% of organizations successfully manage innovation-related transformations, there is a need for specialized and automated way of selecting and training the future BTM [14][15].

The authors favour mainly a just-in-time hands-on holistic approach to knowledge. This knowledge is compulsory for the BTM, especially in the implementation phase [25][21].

2. The researched BTM's profile

As shown in Fig. 1, the management can be divided into three categories [9],

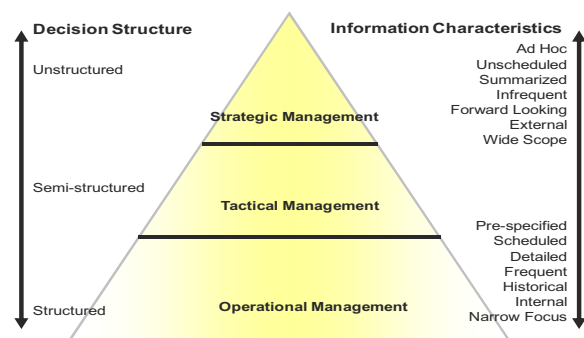- Executive management
- Middle management
- Production management

Figure 1. The management pyramid [12]

Farhoomand defines the following BTMs profiles [7]:

- Advocates
- Technocrats
- Samaritans

Individuals selected to serve as BTMs should have the following qualifications and skills [6]:

- Experience in, and knowledge of frameworks similar to STF
- General knowledge of risk evaluation principles and frameworks obtained through the combination of experience, education and training
- The ability to act objectively and independently
- The ability to analyze information

- The ability to express their findings clearly, concisely, and in a timely manner
- To be an excellent politician, trader and pedagogue
- 10-20 years of experience in complex real world projects as a developer, transformer and designer in major innovation domains
- Technical polyvalence, capable to manage business components design; based on service oriented architectures [16][13]
- Experience with business monitoring tools,
- Straight-forwardness (courage) with the presentation of crucial problems
- Capability to apply the spiral model [8]
- Capability to synchronize the business requirements, business processes, and map it to the organizational structure; hence to the information system
- The use of management science models [3] [30]
- An extensive use of Enterprise Application Integration technologies

2.1. The research question

The research question is: "Which manager profiles are suited for the implementation of an (e-)business transformation project? " [18]

3. BTM's project management skills

The STF will concentrate on a technocrat's profile and the project management capabilities [25]. The STF selects a BTM's profile depending on the nature of the transformation mission as well as on the type of the transformed business environment [10]. Basically, the BTM is a cross-functional project manager [2]. BTMs' should be technocrats from the middle management, because technocrats are capable of finalizing the implementation phase.

3.1. Agile management skills

This research project concentrates on BTMs who have a technocrat's profile and belong to the middle management. By "technocrat" the authors refer to a manager who is in fact an agile (e-)business transformation knowledge worker. This profile is considered to be the STF's basic profile. The profile definition will be essential for the BTM selection, by the human resources or transformation project managers.
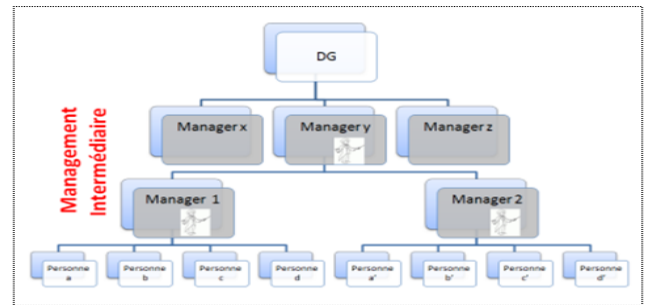

Figure 2. BTM is the agile owner [8].

As shown in Fig. 2, the BTM who is a part of the middle management, and is the transformation project owner and hence the agile project owner. Experience in (e-)business projects shows that the middle management holds the long-term agile solution for transformations [8].

A major cause of managers' failure is the difficulty to manage the human factor in the implementation phase; where they have to deal with information system specialists. The BTM needs adequate knowledge to apprehend the complexity of (e-)business environments and the human factor[20].

The research question argues the skills of the BTMs in complex e-Business transformations [25]. Today's project management tools are adapted to the extreme development techniques; which are totally different from the traditional methods. These tools and environments feature high speed, high complexity, high risk, and high stress; meanwhile, traditional environments follow the classical model [5]. The BTM's role as project manager can be also featured as a combination of Belbin's three roles: 1) *Shaper*, 2) *Implementer* and 3) *Starter*. These are the features demanded for such BTMs [2]

3.2. The impact of polyvalent education

The role of a polyvalent education, which is a combination of majoring in business and in information technology, is essential for profile of a BTM. That will help him to have cross-functional implementation capacities [24].

3.3. Manager's knowledge

STF proposes the optimal use of company's actual Knowledge Management Resources that are integrated in the business processes. That defines the selection factors for a BTM.

STFs aim also to coach BTMs on how to manage the risk factor and how to avoid failure through proactive cross-functional holistic assessment of the project resources, as shown in Fig. 3 [19]. During the implementation phase, it is expected that the BTM uses and enhances the STF's Knowledge Management System (KMS).

These implementation capabilities are assessed by the guidance of the STF's KMS on how *Business Process Integration* and related innovations are implemented. Hence, the role of technology is crucial for the transformation of an existing business environment [1].
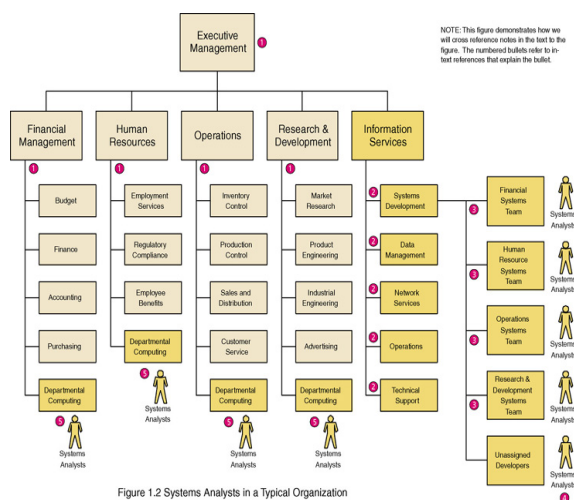

Figure 3. System managed by BTMs [23]*.*

4. The role of KMS and business processes

The KMS integration serves as a support system for the BTM and her/his team. In STF model, the BTM is the team's coach who wants to integrate the accumulated knowledge in the newly created transformed business processes. The BTM has to manage the design and implementation phase of the future business process oriented knowledge system. Therefore, the authors have included in the literature review [21], a sub-category that concentrates on *Business Process Oriented Knowledge Management* (BPOKM) integration. Unfortunately, up today BPOKM is poorly researched, and there are rare works on the topic. BTMs must be capable of integrating BPOKMs into the business information system [11].

4.1. Access to knowledge

It is of interest for the BTM to have instant access to knowledge and to feed the transformed

system with the acquired knowledge and experiences. For each project, the BTM has to build an *eXtensible Markup Language* (XML) meta model for the BPOKTM and to design a service access interface.

4.2. Converting tacit to explicit

As described in the previous section, the transformation manager handles the design and implementation of the XML business transformation patterns that converts a tacit transformation process knowledge into the explicit knowledge. This knowledge will be stored in the future BPOKM business environment [11]. As we can see, major writings on the topic are not up-to-date, what enforces the fact that there is a gap concerning the integration of knowledge.

The BTM must have these skills to build a system that proposes a solution to solve the problems of knowledge draining and turn-over effects, which harm seriously today's business world.

4.3. A holistic approach to knowledge

In Fig. 4, Laudon presents an enterprise's major components, where the information system is in its nucleus. In fact, the *Business Information System* serves as glue to the company's various segments [7]. Fig. 4 represents close interaction between these components, the interaction that is called business integration.

Figure 4. BTM's scope of interventions [9]

The STF selects a BTM who can promote the business integration concept and stands in contrast to the typical non-empirical *ad hoc* managers. A BTM should be capable of holistically integrating the various enterprise sub-subsystems shown in Fig 5.

4.4. "Real-time" knowledge management

Currently, the BTM's profile has to take into account the capacities of integrating knowledge management technologies in organizational business processes; that is assured through a good business communication infrastructure. That is the major factor in assuring that *real time* enterprises would deliver real business performance [10].

5. BTMs as technocrats and innovators

The BTM's **human profile** definition depends on the nature of the mission as well as on the type of the transformed business environment and the company's *Knowledge Systems* [26].
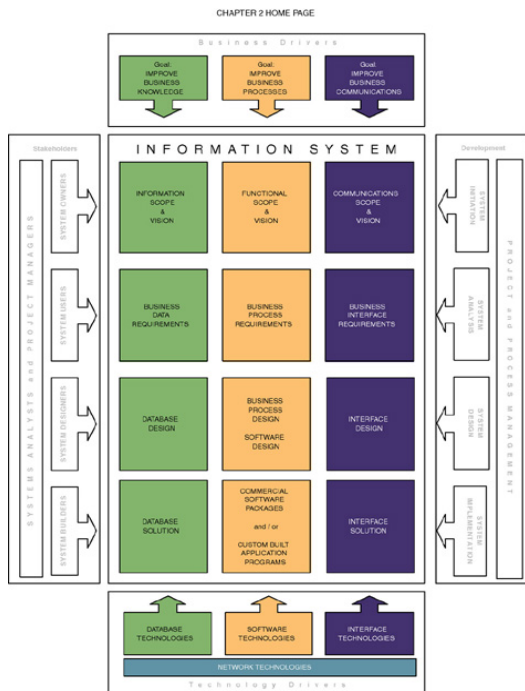

Figure 5. BTM s' types of knowledge [23].

Actually, there is an intensifying focus on process-related skills, competencies and competitive differentiators; that will increasingly separate process excellence leaders from the laggards among the Global 2000 (according to *Gartner, Inc.*). Thus, it implies that a BTM must have a good combination of business knowledge, business process management, and business integration skills [22]. This research presents the future framework for BTM selection and coaching. A BTM must have holistic and integrative management skills. During the selection process, the main question arises: what

is the role of technology and its relation to (e-)Business Transformations [25][10]:

But in general, we realize that a BTM's profile need not be necessarily a computer science engineer but must have a strong ICT knowledge or (e-)business literacy [23]. That means, translated in reality, is having a few years of concrete knowledge in building (e-)business systems. An enterprise architect or a business architect would make an excellent BTM.

Improving of business knowledge, of processes and communication are the most important factors in the business environment transformation. BTMs must have sufficient knowledge of business information systems (as shown in Fig. 5) in order that the future business transformation system would be constructed as a cross-functional or generic business information system. Generic systems will assure future transformations to be less risky and easier to achieve.These skills are [23]:

♦ How to improve business knowledge
♦ How to improve business processes
♦ How to improve business communication
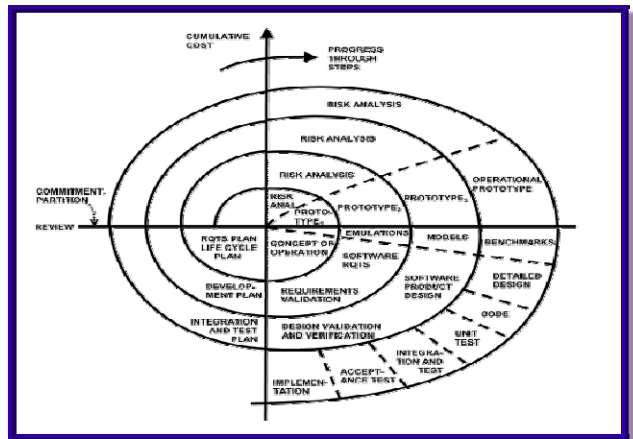
5.1. The STF holistic profile

Figure 6. The spiral model [28].

Fig. 6. presents the spiral model consisting of various phases, where risk is assessed at each new iteration. *Business Transformation Management Methodology* (BTM2) is a new approach for the holistic management in business transformation projects [25]. This method proves that there is a need for such BTMs. Actually, there is a need for BTMs with holistic profiles. In the current research project [21], this article's authors will try to define the managers' holistic

aspects through concrete requirements that are to be fulfilled for such (e-)business transformation tasks. The main issue here is how to define the profile and skills needed; having the necessary knowledge for the implementation phase. [27].

5.2. The BTM's profile definition

According to Laudon, enterprise management can be divided into three categories [9], and as already mentioned, the STF looks at the middle management [29]. Whereas, according to Farhoomand [7], the transformation managers' profile will be based on a technocrat profile [17]; the STF adopts Farhoomand's technocrat model. Therefore, his work concentrates on the a) technocrats in the b) middle-management c) working as (e-)business transformation managers. They intervene also in the d) implementation phase [7]. With points a) to d) is marked the STF's basic profile. This basic profile will be used throughout this research. Besides the strict definition of the STF's basic profile, the authors recommend that the BTM's profile should be, if possible, rounded-up with the following characteristics:

♦ BTM is a knowledge worker
♦ Has a real experience with implementations, as a project manager or a scrum leader.
♦ She/he is a good business process modeller and an enterprise business architect.

The basic profile, categorizations and the related recommendations makeup the STF's BTM holistic profile.

6. Link to the research model

The authors presented the BTM's profile; this profile links the initial research proposal, through the use of factors and the literature review [18]. That represents the link between previous research stages and the next phase that is the literature review question [25][21].

6.1 Link to the research question

Here the authors try to explain the link between what exists and the research question; hence they show the relationship between the functional domain of the (e-)business transformation and the researched topic. This relationship interlinks the research and that will

be analyzed in detail in the later phases of the research [21].

This article served to finalize the research on the BTM's profile.

6.2 Link to the research methodology

The main link between this article and the research methodology is that the research design will inherit a large set of factors for the model.

The STF will define a set of factors, hence variables that will result from the research [21][22]. These factors will be used by the projects' leaders to select BTMs, while knowing that a BTM candidate can use the same STF to tune her/his own orientation model and hence directly influence her/his capacities. With that, She/he will manage the success of the (e-)business transformation process and its related implementation process. This implementation process is supported by the access to a just-in-time knowledge system. The knowledge is stored in business processes.

7. Conclusion

This is the second article in a series of research articles that represent the *Research Design Pattern* of the STF. This part opens the door to the third article in which the authors will explore the literature related to the research topic. The focus is on the managers' profile, hence the capabilities to holistically manage the design and implementation of a (e-)business transformations project.

Today's (e-) business transformation projects have to take into account the integration of just-in-time knowledge management technologies in organizational business processes; that is, assure a good business communication infrastructure. It is the major factor in insuring the real time enterprises, like the transportation industry, to deliver real business performance [10].

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