UHASSELT

KNOWLEDGE IN ACTION

Faculty of Business Economics

Master of Management

Masterthesis

Evaluating business process maturity in Vietnamese human resource firms

Ngoc Khanh Chu

Thesis presented in fulfillment of the requirements for the degree of Master of Management, specialization Business Process Management

SUPERVISOR :

Prof. dr. Koenraad VANHOOF

2016
2017

UHASSELT

KNOWLEDGE IN ACTION

www.uhasselt.be
Universiteit Hasselt
Campus Hasselt:
Martelarenlaan 42 | 3500 Hasselt
Campus Diepenbeek:
Agoralaan Gebouw D | 3590 Diepenbeek

UHASSELT

KNOWLEDGE IN ACTION

Faculty of Business Economics

Master of Management

Masterthesis

Evaluating business process maturity in Vietnamese human resource firms

Ngoc Khanh Chu

Thesis presented in fulfillment of the requirements for the degree of Master of Management, specialization Business Process Management

SUPERVISOR :

Prof. dr. Koenraad VANHOOF

Abstract

Nowadays, companies are facing increasing competition as well as management challenges, which pushes them to find better practices to improve their performance. Human resource companies are process-heavy organizations that have to deal with the complexity and fragmentation in its business processes; as well as the hierarchical organizational structure that operates around business functions, which make it problematic to adapt to market conditions. Business process management is a popular management discipline that promises enhanced process efficiency, performance and governance.

This study's main focus is to help these companies choose an appropriate business process maturity model and evaluate their current state of maturity; thereafter, provide them with corresponding recommendations for their future development.

The methodology in use is qualitative as the main research strategy, with both inductive and deductive reasoning involved. Three Vietnamese human resource companies were selected as cases for the study. As the foundation for the analysis, a literature review was carried out to clarify the concepts surrounding process management as well as the increasing interests in BPM from all over the world in general and in Vietnam in particular.

Fisher's process maturity model, after being adjusted, were selected as the basis for the evaluation process. The factors for evaluation of each company are strategy, controls, process, people and technology. The results show that most of them are between the Tactically Integrated and Process Driven state of maturity, and Technology is the weakest aspect in these companies. In the end, the study has proposed a suitable model specifically for assessing Vietnamese human resource companies' process maturity level and provide suggestions based on Fisher's study for the studied companies. Thereafter, the study provides insights regarding the common characteristics that should be taken into account when making improvement to their business process.

Acknowledgement

This thesis marks the final milestone of my Master in Management programme, specialization in Business process management at Hasselt University. The past year has been exceedingly educational, which equipped me with the proper tools and knowledge for my future development. It was such an interesting and mind-opening process conducting this study, however, had it not been for the advice and support of many others, the outcomes of the thesis would not be possible.

In particular, I would like to thank the following people for their involvement: my promoter, professor Koen Vanhoof for his advices and guidance during the writing and improvement of this thesis; Tan Tai for suggesting several valuable materials for the literature review and his knowledge regarding business process management systems in Vietnam.

Furthermore, I would like to thank the managers and consultants of 3 Vietnamese human resource companies that agreed to participate in this study for their time and cooperation as well as the data collected throughout the interview process.

Finally, I would like to express my thank to my girlfriend Dinh Hanh, my family and friends for their support during the education as well as the writing of this thesis.

Hasselt, August 2017

Ngoc Khanh Chu

Table of Contents

List of figures

List of tables

1 Introduction

Since the economic Renovation in 1986 and Vietnam becoming official member of the WTO in 2007, Vietnamese companies have been facing multiple opportunities and challenges, especially the increase in the exposure to the global market, forcing them to improve Vietnamese products and services in terms of scale, quality and quantity. However, many Vietnamese enterprises are still operating with outdated technologies and lack advanced administration and management tools. This results in the high cost of products and services as well as poor businesses performance.

In the human resource (HR) industry, these challenges and opportunities are becoming more salient. The scale of Vietnamese workforce is escalating annually, with the number of 54.4 million in 2016, increasing half a million from 2015 (General Statistics Office of Vietnam, 2016), with the majority being Millennials. The majority of these labour force (81% of all millennials) relies on job sites and social media seeking suitable vacancies (VietnamWorks, 2006). Technology has revolutionized the way recruiters and job seekers communicate. For an HR company, to outperform competitors, the quality customer service and diversification of services are considerable advantages. Many firms have expanded the width of its offerings beyond traditional workforce solutions, namely consulting, contracting and outsourcing. Be that as it may, some of the challenges for many HR companies are the diversification in operations itself, reluctant to change, elastic to economic conditions, underperformed core processes, lack of cooperation between technical and functional departments, inability in reusing business process, different teams working in separate locations with the client and many challenges regarding adjusting products and services in accordance to the market trend, … Many causes of these issues could be pointed out, but among the most paramount is the absence of operational standards and processes in the and management of the organization. These company could benefit from a management disciplines that is able to transpire geographical and functional boundaries. There have been researches and studies on this subject but the application of foreign standard processes is often not suitable for the situation in Vietnamese HR companies.

2 Problem statement

Business process management (BPM) is a management discipline, targets to increase an organization's performance and efficiency through process improvement, management and control (Jeston & Nelis, 2006). It includes "concepts, methods and techniques to support the design, administration, configuration, enactment and analysis of business process" (Weske, 2007). It is easier to concentrate on the process within the organization, the challenging part is in the implementation of standard processes across functional boundaries and beyond, to suppliers and customers, forming process management department, ultimately improve the overall business performance (Spanyi, 2003). There are a number of study around the adoption of BPM, in the approaches and settings needed for a successful BPM (for instance in research of Trkman, 2010; Rosemann & Bruin, 2005; Bucher, Raber, & Winter, 2015). However, the concept of BPM is more familiar with European, Australian or American companies (Rosemann & Bruin, 2005). Vietnamese larger organizations might have tried some process improvement methods such as Lean, Six Sigma, Business Activity Monitoring or Business Process management but in smaller ones, they often lack the knowledge regarding these management disciplines or do not know that they are implementing BPM in certain aspects of the business and at certain levels. There is the Capability Maturity Model (CMM), developed at Carnegie Mellon University, which provides five stages of maturity to assess the software development process. However, it has been found that this model works best for the software or engineering projects maturity assessment, and a more suitable model for business processes in general was a necessity (Harmon, 2005). Therefore, many authors started to introduce their own models to help organizations evaluate their own business process maturity level. During the adoption of BPM practices, it is important for organizations to realize the state of their implementation as well as on which aspects should the current practices be improved. Therefore, this study aims to help Vietnamese HR companies selecting the proper model, from the multitude of available business process maturity models, and make necessary adjustments; thereafter, look at some case study to understand how the model is applied; as well as provide recommendations for them to extend their process capabilities by moving up the maturity level ladder.

All in all, the next chapters of this study shall be structured as follows: Chapter 2 explains the methodology and steps that are to be carried out for the purpose of this research. In Chapter 3, several research questions shall be asked. Chapter 4 is a review of concepts around business

process and maturity models. Beside the benefits that process management brings and certain pitfalls that companies might encounter when implementing BPM, the current state of BPM knowledge in the world and in Vietnam shall also be discussed. Chapter 5 will explain the selection of the most suitable model for the purpose of this research, evaluating maturity model of HR companies. Next, Chapter 6 discusses the empirical findings and analysis of this data to evaluate the current state of business maturity as well as provides recommendation. In the final chapter, common properties of HR companies shall be pointed out and the limitations of this thesis shall be discussed.

3 Research methodology

This section will first consider the research approach of the study. The author finds qualitative research is more relevant for assessing business process maturity level through different aspects of the organization. These aspects comprise: Strategy, Controls, People, Process and Technology, some of which are difficult to capture with quantitative methodology due to their ambiguity and heavily influenced by human behaviour. Furthermore, qualitative methods are better for research questions that require explanation or understanding of social phenomena and their context (Snape & Spencer, 2013). In addition, a major benefit of qualitative research is the ability to describe and display phenomena as experienced by the study subjects in details and their own terms (Ritchie, 2013).

When carrying out the research, authors can use inductive or deductive reasoning. Inductive is a process of building theory from observation whilst deductive reasoning starts with a theory or generalization and seek to see of it applies to specific circumstances (Hyde, 2000). In this study, the reasoning approach is mostly deductive. Deductive in the application of an improved business process maturity model, which the study shall propose, in the instance of certain Vietnamese HR companies to evaluate their maturity level. However, inductive reasoning is also presence in the recommendations and generalization of key common characteristics of Vietnamese HR companies.

The theoretical framework is carried out using the backward snowballing method. Initially, articles and researches are found via Hasselt University's online search function as well as Google Scholar, with the keywords being "BPM", "business process", "business process management", "BPM maturity model". Then additional new papers are identified using the reference list of the initial articles. One of the main benefits of snowballing is the focus on papers that is actually referenced or papers citing papers included, therefore reducing the possibility of "noise" that is normally results from using a database approach (Wohlin, 2014). When conducting deductive reasoning, it is important to build a broad and solid literature review to have the most comprehensive understanding of the theoretical framework surrounding the research field (Bryman & Bell, 2007).

Additionally, multiple case study design is the selected design for this study as the aim of research is to analyse different aspects of the business process maturity level of several Vietnamese HR companies. For the cases selected in this thesis, 3 Vietnamese companies were selected, which offer a variety of HR services but operates at different scales and with different

brand values. One company is considered to be the leading firm in HR consulting in Vietnam by popularity, network, scale and revenue, the other 2 belong to the small company category, with smaller scale, network and revenue.

Before empirical data can be collected, it is important to choose the appropriate maturity model to evaluate the companies' maturity level. Then, adjustments shall be made to better fit the model in the industry context, if necessary.

Regarding data collection, interview is the main method for collecting the primary data of this study. In addition, documents as well as information available on these companies' website were also utilized. Prior conducting the interview, a detailed list of interview questions was composed based on different factors in the maturity model to be applied. The list of questions is included in Appendix A of this thesis. Due to geographical difficulties, these interviews are conducted via Skype with different level of management in each company, which shall be explained further in Chapter 6 when each company is discussed.

Then, the interview results shall be used to analyse the companies' maturity level base on different factors. During the analysis, whenever the empirical data is found insufficient, the interviewee shall be contacted until the model is filled. Each factor shall be placed at its own maturity state in order to later provide a more detailed recommendation for the companies on how to improve their overall business process maturity for better performance and efficiency. Furthermore, the thesis shall point out the common characteristics that these companies possess.

4 Research questions

This research aims to apply the existing theoretical framework, along with additional criteria regarding BPM maturity model to evaluate some Vietnamese companies operating in the HR industry. Thereafter, we will provide suggestions regarding the possible approach that might help the firms move to a higher maturity level. I find Fisher (2004)'s model to be more detailed and suitable for the purpose of this study. Fisher focuses on five states of maturity in five "levers of change", namely: Strategy, controls, process, people and IT (Fisher, 2004). This model uses these different elements to frame the five phases that allows organizations to identify their BPM implementation themselves. Adjustment for the Vietnamese context shall be carried out on the basis of this model to better fit our target industry, which shall be discussed later on in the paper. Moreover, the context of BPM implementation in Vietnamese companies is far from similar to that in Western ones, some of the differentiation shall also be pointed out within the framework of our study. Therefore, our research questions can be determined as follows:

RQ 1 Can we select a proper model for accessing HR firms' maturity model and if any improvement needed?

RQ 2 How to apply a maturity model to assess the business process of a company?

RQ 3 What can be improved from the current state of business process maturity of these companies to move on to higher maturity level?

RQ 4 What are the special aspects that must be taken into account when improving business process in a Vietnamese HR company?

5 Business process management & maturity

In this section, the surrounding concepts of business process management is explored, as well as that of the business process maturity. Since the situation of business process management is measured by its maturity level, the basic concepts regarding business process and business process management shall firstly be discussed. Additionally, this section also illustrates the origination and trend of BPM in the world in comparison to Vietnam. Finally, the section shall elaborate on the critical success factors along with the benefits and drawbacks when implementing BPM.

5.1 What is a business process?

There are multiple definitions of "business process". As described in his book, Davenport defined business process as *"a structured, measured set of activities designed to produce a specified output for a particular customer or market. […] A process is this a specific ordering of work activities across time and place, with a beginning, an end, and clearly identified inputs and outputs: a structure for action"* (Davenport, 1993). Mohamed Zairi describes business process in his journal article as *"an approach for converting inputs into outputs. It is the way in which all the resources of an organization are used in a reliable, repeatable and consistent way to achieve its goals"* (Zairi, 1997). In a later study by Weske (2012), a business process is defined as *"a set of activates that are performed in coordination in an organizational and technical environment. These activities jointly realized a business goal. Each business process is enacted by a single organization, but it may react with business processes performed by other organizations"* (Weske, 2007).

In all cases, the "output" of all activities is concerned. When a task is carried out individually, the term process is usually overlooked, however, when multiple entities are involved, it is important to designate responsibilities and ownership; this is when a process is appreciated. When an organization has fully realized all relationships among its business processes and illustrates it with a certain methodology, this shall be considered a "business process model". Modelling business process is one of the core activities of business process management, it concentrates on describing the basing issues of business, rationalizing the collective actions of multiple persons, departments and systems within or beyond an organization, hence detects and eliminates the redundancy and unnecessary elements in the process. Process modelling also helps to take away the technical aspects of certain operations and act as a mutual

language between the business and technical department, thus inspires better communication among an organization.

An example of the illustration tool for modelling is the Business Process Modelling Notation (BPMN). A simplified typical hiring process, performed by the Human Resource (HR) department is illustrated in Figure 1.

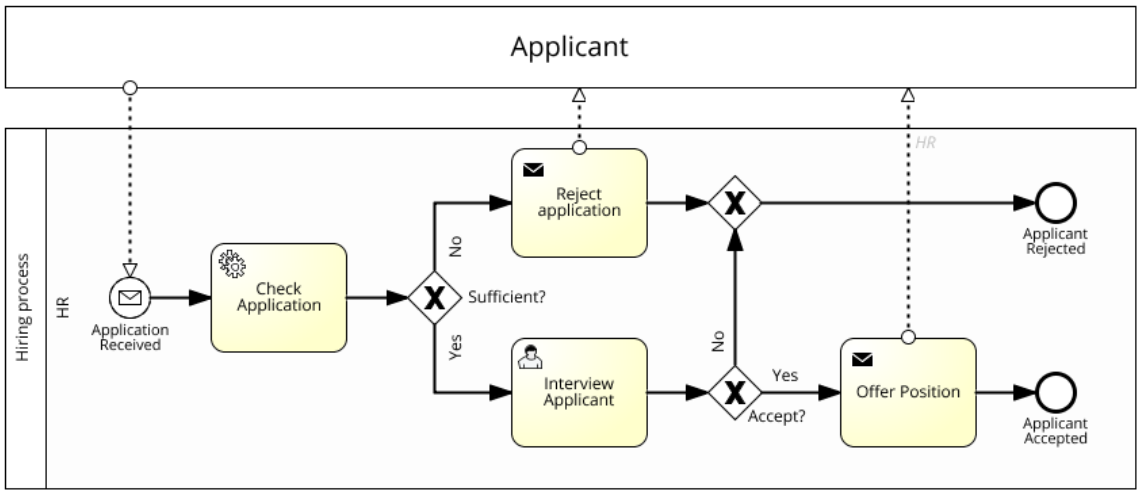

Figure 1 - Sample of a simplified business process modelled in BPMN 2.0

When HR receive an application, the system will check if all criteria and documents are presented. If not, the application is rejected and the applicant is informed; else, the applicant is interviewed and offer a position in the company if he/she is the suitable person. The illustration contains most of the most common objects that can be found in BPMN, namely ***events, activities, gateways, connecting objects*** and ***swimlanes.***

Events are circular objects that denote a "trigger" throughout the execution of a business process, they could be Start, Intermediate or End Event depending on whether it is placed at the beginning, within or at the end of the process. Start Event signals the first step of the process while End Event signals the final step in a process and Intermediate Event represents any events that occurs between a Start and End Event.

Activities are rounded rectangles that represent tasks being done in a particular business process with each activity contains a phrase describing the task, consisting of a verb and a noun. The icon at the top left of the rectangle depicts the type of task. In this instance, the gear icon indicates a Service Task, which means the task is carried out entirely by a service or application; the people icon represents a User Task, meaning it is performed by a person with

the assistance of a service or application; and the envelope icon illustrates a Send Task, a task intended to sends message to an external partaker.

Gateways are diamond shapes that separate and recombines flows within a business process, each gateway has a common attribute (XOR, OR, Complex or AND), in this example, an Exclusive Gateway (XOR). This means that one of the paths set by the gateway must be taken based on a certain condition. Another common type of gateway is the Parallel Gateway, which also separates and joins the workflow, however, it does not depend on a condition and activities in all paths must be carried out before the process can continue. The Inclusive Gateway aims to fill the gap of Exclusive and Parallel Gateway, it also breaks the flow into one or more flows, but allows one or more paths to be chosen, instead of one or all paths, based on defined criteria.

Connecting objects are lines that connect other objects, there are sequence flow, message flow and association. In figure 1, the sequence flows are straight lines with an arrowhead, which connect objects in sequential order while message flow are dashed lines with an arrowhead, connecting the flow of message between partaker, specifically between HR and Applicant.

Swimlanes are either pools or lanes, used to organize objects within a BPMN diagram. Swimlanes represent participants in a business process, regardless of them being a person, a department or an organization, internal or external. This is one of the strengths of BPMN, as it allows the model to show interactions between parties beyond a single department or an organization.

Apart from the aforementioned core elements of BPMN, the full standard consists of over a hundred others. However, a number of cases can be covered and comprehended using the core elements, which facilitates BPMN as a mutual language between the business and technical users without extensive training.

5.2 Business process management (BPM)

BPM is concerned in various fields, from quality administration and management practice to information technology. Therefore, different entities are interested in BPM at different aspects. In order to have a better understanding about BPM, first, we will study its origin and trend.

5.2.1 BPM definition

There are many definitions about BPM but the majority of them reflects the systematic approach and management discipline with technology applications of BPM. Some of the popular definitions are as follows:

- *"Process management, based on a view of an organization as a system of interlinked processes, involves concerted efforts to map, improve, and adhere to organizational processes"* (Benner & Tushman, 2001).
- *"Process management is a set of management and methodological practices to manage business process. These management practices include a team-based approach to enhance quality (e.g. quality circles), elimination of merit-based rewards, and elimination of fear from the work environment"* (Chang, 2006).
- BPM is *"Supporting business processes using methods, techniques, and software to design, enact, control, and analyse operational processes involving humans, organizations, applications, documents and other sources of information"* (Aalst, et al., 2003)
- BPM is a discipline that aims to *"support business processes using concepts, methods, techniques, and software to design, enact, control, and analyse operational processes involving humans, organizations, applications, documents and other sources of information"* (Weske, 2007)

On the basis of the aforementioned definitions, the concept of BPM is displayed on 2 aspects: management and technology. On the management aspect, BPM is a systematic approach to help organizations standardize, optimize their business process to reduce cost, increase performance and achieve necessary goals. On the technical aspect, BPM is a tool for organizations to design, model, deploy, control, operate and improve their business process with room for flexibility. Through BPM, organizations can find proper measures to cut down administration and management cost, improve customer satisfaction and deliver products and services in an agile manner.

Generally, the BPM methodology can be looked at through the business process lifecycle with the following stages: Process design, system configuration, process enactment and diagnosis.

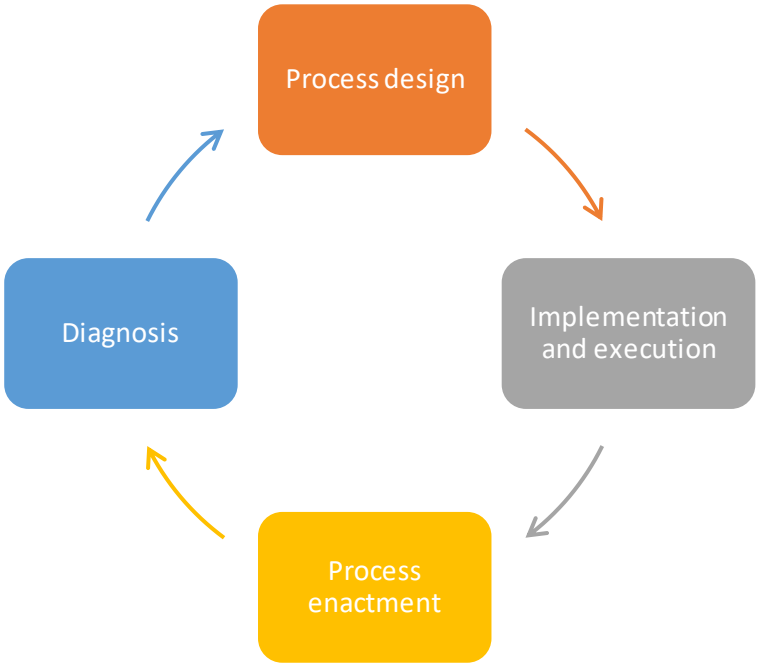

Figure 2 - Business process lifecycle (Aalst, et al., 2003)

The existing environment is analysed, designed or redesigned into business process models with appropriate tools (process design). Then, the model is configured and adopted into specific information systems (system configuration). The processes after adoption are deployed with manuals, instructions and regulations (Process enactment). The deployment and performance of these processes are analysed, evaluate and adjust (diagnosis), in order to perfect the organization's processes in the future.

Subjects interested in business process improvement

There are 2 main group of subjects that are particularly interested (Weske, 2007). The first group being the business administrators, who needs to improve business performance in order to gain customer's satisfaction, become cost effective and create affordable products and services.

The second group includes people working in the information technology industry. Some of them are researchers, who study the methodology and implementation approach of business process while the software maker community interests in powerful and flexible tools that is capable of responding to frequent changes during business operation. Besides being a methodology, BPM is also concerns the business' operational environment, including technical, organization and management structure. Therefore, after selecting technology and determining the organization and management structure as the basis for BPM implementation, one must integrate BPM with other existing supporting systems in the business environment.

5.2.2 The origin and development trend of BPM

The concept Business process management was formed and developed through generations based on multiple management philosophies, including: business administration, quality management and information technology application (figure 3)

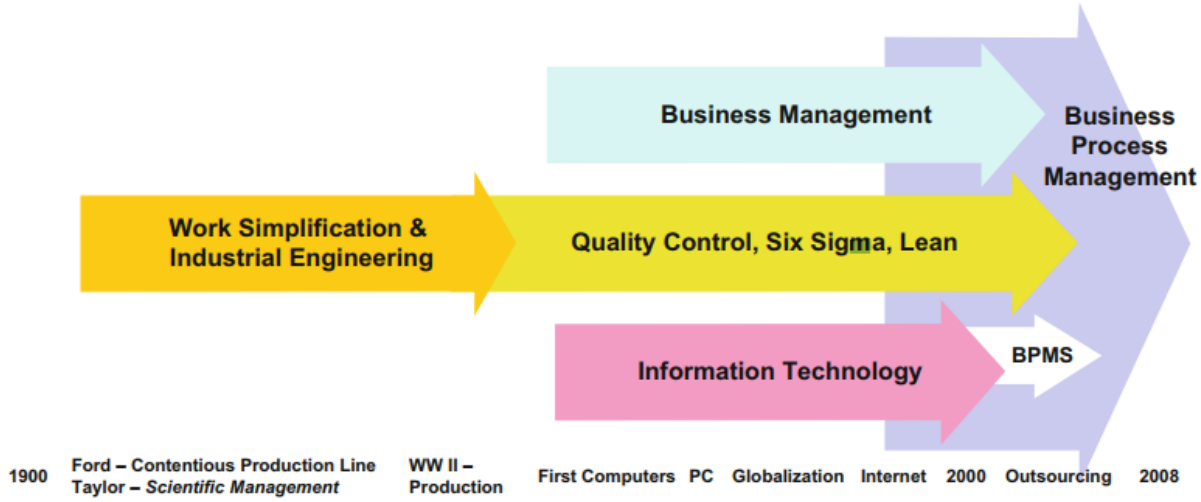

Figure 3 - Overview of approaches to business process change (Harmon, 2013)

Adam Smith presented the idea of specialization of labour in 1776, deemed one of the biggest contributions to modern economic theory (Smith, 1776). This is the basis for the hierarchical structure seen in most companies this day, which can be considered the foundation for later management theories. The twentieth century experienced a bloom of business management methodologies, aiming to improve business performance and efficiency. Some honourable mentions are the Total Quality Management (TQM) in the 1950s, Lean Manufacturing, stemming from Toyota's manufacturing process in the 1980s, or the recent process management evolution revolving around Six Sigma, which is *"a rigorous, focused and highly effective implementation of proven quality principles and techniques"* (Pyzdek & Keller, 2014).

Business process management is considered the combination of all the antecedent methodologies (Phan & Mai, 2013). Not only does BPM focus in the control, supervisory and management but also in solving the need for process enhancement and change. With the rapid globalization, results of process improvement and management is becoming increasingly more important. Business process management takes into account different administration and management methodologies and technological advances in order to assist organizations in comprehending, evaluate and improve their business performance, ultimately rapidly adapt to the changes in the market.

BPM in the world

The global business process management trend is very detailly reported by BPTrends every time a significant change transpired that BPTrends finds it important to capture the new development. The previous reports were conducted in 2005, 2007, 2009, 2011 and 2013, and the latest report in 2016 was based on information provided by over 100 participants in the survey in October of 2015 (Harmon, 2016). In recent years, BPM is being increasingly more of an interested search term, even more so than Six Sigma or TQM. This is illustrated in figure 4, a comparison of interest over time made using Google Trends. One drawback is that the data for Lean was not included in this graph, since the term is quite extensive and can be searched in many cases and not as unique as the terms BPM, Six Sigma or TQM; Google Trends will contain irrelevant results to Lean as a manufacturing system.

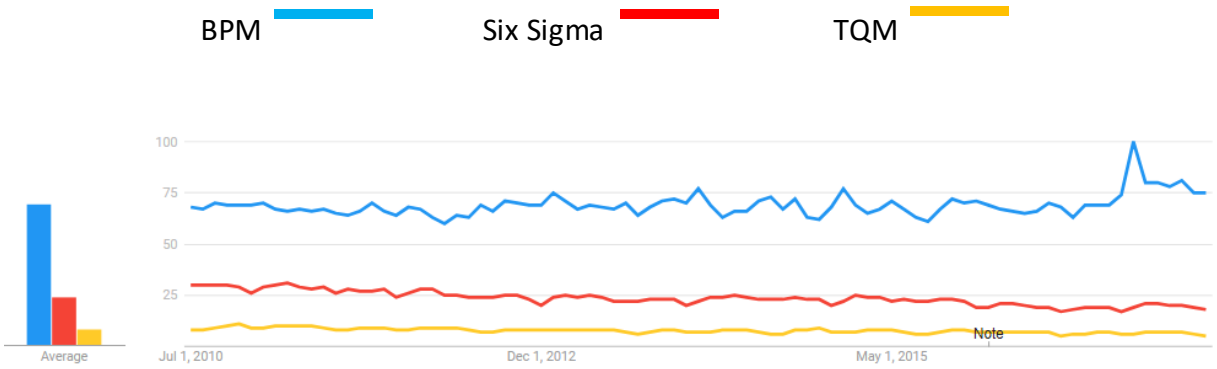

Figure 4 - Search interests in BPM and other management methodologies

Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. Likewise, a score of 0 means the term was less than 1% as popular as the peak.

The graph depicts the frequency of which the term BPM appears in searched phrases since 2010. It is salient that BPM is the dominant interest in recent years compared to other management methodologies. This trend seems to be even increasing and projected to gradually grow further in the coming years.

There is usually a confusion that associates BPM with BPM software or as a software technology. Although there are some similarities in terms of business requirements, process modelling, and there might be an application developed as a result of BPM implementation. However, process management is totally feasible without the help of an application. According to BPTrends, there is 11 percent of participants who considers BPM a *"set of new*

software technologies that make it easier for IT to manage and measure the execution of process workflow and process software applications" in 2015. This is probably because of the fact that a number of software companies denote their applications as a BPM product which brought a lot of confusion. Another 14 percent of the responses depicts that the companies consider BPM *"a cost-saving initiative focused on increasing productivity of specific processes"*. Be that as it may, the majority of the participants correctly understands BPM as *"a top-down methodology designed to organize, manage and measure the organization based on the organization's core processes"*, at 33 percent; or as *"a systematic approach to analysing, redesigning, improving and managing a specific process",* at 25 percent (Harmon, 2016).

	Never	Occasion-ally	Frequently	Most Times	Always
Processes Documented	4%	50%	29%	14%	4%
Standard Processes	9%	48%	20%	20%	1%
Value Chains Modelled	7%	44%	26%	19%	5%
Measures for Major Processes	14%	59%	10%	11%	6%
Consistent IT Support	3%	59%	17%	18%	3%
Skills Defined	8%	47%	28%	14%	3%
Manager Trained	18%	56%	13%	11%	2%
Managers Use Data	13%	60%	16%	8%	3%
Process Improvement	12%	54%	18%	13%	4%
Average for 2015 Survey	**10%**	**53%**	**20%**	**14%**	**3%**
Average for 2013 Survey	**11%**	**51%**	**23%**	**13%**	**2%**

Table 1 - Questions about the frequency of specific organizational activities that suggest organizational maturity (Harmon, 2016)

Regarding the process maturity level, based on multiple criteria, BPTrends report depicts how companies acknowledge the importance of processes and process management. The questions asked aim to assess situation of process management at different organizations in

different maturity levels. Their approach was based on the CMMI method developed by the SEI. The results reflect the maturity of standard, documentation, measurement of the business process and supporting elements (Table 3.1)

The table shows that the majority of organizational activities are met in an "occasionally" and "frequently" manner, with the total of responses being 73 percent in 2015. BPTrends concludes that most companies that take part in the study are at CMMI level 2 – Some Organized Processes (out of 5). At this level of maturity, the organizations start to define their core or most frequent processes. The entire organization is not yet realized as a combination of multiple processes. (Harmon, 2016).

BPM in Vietnam

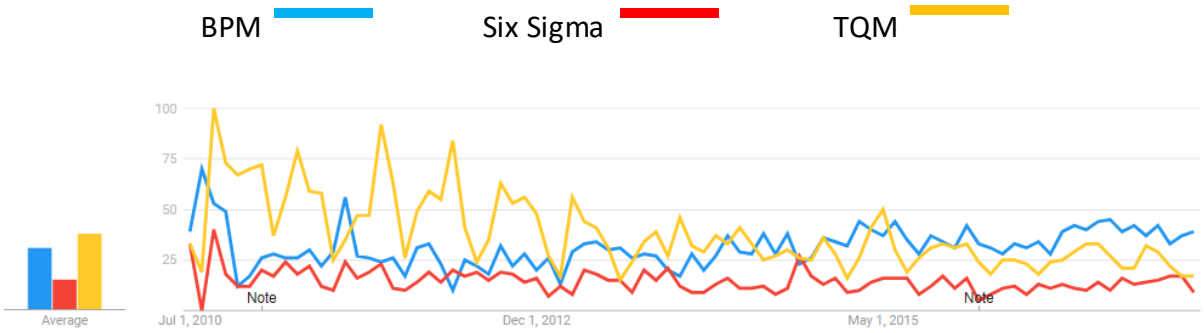

Figure 5 - Search interests in BPM and other management disciplines

In the Vietnamese context, BPM is still a rather new concept that has just gained initial attention in recent years. From 2010 to 2012, TQM seemed to be the most searched one in the three management disciplines. On average, TQM was the most searched term among the three. However, since 2012, the trend of search for BPM was a gradual upward slope, where BPM is becoming the most interested term while Six Sigma's search interest stayed relatively unchanged and that of TQM declined (figure 5).

In a nutshell, we can see that BPM in Vietnam is slowly gaining increasingly more attention. Organizations begin to find BPM an advanced solution that offers potential cost reduction, efficiency enhancement and time saving. This suitably satisfies the new requirements in the current business context, which are expanding in both breadth and depth.

Be that as it may, there currently is no formal research on how the Vietnamese sees BPM as a management discipline. Specifically, there is no evidence that a Vietnamese company that has successfully implement BPM and experienced improved business performance in general. This

might indicate a misconception in Vietnamese firms' leader's mindset. Apart from BPM software technology giants like IBM, Oracle or Bizagi, there is only 2 known domestic software companies that offer a BPM system, but only to the degree of reducing paperwork and administration procedure. These companies also report that most of their customer considers BPM rather as a software than a management discipline, therefore they cannot utilize BPM to its full extent.

5.3 Business process management benefits and pitfalls

5.3.1 Benefits of BPM

It is evident that implementing BPM shall improve the company's process performance and efficiency. *"BPM is the best investment a company can make in establishing a platform for continuous improvement*" (Rudden, 2007). BPM implementation brings about a better process design and development practice, which also helps in the automation of the business's processes. Anyone within the company, from business owner, managers to employees, can experience the impacts of a successful (or fail) BPM implementation.

The benefits of BPM can be categorized into three core benefits – *efficiency, effectiveness and agility* (Rudden, 2007). Most current business processes operate inefficiently because of the large proportion of manual work, unsynchronized cooperation between functional departments and difficulties in the monitoring of overall process performance. This inefficiency can be solved by BPM implementation. Furthermore, BPM helps optimize business processes, identify redundancy or conflicts; from which the managers can deploy appropriate policies and adjustments, ultimately improve the outcomes of the processes. Besides, BPM allows business owner to make changes, pauses in the organization's processes, thereafter increase the business's agility in staying on track and adapting to market requirements (Breyfogle, 2014). BPM shall be the foundation and tool for the inheritance, design and change of business processes in an agile and intuitive manner. Moreover, BPM discipline can keep organization on track with safety, security and compliance (Breyfogle, 2014). Finally, BPM increase the transparency as well as the governance of the organization. The business managers can extract data regarding process performance and have direct control over the regulations that govern process behaviour (Garimella, et al., 2008).

Implementing BPM can result in the deployment of a BPM suite or BPM system (BPMS), which further enhance the advantages of BPM. BPMS can reduce operation cost by automating certain tasks and activities or the whole business process; as well as assists the business in many aspects of BPM implementation such as process management, process design or process change. Furthermore, BPMS can greatly reduce the distance between business and technical employees by allowing business users to play a stronger role in designing IT solutions for the organization. Business users can utilize BPMS to even quickly and effectively develop a new business process themselves.

5.3.2 Pitfalls when implementing BPM

With the numerous benefits that come with BPM, it is tempting for organizations to start implementation without methodology, architecture and process. It is important to allot time to set up and gather metrics (Dixon, 2011), study the principles and get the business, infrastructure and management in place before process improvement work could occur (Garimella, et al., 2008)

Moreover, a process-centric mindset starting from the top management is essential when implementing BPM. Organization directors, managers need to start thinking in a process oriented manner rather than functionally. As discussed in section 3.2.2., some organizations often correlate BPM with BPMS, hence deploying BPMS without proper understanding of BPM as a management discipline (Dixon, 2011).

Lastly, during BPM implementation, it is important to make sure the processes are optimized before automation, since if a process underperforms, automating such process will not only add to the performance but also generate errors faster (Garimella, et al., 2008).

5.4 Business process management maturity

BPM maturity is a term used indicating the stages of development of an organization's BPM implementation. The stages ranges from no process-centric development or knowledge regarding to being the most advanced and developed in process management. The Software Engineering Institute defines organizational maturity as *"the extent to which an organization has explicitly and consistently deployed processes that are documented, managed, measured, controlled and continually improved. Organizational maturity may be measured via appraisals"* (Curtis, et al., 2010).

In order to measure the maturity of business process management or business process, many maturity models were developed, each with different criteria and dimensions. Some models can be used to guide organizations to a higher level of process maturity. The BPM maturity describes an improvement path that guides organizations in ascending the maturity level ladder, from immature, inconsistent to matured, disciplined processes (Curtis & Alden, 2006). Evaluating an organization's BPM maturity correctly can allow the organization to slowly integrating process management and improvement in every stage of development, each stage establishes foundation for later stages (OMG, 2008).

Achieving a higher level of process maturity also set the foundation for a higher level of process capability of the company. As processes mature, they move from an internally-focused perspective to an externally-focused system perspective (Archie III & McCormack, 2004). The relationship between process capability and maturity is illustrated in figure 6.

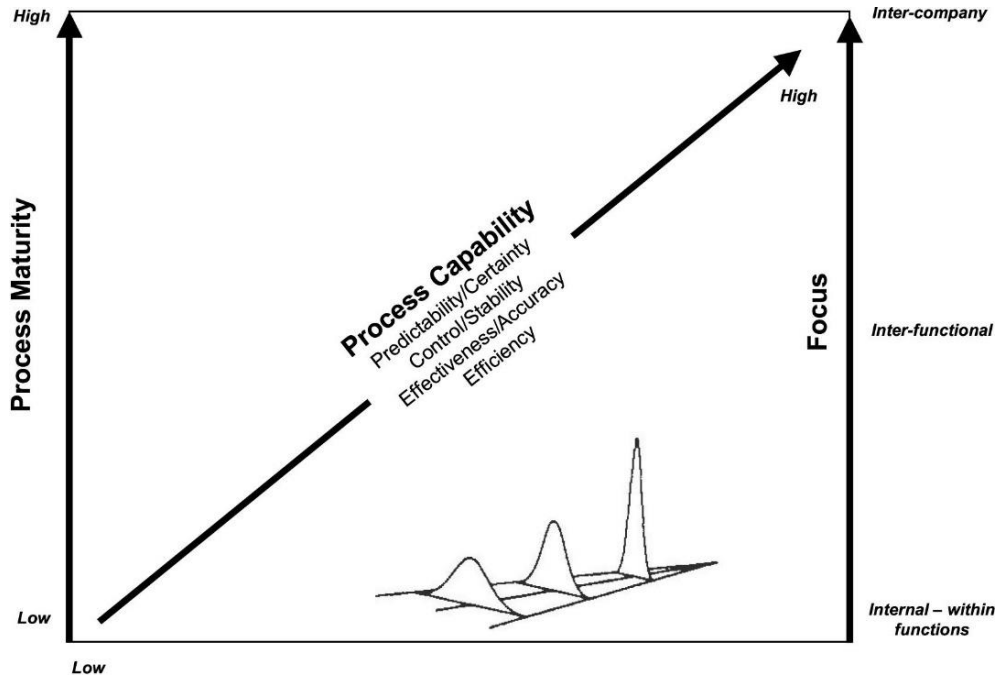

Figure 6 - Relationship between process maturity and process capability (Archie III & McCormack, 2004)

Process capabilities is a set of measurement for process performance, regarding control (the difference between targets and results), predictability (variability in achieving objectives) and effectiveness (the achievement of targets and ability to raise targets) (Archie III & McCormack, 2004). The graph depicts that there is a linear relationship between process maturity and capability. As the organization shift its focus from internal to inter-company process, the process capability rises as well as indicating a higher level of process maturity.

6 Choosing the right business process maturity model

Based on the CMMI, a number of business process maturity model has been developed, both by academic and non-academic researchers ever since. Most models are generic that can be applied to any organizations whilst some are more dedicated to a certain domain such as supply chain management, software development or collaboration. De Bruin (2005) categorized business process maturity models into 3 types: *descriptive, prescriptive and comparative* (De Bruin, et al., 2005).

A descriptive model aims to evaluate the as-is maturity level of the organization without any indication for further improving that maturity level. On the other hand, a prescriptive model shows an improvement path in order to positively affect business performance. Finally, a comparative model is able to compare practices across organizations to benchmark maturity between industries (De Bruin, et al., 2005). Since this paper aims to assess the current maturity level of HR consulting firms and give recommendations on how the company could further improve to achieve a higher state of maturity, it is best to choose a model with **both descriptive and prescriptive nature**.

The number of maturity models causes a lot of difficulties in selecting the most suitable one for the organization. In one study, a group of researchers tried to create a decision tool that helps organizations to select a maturity model that best fit their need from a set of 69 maturity models (Looy, et al., 2013). In addition, there are a few researches that compares several maturity models to find each models' strengths and weaknesses. Tarhan et al. (2015) compares the characteristics of 9 out of the 20 leading maturity models. Since we are considering models with both descriptive and prescriptive nature, Fisher and OMG's business process maturity models are the ones with the strongest properties. However, the application of OMG model is challenging because of the size, extensive coverage and generic content and structure (Tarhan, et al., 2015).

Additionally, some models assume that the company have decided to implement BPM then the BPM maturity level can be assessed. The criteria of such models revolve around the aspects and steps of BPM implementation, for example Rosemann & de Bruin's model, which makes it difficult for us to apply them in the situation of Vietnamese companies in general. This is due to the fact that most of them are very distant to the concept and knowledge of BPM and very few have reported to officially implement BPM as the core management

discipline. Therefore, a model that focuses more on the business process maturity rather than BPM maturity is more suitable for the purpose of this study.

All in all, Fisher's business process maturity model (BPMM) is the best candidate. However, in order to combat its weaker descriptive property, some adjustments must be made. Fisher (2004) model has two dimensions, 5 "levers of change" in a business: *Strategy, Controls, People, Technology and Process*; and 5 maturity levels (figure 7)

	Siloed	Tactically Integrated	Process Driven	Optimized Enterprise	Intelligent Operating Network
Strategy	• Reactive to market conditions within 1-2 years, typically chasing a competitor • Integration within functions • Driven by cost and efficiency	• Adapt/react to market dynamics within 12 months • Some cross-functional integration to solve pains • Initial entry into point-to-point integration with partners	• Adapt/react to market dynamics within 3-6 months • Enterprise-wide process leadership is established • The business process is the foundational element of the enterprise	• Adaptive to market dynamics within weeks • Enterprise organized completely around processes • Optimized processes+execution yield competitive advantage	• Predictive capabilities and market leadership • Continuously adaptive to market dynamics in near real-time • Enterprise and its partners are organized around processes • Competitive advantage is driven and shared by partners
Controls	• Local and functional level authority / autonomy • No enterprise-wide standards or governance • No formal value measurement program	• Hierarchical mgmt. structure • Independent functional department decisions • Limited enterprise-wide standards or governance	• Formal process leadership establishes priorities • Business cases drive projects • Process metrics tied to individual and team performance	• Process teams responsible for overall performance • Relevant process metrics institutionalized as main performance measures	• Inter-enterprise process teams own performance • Relevant process metrics are used to measure bi-directional partner performance
Process	• Static business processes • Functional silos • Geographic silos • Department focused • Informal communications within departments	• Limited process reengineering and cross-functional/process coordination (often manual, one-time efforts) • Systems drive baseline process definitions	• Fully transitioned from functional to process focus, including management structure, execution teams, and performance evaluation • Targeted BPO	• Total process integration across the enterprise • Commitment to continuous process improvement program • Outsource non-core business processes (reduce cost and increase quality)	• Total process integration across the ecosystem • Key processes flow seamlessly across firewalls
People	• Subject matter experts • Culture is adversarial, mutual distrust • No formal change management procedures • I'll do my job, you do yours	• Cross-functional/process team members (usually led by IT) • Limited understanding of cross-departmental process needs and dependencies	• Process leaders define, deploy, enhance, and maintain core processes • Functional teams focus on high quality execution	• Lean organization focused on optimizing process definitions and execution • Ongoing process training for employees	• Partner selection includes process & cultural attributes • Ongoing process training for employees and partners
IT	• Independent systems • Islands of automation • Integration only within functions • Legacy enterprise system(s)	• Leverage ERP systems for cross-functional integration • Point-to-point partner integration • IT leads cross-functional initiatives (systems focused)	• IT supports process leadership team in initiatives • System and instance consolidation to streamline processes and info mgmt.	• Utilize Business Process Management (BPM) solutions to automate process execution, monitoring, and control across the Enterprise	• Utilize Business Process Management (BPM) solutions to automate and monitor process execution throughout the ecosystem

Figure 7 - The Business Process Maturity Model (Fisher, 2004)

Initially, as I applied the model, some criteria of the model tend to overlap with each other, for example, Controls and People factor both mentions process leadership; Process and Controls factor both take into account performance evaluation. This is probably because of Fisher's model have a separate factor for Process, but the presence of process related criteria is visible in all factor of a business process maturity model.

Therefore, I think the 5 levers of change and their criteria need to be adjusted. The adjustment will be based on Rosemann & de Bruin (2005) maturity model, using 6 core elements of BPM (Strategic alignment, Governance, Methods, IT, People and Culture). These factors are very well-defined and later consolidated by a study of Rosemann & vom Brocke (2010). There are many similarities among Rosemann & de Bruin's model 6 elements and Fisher's 5 levers of

change, however, we will only look at the differences and where possible adjustment could be made to Fisher's model.

STRATEGY

"Strategic understanding of the role, positioning and focus for enterprise-wide decision-making in support of overall company objectives" (Fisher, 2004).

Fisher's model does not mention the alignment between an organization's processes and its strategy, although the linkage between strategy and business processes is of great importance (Rosemann & vom Brocke, 2010) if the organization is going process oriented. Hence, since the Strategy lever of change is a broader concept and can includes this information, it is beneficial to add a criterion regarding the alignment between processes and strategy when assessing the Process Driven state of maturity. In addition, a process improvement plan is should be in place that point out how process improvement meets with other strategic prioritized operations. An enterprise process architecture is the highest-level abstraction of value-driven and enabling processes (Rosemann & vom Brocke, 2010), which can set the initiative for further process analyses and models.

Fisher also included the ability to adapt to market change in strategy, however, Rosemann & vom Brocke stressed that the decision-making processes are essential for guidance when adapting to any circumstances in the Governance factor (Rosemann & vom Brocke, 2010). Hence, the capability of the decision-making process (authority, responsibility and speed of the process) should be taken into account when evaluating this criterion.

CONTROLS

"The governance model for the management, administration, and evaluation of initiatives, with a strong focus on the appropriate metrics applied for measurement" (Fisher, 2004).

The process mapping of roles and responsibility should be stressed when assessing the governance model of an organization. The process management roles are mentioned in the Optimized Enterprise stage but process mapping was not mentioned in previous stages.

The integration of process management with suppliers and customers starts to take place when the organization tries to establish inter-process automation and control (Gartner, 2008). This is among the benefits of BPM implementation where suppliers and customers can be

collaborated in process improvement. Therefore, this criterion should be added in the Process Driven stage.

PROCESS

"Operating methods and practices, including policies and procedures, which determine the way activities are performed" (Fisher, 2004).

Rosemann & vom Broke (2010) utilized the process lifecycle when they discuss about the Methods factor, which focuses on the explicit characteristics of each step in the cycle. Whether or not the organization carries out a full process lifecycle should be discussed. Fisher's model only mentioned a process improvement program in the Optimized Enterprise stage, rather than business process lifecycle management. This should be addressed with a criterion regarding process life cycle.

In the HR industry, every recruitment process could be unique to certain industries and the company must be ready its corresponding processes whenever an industry's demand for labour increases (which changes within months or years and depending on region). Therefore, the company's set of processes could become very fragmented depending on the range of industries that the company's currently offering services. This is why reusing processes before development can become beneficial and should be paid more attention and selecting which process as well as which component in the process can be reused is a challenge (Davis, 2010) for less process-centric companies. Therefore, adding criteria regarding process reuse is valuable to the model.

PEOPLE

"The human resource environment, including skills, organizational culture, and organizational structure" (Fisher, 2004).

In this factor, Rosemann & vom Broke (2010) focus more on the continually enhance through training and application of knowledge regarding process management of stakeholders to improve business performance. This level of concern was mentioned in the Optimized Enterprise stage of Fisher's model. The responsibilities and authority of process owners were set in Process Driven stage but the level of comprehension and skills regarding process management is absent. Furthermore, low level employees' understanding regarding the process they are participants and how they are contributing to the process goals plays an

important role when the managers implement process management. Consequently, these criteria are added to the Process Driven and Tactically Integrated stage of Fisher's model.

TECHNOLOGY

"Enabling information systems, applications, tools, and infrastructure" (Fisher, 2004).

Rosemann & de Bruin's IT factor also revolves around IT systems that supports every single stage of a process lifecycle while Fisher has a more general approach that is more applicable for an organization at any level of maturity. Nonetheless, a supported process lifecycle by software is ideal for organizations starting process management, before a full-fledged BPMS system can take place.

Additionally, the development of IT systems was not mentioned in Fisher's model. In an agile environment, process focused IT systems are more adaptable to business conditions and are delivered in a more agile iterative approach (Gartner, 2008).

All adjustments made above to Fisher's model are demonstrated and highlighted in Table 2 below. Compared to the initial model, more criteria were added to become more comprehensive and help companies better evaluate their maturity levels.

	Siloed	Tactically Integrated	Process Driven
Strategy	• Reactive to market conditions within 1-2 years, typically chasing a competitor • Integration within functions • Driven by cost and efficiency	• Adapt/react to market dynamics within 12 months • Some cross-functional integration to solve pains • Initial entry into point-to-point integration with partners • Process improvement plan is in place	• Adapt/react to market dynamics within 3-6 months • Enterprise-wide process leadership is established • The business process is the foundational element of the enterprise • Core processes align with the company strategic goals
Controls	• Local and functional level authority / autonomy • No enterprise-wide standards or governance • No formal value measurement program	• Hierarchical mgmt. structure • Independent functional department decisions • Limited enterprise-wide standards or governance • Processes mapping for core business processes	• Formal process leadership establishes priorities • Business cases drive projects • Process metrics tied to individual and team performance • Suppliers and customers are included into the process management
Process	• Static business processes • Functional silos • Geographic silos • Department focused • Informal communications within departments • Processes are fragmented for every products and services.	• Limited process reengineering and cross-functional/process coordination (often manual, onetime efforts) • Systems drive baseline process definitions • Certain stages of a process lifecycle are executed with proper methods	• Fully transitioned from functional to process focus, including management structure, execution teams, and performance evaluation • Targeted BPO • Effectively reuse business process
People	• Subject matter experts • Culture is adversarial, mutual distrust • No formal change management procedures • I'll do my job, you do yours	• Cross-functional/process team members (usually led by IT) • Limited understanding of cross-departmental process needs and dependencies • Staff understands and is aware of their processes and process leaders' role.	• Process leaders define, deploy, enhance, and maintain core processes • Process owners have proper training regarding process management • Functional teams focus on high quality execution • Management level understanding of process management practices
Technology	• Independent systems • Islands of automation • Integration only within functions • Legacy enterprise system(s)	• Leverage ERP systems for cross-functional integration • Point-to-point partner integration • IT leads cross-functional initiatives (systems focused) • IT solutions are delivered with waterfall method	• IT supports process leadership team in initiatives • System and instance consolidation to streamline processes and info mgmt. • Agile approach is applied throughout Information systems • IT solutions supports all stages of a process lifecycle

Table 2 - Improved Business Process Maturity Model

	Optimized Enterprise	Intelligent Operating Network
Strategy	• Adaptive to market dynamics within weeks • Enterprise organized completely around processes • Optimized processes + execution yield competitive advantage • Build an enterprise process architecture • Process goals aligns with BPM strategy goal	• Predictive capabilities and market leadership • Continuously adaptive to market dynamics in near real-time • Enterprise and its partners are organized around processes • Competitive advantage is driven and shared by partners
Controls	• Process teams responsible for overall performance • Relevant process metrics institutionalized as main performance measures	• Inter-enterprise process teams' own performance • Relevant process metrics are used to measure bi-directional partner performance
Process	• Static business processes • Functional silos • Geographic silos • Department focused • Informal communications within departments • Processes are fragmented for every products and services.	• Total process integration across the enterprise • Business process lifecycle is fully realized and followed • Outsource non-core business processes (reduce cost and increase quality)
People	• Lean organization focused on optimizing process definitions and execution • Ongoing process training for employees	• Partner selection includes process & cultural attributes • Ongoing process training for employees and partners
Techno-logy	• Utilize Business Process Management (BPM) solutions to automate process execution, monitoring, and control across the Enterprise	• Utilize Business Process Management (BPM) solutions to automate and monitor process execution throughout the ecosystem

Table 3 - Improved Business Process Maturity Model (continued horizontally)

7 Empirical findings and data analysis

7.1 Company A

7.1.1 Overview of company A

Company A was established in Vietnam from 2008, providing employment solutions to Vietnamese organizations. It was one of the first fully foreign invested companies in the human resource industry in Vietnam, with clients ranging from insurance, manufacturing and supply chain, information technology, telecom, real estate, pharmaceutical, hospitality, to banking and finance companies. Through an extensive suite of employment solutions including *HR Consulting, Recruitment Process Outsourcing, Outsourcing and Permanent Recruitment*, company A comprehensively cover a broad range of human resourcing needs from recruitment, assessment, training, development, career management to outsourcing and consulting.

Since establishment, the company has 2 separate branches in 2 major cities in Vietnam, Hanoi and Ho Chi Minh, which are also the 2 most recruitment demanding cities. The total number of staff as of 2017 is around 100 employees.

According to the company, "*each solution is customized according to clients' need and expectation"*. The company has been focusing on improve business efficiency, ultimately enhance its services' quality and cost reduction across all solutions provided. As reported in its annual report, the 2016 revenues have increased by 7% while operating profit increased by 11% and earning per share increased by 17%.

Company A's organization chart

As presented in figure 1 below, the 2017 organizational structure of Company A is hierarchical. This is a common case for most of Vietnamese companies. Since the company's establishment, some additional departments were added into the architecture, specifically a dedicated IT department in 2012 instead of an IT team, more and more sub-department was also added into Talent Based Outsourcing and Permanent Recruitment department as the company started offering increasing more services.

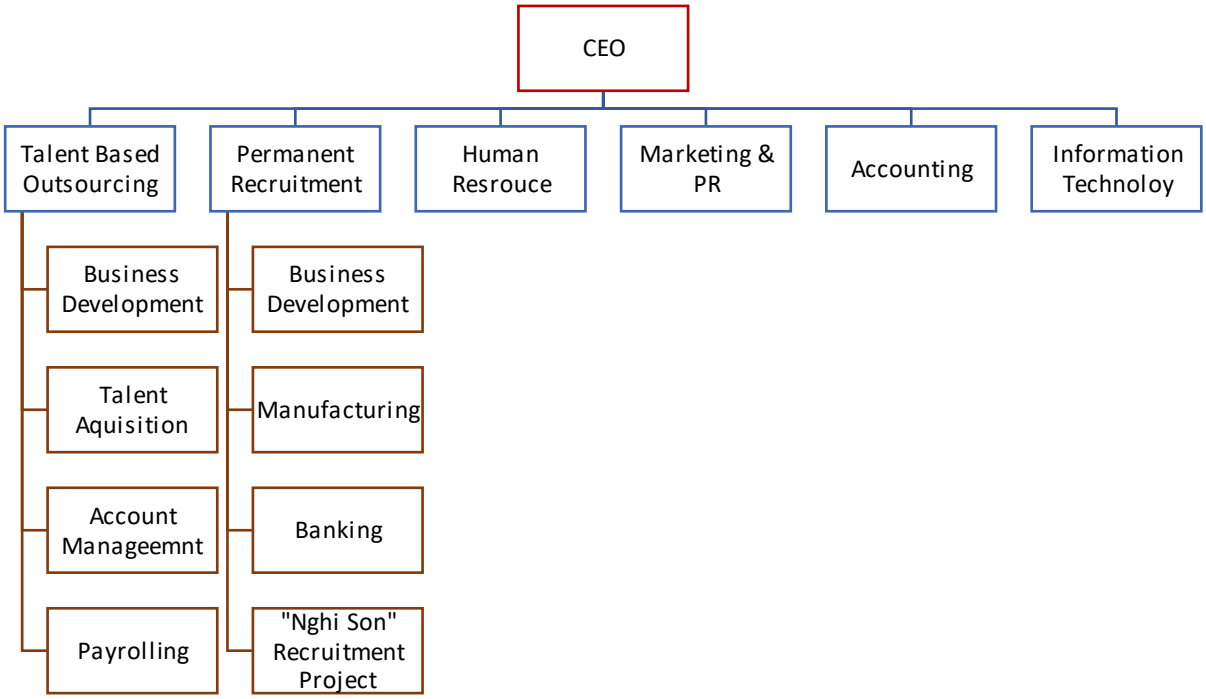

Figure 8 - Company A's Organization Chart 2017

For each department, there is a manager in charge and for each sub-department, there is a team leader or consultant.

The company's Permanent recruitment manager stated that "*talent based outsourcing and permanent recruitment are the two dominant departments of the company as they take care of the company's core businesses. These are also the most process-centric department in the company*". Talent based outsourcing department is responsible for HR Consulting, Recruitment Process Outsourcing and Outsourcing service, which account for the largest piece in the company's revenue cake and HR project count.

Selection of interviewees

For company A, the manager of the Permanent Recruitment was interviewed as this is the core functional department of the company. In addition, the TBO manager was also briefly interviewed for some process related questions and the Administrator cum HR Executive was interviewed to represent the back end of the company. Some lower level employees in each departments' opinion was also taken into account, to make sure there is alignment in both top down and bottom up understanding regarding the interview questions. The whole interview process took place via Skype call and messaging for sharing the interview questions when necessary.

7.1.2 Data analysis and evaluation of company A's business process maturity

STRATEGY

Company A is determined to deliver innovative labour solutions, which concentrate on the customers' core business activities. Not only taking care of its external customers, the company has made considerable efforts to enhance its internal customers' experience in comparison to other Vietnamese companies. This makes, as the manager put it, "*the internal HR department as of great importance as the external ones*". Different departments have different goals and processes, but all surrounds the core value of the business. The alignment of business goals and strategy is an essential element for successful BPM implementation (Bandara, et al., 2009). This is a good direction towards a Process Driven strategy.

The decision-making process of the company is quite top-down as lower-level employees are rarely acknowledged of the decision before it is already made when it comes to company-wide critical decisions. Moreover, the company seems to struggle when it comes to changes although the company's strategy and structure should align with the market environment (Rogers, et al., 1999). For instance, in 2010, the Vietnamese media reported that the banking and finance industry is on a rapid recovery after the 2008 financial crisis, hence the demand additional workforce in this industry would rise by 18% (VietnamWorks, 2010). Although Company A's internal market research also reports similar results, the top management failed to make considerable and timely decisions and actions, which miss the company's opportunity. In late 2011, a new Banking sub-department was established with sufficient trained staff in order to response to the demand in banking labour. The fact that it took nearly a year to initiate a change means company A's Strategy is not yet adapt and familiarize with process management practice and should focuses on this factor first. This empirical data indicates that the company's Strategy factor is in the Tactically Integrated maturity level, where the company fails to initiate proper actions in an unanticipated circumstance. Additionally, the company has separate process goals for each of its core business processes and, according to the manager, these goals aligns with its strategic goal. Moreover, the company's strategy revolves around creating values for customers and employees, which drives its core processes away from cost and efficiency driven, this, according to Fisher 2004, is a Tactically integrated strategy.

Additionally, the company does not yet to have a dedicated department for the maintenance and design of business processes. This means that there is no enterprise-wide process

leadership *established* (Fisher, 2004), which proves that the company is not at a Process Driven state of maturity.

Therefore, it is safe to put Company A's Strategy is at the **Tactically Integrated** maturity state.

CONTROL

As described in figure 1, company A possess a hierarchical organizational structure, moreover, each staff must report to their respecting manager rather than the process owner. This, according to Fisher (2004) is an indication of a Tactically Integrated state of Control maturity where the company has established a hierarchical management structure. As aforementioned, most core business processes have their own process owners, being the manager assistants of the department. Process owners are responsible for the certainty of improvement made to business process capabilities (Trkman, 2010). It is important to clearly define this role as well as their authority/responsibilities for process improvement and monitoring. Company A has process mapping for its core business processes, this shows a Tactically Integrated state, that can improve the problem solving of the teams, training employees and the company can identify best practices that can be implemented across the business.

Regarding performance measurement, although for the Talent Based Outsourcing and Permanent Recruitment department, there are individual or team-based KPIs in place for personal measurements, and most of these data are assessed manually by the department's assistant manager and the HR department. Nevertheless, processes' overall outcome or efficiency was not measured by any measures. The company uses KPIs to assess each process activity individually. This puts company A's Controls at the Process Driven maturity state (3).

For the above reasons, company A's overall Controls is currently at the **end of the Tactically Integrated** maturity level.

PROCESS

The company's core business processes are officially documented and maintained by each department manager's assistant. The form of documentation is still verbal rather than modelled. However, this is not the case for every process in the business. This solidify the senior manager's point of view regarding the relation between the company and its processes. The company has yet to see a business as *"a series of linked processes"* (McCormack &

Johnson, 2001), which put the process view of the company at the initial level. Nonetheless, the manager emphasized that "*whenever an issue is brought up during the management meeting, the whole process which seemed to have caused the issue would be addressed*". This shows signs of a Tactically Integrated process maturity level as the company is not department-focused anymore. (Fisher, 2004).

As abovementioned, the company is very "*caring*" when it comes to its staff. For example, the company consider employee onboarding is a very important process and designed a very clear and well-structured process as well as a list of process goals for employee onboarding. This process involves participants from multiple back-end departments, including HR, IT, Accounting and Marketing. Although not being a core business process, this shows the company has cross-functional processes that aligns to its strategic goals, which Fisher 2004 puts as a level 2 maturity. However, cross-geographic processes are not confirmed by the manager whilst the company has 2 distant branches in the North and South parts of Vietnam, which are 2000 kilometres apart. A set of process that transcends geographical and functional boundaries is required for an evolved process centric organization.

The aforementioned example regarding the company fails to reacts to market demand, the reason besides inefficient decision-making process would also lie in the inability to reuse process, instead of reusing other recruitment processes, the development of a new process will slow down the company's reaction (Davis, 2010). This empirical data belongs to a Tactically Integrated level of maturity.

Finally, the company processes are regularly updated during its operation. This activity is the responsibility of the manager assistant, although any employee can suggest or request a change in the process if they find it necessary. According to the manager, on average, an update is made at least on a yearly basis. A full-fledged process lifecycle is not present here but only certain stages are carried out on demand, though continuous improvements are important aspect of a process driven organization.

Consequently, Company A's Process is currently **Tactically Integrated**.

PEOPLE

The people element reflects the persons who dedicate their knowledge in implementing and improving the organization's performance in a process-centric manner (Gartner, 2008). Company A's senior managers see the business as the combination of core processes and

supporting departments. Besides, the term process is a popular term during management meetings. When asked, the department managers recognize or know of business process management but without proper training on the subject. Management level understands process management practices is what Rosemann & de Bruin suggest for the People factor. However, none of them has been professionally trained in process management, although this is an important capability area for stakeholders in any management of a process (Rosemann & vom Brocke, 2010). One of the manager states *"I have come to acknowledged the rise of BPM in the world as well as the handy companion BPM systems that an HR company will definitely benefit from; but the company is simply not ready nor does not have the resources available for BPM training and implementation".* This negates the fact that People of Company A is ready to become a Process Driven lever of change. Nonetheless, it is clear that the company's process leaders are the one to define, deploy, enhance and maintain core processes.

However, when it comes to cross-department processes, not every participant knows who the process owner is. *"When a designer in the marketing department faces an issue, he would talk to the person who asked him to make that business card, who is the Administrator cum HR Executive",* the manager gave an example on the employee onboarding process. On the company's perspective, this seems to be understandable. Nonetheless, the real person he should talk about issues to should be the process owner, in this case, the HR assistant manager; rather than the previous partaker in the process. Although most core process does not extend beyond the boundary of a department, the cross-department processes are defined and clearly presented (e.g. employee onboarding process, sales).

All in all, company A's People has not yet satisfied all criteria of the Process Driven stage and it is safe to put this lever of change at the **end of a Tactically Integrated** maturity state.

TECHNOLOGY

First and foremost. there is no ERP system in place for Company A. The manager said *"the company hadn't been really generous when it comes to the technology budget until 2012, when the IT department was established and expand the company's applications".* Ever since, there are several separate applications, each with its own purposes and serves a certain core business process, for example, a payroll processing service. The IT of Company A does not support any stage of a process lifecycle, which is a considerable downside for process management practice (Rosemann & vom Brocke, 2010). There is a candidate pool database,

which stores data of all past and potential candidates as well as job seekers that the company has collected. This is integrated with a resume screening application that automatically rule out candidates that do not meet initial job requirements. Although certain processes are automated, the capabilities of technology here is holding back the whole company progress in climbing the maturity stairs. This resulted in reduction of process cycle times, compliance issues, accuracy of information and resources planning (Rosemann & Bruin, 2005). The company shows that they did not have the sufficient vision to let its technology aspect adapt and keep up with market standards. Additionally, many of the processes and activities in the company are done manually and the company does not yet have any plan on making any significant change on the current systems.

All of these evidences clearly indicate a **Siloed** maturity level for the IT factor.

7.1.3 Business process maturity level of company A

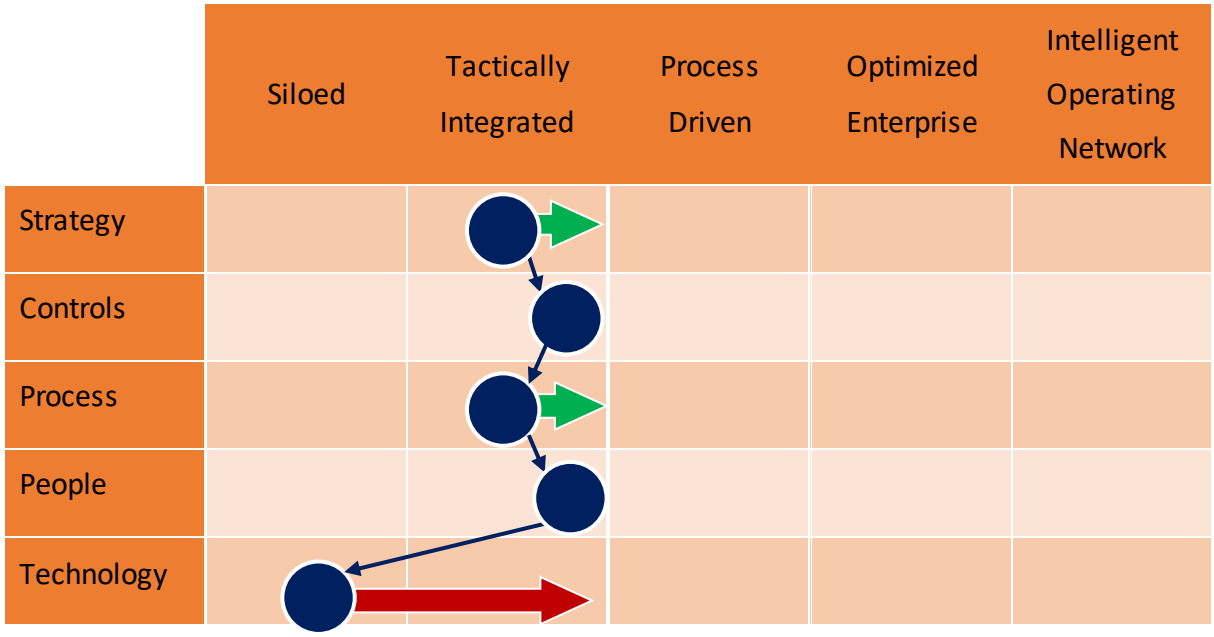

Figure 9 - Business process maturity of Company A

The maturity level of every levers of change in Company A is illustrated in figure 9 above. It is clear that the Technology factor is falling behind the rest, due to the reluctant to change and lack of investment from the managers in IT. The most developed lever is People and Controls, which is ready to move on to a Process Driven state; while Strategy and Process are at a less Tactically Integrated state. This is a common situation for the majority of organizations across the globe (Harmon, 2016).

7.1.4 Recommendation for each lever of change of company A

In order to achieve the benefits of being at the current state, there must be alignment in terms of capabilities across Strategy, Controls, People, Process, and Technology. Lower levels of capabilities in one or more of these areas will inhibit the ability to achieve the maximum benefits that could be achieved at each state in the maturity model (Fisher, 2004).

The improvement roadmap would be making all factors achieve a Tactically Integrated maturity level, and try to balance them, improvement to Strategy and Process can still be made to align with Controls and People. Meanwhile, Technology need to have a significant boost to catch up. Only then can company A start to target a Process Driven maturity level, starting from Controls and People as they are have nearly achieved this state.

STRATEGY

First and foremost, the company should reduce its reaction time to market conditions, this can be done by designing a decision-making process based on industry's best practice. The management should implement measurement for this process as well, clearly stating who can make which decision, how fast can a decision be made, consequently figure out if the decision-making personnel have the capability to influence resource in order to carry out the decision (Rosemann & vom Brocke, 2010). Company A should create a clear process improvement plan in order to have a transparent roadmap on how the processes of the company is going to change and shows the staff that top management is determined and heading towards a clear process-driven strategy. The plan should derive from the organization's main business strategy and outline how process improvement aligns with prioritized business goals (Rosemann & vom Brocke, 2010). Thereafter, the plan should also take into account the establishment of a process management team, in order to implement enterprise-wide process leadership.

CONTROLS

The Controls of Company A is near the Process Driven state, but improvement can still take place in the process measurements area. Process performance metrics should be defined next to individual KPIs, measuring both the input, output and time of the process. These measurements should consider the benefits of all stakeholders of a process and carried out in a continuous manner (Bandara, et al., 2009), establishing a foundation for the applications of data mining techniques.

According to Fisher, an organization doesn't have to shift their entire organizational model to process focus to achieve Process Driven state (Fisher, 2004). While organized around functions, company A should establish a team that is responsible for end-to-end process management with proper authority to enforce their decisions. Such a team would help centralizing process management and implement best practices across the organization.

Additionally, company A should consciously design processes the way they are perceived by their business stakeholders (including customer and partners), and then start to position their operations in these processes (Rosemann & vom Brocke, 2010).

PROCESS

The company should step up from discussing an issue around a process, to focusing on all 4 steps of a process lifecycle and apply methods of best practices drawn from Six Sigma, Lean or other methodologies (Gartner, 2008). Additionally, starts to create formal documented business processes with dedicated modelling language. Employees should be educated about these models instead of verbal documents, which will also raise the awareness of being part of a bigger process and understand the authority and responsibilities of every process roles. Experts on business process from universities, or external business analyst could be hired in order to help refining and implementing a full process lifecycle. Known experts in Vietnam can be found in University of Technology, of the Vietnamese National University or Banking Academy.

Company A should consider process reusing, whether it is structural, design or implementation reuse. It is also time to consider outsource parts of certain process (for example, design in employee onboarding) before outsourcing the whole non-core business process, (Fisher, 2004). Targeting business process outsourcing.

PEOPLE

The authority and responsibility of process owners should be more defined and extensive. Besides process improvement and monitoring, he/she should be able to develop or redesign processes. Eventually, a process owner should dedicate his/her full-time attention for process design, measurement and training participants, in such a way that process owners are responsible for assuring the dynamic improvement of the capabilities of business processes (Trkman, 2010).

Additionally, as mentioned in the Process section, hiring experts could also help educating top management on explicit and tacit knowledge about BPM practices, hence improving the level of BPM understanding (Rosemann & vom Brocke, 2010). Applying the "Train the Trainer" model enables experienced personnel to transfer their knowledge regarding a process to lower-level employees, increasing their awareness of their process. Besides, cross-department collaboration should be encouraged, and improving employee's skill regarding process issues communication.

TECHNOLOGY

From the analysis, this is the weakest aspect of company A that need heavy investment of both time and resources. As the other levers of change have achieved a Tactically Integrated state with the current IT environment, they are not bound to IT improvement to cross the bridge to Process Driven (Fisher, 2004) as demonstrated above. Company A could start investing in Customer Relationship Management or Human Capital Management system, or applications for measuring process metrics or process design as a dedicated process management team is recommended to be established. A cost-benefit analysis could be carried out to figure which kind of system can be carried out first. Furthermore, plans for policy-driven services that can respond to the continual optimization needs of business should be composed by the top management.

7.2 Company B

7.2.1 Overview of company B

Company B was founded in July 2002 in Ho Chi Minh city, being the first professional HR company to be established in Vietnam. Now, it is *"the largest HR firm, in terms of both revenue and scale, in the market"*, said the company's managing director. Company B is the owner of Vietnam's most recognized, award-winning online recruitment website for job seekers and recruiters, as well as offering Executive Search & Selection Services, Recruitment Solutions, Contingency Search Services, Job Search Services, Candidate Selection Services, and Job Opportunities.

In 2013, Company B was invested in by one of the largest Japanese employment agencies and became a member of its wide-spread network. After 15 years of development, now the

company has expanded internationally with its network reaching to 11 locations in the Asia Pacific region. As of March 2017, there are 455 employees.

The company's vision revolves around four core values: extraordinary service, honest communication, responsible actions and continuous improvement.

Company B's organization structure

Company B is a network of branches located around the Asia Pacific region, including Vietnam, Thailand, Hong Kong, Singapore, Australia, South Korea and Japan. From high level, the company has many departments: HR, Finance, Sales, IT, Customer Care, Operations, Communication, Product & Engineering and Marketing. Among these departments, Operations is probably the largest since it is responsible for the company's main business, which is providing services around permanent recruitment and contracting. There are many sub-departments under Operations as Company B offers recruitment services in a total of 12 lines of work, namely: Accounting and Finance, Technology, Supply Chain Management, Sales, Marketing, Legal and Compliance, Fashion & Luxury, Financial Services, Technology, Life Sciences and Industrial & Manufacturing. Unlike company A, company B is much more advanced when it comes to its supporting IT systems, hence, the IT department is another major investment of company B.

The organization structure might differ per branches but in general, several country managers operates the foreign operations with department directors and a manager for each sub-department in Operations.

Selection of Interviewees

The interviewees were selected specifically at the company's Vietnamese headquarter in Hanoi. Among them, the company's managing director has answered some questions of the questionnaire regarding the company's Strategy. Due to her heavy workload, the rest of the questions were answered by her secretary and other managers, being the HR director, head of sales, and a sub-department manager under the Operations department (these are the mid-level management). 2 consultants in the Technology and Finance sub-department was also informally interviewed by sending the questions and answer via email. Some of the other participants were contacted via emails and telephone besides Skype calling.

7.2.2 Data analysis and evaluation of company B's business process maturity

STRATEGY

Company B is trying to adopt its parent's company unique human resource strategy called 3E (Education, Employment, and Evaluation). The company's managing director believes *"a company is as good as its people; despite the company's endeavour to automate its major operations in the future, the planning, maintenance, implementation and development of technology are still heavily rely on human".* This strategy means company B will try to support its clients in post-recruitment stages, including employee's education and evaluation. Through this statement, the company is also aims to utilize technological advances in its information systems. This has a positive impact on the company's processes, since one of the benefits that developing supporting systems might bring along is standardized and enhanced processes. However, the company should concern how the information systems agree with business strategy. Strategic IT alignment, broadly concerned with the compatibility of IT and strategy in the organization, must also be reached (Trkman, 2010). Moreover, the director states that the company tries its best to align its core process goals with strategic goals.

When asked about adapting to market dynamics, the company puts keeping up with market demands at the highest level of concern. *"The labour market fluctuates every quarter, that's why market research is seriously carried out. The company is able to adapt its processes in accordance to market change within 1 to 3 months, depending on the process".* Without a process-centric strategy, this would not be plausible for a multinational company, of which the services it offers cover 12 industries. Whenever a change in strategy transpires, being able to determine which processes will be affected is important for keeping the company up to speed. Prior to this, a well-defined decision-making process guides the company from identifying the decision to proper actions and review. Nonetheless, there is a lack of enterprise-wide leadership for process management, as the Process Driven state requires a top down mandate, an organizational entity to lead the endeavour of moving from Tactically Integrated to Process Driven (Fisher, 2004). Due to the lack of a process management office, company B's Strategy element is currently at the **end of a Tactically Integrated** state of maturity.

CONTROL

Despite a hierarchical functional structure, the management of the company heavily focuses on its business processes. On every management meeting, the reporting and resolution of an issue is carried out for each process rather than each functional department. This shows that the decisions regarding company's operation is not rely vertically only on functional departments but also horizontally, through out a process. Processes are maintained in model form with the Unified Modelling Language, this allows a better management and inclusion of the firm's customers and partners.

Additionally, performance metrics are clearly defined and monitored for individuals but not for process team, evaluated by the employees themselves and the line manager. The current information systems do keep track of process performance with data from process output, for instance, process cycle time or customer satisfaction. Such metrics' results are used as the basis for a reward system, promoting the continuous improvement of process. These measurements should also be used in a way that guides managers' behaviour and shift the focus from personal activities to process results (Bandara, et al., 2009). A well-placed measurement and reward system is required for a Process Driven level of maturity, with process metrics tied to individual and team performance (Fisher, 2004).

Appointing suitable process owners was a matter of debate in the past, since the company was used to a hierarchical vertical management system. However, the current assigned process owners are able to design, review, improve and enact current processes. Plus, the process owners utilize RACI chart to capture the responsibility and authority of every parta ker in the process, such information is clearly illustrated and the presence of a specific reporting structure facilitates quality communication between all process roles. Besides their own authority, the active support and involvement of middle-management and employees is essential for their efforts (Bandara, et al., 2009).

In a nutshell, the Controls of company B is currently at the **beginning of a Process Driven** state.

PROCESS

The company possess a very structured and well-defined set of core business processes, some of which even extend beyond the organization boundaries; this puts its Process maturity in a more advanced state that Siloed, according to Fisher (2004). For example, the basic recruitment process of company B requires intensive and repeated communication among the client, candidates as well as Company B's consultants, legal personnel, sales and internal CV

mapping/screening systems. This process is documented and mapped with Activity Diagrams. The company also has detailed model of all core processes in the Unified Modelling Language, in fact, the company's processes are ISO compliant. This means that the job manual, management and approval of process, operation, standards and decisions are documented with the expression of reducing verbal languages. Therefore, the company process is more well maintained and focused, with official documentation using specialized modelling language, than business functions. Moreover, the processes are audited for ISO compliance in an annual manner, as well as totally revised every 6 months, which indicates a Process Driven state of maturity.

However, the management structure is still hierarchical rather than fully process focus. Because of the extensive number of branches in the APAC region, the company tries its best to standardize process by reusing and find the best practices. There are many challenges in finding the reusable parts because of the drastic differences in market conditions in different countries. Achieving process standardization is arduous and companies might find themselves lost in the complexity of promoting standards among global variations (Davis, 2010).

There is also an application for improvement suggestion, which an employee can use to submit their opinion on how to improve their process. This encourages process improvement and shows that the company is currently on a process lifecycle, with process design, implementation, control & measurement and improvement. Additionally, according to Fisher, the company must aim for business process out-sourcing if the company wants to be in Process Driven state.

All in all, the Process factor of Company B is at the **end of the Tactically Integrated** maturity state.

PEOPLE

As aforementioned, process owners are clearly defined, for example, the owner of the recruitment processes for clients is the sub-department's own manager. This means, for every recruitment industry, a different process owner is assigned. The improvement is carried out by the department's staff. However, this might make the employees that participates in multiple processes difficult to recognized the correct process owner. Nonetheless, the managing director claims that *"the employees are fully aware of their respective process owners and their responsibilities as they are trained when entering the company"*. The process

measurements in place are monitored by process owners while individual and team KPIs are monitored by the line managers. There are training programs on how to interpret these data and make necessary improvement, although some did not render quality results because they are either ambiguous or lack of motivation regarding the importance of process management training. Being a member of the network of employment agencies, Company B often invites experts from the Japanese employment agency to carry out training in recruitment skills and process improvement practices. Making the best out of the situation, this shows the commitment of the company to the development and initiatives of process management skills and expertise. Furthermore, training is deemed to be one of the condition facilitates successful BPM implementation (Pritchard & Armistead, 1999). The people of Company B is no longer fully focus on the performance of the function but the optimization of the end-to-end process, which, according to Fisher (2004), is ready for the Process Driven maturity level.

In addition, the employees within process are well informed about the process outcome as well as the process they will be a part of through training. There is no continuous training for employees nor Lean methodology applied, which means an Optimized Enterprise state of maturity is not yet achieved.

Therefore, company B's People factor is at **Process Driven** state.

TECHNOLOGY

Starting with a website for job seekers and recruiters, the company was initially web-oriented that has evolved to a multinational firm that is backed by numerous supporting systems, including Customer Relationship Management system, Human Resource Information system, as well as Database Management System and an application for CV screening and process improvement. All of these systems have interfaces with each other and supports multiple processes, from recruitment, contracting, employee profile management, benefits, payroll… This shows a cross-functional IT infrastructure with good integration. The CIO of the company confirms that a lot of the business processes were refined and improved during the development of these systems. Company B seems to have considered the software development an opportunity to revise and redraw its processes to keep them up to standards.

In 2016, Company B introduces electronic invoice for all of its services to its customer. This is also another step towards a more automated organization. The current IT systems has successfully pushed the company from a Siloed state of maturity to Tactically Integrated.

However, the best application of IT would be utilizing its capabilities to improve business processes' efficiency, rather than mere automation of these processes (Hammer, 1990). Similar to company A, these systems do not offer workflow solution or automation. Such an environment shall facilitate the dynamic configuration of processes, pushing forward the importance of process owners (Gartner, 2008).

All in all, the company's IT is at the **Tactically Integrated** maturity state.

7.2.3 Business process maturity level of company B

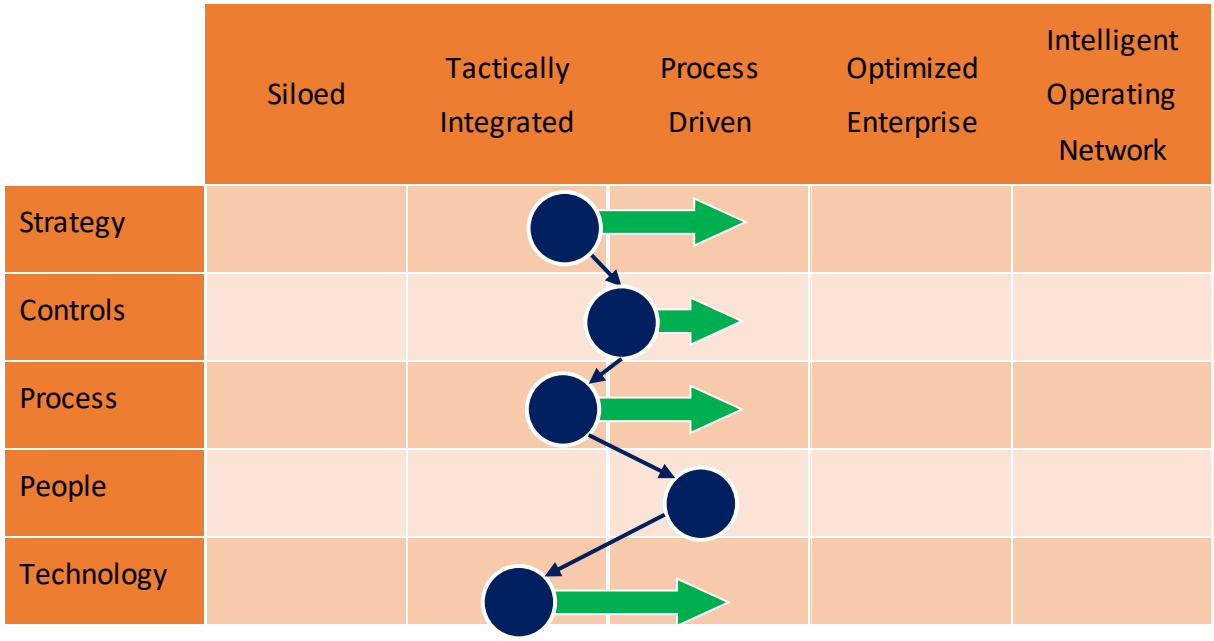

Figure 10 - Business process maturity of Company B

The figure illustrates that the levers of change of Company B are quite consistent, all of which are approaching or at the Process Driven stage of maturity. The Controls and People are already a little bit ahead and stays at the Process Driven stage while the Strategy, Process and Technology factor are closely catching up at the end of a Tactically Integrated stage. Compared to Company A, Company B is a more developed and well-rounded organization, with no factor lagging far behind the others. All in all, Company B is transitioning from a Tactically Integrated into a Process Driven one.

7.2.4 Recommendation for each lever of change of company B

As mentioned in Company A's suggestions, in order to best benefit from BPM implementation, an organization should achieve the same level of maturity across all levers of change (Fisher,

2004) prior to moving on to the next maturity levels. This means that first, the company should try to improve the maturity level of its Strategy, Controls, Process and Technology to become Process Driven, thereafter target to become an Optimized Enterprise.

PROCESS

One of the first aspects of improvement for Company B is its Process, trying to achieve the Process Driven state of maturity. Company B should formalize the process improvement cycle to create a clear roadmap for process owners as well as participants, providing an even more solid commitment toward process-oriented organization. The most important stage for elevating current process performance of company B is probably process improvement and innovation. Moreover, in order to address the challenges in reusing processes, the company should understand the right granularity for reuse as well as how to describe the process components so that they can be reused or implement tools to support the designing and managing reuse process (Davis, 2010). Added to this, it can always hire business process experts to consult and refine current processes. Regarding the change in processes when implementing BPM, project management disciplines should be given enough attention, with adequate planning, creating a suitable project team and proper monitoring and controls (Bandara, et al., 2009).

TECHNOLOGY

The next aspect to be addressed is the company's Technology. Company B should start incorporating process performance measurement services into current IT systems, instead of manually perform these tasks. Currently, the process improvement suggestion application is a right step toward this direction. In addition to this, a workflow management solution to support the process enactment stage can also be recommended (Mentzas, et al., 2001). Such a system could significantly improve process time and resource utilization (Reijers & Aalst, 2005). However, as the company's strategy is heading toward a more technology heavy firm, the management should consider the implementation of a BPMS, to automate the execution, monitoring and control of process across the firm (Fisher, 2004). This will also surely elevate the Process aspect of the company; hence, new processes could be designed based on how the information system interacts with business processes, in terms of required data or execution technique.

STRATEGY & CONTROLS

These factor of company B is entering the Process Driven stage. According to Fisher, this is a critical phase as the company tries to cross the bridge moving from Tactically Integrated, this requires a push from the creation of an enterprise-wide process leadership, which can be achieved by forming a process management department. This is a step further from company A's process management team, however, company B should be careful not to confuse the employees of the complexity of its management structure. Such a structure means that every employee has multiple leaders, which carries its own disadvantages and make it more difficult to create a process oriented structure (Ross, 1999). This is also support the continuous improvement of processes (Trkman, 2010) and supported by the implementation of the aforementioned information systems and vice versa, this organizational entity is to lead the effort of moving the company's technology department closer to other functional departments instead of being separate in traditional perception. All in all, the leadership should be focused around end-to-end processes (Fisher, 2004).

PEOPLE

Similar to Company A, this is the most developed factor of Company B. Training programs about process management practices are already being deployed, however the company should try to create a clear development path and goal for its staff to avoid confusion and create motivation. After all the other levers have reached the Process Driven stage, the company should ready its staff for the next stage. It can start with changing the attitudes and behaviour of those who are influenced by BPM, create a willingness to adopt a new management structure and methodology (Rosemann & vom Brocke, 2010). As Fisher suggested, a Lean organization is what expected from an Optimized Enterprise.

7.3 Company C

7.3.1 Overview of Company C

Established in 2006, Company C's main goal is to become the leading HR solutions company in Vietnam. Company C is a subsidiary of one of the leading outsourcing companies in Japan. As part of a larger global network spreading across 17 countries in the APAC region, Company C has the advantage of adopting the resources and knowledge of the Group company (which was established since 1981). Company possess an experienced team of consultants that offer the following services: Outsourcing: Contract Payroll and Payroll Administration, Temporary

Staff, Headhunt (Executive Search), Training Service and other HR Compliance services, such as obtaining work permits for expatriates, prepare and review labour contract or salary survey.

After more than 10 years of development, the company has 2 offices in Hanoi and Ho Chi Minh, the 2 largest metropolises in Vietnam. The number of employees as of June 2017 is 61. The vision of the company in such a frequently changing business environment as Vietnam is to help clients free mind and free hands in dealing with human resources matters, and bring clients this value through teamwork, adaptability and commitment.

Company C's organizational structure

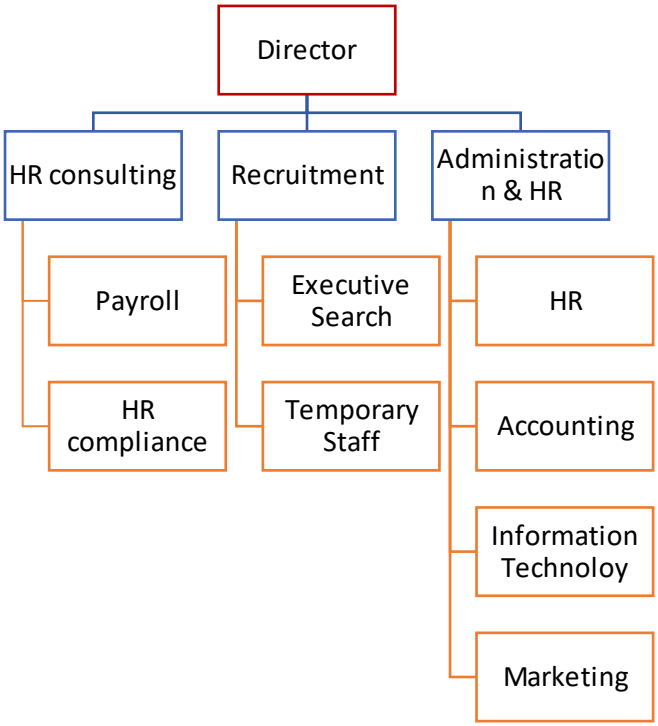

Figure 11 - Company C's organizational Structure

Company C comprises three main departments, being the HR consulting department, Recruitment department, Administration and HR department, Marketing & Sales department and an IT team. The HR consulting and Recruitment department are the two core functional entities of the company, the former is responsible for outsourcing services (payroll administration and contract payroll), as long as HR compliance services; while the latter is dedicated for headhunting (executive search), Training Service and Temporary Staff. The Administration & HR department is the back-end department of the company, which comprises 4 sub-departments, being internal HR, Accounting, IT and Marketing.

On top of the company is the Director, followed by different managers for each department and deputy managers in each sub-department, under them are senior and junior staff. The lower-level staff are divided in different functional teams in each department.

Selection of interviewees

Taking into account the organizational structure of company C, the head of the Recruitment department and Payroll deputy manager were interviewed. Since these are the most important and process heavy parts of the company, they would be among the most knowledgeable persons to understand current process situation of the organization. Similar to previous companies, 2 HR consultants in headhunting and payroll were selected to provide a different view of the company.

7.3.2 Data analysis and evaluation of company C's business process maturity

STRATEGY

Company C tries its best to create unique services and become the leading provider of those services. In particular, *"its payroll services are one of the most reputable among clients",* said the deputy manager. When discussed about the company's decision-making process, whenever a change is reported or suggested in the company, the senior staff will carry out cost-benefit analysis, survey or root cause analysis to create foundation and find suitable responsive actions. This shall be reported to the managers and surveyed down to related employees via email before the final decision can be made. The whole process is totally manually conducted but clearly defined. This could be the result of a semi-adaptation of practice used by the parent company. Unlike Company A and B, there is no low-level staff services offered by company C, this make the company less influenced by the change in business environment. In addition, as figure 11 illustrated, there is no enterprise-wide process leadership, which indicates that the company's Strategy is at the Tactically Integrated state of maturity (Fisher, 2004). This lack of process management entity makes the management of processes much more decentralized and less dedicated. Best practice across the organization and process reuse would be difficult to implement because of the scattered leadership.

In addition, the operation of the company is performed by teams; however, these teams consist of member within a single department, which facilitates the knowledge transfer between senior and junior staff but discourage the cross functional integration. According to Fisher, this is the sign of a Siloed Strategy. Finally, the company has an informal process improvement plan, conducting company-wide review of all process annually or whenever the management finds necessary.

All in all, the Strategy of Company C is at the **beginning of a Tactically Integrated** stage of maturity.

CONTROLS

When it comes to Company C's Controls, it is a bit of a mixed bag. The performing teams in the company are set up purely based on functions, in addition, process owners are defined for each recruitment and payroll process, whose responsibilities are to improve and design the company's process, before enacting the process across the functional teams. These personnel are in close contact with the network's best practices from their 30 years of experience. The company is making the best out of its situation. This shows that the company is approaching the Process Driven stage of maturity. Process roles and responsibilities are well-defined; however, process owners' authority and tasks are not comprehensive. In order to realize their potentials, process owners should be a permanent role with responsibility for designing, measuring process and train frontline staff who performs it (Hammer & Stanton, 1999). In a nutshell, process mapping is carried out but not to its fullest extent, and with a hierarchical management structure based around functional department, these are evidences that company C's Controls is still at the Tactically Integrated maturity level.

On the other hand, team based KPIs and goals are targeted and the team leaders shall divide these targets to team members. It is good that these measurements are automated for core business processes, namely executive search, payroll and several HR compliance processes. Other departments' individual performance is measured manually by managers and team leaders. The company's reward system for employees are based on individual and team's performance figures rather than process outcome. Furthermore, these measurements are purely for evaluating functional staff's performance and not tied to their processes. According to Fisher's model, this is a Tactically Integrated maturity state.

In general, the Controls lever of change of Company C is still at a **Tactically Integrated** maturity level.

PROCESS

At Company C, the core business processes are maintained in the forms of business models, and all employees have access to these models. This encourages the innovations and recommendations from employees to take place. The manager said that lower-level staff are welcome to provide feedback and suggestions to improve the process to process owners, who shall receive and implement such changes. In addition, as mentioned in the Strategy section, the processes are reviewed annually. This shows a commitment to improvement of processes;

however, the process lifecycle is incomplete without proper measurements and monitoring. When the consultants are asked about this matter, they reported that although it is true, but hardly any suggestions were submitted by the employees. When a process is being performed, some activities are done by services, which also handles the communication between different participants. This illustrates a Tactically Integrated Process, because of the lack of cross-functional team as well as incomplete process lifecycle. But as a characteristic of company C's main business processes, being one clients' service only need to be handled by one department (such as payroll services), cross functional team might not be a such an important criterion for measuring company C's Process. A positive point of the company is that it tries to adopt and re-use best processes from the parent company, although the results were not very significant. When an issue is discussed at the management meeting, it is resolve in a functional-focus way, which means that the department managers and teams shall be addressed. This means that there is no transition from functional to process focus in terms of management structure, execution teams and performance evaluation.

Therefore, Company C's Process are at the **Tactically Integrated** State.

PEOPLE

The department managers at Company C knows about process management fairly well, since they are often exposed to the practice and went through training programs conducted by the parent company. However, they claimed that would be difficult if they were to fully implement such practice in the company, they will have to face the resistant from the staff. This is true since the company operates based on traditional functional teams. According to Fisher (2004), this is the sign of a Tactically Integrated state of maturity. Still, the company tries to conduct training frequently, especially for newcomers to raise process awareness, allowing them to realized different functions in a process, process outcomes as well as process owners. This training strategy seems to be effective since the consultants said they are aware of the whole process they are in as well as the process goals, in addition, they also have access to the process model. This data shows that the People of Company C also has characteristics of a Process Driven maturity level. Additionally, process owners in the company operates under the Administration and HR department, with close support from and communication with the Recruitment manager and HR consulting manager. The fact that Company C has separate its process owners from functional departments is beneficial for them to capture the big picture from a non-functional way, and also means that the management tries their best to create a

more process centric environment without breaking out of the traditional way of business mindset. Be that as it may, the manager claims that these process owners are not professionally trained regarding process management practice.

This means that the company's People factor is currently at the end of a **Tactically Integrated** state of maturity

TECHNOLOGY

Currently, Company C has implemented both a CRM and HR information system, however, these systems are incomplete, meaning that some common functionalities of a CRM and HRM system is absent, such as workflow automation or compensation solutions. However, the payroll process is automated as well as salary planning and reporting supported by the HR system, since the main business of the company is outsourcing. It is understandable regarding the scale of Company C, which is smaller than the previous ones and the fact that the traditional ways of working is still a dominant part of the culture. These systems were installed 5 years ago by waterfall approach, seeking the best applications to meet functional requirements, which also helped improved some of the company's processes. Currently, the CRM system only supports the HR solutions and Recruitment department while back end Administration & HR uses the HR information system. These independent systems that lack integration and automation discourage integration between departments (Fisher, 2004).

Therefore, the IT of Company C is at a **Siloed** state of maturity.

7.3.3 Business process maturity level of company C

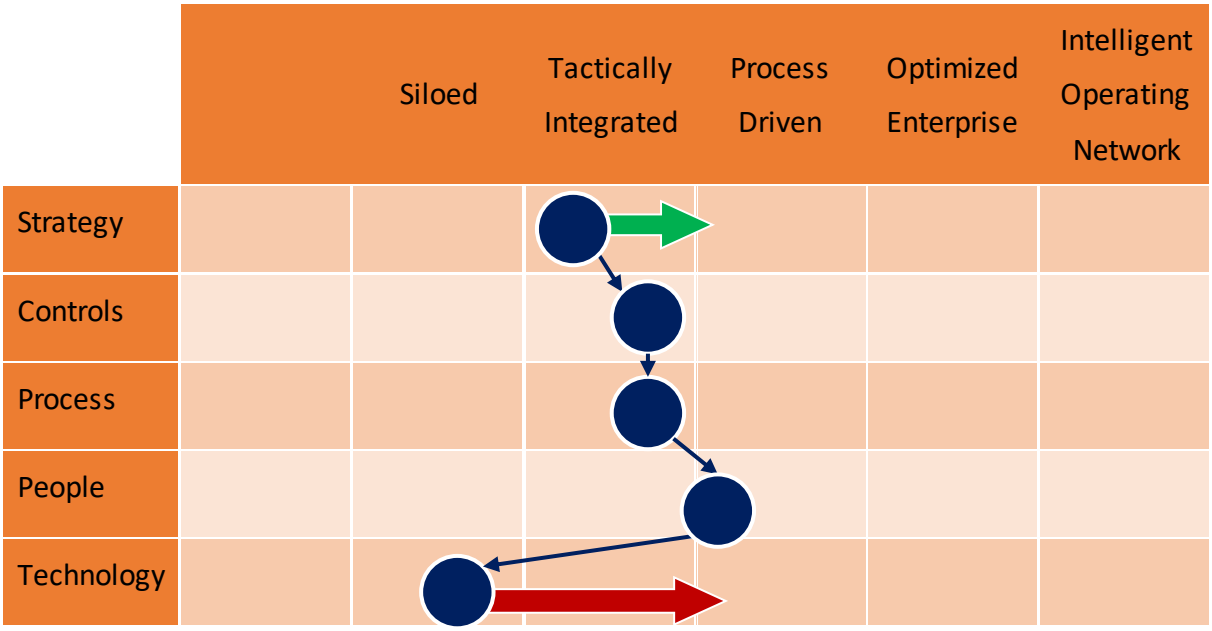

Figure 12 - Business process maturity of Company C

Figure 12 depicts the current maturity level of Company C, which is a Tactically Integrated state as the majority of the levers of change is at Tactically Integrated. Among these factors, Strategy is the least developed and People is ahead of the rest, at the end of the maturity level. The weakest point is Company C's Technology, which is in the Siloed area.

7.3.4 Recommendation for each lever of change of company C

In order to achieve the same maturity level, Company C should first start with improving its Technology and Strategy lever of change to become fully Tactically Integrated. Thereafter can the company start to target a Process Driven level of maturity.

STRATEGY

Regarding Strategy, in order to become fully Tactically Integrated, company C should take advantage of the knowledge source, being its experienced parent company and try to further improve its reaction to market dynamics. Major corporate processes supporting the objectives of the business were already defined. However, when adopting best practice processes from the parent company, company C must consider the potential impacts these changes might have on the firm's performance measures. Additionally, when setting new strategic objectives, process improvement initiatives should be prioritized (Bandara, et al., 2009). Current process owners should also be dedicated for process management, by establishing a business process

management office under the Administration and HR department. Thereafter, this office can make a more detailed process improvement plan with specific goals and targets.

TECHNOLOGY

Company C should determine the level of investment and the projects that will be supported within its limited budget. However, considering that this is the least developed lever of change, and the fact that the company possesses several legacy systems, they should contemplate the implementation of a more modern HRM system. For example, the company can start by adding another module to the current HRIS, where the employee onboarding process or payroll processing can be automated, or integrate the performance data collected by CRM with the HR information system for reward management or salary planning. Pure business logic does not require human decision and intervention can be automated as a sovereign software module.

Besides, process management measures can also be implemented and measured with automation, then the company can utilize these information for a faster decision-making process. The managers should make it clear that the IT department should not have resistant to making necessary changes in these legacy systems. However, these tools should make their end-user feel that they are helped in performing their tasks (Bandara, et al., 2009).

PROCESS

Company C should continue the current practice of going for process reuse, adopting from its parent company; however, they should find the root cause of why this practice has not been very effective. This also helps in the standardization of the company's processes, which shall be a strong foundation for automation, facilitating the implementation of new information systems. In addition, the process owners should encourage more suggestions and creativity from employees as well as managers, in order to promote process improvement. Furthermore, company C should start addressing issues based on process participant or workflow instead of department staff.

CONTROLS

After having the company's Technology and Strategy factor at the Tactically Integrated state of maturity, management can start to consider improving the Controls, Process and People.

Beside establishing a business process management office, new process metrics should be defined, including management and employee culture for evaluation. Because there are continuous interactions between multiple parties the company's core business processes, for example the executive search process, consultants, candidates and clients are in constant communication, the company should include its clients and candidates into the model and management of core business processes. Moreover, the authority of process owners should be more comprehensive. Including their data in management meeting as well as allowing them to enforce new processes instead of the department manager shall be a step forward a more process-centric management structure. Fulfilling these shall promote the company's Controls to approach the Process Driven state.

PEOPLE

Although there is a lack of support from information systems, when designing a new process, the process owners should not consider IT as an obstacle for their innovations. They need to be clear of their own responsibilities and authority. In order to achieve a Process Driven state, first, company C should allow process owners as well as low level employees to take part in training, whether at the parent company or invite experts on process implementation and management from the parent company to organize a training programme. Also, involving employees in meeting, the decision of a new process as well as process mapping relating to their everyday tasks can help to integrate process thinking among staff, as well as helping employees realize how their work creates added value to the overall process. Besides, the managers should establish a working environment that overcome conflicts between functional departments' interests.

8 Conclusions

This study took place to analyse the current situation of several Vietnamese HR businesses in terms of their business process maturity. In the process, the basic concepts around BPM was explained as well as the current trends of BPM in the world and Vietnam. It has shown that BPM is becoming increasingly more interested by managers and administrators in Vietnam, though its application is still very limited. In order to support the improvement of BPM maturity in Vietnamese HR companies, 4 research questions were raised in Chapter 3. The answers to these questions are provided hereafter.

RQ 1 Can we select a proper model for accessing HR firms' maturity model and if any improvement needed?

As presented in Chapter 4, several most cited models, according to Tarhan et al. (2015), were taken into account and Fisher's model in 2004 was selected as the most suitable one for the purpose of this study since it possesses both descriptive and prescriptive property. However, the model has some minor overlapping in its criteria when applied. Therefore, adjustments were made to the Fisher model in order to address this problem as well as to further clarify each lever of change. The changes are based on Rosemann & vom Brocke's critical success factors for BPM.

RQ 2 How to apply a maturity model to assess the business process of a company?

In the study, an interview was carried out to gather sufficient data to assess business process maturity level. On the basis of these data was further analysis carried out, in terms of five levers of change, namely Strategy, Controls, Process, People and Technology. The maturity levels for each factor are evaluated on a scale from Siloed, Tactically Integrated, Process Driven, Optimized Enterprise to Intelligent Operating Network. In the end, the overall business process maturity of all organizations evaluated are between the Tactically Integrated and Process Driven state.

RQ 3 What can be improved from the current state of business process maturity of these companies to move on to higher maturity level?

According to Fisher (2004), an organization performs at a level where it can achieve optimal results from BPM implementation when the same level of maturity is achieved throughout all levers of change. Based on this statement and the prescriptive criteria of Fisher's model, the

recommendations for achieving higher maturity levels of each lever of change were suggested for each of the companies in the study after their respective maturity levels were evaluated in Chapter 6.

RQ 4 What are the special aspects that must be taken into account when improving business process in a Vietnamese HR company?

Based on the analysis in chapter 6, some common properties can be pointed out for Vietnamese HR companies.

- In the HR industries, most companies' core business processes require constant interactions between the company, the client and candidates, the outcome of the service heavily depends on the performance of candidates and the client's judgement. This makes including these entities in the process management very important.
- Normally, HR companies have to keep track of candidates and recruiters on a wide range of industries that they offer HR services. This creates a large set of processes, among which, many is redundant (because of similar industries) and can be reuse to a certain extent.
- Most Vietnamese HR companies possesses a hierarchical management structure, and would like to maintain such a structure as well as they can when implementing a new management disciplines.
- The interest in BPM of Vietnamese companies has increased in recent years, however, the subjects are only those with a managerial position. The average employee still finds process management a very new and untraditional concept.
- As can be seen from the above maturity levels, Technology is a weakness in many Vietnamese companies. Many managers still think IT investment too expensive and not necessary, especially for HR related work since it heavily relies on human interactions. This is probably mostly due to the large amount of readily available and low-cost labour in Vietnam.
- The clarity and transparency that information systems and process centric management discipline is often less preferred due to cultural issues, for example the lobbying culture is engraved in Vietnamese population's mindset when they want to speed up the processes.

- In Vietnamese HR companies, the authority of process owners is unclear. Most of the time, they have to report and require approval from managers before implementing any change to the company's business process.

8.1 Limitations

In order to ensure its accuracy and relevance, this study was carried out in a careful manner with many considerations. However, it is not without limitations, which shall be discussed in this chapter.

The main channel for collecting empirical data in this thesis was phone interview, either via internet or direct call, due to geographical difficulties as the author cannot go to Vietnam during the process. This indirect way of data collection leaves out several important factors such as the real working environment of the company, as well as the body language of the interviewees. During the interview process, most selected interviewees are middle and high-level managers as the CEO is too busy. Additionally, not every question can be and were answered by a single manager. Therefore, multiple managers were interviewed to try to get as much information as possible.

Due to the extensive amount of business process maturity models currently available and the short time frame in which the study is carried out, it is not possible to go through every model to select the most suitable one. Therefore, the most cited models mentioned in a study by Tarhan A. and Turetken O. and Ilisulu, F. in 2015 were selected as the shortlist.

Appendix

Interview questions

Below are the questions used during the data collection process.

SUMMARY

1. Can you give me some background information of the company?

STRATEGY

2. What is the company's current business strategy and strategic goals?
3. For each process in the company, do they have respective process goals? Did you align these goals to the strategic goals?
4. What would happen if a strategic goal is changed as a result of market change, shall the operational goal and tactical goal change accordingly? What is the decision-making process when such changes transpire, how long shall it take in order for the change to be in effect?
5. How are the business processes managed in the company? Is there a dedicated office for this matter?
6. Does the management have plan to introduce new and improved methods to support process management? Can you explain how the improvements are made overtime?

CONTROL

7. What is the organizational structure and management structure of your company?
8. Who has visibility into or understanding of process management in your organization? Is there any dedicated human resource for process modelling and improvement?
9. How does the responsible personnel (process owners) manage and maintain the processes?
10. How does each employee know the authority and responsibilities of the process owners?
11. Does the company define process metrics or anything to measure performance? What is the purpose for measurement? Can you give some examples of automated and manual measurement?

12. To what extent are the customers and partners included into the processes? If so, how are they managed in the process?

PROCESS

13. Which method/language have you used to design and maintain the existing processes? Does the company use any standard set of Business process notations and standards to document your processes? How are they presented to different personnel/department of the company?
14. During management meeting, when address a certain problem, how is the problem addressed? Is it department-centric or process-centric?
15. Are you aware of a process lifecycle? To which extent do the processes in the company follow in terms of their lifecycle?
16. Which processes in the company are reused? What do you take into account when reusing your processes?
17. To what degree does the process extend in terms of scale (geographically and functionally)? Can you give an example of a core business process?

PEOPLE

18. What do you know about business process management? Have you had any training regarding this subject?
19. Are all employees acknowledged that they are part of a larger process and understand the responsibility as well as authority of their process owners? How well do they know of what they should do to achieve the process goal?
20. Do the employees understand the importance of cross-department/process-centric cooperation?
21. How are the process owners trained regarding process management techniques as well as process lifecycle?
22. How are the working teams divided in your company? Usually, there are different teams engaged through the process, how do they communicate? (on demand, periodically…?)

TECHNOLOGY

23. What kinds of system or service do you have in the company? What are their purposes and which process/activity of the company do they support?
24. How do these systems integrate with each other?
25. How were these systems developed? Are most system developed with a “waterfall” method or Agile? Does the development of these system help in terms of refining the processes in the company?
26. As an HR company, of which the processes are very clear, structured and well-defined, which process, in your opinion, needs IT involvement the most?
27. Which processes in the company are automated?
28. Do you plan to adjust the behaviour of your IT department to make it fits toward process management? Such as implementing a workflow automation system?

References

Aalst, W. v. d., Hofstede, A. t. & Weske, M., 2003. *Business Process Management.* s.l.:Springer-Verlag Berlin Heidelberg.

Archie III, L. & McCormack, K., 2004. The development of a supply chain management process maturity model using the concepts of business process orientation. *Supply Chain Management: An International Journal,* 9(4), pp. 272-278.

Bandara, W., Alibabaei, A. & Aghdasi, M., 2009. *Means of achieving Business Process Management success factors.* Athens, Department of Management Science & Technology, Athens University of Economics and Business.

Benner, M. J. & Tushman, M. L., 2001. Exploitation, Exploration, and Process management: The productivity dilemma revisited. *The Academy of Management Review,* Issue 28, pp. 238-256.

Breyfogle, F., 2014. *Quality Magazine.* [Online]
Available at: http://www.qualitymag.com/blogs/14-quality-blog/post/92305-five-benefits-from-implementing-business-process-management

Bryman, A. & Bell, E., 2007. *Business research methods.* 2nd ed. s.l.:Oxford University Press.

Bucher, T., Raber, D. & Winter, R., 2015. A Taxonomy of Business Process Management Approaches. In: *Handbook on Business Process Management 2.* 2 ed. s.l.:s.n.

Burattin, A., 2015. *Process Mining Techniques in Business Environments.* 1 ed. s.l.:Springer International Publishing.

Chang, J. F., 2006. *Business Process Management Systems: Strategy and Implementation.* s.l.:CRC Press.

Curtis, B. & Alden, J., 2006. BPM&Organizational Maturity. *BPTrends*, November.

Curtis, B. & Alden, J., 2006. Business Process Improvement Guided by the BPMM. *BPTrends.*

Curtis, B., Hefley, W. E. & Miller, S. A., 2010. *People Capability Maturity Model® (P-CMM)®,* s.l.: CMMI Institute.

Dallas, I. & Wynn, M. T., 2014. Business Process Management in Small Business: A Case Study. In: *Information Systems for Small and Medium-sized Enterprises.* s.l.:Springer-Verlag Berlin Heidelberg.

Davenport, T. H., 1993. *Process Innovation: Reengineering Work Through Information Technology.* s.l.:Harvard Business School Press.

Davis, R., 2010. *BPTrends.* [Online]
Available at: http://www.bptrends.com/publicationfiles/SIX%2002-10-COL-Process%20in%20Practice-Process%20Reuse-Davis-final.pdf
[Accessed July 2017].

De Bruin, T., Freeze, R. D., Kaulkarni, U. & Rosemann, M., 2005. *Understanding the Main Phases of Developing a Maturity Assessment Model.* s.l., s.n.

Dixon, J., 2011. *Tales From the Trenches: Five BPM Pitfalls to Avoid,* s.l.: Gartner Group.

Fisher, D. M., 2004. The Business Process Maturity Model A Practical Approach for Identifying Opportunities for Optimization. *BPTrends.*

Garimella, K., Lees, M. & Williams, B., 2008. *BPM Basics for Dummies.* Indianapolis, Indiana: Wiley Publishing, Inc.

Gartner, 2008. Maturity Assessment for Business Process Improvement Leaders: Six Phases for Successful BPM Adoption. *Gartner for IT Leaders,* 3 September.

General Statistics Office of Vietnam, 2016. *Vietnam Labour Force Survey ,* s.l.: s.n.

Hammer, M., 1990. Reengineering Work: Don't Automate, Obliterate. *Harvard Business Review,* 68(4), pp. 104-112.

Hammer, M. & Chappy, J., 1993. *Reengineering the corporation: a manifesto for business revolution.* s.l.:Harper Business.

Hammer, M. & Stanton, S., 1999. How Process Enterprises Really Work. *Harvard Business Review,* 77(6), pp. 108-118.

Harmon, P., 2005. CMM and BPM. *BPTrends,* 3(20).

Harmon, P., 2013. *The State of Business Process Management.* s.l., BPTrends.

Harmon, P., 2016. *The State of Business Process Management,* s.l.: BPTrends.

Hyde, K. F., 2000. Recognising deductive processes in qualitative research. *Qualitative Market Research: An International Journal,* 3(2), pp. 82--90.

Jeston, J. & Nelis, J., 2006. *Business Process Management.* s.l.:Routledge.

Larnholt, L., 2015. *5 Industries Desperately in Need of Business Process Management.* [Online]
Available at: https://www.processmaker.com/blog/implementing-bpm/5-industries-desperately-in-need-of-business-process-management/

Looy, A. V., Backer, M. D., Poels, G. & Snoeck, M., 2013. Choosing the Right Business Process Maturity Model. *Information & Management,* 50(7).

McCormack, K. P. & Johnson, W. C., 2001. *Business Process Orientation: Gaining the E-Business Competitive Advantage.* s.l.:CRC Press.

Mentzas, G., Halaris, C. & Kavadias, S., 2001. Modelling business processes with workflow systems: An evaluation of alternative approaches. *International Journal of Information Management,* 21(2), pp. 123-135.

OMG, 2008. *Object Management Group, Inc.* [Online]
Available at: http://www.omg.org/spec/BPMM/1.0/PDF

Phan, D. T. & Mai, T. T., 2013. *Business process management - The new trend in developing bank product and services.* [Online]
Available at: http://mis.hvnh.edu.vn/Gi%E1%BA%A3i%20ph%C3%A1p%20qu%E1%BA%A3n%20l%C3%BD%20quy%20tr%C3%ACnh%20nghi%E1%BB%87p%20v%E1%BB%A5%20BPM%20%E2%80%93%20Xu%20h%C6%B0%E1%BB%9Bng%20m%E1%BB%9Bi%20trong%20ho%E1%BA%A1t%20%C4%91%E1%BB%99ng%20ph%C3%A1t%20tri%E1%BB%83n%20s%

Pritchard, J. & Armistead, C., 1999. Business process management ± lessons from European business. *Business Process Management,* 5(1), pp. 10-35.

Pyzdek, T. & Keller, P. A., 2014. *The Six Sigma Handbook.* New York: McGraw-Hill Education.

Reijers, H. A. & Aalst, W. M. P. v. d., 2005. The Effectiveness of Workflow Management Systems: Predictions and Lessons Learned. *International Journal of Information Management,* 25(5), pp. 458-472.

Ritchie, J., 2013. The Applications of Qualitative Methods to Social Research. In: J. Ritchie & J. Lewis, eds. *Qualitative Research Practice: A Guide for Social Science Students and Researchers.* s.l.:SAGE, pp. 24-34.

Rogers, P. R., Miller, A. & Judge, W. Q., 1999. Using Information-Processing Theory to Understand Planning/Performance Relationships in the Context of Strategy. *Strategic Management Journal ,* 20(6), pp. 567 - 577.

Röglinger, M., Pöppelbuß, J. & Becker, J., 2012. Maturity Models in Business Process Management. *Business Process Management Journal ,* Issue 18.

Rosemann, M. & Bruin, T. d., 2005. Towards a Business Process Management Maturity Model.

Rosemann, M. & vom Brocke, J., 2010. The Six Core Elements of Business Process Management. In: *Handbook on Business Process Management 1.* s.l.:s.n., pp. 107-122.

Ross, J. W., 1999. Dow Corning Corporation: Business Processes and Information Technology. *Journal of Information Technology,* 14(3), pp. 253-266.

Rudden, J., 2007. Making the Case for BPM: A Benefits Checklist. *BPTrends.*

Smith, A., 1776. *The Wealth of Nations.* s.l.:William Strahan, Thomas Cadell.

Snape, D. & Spencer, L., 2013. The Foundations of Qualitative Research. In: J. Ritchie & J. Lewis, eds. *Qualitative Research Practice: A Guide for Social Science Students and Researchers.* s.l.:SAGE, pp. 2-10.

Spanyi, A., 2003. *Business Process Management (BPM) is a Team Sport: Play it to Win!.* s.l.:Anclote Press Imprint of Meghan-Kiffer Press .

Tarhan, A., Turetken, O. & Ilisulu, F., 2015. *Business Process Maturity Assessment: State of the Art and Key Characteristics.* s.l., IEEE.

Trkman, P., 2010. The Critical Success Factors of Business Process Management. *International Journal of Information Management.*

VietnamWorks, 2006. *New Findings about the Millenials in Vietnam,* s.l.: s.n.

VietnamWorks, 2010. *Vietnam Workforce Report,* s.l.: s.n.

Weske, M., 2007. *Business Process Management: Concepts, Languages, Architectures.* s.l.:Springer Science & Business Media.

Wohlin, C., 2014. *Guidelines for Snowballing in Systematic Literature Studies and a Replication in Software Engineering.* London, s.n.

Zairi, M., 1997. Business process management: a boundaryless approach to modern competitiveness. *Business Process Management Journal,* 3(1), pp. 64-80.

Auteursrechtelijke overeenkomst

Ik/wij verlenen het wereldwijde auteursrecht voor de ingediende eindverhandeling:
Evaluating business process maturity in Vietnamese human resource firms

Richting: **Master of Management-Business Process Management**
Jaar: **2017**

in alle mogelijke mediaformaten, - bestaande en in de toekomst te ontwikkelen - , aan de Universiteit Hasselt.

Niet tegenstaand deze toekenning van het auteursrecht aan de Universiteit Hasselt behoud ik als auteur het recht om de eindverhandeling, - in zijn geheel of gedeeltelijk -, vrij te reproduceren, (her)publiceren of distribueren zonder de toelating te moeten verkrijgen van de Universiteit Hasselt.

Ik bevestig dat de eindverhandeling mijn origineel werk is, en dat ik het recht heb om de rechten te verlenen die in deze overeenkomst worden beschreven. Ik verklaar tevens dat de eindverhandeling, naar mijn weten, het auteursrecht van anderen niet overtreedt.

Ik verklaar tevens dat ik voor het materiaal in de eindverhandeling dat beschermd wordt door het auteursrecht, de nodige toelatingen heb verkregen zodat ik deze ook aan de Universiteit Hasselt kan overdragen en dat dit duidelijk in de tekst en inhoud van de eindverhandeling werd genotificeerd.

Universiteit Hasselt zal mij als auteur(s) van de eindverhandeling identificeren en zal geen wijzigingen aanbrengen aan de eindverhandeling, uitgezonderd deze toegelaten door deze overeenkomst.

Voor akkoord,

Chu, Ngoc Khanh

Datum: **21/08/2017**