Making the Connection Between SAP ERP and Business Process Management

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Bachelor’s Thesis

2022

Bachelor of Information Technology

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Degree
Bachelor of Information Technology

Thesis title
Making the Connection Between SAP ERP and Business Process Management

Number of pages
23

The purpose of this Thesis is to propose an integrated approach to process integration, SAP ERP and optimization through enhanced business process models. Once updated business process models are adopted, it is proven that the integrated approach can improve existing business processes in enterprise resource planning (ERP) beyond business process re-engineering (BPR) principles.

This thesis gives a summary of some principles based on professional users' experiences in various firms. These ideas may be used in industrial businesses as a process improvement strategy to get the most out of SAP and BPM.

While writing the Thesis , several research papers have been refered and only relevant sections have been included in the thesis .Different methods for integration of ERP and BPM have been discussed and compared , these are based the existig knowldedge of the previous reaserches.

The conclusions of thesis is the survey results , which are can minimum guidelines for any organisations which has ERP environment or is in the process of implementation of SAP(ERP) . These guidelines can act as basic priciples while integrating the ERP with BPM . However these can be treated as exhustive list since every organisation is different .

Conclusions have been drawn based on the web survey and also the scope for future resecrh has been wriiten for the areas this thesis has not covered due to practical limitations .

Keywords
SAP; ERP; Enterprise Resource Planning; BPM; Business Process Management;

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1 Introduction

Organizations have transitioned from standalone business information systems apps to integrated and adaptable enterprise-wide information systems in the last 10 years. ERP systems, on the other hand, are large and sophisticated systems that require careful design and execution to assure their success. They aren't just software systems; they have an impact on how a company operates.

Traditionally, IT for business applications has been used to automate an organization's pre-existing operations. IT will not significantly increase productivity unless management procedures, including the fundamental structure of the organization, are modified to accept and maximize the benefits of current IT breakthroughs. The innovative use of technology helps to shape and restructure the organization. IT used to primarily apply existing business norms and procedures, effectively passively amplifying the current business frameworks.

SAP and Business Process Management (BPM) are two potential methods for streamlining business processes. Traditional business procedures are included in SAP's ERP software to achieve this aim, but BPM's main goal is to deliver enhanced processes in an organization. Both, on the other hand, work and may be used separately, which is critical.

Business plans should be developed with IT in mind, and IT should effectively represent business strategies. BPM would be difficult to execute and may fail in many organizations if it did not make imaginative use of technology.

1.1 Problem Definition

Business process management is a critical component of continuous improvement and business transformation, but many firms struggle to put it in place successfully. Simply said, business processes are the methods by which work is carried out in any organization. They are cross functional and cover all organizational tasks, such as order fulfillment, which includes everything from client orders to final delivery.

In principle, BPM and SAP have little to do with one another. BPM is a non-IT approach of establishing and managing business processes in businesses. BPM never take care of the Master data, transactional data, finance, and accounting data etc. which are voluminous in any organization. As a result, they must be linked to ERP systems that hold this type of information and transactions. Therefore, many businesses are harnessing the web-based BPM solutions to integrate inhouse business processes with no turbulence to the transactional systems of the elements involved.

Because of their unique needs, most businesses who deployed these systems picked software from several providers. As a result, businesses must now combine disparate information systems. This can be explained through an example, let us say Customer requests a service order, the order gets accepted through a CRM program and should deliver a status report ,but at the same time when customer demands that credit report which may not be available to him since this is located on ERP , this will be unsatisfactory experience for customer.

1.2 The research question and objectives

This thesis aims to strive to find most logical and efficient ways to compress the barriers in Business processes and SAP, So it prescribes some road maps for utilizing BPM and SAP ERP software effectively and efficiently. Using a variety of questions and tactics, a realistic strategy that does not make the program impracticable is provided. This study demonstrates the way two different concepts i.e., SAP and BPM can collaborate in practical environment and at the same time analyzed, basis the experience of seasoned experts in various SAP implantation firms.

1.3 Thesis structure

The thesis structure begins with an introduction that contains background information and topic descriptions, as well as aims, restrictions, advantages, thesis type and research question, and finally, important concept insights and a risk analysis.

The theoretical framework provides a deeper look into theories related to the study issue, as well as crucial vocabulary definitions and examples of key concepts.

The Research Method section of Chapter 3 delves into the research process, resources, and interviewees, as well as the processes required to arrive at the thesis's conclusion. The outcomes of the qualitative research interview's investigative questions (IQ's) are reported in Chapter 4 along with their effect and advantages for implementation and utilization.

The conclusive chapter 5 states the outcome of the thesis is based on the interviews conducted for which web survey was conducted. The conclusion section also states the need for future research for the questions unanswered .

2. The Theoretical background and sources

For the theoretical portion, I have used articles and publications that cover ERP implementation concepts and discover the possible and efficient integration between Business Process Management and ERP. Various publications and white papers were obtained online by searching for relevant keywords. The articles chosen to demonstrate ERP deployment frameworks were chosen from a pool of papers based on how often they were mentioned or referred by other authors.

2.1 ERP (SAP) and BPM

Companies started using ERP systems in the 1990s to combine corporate activities including manufacturing, sales, and distribution, assembling, Finance & accounts, logistics and human resources. The most significant achievement of ERP systems has always been the creation of a unified and consistent database that spans several departments within a firm. Before the advent of ERP, organizations had inbuilt systems and numerous other systems applications those were overcome by ERP environment providing the scope of integration.

ERP (SAP)

Enterprise Resource Planning which helps run core processes in a single system for departments such as finance, manufacturing, HR, supply chain, services, procurement, and others.

Via integrated functional applications throughout the whole business, ERP systems have evolved as the basis of successful data, information, and knowledge management. Furthermore, ERP systems are increasingly being used to help organizations in an ever-changing context of shrinking market shares, fierce rivalry, rising consumer demands, and globalization.

One of the most favorite Areas for investment these days is the Capex on ERPs amongst the Big Overseas companies Davenport, 1998). However, after spending so heavily organizations realized that full potential of ERP is less than realized as what is expected from these, especially when it comes to integration (Beretta, 2002).

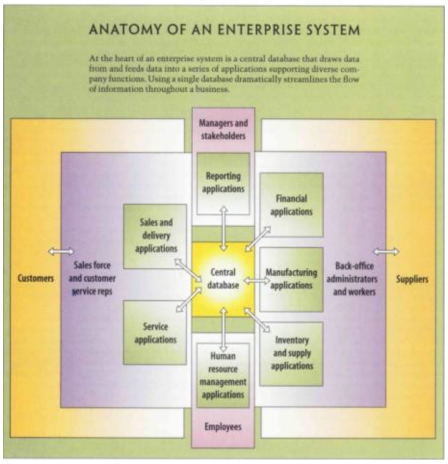

Figure 1: Anatomy of an Enterprise System (davenport 1998, HBR enterprise systems)

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1. Packaged solutions for 25 industries and 12 lines-of-business: on premise, cloud, hybrid
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Business Process Management

Business processes may be brought "to life" in daily work with the aid of systematic process management (Business Process Management, or BPM for short). This lays the groundwork for discovering and pursuing untapped potential. The people involved are a critical aspect of process management. BPM may reduce friction at departmental boundaries, inspire workers, and improve process acceptability. BPM is the art of reducing costs and time while maintaining process quality. There are distinct effort and cost blocks in each management job or implementation project, and they can vary substantially depending on the scale of the project, the strategy, and the organization.

BPM stands for Business Process Management that is used in a variety of ways. BPM is frequently confused with Workflow Management. Monitoring is an important aspect of process management, but it needs some preceding work, which the methodical approach provides.

It's also important to distinguish between business process management and business performance management. This includes approaches, tools, and procedures for enhancing a company's performance and profitability. The emphasis here is on key figure measurement and determination, which is more in the realm of business intelligence.

BPM allows users to see and control all aspects of a transaction or information request that spans various applications, functions, and people in one or more businesses. It can assist businesses in identifying operations that should be automated, automating workflow, monitoring, and enforcing business rules for both human and automated processes, and integrating IT infrastructure with enterprise application integration (EAI) technologies.

What added value does BPM offer?

BPM aims to increase an organization's ability to quickly fit to altering circumstances (Smith & Fingar, 2007). This will be accomplished by returning control of processes to those who work in the real company. Today, IT plays a significant role in supporting and even managing business processes, therefore returning control of the processes to the company would need regaining control of their IT systems.

BPM provides not just process automation but also business process adaptability to changing market and consumer needs, including the emergence of improved service offerings.

This additional benefit is equivalent to a glacier ski tour. To begin, one must purchase an expensive gondola lift ticket in order to reach the glacier (high initial effort without direct major benefit). One can almost effortlessly enjoy the slopes after he/she 've reached the summit (little effort, exploiting the potential). Those who are first to the top can track their own lane, set their own pace and bends, and avoid having to follow or cross the tracks of their forerunners (competitive advantage).

Assume a payroll clerk is responsible for reviewing and reconciling budgeted and actual payroll each pay period. The clerk must disclose the disparity and detail the explanation if the difference is larger than 2%. If the discrepancy is larger than 4%, it must be reported to the department manager for clarification, and then to the finance director for evaluation. Participants in the process can keep track of any unsolved concerns at each level. The procedure is repeated until all difficulties have been handled and all measures have been authorized by the predefined authority.

How can BPM improve collaboration?

The people involved are another crucial aspect of process management. Friction losses at departmental borders can be minimized if the organization adopts and promotes a process-oriented, holistic mindset. There is significant potential for the formation of a new togetherness where before isolation and departmental boundaries ruled if everyone thinks along and knows and considers the colleague and his or her assignment before and after their own work. As a result, it is feasible to modify the process flow structure to take use of the optimization potential more effectively. Quality improves almost naturally in terms of internal procedures, as well as goods and services.

ERP's Impact on Business Processes

An ERP system has a multifaceted influence, meaning it has an impact on a wide range of factors in a company (Somers & Nelson, 2004). With Implementation of SAP comes the new divisions and roles to handle the system and its data as there are some of the organizational and or structural changes owing to the reason that the ERP system will control most IT tasks internally, commercial responsibilities .With IT contracting businesses will be adjusted, if not completely split. to make space for the new information flows and workflows, the patterns of Business will need to be updated (Gefen & Ragowsky, 2005).

Job descriptions would need an overhauling tasks become automated, obsolete, or alter in nature. Eventually, business flows and logics must undergo scrutiny for changes in ownership, participants, Data flow, and priority level.

Because all ERP systems come with a preconceived idea of how a company's processes should function, it's critical to include process modification as part of the deployment goals (Ross & Vitale, 2000). However, understanding these procedures is and not making assumption is of equal importance (Harris, 2004). As a result, a better-informed choice may be made on whether to use the ERP system's process proposals or create workarounds. According to Harris (2004), a vivid scene must be developed as to what way business will operate once ERP is in place which mandates the study of current and upcoming procedures. There would be a risk that techniques that are inefficient will be automated eventually not harnessing the systems power to the fullest owing to the reason that initially the cost of operating the ERP will shoot up which means that if costs are to be justified than strategic decisions are must.

BPM IT Aspects

Although taking the footpaths of information Technology was never compulsory for BPM to come in existence, it can smooth the processes in many ways. In recent times the techniques such as BPMS have come into existence.

BPMN and BPMS can be used interchangeable to good extent as both are used for modelling, evaluation of business processes (Reijers, 2006). One of the important differences among the two is that BPMN is embedded with analytical tools for modelling and process supervision. On a longer horizon, BPMS must be capable of deliver greater business to business integration.

Top management are the ones deciding the strategic decision however the decisions are shared with the rest of the team unless the execution commences. ERP choices are frequently made on a strategic level, implying that the initial part of their technique is carried out in collaboration with personnel in management roles inside the customer firm.

ERP installation with BPM

Many may claim that merging ERP and BPM deployment is impossible owing to the different organizational levels at which they are carried out. BPM is a strategic strategy, whereas ERP is designed to improve a company's operational functionality. However Strategically, both concepts can be explored by treating them as stages.

The routine tasks are granulated for each phase be those are for mangers of implementation team members. Decisions for ERP are always taken at the topmost level of the management for which the basic need is always to take the middle level or lower management in confidence.

The tactical implementation of an ERP follows, and when it becomes live, it has a significant impact on an organization's operational level. Its foundation in material resource planning systems only adds to this, although ERPs touch practically every operational unit. For BPM the controlling and implementation is done at the top management level, even though the process owners will fix the routine blockages. Business Process designing, controlling and implementation are always managed at by BPM which are customized as per the organization’s business scenario and requirements.

Amongst the most desired outcomes from the BPM are discovery, design, implementation, and execution of processes. These are the same processes that will be impacted by the ERP system, allowing BPM to be used in an ERP installation. The stages in implementation in both ERP and BPM have some parallels.

Discovery: One of the early steps in the preparation for installing an ERP system is to learn how it might be done or can be done. Nevertheless, reviewing and understanding the business implies that commencement of the project.

However, the introspection of the business most likely means that the project has started, at least from the business point of view. For moving from conceptual framework to functional matrix deep dives must be made by the business front and cascade those to the experts.

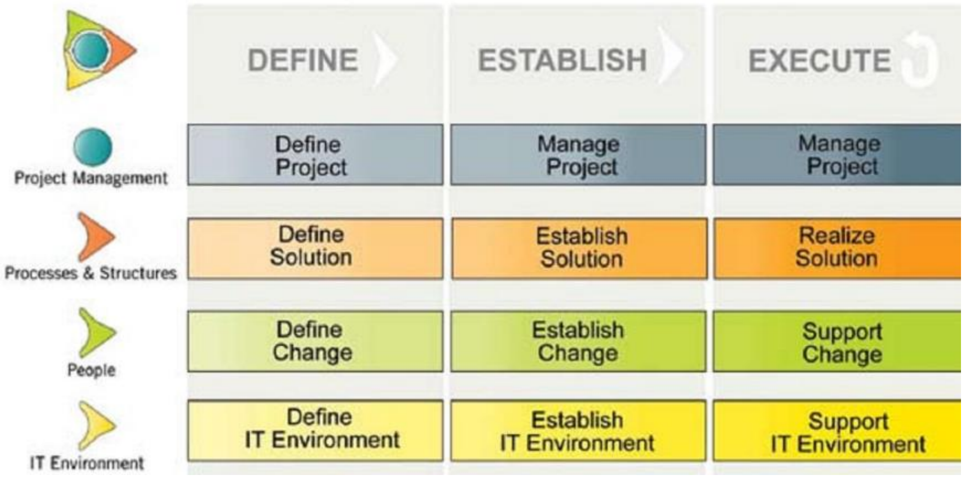


Figure 2: Implementation Model, (Niklas Idorn,2007, ERP adoption through the perspective of business process management)

Design: The design phase envelopes around the sketching the business scenarios, rethink those and draft the design. This will be accomplished by adopting a modeling notation that business analysts can comprehend, hence shortening the time it takes to get from requirement definition to program code. The design phase in BPM to a good extent is like the design phase described in ERP Matrix Combining the BPM design phase with the design phases of ERP deployment might result in a lengthy and inconvenient process. Here, the mapping plays a major role than the emergence of the processes since the design must come into existence.

Deployment. Deployment can be expressed as mechanism that which triggers the execution and is cascaded to all the stakeholders (Smith & Fingar (2007). Moving to another process is eased out by managing the tie up with the legacy and intended systems. Integration with is quite common when it comes to installing the ERP systems. If the integrations are on right track once it is go live, this can be ensured by the deployment.

Execution: The process management systems leverage to carry out the new process as suggested by (Smith & Fingar ,2007). However, execution is said to done when all the processes can be commenced, and stakeholders are able to deliver the results. The execution is the same as when an ERP system goes live, which implies that all the new procedures are employed.

The steps mentioned are correlated to the emergence of the ERP system, there are others stages also, however no direct correlation with the deployment stage . In BPM, the terms "interaction," "monitoring and control," "optimization," and "analysis" highlight the word "management" and relate to the ongoing effort of supervising and improving business processes.

Interaction: Process interfaces are the ones through which stakeholders would communicate. People can supervise, watch, monitor, and intervene in processes using these technologies, which act as a bridge between human labor and automation. As per Smith and Fingar (2007) there are likely to be techniques which will enable users to read, edit very much the way HTML editors allow.

2.2 Integration Approaches Examination

Lam and Shankararaman (2007) suggested that there are four basic integration architectures:

A. **Batch integration:** The real time integration is absent in this approach because the middleware does not exist. Batch based approach is adopted to move the files amongst the different programs.

B. **Point to point integration**. This integration is a Hybrid of the real time and non-real time processing. The communication occurs amongst the interfaces between individual IT applications.

C. **Broker-based integration**. The broker serves as an integration point for data transformation and messaging routing. Real-time processing is enabled by the middleware that connects the IT applications and the broker.

D. **Business process integration**: In the approach the business process model plays a vital role when the workflow amongst IT applications and employee gets captured.

Both broker-based and business process integrations mentioned above covered by the Service oriented Architecture (SOA). Here IT provides business functionality as s services to which different IT systems may have also access, (Ciganek et al., 2007).According to Josuttis (2007), SOA is built on three main technical concepts:

A Service: is a self-contained piece of business functionality that consists of either simple (like retrieving customer data) or complicated (like retrieving customer data) actions (e.g., sales order management). When the service is available on an intranet or internet, it is known as a web service.

Enterprise Service Bus (ESB): It is the broker that allows for high service interoperability across distributed systems. It simplifies the distribution of business processes across several systems and platforms using various platforms and technologies.

LOOSE COUPLING: It's the idea of letting go of system dependencies. Because business activities are spread across several applications, it's critical to reduce the impact of changes and failures.

2.3 Core business processes in ERP system environment

Sales and distribution (SD), production planning, plant maintenance, project management, materials management, financial planning, and human resources are just a few of the functional applications that make up an ERP system's business processes (Sumner, 2005; Monk and Wagner, 2006). Each of these functional applications' process cycles integrate various functions, events, and other process components for planning, controlling, and executing many items/components (materials, resources, and vendors) involved in the planning, control, and execution of many items/components (materials, resources, and vendors) (Curran et al., 1998). These process cycles are made up of several cross-functional processes in general. Each business process in an ERP system will have some data components, structures, and organizational features, depending on the application area.

Furthermore, process components can be linked to other process components as well as data elements and structures. Take an example of a order proposal which creates specification of the customer’s product (Karim et al., 2009).

2.4 Illustration SAP Business Process Management processes are supported

In the figure 3, it is demonstrated that sales representatives give printed quotations to the sales department, which inputs them into a non-SAP application, as an example of a regular offer to cash procedure. Following that, the quote is created using a SAP system interface. Several written and verbal communications amongst the customer, the sales agent, and sales department can occur before the quote is fully turned into a sales order. The sales manager intends to give the sales agents some latitude in closing the deals, however he demands on authorizing any discounted sales orders over a certain % or limit. The sales order is formally accepted, executed, billed, and settled for after approval. (Which SAP business process management 2010 processes)

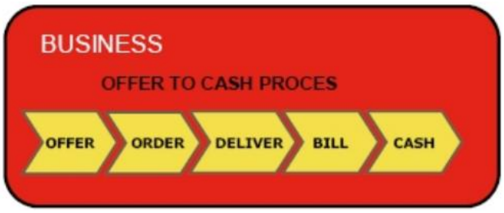


Figure 3: Offer to cash process (Frank Jacobs, blogs.Sap)

Current IT solution: SAP Customization

The code was written to input the quotation into a Legacy software and then create the quotation in SAP through a file interface for this critical quotation and sales order workflow. New added enhancements have been made to allow the quotation to incorporate varying amounts of discounts. This is never sufficient, and as a result the salesman must amend the offers and sales orders. (Which SAP business process management 2010 processes)

This way, sales orders get an approval by Sales manager where discounts exceed a certain amount or %. To change the approval percentage the sales manager is left with no option than requesting a code modification. Most of the times the time change takes nothing less than 14 days (Which procedures are supported by SAP BPM 2010)

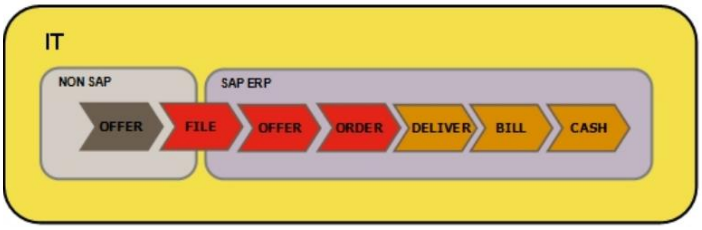


Figure 4: The present IT system is a combination of conventional SAP (yellow flows) and customised development. (Frank Jacobs, blogs.Sap)

IT as a Process Improvement Enabler

The IT Manager is having trouble understanding his colleague's request. In the existing SAP system, even more bespoke code would be necessary to grant the business request. The quantum if code in SAP will at the lowest point. User interfaces and business rules might be created with existing techniques. IT Manager may now grant the sales manager's request thanks to SAP BPM. He can create one or more process-oriented and user-friendly Composite Applications with flexibly specified Business Rules using the SAP Composition Environment (CE). With the implementation of Enterprise Services, data may be transmitted between SAP other semi-SAP systems (ES). This strategy avoids the creation of new, potentially difficult code while also removing existing code. (Which SAP business process management 2010 processes)

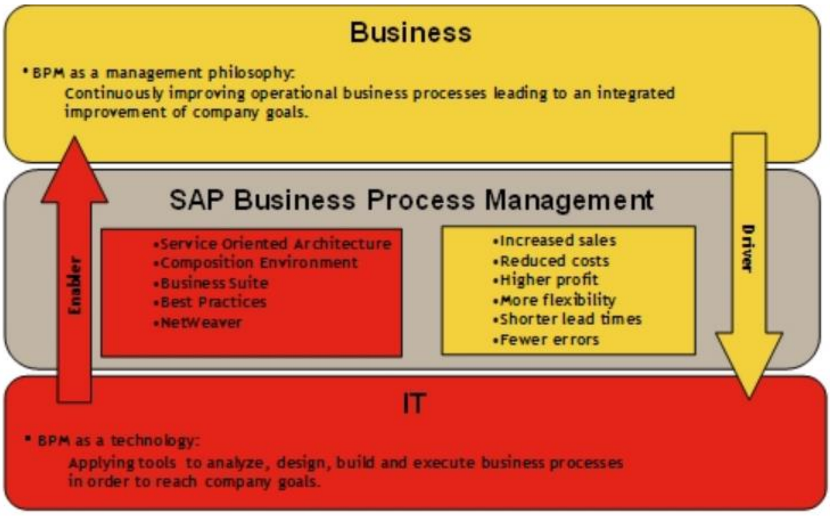


Figure 5: Techniques and concept of BPM: (Frank Jacobs, blogs.Sap)

SAP BPM Heterogeneous Applications Solution

Salesmen deploy a webpage to browse the "Offer" Hybrid Application, which make it possible to create new quotations and amend existing ones. These quotes will be updated using standard SAP Enterprise Services in both non-SAP and SAP ERP systems.

The sales team's SAP ERP interface and manual quotation entry are no longer required. The time it takes to get a quote is cut in half, as is the danger of making a mistake**.**

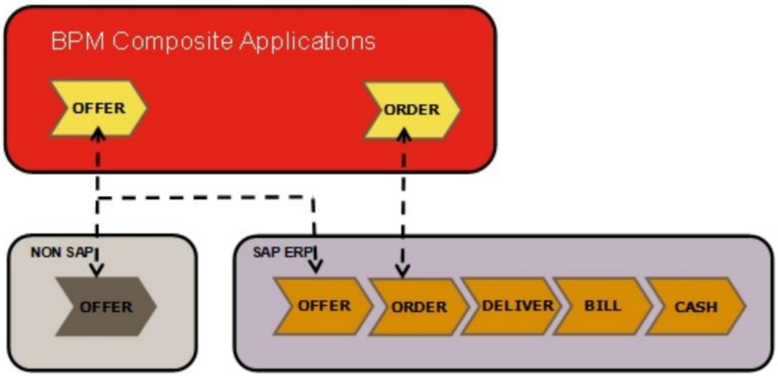


Figure 6: SAP BPM solution and Enterprise Services (Frank Jacobs, blogs.Sap)

2.5 Processes that can be integrated with SAP BPM

Even though this is a subjective question and every company's size and operations and operating environment is different from other. However, there are a few features that are common to processes and are mostly appropriate for SAP BPM. These are mostly processes that:

1. **There's a lot of customized programming**: When a workflow already has a significant number of lines of code, it indicates that the SAP solution was unable to fulfill the company requirements. Additional custom code will almost probably be necessary for every desired optimization in such a process. While SAP BPM will need the creation of a Hybrid Application, Enterprise Services should permit the use/reuse of traditional SAP system functions. To recap, SAP BPM may be used to replace existing custom code and eliminate the need for future additions.

2. **This is not a typical SAP solution: Many** business procedures are incompatible with SAP's typical process flow. Custom processes may be modelled and implemented using the SAP BPM process engine, rather than being restricted to the conventional SAP process flow. Standard SAP functionality may be (re)used by using SAP Enterprise services.

3. **This necessitates adaptable business principles**: With the SAP BPM enterprise logic program, business rules may be adequately documented and modified without the need to submit a change request to the IT department. For example, the business rules are appropriate for recording which levels of the quote are eligible for a discount, as well as the highest limit and % allowed.

4. **This necessitates a great deal of user involvement and participation**: The SAP BPM human interaction capability allows users to create unique interfaces rapidly and simply, allowing the same process to be accessed via many channels. (For example, on a PC, a browser, or on a Smartphone, a distinct application)

5. **This necessitates adaptable business principles**: Business rules may be readily recorded and modified if necessary, using the SAP BPM business rule engine, without the need to submit a change request to the IT department. The business rules in our example are ideal for documenting which levels in the quotation are eligible for a discount, as well as the maximum amount and percentages that may be granted.

3 Empirical part and methodology

With the research aim and research approach, the implemented technique will be presented and supported. Decisions on data collection, for example, and the subsequent presentation of the analysis process will also be described and incorporated.

3.1 Method Motivation

The nature of the research topic should influence the decision to undertake a qualitative study (Creswell, 1998). The goal of this thesis is to see what opportunities there are for combining BPM's strategic approach with ERP deployment. To accomplish so, the two ideas must be extensively investigated, as well as the phases of ERP deployment and the tasks that these phases include. Quantitative methods enable to provide exact description however the picture in entirety may not be ignored.

For instance When a survey question is send out in a quantitative survey, the researcher has not longer any control over it which implies in case the data was insufficient to extract the relevant facts of the implementation , in that case another questionnaire might have to be drafted and send for survey .
On the other hand, when it comes to In qualitative research, the questionnaire can move flexibly and swiftly amongst the data collection and interpreting theoretically (Mark, 1996). Despite being cited multiple times, few scholars have focused on the relationship between process transformation and ERP installations, which is the subject of this thesis. Furthermore, a qualitative method is best employed when variables are difficult to identify and a complete understanding of the issue is required (Creswell, 1998). The thesis seeks to bring all the information together so that BPM and ERP may be connected to maximize efficiency. While there are several ERP deployment frameworks in the literary industry, they all have differences that must be considered. A qualitative method was chosen for the thesis to explore how it functions in practice on a more thorough level.

3.2 Research Information

Using several data sources and a cross correlation analysis, the research technique approach investigates the relationship between BPM and SAP ERP system. A Web poll of practitioners, students, finance experts, logistics and operations experts with several years of experience working as process specialists in various industries and organizations was used to collect the data.

The data collection was facilitate using the survey created in the Google forms, which I found a meaningful way of reaching the appropriate population amongst which were students, SAP professionals, other professionals etc.

The web survey was conducted through social media such as LinkedIn and Facebook. Also, Web survey was conducted through university students of Haaga- Helia UAS and Metropolia UAS. The web survey was sent through the Emails to the students. It was also possible to provide a comment for each validated premise. In the web survey, around 12 respondents participated and around 4 comments were received. The results were interpreted and analyzed to form a conclusion, at the same time form a base for further suggestions.

Workflow experts and process managers who work with SAP and BPM on a continuous basis were expected to be the most experienced users in the BPM environment.

The following questions were asked in the survey through google forms and link was via social media and Email to which 12 respondents replied, the results of the survey are published in the annexure.

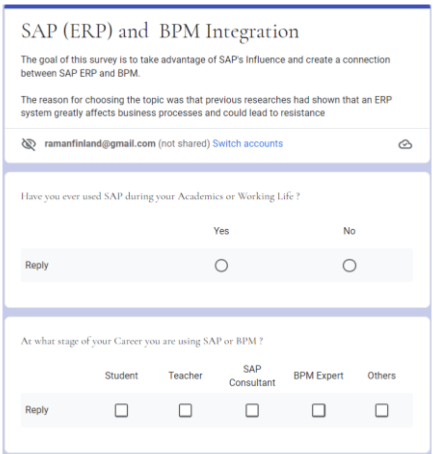


Figure 7: Google Survey form

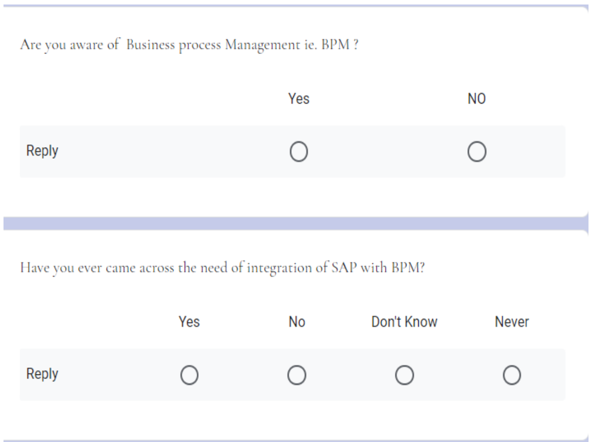


Figure 8: Google Survey form

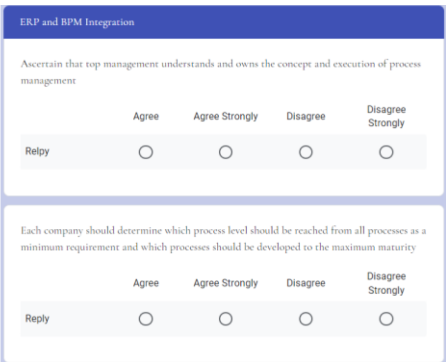
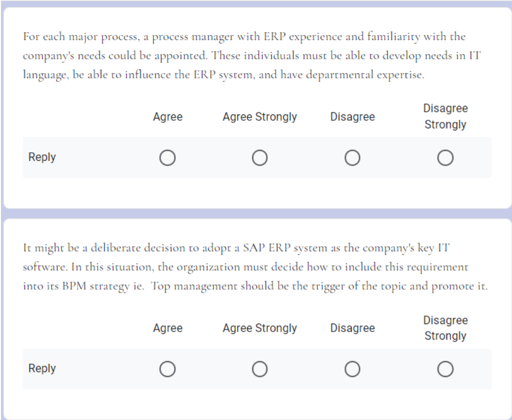


Figure 9: Google Survey form



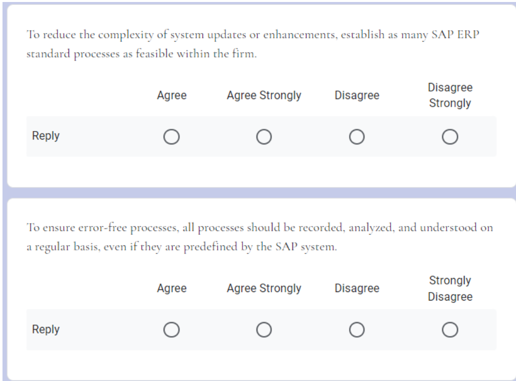
For each major process, a process manager with ERP experience and familiarity with the company's needs could be appointed. These individuals must be able to develop needs in IT language, be able to influence the ERP system, and have departmental expertise.

	Agree	Agree Strongly	Disagree	Disagree Strongly
Reply	○	○	○	○

It might be a deliberate decision to adopt a SAP ERP system as the company's key IT software. In this situation, the organization must decide how to include this requirement into its BPM strategy ie. Top management should be the trigger of the topic and promote it.

	Agree	Agree Strongly	Disagree	Disagree Strongly
Reply	○	○	○	○

Figure 10: Google Survey form



To reduce the complexity of system updates or enhancements, establish as many SAP ERP standard processes as feasible within the firm.

	Agree	Agree Strongly	Disagree	Disagree Strongly
Reply	○	○	○	○

To ensure error-free processes, all processes should be recorded, analyzed, and understood on a regular basis, even if they are predefined by the SAP system.

	Agree	Agree Strongly	Disagree	Strongly Disagree
Reply	○	○	○	○

Figure 11: Google Survey form

The results in annexure clearly show that the respondents were among SAP professionals, BPM, Teachers, students, and other working professionals.

Most of the respondents agree / fully agree with the fact that management's ownership of process management is essential. Most respondents agree that process maturity level should be determined by company. Most of the respondents agreed that an ERP manager should be appointed who have ERP and Departmental experience. Everyone strongly agreed that as many as possible SAP processes should be established also that the processes should be recorded.

4 **Discussion**

The successful adoption of BPM is only achievable if senior management wants it, and the organization follows a top-down strategy to process management introduction and deployment. ERP choices are frequently made at a strategic level, implying that the initial part of their approach is carried out in collaboration with personnel in management positions inside the client firm.

The tactical installation of an ERP is then completed, and it goes live. It has a significant impact on an organization's operational level. It has a foundation in material resource planning. This is further demonstrated by systems, although ERPs affect practically every operational unit. impacted. The BPM ensures the handling and monitoring of the tasks, which gives a chance to the stakeholders to incorporate the changes and manage the bugs.

The usage of SAP standard procedures does not excuse a corporation from documenting, analyzing, and comprehending such processes. A corporation should understand how its processes work and not take them for granted. A study of the established process should always be created to allow a corporation to determine if the standard process is useable or whether a new process should be developed. Obtaining a rapid and accurate process flowchart from a current Sap platform and evaluating how changing parameters inside a SAP system may influence an overall process are currently not possible. As a result, it's essential to understand and assess SAP operations fully. An assessment of a pre-defined process should always be structured to allow a company to evaluate if the standard process can be used or whether a new process should be formed. The procedure is not optimal when data is just collected because the SAP system requires it and no one looks at the values.

For time and money concerns, situations where various teams operate independently on distinct process models must be avoided. SAP is a strong technology that interfaces with a variety of systems, and it might be difficult to separate it from other issues. It's critical that various teams work together and don't create multiple worlds for the same demand. Because teams do not recognize each other, different process maps should not be created.

Several companies strive to implement quick solutions and find that constructing a Spreadsheet or databases for their research is far easier than generating the statistics within a SAP transaction. SAP, on the other hand, provides a wide range of preset reports and may create measurements straight from the SAP data, which are more up to date than an earlier Spreadsheet.

This is why it is getting data / information straightforward from SAP always proves to be meaningful nom matter it would take longer for initial assessment. Although choosing the appropriate variables for beginning study may be bit time consuming but retrieving data from SAP is always a swift method. SAP should also be treated as a analytical mechanism which is capable of data analysis in no time.

5 Conclusion

The questions in the opening section of the thesis are endeavored to be answered in the conclusion section. The take aways will be the lessons learned from the results of the surveys or other methods applied to reach the conclusions. What remained unanswered during the thesis due to the will form the part of the future research.

The preceding list of Questions is not comprehensive, and it does not indicate a ranking. These concepts were created mostly from the study of research papers and were used for the web survey participants, and they are essential to the author. Because of the question's simplicity, each organization can select for itself how thoroughly each specific concept should be considered and developed.

One of the main goals was to propose a strategy through a series of questions that is not impractical to apply. The concepts' application has already been demonstrated in a web survey, demonstrating that it is possible but takes self-discipline. One of the key goals was to suggest a technique that might be implemented via a series of questions. The implementation of the concepts has previously been proved in a web survey, proving that it is possible but requires self-discipline. However, because each organization is unique, questions should always be examined and used considering the circumstances.

To integrate the process discovery, design, deployment, and execution with ERP tasks is quite practical. When ERP goes live, that marks as a conclusive step stage in the ERP implementation and it goes the same way for the BPM.

People understand the process when they are expressed through the process modelling which is a lynchpin for the success of BPM when it comes to integrating the logics.

The mindset toward customization is a deterrent to implementing BPM in ERP. Process refinements are very seldom expressed as the main aspects of implementations by organizations. Because none of the parties involved places a premium on process management, there is only a smattering of interest in a BPM-based ERP installation.

Furthermore, BPM systems offer a variety of techniques to system integration, some of which were examined in this Thesis and their merits and drawbacks highlighted. Even though the ideal approach varies on the individual demands of an organization, I believe that SOA-based techniques are the best. These approaches provide flexibility in responding to changes in the business process because of the demands of the enterprise environment.

The strategy based on "Integration based on business process with broker and adapter" was determined to have advantages over the other alternatives studied in this study. It effectively decouples the BPMS and ERP systems, needing just Broker modifications and leaving both systems unchanged. The other two solutions, on the other hand, both need changes to the BPMS or ERP at some point throughout the integration process.

5.1 Future Research

As discussed in previous sections not all the stages of BPM can be compatible with the ERP deployment. To determine whether ERP can be utilized to properly support BPM, study on the system's actual functionality, not just the implementation project focused on this thesis, is required.

The next step could be to incorporate automation in ERP that incorporates BPM operations. The result would be a technique that strives to minimize the manual intervention and focuses on logic-based processes from the start till conclusion. Employees may have better idea of how their work will change once the system is embraced, which may lessen resistance. It is intended that better process integration will be carried out on a specified process area within a commercial ERP system environment as part of this research.

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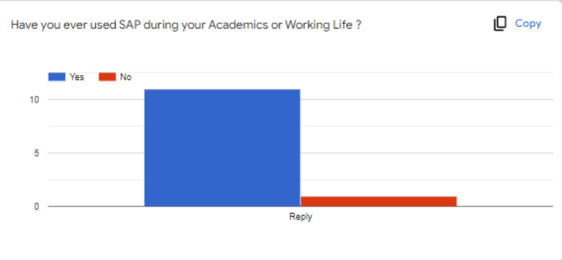
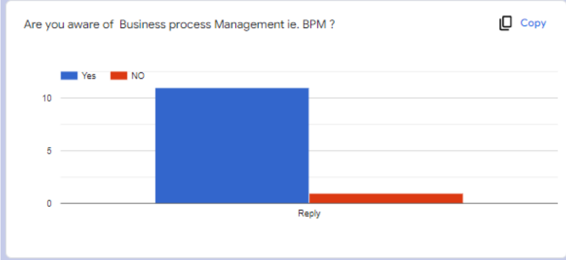
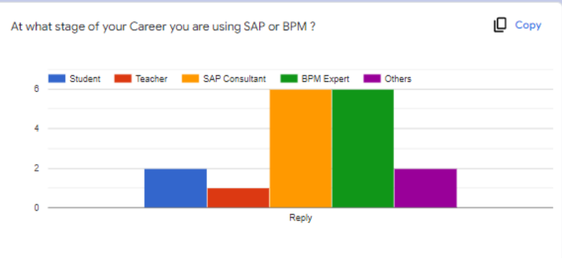
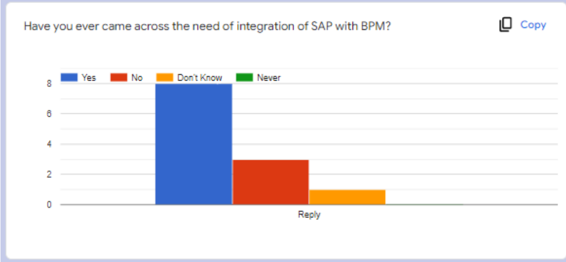
Appendices

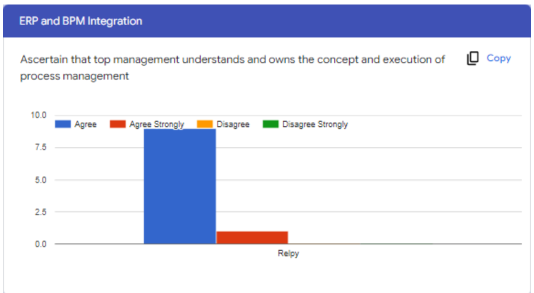
Web Survey Responses

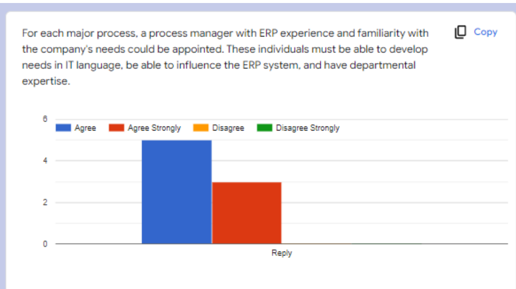


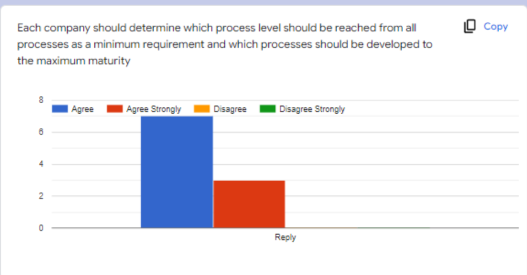


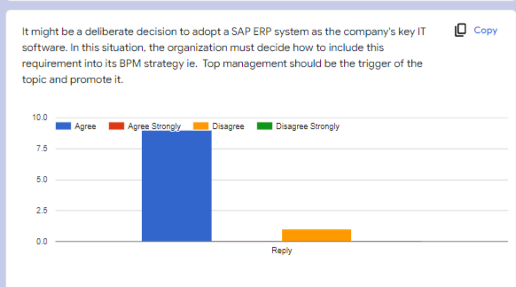


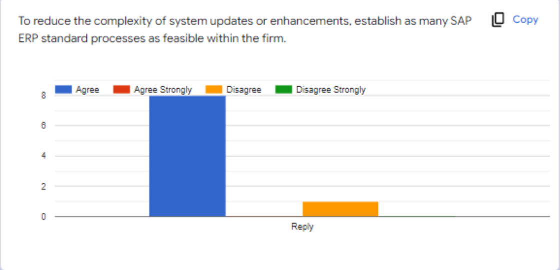


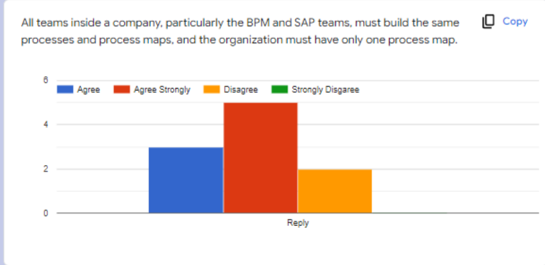


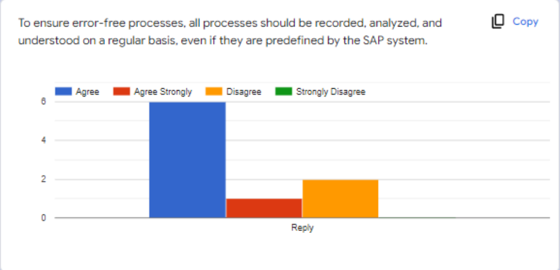


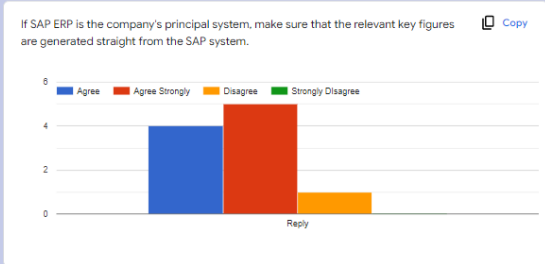












Comments

Any Comments

4 responses

All is well

Older ERP installations may not support service-based APIs and that would be a hurdle in combining ERP with BPM

Process Modelling, which uses a notation that is comprehensible by individuals in the business and correlates to quick changes to the system, is the major activity that may link the concepts.

An analysis of the pre-defined process must always be designed to enable a company to examine whether the standard process is usable or whether an individual process should be developed. The process is not optimal when data is only recorded because the SAP system requires these data and nobody analyses these values.