

Combining BPM and EA in complex ERP projects (a Business Architecture discipline)

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Abstract—This paper presents the up-to-date subject of why BPM and Enterprise Architecture should be an integrated part of any complex IT project. While nearly all Enterprise Architecture frameworks and methods include approaches for handling handle or working with processes, none of the existing EA approaches actually incorporate Business Process Management in their EA disciplines. The benefits as well as different ways of combining these disciplines will be elaborated and illustrated in this paper.

Keywords- *business architectur, business process management, enterprise architecture; Link to strategy, Business Model, Value realization, Business Competencies and business IT alignment*

I. INTRODUCTION

With John Zachman's Enterprise Architecture (EA) definition and description [1] we will soon mark the 25-year anniversary of EA. In that time, several enterprise-architectural methodologies have come and gone and some organizations might ask themselves why they should still apply a quarter century old approach for innovating their organization". An accurate yet stereotypically non-committal consulting answer would be: "It depends." The field of enterprise architecture was inaugurated to address two major problems in IT that were already becoming apparent by then. The first problem was managing the increasing complexity of information technology systems therefore EA in reality started out as a technology focused approach. Several years after the initial EA methodologies were implemented, the second problem become apparent. Aligning business with IT in delivering real business transformation became very difficult and this had a significant negative impact on the real and perceived value of those systems [2]. Unfortunately, most enterprise architects

today only concentrate on the first part of the EA vision, neglecting the important second part, which focuses more on IT alignment [3]. For example, most enterprise architects focus very little on business optimization in terms of effectiveness, efficiency, value drivers and performance drivers and or continuous improvement, which are all disciplines of business process management (BPM).

II. STATEMENT OF NEED

If there is one constant in the market, it is that things are always changing faster and are more dynamic [4]. The pressures on organizations and enterprises around the world to keep up with these changes are increasing. Markets are crowded; margins are squeezed. New challenges seemingly arise overnight on all fronts. All of this is nothing new, but the question remains: How can companies tackle multiple business changes in globalization, productivity, innovation, compliance, information overload, and the changing nature of people and work while at the same time not forgetting the golden rule of business: customers first. Most companies see process effectiveness, efficiency, and innovation to align to their business model and strategy as one of the essential answers to creating long term competitive advantage [4]. The need for value creation and realization is certainly not new, especially with any topics related to process reengineering, process modelling, process optimization, and process innovation. Now more than ever before, companies are struggling to adapt their IT to this accelerating pace and to identify where and how to create the needed value [4]. Everything around them seems to be changing faster than they are able to keep pace. In such

[1] Zachman, J., 1987. "A Framework for Information Systems Architecture". In: *IBM Systems Journal*, vol. 26, no. 3, 1987. IBM
[2] Mayo, D., Tiemann, M., "EA: Its Not Just for IT Anymore", , Journal of Enterprise Architecture, August 2005 and Zachman, J.,

1998 "The Framework for Enterprise Architecture and the Search for the Owner's View of Business Rules". Database Newsletter, Volume 27, . Business Rule Solutions. 1-604-899-5452.

[3] Benson, R., Bugnitz, T., Walton, B., From Business Strategy to IT Action: 2009 Wiley Publishing

Ulrich, W., McWhorter, N., 2010, Business Architecture: The Art and Practice of Business Transformation, Meghan Kiffer Publisher

[4] von Rosing, Mark, 2009, The strategic importance of Competencies, Copenhagen Business School Press

changing times, many things are important to consider when you want to achieve Business and IT alignment to create value. Faster changes and developments in the business domain have put new demands on business and thereby require additional flexibility with this business-IT architecture. The more complex a system is, the less likely it is that it will have the needed flexibility to support the organization in delivering maximum business value. This explains why business process management (BPM) is growing from a hype cycle into a mature market, where according to many market analysts, BPM is the fastest growing initiative in today's IT market. The level of interest and the concomitant around BPM has reached a crescendo. The Gartner Group (2010), for example, identified the improvement of business processes as a top issue on the CIO's agenda for the sixth year in a row and BPM is announced by Gartner Group to "win the 'Triple Crown' of saving money, saving time, and adding value" [5]. With the important realization that the better an organization can manage complexity, the more the organization improves the chances of delivering real business value, the topic of how BPM can be applied to the IT architecture has been put into the spotlight [6]. Combining BPM with EA has created many new areas for an organization to create the needed value to be more competitive. The real questions are how the approaches are or can be integrated and how the potential to deliver significant value can be realized because EA combined with BPM is neither an updated EA approach nor an updated version of business process reengineering (BPR), Six Sigma, or Lean. It is an IT-enabled management discipline that would be applied in the business architecture phase/domain of an EA or BPM engagement. The relationship between the business architecture and how a company can manage their processes to create value is symbiotic [6]. For each part of the value the enterprise delivers to a customer, employee, or shareholder, they have to architect and thereby model, align, manage and govern the processes that support their business model.

III. PORCESSES WITHIN THE EA DESCIPLINE

As just described, the relationship between enterprise

architecture and business process management symbiotic; whereas business process management provides the context and background for what needs to be architected for the business, enterprise architecture helps business processes be enabled in a sustainable and agile manner. Addressing one without the other leads to partial results, at best. However, if performance and value are to be created, processes need to be enabled and structured in the business model and in the operational process execution. Both automated IT processes and non-automated processes play a key role in developing the business competencies to create the needed performance and value. The integration of the architectural domains of business architecture and the information architecture are vital. As shown in Figure 1, the key to linking these to architectural domains is the process architecture. Without business context, architectural activities within IT simply focus on technology solutions.

To illustrate this, Rao Subbarao[7] compares an enterprise to a city (complete with highways, subdivisions, plumbing, electricity, nature preserves, and so on). In industry-speak, enterprise architecture (EA) and process reference models are generally referred to as the city plan, enterprise models, etc. Just as a city has dependencies between roads, utilities, construction, sewage, and so on, interdependencies exist between business competencies, business functions, business processes, application functions and services as well as data and platform services, and so on within an enterprise. Whether we implement a complex IT system (e.g. ERP, CRM, SCM etc) in the functional group like finance, HR or supply chain, it is still a part of the "city" and has interdependencies with other business units, departments, groups. Addressing the needs of just one of the business areas might negatively impact one or more of the other areas. To see the big picture and the interdependencies, architects have to understand the various elements that influence an enterprise [7]. Having visibility across all of these factors helps architects and decision makers better predict the *butterfly effects* (how one infinitesimal action can have a huge effect on the course of a much larger event).

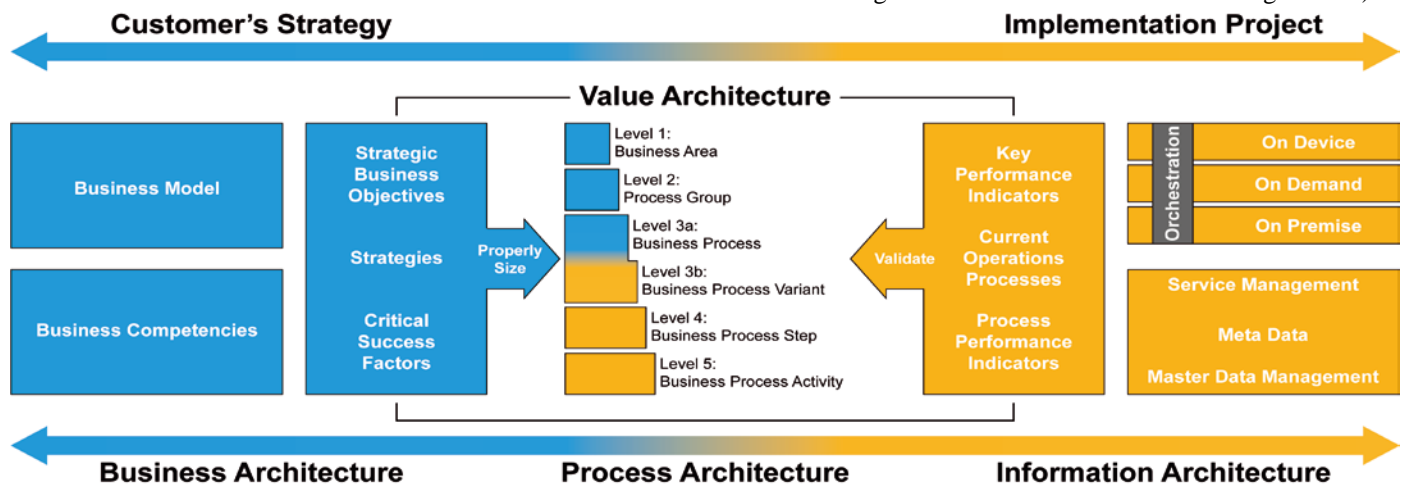


Figure 1. How processes fit into the different EA domains

[5] Gartner (2010) "Leading in Times of Transition", The 2010 CIO Agenda, Stamford, CT

[6 & 7] von Rosing, M. and Subbarao, R., et al

BPM should be an integral part of architecture because it allows IT to properly enable business capabilities using the right technologies and to measure performance in the context of the business. By integrating BPM with the architecture practice, organizations can achieve the level of transparency across the enterprise that is required to directly trace IT organizations' value to the business and measure it. To ensure business-IT alignment, it is critical that the overall strategy, business model, and business competencies, which represents business goals, are directly tied through the processes to various IT initiatives, and the outcome should be monitored and measured in a repeatable, consistent fashion.

IV. WHERE TO START WITH THE TRANSFORMATION

The most common question we encounter is not if BPM and EA fit together, but how they fit together and where to start. First, there is no defined answer to what comes first or where an organization should start. BPM and enterprise architecture address in some areas similar topics, but from a very different perspective and enable different forms of performance and value creation [8]:

- *Enterprise architecture* focuses on setting the framework for the business design and sets in place standards, guidelines, policies, and procedures for ensuring the design, integrity, and, if identified and planned, performance, value creation, and realization for the business as a whole.
- *Business process management* focuses on the management of the business process lifecycle, outlining the way the organization can and will execute its competencies. True performance happens at the activity level, and therefore most form of value creation happens at this level. One of the real benefits of introducing BPM principles to your processes is that you can add the principle of continuous improvement.

Both of these approaches and disciplines have their merits and resulting benefits. Historically, many organizations start with BPM and then first align their process optimization within EA. From an executive business perspective, this decision can be understood, especially since BPM is used as a business discipline and EA is viewed more as a technology discipline. We would however like to argue a different approach. Based on the many BPM projects in the market, it is evident that the principles and thereby process innovation and optimization are necessary and result in multiple benefits. However, we will argue that it is not a sufficient means for succeeding in today's marketplace. For all its appeal, a process-focused approach still leaves firms with complex, hardwired processes. After initial gains, the law of diminishing returns begins to erode improvements in marginal benefits, and the cost of squeezing out remaining inefficiencies within the process office, process center of excellence (CoE), or business transformation office

begins to grow. Worse, as processes are optimized internally, the costs of integrating activities across multiple processes may actually increase, a problem that is especially acute in large, complex organizations. Part of the issue is that traditional, process-based optimization can leave firms with the same activity optimized dissimilarly across many different processes. According to a global business study in 2009 [9] the IBM Institute for Business Value revealed that even though process improvements and optimization create interconnections that reach to multiple business units, complexity increases, causing integration costs to rise as the function of a quadratic equation. Thus, as process improvements and optimization mature, this can end up increasing the complexity of the enterprise. The results of some process-based optimization include:

- Higher costs
- Less flexibility
- Slower time-to-market

Most organizations already know this and have already experienced this in one or the other way, and many researchers [14] argue the same findings that whereas activities across multiple processes increase, thereby being counterproductive and destroying value. All of these conclusions could, in many ways, be evidence that this occurs due to company size or industry complexity. In their research and publication [10] "Simplify to Succeed," Shanker and Robinson revealed with empirical data that there is very little correlation between the size of a firm and return on equity. Some studies have even found a negative correlation, meaning that larger firms return less value for shareholders. Below is illustrates an example of a negative correlation.

Microcap	Small-cap	Midcap	Large-cap
12.7%	11.7%	11.3%	10.4%

Source: Ibbotson Associates, as cited in "When Patience Pays: Keep your eye on the dividend." *Forbes*. June 7, 2004.

Figure 2. Process Improvement and Maturation

At best, this suggests that the benefits of scale are far more elusive than most executives assume. At worst, it suggests that the traditional process optimization works, and the connection to IT systems of many large organizations has destroyed huge amounts of shareholder value. Either way, process-focused improvement and optimization in this context of complex IT (e.g. CRM, ERP, SCM etc.) implementations falls well short of being a general panacea because it does not have a direct link to strategy.

V. LINKING TO STRATGY

Even if a company succeeded in connecting their strategic business objectives with their processes, the work required to maintain this link would be very complex and expensive. As

[8] von Rosing, M. 2009. "Business Value Management: A Way To Plan, Create and Realize Value." IT University, Denmark: http://www.valueteam.biz/downloads/article_value_management.pdf. (Danish only).

[9] IBM Institute for Business Value Analysis. 2009. IBM Press, [10] Ramamurthy, S. and Robinson, M., 2005. "Simplify to succeed" *IBM Business Consulting Services*. <http://www-8.ibm.com/services/pdf/gw510-9108.pdf>.

shown in Figure 3, linking your strategy to your processes is very difficult as there is no direct connection [8].

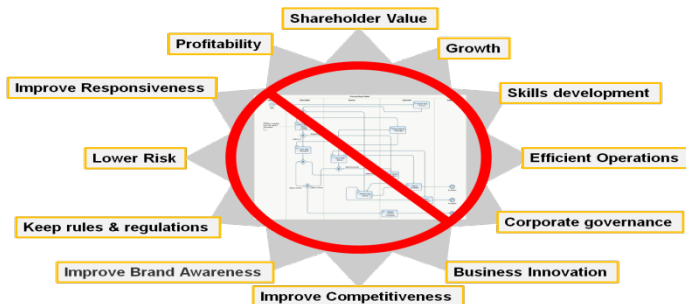


Figure 3. Process Improvement and Maturation

Therefore we can conclude that despite the enormous benefits of BPM, can this not provide the needed link to business strategy. Just look at the large media and entertainment companies that have worked hard over the past years to improve and optimize their sales and marketing processes with an aim toward selling television, radio, and billboard space more effectively. While they were occupied, however, advertisers were busy changing the rules of the game. Demand is now growing for complete media packages that target consumers through multiple, coordinated channels for a single price. Ironically, process improvement and optimization has made the task of meeting this unanticipated shift in demand more difficult. Companies should avoid such miscues by taking a different approach. Instead of honing processes based on an established way of doing business, they should have looked at their business model and the action/reaction need to the market. Then they would have seen that they should fundamentally rebuild “customer targeting and reach” as a competency shared across the entire organization. Such business model improvement and optimization makes companies more responsive, flexible, and focused in the face of change. This example illustrates what many organizations have experienced in one or the other way in their complex IT implementation projects. At a certain business as well as IT complexity, do the IT projects need a clear and accurate understanding of the business strategy, business model, critical success factors, the value.

and performance drivers. In a global Business Architecture analysis[11] and research done jointly by The Open Group Business Forum and the University Alliance members Prof. Dr. Karin Gräslund, Siavash Moshiri and Prof. Dr. Mark von Rosing the specific challenges companies encounter where investigated. As elaborated in Figure 4, companies face multiple Business IT alignment challenges on all levels of the organization (e.g. strategic, tactical, and operational). We learned from this research [11] some basic management principles, but important aspects in linking IT to strategy.

- A firm’s business model is or at least should be a reflection of its realized strategy because there should be a one-to-one mapping from strategy onto business competencies of the business models.
- Strategy and business model, though related, are nonetheless different concepts.
- A business model is the direct result of strategy, but it is not strategy itself.
- The business model is where the strategy is executed through the business competencies
- It is therefore essential that there is a direct link between a business model and with this the attached business competencies and the chosen strategy.
- Business models are concerned with making money, and strategy is concerned with value realization, the two should be highly related and interlinked, always starting from the strategy in all projects
- Value Drivers matter as they incorporate where a strategy interlinks with a business competency
- Performance Drivers relate to activities of an organization (processes)

In order to achieve the above, this is where Enterprise Architecture and BPM come together into play [12]:

- 1) Business Architecture focus on the linkage between strategy, business model, business competencies, value drivers , the organization, the processes, and how to integrate it all into technology to create value.
- 2) BPM focuses on improving the way business activities are organized or executed and have cyclic methods for improving the efficiency and effectiveness of the design, implementation and execution of the processes.

STRATEGIC	TACTICAL	OPERATIONAL
<ol style="list-style-type: none"> 1. Missing link between operational efforts and organizational strategy. 2. Lack of business model transformation and change. 3. Lack of innovation on different business levels. 4. Lack of business governance that incorporates more than business standards, regulations and monitoring. 5. Lack of corporate-wide metrics for business performance. 6. Missing business value realization. 	<ol style="list-style-type: none"> 1. Missing link between the chosen strategy and the business model competencies. 2. Lack of change due to missing link between business model and processes. 3. Lack of innovation due to missing link between business model core and processes. 4. Lack of business governance that incorporates the needed governance of business model and processes. 5. Lack of corporate business performance metrics standards. 6. Missing method for business value realization. 	<ol style="list-style-type: none"> 1. Business competencies are not mapped to processes and activities. 2. Lack of tools to link process method and business model method. 3. Weakness in process methodology of how to incorporate core business competency innovation. 4. Lack of BPM continuous improvement initiatives that incorporate business governance. 5. Lack of BPM tools to support corporate-wide performance metrics. 6. Missing tool to link value realization plans to value creation.

Figure 4. Business IT alignment challenges

[11] Hendrickx, H., Mahakena, M., Daley, K., von Rosing, M., The Business Architecture Profession, 2011, IEE publication

[12] von Rosing, Mark and 'Rao' Raghavendra Subbarao et al

VI. HOW EA AND BPM FIT TOGETHER

Achieving business-IT alignment without a EA (e.g business architecture) approach is not easy, [11] and it would be hard to achieve process and activity alignment in an operational approach without BPM. Therefore these two approaches are the key to achieve real link to strategy and transformation. However combining BPM and EA is for many companies is a significant change of approach and mindset. The key is to apply the combined the enterprise architecture principles, policies, and standards throughout the enterprise continuum to the processes and then execute with BPM principles for the right execution and performance creation.

This helps organizations implementing complex IT solutions align the IT project/solution with the business model, business process, application, information, and infrastructure domains that are all part of the enterprise architecture. Understanding the business architecture is the first step in any enterprise architecture and the key to harmonization of the different perspectives on the same architecture domains. The business architecture is the discipline that combines and incorporates the business strategy and thereby the direction of the organization, its business model, and its operational model. Core (competitive and differentiated) and noncore competencies are identified and business activities are prioritized based on their importance to the performance and value creation of the organization.

The business architecture thereby not only leads the definition and implementation of the business model, business competencies and weakness cluster, but also sets up the objectives and indicators required to measure performance on both the business (strategic and tactical) and operational levels. This makes business architecture one of the most important disciplines for any complex BPM and or IT project in order to identify the strategy, the business model as well as value and performance drivers.

When joining business architecture with a BPM project, the project will have a totally new and focused direction as it is aligned with the measurement and reporting of organizational performance drivers. Organizations can then adequately manage their business and IT alignment. Applying the same set of principles, policies, and standards throughout the organization therefore becomes a value driver for operational excellence in the main BPM disciplines of process effectiveness, process efficiency and process innovation. We do, however, often see that the principles are not applied enough and therefore there is an absence of value creation and realization for an organization. One of the major benefits of combining BPM with EA is that it can add value to both. BPM lacks the architectural principles, policies, and standards that emerge and develop during the link to strategy and business model and then through the architecture lifecycle. On the other hand, the BPM principles and BPM disciplines we discussed can add a lot of value to the enterprise architecture framework of any company [13].

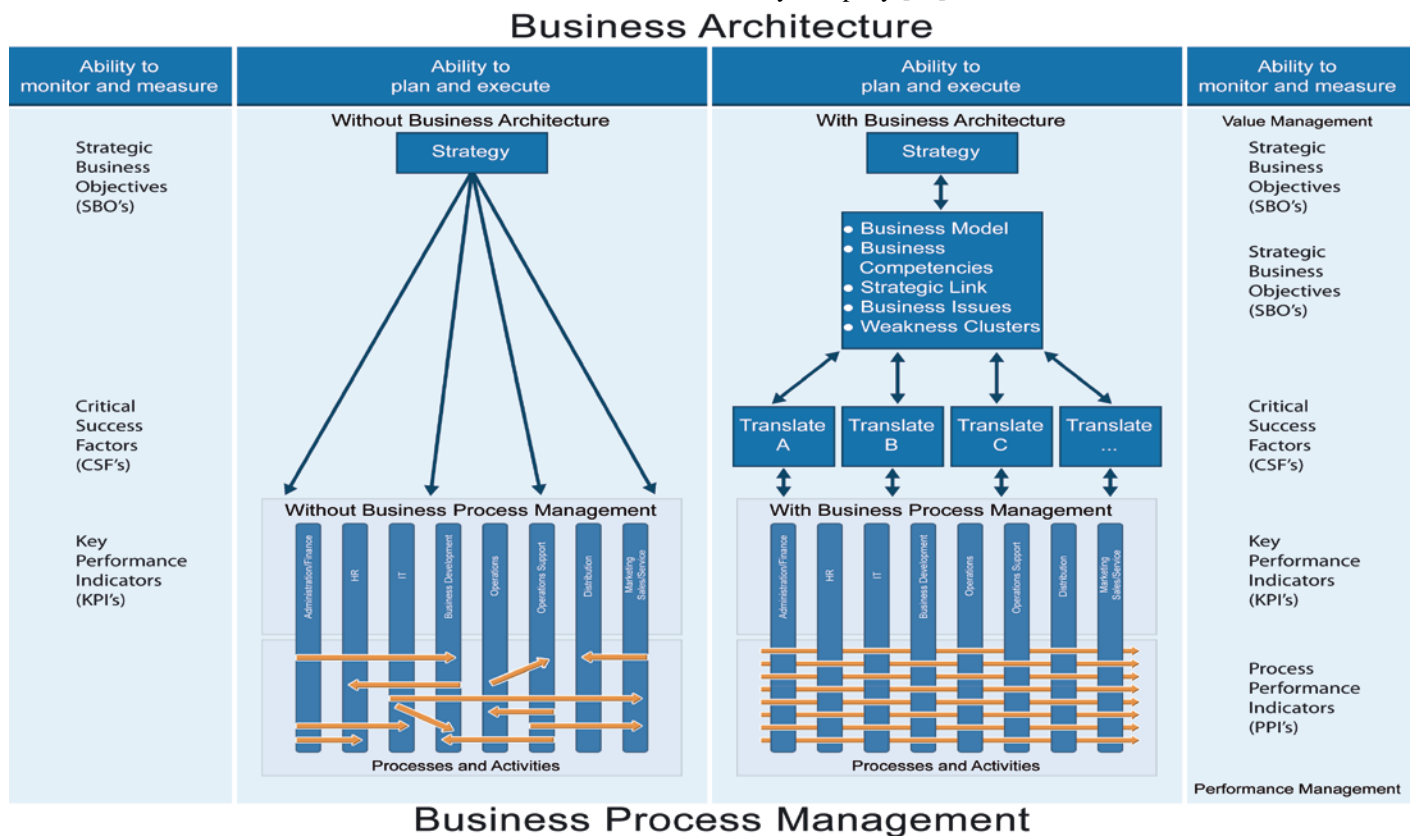


Figure 5. How Business Architecture and BPM fit together

[13] von Rosing, Mark and 'Rao' Raghavendra Subbarao et al

V. HOW BPM ADDS VALUE TO EA

In the previous pages we have elaborated on the benefits EA (e.g. Business Architecture) can provide any BPM project. In this chapter we would like to focus on the benefits BPM can deliver to EA. In order to understand the benefits BPM can add to EA, we need first to understand the missing parts of EA. Below are some examples of the missing parts of enterprise architecture. Although the maturity of the different enterprise architecture framework e.g. The Open Group Architecture Framework (TOGAF), Federal Enterprise Architecture Framework (FEAF), Zachman and/or Gartner (formerly the Meta Framework) has been developed over the years, they are still lacking in some aspects.

- **Change management**

Although the different EA framework have a phase focusing on change management (CM), the CM is only focused on the project CM aspect and furthermore it is not really robust enough to handle the different complex changes a project needs to really transform an organization. If you run a successful business architecture initiative, the developed requirements for the enterprise can result in a massive change request not only for your IT department, but also for business units or even divisions (e.g., the introduction of a new business competency or the outsourcing of one). Depending on the impact to the enterprise, these projects require a more or less heavy emphasis on change management even before the project starts.

- **Process Architecture phase**

The business architecture domain today existing in the different EA frameworks have poor to very little existing Process Architecture deliverables, to develop business architecture as defined above:

- The link to the process model is missing, and these results in the lack of performance alignment, a presumption of any EA initiative.
- There are no work products, accelerators, assets or deliverables around process effectiveness and efficiency mapping, something that any EA and BPM project needs.
- The link between the business model and the process landscape (process levels) is missing, which results in a missing alignment between the strategic level and the operational level, something that any EA initiative needs.

- **EA domains**

EA domains from business architecture, information architecture, and technology architecture are all missing a formal value management and performance management approach which identifies, plans, creates, and realizes value throughout the different domains (not only in one). If these principles are applied, they are defined and developed individually. Having every enterprise architect repeatedly develop the same needed approach and method is very costly and totally inefficient and ineffective.

- **Standard deliverables**

These are proposed to be used across the different frameworks (similar to a project plan that is part of every project methodology): common “translators” or adoption guides for actual architectural content such as business capability/competency models, value trees, process models, data models, and so on. Today everyone is leveraging best practice or out-of-the box content from organizations such as SAP, Oracle, Microsoft and or IBM, but this is not the best way to do this as their Best practice is focused on their application, not on specific EA or BPM content.

Most enterprise architecture frameworks and methods today have a project approach [14]. This by itself is acceptable, especially when an organization is just implementing an enterprise architecture initiative. However, if an organization has already implemented enterprise architecture initiatives, this is insufficient because organizations need a continuous improvement and governance approach around their EA initiatives — not only an EA project approach. If EA initiatives are handled on a project-by-project basis, the whole concept of continuous improvement and governance is lost. The good news is that when you’re applying BPM (process lifecycle) principles to the architecture lifecycle, the missing areas identified above can be added to an organization’s enterprise architecture initiative and/or framework. Figure 6 for example illustrates how the value principles (value planning, identification, creation, and realization) and continuous improvement and governance are added to the TOGAF approach. [8]

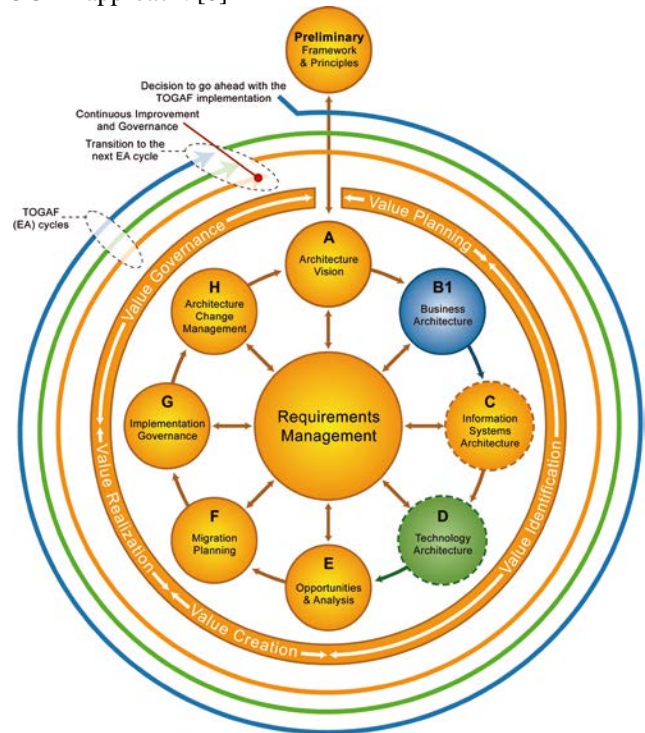


Figure 6. Applying BPM principles to TOGAF ADM

[14] TOGAF 9, FEAF, Zachman and Gartner Framework

Combining BPM principles with EA principles gives the EA approach practical value. Applying BPM to Enterprise Architecture: The basic principle is that each pass through of the architectural lifecycle has a fixed set of EA project goals and thereby principles that apply throughout the iteration/phases (A to H). Within the iteration of the architecture lifecycle phases, the planning, identification, creation, realization, and governance of the value management principles are being applied. For the realization of the business value, individual iterations of the process lifecycle are initiated. When we enter such an iteration, BPM governance and BPM approaches such as the process analysis, process design, process implementation and process monitoring come into play. This continuous improvement process of business performance is guided by the business governance. It is important that at the end of every cycle, lessons learned, insight gained, and applied or developed standards are adopted in the principles, policies, and standards of the enterprise architecture so they will be available for the next cycle. The important task of joining these approaches with all the processes and activities that support the required IT transformation enables the transition from business innovation to business transformation. In BPM as with EA, the continuous improvement phase is not a one-time project initiative but rather is a discipline that must be embedded in an organization to be successful. A company is ready to start with the continuous improvement phase after one cycle of the transition has been successfully completed and any necessary adjustments to the process approach have been made.

In this phase of process governance, ownership goes hand in hand with development of the business model, performance, and value management. Any enterprise architecture setup is adjusted and repeated regularly, ensuring that EA becomes institutionalized to get an alignment of the strategic, organizational, technology,

VII. LESSONS LEARNED

Below are some of the key lessons learned about joining BPM and enterprise architecture in complex ERP projects:

- Business architecture and business process management is in the best interest of the business. Ensure that the business owners recognize that and own the discipline. Build a strategy that makes the business the owner of process data. Identify a business owner of record who is accountable for each process.
- Define the strategic alignment, including business architecture set-up, business model, business architecture innovation, and transformation need - what to do
- Actively recruit stakeholders who have a proven record to drive change — ones who have credibility at all levels in the organization.
- Translate the chosen path when identifying in which processes and activities you will do this — where to do it
- Determine who should be doing it and how — the person who is responsible should be doing it.

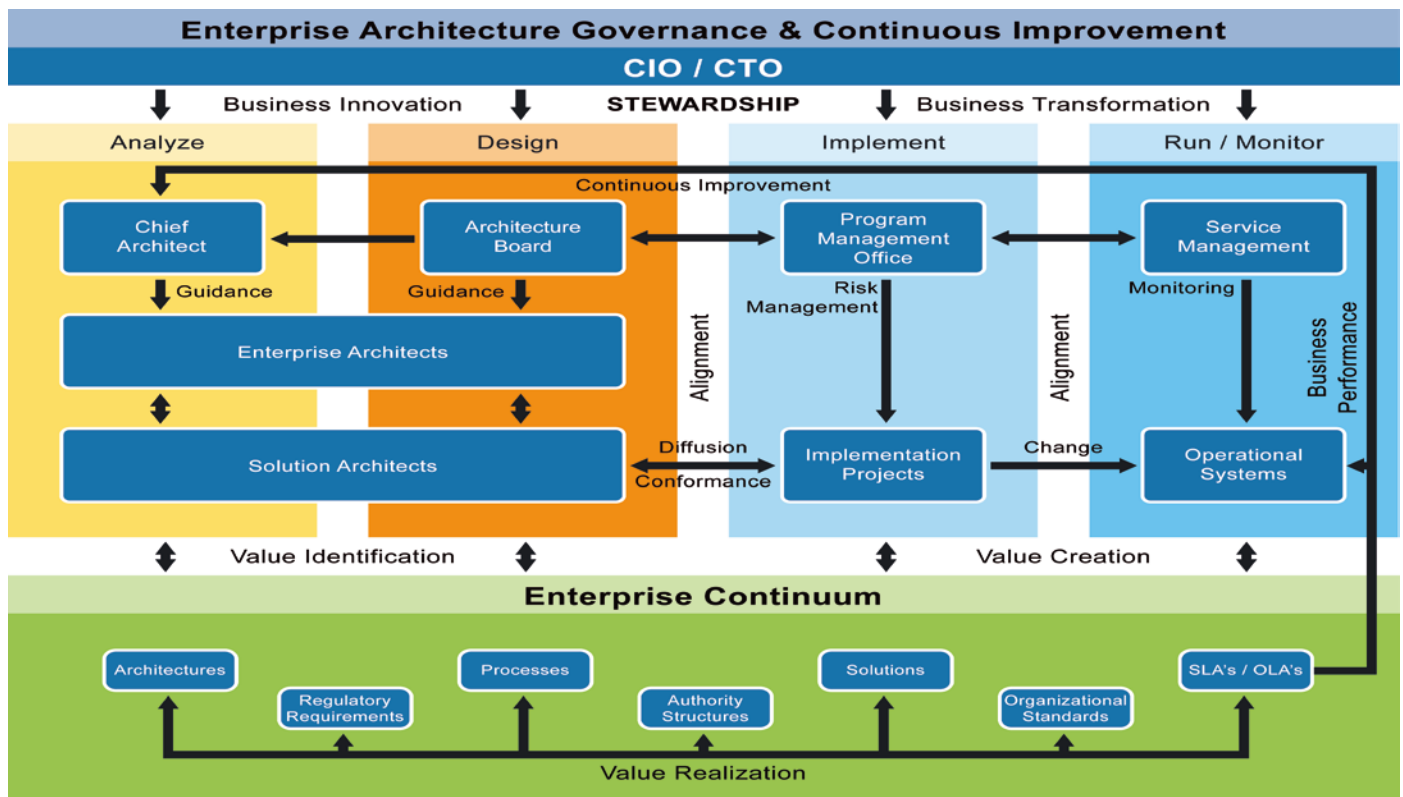


Figure 7. Applying BPM principles e.g process analysis, design, implementation and run/monitor to Enterprise Architecture

- Maintaining leadership support and commitment on a long-term basis. According to analyst firms, it can take anywhere from eight months to three years to achieve BPM excellence. It's challenging to maintain commitment and support for such extended durations, because it is hard to measure success and value-added during the early stages.
- Architects should foster a culture (discipline) where there is commitment and engagement across the organization. Don't make people feel that this is being pushed on them. Answer the question, "What's in it for me?" for each group.
- Identify performance parameters and identify value drivers.
- Raise corporation-wide awareness of the benefits and methodologies of business process management. Demonstrate value quickly and often. Build credibility.
- Do not underestimate the "soft side" of BPM. Establish a community of practice. Be prepared to face resistance.
- Plan ahead to address BPM challenges that the project teams will face. Establish (and publish) the "process" of business process management. It's like building a blueprint for a blueprint.
- Socialize and seek buy-in from the business leaders and key influencers before making BPM operational. This will prevent them from thinking BPM is just one additional thing they have to do now.
- Identify required skill sets for process-centric roles such as business architects, analysts, process owners, and so on. Encourage process-centric thinking (and thinkers) within the organization.
- At the time that process-oriented organizational structures are put in place, there is a lack of discipline and supporting framework around BPM. This leads to a BPM practice that is unsustainable
- Some organizations approach BPM as a project or silos of projects, as opposed to a transformation-like approach. Because of that, there can be a lack of ownership and accountability once the projects are completed.

VIII. CONCLUSIONS & SUMMARY

The paper highlighted why BPM and Enterprise Architecture should be an integrated part of any complex IT implementations to realize business value. Furthermore we described the multiple benefits and different ways to combine the disciplines. As the old African proverb, "If you want to go fast, go alone. If you want to go far, go together," applies here. BPM is something that cannot go far without an organization-wide architectural anchoring. Planning for process alignment, value creation, continuous improvement, architectural principles, standards, rules, and governance is a necessity for the most modern organizations, however these these plans are often skipped and lead to of the perceived high planning costs and minimal operational value. The success of interlinking BPM with EA derives from the proper coordination between planning and execution of the overlapping principles in the approaches. This in turn requires a firm understanding of the

EA and process lifecycles of the enterprise and the establishment of appropriate collaboration and EA and BPM governance approaches to ensure interlinking of the described approaches. Whereas value management, business process management and enterprise architecture each have value on their own, we have described how they are naturally synergetic and work best when used together for better business performance and value outcomes and strategic alignment of business and IT. When these approaches are used together, performance drivers and operational excellence and thereby possible improvement areas are provided by the BPM context that outlines where to change the input-output model and provides an understanding of where to create the value and how and where to measure performance. Business Architecture provides the design principles for solution transformation, and the rest of EA provides the discipline for translating business vision and strategy into architectural change. Although governance principles can apply the needed standards and rules, all are required for sustainable continuous improvement, optimization, and innovation. It is important to realize the value of direct collaboration across the described boundaries. Only when supported by appropriate collaboration and governance processes can BPM and EA roles work effectively together toward the common goals of the enterprise. The key to business-IT alignment and what glues it all together is the processes and activities. The notion of having business process optimization and integration of approaches has been around very long. Yet around the same time that EA and governance became a mainstream topic in the context of business and IT alignment, the focus in many process optimization communities shifted subtly to BPM to go beyond an optimization approach.

The key distinction for BPM as a discipline is added focus on flexible and dynamic process design and process orchestration and automation through architectural IT enablement. In addition to reduced costs through continued improvement and automation, BPM also provides the foundation for converged and agile business and IT responsiveness and is the key to applying the principles discussed in this paper.

ACKNOWLEDGMENT

The authors acknowledge the contributions, review and or input of the participants of:

- the Enterprise Architecture University Alliance members Prof. Dr. Karin Gräslund and Siavash Moshiri,
- the LEAD Enterprise Architect program developers (www.LeadEnterpriseArchitect.com) Michael van den Dungen and Arjan Visser,
- the Business Forum of The Open Group that have worked the last 2 years with Prof. Dr. Mark von Rosing together on developing The Open Group Business Architecture Method, and certification: Mieke Mahakena (CapGemini), Ann Rosenberg (SAP), Gail Wright (Oracle), Kevin Daley (IBM), Harry Hendrickx (HP) and Steve Philp (The Open Group)