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## Developments in Practice XXIX: The Emerging Role of the Enterprise Business Architect

James D. McKeen

*Queen's School of Business, Queen's University, jmckeen@business.queensu.ca*

Heather A. Smith

*Queen's School of Business, Queen's University, hsmith@business.queensu.ca*

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# Communications of the Association for Information Systems

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## Developments in Practice XXIX: The Emerging Role of the Enterprise Business Architect

J.D. McKeen  
*[jmckeen@business.queensu.ca](mailto:jmckeen@business.queensu.ca)*

Heather A. Smith  
*Queen's School of Business*

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### Abstract:

This paper recognizes the need for process-based transformation in today's organizations and argues for the establishment of a new organizational role—the enterprise business architect (EBA)—capable of leading enterprise-wide as opposed to a functional change. The paper first reviews the nature of business processes with respect to their three main constituencies: customers, employees, and technology. Next, a description of the EBA role including duties, skills, responsibilities, and overall mandate is presented. Based on this, various career development strategies are suggested for prospective EBAs and an argument is made for the appropriate organizational positioning for this new role. The paper concludes with a challenge to IT to step up to this new opportunity to reshape organizations.

**Keywords:** business process design, business architect, business process redesign, business process reengineering (BPR)

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### I. INTRODUCTION

Business and IT are becoming increasingly integrated. Recently, Smith and McKeen [2006a] noted that IT and the business were moving closer together and that increasingly, IT was being looked to for help with horizontal integration, enterprise vision, and process redesign, in addition to its traditional systems and technology work. Other papers have explored the business value of IT [Smith et al. 2007c] and the growing importance of common or standardized information to the business [Smith and McKeen 2007a].

Yet business and IT processes do not yet reflect this fact. Most organizations are still coping with business-unit-centric processes and metrics, system-centric thinking, and a lack of meaningful enterprise information. And, as if streamlining internal operations were not challenge enough, businesses must now interact effectively with an ecosystem of partners, suppliers, and customers—to deliver flexible business models with reduced risks, lower costs, and shortened cycle times while continuing to deliver increased revenues. The goal is responsive, adaptive business optimization. To achieve business transformation of this scale will require a major increase in the alignment and synergy between business and technology.

Some IT leaders and academics (and a few business executives) are now considering the concept that IT's skills can be used to transform the business—and not just with technology [Smith and McKeen 2007]. The fundamental idea is that IT has a set of analytical and process skills, even information management skills, which it can bring to bear on the process of helping a business transform itself from a bunch of siloed business units into more effective enterprise models. To engage these skills productively will require a new IT-business partnership and the creation of the “enterprise business architect” (EBA) role in order to facilitate the translation of business strategy into technology-enabled processes. This is an emerging role that has yet to be clearly articulated. Based on input from a focus group of leading IT managers, we examine business processes and the concept of process-based transformation. Building on this platform, we articulate the role of the enterprise business architect in terms of skills, activities, responsibilities, development and career path as well as positioning and reporting relationships with the organizational hierarchy. Finally, we create a job ad for an enterprise business architect.

### II. THE IMPORTANCE OF PROCESS-BASED TRANSFORMATION

At the outset of this discussion an important distinction must be made between “business” transformation and “process-based” transformation. True business transformation determines the overall strategy of the business; that is, the products/services to be offered, the segments of the market to be pursued, the customer base to be targeted, and the business model to be deployed. Process-based transformation works within these parameters to integrate and optimize processes across the enterprise. Where business transformation is strategic, process-based transformation is operational. Optimal benefit is obtained where these two transformation activities are closely integrated. This explains why process-based transformation activities typically report to the overall business transformation office—often referred to as the VP Transformation, VP Enterprise Organization, Business Transformation Executive or simply the VP Operations.

During the summer of 1990, two landmark articles focused management's attention on the need to revamp business processes. One of those [Hammer 1990] claimed that firms were simply using technology to “mechanize old ways of doing business” and argued that organizations should take a holistic view of business processes, challenge outdated rules and embedded assumptions, adopt a cross-functional perspective, and take advantage of the new capabilities offered by information technology. Coining the phrase “business process reengineering” (BPR), Hammer offered seven organizing principles:

1. Organize around outcomes, not tasks.
2. Have those who use the output of the process, perform the process.
3. Subsume information-processing work into the real work that produces the information.
4. Treat geographically dispersed organizational resources as though they were centralized.
5. Link parallel activities instead of integrating their results.
6. Put the decision point where the work is performed, and build control into the process.
7. Capture information once and at the source.

The other article [Davenport and Short 1990] used the term “business process redesign” (whose acronym is also BPR unfortunately) but envisioned a much more central role for IT. The authors argued that IT capabilities and BPR have a recursive relationship—the “new industrial engineering” —where “thinking about information technology should be in terms of how it supports new or redesigned business processes, rather than business functions or other organizational entities. And business processes and process improvement should be considered in terms of the capabilities information technology can provide.” As a result, this article established IT as the key enabler for process innovation. The authors offered the following five-step guide for conducting successful business process redesign:

1. Develop the business vision and process objectives.
2. Identify the processes to be redesigned.
3. Understand and measure the existing process.
4. Identify the IT levers.
5. Design and build a prototype of the new process.

By the mid-1990s, however, the BPR movement was facing challenges [e.g., Davenport and Stoddard 1994; Earl 1994]. BPR did not appear to be producing the promised advances within organizations. Goals of radical transformation were being satisfied by incremental and rather modest improvements. A sample of 621 large American and European companies revealed that 70-75 percent were then engaged in at least one BPR project but, disappointingly, found that results were falling well below expectations [Champy 1995]. Based on a review of the achievements of the BPR movement and the assumption that failure was at least partially due to project planning and execution, Kettinger et al. [1997] mapped tools, techniques and methods onto a six-stage BPR framework: envision, initiate, diagnose, redesign, reconstruct, and evaluate. The result was a template to improve business process change. An excellent review of the BPR movement by O’Neill and Sohal [1999] characterized BPR as suffering definitional ambiguity with respect to what BPR actually is and how it is different from TQM, performance difficulties due to necessary change having to overcome organizational inertia, the lack of established best practices and the inability to effectively manage the inherent risks of introducing radical organizational change.

If we fast forward to 2007, we see Hammer [2007] revisit the BPR movement claiming both success (“Few executives question the idea that redesigning business processes—work that runs from end to end across an enterprise—can lead to dramatic enhancements in performance, enabling organizations to deliver greater value to customers in ways that also generate higher profits for shareholders”) and failure (“Casualties litter the road ... many [organizations] have made slow or little progress... even businesses that succeeded in transforming themselves have found the endeavor arduous and harrowing”). The reason for this has been the failure to recognize that “designing new business processes involves more than rearranging work flows—who does what tasks, in what locations, and in what sequence” [Hammer 2007]. In contrast, the way to make redesigned processes work requires a concerted effort integrated on many fronts. It is a full-scale mission, not for the faint of heart. Hammer [2007] argues that:

*Companies must redefine jobs more broadly, increase training to support those jobs and enable decision making by front-line personnel, and redirect reward systems to focus on processes as well as outcomes. As if that weren't enough, enterprises also have to reshape organizational cultures to emphasize teamwork, personal accountability, and the customer's importance; redefine roles and responsibilities so that managers oversee processes instead of activities and develop people rather than supervise them; and realign information systems so they help cross-functional processes work smoothly rather than simply support departments.*

To accomplish “process-based transformation” (which now replaces the term “business process reengineering”), Hammer [2007] offers a new framework called the Process and Enterprise Maturity Model (PEMM) which consists of five process enablers (design, performers, owner, infrastructure, and metrics) and four enterprise capabilities (leadership, culture, expertise, and governance), which together help managers plan process-based transformations, track their progress and identify roadblocks. Of particular interest is the realization that effective process change requires an enterprise (as opposed to a functional) perspective, and the change itself must be organizationally aligned in terms of politics (power and influence), strategy (direction and mission), culture (norms and values), technology (support and emerging capabilities), HR (rewards and training) and management (leadership and practice). Without such a comprehensive approach, transformation initiatives are not likely to survive falling prey to everyday organizational machinations or simply be overcome by organizational inertia.

In review, this literature has been highly successful in terms of fueling interest in process management. Once viewed as mundane, business processes are now seen as the way to improving cost, quality, speed, and profitability [Hammer 2007]. Furthermore, it is suggested that these outcomes can be achieved by adopting the suggested

frameworks and following their guidelines to redesign customer-facing and internal processes. While these frameworks succeed as high level prognostications, our interest centers on a more detailed level of analysis—on the actual business processes themselves, their design, and the implications of transforming these processes for organizations. In addition, we are particularly interested to know how IT might bring its expertise and leadership to bear on these transformation initiatives. After all, as one CIO explained “a system is a digital representation of a process” [Smith and McKeen 2006b]. It is clear that technology plays a central role, and it is also clear that IT is uniquely positioned to observe behavior and investment across the organization and to spot leverage opportunities. Furthermore, given its enterprise vantage point, IT is in a position to understand the consequences of NOT transforming an organization.

To investigate further, a number of key questions must be answered. For instance, what are the requisite skills and knowledge base for someone transforming business processes? Who are the best people for conducting and leading such initiatives? What is the role for IT? What are the operative design principles? What are the roles, beyond ownership, for business managers and/or IT managers? To obtain answers to these questions, we need to examine business processes in more detail.

### III. THE NATURE OF BUSINESS PROCESSES<sup>1</sup>

It should go without saying that any attempt at process-based transformation must ultimately focus on processes. Whether service-oriented or product-oriented, processes constitute the means by which organizations create value. But, like a saw, they cut both ways, so, when poorly designed or executed, processes can exact a significant toll on organizations as well. According to a Wikipedia definition,<sup>2</sup> a **business process** is “a set of linked activities that create value by transforming an input into a more valuable output. Both input and output can be artifacts and/or information and the transformation can be performed by human actors, machines, or both.” The following is a typical classification for business processes:

- Management processes (e.g., corporate governance and strategic management)
- Operational processes (e.g., purchasing, manufacturing, sales)
- Supporting processes (e.g., accounting, recruitment and IT support)

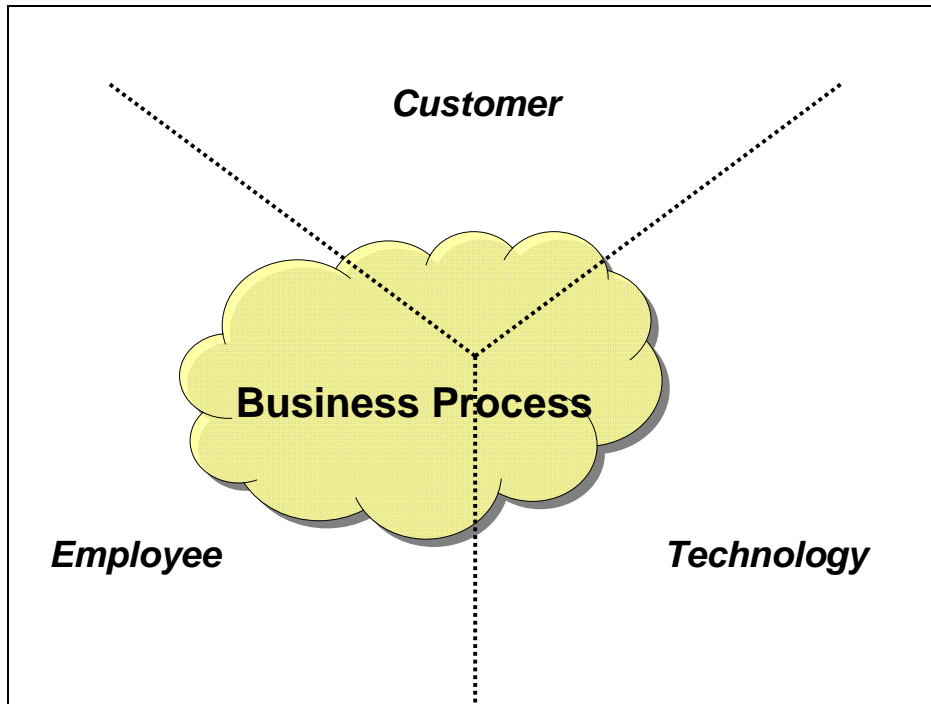
A business process can be decomposed into several subprocesses, which have their own attributes but also contribute to achieving the goal of the super-process. The analysis of business processes typically includes the mapping of processes and subprocesses down to the activity level. Activities are parts of the business process that do not include any decision making and thus are not worth decomposing (although decomposition would be possible). Examples of activities are “answer the phone” or “produce an invoice.”

Business processes are typically triggered by an event, for example, the receipt of an order triggers an order fulfillment process. This process (i.e., order fulfillment) may consist of a number of subprocesses (e.g., invoicing, shipping, replenishment) with the result that a single trigger may result in the cascading of many related processes. With each business process, however, there are three main constituencies: customers, employees and IT. Figure 1 superimposes a business process on these three constituencies to show that part of the business process may be accomplished by the customer, part by an employee and part by technology. Continuing the previous example, the customer may provide order details, an employee may add product and shipping information, and a system may process the order ensuring that payment is received, delivery is made, and stores are replenished.

Both the shape and the placement of the business process on the grid in Figure 1 are important as both play active roles in the ultimate execution of the process. The *shape* of the process represents its content, that is, the activities that are actually performed. As an example, consider what happens when goods are received on a loading platform. Typically someone in the receiving department determines what was actually received in order to match this with the shipping document (perhaps an advanced shipping notice as well), the original order, and the invoice so that someone in the accounting department can authorize payment to the vendor. This process makes sense within a departmentalized organization where the goal is to comply with audit/accounting requirements. It makes less sense where the goal is to reduce the time and cost of ordering goods. If the process were to be redesigned to allow an employee in the shipping department to trigger payment for the goods received, it would have implications for the vendor as well as the receiving company. Furthermore, it would enable the reshaped process to be automated by taking advantage of the capabilities of IT.

<sup>1</sup> Unfortunately, the study of business processes is cluttered with confusing terminology which makes the work that has been done difficult to assimilate. In Appendix A, we present definitions for a number of related constructs to provide some clarity.

<sup>2</sup> Appendix A contains a number of definitions of concepts related to business processes.



**Figure 1. Business Process Key Constituencies**

As can be seen from the previous example, the *position* of the business process on the grid in Figure 1 is also important. By introducing additional automation into the existing process, it in effect shifts the process toward the “technology” portion of the grid where a cost savings can be realized. What is interesting here is the relationship between position and shape. If we simply automate an existing business process (which Hammer in his 1990 article refers to as “paving the cow paths”), we reposition the process to realize the cost savings of automation. However, if we examine the business process from an enterprise perspective, we may change the shape of the process—and may indeed eliminate the entire process—thus realizing the bigger prize of transformation. The close relationship between a process’ shape and position arises from the fact that processes may be reconfigured simply to take advantage of the emerging capabilities of technology.

In terms of industry trends, there has been a continuing push towards automation. Some processes by their very nature are routine (e.g., posting a payment to an account) and are easily automated. Other processes, while not routine by nature, can be automated through redesign (e.g., configuring a mortgage). Still others remain resistant to routinization and require extensive human involvement (e.g., designing a marketing ad). Another noticeable trend is the push toward self-service where customers enact transactions themselves. In Figure 1, this represents a process shift in the direction of the customer portion of the grid enabled by the emergence of the Internet.

Undoubtedly, the majority of new opportunities to reconfigure and expand business processes are being driven by IT capabilities. Fueled by advances in communication, data analytics and information management (and most dramatically, the Internet), a new logic of process design has emerged which centers on *decision making* (i.e., what is the decision and who should make it?) and *service* (i.e., what needs to be done and who should do it?). No longer are business processes held hostage by antiquated design requirements. For instance, processes originally designed to partition/stage work for audit/control purposes are now governed by password-controlled access, identity management and workflow software. This eliminates the need for elaborate (and costly) systems of embedded “checks and balances” and unnecessary redundancy which unfortunately continue to plague most organizations. The transformation of the role of the customer service representative provides an example of this new design logic of aligning service and decision making (see Text Box).

#### **IV. THE ENTERPRISE BUSINESS ARCHITECT (EBA)**

To explore how organizations are approaching process-based transformation, we convened a focus group of senior IT managers from a variety of different companies representing several industries including manufacturing, insurance, banking and finance, pharmaceutical, government, retail, automotive and telecommunications. The reasons for focusing on IT managers were twofold: the first recognizes the central role that technology plays in process-based transformation [Davenport and Short 1993], and the second recognizes that IT more than any other



### **The Customer Service Representative**

*Frontline customer service representatives are now assuming multi-functional roles capable of engaging customers in higher value activities. Before the customer's call arrives in the call center, the representative is presented with the caller's information, knows that the caller has recently made a large item purchase, has also made two technical service requests within the past week associated with this item, and is presented with the list of available scripts to guide the impending discussion. Furthermore, the representative is empowered to make all of the alternative decisions listed. Should the customer decide to return the item, the representative can authorize full reimbursement (based on customer status) as well as schedule the pick-up. This single business process replaces the former service call, payment adjustment, verification of return, service warranty check, and authorization for credit card reimbursement. The result is a customer pleasantly surprised by the one-call resolution and thankful for not having to repeat her complaint history over and over.*

area of the business has an enterprise-wide focus. In preparation for the meeting, focus group members were asked to consider examples of process-based transformation within their organizations and to focus on the overall role of IT. We coined the term “enterprise business architect” (EBA) to denote the person designing the process transformation.<sup>3</sup> Members of the group were asked to focus on the unique skills and competencies of an EBA and to assess how their skills differed from (or related to) other organizational roles. In addition, we were interested to know the background of these individuals and to what extent they could be trained. Finally, we asked about the overall role for IT in these process-based transformations. The group was sequestered for an entire day, and the discussion was moderated by one of the authors while the other author recorded the discussion. As a group, we explored the EBA role in terms of definition, requisite skills base, reporting relationships as well as investigating those already functioning as EBAs (i.e., who they are and what they do, and how they do it). As a result of these different views, a composite picture of an EBA emerged. The remainder of this paper represents a summary of the focus group discussion.

### **EBA: Bridging Business and Technology**

As previously mentioned, we chose the term “enterprise business architect” (EBA).<sup>4</sup> The juxtaposition of “business” and “architect” connotes the bridging of two knowledge bases—business and technology—and the addition of “enterprise” reflects the level of the function within the organizational hierarchy. Despite the fact that the term “business architect” [McGee 2006] is already well-defined, the consensus of the focus group was that the current business architect role fails to reflect an enterprise-wide mandate and, indeed, many business architects function within a line of business or even at the department level. The difference is critical. If, as Hammer [2007] suggests, the goal is to achieve true cross-boundary process-based transformation, this necessitates analysis at the enterprise level.

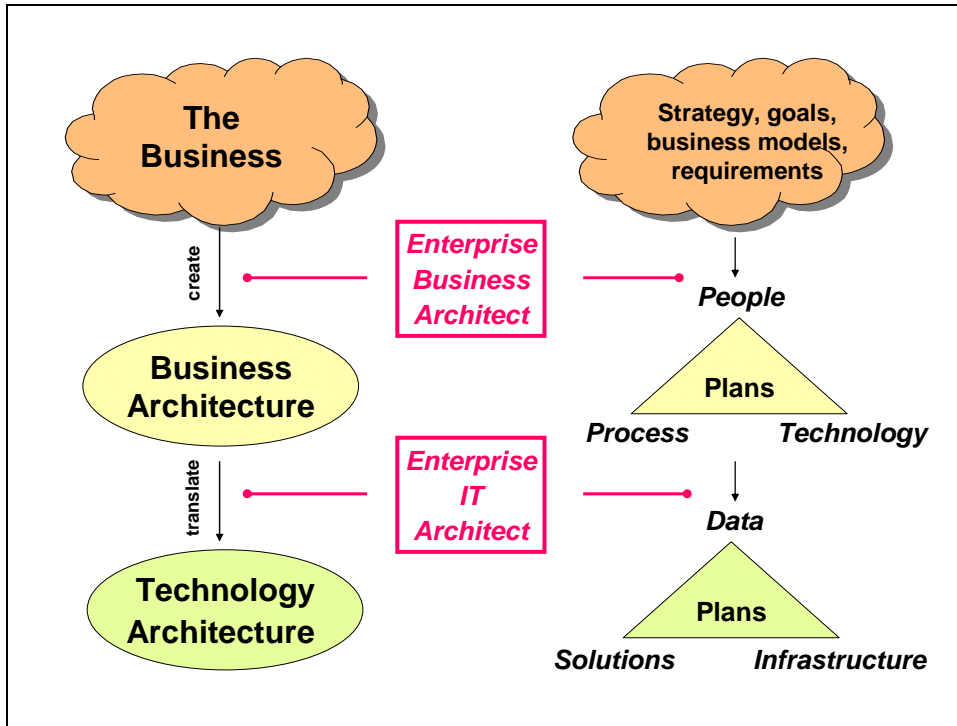
According to one group member, an enterprise business architect is “anyone who takes a step back and looks at the way work is being directed and accomplished and then identifies, designs and oversees the implementation of improvements that are harmonious with the nature and strategy of the organization.” Another member clarified the role of the EBA by contrasting the two types of architect (i.e., business versus IT) as follows:

- An **enterprise business architect** understands the strategy and goals for the business, documents the functions, processes, and information needed to get there (from an enterprise perspective), and creates clearly documented plans for accomplishing this.
- An **enterprise IT architect** takes the business architecture and creates a corresponding IT strategy and plan to accomplish this. In doing so, they document the technology-driven functions, processes, information and platforms, needed to get there (from an enterprise perspective), and creates clearly documented plans for accomplishing this.

<sup>3</sup> In order to focus the discussion on the nature of the EBA role, we refer to the EBA as if this were a single person. Within any sizable organization, however, this would not be the case, as it would be necessary to have a multi-person team performing the overall EBA role.

<sup>4</sup> The choice of Enterprise Business Architect (EBA) was not an easy task due to the proliferation of similar sounding and/or related job titles already in existence. As a case in point, one focus group member provided the following list of roles and job titles: IT architecture, IT planner, data analyst, applications architect, infrastructure architecture, data architect, process architect, IT architect, requirements analyst, business analyst, enterprise architect, solution architect, process design consultant, platform architect, network architecture, infrastructure architect, process analysis, application architecture, network architect, enterprise architecture.

Figure 2 demonstrates why it is necessary for the EBA to understand the overall strategy, goals and business models of the enterprise in order to extract requirements for integrating people, processes and technology to produce a comprehensive architectural plan for the enterprise. The enterprise IT architect then accepts these and produces a plan for the enterprise technology in order to enact the overall business model. It was pointed out by members of the focus group that the function of the EBA, being less well developed and institutionalized than that of the IT architect, is often missing in organizations. Bypassing the role of the EBA allows organizations to proceed directly from high level business strategy to technology solutions often with disastrous effects. In such cases, technology can prematurely limit the choice, range and type of business models that are considered yielding sub-optimal support and missed opportunities for the enterprise. Thus the relationship between IT architecture and business architecture is critical because, while it represents two sides of the same coin—different yet closely related—it effectively decouples strategy (i.e., the business) and solution (i.e., technology). This is effective because of the collaborative relationship between strategy and technology. According to Smith et al [2007], no longer does strategy simply drive technology nor does technology drive strategy. Their interrelationship is much more symbiotic.



**Figure 2. The Relationship between Enterprise IT and Business Architecture**

**EBA: An Architectural Role**

One firm made an important distinction that, while the EBA role spans the domain of business and the domain of information technology, it is fundamentally an architectural role which means that an EBA

*... must take a holistic and systemic view of the combined business and IT domains, based on rigorous articulation of the dimensions of both problems and solutions. They focus on developing a clear understanding of how subsystems work together to serve the purposes of larger enterprise and marketplace systems.*

Thus EBAs must focus on the structural aspects of a business and their relationship to other businesses, individuals, and solution structures. They must address the business aspects of solutions and solution components through an analysis of business value, processes, components, organization, skills, job roles, and culture. They do this by identifying and managing the coordinated business and technical design decisions needed to deliver the promised value.

According to this same firm, it is vital that EBAs

*... are able to take a view across business change programs, assessing their combined business and technical risk, overlap/dependencies and business impact on the staff and customers of an organization. They also shape strategy by continually influencing the business value and strategic choices in the light of*



what is possible from a business and technical solution perspective. Despite these structured and rigorous perspectives, EBAs are expected to communicate at board level where insight, judgment, and other leadership skills are valued as much, if not more, than structured analysis.

### EBA: An Urban Planning Analogy

Because of their everyday usage, the terms “architect” and “architecture” imply certain things to individuals and are interpreted according. According to one focus group member, an “architect” implies a role that “defines or articulates some concept into a concrete set of terms or patterns.” A common point of reference is a building architect. According to group consensus, this is a very tempting but ultimately misleading (and therefore inappropriate) analogy to use for an EBA for a number of reasons: a building is governed by a series of well-established building codes (e.g., set-backs, allowances, structural components); it is designed for a specific purpose (e.g., a single family dwelling or high rise apartment tower); it is fairly straightforward, well-defined task; and it represents a physical structure (e.g., stucco exterior). The difficulty with this analogy is that business platforms may need to be repurposed within 3 months; they are orders of magnitude more complex than buildings; they are less bound to engineering principles and physical laws (e.g., gravity); and they seldom perform the role for which they were originally designed. As a result, it was agreed that the preferred analogy is *urban planning*, where architects must plan for transportation systems (e.g., cars, buses, trains, trucks), physical infrastructure (e.g., sewage, water, electricity), virtual infrastructure (e.g., postal/zip codes, municipal registration, census), municipal/essential services (e.g., schools, fire departments, police, government), and a range of community services (e.g., shopping, recreational facilities). In addition, it is not uncommon to face the need for dramatic change within urban environments; for instance, highways asked to carry ten times the volume they were designed to accommodate; city/town populations unexpectedly doubling; airport hangars being repurposed as athletic centers; residential areas pondering commercial zoning; as well as the amalgamation of distinct urban entities to create common systems for government and services. The focus group felt that this analogy represents the world of the EBA more accurately.

### EBA: Role Responsibilities

The focus group suggested that the successful EBA requires expertise in four key domains: business consulting, process consulting, architecture development, and integration. Furthermore, the fact that the EBA role bridges the business and IT also necessitates the development and use of common language, paradigms and even thought processes in order that communication is effective. In order to gain a more detailed understanding of the nature of the role, the focus group created the following list of specific EBA responsibilities:

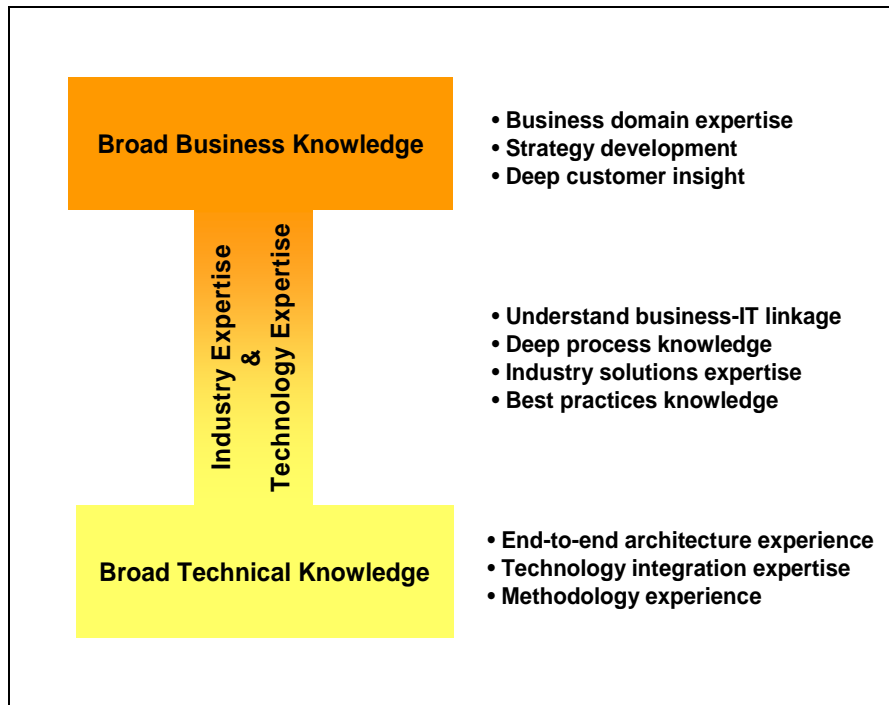
- Identify and advise on process-based transformation potential across the enterprise.
- Distinguish the differentiating from the non-differentiating parts of the business enterprise and advise on appropriate initiatives in each area.
- Recommend the actions necessary to prioritize and improve the business enterprise to deliver short and long term business value.
- Mobilize and orchestrate the business, IT and third parties (where necessary) to deliver process-based transformation.
- Advise on coordinated business and technology transformation initiatives to advance the overall organizational strategy.
- Create and document operational business designs based on sound principles and standards in order to bridge gaps between business executives and IT architects.
- Architect business components.
- Perform capability analysis and value placement.
- Design organizations and job roles.
- Architect and lead business process change.
- Maintain business requirements.
- Perform selection of business modeling tools.
- Architect intra- and inter-enterprise solutions.
- Keep abreast of emergent strategic initiatives.
- Transfer business transformation architecture skills to others within the organization (both business and IT).

It is evident that the EBA role represents a unique and diverse set of responsibilities.<sup>5</sup> The diversity derives from the need to span two different areas of expertise (i.e., business and technology), and the uniqueness derives from the need for both breadth and depth simultaneously. These EBA characteristics were depicted by one focus group member as “I-shaped” (see Figure 3a). This diagram makes it clear that having broad business knowledge or broad

<sup>5</sup> We differentiate the *duties* of an EBA (i.e., *what needs to be done*) from an incumbent EBA’s actual skill level which relates to his/her proficiency in accomplishing these responsibilities (i.e., *how well they are done*).

technical knowledge alone is insufficient. It requires both. . . plus combined industry-technology expertise which includes the following:

- an understanding of business-IT linkage
- deep process knowledge
- industry solutions expertise
- best practices knowledge



**Figure 3a. The EBA Skill Set Is “I-Shaped”**

It is also evident from this description of the EBA role why Davenport and Short [1990] argue that process-based transformation requires two new and different skills—*facilitation* and *influence*. They suggest that these particular skills are vital because “traditional sources of authority may be of little use when process changes cut across organizational units” (p. 24). As can be seen from the above list of EBA responsibilities, many if not most indeed cut across the enterprise. In addition to the skills of facilitation and influence, the focus group added other “soft” skills including customer relationship, teaming, partnering, leadership, strategic and innovative thinking, creativity, and having a passion for business. These are necessary skills for fostering trust and credibility which are important antecedents of facilitation and influence.

### **EBA: Development and Career Path**

The focus group explored the question of how best to develop future EBAs and whether or not, because of their unique skill set, they could be hired from outside the firm. Regarding the first question, the focus group consensus was that EBAs could definitely be developed internally. EBA candidates could follow a career path originating within the business or within IT. Typical candidates include the following:

- Technology/enterprise architects with a bias toward business strategy, business decomposition, business process, and often coming from some workflow technology experience
- Business analysts/architects who have line of business experience and have grown into various business planning or strategy assignments
- Business operations individuals with experience in process design, workflow and strategic planning

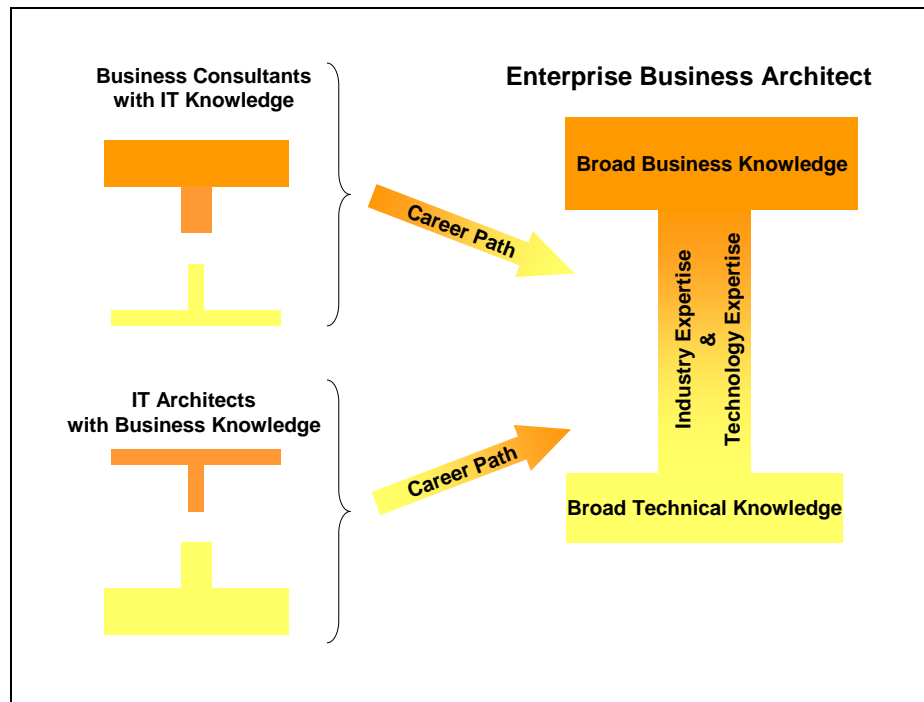
These two archetypical career paths (i.e., business→ EBA or IT→ EBA) involve different development challenges. Figure 3b contrasts these two career progressions; the first candidate originates as a “business consultant with IT knowledge” and the other originates as an “IT architect with business knowledge.” The paths differ with respect to the need to acquire broad knowledge in the “other” field but are identical with respect to the need to acquire the common industry-technology knowledge—that knowledge that effectively links the areas of business and technology. The first candidate’s key challenge is to grow *technology* breadth and depth. It was suggested by the focus group that this is best accomplished by:



1. A series of “engagement experiences with IT architects” in order to develop facility with the various abstraction tools and techniques used by architects;
2. Targeted training and education (e.g., abstraction, modularization, classification, re-use); and
3. Architecture mobilization (i.e., transferring an existing architecture to a different part of the business).

The second candidate’s key challenge is to grow *business* breadth and depth. Here the suggested process was:

1. A series of engagement experiences with business analysts to develop expertise in business analysis and relationship development;
2. Targeted training and education programs (i.e., key business areas); and
3. Enterprise business modeling and workflow planning.



**Figure 3b. Two EBA Career Paths**

The acquisition of common industry-technology expertise comes from membership in trade associations, attendance at industry conferences, exposure to trade publications, vendor presentations, and membership in standard setting groups. This expertise, like all forms, is acquired over time and at a pace commensurate with the frequency and quality of exposure.

The other main question was whether or not EBAs could be hired. The reason for this question was that the nature of the EBA role (i.e., process-based transformation) requires intimate knowledge of the business as well as the technology. The group consensus, however, was that indeed EBAs could be hired and expected to contribute immediately based on the expertise they bring to the firm. The value in recruiting such individuals would be realized because of their knowledge of the industry, technology and best practice, as well as their proven managerial and leadership skills. What these individuals lack is: a) specific knowledge regarding the new organization’s strategy and rationale; b) its customers; c) insight into the organization’s politics; d) necessary enculturation into the organization’s web of norms and values; and e) trust and influence within the organization. These missing attributes limit the effectiveness of the newly-hired EBA until such time as they can be acquired and/or earned in the workplace. According to the focus group, the key question was not whether an EBA *could* be hired but whether an EBA *should* be hired. Internal candidates have already established trust and credibility, are knowledgeable about organizational politics and need only to acquire the requisite skills—whether IT-related or business-related, as previously discussed. Both cases require sufficient time for maturation into the EBA role but, according to the focus group, both have proven successful.

In order to provide additional focus for the role and to bring the concept to life, the focus group suggested that we “post an ad” for an EBA position. Collectively the ad was created based on input from members of the focus group

(see Appendix B). This ad demonstrates the unique blend of responsibilities, skills and personal characteristics of a successful candidate for the EBA role.

### **EBA: Organizational Positioning**

It has previously been argued that process-based transformation activities should report to the office charged with overall business transformation. This ensures that strategy and operations are successfully integrated but, equally importantly, it ensures high-level positioning of the EBA function. This is critical in order for the EBA to be able to pursue true cross-boundary transformation. Ordinarily, such initiatives have a tendency to be quickly co-opted by strong lines-of-business executives who tend to resist “enterprise” systems.

While it was agreed that the EBA should ideally report to the business transformation executive, not all focus group firms had such an executive (i.e., a business transformation officer). Hence, discussion centered on the appropriate organizational placement of the EBA function within firms lacking a business transformation mandate/office. Some members of the focus group recommended that the EBA report to the chief operating officer (COO) if not directly to the chief executive officer (CEO). Their argument was that this would allow the EBA to operate independently of the business and IT. Other members suggested that the EBA should report directly to the chief information officer (CIO) and be positioned equivalently to the chief technology officer (CTO), if such a role exists in the organization. Their argument was that, because of the enabling role of technology in process-based transformation, the EBA role should report through the CIO, who is mandated to introduce technology solutions to the business. It was suggested by the focus group that the issue of the EBA placement within the organizational hierarchy might be resolved depending on how the CIO was seen by the other C-level executives. If the CIO is seen as playing a “technology-first” role, the EBA should report to the COO or CEO (i.e., through a high-level neutral office), whereas if the CIO is seen as playing a “business-first” role, the EBA should report directly to the CIO.

### **V. CONCLUSION**

In 1990, Davenport and Short claimed that “few IT groups have the power and influence to spearhead process redesign.” At best, they saw these IT groups being able to play three minor roles; advocacy, analysis, and redesign. That was a long time ago—predating the very existence of the CIO. Things have changed dramatically since then and the CIO role has grown in importance and stature. According to Smith and McKeen [2006], the IT group is now expected to provide leadership with regard to organizational transformation. But no one will “task” IT with process-based change; instead, IT will have to seize the initiative. An effective way to begin is to articulate the role of EBA and lobby for its inclusion within the organization. It is hoped that this paper provides useful guidance for this endeavor. The opportunity awaits; IT has the skills; IT has the enterprise perspective; now IT needs to take up the challenge. Furthermore, the timing may be opportune. As one member of the focus group suggested, “IT has been practicing building horizontal systems and quietly understanding the business—now let’s play at what we have been trained to do.”

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## APPENDIX A: BUSINESS PROCESS-RELATED CONSTRUCTS

(based on Wikipedia definitions)

**Business process re-engineering** (or BPR) is a management approach aiming at improvements by means of elevating efficiency and effectiveness of the processes that exist within and across organizations. Hammer's article [1990] instilled BPR with the notion of one-off revolutionary change as opposed to incremental change. Business process reengineering is also known as business process redesign [Davenport 1990], business transformation, business process change [Kettinger et al. 1997] and/or business process change management.

**Business process management** (or BPM and sometimes just **process management**) refers to activities performed by organizations to manage and, if necessary, to improve their business processes. It is the application of knowledge, skills, tools, techniques, and systems to define, visualize, measure, control, report, and improve processes with the goal of meeting customer requirements effectively and efficiently. A key aspect of BPM is the existence of software tools called business process management systems (BPM systems) which monitor the execution of the business processes so that managers can analyze and change processes in response to accurate data. BPM differs from business process re-engineering in that it does not aim at one-off revolutionary (or transformational) changes to business processes, but at their continuous evolution.

**Business process automation** (or BPA) is the process a business uses to contain costs. It consists of integrating applications, cutting labor wherever possible, and using software applications throughout the organization. This is the flip side of Hammer's [1990] rallying cry; that is, "automate, don't obliterate."

**Collaborative business engineering** (or CBE) combines a BPR process with collaboration and simulation modeling support to address two perceived weaknesses with the BPR—insufficient stakeholder involvement and poor analyses of the business processes [Den Hengst and De Vreede 2004].

**Performance measurement** is the process of assessing progress toward achieving predetermined goals while **performance management** is building on that process by adding the relevant actions on the progress achieved against these predetermined goals.

**Workflow** is the organization of documents and/or tasks through a process. It specifies how tasks are structured, who performs them and in what sequence, how they are synchronized, how information flows to support the tasks and how tasks are being tracked.

**Business process modeling** is the use of modeling techniques and software to simulate actual processes in order to estimate their efficiency and effectiveness. To do so, these techniques allow organizations to test the efficacy of alternative process designs before putting them into practice.

**Six Sigma** is a system of practices originally developed by Motorola to systematically improve processes by eliminating defects. Since it was originally developed, Six Sigma has become an element of many Total Quality Management (TQM) initiatives.

**Total Quality Management (TQM)** is a management strategy aimed at embedding awareness of quality in all organizational processes. TQM has been widely used in industries such as manufacturing, education, government, and service.

**Capability Maturity Model Integration (CMMI)** is a process improvement approach for software engineering (e.g., project management, requirements development, risk management) that provides organizations with the essential elements of effective processes. The CMMI is the successor of the Capability Maturity Model (CMM) which was the genesis for the concept of maturity models.

## APPENDIX B: SAMPLE JOB AD FOR ENTERPRISE BUSINESS ANALYST (EBA)

The successful applicant will provide business architecture leadership and enterprise-level consulting to the organization on the development of a high quality, rationalized business capability across the enterprise. The major activities and areas of responsibility include (but are not limited to) the following:

- Lead the development and ongoing vitality of a cross-functional view of the enterprise business function and processes as input to the strategic plan and thereby influence investment decisions.
- Analyze and interpret complex business requirements at the strategic level to identify major technology opportunities and risks across all areas of the business.
- Ensure ongoing portfolio management with respect to the inventory of business capabilities and processes in the enterprise, including rationalization of functions and business processes, and identification of opportunity areas.
- Analyze and interpret enterprise technology strategies to identify and recommend opportunities to further these strategies in the context of proposed business cases, and to identify gaps between articulated technology strategies and understood business strategies.
- Create enterprise business architecture models, blueprints and architectural standards and guidelines to deliver business architecture and business process management best practice to the enterprise.
- Establish governance processes to ensure portfolio alignment and compliance to enterprise business architecture standards. Identify the approach to direct the development and implementation of enterprise shareable business services.

The successful applicant will have extensive work experience, demonstrated leadership skills, and will be knowledgeable with respect to all aspects of information technology. A background and experience in IT or business architecture and planning is considered an asset. Key attributes will include teamwork partnering, building trust, strategic as well as conceptual thinking, relationship building and a proven ability to work effectively with senior business executives.

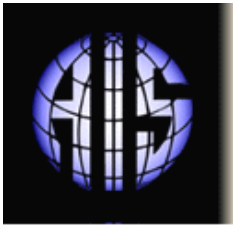
## ABOUT THE AUTHORS

**James D. McKeen** is a professor of MIS at the School of Business, Queen's University at Kingston, Canada and is the founding director of The Monieson Centre which conducts multi-university, collaborative research focused on generating value through knowledge in organizations. Jim received his Ph.D. in Business Administration from the University of Minnesota. He has been working in the field of MIS for many years as a practitioner, researcher, and consultant and is a frequent speaker at business and academic conferences. His research has been widely published in various journals including the *MIS Quarterly*, *Knowledge Management Research and Practice*, the *Journal of Information Technology Management*, the *Communications of the Association of Information Systems*, *MIS Quarterly Executive*, the *Journal of Systems and Software*, the *International Journal of Management Reviews*, *Information and Management*, *Communications of the ACM*, *Computers and Education*, *OMEGA*, *Canadian Journal of Administrative Sciences*, *Journal of MIS*, *KM Review*, *Journal of Information Science and Technology* and *Database*. Jim is a co-author of three books on IT management with Heather Smith—the most recent being *IT Strategy in Action* (Pearson Prentice Hall, 2008). He currently serves on a number of editorial boards.

**Heather A. Smith** is senior research associate with Queen's University School of Business, specializing in IT management issues. A former senior IT manager, she is a founder and co-director (with James McKeen) of the IT

Management Forum, the CIO Brief, and the KM Forum, which facilitate interorganizational learning among senior executives, and co-author (with James McKeen) of *Management Challenges in IS: Successful Strategies and Appropriate Action* (1996). She is also a research associate with the Lac Carling Congress on E-Government, the Society for Information Management, and Chair of the IT Excellence Awards University Advisory Council. Her research is published in *CAIS*, *MIT Sloan Management Review*, *KMRP*, *JIST*, *JITM*, *Information and Management Database*, *CIO Canada*, and the *CIO Governments Review*. Her book, *Making IT Happen: Critical Issues in IT Management* with James McKeen was published by Wiley in January 2003 and she is co-author of a book, *Information Technology and Organizational Transformation: Solving the Management Puzzle* published by Butterworth-Heinemann. Her most recent book (*IT Strategy in Action*) with James McKeen is being published by Pearson Prentice Hall (2008).

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