Major issues in Business Process Management: an Expert Perspective

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Study Approach

The results presented in this report are part of a larger global study on the major issues in BPM. Only one part of the larger study is reported here, *viz.* interviews with BPM experts. Interviews of BPM tool vendors together with focus group studies involving user organizations were conducted in parallel and set the groundwork for the identification of BPM issues on a global scale. Through this multi-method approach, we identify four distinct sets of outcomes. First, as is the focus of this report, we identify the BPM issues as perceived by BPM experts. Second, the research design allows us to gain insight into the opinions of organizations deploying BPM solutions. Third, an understanding of organizations' misconceptions of BPM technologies, as confronted by BPM tool vendors, is obtained. Last, we seek to gain an understanding of BPM issues on a global scale, together with knowledge of matters of concern. This final outcome is aimed to produce an industry-driven research agenda that will inform practitioners and, in particular, the research community worldwide on issues and challenges that are prevalent or emerging in BPM and related areas.

Fourteen global BPM experts[1] were interviewed throughout a six month period (between March 2006 and September 2006). Each interview lasted approximately 45 minutes to 1 hour. The participating experts were identified through a judgmental procedure, based on factors such as years of experience in BPM and proven expertise (based on evidence such as best selling BPM book publications, research publications[2], invited keynote speeches at leading BPM events, special designations[3] held in BPM-related institutions, and recognitions through major BPM bodies such as Bpmg.org[4]). The experiences of the experts were thus varied, ranging from business or organizational level to technical level. A list of target BPM experts was developed, and the experts were individually contacted. A face-to-face interview or telephone interview was then set up to suit the feasibility of the project. Due to the global dispersion of the experts, only 8 out of the 14 interviews were conducted face-to-face. Previous established studies denote that telephone interviews are just as effective as face-to-face interviews and we have observed no limitations in the manner in which the data was collected for this particular project.

The semi-structured interviews were designed and pilot tested to elicit free flowing information from the target experts. All four researchers took part in the data collection process where a protocol on the overall interview conduct was followed. Each interview was led by one researcher (at a time) with a second researcher taking part in the interview as a supporting facilitator when possible. The interviewers were equipped with a "field kit" that consisted of a standard introduction to the project, the core interview questions (see Exhibit 1), and a summary notes template to take down effective notes during the probing process of the interview. The first two questions were designed to "set the scene." Question 1 was intended to anchor the expert into his/her area of expertise, and Question 2 was posed to clarify the expert's perspective on what BPM is and to further identify his/her view on what BPM can do within organizational contexts. Questions 3 and 4 were the main parts of the interview, where major issues and potential

[1] The details of experts are not revealed in this report due to confidentiality and ethical reasons.
[2] Identified through best paper awards, various nominations, and successful large scale research grants.
[3] Roles such as presidents and directors in major BPM consultancies and research centers.
[4] The Business Process Management Group (BPMG.org) is a global business club exchanging ideas and best practice in process and change management. They have over 16,000 global members in 155 countries across all business sectors and support their members through case studies, seminars, education, and research (see http://www.bpmg.org/ for further details, last accessed November 22nd, 2006)

recommendations in terms of the generic BPM methodology and specific BPM technology were elicited.

***E*xhibit 1. Expert Interview protocol**

Q 1: Please describe your role in relation to your BPM experience

Q 2: How would you define the term "BPM" and, in your own opinion what role(s) does BPM currently play in businesses?

Q 3: What do you perceive as the major issues in Business Process Management?

What recommendations can you give in addressing some of these issues that you identified?

Q 4: What do you perceive as the major issues in Business Process Management supporting Technologies?

As each interview was completed, the main findings were summarized. All interviews were transcribed and analyzed in detail using the qualitative data analysis tool NVivo 2.0, and the coding was conducted by two of the researchers. The first researcher coded each of the interviews and created an initial node structure. The other re-coded the interviews against this created node structure. Only a few discrepancies existed and these were discussed and resolved by recoding the nodes according to a common consensus. This resulted in a set of major BPM issues as defined by the BPM experts, a high level discussion of which follows in the next section.

Study Findings

We present the main BPM issues perceived by the experts against the typical organizational levels. The findings are thus grouped into three categories; namely, strategic level, tactical level, and operational/technical level issues (as shown in Table 1). This approach is used to specify the context of the identified issues and to better structure the discussion. From the BPM perspective, the *strategic level*, which is at the top level of categorisation, relates to top management support, business and IT alignment, process organization, and governance issues. The *tactical level* encompasses challenges in efforts such as process modeling, process performance measurement, and BPM methodologies. The *operational level* relates to technological issues in BPM adoption such as technology capability, SOA (Service Oriented Architectures) maturity in the technology landscape, use of XML standards, and so on.

Strategic	Tactical	Operational
• Lack of governance • Lack of employee buy in • Lack of common mind share of BPM • Broken link between BPM efforts and organizational strategy	• Lack of standards • Weaknesses in process specification • Lack of BPM education • Lack of methodology	• Lack of tool support for process visualisation • Perceived gaps between process design and process execution • Miscommunication of tool capabilities

Table 1. Major Issues in BPM at Different Organizational Levels, as noted by BPM Experts.

During data analysis, the NVivo tool is used to enable the researchers to keep track of the information collected, the analysis, and the original source. However, the original source is not denoted here in this report due to confidentiality agreements with the interviewed experts. Whenever applicable, direct quotes from the experts are depicted in "*see quotes in the text.*"

Issues at the Strategic Level

Lack of Governance

Lack of governance is a frequently quoted issue by experts. Corporate governance is the system by which companies are directed and managed. It influences how the objectives of the company are set and achieved, how risk is monitored and assessed, and how performance is optimized (ASX Corporate Governance Council, 2003). Experts stated that governance is the real issue, "… *the biggest challenge for the next step forward in BPM is proper representation of organization and assignment of responsibility and allowing organizations to be extremely flexible while at the same time not losing track of any piece of work"*. From the perspective of BPM, another frequent issue is the ownership and control of processes across organizational units. Questions such as "*who is the owner of the business process?*" "*Who is allowed to change it, who is allowed to alter it? Do I want you to share my process or my bits of the process with my competitors?*" are essential to be addressed for the effective deployment of BPM. However, no recommended procedure on how to address them has been discussed. It is claimed that solving this issue is "*absolutely difficult.*" Some recommendations towards a solution include the clear documentation of BPM authentication standards (consistent standards for access to BPM-related systems) and organizational directories that show the fluidity of organizational structures. Good sponsorship from high level management is one of the factors that will support the above, which is also related to the issue of employee buy-in discussed below.

Lack of employee buy-in

Employee buy-in across an organization is negatively impacted by the lack of a common understanding of BPM. One reason for this is the lack of awareness of what BPM is. Another reason is the wide range of views that exist of BPM: *"There are too many meanings with the acronym BPM.. So if you talk to a manager versus a technical person or a process owner, their perspective of BPM would be different."* This multiple perspective and lack of common consensus often creates confusion and disagreement on the benefits, expectations, and deliverables of BPM. Middle management has also been particularly criticized as being non-supportive for BPM initiatives: "*Middle management feels threatened by the introduction of business processes because they are losing control.*" Experts believe that the way to remove this barrier is to obtain top management support, which in itself is also a challenging task. Indeed, quite often the bottleneck is at the top of the bottle and careful measures need to be taken to obtain the buy-in from these top level managers. *"One issue is getting the leadership buy-in and getting their engagement and accountability to implement BPM, and in order to get that, I think you need to be able to clearly articulate the business case and the business need and how that fits into the overall strategic goals and objectives.*" "*You can use different techniques to sell business process management top down, and you need to do things like benchmarking and story telling".*

Organizational culture also plays a role in levels of employee buy-in. BPM is generally "*a very hard concept to sell in organizations. Business process management typically involves the graphical mapping and modeling of processes, and, in particular, in the US, many organizations don't see a value in just understanding how the business works. Americans just want to do stuff. Germans, on the other hand, want to understand stuff; there is a big difference."* When asked what one can do to change a culture to make BPM more acceptable, experts' responses were (a) "*First of all talk about it and educate students – That's sort of a grass roots thing";* (b) *"Stress the organizational side more than the technical side. Make sure that BPM is not just the type of software that one uses and speaks the language of the business";* and (c) *"Give the people involved the impression they are still under control and that BPM is just a system that helps them to forget and make it easier to access applications.*"

Another identified hurdle to employee buy-in is the common perception that BPM is about minimizing employee-base – *"People are also very reluctant to talk about processes because they think that they are going to be rationalized in a way.*" This is a difficult hurdle to overcome as, invariably, process automation and improvements do, in cases, result in minimization of the workforce. However, the employees' perception that this is commonly the case is due to lack of understanding of BPM benefits overall.

Lack of common mind share of BPM

There is a lack of awareness that BPM technologies can help, as well as a lack of consensus that a holistic BPM approach is applicable. One of the major inhibitors for this is the lack of agreement on what BPM is and what it can provide. "*The first thing is the term itself because it's such a broad term, business process management; if you talk to different people they will give you totally different definitions of business process management.*" "*The main thing first is getting an agreement from all the different stakeholders that when they talk about business process management, what does it actually mean?*"

Broken link between BPM efforts and organizational strategy

BPM management should be a holistic approach *"…I particularly emphasize that when one looks at the way that an organization gets its work done that you see that part of this is an important strategic level and part of this is an important operational level.*" There should be no gap between organizational strategy and BPM efforts; *"a total alignment from strategic intent, strategic objectives to stakeholder, and the relationships and the measures of value for them, and the processes which contribute towards those, should exist".* Then, "*when one looks at the way that an organization gets its work done, you see that part of this is an important strategic level, and part of this is an important operational level.*" Often, *"4,5,6 different places in the organization run BPM project, and then you have the problem how to bring these local projects together in an overall process architecture. I see a lot of bottom up projects but no way to tie that all into an overall business strategy or process strategy of the organization. That, in my view, is one of the biggest problems that BPM, both the technical industry and as far as consultancy, has to overcome.*"

BPM experts have also expressed a major concern with the problem of policy management, policy match making, and service agreement. "*BPM has to fit into an overall IT infrastructure,*" and this can only be done with the proper documentation of procedures and policies that clearly show how organizational strategy, corporate mission, and supporting technologies fit together.

One can use portfolios and strategy maps to look at what are the processes within an organization and how they relate to an overall strategy. Such approaches will also assist organizations to align the different BPM projects together and assist in communicating the business value of BPM efforts to the relevant stakeholders.

Issues at the Tactical Level

Lack of Standards

Standards are specifications that are sanctioned by governing bodies or specifications that are widely accepted and used (*de facto* standards). In general, they provide an agreed-upon basis with which software, hardware, and communication can be specified. They, hence, play an important role in maintaining consistency within and across organizations and domains. In the space of BPM, standards support consistency and completeness of BPM solutions, and allow various departments within an organization to better communicate their processes. For example, the recently proposed candidate standard BPMN (Business Process Modeling Notation) denotes an effort at standardizing process modeling in organizations and putting an end to having to translate models from different notations within an organization. Standards can also assist organizations to align their BPM initiatives with essential compliance requirements. A number of standards were identified during discussions, predominantly BPEL, BPMN, and various W3

standards on web services. Experts state that *"there is some evidence that these open standards will allow for better interaction*, *easier interaction between enterprise applications, and that will be conclusive to process management."*

However, standards themselves can be problematic. With regards to the content of standards, their development is often domain specific, so experts in the field come together to derive these, and "*that is more a political issue.*" As mentioned earlier, BPM means so many different things to so many different people, and standards bodies and standards groups have their own vested interest in what they do and what they are trying to push. The *application* (as apposed to the creation) of standards is another related issue – when to use what standard and when to deviate from these is not an easy decision to make. Experts state, *"Use them where they exist and they're good and then depart from them if you have a good reason to but don't propagate a non standard simply because it's more convenient for you."*

Weaknesses in process specification

Process specification is important as it allows you to break up information islands within the organizations to allow people to get a broader look at the problem. Organizations often use process modeling to achieve this. However, there is the classic trade off between richness in expression and the stability of the business of a language. There is a difference between what could and should be usefully modeled and what modeling languages can actually support; this issue is yet to be addressed. In light of using process modeling for process specification, organizations also often fall into the pitfall of over specifying their process and losing track of the bigger picture of the intended purpose of modeling; "*Coming up with 400 different models is not important. Trying to analyze all the specifications is not important.*" Experts also suggest to model (document) the processes at different levels of abstractions; "*sometimes business people want to see their processes in a much more simple way so when we transform those processes to the technical view we still should be able to have that abstract view."*

Lack of BPM education

Past BPM success studies have directly stated the importance of appropriately skilled personnel and BPM education for successful proliferation (Grover et al., 1998; Larsen and Myers, 1998; Murphy and Staples, 1998; Ketinger and Teng, 1997). However, many years after identifying this need, lack of appropriate BPM education is still a topic that is raised as a perennial issue by the experts. "*If you take an MBA in a school in the US, you don't hear "process." I mean it's not being taught at Harvard, it's not being taught at Stanford. They have marketing and they have finance, etc. If they hear about process at all, it's operations under manufacturing somewhere.*" "*There is a brand new area, and I believe that the university ought to jump into this area, teach it, and research it.*"

Lack of methodology

As experts stated, "*There is a strong need for methodology for BPM, and none exists at this point.*" *"From a methodology perspective,…really the biggest issue is that there are none. There are no methodologies; there are no set ways of doing BPM. There is no standardized approach."* There is general agreement among all the experts interviewed that there is no reliable *holistic* methodology that guides the BPM projects end-to-end. Experts also commented that a lot of companies get hung up on ad hoc-specific methodologies that come up time to time, and they recommend that the better approach is to borrow from these different approaches and adapt one's own. "*Companies get hung up on whether it's Lean or Six-Sigma or what is the right methodology, and they argue how many black belts you should have, and how many classes you should attend. We took parts out of Lean; we took parts out of Six-Sigma. Neither one of them, frankly, we felt, applied very well to business process improvement."* In the end, the expert recommendation is to *"look at what the continuing improvement opportunities are and try and focus on what we need to focus on,*" since there is no common model that solves all purposes.

"The biggest change for moving forward in all this is to get away from the one size fits all mentality."

Experts also argue that there is a need for an overall encompassing methodology that addresses issues such as BPM project scope management, appropriate tool, and technique selection in BPM projects, maintenance of performance measures, and overall project flexibility.

Issues at the Operational Level

Limitations of the technical support made available for BPM efforts was a recurring theme discussed by the experts during the interviews. Many user organizations *do* have various BPM technologies deployed, but *"that doesn't mean that they are BPM compliant just by buying those technologies."* Having merely the technology does not address any issue; rather, it is how the technology is used that is important. While this is a fairly broad topic, a range of weaknesses from the tool vendors' side were identified by the BPM experts. These were the lack of tool support for process visualization, perceived gaps between process level and runtime, lack of flexibility in BPM tools, and miscommunication of tool capabilities.

Lack of tool support for process visualization

Process visualization is a core element within BPM projects, and this is often achieved with a series of as-is and to-be process modeling tasks. Process modeling is an approach for visually depicting how businesses conduct their operations by defining the entities, activities, enablers, and further relationships along control flows (Curtis et al., 1992; Gill 1999). It is widely used to increase awareness and knowledge of business processes, and to deconstruct organizational complexity (Davenport, 1993; Hammer and Champy, 1993; Smith and Fingar, 2003). The visualization of business processes in the form of process models has increased in popularity and importance, and appropriate tool support is a critical success factor for successful process modeling (Bandara et al., 2005). According to the experts, this is a gap that needs to be addressed: "*Some companies, they print out "wall-papers," they are sitting in the middle of the room with glasses and take a look at the comprehension of business processes.*" In particular, this quote leads to a discussion of the lack of tool support for visualizing processes at different levels of abstraction that would enable the user to view/navigate them.

Experts also commented on the issues of visualizing large-scale process models. "*The problem is how to design huge business processes. If you take a look at the tools, you simply cannot view a process mode."* There are *"monster diagrams"* created through BPM process modeling initiatives, and this added visual complexity (when process modeling is meant to *reduce* the complexity of the business processes) is not helpful. Some tools attempt to reduce that complexity by breaking down the process; *"So if you have a big process and you know that this part of the process – this technology is going to support and this part – this technology, you would totally break up that process into different pieces and give it into different parts, and hope they will work together somehow, and that will introduce those complexities,"* but this can introduce new complexities, specifically in relation to technology and process integration.

Other identified needs are those of finding the right modeling language for all required purposes: "*We are trying at the moment…to force feed us one type of representation which is BPMN or Petri nets or flowcharts or EPCs; they are supposed to work at all levels and simply don't. It's good for the technicians and it's good up to the process analyst but when you go into the business world then people don't think in boxes and arrows.*"

Perceived gaps between process design and process execution

In the current market, the tools for BPM are relatively fragmented. Different vendors specialize in different aspects of the BPM lifecycle, and often, due to a lack of standards, activities completed in one phase with one type of tool do not translate to the next steps of the lifecycle (which may require the use of another type of tool). This is particularly visible between the process design

(process specification/requirements engineering phase) and the process execution phase. "*From the process abstract level there is no connection to the implementation.*" "*They provide the tools for designing the process and simulating it and then provide you with another tool to execute the process but they don't have any kind of tool to design process directly into run time.*" This creates a large amount of rework and sometime loss of information in the process of translation. "*If you go from design to implementation then we've got the problem where we represent processes in the design phase with one medium and then, in the implementation phase, when we put them into systems we have to convert them to various amounts of dialects that are out there at the moment. So it's another exercise.*"

One expert's vision is to come up with a technology solution that *"(a) allows to quickly or partly construct process or information systems. And (b) allows the execution of these systems to be flexible."* If these requirements are not met then it is the view of the expert that "*the whole technology will eventually fail.*"

Miscommunication of tool capabilities

It is a common problem that many users are not aware of the full functionality of the tool(s) that they have purchased. Tool vendors and consultants have been criticized for providing incomplete details of the software and/or misleading information. "*There's a lot of hype in the market,*" and there is "*a lot of misinformation out there that large corporations are spreading in order to sell their product.*"

Contributions and future work

This report provides a targeted discussion of the frequently mentioned issues and challenges related to BPM adoption in present organizations as perceived by BPM experts. In order to identify the main issues, a rigorous research approach was used, employing in-depth interviews with 14 expert participants world-wide, identified through a meticulous selection process. In particular, the study has found a number of more frequently noted issues, such as lack of top management support, lack of tools for visualization for large processes, and lack of tools that link process design to process execution.

The study's findings are expected to be of benefit to both the BPM research and practicing communities, in terms of providing guidance in positioning their current research and targeting future BPM research topics identified by industry as areas that need attention. The study is not without its limitations. The data collected at this stage of the study was limited to a selected group of BPM experts identified through a judgmental, sampling method. While inherent weaknesses of interviews (which were used as the data collection approach) were mitigated as much as possible with a coherent interview protocol, the process is relatively subjective in nature and research bias may have occurred during data collection, in particular when identifying target interviewees and during the facilitation and probing of the actual interviews.

This study is the first step towards deriving a global industry-based research agenda for the BPM context. Extensions of the presented work are planned, and have commenced, in order to generalize these findings across different perspectives (as discussed in the research design section). While this document reported on issues identified by BPM experts, the identification of issues as observed by BPM-related technology vendors and experienced by BPM users have been completed (Indulska *et al.*, 2006). This method of triangulation will enable a rich multi-perspective analysis of BPM issues across different crucial stakeholders of BPM, leading to a better understanding of overall issues in BPM and, accordingly, related critical research directions.

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