Class Notes: BPM Research and Education

Jan Recker

Jan Recker [j.recker@qut.edu.au]

From Product Innovation to Organizational Innovation – and what that has to do with Business Process Management

One of the key trends that we currently witness not only in academic circles but also in industry - all throughout Australia at least – is that "Innovation" is becoming an important driver for business projects, for change agendas – and in turn, for Business Process Management initiatives.

The first thing that people typically associate with innovation is the development of new products and new technologies. We might go even further and classify them in terms of how 'novel', 'appropriate' or 'valuable' these innovations might be. But increasingly, innovation is seen as also applying to the development of new service offerings, new business models, new processes or new management practices. Today, there is a greater recognition that novel ideas can transform just about any part of the value chain and just about every asset and element in an organizational system — and that products and services represent just the tip of the innovation iceberg. Think about it. Steve Job's key innovation was not the i-device itself, it was the business model that centred around this piece of technology, and the novel processes with which people could interact, use, develop, apply or make money on the basis of that technology. So, innovation is much more than a novel piece of technology or product. Thus, the physical IPhone was the obvious attractor, but it was the App store that created an innovative and novel business model that provided a separate ongoing value proposition and added income stream.

What we learn from this example is that innovation is not only deceptively complex but also often a composition of overlapping innovations of different sorts (e.g., new products combined with new process platforms create entire new business models). Focusing on any one type of innovation in itself thus limits our explanatory power as well as our ability to replicate or benefit from innovations.

The increased attention to viewing innovation as a multi-faceted phenomenon that goes well beyond product development brings it also into the focus of process management – where the key organizational asset of focus has always been the 'way an organization manages and executes its work procedures.

The connection between process innovation and process management is by no means new. Colleagues would argue that process innovation was one of the waves that preceded the current enterprise-wide focus on holistically managing business processes. For one thing, Thomas Davenport published on process innovation already in 1993 [1].Today, we understand that process innovation is but one of the many ways in which processes can be improved (other ways would include re-engineering, re-designing or even re-thinking processes [2]).

So, while all would argue and claim that there is indeed an intimate connection between process management and innovation as a key agenda item for organizations, the question remains how exactly this connection manifests itself and – more importantly – how exactly process management can aid organizational innovation. Let's go, take a look then. We'll start with some common problems that emerge when innovation is viewed from an organization-centric rather than a product-centric perspective.

Who Owns Innovation?

Much has been written about organizational innovation, many solutions have been proposed, and many myths established and challenged (see this list of five myths [3], for instance). But - who "owns" innovations? In the old days, (product) innovation came out of dedicated departments and from dedicated employees – notably designers, engineers or scientists — whose responsibility it was to generate, build and pursue new ideas. But with the increased focus on a more holistic understanding of what innovation might be, innovation has become a key responsibility of the entire organization – or better, as a key so-called dynamic capability [4] that needs to be identified, nurtured, grown and exploited. Often, the new imperative is to view innovation as an "anyone, anytime, anywhere" capability that harnesses the skills and imagination of employees at all levels.

This vision is exciting – but hard to achieve. We have all seen suggestion boxes being installed – and being left alone, we probably all have a Yammer (or a similar enterprise social networking solution) logon, we have all been in creativity and brainstorming workshops. Yet, the success of these measures remains debatable – or at the very least poorly understood. This is often due to a lack of capacity, time, motivation or incentives for the individuals. Moreover, especially in large organizations the question remains: If an idea ventures successfully from ideation to business case and productization – whose idea is it? Who needs to be motivated, incentivized, or supported in capacity and time? The answer is probably that the schemes themselves need to be as dynamic as the innovation capability itself. Support programs are required for ideation – but also for further development, productization or innovation implementation. Incentive schemes need to address key stakeholders at each of these levels. Time and capacity planning needs to be adaptive depending on the stage of the innovation process as well as the stage of the innovation itself.

One role that we see emerging in this context is that of an innovation case manager. This role would ascribe responsibility, ownership, authority but also liability about an innovation to a specific, well-suited position in an organization, with the view to drive the innovation through the innovation process, not unlike a process owner being responsible to "drive" processes and be responsible for all cases of process instances.

What Drives Innovation?

A second key challenge relates to understanding where innovation actually comes from.
A sparkling idea on a lazy Tuesday afternoon? The recognition of an opportunity? A deep knowledge and second vision about future demands and solutions?

If we understand the main reasons behind why innovations were incepted and grown, we can use this knowledge to identify and support the origins of innovations much better. In our work at Queensland University of Technology where we attempt to build an understanding of innovation, we differentiate three drivers for innovation:

1) **Problem-driven innovation**
   Innovation driven by a problem is the classical case where a novel, value-add contribution is sought in reaction to an identified issue. In process terms, we could call

this the classical process improvement scenario where we analyze an as-is situation to understand a problem, and then seek to sketch out a to-be scenario that (hopefully) eradicates the problem. Various facilitation techniques, common practices as materialised in reference models (e.g., SCOR) and brainstorming-like methods are then typically used to develop a to-be scenario that (hopefully) eradicates the problem.

Two key attributes describe problem-driven innovation. First, it is imposed top-down, as a reaction to the occurrence and identification of an issue that is deemed significant enough to warrant attention. Second, it is reactive in nature, reliant on the problem to manifest and to be perceived. If the problems to be addressed outweigh the organisational capacity to respond, the focus will be on "fire fighting", leaving little room for considering other, more proactive types of innovation. Problem-driven innovation also tends to be limited to transactional (often process) innovation as new products, services or even business models are typically not derived from an attempt to fix an existing issue.

2) **Constraint-driven innovation**
Innovation driven by a constraint describes cases in which boundaries exist within the context of an organization that limit the ability to undertake "regular" routines, or to employ "regular" artifacts. Instead, a constraint within the context 'forces' the organization to identify and adopt novel ways of running their business processes, or sparks novel product or service designs. These constraints can be macro-economic developments (e.g., changes in the exchange rate making export or import more difficult) or company-internal development (e.g., budget cuts or staff reorganizations). Unlike problems, constraints cannot be eliminated, but an organization has to adopt to these constraints. Examples for constraint-driven innovation can be found in developing countries (how can mobile payment solutions work in the Philippines, on 1,000s of islands with only very small populations on each island? How can Brazil's cash banking system operate when inflation is rapid and ever-increasing – even by the time the customer leaves the bank?) but also within the internal context of organizations in industrialized nations (how do we support collaborative design in a multinational corporation across different continents and timezones?).

Constraint-driven innovation is characterized by two attributes – context-awareness and tight coupling. Context-awareness means that an organizational system has a sound understanding of its wider environmental setting and the factors within this environment. Tight coupling means that (context-aware) organizations not only understand *what* context matters, but also *how* it matters to organizational systems and processes. In other words, they are able to relate elements in the context (such as stability of the financial system, geographical dispersion of markets, weather patterns etc) to elements in the organizational systems (technical architecture, product and service models, processes, workforce, etc) and thus have an understanding of impacts, barriers – and potential solutions.

3) **Opportunity-driven innovation**
Innovation driven by an opportunity describes cases in which innovations are borne not out of necessity but out the realization of a possibility, where an understanding emerged that some advancement within or outside the organization can lead to the emergence and development of an innovation. Often, we associate opportunity-driven innovation with technological advances (often caused by the sheer speed by which these advances occur). For example, just two years ago Mark Zuckerberg posed the question of the business value of the then emerging Facebook. Now we are wondering (still, perhaps), how social media technologies can innovate our client engagement processes.

Opportunity-driven innovation is characterized by the attributes of innovation capability and innovation latency. Innovation capability refers to the potential of emerging technologies to spark innovation in an organization on the basis of that technology. The

question is what new capability is provided by a technology that could yield novel ways of working, or products or service models in an organization. A typical example is the capability of mobile technologies to provide location-based information - which can provide an 'ability to locate' to organizations. Whether or not this potential is realized then is a question of innovation latency – the time required by organizations to identify the innovation capability of an emerging technology (data latency), the time required to analyze the innovation potential originating from that capability (analysis latency) and finally the time required to reach a decision about capitalizing on that innovation potential (decision latency).

How to Create Innovation? – And here's the Possible Link to BPM

Understanding innovation drivers and clarifying issues around ownership is like putting together only two pieces of a large puzzle. We believe that a key challenge remains still around the processes of igniting, incubating, developing and delivering an innovation. These processes relate to the questions of "where does my idea come from? How do you I utilize an emerging technology? Why don't I know how I can best deploy Foursquare in my processes? How do I get my team to be innovative?"

Why is this so hard? Intuitively, as I remarked in the introductory statements above, I would argue that Business Process Management as a discipline would be a first option to consider – aren't we the experts on change, improvement, redesign, and indeed innovation?

Well, the truth (or better, our interpretation of it) is that Business Process Management supports innovations and innovation processes quite poorly. And I go further to argue that this is the case because we tended not to focus on the solutions that are out-of-the-box, novel or radical but rather on the continuous, incremental, in-house opportunities and changes. We might speculate that this focus historically is due to the proposals and experiences made in relation to Business Process Reengineering and the typical connotation of radical redesign that many people associate with it.

I tried to conceptualize this view graphically in Figure 1. In that figure, I have tried to cluster typical methods and approaches that are associated with Business Process Management (in its various shapes and formats) alongside two dimensions: the approach, in a continuum from analytical to creative; and focus (internal or external).

By approach I mean the nature of the techniques that are applied. Six Sigma methods, for example, tend to have a strong mathematical and quantitative focus; whereas SCAMPER can be considered more of a creativity support workshop technique.

By focus I refer to the scope or lens that a technique suggests. Theory of Constraints, for example, is a technique that is inward looking, examining an (internal) business process to identify the bottlenecks within. Design Thinking, by nature, implores an outside-in view that starts typically with external consumers and their perceptions of a product, process or system.

I do not mean to claim that the conceptualization is exhaustive, comprehensive or ultimately faithful. I try to draw to attention tendencies rather than truth. So be gentle with your rigorous examination of the classification I propose here.
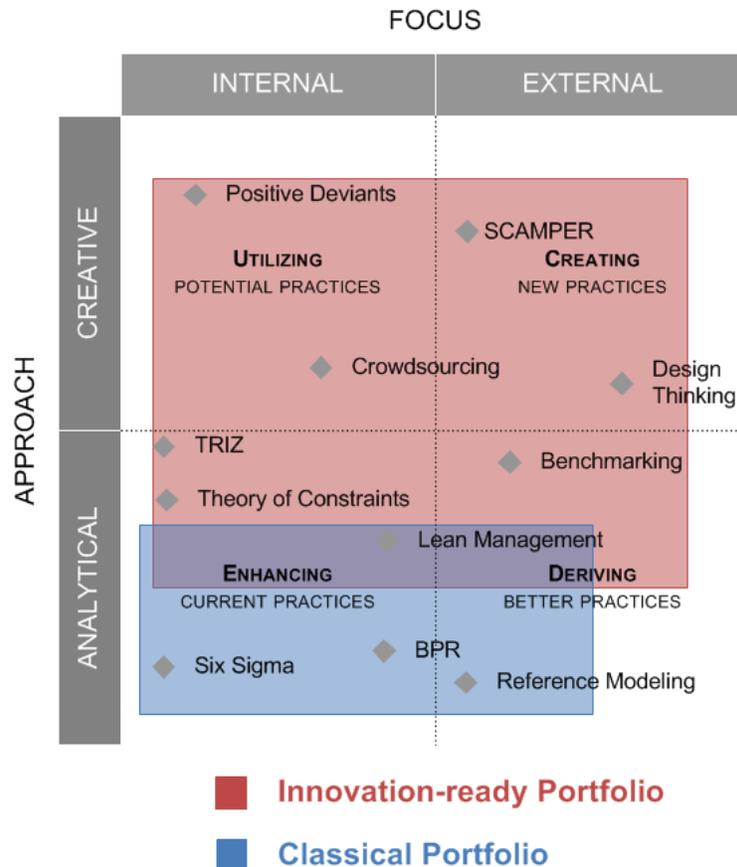
Figure 1: Two Types of BPM Portfolios

What Figure 1 allows me to do, however, and what is the key point I am trying to argue, is that it indicates and compares what I call the 'classical' versus the 'innovation-ready' portfolio of approaches and techniques.

Working with many organizations, we have found that most repertoires of BPM knowledge and techniques are skewed towards analytical approaches' and internal foci (the blue shaded area in Figure 1). Of course any one organization may wish to object and I welcome feedback from organizations with a distinctively different portfolio. Still, many organizations have a good track record in Lean, in Six Sigma, in BPR and other sorts of approaches.

If we consider the theoretical scenario of an innovation-reader portfolio, we would argue that such a portfolio would have to be well-rounded and inclusive rather than deep and exclusive. If we know one thing about innovation it is that it is highly dynamic, fluid and originates from a vast variety of scenarios (and stems from often distinctively separate drivers and origins). To be able to better match these attributes (and thus better capitalize on innovation opportunities as they arise), we need an organization to be ready, which means that our portfolio needs to be able to consider all sorts of scenarios from all sorts of angles.

Putting my BPM hat back on, I think this means two things: First, we need to make an effort of broadening our toolbox. To be innovation-ready, it will not be sufficient to have a team undergo Six Sigma Black Belt training alone. Other techniques will need to find their way into the toolbox, and also need the same recognition and place as an appropriate and valuable approach.

Second – and this is probably more a research theme, we need to expand our toolbox. If I look closely at Figure 1, I find that the bottom-left corner is over-populated while the top-right corner is

sparsely populated. Surely, we can do more than relying on SCAMPER and De Bono-inspired brainstorming workshops to trigger creativity and outward-thinking. Again, I see this as a welcome opportunity for discussion and feedback: my own view of the BPM portfolios is surely limited and I would love to hear about the approaches and techniques in use, and how I might situate them in Figure 1 – or else reframe this conceptualization altogether.

Some Final Words

My colleague Michael Rosemann always argues that innovation correlates with ambition. If key stakeholders and decision authorities are not committed to develop and deliver innovations that truly excite (rather than meet expectations), the innovation process can shape up like Sisyphus trying to bring that big boulder up the mountain only to see it rolling back down over and over. An organization not only needs to commit to becoming innovative, but it needs to be embedded as an ambition – an objective, a goal, a performance indicator and a measurement. Thus, successful innovation will require a 'sense of urgency' and capitalizing on problems, constraints and opportunities that inspire innovation. The effective innovation process itself will rely on a supportive organizational culture and methods, architectures, systems and tools that appropriately facilitate this process.

So, another question that comes out of the discussion above (and I hope it triggered many more) is a deceptively simple one:

"Who is your Innovation Champion – and could it be someone from the BPM team?"

If you have the answer, let me know.

Acknowledgments

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As usual, please feel free to contact me with your suggestions, feedback and comments – or for a copy of articles related to the topics above.

About Me

Jan Recker is Full Professor and Woolworths Chair of Retail Innovation at Queensland University of Technology in Brisbane, Australia. Jan's research interests focus on the use of process design in organizational practice, business transformations and organizational innovations. Jan has authored and edited several books, including one on BPMN and one on Green BPM. He also co-authored over 100 academic papers in journals and conferences and presented his research all over the globe. He holds a PhD in Information Systems from Queensland University of Technology and a MS in Information Systems from the University of Muenster, Germany.
His research and publications can be accessed at http://www.janrecker.com/. The best way to contact Jan is via email (j.recker@qut.edu.au). You can subscribe to his tweets at www.twitter.com/janrecker/.

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