



Re-humanising the corporation: “Don’t automate, facilitate”

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It is over a decade now since Business Process Reengineering (BPR) dominated our business thinking. Amongst the numerous post mortems undertaken on BPR, Michael Hammer’s own admission in 1996¹ that the BPR movement had forgotten about people perhaps sums up the common sentiment. The process focus, however, is far from forgotten, and is currently experiencing resurgence under the banner of Business Process Management (BPM).

Like BPR, BPM focuses on processes and the management of processes as organisational assets. As for BPR, complementary technologies are emerging to enable organisations to orchestrate their business processes with systems². But while BPR was largely focused on cross-functional processes within the enterprise, BPM promises the ability to support inter-enterprise processes as well.

The ‘tongue in cheek’ title of this paper highlights the lessons we have learnt from BPR as we rush forward with BPM. The past decade or more has seen organisations delayer and downsize to the extent that very few jobs now could be described as mechanistic. Almost all require at least some level of human intellect. It is time to recognise the important roles that people now play in facilitating effective business processes.

Knowledge Management (KM) technologies are evolving from merely providing information repositories to become more human-centred, enabling greater knowledge flows and collaboration. To be successful, BPM will need to work in concert with KM.

Reengineering back?

Tom Davenport and Larry Prusak have provided an insightful chronology of post-BPR development³. They acknowledge that, as well as ignoring people, the BPR era was also guilty of an over-emphasis on process at the expense of knowledge-based practices. Practices could be described as ‘rules of thumb’ – improvisations and adaptations that humans learn on the job in executing designed business processes, which largely go undocumented. John Seely Brown supports the balancing of process

1. White, J. “Re-engineering Gurus Take Steps to Remodel Their Stalling Vehicles.” *Wall Street Journal*, 26 Nov 1996.

2. Smith, H. and Fingar, P. *Business Process Management: The Third Wave*. Meghan-Kiffer Press, 2002.

3. Davenport, T., Prusak, L. and Wilson, J. *What’s the Big Idea? Creating and Capitalizing on the Best Management Thinking*. Harvard Business School Press, 2003.

with practice⁴. Peter Keen, a business process champion, acknowledges the importance of practice, though his terminology in referring to practices as “unreified processes” could easily obscure this⁵. The time needed to engineer information systems to support reengineered processes was a major problem. ERP systems like SAP, PeopleSoft and Oracle, providing standardised business processes, were seen as the response to this shortcoming, but clearly these systems support common rather than competitive processes.

New developments in BPM aim to provide support for customised competitive processes, through the use of a standardised business process language and technologies to support a seamless integration of support systems (see www.bpmi.org).

With the increasing focus on business process efficiencies and business process outsourcing (BPO), a business process focus is back on the agenda. We might improve our chances of success this time around through a better understanding of the application of business process technologies in conjunction with KM processes and technologies.

Human-centred versus systems-centred processes

BPM is a ‘systems-centred’ approach: the BPM system orchestrates human activity. Business processes are mapped and then systematised. Where processes appear too complex to systematise, the system hands control over to humans until it can once more resume control. Throughout this process, performance metrics are collected and compliance to processes checked.

There are, however, risks with the systems-centred approach. Pushing process and compliance too far into the ‘human space’ can result in:

- A dumbing down of the workforce and a loss of motivation and innovation.

- A silent workforce revolt, whereby defined processes are not followed and metrics are manufactured to hide the fact.
- A false sense of security in managers that processes are operating well and are under control.

Knowledge systems on the other hand favour a ‘human-centred’ approach. Humans do the orchestrating by calling on business process systems at their discretion. Systems become essentially tools for humans to apply. *But* the human-centred approach carries its own risks, especially in situations where consistency of process is paramount (such as financial transactions or machine controls). Being too human-centred can result in:

- Inconsistent performance, since that is highly reliant on individual competency.
- Lower efficiency, because opportunities for automation are not taken.
- Lower process efficiency, because new opportunities are not taken for fear of job losses.

The balance between the systems- and human-centred approaches is critical to optimising organisational performance.

Orchestration versus facilitation

Process automation, or orchestrating human activity through process management, has been the mainstay of the IT industry. Yet while progress towards truly autonomous intelligent machines or processes has been slow, systems facilitating human action have progressed significantly. The electronic spreadsheet is arguably the most productive class of software ever written. Its direct manipulation interface facilitates human intelligence and action. Paradoxically, spreadsheets tend to make poor business process systems, hard to program and non-transparent in their operations. Computer Aided Design (CAD) systems and the majority of computer arcade games utilise similar direct manipulation interfaces that support human action and

4. Seely Brown, J. *The Social Life of Information*. Harvard Business School Press, 2000.

5. Keen, P. *The Process Edge: Creating Value Where it Counts*. Harvard Business School Press, 1997.

thought. These 'Expressive Systems'⁶ are designed to facilitate human problem solving by flexibly adapting to the needs of humans as they work through a problem-solving process.



BPM systems work on the premise that know-how and work processes can be explicitly represented. Once represented explicitly, these processes can be flexibly adapted, measured and monitored. BPM is inherently a systems-centred approach, with the system orchestrating business processes and the humans that execute them. Yet BPM does not assume that all know-how can be explicitly represented and will hand over control to the human being when this occurs. The trick is knowing when and how to hand over.

When to orchestrate and when to facilitate?

The history of the exploitation of IT has been characterised by many outrageously ambitious initiatives, of which a few have succeeded beyond reasonable expectation. For example, the ATM has fundamentally changed the way banks are staffed. Similarly, we no longer think twice about using our credit cards anywhere in the world. Processes and technologies push the boundaries of substituting what was once human endeavour with technology-based systems. Sometimes radical change is achieved, but in others, unseen socio-technical barriers thwart progress. We still are not all comfortable with buying at electronic auctions and the e-commerce boom of the last decade was hugely overrated. The question is how to recognise when to push through the socio-technical barriers to automate a process and when to stand back and facilitate human endeavour.

The tipping point

The point at which systems-centred business process should hand over to human-centred business practice, or vice versa, is the 'tipping point'. In analysing your business processes with a view to developing a systems-centred support solution, ask the following questions:

- Could an automated solution prove difficult to socialise? (For example, a rostering solution that does not respect unwritten norms.)
- Does the process largely encompass the need for human creativity or insight?
- Does the process encompass decisions that are largely judgemental?
- Can I describe this process in a way that it can be unambiguously programmed?
- Does my process map have feedback loops that are difficult to follow?

If any of the above questions are answered in the affirmative, you should consider a lower-risk, human-centred, facilitated approach.

On the other hand, in analysing current human-centred processes, ask:

- Do members of staff find the process tedious and error-prone?
- Are you confident that the documented processes can be read, learned and performed by a new staff member with minimal support from others?
- Is an automated solution feasible? (That is, a solution that is acceptable 100 per cent of the time.)
- Is the benefit from systematising the business process likely to be a key competitive advantage?

An affirmative answer to any of these questions would suggest strong consideration be given to a systems-orchestrated approach.

As we celebrate the return to process thinking and the rapid advances being made with BPM systems, it is important not to forget the lessons from past BPR experiences. Resisting the human factor by dictating a BPM strategy could have similar consequences to failed BPR projects that followed a similar approach. Dumbing down the workforce through inappropriate insistence on process compliance can result in organisational performance deteriorating rather than improving – for example, when unions 'work to rule' as a negotiation ploy.

6. Pawson, R. *Expressive Systems: A Manifesto for Radical Business Software*. CSC's Research Services, 2000.

How many of your day-to-day activities are orchestrated by systems, and how many are supported by systems tools used at your discretion? What helps you more: your spreadsheet, your word processor or the company's ERP system? Ask some of your colleagues the same

questions. Which style of systems is helping them (or would help them) most in their day-to-day work? Then ask yourself the 'tipping point' questions before you decide where your next organisational improvement will come from, and how.

THE TIPPING POINT IN SCHEDULING APPLICATIONS

Scheduling, rostering and resource allocation are common business processes that have largely defied attempts at automation. Scheduling is an application that is mostly human-centred but in some situations can be systems-centred. While the mechanics of how a schedule is constructed can be described or mapped, typically there will be a process step that applies a complex set of constraints before generating the schedule.

Solutions supporting the scheduling process range from simply providing supporting data for a human scheduler to full automation. However, there is a cost/utility trade-off, and often the development and ongoing maintenance costs of sophisticated automatic scheduling applications cannot be justified.

The tipping point is where the point of cost justification of additional utility starts to become questionable:

automatically generated schedules are rarely foolproof and the skills to maintain a complex scheduling solution are specialised and expensive. Since automatically generated schedules still require some human massaging, the cost/utility equation is often unattractive.

In scheduling or rostering, the tipping point depends on the application. For example, project management systems typically work at the 'expressive systems' level, with project managers generating or modifying plans manually while the system propagates the plan changes and feeds back impacts on time, cost and resources; but in cargo or container packing on ships or planes, an automated system can outperform the human, and human intervention is required only to deal with rare exceptions. In this instance, a systems-centred approach is both cost-justified and preferred.

Human-centred versus systems-centred trade-offs

