

# Aligning Business Process Management and Business Intelligence to Achieve Business Process Excellence

## A closed loop approach leads to better-informed decisions and enables Intelligent Business Operations

### **BPM Trends Series**

*This paper is one of a series, Capgemini BPM Trends, which shares insights into how to resolve today's most pressing business challenges using the latest Business Process Management tools and methodologies.*

Today's economic climate means businesses need to be as effective and efficient as possible, and to make the smartest possible decisions. The way to achieve this is by integrating Business Intelligence (BI) and Business Process Management (BPM) – a combination that is a prerequisite of Intelligent Business Operations. BPM on its own is not enough because you can't see the dynamic context of processes. By adding BI you can achieve closed loop

performance management, where metrics are compared with business objectives and the results fed back to improve processes and decisions. Client experience confirms that BI and BPM are far more powerful when integrated together than individually.

### Gaining competitive advantage through better processes and decisions

Given the economic and institutional crises in our globalized economy, the way to compete is to run your business with maximum efficiency and effectiveness, and to make the smartest possible decisions.

To do so, you need what has been called “the integrated business processes and capabilities that together serve customers in ways that are differentiated from competitors and that create the organization’s formula for business success”<sup>1</sup>.

Capgemini believes that can best be achieved through the alignment of Business Process Management (BPM) and Business Intelligence (BI). This combination is often referred to as Operational Intelligence, and is an essential component of Gartner’s concept of Intelligent Business Operations (IBO)<sup>2</sup>.

### The limits of BPM BPM on its own will deliver efficiency, agility and customer intimacy. But is it the right kind of efficiency? Does the balance between efficiency and agility meet business needs? Is the level of intimacy appropriate for every customer?

Let’s look at some examples:

- A customer delivery process can be very efficient (for example, following a Lean program) – in fact, it may not contain any idle time at all. But efficiency is not always matched with effectiveness. For example, it may be that because of marketing campaigns in some regions, there are configuration problems and stock breakdowns. Even if the item that you can’t

get is just a giveaway that comes with your product, shortages can undermine your whole proposition.

- By definition, agility can necessitate some inefficiencies. You need more than minimal stock levels to keep a manufacturing conveyor belt running; similarly, economic growth arguably requires some level of frictional unemployment.
- A call center representative may be confronted with a demanding customer, and be forced to decide whether to prioritize overall efficiency or service to this one customer. Does the agent mark the customer as a lead, get off the phone, and move on to the next customer, or continue the conversation with this customer and let others wait? An optimized process won’t help the agent decide, unless the process also provides information about the individual customer’s value to the business.

All these cases show the importance of looking at processes in their wider context, and seeing how the changing dynamics of this context affect customer experience or business value.

### Combining BPM and BI

The dynamics of the context can be understood by complementing BPM with the analytic mechanisms of BI. Equally, to harvest the full potential value of BI you need a business model and a business process perspective. Only by using BPM and BI together do you get access to sophisticated capabilities like the one Capgemini calls “drill-out” (see panel).

However, simply integrating BPM, BI and some business applications into a customer initiative will not yield the desired competitive advantage. What is required is

### Drill-out

Drill-down is usually based on just one dimension, or on something like a KPI tree. For example, you can drill down through sales by region, by margin, by salesperson. Drill-out is something completely new, and is based on a different representation of the business, such as a process model, resource model, or value chain. With it, you can jump from one dimension to a completely different one.

Let’s say sales of a low-margin standardized product are lower in one region than in another. Drilling down might not tell you the reason, but drilling out could. For example, exploring the sales figures in conjunction with the business model might reveal that processes are different in the lower-performing region: perhaps greater customization of products is lengthening delivery times because of the switchover time needed to make the standard product.

<sup>1</sup> Thomas H. Davenport, Jeanne G. Harris, *Competing on Analytics*, (Harvard Business School Press, 2007), p. 187

<sup>2</sup> Gartner Says Intelligent Business Operations Is the Next Step for BPM Programs, press release, March 7, 2012. <http://www.gartner.com/it/page.jsp?id=1943514>

structured interoperability across the organization’s entire BPM, BI and application environments. This interoperability must be business-driven, which means that the initiative needs to start from a broader context than the processes themselves: that of the business architecture, business model, and value chain.

The alignment of BPM and BI can be seen from two main perspectives:

- Injecting BI into business processes to improve decision-making – i.e. taking an inside-out view of the decision
- Closed loop performance management – i.e. taking an outside-in view of the decision

We will discuss each of these perspectives separately, but it should be understood that they are two ways of looking at the same issue: that of linking the process information and process results available through BPM with the decision support capabilities of BI.

**Injecting BI into business processes to improve decision-making**

Many business processes require users to make a decision, such as approval of a purchase request. Often, the decision has not been modeled as part of the process, leaving the user to rely on spreadsheets, phone calls,

e-mails, or experience to determine the best decision in the current context. In situations with a wide and changing variety of options, this lack of support for decision-making leads to disastrous inconsistency.

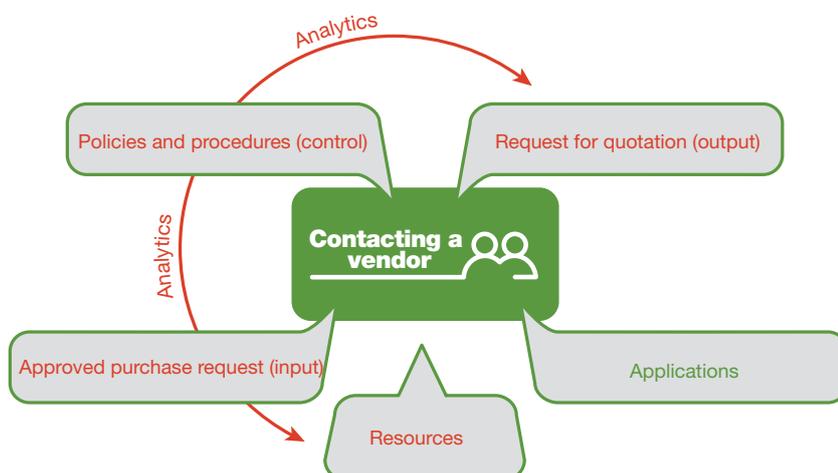
Adding BI analytics into the process improves and accelerates decisions, enabling better outcomes (Figure 1).

Business rules are often used to inject BI into BPM and hence provide decision support. This is a valid approach that makes processes more flexible, offers additional analytic capabilities, and hides much of the complexity that is typical of BI.

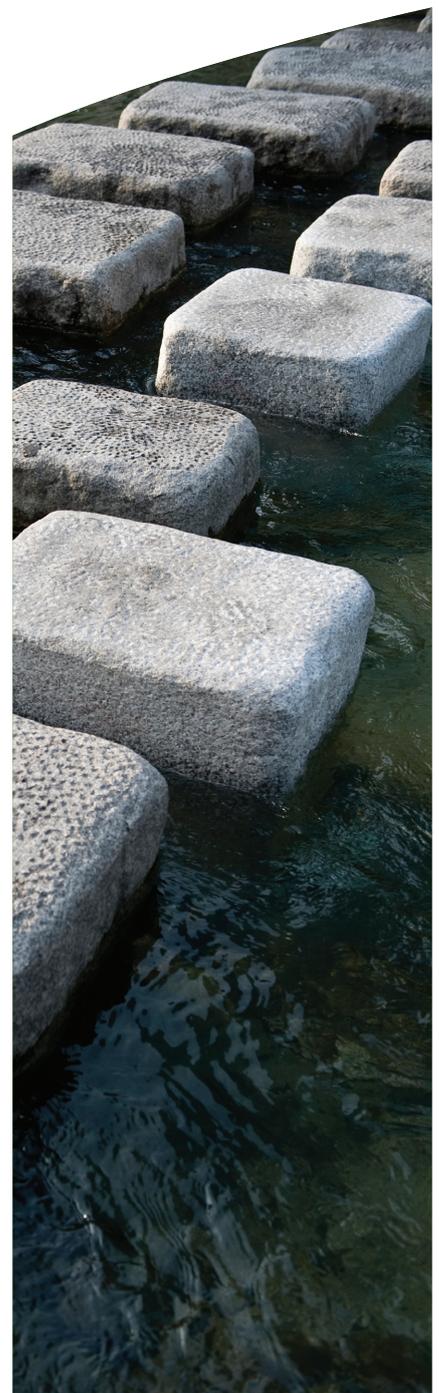
Defining the rules is a complex process that involves balancing conflicting priorities in different parts of an organization. Rules engines can help by providing scalability, traceability, and accuracy.

However, rules engines alone are not enough. They cannot cope with the typical scenario of proliferating business models, products, services, channels, customer segments, and value expectations from different stakeholders. Nor do they provide the vital ability to understand changing environments and respond to that understanding.

Figure 1. Analytics that feed into business processes – contact vendor activity



Source: Capgemini



For example, by implementing rules, you could make an airport's operations efficient from a perspective of ground and air traffic control. But your rules probably wouldn't take into account the most valuable aspect of the operations from an airport perspective – that is, the shopping area. (Heathrow Terminal 5 has been described as “a huge shopping mall with a parking lot for airplanes”.)

Add BI, and you could get more accurate intelligence on where the plane is, and on how long it will take to refuel, complete maintenance etc. That way, passengers can be given more time to shop before being asked to go to the departure gate. Then there should be more revenue for retail outlets and less frustration for customers, since they no longer have to wait idly by the gate for the aircraft to become available.

**By combining BI with the rule-based approach associated with BPM, you can monitor the decision-making process from an analytical perspective. Errors in business rules will be detected sooner, and rules can be changed as necessary, either automatically or manually.**

Other examples where BI can usefully be injected into BPM include:

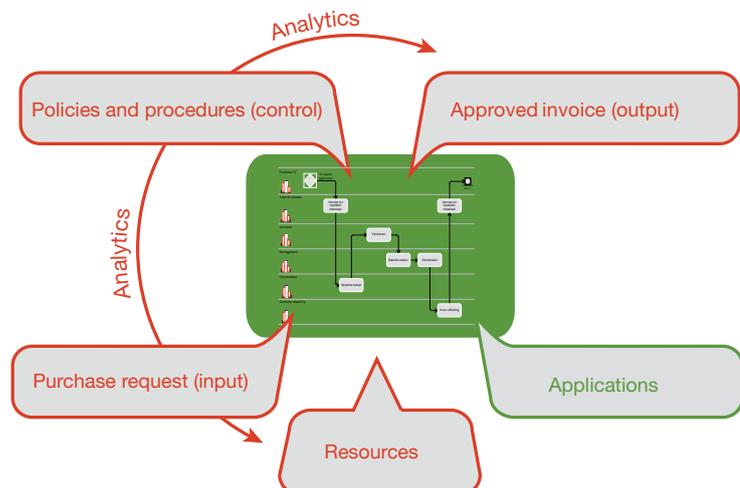
- choosing the best shipping vendors for a shipping firm
- defining skill requirements to perform a task
- allocating field service teams to interventions
- employee appraisal
- approving website content
- choosing which marketing campaigns to fund

### Closed loop performance management

Most BPM initiatives capture metrics to assess the efficiency of a process. A few initiatives have shown, though, that more can be done by setting process metrics in the broader context of a value chain or a business model. It then becomes possible to understand the impact of a given process on the overall performance of the business: either on its overall strategic objectives or a specific business campaign. That understanding can lead to better decision-making at an organizational level (Figure 2).

The results of performance monitoring become even more valuable if they

Figure 2. Analytics about business processes – procurement process



Source: Capgemini



are used to adjust business processes and objectives. This closed loop performance management often involves human intervention to improve the way decisions are made – for example, the call center agent might be instructed to look at a metric of the customer’s value to the company before deciding how long to spend on the call. The feedback and insights gained may also lead the business to automate business processes and event handling further.

From a technology point of view, closed loop performance management solutions require at least a combination of BPM and BI, and sometimes Complex Event Processing technology as well.

**Conclusion**

Today, many organizations are implementing Business Process Management and Business Intelligence initiatives as separate programs. They are flooded with indicators – mostly process performance indicators and key performance indicators – but performance monitoring is carried out at too local a level, in too isolated a way, and with too much focus on lagging indicators. Usually it is hard to see how the various factors measured contribute to different aspects of business value.

Combining BPM and BI to achieve closed loop performance management makes it possible to relate all these indicators to one another. It then becomes possible to analyze cause-and-effect relationships over different

dimensions. As a result, management and staff can make better and more timely decisions and the organization becomes more efficient and effective. This is a crucial step for any enterprise with its sights set on Intelligent Business Operations.

**Client case study: bank adds BI to a BPM-powered solution**

**Management issue**

The COO of a large international bank’s retail arm set up a business campaign to define guaranteed service levels for customer categories showing a low Net Promoter Score (i.e. the customers were less likely than average to promote the bank to relatives and friends). The service guarantee stated that if the bank failed to handle customer transactions within specified time limits, 0.05% would be added to the customer’s savings accounts.

BI about business operations was essential to keep service level breaches to a minimum, particularly as the bank wanted to launch multiple campaigns of this type.

**Initial approach**

A good deal of relevant transactional and process information was already available, and a large BPM project,

supported by a new Business Process Competency Centre (BPCC), was launched to improve operational business processes.

This initiative resulted in leaner operations and well-documented processes, but essential elements were still missing. For example:

- The impact of the change on business results or business value was not clear
- There was a lack of information to support senior management decisions, and the impact of those decisions on operational execution was hard to establish
- There was not enough information about current processes for the COO to know whether a proposed action, such as this campaign, was viable in a particular region
- Performance at each level of the management hierarchy (COO, value chain owner, process owner, team owner) was measured, but it was not possible to see how one level impacted another

- There was a wide gap between the documented process models and what teams actually did

**Capgemini’s solution**

In four months, we helped the bank to introduce BI analytics based on a business model and a value management methodology. Our approach made it possible to explore process performance information along with intelligence on customers, channels, operational

**“Now I really have a grip on what is going on in my organization; this will be the ‘Single Point of Truth’ for the whole bank.”**

COO of retail bank

teams, and financial objectives and risks. We also introduced a feature called “action management”, which provides flexible tracking of performance improvements across a range of initiatives.

**Results**

- All management levels, from COO to operational team leaders, now have performance information about processes, customers, finance and capabilities to support their decisions
- The impact of performance at one level on another level can be seen, and there is a daily “performance dialogue” between all hierarchical levels. This makes it possible to

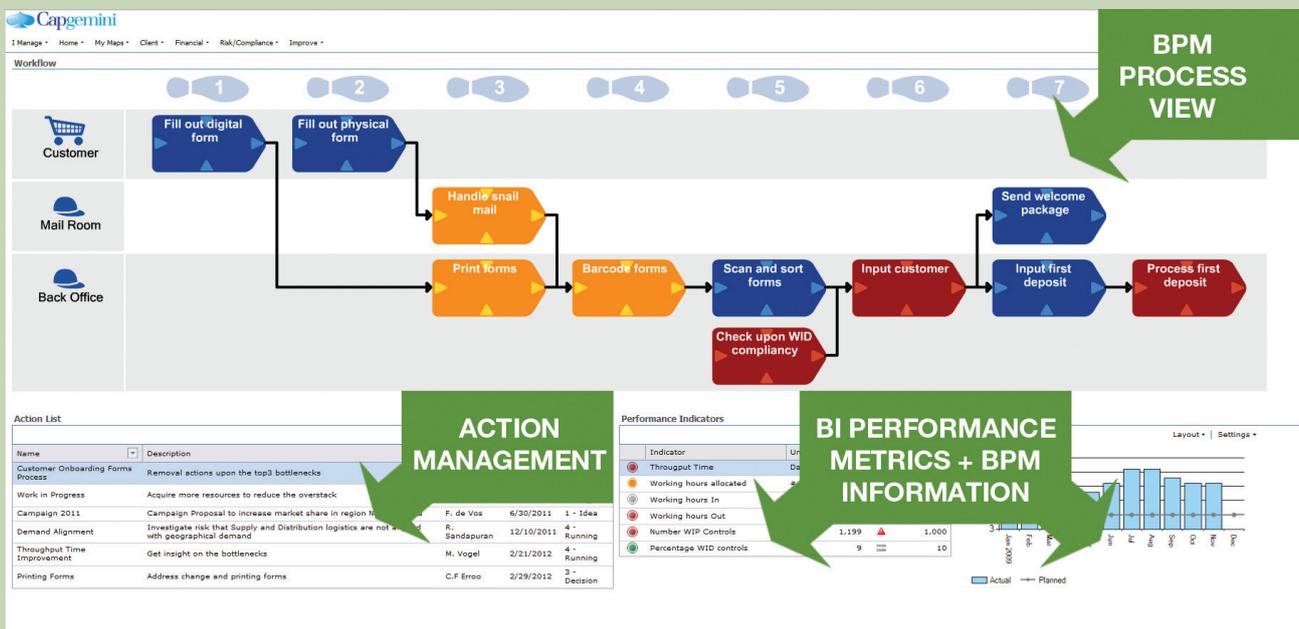
work together to achieve corporate objectives

- A range of information to support business campaigns is now available – it is easy to assess whether they are viable, and then measure their impact
- Through appropriate use of performance feedback, the bank has closed the loop between initiating actions, monitoring performance and taking new actions
- The bank regards this project as the first time it has achieved true Operational Intelligence

**Next steps**

The bank now intends to apply the same Operational Intelligence approach to other value chains (savings, mortgages, payments, and cards), other business units (corporate banking, private banking) and banking operations in other countries. There will also be continuous improvement of the area described below.

**Figure 3. Process manager cockpit**



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