Business process optimization, Part 1: Planning for sustained agility and business outcomes

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This article explores commonly held concepts behind business performance and agility, and illustrates at a practical level how to extend these into new and innovative ways of measuring, achieving and sustaining business performance through business agility.

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Introduction

Organizations increasingly navigate a highly volatile, complex environment in which uncertainty, change, and the rise of technology, new business models and competitive threats are the only constants. Companies seeking to out-perform in this environment require operational dexterity, and business agility is critical to being responsive to increasingly changing market conditions. The pragmatic and operational definition of business performance and business agility, that is, how to achieve and to sustain them within the context of a supporting IT environment, varies considerably. Although there is a growing congruence in the industry around the definition of business agility, often with an underlying agenda of selling software or services, an agreed upon or recognized definition of business agility remains evasive.

Stakeholders pull a variety of levers to achieve business agility. Figure 1 illustrates sample levers often leveraged to improve business agility.
Figure 1. Business agility levers

(See a larger version of Figure 1.)

Focusing on a single lever or even a collection of levers may not bring about the desired business outcome. For example, a focus on improving an accounts open process may result in increasing short-term revenue and accounts. However, what if the business outcome, the strategic CEO imperative, was to become a leader in the market measured by being number one in revenue and profit in retail banking? Optimizing the account opening process resulting in increasing the number of new checking and savings accounts is good work but insufficient.

It is useful to realize the pragmatic and operational definition of business performance and business agility; specifically how to achieve and to sustain each within the context of a supporting IT environment. What supportive role should the IT infrastructure, software architecture, application development, best practices or any of the agility levers play in order to achieve business goals and maintain performance over time? In the context of business process optimization (BPO), businesses need to look beyond classical application development and agility levers to achieve business outcomes.

This article describes the practical definitions, principles and conceptual model for business agility and business performance from both a business and an IT perspective. The primary audience is business and technical leaders and architects who need to understand how to achieve business agility and drive their organizations towards innovation and continuous business improvement, while maintaining and exceeding levels of business performance.

The objectives in achieving, sustaining, and improving business performance through BPO are as follows:
• Enable agility across multiple dimensions of business and IT in order to be able to manage and incorporate changes in business and technology.
• Help in making trade-offs between agility and effectiveness or efficiency.
• Gain the ability to handle and manage complexity in the face of continuous change, including predictable and unpredictable variation.
• Optimize business architecture and service delivery under unpredictable market or business shifts.

In general, the goal is to be able to optimize the process of change as it naturally occurs in dynamically varying environments, markets and organizations.

**Defining business process optimization**

Business performance is ultimately measured by a comparison of track record with existing scorecards, balance sheets, or key performance indicators (KPIs). Instead of focusing on solutions design, we recommend refocusing on business design, which incorporates unanticipated and predictable variations within the business ecosystem.

BPO is a systematic approach that emphasizes repeatability and replaces heroic efforts and one-time improvements. BPO shifts the focus to business innovation or what should be different in a process (business outcomes), rather than solely requirements gathering or process modeling. The emphasis in BPO is on comprehensive change – not on incrementally improving systems or processes, but re-engineering the business to realize gains through emerging technology exploitation. BPO renders enduring structural changes in organization that are necessary for innovation, business outcome, or both.

We define business agility as the collective capabilities and constructs allowing a business to continuously transform in order to achieve its business outcomes, and to be predictive, flexible, responsive, and launch business initiatives in times of change and uncertainty. BPO makes this possible using building blocks focusing on business performance in which business agility is not only what you do but what you become.

**Influences on BPO**

Factors influencing business performance and agility vary. It's useful to understand a number of these factors, many of which tend to be under the control of the business and supported by IT. However, several of these factors can be put under IT scrutiny and monitoring with the correct instrumentation and interpretation of events. These factors include:

**Business ecosystem**

The network of organizations including partners, suppliers, customers, government agencies, or distributors involved in the delivery of goods and services through both competition and cooperation where each coevolves to some extent.

The ecosystem includes policies, rules and laws governing business providers, business consumers, and business brokers.
Business context

The environment, market, legislation and ecosystem within which the business is operating and evolving changes and varies based on forces within the business context. The business context is a business state within the business ecosystem.

The context in which a business-significant event has occurred or is occurring provides the background and conditions to be used in the evaluation of business policies and business rules as a basis of taking corrective actions for business processes and services.

It is the confluence of the factors and eight enablers (process, information, events, rules, content, analytics, collaboration and monitoring, as shown in Figure 2) that influence BPO such that changes can be made intelligently in the way businesses adapt to business environment changes and affect desirable business outcomes in a consistent and predictable fashion even in the face of generally unpredictable circumstances.

The eight enablers are described in detail in the IBM whitepaper *The Language of Business Design* (PDF).

Figure 2. Business enablers

(See a larger version of Figure 2.)

Business variations and change

There are many changes constantly occurring within the business context and most are unpredictable. Only some of these are business-significant and should be "bubbled up" or surfaced at an executive and business level, especially when business sensors detect a certain threshold above which apparently ordinary events become important enough that the business sensors should indicate that a potentially impactful variation has occurred.

Business state

A business state is the result of a significant business change that causes the parameters and qualifiers of efficiency, effectiveness, agility and performance to change. A change of state implies that business outcomes may differ as you transition from one business state to another. The business state is a snapshot in time of the key metrics and information related to the business context.

Business outcomes

Understanding and defining desired business outcomes provides clarity to initiatives and projects. It enables all stakeholders (business and IT) to fully participate and cooperate with agreed upon and clearly understood objectives. Measurable business outcomes become the central focal point of projects rather than requirements.
Business goals

A business goal denotes the business aspiration of an organization. It describes a desired state that the business intends to achieve. It can be at a high level, starting from a vision and strategy statement, or translated and decomposed into operational, actionable and measurable objectives. Typically goals are set in such a way that there is a finite time to attain these goals. Target business performance is defined in terms of a set of business goals associated with KPIs. An example of a business goal could be as high level as "Increase average revenue per customer by 20%" to something more actionable such as "Increase cross selling products in northeastern region by 5%.”

Key performance indicators

A KPI is a measure of performance, or in other words, a measure of meeting the business goals. An example of a KPI for the "Increase average revenue per customer by 20%" business goal might be "Increase average revenue per customer."

Business processes

A business process describes a sequence or flow of activities or steps in an organization to carry out work to achieve a business result by achieving business goals. Business processes can be named (for example, order processing) or unnamed and known only by their operational function.

Business policies and rules

A business policy is a declaration or statement that describes principles to guide decisions to drive to desired outcomes. An example of a business policy is "Book non-refundable tickets whenever available." A business policy reflects business tactics to ensure adherence to the business goals over time. A business rule is a declarative statement that constrains some aspect of the business. It describes how a business should behave in the face of events under a certain set of circumstances. A decision could cause a transition from one entity to another in a state diagram.

Business decisions

Business decisions record and formalize the decisions that an organization makes within a business process.

Business sensors

Business sensors are instrumentation and mechanisms to monitor, track, modulate and govern business change, just as KPIs track the events and occurrences within the business context.

Business events

Business events are occurrences that represent a significant change in the state of the business. Typically these are not ad hoc or non-deterministic, and are not part of a set of repeating sequences of activities in a business process.
**Business monitoring**

The monitoring of business activities based on a set of KPIs. It involves looking at business events and comparing against thresholds using light algorithms and reporting.

**Service-level agreements (SLAs)**

A service-level agreement is a contract between two business parties formalizing a set of expectations between consumers and the provider of services. This agreement is defined in measurable terms.

**BPO usage scenarios**

Table 1 lists use cases in which BPO should be applied.

**Table 1. BPO drivers and potential impacts**

<table>
<thead>
<tr>
<th>Business driver</th>
<th>Explanation</th>
<th>BPO impact</th>
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<tbody>
<tr>
<td>No agreement on process view</td>
<td>Different geographies or business units do not agree on a process model.</td>
<td>BPO focuses on the underlying business entities and how to prepare them for ongoing change.</td>
</tr>
<tr>
<td></td>
<td>Cannot get agreement on process or on standard processes yet must improve the process or high process complexity.</td>
<td>BPO focuses on optimizing business outcomes.</td>
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<td></td>
<td>High variability of process or variability is seen as competitive advantage or regional differences or geographical differences are significant and process decomposition is inadequate for gaining global consensus.</td>
<td>BPO focuses on measurable business goals and measurable agility levers.</td>
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<td></td>
<td>BPO provides process view without a focus on activities.</td>
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<tr>
<td>Desire for measurable business agility</td>
<td>Desire to make a process or domain more responsive, more predictive, more flexible and adaptable to change and uncertainty. Need to imbed business insight into the process.</td>
<td>BPO provides a business-centric engineering approach for identifying and architecting defined agility points.</td>
</tr>
<tr>
<td></td>
<td>BPO uses an agility model to measure and assess current and future agility needs across multiple dimensions.</td>
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<tr>
<td>Resistance to BPM and process thinking</td>
<td>Organization does not accept process models (named processes) or process views as a way of describing their business lifecycle or operations.</td>
<td>BPO provides the ability to support process patterns defined by business users without having to do a process model or re-engineer the process in advance.</td>
</tr>
<tr>
<td>Belief that technology can do more</td>
<td>Technology can do more than what is currently being achieved. Can we demonstrate how using technology can make a process better?</td>
<td>BPO demonstrates the “art of possibilities” with business stakeholders showing what is possible with holistic use of technology in making a business process more responsive, more measurable and more adaptable.</td>
</tr>
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<td></td>
<td>Desire to balance investment in IT infrastructure with equal or greater positive impact to business returns.</td>
<td>BPO architecturally addresses several technology levers such as analytics, business process management, rules, decision management, learning systems, SOA, mobile, cloud and others.</td>
</tr>
<tr>
<td>Unable to determine what to do next</td>
<td>Unsure whether the next project should be custom application development, rules engine development, decision management or BPM adoption, Lean Six Sigma, analytics initiative,</td>
<td>BPO focuses attention on the outcomes necessary for a process to achieve the necessary measurable results.</td>
</tr>
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content management, a transformation project or some hybrid of these.

BPO provides an engineered approach to holistically leveraging technology and best practices to create sustained capability.

The role of variation-oriented business optimization

Increasing business agility depends to a large extent on applying variation-oriented analysis and design to identify and form a foundation for predictable, anticipated variation (that is, change) and unpredictable, unanticipated change, and pertains to types of variations and changes rather than individual instances of those variations.

There are generally four axes of variation: information (structure), processes (flow), events, and rules or policies form the axes of variation that provide an opportunity for change in a business. Additional axes of variation can be mapped to the remaining agility enablers, such as organization and collaboration. Together these enablers of agility form a set of aspects that can be defined as varying.

Variation-oriented business analysis recognizes the changing nature of the business ecosystem and seeks to optimize business processes through correct design, planning, execution monitoring and optimization. Variation-oriented business optimization helps manage and mitigate complexity in ambiguous, unpredictable and murkyly evolving circumstances using business sensors in the business context to trigger the smart changes needed to adapt and to optimize the response so the business is not unnecessarily expending scarce resources or ignoring critical threats and complexities.

BPO is a green-field opportunity

If you have been working in the industry for a while, none of these three words, business, process or optimization will sound new to you. Even together, they appear to correspond to a value proposition that has been around in the media and the boardroom for decades. Indeed, through modeling, management, instrumentation, automation, and re-engineering, BPM has enabled organizations to achieve process optimization through continuous process improvement. However, while bringing value locally, the optimization of individual processes does not allow the realization of the full potential of the overall performance optimization that you can get by breaking silos and ensuring collaboration. In other words, changing modeled processes will not in most cases change business outcomes, but will only achieve the same outcomes at less cost or higher quality. The choice is whether to make the current state more efficient (BPM) or change the current state (BPO).

Let's look at an analogy: when designing a car and improving it for a certain purpose, either speed, cost or energy efficiency, you cannot succeed without a fully integrated engineering of all the components. The engine has to fit in the body, the body has to meet certain aerodynamics and appearance goals, the transmission needs to be compatible with the intended usage, and and so on with the dashboard, circuits, options and all sort of mechanical, electrical, quality and security constraints. In the same way, you can improve local business operations but you cannot optimize the performance of an entire enterprise solely by implementing BPM in the traditional meaning of the term.
As illustrated in Figure 3, a modern organization encompasses not only internal processes, but also marketing, suppliers, partners and customers, all of which need to be taken into account when optimizing business outcomes. BPO is an innovative approach to identifying elements across traditional and typical silos, which, bridged and combined, can radically improve the performance of an organization and its extended supply chain.

**Figure 3. The organization and its extended supply chain**

BPO doesn't eliminate the need for local performance improvement initiatives, but instead federates them and identifies those that require cross-boundary collaboration.

**Conclusion**

In order to achieve and improve business performance, you need to understand its elements and how to leverage foundational notions that must be in place, such as business agility, in order for the business performance to be realistic, sustainable and able to provide for continuous improvement.

The value proposition of BPO is twofold:

1. Achieve and sustain business performance:
   - Change the business operational model at a rate, cost, quality and predictability consistent with strategic needs.
   - Monitor real-time business events using new combinations of information technology.
   - Provide corrective actions or organizational change as an enabler for sustaining business outcomes.

2. Enable operational dexterity to address agility and complexity gaps identified by executives:
   - Optimize business performance based on well-defined points of agility.
   - Optimize the process of change.
   - Holistically use IT and business operational change as an enabler.
   - Achieve better business outcomes from data and processes in the business.
   - Real-time insight and monitoring to improve decision-making.
• Liberate business from the rigidity and fragility of existing applications that hard-code processes and information utilization.

Businesses believe "we can do better" and are looking for a means of achieving higher level of performance. Business process optimization is a green-field opportunity to liberate business from the rigidity and fragility of their existing applications using a holistic approach to leveraging technology. In Part 2, we'll discuss the BPO method, an easy to use approach for making BPO real as a business-centered engineering method.

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Related topics

- **The Language of Business Design**: IBM whitepaper, October 2010. (PDF)
- **The Data4BPM series**: P. Nandi, et al, April 2010
- **The Component Business Model**: A component-based approach to strategic change.
- **Cutting Through Complexity with Business Agility**: An IBM study.
- **Actionable Business Architecture**: An IBM whitepaper.
- **Capitalizing on complexity**: A Global IBM CEO Study, 2010.
- **developerWorks BPM zone**: Get the latest technical resources on IBM BPM solutions, including downloads, demos, articles, tutorials, events, webcasts, and more.
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