



BPM and SOA

Mike Rosen

CTO
AZORA Technologies, Inc.

mike.rosen@azoratech.com

Business Processes Start with Capabilities

There are numerous approaches to positioning business processes and services within both the current and future state descriptions of a business / IT solution. With the evolution of Business Architecture, an approach has emerged that addresses the complexity of the current state, many-to-many mappings of processes to existing systems, as well as the better designed, many-to-some (and hopefully far fewer) future state mappings of business services. This new approach uses 'business capabilities' as the fundamental abstraction to describe the business requirements, and then maps from capabilities to processes and / or systems, making the redundancies of the current state much more obvious, and the transition to the future state much clearer.

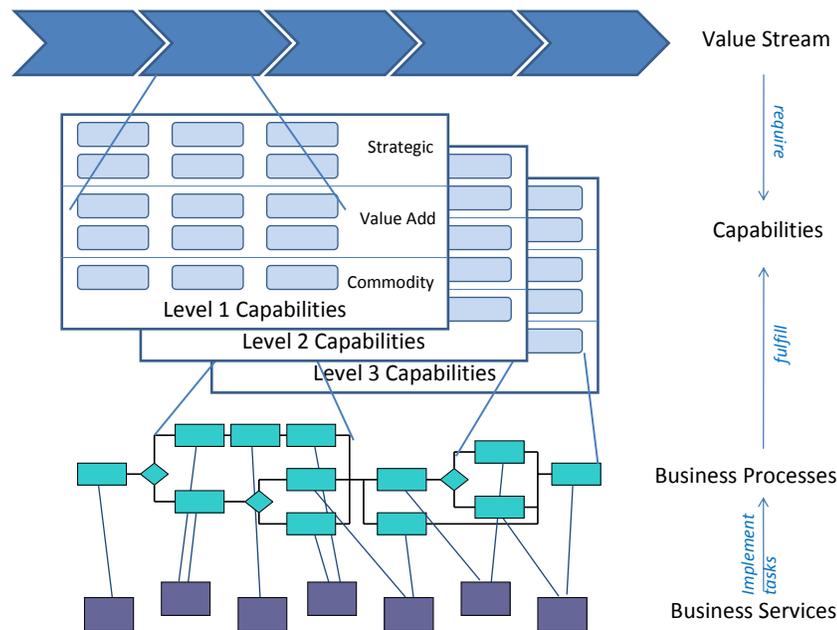
Simply put, a business capability describes *what* an enterprise does, not *how* it does it. Capabilities provide an organization's capacity to achieve a desired outcome. For example, an insurance company has many different capabilities such as claims processing and payroll. Claims processing is core to their business and can value-add, or differentiate them from other insurers, so they may choose to implement this with a set of business processes, supported by various automated systems. Payroll is a commodity capability which they may choose to outsource. Either way, the company must be able to provide both in order to achieve their desired outcome of profitable customer support.

In an article titled "A Business-Oriented Foundation for Service Orientation", author Ulrich Homann provides a more formal definition: "A business capability is a particular ability or capacity that a business may possess or exchange to achieve a specific purpose or outcome. A capability describes what the business does (outcomes and service levels) that creates value for customers; for example, pay employee or ship product. A business capability abstracts and encapsulates the people, process/procedures, technology, and information into the essential building blocks needed to facilitate performance improvement and redesign analysis."

Capabilities are described in a *capability model* which is a hierarchical description of what the business does. We usually talk about Level 1, Level 2, and Level 3 capabilities (or more levels depending on the complexity of the business), where each level is a decomposition of one or more capabilities at a higher level. Going back to the previous example, Claims processing would be Level 1, broken down into claim validation, research, approval, and payment at Level 2, where validation might be broken down into account validation, claimant validation, and coverage validation at Level 3. At Level 1, I typically order these models according to three categories of capabilities: strategic, value-add, and commodity.

Good capability models are relevant to the business and defined in business terms. The importance of a capability can be tied to specific outcomes and metrics. Capabilities models provide a fairly stable view of the business because the fundamental capabilities rarely change, although the processes, applications or sourcing of them do change over time.

So how do we get to the heart of what business capabilities an enterprise needs? I like to start by looking at value streams. Value streams focus on the identification of the end-to-end value creation performed by a high-level process from the standpoint of the customer of that process. That may be the external customer of a business in the case of an insurance claim, or an internal customer in a value stream such as portfolio management. The value stream is the tool of choice when there is an opportunity to restructure the way the organization interacts with its customers to increase the customer value proposition, or when it feels there is opportunity to improve how the existing process is working. Value streams are particularly useful in Lean activities. Value streams focus on the delivery of value, which many not directly reflect the way work actually flows through an organization, although they are generally arranged in a time-based order reflecting the most common scenario.



Analysis of the value stream leads to identification of the business capabilities that will be required to provide value in each of the steps of the value stream. The figure illustrates the mapping of one phase of the value stream to one or more Level 1, value-added capabilities. Those capabilities are then expanded to Level 2 and Level 3 through further analysis. The next question is how are those capabilities currently implemented? And, how should they be implemented in the future state of a more flexible, efficient and aligned Business / IT solution? The figure shows the approach for the future state mapping.

Business processes describe how the business performs, or implements, the given capability, and how capabilities connect to deliver a desired outcome. When we get down to Level 3, the capabilities often map fairly directly to the business processes (typically level-3) that fulfill them. Business processes can be described by a sequence of tasks and flows that implement the process. I've already written extensively in the Column on how the tasks of a business processes should be implemented by *business services* (or more specifically by an operation of a business service interface), which itself may be implemented by other smaller services.

One of the seemingly perpetual issues that we face is 'business / IT alignment'. First, we might ask what that really means. Then, we can look for ways to specify and achieve the alignment. Leading business architect William Ulrich defines alignment as "The state in which business

strategies, capabilities, semantics, processes, rules and governance structures interact in harmony with automated systems and data". I like this definition because it gets right to the point and lays out the complexity of the alignment problem. So as an architect, I look for a model that will help handle that complexity, and a key to that model is the concept of a *business capability*.

Business capabilities provide the link between two complex, disparate environments; that of the business and IT architectures. The capability view of the business provides the high-level foundation for alignment between them. Capability models don't reduce the complexity, rather they illustrate it in ways that provide new insight to the business. *Capability maps* link the capabilities up to the strategies, goals, objectives, products and services they support, and down to the process, applications, systems, services and sourcing that implement them. Often, this mapping is a complex nest of many-to-many relationships.

Capability models and mapping represent current best practices in the area of business architecture and are gaining widespread acceptance for good reason. In a future Column I will address the use of capability maps to get a handle on the current state and to create a roadmap for achieving the future state.

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