



Performance Improvement

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A Framework for Defining and Designing the Structure of Work, Part 3

This is part three of a three-part paper describing a framework for modeling the business architecture (BA) layer of enterprise architecture (EA). In this article, we will add the technology and human resource dimensions, but first a quick orientation:

In the first article we described the view we call the Value Creation Hierarchy (VCH), shown in Figure 1. Every organization exists to create and deliver value to the marketplace using its internal system of processes and resources.

At the top level is the entire organization as a system, with the organization's business units operating as the engines which create, sell and deliver value and generate revenue for the enterprise. At the next level is the organization's value creation system (VCS), which is composed of three major sub-systems (Launched, Sold and Delivered) by which the organization creates, sells and delivers products and services of value to the marketplace.

The third level then divides the Launched, Sold and Delivered sub-systems into processes. Launched includes those processes--such as research, product development, and product extensions—whose purpose is to create new products and services. Sold includes those processes that are aimed at marketing and selling the goods and services. And Delivered includes those many processes that make and get the products and services to customers and provide on-going support.

At the fourth level are individual processes, such as product development or order fulfillment as well as supporting processes. At the fifth level are sub-processes performers (whether human or technology or a combination).

We then laid out a set of process diagrams corresponding to the levels of the VCH (Figure 2) and suggested that these tools together can be used to depict much of any organization's business architecture.

In our September column we argued that a business architecture needs to include a depiction of the management system (shown in Figure 3), which consists of the processes for planning, monitoring, guiding and managing organizational performance.

(Note: The remainder of this article walks you through an application of the BA built as we have described in parts 1 and 2, so to understand the walkthrough, you will probably need to refer back to the tools and models described in those earlier columns.)

Bridge to Enabling Architectures

Now we are in position to bridge between the BA and other architectures. We want to specify performance and performers. We will define the “performer” as:

- a human being executing tasks with no use of an enabling information technology (i.e., the human performer performs a manual task without any use of a computer);
- or a human using a supporting technology (e.g., the human performer uses a computer to process information, access data, perform analysis, etc.);
- or a technology acting as a performer (e.g., a system sends information to another system)

Each of the above options describes a performance situation in which the task is executed in a particular manner, and our process maps should make clear which performance situations are required in the process. In turn the maps become the basis for defining what kinds of technologies are needed and what what knowledge and skills the human performers must possess in order to perform the processes as they have been designed.

Technology Performance Architecture

The jumping off point for defining the enabling technologies are the process maps described earlier in the BA. Taken together, the maps for all the affected processes contain the specifications for what technologies are going to be needed. Figure 4 shows the elements of the Technology Performance Architecture.

One key element of the Technology Performance Architecture is the Use Case. A Use Case is developed for each instance in each process where a human performer uses technology to execute a task. For a change of significant magnitude, affecting multiple processes, there may be dozens of Use Cases developed. Each Use Case is a specific requirement for a specific item of technology to be designed, purchased or modified to meet process needs.

At times the use of a technology may be so complex that it cannot be adequately captured in a process map or use case document. What may be more revealing are “drilldowns” that show how the performance will happen. For example, a process may require very different actions depending on whether a customer is new; existing; existing but with a late-payment history; existing but with no credit, etc. Such complicated algorithms might be diagramed using tools such as if-then scenarios or other techniques that work better than process maps.

Another element of the Technology Performance Architecture is the Technology Enabler Chart which is a compilation of all the technologies embedded in the various processes identified in the BA. When developed in the context of an improvement effort, the Technology Enabler Chart also specifies the current state of each required technology, some of which may be existing and others brand-new. This list amounts to “marching orders” for the IT organization, as it lists all of the requirements of all the processes needed to support the business.

From the Technology Enabler Chart all of the requirements can be and appropriately distributed into three categories of IT technologies that link to the three classic IT architectures (data architecture, applications architecture and technical architecture) listed in most EA models.

In addition, the Technology Performance Architecture contains some other elements not generally found in EA models:

- We have included the IT organization’s own processes, since these are the processes that produce the technologies needed by the business. How well these processes are designed, executed and managed are key to success.

- We have also included the IT function's management system, which should be a mirror of the enterprise management system and driven by it. The goals and needs of the enterprise should be received by this system and then translated into specific objectives and projects for the IT function's processes.

Human Performance Architecture

This architecture is derived from the BA as well, with a focus on the human performers who execute the processes. (See Figure 5 for the Human Performance Architecture.) The tools in this architecture specify what the human performers will have to be able to do to execute the BA processes as intended. The path down from the BA leads to two tools that provide more details and insight into human performance of the targeted processes.

The function role-responsibility matrices identify each job that participates in the affected processes and how the performers in those jobs will do their work.

Then for each affected job we develop a complete Job Model that specifies the job accomplishments, measures, performance goals and knowledge/skill requirements.

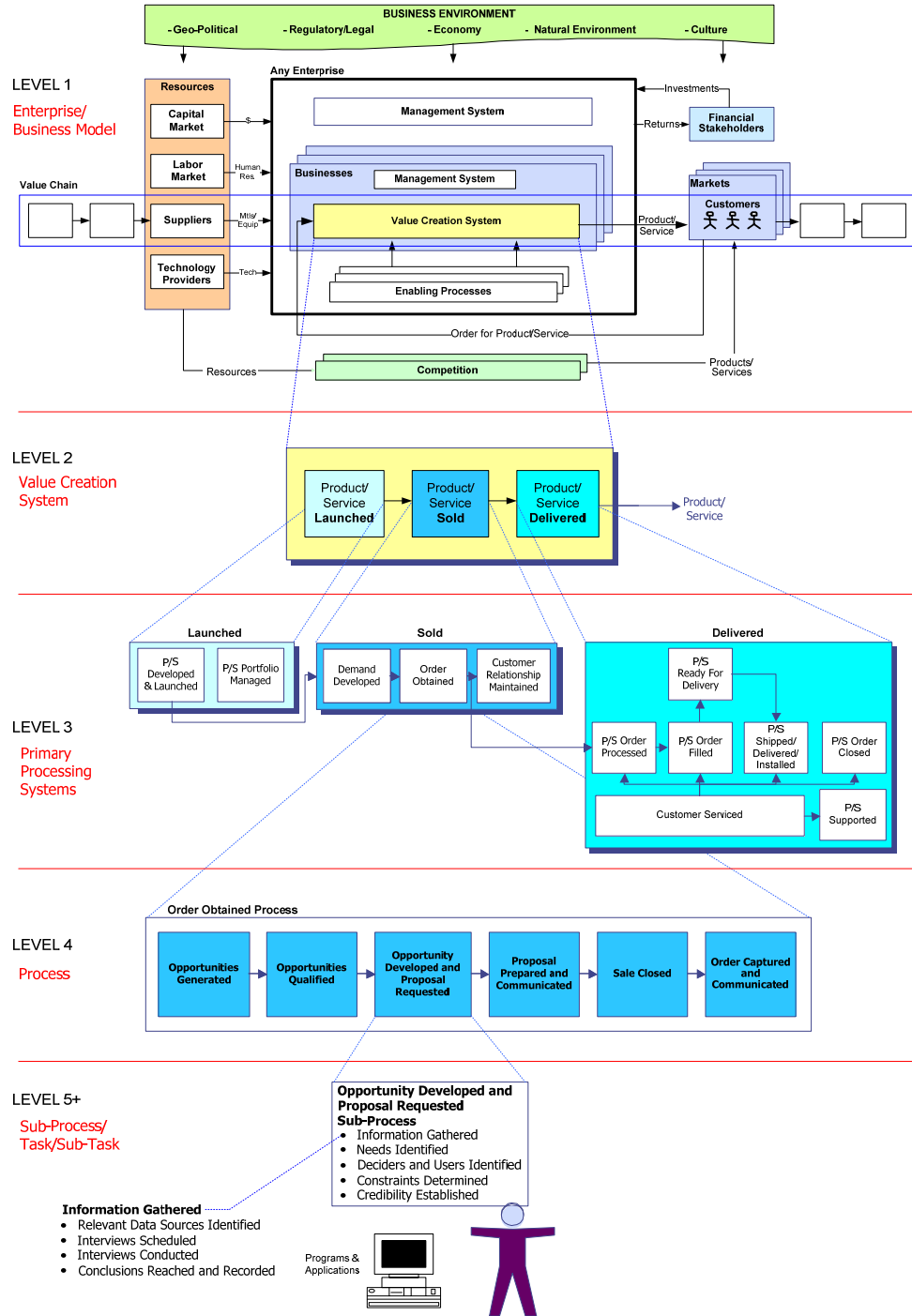
With the Job Models completed, we can check them against the Use Cases to see if they match, and make appropriate adjustments if they don't. For example, perhaps the use cases specify that order entry clerks are going to be using supply chain analytics software, yet the Job Models make no reference to the skills it would take to use such software.

Then, as we did with the Technology Performance Architecture, we now distribute the requirements into several buckets (knowledge and skills, staffing, and performance management) and link them to the HR function's processes that deal with those areas. For example, in order to execute some of the processes in the BA, we may have to train people, or maybe we will hire from outside, which impacts the staffing process.

The Complete VCA

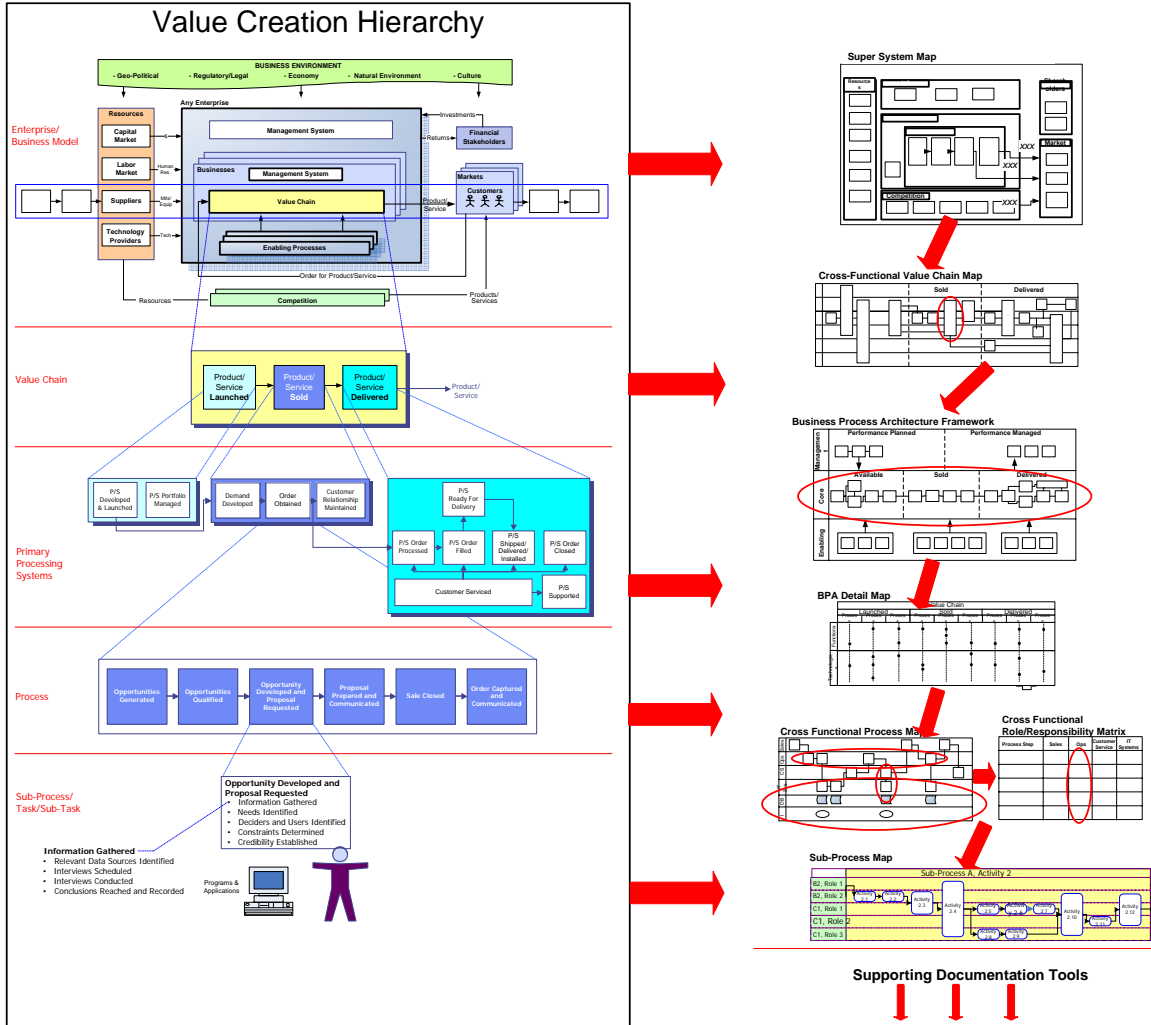
Now, with these enabling architectures defined, we have produced what we would consider to be a complete EA, or what we prefer to call a Value Creation Architecture (VCA). It consists of the Business Architecture, the Management System Architecture, the Technology Performance Architecture, and the Human Performance Architecture. This unifying architecture (see Figure 6) will be constantly affected by changes large and small, but an organization that has developed a complete and accurate VCA like this one is capable of accommodating even large changes much more rapidly than an organization that has not defined its VCA.

Figure 1. Value Creation Hierarchy



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Figure 2. Business Architecture



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Figure 3. Performance Planned and Managed Hierarchy

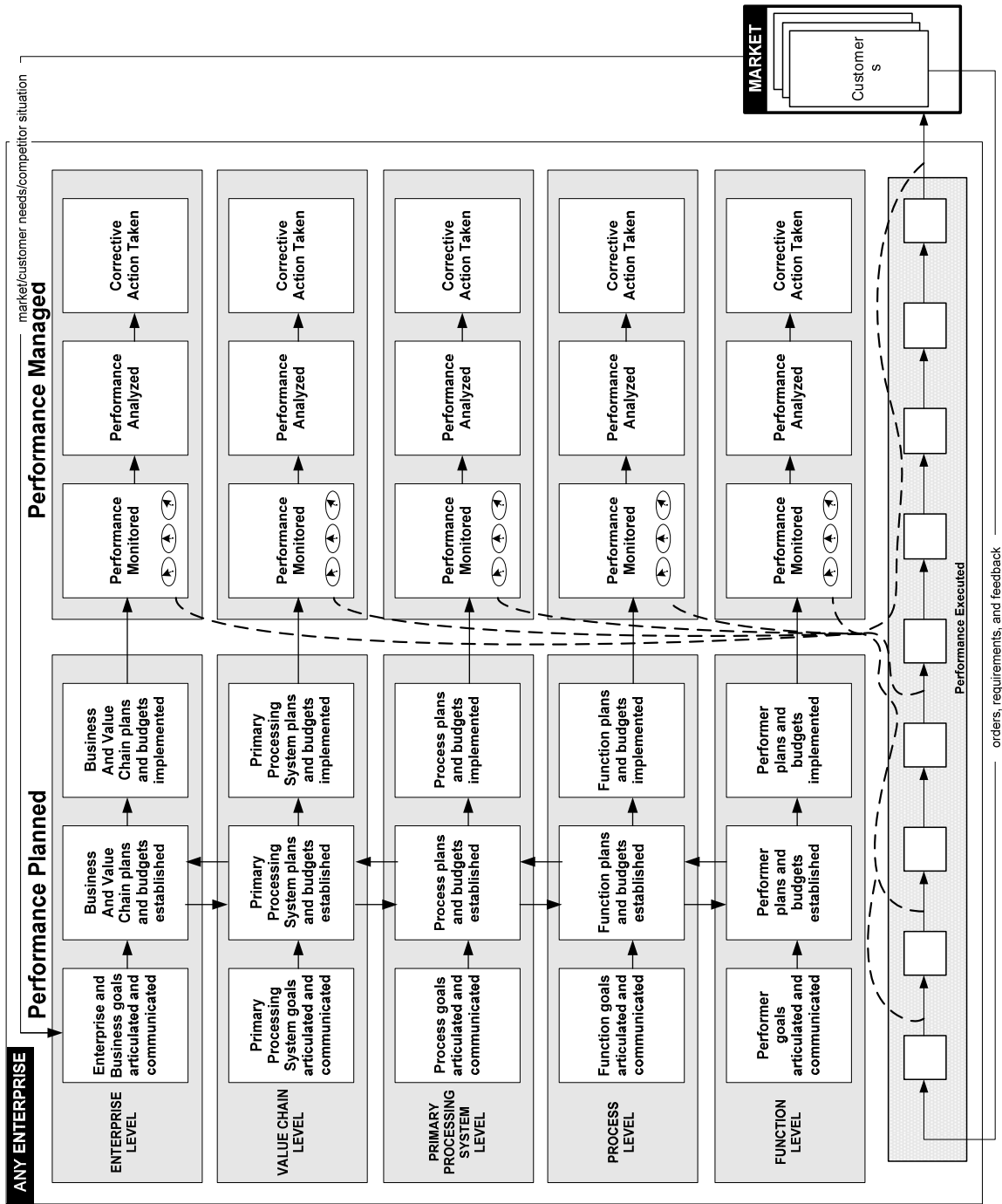


Figure 4. The Technology Performance Architecture

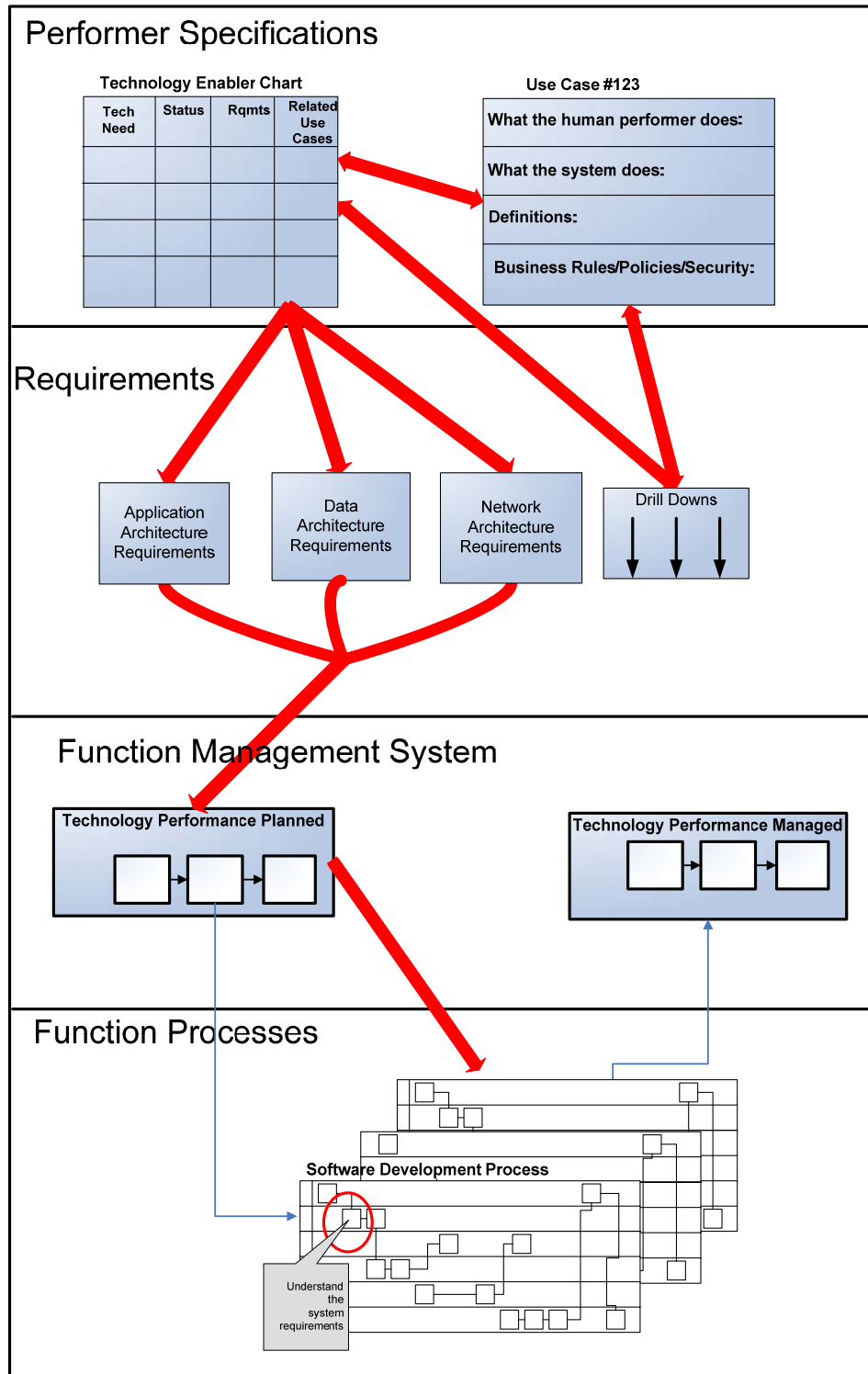


Figure 5. The Human Performance Architecture

