Process Architecture and Organizational Alignment

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Business Process Reengineering

Outline

- THE SECOND PHASE of the BPTrends enterprise methodology focuses on creating a business process architecture for the organization.
- we create a separate enterprise architecture for each value chain, so, in effect, we are really talking about creating a business process architecture for a value chain.

Business Process Architecture

- *business process architecture:* a body of knowledge about the business processes that comprise a value chain.
- The knowledge is organized by a hierarchical decomposition of the processes that make up the value chain.
- The processes, in turn, organize information about the performance measures, process managers and organizational resources used by the various processes.
- The entire business process architecture is hierarchically organized so that executives can see
  - how specific processes are aligned to support the organization's strategic goals,
  - how process measures are aligned and
  - what resources are required for what processes and vice versa.

Process Hierarchies

- A value chain is the largest process we normally talk about. It defines a process that begins when the company decides to create a new product or service, or when a customer orders a product, and concludes when the customer has and is satisfied with the product or service (level 0).
- The major operational processes within a value chain are usually processes like Design New Products, Sell Products to Customers, and Create and Deliver Products to Customers (i.e., Supply Chain) (level 1).
- Any one of these Level 1 processes can be subdivided into several Level 2 processes.
  - the smallest process we diagram is called an activity
- steps, tasks and procedures: the subelements of an activity.

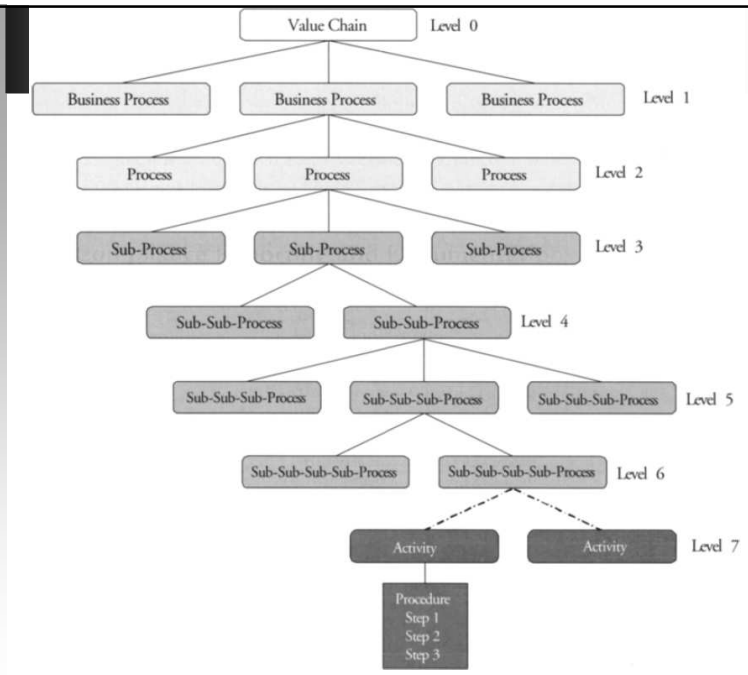

Figure 4.2 A hierarchical decomposition of a value chain, suggesting how "level of analysis" corresponds to process level.

Defining a Business Process Architecture

- The key steps involved in creating a business process architecture are as follows:
  1. Identify a specific value chain.
  2. Determine the specific strategic goals the value chain is to achieve.
  3. Determine how you will measure whether or not the value chain achieves its goals.
  4. Subdivide the value chain into its major processes (Level 1 processes).
     1. Subdivide the major processes (Level 1 processes) into their subprocesses (Level 2 processes).
     2. If appropriate, subdivide the Level 2 processes into their subprocesses (Level 3 processes).
  5. Use a worksheet. For each Level 1 process,
     1. determine how the Level 1 process will be measured.
     2. Determine who will be responsible for the process.
     3. Determine what resources are linked to each Level 1 process.
  6. Repeat this procedure, using new worksheets, for each Level 2 process, and so forth.

Architecture Analysis Worksheet – Level 1 Processes			
Value Chain:	Value Chain Process Manager		
Strategic Goals for Value Chain:			
Level 1 Processes	Process Manager	Level 1 Goals/Process Metrics	Level 1 Resources

Figure 4.3 A Level 1 architecture analysis worksheet.

Completing a Worksheet

- Working across the Level 1 worksheet shown in Figure 4.3
  - the top of the worksheet provides a space for
    - the name of the value chain and
    - for a description of how that value chain supports the corporate strategy and
    - how it will be measured
  - The goals of the value chain must be concisely defined and measures must be developed that everyone agrees will accurately reflect the success or failure of the value chain.
- the architecture group should define the Level 1 processes that comprise the value chain.
  - simple and general and to limit them to about three to seven processes.
  - Most generic frameworks focus on three level 1 processes-a design process, a product/service development/delivery process, and a sales/marketing/ service process.

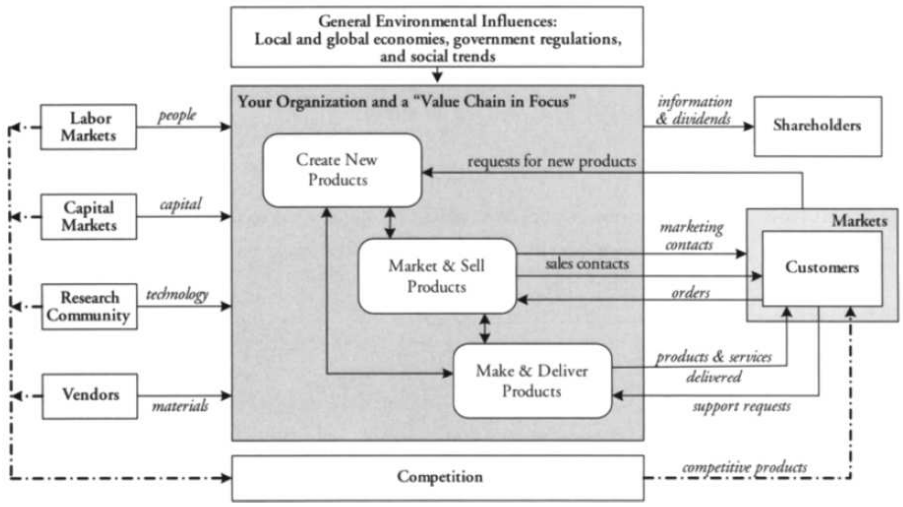

Figure 4.4 An organization diagram showing the major processes in a value chain.

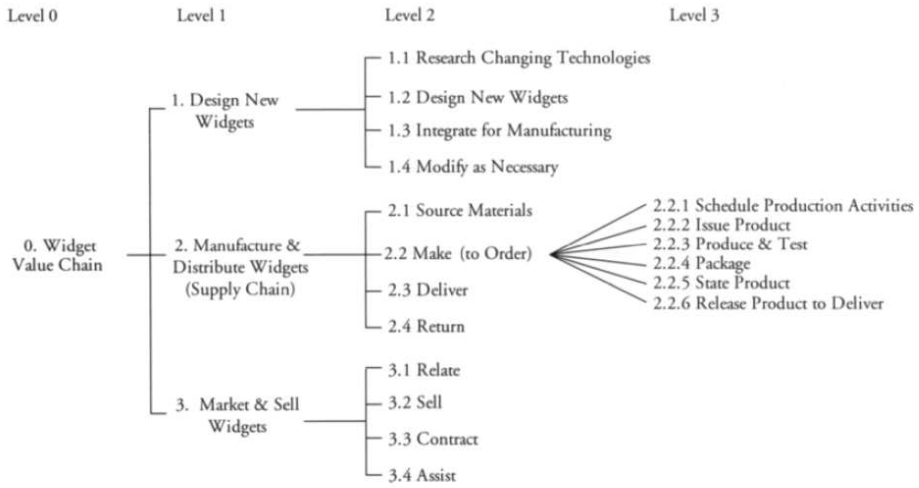

Figure 4.5 Horizontal decomposition of a value chain into three process levels.

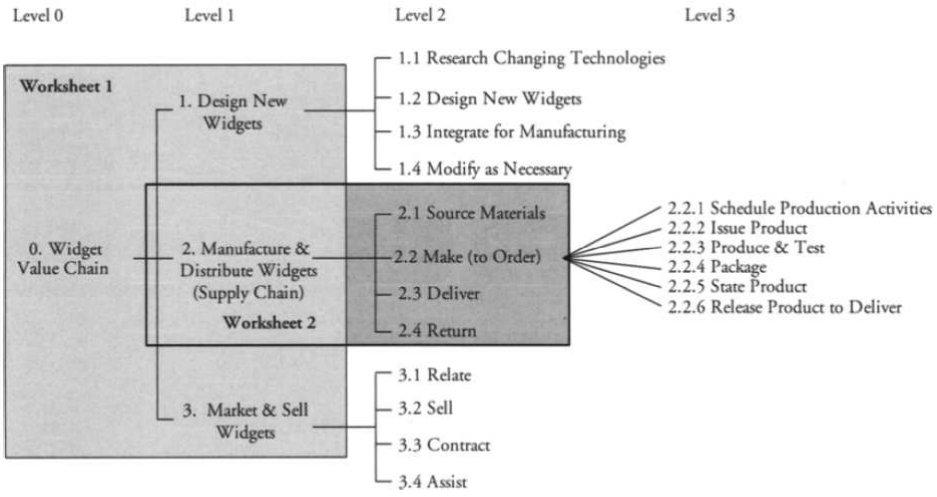

Figure 4.6 Architecture analysis worksheets and a process hierarchy.

Core, Support and Management Processes

- processes that add value to the product or service that the organization is producing for its customers.

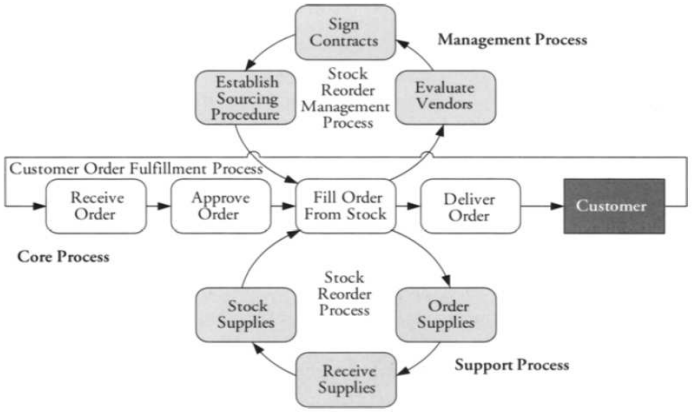

Figure 4.7 Three types of processes: Core, Management and Support processes.

Discussion

- Should we include support or enabling processes in our business process architecture, and, if so, how should we represent them?

IT support or independent?

- IT has a core set of functions, like the company network and good maintenance practices, that apply to all processes or departments it supports; thus, there is a very strong argument for treating IT as an independent department.
- An alternative approach is to treat IT as an independent organization, a cost center, or an independent value chain.
  - This reflects what happens when IT is outsourced.
  - In essence, IT becomes a separate company-a value chain that produces software and services that it sells to the parent company's core processes.
  - Whether your company outsources IT or keeps it in house, if you regard it as its own value chain, and create an independent business process architecture to describe IT's core, support and management processes, you will find that it makes everything easier to understand.

Value Chain of Support Processes

- Obviously, the same logic can be applied to the other main support processes, including human resources, facilities, and accounting.
- If you follow this approach, then you will leave support processes off the business process architecture worksheets you create for your core value chains and describe each major support process as an independent architecture with its own worksheets.

Representing Management Processes

- The processes or activities that are performed by the individuals that actually manage processes on a day-to-day basis.
  - don't need an independent representation on our business process architecture
- Some general management processes that perform enterprise planning, organizing, communication or monitoring functions
  - should define them and document how they function
  - "management value chain" and document them on their own worksheets.

Aligning Managers, Measures and Resources

- As processes are identified, the group can determine who is responsible for managing that process
- The architecture team should define the goal of each Level 1 process and consider how the success of each of the Level 1 processes should be measured
- The final column on the worksheet asks the architecture team to list resources that are required to support each Level 1 process

Aligning Managers, Measures and Resources

- Some of the types of resources that organizations might seek to align with Level 1 or Level 2 processes include
  - **Alignment with corporate strategies and goals**
    - list information about specific Level 1 strategies and stakeholders and note how the specific strategies support corporate strategies.
    - (or) list all the stakeholders that are interested in each specific Level 1 process
  - **Alignment with other processes**
    - indicate just which core or operational processes depend on which management or support processes
  - **Alignment with policies and rules**
    - list the specific business rules that are used in specific subprocesses, and then check to see that policies and rules are being consistently applied
  - **Alignment with IT resources**
    - which software applications or which databases are used by which processes
  - **Alignment with HR resources**
    - which roles or jobs are associated with which Level 2 or 3 processes
  - **Alignment with ISO 9000 and various risk management standards.**
    - gathering and maintaining information about the decisions and the risks involved in specific processes

SCOR Level 1

- **Plan (P)**
  - The Plan processes describe the planning activities associated with operating a supply chain. This includes gathering customer requirements, collecting information on available resources, and balancing requirements and resources to determine planned capabilities and resource gaps.
- **Source (S)**
  - The Source processes describe the ordering (or scheduling) and receipt of goods and services. The Source process includes issuing purchase orders, scheduling deliveries, receiving, shipment validation and storage, and accepting supplier invoices.
- **Make (M)**
  - The Make processes describe the activities associated with the conversion of materials or creation of the content for services. It focuses on conversion of materials rather than production or manufacturing because Make represents all types of material conversions: assembly, chemical processing, maintenance, repair, overhaul, recycling, refurbishment, remanufacturing, and other material conversion processes.
- **Deliver (D)**
  - The Deliver processes describe the activities associated with the creation, maintenance, and fulfillment of customer orders. It includes the receipt, validation, and creation of customer orders; scheduling order delivery; pick, pack, and shipment; and invoicing the customer.
- **Return (R)**
  - The Return processes describe the activities associated with the reverse flow of goods back from the customer. The Return process includes the identification of the need for a return, the disposition decision making, the scheduling of the return, and the shipment and receipt of the returned goods.

SCOR Level 2

- Each Level 2 Process Can Be Further Described by Type

Planning	A process that aligns expected resources to meet expected demand requirements. Planning processes: › Balance aggregated demand and supply › Generally occur at regular, periodic intervals › Consider consistent planning horizon › Can contribute to supply chain response time
Execution	A process triggered by planned or actual demand that changes the state of material goods. Execution processes: › Generally involve: 1. Scheduling/sequencing, 2. Transforming product, and/or 3. Moving product to the next process. › Can contribute to the order fulfillment cycle time
Enable	A process that prepares, maintains, or manages information or relationships on which planning and execution processes rely.

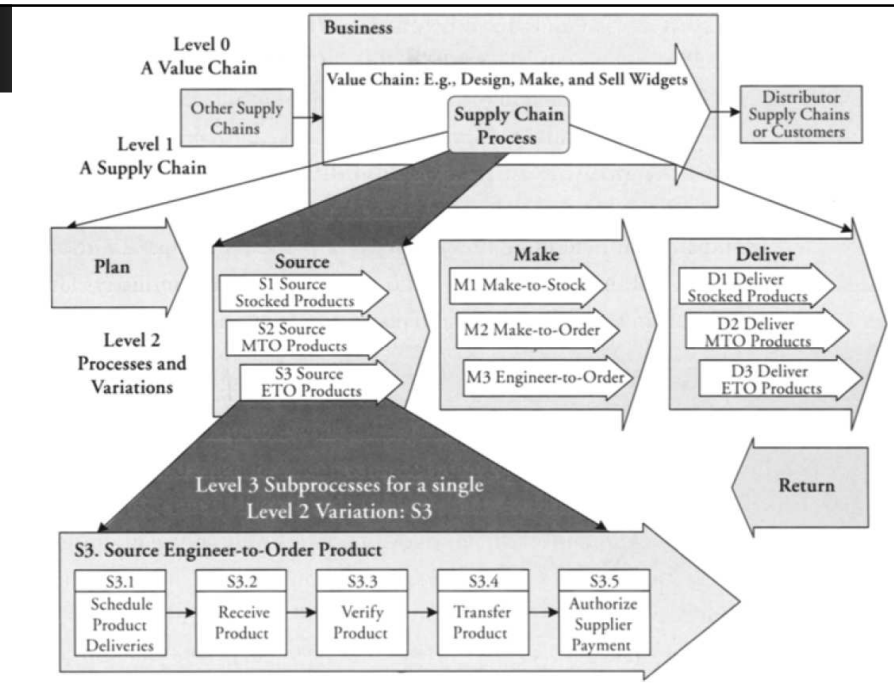

Figure 4.8 The three levels of a SCOR architecture.

SCOR Level 2: examples

- Each Execution process, for example, has three different possible capabilities of representing and responding to customer orders. Different supply chain strategy supports corresponding product or service types. These categories also affect Plan and Return processes.
  - Stocked Product (S1, M1, D1, D4)
    - Inventory driven (Plan)
    - Standard material orders
    - High fill rate, short turnaround
  - Make-to-Order (S2, M2, D2)
    - Customer order driven
    - Configurable materials
    - Longer turn-around times
  - Engineer-to-Order (S3, M3, D3)
    - Customer requirements driven
    - Sourcing new materials
    - Longest long lead-times, low fill rates

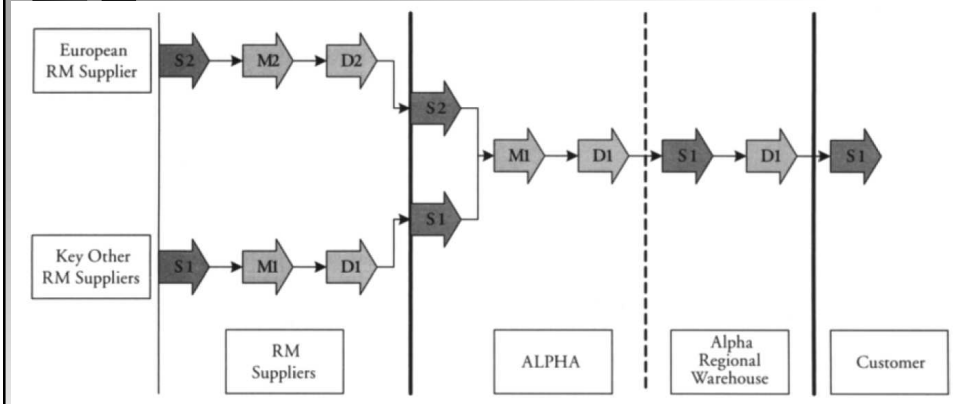

Figure 4.10 A SCOR thread diagram of a simple supply chain process.

	Performance Attribute	Performance Attribute Definition	Level 1 Metric
Customer Facing Attributes	Supply Chain Delivery Reliability	The performance of the supply chain in delivering: the correct product, to the correct place, at the correct time, in the correct condition and packaging, in the correct quantity, with the correct documentation, to the correct customer.	Delivery Performance
			Fill Rates
			Perfect Order Fulfillment
	Supply Chain Responsiveness	The velocity at which a supply chain provides products to the customer.	Order Fulfillment Lead Times
	Supply Chain Flexibility	The agility of a supply chain in responding to marketplace changes to gain or maintain competitive advantage.	Supply Chain Response Time
			Production Flexibility
Internal Facing Attributes	Supply Chain Costs	The costs associated with operating the supply chain.	Cost of Goods Sold
			Total Supply Chain Management Costs
			Value-Added Productivity
			Warranty / Returns Processing Costs
	Supply Chain Asset Management Efficiency	The effectiveness of an organization in managing assets to support demand satisfaction. This includes the management of all assets: fixed and working capital.	Cash-to-Cash Cycle Time
			Inventory Days of Supply
			Asset Turns

Figure 4.11 SCOR performance attributes and Level 1 metrics.

Value Reference Model (VRM)

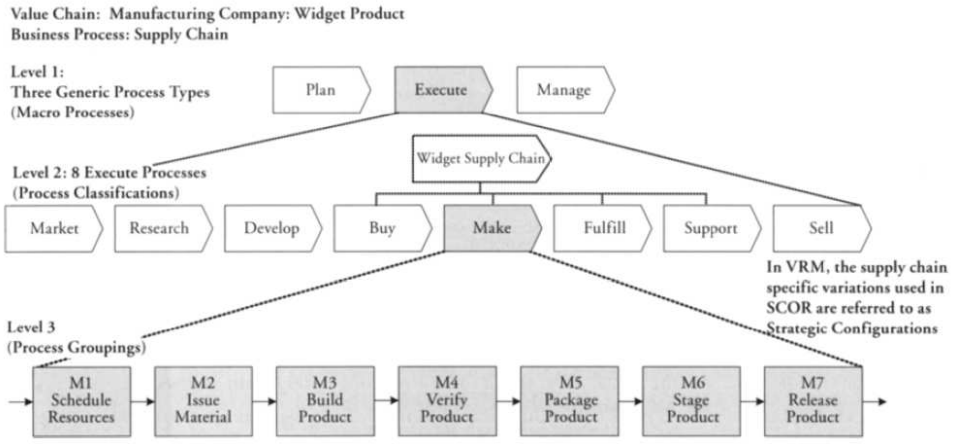

Figure 4.13 The Value Chain Council's VRM framework.

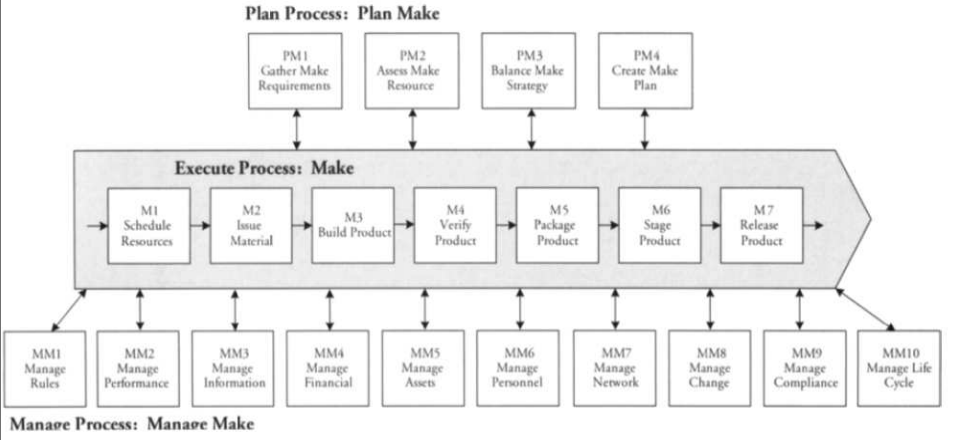

Figure 4.14 The Plan and Manage Processes that are associated with the Execute Make Process.

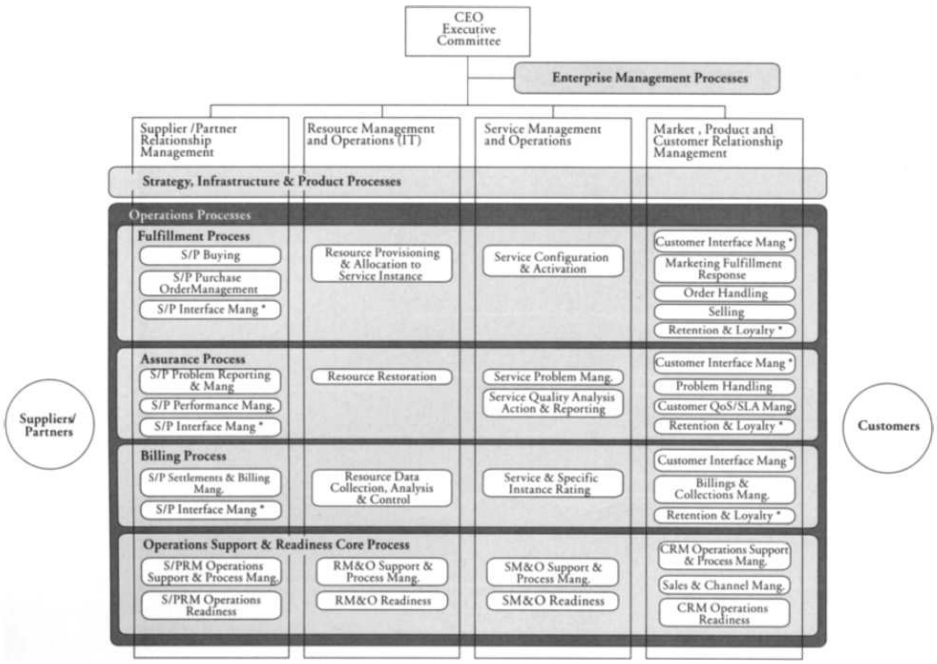

Figure 4.15 The TeleManagement Forum's eTOM reference architecture.

Questions?