BPTF Framework 2010, Part 1

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Introduction

Business Process Transformation Framework (BPTF) is an emerging methodology/technology for process management directly tied to best practices and configurable IT systems choices. The ultimate objective is improved alignment between business strategy, business processes, people and systems necessary to support that strategy. This alignment reduces business process transformation cycle times and mitigates risk of improvement project failures and cost overruns.

From a strategic viewpoint, BPTF provides functional / operational process decomposition and value analysis which is critical in evaluating the relative value / contribution of operational tactics and strategies, existing operational processes and IT portfolios, and ultimately provides a support foundation for investment decisions and changes in organization design, operational processes and information technology, support that minimizes risk and maximizes the value of those investments.

Value, however, is in the eye of the beholder. In every industry there are considerations and trade-offs that must be made based on business strategy, culture, core competencies, competitive pressures, and changes that come from every direction. In the insurance industry, for example, State Farm Insurance bases its competitive strength upon its extensive agency environment and personal service – a strategy that can be more expensive than others. Progressive and Geico, by comparison, have a more "direct to consumer" strategy. To support either strategy, systems and processes can be designed to provide prompt claims service and customer satisfaction, but these can represent a significant drain on cash flow. In manufacturing companies, build-to-order or engineer-to-order strategies can provide for greater market agility, improved customer satisfaction and reduced inventory costs, but can also add capacity and labor costs compared with a make-to-stock mass production strategy. Outsourcing can lead to great operational efficiency, reduced overhead expense, and reduced time to market, but often comes with the trade-offs of losing control over products, quality and the customer responsiveness.

These strategies and choices provide the design challenge and result in differences in every design initiative. A process design solution to a common business issue will be different at AMD than at Intel; the same processes implemented at State Farm will have different outcomes at Nationwide; and systems implemented by General Motors may not be the right solution for Ford.

With shrinking product lifecycles and product variant proliferation, many formerly sequential business processes now require parallel and cross-functional collaborative activities. With this change, transactional information flow between traditional functional departments has also changed, by necessity, into a real-time network of digital data often spanning the globe. Business processes become much more complex with countless information dependencies as the management focus expands from inside the walls of a company to encompassing the entire supply chain. Relentless pressure to speed the flow of business information is further confounded by requirements to provide information in multiple contexts to meet the information requirements of various functional groups and all levels of the organization.

Simultaneously, companies are facing more and more aggressive global competition and must be able to expand their value chains to deal with these global challenges. Being able to standardize and reapply business processes quickly in expanded operations or in acquisitions becomes a key strategy to deal with this increasing complexity and expansion.

Part I - Business Process Transformation Framework

The ability to standardize and reapply business process models was pioneered by the military where standardization and normalization of activities is required for precise planning, proactive situation management, and often survival. As competitive pressures caused manufacturing supply chains to respond more quickly to customer requirements, while at the same time reducing inventory and costs, information flow improvements to enable real time availability, data integrity and accuracy of transactions became a critical enabling factor for success and even survival of a business. With the need for multiple enterprise solutions to work in concert, sharing information real time, agreement and consensus on business terminology and metrics became dramatically more important. Reference process models needed further evolution to cover supply chain operations across multiple trading partners and regions, and to more precisely define enterprise system configurations to support the increasing competitive requirements.

Today, the need for accurate and timely information, reuse and rapid repurposing of assets and knowledge is expanding to all areas of business communications. Ability to integrate, manage and control the entire value chain, spanning value creation and delivery processes, is critical for sustainable competitive differentiation and long-term business success. Reference models are expanding rapidly to encompass all areas of business activities and interactions in order to improve precision and speed of information sharing while increasing the flexibility and agility of companies to meet changing business needs.

Precise and timely transformation of business processes is a critical competitive advantage for any company in any industry. When corporate leaders face challenges of growth, profitability or sustainable development, the immediate objectives are to define an actionable strategy and mobilize the workforce. Implementing those strategies, however, often requires partial or substantial transformation of business processes. BPTF plays a crucial role, focusing leadership and operations on the right path to meaningful transformation.

The BPTF has three transformational dimensions applicable to every company: Value Chain Segmentation, Business Building Blocks and Continuous Improvement Programs.

Business Building Blocks define basic actionable (or functional) elements connected into value streams and process flows which comprise the value chain segmentation.

Value Chain Segmentation defines connected value streams (or process flows) that must undergo transformation in order for a company to improve performance.

Continuous Improvement Programs are sets of action plans that can be executed in a given timeframe to migrate the company from one value chain design to another within the scope of transformation.

Figure 1 – BPTF Dimensions

This complete, three-dimensional view of transformation defines what particular value stream must undergo transformation, what actionable items (functions) are affected by the transformation, and how, over time, the transformed value streams must evolve. The first part of this three part article series defines each of the transformation dimensions and provides insights into how to compile a complete and effective representation of the transformed business process.

Value Chain Segmentation

This BPTF dimension defines business processes as connected value streams. Value streams include activity flow with explicit information flow (called inputs and outputs), business metrics and timeline associated with the flow in execution (e.g., duration of the process from one point of I/O hand-off to another point in the same value stream). An example of a value stream is "order to cash", with each activity clearly defined, their I/O connectivity defined along with metrics and timeliness of each transaction within the process.

> *BPTF Definition: ValueStream – an end to end set of activities. Order fulfillment, for example, is a value stream for which the input is the order, and the result is the delivery of ordered goods. Order entry is one activity in the collection of activities that constitute the order fulfillment value stream.*

Segmentation, both of the external marketplace and of an organization's internal value streams, is essential to maximizing the efficiency, effectiveness, profitability and customer satisfaction ratings of most organizations. There are many unfortunate and sometimes terminal examples of the opposite outcome for organizations that have not understood the importance of segmentation.

Essentially, segmentation means that one size rarely fits all. All customers are not the same (e.g., business customer versus consumer), not all customers buy in the same way (e.g., retail outlet versus Internet purchase site) and not all products or services can be provided using the same assets in the same facility (e.g., you don't make nuts and bolts in a chocolate factory that mixes nuts and nougat)! The differentiated demands of the marketplace for products and services has implications for how an organization sells, produces, delivers and supports those products and services.

A typical global company encompasses differing businesses and multiple strategic business units (SBUs). From a high level perspective, all SBUs have similarities. For example, they all perform finance, sales, marketing, and other basic functional activities. But a more detailed examination will reveal that some of those functional activities differ by SBU depending upon the market each SBU serves and the business objectives of each.

Value stream segmentation simply translates external market requirements into key internal operating process requirements. These process requirements manifest themselves as physical or virtual differences in site locations, processes, systems, production layouts, lead times, quality attributes and skill requirements.

An effective organization develops a market segmentation model that meets the specific needs of its markets, customers, channels, products and services. Disciplined value chain segmentation enables companies to understand and specify more fully what externally facing processes are needed in the process modeling of the next step in the business architecture roadmap.

Every global company must master global value chain management, which encompasses a wide spectrum of relationships (supplier-OEM-dealer), product portfolios and brands and geographical regions. Because it can be compiled in a structured catalogue of pre-defined value streams built with proven standard business elements (activities, I/Os, metrics and practices), the value chain segmentation dimension of BPTF is often called "business architecture". Business architecture (BA) is relied upon to enable process standardization and harmonization of information management infrastructure. In order to support streamlining and continuous improvement of supply chain global operations, BA must be able to:

- Define any business process at any location for any product (platform or program)
- Capture all necessary information about the process for comparative performance analysis of benchmarking, cycle time, variability and waste analysis, maturity analysis and business rules comparison

- Document a complete set of capability requirements for automation and information management for any business process. Capability requirements are used to assess current utilization of computing assets, and to plan acquisitions of new computing assets.

Business Building Blocks

Most people are familiar with Lego™ toy system. Plastic Lego "bricks" can be assembled and connected in many ways, to construct objects such as vehicles, buildings and even working robots. Anything assembled can then be taken apart again, and the pieces used to make other objects. Lego pieces of all varieties are a part of a universal system. Despite variation in the design and purpose of individual pieces over the years, each remains compatible in some way with existing pieces. BPTF building blocks are similar to Lego blocks, but in a business process context.

This BPTF dimension directly relates to pieces that can be assembled to model value streams. In a sense, this dimension deprives us of understanding connectedness of the processes within the value chain segmentation dimension, but precisely defines what each value-added step must accomplish to keep the value stream performing as desired. These standard building blocks have normalized definitions (e.g., each block is defined once and in a unique way) no matter in how many value streams they may be referenced as component value-added enablers. Thus, the building blocks can be stored in dictionaries where they are hierarchically organized and associated with each other according to a pervasive ontology defining all associations within and across all structured dictionaries. For example, process dictionaries define hierarchical decomposition of activities within a company's global value chain, while inputs-outputs dictionaries define all transactions, documents and information dependencies between these activities.

> *BPTF Definfition: Ontology – formally structured representation of knowledge (e.g., medicine) through documentation of knowledge concepts (e.g., physician , patient, illness, treatment,…) and all relationships between those concepts (e.g., <u>treatment</u> of an <u>illness</u> affecting a <u>patient</u> is prescribed by a <u>physician</u>). If ontology is used to describes business process, then concepts such as activity, input/output, resource and metrics can be associated as in: <u>metrics</u> evaluates <u>activity</u> performed by a <u>resource</u> that produces <u>input/output</u>.*

In order to populate the Building Blocks, and the business process definition dictionaries, the business architecture team must prepare the Building Blocks structure and scope using one of two fundamental approaches:

- Document-based approach using graphical process capture
- Model-based approach using reference models

Using the first approach, the BA team collects documents and organizes the business process flow designs captured using process representation templates, usually hard copy graphical templates and drawings. The process is documented at various levels of detail in different manual documents and diagrams. Linkage between the levels of process detail is not preserved between various documents. Rather, document nomenclature is utilized to establish the hierarchical structure for navigating through captured process knowledge. This approach is cumbersome, and less than effective due to lack of standardization of the modeling elements and lack of the precision required for automated analysis and execution.

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BPTF Deinfition: Semantics – the study or science of meaning in language. How we communicate and reach agreement on the meaning of business process elements.

The model based approach, on the other hand, solves the semantic problem imposed by duplication of element listings across multiple artifacts. It relies on development and use of reference models in which building blocks are defined consistently and are the only ones used (fully normalized) in all dictionaries. Typically, one of the dictionaries serves as a master (high level) dictionary and is an open standard dictionary (maintained outside of any specific company). Other dictionaries contain additional process subsets and details unique to a specific company's operations. There are other dictionaries defining additional building blocks such as deliverables, inputs-outputs, metrics, resources, rules, practices, technology components, etc. Within a company's BPTF, four types of models are often found:

VRM Value Reference Model	XRM eXtensible Reference Model	VLM Value Lifecycle Model	SFD System Functions Dictionary
Industry level neutral reference models (e.g. VRM or APQP)	Company specific extensions of the open standard model	Project reference models defining stage-gate deliverables	System function models representing typical system functions and transactions

Table 1 - BPTF Reference Models

Following a consistent ontology (set of definitions of building blocks and their associations) enables reuse of process models and capture of process designs at any level of detail required in the methodology of continuous improvement and process standardization.

Continuous Improvement Programs

This BPTF dimension makes value streams and basic building blocks dynamic. Modeling utilizes standard building blocks and automatically generates models depicting a company's value chain segmentation. However, models are always specific and representative of a snapshot in time. For example, one model can represent a specific value stream and its standard building blocks at the beginning of an improvement initiative (as-is snapshot). Other models can represent desired designs of the same value stream built from same standard building blocks at various times in the future. These models enable analysis and facilitate consensus in determining and eliminating the root cause of performance degradation. Models facilitate and accelerate identification of

performance problems even in complex processes with hundreds of tasks and dependencies.

Following this modeling approach and structure, a company can organize and archive process knowledge for reuse, standardization and harmonization of the computing infrastructure. Each model defined within the three-dimensional BPTF is then available for analysis, comparison and execution using the overall enterprise architecture methodology. Model development progresses from a starting point of industry neutral standards to process blueprints defining a granular set of procedural steps and related information transactions, all while completely reusing already defined standard building blocks and their associations.

As with all processes, the BPTF methodology and process may be disaggregated into component steps. The key difference between the BPTF methodology and other process design methodologies is the ability to leverage a modeling approach in combination with proven best practices in implementing desired changes. Specifically, BPTF supports the critical integration of people, process, and tools required for successful process design and implementation initiatives.

Recognizing the importance of integrating People, Processes, and Tools in a sustainable change initiative is an integral part of the BPTF methodology. Some of the component tasks in change initiatives involving the combination of Oliver Wight and VCG methodologies include:
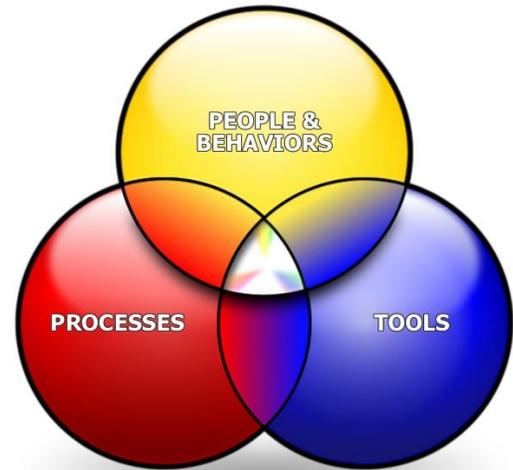
Figure 2 **- BPTF Approach to Integrating People, Processes and Tools in Change Initiatives** **(**Courtesy Oliver Wight International)

Diagnostic/Discovery

This brief step determines which redesigned business processes should deliver the greatest benefits to the organization in the shortest amount of time, and recommends a path forward on a journey to business excellence. Other deliverables from this step include:

- Potential benefits
- Education on the framework implementation methodology and training on use of the framework
- Analysis of management readiness for change
- Recommended scope for the first improvement initiative with an estimate of cost and benefits.

Leadership Phase of the Oliver Wight Proven Path

In this step of the methodology, Senior Managers and key initiative managers are introduced to best practices, the concepts and principles of business excellence, and to a proven change management process. They create a vision of the journey ahead of them, establish improvement priorities, determine the business case for proceeding and charter a team to lead the initiative.

Education

Education is the critical first step in business process transformation. Best practice and change management education is first provided to the executive team so they can properly support the initiative team, and then in more detail to the team tasked with business process design and execution. This process education is presented in parallel with framework education in which the improvement priority dimensions and key business drivers are documented, and an improvement score card and associate metrics are developed.

Design Workshops

At this point, best practice education comes together with the BPTF. In a series of workshops, design teams receive additional process education and are presented with template Oliver Wight Class A value stream models that they modify for best fit with their particular business requirements.

Only three days are required for each process design workshop, for example demand planning, master supply planning, and product/portfolio review. The design team then goes on to complete its formal policies, procedures, measurement tracking systems, and roles and responsibilities while other design teams engage in their workshops. These workshops accelerate completion and implementation of the detailed designs, and enable end-to-end design analysis to ensure all redesigned processes are integrated and optimized. These workshops allow the organization to drive business benefits rapidly to the bottom line—the primary fundamental objective of this methodology.

Process Metrics Development

Coming out of the Workshops and final end-to-end design validation, the project teams incorporate the required Oliver Wight Class A required metrics and add additional metrics based on a brainstorming event utilizing knowledge of their business objectives and a library of BPTF metrics in a reusable dictionary containing both Oliver Wight and VRM metrics.

PACOM

This is an acronym for Process, Automation, Culture, Organization and Metric. It is a unique element of the Integrated Continuous Improvement Methodology (ICIM) within the BPTF methodology. Its purpose is to identify the barriers to changing behaviors to match the redesigned business processes. The implementation team reaches consensus on the potential barriers and creates action plans to mitigate or eliminate these barriers as they manifest themselves.

Documentation of the New Design

The design process ends with publication of the completed design package including:

- Process Design description, scope, goals and objective
- Process Design ValueCard (a balanced set of metrics that best represents strategic priority dimension of that process)
- Process description
- Input-output description
- Metrics summarized by process step
- Practices by process
- Roles by process
- Key reference documentation by process

Formal documentation, along with assignment of a process owner for each of the business processes, is essential to sustainability of the business process and resulting improvements. When process documentation is not formalized by a company, its business processes will not be aligned or supported by precise configuration of its systems. Results will improve for a time, but its business processes will quickly succumb to organizational elasticity and lack of systems support. Results will return to prior unacceptable performance levels and costs.

In the next article we will provide an overview of the BPTF architecture and how it can be used to define all views necessary for identifying and communicating requirements for business process transformation.

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