

The Business Process (Quiet) Revolution; Transformation to Process Organization

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Abstract: This paper addresses the definition of the Enterprise Process Framework, the process of creating it and the benefits it can generate.

The competitive global market climate of the new millennium has raised awareness of business processes as the most important management paradigm. The idea of the *process organization* is gaining strong momentum; the process 'option' is now becoming a mandatory requirement. The integration of the Process Framework into the management structure introduces clear focus on consistent and collaborative ways to achieve results that directly impact the bottom line; hence, delighted customers and stakeholders.

The paper concludes with an initial report from a recent process framework deployment project at a leading energy generation and trading enterprise. This enterprise is using the open methodology implemented by Interfacing Technologies in its CIMOSA-like FirstSTEP and the EPC (Enterprise Process Center) process management solutions.

1. INTRODUCTION

Although research into business processes was conducted earlier, e.g. IBM, (Engelke, et al, 1984) and CIMOSA (AMICE, 1989), it was Michael Hammer (1990) who first raised the visibility of business processes with the introduction of BPR—Business Process Reengineering—in the early 90's. In subsequent years, BPR has often been associated with drastic change and downsizing initiatives, rather than improving practices and resulted many failed reengineering mega-projects. The emergence of the Business Process

Management (BPM) in the new millennium, post Y2K, has given renewed focus to the process promise and has been a solid, yet quiet, business revolution.

To understand why an entire enterprise would begin instituting process structure and transforming management to business *process* management, we must understand the primary characteristics of the business process, or the *Process Construct* and the benefits brought about by BPM.

The traditional “Function Enterprise” is the product of the Industrial Revolution in which the guiding principle for organizing enterprises by function is the distribution of work by labor specialization.

In the Process generation, the functional organization of enterprises may not completely disappear, but rather be transformed into the context or the grid for performing processes that bring value to customers.

Technological superiority, innovation, or longevity are no longer what makes or breaks companies— it is how well they are organized to respond to and serve their customers.

The only way to achieve such sustainable customer satisfaction and results is to become a Process organization. Table 1 below highlights the important cultural differences between a functional organization and a process-centric one.

Table 1: Functional vs. Process Enterprise

| Enterprise Behaviors | Functional Enterprise | Process-centric Enterprise |
|-----------------------------|-----------------------------------|---|
| Managers Manage | Resources and Work | Customers and Results |
| Teams Operate | Independently | Collaboratively |
| Organization Dynamics | Rigid to adapt – Frequent re-org. | Flexible to new demands and self-reorg. |
| Resources Focus | Meeting job requirements | Best results, Customers |
| Knowledge Dissemination | Islands of Information | Integrated across the enterprise |
| Culture | Closed | Open |

2. PROCESS CLASSIFICATION

Quite often, business processes at different levels are seen as synonymous with workflow, application automation and/or application integration. These “automated processes” are a sub-set of the overall “human processes” which make up the process framework of the organization. While selected steps of human processes are traditionally automated using Workflow solutions and/or specifically designed applications, such automation applies to a very specific set of repeatable and frequent processes, sub-processes and activities. Common examples include: ‘Call Routing’ in the Help Desk process, ‘Order Entry and Tracking’ in the Order Fulfillment process, Automated

Core processes (trading transaction processes, on-line banking, et cetera.). It is important to note that, typically, every automated process is triggered by a human activity or sub-process. The ‘Call routing’ sub-process is triggered by a call or an email to the help-desk and may commence with a support person responding, which then invokes an automated flow of subsequent activities.

To ensure successful process transformation, both automated and human processes must be managed under the same comprehensive framework (Table 2). The basic criteria for a successful business process is that it: a) is visible to all process stakeholders, b) adds value, and c) is streamlined and focuses on contributing to customer satisfaction.

Hundreds (and sometimes thousands) of processes make up the process framework of a given enterprise. Classifying them in a manageable top layer (typically consisting of up to 10 top processes) and distinguishing between ‘core’ also called ‘identity’ and ‘support’ processes enables clarity in the process forest. Identity processes are those that make the enterprise unique in its market space, while support processes are the same from one enterprise to the other (Finance, Admin, HR, and others). Once created, the process hierarchy must be maintained like the enterprise’s organizational chart.

Table 2: Business Process Classification

| The Enterprise Process Framework: | | | |
|--|---|--|---|
| Support Processes | | Core/Identity Processes | |
| <u>Finance</u> <ul style="list-style-type: none"> • Credit Authorization • Budgeting • Auditing | <u>Marketing</u> <ul style="list-style-type: none"> • PR/ Communication • Web Marketing • Lead Generation • Events/Trade Shows | <u>Banking/Finance</u> <ul style="list-style-type: none"> • Straight Through Processing • Acct Provisioning • Loan/Credit Processing | <u>Services</u> <ul style="list-style-type: none"> • Outsourcing • Application Development • Logistics |
| <u>Operations/Logistics</u> <ul style="list-style-type: none"> • Purchasing • Contracts • Invoicing • Shipping | <u>Sales</u> <ul style="list-style-type: none"> • Qualification • CRM • Pre-sale • Negotiation & Closing • Channel Mktg. | <u>Energy:</u> <ul style="list-style-type: none"> • Short Term Trading • Long Term Trading • Strategic Planning | <u>Pharmaceutical</u> <ul style="list-style-type: none"> • Clinical testing • Drug Submissions • Clinical Research |
| <u>Human Resources</u> <ul style="list-style-type: none"> • Hiring • HR Development • Performance Evaluation | <u>Legal</u> <ul style="list-style-type: none"> • Contracts • Policies • Acquisitions | <u>Manufacturing</u> <ul style="list-style-type: none"> • Product R&D • Product Engineering • Quality Assurance • Production | |

An enterprise is a microcosm, with people, behaviors, activities, goals, aspirations and so on, working in a non-isolated environment of market pressures, customers, suppliers, regulatory laws.

What differentiates a successful enterprise from a lagging one is the way it is organized not just to satisfy its constituents—customers, suppliers, employees and shareholders—but to actually delight them with great experiences.

The way to achieve this dimension of satisfaction is to create an environment in which all parties collaborate towards common goals and results.

The business process framework enables:

- a) Alignment and Consistency: Process stakeholders gain a clear understanding of their process and align to execute the process in a consistent manner.
- b) Execution: A clear process holds its owner accountable for a high degree of execution and maximization of results.
- c) Optimization: Well-defined processes are easier to improve and optimize.

3. PROCESS MANAGEMENT WITH FIRSTSTEP® AND THE EPC

Business Process Management is about availability of critical and up-to-date process information to process managers who are accountable for the process execution and goals. A number of process-modeling and -management solutions supporting several methodologies have been developed over the years. Being a methodology independent enterprise modeling and simulation application, FirstSTEP has been adopted by industry leaders in such diversified sectors as manufacturing, finance, telecom, energy, healthcare, public, and services. Its concept and approach comply with the CIMOSA framework (1996).

Today, the FirstSTEP family of process modeling products includes two members: FirstSTEP Designer for modeling business processes, performance analysis and simulation, and FirstSTEP Charter for process mapping in MS-Visio. Both modeling environments use XML as a bridge between each other and to the Enterprise Process Center™ – the EPC.

The EPC is a web-based (J2EE) knowledge and process portal that enables access to process information (maps, models, documents, applications, process instances, process data) from every desktop inside the enterprise firewall. Optional extranets allow the extension of the EPC to customers and suppliers outside of the enterprise boundaries.

While the FirstSTEP process design environment is evolving to become an integral component of the EPC, the EPC will also support other process meta-models so enterprises can benefit from existing investments in process design work.

4. THE NEW BUSINESS PROCESS CONSTRUCT

Perhaps the most concise definition for ‘business process’ is the one suggested recently by Michael Hammer (2001): “an organized group of related activities that together create a result of value to customers” (Fig. 1).

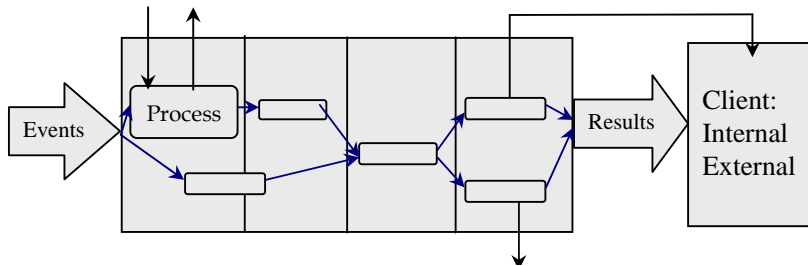


Figure 1: The Business Process Construct

Note that distinct activities, performed by a single or multiple functions within a single or multiple enterprises, join together to deliver results to a client. Operating through a process, ensures that focus is kept on everything that makes the process results shine and the process client delighted.

With an enterprise-wide view on processes, a process chart, or ‘Process Framework’, emerges. Such a framework provides a well-defined structure for the web of processes that traverse the enterprise. All key processes and their inter-relations, links to enterprise objects, human resources, assets, information, knowledge and supporting applications ultimately make up the framework.

Processes can be defined at many different levels and with various boundaries. To derive the important benefits that processes bring to the enterprise management infrastructure, we need to consider a number of important process characteristics:

Process Results: These are clear performance targets linked to the organizational strategic objectives and designed to support the mission and the direction of the enterprise.

Process boundaries: Boundaries define the scope of the process: its beginning and end-points. Furthermore, they determine the ‘touch points’ with other processes.

Process Instantiation: Instances of processes can be a.) *transactions* in a repeated transactional process, b.) *projects* in a project driven business unit, or c.) *programs* in a service delivery organization.

Process Client: The ultimate customer who will enjoy the benefits of the process and receive the value generated by all process constituents.

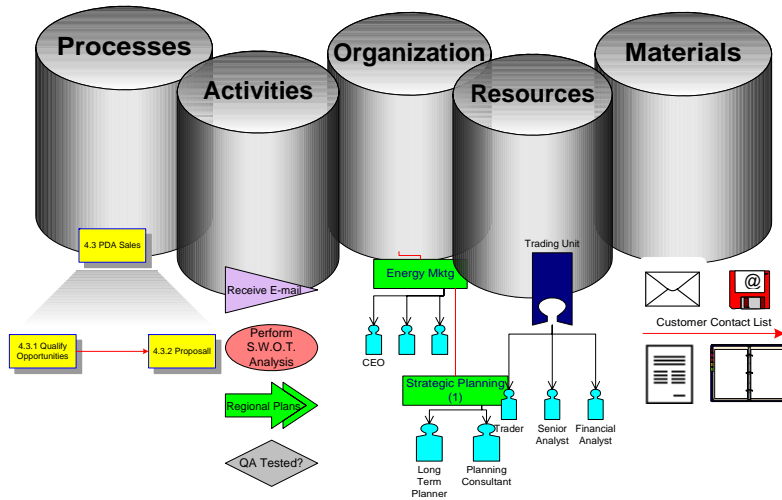
Process Manager/Owner: This is where the responsibility and accountability for the performance of the process lies.

Now, to create a beneficial *Process Framework* for the organization, one must create the ‘top level tier’ first to provide a clear vision or structure, and then proceed to subsequent process tiers in a way that can lend itself to a clear and efficient process distribution through the organizational functions.

In constructing the top level tier, it is important to make a distinction between core processes which are sometimes called also ‘identity processes’ (Hammer, 2001) and ‘support processes’. Support processes are typically transactional in nature. Identity processes can accommodate all types of process instantiation. The types that are used depend on the nature of the enterprise.

5. FIRSTSTEP METHODOLOGY AND PROCESS STANDARDS

Charting the enterprise processes can be accomplished in many ways — from the simplest diagramming approach to the creation and management of multi-layered and complex maps coupled with various organizational objects and linked to systems, information, networks and other dimensions. There seems to be a renewed effort to converge Business Process Modeling standards. The OMG and the BPMI are making efforts to converge and create a common language.



The FirstSTEP modeling class definition has been described in *First-STEP Process Modeler—a CIMOSA compliant Modeling Tool* (Levi, Klap-

sis, 1999). It Consists of 5 classes of objects: Processes (with hierarchical layers of sub-processes), Activities (the lowest-level work steps, classified in 6 generic groups for clarity and standardization), Organizational units (functions, departments), Resources (performers of activities, human and non-human – systems, machinery), and Materials (products, documents, information objects -- all entities flowing through, linked to, or referred to the process). This definition represents a common subset of most evolving standards and thus is designed to adapt to most enterprise needs.

The FirstSTEP methodology (Fig. 2) focuses on the business design needs first and foremost. By being simple and generic, it can be easily understood by business users at all levels, a pre-condition to the acceptance of process framework and getting the buy-in from all users in the enterprise.

The methodology is evolving to support integration to other meta-models such as represented by evolving standards; UML, BPML, IDEF and WfMC.

6. DEPLOYING PROCESS FRAMEWORK WITH THE ENTERPRISE PROCESS CENTER

The transition to Process Enterprise takes a concentrated level of effort. It requires attention to many operational, organizational, human and systems/application details. The process may take several months and considerable effort to shape up, depending on the size and state of the enterprise. But the rewards justify the process and the efforts.

Through working with a number of enterprises, Interfacing Technologies has developed a three step program, titled PI-3 (Fig. 3), supported by the Enterprise Process Center technology and designed to take an organization through the transition path.

While many enterprises begin the transition without doing so, it is necessary to ensure clarity in the process, especially when it involves everyone in the organization.

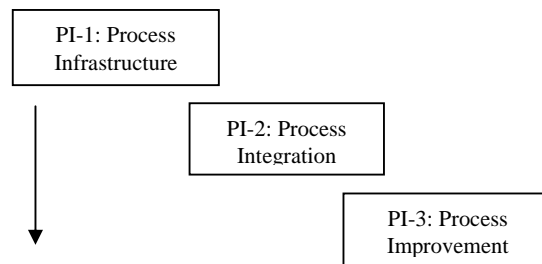


Figure 3: The PI-3 Program

Coupled with the FirstSTEP methodology, and supported by both FirstSTEP and the EPC, PI-3 takes advantage of the hierarchical approach to setting the high-level process framework in its first step: the **Process Infrastructure**. The enterprise process framework is created in this step. The framework typically consists of 6 to 10 primary processes at tier 1, with de-

composition to multiple levels of sub processes, organized in a methodical fashion. The EPC, with its hierarchal view (process trees) enable easy access to any layer and process.

Processes have numerous links to one another, and it is in those links that errors in executions often occur. The *Process Reconciliation* is a key step required to ensure clarity in what is expected from one process to support the other. Inter-process collaboration is fundamental element for a solid infrastructure.

The second step in the program focuses on integrating the process framework into the Enterprise's existing systems, applications, content and knowledge. This is the *Process Integration*.

Process knowledge captured within the first two steps in either maps or in related content, creates enthusiasm for the promise of process management (Fig. 4). Users, manager, and external partners can view the processes they own or in which they participate, access critical knowledge and applications, and execute with clear view of the impact of their actions. Process knowledge must be live and incorporated into the evolving business practices.

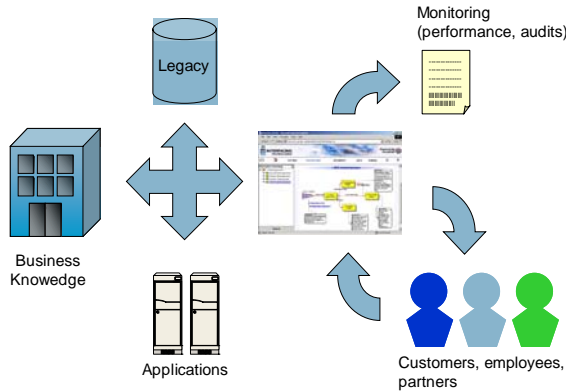
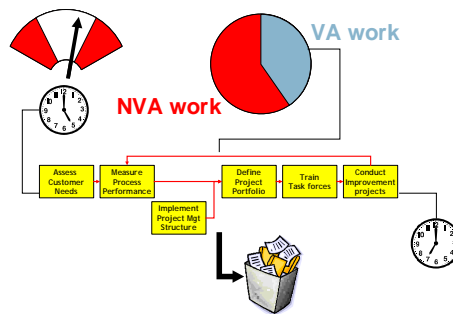


Figure 4: Process Knowledge

The Process Framework can now become an integral part of the organization, enabling access to critical data and specific applications directly from the corresponding process step. To complete the integration, applications and systems must be able to feed back critical information to assess and audit the processes.

The third element in ensuring that processes meet and exceed set targets and results is captured in the *Process Improvement* phase. Goals must be measurable and verifiable. And then improvement proposals can be implemented with clear ability to assess the incremental results.

Nowadays, the art of business



management includes, quantified decision making techniques, such as those promoted by various improvement and quality methodologies; the most process oriented one is Six Sigma (Pande, 2002). Others target both organizational and process key measures; the most employed one is the Balanced Score Card (Kaplyn, Norton, 1996). The goal is to ensure that the standardized processes deliver results that meet customers' requirements in the most effective way, and if they do not, to act on the real cause of process waste.

Integrated with the other two dimensions of PI-3, the process improvement dimension will enable the process-led organization:

- to maximize customer satisfaction
- to eliminate ambiguity, making critical decisions based on measured facts
- to document priorities for processes improvements
- to eliminate root causes of poor performance
- to maximize, sustainable business results by focusing on added value work.

7. INITIAL CASE REPORT

Since the first release of FirstSTEP in late 1994, Interfacing Technologies has worked with hundreds of enterprises, initially to support BPR initiatives. Focus has shifted in the last couple of years to BPM and the transformation to process organization. In this paper we report notable initial results from a significant project with a leading US based energy generation and trading organization. In 2001, this enterprise decided to become a process driven enterprise. To support them in this mission, they turned to Interfacing's FirstSTEP and EPC technology.

Key expectations for drastic impacts were:

1. Making business process knowledge available to team members across the organization, thus adding value through cross-functional knowledge transfer.
2. Increasing operating efficiency with the following mechanisms:
 - continuously challenging and improving how they do business
 - clearly defining accountability
 - defining IT needs through process workflow
 - Enhancing auditing capabilities
 - Enhancing performance management capabilities
 - Providing flexibility in a growth environment
3. Streamlining the process of integration in a merger or acquisition
4. Self-reorganization through dynamic process changes:
Changes in process ownership, boundaries and definition automati-

cally imply new roles and responsibilities, hence accomplishing in a more natural manner what was traditionally done through functional reorganization, often viewed as a drastic, costly and unpleasant process.

5. Improving HR management:

Skill gaps identified through resource needs of processes—workforce planning, a much quicker process of hiring and reallocation of resources.

The project started by outlining and getting consensus on the high level process framework structured around 10 primary core and support processes. Process Leaders were appointed to each of the process areas. This was the start of the Process Infrastructure phase, during which hundreds of processes were mapped through a methodic process involving process owners and process stakeholders.

In addition to a simple but effective process review and validation, the Process Reconciliation phase was a very important step in completing the process framework. In this phase, cross functional and cross process teams identified key process touch points where critical interfaces between distinct process areas occur.

The project is supported by the EPC which enables a single-point access to all of the key processes and their related content.

This includes:

- Business Process Flows, Maps and Diagrams
- Application and System Linkages / Integration
- Process Content Integration; documents, spreadsheets, websites, presentations, procedures, templates
- Process Ownership and Accountability

While the project is in the middle of the transformation process, with the ultimate benefits yet to be realized, promising observations and results have already been reported:

- The whole Company is “process aware”
- Process “members” share information and are enthusiastic about process definitions and executions
- One place has been created for employees to go for “Process Knowledge”
- “Applications” fall into the “Big Picture”
- Operations are gaining higher level of consistency expected to yield direct impact on bottom-line.

To achieve the initial results major challenges had to be overcome (see Table 3).

The *Infrastructure* phase of the project is near completion at the time of writing this paper. The *Integration* phase is being executed with process con-

tent and initial applications being integrated. The process improvement initiative, which will tie organizational and process metrics to the Framework, will be launched next. With the ability to set, measure, monitor and manage process related KPI's, process ownership and accountability will be realized. This will enable true management by process results to maximize the organization output and bottom line.

Table 3: Challenges in the project

| Typical Challenges | Steps taken |
|-------------------------------------|--|
| Resistance to Process Change | Regular Process Leader and Process Manager meetings, short/frequent education sessions |
| Learning new ways and practices | Get everyone involved in capturing and reviewing Process information |
| Assuming responsibility for results | Clear KPI based incentive programs |
| "No time ..." | Prioritization |
| Doubts and all of the above | "Commitment from the very top – the CEO" |

8. SUMMARY – CONCLUSION

It is only now that the biggest impact of process framework technology has the opportunity for significant realization. While many enterprises have embarked on one level of BPM initiative or another, only those who completely change their culture to become Process Enterprises will gain sustainable rewards. Initial results reported in this paper illustrate pioneering work of one of the first enterprises to embrace process culture, and the initial results are significant. Challenges and threats to such deployments are very real and the deployment teams had to continuously find ways to meet the challenges. Without a doubt, the most critical success factor was the complete and unconditional directive from the very top—the CEO—to see the transformation process to its completion.

Future work, already underway, will see the smooth integration of the high-level Process Framework to the enterprise application and data layers to increase the ability to automate and integrate. The general BPM market is expected to experience the merging of multiple methodologies and meta-models to support similar initiatives.

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