



Business Process Improvement

Enhancing Competitiveness

Business Solutions

Aura Advanced Technologies

Abstract

*Process Management has now become the most important trend in modern businesses. It is often dressed up as many other things, but in the end, how the business delivers value is dependent on the operational effectiveness of its processes. Success requires the ability to set the right balance between efficiency and flexibility, control and adaptability, compliance and nimbleness. **Business Process Improvement** methodologies are helping modern organization achieve that.*

Business Process Improvement (BPI) is fundamentally a management philosophy underpinned by a comprehensive process-oriented infrastructure. It is not a question of if your firm will employ BPI initiatives – it is just a question of when. If approached correctly, BPI allows the firm to truly close the gap between strategy and operational innovation.

*This white paper brings the two distinct disciplines of **management** and **information technology** together to help managers and analysts maintain a competitive edge. The purpose of this paper is to introduce you to the best practices in Business Process Improvement.*

“No matter how hard individuals work, they cannot overcome a flawed process design, much less the burden of no design at all” - Michael Hammer, co-author of *Reengineering the Corporation*, in his book *The Agenda*

Introduction

In the current business climate, executives are under increasing pressure to avoid commoditization of the firm's offerings. More often than not, firms rely on marketing *alone* to differentiate their products and services from those of the competition; a flawed approach, to say the least. Firms should remember that the whole organization must deliver on “marketing promises” and which, certainly, is not an easy task.

Companies can enhance their competitiveness by taking an *inside-out* approach to their business. *Strategy and operations* play a central role in leveraging business performance and competitiveness of the firm. By defining its *strategy*, companies choose the right battlegrounds matching its *operational* capabilities and organizational *infrastructure*.

Business Process Improvement (BPI) has, therefore, become a buzzword in several organizations - struggling to cope with inefficiencies and redundancies resulting in high operations costs. In today's fiercely competitive marketplace, *efficient workflow* through an organization has become a critical determinant for long-term success.

Companies should choose the right battlegrounds matching its *operational* capabilities and organizational *infrastructure*

The first reference to cross-functional business processes appeared in the mid-1980s and by the early-1990s, Business Process Reengineering (BPR) was the next big thing.¹ It was attracting the attention of senior executives, managers, IS professionals, management authors and industry experts.

As BPR called for radical changes within the organization, it became synonymous with employee layoffs, massive cost-cuttings, outsourcing and exiting the non-core businesses. Critics frowned upon reengineering efforts as an ‘excuse for *mismanagement*’; they believed that BPR, unlike Kaizen or TQM, did not address the root-causes of business problems which resulted in employee dissatisfaction and poor company performance. Given the huge costs and risks involved in executing reengineering initiatives, many BPR projects failed miserably. By the mid-to-late 1990s, BPR had fallen out of favor.

Few literatures draw similarities between BPI and BPR methodologies. However, we wish to distinguish between BPI and BPR. The term, Business Process Improvement (BPI), is derived from Business Process Management (BPM). *Gartner Research* defined BPM as a ‘general’ term for the services and tools that support explicit process management (for example, process analysis, definition, execution, monitoring and administration), including support for human and application-level interaction.²

Process orientation has become mainstream thinking for modern managers and technologists, and BPM is clearly riding this trend. According to *Gartner Research*³, the four key-drivers for BPM are:

- ➔ Compliance
- ➔ Cost savings
- ➔ Time to market
- ➔ Risk reduction

Modern organizations are struggling with stringent compliance requirements, cost pressures and inefficient processes and complex supply chains. BPM is often seen as a solution to all these problems. This perception is supported by the strong success rate of 90-95 percent in all BPM projects combined with an average ROI realization of 15 percent. *BPM has many variations and BPI is one of them.*

¹ *Workflow Modeling -Tools for Process Improvement and Application Development*: Alec Sharp & Patrick McDermott

² *Gartner Research*: Definition of BPM

³ *Gartner Research*: BPM Trends

What is Business Process Improvement?

Business Process Improvement (BPI) is a systematic approach to help an organization make changes in the way it does business. It works by defining the organization's strategic goals and purposes, determining what the organization's stakeholders are expecting, and aligning the business processes to meet those requirements.

The effectiveness and efficiency of internal and external business processes play a significant role in determining the economic success of a company. The main objectives of BPI are, therefore, to improve *productivity* and *competitiveness* of the organization; end result being a superior intrinsic value for the company and greater customer satisfaction.

BPI is often seen as a way of standardizing business operations and squeezing cost out. But focusing on these two objectives *alone* misses the vital need for the firm to adapt and evolve. The heart of BPI is about achieving an effective balance between operational efficiency, effective service, resource optimization, lower costs and organizational agility.

Thinking BPI: Not *Why* but *When*

Modern executives are wondering how to support the ever evolving needs of your business; yet keep technology complexity, development costs, compliance burden and time to market down to minimum. If you are struggling with some of these issues, chances are that your business *really* needs BPI. It is not a question of *whether* your firm will employ BPI initiatives – it is just a question of *when*. A typical BPI initiative can increase operating efficiency by as much as 50 percent.

Proven benefits due to BPI initiatives include:

- Reduced elapsed time
- Reduction in costs
- Greater human satisfaction
- Reduction of extra human tasks
- Increase in agility
- Reduction of errors
- Increased compliance factors
- Increased cross-departmental fusion

In most cases, need for high cost savings and improved time to market drives BPI project investments. Increasing compliance costs and evolving business needs have made companies started thinking about BPI. Furthermore, customers now expect operational excellence, lower costs and integrated service offerings – *all* at the same time. This necessitates that modern organizations develop internal infrastructure with a vision that supports customer expectations. Such a supporting infrastructure realized by BPI projects would raise organizations' capabilities and responsiveness, leading to potential strategic advantages. Through BPI methodology⁴, your business can achieve higher level of profitability, greater employee morale and customer satisfaction, leaving your competitors in the dust.

Business-IT Alignment and BPI

IT is a key enabler of any process improvement project. However, historical analysis suggests that **less than 30%** of IT projects are successful, often due to the lack of alignment with business needs and priorities. Business Alignment is required in companies across all industries, but is critical in those where IT plays a central role in business operations. Business Alignment is at the core of realizing the full potential from IT.

More often than not, modern enterprises acquire major new information systems or enterprise applications, and then redesign operating processes to take the best advantage of it; instead, it should be the other way round. We believe that business strategy and business initiatives must drive the direction and priorities for IT investments. At the same time, IT capabilities must enable innovative business strategies and business capabilities.

⁴ Refer Page (5): **Is there a BPI Methodology?**

We believe that *business strategy* and *business initiatives* must *drive the direction and priorities* for *IT investments*.

BPI requires taking a broader view of both IT and business activity, and of the relationships between them. IT should be viewed as more than an automating or mechanizing force: to fundamentally reshape the way business is done. IT and BPI should have a recursive relationship; IT capabilities should support business processes, and business processes should be in terms of IT capabilities.

Is there a BPI Methodology?

Certainly, there is. Most experts agree that there are some common elements involving any BPI initiative, such as (i) Developing business and process objectives; (ii) Identifying the processes to be redesigned; (iii) Understanding and measuring the existing processes; (iv) Identifying IT levers; and, (v) Modeling the new process design.

There are many variations to BPI methodologies and there are distinct pros and cons involved. Selection of a particular methodology would depend on specific business need, infrastructure, size, workflow management and culture of your firm. *One size fits all* approach, if followed by process designers, could lead to the failure of BPI initiative.

In their book, *Workflow Modeling: Tools for Process Improvement and Application Development*, Alec and Patrick describe a unique BPI-model that we have found really useful in our consulting engagements across verticals in several organizations. This model comprises a five-layer framework⁵:

- ➔ Mission, Strategy and Goals
- ➔ Business Process (Modeling and Analysis)
- ➔ Presentation/ User Interface
- ➔ Application Logic
- ➔ Database Management

Business Process Improvement and Information Systems are inseparable. Whether your firm is business-oriented or systems-oriented, IT plays a key role.

Mission, Strategy and Goals: Before embarking on a BPI initiative, it is important to articulate your mission, business strategy and objectives. Process owners and champions⁶ should start with articulating business strategy and objectives aligned to the corporate mission. By describing the target markets and customers, services, differentiating elements of the business model, performance targets and stakeholder's expectations, BPI initiatives will prove more successful in realizing the expected value from process improvement.

Our experience suggests that the companies are better-off answering **five critical questions** while articulating their business strategies and objectives. Following questions should be part of the company's strategy framework:

- ➔ Are you selling to the **right kinds of customers**?
 - How effectively have you segmented, targeted and positioned your products/services?
- ➔ Do you have the **right competitive advantage**?
 - Can you defend your "turf"?
- ➔ Do you have the **right supporting infrastructure**?
 - Can the rest of the organization deliver on "marketing promises"?
- ➔ Can you **execute the required programs**?
 - Do you have the "right" culture and processes?
- ➔ Will these things **stay "right" in the future**?
 - What changes in market and competitive conditions can be anticipated?
 - How will things change as you enter new markets or add new products?

⁵ Source: *Workflow Modeling: Tools for Process Improvement and Application Development* by Alec Sharp and Patrick McDermott

⁶ Refer Page(8): *Project Management Approach to BPI*

At the strategic level, the three core operating processes of any business are: managing supply chains (including manufacturing and logistics), creating and commercializing products, and managing customer relationships. The *process strategy* should support these core operating processes within the organization.

In any BPI initiative, *process strategy* should be developed in accordance with the mission, strategy and objectives of the firm. Moreover, process strategy must be strongly aligned with operational and infrastructural capabilities of the company (and/or individual departments within a company). It is vital for the success of any BPI project.



Companies use either a **push/pull** platform or a combination of both to support their operating processes. Push/pull process strategies are strongly linked to both internal and external factors. *Internally*, process strategies must be aligned with capabilities of the firm both at the department and corporate level. Furthermore, it must be sync with organization structure and culture of the firm. *Externally*, process strategies should be in accordance with supply and demand conditions, competition, customer expectations, government regulations, etc.

Push strategies and systems contrast starkly with pull ones, particularly in their view of demand; the former treat market demand as foreseeable, the latter as highly uncertain.⁷ This difference in a basic premise often leads to fundamentally different process-design principles.

Fig 1: Process Strategy

Business Processes (Modeling and Analysis): Companies should organize people, resources and activities into processes which deliver maximum value to external and internal customers, in keeping with the mission. For any BPI initiative, this step is the most important of all as it allows us to redesign and optimize the existing processes. Before discussing the different steps involved in process design and analysis, *process definition* must be clear.

Any operating process has two important characteristics: (i) They have customers (internal and external), (ii) They cross organizational boundaries, i.e., they occur across or between organizational subunits. Processes are generally identified in terms of beginning and end points, interfaces, and organization units involved, *particularly the customer unit*. High Impact processes should have *process owners*. Examples of processes include: developing a new product; ordering goods from a supplier; creating a marketing plan; processing and paying an insurance claim; etc.

A single *process* is further subdivided into *sub-processes*, *tasks* or *activities*. For example, a process such as *creating a marketing plan* could involve sub-processes (market segmentation, targeting, etc) which in turn could involve multiple tasks and activities (designing survey, collecting responses, analyzing results).

Three main steps involved in process design are described below:

➔ **Framing the Overall Process**

By developing an overall process map, a set of related processes including the target process to be improved is identified. Scope of the target process should then be established using a framework for identifying a process and its boundaries. At this stage, you should review the company's mission, business strategy and process strategy (at the macro-level) discussed earlier. After performing an initial assessment by summarizing stakeholder's interests and

⁷ From push to pull: The next frontier of innovation; The McKinsey Quarterly 2005 Number 3

concerns, you should determine process vision (at the micro-level) and key performance indicators (KPIs) and objectives (KBOs).

➔ **Understanding the 'As-Is' Process**

After clarifying the performance objectives for the process, you need to understand why those goals are not being met. It should be noted that many so-called improvements are implemented that don't actually improve anything because other factors are the root cause. After having understood the current workflow, *model it*. Our experience suggests that **swimlane diagrams** allow an effective process representation, which is both simple and logical, explaining clearly *who* does *what* and *when*.

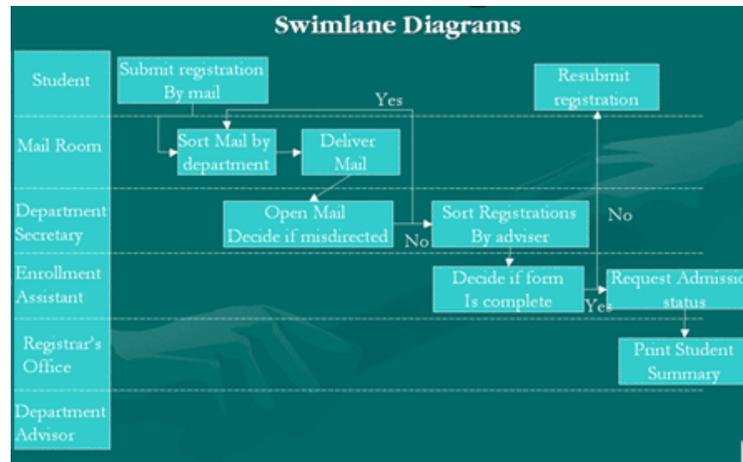


Fig 2: Example of a Swimlane Diagram

➔ **Designing the 'To-Be' (New) Process**

Based on assessment, begin by selecting the key features of the to-be process. After a thorough analysis of process optimization, design the to-be process workflow and progress through the different levels of detail. Develop use case scenarios looking at how systems will support the new process and revise the process flow as needed.

After you have designed the new process, have the proposed new system walked through from start to finish making sure it is usable by the person(s) actually responsible for the process. Increasingly, organizations are realizing that after defining their new business processes, it is important to communicate those processes to those who need them.

Presentation/ User Interface: After having developed the new business process, *presentation* or *user interface* should be implemented. It is a mechanism by which **people or other systems interact with an information system**. This mechanism is usually the GUI running on your desktop, but could be just about anything including bar code scanner, EDI, browser or terminal.

Application Logic: These are programmed transactions containing logic to enforce business rules and maintain data integrity. In simple terms, these are the application program that results in any transaction. Programmed application logic is usually distributed across servers or client machines.

Database Management: The final step involves setting-up an effective Database Management System. DBMS is a program or collection of programs that creates and maintains a database, and allows users to retrieve information from that database. Many DBMS also have report generation capabilities built into their functions. You should design your DBMS in accordance with your process requirements.

This summarizes the five-layer framework that we advise our clients when implementing BPI initiatives for their businesses.

Life Cycle Approach to Process Improvement

The final process design should not be viewed as the end of the BPI process. Rather, it should be viewed as a prototype, with successive iterations. We advise our clients to follow a **Life Cycle Approach** to process design and improvement. In this approach, after defining its business and process strategy, companies follow an incremental process improvement as outlined in this diagram below.

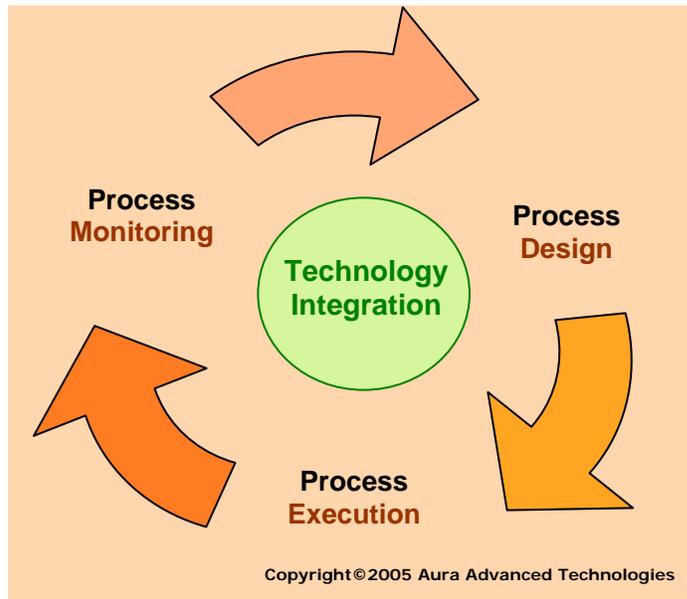


Fig 3: Life Cycle Approach to Process Improvement

After developing the new process design, the firm should define who is responsible for what, what sort of metrics will be used. Process Monitoring is critical to the success of any BPI project. Process owners and champions should determine appropriate Key Performance Indicators (KPIs) that will help realize the firm's Key Business Objectives (KBOs). Based on these results, the process design should be incrementally improved and optimized.

Technology is at the heart of any process design project. Demand for continuous business process improvement requires a rethinking of how information systems are designed and constructed. It is no longer sufficient to produce fixed solutions to fixed business problem. Information systems, like the business systems they support, must be adaptive in nature. They must be capable of sustained, graceful change in response to evolving business requirements.

Project Management Approach to BPI

Companies can enhance their business processes by clearly specifying the roles of *process owners* and *process information officers* before allocating these roles to the appropriate people. Successful BPI projects also require excellent business analysts, enterprise architects and other change professionals providing a practical, technical complement to the leadership of the process owners.

Businesses are increasingly focusing on cross-functional business processes and senior business executives are trying to determine how this new focus can be reflected in their organizations' structures. Gartner Research suggests that a good process improvement approach will be based on four roles, (i) Process champion; (ii) Process Owner; (iii) Process information officer (PIO); and, (iv) Business analyst.

An effective *process champion* should be a senior executive who is able to link process improvement to business goals. This person should have an established responsibility that crosses several functions. The CEO, CFO, COO, CIO or strategy director could perform this role. Once process thinking and process ownership have become fully institutionalized, many people will be process advocates, and there will be no need for a separate role.

Because processes cross functions and business units, each needs an owner – a senior non-IT manager with authority over the process. In most cases, the *process owners* will be a senior executive who may have a small team. This team will work with enterprise architects and business analysts to support the process owner. The CIO should be, or should appoint, the process owner for the IT delivery processes.

By year-end 2009, at least **60 percent of major organizations** will have made business processes a critical feature of their management structures

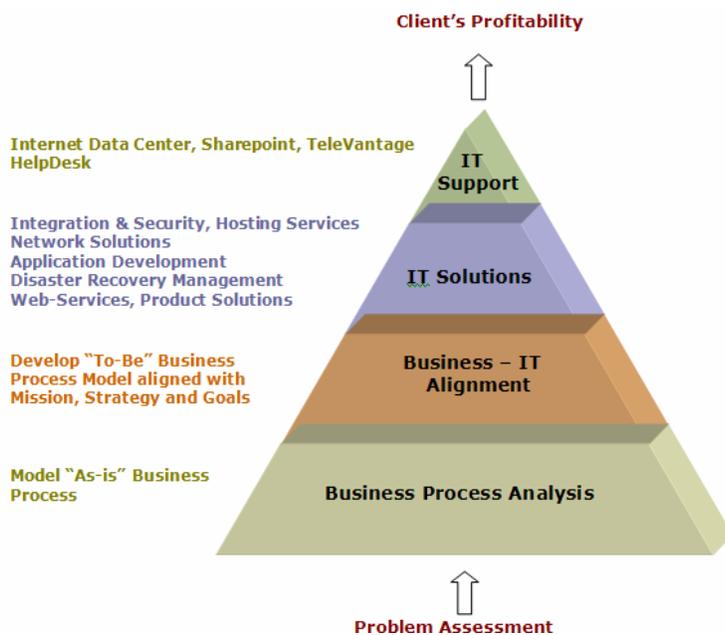
Each process owner needs access to a trusted technical advisor (often an IT manager) or a *process information officer* (PIO). PIOs are the practical complements to process owners' strategic vision and should provide advice on the feasibility, costs and risk of the various practical options. Their advice will cover IT, but should not be limited to it, and they should oversee the work of generating system requirements and engaging implementers.

PIOs need a variety of specialists to help them measure their processes, define new ones, develop or buy applications, and make organizational changes. The most critical skills required for *business analysts* are process design and change management.

Some of the biggest obstacles that BPI projects often face are: (i) Lack of sustained management commitment and leadership; (ii) Unrealistic scope and expectations; and (iii) Resistance to Change. By gathering management support for BPI initiatives and establishing appropriate KPIs and KBOs, concerns of all stakeholders will be addressed effectively.

Aura as a Partner for Business Process Improvement

Our experience suggests that modern businesses face significant friction losses between the strategic level and the operational organization. While strategically the company may think in terms of business processes based on products and markets, the actual operations frequently deal in processes within functionally-oriented departments.



Aura's unique methodology and superior understanding of our client's businesses has differentiated us from the competition. Aura's value proposition of *end-to-end business process solution* allows our clients the benefit of front-end consulting, technology integration, implementation and support – all from a single vendor. Our implementable recommendations are strongly aligned to mission, strategy and business objectives of our clients. Our methodology leverages our business model allowing us to offer cost-effective and comprehensive IT solutions.

Fig 4: Aura's Consulting Model. © Copyright 2005. All Rights Reserved.

Business process modeling and analysis is critical to the success of any business process. We offer business services that build visual models (such as swimlane diagrams) illustrating the current workflow process of your organization and shows where improvement and development can take place. Our proven techniques for identifying, modeling and redesigning business processes, aid in defining system requirements and brings the two distinct disciplines of management and information technology together to assist your organization in maintaining its competitive edge. Our IT capabilities allow us to offer you comprehensive solutions enhancing your network security and performance.

Our BPI consultants scrutinize everything from planning and systems integration to examination of functional areas to assess your current processes. Looking outside your organization and your core competencies, we determine your critical success factors so that we can recommend the most appropriate courses of action.

For example, when contacted by an environmental services company for optimizing their business processes we knew that they were wasting their limited resources on performing non-core activities. By following the *five-layer framework*, discussed before, we performed an initial assessment of the company’s mission, strategy and objectives. We conducted interviews to assess concerns and interests of different stakeholders. After that was done, we articulated the process vision, established process boundaries, scope and key process indicators.

The nature of environmental services demands a clear and accurate flow of information within the company and through to their clients. After modeling the cross-functional process flow we checked for bottlenecks, analyzed cycle time, idle time, delivery time, etc. Finally, we developed the *to-be* process that optimized information workflow across functional silos such as sales, customer service, administration, coordination, field technicians, accounting and support.

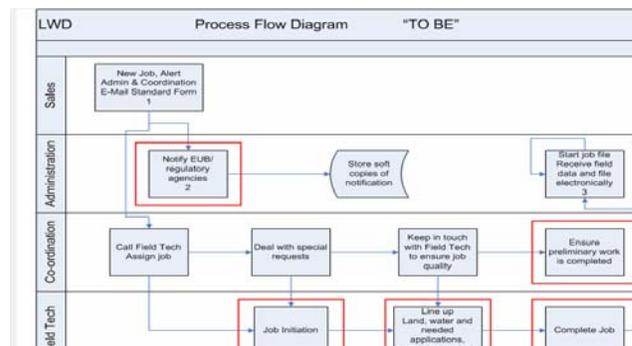


Fig 5: To-Be Process Design for Environmental Services Client

Our process improvement efforts resulted in the development of an application that improved the flow of information from Field to Customer, increased data accuracy and reduced the delivery time from the point of the initial sale to final billing.

Conclusion

In the quicksand of corporate competition, doing nothing is just not an option. True business process improvement that allows an organization to advance in its current competitive situation requires the capabilities described here. Constantly reducing operating costs is one side of the equation; increasing agility and responsiveness is the other.

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You can benefit from the diverse experience of [our team](#). Our consultants possess specialized knowledge and experience in strategy and operations resulting in implementable recommendations for our clients. If you would like to learn more about process improvement and our Business Solutions practice, contact us by email address information@auraadvanced.com or call 403-269-6123.

To learn more about our BPI services; visit our company website: www.auraadvanced.com

Glossary of Terms

This section is intended to help assist the reader in correlating acronym used within this white paper. Single line definitions are provided not as a means of fully explaining the terms, but as an overall supplement to their fuller explanations found within the text of this document.

TQM- Total Quality Management: It is the continuous or incremental improvement of existing business processes over time. This entails moderate risks as compared to BPR, which is typically high risk.

BPR- Business Process Reengineering: A fundamental corporate reorganization based upon the processes that deliver value to customers. It typically involves re-orienting a business from a product or location viewpoint to a customer focus.

BPM- Business Process Management: It refers to a set of activities which organizations can perform to either optimize their business processes or adapt them to new organizational needs. As these activities are usually aided by software tools, the term BPM is synonymously used to refer to the software tools.

BPI- Business Process Improvement: The process of developing and implementing incremental improvements for a process. BPI is used when business is manageable and processes are relatively consistent. There is low risk associated with BPI and it starts with the existing process.

DBMS- Database Management System: Database Management System. Used to store, process and manage data in a systematic way. May use a variety of underlying storage methods, including relational, multidimensional, network and hierarchical.

EDI- Electronic Data Interchange: computer-to-computer transmission of information between two companies, including such documents as purchase orders and invoices.

GUI- Graphics User Interface: A computer terminal interface, such as Windows, that is based on graphics instead of text.

IS- Information Systems: A computer-based system used for managing and processing information. Also, a functional group within a business that manages the development and operations of the business's information

IT- Information Technology: The branch of engineering that deals with the use of computers and telecommunications to retrieve and store and transmit information

IVR- Interactive Voice Response: A generic term for transaction systems allowing phone callers to use an ordinary telephone to interact with a computer through speech or dialed instructions. Each response by the caller triggers another recorded message until the transaction is completed.

KPI- Key Performance Indicators: Key Performance Indicators (KPI), also known as Key Success Indicators (KSI) are financial or non-financial metrics used to reflect the critical success factors of an organization.

Activities: Processes could involve two types of activities: Managerial (e.g. develop a budget) and Operational (e.g. fill a customer order).

Entities: Processes take place between organizational entities. They could be Interorganizational or Interfunctional.

Kaizen: The Japanese process of continuous improvement using problem-solving and analysis techniques that may include the use of fishbone diagrams, control charts, affinity diagrams and other tools.

Objects: Processes result in manipulation of objects. These objects could be Physical or Informational.

Swimlane Diagrams: Show processes in "lanes" (like the lanes you swim laps in) to depict tasks that occur concurrently, illustrating who does what, and when. Used to design workflow.
