
Can Six Sigma and Business Process Management Coexist?

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Agenda

- Answer the question
 - Business Process Management & Six Sigma Overview
 - Relationship between BPM and Six Sigma
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What is Business Process Management?

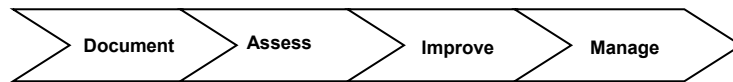
- What is BPM?
 - A systematic method of graphically representing the business
 - It defines business processes and business rules
 - It's a communication and documentation tool
 - What does it do for business?
 - It allows business and technology to better understand implications of how work is performed
 - Visually identifies problems with processes
 - It allows the business to define improved business processes and test them prior to implementation
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Business Process Management

- Defines the discipline that helps companies:
 - Identify the processes that are essential
 - Understand the interactions within the processes that subtract value
 - Validate what improvements are needed
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Business Process Management

- A systematic approach to understanding, improving, and managing a business
- Discipline has four basic phases:
 - Document
 - Assess
 - Improve
 - Manage



Six Sigma Methodology

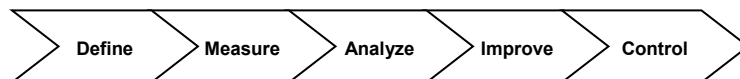
- Speed is becoming a strategic approach for businesses of all sizes
- Focus on elimination of errors and defects
- Resulting in financial and competitive advantage:
 - Reduced costs
 - Improved efficiency
 - Increased profitability
 - Increased customer satisfaction

What is Six Sigma?

- Total Quality Management
- Statistical Process Control
- Focus on Result\$
- Strategic Plan for Implementation

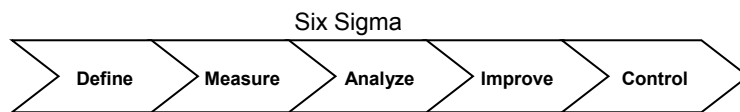
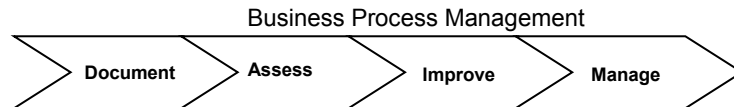
Six Sigma Methodology

- A systematic way of improving processes
- Discipline has 5 distinct phases
 - Define
 - Measure
 - Analyze
 - Improve
 - Control



BPM and Six Sigma

- Well defined methodology underpins both approaches

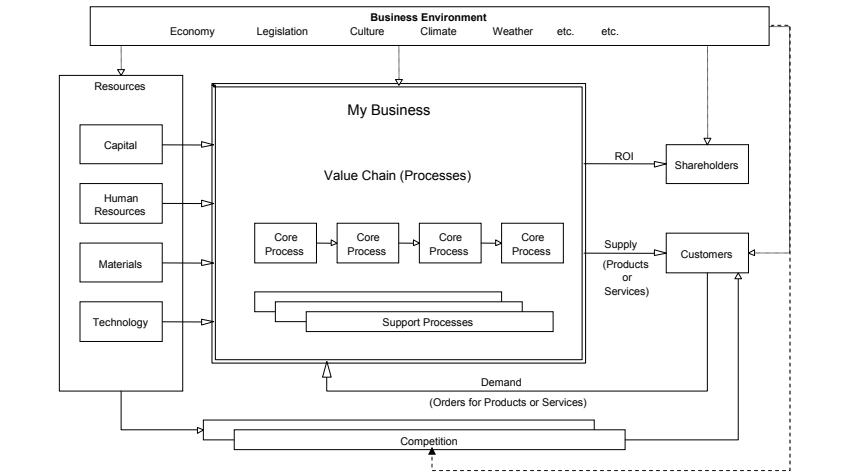


BPM - Document Phase

- Create a Process Inventory – Identify the Value Chain
 - Classifying processes
 - Core Process (the value chain)
 - Support Processes

Business as a System

BUSINE-1.IGX

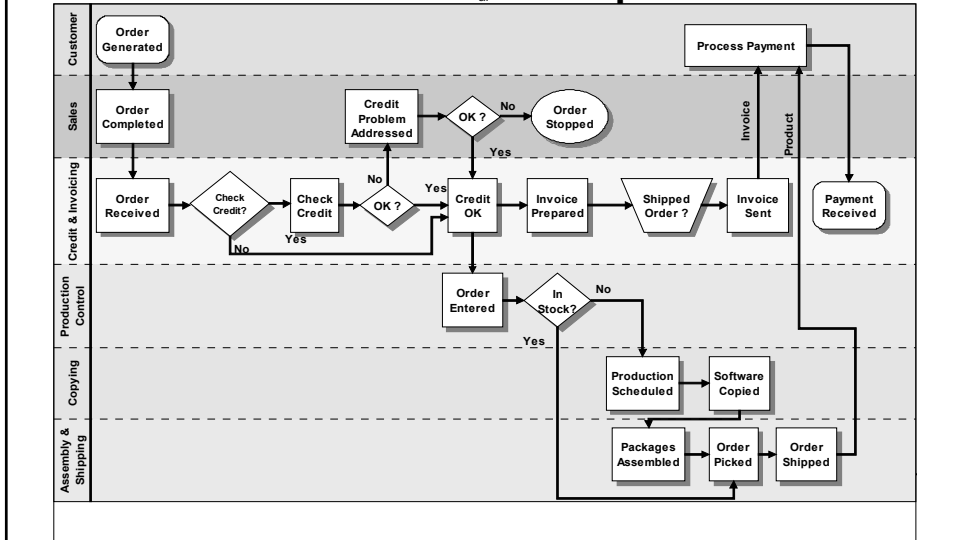


Document Processes

- Create a System Level Map
 - High level graphic representation of the sequence of work as it flows through the organization
 - Enables drilling down into the Core processes.
- Create Core Process Maps

Document Processes

Core Process Map



BPM - Assess Phase

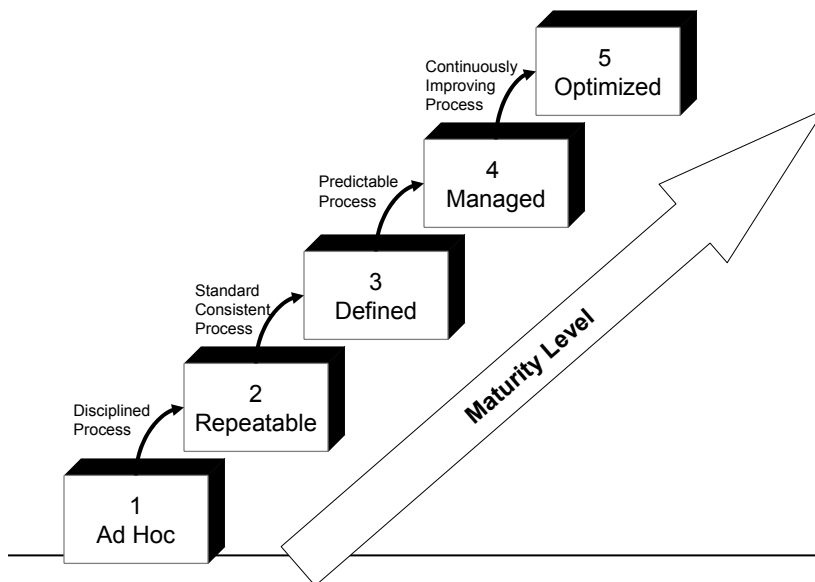
- Quantitative Measures
 - Process measures represent parameters that directly control the integration of the resources.
 - They enable you to predict characteristics of the output before they are delivered to the customers.

Assess Performance

- Quantitative Measures

- Quality is characterized by two sets of elements:
 - Deliverables
 - Attributes provided
 - Interactions
 - Customer experience
- You need to ensure Quality in both sets!

Qualitative Process Assessment



Assess the Processes

- The objective here is to determine where and how to direct improvement efforts to maximize benefit to the business.
 - Process Improvement is an investment with a very nice payback, you need to make the investment wisely.
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Assess the Processes

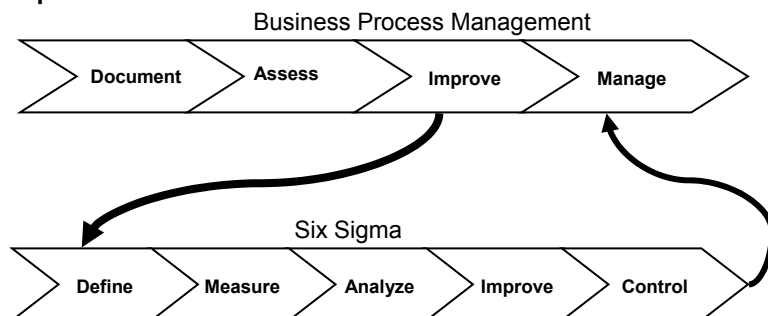
- Create a gap analysis based upon:
 - Importance
 - Opportunity
 - Feasibility
 - Start with:
 - Quantitative assessment
 - Qualitative assessment
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Improve Phase

- The goal is to evaluate how an organizations resources be used most efficiently
- Typical goals reducing costs, shortening cycle time, improving product or service quality
- Implementing a redesigned process can have adverse affects in other parts of the business
- Good use of analytical tools is required to execute the improvements correctly
- Six Sigma provides those tools if applied properly

Improve

- Six Sigma provides the toolset for process improvement



What is Six Sigma?

- Well-structured, data-driven methodology for eliminating defects, waste, or quality problems of all kinds in manufacturing, service delivery, management, and other business processes.
 - The methodology is based on the combination of well-established statistical process control techniques, data analysis methods, and the systematic training of all personnel at every level in the organization involved in the process targeted by Six Sigma.
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Six Sigma - Principles

- The term Six Sigma defines an optimum measurement of quality:
 - 3.4 defects per million opportunities.
 - The Greek letter SIGMA is a mathematical term that simply represents a measure of variation, the distribution or spread around the mean or average of any process or procedure.
 - If we can reduce the standard deviation (average deviation in our product) then less of our product or service will be faulty.
 - In other words lets make sure that everything we do is right first time by monitoring and removing mistakes from the process.
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Benefits of Six Sigma

- **Start with the customer.**
 - Requires clear definition of customer requirements (Critical to Quality).
 - A defect is any instance or event in which the product or process fails to meet a customer requirement.
- **Provides a consistent metric.**
 - Once you have defined the requirements the definition of defects is clear and can be applied to any process.
- **Links to a very ambitious goal.**
 - Performance objective of 99.9997%.

Six Sigma Improvement and Management Strategies

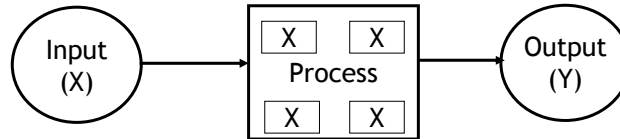
- **The Fuel**
 - Customer knowledge and effective measures
- **The Engine**
 - Processes of the organization
- **Linkage between both is the key to success or failure**

The Essence of Six Sigma



$$Y = f(x)$$

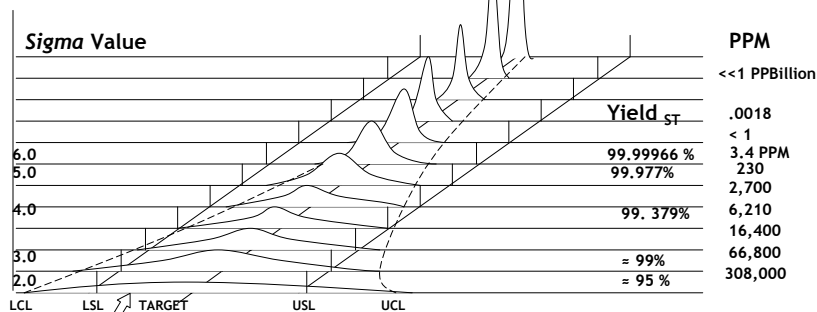
"Y is equal to the function of X"



- Inputs and processes (X) have a profound affect on the output (Y)
- Controlling the inputs, their interactions and the processes will improve the output
- Attempting to manage results (Y) only causes increased costs due to rework, test and inspection

"Sigma", Yield and PPM

A "good" process that will repeatably and reliably produce excellent service and products.



A "bad" process that will repeatably and reliably produce bad service or non-conforming parts that need to be inspected and reworked or scrapped

Cpk = Process Capability

Yield = How much "passes" through with no defects

PPM = parts per million

USL = Upper Spec. Limit

LSL = Lower Spec. Limit

Voice of the Customer

UCL = Upper Control Limit

LCL = Lower Control Limit

Voice of the Process

Stages in a Six Sigma Project

- **Define.** The *Define* phase is concerned with the definition of project goals and boundaries, and the identification of issues that need to be addressed to achieve the higher (better) sigma level.
- **Measure.** The goal of the *Measure* phase of the Six Sigma strategy is to gather information about the current situation, to obtain baseline data on current process performance, and to identify problem areas.
- **Analyze.** The goal of the *Analyze* phase of the Six Sigma quality effort is to identify the root cause(s) of quality problems, and to confirm those causes using the appropriate data analysis tools.
- **Improve.** The goal of the *Improve* phase is to implement solutions that address the problems (root causes) identified during the previous (*Analyze*) phase.
- **Control.** The goal of the *Control* phase is to evaluate and monitor the results of the previous phase (*Improve*).
- Basically identify an area where there is a process problem, measure it, work out why there is a problem and then fix it.

Six Sigma Improvement Model

	Process Improvement	Process Design/Redesign
Define	<ul style="list-style-type: none"> ■ Identify the problem ■ Define requirements ■ Set Goal 	<ul style="list-style-type: none"> ■ Identify broad problems ■ Define goal/change vision ■ Clarify scope & customer requirements
Measure	<ul style="list-style-type: none"> ■ Validate problem/process ■ Refine problem/goal ■ Measure key steps/inputs 	<ul style="list-style-type: none"> ■ Measure performance ■ Gather process data
Analyze	<ul style="list-style-type: none"> ■ Develop potential causes ■ Identify vital few ■ Validate causes 	<ul style="list-style-type: none"> ■ Identify "Best Practices" ■ Assess Process Design ■ Refine requirements
Improve	<ul style="list-style-type: none"> ■ Develop ideas to remove root causes ■ Test solutions ■ Measure results 	<ul style="list-style-type: none"> ■ Design new process ■ Implement new process structure, systems
Control	<ul style="list-style-type: none"> ■ Establish standard measures to maintain performance ■ Correct problems as needed 	<ul style="list-style-type: none"> ■ Establish measures & reviews to maintain performance ■ Correct problems as needed

Conclusion: Six Sigma is a Process Centric Approach

- Any process that creates value for a company and its customers is linked within the business as part of a set of interacting processes.
- Processes can create value or reduce it based upon how well they function.
- Six Sigma demands recognition of these factors
- A process centric approach is the key to fully realizing the benefits of Six Sigma

Conclusions

- BPM Promotes
 - Best practices by:
 - sharing knowledge
 - tracking opportunities for improvement
 - helping to manage and control changes to processes
- Six Sigma
 - Key Benefits
 - Easier and more effective project identification
 - Reduced project time
 - Reduced experimentation costs
 - Improved data integrity and productivity
 - Improved results and more effective deployment

Conclusions

■ Combining BPM and Six Sigma:

- Provides a process centric approach to improvement
- Expands the effectiveness of Six Sigma and BPM projects (Process Improvement or Process Redesign)
- Provides additional tools to design business processes
- Provides tools to run simulation and statistical analysis of business processes
- Improves the capture of meaningful data
- Provides a link between corporate strategy and effective business execution