



# The Key Techniques of Process Improvement

By

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# Process improvement techniques have been evolving

Every organization has some form of process improvement program in effect today. Some of these are enterprise wide and some are focused on key or mission critical processes. Most are somewhere in between. Some are driven by new technologies, new applications and new strategic direction, objectives, goals and initiatives. Some of these projects come from applying management disciplines like balanced scorecard or value streams, agile process techniques, value chain the Rummler –Brache approach to process change or one of the other 50+ disciplines. Whatever the approach, few are well versed in the techniques of process improvement. Most organizations fall back on two approaches:

- 1. Use a consultant to facilitate or actually do the process effort
- 2. Buy a tool and have the vendor teach you their methodology for using the tool

Both of these put the responsibility outside the organization. It is not surprising the studies show that 75% of process projects are a failure in some way. They may be over budget, take too long, become too complicated, fail to deliver results or actually implement the wrong process. This last one, implementing the wrong process is usually done at the expense of user productivity. So what can be done about this?

# Just what is process improvement?

Process mapping is not process improvement. Process mapping will identify where a process is not meeting its original intent. The process team can do maintenance and bring the process 'up to specification' that was originally defined for it. Process mapping is also not considered process modeling. Process modeling includes the documents (data) for the process, the decisions (rules) and any other enablers like skills, policies, procedure and technology that are needed to make the process work and deliver results 'as expected' by the management.

So, does mapping do anything for you? Yes, there are many benefits from mapping with the most important is that mapping allows you to visualize the work. It can also capture multiple views of a process through the use of swim lanes. In cleaning up the process you can see redundant steps and things that are out of sequence. A map is then a recording of process





execution sometimes called the 'process of record'. They are also a part of methodology usually related to the use of a process mapping tool.

When documenting a process you start with the actions or process steps. These steps help determine many supporting needs such as the data used by a process, where the work is done, who does the work, what they need to do the work, any decisions they might make or rules that drive the decisions and so on. These are the enablers of the process.

Real improvement requires a methodology that focuses on problem solving for process issues and aligning both the process architecture and process execution with business goals. The simplest start for problem solving is comments in interviews that lead to improvement. An interview with key managers and operators of a process and its context identifies problems, opportunities and enabler issues such as poorly performing applications or lack of data access. Any improvement decision should relate processes to organization performance.

One of the key factors often not included is the comments by the users of the process. These are the people that need the skills and other enablers to effectively make a process work. This is especially true when an application is required to support the process. The application navigation will make or break the delivery of value to the business. Only the users are knowledgeable about this need.

#### Improving the process

Primary in improvement is knowing where the improvement opportunities are located. Are they in a major process? Are they in a sub process? Are they in a related process? Locating the process opportunity requires that the process team gather evidence of lack of process performance. The number one questions should be does it meet the business goals or objectives for that process? In many cases these have never been actually documented but are assumed especially when dealing with sub processes that take on the goal of their parent process.

In addition management requires some definition of the expected yield, what is the risk associated with change and in what sequence would the processes be improved. So a basic improvement approach is needed that is part of overall process management.





# **Process Improvement Stages and Methodology**



This is a much more detailed improvement view than shown in most process methodologies and should have business motive added for direction, architecture etc.

Process improvement actions and emphasis involve a number of considerations. Improvement starts with adding/removing steps that focus the process on delivering value to the customer either internal or external to the organization. The question you ask is 'what steps would you add, such as to remove ambiguities, what steps are technical steps and should be moved elsewhere as they don't add value to the customer and what steps would you remove as redundant, unneeded or not appropriate to a flow?

After that you look at the step inputs and outputs. Again there are questions such as; are there new inputs or outputs needed, should the inputs and outputs be updated? Finally you ask about process governance and controls with questions like, what checks and balances might be needed to assure correct results?

Once you have an idea of what the target process should look like you need to consider improving the enablers. Here are a few hints on what to look at:

• Start with policies and procedures. What rules should you move to P&P, what rule definition and explanations do you need? Should the rules be included in the process as an automated decision or as part of an executable process? Usually HR and others help with policies and procedures while IT can help make them automated.





- Then consider the systems and related IT infrastructure. What databases, applications, web presence, mobile capability, connectivity, data management, security and compliance issues you need to address? Usually IT helps with this.
- Next you add the skills consideration such as what competency needs are there, what special tool use should you train them on, what positions and education do they need to do the work and so on. Usually HR can help with this.
- Then there is the document and data consideration. What documents should be included either paper or automated such as electronic form.
- Finally you need to consider what business technology might be needed such as mobile devices, in places like warehouses, retail establishments. Technology such as storage systems, scanners, sensors, cameras and other device that may be specific to an industry or government.

# What are the key techniques?

Process improvement techniques are not only applied to processes but must also be applied to the enablers. Often an old enabler can slow done or negate an improvement. There are 5 analytical techniques that the improvement approaches support:

- 1. **Discovery** Identifying where there are opportunities for improvement
- 2. **Diagnostic** Identifying where there are problems such as bottleneck or choke points, excessive resource use and so on.
- 3. **Predictive** –Anticipate issues and opportunities, verification of process and enabler performance expectations and other outcomes of a process.
- 4. **Prescriptive** –Correct or remediate a situation
- 5. **Managing and monitoring** Part of process management continuous process improvement this involves identifying points of process execution that may be out of control. This is much like quality measurement and control charts.
- 1. *Observation* This is the most common approach to improving a process. It is usually done with teams but can be done with a domain expert.
  - 1. *What do you use it for?* Often used for process maintenance through process reviews. This is a technique used for mainly for discovery and prescription and in some cases for monitoring through review.
  - 2. *When do you use it*? This is often used as a means of identifying opportunities for improvement through team facilitation, especially when it is a large transformation project. For single process effort it is used by a team assigned to fix and improve the process.



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- 2. *Performance* You can look at the performance variables (metrics) for each step of a process the process overall or a suite of processes.
  - 1. *What do you use it for?* Quantitative analysis of a process. Classic KPIs. There are many industry oriented KPIs and large libraries of KPIs. These are KPIs that relate to processes either directly or indirectly. This involves discovery of which metrics need improvement. For well-defined or engineered processes like in manufacturing or regulatory compliance it means looking at typical process metrics of cycle time, queue time, transport time, throughput and possibly process cycle efficiency and error rates. There are other metrics such as quality, customer satisfaction, effectiveness measures and so on that can be used especially when dealing with case management
  - 2. *When do you use it*? When you have access to process metric data such as with a process mining tool, previous measurement efforts or industrial engineering studies.
- 3. *Touchpoint/Context analysis* This approach is used when you want to look at processes relationships and impacts on components of the enterprise.
  - 1. *What do you use it for?* Development of impact maps that highlight hidden relationships that might hinder deployment. It is a form of diagnostic and prescriptive technique especially as relates to enablers that support the processes.
  - 2. *When do you use it*? This technique is diagnostic and prescriptive and in the situation of hidden process relationships it can be predictive. Very useful for analyzing migration strategies from current to future process and enabler suites.
- 4. Process Mining Extracting performance and flow material from database logs
  - 1. *What do you use it for?* Clearly used for discovery of metrics for processes. Also used for diagnostics regarding repeated paths or excessive path navigation. Especially useful in certain industries like health care, hospitality and law enforcement to find patterns.
  - 2. When do you use it? When you need process metrics.
- 5. *Policy and Procedure (P&P)* Changes in policies and procedures often point to new processes or changes needed in existing processes.
  - 1. *What do you use it for?* Used to provide the rules evolving from policy statements. Process rules may be impacted by policy changes. Predictive techniques are used here to assess impact via impact maps.
  - 2. *When do you use it*? When there are major policy changes resulting in strategic initiatives and changes in organization direction. Used as part of large





transformation projects to assess impact of current to future migration issues for related processes.

- 6. *Analytics* Rigorous techniques of analyzing quantitative, monetary and phrase descriptions of processes across an enterprise
  - 1. *What do you use it for?* These are for diagnostic, prescriptive and predictive situations. Usually these involve ranking process improvement opportunities, assessing impact and comparative analysis for process consolidation...
  - 2. *When do you use it*? When you need comparative analytics for migration analysis, process rankings, impact analysis. Especially useful for analyzing fit of alternative process consolidation options, merger success probability, acquisition fit and other strategic and operational changes.
- 7. *Business change assessment* impact analysis for consolidation, merger, privatization and other structural process changes across multiple operating units or functions
  - 1. *What do you use it for?* Assess impact of change to various processes, enablers and related parts of the organization.
  - 2. *When do you use it*? When you analyze alternative change strategies and initiatives. The goal is to discover and diagnose hidden impacts. Used when you have decided on a series of changes and want to know the impact
- 8. *Simulation* Using estimated values or values from reality to find bottlenecks in a new process
  - 1. *What do you use it for?* Used for diagnosis of process alternatives, discovery of performance bottlenecks, predictive analysis of process breakdown through stress testing.
  - 2. *When do you use it*? This approach should be used to verify process design and performance expectations.
- 9. *Process Consolidation* Combining processes to get one simpler, common or federated process to be shared
  - 1. *What do you use it for?* Most used for reducing and standardizing processes. Such situation happen when federating back office processes, reducing process variation in terms of steps, sharing common technologies and skill sets.
  - 2. *When do you use it*? Most used when centralizing and reducing an organization to create more profit by reducing process and enabler costs. Also used when there is a desire to acquire a standard package for Enterprise Resource Planning, Supply Chain Management or Customer Relationship Management.



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- 10. *Process intelligence* Tracking and monitoring the process performance of the organization.
  - 1. *What do you use it for?* Identifying when processes are changing performance. This mainly for process monitoring and tracking such as in continuous process improvement, process management and process centers of excellence.
  - 2. *When do you use it*? When you are reaching a levels 3to 5 capability using the capability maturity management approach (CMM).

#### The desired outcome for process improvement

The desired outcome is returned value for the process investment. The main reasons for process change are to improve the quality and the efficiency of the process and to align the process with business goals to achieve that value. Applying one or more of the techniques described above provides the insight needed to make changes and align with the goals of the business. Also it is important to keep in mind that you can over analyze something. This is called 'analysis paralysis' and results in analysis for analysis sake a situation we all want to avoid.

A well thought out process improvement plan is needed right at the beginning of a process effort to make sure the needs of the business are met. Such a plan sets boundaries and defines when you have just enough analysis to accomplish the purpose of the process project whether it is as large as a complete transformation or just the improvement of one core process with its sub processes and enablers.