

IFMR can meet your process mapping needs efficiently, effectively and economically. We have a distinctive methodology that captures the essential static and dynamic details of a process with a view on process improvement.

What is a process?

Almost everything we do in life involves a process. Whether you're making pizza, installing a home satellite dish or paying an invoice, a process is involved.

A process can be defined as a series of value-added tasks that are linked together to turn inputs into a product or service output. It must have two or more activities that serves a purpose for an organization. They can be defined at many different levels and with various boundaries. Furthermore:

- Processes must have a beginning and an end.
- Processes are co-ordinated activities that involve people, procedures, technology and infrastructure
- Processes constitute a significant portion of organizational costs.
- An organization is only as effective as its processes.
- All work is part of a process that starts and ends with a customer.

What is a process map?

A process map is a visual illustration of various activities which are performed to accomplish a particular task.

Key elements of any process include the following attributes:

- Inputs
- Outputs
- Activity steps
- Decision points
- Functions

The lines and symbols on a process map help us to record concise sentences for every step in the process that tells the reader:

- What is happening in the process
- Where it is happening
- When it is happening
- Who is doing it/Whose the actor
- How inputs and outputs are handled and distributed

Why do we need to create a process map?

The purpose of process mapping is for better understanding. It involves the gathering and organizing of facts about the work and displaying them so that they can be questioned and improved by knowledgeable people. Process maps aid in understanding by abstracting, using visual charting symbols consistently and masking unnecessary details. To summarize at a broader level, process maps are created to:-

- Find out how your processes work and why they behave the way they do
- Identify "quick-win" process improvement opportunities
- Establish performance objectives
- Reveal opportunities to standardize processes
- Document best practices, standard operating guidelines and procedures
- Jump start and foster major business process improvement, redesign or reengineering initiatives

How do we create a process map?

- **Step 1: Identify the problem:**
 - What is the process that needs to be visualized? Type its title at the top of the document.
- **Step 2: Brainstorm all the activities that will be involved:**
 - At this point, sequencing the steps isn't important, but it may help you to remember the steps needed for your process. Decide what level of detail to include. Determine who does what and when it is done.
- **Step 3: Figure out boundaries:**
 - Where or when does the process start?
 - Where or when does the process stop?
- **Step 4: Determine and sequence the steps:**
 - It's helpful to have a verb begin the description. You can show either the general flow or every detailed action or decision.
- **Step 5: Draw basic flowchart symbols:**
 - Each element in a process map is represented by a specific flowchart symbol, which together represent process mapping symbols:
 - **Ovals** show the beginning or the ending of a process.
 - **Rectangles** show an operation or activity that needs to be done.
 - **Arrows** represent the direction of flow.
 - **Diamonds** show a point where a decision must be made. Arrows coming out of a diamond are usually labelled yes or no. Only one arrow comes out of an activity box. If more than is needed, you should probably use a decision diamond.
 - **Parallelograms** show inputs or outputs.
- **Step 6: Finalize the process flowchart**
 - Review the flowchart with other stakeholders (team member, workers, supervisors, suppliers, customers, etc.) to make sure everyone is in agreement.
 - Make sure you've included important chart information like a title and date, which will make it easy to reference.
 - Helpful questions to ask:
 - Is the process being run how it should?
 - Will team members follow the charted process?
 - Is everyone in agreement with the process map flow?
 - Is anything redundant?
 - Are any steps missing?

Numbering conventions

To help with process map organization, you can number the process maps and process steps. Here's a process mapping numbering convention example:

- **Process 1**
 - Sub-process 1.1
 - Sub-process 1.1.1
 - Sub-process 1.1.2
 - Sub-process 1.1.3
 - Sub-process 1.2
 - Sub-process 1.2.1
 - Sub-process 1.2.2
- **Process 2**
 - Sub-process 2.1
 - Sub-process 2.1.1
 - Sub-process 2.1.2
- **Process 3**
 - Sub-process 3.1
 - Sub-process 3.1.1
 - Sub-process 3.1.2
 - Sub-process 3.2
 - Sub-process 3.2.1

Process maps provide valuable insights into how a businesses or an organization can improve processes. When important information is presented visually, it increases understanding and collaboration for any project.

What are the benefits of creating process map?

- Reduced operating costs
- Increased quality
- Increased productivity
- Improved customer service
- Work simplification

Process mapping improves our understanding of processes and, in essence, boosts our understanding of business and operational performance. Some of the benefits of a well-prepared process map are as follows:

- Employees can participate in constructing a process map. This is one of the most important benefits because it gives employees an opportunity to experience a shared view. The methodology is the catalyst to give businesses and organizations access to more diversity, creativity and innovation.
 - Some of the best solutions to business problems come from within the organization.
 - Employees are more often than not astonished by the complexity of the process and delighted to see the "actual process" for the first time. They say it reveals the issues and gaps that cause business and operational problems. Furthermore, people may be more willing to participate in a change initiative and pitch in with new ideas when they are directly involved. This helps to increase the probability of success and encourages a higher level of involvement and agreement.
- Process mapping allows you to visually illustrate and convey the essential details of a process in a way that written procedures cannot do. A process map can replace many pages of words.
- Process maps can save you time and simplify your projects because they can:
 - Build, influence and accelerate the "Opportunity Assessment" and "Design" phases of a project.
 - Effectively communicate ideas, information and data visually.

- Aid in solving problems and making decisions.
- Identify actual or ideal paths and can reveal problems and potential solutions.
- Be produced quickly and economically by a skilled individual.
- Show processes broken down into steps using symbols that are easy to follow and understand.
- Show intricate connections and sequences easily, allowing for immediate location of any element of a process.
- Show an entire business process from beginning to end and can be used to understand the current-state and to design and depict the future-state process.
- Process maps help you to understand the important characteristics of a process, allowing you to generate useful analytical data in order to derive findings, draw conclusions and formulate recommendations. Furthermore, process maps allow you to systematically ask many important probing questions that lead to developing a view on business process improvement.

IMPROVING PROCESSES:

Processes are the most effective way to manage an organization at any level and eventually support its overall goals. By improving processes, a business or organization can improve internal efficiencies, effectiveness, adaptability and customer service levels.

Documenting processes involving people, particularly employees, can lead to insights and changes that can help improve an area or operation. One way to understand a process is to start thinking about its major elements - inputs, outputs, activity steps, decision points, enablers and functions.

Improving processes include:

- Eliminating entire processes or sub-processes that are unnecessary.
- Automating manual activity steps.
- Combining steps.
- Outsourcing elements of the process.
- Changing the location where steps are done or the people performing them.
- Altering or modifying how activity steps are done.

BUSINESS APPLICATIONS FOR PROCESS MAPS

BUSINESS PROCESS IMPROVEMENT, BUSINESS PROCESS REDESIGN AND REENGINEERING INITIATIVES:

- Process mapping sets the momentum for:
 - Revealing opportunities to improve or standardize processes
 - Establishing and documenting best practices
 - Fostering or jump starting these initiatives
 - Identifying "quick-win" opportunities
 - Preparing for e-process initiatives

TRAINING:

- Create training and reference manuals
 - Easier to train people when they are able to see the process visually.
 - Employees with the combination of effective process documentation and appropriate competencies are more likely to do their jobs properly almost all of the time.

QUALITY:

- SIX SIGMA - Process maps are used in the ANALYZE PHASE to create "As-Is" maps and in the IMPROVE PHASE to create the "To-Be" process maps.
- ISO - Map and analyze the major business processes in preparation for ISO documentation. Quality system documentation clarifies what is expected of workers and increases the likelihood of consistent operation.

SIMULATION:

- Gather process related information and create a static model in preparation for simulation projects.
- Develop the model building skills necessary to become an effective Simulation Analyst before investing in extensive simulation training.

INFORMATION TECHNOLOGY:

- Prepare your organization to make the transition into system requirements analysis because they describe how the functions would interact with a system to complete an activity step.
- Create the Business Requirements Document. Business Analysts can use process maps to structure business user requirements in order to be able to validate them and document them for use by others.
- Identify the types and function of information systems or applications used in the process. Process mapping is useful when projects involve integrating enterprise applications with current legacy and custom applications.
- Map the steps to document the Contingency, Disaster Recovery and Business Continuity Plans. Process mapping fosters discussion, communication, ideas and visually illustrates the key steps required to develop these plans.

WORK MEASUREMENT:

- Gather information on the elements of a process in preparation for a work measurement or activity sampling study.

DOCUMENT, REVIEW AND ANALYZE CURRENT-STATE PROCESSES:

- Mapping the current-state is an important first step in process improvement projects and other major corporate initiatives.
- Protect your organization's knowledge capital by mapping critical processes.
- Find out how processes work and why they behave the way they do.
- Stay focused on factual details, not on someone's opinion.
- Identify root cause of sub-standard process performance.
- Establish a baseline in order to validate improvement and justify change or capital expenditures.
- Promote and foster a process-centric attitude in the workplace.

DESIGN FUTURE-STATE BUSINESS & OPERATIONAL PROCESSES:

- Visualize future-state processes before making changes to current-state or investing in major capital.
- Future-state process maps can be used to guide implementation.

INTEGRATION OF PROCESSES FOR ACQUISITIONS, MERGERS AND NEW SERVICES.

- Ensure effective integration of business operations, including formation of common business practices and understanding of system platforms.
- Establish common business practices.
- Identify who will be affected in order to prepare them for change, re-assignment or training.
- Get people to think together towards a common goal in a structured way.
- Identify stakeholder issues and gaps at the outset.

SELLING AND DECOMMISSION OF BUSINESS OPERATIONS.

- Map the processes required for a seamless transition of customer records, files or accounts and methodical shut-down of business operations.
- Share process maps with purchaser to enhance communication.

What are the challenges of creating a process map?

The following are four common problems which adversely affect the use of process mapping on identifying improvement opportunities. These problems are related to the appropriate use of the process mapping method, how process mapping is planned and executed.

Mistake #1:

Apply process mapping on inappropriate types of processes

Most organizations' business operation can be categorized into three types of processes: transformational processes, transactional processes and decision-making processes.

Transformational processes refer to the interactions where specific inputs are reshaped to outputs with changes in physical or virtual forms. Manufacturing (change in physical forms) and systems development (change in virtual forms) are typical examples of transformational processes. Transactional processes refer to the interactions of different input parties where they accomplish to generate specific outcomes. Call centre support and most sales activities are examples of transactional processes; Decision-making processes refer to the interactions of different input parties where they accomplish to make decisions. The decisions made can be within a pre-defined range (e.g. approve or reject an application) specific or open-ended (e.g. what is the optimal market entry price level?). Pricing, market forecasting and inventory control are examples of decision-making processes.

Process mapping is more effective on identifying improvement opportunities on transformational and transactional processes than on decision-making processes, especially those involving high-level, open-ended decisions.

This is because, firstly, the outputs from such transformational and transactional processes tend to be more specific and objectively-defined (e.g. specific products and service outputs) and secondly, process variations are more traceable. By contrast, high-level, open-ended decision-making processes tend to be abstract and intangible. Also, the fact that such decision-making involves a lot of dynamic, unpredictable factors mean that it is the quality of individuals gathering, processing and analyzing the information which matter. Process

mapping is seldom the most optimal method of identifying and visualizing improvement opportunities in these circumstances.

Mistake #2:

Being unclear about the focus of your process mapping

Preliminary analysis can point to areas where process inefficiencies or disjoints occur, but their underlying causes may reside outside the processes where these problems are diagnosed. For example, I was once involved in a HOTEL process improvement project where the problem of room service was addressed. The delivery process was mapped and analyzed and no major shortcoming was identified. But when it came to interviewing and Gemba assessment, it was found that the problem was not caused by room service delivery but because staff lifts were frequently occupied by housekeeping team for transporting laundry.

This case showed that cause of process inefficiency can be caused outside the process being addressed. Additionally, the effectiveness of process mapping will diminish if the process improvement team is ambiguous on determining whether it is the core or secondary processes (i.e. variations from core processes to cater for exceptional and unique scenarios, transitional (interim) processes or supplementary processes) on which they should focus on.

Mistake #3:

Trying to create the "perfect" process maps (and forgetting why you're process mapping in the first place)

Improvement professionals and their business-side counterparts sometimes bury themselves in process mapping analysis and forget the goal of improvement (i.e. improving the business) and instead focus on building 'perfect' process maps. For instance, when business communities visualize how their processes are reflected on process maps, they are tempted to describe and explain it in a way which will make the processes 'join together and make logical sense'.

Mistake #4:

Weakness on cross-party responsibilities

As a format of presentation, process maps are never ideal when it comes to showing multiple responsibilities among different parties, especially when one of them plays a leadership role. For example, on a swim-lane diagram, a cross-team activity is usually indicated by a task which extends across several swim-lanes to the responsible parties; it, however, is difficult to display a leading party in a clear way graphically. Less experienced process analysts and improvement professionals may overlook the leadership dimension on the analysis.