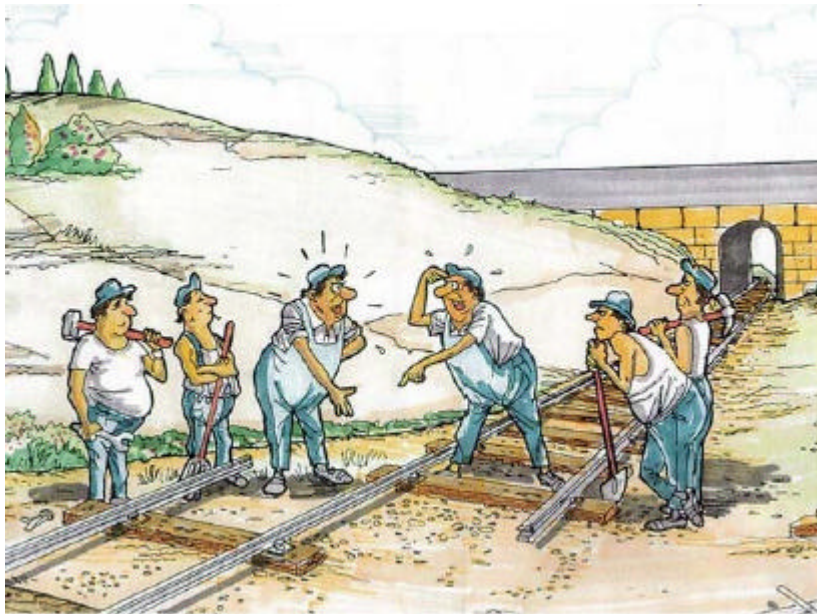


Project Processes

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When Development Projects Fail to Deliver Results, Re-examine the Most Neglected Project Element - Processes



Process is defined as the means of inducing change. “Processes” that do not result in desired changes are not processes, but merely empty activities and tasks.

Teams responsible for processes must brainstorm for the best solutions, based on the best cause-effect and baseline research information. Once the solution has been selected, the team must communicate the task to each other and single-mindedly implement it. Process Mapping is a useful tool to clearly understand what is involved in each process.



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1. Understanding Processes

Process is defined as the means of inducing change. “Processes” that do not result in desired changes are not processes, but merely empty activities and tasks. Processes are subject to the laws of expediency and efficiency. "Process Design" is therefore results-oriented design, which eliminates empty activities (process steps which do not contribute to results) and enhances those process steps, which do contribute.

A process is simply the way we do something – converting inputs to results with the help of resources, subject to certain constraints and rules.

A process can be fairly high level – **Improving Community Health**, or it can be at a lower level, focused on a specific activity – **Dealing with a slum dweller’s request for construction of a low cost toilet unit**.

We must remember that Projects are usually one-off designs, and the idea of Process Reengineering may not be appropriate, unless we are talking of a Development Programme which is open ended. If a similar project is designed again, the experience of the previous project will obviously be of great help, even though the design must be relevant to the current project period.


We are therefore talking of incremental redesign rather than radical redesign. Incremental redesign would follow cues from process monitoring exercises, which will be undertaken at regular intervals.

When a project is set up, project officials bring with them experience of various processes, as they were performed in other projects. These processes are not documented and are likely to remain unchanged regardless of the arrival of new technology, new project participant expectations and new work systems such as outsourcing and partnering.

Process mapping, which we shall deal with shortly, exposes those activities that may have once been relevant but are no longer adding value to the customer. This helps to redesign processes. If changes have been drastic, then process reengineering might be called for. Process mapping may also reveal unnecessary delays in transit between departments or functions, suggesting integration of processes under teams.

Where would Processes figure in a typical LFA Project Planning Matrix (PPM)? We would have a 6 x 4 matrix instead of the familiar 4 x 4 matrix as in the table below:

Narrative Summary of Objectives and Activities	Objectively Verifiable Indicators	Means of Verification	Important Assumptions and External Factors
1. Goal			
2. Purpose			
3. Project Output			
4. Processes			
5. Activities			
6. Task			

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1.1. Limitations of CPM/PERT to depict processes

The Critical Path Method (CPM) and its probabilistic version, PERT have serious shortcomings when it comes to depicting processes which could be made up of conditional activities or repetitive activities.

The CPM/PERT technique uses a timeline and goes from left to right. Arrows cannot be shown going backwards in time. For this reason, CPM/PERT cannot depict the flow of an activity, which has to pass a condition test. Similarly, it is not very convenient to depict for example, 6 training activities that have to be conducted in a year, although the Microsoft Project software has capabilities for assigning resources to activities and making task notes to describe processes.

The CPM/PERT holds its own in analyzing project activities/tasks and calculating project times and costs. It is however designed for the execution of large physical projects, and not for the analysis of processes.

1.2. The Nature of Processes

Processes are characterized by a series of connected steps or actions to achieve a result, which has a higher-level aim or purpose. Each Process has a definite start and end point. There are rules governing the standard or quality of inputs, and processes are usually linked to other processes.

Over time, processes could become inefficient, due to changes in customer demand, technology and/or the environment, and this tells us that we cannot blindly use processes used in previous projects for achieving similar outputs. Baseline research and cause-effect research should be carried out each time a project is undertaken to ensure that we are adopting the right process solution to achieve a Project Output.

Each new project must be seen as a new problem, which requires comprehensive solution. Process Solutions are the key to the overall solution, as they are at the lowest level of the problem space.

1.3. Ensuring Process Success


We saw in an earlier section that unless there is a high probability of success in the Project Outputs (or Processes), the Project Output cannot be achieved. This means that it is essential we have a tried and tested Process Solution, within the control of the project.

While it is understood that there are risks associated with external factors in the Project Goal and Project Purpose, we should have a high level of certainty about the achievement of Process results. If Risk is unacceptably high, the process is obviously unreliable and must be redesigned

1.4. Process Solutions

The cause-effect analysis that emerges from the Problem Tree converts to a means-ends analysis in the Objectives Tree, which presents a comprehensive solution to a problem. The various elements of the problem¹ are:

¹ Ackoff, R.L., *The Design of Social Research*, Chicago University Press, Chicago, 1961


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- ❖ There is an individual or group which faces the problem and experiences it in a unique way
- ❖ The individual or group (problem solver/s) must want to move from a problem situation to a new situation, which constitutes the objective(s) to be achieved
- ❖ There must be several ways (alternatives) of achieving the objective, offering the problem solver/s a choice of means
- ❖ The problem solver/s must select the most efficient solution to the problem, subject to various constraints such as available technology, know-how, cultural perspective etc.

Processes are at the lowest levels of the hierarchy of objectives. Processes can be simplified into activities and tasks, which represent the highest confidence of achievement. Activities and tasks are very much under the control of the project, even if the Project Goal and Project Purpose are less under project control, as they depend on external factors.

If the problem solver is doubtful about the achievement of activities and tasks, the project is very risky, and could result in the mere performance of activities, which do not lead anywhere.

Teams responsible for processes must brainstorm for the best solutions, based on the best cause-effect and baseline research information. Once the solution has been selected, the team must communicate the task to each other and single-mindedly implement it. Process Mapping is a useful tool to clearly understand what is involved in each process.

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2. Process Mapping

Process Maps quickly communicate what the organisation does and how it delivers services? A Process Map details the key activities that make up each process and invariably points to the result, which can be expected from it.

There are two main types of Process maps:

- ❖ Process Flowcharts (Hierarchy)
 - Sequencing of Activities
 - Process Logic
- ❖ Process Definition Charts –
 - Inputs
 - Resources required
 - Outputs
 - controls and constraints that regulate the activity

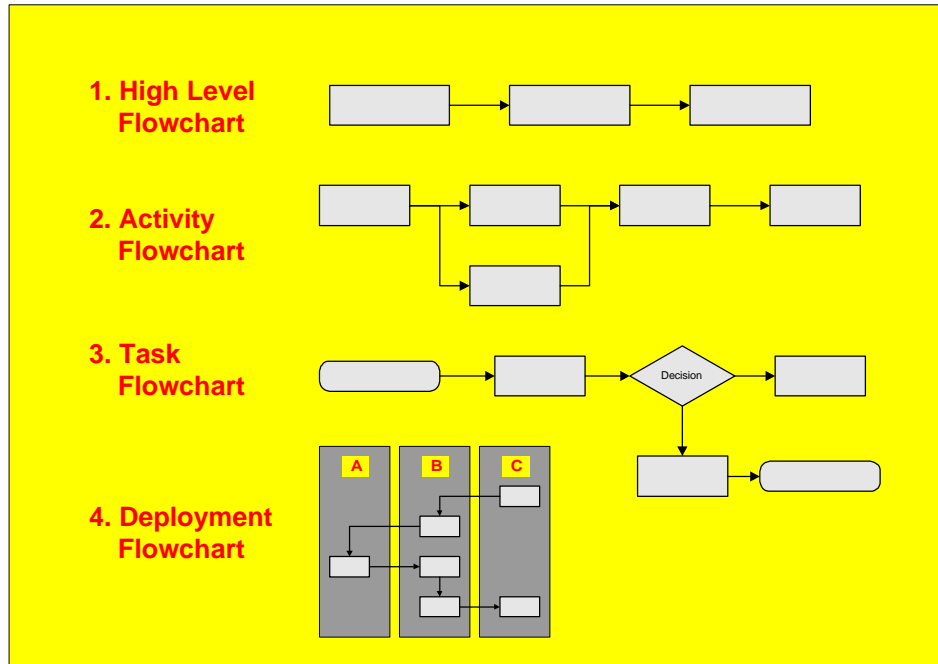
Process maps provide a structured approach, which can help avoid surprises and cascading chaos. It can ensure that Task Managers are clear about what they propose to do, and clearly shows the interrelated processes, activities and tasks must be successfully executed if the Project Output is to be delivered as promised.

It is most important for Project Managers and staff to understand where their work fits into the larger picture, with roles and responsibilities clearly defined and agreed. The integration of the activities of various individuals and teams helps teams to co-ordinate and direct their efforts.

The rule of Process Mapping is to begin with a chart that summarises the process with broad brush strokes, and then introduce charts with greater detail.

2.1. Process Flowcharts

Basically there are four types of Process Flowcharts as can be seen in the chart below:



We can see how the level of detail increases in the Activity Flowchart and Task Flowchart, while the Deployment Flowchart provides another kind of information.

Very often, even in what we may consider to be simple processes, the discipline of process mapping forces us to look at the fine detail and makes sure that all members of the team have the same understanding about the activities and tasks, their sequencing and resourcing.

Roles and responsibilities can be clearly agreed and defined, ensuring that all concerned in the process know who is responsible and accountable for what.

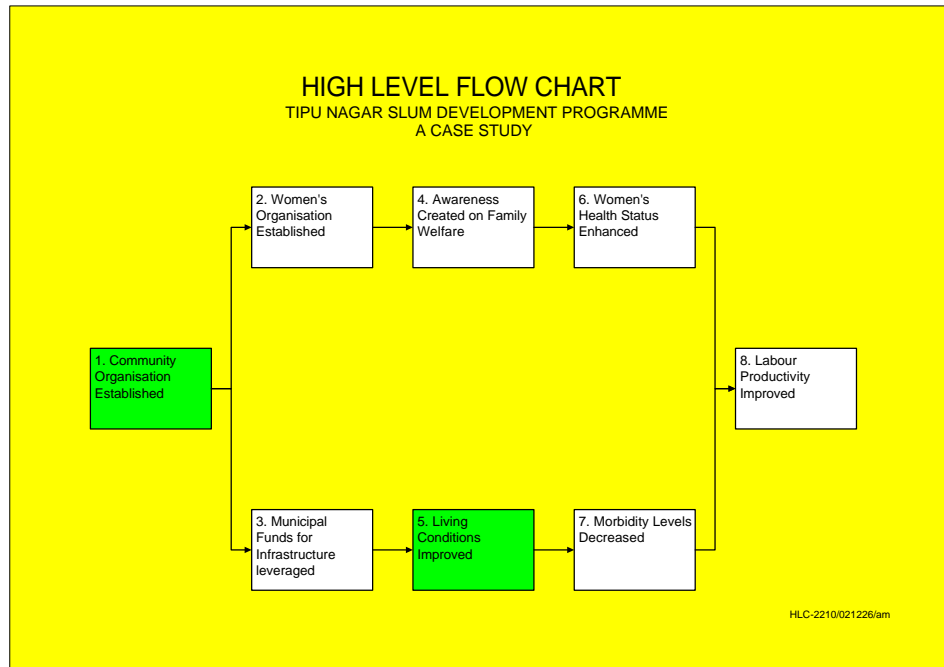
Process mapping helps to prevent gaps between departments and other organizations, which could inconvenience customers.

Arguably the most important benefit of process mapping is to clearly understand what results are expected from the process. By definition, all such results are intended to satisfy customer requirements. Process maps force us to understand and define such requirements.

2.1.1. High Level Flowchart - Rough Cut

A High Level Flowchart shows the main activities required to complete the whole process at a High Level. The activities are numbered to keep track of where we are as we develop the flowchart further.

The High Level Flowchart provides a summary or quick overview of what is involved in the process.



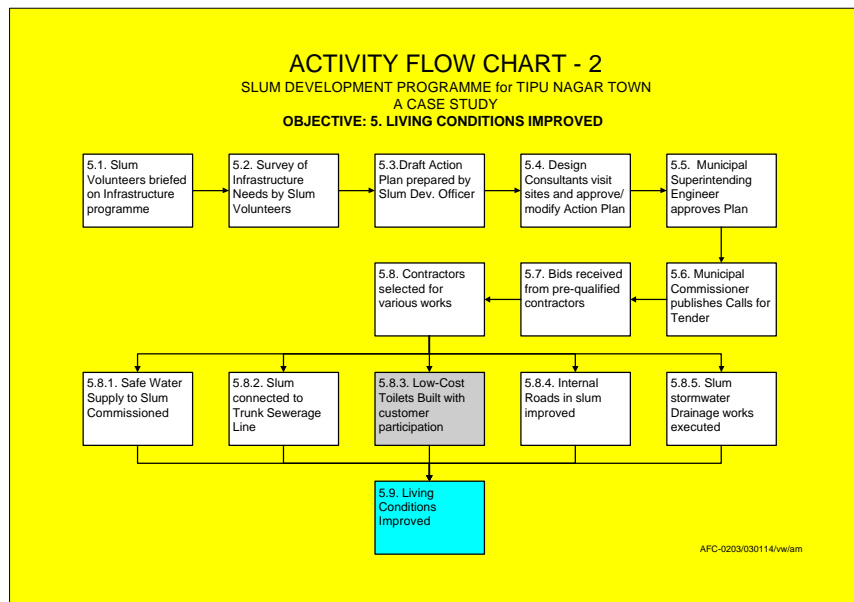
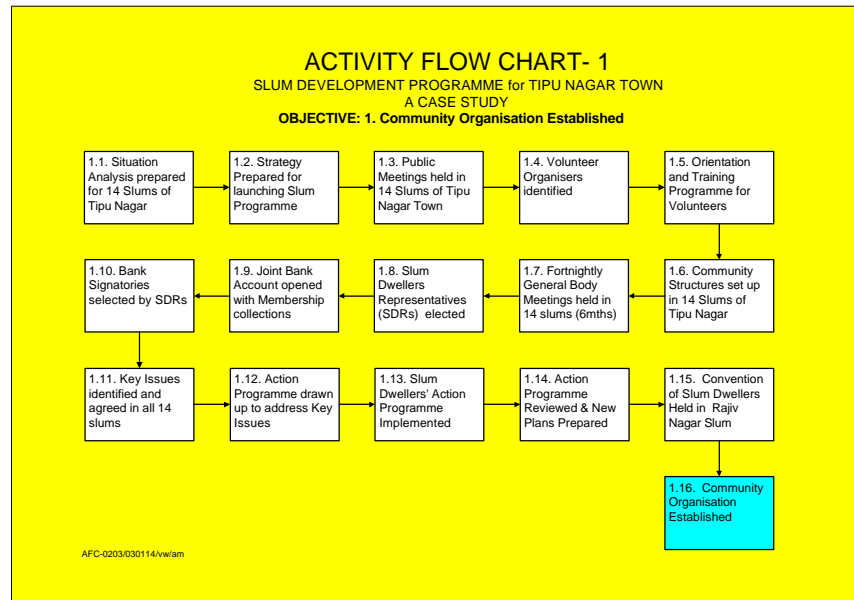
The High Level Flowchart is the first step in what is referred to as “Work Breakdown”, which requires a quick assessment of all the important things to do in a given situation.

Major donor agencies frequently call for a Technical Proposal, which is the applying agency’s opportunity to communicate their understanding of the important issues involved in the study or project.

A communication using a High Level Flowchart is free of clutter and communicates an entire project concept in a single chart.

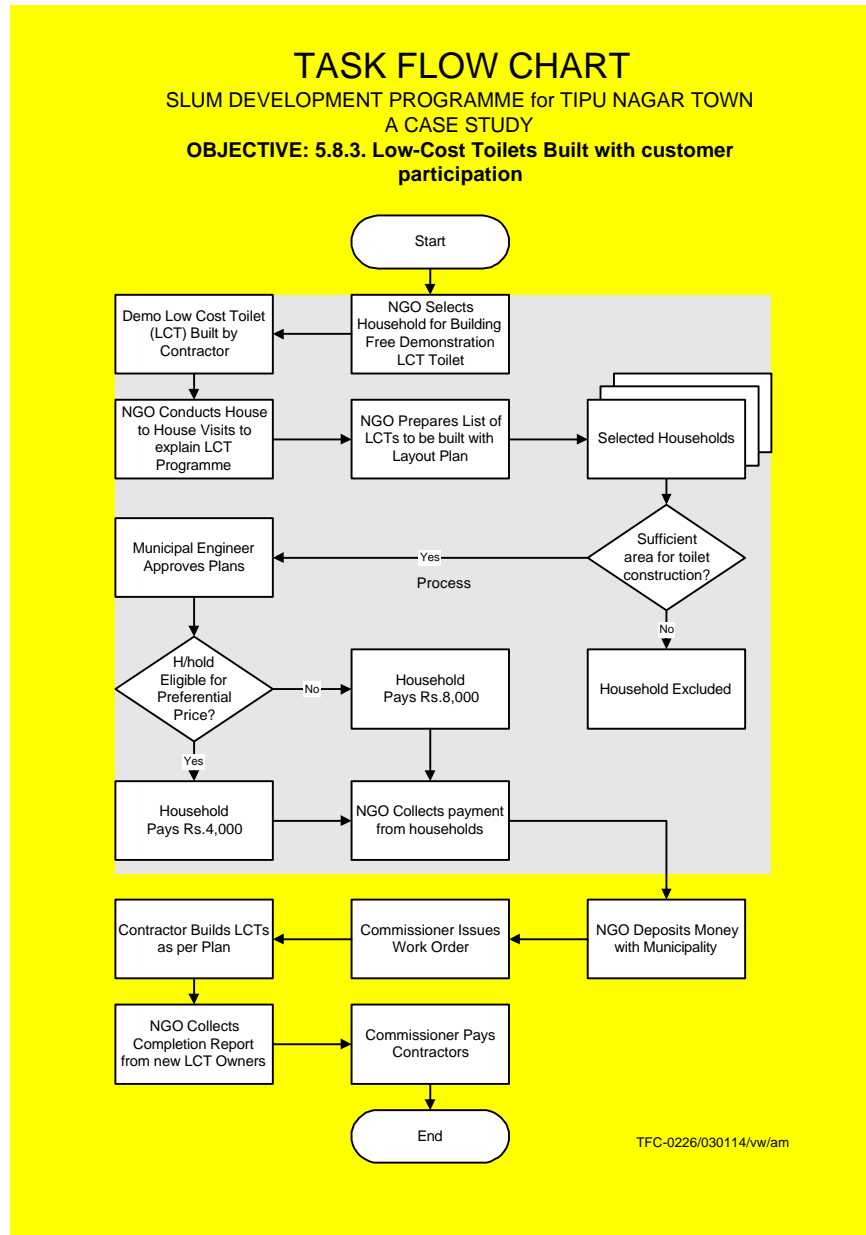
2.1.2. Activity Flowchart - More Detail

An Activity Flowchart takes an element out of a High Level Flowchart and details the activities that make up a Process or Sub-Process. Here again, each activity is numbered and is arranged sequentially.



2.1.3. Task Flowchart

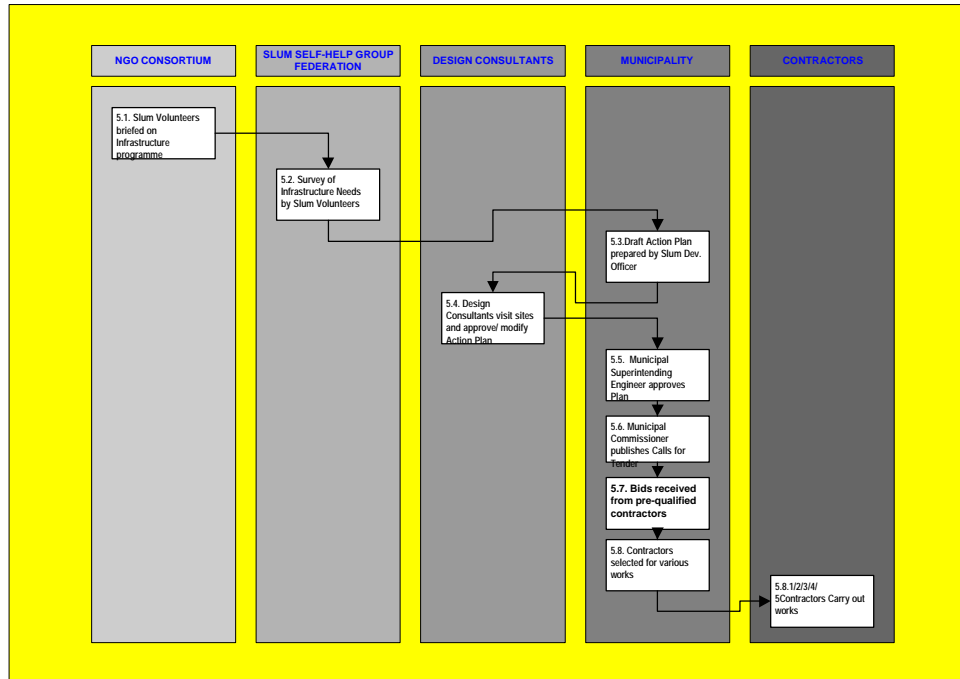
Task Flowcharts further detail an Activity from the Activity Flowchart, using Flowcharting Conventions to show the logic of the task



Task Flowcharts immediately show up problem areas in the process flow and provided we are prepared to question how we organize our work, it may be possible to introduce substantial improvements.

2.1.4. Process Deployment Charts

The Process Deployment Chart shows the process flow across various departments or teams.

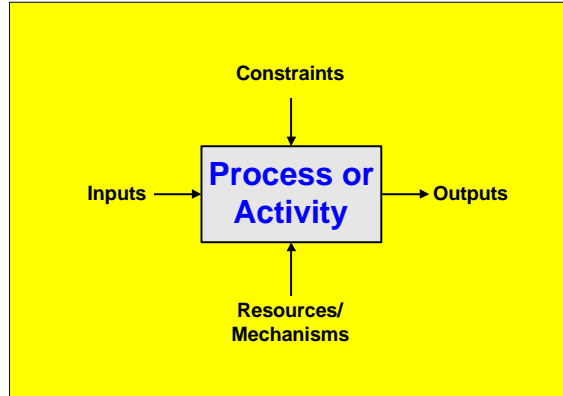


It is commonly thought that customers are external to an organisation. The deployment chart reminds us that customers could be internal as well. Such an orientation makes it possible to rearrange departmental interfaces, and even constitute teams which have complete responsibility for the delivery of the services and the success of the processes.

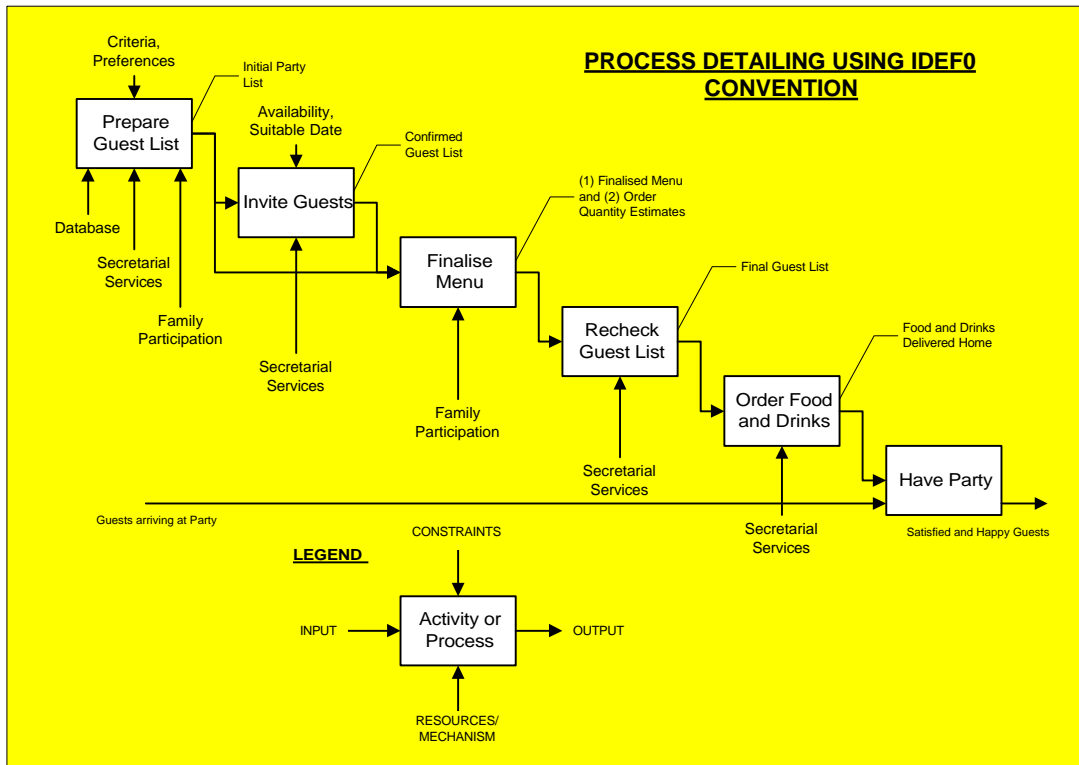
The Project Management Unit concept used by the World Bank and Asian Development Bank is a major step in the direction of bringing deployment of various departments and even organizations under a single line command.


2.2. Process Definition Chart - Fine Detail

A Process Definition Chart goes into detail so far not covered and include the inputs, constraints, and the resources required to achieve a result.



The following example illustrates how the Process Definition Chart explains what is involved in a process to organize a party.



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2.3. Reflections on Process Mapping

The Objective of Process Mapping is to improve performance, not to produce technical and visually sophisticated charts. Since an ideal flowchart will give the impression that the process is working well, first efforts at Process Mapping should produce an “As-is” flowchart, which will help us analyse the process and suggest improvements.

At a simple level, the purpose of Process Mapping is to understand present performance levels. At a more complex level, a collection of process maps, which is called a Process Atlas would be a complete documentation of the project processes, using IDEF0 (Integrated DEFinition for Function Modelling)

There are no hard and fast rules about the definitions of Processes, Sub-Processes, Activities, Tasks and the Number of Maps required. These are to be decided by Process Teams on a case-to-case basis.

It has been said, “Plans are nothing, Planning is Everything”. Process Maps are a way of concentrating the attention of the Process Team around a depiction of their work and creates the required accountability.

2.4. About IDEF0

IDEF0 (Integrated DEFinition for Function Modelling) is a universally accepted documentation system, based on SADT (Structured Analysis Design Technique invented by Douglas T.Ross, first used in USAF 1973 AFCAM Project).

IDEF0 is based on work originally done for the USAF under the ICAM Program in the 70’s. IDEF1X was developed by Hughes Aircraft under ICAM in the 80’s and IDEF was formally endorsed by DoD in 1993 and became FIPS Standard².

3. When there is no Process Solution

Sometimes we encounter NEW situations where we have no Process Solutions and we have to cope with IGNORANCE. These are essentially learning situations where we have to discover the cause-effect relationships and evolve a Process Solution.


What does learning involve? Organisational Learning has been defined as "a group of people continually enhancing their capacity to create what they want to create³." Modern information systems enhance learning through capabilities in knowledge acquisition, information distribution, and information interpretation.

In order to have knowledge, one must first experience “Knowing”. Knowing is Effective Action. When someone acts effectively in a particular situation, we conclude it is because of something he/she knows⁴.

² Feldmann, Clarence G., The Practical Guide to Business Process Reengineering Using IDEF0, Dorset House, NY 1998

³ Senge 1990

⁴ Cavaleri, Steven A., and Fearon, David S., Managing in and Through the Knowledge Ecology, in Developing & Managing a Learning Organisation, Blackwell, 2002

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The Action-Learning Cycle spins in a continuous process:

- ❖ Theories of how things work
- ❖ Experiences that test the validity of ideas
- ❖ Observing and reflecting behaviours that are used to define meaning found in experiences
- ❖ Questioning and experimenting with new ideas

The Learning Organisation makes personal knowledge available to others, enhancing each person's ability, and thereby the organisation's capacity in order to create value for customers.

3.1. Managing Learning

How do organizations manage learning? The answer to this question depends on the worldview of the organization.

One worldview typically holds that management is a body of external facts while another holds that managing is a personal activity reflecting personal beliefs and external facts. The second approach asks how shared beliefs and values influence the meaning of experiences

These two widely differing positions have been called⁵:

- ❖ The Yoga of Objectivity and
- ❖ The Yoga of Participation

The Yoga of Objectivity takes a detached, rational view of situations, discounting the influence of subjective views in problem definition.

The Yoga of Participation on the other hand involves personal identification with work, identifying mentally and spiritually as part of a whole system. Often there is a willingness to be personally transformed by the process.

Organisational Learning is not a management technique. It is described as “the purposeful creation of shared meanings derived from the common experiences of people in organizations⁶.”


3.2. Criticisms of the LFA

One of the main criticisms of the Logical Framework Approach (LFA) is that it is a Blueprint Approach borrowed from Engineering Technology, not suited for development projects. It is argued that the Social Sciences are inexact unlike Physical, Chemical, Natural Sciences and that humans are not predictable like machines.

Critics point out that the “objective approach” of LFA requires that a problem must first be defined, after which it can be optimised if not solved. This approach, deeply rooted in Western cultural assumptions is considered to be an articulation of the “Positivist Paradigm”.

⁵ Skolimowsky, Henry, The methodology of participation and its consequences, Institute for Social Research, University of Michigan

⁶ Cavelari and Fearon 2002

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3.2.1. *The Positivist Paradigm*

The positivist paradigm believes that there is an objective reality “out there”, the knowledge of which can be acquired from “sense data” that can be directly experienced and verified between independent observers.

This approach requires empirical testing, based on inductive and deductive hypotheses, for which measurement is a central preoccupation.

The Positivist Paradigm is a belief about science and scientific knowledge that emerged towards the end of the Age of Enlightenment. Basically, it holds that

- ❖ the only acceptable knowledge is certain knowledge - any knowledge claims which are less than certain are to be rejected, and
- ❖ the only domain for achieving certain knowledge is the domain of natural science. Natural science, with its mixture of mathematics, empirical investigation into cause-effect relationships, and resulting theories (apparently) capable of prediction and control over nature, becomes the paradigm against which all other forms of knowledge must be measured.

The positivist approach has been internalized in most modern institutions and is perhaps ideally matched to hierarchical systems with top down management systems of objective setting and performance appraisals.

3.2.2. *The Anti-Positivist Paradigm*


Over the last half century, a completely different worldview has emerged in the social sciences, recognising that methods are required to understand multiple realities as opposed to the single reality approach of the positivist paradigm.

This worldview is “characterized by a belief in a socially constructed, subjectively-based reality, one that is influenced by culture and history. Nonetheless it still retains the ideals of researcher objectivity, and researcher as passive collector and expert interpreter of data⁷.”

The central tenet of “discourse ethics” proposed by Juergen Habermas is that in order for any norm to be considered valid, it must meet the condition that: "all affected can accept the consequences and side effects its general observance can be anticipated to have for the satisfaction of everyone's interests." This principle is quite straightforward: in order for us to recognize a claim as valid, everyone who could be affected by its adoption must freely accept it. We can see that “Participation Analysis” or “Stakeholder Analysis”, one of the key elements of LFA tries to incorporate this teaching of discourse ethics.

In practical terms, getting consensus from various stakeholders could be very difficult and consensus is reached between representatives of stakeholders.

⁷ O'Brien, Rory, An Overview of the Methodological Approach of Action Research

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3.3. Exploratory Studies

In situations where we have to function with relative ignorance, we need to adopt scientific learning approaches which are at the heart of research methodology.

In such cases, we do not have a hypothesis to begin with. Hypothesis generation using inductive research looks for patterns in data and develops hypotheses.

Once hypotheses are available, they can be tested with Deductive Research techniques. These involve setting up a hypothesis and testing with systematically collected data.

Some examples of experimental data used for testing hypotheses are:

- ❖ Randomised Two-Group Design
- ❖ Before-After Two-Group Design
- ❖ Factorial Design
- ❖ Repeated Measures Design