

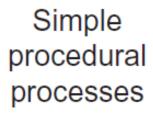
Simple and Complex Processes

Simple processes usually follow a consistent, well-defined sequence of steps with clearly defined rules.

Each step or task can be precisely defined and the sequence lacks branches or exceptions.

Simple and Complex Processes

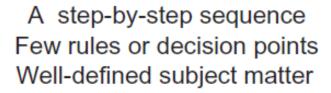
- More complex processes involve branches and exceptions, usually draw on many rules, and tend to be slightly less well defined, change often, and evolve as time passes.
- They require more initiative on the part of human performers.
- Really complex processes demand still more initiative and creativity on the part of human performers.
- Successful performance usually requires that the performer study an evolving body of knowledge to be prepared to perform the tasks required to create successful results



More complex processes

Very complex processes

(Case management)



A branching sequence
Many rules or decision points
A less well-defined subject
matter

Sequence defined by process Heuristics and guesses Evolving subject matter

Manufacturing line Retail sales Bookeeping Repair of equipment Field sales Process analysis New product development Software system design Consulting

Can be automated

Simple and Complex Processes

In the past workers were more likely to be engaged in the type of procedural tasks one still finds in production line manufacturing and in some clerical tasks.

Increasingly, however, today's workers are engaged in tasks that require more knowledge often referred to as knowledge workers.

For some this implies that the workers use computers to acquire or manipulate the information they need to do their jobs.

but for others it simply refers to the fact that the workers perform in more complex processes

Business Process Problems

Formally, a problem is the difference between what exists now and what we desire.

We can use the Gap Model to represent what the problem is.

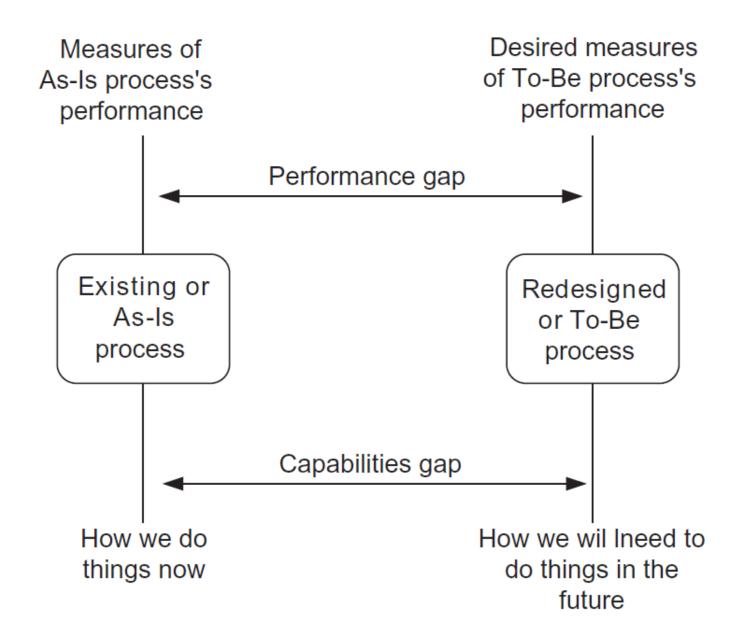
We represent the gap model with:

Two boxes: the left box is labelled the existing or As-Is process. The right box is labelled the redesigned or To-Be process.

We describe the performance gap and the capabilities gap.

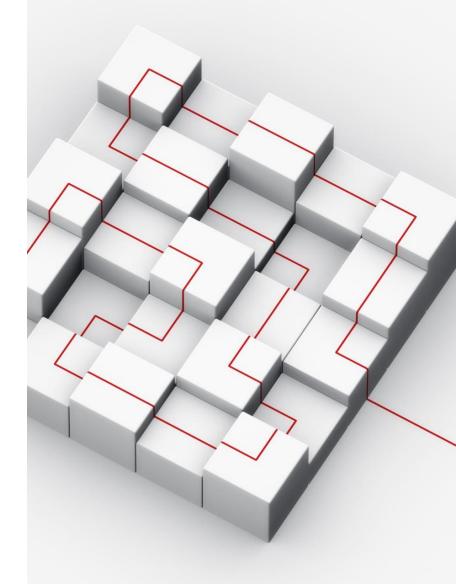
We refer to descriptions of the difference between how things are done now and how they could or should be performed in the redesigned process as the capabilities gap

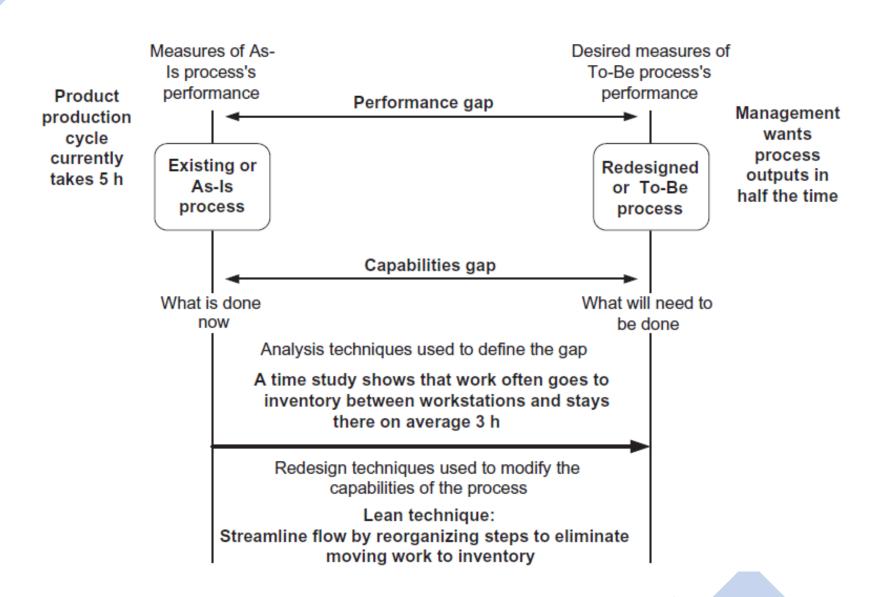
The gap model



The gap model

- The Gap Model provides a framework for thinking about the kinds of analytic techniques we might want to use to define the problem
- We can even suggest the redesign techniques we might use to resolve the problem.
- The nature of the capability gap often suggests the project approach, analysis data to gather, and the process redesign or improvement techniques that will be most useful.





Problem scoping process

- Need to work up a good overview of the existing or As-Is process
 - Most teams begin by asking management about the nature of the process. What is it called, for example?
 - It is usually best to define a process with a verb-noun phrase
 - For example: call a process "deliver pizzas" instead of "pizza delivery"
- Acquire more information
 - At a minimum define the inputs that trigger the process and the outputs that signal that the process has successfully concluded
- Define the major substeps in the overall process to show what is included in the process and what is excluded. The idea here is to have a rough but useful overview of the elements in the process, as it is currently understood.
- The process is shared with everyone involved in the project, and management is asked: Does this describe the process we are to improve?

Problem scoping process

- Determine what management thinks the problem is and then proceed to gather more information to determine if their understanding is probably correct, or if it will make sense for us to suggest changing the scope of the project in some way.
- Once there is an initial description of the problem, then talk with people involved in the process to refine the understanding of the process and to identify likely problems.
- The aim of the above exercise is to refine the initial understanding of the measures of the As-Is process, of the actual inputs, steps, and outputs of the process, the causes of whatever specific problem that management has asked us to eliminate, and of any other problems that prevent the process from functioning as well as it might.

Problem scoping process

As you gather information from senior management about the process to be changed you should also be developing a list of all the stakeholders who have an interest in the process.

Stakeholders will include customers, suppliers, managers, employees, and anyone managing a process that interacts with the process you are going to try to change.

During the analysis phase of the project you will want to interview all the stakeholders (or at least representatives) to ensure that you understand how they view the process and its problems.

Refining an Initial Process Description

Create a process scope diagram. Later, once you understand the problem better and as you begin to refine the analysis of the problem, you can move to a process flow diagram.

In essence, a process scope diagram helps you analyze the relationship between a given process and its environment.

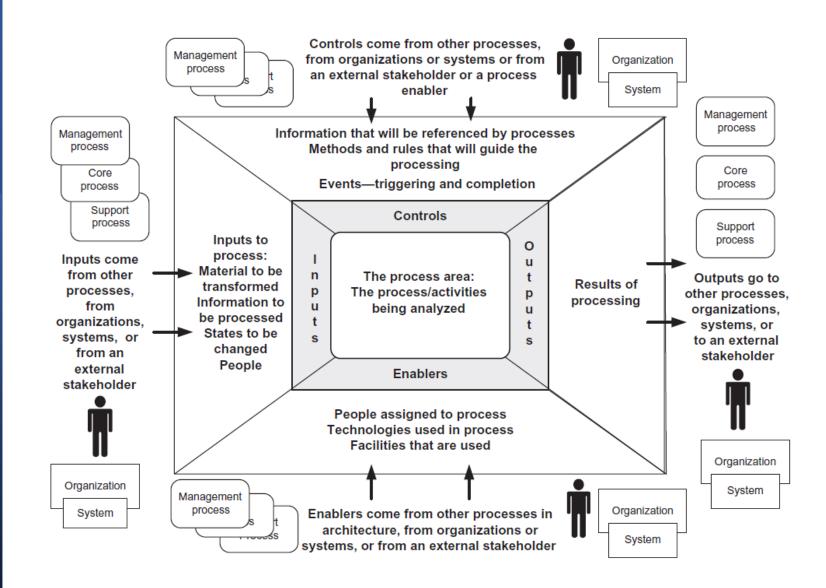
A process flow diagram, on the other hand, looks primarily at the internal workings of a given process.

When you are just starting to try to figure out what might be wrong with a process a scope diagram is much more powerful than a flow diagram.

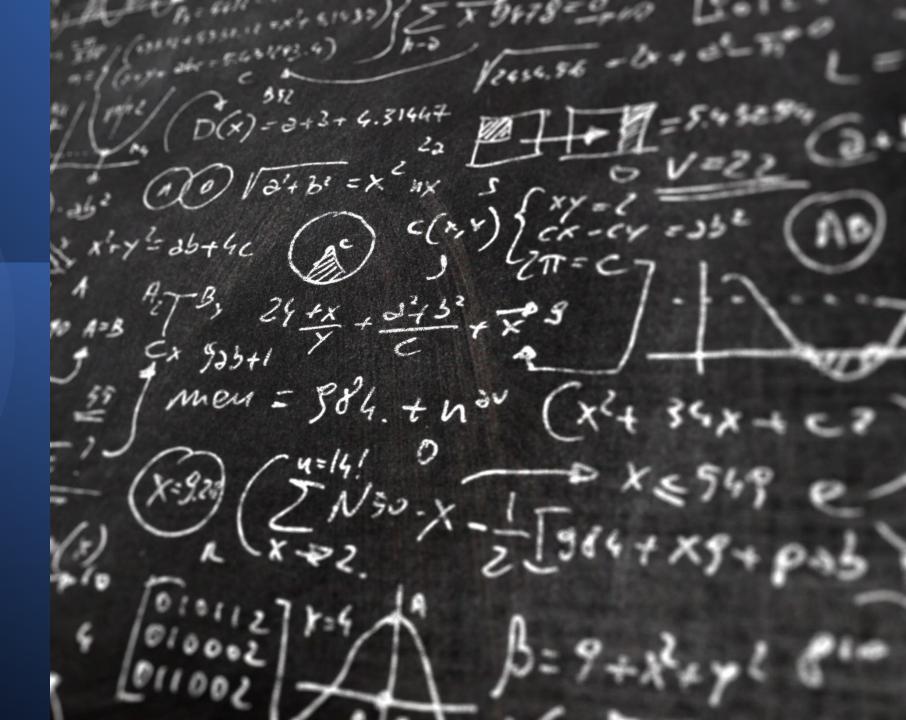
Elements of a process scope diagram

- The basic ideas behind the process scope diagram originated with the structured software analysis modelling technique, called Integrated Definition (IDEF) language, which was originally developed by the US Air Force and which proved popular with computer-assisted software engineering tool vendors in the late 1980s. It is also referred to as IGOE (inputs, guides (controls), outputs, and enablers) diagram.
- Controls can be individuals, organizations, systems, documents, or processes that manage, constrain, or control the activities of the processes in the process area.
- Inputs are consumed by the processes, modified, and turned into outputs.
- The controls and the enabling "inputs," on the other hand, are reusable resources that are used over and over again.
- In essence, the process scope diagram reminds us of the types of problems we might encounter in analyzing any process

Elements of a process scope diagram



Types of process problems



Output Problems

- Output problems result when the "customer" of the process is not getting what is expected.
- It is possible the outputs are unrealistic or unnecessary and should be changed, but, as things stand, if the quality, quantity, or timeliness of the outputs of the process-in-scope are not satisfying your customers you have problems.
- Keep in mind that "customers" can be other processes.
- Similarly, there can be other stakeholders who have an interest in the outputs of a process. Thus, for example, local government regulators might be interested in outputs that do not meet local foodservice laws.
- Outputs can take different forms, including physical entities, information or data, or decisions/approvals

Quality of Output

Output is rejected by a quality control process downstream (number, ratio of rejects).

The downstream process refuses to accept output from the process-in-scope.

Output is returned (ratio of returns to output).

Quantity of Output

The process does not produce the number of outputs required.

The process cannot scale down quickly when a decreased number of outputs are required.

The process cannot scale up quickly when an increased number of outputs are required.

Timeliness of Output

• Some or all of the needed outputs are not produced when required.

Input Problems

This type of problem results because the "suppliers" of the process-in-scope are not producing what is needed by the process-in-scope

Suppliers can include companies, individuals, or other processes, and "inputs" can include things, information, money, or even temporary employees.

As with output, inputs to the process-in-scope can be deficient in quality, quantity, or timeliness.

Similarly, inputs can take different forms, including physical entities, information or data, or decisions/approvals.

Quality of Inputs

Inputs are rejected because they do not meet the quality standards of the process-inscope.

Inputs must be returned to an upstream process or supplier (ratio of returns to input).

Quantity of Input

The supplier does not produce the number of inputs required.

The supplier cannot scale down quickly when a decreased number of inputs are required.

The supplier cannot scale up quickly when an increased number of inputs are required.

Timeliness of Inputs

Some or all of the needed inputs do not arrive when needed.

Inputs arrive in batches and must be stored till needed.

Controls define or constrain how a process is performed.

Problems with Controls

In most cases, controls are created by higher-level management processes and then released to the managers and employees of the process-in-scope



Process-in-Scope Not Aligned to Organization or Value Chain Strategy

Problems with Policies or Business Rules

Problems with Documentation, Manuals, etc.

Problems with External Management Processes

Problems With Enablers

- Problems with enabling or support processes arise when those processes fail to provide or maintain the resources needed by the process-in-scope
- Support processes and problems can be divided into three or four broad categories:
- Employee Problems:
 - The process-in-scope is understaffed. HR cannot find or hire enough employees to adequately staff it.
 - The jobs or roles defined for employees assigned to the process do not match the needs/requirements of the process-in-scope.
 - Employees lack the skills needed to perform the work required to accomplish the process-in-scope.
 - Etc....

Problems With Enablers

• IT Problems:

- IT applications require inputs or generate outputs that are out of sync with
- the actual flow and activities of the process-in-scope.
- Required or generated data are out of sync with the actual flow and activities of the process-in-scope.
- IT applications or tools require inputs or make outputs that are hard or impossible to interpret, and thus inadequate user interfaces lead to inefficiencies or errors.

Problems With Enablers

- Facilities, Equipment, and Location Problems:
 - Resources or tools required by the process-in-scope are unavailable when they are needed.
 - The facilities are inadequate.
 - The equipment is inadequate.
 - The process-in-scope is geographically distributed, and this causes inefficiencies.

Problems With Enablers

- Accounting and Bookkeeping Problems:
 - Bookkeeping requirements impose heavy burdens on the process-in-scope.
 - Accounting information needed for decisions in the process-in-scope is not available or is not available in the form needed for the decisions.

Creating a Business Case for a Process Change Project

- 1. Define the As-Is process (what is in and out of scope).
- 2. Determine what the As-Is process is or is not doing now (concrete measures).
- 3. Define what the To-Be process should or should not do when it is completed (the goal of the project).
- 4. Consider the means you will use to bridge the capability gap.
- 5. Then consider what bridging the gap will cost in terms of time, cost, and effort.
- 6. Finally, consider the risks and the "politics" and revise if needed.

Creating a **Business** Case for a Process Change **Project**

• Some guidelines:

- Keep it simple.
- State clearly: What is the problem?
- What process do we want to change?
- Why do we want to change it?
- Describe measures of the current situation.
- What is the objective or goal of the project?
- What would the new process be like?
- What measures would we expect of the new process?
- What is involved in creating the new process?
- Analysis and design
- Implementation
- Rollout
- What resources, time, and cost will be required to solve this problem?