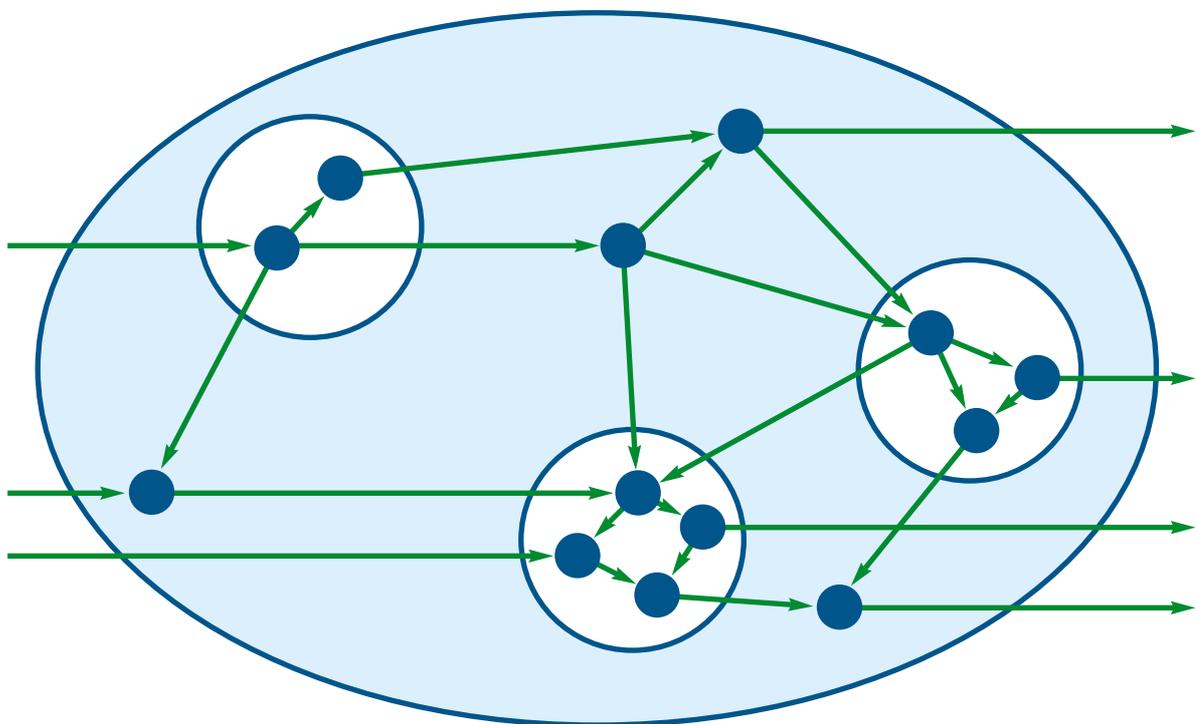


# Process Understanding & Improvement

## Introduction

Processes are the fundamental building blocks of all organisations, and both process understanding and process improvement form the lifeblood of total quality organisations. Processes transform inputs, which can include actions, methods and operations, into outputs. They are the steps by which we add value, and it should be the aim of customer focused, total quality organisations, for these outputs to satisfy or exceed the needs and expectations of their customers.

Everything we do is a process, whether it is documented or not, and in each area or function of an organisation there are many processes taking place. These processes interact with other processes throughout an organisation, as outputs from one process form the inputs to another. As shown in the diagram below, each process is therefore part of a larger process and organisations large and small can be seen as complex networks of interconnecting processes, the highest level being the organisation itself.



Whereas the outputs of an organisation go to its "external customers", the outputs of internal processes of the organisation go to "internal customers". If the needs and expectations of each internal and external customer are consistently met or exceeded, then it can be said that it is "total quality".

## The key roles of process management

Effective process management requires 4 key roles:

- The process sponsor
- The process owner
- The process manager
- The process worker

**The Process Sponsor** is the person who provides direction and ensures that there is sufficient resource available to improve a process. He or she is normally at a senior level in an organisation.

**The Process Owner** usually sits outside the process, and is directly and personally accountable for the end-to-end process. He or she is the final arbiter for the process and should drive any process improvement initiatives and activities.

**The Process Manager** works inside the process and is responsible for discrete parts of it. He or she ensures day-to-day production performance, directly manages process workers and supplier relationships and provides the process owner with metrics, reports and improvement ideas.

**The Process Worker** works inside the process with responsibility for specific delivery to agreed standards. He or she may manage small teams of less experienced workers and provide the process manager with metrics, reports and improvement ideas.

## The elements of a process

There are many elements to a process and it helps if these can be defined to aid clarity around the process, so that a common understanding may be obtained. The elements that are defined are the process':

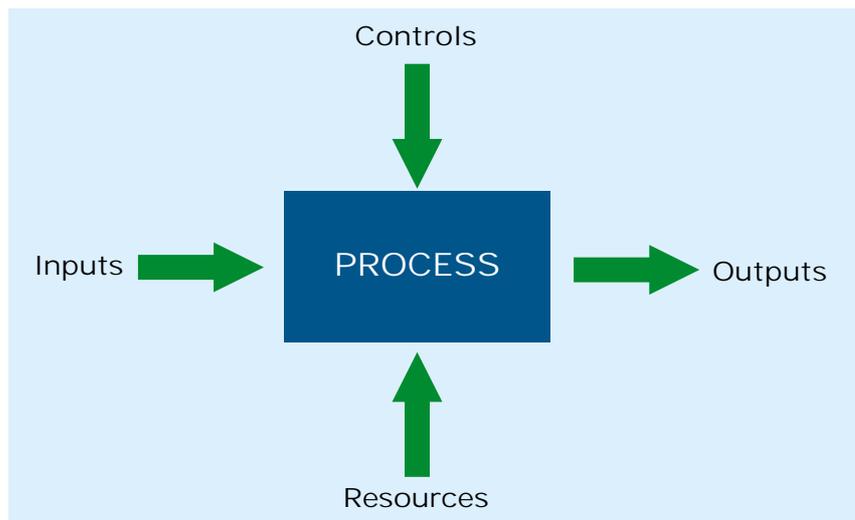
- Title
- Purpose
- Scope
- Inputs
- Outputs
- Controls
- Resources

The **Process Title** should be simple and comprise a verb and a noun, *e.g.* design new product.

The **Process Purpose** should always begin with "Is to...", *e.g.* Is to bring a new product to market based on the latest innovative thinking, within an agreed timescale.

The **Process Scope** defines precisely where the process starts and ends, and what is specifically included and explicitly excluded, *e.g.* the process starts with writing a project plan and ends when the customer accepts the final product; all manufacturing is included, but all packaging design is excluded.

The **Inputs** of a process are the things that are transformed by the process into the end product or service required by the customer of the process. Inputs can be tangible, e.g, written data, or intangible, e.g, verbal requests.



The **Outputs** of a process can be products or services and should conform to the specifications agreed in advance with the recipient, *i.e.*, with the customer, internal or external. Outputs can also be tangible, e.g, product, or intangible, e.g, advice.

Process **Controls** may be imposed either externally or internally, e.g, customer specifications, legislative requirements and copyright laws are all externally imposed, whereas internal quality checks and organisational procedures are derived from within the organisation.

Process **Resources** are all the things that a process must routinely have to be able to convert the inputs into outputs. Resources may be tangible, e.g, people, a PC, software, or intangible, e.g, skills and experience.

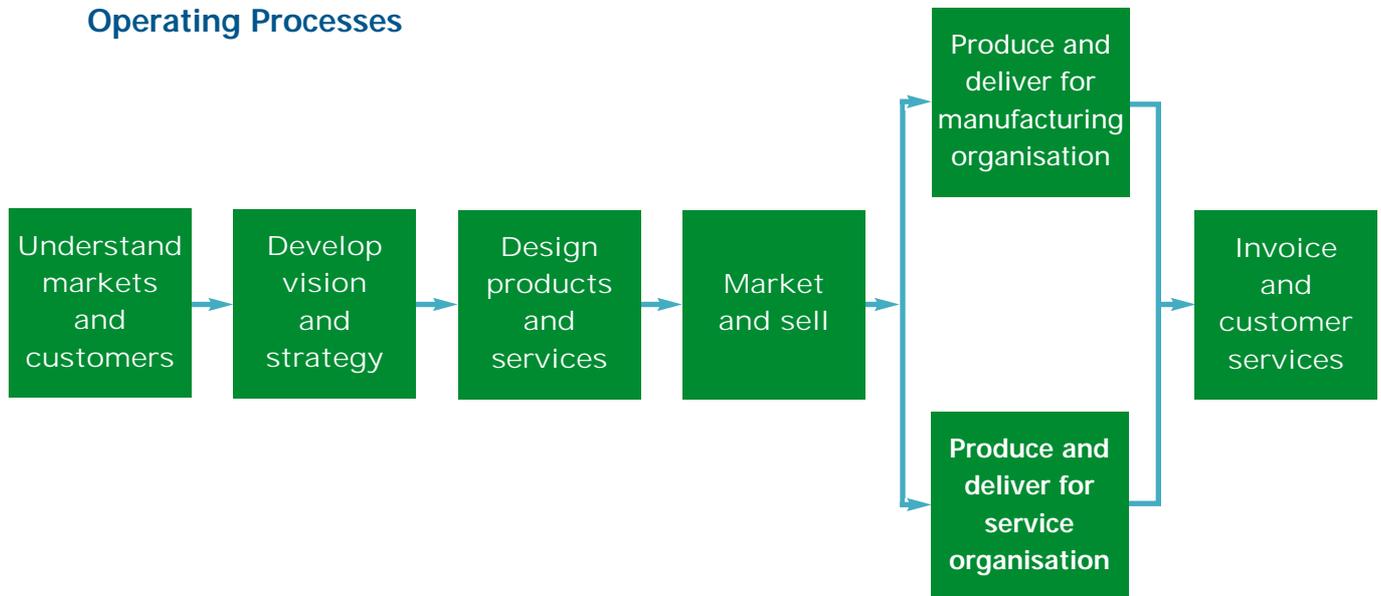
## Process Classification Framework

A key activity when managing processes is the identification of the processes in the first place.

The Process Classification Framework was developed by the American Productivity and Quality Center (APQC) International Benchmarking Clearinghouse, with help from several international organisations, in close partnership with Arthur Andersen & Co. Its purpose is to help organisations identify their processes and provide a common framework to facilitate inter-company learning, and reach out across functional and industry boundaries to communicate and share information.

It supplies a high level generic view of business processes often found in multiple industries and sectors, e.g, manufacturing and service companies, healthcare, government, education and others. It represents major processes and sub-processes, rather than functions, through its structure and vocabulary. It does not list all the processes within any specific organisation, nor is every process listed in the framework present in every organisation.

## Operating Processes



## Management & Support Processes



Each of the 13 key processes represented in the above schematic have been sub-divided into several sub-processes and sub-divided again into simpler processes in the full Process Classification Framework document; however, it is beyond the scope of this site to include the full version.

## Six steps for process improvement

The opportunity for improvement to either operating or management processes can often be vast, but must be focused. It is imperative that the number of process improvement activities undertaken by an organisation is matched by the organisation's ability to fund the activity and implement the changes without harmful disruption to day-to-day delivery of its products and services. Initiative overload and fatigue is a common syndrome, and is ultimately counter-productive.

To ensure you do not fall into this trap, use the six step methodology for process improvement as detailed on the following pages.

### The six steps are:

- Process selection
- Process understanding
- Process performance
- Process review
- Process change
- Capturing the change

The objective of **Process Selection** is to select a small and achievable number of processes, most directly influencing the achievement of the organisation's goals and objectives, upon which to undertake process improvement activity. This can take anywhere from a few hours to weeks, be either proactive, e.g, management initiative, or reactive, e.g, customer complaint, and involve one or several people.

The Process Classification Framework, described above, is an aid in this area.

The outcomes of the **Process Selection** step should be an agreed number of processes to be reviewed, management approval to dedicate resource to the work and agreed objectives for the work.

Next, comes **Process Understanding**, covering the scope of the process – where it starts and ends, what is included and excluded. In addition, the key sub-processes and accountabilities of the process to the organisation must be understood. These can be achieved by completing the elements of a process - title, purpose, scope, inputs, outputs, controls and resources, and using tools such as process mapping, decomposition and flowcharting, covered later in this section.

The outcomes of **Process Understanding** are a high level process map, sub-process maps, a list of key accountabilities and lists of the major inputs, outputs, controls and resources acting upon the processes and sub-processes.

**Process Performance** involves recording and detailing the historical performance of the process, obtaining perceptual views of both current and historical performance from customers and suppliers, defining the agreed required performance of the future improved process, and agreeing how it will be measured, monitored and reviewed. Data must be gathered and analysed – this can be accomplished via several means, including observation, counting, workshops, interviews, focus groups and questionnaires, to name a few.

The outcomes of **Process Performance** are an understanding of the key metric data, the underlying capability of the process and customers', suppliers' and staff requirements for the future improved process.

In **Process Review**, the data and information that has been collected and analysed is reviewed and recommendations made for the improved process. Several tools, such as Cause and Effect, Pareto and Force Field Analysis can be used in this step, and are covered in the Tools section.

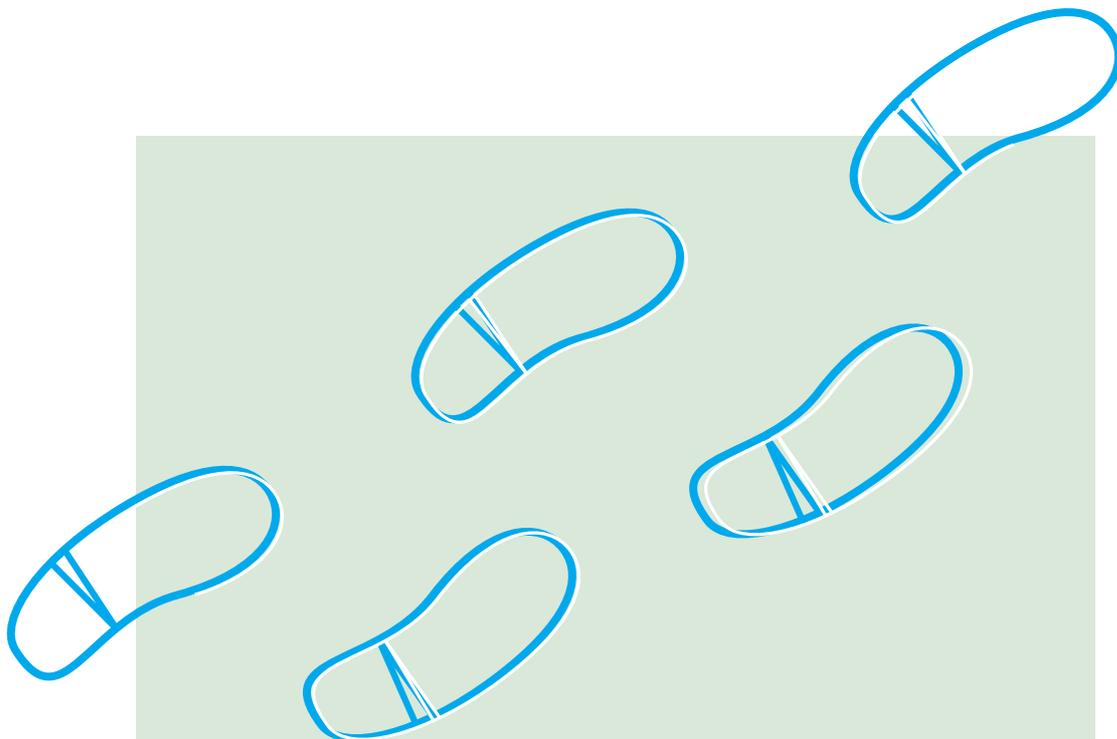
The outcomes of **Process Review** include the identification of either continuous improvement activity and/or a process re-design project, plus the identification of any tactical "quick wins". The business benefits and timescales for realising these must also be identified, together with process improvement resource allocation, performance metrics and a monitoring and reporting mechanism.

**Process Change** translates the prioritised process improvement mandates into an integrated programme of continuous improvement or process re-design activity. Detailed project plans with milestones, objectives, performance measures and targets, benefits, roles and deliverables must be developed, as well as a plan to manage the change and train all necessary personnel in the new process.

Once the previous five steps have been implemented it is essential that the improvements that have been achieved are sustained.

In the final **Capturing the Change** step, the process improvements are integrated into the business management system, ensuring the change is reviewed, managed and built upon. Procedures should be written for the improved process, the changes, improvements and benefits communicated to all stakeholders, any training conducted, and the process and procedures regularly audited.

The six steps are sometimes referred to as a "footprint" – each print forms a path, that if followed, will lead you to the required destination.



## Process re-design and business transformation

So far this section has discussed process improvement, which is a continuous activity within an organisation that is serious about quality. However, another concept was introduced in 1990 - business process re-design or re-engineering (BPR). It refers to the radical change to a business process and the aim of BPR is to make discontinuous, major improvements. This invariably means organisational change and the extent of that change depends upon the scope of the process being re-designed.

Definitions of the concept include:

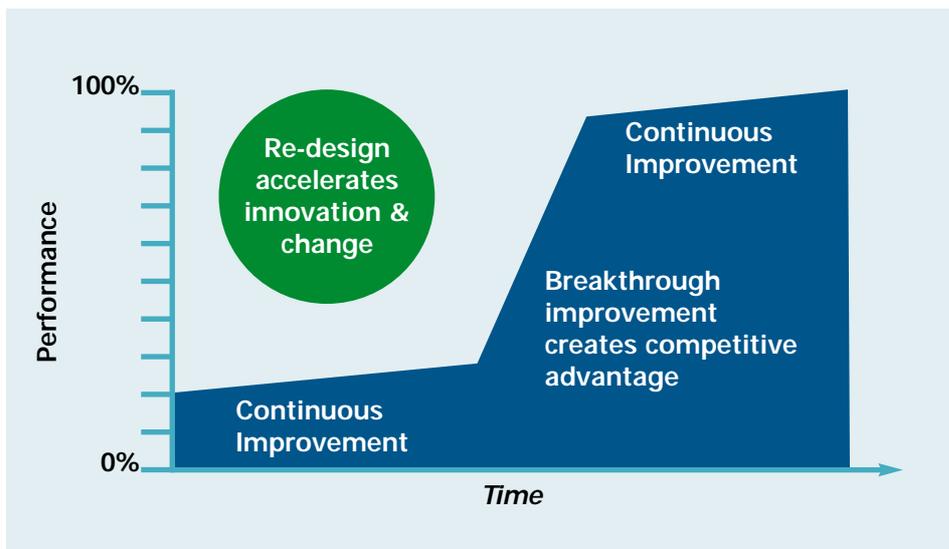
***“The fundamental re-thinking and radical re-design of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed.”***

Hammer & Champy, 1993

***“To rethink, restructure and streamline the business structures, processes, methods of working, management systems and external relationships through which we create and deliver value.”***

Talwar, 1993

Many processes within organisations are very good and do not need re-designing, or not for a while at least. These processes should be subjected to a regime of continuous improvement as discussed earlier in this chapter. It is the poorly performing processes that need a radical review.



Re-thinking the process is central to BPR, and it is therefore essential to take an objective overview of the process to be re-designed. Whilst information about the current process needs to be obtained from people directly involved within it, it is essential that fresh thinking is employed and this requires the involvement of people who do not normally work within the process.

Because the degree of change in BPR is high, it is essential that ownership exists at the highest level in the organisation. BPR is therefore a top-down approach and takes the form of a project, typically having seven phases:

- Discover
- Establish the re-design team
- Analyse and document process(es)
- Innovate and rebuild
- Re-organise and re-train
- Measure performance
- Continuous re-design and improvement

In the **Discover** phase, a problem or unacceptable outcome is identified and the desired outcome determined. This can involve an assessment of the business need, and will definitely include determining the processes involved, including the scope, identifying process customers and their requirements, and establishing effectiveness measurements.

Critical to the success of the re-design is the make-up of the **Re-design Team**. Membership is dependent upon the scope of the process in question, but should include:

- Overall sponsor or champion (senior manager at a level above the scope of the process to resolve interdepartmental conflicts)
- Process owner
- Team leader
- Facilitator
- Team members based on their knowledge, skills and attitudes

The team should have between five and ten members, represent the scope of the process, only work on one re-design project at a time, and include internal and external people. Internal people are those from within the process and external people are from the wider organisation and outside the process, bringing objectivity to the project.

As with process improvement, it is necessary to document the process by mapping and/or flowcharting, and this is done in the **Analyse and Document Process** phase of the project. Seeing the "As Is" process provides a baseline from which to measure, analyse, test and re-design. This can also include collecting benchmarking information, and clarifying the root causes of problems, particularly those that cross departmental or functional lines.

In the **Innovate and Rebuild** phase, the new process re-design is established. The team must re-think and re-design the new process, again using process mapping. It is an iterative approach involving all stakeholders. Approval, by all, of the resulting action plan commits the organisation to implementing the changes.

Next the changes must be piloted and their effectiveness validated. There will be a need to **Re-organise and Re-train** for the new technology and roles needed for the successful implementation. BPR efforts can involve substantial investment in training and also considerable top management support and commitment.

It is necessary to develop appropriate metrics to **Measure the Performance** of the new process, sub-processes, activities and tasks. These must be meaningful in terms of the inputs and outputs of the process, and also in terms of the customers of and suppliers to the process.

The project approach to BPR implies a one-off activity. When the project is over, the team disbands and business returns to normal, albeit a radically different normal. However, in a rapidly changing, ever more competitive business environment, it is likely that organisations will re-engineer one process after another, and once a process has been re-designed, continuous improvement of the new process by the team of people working in the process should become the norm in a **Continuous Re-design and Improvement** culture across the entire organisation.

BPR operates on several levels, both operational and managerial, with processes being re-designed, then continuously improved.

However, on a more far-reaching level, there are re-designs of major cross-functional processes, that are also project based and involve cross-functional teams.

Larger projects still are the re-design of an organisation's core processes, which can involve wholesale organisational change or business transformation. At this level, there is the opportunity of aligning business processes with the long-term strategy of the organisation.