

Specifying, designing and developing processes, products and services: Part 1 of 2

Introduction

Processes are a fact of business life, yet many people find great difficulty in recognising a process, let alone in defining one. This may come as a surprise, in light of the “popularity” of business process re-engineering (BPR) in the 1990s and the growing emphasis on process management in areas such as business process outsourcing and automation, and in international management standards such as the ISO9000 series and the European Business Excellence Model.

Processes are how an organisation gets things done – how it implements its business strategy, how it makes and delivers its “products” and how it meets its objectives. Processes should be planned, and will require resources, skills and management. You cannot manage or improve how you operate until you understand what you are doing at present.

It can be difficult for those who are steeped in narrative procedures suddenly to change their thinking sufficiently radically to allow them to “see” their processes, and how they interact. Often they think of what their department does as a series of disjointed tasks, rather than identifying what initiates an action and how it is followed through to completion.

And products equally have to be designed and planned, and controlled so that they conform with specification and comply with relevant legislation.

A Manufactured Definition?

Quality is about meeting customer requirements and ensuring customer satisfaction. ISO9001:2000 specifies the requirements for a quality management system “*where an organization:*

- a) *needs to demonstrate its ability to consistently provide product that meets customer and applicable regulatory requirements, and*
- b) *aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements”.*

Unfortunately, the wording of the standard has been influenced by its manufacturing origins, which can make it difficult for service organisations and administrative functions to understand how to apply it to their business.

ISO9000:2000 sets out the meaning of words and phrases (Fundamentals and Vocabulary) used in the companion standards, so a “product” is the “*result of a set of interrelated or interacting activities which transforms inputs into outputs*”, and a “customer” is an “*organization or person that receives the result of a process*”. But a note in ISO9001:2000 states that the term “product” applies “*only to the product intended for, or required by, a customer*”.

What sometimes happens with a long-winded narrative procedure is that more words are added to “explain” something which is not clear, and the result is that the document loses its impact and consistency. Are there situations when terminology is better left undefined, or at least care is taken to avoid contradictions?

Might it perhaps be clearer to define:

product as “ <i>the output from an organisation</i> ”, and
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processes as “*the means by which the output is created*”?

The standard draws the following diagram of the relationship between an organisation and its customers / suppliers. Few are likely to find a problem with this explanation, but the standard also states that “*a customer can be internal or external to the organization*”, which seems to be at odds with the diagram.

Supplier → Organisation → Customer.

The Concept of Internal Customers & Suppliers

The concept of “internal” as well as external customers does give a useful reminder that individuals within the organisation rely on others’ performances, but the term “product” is used in relation to the “deliverable” supplied by the organisation to an outside party (an external customer) – which is perhaps the way most people think of it.

While the definitions above relate to an organisation and how it operates with external bodies, there can be benefit in applying the same thinking to an individual process by considering:

- a) who provides goods or services (in the widest sense of the terms, including (eg) “information”, “energy”, “premises”) for the process to function
- b) who receives output from the process.

This is one of the key elements of process management, and goes beyond mere process mapping. What influences how the process works, and who is affected by or relies on the process? What risks may apply, and what do you need to manage as a result?

It is also valuable for an internal department which never speaks to or sees a customer to realise that their actions within a supporting process may have an affect on the production and delivery processes. The fact that processes, and the people working in them, form a “chain” which connects the customer order with the delivery of the product is made more visible when processes are defined and the involvement of people is highlighted.

Types of product

Unfortunately, Notes in ISO9000:2000 which explain the term “product” are even less helpful:

There are four generic product categories, as follows:

- *services (e.g. transport);*
- *software (e.g. computer program, dictionary);*
- *hardware (e.g. engine mechanical part);*
- *processed materials (e.g. lubricant).*

No wonder people get confused! Literally, a “product” is “*something that is produced*”. The same term is normally used in relation to a wholesaler or reseller, who supplies “products” even though it did not “produce” them.

“Services” are different enough in concept (you cannot touch them, or put them in a box or on a shelf, and each “delivery” may vary slightly – sometimes with good reason) that there is a natural inclination to talk of “goods and services” to indicate that a “product” can be material or non-material. Another distinguishing factor is that the provision of a “service” does not result in a transfer of ownership.

Other related terms include:

Output: something which is “*put out*” (intentionally by something or somebody)

Outcome: something which “*comes out*” or “*happens*”, as a “*consequence*” or “*result*” of some event or action.

So the **output** from a process is the (intended) “deliverable” - generated by the activities that constitute the process, and in many cases defined by its objective(s). This could be:

- a goods delivery
- a new member of staff
- a detailed plan for the development of a new product
- a tender submission for a contract.

Other **outcomes** (“by-products”?) may be more difficult to recognise, and are often given less attention. Learning and increased knowledge will hopefully be an outcome for the people who are involved in a process – as they should be for the organisation, especially if it sees itself as a “learning organisation”.

But this will require a culture and approach to how you operate which looks at what you are doing, how you are doing it, how well you are doing it and what you are trying to achieve. In other words, you need to look critically at your processes, their efficiency, their resource requirements and their objectives.

Again because of the manufacturing mindset which often shapes the wording, “*products*” tend to be thought of as physical entities, and the words “*and services*” are often added, even though an earlier definition may have stated that “*wherever product is mentioned it includes services*”. “Although “goods” may sometimes be seen as a direct equivalent for “products”, the term “*goods and services*” may help to show that “product” can include not only physical entities but also such things as (the provision of) training and information.

For the sake of clarity, we shall use the terms in the following context, which hopefully will be intuitive to most readers whether they work in manufacturing, service industries, administration or the voluntary sector:

Product: “*goods or services which are produced or provided by an organisation for the benefit of another organisation or person.*”

Customer: “*an organization or person that receives a product from another organisation or person.*”

Supplier: “*an organization or person that provides a product to another organisation or person.*”

So payment is not necessary for the “customer” or “supplier” relationship (although payment is often involved, and this might be one of the characteristics which comes to mind first).

Who is the Customer for a Product?

Bearing in mind that one of the keys to staying in business is to satisfy customer requirements, it is essential to identify customer needs and expectations (as well as other requirements relating to the product and its delivery which must be met).

Given that a customer is “*an organization or person that receives a product from another organisation or person*”, you might be surprised that it can sometimes be a challenge to identify who is your “customer” and what is the “product” you are supplying to them.

To illustrate this, consider the position of a university. If you ask the staff whom they see as their “customer”, you may get suggestions such as “the student”, “the state” and even “our international marketing department” (who promote their courses around the world to attract revenue-earning registrations from fee-paying students).

It can be difficult to determine which one of these should be classed as the “customer” - and perhaps there is value in regarding each as a customer in its own way. Depending on the choice, however, the idea of a related “product” may change.

For example, is the organisation providing a service to the parents, who are often the source of significant funding to get their children through a course? Is their “product” a better educated young adult?

Does the state benefit from a better-qualified workforce? Does “our international marketing department” receive a portfolio of courses to promote?

Another example which raises the same sort of questions is a football club. Are the paying spectators the customers, or is it the television companies, or perhaps the club sponsors? Depending on which view you take, the customer requirements (and therefore how they are satisfied) will be different - and possibly contradictory.

In practice, the needs of all stakeholders should be considered, whether or not they are paying for the privilege.

A Matter of Scale

As an alternative to the “traditional” definition of a process (“*a set of interrelated or interacting activities which transforms inputs into outputs*”), it may help you to design, develop and manage your own processes if you consider it as a:

Process: “*set of related tasks triggered by an event and intended to achieve an objective. It uses resources and is subject to influences*”.

The “event” can be an action / a thought / a decision / a diary date - so a process can be reactive (responsive) or proactive. For example:

- “Responding to a Sales Enquiry”
- “Recruiting Staff”
- “Holding a Management Review Meeting”.

This definition works as well at the organisational level (“*running the business*”) as it does for an individual process. Clarity of the “mission” is essential to ensure that everyone within the organisation is working towards the same ends. Resources must be made available, whether physical, information or (competent) people.

It also avoids the risk that artificial “transformations” will be invented to fit the “traditional” definition, and that “inputs” such as “*methodologies*” and “*templates*” and even “*staff*” are allegedly “transformed”, when they will patently still exist (and be required) the next time the process is followed. Most people don’t go to work to “do transformations” – they have an objective to accomplish, or at least they will respond to events as they happen.

Types of process

Processes can be:

- continuous (as on a production line / in manufacturing)
- transactional (as in sales order processing).

This difference is also recognised in Six Sigma methodology (which again originated in manufacturing, and was then extended to service and administrative activities).

Two key differences between these types of process are that:

(i) you can’t always see “transactional” processes. You can see (and hear) the production line running from the time it starts up, but if you walk into an accounts office you are likely to see a number of “random” people working at computer keyboards or working with pieces of paper. “Transactional” processes tend to be “discontinuous”.

(ii) people involved in “transactional” processes often choose to do “bits” of different processes (and different instances of the same process) at different times. “Transactional” processes are also “selective” in the way they are sometimes progressed.

Some transactional processes commonly run alongside other instances of the same process (eg dealing with a number of sales enquiries) whilst others are performed maybe once a year (eg preparation of the annual business plan).

In all cases, however, factors which can influence successful performance (and a compliant “product”) must be identified and managed, and the effect that operations will have on the environment etc must also be anticipated. This is the essence of risk management.

And once processes are in place and operating, management must review and improve them on the basis of hard facts - whether or not a process needs to be defined in detail, suitable measures should be in place to allow management to assess if:

- i) the process is achieving its objectives
- ii) there are ways to reduce variation in the results of the process.

The “production” process

To ensure that the product (“goods” or “services”) which you deliver to your customer meets his requirements, it is essential that you understand what the customer / end user requires the product to do. You may be given a specification, but in many cases it is not easy to establish all the relevant information when the need is identified. The requirements may affect how you design and operate the relevant process(es) - in addition, you need to ensure that the product will not cause harm, meets applicable legislative requirements and that it can be produced efficiently.

And however good your product, and however efficient your process, the aim must always be to seek to improve – or risk losing business to the competition.

Sources

ISO9000:2000 Quality management systems - Fundamentals and vocabulary

ISO9001:2000 Quality management systems – Requirements

Rummler – Brache (Improving Performance – How to Manage the White Space on the Organisation Chart) (Jossey Bass 1995) (a practical guide to management systems and business process development)

This is one of four modules written in 2007-2008 by Peter Fraser of MandOS for the Chartered Quality Institute (CQI)'s Body of Quality Knowledge (BoQK). The BoQK (see www.thecqi.org/knowledge) is the framework that defines the current boundaries of knowledge of the quality profession in the UK. It acts as one of the foundations that defines the quality profession and provides the basis for regulation.

The categories of the BoQK are:

- Concepts of quality, its history and development
- Customers, suppliers, other stakeholders and markets
- Interactions of organisations and people
- Technologies and techniques
- Laws, standards, models, associations and professional bodies
- Corporate strategy.

The four modules are:

- **Specifying, Designing and Developing Processes, Products and Services**
- **Management Systems**
- **Elements of Corporate Strategy**
- **Evolution of Quality Thinking Post 1970**