

CONTEMPLATING THE PROCESS

Recent articles and letters on the subject of "processes" in the Institute of Quality Assurance's magazine "Quality World" highlight a serious problem. They confirm that there is a serious degree of misunderstanding of the concept of a "business process". If this is not addressed quickly, many organisations are going to waste a vast amount of time trying to implement ISO9001:2000 without the understanding and knowledge required.

"Processes" have not replaced "procedures" - processes have always existed because that is how day-to-day business operates. What has changed is the focus on the flow of work through and amongst departments rather than on what happens within a department. A procedure is merely a recorded description of how something (an activity or a process) is done. So a process definition is a procedure. Processes and procedures are not mutually exclusive.

Claiming that a piece of software is "ISO9001:2000 ready" is meaningless. Any decent word processing package is "ISO9001:2000 ready", as is a paper and pencil. What is patently not ready is the bulk of UK business, which lacks the knowledge (and the advice) to understand:

- what is a business process
- how to identify key processes
- how to (even begin to) define a process
- how to structure a management system
- what is the impact of external standards
 - where to start.

**The following article by Peter Fraser of MandOS
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What does the “process approach” required by ISO9001:2000 mean? What do you understand as a “process” and how many of them do you have in your organisation? How should you define them and how do they inter-relate? Peter Fraser of MandOS asks more questions and offers some answers.

Why is it so difficult for managers to understand the meanings of the terms "process" and "procedure"? They are basic tenets of ISO9001:2000, yet much of the advice and “best practice” examples on offer only serve to compound the problem. For example, the following statements have appeared in articles and referenced documents in QW this year:

“The revised ISO9001:2000 standard requires that all business processes ... be flowcharted.”

“The revised ISO standard includes Requirement 7.0 ... that is made up of four levels of processes and subprocesses.”

“Procedures are used to perform a task, whereas processes are used to achieve a result.”

“Processes are difficult to measure, whereas procedures are easily measurable.”

And why is “Management Responsibility” portrayed as a process in the ISO9001 model of a process-based Quality Management System?

FUNDAMENTAL MEANINGS

Some “operational definitions” are an essential first step.

A “**process**” is a sequence of related tasks which act on inputs to add value to create outputs. It uses resources and is subject to controls and influences. Formal and informal business processes have always existed because that is how day-to-day business operates. Nothing is achieved within an organisation which is not part of a process. Your processes already exist – all you need to do is to recognise and describe them!

On the other hand, a “**procedure**” is a recorded description of how something (an activity or a process) is done. So processes and procedures are not mutually exclusive - a process definition is just one type of a procedure. (For completeness, I would define a “**task**” as “*an activity within a process which is the responsibility of one person, performed at one time and in one place*”).

Managers who are steeped in narrative procedures often think of their department’s operations as a series of disjointed tasks, rather than identifying what initiates an action and how it is followed through to completion. So they may have a contract review ‘procedure’ and a purchasing ‘procedure’. But confirming that you can do the job is only one step within the process of tendering for work, and your purchasing and receipt process is not logically complete until the goods or services have been received and checked.

A simple definition of a “**system**” is “*a set of related processes with an overall aim or objective*”. For a variety of practical reasons, each constituent process may contain or be divided into sub-processes. So there is a clear hierarchy down to the task level, although deciding which term should be used in a particular instance may be a matter of circumstance and personal choice. Think of them as a set of Russian dolls – if you only look at one, you do not know where it fits in the overall set.

Some of the definitions in the new ISO 9000 series are unhelpful. For example, an earlier draft defined a process as ‘one or more activities which...’ but the final version defines it as a ‘system which...’. Why change? This definition means, nonsensically, that you could infer that a procedure (ie a process definition) could be the description of an entire management system.

At the other end of the scale, though, a “**work instruction**” is most definitely a procedure. In my experience, a work instruction is typically “*a detailed description of a (relatively complex) task, defined separately from the process which contains the task*”. See Figure 1.

A "System"	A "Process"	A "Task"
is comprised of	is comprised of	is comprised of
a number of related "Processes"	a sequence of "tasks" and / or "sub-processes"	one or more actions
and is described in	and is described in	and is described in
"System Documentation" or a "System Description" (eg a manual)	a "Process Description" or "Process Definition" (ie a Procedure)	a "Task Description" (ie a Procedure)
which contains	which contains	which contains
a number of "Procedures" ie Process Descriptions and Task Descriptions	a description of each Task (what is done, by whom and how)	the specific roles of those involved, and (if required) references to supporting "Work Instructions" and other documents
as well as	as well as	as well as
an introduction and explanation of the system and how it relates to other systems	a description of the resources needed and the influences which may affect how the process works	(optionally) actual copies of forms to be used and information sources to be accessed

Figure 1: The Basic Concepts

WHAT DOES A PROCESS LOOK LIKE?

A typical process involves people in more than one functional department, and information or material will pass between departments. So if you list your processes by department, you are confirming that you have still to adjust your mind to be able to "see" your processes. Some examples of common business processes are:

- Recruiting a new member of staff
- Maintaining a piece of equipment
- Implementing an external standard.

Most processes have a small number of stages, each consisting of one or more steps or activities. Imagine a process flowing across the page, supported on a bed of resources, with a set of influences exerting pressure from above. The resources (such as information, skills, materials, equipment) sustain the process; the influences (such as policies, legislation, measurements, business risks) control and constrain how it is performed. See Figure 2.

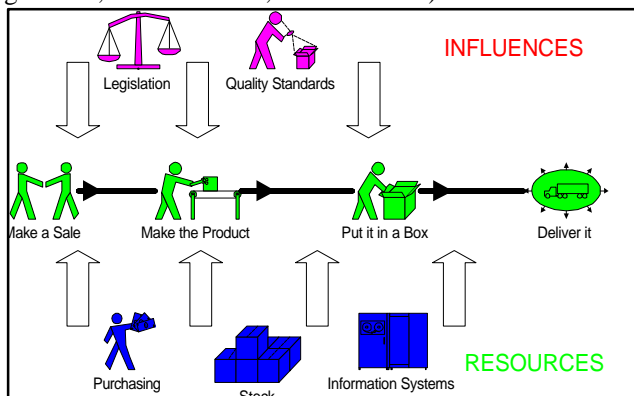


Figure 2: Manufacturing to Order

INTERPRETING THE STANDARD

Section 5.5.3 (Internal communication) of ISO9001: 2000 requires “appropriate communication processes ...”. You should not need separate processes since your process definitions should already describe how you consult with or inform staff (and customers). The Note to Section 4.1 refers to distinct processes for “management activities” and “measurement”. All processes should be “managed”, that is, planned, monitored, measured and controlled. A separate planning process is normal, but the other activities should happen as an integral part of existing processes.

Some common misapprehensions include:

“You must define at least six processes”

The standard says that you must have “documented procedures” to explain how you address six specific requirements.

But “preventive action”, for example, should be addressed in your processes for planning, allocation of responsibilities, product design, process design and management review. It is neither a single process nor a single action. The identification and reduction of risk should be part of your operating strategy.

“You must flowchart your processes”

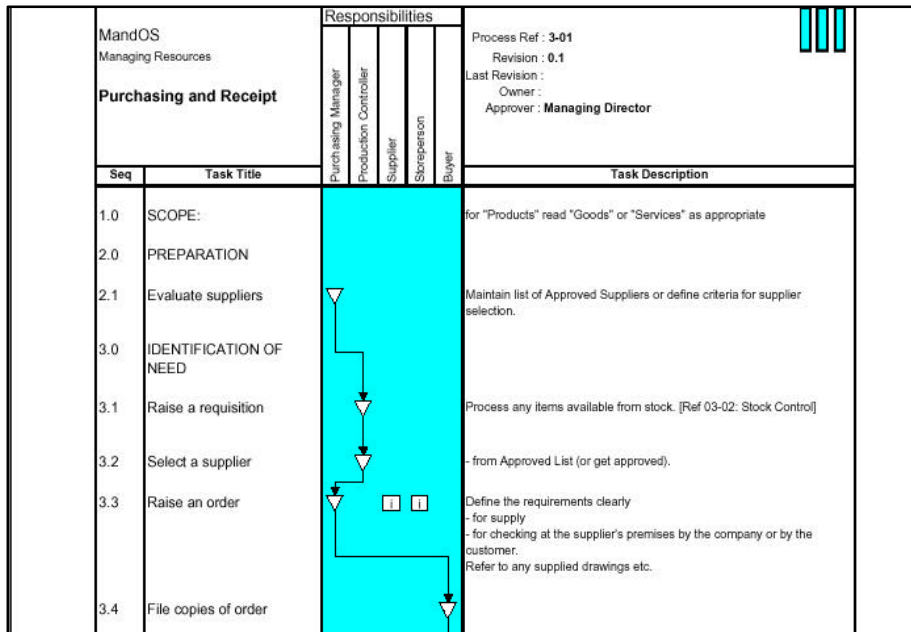
The standard does not mention flowcharts.

But a flowchart is an excellent way to communicate the essential flow of a process and the responsibilities of the people involved. Use it because it makes sense!

HOW TO DEVELOP A PROCESS-BASED MANAGEMENT & OPERATIONAL SYSTEM

GET THE STRUCTURE RIGHT	
ALWAYS start at the top level and work down	“Running the business” is a process
Define no more than 6-8 top-level process groups	Eg Planning and Organising / Getting and Doing Work / Managing Resources / Managing People / Reviewing and Improving
Use a simple numbering system for processes	- to show the sequence and relationship of processes and sub-processes within the Process Groups
DEFINE A PROCESS	
Be clear why you are defining the process	Who will use the definition, and for what?
Get the level of detail right	- a reader should be able to scan and understand a process definition in, say, 30 seconds. This means no more than 2-3 pages of A4.
Assume competence in the user	If they are not competent, train them.
Be consistent	Apply a few basic standards and simple conventions, and stick to them.
Use a graphical presentation	- a simple diagram, such as a deployment (matrix) flowchart, is ideal.
Remember that a process definition is not (just) a flowchart	Also consider: <ul style="list-style-type: none"> - reference documents and records - resource requirements - influences
DEFINE A TASK	
Be concise	Use active verb / noun format. Additional description can be added if necessary, or you can refer to a sub-process
Identify who is involved	Job functions, not individuals. Only one responsible per task. Others may assist (perhaps as delegates), be consulted and be informed. Use a small number of symbols to identify the type of involvement
Show the flow	Other than at the macro-level (top level processes), a vertical presentation works best
If possible, avoid decisions	- or rather: avoid decision symbols, branches and loopbacks on flowcharts. It is usually possible to word a task so that the “condition” is built into the task.

HOW SOFTWARE CAN HELP



A disciplined approach with clear conventions is needed when using drawing and diagramming software. You need to concentrate on content and use a simple, standard format which everyone can learn and understand easily. If the software has an underlying database, you can analyse processes to give lists of, for example, the tasks in which a selected job function is involved or a document is used.

Many traditional quality systems have a section for each procedure which lists the responsibilities of those involved. Process mapping allows you to turn this on its head by first specifying the steps in the process and then allocating responsibilities for each, so that the responsibilities are an automatic by-product.

Take care how you draw the flowcharts. The "text inside boxes" format runs two particular risks. First, it is possible to use the same symbol for a number of unrelated purposes (such as events, actions, job titles and reference documents), so that the meaning of the flowchart is unclear. There can also be a problem when a deployment flowchart format is used, since each "swimlane" requires space to accommodate relatively bulky boxes and the number of swimlanes is therefore restricted. One solution is a simple combination of narrative and graphical format, with a structure which shows the flow of tasks and who is involved, but still allows text for detail when required.

A TYPICAL SYSTEM STRUCTURE

Figure 3 outlines a suggested structure for the key operational processes of a typical small or medium sized enterprise (SME).

<i>Planning and Organising</i>	Assess the Market Assess Internal Capability Prepare a Business Plan Define and Implement Policies Define and Implement Processes Allocate Responsibilities	
<i>Getting and Doing Work</i>	Design and Develop Sell Manufacture Distribute Maintain. Initiate / Manage / Complete a Project. Design / Develop / Deliver.	<i>- for manufacturing</i> <i>- if project-based</i> <i>- for services</i>
<i>Managing Resources</i>	Equipment Premises Finance Information Documents and Records	
<i>Managing People and Relationships</i>	Staff Suppliers Agents	
<i>Reviewing and Improving</i>	Review Processes Fix Problems and Make Improvements Review Operations Review the Business.	

Figure 3: Typical Processes

CONCLUSION

The key to success lies in understanding and applying the basic concepts. A process-based management system should be a simple description of what the organisation does. Process descriptions can then be reviewed in relation to the requirements of external standards, legislation or policies and refined if necessary. The involvement of people, the use of reference documents and the impact of resources and influences will be integrated into the system in the most logical way. The result should be a dynamic management and operational system which people actually use on a day-to-day basis, and which goes beyond mere compliance. You cannot improve what you don't understand – this is the first step in the process.



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