



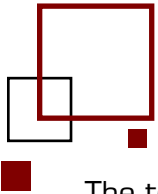
BUSINESS PROCESS

MAPPING



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A white paper modelling
the different levels of
Business Process
Mapping

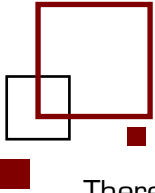


The term process mapping has a variety of different meanings. In some cases it might mean creating a relatively simple block diagram to a flowchart a business process, or it might be a broader and more complex set of interrelated set of business processes. But before we delve into the definition of process mapping, we should refresh the meaning of a business process. A business process is a specific ordering of work activities across time and place, with a beginning, an end, and clearly defined inputs and outputs: a structure for action¹. For the purposes of this paper we rely on Cobb's² definition of process mapping: Business process mapping is the ability to view an entire business system, including all of its core processes, graphically at any level of detail and complexity.

The activities associated with business process mapping are typically much more than simple diagramming of a flowchart of how a process works. To successfully map an organisation, some level of business systems analysis is needed to model a process. Furthermore, process mapping often requires cross-functional consensus of a process.

Jacka and Keller's book defines four steps to business process mapping³:

- (1) The first step is *process identification*. Many organisations think they know their processes, but it is just this silo mentality that causes processes to lose their crossfunctional approach.
- (2) Once the processes are identified, the second step begins – *information gathering*. There is a large volume of information that should be obtained before trying to learn the intricacies of a process. Primary among these is identifying who the true process owners are. Their buy-in and agreement throughout the analysis is paramount. Additional information that should be obtained includes the objectives of the process, risks to the process, key controls over those risks, and measures of success for the process.
- (3) Only after all this is done is actual "*Process Mapping*" completed. This involves sitting with each employee and having him or her describe what it is they do. This allows them to interactively ensure the final map matches their understanding of their work. The final process maps are typically developed using flowcharting software.
- (4) While *Analysis* is considered the fourth step, analysis must really occur throughout the review. There are some specific analyses that should be completed once the maps are done. These include identifying unnecessary approvals, isolating rework and removing duplicate forms.



There are numerous pitfalls and traps that can occur in the mapping project, but practice will help any practitioner become more effective. Some of the most common problems with process maps are listed below:

- Excess complexity;
- Undefined external dependencies and linkages;
- Lack of performance measures;
- Poor understanding of organisational requirements;
- Poorly documented procedures;
- Unclear responsibilities;
- Undefined scope.

Cobb⁴ noted that the design of the process and the documentation of the process are intimately related to each other and it is difficult to separate the two. In any business process mapping initiative, it is always a good idea to identify how much process design and/or redesign is included in the process mapping effort. Simply documenting a process that is poorly designed to begin with doesn't accomplish very much except perhaps exposing some of these problems.

Aside from these problems, another common problem is that process design is often done without the right level of buy-in and consensus from the people who have to implement the process. In the usual case of an ERP supported process design, unrealistic processes could be mapped which doesn't fit any system and would subsequently be of no use to the organisation. With these types of disjointed efforts processes often exist only on paper, but what is done in actual practice may be completely different.

When done correctly, Business Process Mapping should lead everyone to a better understanding of what the company is trying to achieve, a realigned sense of purpose, and a number of suggestions that can streamline operations while increasing customer satisfaction.

¹ TH Davenport, *Process Innovation: Reengineering Work through Information Technology*, Harvard Business School Press, Boston, Massachusetts, 1993.

² CG Cobb, *Enterprise process mapping: Integrating Systems for Compliance and Business Excellence*, American society for quality, 2003.

³ JM Jacka & PJ Keller, *Business Process Mapping: Improving Customer Satisfaction*, John Wiley & Sons, New York, 2002.

⁴ CG Cobb, *Enterprise process mapping: Integrating Systems for Compliance and Business Excellence*.

Business process definition of requirements

Understanding Business Process mapping requires elaboration on what "high level" and what "detail level" business process design means. Many different models exist; we offer our classification as one alternative:

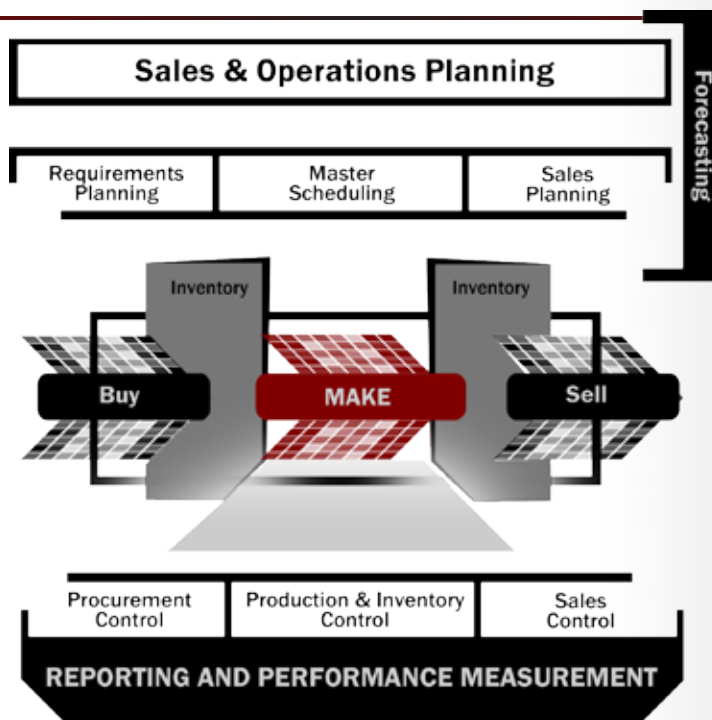
Level:

- 1 : The "Business Process Identification" level
- 2 : The "Sequence of Events" level
- 3 : The "Workflow" level
- 4 : The "Transaction" level

Level One:

"Business Process Identification" level

The primary objective at Level One is to identify the business processes. The figure below illustrates a level one business process map for a manufacturing company:



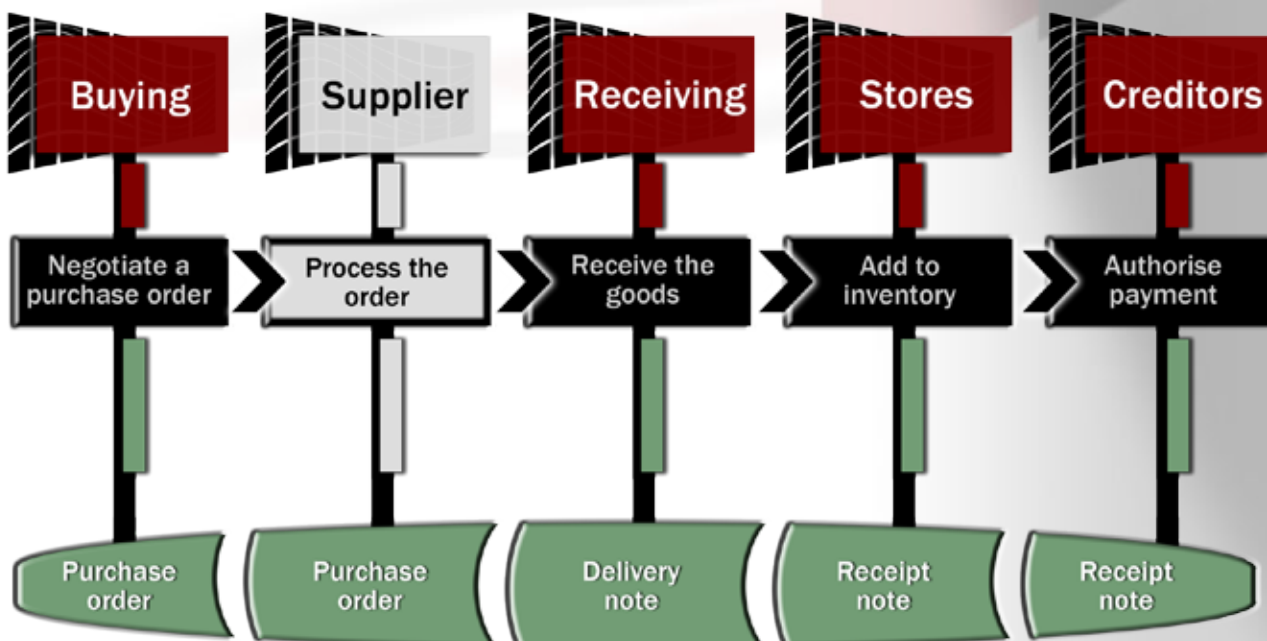
A common benefit from Level One mapping is that one can identify missing business processes which may contribute to problems or point to opportunities.

Level Two:

"Sequence of Events" level

The primary objective at Level Two is to associate the business processes with the high level functional organisation structure and the major system modules, primarily by identifying the major sequential steps in the process.

As an example, one may find that the business process of "Purchasing" has the relationships indicated in the following diagram with the organisational functions of "Buying", "Receiving", "Stores" and "Creditors" as well as the system elements of "Purchase order", "Delivery note" and "Receipt note".



A common benefit from Level Two association is that one can identify where patches such as spreadsheets or manual activities shore up what should be done by IT systems – and thus clearly point out where the new ERP system can improve on the old. Another benefit is that double-work is identified, paving the way for re-engineering or streamlining the business processes.

In many projects, Level Two business process design is sufficient to develop a user requirement that can be used for system selection.

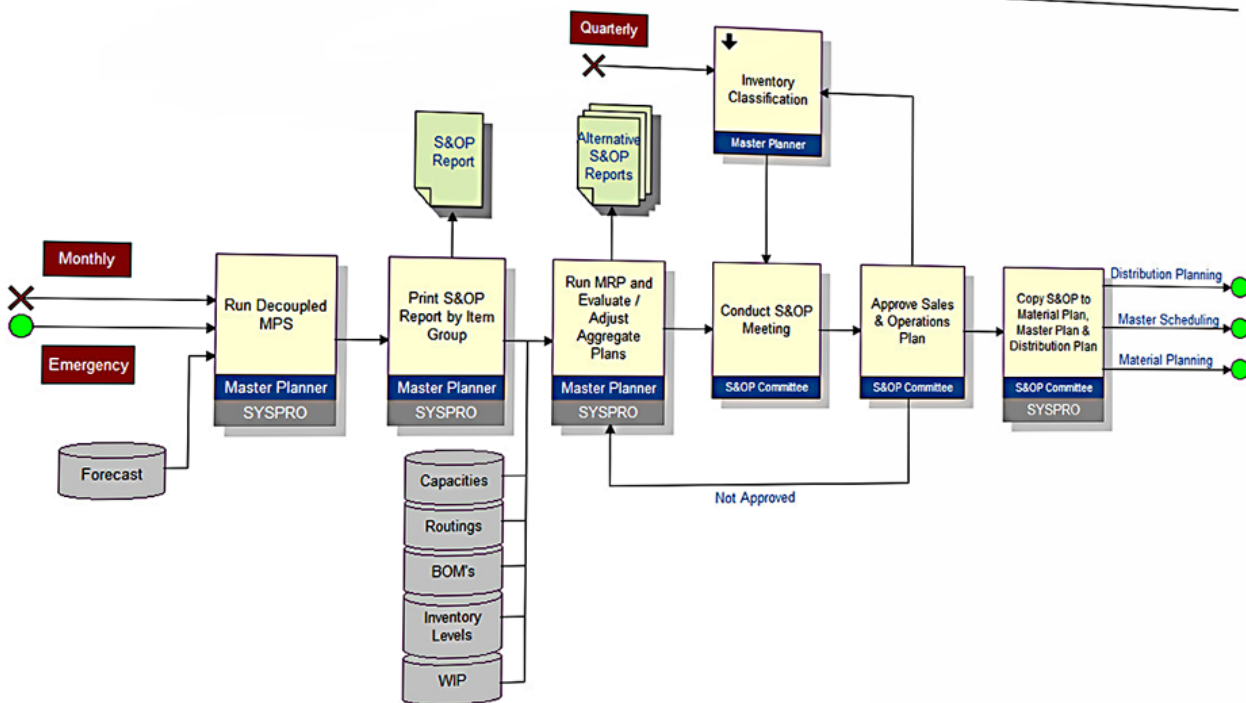
Level Three:

"Workflow" level

The primary objective at Level Three is to optimise the business processes by using best practices.

Different techniques such as **Visio flow diagrams** or "swim lanes" are used to map the business processes; in this example the process of capturing an invoice in the ERP system.

Process: Example



There is limited benefit to mapping As-Is business processes at Level Three. It is, however, the appropriate level to design business processes for sign-off as the To-Be "Business Process Blueprint" and to document As-Built business processes. Level Three is also the best level of detail to use for user training, for user documentation and for business process audits. All of these activities usually only happen in the Implementation Phase that we discuss in chapter four.

Level Four:

"Transaction" level

Typical elements at this level are the following:

- Data fields
- Workflow decision branches
- Database integration

The primary objective at Level Four is to configure the system. Most commonly, the business process mapping conventions, terminology and iconography is prescribed by the particular system or systems in use, or by the IT personnel or ERP Implementation Partner company; all of which means that this only happens during the Implementation Phase that we discuss in chapter four.

An example of a typical task at the transaction level is:

Transaction:

Creating a requisition:

1. *Open the Requisition Entry program*
(SYSPRO menu > Purchase Orders > Requisition System > RequisitionEntry)
2. *Enter the required basic information.*
 - *Enter the Stock code field.*
 - *Enter the Required quantity field.*
 - *Select Route to at the Routing option.*
 - *Enter The route to person*
 - *Enter Please advise delivery date in the Route note field.*
3. *Save Requisition Line.*