



What is Business Process Design and Why Should I Care?

by **Jay Cousins** and **Tony Stewart**, RivCom Ltd

Introduction

"No matter how hard individuals work, they cannot overcome a flawed process design, much less the burden of no design at all."

Michael Hammer, co-author of **Reengineering the Corporation**, in his book **The Agenda**.

Increasingly, organisations are realising that the first step in almost any major project is to analyse and define their business processes, and then communicate those processes to those who need them. This applies whether the project involves integrating standalone IT systems; using Web Services to connect an ad-hoc federation of partners and suppliers; making best use of the new Business Process Management tools; or creating process-based instructions to comply with ISO 9000:2000. You can barely read an article in a business magazine without coming across a reference to business process analysis and design, either as a pre-requisite for new projects, or as the integral element whose absence contributed to the failure of an earlier eCommerce, b2b or IT integration project.

Like many business buzzwords, process-related terms have taken on an urgent resonance that can sometimes inhibit people from asking fundamental questions such as: What is a "business process"? What does "business process modelling" mean, and what is the nature and purpose of "business process analysis and design"?

This paper attempts to put these issues into perspective.

What is a business process?

A business process is a set of logically related business activities that combine to deliver something of value (e.g. products, goods, services or information) to a customer.

A typical high-level business process, such as "Develop market" or "Sell to customer", describes the means by which the organisation provides value to its customers, without regard to the individual functional departments (e.g. the accounting department) that might be involved.

As a result, business processes represent an alternative – and in many ways more powerful – way of looking at an organisation and what it does than the traditional departmental or functional view.

Business processes can be seen individually, as discrete steps in a business cycle, or collectively as the set of activities that create the value chain of an organisation and associate that value chain with the requirements of the customer.

It is important to recognise that the "customer" of a business process can be several different things, according to the process's position in the business cycle. For example, the customer of one process could be the next process in the cycle (in which case the output from one process is input to the next, "customer" process). Equally, the customer can be the end purchaser of a product.

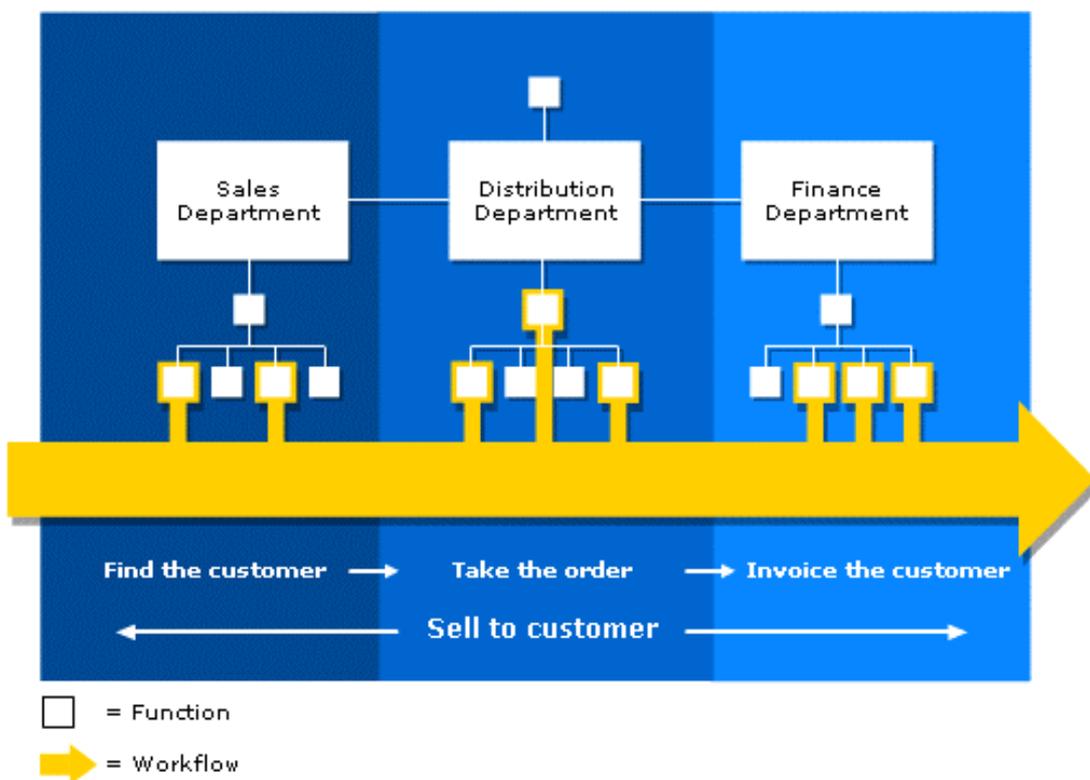


Business processes vs. functional departments

Most large organisations are structured into divisions and departments (e.g. sales or finance departments) that are dedicated to performing specific functions and staffed with personnel who are expert at those functions. Business processes cut across these organisational divisions. Where different activities in a process require different skills, the process is likely to involve a number of people and departments.

For example, consider the business process "Sell to customer". Within a typical implementation of this process:

- the *sales department* finds the customer
- the *distribution department* takes the customer's order
- the *finance department* invoices the customer.



Business processes flow across the departments within an organisation

In this case, the work flows through several internal departments. However, from the customer's point of view, a single process has taken place.

Process composition

A business process is made up of a hierarchy of activity levels. These levels are typically given labels such as "subprocess," "activity" and "task". (Unfortunately, these terms are used inconsistently at different organisations, although the underlying concepts are the same.) For example, the "Sell to customer" process might contain three sub-processes: "Find the customer", "Take the order" and "Invoice the customer". Each of these, in turn, is composed of lower-level activities and tasks that further define the work that needs to be performed in order to "Sell to customer".



What's wrong with the functional view?

A traditional organisational chart generally organises activities according to functional units. However, dividing tasks *vertically* according to functional divisions is not the best way to optimise the process itself. A process is a continuous flow in which value is added to successive stages of the production cycle until a product is generated to meet a customer's need. The process flow is *horizontal* because it is uninhibited by function; it crosses and re-crosses organisational departments and divisions. It changes the emphasis from who does what, to what needs to be done.

The functional approach can sometimes straitjacket a process; as control for the process moves and changes along the production chain, there is the risk of task duplication, delay, and loss of quality control. The risk is amplified in a functionally defined and rigidly hierarchical organisational environment, because the structure maintains the risk. In such organisations a change of focus is required, from the functional view to the process view.

What is business process design?

"In the current economic climate, business process flexibility is key to organisational survival."

Ovum, from **Business Process Management: A Systems Solution to Crisis**, September 2002.

Business process design is the method by which an organisation understands and defines the business activities that enable it to function. Process design is concerned with designing a business' processes to ensure that they are optimised, effective, meet customer requirements, and support and sustain organisational development and growth. A well-designed process will improve efficiency and deliver greater productivity.

The most common initiatives behind business process design projects are:

- customer and supply chain management
- operational performance improvement
- business process integration and automation
- cost reduction
- new business opportunities.

Business process design typically occurs as an early, critical phase in these projects, rather than as an end in itself. The goal of the overall project is to implement business change, whether that change is primarily organisational (improve the business' operating processes), technical (implement or integrate software systems), or a combination of the two.

In a process improvement project, the focus of the business process design phase is to streamline the process: to understand and measure the requirements, and to eliminate the risk of losing value through inefficient or inappropriate activities. In a technology implementation project, the focus is on understanding the processes that are being automated, and ensuring that the appropriate technology is selected, configured and implemented to support them.

In both cases, the process design activities can range from modest (e.g. tweak existing processes and look for some quick wins) to aggressive (e.g. identify



major opportunities to increase value or drive down costs through radical process improvement or outsourcing).

In short, business process design is a tool that can serve many different kinds of projects.

A brief history of the business process ...

The path to business improvement is a long one. Earlier approaches included Systems Dynamics in the 1960s and Total Quality Management (TQM) in the 1980s. The development of IT in the 1990s and its ability to overcome geographical distance and global timezones spawned a new kind of global, information-based society and a radically different business environment. In a rapidly changing market customers suddenly had the freedom to demand and set the level of service they wanted; if one company couldn't deliver in the required timeframe, another one somewhere else probably could. Business needed a new approach – one that offered dramatic change and rapid results. Companies began to analyse what it was that provided the value chain of the organisation and actually delivered the goods that satisfied the customer's need – and the business process approach began to take shape.

What are the common drivers behind a business process design project?

Different process design projects will target different areas of business activity, according to organisational focus and requirements. However, most process design projects are driven by a combination of these common requirements:

- **The need to increase efficiency**
An inefficient business process leads to poor communication, duplication of effort, functional barriers, delays, unnecessary costs (money, materials and manpower) and, ultimately, an output that either partially or wholly fails to achieve its designated purpose.
- **The need to evaluate business practice as part of an organisational development project**
For example, business process design might be required in preparation for the implementation of enterprise technology such as ERP modules for supply chain management or CRM, or prior to a proposed merger, acquisition or internal restructuring project.
- **The need to evaluate potential new business ventures (e.g. joint ventures or alliances) or business offerings**
- **The need to manage the company's knowledge resources**
Knowledge management and sharing can be difficult without clear processes to capture and contain both what is already known, and the new knowledge and skills that are acquired on a daily basis.
- **The need to manage human resources**
Business process design can help to identify current and future HR competence requirements, and is often an integral part of developing a human resource strategy.

Methodology: Implementing business process design

Business process design projects have two phases: analysis and design. Both phases are typically carried out in modelling workshops.



Modelling workshops

The process of analysing existing processes and defining new or improved ones takes place in facilitated group sessions, often called modelling workshops because one of their tangible outputs is a business process model (see below).

Team members typically include:

- subject matter experts (SMEs) from the organisation, who work in the process
- facilitators with experience of working in or designing such processes.

In general, modelling workshops are iterative in nature, and progress from building graphical diagrams of the processes (usually at the whiteboard) to developing detailed descriptions of those processes, and then passing through a cycle of review and improvement until the process designs are ready for publication and communication within the organisation.

Analysing and designing processes

The aim of the analysis phase of a business process design project is to understand how the processes of a business function and interact; the aim of the design phase is to improve the way that those processes operate and interact.

The purpose of the analysis phase is to:

- understand the organisation and its purpose or “mission” and relate this to the organisation’s current business processes
- identify and analyse the collection of processes and activities currently operational within the organisation, and ascertain how far they achieve the business’s objectives.

The results of the analysis phase are then fed into the design phase, whose purpose is to:

- investigate options for achieving improvement by redesigning the processes currently in operation
- identify and prioritise areas for improvement
- implement process design according to an agreed schedule.

One of the decisions that needs to be made early in the project is what kind of analysis is needed – strategic (“top down”) or tactical (“bottom up”):

- A strategic perspective is higher level (i.e. managers) and seeks to understand the processes that make up the business and deliver its value.
- A tactical perspective is lower level (i.e. practitioners) and seeks to understand the activities that support processes. It is driven by the task requirements for operational efficiency.

In some projects the workshop teams will spend most time analysing existing processes, whilst in others they will spend most time designing improved ones, according to the nature and perspective of the project. For example:

- **design-led projects**
In a “clean slate” approach, the workshop team designs new processes with little regard for the current situation, and then considers their impact on the current organisation. However, a degree of analysis is still required as part of the design phase, if only to develop a consensus amongst the workshop team members about the key failure points in the current processes and which opportunities for improvement should be prioritised.



- **analysis-led projects**

In many IT-driven projects, the purpose of the analysis phase is to understand the processes that are going to be automated. This ensures a good fit between the processes and the selected technology, and indicates how that technology should be configured. In this situation, little or no time might be allocated to improving the existing processes. However, some design work is almost always required to ensure the best use of technology.

In all cases, it is important to dedicate some time to understanding the current processes, because the exercise helps to clarify the “language” used by the business to describe its processes, and provides the basis from which improvement can be evaluated.

Output: Business process models

The output of a business process design project is a streamlined, comprehensive, easy-to-use model of the ways in which a business delivers output to its customers. One of the key purposes of process modelling is to provide a “process view” of the business. While organisations tend to think of themselves in terms of management structures and functional departments, outsiders, including customers and suppliers, see the organisation in terms of the value it delivers to them – and it is the business processes that deliver this value.

Once the organisation sees itself in terms of business processes, it can improve the way it delivers value to customers, and hence the profitability and success of the company itself.

What is a business process model?

“All too often, enterprises do not have sufficient understanding of their processes to be able to manage them effectively.”

Butler Group, from **Business Process Management: Improving business efficiency, an in-depth report**, March 2002.

The model typically consists of a set of diagrams, textual descriptions and data elements that provide both overview and detailed information about the business processes in a format that can be understood by managers and personnel within the organisation. The key components of a typical business process model are:

- **the set of processes and activities that take place within the organisation**
These are arranged into a hierarchy of detail – e.g. a top-level process which is composed of a set of subprocesses, each of which is composed of a set of activities, and so on down to a defined level of detail.
- **a text description of each process or activity**
This description generally conforms to a template so that the information is presented consistently and completely. It might be extremely detailed and contain information about the activity’s purpose, triggers, timings, duration, and resource requirements (e.g. HR competences).
- **drawings (typically swimlane and workflow diagrams)**
These illustrate the relationships between activities in the model. At the higher level of the model (e.g. subprocess) the flows between processes are usually simple, which is reflected in more simple diagrams; at the



more detailed levels of the model the flows, and therefore the diagrams, are generally more complex.

- **inputs and outputs**
These are the types of information flowing in and out of each activity, including the source or destination of each information flow and the characteristics of the data itself.
- **key performance indicators**
These are the measurements that are used to determine how well the process is operating.

The diagrams are a particularly important tool. They provide a graphical view of the material presented in the text description of the processes, and make it easier to identify the following components:

- applications and their associated requirements
- physical environment requirements
- performance support requirements
- technology infrastructure requirements.

What use is a business process model?

“People who are aligned around a common goal but lack the discipline of a well-designed process will go nowhere ... likewise the best-designed process has no chance of survival when people aren’t aligned around the process and its goals.”

Michael Hammer, co-author of **Reengineering the Corporation**, in his book **The Agenda**

A business process model provides an at-a-glance view of what the organisation does (or should be doing) and how information flows in and out of activities. It allows individuals to place their own actions within the context of the business as a whole, and focuses attention on the organisation’s ultimate purpose – namely, to satisfy the needs of customer in the most efficient and cost-effective manner.

The model also provides transparency and a means by which to measure individual and company performance. When well designed processes are arranged in a business process model, managers and staff can drill down through the model from the highest to the lowest level of detail – for example, from the process called “Sell to customer” right down to the task called “Enter transaction on POS system”. Using the model’s information flows and key performance indicators, managers can measure how well the business is performing, and adjust individual tasks, activities or even whole processes to improve performance, to keep pace with changes in the business environment, or to reflect a new company strategy.

Conclusion

A business process, then, is a set of logically related business activities that combine to deliver something of value to a customer. An organisation’s business processes are best described by means of a business process model. A business process is entirely independent of *who* carries out the activities and the organisational structure of the company. A defined set of business processes can be used as a framework for assessing the impact of changes across the business



– for example, changes in IT support systems, staffing, costs and performance, or the potential impact of dramatic changes such as mergers, acquisitions and partnerships. The activities in a business process provide a checklist of what could or should be happening within the organisation. The very exercise of defining processes forces a company to formulate and pin down common terminology, as well as common aims and expectations, and to eliminate misunderstandings. An organisation's set of processes, taken as a whole, communicates best practice and helps everyone in the organisation to understand the common goal towards which each individual or department is working. The processes illustrate the flow of not only tasks, but also information, around the company and help to contain and disseminate the information and experience that are amongst any organisation's most valuable commodities.

In short, analysing and defining a company's business process is the single crucial step required to understand how an organisation works, how that organisation *wants* or *needs* to work, and how to go about bridging the gap between the two.