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|  |  | Business Processing  Complementary processes and examples | | |  | |
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|  | **Introduction**  A business is a large vessel of data and information of all types and magnitudes, since ancient times humanity has struggled to invent methods to process this vast pool of data and information in order to further their business’ mission and achieve their vision. Business processing is a technique that attempts to perform these actions.  This report will be a compilation of processes, complementary processes and examples.  Author: K.P.I. Shenesh Perera  Date: 02/03/2019  IDM | | | | |  |
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**Contents**

[What is a business and what makes one? 3](#_Toc2799442)

[What is Business Intelligence? 4](#_Toc2799443)

[Types of data 4](#_Toc2799444)

[Business Processing 4](#_Toc2799445)

[Common business processes 6](#_Toc2799446)

[Steps to be taken to establish a business process 6](#_Toc2799447)

[Supportive processes 7](#_Toc2799448)

[Tools of business processing 8](#_Toc2799449)

[Flowcharts 8](#_Toc2799450)

[Functional Flow Block Diagram 8](#_Toc2799451)

[Control Flow Diagram 8](#_Toc2799452)

[Gantt Chart 9](#_Toc2799453)

[PERT Diagram 9](#_Toc2799454)

[IDEF Diagram 9](#_Toc2799455)

# What is a business and what makes one?



Figure 1.0, smallbiztrends.com, 15/05/2018, Gabrielle Pickard-Whitehead

A business is an organization or enterprising entity engaged in commercial, industrial, or professional activities. Businesses can be for-profit entities or nonprofit organizations that operate to fulfill a charitable mission or further a social cause. Business is also the organized efforts and activities of individuals to produce and sell goods and services for profit.

Generally, a business begins with a business concept and a brand that represents it. Depending on the nature of the business, extensive market research may be necessary to determine whether turning the idea into a business is feasible and if the business can deliver value to consumers.

The brand can be one of the most valuable assets of a business; therefore, careful consideration should be given when choosing it. Businesses operating under fictitious names must be registered with the state.

# What is Business Intelligence?

Business intelligence leverages software and services to transform data into actionable intelligence that informs an organization’s strategic and tactical business decisions. BI tools access and analyze data sets and present analytical findings in reports, summaries, dashboards, graphs, charts and maps to provide users with detailed intelligence about the state of the business.

# Types of data

There are namely 3 types of data involved in the context of a business. Business processing techniques process these types of data, namely they are:

1. **Structured data –** Structured data is composed of elements that are addressable for effective analysis. It has been organized into a formatted repository that is typically a database. Basically any data that can be stored in database SQL in table with rows and columns. They have a relational key and can easily mapped into pre-designed fields.
2. **Semi-structured data -** Semi-structured data is information that does not reside in a rational database but has some organizational properties that makes it easier to analyze.
3. **Unstructured data -** Unstructured data is data that is not organized in a pre-defined manner or does not have a pre-defined data model, thus it is not a good fit for a mainstream relational database.

# Business Processing

A business process is a collection of linked tasks which find their end in the delivery of a service or product to a client. A business process has also been defined as a set of activities and tasks that, once completed, will accomplish an organizational goal.

The process must involve clearly defined inputs and a single output. These inputs are made up of all of the factors which contribute to the added value of a service or product. These factors can be categorized into management processes, operational processes and supporting business processes.

Management processes govern the operation of a particular organization’s system of operation. Operational processes constitute the core business. Supporting processes such as human resources and accounting are put in place to support the core business processes.

The definition of the term business process and the development of this definition since its conception by Adam Smith in 1776 has led to such areas of study as Operations Development, Operations Management and to the development of various Business Management Systems.

These systems, in turn, have created an industry for Business processing software which seeks to automate process management by connecting various process actors via technology. A process requires a series of actions to achieve a certain objective.

Processes can be simple or complex based on number of steps, number of systems involved etc. They can be short or long running. Longer processes tend to have multiple dependencies and a greater documentation requirement.

# Common business processes

A small business is pretty simple, until you start to grow. Growth introduces new complexities that require more employees and more focus. The five core processes for a small business quickly grow to the ten core processes for business.

That is, each of the core small business processes splits into two and now sales and marketing are separate processes, same with accounting, technology, quality and product delivery.

Following are some of the examples of the usual entities that is concerned with processing data and information within a business:

* Customer Strategy & Relationships done by Marketing
* Employee Development & Satisfaction done by Human Resource
* Quality, Process Improvement & Change Management done by Quality Control
* Financial Analysis, Reporting, & Capital Management done by Accounts
* Management Responsibility concerned with top level management
* Customer Acquisition done by sales
* Product Development
* Product/Service Delivery
* Accounting Management
* Technology Management

# Steps to be taken to establish a business process

1. **Define Your Goals** - What is the purpose of the process? Why was it created? How will you know if it is successful?
2. **Plan and Map Your Process** - What are the strategies needed to achieve the goals? This is the broad roadmap for the process.
3. **Set Actions and Assign Stakeholders** - Identify the individual tasks your teams and machines need to do in order to execute the plan.
4. **Test the Process** - Run the process on a small scale to see how it performs. Notice any gaps and make adjustments.
5. **Implement the Process** - Start running the process in a live environment. Properly communicate and train all stakeholders.
6. **Monitor the Results** - Review the process and analyze its patterns. Document the process history.
7. **Repeat** - If the process is able to achieve the goals set for it, replicate it for the future processes.

# Supportive processes

These processes help ensuring that business processing is done to its optimum level, and nothing goes wrong.

* **Business Process Automation** – This is a technology-driven strategy to automate a business process in order to accomplish it with minimum cost and in a shorter time. It is extremely useful for both simple & complex business processes.
* **BPM** – This is a systematic approach to make an organization’s processes more efficient and dynamic in order to meet the changing needs of business. Continuous improvement is one of the core underlying philosophies of BPM and it aims to put it at the center of all BPM initiatives.

BPM is an ongoing approach to continuously make execution of business processes better. Several cloud and on premise software solutions are available to implement BPM.

* **Business Process Modeling** – This is a diagrammatic/structural representation of flow of business activities in an organization or function within an organization. Its primary use is to document and baseline the current flow of activities in order to identify improvements and enhancements for speedy accomplishment of tasks.

Usually, they follow a standard such as Business Process Modeling Notation (BPMN) which is a globally accepted standard which most process professionals easily identify with.

* **Business Process Improvement** – This is a strategic planning initiative that aims at reshaping business processes based on operations, complexity levels, employee skills etc. in order to make the entire process more meaningful, efficient and contribute to overall business growth.

It is a rather drastic way to rediscover more efficient ways to run a business process rather than taking small incremental steps.

It usually starts with process mapping and its core aim is to align IT resources with organizational business goals. There are a lot of process improvement tools in the market, that’d help you out with this.’

* **Business Process Reengineering** – This is a complete redesign of business processes after thorough analysis in order to bring drastic impact. It involves identifying the core of inefficiency, culling out tasks that don’t add any value and even implementing a top-to-bottom change in the way a process is designed in order to bring about an overall transformation.
* **Business process optimization** – Is a process that takes an existing process and uses analytics and business process mining tools to weed out bottlenecks and other significant inefficiencies in a process.
* **Business process mapping** - is a procedure to document, clarify, and break down process sequences into logical steps. The mapping is either done in written format or visualized using flow charts. Choose a process mapping software that empowers business users to map all the processes based on logical steps with an intuitive visual interface.
* **Business process analysis** - is the process of identifying business requirements and deciding on solutions that best solve business problems. This can consist of process improvement, policy development, organizational change, or strategic planning.
* **Business process integration** - is the ability to define a process model that defines the sequence, hierarchy, events, and execution logic and movement of information between systems residing in the same enterprise.
* **Business process Simulation** - is a tool for the analysis of business processes to measure performance, test process design, identify bottlenecks, test changes, and find how a process operates in different environmental conditions with different datasets.
* **Business process transformation** - is a term that means radically changing a series of actions needed to meet a specific business goal. This is aimed at ensuring that a company’s employees, goals, processes, and technologies are all in line with each other.
* **Business process Monitoring** - is the active monitoring of business processes and activity to help management gain insight into important transactions and processes within an enterprise. This helps management to gain visibility on how their processes are functioning, and if they’re aligned with the company’s business goals.

# Tools of business processing

The purpose of business process tools is to improve performance by increasing efficiency and productivity. The tools used are essentially visual aids that can quickly and clearly give the big picture of a very complex or evidently largely informative business process even to those that have less exposure to the field. Here are some of the most common and most effective to achieve this:

## Flowcharts

A flowchart is a diagram that represents a process and can be created with readily available software. Flowcharts contain a starting and ending point. Typically, symbols such as circles, squares and diamonds represent events or activities, while arrows indicate sequential flow and associations between steps.

## Functional Flow Block Diagram

A functional flow block diagram (FFBD) is used to describe requirements in functional terms. Rather than being solution-oriented like a flowchart, the FFBD is functionally oriented and illustrates the functional architecture of a system

## Control Flow Diagram

A control flow diagram is used to help describe the normal flow of a process, with added limits and constraints. Control flow diagrams illustrate how certain conditions, such as alternate operations, additional data or equipment, or alternative inputs affect a process flow.

## Gantt Chart

A Gantt chart is another way to visually communicate information. Typically, a bar chart, Gantt charts focus on activities and tasks involved in a process, depicted sequentially and against a timeline. They also show the dependency relationships between activities. With a Gantt chart, a professional can see at a glance whether a project is on, ahead or behind schedule.

## PERT Diagram

A Program Evaluation and Review Technique diagram is used to help identify the minimum amount of time needed to complete a project. The concept behind this technique is that certain activities cannot be started until others are completed. The PERT diagram helps avoid unrealistically short timelines by estimating the shortest, most likely and longest time each step of a process will take.

## IDEF Diagram

IDEF is an acronym for Integration Definition, a commonly used technique in business process modeling. IDEF refers to 16 methods, designed to capture a type of information through modeling processes. IDEF methods are used to create diagrams that define system control and data flow, and can graphically represent a wide variety of processes with any desired level of detail.