INFORMATION SYSTEM MANAGEMENT

CHAPTER 1

**BUSINESS PROCESS AND BUSINESS PROCESS INTEGRATION**

Digital transformation has created many opportunities for companies.

One is to be able to work together with other organizations, through the integration of processes. Partners, customers, suppliers and even competitors (in purchasing cooperatives, for example) can work together to achieve better results.

To achieve these goals, there is a methodology called BPI – Business Process Integration. It aims to promote this integration in a harmonious way and with benefits for all involved, without forgetting internal business integration.

Business Process Integration (BPI) is a crucial technique for supporting interorganizational business interoperability. BPI enables the automation of business processes and the integration of systems into several organizations “

In this sense, the integration of organizational process models is one of the most used approaches to achieve BPI

In this post, you will learn what BPI is and how it can be applied in your company. Find out the 5 steps for implementing process integration in your business.

**Why do companies want to adopt BPI – Business Process Integration?**

Companies seek, through BPI, a way not only to integrate applications and systems internally. The goal is bigger: they want to relate and exchange information externally, with the tools and data from partners, suppliers and customers.

In the same way that an ERP ([Integrated Management System](https://en.wikipedia.org/wiki/Enterprise_resource_planning)) generates more transparency, agility and reliability in the management of a company, BPI acts in a similar way between companies.

Thus, the needs of all are aligned with the objectives of the business, which brings transparency, agility and flexibility to companies. The result is more efficiency and [**innovation**](https://www.heflo.com/blog/bpm/bpm-innovations/).

This is because some of the processes dominated by organizations external to your business are unknown or few are exploited in your organization. And it works the other way around, too.

For example, a company that produces wooden furniture for hotels does not understand anything about hospitality, much less about forest cultivation and the extraction of timber.

However, if everyone could align their goals, it may be possible to create integrated and innovative processes, from planting trees to the use of wooden furniture by hotel guests.

With all stakeholders exchanging information, it is possible to create integrated processes that are much more objective and efficient for the group. Thus, more value is delivered to end customers using fewer resources.

Imagine that the hotel knows that its customers prefer furniture made with light wood and with certain colouring and shape. If this information is shared with the logger and the furniture factory, the whole [value chain](https://www.heflo.com/definitions/what-is-value-chain/) can prepare for this.

Thus, the integration of processes goes beyond the boundaries of the company and encompasses each stage of the production process, in different organizations.

But, what is BPI, that allows it to advantage businesses in such a way?

**What is BPI – Business Process Integration?**

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In this sense, the integration of organizational process models is one of the most used approaches to achieve BPI.

But integrating models is very complex. Therefore, it requires process analysts to have extensive experience.

Therefore, it is crucial to follow a rigorous and careful step by step in pursuit of BPI.

Without this, in addition to wasting precious time by “walking around in circles,” you will not achieve the desired benefits in terms of agility, innovation and [**customer satisfaction**](https://www.heflo.com/blog/workflow/customer-feedback-process-flow/).

Now that it’s clear to you what BPI is, let’s take a step-by-step approach to implementing it in your company.

**IMPLEMENTING ENTERPRISE SYSTEM**

**The 5 steps for implementing BPI in your company**

**1- Identification of business processes**

The first step in implementing BPI is to identify processes. For this, there is nothing more appropriate than using business process mapping tools. Good BPM software, in addition to mapping, also enables[**process modeling**](https://www.heflo.com/business-process-modeling-tool/) and automation.

In this way, you know in real time the process’s performance and the adjustments you need to make to promote[**continuous improvement**](https://www.heflo.com/blog/bpm/continuous-business-process-improvement/).

With processes identified, automated and optimized, you need to define a way to share them with other organizations. Documentation is the next step.

HEFLO is a complete BPM software that does everything from mapping and modeling and documentation to automation.

**2- Process documentation**

The traditional way of sharing a process is through documentation.

Typically printed or PDF documents (and even Word) are created specifying all the details of the process, the person in charge, tasks and [**decision making**](https://www.heflo.com/blog/business-management/business-decision-making-process/).

Some BPM tools, such as HEFLO, do the documentation automatically, based on the process diagram itself, created in the tool through a drag-and-drop interface.

Of course, this speeds up the consolidation and exchange of information. See in the image below how people can view, approve, and send suggestions for documented processes.

But what if, through authorizations with login and password, the analysts and [**process owners**](https://www.heflo.com/definitions/process-owner/) of partner organizations could access the process diagrams of other organizations and edit them in the tool simultaneously?

**3 – Collaborative modeling of newly integrated processes**

Without the use of collaborative BPM tools, you’ll need to share the documentation, wait for the analysts at each company to study them, and set up meetings to define what the integrated processes will look like.

With the use of the collaborative tool, this will be much easier.

Everyone who has access to the process models can make changes and create new process diagrams from the existing ones without losing the previous ones.

One can even capture one process from one organization (already modeled in the tool) “copy and paste” into another and integrate it quickly.

In addition, everyone can make comments and suggestions in the processes as others model and adjust them.

**4 – Implementation**

As the tool also [**automates the**](https://www.heflo.com/business-process-automation-software/)**processes**, implementation is very agile and can be accompanied by all the organizations involved.

A request made by one company can trigger a process in the other that, through the same flow of tasks, triggers the suppliers in a third company, and so on.

**5- Monitoring and continuous improvement**

Like there is in a BPM process, the BPI process provides for the creation of[KPIs](https://www.heflo.com/blog/business-management/kpi-types-of-key-performance-indicators/) to track processes.

Thus, together, companies and organizations can assess whether integrations are having the desired effects and provide the necessary adjustments and improvements to the processes.

All this in a transparent way and based on facts and figures.

So, what do you think of doing BPI – Business Process Integration – with the help of a BPM tool?

Also see:[**Learn more about Low Code Platforms and Low Code BPMS**](https://www.heflo.com/blog/bpm/low-code-platform/)

**Does your business use BPI? What do you think of the idea?**

Share your BPI experience with us! Tell us how you use it in your business.

And if this is news to you, what do you think? Are our companies mature enough to exchange information in real time in this way?

# Business Process Integration: Creating Connectivity

Business Process Integration (BPI) is essential for businesses looking to connect systems and information efficiently. BPI allows for automation of business processes, integration of systems and services, and the secure sharing of data across numerous applications. Overcoming integration challenges allows organizations to connect systems internally and externally. Moreover, BPI allows for the automation of management, operational, and supporting processes. This gives businesses an edge over competitors as they can spend less time concerned about the challenges of integration and more time and energy on driving new business.

Previously, business process integration software was only available to large enterprise companies that could afford it. Today, businesses of all sizes need a efficient integration solution to streamline processes between marketing, sales, customer service, and supply chain management, etc. Integration among administrative, operational, and support processes increases productivity by simplifying regular enterprise functions.

## Integration Barriers

Integration without the proper tools is complicated. Many businesses implement custom integration to take on the challenge of creating seamless connectivity. This method calls for a developer to create [point-to-point](https://www.mulesoft.com/resources/esb/eliminating-point-point-integration-pain-mule-esb-use-cases) integrations between applications and services. As a business grows and the number of integrations increases, the point-to-point architecture or “spaghetti code”, becomes complex, fragile, and expensive to maintain.



Companies without an integration solution often resort to manual data entry. This method requires individuals to transfer data from one application to another by hand, often resulting in “swivel chair” data entry. Such a technique is time consuming and expensive. Some companies employ data loaders or other tools to help integration, yet with limited connectivity to certain services, they are not always scalable.

## Business Process Integration Solution

Organizations seek a solution not only to synchronize applications and systems internally, but also to connect externally to partner, supplier, and customer systems. Business process management strives to improve processes and align the needs of customers with company objectives. This gives businesses [visibility](https://www.mulesoft.com/managing-mule-esb-enterprise) and flexibility, making them more efficient and innovative.

Moreover, workflow automation promotes efficient interactions between process models and data models. Business process re-engineering works towards improving efficiency across the business model by helping companies evaluate and implement best practices for process automation and business integration. Critical governance and operations processes can be automated and synchronized to ensure businesses follow standards. Core business processes relating to marketing, sales, and purchases can be integrated with support and accounting to enhance visibility and improve communication across the team. With critical business processes automated, companies are free to focus primarily on driving new business.

MuleSoft offers a solution to take on the challenges of business process integration. Mule as an [Enterprise Service Bus](https://www.mulesoft.com/platform/soa/mule-esb-open-source-esb) is a [lightweight](https://www.mulesoft.com/platform/soa/mule-esb-small-footprint) integration platform that enables connectivity across applications and services. It provides the technology to automate business process within the organization as well across customers, partners, and suppliers. Mule as an ESB quickly and reliably enables integration between data and technology.

Mule as an ESB takes the pain out of integration. By leveraging a library of [Anypoint Connectors](https://www.mulesoft.com/exchange/%22%20%5Cl%20%22%21/?types=connector), creating instant API connectivity with popular third party applications and services without complicated code is both fast and easy. With [Anypoint Studio](https://www.mulesoft.com/platform/mule-studio), any developer can quickly create integrations, customize business processes and make modifications. Moreover, Mule as an ESB eliminates the task of manual data entry and simplifies the synchronization of data between cloud and on-premises applications with repeatable integrations.

## MuleSoft Supports Business Process Integration

As a trusted name in integration, Mule as an ESB enables over 1,600 organizations in more than 60 countries to build [application networks](https://www.mulesoft.com/why-mulesoft) that increase the clock speed of business. Additionally, Mule as an ESB is [open source](http://www.mulesoft.org/) and developer friendly, with a growing developer community. The lightweight and flexible platform has the power to drive even the most demanding and mission-critical [SOA](https://www.mulesoft.com/resources/esb/soa-integration-solution) implementations. Best of all, Mule as an Enterprise Service Bus is [scalable](https://www.mulesoft.com/platform/soa/high-availability-mule-esb) - easily adapting to changing business requirements.

Leveraging [Mule as an Enterprise Service Bus](https://www.mulesoft.com/platform/soa/mule-esb-features) makes it easy to simplify business process integration. BPI breaks down integration barriers, gives organizations control over their processes, and makes businesses more efficient. Get started today by [contacting a Mule expert](https://www.mulesoft.com/lp/contact) today.

**Enterprise resource planning** (**ERP**) is the integrated management of main business processes, often in real time and mediated by software and technology.

ERP is usually referred to as a category of [business management software](https://en.wikipedia.org/wiki/Business_management_tools) — typically a suite of integrated [applications](https://en.wikipedia.org/wiki/Application_software)—that an organization can use to collect, store, manage, and interpret data from many [business](https://en.wikipedia.org/wiki/Business_sector) activities.

ERP provides an integrated and continuously updated view of core business processes using common [databases](https://en.wikipedia.org/wiki/Database) maintained by a [database management system](https://en.wikipedia.org/wiki/Database_management_system). ERP systems track business resources—cash, [raw materials](https://en.wikipedia.org/wiki/Raw_material), [production capacity](https://en.wikipedia.org/wiki/Production_capacity)—and the status of business commitments: orders, [purchase orders](https://en.wikipedia.org/wiki/Purchase_order), and [payroll](https://en.wikipedia.org/wiki/Payroll). The applications that make up the system share data across various departments (manufacturing, purchasing, sales, [accounting](https://en.wikipedia.org/wiki/Accounting), etc.) that provide the data  ERP facilitates information flow between all business functions and manages connections to outside [stakeholders](https://en.wikipedia.org/wiki/Stakeholder_%28corporate%29).

Enterprise system software is a multibillion-dollar industry that produces components supporting a variety of business functions. IT investments have become the largest category of capital expenditure in United States-based businesses over the pastdecade. Though early ERP systems focused on large enterprises, smaller enterprises increasingly use ERP systems.

The ERP system integrates varied organizational systems and facilitates error-free transactions and production, thereby enhancing the organization's efficiency. However, developing an ERP system differs from traditional system development. ERP systems run on a variety of [computer hardware](https://en.wikipedia.org/wiki/Computer_hardware) and [network](https://en.wikipedia.org/wiki/Computer_network) configurations, typically using a [database](https://en.wikipedia.org/wiki/Database) as an [information repository](https://en.wikipedia.org/wiki/Information_repository).

**ERP systems typically include the following characteristics:**

* An integrated system
* Operates in (or near) real time
* A common database that supports all the applications
* A consistent look and feel across modules
* Installation of the system with elaborate application/data integration by the Information Technology (IT) department, provided the implementation is not done in small steps[[20]](https://en.wikipedia.org/wiki/Enterprise_resource_planning#cite_note-20)
* Deployment options include: [on-premises](https://en.wikipedia.org/wiki/On-premises), cloud hosted, or [SaaS](https://en.wikipedia.org/wiki/SaaS%22%20%5Co%20%22SaaS)

## Functional area

An ERP system covers the following common functional areas. In many ERP systems, these are called and grouped together as ERP modules:

* [Financial accounting](https://en.wikipedia.org/wiki/Financial_accounting): [general ledger](https://en.wikipedia.org/wiki/General_ledger), [fixed assets](https://en.wikipedia.org/wiki/Fixed_asset), [payables](https://en.wikipedia.org/wiki/Accounts_payable) including vouchering, matching and payment, [receivables](https://en.wikipedia.org/wiki/Accounts_receivable) and collections, [cash management](https://en.wikipedia.org/wiki/Cash_management), [financial consolidation](https://en.wikipedia.org/wiki/Consolidation_%28business%29)
* [Management accounting](https://en.wikipedia.org/wiki/Management_accounting): [budgeting](https://en.wikipedia.org/wiki/Budgeting), costing, [cost management](https://en.wikipedia.org/wiki/Cost_management), [activity based costing](https://en.wikipedia.org/wiki/Activity_based_costing)
* [Human resources](https://en.wikipedia.org/wiki/Human_resources): [recruiting](https://en.wikipedia.org/wiki/Recruitment), [training](https://en.wikipedia.org/wiki/Training), [rostering](https://en.wikipedia.org/wiki/Schedule_%28workplace%29), [payroll](https://en.wikipedia.org/wiki/Payroll), [benefits](https://en.wikipedia.org/wiki/Employee_benefit), [retirement and pension plans](https://en.wikipedia.org/wiki/Pensions), [diversity management](https://en.wikipedia.org/wiki/Diversity_%28business%29), [retirement](https://en.wikipedia.org/wiki/Retirement), [separation](https://en.wikipedia.org/wiki/Employee_exit_management)
* Manufacturing: [engineering](https://en.wikipedia.org/wiki/Engineering), [bill of materials](https://en.wikipedia.org/wiki/Bill_of_materials), work orders, [scheduling](https://en.wikipedia.org/wiki/Scheduling), [capacity](https://en.wikipedia.org/wiki/Capacity_utilization), [workflow management](https://en.wikipedia.org/wiki/Workflow_management_system), [quality control](https://en.wikipedia.org/wiki/Quality_control), manufacturing process, manufacturing projects, manufacturing flow, [product life cycle management](https://en.wikipedia.org/wiki/Product_life_cycle_management)
* Order processing: [order to cash](https://en.wikipedia.org/wiki/Order_to_cash), order entry, credit checking, [pricing](https://en.wikipedia.org/wiki/Pricing), available to promise, [inventory](https://en.wikipedia.org/wiki/Inventory), [shipping](https://en.wikipedia.org/wiki/Shipping), sales analysis and reporting, sales commissioning
* [Supply chain management](https://en.wikipedia.org/wiki/Supply_chain_management): supply chain planning, supplier scheduling, [product configurator](https://en.wikipedia.org/wiki/Product_configurator), [order to cash](https://en.wikipedia.org/wiki/Order_to_cash), [purchasing](https://en.wikipedia.org/wiki/Purchasing), [inventory](https://en.wikipedia.org/wiki/Inventory), claim processing, [warehousing](https://en.wikipedia.org/wiki/Warehousing) (receiving, putaway, [picking](https://en.wikipedia.org/wiki/Order_picking) and [packing](https://en.wikipedia.org/wiki/Packaging_and_labeling))
* [Project management](https://en.wikipedia.org/wiki/Project_management): project planning, resource planning, project costing, [work breakdown structure](https://en.wikipedia.org/wiki/Work_breakdown_structure), [billing](https://en.wikipedia.org/wiki/Invoice), time and expense, performance units, activity management
* Customer relationship management (CRM): sales and marketing, commissions, service, customer contact, [call center](https://en.wikipedia.org/wiki/Call_center) support – CRM systems are not always considered part of ERP systems but rather [business support systems](https://en.wikipedia.org/wiki/Business_support_system) (BSS)
* Data services: various "self–service" interfaces for customers, suppliers and/or employees

## Connectivity to plant floor information

ERP systems connect to real–time data and transaction data in a variety of ways. These systems are typically configured by [systems integrators](https://en.wikipedia.org/wiki/Systems_integrator), who bring unique knowledge on process, equipment, and vendor solutions.

**Direct integration**—ERP systems have connectivity (communications to plant floor equipment) as part of their product offering. This requires that the vendors offer specific support for the plant floor equipment their customers operate. ERP vendors must be experts in their own products and connectivity to other vendor products, including those of their competitors.

**Database integration**—ERP systems connect to plant floor data sources through staging tables in a database. Plant floor systems deposit the necessary information into the database. The ERP system reads the information in the table. The benefit of staging is that ERP vendors do not need to master the complexities of equipment integration. Connectivity becomes the responsibility of the systems integrator.

[**Enterprise appliance transaction modules**](https://en.wikipedia.org/wiki/Enterprise_appliance_transaction_module)**(EATM)**—These devices communicate directly with plant floor equipment and with the ERP system via methods supported by the ERP system. EATM can employ a staging table, web services, or system–specific program interfaces ([APIs](https://en.wikipedia.org/wiki/Api)). An EATM offers the benefit of being an off–the–shelf solution.

**Custom–integration solutions**—Many system integrators offer custom solutions. These systems tend to have the highest level of initial integration cost, and can have a higher long term maintenance and reliability costs. Long term costs can be minimized through careful system testing and thorough documentation. Custom–integrated solutions typically run on [workstation](https://en.wikipedia.org/wiki/Workstation) or server-class computers.

### Configuration

Configuring an ERP system is largely a matter of balancing the way the organization wants the system to work with the way it was designed to work. ERP systems typically include many settings that modify system operations. For example, an organization can select the type of inventory accounting—[FIFO or LIFO](https://en.wikipedia.org/wiki/FIFO_and_LIFO_accounting)—to use; whether to recognize revenue by geographical unit, product line, or distribution channel; and whether to pay for shipping costs on customer returns.[[42]](https://en.wikipedia.org/wiki/Enterprise_resource_planning#cite_note-Thomas_H._Davenport_1998-42)

### Two-tier enterprise resource planning[

###  Two-tier ERP software and hardware lets companies run the equivalent of two ERP systems at once: one at the corporate level and one at the division or subsidiary level. For example, a manufacturing company could use an ERP system to manage across the organization using independent global or regional distribution, production or sales centers, and service providers to support the main company’s customers. Each independent center (or) subsidiary may have its own [business models](https://en.wikipedia.org/wiki/Business_model), [workflows](https://en.wikipedia.org/wiki/Workflow), and [business processes](https://en.wikipedia.org/wiki/Business_process).

Given the realities of globalization, enterprises continuously evaluate how to optimize their regional, divisional, and product or manufacturing strategies to support strategic goals and reduce time-to-market while increasing profitability and delivering value.[[45]](https://en.wikipedia.org/wiki/Enterprise_resource_planning#cite_note-ferdows-45) With two-tier ERP, the regional distribution, production, or sales centers and service providers continue operating under their own business model—separate from the main company, using their own ERP systems. Since these smaller companies' processes and workflows are not tied to main company's processes and workflows, they can respond to local business requirements in multiple locations.

Factors that affect enterprises' adoption of two-tier ERP systems include:

* Manufacturing globalization, the economics of sourcing in emerging economies
* Potential for quicker, less costly ERP implementations at subsidiaries, based on selecting software more suited to smaller companies
* Extra effort, (often involving the use of [Enterprise application integration](https://en.wikipedia.org/wiki/Enterprise_application_integration)) is required where data must pass between two ERP systems[[47]](https://en.wikipedia.org/wiki/Enterprise_resource_planning#cite_note-47) Two-tier ERP strategies give enterprises agility in responding to market demands and in aligning IT systems at a corporate level while inevitably resulting in more systems as compared to one ERP system used throughout the organization.

### Customization

ERP systems are theoretically based on industry best practices, and their makers intend that organizations deploy them "as is ERP vendors do offer customers configuration options that let organizations incorporate their own business rules, but gaps in features often remain even after configuration is complete.

ERP customers have several options to reconcile feature gaps, each with their own pros/cons. Technical solutions include rewriting part of the delivered software, writing a homegrown module to work within the ERP system, or interfacing to an external system. These three options constitute varying degrees of system customization—with the first being the most invasive and costly to maintain. Alternatively, there are non-technical options such as changing business practices or organizational policies to better match the delivered ERP feature set. Key differences between customization and configuration include:

* Customization is always optional, whereas the software must always be configured before use (e.g., setting up cost/profit center structures, organizational trees, purchase approval rules, etc.).
* The software is designed to handle various configurations and behaves predictably in any allowed configuration.
* ERP creates a more agile company that adapts better to change. It also makes a company more flexible and less rigidly structured so organization components operate more cohesively, enhancing the business—internally and externally.[[60]](https://en.wikipedia.org/wiki/Enterprise_resource_planning#cite_note-60)
* ERP can improve data security in a closed environment.

What is ERP Software?

**Enterprise resource planning (ERP) software is an integrated suite of applications designed to manage business functions, such as finance, human resources, sales and manufacturing.**

Different ERP systems are designed for different company sizes and industries. Many ERP systems are flexible and can accommodate organizations of any size. For example, small organizations do not necessarily have to select a system designed for SMBs. When implementing a system designed for large enterprises, small organizations can simply pick and choose the modules they implement.

Small organizations also can choose a different solution from the same vendor. For example, [Tier 1 ERP](https://www.panorama-consulting.com/tier-1-erp/) vendors have different solutions designed for different size companies.

When properly implemented, ERP software increases organizational efficiency by automating business processes and enabling access to reliable data.



## CHAPTER 2

## ANALYSING BUSINESS REQUIREMENTS FOR SELECTING AND IMPLEMENTING ENTERPRISE SYSTEMAND SOFTWARE

## SELECTION OF ENTERPRISE SYTEM SOFTWARE

## How to Select an ERP System

You didn’t stumble upon this guide by accident. Perhaps you are looking to purchase new ERP software. Maybe you are in the middle of implementation and want to make sure you are on the right track. Maybe you are just a curious person. Regardless of the reason know this: selecting an ERP system can be a daunting task.

[ERP](https://www.panorama-consulting.com/7-common-questions-about-erp-software/) software can either make or break your organization so it is important to get it right from the beginning. A comprehensive and planned ERP selection process should support your overall organizational goals. A strong foundation of planning and strategy, and preferably experience, is required when taking on this task. It should not be taken lightly.

In this guide, we strive to answer as many questions as we can regarding ERP [software selection process best practices](https://www.panorama-consulting.com/software-selection-process-best-practices/). By exclusively focusing on ERP selection, we hope to provide you the level of detail necessary to understand the ins and outs of the ERP selection process, whether or not you’re pursuing digital transformation.

Keep in mind that the selection process for any enterprise-wide software can require a fair amount of research and testing. These things take time. The following twelve steps can take anywhere from 14 to 24 weeks to complete, depending on the size of your organization. While this may seem like a long time, consider this: the next ERP system you implement should support your organization for at least ten years. By following our guide, you will find that

The high cost involved in enterprise application & the currently available open source applications are the major factors hindering the enterprise application market. Global software vendors such as Microsoft, SAP, Oracle, IBM Corp., etc. charge extensively for their solutions. These software vendors also charge high fees for maintenance & support function. Therefore, enterprises are shifting from licensed software to open source applications, as they are one of the best alternatives to these high-cost applications. Local vendors present in the market provide support for open source applications. They also modify the open source code & provide customization as per the demand of the end-users

**ERP APPLICATIONS**

**The global enterprise application market includes segmentation analysis based on solutions, delivery model & end-users.**

**Market by Delivery Model:**

* On-Premises
* Cloud

**Market by End Users:**

* Manufacturing & Services
* Banking, Financial Services & Insurance (BFSI)
* Healthcare
* Retail
* Government
* Aerospace & Defense
* Telecom
* Others

**Market by Solutions:**

* Customer Relationship Management (CRM)
* Enterprise Resource Planning (ERP)
* Supply Chain Management (SCM)
* Business Intelligence (BI)
* Business Process Management (BPM)
* Content Management System (CMS)
* Enterprise Asset Management (EAM)
* Web Conferencing
* Other Applications

The market revenue estimates & forecast includes only enterprise application systems & excludes the conventional systems.

**Geographically, the global Enterprise Application market has been segmented by four major regions, which includes:**

* [North America Enterprise Application Market](https://www.inkwoodresearch.com/reports/north-america-enterprise-application-market/) : the United States & Canada
* [Europe Enterprise Application Market](https://www.inkwoodresearch.com/reports/europe-enterprise-application-market/) : United Kingdom, Germany, France, Spain, Italy & Rest of Europe
* [Asia Pacific Enterprise Application Market](https://www.inkwoodresearch.com/reports/asia-pacific-enterprise-application-market/) : China, India, Japan, South Korea, Australia & Rest of Asia Pacific
* Rest of World: Latin America, Middle East & Africa

In 2018, the majority of the market share was captured by North America in the global enterprise application market by geography. The dominance of North America is mainly because of the availability of adequate infrastructure & wide geographic dispersion of employees due to the increasing globalization. Further, global software vendors such as IBM Corp., Oracle, Microsoft Corp., SAP, HP, etc. offers enterprise applications in the region. Most organizations in the region are technologically advanced in terms of business processes. There is a conscious effort to build a cost-effective infrastructure & increase the flexibility of the system to comply with changing business environments. The region is home to many hybrid cloud vendors. This coupled with the increased adoption of cloud services in sectors such as healthcare, telecom & BFSI is driving the market growth.

On the flip side, the Asia Pacific is anticipated to be the fastest growing region in the market during the forecast period of 2019-2027. India, China & Japan are the leading countries that are contributing to the growth of the market. The rapid economic growth & the services industry are driving the market in this region. A growing number of Asian companies, particularly in India & China, are enjoying high growth figures & are expected to grow soon substantially. The Asia Pacific region has also been witnessing increasing investment in the IT sector. Enterprises across the Asia Pacific region are increasingly investing in the enterprise application solutions that help to minimize operational costs & can integrate with their other business processes such as CRM, business intelligence, supply chain management & other enterprise applications.

The report segments the ERP application market by solution, delivery model, & end-user. The commonly used solutions in the market are Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), Supply Chain Management (SCM), Business Intelligence (BI), Web Conferencing, Business Process Management (BPM), Content Management System (CMS), Enterprise Asset Management (EAM) & others. Other enterprise application solutions include Human Resource Management (HRM), Management Information System (MIS), Human Capital Management (HCM), Project & Portfolio Management (PPM) & others. The delivery model segment is further bifurcated into On-premise & cloud based. By end-user, the market is segmented into manufacturing & services, BFSI, healthcare, retail, government, aerospace & defence, telecommunications & others.

The global EA market is highly fragmented with the presence of many diversified international, regional & local players.

**Some of the key players operating in the global enterprise application market are:**

* Oracle
* International Business Machine (IBM) Corporation
* Microsoft Corporation
* SAP
* Hewlett Packard Enterprise
* Other companies

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**Key findings of the global enterprise application market;**

* Adoption of cloud & mobile-based applications & growing demand for real-time data access is fuelling growth in the global EA market.
* The on-premises segment is dominating the market due to minimal security concerns as compared to cloud based software.
* Key strategies analysed from the recent developments of the key companies operating in the market include, acquisitions, partnership, collaborations & product launch.
* Presently, retail is driving the demand for enterprise application as it helps organizations to focus more on core business activities rather than involvement in IT related activities.

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CHAPTER 3

ORGANIZATIONAL CHANGE AND CHANGE MANAGEMENT

## WHAT IS EFFECTIVE ORGANIZATIONAL CHANGE MANAGEMENT?

A change management plan can support a smooth transition and ensure your employees are guided through the change journey. The harsh fact is that approximately 70 percent of change initiatives fail due to negative employee attitudes and unproductive management behavior. Using the services of a professional change management consultant could ensure you are in the winning 30 percent.

In this article, **Pulse**Learning presents six key steps to effective organizational change management.

#### ****1. Clearly define the change and align it to business goals.****

It might seem obvious but many organizations miss this first vital step. It’s one thing to articulate the change required and entirely another to conduct a critical review against organizational objectives and performance goals to ensure the change will carry your business in the right direction strategically, financially, and ethically. This step can also assist you to determine the value of the change, which will quantify the effort and inputs you should invest.

Key questions:
• What do we need to change?
• Why is this change required?

#### ****2. Determine impacts and those affected.****

Once you know exactly what you wish to achieve and why, you should then determine the impacts of the change at various organizational levels. Review the effect on each business unit and how it cascades through the organizational structure to the individual. This information will start to form the blueprint for where training and support is needed the most to mitigate the impacts.

Key questions:
• What are the impacts of the change?
• Who will the change affect the most?
• How will the change be received?

#### ****3. Develop a communication strategy.****

Although all employees should be taken on the change journey, the first two steps will have highlighted those employees you absolutely must communicate the change to. Determine the most effective means of communication for the group or individual that will bring them on board. The communication strategy should include a timeline for how the change will be incrementally communicated, key messages, and the communication channels and mediums you plan to use.

Key questions:
• How will the change be communicated?
• How will feedback be managed?

#### ****4. Provide effective training.****

With the change message out in the open, it’s important that your people know they will receive training, structured or informal, to teach the skills and knowledge required to operate efficiently as the change is rolled out. Training could include a suite of micro-learning online modules, or a blended learning approach incorporating [face-to-face training](https://www.pulselearning.com/services/instructor-led-training/) sessions or on-the-job coaching and mentoring.

Key questions:
• What behaviors and skills are required to achieve business results?
• What training delivery methods will be most effective?

#### ****5. Implement a support structure.****

Providing a support structure is essential to assist employees to emotionally and practically adjust to the change and to build proficiency of behaviors and technical skills needed to achieve desired business results. Some change can result in redundancies or restructures, so you could consider providing support such as counseling services to help people navigate the situation. To help employees adjust to changes to how a role is performed, a mentorship or an open-door policy with management to ask questions as they arise could be set up.

Key questions:
• Where is support most required?
• What types of support will be most effective?

#### ****6. Measure the change process.****

Throughout the change management process, a structure should be put in place to measure the business impact of the changes and ensure that continued reinforcement opportunities exist to build proficiencies. You should also evaluate your change management plan to determine its effectiveness and document any lessons learned.

Key questions:
• Did the change assist in achieving business goals?
• Was the change management process successful?
• What could have been done differently?

Is your business going through a period of organizational change? **Pulse**Learning can assist in managing the change process to meet business goals and minimize the associated impacts. **Pulse**Learning is an award-winning global learning provider experienced in change management consultancy and developing engaging and innovative [eLearning](https://www.pulselearning.com/services/custom-eLearning/) and [blended training](https://www.pulselearning.com/services/blended-learning/) solutions.

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* We will always give you something back for doing this.
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**Communication**

This  is the act of conveying [meanings](https://en.wikipedia.org/wiki/Meaning_%28semiotics%29) from one [entity](https://en.wikipedia.org/wiki/Subject_%28philosophy%29) or [group](https://en.wikipedia.org/wiki/Organization) to another through the use of mutually understood [signs](https://en.wikipedia.org/wiki/Sign), [symbols](https://en.wikipedia.org/wiki/Symbol), and [semiotic](https://en.wikipedia.org/wiki/Semiosis) rules.

The main steps inherent to all [communication](https://en.wikipedia.org/wiki/Models_of_communication) are

1. The formation of communicative [motivation](https://en.wikipedia.org/wiki/Motivation) or [reason](https://en.wikipedia.org/wiki/Reason).
2. [Message](https://en.wikipedia.org/wiki/Message) composition (further [internal](https://en.wikipedia.org/wiki/Mind) or [technical](https://en.wikipedia.org/wiki/Technology) elaboration on what exactly to express).
3. Message encoding (for example, into [digital data](https://en.wikipedia.org/wiki/Digital_data), [written text](https://en.wikipedia.org/wiki/Written_text), [speech](https://en.wikipedia.org/wiki/Spoken_word), [pictures](https://en.wikipedia.org/wiki/Picture), [gestures](https://en.wikipedia.org/wiki/Gesture) and so on).
4. [Transmission](https://en.wikipedia.org/wiki/Transmission_%28telecommunications%29) of the encoded message as a sequence of signals using a specific [channel](https://en.wikipedia.org/wiki/Communication_channel) or [medium](https://en.wikipedia.org/wiki/Media_%28communication%29).
5. Noise sources such as natural forces and in some cases human activity (both [intentional](https://en.wikipedia.org/wiki/Intentional) and accidental) begin influencing the quality of signals propagating from the sender to one or more receivers.
6. [Reception](https://en.wiktionary.org/wiki/reception) of signals and reassembling of the encoded message from a sequence of received signals.
7. Decoding of the reassembled encoded message.
8. [Interpretation](https://en.wiktionary.org/wiki/interpretation) and [making sense](https://en.wikipedia.org/wiki/Nous) of the [presumed](https://en.wikipedia.org/wiki/Presumed) original message.

The [scientific study](https://en.wikipedia.org/wiki/Science) of communication can be divided into:

* [Information theory](https://en.wikipedia.org/wiki/Information_theory) which studies the quantification, storage, and communication of information in general;
* [Communication studies](https://en.wikipedia.org/wiki/Communication_studies) which concerns human communication;
* [Biosemiotics](https://en.wikipedia.org/wiki/Biosemiotics) which examines communication in and between living organisms in general.

The channel of communication can be [visual](https://en.wikipedia.org/wiki/Visual), [auditory](https://en.wikipedia.org/wiki/Sound), [tactile](https://en.wikipedia.org/wiki/Somatosensory_system)/[haptic](https://en.wikipedia.org/wiki/Haptic_communication%22%20%5Co%20%22Haptic%20communication) (e.g. [Braille](https://en.wikipedia.org/wiki/Braille) or other physical means), [olfactory](https://en.wikipedia.org/wiki/Olfactory), [electromagnetic](https://en.wikipedia.org/wiki/Electromagnetism), or [biochemical](https://en.wikipedia.org/wiki/Biochemistry).

Human communication is unique for its extensive use of [abstract language](https://en.wikipedia.org/wiki/Language). Development of [civilization](https://en.wikipedia.org/wiki/Civilization) has been closely linked with [progress](https://en.wikipedia.org/wiki/History_of_telecommunication) in [telecommunication](https://en.wikipedia.org/wiki/Telecommunication).

# Job Redesign - Meaning, Process and its Advantages

**Restructuring the elements including tasks, duties and responsibilities of a specific job in order to make it more encouraging and inspiring for the employees or workers is known as job redesigning. The process includes revising, analyzing, altering, reforming and reshuffling the job-related content and dimensions to increase the variety of assignments and functions to motivate employees and make them feel as an important asset of the organization. The main objective of conducting job redesigning is to place the right person at the right job and get the maximum output while increasing their level of satisfaction.**



### Job Redesign Process

* **Revising the Job Content:** Job redesigning process involves recollecting and revising job-related information to determine the inconsistency between person and the job.
* **Analyzing Job-related Information:** Once the job analyst is through with recollecting and revising the job content, analyzing the discrepancies is the next step. It is done to determine the hindrances in performing job-related tasks and duties and investigate why an employee is not able to deliver the expected output.
* **Altering the Job Elements:** The next step is to amend the job elements. It may include cut back on extra responsibilities or addition of more functions and a higher degree of accountability. The basic aim of altering the job content is to design a job in such a manner that encourages employees to work harder and perform better.
* **Reformation of Job Description and Specification:** After altering the job elements, a job analyst needs to reform the job description and specification in order to make sure that the worker placed at a particular place is able to deliver what is expected of him.
* **Reshuffling the Job-related Tasks and Duties:** Next is to reallocation of new or altered tasks and functions to employees. It may be done by rotating, enriching, enlarging and engineering the job. The idea is to motivate the performers while increasing their satisfaction level.

### Advantages of Job Redesigning



* **Enhances the Quality of Work-Life:** Job redesigning motivates the employees and enhances the quality of their work life. It increases their on-the-job productivity and encourages them to perform better.
* **Increases Organization’s and Employees’ Productivity:** Altering their job functions and duties makes employees much comfortable and adds to their satisfaction level. The unambiguous job responsibilities and tasks motivate them to work harder and give their best output. Not only this, it also results in increased productivity of an organization.
* **Brings the Sense of Belongingness in Employees:** Redesigning job and allowing employees to do what they are good at creates a sense of belongingness in them towards the organization. It is an effective strategy to retain the talent in the organization and encouraging them to carry out their responsibilities in a better fashion.
* **Creates a Right Person-Job Fit:** Job Redesigning plays an important role in creating a right person-job fit while harnessing the full potential of employees. It helps organization as well as employees in achieving their targets or goals.

Therefore, the purpose of job redesigning is to identify the task significance and skill variety available in the organization and reallocating the job-related tasks and responsibilities according to the specific skills possessed by an employee.

# CHAPTER 4

# POST IMPLEMENTATION ISSUES

Post-implementation review is the last step in your project cycle and usually involves an independent party, which can act more objectively in making their determinations about how the project was run. This provides the stakeholders of the project the confidence to know that the objectives of the project were met successfully.

## What Is Post-Implementation Issues ?

What are you going to do when the project’s over? Have a little celebration and move on to the next one, right? The project might be over, but the process continues.

That means that if you delivered a product or a service, the project might be completed, but you still need to check on the viability of the product or service. You might have achieved the goals you set out for the project, but what about the business needs that product or service was responding to?

Think of it as an ongoing step in your [project closure process](https://www.projectmanager.com/templates/project-closure-template). It’s a post-project review or post-implementation review, which is part of your project management responsibilities. It’s also a great way to identify project successes, deliverables, achievements and learn lessons from those parts of the project that didn’t work out as planned.

How do you practically apply a post-implementation review? How can you be sure that the project solved the problems it was created to address? Are there more benefits that can be unpacked from the project? What are the lessoned learned? To answer those and more questions, you need to follow a process.

## What Is the Post-Implementation Review Process?

To get the most out of your project, you want to employ a post-implementation review process. While this can start at any time after the initial project has been complete, starting it sooner than later makes sure that the project details are still fresh in the team’s mind.

While go get the most from the process, you’ll want to wait a while, after the project’s product or service has had time to exist in the real world. But at least start the process by beginning to list ideas and observations. You don’t want to wait until the participants are distracted by other projects.

### ****How to Conduct a Post-Implementation Review****

After the project’s deliverables have gone through at least one successful business cycle, you can get started on the review. There are [project closure checklists](https://www.projectmanager.com/blog/project-closure-checklist) that help frame the process. Here are some of the best practices for conducting the review include the following.

* **Trust.**To get the information you need, you want honesty from your participants. Therefore, tell them you want openness, without fear of retribution. The more critical and truthful their observations about the project are, the more successful the review.
* **Objectivity.**While you want honesty, you don’t want sour grapes or interpersonal issues clouding observations with bad feelings or to settle old scores. Seek objectivity, or as close to an impartial critique as can be expected.
* **Documentation.**Like all project management, you want to create a paper trail that illustrates how you went from Point A to Point B. By documenting the practices and procedures that created the successes in the project, you’ll be able to follow them again in future projects.
* **Hindsight.**As you develop a narrative as to what worked and what didn’t, what surprises arose during the project and how you dealt with them, understand that this hindsight vision can also help as you look forward towards new projects.
* **Improvement.**The point of this review process is not to blame individuals or teams for mistakes, but to learn from experience and then apply that knowledge to future projects. Stay focused on what’s next, rather than looking back as a means of applying guilt.

### Post-Implementation Review Methods

There are many ways to gather the information you want to determine what worked and what didn’t in your project. Here are some examples.

* **Gap Analysis.**This method of assessing how a plan differed from the actual application is always a powerful tool to see what benchmarks you met, and which you didn’t. You can start with your project charter and see how closely you adhered to your objectives. Look at your deliverables. Are they at a quality level you expected? When there are gaps discovered, figure out how they can be closed.
* **Project Goals.**Simply put, did you achieve the goals of your project? Are your deliverables functioning as planned? What was the error rate of the project? Can the deliverables adjust to changes in the market? How well-trained and supported are end-users? What controls and systems are in place and are they working? Are problems being addressed? Did you planned goal align with your result?
* **Stakeholders.**How satisfied are your stakeholders? Were users needs met? What effect did the project have on them? If there is dissatisfaction, why is that and what can you do to resolve it?
* **Cost.**How much did the project end up costing? What are the costs involved in operating the project’s result? Are the costs aligned to the benefits of the project? If this isn’t the case, how can you improve the cost next time?
* **Benefits.**Did the project achieve the benefits projected, and if not why and how can that be improved? What opportunities are there to further the results? Are there other changes you could apply to help maximize the project’s results?
* **Lessons.**Did the project’s deliverable, schedule and budget all meet expectations, and if not why? What were some of the issues that arose during the running of the project and how could they be avoided for the next project? What went well, and what can you learn from that experience?
* **Report.**Document what you learned from the review, whether there is actions needed to get the beneficial results you want and list the lessons you’ve learned, noting how the project can impact future projects, so you can build on success and avoid problems.

ProjectManager.com’s timesheet feature can help with your post-implementation review

### Report on Tasks and Their Successes

Speaking of tasks, you’ll want to take a deep dive into how tasks were executed. ProjectManager has tasks reports that reflect the status reports of your team. They show when a task was started, how long it took to complete, if there were dependencies, bottlenecks or delays that left teams unnecessarily idle.

Because with ProjectManager.com tasks also collect comments and supporting documents, they are a great resource for looking into the execution of individual tasks and see if there are ways to make the process more efficient. These reports will also help project managers pinpoint the team members who they’ll want to interview during the post-implementation review.

## Final Thoughts on Post-Implementation Review

There are many [ways to close a project](https://www.projectmanager.com/training/how-to-close-a-project), but too often the post-implementation review is neglected. It’s understandable, as a critical review can open some old wounds.

When you’re dealing with a lot of people and asking them for criticism of the project, there’s the potential to step on someone’s toes and create hurt feelings that can creates some unpleasant political issues within your team or organization. Therefore, be clear that what you’re interested in is not a personal attack, but a systemic overview of process and how everyone together can work towards improving it. That’s why it often helps to hire an independent party to collect the post-project data.

Don’t forget to review all the project documentation. It’ll help you better assess what worked and what didn’t, and provide you with an overview of the project and where there might have been unforeseen holes that you can then fill in with upcoming projects.

When you’re done with the review be completely transparent. Share your findings in a report and make sure everyone has access to these documents. If you want to, it can help if you present the information to the organization. Your goal is to create better projects, and that information isn’t proprietary. Everyone has a need to know.

**THE ENTERPRISE SYSTEM PROCESS**

The general theory of the system has become in recent decades as one of the most spectacular achievements in science and technology. Starting from the systemic approach to the enterprise based

 the triplet, *input (I )- process (P)* - *output (I),* the authors outlined four classes of problems with four types of questions of the triplet (I, P, E) as such (Table 1):

Table 1. The Enterprise System Processes

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| The Class of | System/Subsystem | Known | Unknown | Question |
| Problem |  |  |  |
| I | P | E | Elements | Elements |
|  |  |
| Modeling | I | ? | E | {I}, {E} | {P} | How? |
|  |  |  |
|  |  |  |  |
| Simulation | I | P | ? | {I}, {P} | {E} | What? |
|  |  |  |  |
| Optimization | ? | P | E | {P}, {E} | {I} | With? |
|  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |
|  |  |  |  |

The classes of problems to address systemic risk assessment of the company are:

* *Modeling* - describes the behavior of the analyzed system. Develops the situation that shows howhaving known {I} to obtain{E} desired.
* *Simulation* –analyzes the system generating its behavior. The question is, what happens with {E}when we know the input vector values under a constant process.
* *Optimization* - management of the system. It identifies the input vector values {I} to materializewith what it achieves the goals {E} in terms of a constant process.
* *Control* –maintaining th state of the system. The input vector values {I} are continuouslycontrolled which are subjected to a constant process and thus develop the goals {E}.

Modeling

risk assessment is performed in the enterprise as a system, compared to the contained departments and in the enterprise as a subsystem compared to the national economy. Modeling the enterprise system, in the authors’ view, is conform to the flow chart shown in the following figure .. The risk management cycle in the enterprise system is a cyclic and continuous process

Monte Carlo simulation is a method for iteratively evaluating a deterministic model using sets of random numbers as inputs. This method is often used when the model is complex, nonlinear, or involves more than just a couple uncertain parameters. Monte Carlo simulation is often used in business for risk and decision analysis, to help make decisions given uncertainties in market trends, fluctuations, and other uncertain factors.

control

communication and control are essential elements in the management process. Corporate communication for business sustainability, corporate communication component that integrates communication with stakeholders relevant to the organization, has as the central theme the growth prospects of sustainability of the organization in the context of sustainable development.

ORDER PROCESING

Order processing starts with the receipt of an order from a customer. It may be obtained by a salesperson, be telephoned in, or arrive by mail. Regular buyers and sellers are often linked electronically. As the buyer’s inventories become low, an electronic purchase order is generated. It is communicated to the seller, whose computers will determine that the goods are available, and the seller will inform the buyer, still using electronic methods, that the order will be filled and shipped by a certain date.

The first step in most order-processing systems is to verify the accuracy of the order—that is, to make certain that the document contains no internal errors that might mean the customer was uncertain about what he or she was ordering. The next step is to verify the customer’s credit or ability to pay. After determining from which inventory point to ship the goods, instructions are sent to that warehouse to fill the order. At the warehouse an “order picking list” is given to a warehouse worker, who assembles the specific order. In the packing area, it is checked and packed for shipment, and the package is labeled.

The traffic manager prepares the [transportation](https://www.britannica.com/technology/transportation-technology) documents and notifies a carrier to pick up the shipment. An invoice for the goods is sent to the buyer, and various inventory and financial records are updated. The shipper uses the term “order cycle” to indicate the span of time between receiving and shipping the order. The buyer uses the phrase to indicate the span of time between placing and receiving the order.

## [Packaging](https://www.britannica.com/technology/packaging)

Two purposes are served by packaging: promoting the product and protecting it. The promotional effort is to make the product stand out on a store shelf and say “take me home” to the customer walking down the store aisle. The protective function is to protect the product and, in some instances, to keep the product from damaging surrounding items. Retail packages of food and drugs must be tamperproof to the extent that the consumer can determine whether the package has been tampered with. Choice of packaging [materials](https://www.britannica.com/science/recycling) also is influenced by concerns for environmental protection. Containers that can be recycled, or are made of recycled materials, are enjoying increased demand. Many local and state laws encourage the recycling of beverage containers.

Most retail products are packed in a [hierarchy](https://www.merriam-webster.com/dictionary/hierarchy) of packaging. The concept can be compared to building blocks—the smallest size is the shelf container that the customer buys and takes home. These containers fit into boxes that are about one cubic foot in dimension and are unloaded, item by item, by the person stocking the shelves. These boxes in turn are handled on pallets, wooden platforms about 6 inches high and 40 inches by 48 inches along the top.

Pallets are loaded two or four boxes high and moved by mechanical devices known as [forklift trucks](https://www.britannica.com/technology/forklift-truck), tractorlike vehicles with two lifting prongs in front that fit into slots in the pallet and then lift it. Loaded pallets are moved by forklift trucks into and out of warehouses, railcars, and trucks, Pallet loads are also called “unit loads” and are the most common way of handling packaged freight. Goods that are not packaged are often handled in bulk. Examples are iron ore, coal, and grains that move in trainload, truckload, and shipload lots. They are loaded, unloaded, and transferred by large mechanical devices. Liquids such as petroleum are pumped through pipelines or carried in

## PURCHASING SYSTEM

## What Is a Purchasing System?

A purchasing system is a process for buying products and services encompassing purchase from requisition and purchase order through product receipt and payment. Purchasing systems are a key component of effective [inventory management](https://www.investopedia.com/terms/i/inventory-management.asp) in that they monitor existing stock and help companies determine what to buy, how much to buy and when to buy it. Purchasing systems may be based on economic order quantity models.

Purchasing systems play an essential role in controlling a company's cash outflows in that they ensure that only necessary purchases are made and that they are made at reasonable prices.

## Understanding Purchasing Systems

Purchasing systems makes the purchasing process more efficient and help companies reduce supply costs. Computerized purchasing systems can cut companies' administrative costs, shorten the length of the purchase cycle and reduce human error, thereby minimizing shortages. They can also simplify order tracking and make it easier to manage purchasing budgets by quickly creating expenditure reports.

Purchasing systems play an essential role in controlling a company's cash outflows. They ensure that only necessary purchases are made and that they are made at reasonable prices. Purchasing systems make use of outputs from production planning systems. These outputs include input amounts needed in the production process.

### KEY TAKEAWAYS

* A purchasing system encompasses the process of purchasing from requisition through product receipt and payment.
* Purchasing systems maintain efficiency by ensuring that only needed purchases are made and that they are effected at reasonable prices.
* Purchasing systems are augmented through automated systems like purchase-to-pay and economic models such as economic order quantity.

## Economic Order Quantity and Purchasing

The [economic order quantity](https://www.investopedia.com/terms/e/economicorderquantity.asp) (EOQ) model is used in inventory management by calculating the number of units a company should purchase for its inventory with each batch order to reduce the total costs of its inventory. The costs of its inventory include holding and setup costs.

The EOQ model seeks to ensure that the right amount of inventory is ordered per batch so a company does not have to make orders too frequently and there is not an excess of inventory sitting on hand. It assumes that there is a trade-off between inventory holding costs and inventory setup costs, and total inventory costs are minimized when both setup costs and holding costs are minimized.

## Purchase-to-Pay

[Purchase-to-Pay](https://www.investopedia.com/terms/p/purchasetopay.asp) is an integrated system that fully automates the goods and services purchasing process for a business. The system gets its name because it handles all aspects of the acquisition from the purchase of goods to the payment of the vendor. The Purchase-to-Pay system begins with requisitioning, then proceeds to [procurement](https://www.investopedia.com/terms/p/procurement.asp), and ends with payment. Purchase-to-Pay seeks to optimize the purchasing process, thereby benefiting the organization through better financial controls and efficiency. This streamlined, integrate

**PRODUCTION LOGISTICS**

From procurement to manufacturing operations, DB Schenker's production logistics services can reduce costs and streamline your processes.

DB Schenker is a leader in the logistics industry. We have the experience and expertise to optimize your supply chain from the procurement stage to the actual manufacturing operations.

Whether you need greater control and visibility of your production supply, or you want to optimize your sequenced line side deliveries, our procurement and manufacturing logistics solutions can help.

DB Schenker’s **Production Logistics** fills the gap between your suppliers’ operations and your company’s manufacturing sites. We’ll handle consolidating supplier materials close to your supply points using our own — or your preferred — expert international transportation network. You’ll save in logistics costs because we reduce safety stock, cycle times, and excess inventory. We make your suppliers feel as though they’re right next door.

Our **Production Logistics** covers all activities connected to your supply of manufacturing operations – from kitting and subassembly, to JIT and JIS delivery. We focus on keeping your supply chain lean – providing just the right amount of supplies for on-time manufacture. Using the latest techniques and technology, we manage all aspects of supply for your manufacturing operations.

Our Production Logistics Services:

* Material consolidation at origin
* Order management
* Inbound transportation
* VMI services
* Supplier Park Solutions
* Line-side feeding
* Order sequencing
* Quality assurance
* Kitting and pre-production preparation
* Un-packaging/packaging services

### Benefits

* Reduced Logistics Costs: Avoid rush shipments and low/surplus inventory
* Streamlined Procurement: Get control and transparency with a sequenced, faster flow of inbound goods
* Real-time Data: See real-time inventory level to help make smart reordering decisions
* Cut Distribution Cost: Our Value-added and Quality Control/Assurance services allow you to reduce the risk of shipping unsuitable stock.
* Supervise Outsourced Production: Manage your production and flow of goods

## ACCOUNTING

## Introduction to Accounting Basics

This explanation of accounting basics will introduce you to some basic accounting principles, accounting concepts, and accounting terminology. Once you become familiar with some of these terms and concepts, you will feel comfortable navigating through the explanations, quizzes, quick tests, and other features of AccountingCoach.com.

Some of the basic accounting terms that you will learn include revenues, expenses, assets, liabilities, income statement, balance sheet, and statement of cash flows. You will become familiar with accounting debits and credits as we show you how to record transactions. You will also see why two basic accounting principles, the revenue recognition principle and the matching principle, assure that a company's income statement reports a company's profitability.

In this explanation of accounting basics, and throughout all of the free materials and the PRO materials—we will often omit some accounting details and complexities in order to present clear and concise explanations. This means that you should always seek professional advice for your specific circumstances.

***Did you know?*** To make accounting even easier to understand, we created a collection of premium materials called ***[AccountingCoach PRO](https://www.accountingcoach.com/pro/%22%20%5Co%20%22PRO%20Features)***. Our PRO users get lifetime access to our visual tutorials, seminar videos, cheat sheets, flashcards, quick tests, quick tests with coaching, business forms, and more.

[Confused? Send Feedback](https://www.accountingcoach.com/accounting-basics/explanation)

## A Story for Relating to Accounting Basics

We will present the basics of accounting through a story of a person starting a new business. The person is Joe Perez—a savvy man who sees the need for a parcel delivery service in his community. Joe has researched his idea and has prepared a business plan that documents the viability of his new business.

Joe has also met with an attorney to discuss the form of business he should use. Given his specific situation, they concluded that a corporation will be best. Joe decides that the name for his corporation will be Direct Delivery, Inc. The attorney also advises Joe on the various permits and government identification numbers that will be needed for the new corporation.

Joe is a hard worker and a smart man, but admits he is not comfortable with matters of accounting. He assumes he will use some accounting software, but wants to meet with a professional accountant before making his selection. He asks his banker to recommend a professional accountant who is also skilled in explaining accounting to someone without an accounting background. Joe wants to understand the financial statements and wants to keep on top of his new business. His banker recommends Marilyn, an accountant who has helped many of the bank's small business customers.

Joe seems puzzled by the term transaction, so Marilyn gives him five examples of transactions that Direct Delivery, Inc. will need to record:

1. Joe will no doubt start his business by putting some of his own personal money into it. In effect, he is buying shares of Direct Delivery's common stock.
2. Direct Delivery will need to buy a sturdy, dependable delivery vehicle.
3. The business will begin earning fees and billing clients for delivering their parcels.
4. The business will be collecting the fees that were earned.
5. The business will incur expenses in operating the business, such as a salary for Joe, expenses associated with the delivery vehicle, advertising, etc.

With thousands of such transactions in a given year, Joe is smart to start using accounting software right from the beginning. Accounting software will generate sales invoices and accounting entries simultaneously, prepare statements for customers with no additional work, write checks, automatically update accounting records, etc.

By getting into the habit of entering all of the day's business transactions into his computer, Joe will be rewarded with fast and easy access to the specific information he will need to make sound business decisions. Marilyn tells Joe that accounting's "transaction approach" is useful, reliable, and informative. She has worked with other small business owners who think it is enough to simply "know" their company made $30,000 during the year (based only on the fact that it owns $30,000 more than it did on January 1). Those are the people who start off on the wrong foot and end up in Marilyn's office looking for financial advice.

If Joe enters all of Direct Delivery's transactions into his computer, good accounting software will allow Joe to print out his financial statements with a click of a button. In Parts 2 through 7 Marilyn will explain the content and purpose of the three main financial statements:

1. Income Statement
2. Balance Sheet
3. Statement of Cash Flows

**PLANNING CONTROL**

Following are the important activities involved in program plan preparation and program control:

|  |  |
| --- | --- |
| Program plan preparation activities | Program control activities |
| * Processing a large amount of information
* Extensive consultation with stakeholders
* Preparing the program plan
 | * Provide supporting activities to refine and improve the delivery
* Reduce the impact of ambiguity and brings certainty
* Justify the continuance of the program
 |

In case of the Program plan preparation activities, Preparing a program plan involves processing a large amount of information. This information comes from external sources like lessons learned from previous programs.

The stakeholders including management groups need to go through an extensive consultation regarding this information to identify the right path for a program. The final program plan is a result of multiple iterations.

In the beginning, the first iterations give ambiguous plans but with progressive refining and input from other information baselines, the program plan improves. Finally, the program plan is prepared.

In case of Program control activities, Program control provides supporting activities and processes that run throughout the lifecycle of a program to refine and improve delivery of the program.

It helps reduce the impact of ambiguity and bring certainty whenever possible. It justifies the continuance of the program by ensuring that benefits outweigh expenses. Also, the management and control of the program should learn from the experience in previous tranches.

In the next section, we will discuss the program plan.

Program Plan

The program plan is the key control document for a program which forms a complete picture of how the program is going to work. Following are the functions of a program plan:

* Program plan has to ensure that there is a clear understanding of the program objectives mentioned in the vision statement.
* The blueprint should have the ability to achieve the objectives and the same is confirmed in the program plan. Benefits should be linked to projects and tranches, and similarly, the projects should contribute towards the benefits.
* Program plan gets inputs from various documents.
* The inputs from resources, on their capacity and skills, form a part of the program plan.
* The stakeholder needs regarding appropriate information also form a part of the program plan.
* The risks and issues as well as identifying the roles of responsible persons should form a part of the program plan.
* The timetable in the program plan identifies the dependencies and interfaces between projects and benefits.
* The program plan lists the milestones to ensure that the progress is monitored.
* It is important to ensure that transition is smooth by considering the cultural aspects and acceptance of teams involved in change.
* A number of governance strategies include associated plans and it is perfectly acceptable to integrate these plans into the program plan for simplicity, wherever appropriate.
* Developing and maintaining the program plan requires on-going coordination of all project plans.
* The focus of program planning is on the interdependencies between projects and any dependencies on external factors outside the control of the program.

**CHAPTER-5**

**HUMAN RESOURCE FUNCTIONS**

**Significant Functions of Human Resource Management**

Human Resource Management is the effective use of employees in an organization. It is designed to maximize the performance level of the employees. It is a department that looks after a plethora of functions. Besides recruiting and firing, it has a plethora of responsibilities to fulfill.

**Here are a few significant functions of HRM-**

# Recruitment And Selection

Recruitment is the process of attracting, shortlisting, selecting and appointing the candidates for a job role. Hiring potential candidates by assessing their skills is the primary function of Human Resource Management. Before taking the step of recruitment and selection, the companies must consider the process of staffing as an important step. They should analyze the number of employees needed and work on the budget. They should then move forward to recruit and select the employees.

**Orientation**

Orientation is one of the most important processes of human resource management. It is vital for the adjustment of employees in the new environment. The purpose of the orientation process is to familiarize the employees with the working of the organization by introducing them to the long-term and short-term goals. It instills the brain of an employee with the goals and objectives of the company and how can they serve the company’s growth. Also, it helps the employees to know their job description, duties and job role.

# Maintaining Good Working Conditions

Good working conditions attract all the employees. Good working environment also includes motivating the employees. Lack of motivation makes the employees unproductive. They are not able to provide fruitful results if they are not encouraged and appreciated. There are chances that an employee will leave the company if the workplace and work environment is not impressive enough. One of the important factors that the HR department must consider is the financial and non-financial benefits. Employee welfare should also be taken into account.

# Managing Employee Relations

Employee relations boost confidence in the employees. The process is crucial for human resource management as it motivates the employees and helps them emerge as victors. Organizing activities that help to know an employee at the personal and professional front is the way to promote good employee relations. The organization will be successful when the employer and the employee gets to enjoy a healthy relationship.

# Training And Development

Another important function of the human resource development is Training and Development. It prepares the employees to perform their best by undergoing educational and training programs. It instills the learning ability in the employees and introduces them to the new techniques and tools. This increases their work efficiency. [Human resource developmen](http://www.besthrcertification.org/)t aims at creating a good work culture.

HR professionals have a lot of responsibilities on their shoulders. Without certain skills and knowledge, they will not be able to carry out the above-mentioned functions. Therefore, HR professionals must be trained enough to prove their worth. Most of the organizations hire HR professionals who are certified. Certifications prove that the HR professional is geared up to showcase his skills in the work. Certifications provide credibility and recognition to the HR professional and give them the ability to take the decisions on their own.

Make the best use of the employees by undergoing the above-mentioned important functions!

**HOW ENTERPRISE SYSTEM SUPPORT BUSINESS**

Enterprise systems integrate the firm’s key business processes in sales, production, finance, logistics, and human resources into a single software system so that information can flow throughout the organization, improving coordination, efficiency, and decision making.

Enterprise systems (ES) are software packages that include enterprise resource planning (ERP) software and such related packages as customer relationship management (CRM), and supply chain management (SCM) from vendors such as SAP, Oracle.

These systems help create a more uniform organization in which everyone uses similar processes and information, and measures their work in terms of organization-wide performance standards.

The coordination of the firm’s key business processes allows the firm to respond more rapidly to customer demands.

According to Aldi annual report, (10K report 2009) which provides recommendations on how Aldi can achieve more results by diversifying into new markets as well as retaining loyalty with their existing customer base. Scope: In recent months the retailer is looking to enhance its image and perception by developing a stronger focus on quality of its products, as well as its additional in-store services. (Aldi, 2009) Furthermore, Aldi has expansion plans in opening new stores in higher, more upmarket locations and to expand its product ranges to attract a higher-earning clientele (Aldi, 2009).

Furthermore, the report also focuses on potential asset-lead and market-lead strategies in order to build upon and to communicate their core competencies through innovative marketing techniques, and, in turn, to achieve higher customer loyalty.

## Benefits from enterprise systems

Benefits from enterprise systems are realized into the five main dimensions: operational, managerial, strategic, infrastructure, and organizational. Their benefits categories are discussed in more depth below and are used in the Results section to analyze benefits in all five dimensions.

Operational benefits

Operational benefits are usually reflected in cost reduction, cycle time reduction, productivity improvement, quality improvement, and improved customer service.

Managerial benefits

Improved management decision-making, e.g., improved allocation and control of organization’s resources, monitoring of operations, performance improvement and support for strategic decisions.

Strategic benefits

Support for strategic action such as business growth, alliance, globalization, innovation, product differentiation, and external linkages.

IT Infrastructure benefits

Reduced IT costs, increased capability for quick and economic implementation of new applications, and enablement of greater organizational flexibility.

Organizational benefits

Consequences of ES use that make an organization more focused and cohesive, better at learning, and better at executing its chosen strategies. Evidence of organizational benefits includes increased employee morale and satisfaction, greater employee accountability, and the transformation of users from doers to planners with broadened skills.

Benefits from enterprise systems are perceived differently by different stakeholders. Strategic benefits appear to flow from a broad range of activities in internal and external areas, and are described in terms of general competitiveness, product strategies, and other strategic capabilities. The most accurate informants about these benefits are senior managers such as chief executive officers, since they have a clearer understanding of the competitive position of their organizations. On the other hand, senior IT managers appear to be the most reliable to ask about IT infrastructure benefits. They can speak with authority about IT-related benefits. Finally, organisational benefits are mainly reflected in individual attitudes (e.g. employee morale) and interpersonal interactions. The best informed people to ask about organizational

Benefits are again business managers since they have an encompassing view of how the adoption of ES has affected employee morale and the sense of purpose within individual parts of the organisation.

Operational Benefits

Business managers who know about business value chain processes, and business stakeholder support activities

Managerial Benefits

Business managers who know about different kinds of resources affected, and different levels of decision-making

Strategic Benefits

Senior managers who know about achievement of the various strategic goals

Organizational Benefits

Business managers who know about individual attitudes and interpersonal interactions

Barriers and conditions for the implementation of Enterprise Systems

Enterprise System implementation of the three elements of success is: environmental mature management maturity, as well as the guarantee of capital throughout the implementation of Enterprise System

Before considering the implementation of Enterprise System, companies should consider their own management infrastructure is appropriate. In fact the implementation of Enterprise System the due to the change management concepts and operational practices, business-and low-level personnel in the hardest hit. Internal processes optimization and fairness in the Enterprise System implementation process is the biggest problem encountered. In addition, this does not mean that the implementation of Enterprise System will be able to improve the management level. If management has become a disease, then, Enterprise System can only fuse the real medicine is a business management strategy and internal management staff to enhance the management level.

Financial barriers should in fact be the biggest barrier. The implementation of Enterprise System prone to millions, tens of millions, for small and medium enterprises, and ultimately to create value or by products, Enterprise System, at best, is an information platform. Enterprise System in the short term, apart from helping to cultivate and to help staff the concept, the negative returns. As for the long-term interests, for the efficiency gains and cost reduction, but also fundamentally corporate governance will produce fundamental changes in the structure of the self-optimization path.

Organizations investing in Enterprise System need to understand that an assessment of benefits at one point in time does not represent the final gain or loss of their investment. No benefits at one time, does not mean no benefits for good. Many benefits may be found at a later stage, in a range of different dimensions. The evaluation of Enterprise System investment needs to take a longitudinal view with different types of benefits planned at different stages.

Enterprise System managers need to understand that further benefits in all dimensions are possible. A one-time gain may not mean an all-time win. Benefits realized at one time point can decrease later. Businesses must continuously evaluate current use and plan for future growth in all dimensions. It is therefore important for business managers to adopt a holistic view of the benefit realization and to manage the different effects in the different dimensions.

Management practices because so many other differences, including company size, industry differences and cultural effects, might have caused the different outcomes.

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