

# Unit-V

## **Contemporary Management Practice**

# Basic Concepts of MIS

**MIS** is the use of information technology, people, and business processes to record, store and process data to produce information that decision makers can use to make day to day decisions. The full form of MIS is **Management Information Systems**. The purpose of MIS is to extract data from varied sources and derive insights that drive business growth.

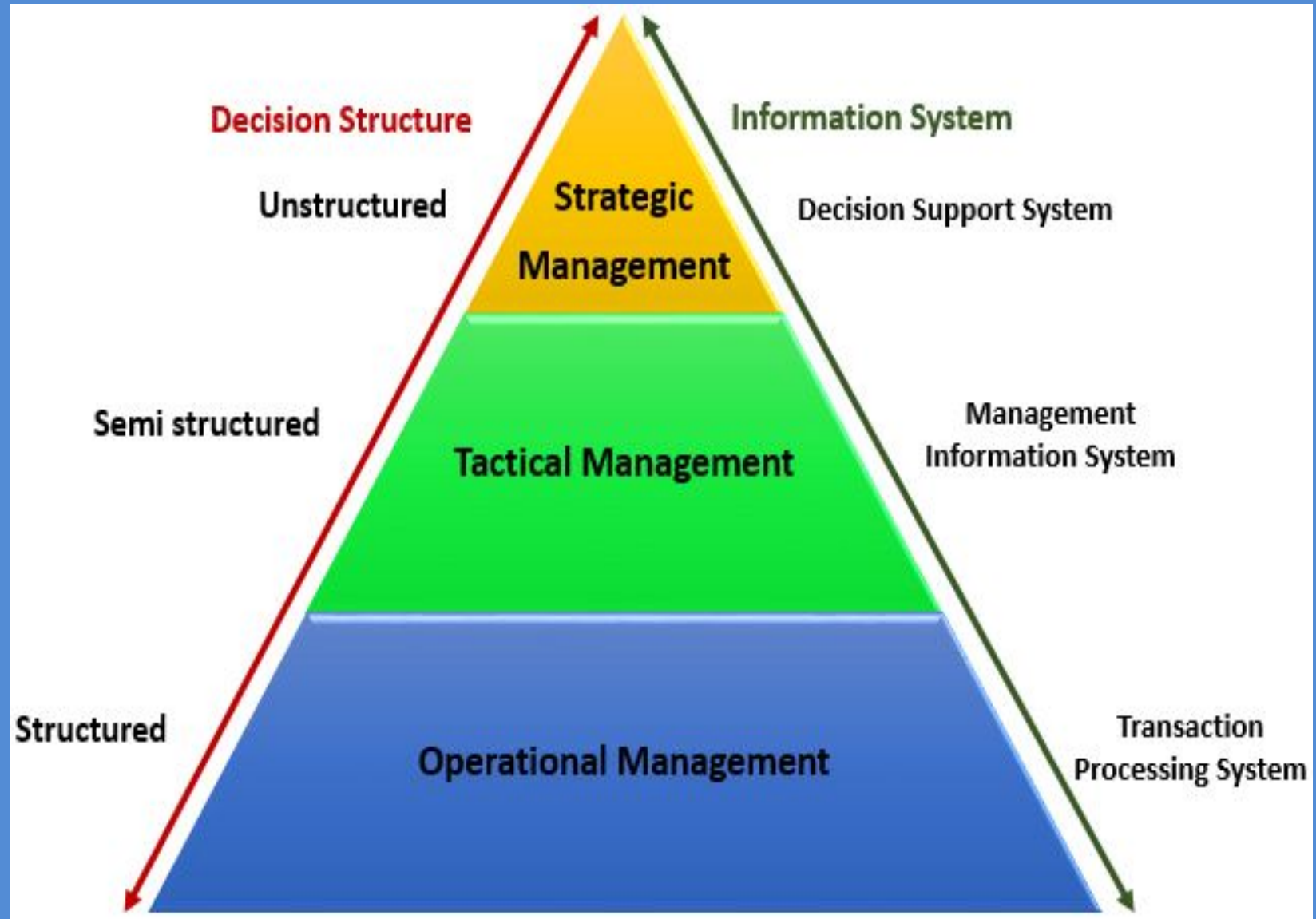
# The need for MIS

- **Decision makers need information to make effective decisions.** Management Information Systems (MIS) make this possible.
- **MIS systems facilitate communication within and outside the organization** – employees within the organization are able to easily access the required information for the day to day operations. Facilitates such as Short Message Service (SMS) & Email make it possible to communicate with customers and suppliers from within the MIS system that an organization is using.
- **Record keeping** – management information systems record all business transactions of an organization and provide a reference point for the transactions.

# Components of MIS

- **People** – people who use the information system
- **Data** – the data that the information system records
- **Business Procedures** – procedures put in place on how to record, store and analyze data
- **Hardware** – these include servers, workstations, networking equipment, printers, etc.
- **Software** – these are programs used to handle the data. These include programs such as spreadsheet programs, database software, etc.

# Types of Information Systems



# Summary

- MIS stands for Management Information System. It is a collection of people, procedures, data, and information technology that aids managers to make informed decisions.
- Computerized information systems are more efficient compared to manual information systems. Manual information systems are cheaper compared to computerized information systems.
- Transaction processing systems (TPS) are by operational staff to record day to day business transactions, and they are used to make structured decisions
- Management Information Systems (MIS) are used by middle-level managers to make semi-structured decisions
- Decision Support Systems are used by top level managers, and they help top level managers to make unstructured decisions.

# Materials Requirement Planning

Material requirements planning (MRP) is a system for calculating the materials and components needed to manufacture a product. It consists of three primary steps: taking inventory of the materials and components on hand, identifying which additional ones are needed and then scheduling their production or purchase.

MRP is one of the most widely used systems for harnessing computer power to automate the manufacturing process.

# MRP basics

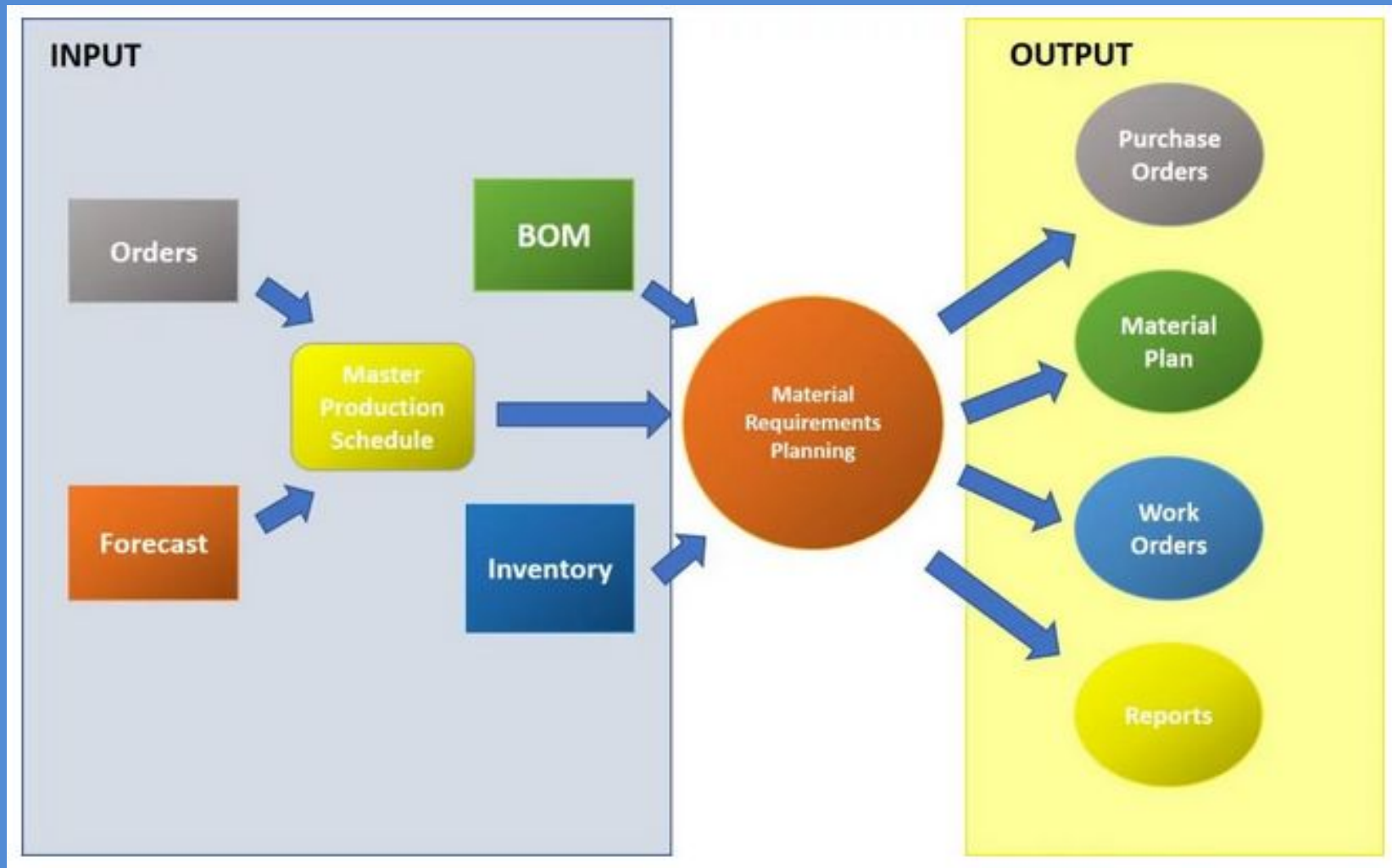
- MRP uses information from the bill of materials (a list of all the materials, subassemblies and other components needed to make a product, along with their quantities), inventory data and the master production schedule to calculate the required materials and when they will be needed during the manufacturing process.
- MRP is useful in both discrete manufacturing, in which the final products are distinct items that can be counted -- such as bolts, subassemblies or automobiles -- and process manufacturing, which results in bulk products -- such as chemicals, soft drinks and detergent -- that can't be separately counted or broken down into their constituent parts.



# Objectives of material requirements planning

- The primary objective of MRP is to make sure that materials and components are available when needed in the production process and that manufacturing takes place on schedule.
- Effective inventory management and optimization is another goal of MRP. While MRP is designed to ensure adequate inventory at the required times, a company can be tempted to hold more inventory than is necessary, thereby driving up inventory costs.
- MRP can also improve manufacturing efficiency by using accurate scheduling to optimize the use of labour and equipment.

# MRP System



**The calculations that MRP performs are based on the data inputs. As shown in the diagram above, these data inputs include:**

- **Customer Orders:** This refers to the specific information you receive from customers and includes one-offs and regular ordering patterns.
- **Forecast Demand:** This is a prediction from the marketplace about how much probable demand there will be for a product or service. It is based on historic accounting and current trend analysis.
- **Master Production Schedule (MPS):** Both forecast demand and customer orders feed into the master production schedule. The MPS is a plan that a company develops for production, staffing, or inventory. It is the production future plan that includes the quantities you need to produce the products in a specified time period. It also includes inventory costs, production costs, inventory information, supply, lot size, lead time, and development capacity.
- **Bill of Materials (BOM):** Also called a product structure file, this includes the details and quantities of the raw materials, assemblies, and components that make up each end product.
- **Inventory Records:** These are the raw materials and the completed products that you either have on hand or have already ordered.

**After MRP receives the input, it generates the output. There are four main outputs. These include:**

- **Purchase Orders (PO):** This is the recommended purchasing schedule that includes the order you give to suppliers to send the materials. The PO includes a schedule with quantities and start and finish dates to meet the MPS.
- **Material Plan:** This details the raw materials, assembly items, and component needs to make the end products with quantities and dates. We recommend that you use attribute settings to set the time fences and to firm orders.
- **Work Orders:** This details the work that goes into producing the end product, including which departments are responsible for what part, what materials are necessary, and what the start and end dates are.
- **Reports:** MRP generates primary and secondary reports. The primary reports include all three of the above — those that deal with production and inventory planning and control. Secondary reports are those that detail things, such as performance control, exception data (e.g., errors or late orders), deviations, and predictors of future inventories and contracts.

# Just-in-Time

The **Just-in-Time** or **JIT** is an inventory management system wherein the material, or the products are produced and acquired just a few hours before they are put to use. The Just-in-time system is adopted by the firms, to reduce the unnecessary burden of inventory management, in case the demand is less than the inventory raised.

# Objectives

The main objective of Just-in-time is to increase the inventory turnover and reduce the holding cost and any other costs associated with it. This concept is again popularized by the Japanese firms, who place an order for the material, the same day the product is to be produced. Others Include:

- Zero inventory
- Zero breakdowns
- 100% on time delivery service
- Elimination of non-value added activities
- Zero defects.

# The benefits of a JIT system

- **Reduction in the order to payment timeline;** cash, as they say is king in business. Many businesses will suffer with cash flow problems as they will often have to purchase large amounts of raw materials prior to manufacturing and subsequent payment by the customer. Often this gap is many months. Through implementing JIT you are able to considerably reduce that time period.
- **Reduction in Inventory costs;** one of the main aims with any JIT implementation is to improve stock turns and the amount of stock being held. Personal experience has seen reductions of more than 90% stock in some industries. Along with the reduction in the stock come many other associated benefits.
- **Reduction in space required;** by removing large amounts of stock from the system and moving processes closer together we will often see a significant reduction in the amount of floor space being used. Results from 100's of projects run within companies in the UK through the Manufacturing Advisory Service saw average reductions of 33% for simple 5 day implementation projects.
- **Reduction in handling equipment and other costs;** if you don't have to move large batches there is less need for complex machinery to move them and all of the associated labor and training.

- **Lead time reductions;** one of the most significantly impacted areas is that of the time it takes for products to flow through the process. Instead of weeks or months most JIT implementations result in lead times of hours or a few days.
- **Reduced planning complexity;** the use of simple pull systems such as Kanban, even with your suppliers, can significantly reduce the need for any form of complex planning. With many implementations the only planning is the final shipping process.
- **Improved Quality;** the removal of large batch manufacturing and reduction in handling often results in significant quality improvements; often in the region of 25% or more.
- **Productivity increases;** to achieve JIT there are many hurdles that must be overcome with regards to how the process will flow. These will often result in productivity improvements of 25% upwards.
- **Problems are highlighted quicker;** often this is cited as being a negative aspect of JIT in that any problems will often have an immediate impact on your whole production process. However this is the perfect way to ensure that problems are highlighted and solved immediately when they occur.
- **Employee empowerment;** one requirement of JIT as with most other aspects of Lean manufacturing is that employees are heavily involved in the design and application of your system.



# Total quality management (TQM)

Total quality management (TQM) describes a management approach to long-term success through customer satisfaction. In a TQM effort, all members of an organization participate in improving processes, products, services, and the culture in which they work.

# Elements of TQM

- Customer-focused
- Total employee involvement
- Process-centred
- Integrated system
- Strategic and systematic approach
- Continual improvement
- Fact-based decision making
- Communications

# Benefits of Total Quality Management

- Strengthened competitive position
- Adaptability to changing or emerging market conditions and to environmental and other government regulations
- Higher productivity
- Enhanced market image
- Elimination of defects and waste
- Reduced costs and better cost management
- Higher profitability
- Improved customer focus and satisfaction
- Increased customer loyalty and retention
- Increased job security
- Improved employee morale
- Enhanced shareholder and stakeholder value
- Improved and innovative processes

# Strategies for Implementing TQM Systems

## Strategy 1: The TQM element approach

The TQM element approach takes key business processes and/or organizational units and uses the tools of TQM to foster improvements. This method was widely used in the early 1980s as companies tried to implement parts of TQM as they learned them. Examples of this approach include quality circles, statistical process control, Taguchi methods, and quality function deployment.

## Strategy 2: The guru approach

The guru approach uses the teachings and writings of one or more of the leading quality thinkers as a guide against which to determine where the organization has deficiencies. The organization makes appropriate changes to remedy those deficiencies. For example, managers might study Deming's 14 points or attend the Crosby College. Afterward, they would work on implementing the approach learned.

### **Strategy 3: The organization model approach**

In this approach, individuals or teams visit organizations that have taken a leadership role in TQM and determine their processes and reasons for success. They then integrate these ideas with their own ideas to develop an organizational model adapted for their specific organization. This method was used widely in the late 1980s and is exemplified by the initial recipients of the Malcolm Baldrige National Quality Award.

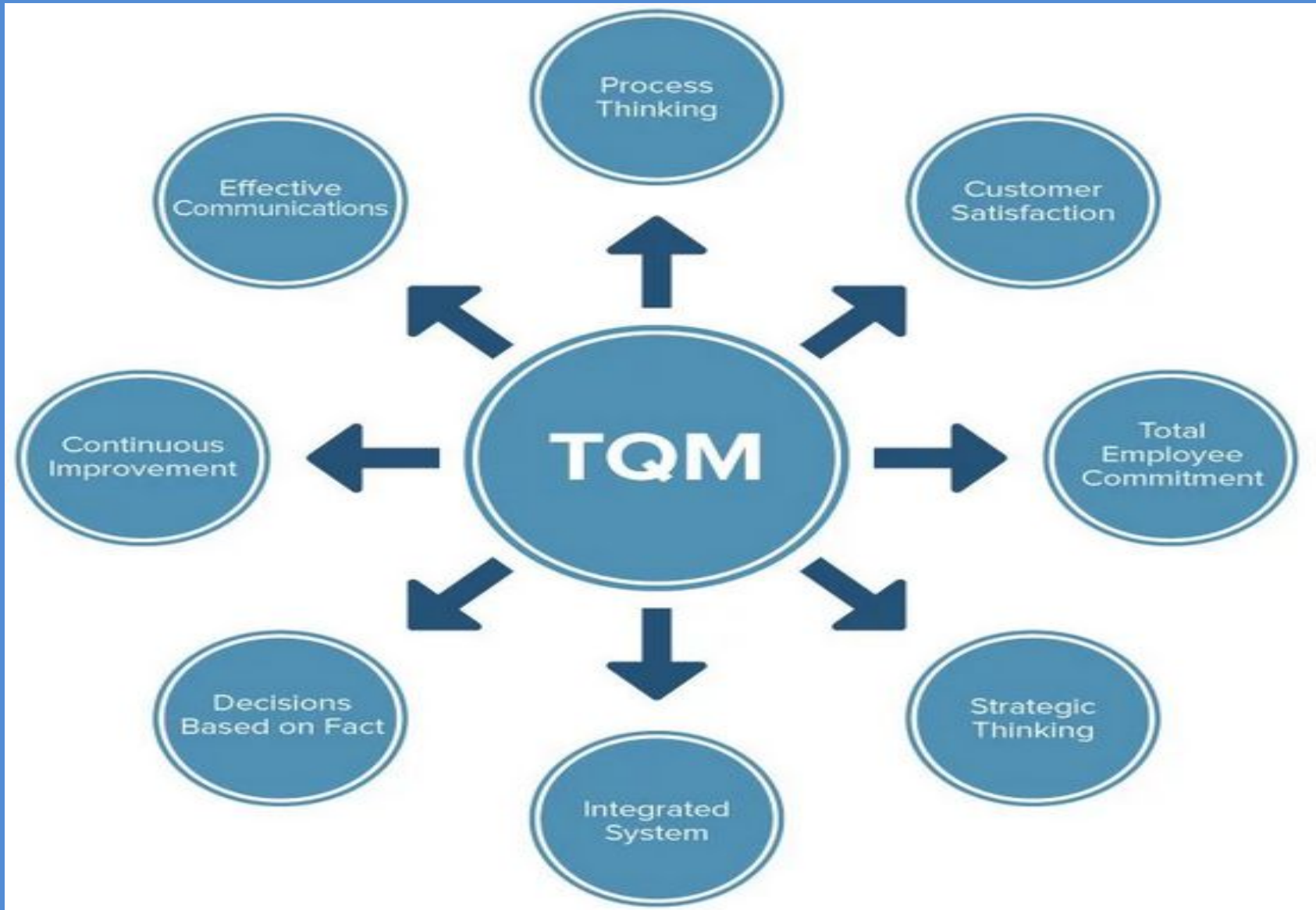
### **Strategy 4: The Japanese total quality approach**

Organizations using the Japanese total quality approach examine the detailed implementation techniques and strategies employed by Deming Prize-winning companies and use this experience to develop a long-range master plan for in-house use. This approach was used by Florida Power and Light—among others—to implement TQM and to compete for, and win, the Deming Prize.

### **Strategy 5: The award criteria approach**

When using this model, an organization uses the criteria of a quality award (e.g., the Deming Prize, the European Quality Award, or the Malcolm Baldrige National Quality Award), to identify areas for improvement. Under this approach, TQM implementation focuses on meeting specific award criteria.

# TQM

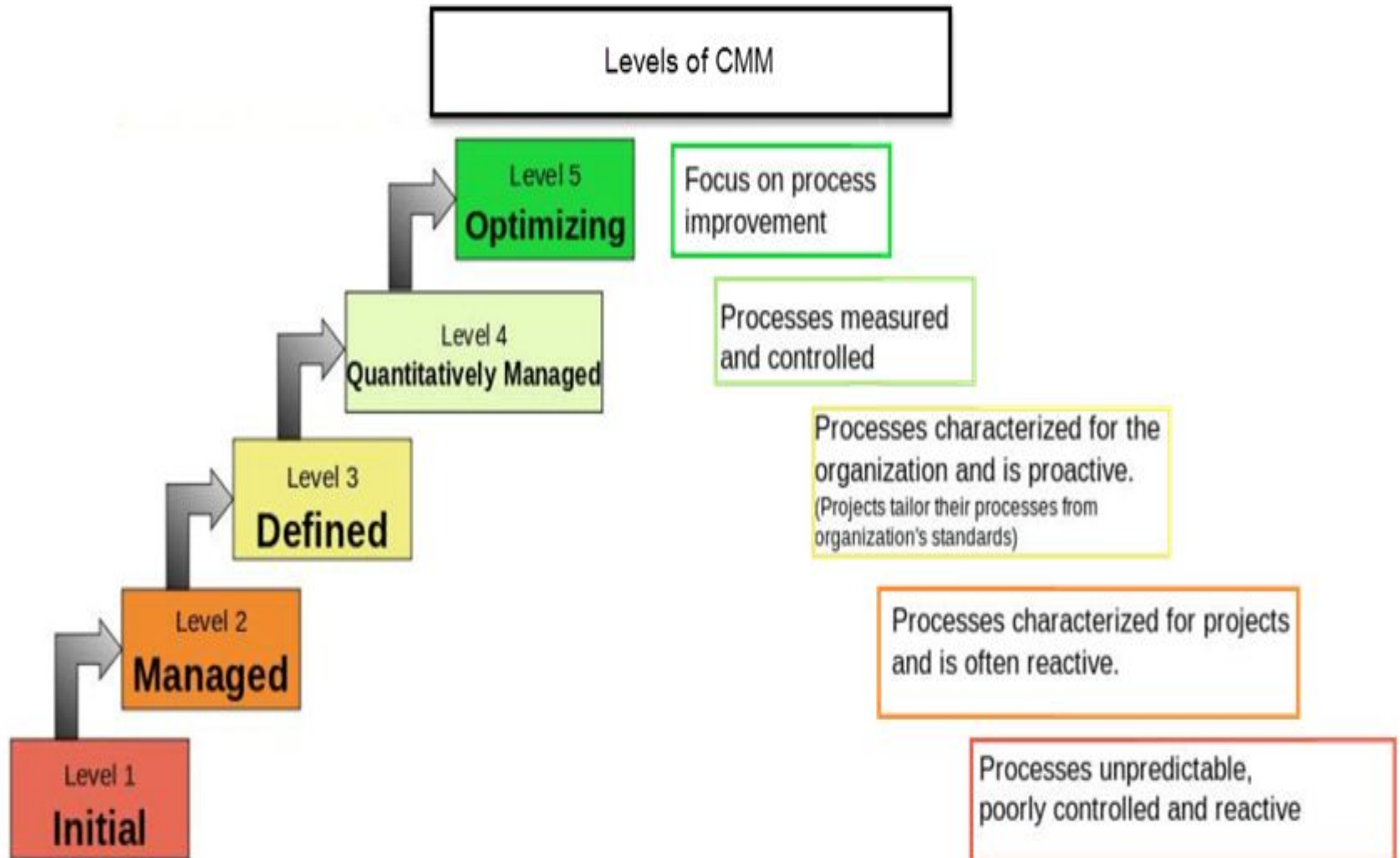


# Capability maturity model

Capability Maturity Model is used as a benchmark to measure the maturity of an organization's software process.

CMM was developed at the Software engineering institute in the late 80's. It was developed as a result of a study financed by the U.S Air Force as a way to evaluate the work of subcontractors. Later based on the CMM-SW model created in 1991 to assess the maturity of software development.

# Levels of CMM





# Time to Implement CMM

CMM implementation does not occur overnight

It's just not merely a "paperwork."

Typical times for implementation is

- 3-6 months -> for preparation

- 6-12 months -> for implementation

- 3 months -> for assessment preparation

- 12 months -> for each new level

# Limitations of CMM Models

- CMM determines what a process should address instead of how it should be implemented
- It does not explain every possibility of software process improvement
- It concentrates on software issues but does not consider strategic business planning, adopting technologies, establishing product line and managing human resources
- It does not tell on what kind of business an organization should be in
- CMM will not be useful in the project having a crisis right now

# Six Sigma

Six Sigma is a quality-control methodology developed in 1986 by Motorola, Inc. The method uses a data-driven review to limit mistakes or defects in and process. Six Sigma emphasizes cycle-time improvement while at the same time reducing manufacturing defects to a level of no more than 3.4 occurrences per million units or events. In other words, the system is a method to work faster with fewer mistakes.

# Key Points

- Six Sigma is a quality-control methodology developed in 1986 by Motorola, Inc.
- It was originally developed as a management method to work faster with fewer mistakes.
- It has now become an industry standard with certifications offered to practitioners.

# Steps in Six Sigma

- Define: The initial phase of the Six Sigma process is the define stage. The team initiating a high-level view of company processes to gauge client needs and define a problem or an area that needs improvement.
- Measurement: The second stage, measurement, is the accumulation of data, which is critical during the life of the project. Initially, the team maps out the current process to determine a baseline and looks for what is causing a problem. Throughout the project, it charts possible improvements empirically.
- Analysis: The third stage is analysis, which is continual as the team analyzes the data and focuses on the cause of a problem.
- Improvement: The fourth phase is improvement. This is the solution-development phase in which the team implements a solution and verifies it performs as expected.
- Control: Finally, the fifth phase entails control. Here, the focus is on maintaining the solution and progress the team has made.

# Supply Chain Management

Introduction: Supply chain management (SCM) is the broad range of activities required to plan, control and execute a product's flow from materials to production to distribution in the most economical way possible.

Companies use both business strategy and specialized software in these endeavors to create a competitive advantage.

# Importance

- SCM has significant impacts on both the enterprise and the consumer.
- Supply chain management activities can improve customer service.
- SCM also provides a major advantage for companies by decreasing operating costs.
- People rely on supply chains to deliver necessities like food and water as well as medicines and healthcare.
- SCM can also improve quality of life by fostering job creation, providing a foundation for economic growth and improving standards of living.

# Supply chain management





# The role of SCM software

Technology is critical in managing today's supply chains, and every major supply chain management process has a software category dedicated to it. Most vendors of ERP suites offer supply chain management software, and there are thousands of niche vendors. Besides managing specific processes, SCM software has an important role to play in tying together the people, processes, and systems that participate in the supply chain.

Other commonly used SCM modules include the following:

- a **transportation management system (TMS)** for managing the transport and storage of goods, especially across global supply chains
- a **warehouse management system (WMS)** for all of the activities inside warehouses and distribution centers
- an **order management system**, to handle processing of customer orders through WMS, ERP and TMS systems, at all stages of the supply chain. (See "How supply chain systems process orders.")

# Enterprise Resource Planning

Enterprise resource planning (ERP) is defined as the ability to deliver an integrated suite of business applications. ERP tools share a common process and data model, covering broad and deep operational end-to-end processes, such as those found in finance, HR, distribution, manufacturing, service and the supply chain.

# Importance of ERP

- Competitive Advantage
- Improved Process Efficiency
- Accurate Forecasting
- Department Collaboration
- Integrated Information
- Cost Savings
- Streamlined Processes
- Customized Reporting
- Increased Productivity
- Regulatory Compliance
- Customer Service
- Data Reliability

# Functions of ERP



# A Model ERP Interface – Odoo ERP Software

Apps - Odoo

localhost:8069/web#view\_type=kanban&model=ir.module.module&menu\_id=51&action=36






















Apps Settings Administrator

odoo

Apps Updates

Apps

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 <b>CRM</b> Leads, Opportunities, Activities <a href="#">Install</a>	 <b>Project Management</b> Projects, Tasks <a href="#">Install</a>	 <b>Inventory Management</b> Inventory, Logistics, Warehousing <a href="#">Install</a>
 <b>MRP</b> Manufacturing Orders, Bill of Materials, Routings <a href="#">Install</a>	 <b>Sales Management</b> Quotations, Sales Orders, Invoicing <a href="#">Install</a>	 <b>Point of Sale</b> Touchscreen Interface for Shops <a href="#">Install</a>
 <b>Discuss</b> Discussions, Mailing Lists, News <a href="#">Install</a>	 <b>Leave Management</b> Holidays, Allocation and Leave Requests <a href="#">Install</a>	 <b>Invoicing</b> Send Invoices and Track Payments <a href="#">Install</a>
 <b>Accounting and Finance</b> Financial and Analytic Accounting <a href="#">Install</a>	 <b>Issue Tracking</b> Support, Bug Tracker, Helpdesk <a href="#">Install</a>	 <b>Notes</b> Sticky notes, Collaborative, Memos <a href="#">Install</a>
 <b>Website Builder</b> Build Your Enterprise Website <a href="#">Install</a>	 <b>eCommerce</b> Sell Your Products Online <a href="#">Install</a>	 <b>Purchase Management</b> Purchase Orders, Receipts, Vendor Bills <a href="#">Install</a>
 <b>Employee Directory</b> Jobs, Departments, Employees Details <a href="#">Install</a>	 <b>Timesheets</b> Timesheets, Attendances, Activities <a href="#">Install</a>	 <b>Recruitment Process</b> Jobs, Recruitment, Applications, Job Interviews, Surveys <a href="#">Install</a>
 <b>Expense Tracker</b> Expenses Validation, Invoicing <a href="#">Install</a>	 <b>Dashboards</b> Create your custom dashboard <a href="#">Install</a>	 <b>Survey</b> Create surveys, collect answers and print statistics <a href="#">Install</a>

Powered by Odoo

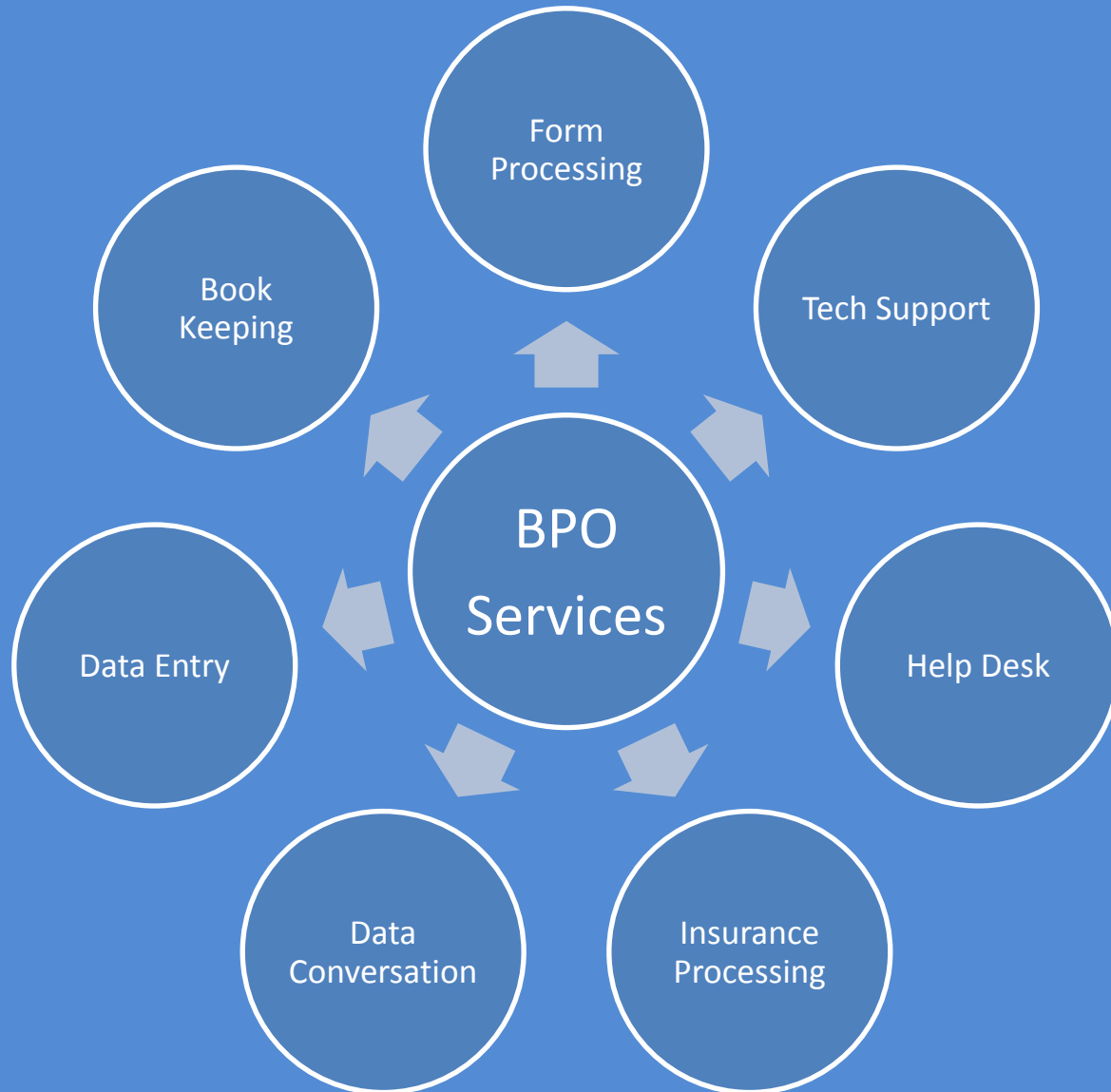
# Business Process outsourcing

Business Process Outsourcing (BPO) is a subset of outsourcing that involves contracting the operations and responsibilities for a particular business process to a third-party service provider.

# Importance

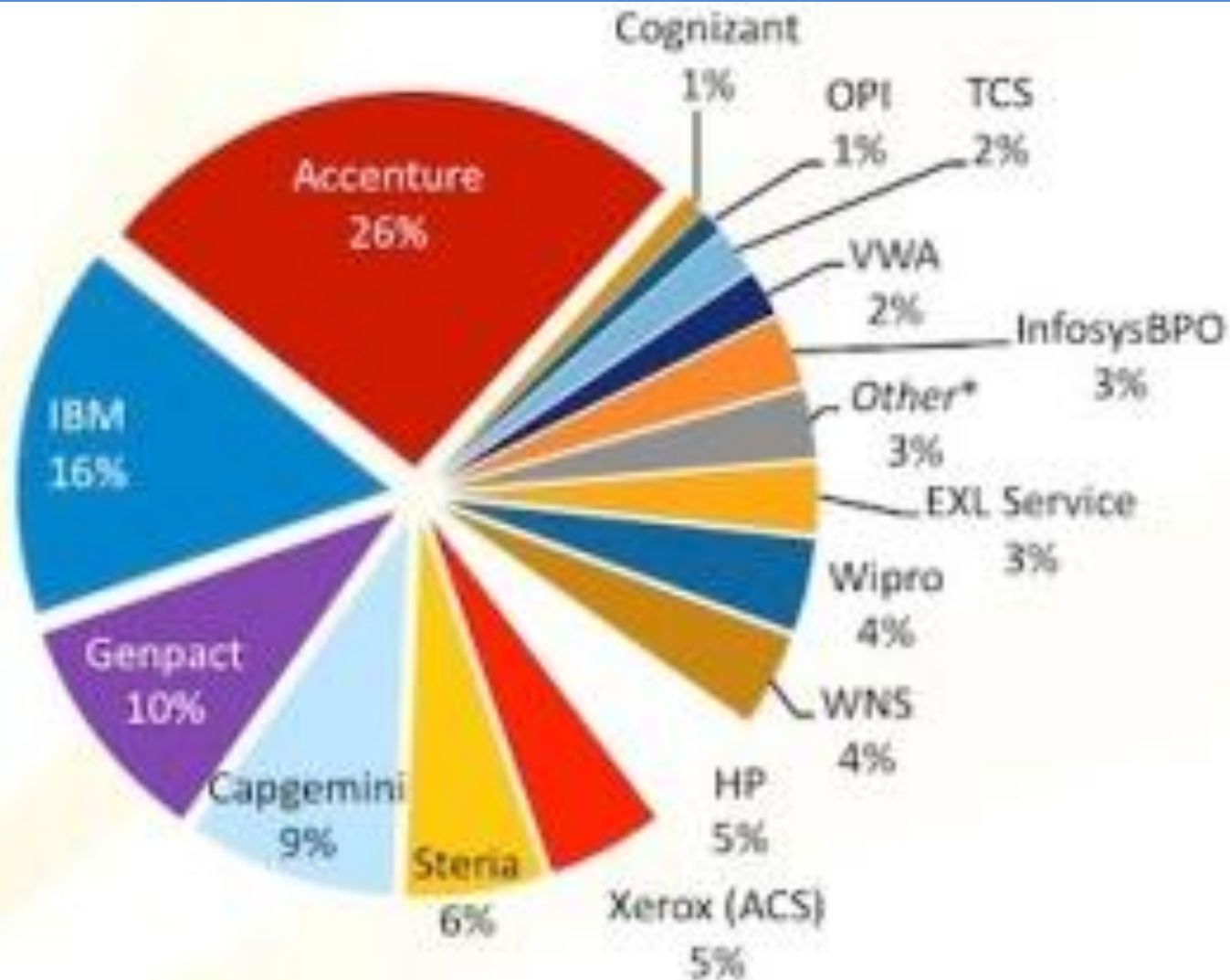
- Cost Reduction
- Availability of Experienced Professionals
- Ability to Focus on Core Business
- Excellent Source of Customer Feedback
- Access to the Latest Updated Technologies
- Excellent Employment Opportunity

# BPO Services





# BPO Market Share in India



Source: HFS Research, 2010

Sample size: 788 current Multi-scope F&A BPO contracts (includes 2 or more core F&A processes bundled)

\*Other category includes iGato, Intelenet and Xchanging

# Business process Re-engineering

Business Process Reengineering involves the radical redesign of core business processes to achieve dramatic improvements in productivity, cycle times and quality.

In Business Process Reengineering, companies start with a blank sheet of paper and rethink existing processes to deliver more value to the customer.

They typically adopt a new value system that places increased emphasis on customer needs.

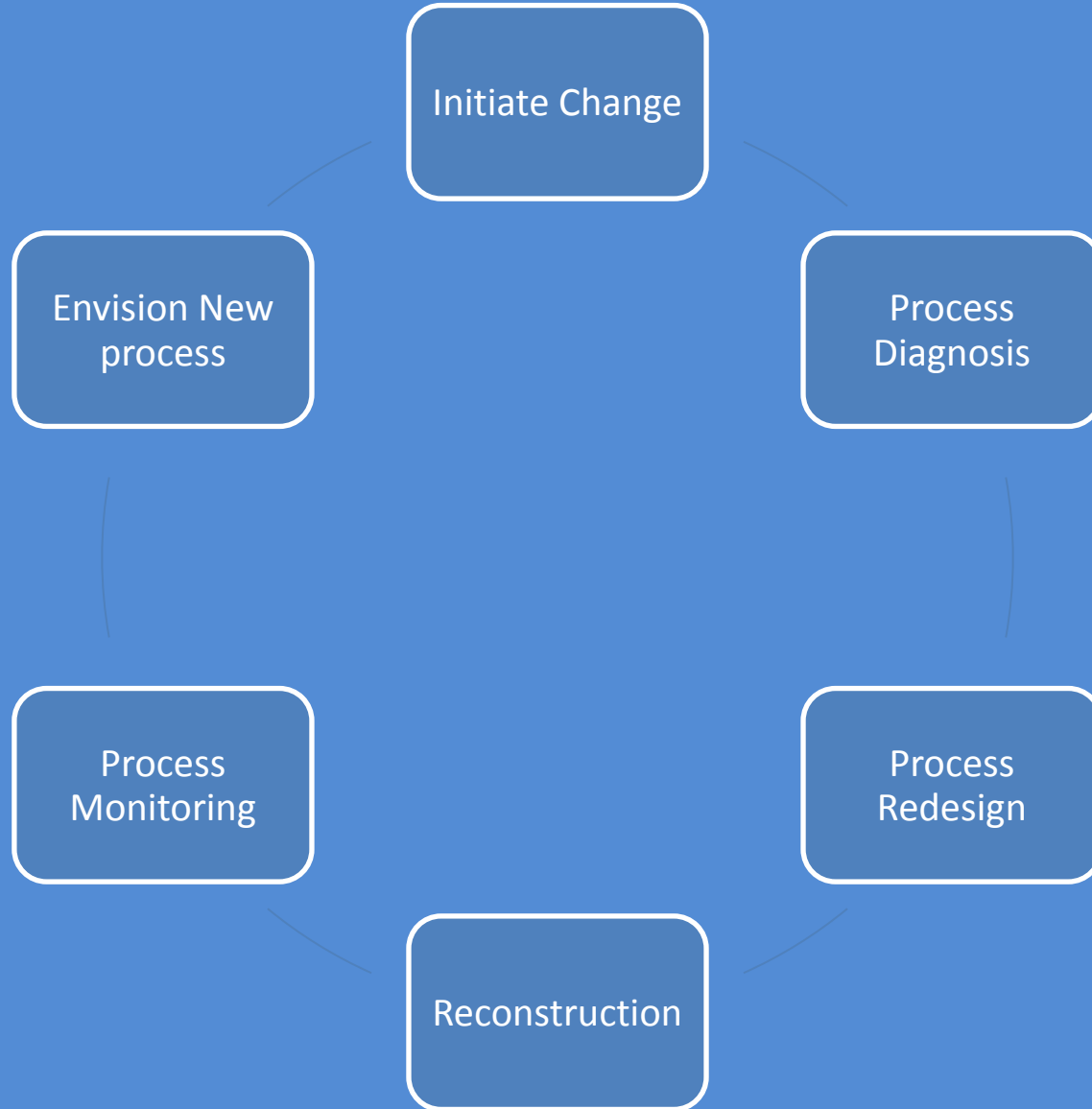
Companies reduce organizational layers and eliminate unproductive activities in two key areas. First, they redesign functional organizations into cross-functional teams. Second, they use technology to improve data dissemination and decision making.

# Importance

- Can save a company which is running at a loss
- By changing the present process through BPR a losing business can make profits
- Can find new business dimensions
- BPR will open up new dimension into the existing business
- Continues improvements will enhance the business performance
- Over all change could enhance the performance of the business
- Improves quality
- Improves the quality of service delivery and customer satisfaction

# Business process Re-engineering

## Process



# Critical Success factors in BPR

- Clear vision for transformation
- Top management commitment
- Identification of core processes for BPR
- Ambitious BPR Team
- Knowledge of Reengineering techniques
- Engaging external consultants
- Tolerance of genuine failures
- Change Management

# Bench Marking

Benchmarking is a process of measuring the performance of a company's products, services, or processes against those of another business considered to be the best in the industry, aka "best in class." The point of benchmarking is to identify internal opportunities for improvement. By studying companies with superior performance, breaking down what makes such superior performance possible, and then comparing those processes to how your business operates, you can implement changes that will yield significant improvements.

# Balanced Score Card

The Balanced Scorecard, referred to as the BSC, is a framework to implement and manage strategy. It links a vision to strategic objectives, measures, targets, and initiatives. It balances financial measures with performance measures and objectives related to all other parts of the organization. It is a business performance management tool.



## Financial Perspective

Financial result and growth  
Key Financial parameters and performance (ROE, ROCE)  
Higher Profit Margin  
Improved Cash flow  
Lower Bad loans and lower debt  
Net Interest Margin  
Reduced overhead Expenses  
Proper Revenue Mix

## Learning and Growth

Develop Critical Skills and Knowledge  
Proper Knowledge Management  
Provide Strategic Information to all  
Align Personal Goals with Company goals  
Employee growth and turnover  
Employee Satisfaction and Retention

# Balanced Scorecard

## Customers

Increase Customer Satisfaction  
Increase Customer Loyalty  
Retention of key customers  
Sales revenue per customer  
Competitive pricing and product offering  
High Quality Service  
Customer preference compared to competitors

## Internal Business Processes

Cross-Sell Products  
Improve Operational efficiency and minimize Problems  
Proper Customer relationship management  
Higher success rate in converting business opportunities  
Fast business decisions and approvals  
Proper work culture and higher employee confidence



# Advantages of BSC

- **It Makes It Easy to Communicate**
- **It Aligns Your Departments and Divisions**
- **Create a Link Between Your Individual Goals and Organizational Strategy**
- **Keep Your Strategy at the Front and Center of the Reporting Process**

# Conclusion

Due to a large number of advantages of balanced scorecard, a large number of organizations are exclusively embracing it to achieve desired results. The balanced scorecard is considered to be the most influential business idea which has potential to reflect the true essence of value creation activities of your organization.

**Thank You**