



A Guide for ERP concepts

An ERP system integrates data and processes across multiple departments and locations hence ensuring right people get the right information in right time.

Know all about ERP and various terms related to ERP

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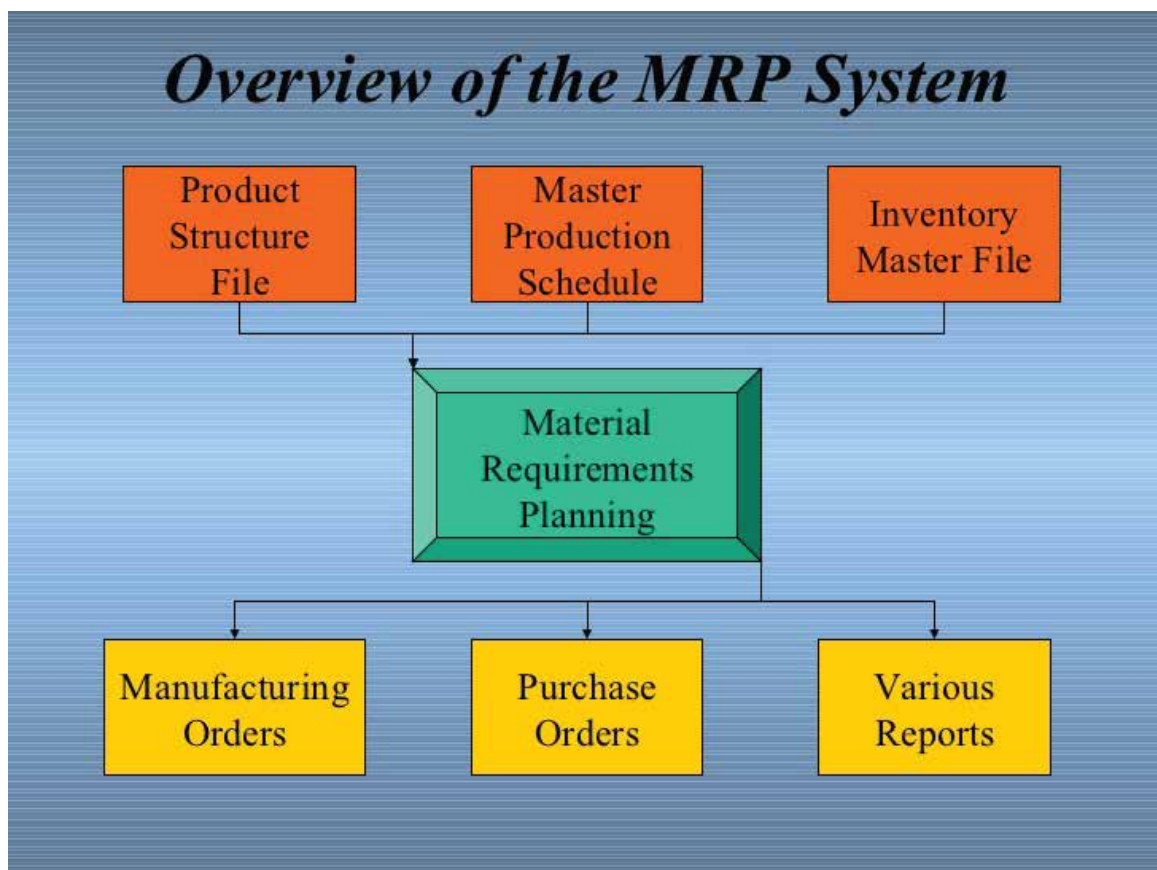
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MRP stands for material requirement planning. MRP is a production planning and inventory control system that was in use extensively before ERP came in the picture.

Functions of MRP are:

1. Ensures that right materials are available for production with right quantity.
2. Reduces wastage by maintaining lowest possible materials and product levels in stock.
3. Helps plan manufacturing functions, delivery schedules and purchasing.

The main shortcoming of an MRP system is Data Integrity. For successful material requirements planning the data fed in the system must be accurate or it can cause serious production and stock errors.

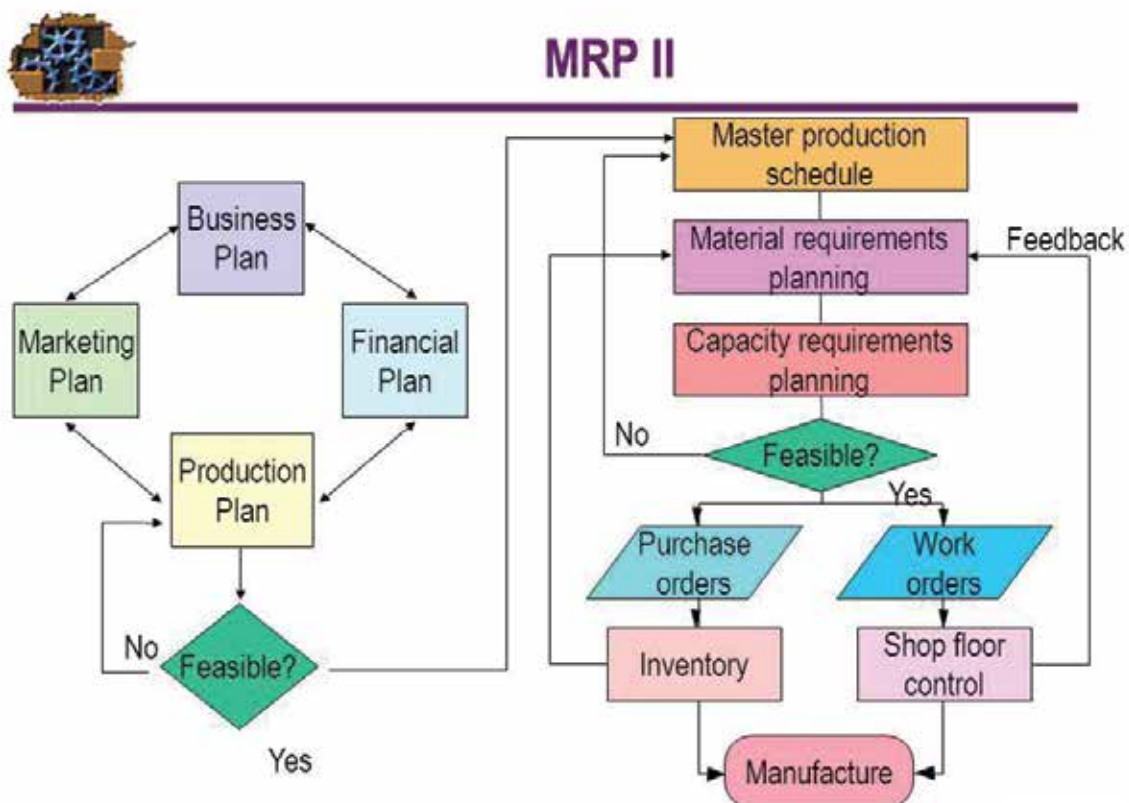


MRP 2.0

Manufacturing resource planning or MRP 2.0 is an integrated system used by businesses. It is an upgrade from manufacturing requirement planning

- It allows additional data such as employee and financial needs.
- It is designed to centralize, integrate and process information for effective decision making.
- It can create detail production schedules using real time data to coordinate the arrival of component materials with machine and labor availability.

MRP 2.0 is widely used in industries today by itself but it can also be used as a module of more extensive ERP systems.

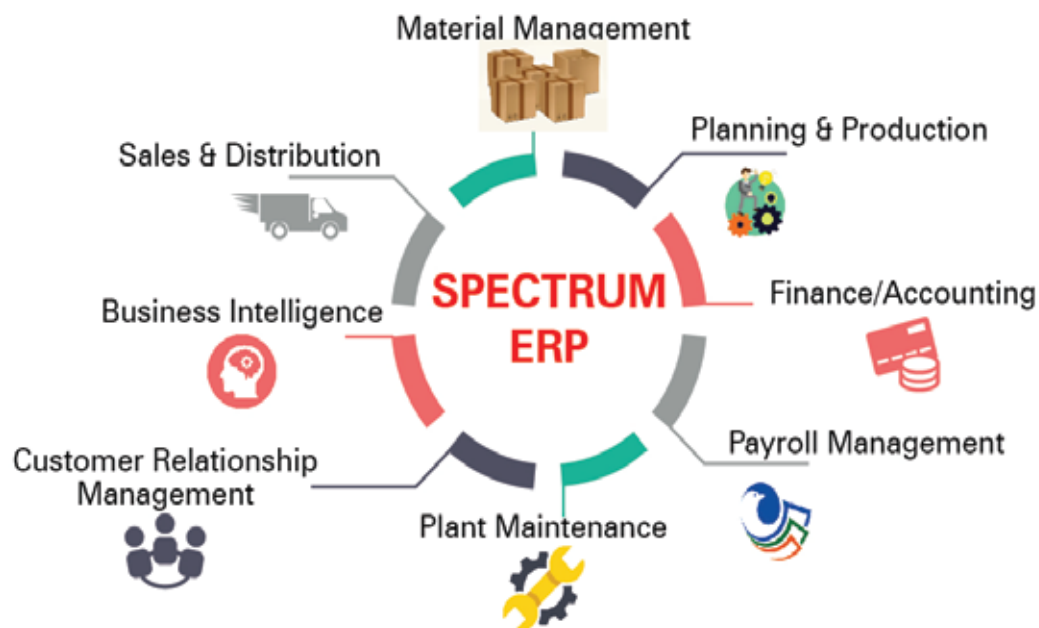


ERP

ERP is a shared database that supports multiple functions used by different business units hence reducing duplication and streamlining business processes

An ERP will:-

- Create a common database serving in multiple functional areas.
- Streamline business operations by integrating the data and refining the processes.
- Integrate and automate the data management of business processes.



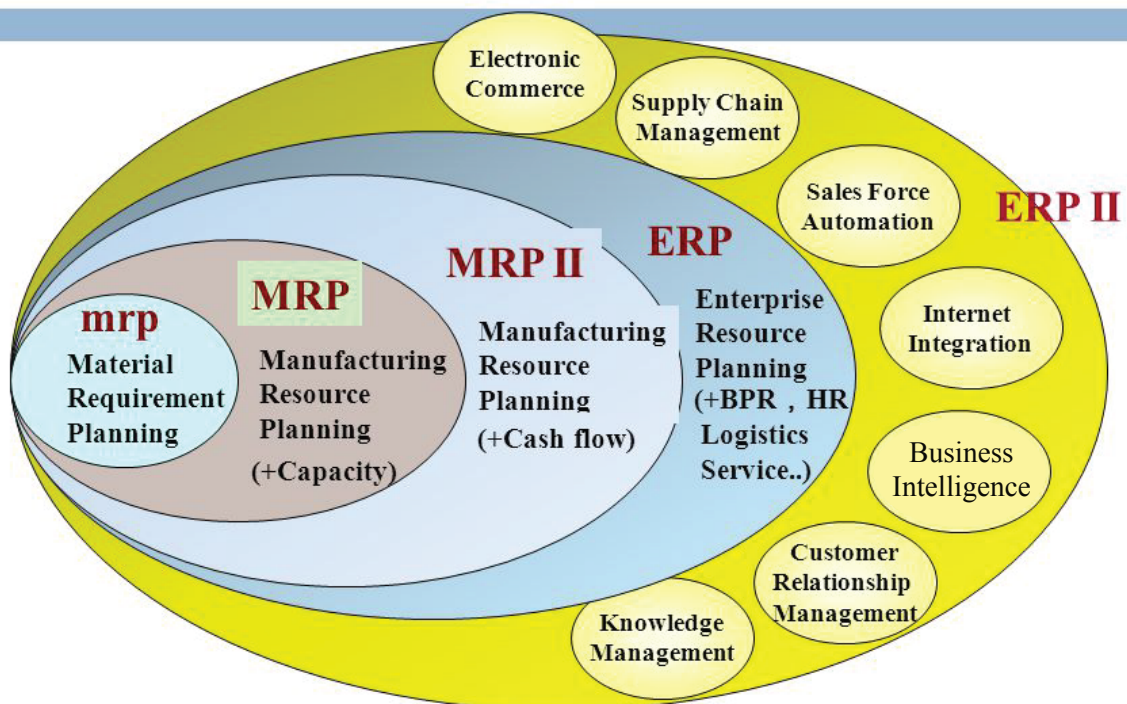
ERP 2.0

ERP 2.0 has all the functions as ERP with improvement in functionality associated with supply chain management, supplier relationship management and customer relationship management.

ERP II can enable access to information by those outside the company. e.g. A manufacturing plant that allows access to planning information by another plant or its customers.

Software that allows access by those outside the company has more stringent security plus design to avoid access to certain company information

Evolution of ERP



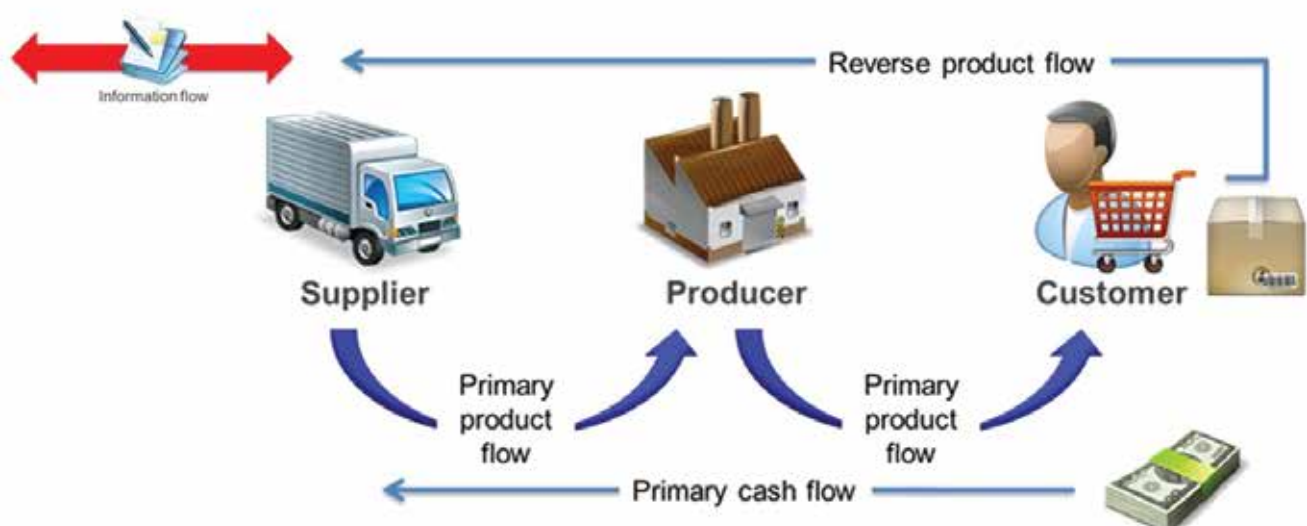
Supply Chain Management

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Supply chain management is the management of the flow of goods and services that involves the movement and storage of raw materials, work-in-process inventory and finished goods from point of origin to point of consumption.

An efficient supply chain will:-

- Optimize your operations to maximize efficiency.
- Deliver products as fast and as cheap as possible without sacrificing quality. Eliminate redundant steps & increase negotiating power with other businesses by ensuring that your company delivers the right product at right time.



Bill of Material (BOM)

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A bill of materials (BOM) is a comprehensive list of parts, items, assemblies and other materials required to create a product as well as instructions required for gathering and using the required materials.

The bill of materials will:

- Explains what, how, and where to buy required materials
- Includes instructions for how to assemble the product from the various parts ordered.



Kanban and JIT

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Just-in-time (JIT) is an inventory strategy in which companies receive goods only as they are needed in the production process, thereby reducing inventory costs.

This method requires producers to forecast demand accurately.

This method reduces costs by eliminating warehouse storage needs but can give trouble if supply chain breaks down

Kanban is a scheduling system for lean manufacturing; it is a method to achieve JIT. In this process problem areas are highlighted by measuring lead time and cycle time of the full process and process steps.



Total Quality Management

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

The principles of TQM are:-

- Organization should work with customer satisfaction in mind
- Middle management of the organization should be well informed
- Organization should be Process-centered
- Organization should have an integrated system for data storage
- Every step towards the end product should be strategic and systematic
- Every step should be analyzed properly
- Decision should be made based on facts
- There should be an open channel of communication all over the organization



Product Lifecycle Management

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PLM is defined as a process that is used to streamline collaboration and communication between product stakeholders, engineering, design, manufacturing, quality and other key disciplines.

An ideal PLM framework will:

- Cover the breadth of a product's lifecycle integrating cross-discipline product development, manufacturing and field services.
- Improves the development and management of BOM, requirements management, sourcing, document storage, collaboration, workflow and other areas all essential to product development.
- Enable collaboration and flexible processes across the extended enterprise



Purchase to Pay

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Purchase to Pay helps in creating an integrated system that fully automates the goods and services purchasing process for a business beginning with requisitioning through to actual procurement and ending with payment thereby benefiting the organization through better financial controls and efficiency, which in turn saves costs and reduces risk.

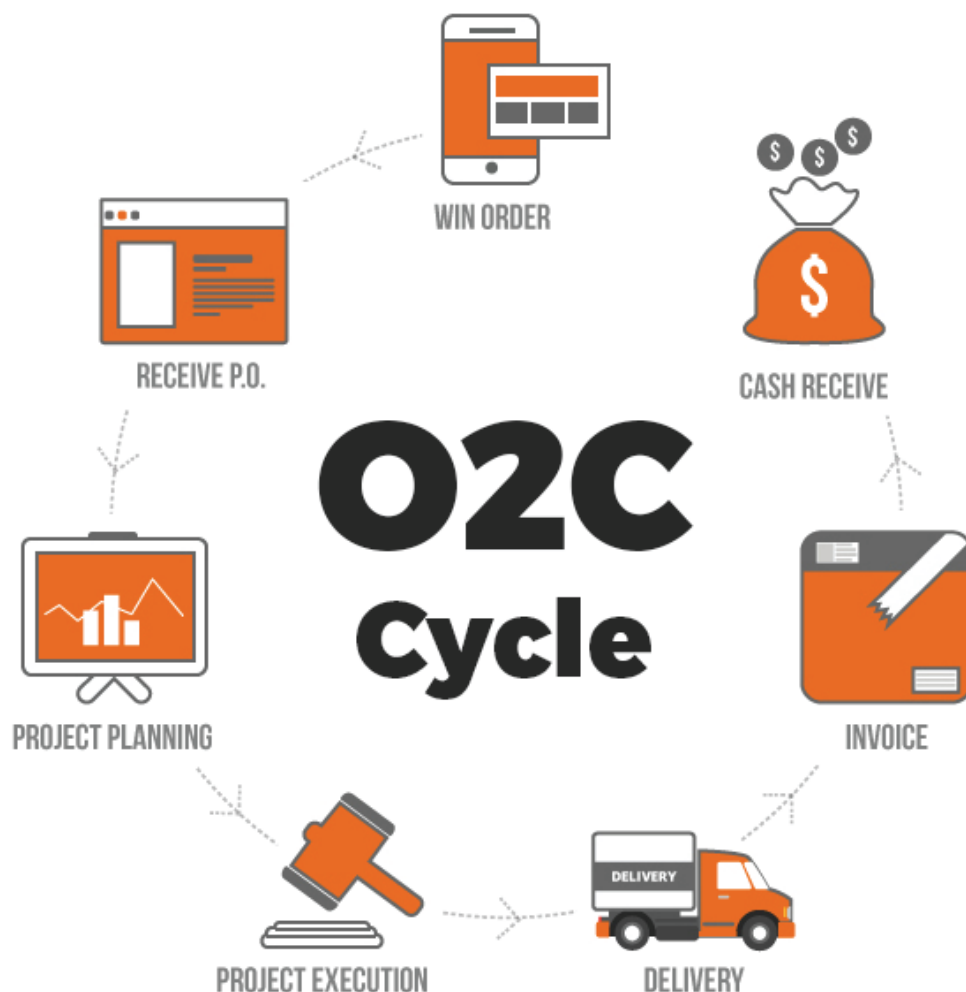


Order to Cash

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Order to Cash (O2C/OTC) is a set of business processes for receiving and processing customer sales orders for goods and services and their payment, these processes have to be managed efficiently and accurately or organization can face financial problems.

In an ideal world there would be a simple chain that ensures that the customer gets his product and the company gets their payment. However, there are always glitches in every system which has to be dealt with quickly.



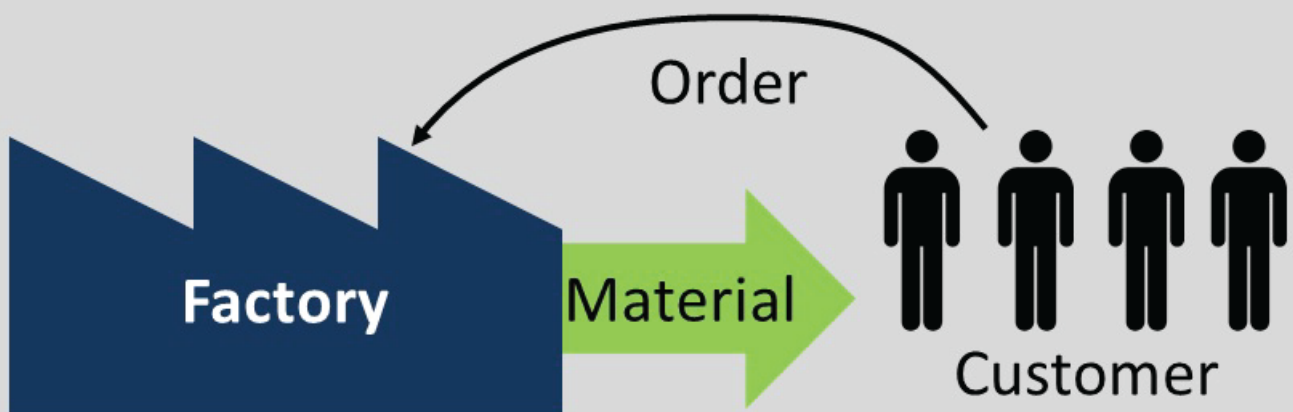
Make to Order

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Make to order is a business production strategy in which business manufactures end product once the customer places the order creating additional wait time to customer but allowing flexible customization.

The main advantage of this process is system is being able to fulfill an order with the exact product specification required by the customer while also being able to get close to zero inventory and hence minimizing the chances of wastage. This process can cause trouble when the supply chain breaks down suddenly due to some unforeseen event.

Make-to-Order (Pull)



Make to Stock

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Make to stock (MTS) is a production strategy that match production and inventory with consumer demand forecasts. If demand for the product can be accurately forecasted, the MTS strategy is an efficient choice for production but this becomes increasingly challenging when a company operates in an industry with cyclical sales cycles or seasonality.

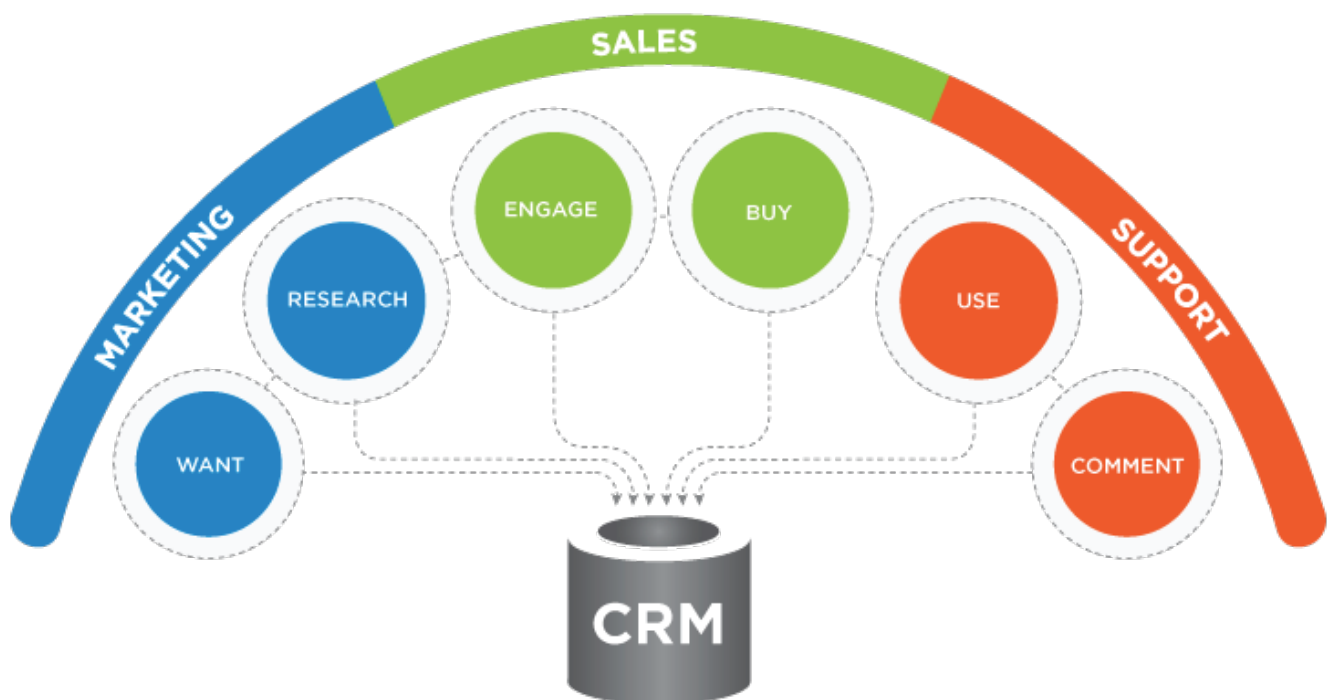
Make-to-Stock (Push)



CRM is commonly used to refer to practices, strategies and technologies that businesses use to manage and analyze customer interactions and data throughout customer lifecycle.

Functions of CRM include:

- Compile information on customers
- Give detailed information on customers' personal information, purchase history, buying preferences and concerns.
- Easily accessible and manageable customer information
- Record customer interactions
- Automate workflow processes such as tasks, calendars and alerts
- Help in social media management



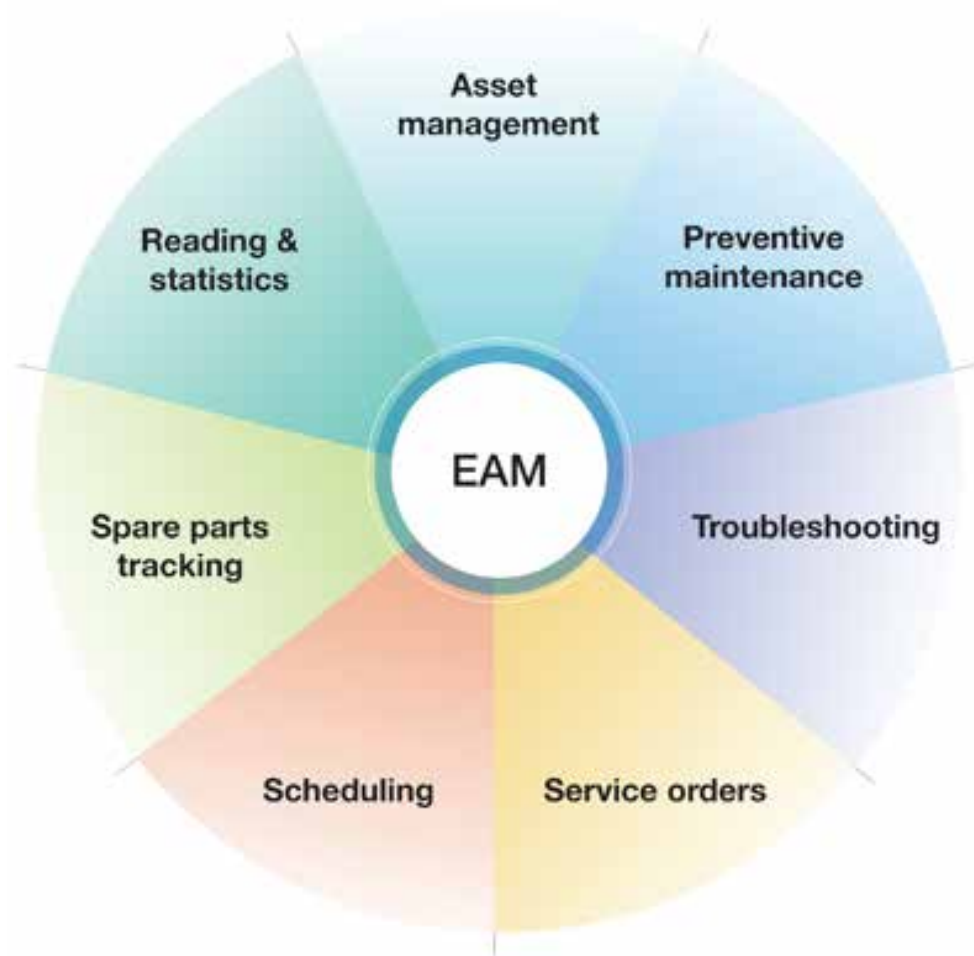
Enterprise Asset Management

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The lifecycle management of the high value physical assets of businesses requires regressive planning and execution and to help with these businesses takes help from Enterprise asset management software.

EAM is a term vendor's use for software that gives managers a way by which they can view all the company owned assets; these enable managers to control and pro-actively optimize operations for quality and efficiency.

EAM covers subjects including the design, construction, commissioning, operations, maintenance and decommissioning or replacement of plant, equipment and facilities.



Business intelligence (BI) is a process used for analyzing data and present actionable information to help management in making informed decisions.

BI encompasses a wide variety of tools, applications and methodologies that are used to prepare BI for analysis, develop and run queries against that data and create reports, dashboards and data visualizations

BI can help in accelerating and improving decision-making, optimizing internal business processes, increasing operational efficiency, driving new revenues and gaining competitive advantage over business rivals.



MIS

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Management Information System (MIS) is a computerized database of financial information that is organized and programmed in a way that it produces regular reports on operations for every level of management in a company.

Purpose of the MIS is to give management a platform to monitor the company as a whole. Information displayed by the MIS typically shows actual data against planned results and results from a year before; thus it measures progress against goals.



Workflow Management System

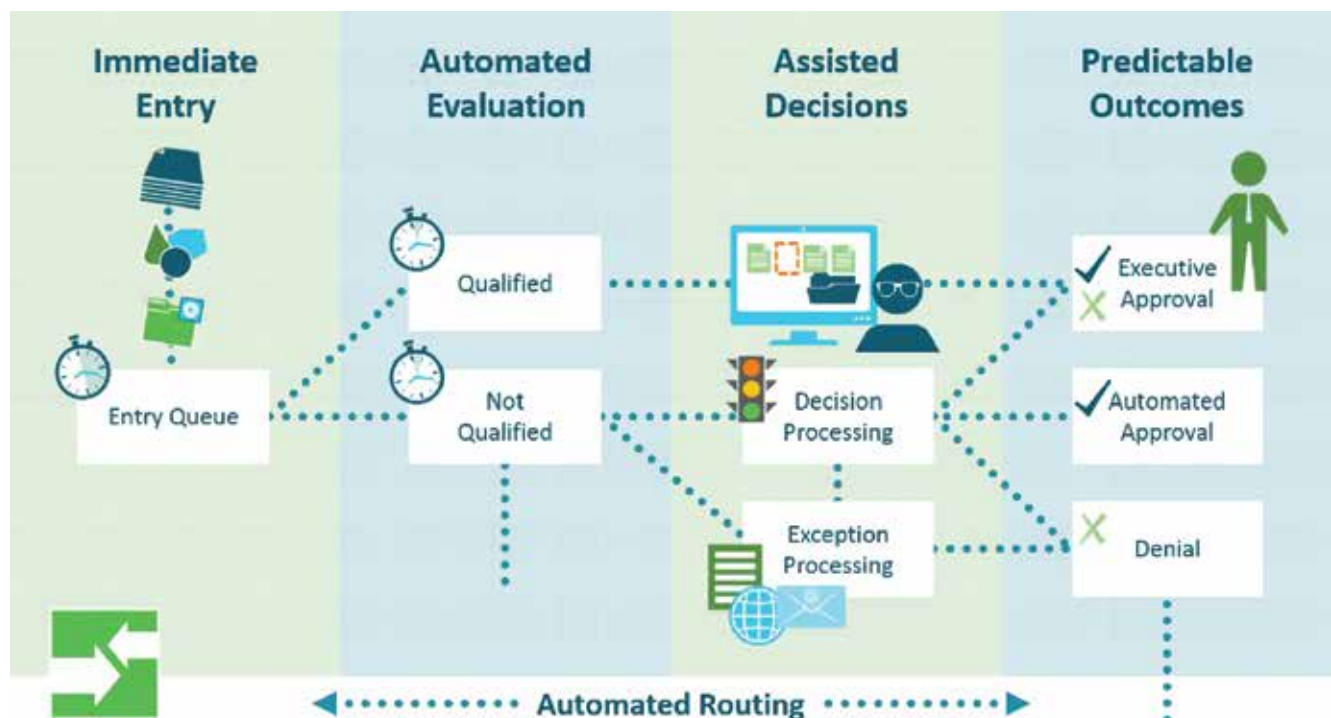
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Workflow Management System provides an infrastructure to setup, execute, and monitor workflows arranged as a workflow application.

WMS allows individual to:

- Automate repetitive processes
- Follow up automatically on uncompleted tasks in the process
- Gives an overall picture of the workflow along with performance metrics.

The visibility of the work that comes with workflow management tends to lead to awareness of how to improve workflows and business process improvement.



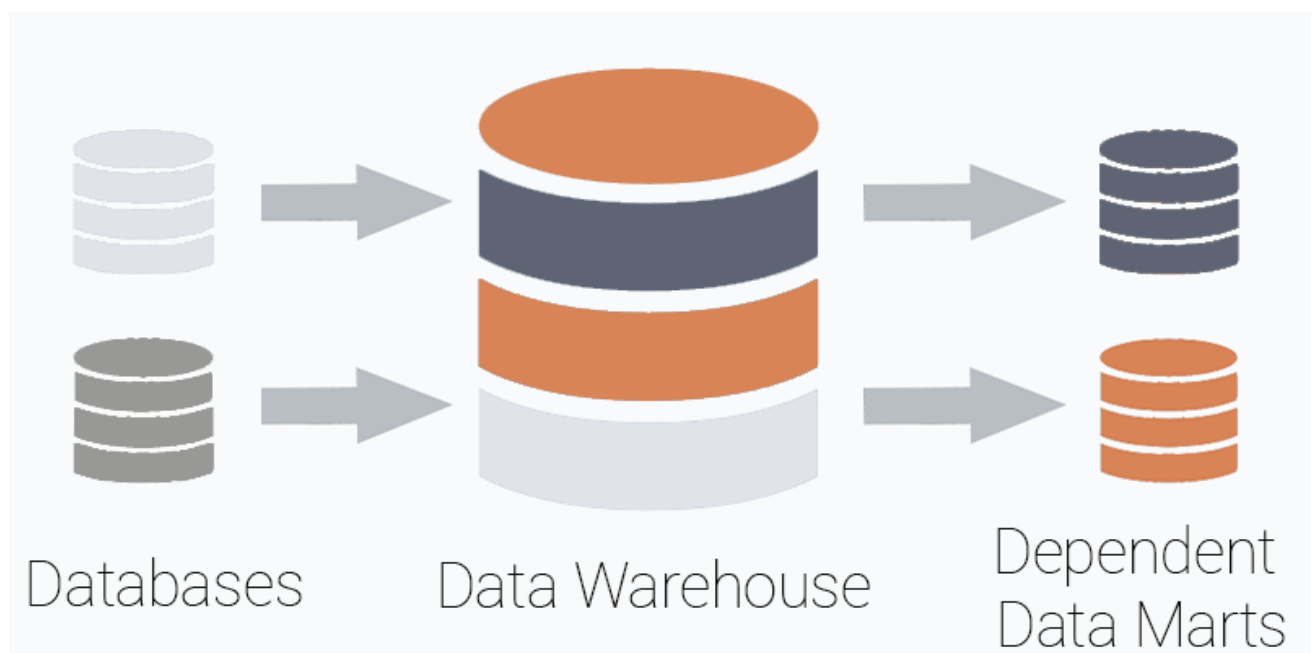
Database & Data Warehousing

Database is a way to collect information about a business in an organized manner to model aspects of reality so that it is available to the right person at right time.

Data warehousing is the process of constructing and using a data warehouse which is constructed by integrating data from multiple heterogeneous sources.

The main functions of data warehousing is:

- Data extraction i.e. Gathering or collecting data
- Data cleaning i.e. finding and correcting errors in data
- Data transformation i.e. converting the data from legacy format to warehouse format.
- Data loading i.e. sorting, summarizing, consolidating, checking integrity, and building indices and partitions.
- Refreshing i.e. updating from data sources to warehouse.



IT Infrastructure

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IT infrastructure refers to an optimized, tightly-integrated collection of IT components, it includes:

- A variety of computers, storage, networking and virtualization resources.
- All the hardware, software, networks and data centers facilities and related IT equipments used to develop, test, operate, monitor, manage and support information.

IT infrastructure includes all the physical IT devices and products, but does not include the employees, documentation or processes used in operating and managing IT services.



Cloud ERP

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Cloud ERP

Cloud computing allows users to run a specific software in shared computing resources via internet. These computing resources are maintained in remote data centers dedicated to hosting various applications on multiple platforms. Its up-front cost in general is on the lower side than on-premise ERP however a monthly cost is charged which may or may not get the life time cost of cloud ERP higher than on-premise ERP.



SaaS

Software as a Service (SaaS/on-demand software) is a software licensing and deliver model in which software is licensed on a subscription basis and is hosted centrally. SaaS is generally accessed by the users using web browser. It has become a common delivery model for many business applications. Common examples of SaaS service are: Management Information System (MIS), Cloud ERP, Customer Relationship Management software, Content Management and many more.



ERP Implementation Methodology

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The planning and execution for successful ERP implementation is called ERP implementation methodology. Common steps of ERP implementation methodology are:-

- Team forming
- Requirement gathering and proposal submission
- Business process reengineering
- Project customization
- Training and knowledge transfer
- Reviews and Feedbacks
- Project acceptance
- Post implementation



About Force-Intellect

What We Offer

Force-Intellect provide ERP Software, ERP Products and ERP Custom Applications that help manufacturing organizations streamline their processes and become more efficient, productive and agile. We provide you the technology edge to stay ahead of competition.

Spectrum ERP - End to End ERP software solution for Manufacturing Industry SMEs



eProcurement Solution - eProcurement software solution for Automated, Transparent & Efficient procurements



Spectrum ERP Mobile Apps - Mobile Apps offer easy access to select features of Spectrum ERP any-time, anywhere!



Spectrum ERP Business Intelligence Solution - Dashboards, Visual Analytical Reports to take more informed decisions



Spectrum ERP Custom Applications - Hybrid Solution with "ready to use" + "customized modules" designed for unique business processes of Manufacturing SMEs



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