The Ultimate Manufacturing ERP Glossary

A guide to 100 of the most common manufacturing ERP terms and acronyms

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The ERP universe is filled with buzzwords, made-up vendor terms and acronyms. BPM, CoC, MES, M2M, OEE, PPV ... the list is extensive. Even worse, the frequently evolving terms often create more questions than answers. For example, what are the specific differences between ERP, MRP and MES? Or which service level of Cloud Computing is best for my company (IaaS versus PaaS versus SaaS)?

Empower yourself with these definitions to increase communication and make informed decisions about your future ERP solution. This glossary will help you identify and define:

- Common terms used during the ERP selection process
- Features, applications and modules typically found in a comprehensive ERP solution
- Business critical tools your new ERP solution must contain

Evaluating a new ERP solution is a huge undertaking. Arm yourself with this handy guide to best decipher the ERP vendors' websites, brochures and salespeople. From the most common terms to the more advanced, this guide provides a solid starting point to the world of ERP.

3rd Party Application
An application that works within your ERP system, but is designed and maintained by a company other than your ERP vendor.

Actual Cost
The ever-changing real expense of each component in your manufacturing process. Actual costing tends to be preferred by manufacturers with frequently changing part costs. The counter to actual costing is standard costing.

Ad Hoc Query
A one-time, on the fly query that does not occur on a regular basis. Unplanned, ad hoc queries consist of dynamically constructed SQL.

Advanced Product Quality Planning (APQP)
Developed originally for the automotive industry, the APQP framework serves as a guide to the product development process. Typically included in an ERP quality management suite.

Advanced Shipping Notice (ASN)
A common EDI document, ASNs notify customers that a shipment is incoming so they can prepare to accept delivery.

Backflush
The removal of materials and parts from your inventory control module based on what was consumed during production.

Batch Upload
The transfer of data from one place (your shop floor) to another (your ERP system) in large groups at set intervals. Typically, batch uploads occur only a few times a day and are the counter to real-time reporting.

Best of Breed ERP
An ERP system made up of multiple, disparate third party applications bolted onto the core program. The counter to best of breed ERP is comprehensive ERP.

Bill of Lading (BOL)
A required shipping document provided to the carrier with details of the shipment.

Bill of Material (BOM)
The "recipe" for manufacturing an end product. The BOM contains important details such as the list and quantities of raw materials and sub-components, the intermediate assembly processes and the specific process details, such as cycle time.

Bring Your Own Device (BYOD)
The increasingly common practice of bringing personally owned devices (phones, laptops, etc.) to work and using them to access privileged company information.

Business Activity Monitoring
A customizable, query-based advisory system that automatically alerts you (through text or email) of critical events and issues based on the capture and evaluation of your manufacturing data.

Business Intelligence (BI)
Software tools that transform raw data into useful reports, email alerts, analytics, dashboards and more to help you evaluate your business data.

Business Process Management (BPM)
The optimization of company processes to increase the efficiency of an organization. ERP BPM tools can include workflow, business activity monitoring and more.

Capable to Promise (CTP)
A realistic date of when demand will be satisfied and goods can be delivered based on material availability and capacity resources.

Certificate of Conformance (CoC)
A document certifying that the manufactured good meets the required specifications.

Class I/II/III
A medical device regulatory classification that determines the level of control necessary to assure the safety and effectiveness of the device. Class I is for low risk devices and Class III is for parts with the greatest risk.

Cloud Computing
A multifaceted service platform involving remote servers and software networks that allow centralized data storage. Clouds can be public, private or hybrid. In the ERP world, the three most common cloud computing platforms are IaaS, PaaS and SaaS.

Comprehensive ERP
An ERP solution where every program needed to run your business, from the front office to the shop floor, is natively developed by one company in one central database. Comprehensive ERP is counter to best of breed ERP.

Corrective Action Report/Corrective Action Preventative Action (CAR/CAPA)
The systematic investigation of the root causes of non-conformities in a manufactured product to prevent their recurrence or occurrence. Typically included in an ERP quality management suite.

Cost of Goods Sold (COGS)
The direct cost of a product determined by the materials, labor and overhead required to produce it.

Customer Relationship Management (CRM)
A program to help your sales, technical support, marketing and customer service teams manage your interactions with customers and prospects.

Cycle Count
The process of sample counting a sub-set of your larger inventory in a specific location on a specific day rather than performing a warehouse-wide physical inventory.

Database Administrator (DBA)
In the ERP world, the DBA is typically the primary contact responsible for the installation, upgrades, administration and maintenance of your ERP solution.

Device History Record (DHR)
A requirement for medical manufacturers, DHRs contain details about each batch, lot and unit produced during manufacturing. Typically included in an ERP quality management suite.

Discrete Manufacturing
A type of manufacturing. Discrete manufacturers typically produce distinct items that can be assembled or taken apart, such as toys, engine parts and furniture. The counter to discrete manufacturing is process manufacturing.

Dispatch List
A list of manufacturing work orders in priority sequence with assigned work stations. Dispatch lists are an alternate option to finite scheduling and typically preferred by assembly manufacturers.

Document Control
A document management solution that maintains critical manufacturing documents (procedures, work instructions, etc.) for adherence to quality regulations. Typically included in an ERP quality management suite.

Downtime
The duration of time a work center is unavailable for use.

Electronic Data Interchange (EDI)
A document exchange program that sends information (purchase orders, ASNs, etc.) between business partners in a standard electronic format without human intervention.

Engineering Change Order (ECO)
A document outlining (typically last minute) changes in components, assemblies, specifications, processes and work instructions. Typically included in an ERP quality management suite.

Enterprise Resource Planning (ERP)
Business management software that helps run your company through an integrated view of your core enterprise operations.

Failure Mode Effects Analysis (FMEA)
A step-by-step approach to identify all possible failures in a design, product or process. Typically included in an ERP quality management suite.

Finite Scheduling
A scheduling engine that recognizes actual plant capacity limits in real time by automatically taking into account material constraints, BOM complexity, WIP processes, tooling conflicts and priority orders, while simultaneously evaluating the resources required to meet demand and allow for unplanned events.

First In, First Out/Last In, First Out (FIFO/LIFO)
Asset management tools that facilitate the financial tracking of inventory. FIFO means the oldest inventory items are recorded as sold first, while LIFO marks the most recently produced items as first.

Forecasting
In your ERP solution, forecasting tools help to project manufacturing plant throughput, resource requirements, revenues and profitability.

General Ledger (GL)
The central repository for all accounting data transferred from different modules (such as accounts payable, accounts receivable, fixed assets, etc.) and the backbone of any financial management system.

Hosted ERP
An ERP solution that is installed, managed and run at a remote site, such as a server farm or your ERP vendor's facility. The counter is on premise ERP.

Human Machine Interface (HMI)
The graphics-based user interface of a manufacturing or process control system. For example, the computer program that communicates with your programmable logic controllers (PLCs)

Human Resource Management (HRM)
Applications designed to maximize and manage employee assets through ERP tools such as payroll, time and attendance, benefits, recruitment, etc.

Infrastructure as a Service (IaaS)
IaaS is the lowest service level in Cloud Computing. With IaaS, a third party manages the basic components of a functioning computer environment such as virtualization technologies, raw storage, firewall options and other network connectivity infrastructure. The manufacturer is responsible for managing the platform and applications.

In-Line Vehicle Sequencing (ILVS)
An application for automotive manufacturers that uses verification labels to calculate the specific sequence to loads parts for vehicle assembly lines.

Intercompany Transaction (ICT)
A financial transaction between two units of the same corporation (For example, between a parent and subsidiary, two divisions, etc.).

International Organization for Standardization (ISO)
An international group of 163 member countries that develop and publish international manufacturing standards to ensure quality, safety and efficiency.

Internet of Things (IoT)
The concept of connecting everything imaginable to a network so that information can be quickly and easily shared through network connections with everything else.

IQMS
The foremost authority in manufacturing software.

Job Shop Manufacturing
A type of manufacturing. Job shops manufacture a variety of custom products in small batches. As these jobs are typically a customized, one-time run, the manufacturing set up is unique.

Just in Time (JIT)
An inventory management philosophy that focuses on having the right material, at the right time, at the right place and in the exact amount to reduce in-process inventory and associated carrying costs.

Kaizen
A long-term competitive strategy involving the practice of continuous improvement across all aspects of your business.

Kanban
A scheduling tool to support just in time production that maintains inventory levels at the work center by aligning the rate of demand with the rate of production.

Key Performance Indicator (KPI)
A type of performance measurement that evaluates how effectively a company is achieving key business objectives. Most ERP solutions offer customizable KPIs with drill down capability as part of their Business Intelligence package.

Kitting
The grouping and packaging of separate but related items into one unit.

Lightstick
Manufacturing hardware that mounts to the top of a work center and delivers a visual indicator of the job's production performance.

Line Clearance
The clearance of an assembly line by a trained employee before the start of a new job.

Machine to Machine (M2M)
Technology that allows wired and wireless devices to exchange information and perform actions with each other. M2M is an integral component to the Internet of Things. The remote monitoring of work centers is an example of M2M in a manufacturing environment.

Maintenance, Repair and Overhaul (MRO)
In your ERP solution, the MRO module facilitates scheduled and preventative maintenance in order to increase work center availability and reduce cost and repair times.

Make to Order Manufacturing
A type of manufacturing. Make to Order manufacturing only begins after a customer's order is received, allowing for order customization, but increased customer wait time. Make to Order manufacturing supports lean inventory practices.

Manufacturing Execution System (MES)
A software package that monitors and manages production on your shop floor. Originally a self-contained solution, MES software is now increasingly integrated with ERP systems.

Manufacturing Intelligence
Tools that gather large amounts of manufacturing data from a variety of sources into once central structure (ERP) for reporting, analysis and performance review.

Master Production Schedule (MPS)
The plan for all future production with details such as what is to be produced, when and with what materials. In an ERP solution, the MPS tool considers sales and forecast demand, inventory levels, production lead times, resource capacity and more, then translates that data into a comprehensive manufacturing schedule.

Material Requirements Planning (MRP)
The predecessor to ERP, MRP now refers to a set of features inside your ERP software that manage your production planning, scheduling and inventory control.

Material Review Board (MRB)
A group of people who decide the proper treatment of a non-conforming material. Typically included in an ERP quality management suite.

Non-Disclosure Agreement (NDA)
A binding confidentiality agreement (for example, between an ERP vendor and a manufacturer) that forbids the dissemination of private information gained while working with the manufacturer.

On Premise ERP
An ERP solution that is installed, managed and completely run at the manufacturer's physical site. The counter to on premise ERP is hosted ERP.

Original Equipment Manufacturer (OEM)
There are two definitions for an OEM: 1) A manufacturer that makes components for another company's own product. For example, if you manufacturer seat belts for Toyota, you are regarded as the OEM of the seat belts. 2) Value-added resellers who resell another company's product under their own name and branding.

Out of the Box
An ERP solution that requires little customization, configuration or integration after installation.

Outsource
The process of farming out aspects of your production to a third party contract manufacturer. ERP solutions typically offer an Outsource module to manage this process.

Overall Equipment Effectiveness (OEE)
A consistent way to measure the effectiveness of a machine or process through the three sources of manufacturing productivity loss (availability, performance and quality).

Overrun
The manufacturing of more product than is required, resulting in excess inventory and lost profits.

Packing Slip
A document that accompanies shipments to alert recipients of the items and quantity in the shipment.

Physical Inventory
The process of physically counting your entire inventory. Warehouse management tools in your ERP solution can greatly reduce physical inventory time and greatly increase inventory accuracy.

Pick List
A list of choices from which users can normally select only one.

Platform as a Service (PaaS)
PaaS builds upon the IaaS level in Cloud Computing where a third party provides not only the necessary IaaS components, but also operating environments such as fully ready database systems, web servers, rendering farms, software development environments and more. The manufacturer is still responsible for managing the applications.

Process Manufacturing
A type of manufacturing. Process manufacturers typically produce items that cannot be broken down into their component parts, such as cheese, paint or pharmaceuticals. The counter to process manufacturing is discrete manufacturing.

Product Lifecycle Management (PLM)
A module in your ERP solution that manages the entire lifecycle of a product from inception and design through manufacture and disposal.

Production Reporting
A report, either keyed into the ERP solution or captured automatically, with the production details from a particular work station during a shift. Production report details can include number of parts made, number of rejects, etc.

Programmable Logic Controller (PLC)
A digital computer used for automation and control of machines in manufacturing work centers. PLCs can collect detailed process data and relay it back to your ERP solution.

Purchase Price Variance (PPV)
When purchasing materials, the PPV is the price difference between the assigned standard cost of the material and the actual cost of the material.

Quality Management System (QMS)
A toolbox of applications designed to help manufacturers manage every quality and compliance requirement. Specific tools can include document control, SPC, quality audit, PLM/DHR, ECO, MRB, CAR, APQP, cost of quality and much more.

Radio Frequency Identification (RFID)
Intelligent tags or labels that talk to a networked system to track products and assets without the line of sight scanning limitations required of barcodes.

Real-Time Reporting
The ability to instantaneously collect and analyze enterprise data with your ERP solution. The counter to real-time reporting is batch uploads.

Return Material Authorization (RMA)
The process of returning a product for repair, replacement or refund. ERP tools should manage RMAs for both customer and supplier returns.

Safety Stock
Extra inventory that is held as a buffer to mitigate the risk of stock-out. MRP and forecasting tools help determine the correct amount of safety stock to guard against loss while still adhering to lean principles.

Self-Service Portal
A website allowing users to access specific business details. In manufacturing, self-service portals can exist for employees, customers, vendors/suppliers, consumers and much more.

Serial/Lot Traceability
Through barcodes and labels, serial/lot tracking provides end to end traceability for every step in the production of a part. In highly regulated industries, such as medical, automotive and food and beverage, comprehensive traceability is a requirement.

Shelf Life
The length of time a material or product may be stored before becoming unsuitable for use or consumption.

Software as a Service (SaaS)
SaaS is the topmost service level in Cloud Computing with a third party that provides all IaaS and PaaS services, plus all required maintenance, configuration and updates to your ERP system. With a SaaS contract, you do not own any part of your ERP system, but rather rent the program from a service provider on a monthly basis.

Standard Cost
The assigning of predetermined estimated values to each of your materials, labor and overhead. Discrete manufacturers with steady pricing scenarios and long-running jobs tend to prefer standard costing. The counter to standard costing is actual costing.

Statistical Process Control (SPC)
In manufacturing, statistical process control is a methodology for measuring and controlling quality. Typically included in an ERP quality management suite.

Structured Query Language (SQL)
A programming language used to communicate with a database.

Tier 1, 2, 3
An automotive industry classification indicating the commercial distance between the supplier and the car manufacturer. OEM refers to the company that makes the actual car (Toyota, Ford). Tier 1 manufacturers are direct suppliers to the automotive maker, while Tier 2 manufacturers supply Tier 1 companies, etc.

Time and Attendance
A module in your ERP solution designed to facilitate timely and consistent labor reporting for payroll and job costing.

Total Cost of Ownership
A financial estimate that determines the direct and indirect costs of a product. For example, when selecting an ERP solution, you not only consider the initial software investment, but also the cost of annual maintenance, infrastructure hardware, training and customization.

Unit of Measure (UOM) Management
Manufacturers deal with multiple UOMs per inventory item (For example, you stock in one UOM but produce in another). ERP software manages and converts UOMs so you can manufacture, order and receive items with ease.

Value-Added Reseller (VAR)
A company that takes a product, adds features or services of its own, then resells it as a new product.

Vendor Managed Inventory (VMI)
A supply chain model where the manufacturer (rather than the distributor) is responsible for generating orders and maintaining the distributor's inventory levels.

Warehouse Management System (WMS)
A toolbox of applications designed to help manufacturers manage every aspect of their inventory and warehouse. Specific tools can include directed pick up and put away distribution, wave management, dock scheduling, shelf life management and more.

Work in Progress (WIP)
Partially finished goods waiting for the next step in the manufacturing process.

Work Order
Internal authorization to manufacture a specific amount of a specific product. Manufacturers use work orders to create the master production schedule.

Workflow
An important tool in BPM, ERP workflows automatically facilitate the routing, tracking and approval of documents and processes.

About IQMS
IQMS uniquely combines ERP and manufacturing execution system (MES) functionality to give manufacturers a comprehensive end-to-end suite for running the business, backed by the real-time performance and scalability companies demand. Developed specifically for mid-market repetitive, discrete and batch process manufacturers, IQMS provides robust capabilities for addressing strict customer and regulatory certification and compliance. IQMS achieves this by delivering traditional ERP functionality for accounting, sales orders, material requirements, inventory and purchasing, plus extended native features for CRM, human resources, production scheduling, shop floor control, warehouse and quality modules. With offices across North America, Europe and Asia, IQMS serves manufacturers around the world.

For more information, please visit www.iqms.com.