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Vendor Feature Comparison

Enterprise Resource Planning

Vendor Feature Comparison for
Enterprise Resource Planning

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Enterprise resource planning (ERP) software can be a bit of a bear when it comes to researching exactly what you need. Systems can be all-inclusive, offering everything your business could ever possibly need — from employee time cards to inventory barcode scanning — to best-of-breed software that specializes by application or by industry.

Whether you're a small accounting firm or a major manufacturing company, the right ERP software can help with whatever you need: consolidating your to-do lists, organizing your workload, keeping track of inventory, managing your employees and so much more.

To help you find the perfect fit, we've created this Enterprise Resource Planning Feature Comparison by compiling the features and modules available in some of the leading ERP systems. We went through vendor websites, looked at white papers and spoke to representatives to compile this data so you don't have to.

In this e-book, you'll find:

- **Which vendors offer which features.** While some features are considered mandatory in order for software to be considered in the ERP market, there are a few niche applications that will only be included in the more robust systems.

- **Descriptions and explanations of advanced features.** Features like item attribute management, fixed asset management and strategic sourcing will be defined here so that you can easily determine which ones apply to your business.

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Introduction

One thing that's sure to come up in the course of researching ERP software is the fact that different vendors use different terminology to describe the same features. Additionally, many sites keep their white pages or software brochures gated behind forms that require contact information to view. Even without these tricky aspects of internet research, understanding the information once you get your hands on it can be a complicated process as well.

To help make your life easier, we've researched and compiled feature information from 30 leading ERP vendors using product brochures, data sheets, vendor websites, instructional videos and conversations with vendor representatives.

The features covered in this guide are considered standard functionality for most Enterprise Resource Planning software, but it should be noted that not every ERP vendor offers the full range of modules.

Before we get to our tables, here are two things to keep in mind:

- If a vendor in the table doesn't have a check for a certain function, it's may still be possible to have that feature custom-built for your needs. Many vendors in this space are able to customize and add functionality for any client.

- Tables generally indicate strengths as opposed to gaps in application coverage. Vendors typically don't list every single feature available in their system online or in documents, but instead choose to highlight the areas where their system offers the greatest benefits.

Note: You can click on the names of products in tables to view descriptions and user reviews.

Enterprise Resource Planning Software

Enterprise resource planning owes its origins to companies in the 1990s that required inter-departmental software solutions that would integrate seamlessly with their existing manufacturing applications.

Once vendors identified this need, complex systems that allowed collaboration between different applications started cropping up. Now, companies can share forecasting data gathered within the supply chain with their financial accounting department, customer relationship system or manufacturing facility, for example.

Of course, not every business needs their manufacturing department to be able to communicate with their accounting department—in fact, not every business has a manufacturing department. That why the definition of true ERP software tends to be somewhat elusive. For our purposes, we consider vendors that offer at least three of the following applications:

- Accounting
- Human resources
- Project management
- Inventory management
- Supply chain management
- Manufacturing

Other features that may be included in ERP bundles but weren't researched for this e-book include:

- Bills of material
- Distribution management
- Order management
- Purchasing management
- Warehouse management

Also bear in mind that some of these functions may be incorporated into other modules that we did explore, so keep an eye out for those below.

Now that we've set up some parameters for our research, here are the results.

Accounting

Outside of the ERP market, there is a diverse and well-rounded offering of standalone accounting software for firms as well as SMBs that need to be able to keep track of expenses in-house. These best-of-breed products will all offer core accounting features as well as more specialized functionality that varies by industry.

Accounting modules that are incorporated into larger ERP systems may not be as robust as these best-of-breed systems, but they should all be capable of providing the following three core accounting functionalities:

- **General ledger.** A record of every financial transaction that can be used to prepare financial statements and keep track of both incoming and outgoing funds. May also be referred to as "bookkeeping," "chart of accounts," "trial balance" or "nominal ledger."

- **Accounts payable.** A record of all the money paid or owed by a business to its suppliers or other creditors. This feature should not be confused with options that allow businesses to accept payments from customers, as it deals exclusively with money leaving the company in exchange for goods or services.

- **Accounts receivable.** A record of all the money owed to the business that has not yet been paid. This feature can help automate the creation of invoices as well as the collection of payments.

A few other functions you may want to look for in ERP financial management systems are:

- **Bank reconciliation.** The ability to automatically compare bank account records or statements with the general ledger(s) in order to verify that all accounts are accurate and balanced.

Accounting

- **Financial reporting.** Allows for tracking trends, measuring key performance metrics and optimizing profitability. These reports often include profit and loss (P&L) statements, balance sheets, sales tax and expense reports.

- **Fixed asset tracking.** Enables businesses to define and track fixed assets such as machinery or property as well as depreciate those assets accurately.

- **Expense management.** A built-in portal where employees and managers can keep track of all work-related expenses, e.g., travel arrangements or equipment maintenance.

- **Billing.** Allows for complex sales and invoicing processes such as recurring or contract-based billing.

Accounting Features

	aAce	Acumatica Cloud ERP	Exact Macola	Microsoft Dynamics GP	NetSuite	SAP Business One
General ledger	✓	✓	✓	✓	✓	✓
Accounts payable	✓	✓	✓	✓	✓	✓
Accounts receivable	✓	✓	✓	✓	✓	✓
Bank reconciliation	✓		✓	✓	✓	✓
Financial reporting	✓	✓	✓	✓	✓	✓
Fixed asset		✓	✓	✓	✓	✓
Expense management		✓		✓		✓
Billing		✓		✓	✓	✓

Human Resources

HR software can fluctuate quite a lot in the features it offers. More basic systems may be limited to simple personnel tracking and clock-in/clock-out capabilities, while other systems can include everything from a contact information database to applicant tracking and new hire training.

In researching HR modules within ERP software systems, we looked for the following features:

- **Personnel tracking.** Generally considered one of the most fundamental features of human resources software. Acts as a database for all employee information, such as names, addresses, job titles, social security numbers and salary.

- **Reporting.** Automatically collects and reports on employee and applicant data in order to analyze any trends that may appear.

- **Payroll.** Cuts paychecks, calculates tax withholdings and tracks salaries, bonuses, 401k contributions and health deductions. Note that some systems will incorporate payroll functionality into accounting suites.

- **Benefits administration.** Keeps track of employee benefits like paid time off, medical or life insurance policies and 401k accounts.

- **Time/attendance tracking.** Enables employees to clock in and out, tracks attendance and absences (e.g., PTO and sick days), and provides alerts when employees miss or perform established amounts of work.

- **Recruiting/applicant tracking.** A centralized database for recruiters to store and access applicant information throughout the hiring process.

Human Resources

- **Onboarding.** Handles all the required steps for new hires such as filling out tax forms, administering policy trainings, etc.

- **Employee scheduling.** Automates scheduling processes of staff on a myriad of levels.

- **Compensation management.** Keeps track of the different types and levels of compensation available to employees.

- **Performance review.** Enables managers to log employee feedback in one centralized location for the purpose of promotional consideration, bonus approval, etc.

Human Resources Features

	Deskera	Epicor	ePROMIS	FinancialForce	Microsoft Dynamics GP	Oracle JD Edwards
Personnel tracking	✓	✓	✓	✓	✓	✓
Reporting	✓	✓	✓	✓	✓	✓
Payroll	✓	✓	✓		✓	✓
Benefits administration		✓		✓	✓	✓
Time/attendance tracking	✓		✓	✓	✓	✓
Recruiting/applicant tracking	✓	✓	✓	✓	✓	✓
Onboarding	✓	✓	✓	✓	✓	✓
Employee scheduling	✓			✓	✓	✓
Compensation management					✓	✓
Performance review	✓	✓	✓	✓	✓	✓

Project Management

Project management software enables managers to keep tabs on all the complex aspects of extended projects that last weeks, months or even years. This function of ERP systems serves as a central collection point for all employees working on the project to access relevant information.

In full-fledged project management software, every team member working on a project is given login information and allowed to customize what they see, update status reports and monitor the overall progress of the project. Above all, project management software will increase company efficiency using the following features:

- **Collaboration.** Enables team to work together, view one another's work status, communicate ideas coordinate among themselves, etc. Can include functions such as shared task lists, online chat or message boards, video conferencing and team dashboards.

- **Task management.** Allows managers or other users to create, track or assign tasks and deadlines related to an overall project.

- **Project planning & scheduling.** Defines the scope of projects and helps users create a roadmap of tasks (usually with tools such as Gantt charts) to identify potential speed bumps, milestones or key resources.

- **Tracking/reporting.** Tracks actual and estimated time spent on each task as well as costs accrued. Creates reports based on this information so that executives and team members can visualize the status of projects.

Project Management

- **Employee time tracking.** Monitors the amount of time employees spend on tasks, provides availability for assignments and bandwidth and creates timesheets.

- **Document management.** Also referred to as file sharing sometimes, document management enables team members to upload documents to a central repository, sign forms and track history of paperwork.

Project Management Features

	abas ERP	Epicor	IFS ERP	IQMS Manufacturing ERP	Microsoft Dynamics GP	NetSuite
Collaboration	✓	✓	✓	✓	✓	✓
Task management	✓	✓	✓	✓	✓	✓
Project planning & scheduling	✓	✓	✓	✓		✓
Tracking/reporting	✓	✓	✓	✓		✓
Employee time tracking		✓	✓		✓	✓
Document management	✓		✓	✓	✓	✓

Inventory Management

Inventory management systems will make keeping track of stock, monitoring product and resource supplies and maximizing profits relatively simple. Through forecasting and automated reordering functions, stock levels can remain at an optimum level between running out too quickly or depreciating on the shelf.

While inventory systems can differ depending on unique requirements of the industry — for example, food distributors require expiration date tracking in order to ensure the product is delivered while it's still good.

Aside from considering those specialized features, ERP-integrated inventory systems may include the following features:

- **Inventory control.** An essential function of inventory software, this allows workers to track quantities of stock, optimize reordering processes, and use advanced analysis to identify trends in inventory, resources, warehouse shelving and picking.

- **Inventory auditing.** Supports regular inventory counts/cycle counts. Creates tracking sheets for physical counting and provides RF support for counting processes.

- **Barcoding/RFID/electronic scanning.** Enables barcoding or radio frequency identification (RFID) functionality to scan items during shipping, receiving and transferring in order to reduce human error.

- **Order management.** Captures, processes and fulfills orders from point of purchase through payment and delivery.

- **Lot traceability.** Create lot numbers to enable stock tracking from ingredients and raw materials all the way through manufacturing and distribution.

Inventory Management

- **Item attribute management.** Enables users to define and track items according to specific attributes such as size, color, ingredients etc.

- **Sales/Purchase orders.** Allows for tracking of product sales and orders and automatically adjusts product quantities.

- **Demand forecasting.** Monitors trends that could impact future demand and creates suggestions to help organizations minimize waste, reduce data latency and enable real-time demand planning.

- **Reporting and analysis.** Enables users to create reports, keep an eye on trends and analyze the performance of various inventory processes.

- **Vendor-managed inventory.** Provides options for supplier vendors to take on many of the duties and responsibilities of maintaining their buyer's inventory.

Inventory Management Features

	aAce	CentralBOS	Distribution One	ERPNext	Exact Macola	Oracle JD Edwards
Inventory control	✓	✓	✓	✓	✓	✓
Auditing	✓		✓	✓		✓
Barcoding/RFID	✓	✓	✓		✓	✓
Order management	✓	✓	✓		✓	✓
Lot traceability	✓		✓	✓	✓	✓
Item attribute management	✓	✓	✓			✓
Sales/purchase orders	✓	✓	✓			✓
Demand forecasting	✓		✓			✓
Reporting & analysis	✓	✓	✓			✓
Vendor-managed inventory			✓			✓

Supply Chain Management

Supply chain management (SCM) applications are actually a series of features that work together to communicate and track products as they move from the manufacturing stages all the way through distribution centers and into retail stores.

In terms of ERP functions, SCM is on the heftier side. Basic features will include resource and demand planning, but a full-bodied SCM system will typically offer the following:

- **Supply chain planning.** Capable of taking sales numbers, historical trends, upcoming promotions and sourcing data into consideration in order to forecast customer demand and adjust production accordingly.

- **Demand planning.** Works to make other forecasting features more accurate by reducing biases in the data and collecting information in real-time. This software can also create customizable reports according to a number of filters, such as market, time or customer.

- **Vendor-managed inventory.** Sometimes bundled into Inventory management systems instead of SCM, vendor-managed inventory (VMI) allows vendors access and control over buyer inventories so they can take charge of monitoring, updating and replenishing inventory themselves.

- **Supplier management.** Helps businesses manage relationships with suppliers and keep track of all supplier performance history in order to make more informed decisions regarding sourcing. Users can set their own "risk" categories and assess which vendors are reliable and which ones aren't.

Supply Chain Management

- **Procurement.** Similar to supplier management, except this feature handles the financial aspects of the supplier/buyer relationship. Able to carry out purchase orders, distribute purchasing terms electronically for approval and log expenses for future references. Additionally, this can help organizations ensure compliance at all times.

- **Strategic sourcing.** Before the procurement process begins, sourcing software can be deployed to assess money saving goals and screen potential vendors. Strategic sourcing also includes budget and spend analysis to identify unnecessarily expensive supplier relationships by comparing with other market options.

- **Warehouse management.** One of the most integral functions of SCM software, warehouse management systems monitor and control all the movement of materials or products within the warehouse, from shipping and receiving to transfers. Many warehouse management systems include advanced shipment notifications, picking and putaway tracking and RFID or other e-scanner capabilities.

- **Transportation management.** Essentially, TMS software handles planning, controlling, and executing all movement of products to and from warehouses. Logistics software works to suggest efficient delivery modalities (air, land, sea) as well as routes and load splitting constraints. Deliveries can be monitored with satcomm or other communication devices, and very advanced TMS software often includes sub-features such as fleet management.

- **Order fulfillment.** Helps determine the best production methods for products — such as build-to-order or engineer-to-order — to decrease lead times on production. After orders are complete, this software keeps track of unpaid transactions through revenue recognition processes as well.

Supply Chain Management Features

	Apprise ERP	Epicor	IFS ERP	IQMS Manufacturing ERP	NetSuite	SAP Business One
Supply chain planning	✓	✓	✓	✓	✓	✓
Demand planning	✓	✓	✓	✓	✓	✓
Vendor-managed inventory		✓		✓		
Supplier management	✓	✓			✓	✓
Procurement		✓	✓		✓	
Strategic sourcing		✓				✓
Warehouse management	✓	✓	✓	✓	✓	✓
Transportation management	✓	✓				✓
Order fulfillment		✓	✓	✓	✓	✓

Manufacturing

Enterprise resource planning software really got it start thanks to manufacturing organizations, so it makes sense that any ERP system is incomplete without this functionality. Think of manufacturing as the hub of the ERP wheel, with spokes serving as lines of communication to every other department or application. Within that hub, you should find the following:

- **MRP.** Can refer to Materials Requirements Planning or Manufacturing Resource Planning. This is a core function of manufacturing software that helps plan production runs according to either customer demands or resource availability. It also helps users plan master production schedules to optimize product quantities.

- **Manufacturing execution system.** The functions of this feature can vary from simply reporting on the status of manufacturing processes to actually controlling machinery on the shop floor. Regardless of the level of control, though, MES software should always provide real-time feedback on production.

- **Quality management.** Works with other systems to monitor quality throughout the manufacturing process by reducing human error. Enables lot traceability throughout the system in order to contain quality issues should they arise, and provides audit trails to make tracking the origin of defects quicker and simpler. It can also support workflow for corrective action and work order requests for the same.

- **Product lifecycle management.** Monitors and manages product data from design steps to production and beyond.

Manufacturing Features

	Deltek Costpoint	Epicor	ePROMIS	IFS ERP	IQMS Manufacturing ERP	Microsoft Dynamics GP
MRP	✓	✓	✓	✓	✓	✓
Manufacturing execution system	✓	✓	✓	✓	✓	
Quality management	✓	✓		✓	✓	✓
Product lifecycle management		✓		✓	✓	

Methodology

To collect the data in this report, we surveyed publicly available documentation of ERP software vendors. We examined product brochures, white papers, data sheets, websites, instructional manuals and videos, knowledge bases and support forums.

All of the information we examined for the above tables is first-party; If the vendor doesn't say it offers a given feature, we didn't check it in the tables, even in cases where literature from consulting firms indicates that the vendor does offer it. We considered publications by vendors and their channel partners as the only authoritative source of information about functionality coverage.

Results are representative of our vendor sample, not necessarily enterprise resource planning software as a whole. Sources attributed and products referenced in this article may or may not represent client vendors of Software Advice, but vendor status is never used as a basis for selection.

If you have comments or if you're a vendor and would like to update your information, please contact lisa@softwareadvice.com.

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Created by Lisa Hedges

Lisa Hedges is a Content Analyst at Software Advice. She follows technology trends and reports on several markets, including accounting, supply chain management, and enterprise resource planning.

- Software Advice profile

- lisa@softwareadvice.com

- (512) 640-0320

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