TEC | Technology Evaluation Centers

EPICOR ERP

EPICOR

Discrete Manufacturing

Ted Rohm, Senior ERP Analyst | February 2020

TEC CERTIFICATION REPORT

TEC Certification Reports provide detailed analysis of leading software solutions that have successfully completed TEC's Certification Program.

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About This Report

Product: Epicor ERP
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Certification by:
Ted Rohm, Senior ERP Analyst, Technology Evaluation Centers
Demonstration conducted by:
James Frye, Senior Principal Solutions Engineer, Epicor Software

Technology Evaluation Centers (TEC) is pleased to announce that Epicor ERP by Epicor is now TEC Certified for online evaluation of ERP solutions for discrete manufacturing in the ERP Evaluation Center. The TEC Evaluation Centers enable you to compare and evaluate functionality based on TEC's comprehensive models of business software. Data used in the Evaluation Centers are obtained from the vendors' responses to TEC's research questionnaire. Certification ensures that Epicor has demonstrated Epicor ERP's support for specific real-world business processes chosen by TEC analysts, and that TEC analysts have analytically and comparatively reviewed research questionnaire data about Epicor ERP against known benchmarks.

Industry-Specific Solutions Infused With The Latest Software Technology

Epicor's industry-focused enterprise resource planning (ERP) solution has a long heritage of providing deep capabilities for mid-market manufacturers in discrete manufacturing. Epicor ERP has been serving industries that require more complex manufacturing operations for more than 40 years. The solution brings together a compelling combination of these deep capabilities, a next-generation Kinetic user experience, and leading-edge technologies (such as the EVA digital assistant, Internet of Things (IoT) connections, artificial intelligence available in the cloud)—all at a very accessible price.

Epicor is a global ERP solution provider based in Austin, Texas. The company has approximately 40 offices distributed across the Americas (13 offices), Europe, Middle East and Africa (12), Asia (11), and Australia and New Zealand (4). Overall, the company has a presence in more than 150 countries and runs its software in 30 languages.

Epicor ERP is a best fit for industrial machinery; fabricated metals; electronics and high tech; measuring and controlling devices; aerospace and defense; furniture and fixtures; and medical devices. The system can support other industries and has customers across a wide range of other manufacturing industries and even non-manufacturing industries. Epicor ERP users include companies in professional services, consumer goods manufacturing, automotive manufacturing, chemical manufacturing, food and beverage manufacturing, packaging manufacturing, and other goods and services industries.

Epicor ERP's market focus is for mid-market customers but the software is used by customers ranging in size from very small businesses with 1–19 employees to much larger installations with more than 2,500 employees (figure1).

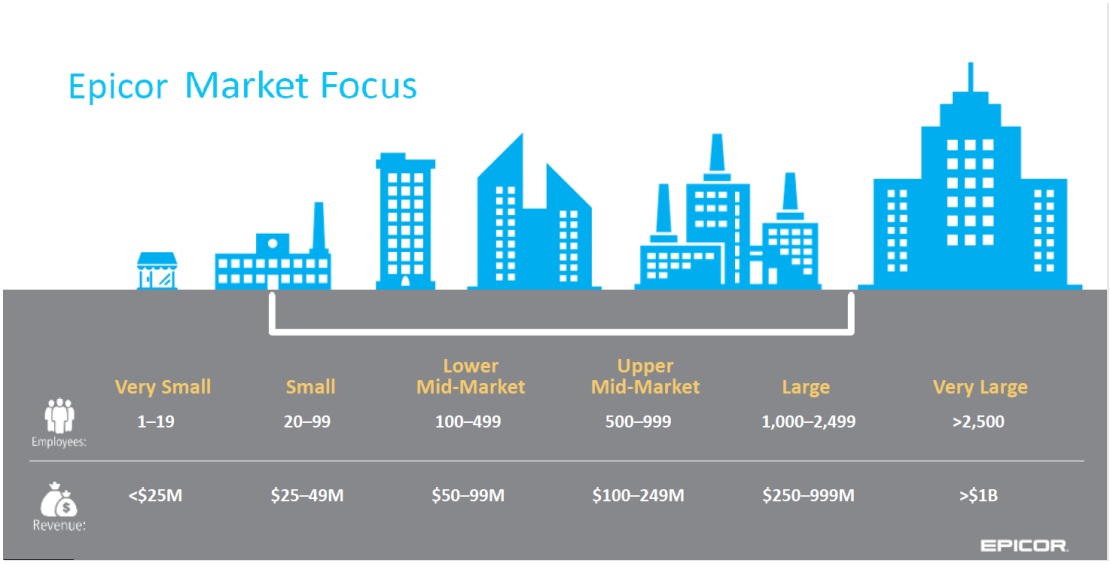


Figure 1. Epicor market focus

Epicor ERP's strength is serving industries that require more complex discrete manufacturing processes. These include engineer-to-order (ETO), make-to-order (MTO), and configure-to-order (CTO) processes. The application can of course support assemble-to-order (ATO) and make-to-stock (MTS) modes of production. However, Epicor ERP does not support process manufacturing or batch-oriented manufacturing extensively.

Benchmark Results for Epicor ERP

The TEC Focus Indicator presents the results of benchmarking Epicor ERP against an **Industry Average**. TEC calculates the industry average for a given software market space based on product data from real-world software solutions, scoring solution support for hundreds to thousands of features and functions. The Industry Average circle in the middle of the graph is a normalized representation of the average of the scores.

- The Focus Indicator represents neither the quality of the product nor an absolute quantity of supported functionality. Rather, the **graph is normalized** to show *support relative to the average quantity of functionality supported*.
- The functional criteria have been equalized (attributed equal weight).
- High and low thresholds have been set in order to create the "Dominant," "Competitive," and "Minimal Support" zones (see below for more details).

Reading the TEC Focus Indicator

The axes represent the main modules of a typical ERP product and the red dots show the relative support of the product compared with the Industry Average. The closer a red dot is to the center, the more functionality the product supports for that module.

The **Industry Average circle** marks the relative support of the average ERP product within the indicated market space.

The **Dominant Zone** (green) shows where the product supports more functionality than the average solution. Dominant modules are likely to be competitive differentiators for the vendor.

The **Competitive Zone** (white) shows where the product supports about the same amount of functionality as the average solution. This typically indicates that most vendors in this market space support this functionality.

The **Minimal Support Zone** (red) shows where the product supports less functionality than the average solution. Minimal Support modules might indicate less of a focus for this functionality, as it may not have as much of an importance within the vendor's target market.

If your needs correspond to modules ranked closer to the center of the Focus Indicator, Epicor ERP may be an application worth evaluating.

Epicor ERP for Discrete Manufacturing

This **TEC Focus Indicator™** shows you which types of functionality are likely differentiators for the Epicor ERP application in the discrete manufacturing software space.

*The module scored in the maximum range for functionality.

TEC Focus Indicator Epicor ERP for Discrete Manufacturing

ERP for discrete manufacturing includes functionality that addresses the specific requirements of manufacturing distinct items. It supports a company's full cycle of manufacturing in a discrete environment.

Use TEC Advisor to compare Epicor ERP with other discrete manufacturing solutions, according to your organization's needs and characteristics. Compare now.

Product Review: Epicor ERP

Epicor ERP was presented to TEC in a multi-hour, scripted demonstration. James Frye, Senior Principal Solutions Engineer at Epicor Software, demonstrated the latest version of the Epicor ERP solution to TEC as part of the product certification process. During the first part of the product demonstration, Epicor was tasked with showing the product's user interface, usability, customization features, and underlying business platform support such as reporting, document management, and business process management (BPM). In the second part of the demonstration, Mr. Frye showed the live execution of a suite of real-world business process scenarios centered around mega business processes including procure to pay, quote-to-cash, and inventory management.

User Experience

Fit and Finish

Epicor Kinetic Design is Epicor's user experience platform. It is a multi-pronged cross-platform user experience (UX) framework that is being applied across the Epicor applications including Epicor ERP. The kinetic design platform principles and tools have been are being applied across the Epicor ERP solution. This review will report on only the latest version of the application as demonstrated.

The Kinetic Design user experience has a very modern and elegant look and feel. An overriding goal of the Kinetic experience is to transform how users interact with the software in order to simplify their everyday tasks. Figure 2, the homepage, is an example of a screen that has been "kineticized".

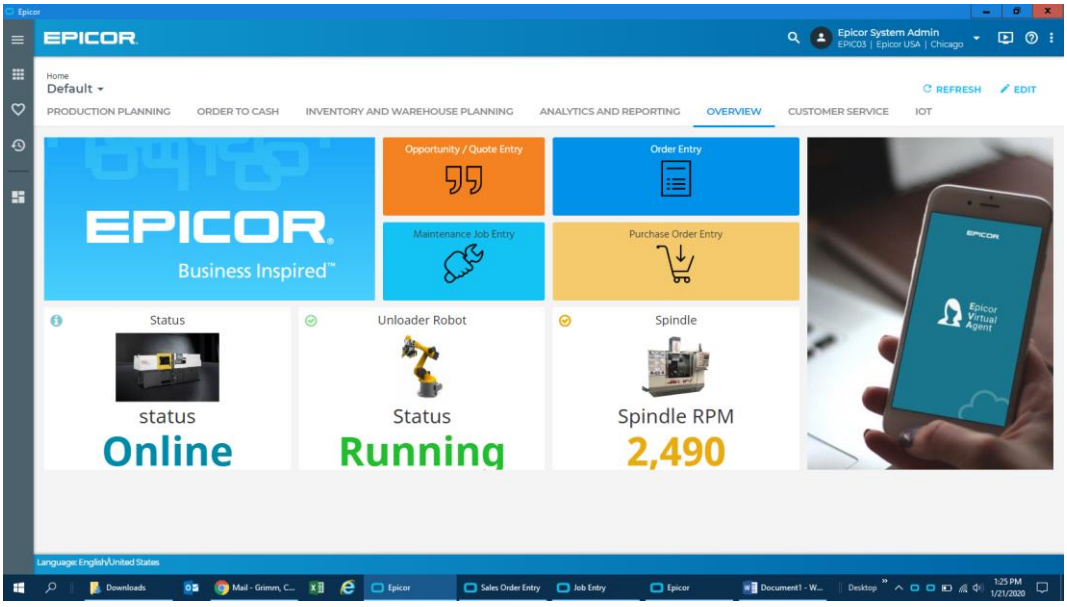


Figure 2. Epicor homepage

Figure 3. Enterprise Search screen

The Enterprise search allows a user to search across the entire system to quickly find all objects that match the search results (figure 3). For example, a user can enter an invoice number and search across the entire system for matching data. The system brings back the data that matches the invoice entered. If there were data from multiple database objects that match the search, then the different objects would be tagged in the returned search. From the set of results displayed, the user can right-click on a hyperlinked item to see the list of functions that a user can move to from the displayed search result.

Epicor Knowledge Mentor

Users have access to a detailed knowledge base from within the system. The knowledge base provides detailed, step-by-step instructions detailing the best practices for a particular business process. Epicor provides additional training and education tools available to its customers. A power user can record a process and add their own business' unique twists to the process.

Business Platform Tools and Capabilities

The Epicor ERP system delivers a full complement of platform tools to support business operations. The base platform of an application system starts with infrastructure (hardware, servers, and network devices) and adds additional platform layers such as the operating system and database platforms on top of this infrastructure. There is an additional set of tools that is needed to support an enterprise application. This includes tools for document management; reporting, analytics, and business intelligence (BI); business process management; digital assistants; and enterprise social collaboration. At TEC, we have coined the term business platform capabilities to categorize these additional tools.

Dashboards and Analytics

Epicor ERP has two primary tools for reporting and analytics in the system: 1) Embedded trackers and dashboards, and 2) Epicor data analytics (EDA). The tracker and dashboards

tools are for day-to-day view of the data. The data analytics tool is for getting a bigger picture of the business and doing higher-level analysis. Analytics gives a more strategic view of trends over time. The system is delivered with a large suite of prebuilt operational reports, dashboards and analytics examples.

The trackers and dashboards are built to be easy to use and just as importantly be easy to create. Epicor has made creating dashboards extremely easy. There are only two steps to creating a dashboard: to build first the query and then the dashboard to display the data retrieved by the query. The query is created using the business activity query (BAQ) designer. In the BAQ designer, the user can drag and drop fields into the query. The user can also create other information to display such as a sum of values and calculations based on the data. The system automatically builds the query for the user. The second part is to create the new dashboard using the dashboard designer.

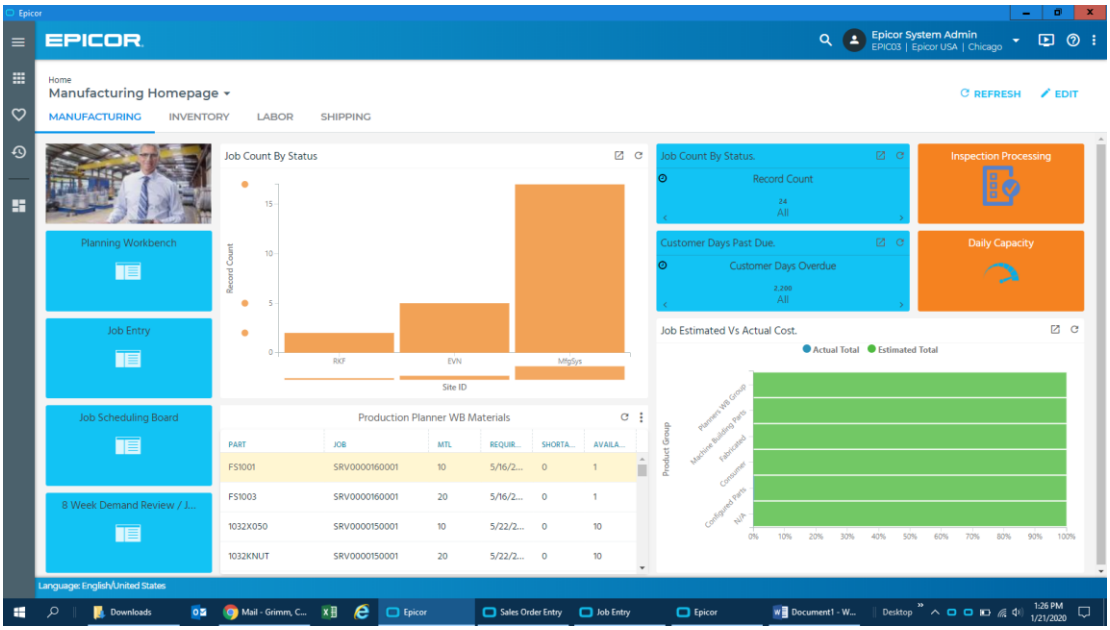


Figure 4. Manufacturing homepage

The dashboard designer is also very easy to use. The user simply enters the name of the query built in step one. The user can then perform additional calculations, add rules such as highlighting important information, or add a chart to the dashboard. The dashboard shown in figure 4 was created in just a few minutes. A user can now deploy this new dashboard on the screen or for a mobile device. The dashboard can be run on any device and it resizes to fit on the device.

The first problem when creating one's own reports is finding out the underlying database table and field name behind the data being displayed. This table and field name are then used in creating the report. In Epicor ERP, this database table and field information is found easily enough by selecting the field help. The field help window displays all the technical details for the field, along with the help text for the field. All anyone needs to know when

creating a report is where the data resides (table and field) and how they want to display the information. This is all the “technical” know-how needed to build your own reports.

Epicor has a full suite of business intelligence and analytics tools to meet all of an enterprise’s needs. They range from the operation reports and dashboards to the more sophisticated analytics tools. Epicor analytics is a full-featured analytics tool for working with large data sets and displaying the data visually, as shown in figure 5.

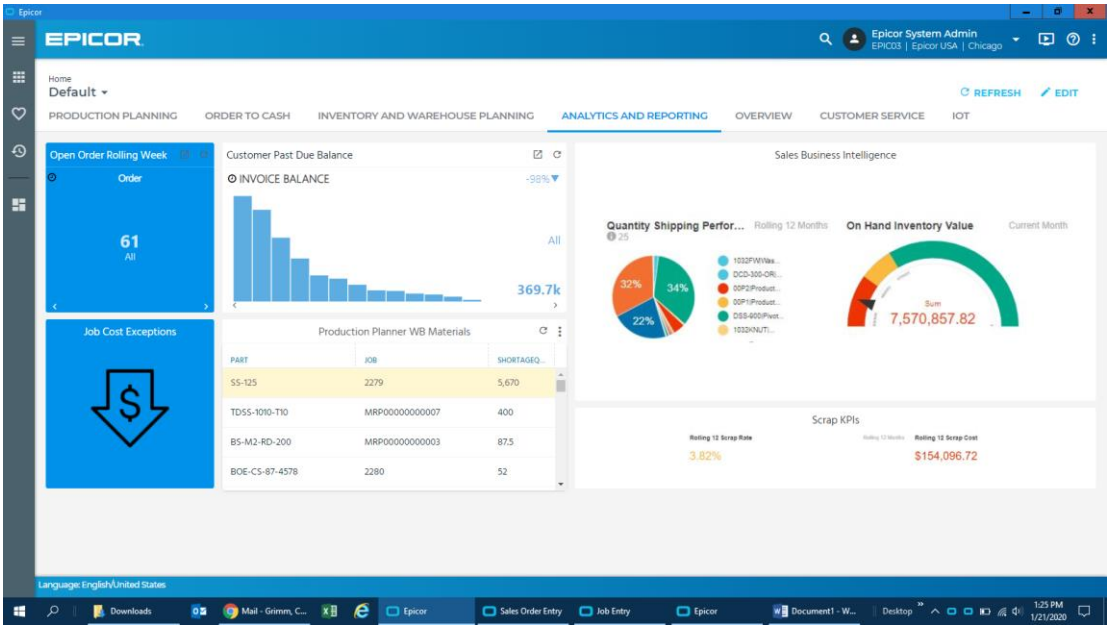


Figure 5. Epicor analytics and reporting dashboard

Note: There are other reporting tools available including a financial reporting tool for detailed financial reporting, and the Epicor XL Connect product for those who wish to use Excel.

Epicor Collaborate

Epicor Collaborate is an enterprise social collaboration tool. It lets users collaborate with each other in the familiar social media environment. Users can follow orders, people, and processes the same way they follow topics on social media. Users can collaborate in real time and reference the relevant business objects and events. The tool brings collaborative engagement with the context of the associated business object. As users are working in Epicor ERP, they can easily start a conversation on a business topic. This provides a social means of communication in the business environment.

Epicor Virtual Assistant—EVA

Epicor Virtual Agent (EVA) is a digital agent designed to help users work smarter. The tool is similar to other virtual digital assistants on the market such as Apple’s Siri or Amazon’s

Alexa. The assistant uses natural language processing (NLP) to interact with the user. The EVAs in ERP systems are currently being used to handle relatively simple tasks such as requesting time off, entering timesheets, or providing latest business results. The skills of this and other digital assistants will continue to grow and will start to replace many common interactions with the ERP system.

Manufacturing Execution System (MES)

Epicor ERP manufacturers use Epicor Advanced MES to improve quality, reduce scrap, help ensure on-time delivery, and boost production throughput. Epicor Advanced MES can improve profitability by helping users find more capacity. Epicor Advanced MES collects data directly from equipment and operators on the shop floor in real time, minimizing inaccurate and time-consuming manual data collection (figure 6). With information instantly in hand, an operator can anticipate and solve production problems before they happen. Real-time insight helps users pinpoint critical issues, reduce waste, and improve quality and customer service. Everyone in the plant and throughout the business can take action to improve manufacturing performance.

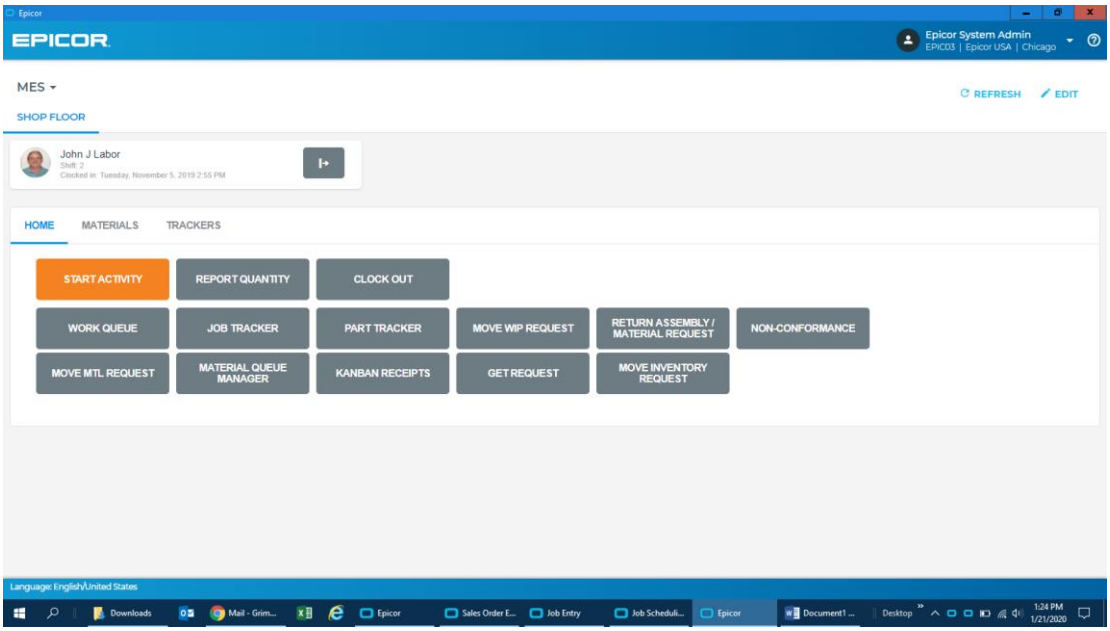


Figure 6. Manufacturing execution system

Internet of Things (IoT)

The Internet of Things (IoT) allows manufacturers to connect their systems, sensors, machines, and people. Epicor ERP users can more easily capitalize on this increasingly essential capability with Epicor IoT. Epicor IoT leverages the power of Microsoft Azure IoT Hub with the context and in-depth data of Epicor ERP. With Epicor IoT, users get intelligent insight into the operations and day-to-day activities. Epicor IoT enables monitoring of

equipment, assets, environmental factors, inventory locations, and their corresponding IoT data. Events and data—such as sensor and machine telemetry—flow into the Azure IoT Hub. From there, the data propagates to the IoT module of the Epicor ERP solution. Epicor IoT has an advanced rule-based engine that can detect patterns and raise alerts and notifications that propagate into Epicor ERP, where they can be used to trigger business process changes such as raising a maintenance suggestion when equipment degradation is detected.

Document Management and Business Process Management (BPM)

Epicor recently acquired DocStar to be its enterprise content management solution. Most manufacturers cannot operate effectively without a full-featured enterprise content management solution. DocStar allows users to store, retrieve, edit, version, tag, and manage all the business documents. When a document is saved to Epicor ERP, all the metadata is automatically attached to the document. DocStar is a separate product but has been tightly integrated into Epicor ERP.

Epicor ERP also has a full-featured business process management (BPM) tool. BPM tools are used to monitor system events, evaluate conditions, and send alerts or take actions based on the condition. Business events such as orders with excessive discounts or customers going over their credit limit are common places where BPM tools are applied. The BPM tool within Epicor ERP is a very easy-to-use and full-featured BPM solution.

Support of Processes

Of course, an ERP system such as Epicor ERP can be used for thousands of tasks. Evaluating how any single ERP system handles a particular business' processes requires a well-designed and planned demonstration. At a minimum, ERP demonstrations for system evaluation should take multiple days. However, the brief, multi-hour demonstration given by Epicor reveals why it has been the choice for hundreds of organizations over decades. Built into Epicor ERP is a lot of what one might call last-mile functionality to support manufacturers. Below are the highlights of just a few of these last-mile capabilities.

Product configurator fully embedded into ERP software. A product configurator is used to drive the creation of custom quotes and orders. Some ERP providers rely on third-party product configurators or configure, price, quote (CPQ) solutions for this task. Epicor's product configurator is fully embedded and can automatically create the appropriate bill of materials (BOM) and manufacturing routings needed for the manufacture of a new customer product for ETO, CTO, MTO, and other custom manufacturing processes.

From the opportunity, the sales order is created with a single click. When this sales order is released, Epicor ERP creates three different actions to fulfill this order. It creates the purchase order to acquire the product, the manufacturing job for the custom manufacture,

and an inter-company transfer to bring material from the other warehouse.

Procure-to-pay process—The procurement process is one of the most, if not the most, important business process for manufacturers. Manufacturers must manage every aspect of the process. Suppliers need to be managed via **supplier relationship management (SRM) analytics**. Figure 7 is an example of an SRM cockpit. The SRM cockpit keeps track of a number of ratings on a supplier including the on-time rating, service rating, and quality rating. Of course, all of these ratings can be adjusted to fit a company's unique requirements.

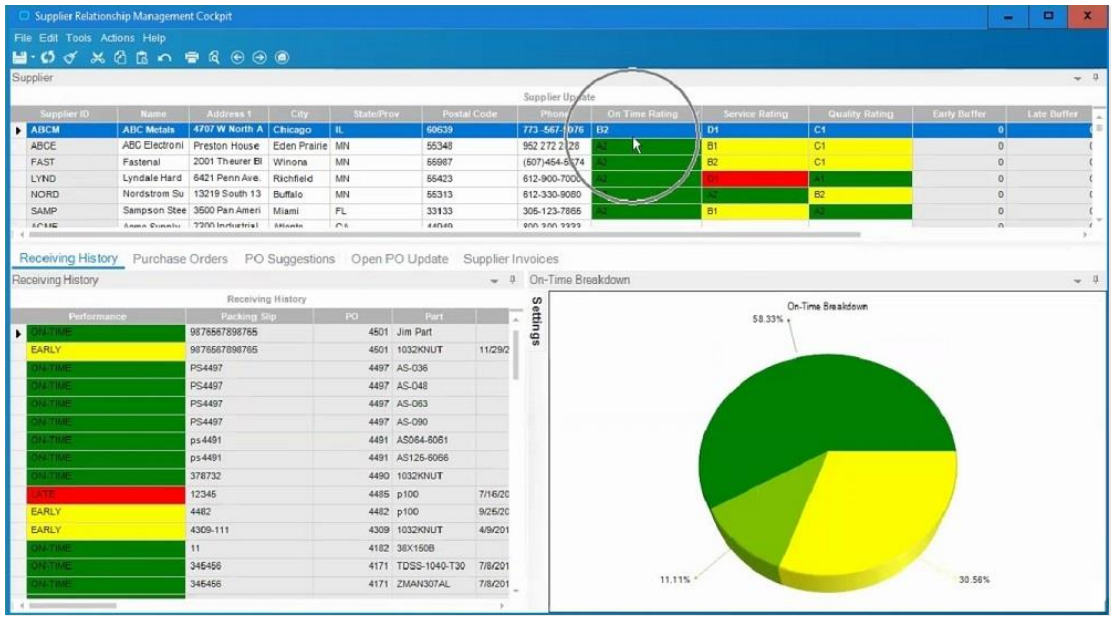


Figure 7. Supplier relationship management (SRM) cockpit

During the procure-to-pay process, purchase orders need to be received and processed in a number of ways and as efficiently as possible. Epicor ERP can process single- and multiple-step receipts on POs. Having visibility into the status of POs is extremely important to Epicor's customers. There are PO status dashboards for monitoring and aiding in the processing of purchase orders.

There are many other little details that are part of Epicor ERP for managing all these last-mile details. Many of the newer entrants to the ERP market cannot match the depth of functionality available in Epicor ERP.

TEC Analyst Observations on Epicor ERP

Epicor ERP has long delivered deep, industry-specific functionality to its manufacturing customer base. The solution is built to support the needs of some of the more complex discrete manufacturing customers. As this report shows, Epicor ERP is a highly competitive manufacturing ERP solution in what is a highly competitive marketplace. There are many ERP solutions for discrete manufacturing, but the number drops significantly when one starts to look at the custom, to-order manufacturing solution providers.

Epicor ERP scores in the dominant zone in all the modules within TEC's ERP model for discrete manufacturing, including: Financials; Manufacturing Management; Inventory Management; Purchasing Management; and Sales Management.

Epicor has been serving customers on a global scale for what is now some 45 years and is now being positioned to support customers for another 45 years. Epicor is financially sound and ready to continue to grow and invest in its solutions to meet its customers' needs. Though a private company, Epicor is reported to have a total close to $1 billion (USD) in annual revenues. The recent acquisition by Kohlberg Kravis Roberts & Co. shows that it is a company with solid business fundamentals that will be here for many years to come.

The recent releases of Epicor ERP show that the company is fully committed to keeping pace with the forces of digitization and bringing the latest technologies to its customers. The Kinetic Design experience, along with mobile, social, and AI skills, delivers a user experience that is on par with its rivals. The overall application continues to be built out functionally beyond core ERP processes in support of manufacturing requirements such as quality management, warehouse management, and field service by the recently released Epicor Service Pro.

When it comes down to selecting a manufacturing ERP solution, Epicor is almost always part of the decision matrix. There was a period of time where Epicor was, rightfully, seen as dropping behind the competition in some of the newer technology areas. However, that time is now in the rearview mirror. The latest technological and financial injections should make Epicor ERP part of every discrete manufactuerer's ERP shortlist.

Detailed Functionality Graphs for Epicor ERP

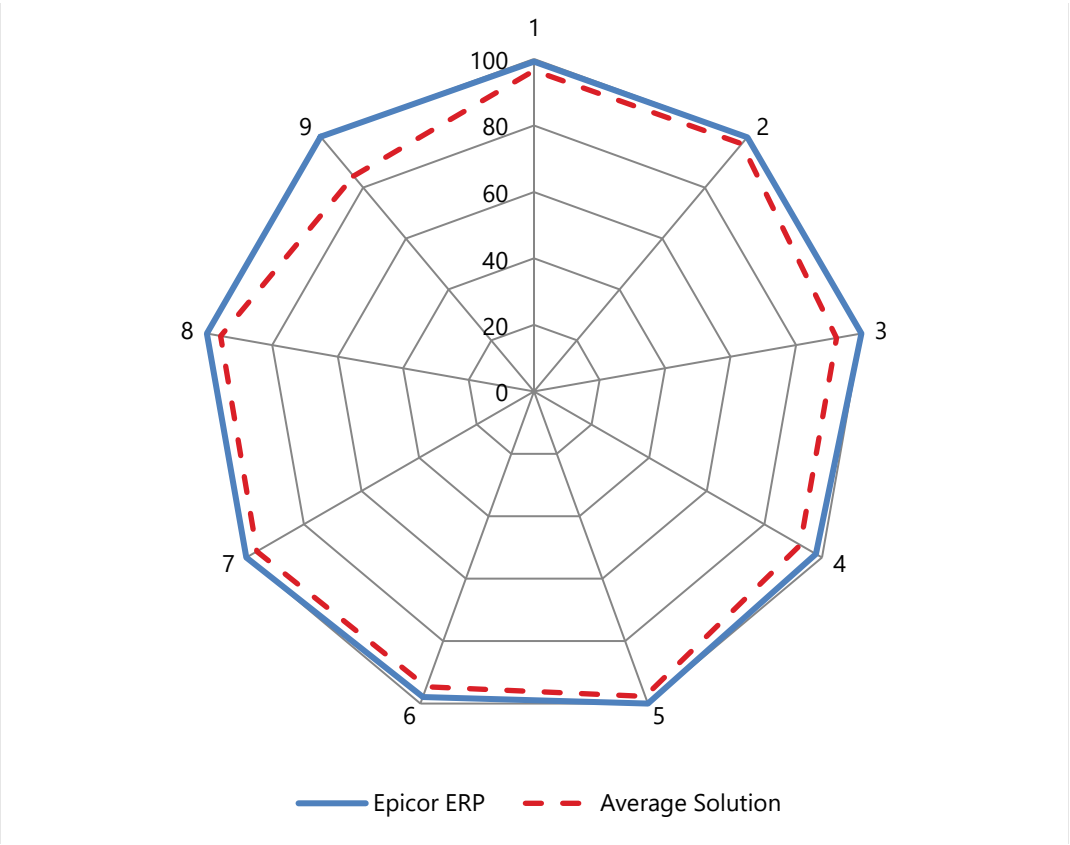
The following functionality benchmark graphs represent the quantity of support by Epicor ERP for the functionality within each module identified in the TEC Focus Indicators, on a scale of 0 to 100 points. The closer the plotted value is to 100 (toward the outside in spider graphs and the top of bar graphs), the more functionality Epicor ERP supports. The functionality of Epicor ERP is shown in blue; an average of what competitor solutions offer is shown in red.

Discrete Manufacturing

Epicor ERP for Discrete Manufacturing

Financials

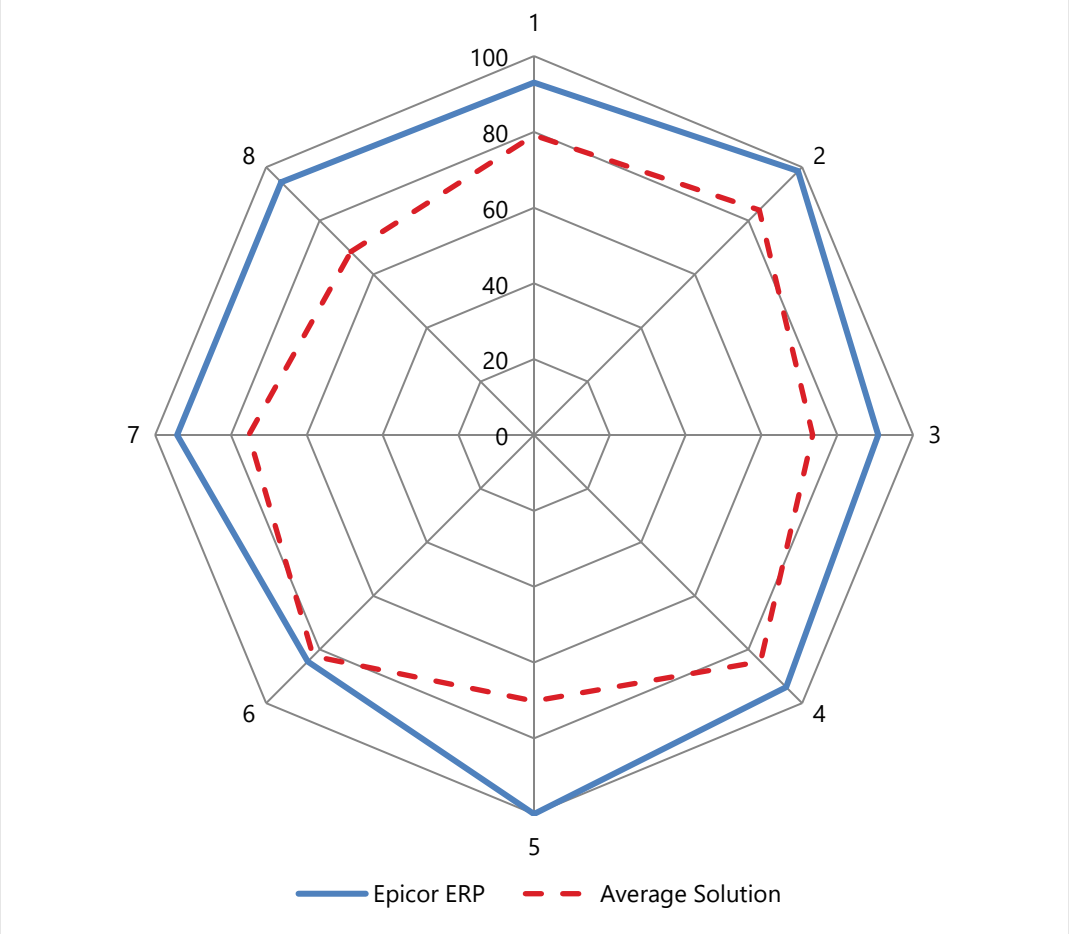
The Financials module provides features and functions that allow accountants and financial managers to ensure financial transactions are tracked and properly recorded, and that this information is available via reports and other data retrieval tools. Traditionally, this module includes the General Ledger, Accounts Payable, Fixed Assets, Cost accounting, Cash Management, Accounts Receivable, and Financial Reporting submodules.



Criteria		Epicor ERP Score	Average Score
1	General Ledger	99.2	96.5
2	Accounts Payable (A/P)	99.8	97.2
3	Fixed Assets	100	92.4
4	Cost Accounting	97.9	92.5
5	Cash Management	100	97.7
6	Budgeting	97.9	94.6
7	Accounts Receivable	100	96.3
8	Financial Reporting	100	95.8
9	Project Accounting	100	84.5

Human Resources

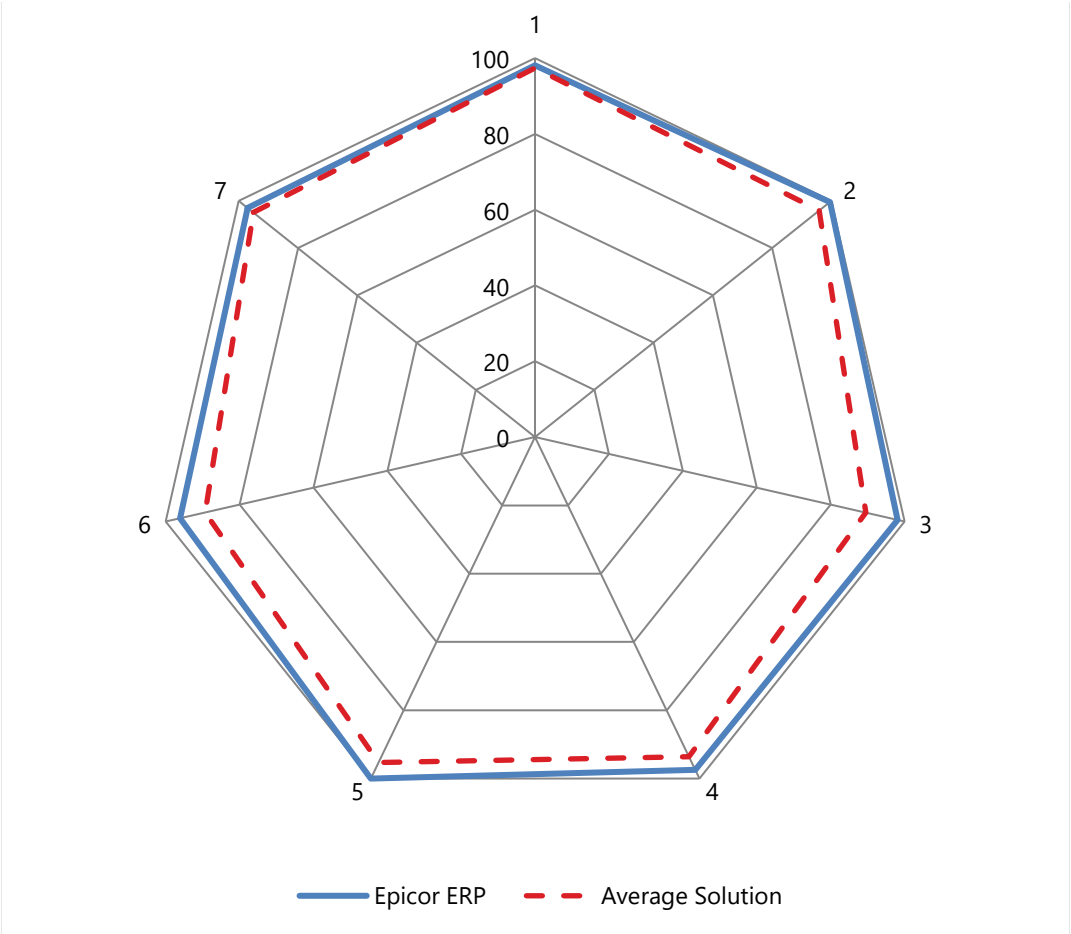
Human Resources management encompasses all the applications necessary for handling personnel-related tasks for corporate managers and individual employees. Submodules include Personnel Management, Benefits, Payroll, Employee Self-Service, Employee Metrics, Health and Safety, Workforce Management, and Training.



Criteria		Epicor ERP Score	Average Score
1	Personnel Management	93.0	79.1
2	Benefits	98.5	84.0
3	Payroll	90.8	73.5
4	Employee Self-Service	94.1	84.5
5	Employee Metrics	100	70.2
6	Health and Safety	84.5	82.5
7	Workforce Management	94.2	75.3
8	Training	94.4	68.4

Manufacturing Management

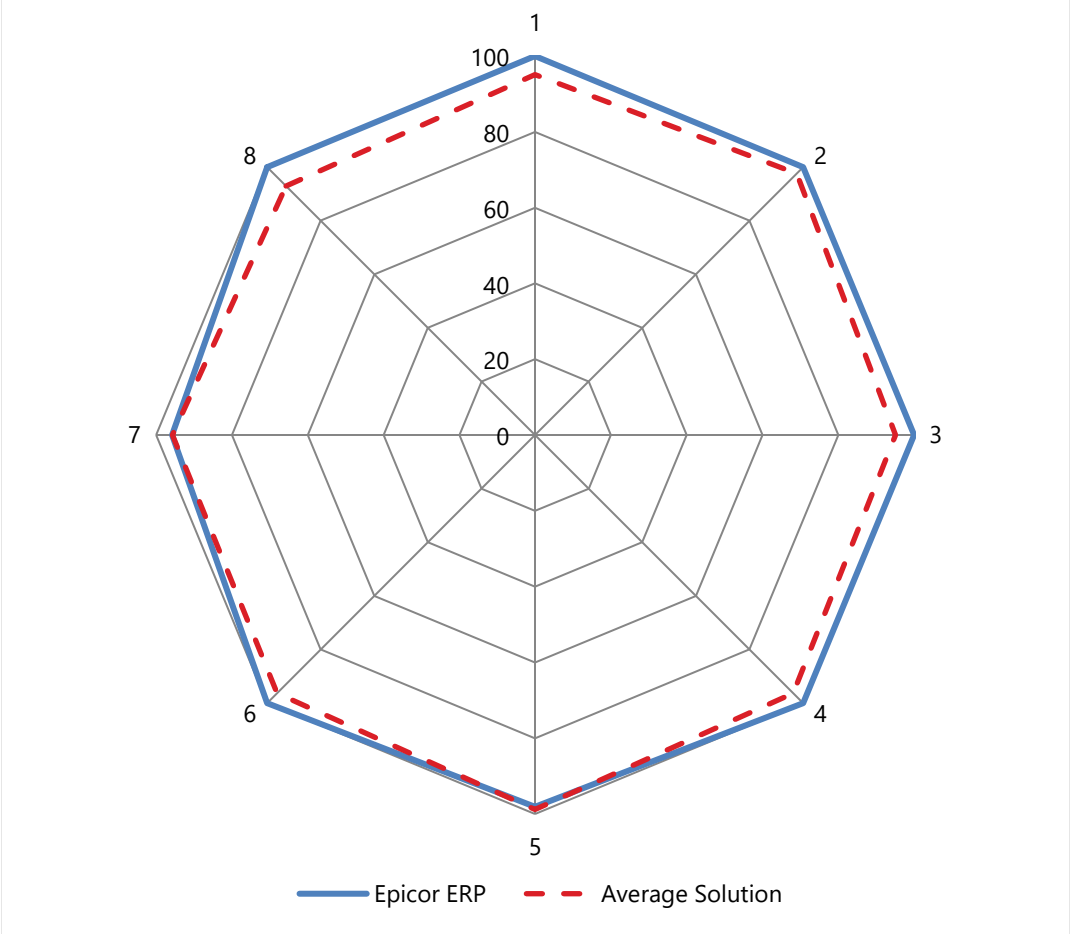
Manufacturing Management covers discrete manufacturing and provides the ability to plan production at various scales, rolling high-level plans down into daily schedules of individual machines and workers, and tracing real-time situations on the production shop floor and in planning to control manufacturing. This ensures that manufacturing facilities follow production plans in an accurate and timely manner, and that manufacturing schedules and operations are altered as required. It involves product configuring, work centers and machines dispatching, all aspects of work-in-progress management, and comprehensive product costing functionality. It also provides a consolidated view of the production situation using extensive multi-level reporting capabilities.



Criteria		Epicor ERP Score	Average Score
1	Product Costing	98.1	97.4
2	Shop Floor Control	99.5	95.9
3	Field Service and Repairs	98.1	89.5
4	Production Planning	97.4	93.6
5	Product Data Management (PDM)	100	95.3
6	Project Management	96.1	89.3
7	Product/Item Configurator	97.0	95.1

Inventory Management

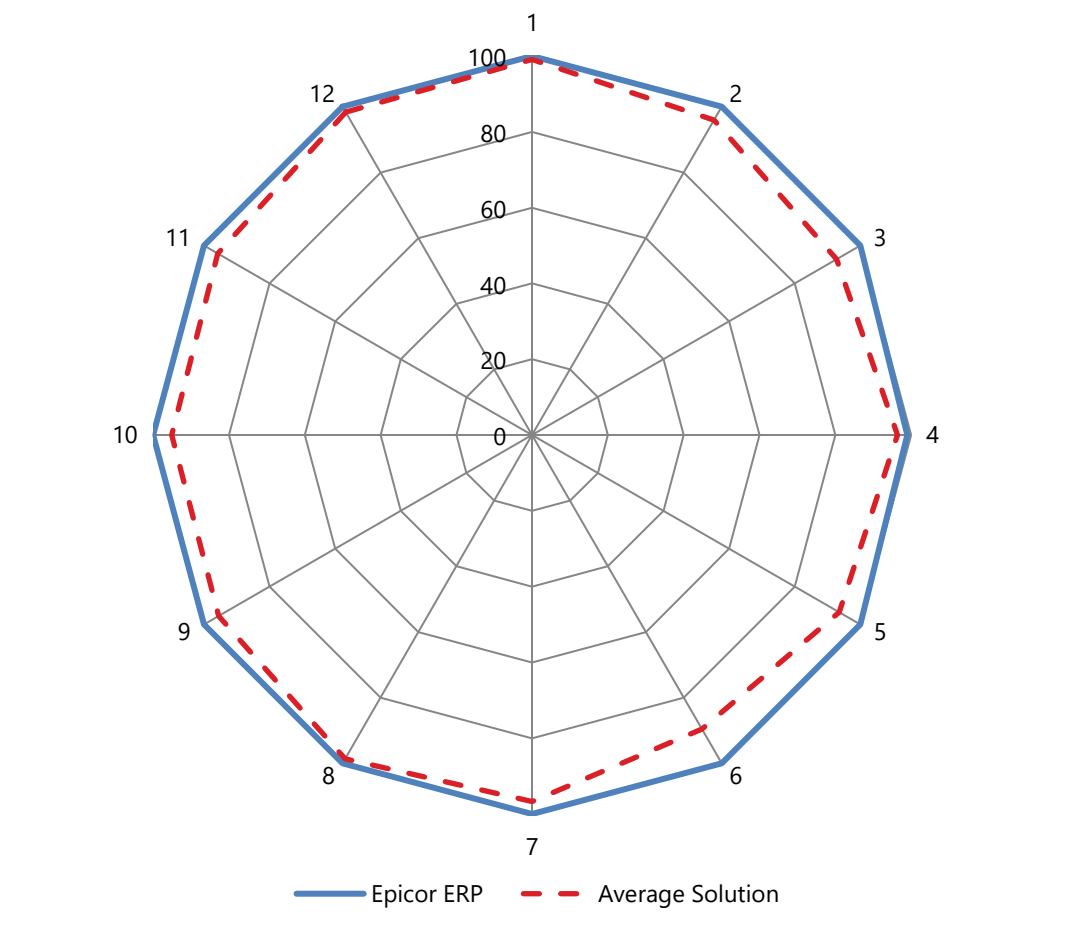
Inventory Management functionality addresses the record-keeping of warehoused goods, and managing the movement of these goods to, from, and through warehouses. Forecasting, finished goods reservation and allocation processes, and inventory adjustments are also a part of this functional module.



Criteria		Epicor ERP Score	Average Score
1	Inventory Management—Online Requirements	100	95.1
2	Processing Requirements	100	97.6
3	Data Requirements	100	95.1
4	Locations and Lot Control	100	96.3
5	Reporting and Interfacing Requirements	98.1	98.8
6	Adjusting Inventory	100	96.3
7	Forecasting	95.8	95.7
8	Reservations and Allocations	100	92.9

Purchasing Management

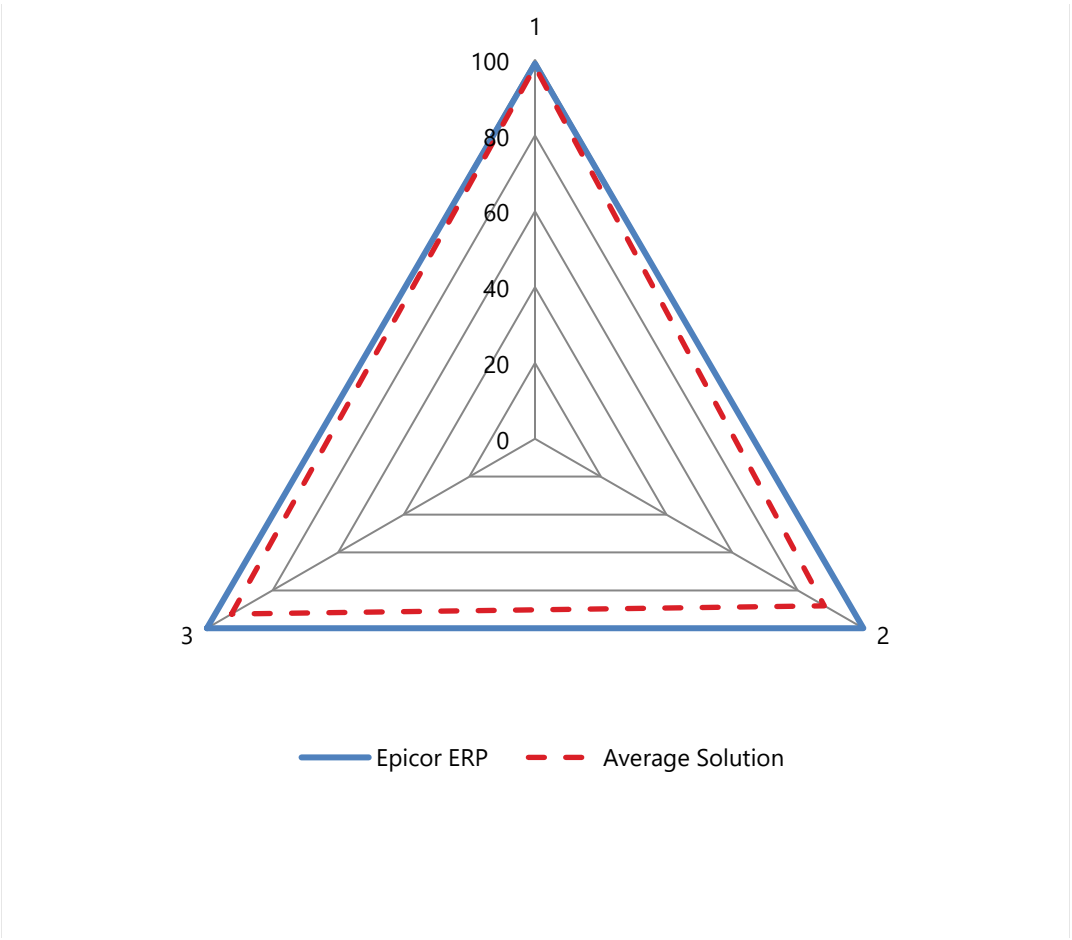
Purchasing Management encompasses a group of applications that controls the purchasing of raw materials and manages inventory stocks. It also involves creating purchase orders/contracts, supplier tracking, goods receipt and payment, and associated regulatory compliance analysis and reporting.



Criteria		Epicor ERP Score	Average Score
1	Profile of Suppliers	100	99.1
2	Rating of Suppliers	100	96.0
3	Requisitions and Quotations	100	92.8
4	Purchase Orders (POs)	99.0	96.4
5	Pricing	100	93.6
6	Vendor Contracts and Agreements	100	89.6
7	Management of POs	100	96.7
8	Procurement and Online Reporting	100	98.7
9	Repeat Procurement	100	95.5
10	Receipts for Procurement	100	95.1
11	Online Requirements	100	95.8
12	Reporting and Interfacing Requirements	100	98.4

Quality Management

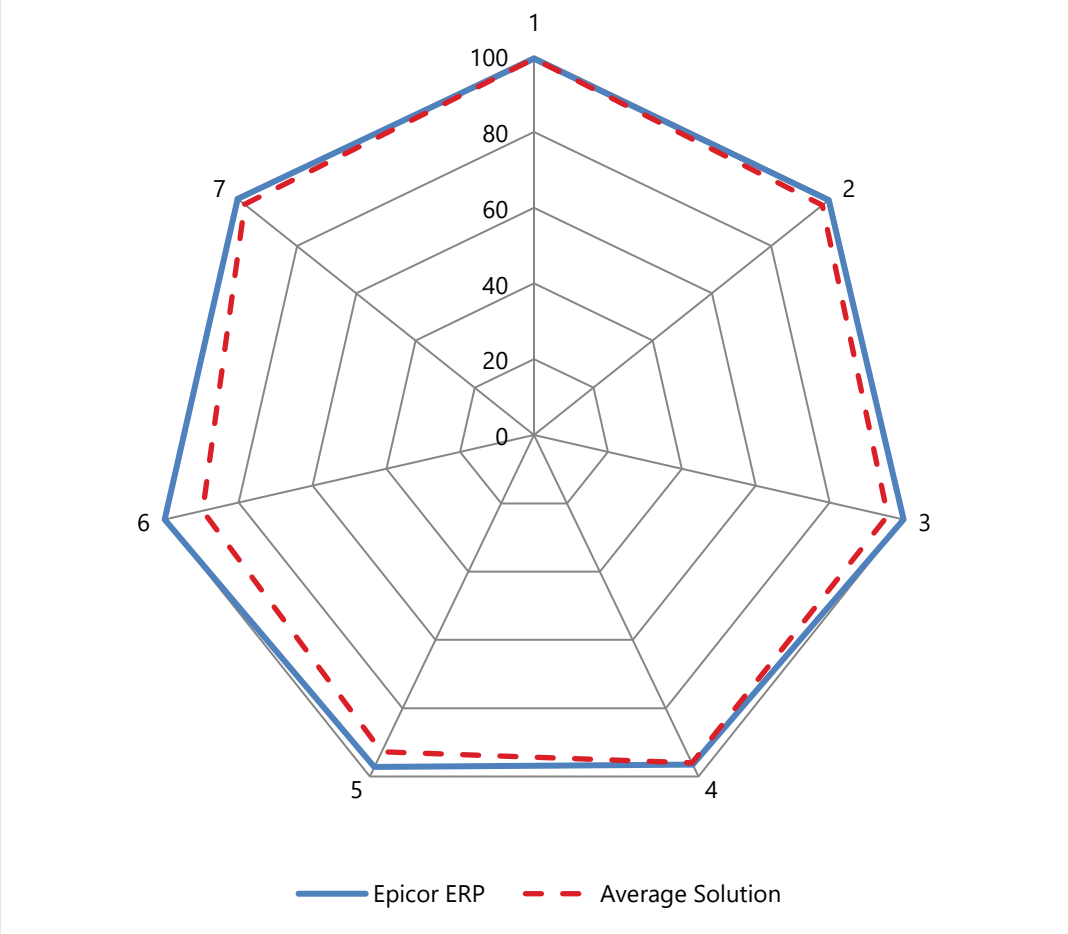
Quality Management refers to the set of actions taken by an organization to ensure that it creates and delivers high-quality products. Organizations must comply with national and international rules and regulations related to product quality, but they often also create and use internal requirements for quality control. Specific procedures need to be set up in order to ensure that the end products comply with internal or external quality standards. All these activities need to be well documented in order to provide the information needed when customers are not satisfied with the quality of the products received. Government agencies may also require this information for control and verification.



Criteria		Epicor ERP Score	Average Score
1	Production Quality Management	99.0	98.2
2	Non-Production Quality Management	100	88.1
3	Inventory Quality Management	100	92.5

Sales Management

Sales Management encompasses a group of applications that automates the data entry process of customer orders and keeps track of the status of orders. It involves order entry, order tracing and status reporting, pricing, invoicing, etc. It also provides basic functionality for lead tracking, customer information, quote processing, pricing and rebates, etc.



Criteria		Epicor ERP Score	Average Score
1	Online Requirements	99.3	99.3
2	Reporting and Interfacing Requirements	99.4	97.3
3	Available-to-Promise (ATP)	100	95.7
4	Pricing and Discounting	96.5	96.0
5	Customer Relationship Management (CRM)	97.2	92.8
6	Order Entry	100	89.7
7	Customer Service and Returned Goods Handling	100	97.7