

# Epicor® Enterprise Resource Planning



**EPICOR®**

## Epicor Software Drives Business Growth

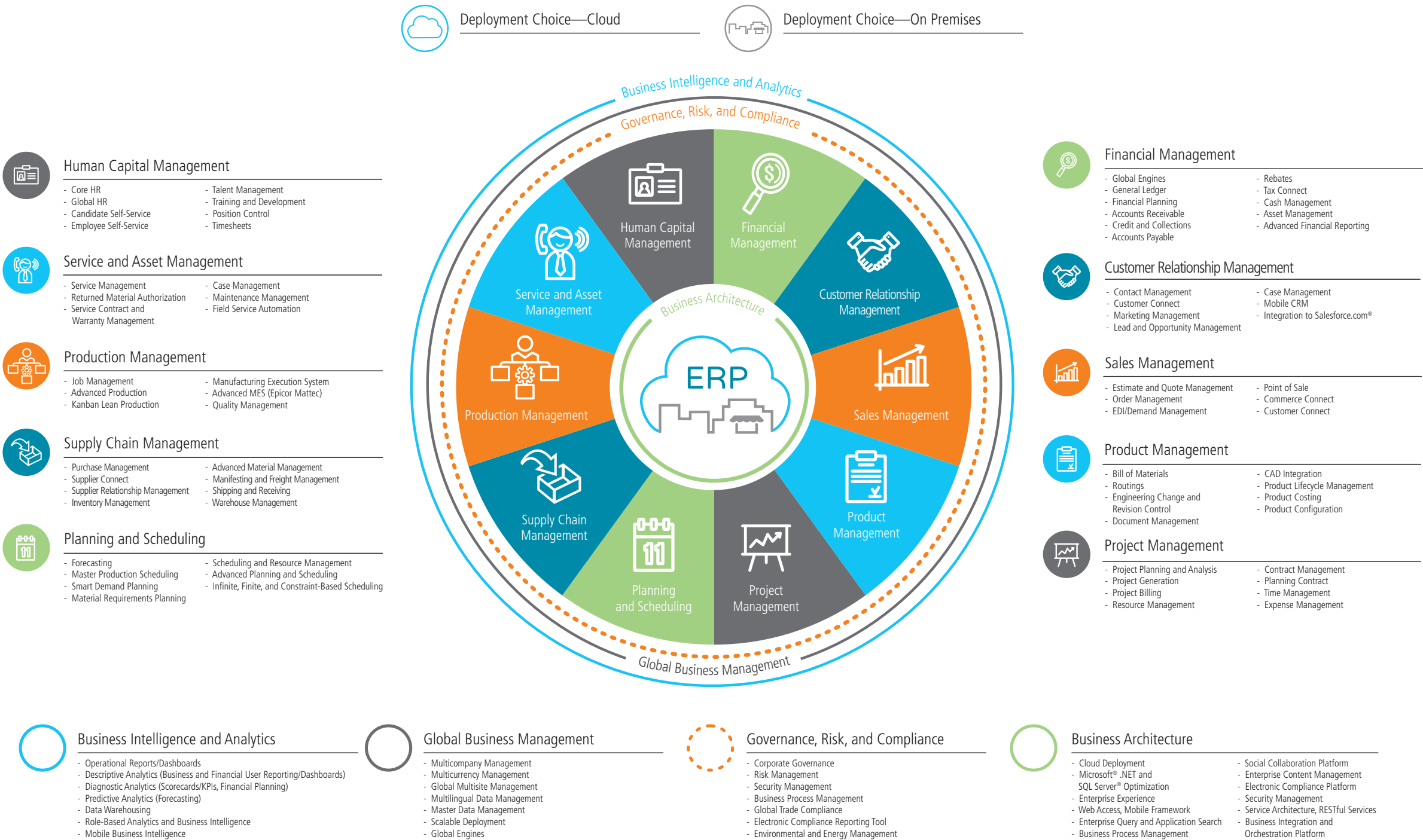
Epicor Software Corporation drives business growth. We provide flexible, industry-specific software that is designed around the needs of our manufacturing, distribution, retail, and service industry customers. More than 40 years of experience with our customers' unique business processes and operational requirements is built into every solution—in the cloud, hosted, or on premises. With a deep understanding of your industry, Epicor solutions spur growth while managing complexity. The result is powerful solutions that free your resources so you can grow your business.

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Epicor ERP Diagram

# Epicor ERP



## Customer Relationship Management



- ▶ Contact management
- ▶ Customer Connect
- ▶ Marketing Management
- ▶ Lead and Opportunity Management
- ▶ Case Management
- ▶ Mobile CRM
- ▶ Epicor ERP Integration to Salesforce.com®

Customer relationship management (CRM) strategies are as important to businesses today as they have ever been. We've designed Epicor CRM to help you stay ahead of the curve and successfully meet the challenges that the market brings—helping you to effectively manage your entire customer life cycle, improve operational efficiency, and accelerate growth both internally and externally.

CRM can control every aspect of a company's interaction with its customers and prospects including generating the lead, developing the opportunity, taking the order, producing and shipping or supplying the goods or services, payment, and ongoing support of the customer. Epicor CRM provides a 360-degree view of the complete customer, supplier, or partner relationship. Epicor CRM broadens the scope of customer information to everyone within and across the organization and to stakeholders beyond.

Epicor Social Enterprise (ESE) further enhances Epicor CRM, delivering up-to-date contextual information to key stakeholders for the life of the customer relationship. Using ESE, customers, prospects, and partners can collaborate with internal information workers to target the high customer satisfaction.



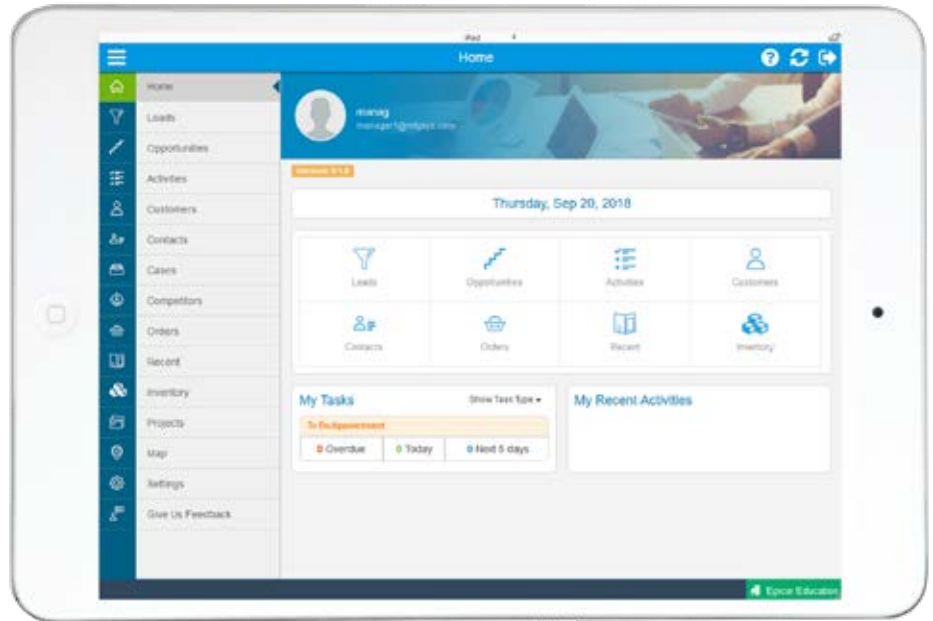


## Case Management

Improving the productivity and responsiveness of your support center is an essential component of building industry leading customer satisfaction. From initial call to resolution and follow-up, Case Management provides a customer focused solution for personalized, high-quality service. This comprehensive one-stop solution comes equipped with time saving links to customer-focused activities (e.g., new quotes, orders, RMA requests, or service calls), plus a search-driven knowledgebase and case-driven workflow for standardizing case resolution. In addition, Case Management is integrated with Epicor Service Management's Field Service module for easy access to dispatching field activities, online answer books, existing customer field service calls, warranty information, and service contracts.

## Mobile CRM

Keeping your customers at the focus of your business today means that you need to be able to respond to their requests in a fast and efficient way. To achieve this, it is crucial that you take advantage of the latest technologies by providing your salesforce with easy-to-use tools designed to increase productivity and improve employee engagement. Epicor Mobile CRM empowers your salesforce by providing mobile access to the entire CRM suite of capabilities on iOS™ and Android™ devices. Through our next-generation mobile application, you can manage leads, customers and contacts, as well as quotes, from opportunity to order shipment. Create activity-based workflows like call and email logging, notes, "to do" lists and appointments, and implement your back office task workflow. Access data related to competitors, cases, projects,



**Figure 1.2** Mobile CRM—With Epicor Mobile CRM manage the sales cycle from opportunity to order shipment—anytime, anywhere.

and order history—even without Internet connectivity. Also, visualize your customers and prospects on a map while in the area, and then get travel time and directions to the selected location.

Never miss a sales opportunity again. With Mobile CRM, you can search your inventory to verify product availability, create Sales Orders (even from Opportunities), and finally ship them to your customers—all from your mobile device.

(See fig.1.2)

## Epicor ERP Integration to Salesforce.com®

Ensure that your contact management system and your Epicor ERP CRM solution are in sync. This module directly integrates Epicor ERP to your Salesforce.com software and does not rely on a middleware or another tool. Create and manage customer records, contacts, and Epicor parts bi-directionally in either the CRM module in

Epicor ERP or in Salesforce.com software. Therefore, any time you alter any of these records in either system, it is designed to synchronize automatically, saving you time and preventing potential data entry inconsistencies. Flag a "won" opportunity in your Salesforce.com software and it can automatically create a quote in Epicor ERP. It will validate parts and alert you if any of the inventory items from the won opportunity are not loaded in Epicor ERP. You can then maintain the rest of the sales process in Epicor ERP, saving you time and helping ensuring accuracy between the opportunity and the quote.

## Sales Management



- ▶ Estimating and Quotation Management
- ▶ Order Management
- ▶ EDI/Demand Management
- ▶ Point of Sale
- ▶ Commerce Connect
- ▶ Customer Connect

The Epicor Sales Management module delivers a comprehensive suite that enables you to produce accurate estimates, streamline your order-to-cash cycle, and fulfill perfect orders that ensure world-class customer satisfaction. Epicor Sales Management automates and improves labor-intensive processes for quoting, proposal generation, configuration, and order entry—enabling you to improve sales productivity by increasing accuracy during the quote and order process and identifying the right solution to meet customers' needs.



## Estimating and Quotation Management

Easily generate and track all customer or prospect requests for quotation (RFQs)—from the time of receipt until an order is placed. Create estimates and get quotes out more quickly with more accurate pricing and lead times with a wide range of powerful tools.

## Estimating Management

Generate estimates easily utilizing the tree interface to drag-and-drop components, operations or materials from another quote, Bill of Materials (BOM) or previous job. Pull same-as-except type parts into the estimate, then modify them quickly and easily to create a new one. Calculate material, subcontract, labor, and burden costs for multiple quantities of a part. Perform realistic cost estimating with the ability to add any special charges (e.g., tooling or design), minimum lot charges, price breaks, and scrap factors on materials and subcontracting. Specify and store individual markups for material class, subcontracting, operations, and special costs. Create RFQ requests to trigger buyers to solicit suppliers for pricing of materials required in the estimating process. Review responses once submitted for inclusion in the estimate. When the order arrives, punch a few keys and the detailed routing will be ready to go to the floor or to make additional changes.

## Social Estimating

Connect with engineers and other subject matter experts from the field. Epicor Social Enterprise helps to drive more accurate and timely estimates by enabling engineers to be part of a group that sales and estimators can collaborate with electronically. Share knowledge and discuss best options for customers leveraging up-to-date ERP information.

## Quotation Management

Manage the sales cycle with dynamic task lists that ensure the right people are working on the quote at the right time. Use the Part Advisor to drill down into the quote/job/ part status and history to answer critical questions related to a part:

- ▶ Have I quoted it before?
- ▶ Are there current orders for it?
- ▶ Have I run it before?
- ▶ Am I currently running it?
- ▶ Do I have any in inventory?
- ▶ Is part profitability available?

Instantly query summary and detailed information on an estimate/quote. Check inventory availability and easily cross-reference customer part numbers to your part numbers automatically during the quoting process. Send quotes to prospects, even if they don't exist in the customer file. Quotation management capabilities include;

- ▶ Standard Routings
- ▶ Drag-And-Drop Interface
- ▶ Realistic cost estimates with minimum lot charges, price breaks, and scrap factors on materials and subcontracting
- ▶ Inventory Availability
- ▶ Request Supplier RFQ
- ▶ Markups by Category

## Pipeline Management

Accurately predict pipeline activity by tracking the confidence levels (e.g., best, worst, most likely) by quote line with the ability to perform management overrides to optimize forecast accuracy. Track all competitors to find out where you are winning and why you may be losing.

## Order/Job Integration

Increase efficiency and accuracy with the ability to quickly transfer quote information to a sales order or job. Built with tremendous flexibility, there are multiple ways to process an order and job from an existing quote such as:

- ▶ Push to an order by the line item
- ▶ Flag as won, automatically generating an order
- ▶ Pull from Order Management with the capability to define specific lines and quantities desired

## Order Management

Order Management drives the Epicor system. From the time an order is entered, its progress is tracked through final shipment, producing perfect order fulfillment on demand for maximum customer satisfaction. The Order Job Wizard generates appropriate jobs for new orders in a single step that enables the user to create, plan, schedule, and release jobs against multiple lines and multiple releases. Effectively manage orders with the ability to apply order-based discounts on an order value or product quantity basis. Optionally override and lock pricing. Check customer credit status online at quote entry, order entry, and shipment entry. Using blanket orders establish multiple releases (either firm or not firm) for each sales order line and pull parts directly from inventory. Optionally lock the order line quantity allowing new

releases to decrement the final delivery quantity on the final delivery date, keeping the total line quantity in balance with the release. Simplify repeat orders with the Copy Order function including the ability to optionally build a new order from history or see previous orders and enter the quantity on the order form. Use Available-To-Promise to view running balances during order entry. Enter a quantity, and the system will find the earliest date that quantity will be available. Enter a date, and see how many parts are available on that day. Counter Sales allow you to automate the pick-up, shipment, and generation of sales invoices for walk-in customers. Additional capabilities include;

- ▶ Tax calculations and fields are available at the sales order, line, and release levels.
- ▶ Application for payment may be required from a different customer than the customer order/receiving the goods or bill third-parties, such as a customer of your distributor.
- ▶ Manage sales commission calculations for direct and indirect sales teams. Allocate commission percentage over multiple sales entities per order line.
- ▶ Generate customer, product group, warehouse, and products specific pricing hierarchies, while matching the end-user currency. For global enterprises, company, plant, and warehouse pricing offers flexibility in pricing products.
- ▶ Enter unlimited miscellaneous charges or credits on each order header or order line. These charges will then print on the order and carry over to invoicing.
- ▶ Link sales orders to Projects.

(See Figure 2)

## Sales Kits

Flexibility in selling items in kits includes configured item kits, optional price rollup and item substitution, mandatory ship complete, and optional printing of kit components on the packing slip and invoice. Use the answers from the kit master to “on the fly” configure individual kit components, automating kit instructions for features like style, color, and size. Configure a Kit within

Line	MF/KitType	Part	Part Description	Order Quantity	UoM	Order Qty
1	Manufactured	DSD-380-OR	Steel O-Ring	1,608.00	EA	1,309.80
2	Manufactured	DSS-100C	DSS Sawtooth Asst	40.00	EA	40.00

**Figure 2** Order Management—Manage sophisticated sales requirement—from the time an order is entered until final shipment.

a Kit functionality support the ability to define multilevel configured sales kits that include non-stock components generated on a job or purchased direct for the kit, alongside stocked components.

## Up-Sell, Cross-Sell, and Down-Sell

Improve order accuracy and ability to enhance sales with Up-sell, Cross-sell, and Down-sell capabilities. At time of sales order entry, users are prompted with suggestions for “Upgrades,” “Downgrades,” “Substitutes,” and “Complements.” Whether substituting the original part with an upgrade or downgrade or adding complementary products; improved customer satisfaction alongside enhanced sales is the return.

## Capable-To-Promise

Provide accurate, real-time delivery dates to customers when using Advanced Planning and Scheduling (APS). Furnish a realistic promise date to your customer by finding out how a quote would fit into your current schedule. For multilevel structured products, Capable-To-Promise can be configured to create the sublevel assembly structures in addition to the top level assembly.

## Fulfillment and Allocation Processing

Use the Fulfillment Workbench for allocation or reservation and distribution processing, and plan for sales, transfers and job order types. Various fulfillment techniques, such as pick and pack, console-driven, and pre-pack processes may be performed through the use of templates to automate the fulfillment process. Hard allocation to finite level, versus reservations processing, may be launched directly from the order, line, and release areas as well. In conjunction with the fulfillment process, cross-docking provides the ability to directly link future inbound supply of items from purchase orders or jobs directly to demand from sales orders, transfer orders, or jobs. When the cross-docked items are received, they are immediately directed to the demand they are linked to, minimizing the time and task to fulfill the order or job.

## Order Shipment Parameters

With Order Management, all orders and change orders will be effectively managed online, perfecting the order-to-delivery process for maximum customer satisfaction. Set up the appropriate shipping parameters including the ability to manage;

- ▶ Track multiple ship-to addresses per order release.
- ▶ Ship an order from multiple plants and multiple warehouses.
- ▶ Do a one-time shipment to an address in Order Entry.
- ▶ Drop Ship and Buy to Order provides the ability from within a sales order to define a part as being "Buy-to-Order. This may or may not be defined as a drop ship item. In both cases, the purchase order will be linked to the sales order directly.
- ▶ Automatically create backorders for lines shipped incomplete. Flexibility enables customer-specific backorder parameters for complete order lines or complete orders to be set.

### Credit Card Processing

Epicor Credit Card Processing includes easy to use maintenance for initial setup along with a variety of integration points to bring an easily deployable solution to your business that meets the security guidelines as specified in the Payment Card Industry Data Security Standard including securely encrypted account numbers and key management. Epicor Sales Management uses Epicor Credit Card Processing to support authorization with the sales order, reauthorization with the sales order before picking and shipping, and complete or partial funds collected with the sales order.

### Order Monitoring

Use order tracker to see a summarized view of the order, drill down on selected items to see greater details (e.g. lines, releases, shipments, charges, bookings, audit, and payment information). Monitor and track changes to orders using Social Enterprise. Easily subscribe to notifications about changes to orders without building Business Process Management (BPM) controls. View a summary of all the changes to the order in an activity stream inside or outside Epicor ERP or receive social media style updates via Email or directly in your browser.

## EDI/Demand Management

Today, all suppliers large and small are facing increased expectations from their customers to have systems in place for immediate response to changes in their demand such as forecast and shipping schedule changes. Epicor EDI/Demand Management secures your competitive edge by incorporating electronic data interchange (EDI) with demand scheduling. The EDI/Demand Management framework leverages the SOA business architecture of Epicor ERP and deep industry experience in EDI to lower the cost of EDI deployment. The framework provides full flexibility and control for setting up customer contracts and handling their schedules once inside the Epicor ERP system, whether entered manually in Demand Management or contained in EDI messages. This helps your company reduce lead time and effort for planning and procurement, thus enabling you to respond on the production floor faster. A wide range of EDI implementation choices are available to match your company's needs, making it possible to preserve much of your investment in EDI setup and existing staff.

### Demand Management

A component of the embedded EDI/Demand Management module, Demand Management starts with a "contract" set up per customer with such agreed-upon parameters as pricing, initial demand schedule, and contract end date. The contract is then linked to incoming purchase orders, forecasts, and shipping schedules. These contracts can be managed, and schedules produced, automatically with set periodicities or schedule constraints that match each customer's unique shipping needs. Additionally, as changes happen, the schedules can be updated, and changes matched to existing sales orders, which are then updated accordingly. You can use Demand Management without EDI, and if EDI is deployed, your customers' electronic demand changes are brought in automatically for system review and

acceptance into sales orders or forecasts in your Epicor ERP system, according to parameters and tolerances you specify. This is especially important for companies doing business in automotive as well as other industries such as industrial, consumer products, retail, and aerospace and defense. Demand Management capabilities include;

- ▶ Demand Contract structure provides the ability to have many sales orders/ lines attached to the contract.
- ▶ Demand Entry Management Console supports one inbound purchase order at a time, or options can be tuned for more automated entry into the Epicor ERP system.
- ▶ Establish demand settings per trading partner to include tolerances, such as for allowable time windows when schedule lines can be added or deleted or changed, tolerances for price variations, parameters for matching changes against existing sales orders, and functions for reconciling shipped quantities between you and your trading partner. Automated Demand Management processing can be set to always process in spite of tolerance errors, process with warnings, or stop when an error is encountered.
- ▶ Use Demand Mass Review to manually match incoming forecast and shipping schedule changes to existing forecasts and sales order lines in the Epicor ERP System. Configurable matching algorithms help to speed up the matching process.
- ▶ Manually generate sales order release schedules based on defaulted customer periodicity (interval setup) and release quantity. Automatically close rejected schedules from the customer record.
- ▶ Review balances as well as proposed quantity of proposed schedule.
- ▶ Manage and reconcile the cumulative shipped quantity. Validate cumulative quantity discrepancies by customer and choose to "Stop" or "Warn" and then allow the received demand to be turned into a valid sales order—this

- ▶ feature includes Cumulative Variances Reporting. The Demand Reconciliation screen helps in the cumulative matching process with the ability to easily make reconciled quantity adjustments. Cumulative quantities are tracked at the order and shipment levels over the life of the contract.
- ▶ Schedule forecasted deliveries that can be utilized with MRP to predict demand for resources and provide guidance on pending demand for materials.
- ▶ Periodicity (Interval Setup) - Specify rules by plant or plant/supplier for automatic purchase schedule suggestions. Periodicity rules can be specified as Daily, Monthly Forward, Weekly Forward, and Nth Day of Week.
- ▶ Capable-to-Promise - Set up the system to review open contracts and capacity requirements for a product and automatically adjust the new demand requirements after reviewing against open contracts as well as available capacity.
- ▶ Support for Allowance and Charge Codes - Optionally receive and process allowances and miscellaneous charges within EDI transmissions from trading partners. Both flat amounts and percentage based charges are available.
- ▶ Automated Order Match Validation - Automatically cancel demand releases received that are not matched to a specific order release.
- ▶ Close and Process Schedules - Use a single step to automatically close and process all schedules within Demand Management.
- ▶ Contract Start and End - Manage contracts effectively with contract start and end date.

## EDI Standard Transactions

The Epicor ERP system framework readily supports the following listed standard ANSI X12 and EDIFACT documents. Many more are available from the Epicor EDI Solutions Team, who are experienced in making EDI work in various environments and can offer enhanced functionality that is tailored to

the EDI needs of your business. For example;

### Inbound Documents

- ▶ Purchase Order (ORDERS, 850)
- ▶ Planning Schedule (DELFOR, 830)
- ▶ Shipping Schedule (DELJIT, 862)
- ▶ Change Order (ORDCHG, 860)

### Outbound Documents

- ▶ Purchase Order Acknowledgement (ORDRSP, 855)
- ▶ Advanced Ship Notice (DESADV, 856)
- ▶ Invoice (INVOIC, 810)
- ▶ Purchase Order Change Acknowledgement (865)

(See figure 2.1)

## Point of Sale

Epicor Point of Sale (POS) extends the power of your Epicor ERP solution to a customer-facing sales environment—whether you're an organization with a single POS station or a large, multinational chain with hundreds of stores. Epicor POS provides a feature-rich system that empowers store personnel to provide an enhanced customer experience. Comprehensive functionality includes

electronic gift cards, gift receipting, customized receipt per transaction type, coupon redemption/issuance, layaways, special orders, suspend and resume, item marking for various functions, additional input fields, multicurrency, start/end of day functions, cash management, and more.

## Commerce Connect

The increasing proliferation of eCommerce likely means that more of your customers are looking online to solve their business problems, which means that providing customers with the ability to buy online from you is just a start. Your Web site must provide an experience that truly does solve problems, or better yet, inspires them in some way to keep coming back. Whether your Web site serves Business-to-Consumer (B2C), Business-to-Business (B2B), or both needs, it requires strong functionality and must use the latest technology to deliver customers the best possible online experience. Epicor Commerce Connect provides everything your Web site needs to deliver a rich customer experience, throughout the customer's entire order life cycle—from quote to fulfillment to service.

**Figure 2.1** EDI/Demand Management—Manage one inbound purchase order at a time, or options can be turned for more automated entry into the Epicor ERP system.

The key advantage of Epicor Commerce Connect (ECC) is its deep integration to Epicor ERP. Epicor Commerce Connect negates much of the risk that goes with using a nonintegrated eCommerce solution by getting all of its information direct from Epicor ERP. All transactional data flows seamlessly between Epicor Commerce Connect and Epicor ERP: product information, customer specific pricing, inventory levels, and more, can be viewed online via Epicor Commerce Connect. While many companies can provide eCommerce services, very few are able to deliver the value and rapid results the way that Epicor Commerce Connect can.

### A Modular Approach to a Better Web site

Whether you are selling to the general public, or to other businesses, Epicor Commerce Connect has been designed to help you provide all visitors to your site(s) with the same high levels of user experience they have come to expect in today's online environment. Browsing tools such as configurable search, suggested items and automatically updated listings of popular products on your site are able to help your customers very quickly get to the items they wish to purchase, while at the same time ensuring that they are exposed to as much of your product range as possible—in ways that are relevant and tailored to customer interests.

You can also provide tools to help your customers make better purchasing decisions including the ability for customers;

- ▶ To see related products
- ▶ Compare different products
- ▶ View the product up close using the product image zoom-in capability.

Tools such as these allow the customer to make better purchase decisions, which in turn lead to much higher levels of customer satisfaction and a lower rate of product returns.

### Configurator

Many businesses sell products that can be customized - for example by color, size, material and much more. With products such as these, the number of possible combinations the customer could choose can rapidly rise to the thousands, or more. To help manage this complexity, Epicor Commerce Connect includes a configurator module that provides a fast and efficient mechanism to display all product options on one page—allowing your customers to simply and easily choose their own product specifications without the stress of having to navigate through multiple different pages to find the combination that best meets their needs.

Fully integrated with Commerce Connect, Epicor Product Configurator enables Web-based configurations that can be used for quoting and pricing within the

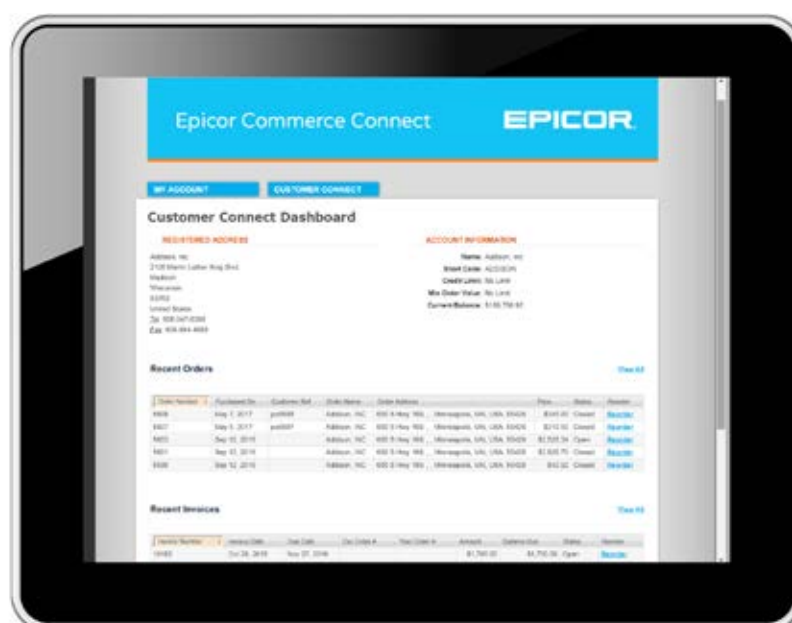
Epicor Commerce Connect solution.

Once configurations are accepted by your customer, the instant flow to Epicor ERP enables not only price, but also product build to be delivered for more rapid response to new orders. Use the robust configuration capabilities and extend them to your customers and channel to ensure that customer requirements are met. Parametric capabilities enable visual confirmation of configuration results.

### Customer Connect

The Epicor Customer Connect portal provides interactive, customer-facing content over the web. Today's customers want new access to information. Being able to view special promotions and pricelists, make repeat purchases, and pay on account are standards to improved customer loyalty and online commerce.

(See figure 2.2)



**Figure 2.2** Customer Connect—Always a click away, Epicor Customer Connect gives B2B customers access to account-specific information—directly from your website. Whether ordering a replacement part or checking on the status of a shipment or payment history, Customer Connect extends your level of service to customers.

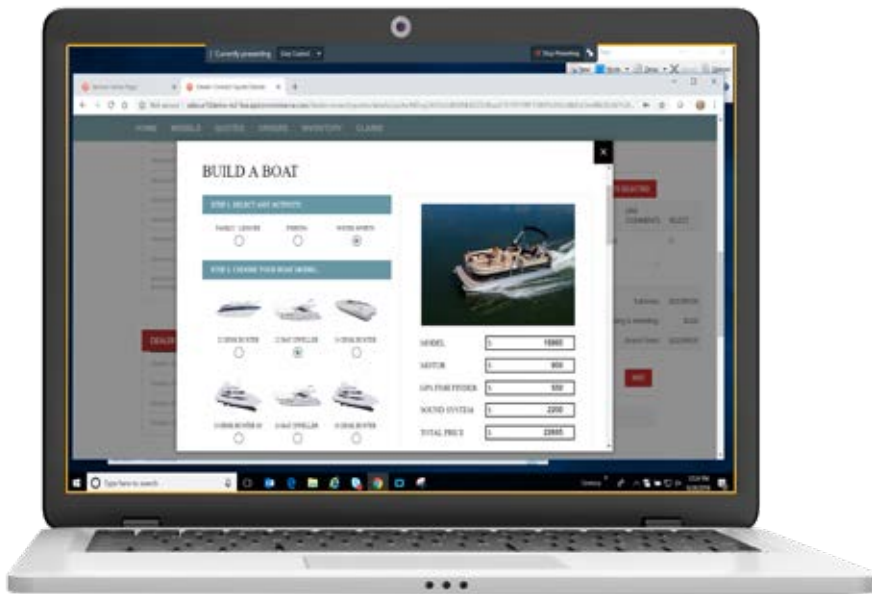


## Dealer Network Portal

Epicor Dealer Network Portal is an innovative enterprise solution designed for manufacturers who sell or service products through dealers. Powered by Epicor Commerce Connect (ECC) and tightly integrated with your Epicor ERP system, Epicor Dealer Network Portal creates a modern online experience for your dealers to rapidly configure, price, and quote orders, as well as manage service and warranty needs for your products.

By capturing all dealer activity through a single easy-to-use portal, you establish a single thread of data that connects all transactions at the dealer with your back-end ERP. You gain full visibility into the business making it simpler for dealers, which enables you to drive business growth as a preferred innovative brand.

(See figure 2.3)



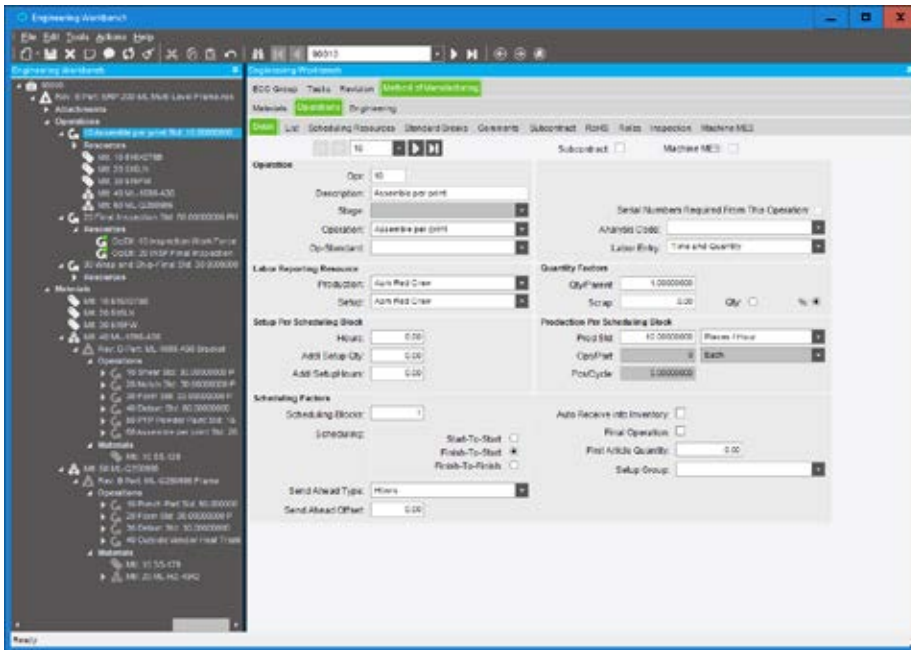
**Figure 2.3** Dealer Network Portal—Capture all dealer activity through a single, easy to use portal.

## Product Management



- ▶ Methods of Manufacturing
- ▶ Bill of Materials (BOM)
- ▶ Routings
- ▶ Engineering Change and Revision Control
- ▶ Document Management
- ▶ CAD Integration
- ▶ Product Lifecycle Management
- ▶ Product Costing
- ▶ Product Configuration

Epicor Product Management serves as the central hub for your process and product data and history. It provides collaboration and data exchange among enterprise users who interact with your products—including product managers, engineers, salespeople, buyers, and quality assurance representatives. Epicor Product Lifecycle Management (PLM) provides a comprehensive end-to-end solution to manage all aspects of a product's lifecycle, enabling enterprises to control the enormous number of electronic documents produced. With Epicor Product Management, you can optimize the product lifecycle processes to increase the efficiency of your staff, create better quality products, launch new products in less time at a lower cost, and maximize profits.



**Figure 3** *Methods of Manufacturing—Build a visual view of a routing for a new part using the integration to other engineering information and the drag-and-drop interface.*

## Methods of Manufacturing

Manage product bill of materials (BOM) and routings in one central location. The part-specific method of manufacturing is controlled through engineering and offers drill-down functionality to lower level subcomponents—along with material and routing components required for each. Streamline engineering by modifying existing methods for same-as except quotations and production runs. Enable engineers to begin with an existing method of manufacture from the methods master, a quote, or a job, and then easily modify it for the project at hand.

(See fig. 3)

## Bill of Materials (BOM)

Epicor supports traditional BOM management with single-level part formats that recognize the materials and components required to build end parts. In addition, Epicor supports multilevel

BOM management that incorporates not only single-level components and material requirements, but also internal and external routing steps for complete end to end assembly visibility, planning, scheduling, and costing. Epicor supports visual engineering technology with indented tree structures and drag-and-drop BOM management. Easily create new BOMs with functionality that enables the user to pull an existing method of manufacturing for a product and make modifications for future runs or similar products. Use alternate BOMs to predefine multiple BOM structures for the same part with material or component substitutions. In a multi-plant environment, BOMs at the plant level facilitate choices of where to build the part using plant appropriate methods. Optionally have several BOMs within a plant, allowing the planner to choose the most cost-effective build. Gain the ability to store multiple reference designators on BOMs. You can also obtain

explosion reports by component and by reference designator from quotes, jobs, and the engineering workbench.

## Routings

Detailed routings facilitate planning, scheduling, and costing of products more efficiently. Everything needed to produce a product is managed in one central location. Managing changes to routings is simplified. Changes are automatically communicated to the plant floor execution system and operators have online visibility of the latest routing production notes, as well as standards and resource requirements. Easily understand, navigate, and revise even the most complex, multilevel routing in the tree structure of the engineering workbench. Free up engineers to focus on constructing the most cost-effective build. Quickly build new routings and easily modify existing routings using the Epicor drag-and-drop engineering tools. Alternate routings allows the definition and maintenance of multiple routings or material substitutions under a single part number. In a multi-plant environment, alternate routings at the plant level facilitate choosing where to build the part using plant appropriate methods. Manage and measure jobs with flexible production standards using traditional time-based production standards—including pieces per hour, hours per piece, pieces per minute, minutes per piece, operations per hour, fixed hours, and operations per minute. You also have the ability to allow planning by volume and quantity using dimensional planning that is not time constrained.

## Engineering Change and Revision Control

Achieve control and consistency in your engineering change and revision process. Engineering Change and Revision Control is designed to enable engineering change management, multiple revision control of products, and engineering workflow management, and it offers detailed cost analysis of products during the engineering process. The engineering workbench gives engineers an area to manage all engineering tasks related to the modification, review, and approval of assemblies—including full revision updating and control, check-out procedures, security, engineering change orders, BOM maintenance, what-if BOM maintenance, what-if cost rollups, adding parts, placing parts on hold, and product routing maintenance. The engineering workbench also enables engineers to drill into all related information, like jobs, inventories, sales orders, and quotes.

## Document Management

Epicor drag-and-drop attachments support the ability to manage and view attachments against any record or application process. With respect to BOMs, additional functionality exists to allow attachments linked to end products and components to automatically flow to production planning and—eventually—the production floor, ensuring strong control of product and process documentation at each product revision and production run. Attachments at the record level would typically provide information, drawings, documentation, or context specific to that record. All attachments can be secured using standard role-based security. Microsoft SharePoint® repository document management and attachments capability also offers the use of a Microsoft SharePoint document repository. This provides document versioning, check-out and check-in support, and facilitates integration to other document management systems.

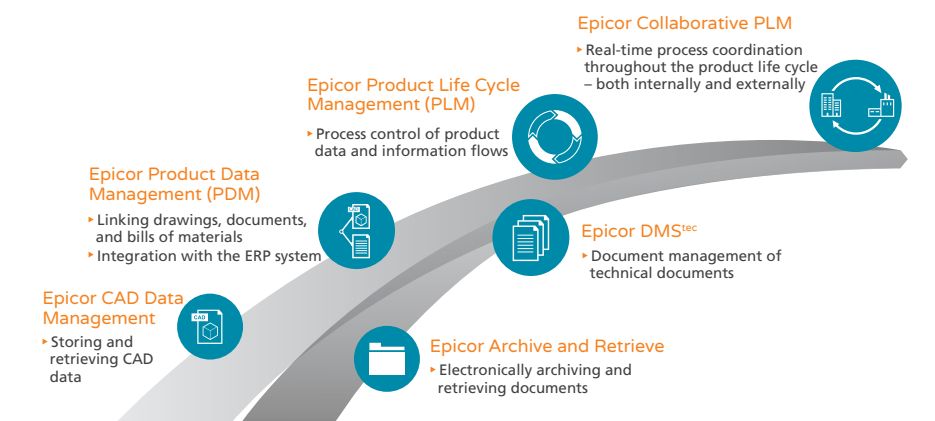
## CAD Integration

For companies who do not require the full product lifecycle management solution, CADLink for Epicor increases the speed of engineering data flowing from the engineer's desktop to the rest of the business—in particular procurement and manufacturing. The CADLink for Epicor solution is designed to streamline the entire product development process, letting engineers push forward BOM revisions to Epicor ERP with a click of a button without leaving their familiar CAD environment. CADLink for Epicor eliminates all the burdens of disparate systems, allowing engineers to focus more on what they do best—engineering.

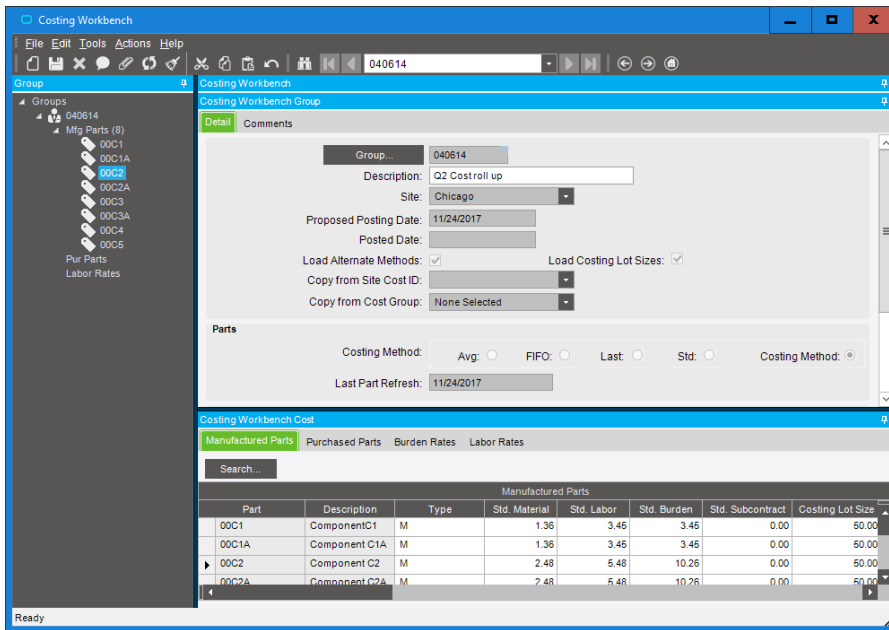
## Product Lifecycle Management

Epicor Product Lifecycle Management (PLM) solutions provide you with CAD data management, product data management (PDM), and technical document management system capabilities that can be expanded to deliver a fully featured, collaborative product lifecycle management solution that is designed to seamlessly integrate into your Epicor ERP. Epicor PLM serves as a central knowledge repository for process and product history and promotes integration and data exchange among all enterprise users who interact

with a product. Epicor PLM manages all documentation associated with a product throughout its entire product lifecycle and includes full integration with numerous computer aided design (CAD) systems and various electronic design automation (EDA) systems. Epicor PLM is particularly useful for companies that design what they manufacture, want standardized methodologies around work flow, use CAD or EDA systems, or use drawings to produce a quote or an order. Epicor PLM provides an electronic vault where documents can be securely stored and where access and versioning can be tightly controlled. The type of sophisticated document management that PLM offers is critical for those organizations that need excellent audit tracking and control of all documents across the enterprise. PLM also provides advanced document search and retrieval functionality. Increase your productivity by more efficiently managing the product life cycle—from design to end-of-life. Engineering change order (ECO) processes are supported—including the ability to have as many 3D models as desired and any number of derived technical drawings from one or more CAD systems assigned to each part.



**Figure 3.1** Product Lifecycle Management—A step-by-step model to follow your own evolutionary path to PLM, fully integrated into your Epicor ERP.



**Figure 3.2** Product Costing—Maintain and view costing by part type and cost type and access this information throughout the system.

Epicor PLM supports the entire product change order management. All changes to CAD models or drawings are documented in a change history. History entries include date, change reason, and user. Additionally, processes defined using Epicor PLM Workflow assures change order control—from the beginning of the modification to the final release. All part master data, characteristics, and the change history journal are transferred and documented in the title block of the respective drawings. Upon further modifications, this data is updated automatically. Additionally, the BOM can be inserted into the drawing.

(See fig. 3.1)

## Product Costing

As a manufacturer or distributor, you consistently monitor product cost and analyze profitability as a way to pass cost savings on to customers while staying competitive. Epicor offers the flexibility and accuracy needed to analyze product cost on a customer-by-customer, part-by-part, and job-by-job basis. Maintain elements of product cost in separate buckets—including material, labor, burden, subcontracting, and material burden cost. Costing methods include average, lot, last, first in/first out,

and standard. The costing workbench supports the management of part costs in a single location. Specialized tools pull in the most recent costs and automatically perform cost rollups. Designed with full audit capabilities, the workbench offers variance analysis prior to posting new cost tables along with the effective dates of the costing changes. The costing workbench offers easy manipulation of resource, resource group, and operation cost.

(See fig. 3.2)

## Product Configuration

Product Configuration enables on-the-fly configuration of highly customizable and dimensional products via a straightforward question and answer evaluation. It is web enabled and you can mark configurators as Epicor Web Configurator (EWC) and deploy them to Epicor Web.

When you enter a configurator record and set it to EWC, all Client processing is moved to the web and the existing Server side logic remains in the Epicor ERP application. It is also available to users employing Commerce Connect including the Dealer Network Portal. This simple-to-use module gives you the ability to formalize all configurations

prior to circulation and approval and includes detailed audit trail logs noting ID and approval date. In addition, you can tie a configuration to a BOM structure containing multiple options—each with its own set of rules—and optimally create unique configurations and rules for each revision. Configuration responses are stored with other product information for historical auditing and accuracy.

ConfiguratorLink for Epicor is a powerful tool that extends the native functions of the Epicor Configurator to allow it to become a Parametric Configurator. ConfiguratorLink automatically rebuilds 3D models according to Epicor Configurator parameters defined and mapped to CAD models, allowing users to produce 3D models and drawings quickly in sales and production processes. Helping employees and customers visualize the configured product is a few clicks away. ConfiguratorLink also has the ability to search and pull configuration parameters and automatically create CAD files for production processes such as burn table or CNC lathe. Quote integration produces 3D CAD files that are ideal for customer approval and signoff. Finally, ConfiguratorLink can push parameter data back to Epicor. Any parameter changes made in CAD will be saved back to the configuration parameters in Epicor—no need to jump back and forth between CAD and ERP.

(See fig. 3.3)



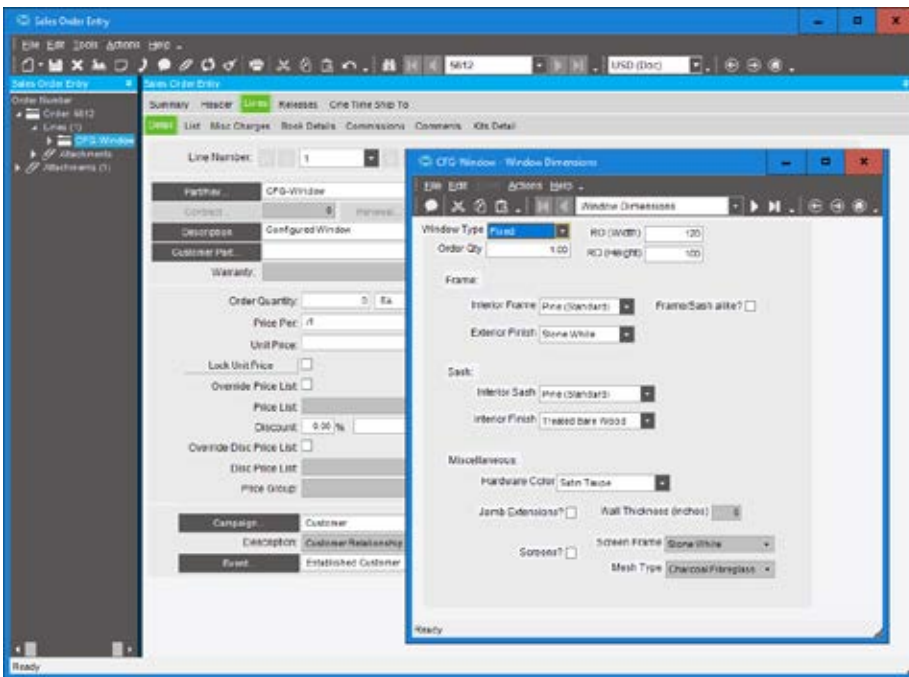


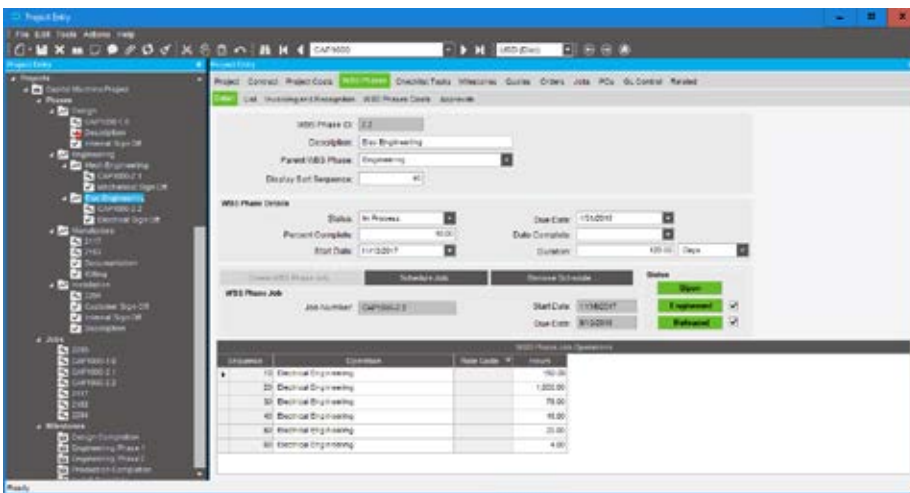
Figure 3.3 Product Configuration—Build complex and flexible configuration models with attractive interfaces.

# Project Management



- ▶ Project Planning and Analysis
- ▶ Project Generation
- ▶ Social Project Management
- ▶ Project Billing
- ▶ Resource Management
- ▶ Contract Management
- ▶ Planning Contract
- ▶ Time Management
- ▶ Expense Management

To be successful in a project environment, project management must permeate every aspect of your business solution. Companies that are able to efficiently meet the demands of managing their portfolio of projects have a distinct advantage over their competition—they have a better understanding of their costs, so they can bid and win business with confidence. Epicor Project Management is a comprehensive solution for companies that plan and execute either simple or complex projects that may require intricate, multilevel phases, as well as strict costing or complex billing methods. Embedded within the robust capabilities of Epicor, Project Management utilizes detailed estimation, planning, scheduling, costing, and supply chain logistics for complete control and analysis of any project. Resource Management provides a detailed representation of resource capabilities and availability. Time and Expense Management and Approval ensure projects reflect accurate costs, and the comprehensive Billing and Revenue Recognition functionality guarantees compliance with contract requirements and accounting standards. At all times and throughout the entire process, embedded Project Analysis and reporting—combined with Business Process Management (BPM)—provides accurate and up-to-date status information and meaningful alerts.



**Figure 4** Project Planning and Analysis—Effectively manage the project work breakdown structure no matter how complex. Ease the burden on project managers by providing access to everything relating to the project in a single place.

## Project Planning and Analysis

Supporting the needs of industries with a project orientation, Epicor Project Planning provides flexible Work Breakdown Structure (WBS) capabilities—including multilevel phases within a project. Fully embedded within Epicor, Project Management offers the robust Epicor scheduling engine for complete visibility and management of the project schedule. The Project Planning module also includes the ability to accumulate and roll up costs for a WBS Phase to the main project—supporting budgets, estimated completion values, and calculated, estimated, and actual costs accumulated at the WBS Phase or project level. For complete visibility, all costs are rolled up through the project structure, with added analysis capabilities offering cross-project scrutiny of material class, burden, or labor type.

(See figure 4)

## Project Generation

Define all project components as part of a logical, cohesive plan. A project can be generated at any time—including at the quote, sales order, or after the contract has been signed with the customer. Define

the default project approvals method and workflow group.

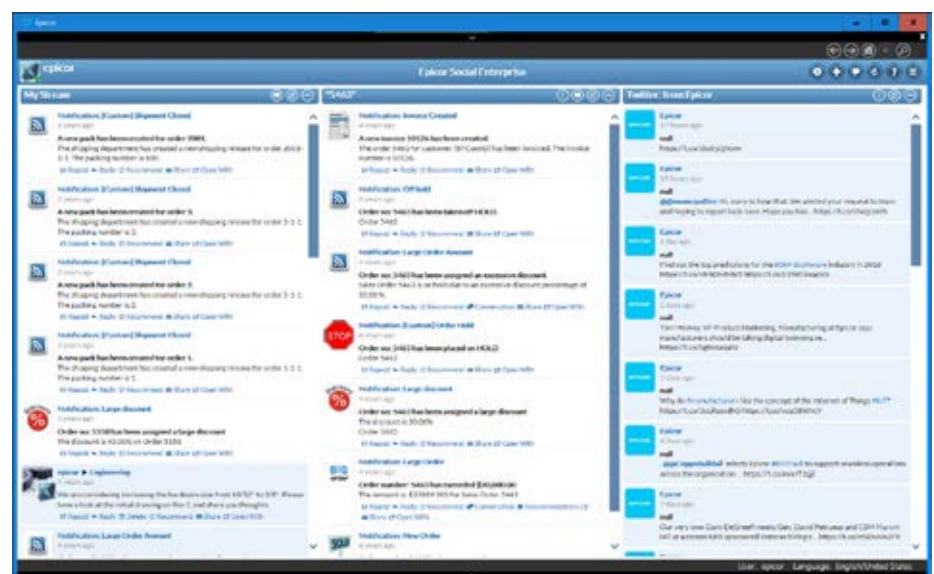
Define the work breakdown structure for the project. Automatically create jobs for the collection of costs and management of operations, and define the hierarchy for phase cost accumulation. Define multiple operations, their sequence, defined resource roles, and planned hours as required against each phase job. Optionally define workflow and approvals overrides at the phase level. Create a library of template

project WBS structures to represent the various methodologies or requirements of recurring projects. Project structure and contract details can be manipulated in duplicated projects to reflect any nuances on a particular engagement. Bidirectional integration with Microsoft® Project® gives project managers an additional tool to use to easily manipulate the schedule and simplify the planning of any project.

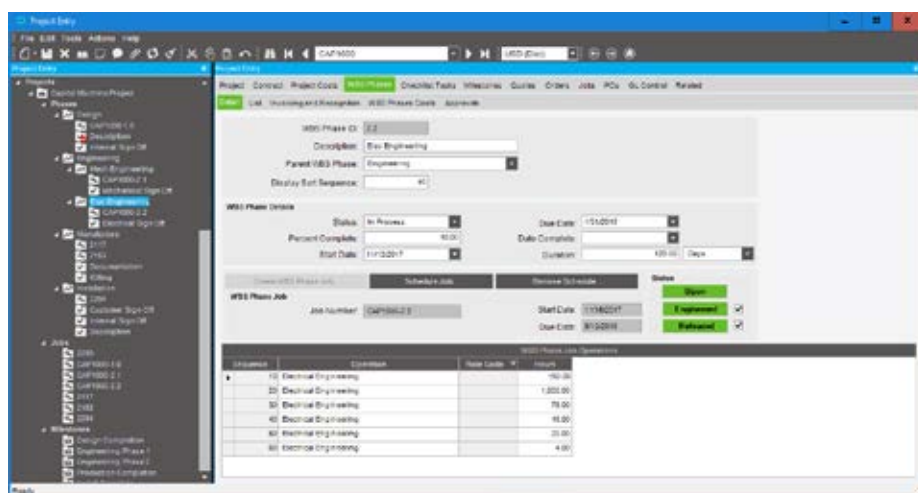
## Social Project Management

Social Project Management gives the internal and external project community visibility into the events of the project—as they happen. This allows teams to achieve transparency regarding project progress and status and enables smarter and more efficient collaboration.

Epicor Social Enterprise provides access to those involved with your projects to subscribe, follow, and trend what matters most to the team. Rather than relying on the team alone, why not leverage the full expertise of an organization or other social network? Project teams are social entities—embedded in multiple social networks both internal and external to the organization. Each member of the team has unique social



**Figure 4.1** Social Project Management—Sharing valuable knowledge helps project teams leverage the full expertise of an organization or other social network.



**Figure 4.2 Project Billing**—Comprehensive contract management provides a range of invoicing options to cater for any billing situations.

connections inside and outside the organization.

Epicor Social Enterprise allows the project team to tap into social networks for expertise and improved access to knowledge to complete their goals. It allows a project manager to see the social network of their team and leverage those connections to better collaborate with the greater project community.

(See figure 4.1)

## Contract Management

Maintain the contractual arrangements for a particular project with Contract Management. Record details of the customer together with key contract dates, values, currency definitions, project manager, and the appropriate revenue recognition method. Define source of costs rates to be applied to the project contract—hierarchical, project, employee, or role. Configuration settings can be used to ensure that only resources with the specific role codes defined in the project contract are able to work and record time against a project. This can be extended to record the specific resources that are approved to work on a particular project contract. Invoice ceilings can be established to limit

the amount billed for a particular role code, resource, or supplier. The contract defines the system behavior when such ceilings are met—either continue or cease invoicing for the defined resource. Epicor BPM can be used to monitor as ceilings are approached. To cater for the needs of certain industries—notably contracts dealing with the U.S. Department of Defense—Burden Sets and the sequence in which they are applied may be maintained and defined against the project contract.

## Planning Contract

You can associate a planning contract with one or more projects. New sales orders, purchase orders or jobs linked to a project will inherit the Contract ID. This supports the ability to link demand and supply to the project. The demand linked to a planning contract is filled by the supplies linked to the same planning contract. As a result, the demand is fulfilled specifically from assigned Contract warehouse/bin locations, excluding other non-planning contract warehouses/bins from the fulfillment process. You can link demand to a project, job or sales order indicating where the demand will be consumed.

## Revenue Recognition and Analysis

Use the Revenue Recognition Workbench to automate revenue recognition and process the various milestones and contractually defined billing points on a project. You can generate journals for revenue recognition based on the costs produced from the Project Analysis during the life of the project. The journals can be reversed once the project is completed. Easily perform revenue analysis for progress or milestone billing.

## Project Billing

Project Management allows you to generate progress and milestone billing, so you can invoice your customer and optionally defer the revenue and cost of sale—recognizing them at various stages in the project. Invoices can be generated based on a fixed date, fixed amount, user-defined stage of project completion, or user-defined cost-to-date. More complex contract arrangements can be defined using the sophisticated options available in Epicor Project Billing.

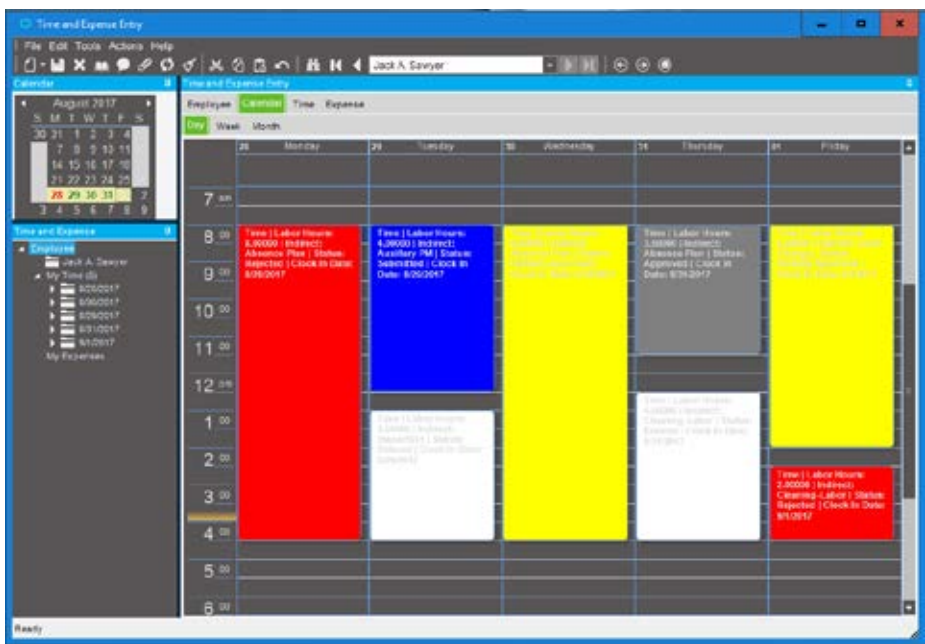
The advanced invoicing methods available in Epicor Project Billing provide the capability required to handle the commercial terms negotiated during the project bid process. This flexibility enables project managers to focus on managing project delivery in the most efficient way while also handling accurate billing in accordance with a customer-defined schedule—including comprehensive contract management, multiple invoicing methods, time and materials billing, milestone billing, and more.

(See figure 4.2)

## Resource Management

Epicor Resource Management provides the ability to define all resources available—whether they are employees, contractors, equipment, or machinery. Comprehensive calendars, resource capabilities, roles, and capacities can be defined, which are then referenced throughout Epicor. Resource





**Figure 4.3** Time Management—Calendar provides clear visibility of missing time sheets entries. The colored blocks indicate the approval status of each time transaction.

Management additionally provides the comprehensive costing and default burden and billing data used throughout the application—from planning and scheduling to labor bookings. Contractual role requirements and a clear separation of direct and indirect labor are supported in accordance with the specifications of the most demanding contract requirements.

## Time Management

Time Management in Epicor provides a highly configurable environment for the recording and management of time across projects, jobs, service orders, and internal codes. A range of entry options are available, each reflecting the nature of a particular transaction. Time can be entered via web browser when employees are on the go, on the shopfloor, or in the office—resulting in quick and accurate recording. Time recording reliability is reinforced through an array of task-centric entry options, which focus on the critical data required in each context. Additional configuration options ensure that users only have access to authorized jobs and booking codes, with a clear separation between

direct and indirect labor entry. Additionally, the flexible approvals process provides the security to ensure that transactions are properly authorized and backed up by a comprehensive audit trail.

(See figure 4.3)

## Expense Management

Expense Management in Epicor helps eliminate administrative effort and increase efficiency by providing a secure environment for recording and managing multicurrency expenses across projects, jobs, and service orders, as well as purely internal expenses. The flexible approval process of Expense Management also provides the security to ensure expenses are properly authorized and backed up by a comprehensive audit trail, with approved transactions flowing directly into Accounts Payable for fast, efficient processing and reimbursement. Expenses can be entered on mobile devices via web browser when employees are on the go.

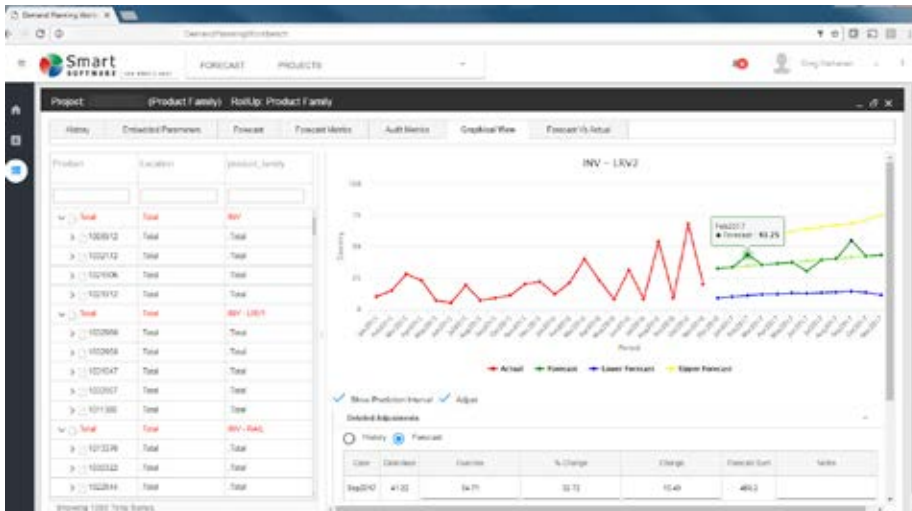


# Planning and Scheduling



- ▶ Forecasting and Master Production Scheduling
- ▶ Epicor Smart Demand Planner
- ▶ Material Requirements Planning
- ▶ Scheduling and Resource Management
- ▶ Advanced Planning and Scheduling
- ▶ Infinite, Finite and Constraint Based Scheduling

Performance-driven companies have mastered the art of predicting and responding quickly to changes in customer demand with minimal business interruption. Whether you are a global, multisite enterprise or a single site manufacturer or distributor, precise and flexible planning and scheduling is imperative to efficient and profitable operation. Epicor offers a comprehensive solution for forecasting, material requirements planning (MRP), scheduling, and advanced planning and scheduling to meet the needs of today's agile businesses.



**Figure 5** Epicor Smart Demand Planner—Easily create and visualize accurate forecasts with the information you need.

### Forecasting and Master Production Scheduling

Forecasting and Master Production Scheduling (MPS) in Epicor are included with the Material Requirements Planning module and are designed to assist manufacturers and distributors with both day-to-day control and long-range planning and decision making. Forecasting and MPS support businesses that operate multiple, mixed-mode strategies simultaneously. Forecasting & Master Production Scheduling functionality includes:

#### Forecasting

Forecasts can be generated from multiple historical sources (e.g., sales, invoice, and inventory usage history). Users can also manually enter forecasts for companies, plants, customers, dates, and parts, cut-and-paste from other applications into the forecast system, or generate forecasts from multiple historical sources (e.g., sales, invoice, and inventory usage history).

Another option is to export and import forecasts to and from other applications or customers. Import options allow forecasts to be broken down by part, customer, plant, date, and company. This import can update

the existing forecast, be a new forecast, or be a complete clear and re-load.

#### Forecast Buckets

Bucket forecasts for variable periods: daily, weekly, monthly, yearly, etc.

#### Forecast Analysis

Forecast any number of variables (e.g., revenue) rather than just forecasting product units. Forecasting allows any number of tiers to be forecast and analyzed (e.g., forecasting product units by company, state, city, and customer).

#### Inter-Company Trading

Dynamically accept forecasts from other companies within the enterprise. This allows companies to give visibility to the supply company of future demand without needing to raise a firm intercompany order.

#### Master Production Schedule

Enter production forecasts for specific end parts using the MPS function. Perform an iterative process of entering a planned schedule, viewing the effect on your resources, then modifying the plan until you have achieved an optimal schedule. Manually enter or cut-and-paste MPS from

other applications or automatically generate the MPS from the forecast.

### Driving Capacity and Raw Material Procurement

Make and alter MPS decisions based on constraints. Both forecasting and MPS can independently drive future demand.

### Epicor Smart Demand Planner

Epicor Smart Demand Planner provides cloud-based statistical forecasting that automatically selects the right forecast model for each item—accounting for trend, seasonality, and promotion/event-driven demand. For companies that manage many items like component parts, service parts, material requirements planning, or high-tech equipment, it includes an intermittent demand model so you can accurately forecast the inventory needed to hit desired service levels. Once the baseline forecast is produced, it is available for collaborative review and consensus planning by authorized stakeholders. In addition, forecast accuracy can be measured to ensure the best possible forecast is delivered to the business at both the aggregate and item-mix levels.

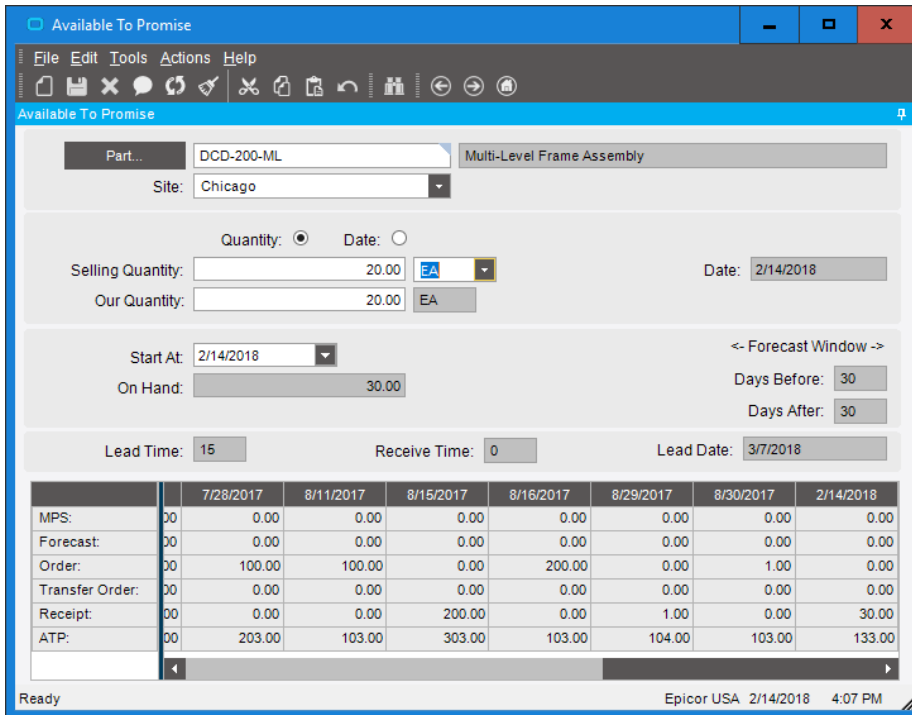
Epicor Smart Demand Planner seamlessly integrates with Epicor ERP software using an “out of the box” connector that simplifies implementation and support.

(See figure 5)

*Note: Learn more about related Smart products in the Supply Chain Management chapter.*

### Material Requirements Planning

Built for the needs of a single site as well as extended enterprise, MRP offers cross-plant and cross-company planning. Enhanced to offer plant source as well as



**Figure 5.1** Material Requirements Planning—Check supply and demand of a part with Available-to-Promise functionality.

product group sourcing of materials and assemblies, MRP automatically and visually extends the enterprise to efficiently manage supply and demand, from forecasting and MPS to MRP generation, and more. Material Requirements Planning functionality includes:

### MRP Generation

Run MRP with either net change or full MRP regeneration options. The MRP generation process balances the demand of customer orders and forecasts with the supply of jobs. As orders and forecasts change, MRP automatically adjusts corresponding jobs so you are in balance. MRP even reschedules your plant for you.

### Material Planning

Create purchase order suggestions for inventory and purchased parts that are needed to complete production. Use lead times and vendor price breaks to determine when the part should be ordered and at what price.

### Planning Contracts

There are instances where parts need to be manufactured or purchased to satisfy

a future requirement for a product or job that has yet to be fully developed from an engineering standpoint or there are long lead items that need to be purchased or built before the upper level orders are ready to be released. The Planning Contract gives you the ability to manage long lead-time items before a trigger appears for demand. Best of all, it allows you to earmark these items for specific needs even if a Job or Sales Order has not been generated yet. The planning contract concept is used specifically in a situation where the supply generated to fulfill a contract is consumed by the actual demand linked to the same part in the same planning contract. Supply for contract materials is kept distinct from other general supply. The Multi-Level Pegging Process pegs demand and supply, if they are linked to the same planning contract. Link Planning Contracts to demand and supply. The demand you link to a planning contract is filled by the supply you link to the same planning contract. As a result, the demand is fulfilled specifically from the assigned contract warehouse/bin locations, and excludes other non-planning contract warehouses/bins from the fulfillment

process. You can link a planning contract to a job, project, purchase order, sales order, transfer order, or quote.

### Dynamic Lead-Times

Take into consideration variables such as the batch size, production calendar for a resource, the run rate of the resource utilized, and the availability of material flagged as constrained in production schedules.

### Part Planning Tools

Account for production prep, kit, and receipt time. Use this to derive cycle-times and appropriate lead-time for producing the product

### Plan as Assembly

Use Plan as Assembly to plan lower component manufacturing parts without the need to include them in the full assembly structure. This feature enables complex planning for multilevel complex parts with components that are typically stocked.

### Planning Horizon

Review the planning horizon of a part or resource, then plan up to, but not beyond the horizon, preventing premature planning.

### Auto Job Firm Process

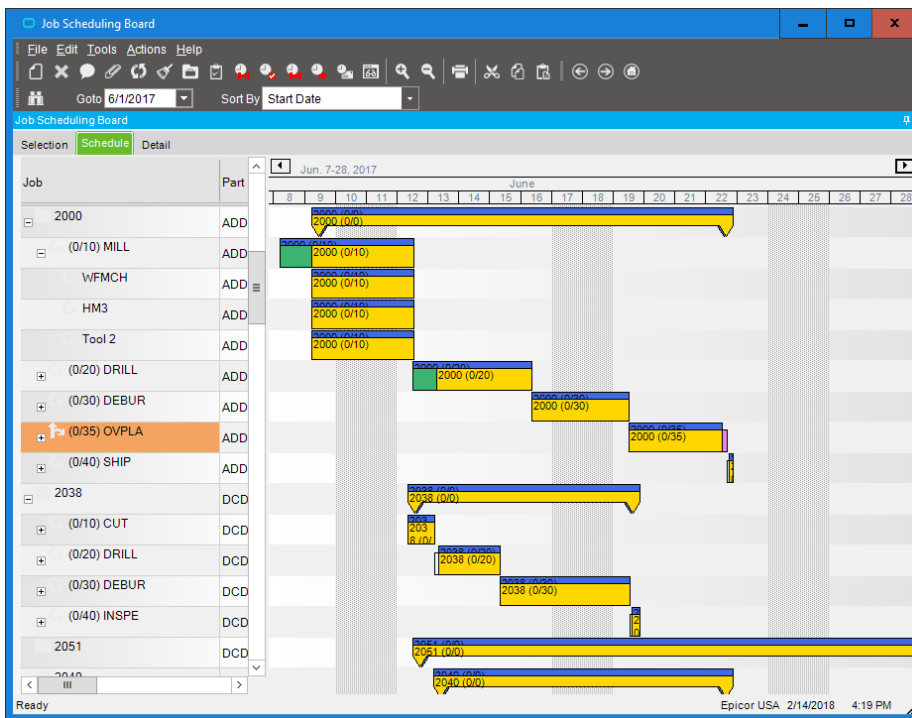
Use predefined rules to firm up and move MRP production requirements to production planning automatically, for rapid response to current demand.

### Multisite

Run MRP for all plants or for individual plants within a company. Changed schedule dates roll down to all subcomponents—even those being manufactured in another plant.

### Multilevel Pegging

Analyze all the supply and demand in your system, then peg each supply against demand, prioritized by due date. Because supply is calculated for every inventory item from all possible sources—regardless of whether demand exists—you are alerted to items that may be overstocked or obsolete.



**Figure 5.2** *Scheduling and Resource Management—Manipulate the schedule directly from a sophisticated, drag-and-drop visual scheduling board.*

## Sourcing By Plant

Define a unique source per part or plant—whether its default sourcing is purchased, produced, or transferred. What is produced in one location may be purchased—or transferred in—from another.

## Available-to-Promise

View running balances with the available-to-promise function. Enter a quantity, and the system will find the earliest date that quantity will be available. Enter a date, and see how many parts are available on that day. MPS, forecast, order, and planned receipt quantities are visible to help you in your production planning tasks.

## Planning Types

Maximize your planning accuracy with multiple types of inventory planning, including minimum/maximum/multiple, days of supply and run out.

## Rough Cut Horizon

Enable MRP to process more efficiently by removing the time spent scheduling beyond a specified threshold or rough cut horizon.

## Recycle Jobs

MRP reuses un-firm jobs for optimum MRP performance.

## Short Horizon Days of Supply

To optimize MRP performance, a Short Horizon Days of Supply field is included within the Part Maintenance program on the Plant Detail sheet. This field defines a material value that will be used when MRP determines that the needed materials falls within the Short Horizon.

## Calculate Manufacturing Lead Time

Plan for part components lower down in the assembly structure for accurate MRP scheduling.

## Start Minimum Quantity

Account for partial material availability in MRP calculations to get started earlier with available material and improve delivery performance.

## Bill of Materials Check

MRP checks the revision level and verifies approvals before pulling in a standard BOM and routing. For parts that do not have a current approved revision, a job suggestion is created in the new/change order queue to help ensure requirements are not lost.

(See figure 5.1)

## Scheduling and Resource Management

Multiple resource views and online scheduling tools such as the change impact informer offer the master scheduler and manager the ability to visually locate overload problems and slack conditions, then perform cost and throughput analysis on schedule changes before they are firmly committed. Scheduling & Resource Management functionality includes:

## Production Scheduling Board

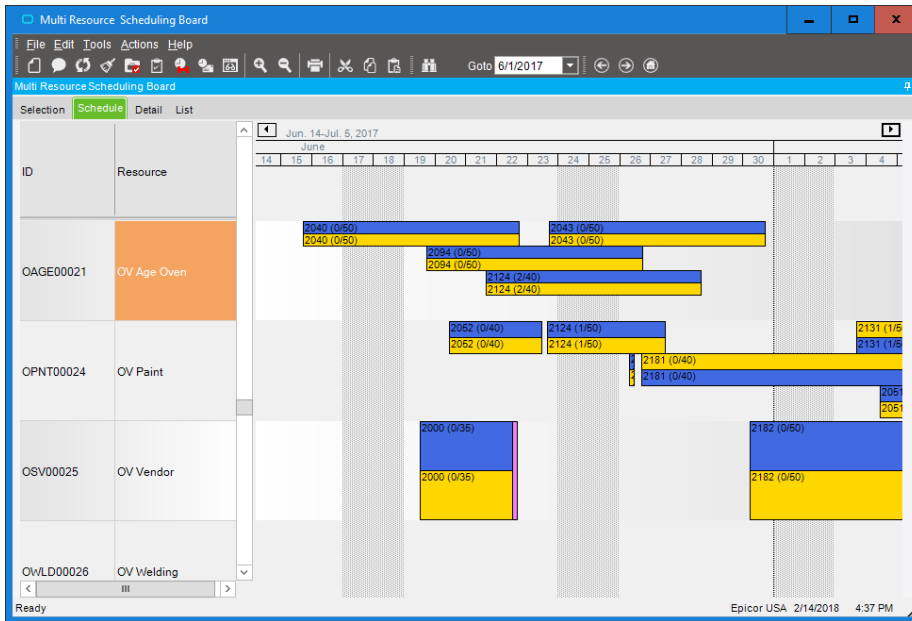
Easily manipulate the schedule with drag-and-drop and drill-down techniques for multilevel assemblies and operation details. A main control center for scheduling resources graphically displays schedules by job, resource, resource group, or entire plant. Dynamically change the timeline of the view to see short-run operations and quickly analyze the impact of long running operations.

## Alerts

View indicators, such as late status and material availability, to proactively alert the master scheduler to potential problems in the schedule. Optionally customize colors to denote actual, what-if, or delinquent load by job or operation.

## Finite Scheduling

Schedule and reschedule with flexible, finite real-time schedule capabilities for a single job and plant-wide global finite capacity. Features include job locking for key operations or jobs, user-defined priority, and capacity load leveling by resource and resource group.



**Figure 5.3** Advanced Planning and Scheduling—Consider production resources and create a visual finite schedule for improved schedule accuracy.

### Drag-and-Drop

Drag-and-drop scheduled load hours forward or backward to effectively alleviate fall overload conditions at critical resources or resource groups.

### Operation Complete Quantity and Complete Time Displayed

The Job Scheduling Board, Resource Scheduling Board, and Multi-Resource Scheduling Board all have an Operation Complete Quantity field on their Detail sheets. This field displays the number of parts that have been completed on the current operation. Both the Job Scheduling Board and Resource Scheduling Board display the Operation Complete Time value after you move an operation. This shows you the amount of time that is left to complete the operation.

### Overload Informer

Display each date and resource/resource group, where scheduled hours exceed capacity based on what-if or actual job schedules. Access resource, resource-group, and job scheduling information to review the causes of an overload and make schedule changes as needed.

### Multilevel Assemblies

Manage complex assemblies by matching the schedule to actual production output. From branch- and component-level rescheduling to final assembly, Epicor helps to ensure that all components are on time and that nothing slips through the cracks. Visually explode high-level components to view lower-level component schedules.

### Schedule Multi-Job

The Scheduling Multi-Job option allows you to schedule a group of associated jobs as if it were a single job. Jobs are associated via make-to-job relationships. This makes it possible to schedule and re-arrange manufacturing jobs for a parent assembly and its child subassemblies (called predecessor and successor jobs) all at the same time. This allows the scheduling planner to easily manage linked jobs to ensure that they are scheduled together so that all demands were met to meet customer requirements.

### What-If and Change Impact

Schedule jobs in a what-if mode, with the ability to analyze potential bottlenecks before finalizing the actual schedule.

View the potential changes for cost and throughput to the schedule after creating what-if scenarios.

### Setup Grouping

Use setup groups to streamline your setup processes. Dynamically assign grouping based on the criteria you define.

### Capabilities with Zero Priority

When you schedule by capability, the Scheduling Engine selects resources by the priority value defined for each capability. You can assign a zero value to a capability's priority. Any resource that is defined by this zero priority will not be selected by the Scheduling Engine. It will, however, be available to use as a resource on the Start Activity or Labor Entry windows.

### Dual Resource Constraints

Use a secondary resource constraint (e.g., a tool or employee) in addition to the primary resource in finite capacity scheduling.

*Note: The Advanced Planning and Scheduling module provides the ability to use more than two resource constraints.*

### Conditional Forward Schedule

Optionally allow the system to perform a forward schedule based on a start date of today when performing a backward schedule if a current date is encountered.

### Resource Group

Define an unlimited number of resources within a resource group. Resource groups can be used in the planning process with the actual resource assigned automatically based on availability of individual resources. Resources may have unique calendars, and values for hourly/daily capacity, queue- and move-time.

### Finite Load Horizon

Prevent the schedule from making adjustments too far into the future—potentially impacting material purchases and resource allocations—with finite load



horizons (e.g., time fences or cutoff dates) for finitely scheduling load on the resource.

### Resource-Based Schedule

Develop a schedule for each individual resource deployed in the schedule.

### Reschedule Delta

Optionally automate the system's response to parts that are planned to be early or late by a threshold number of days.

### Rough Cut Scheduling

Keep an eye on the future with Rough Cut Scheduling which shows future production without taxing system resources.

### Scheduling Factor Send Ahead

Start-to-start scheduled operations or operations scheduled to begin at the same time can be staggered based on an offset factor that is calculated by number of pieces or a percentage of time allocated.

### Scheduling Blocks

Account for periodic processes with scheduling blocks. Scheduling blocks define periodic setup needs such as tool changes or other processes.

### Material Constraints Displayed

Both the Multi-Resource Scheduling Board and the Job Scheduling Board indicate which materials are constrained. On both scheduling boards, the Related Materials grid contains columns that display this information. One column indicates whether or not the material is constrained. The other columns define the purchase order, job, and lead time linked to the constrained material.

(See figure 5.2)

## Advanced Planning and Scheduling

Available as an extension to Scheduling, Epicor Advanced Planning and Scheduling incorporates the strength of the Scheduling engine and enhances it with advanced functionality such as multiple constraint

scheduling, a wide range of scheduling methods, visual drag-and-drop scheduling, capability and dependent capability-based scheduling, real-time capable-to-promise functionality, and advanced material planning functionality.

### Capable-to-Promise

Easily manage customer expectations with real-time capable-to-promise functionality in Order Management. Epicor capable-to-promise uses the scheduling engine to determine accurate promise dates and offers order processing single-click confirmation or order cancellation based on the projected due date.

### Multiple Resource Scheduling Board

Easily manipulate the schedule with drag-and-drop manipulation and drill-down techniques for multilevel assemblies and operation details. A main control center for scheduling resources graphically displays schedules for a group of resources in one screen. Dynamically change the timeline of the view to see minute operations and quickly analyze the impact of long running operations. Add memos to a schedule on the Multi-Resource Scheduling Board about any aspect of a current schedule.

### Multiple Constraints

Set up every operation with multiple constraints or resources (e.g., machines, tools, skilled labor, raw materials, or available subassemblies).

### Resource Eligibility

Define resources within a specific resource group with individual characteristics to improve scheduling accuracy.

### Automated Scheduling by Capability

Define a capability or skill level that can be tied to multiple resources rather than a resource group or individual resource in the planning process. The APS engine then determines, based on the available

resources, which individual resource to schedule for the operation.

### Dependent Capabilities

Link dependent capabilities that the scheduling engine schedules along with the primary capability when operations require dependent skills to perform the operation.

### Finite or Infinite Capacity

Define each resource with either finite or infinite capacity. When a piece of the schedule is moved, the resource is rescheduled according to its type.

### Minimum WIP Scheduling

Use a unique scheduling algorithm designed to minimize work in process by scheduling a job to ship as early as possible. APS then back schedules to start working on the job as late as possible.

### Dimensional Planning

Schedule by volume and quantity using dimensional planning that is not time constrained.

### Rate-Based Scheduling

Schedule cells based on production throughput rates rather than time.

### Material Constraints

Consider material availability as a scheduling constraint. Integrated directly with Inventory and Purchasing, the APS system knows when material is due and schedules accordingly.

### Advanced Material Planning

Increase throughput by considering material and component availability as a constraint. Advanced material planning, an integral feature of APS, facilitates intelligent stocking and procurement of material requirements. The schedule function recognizes materials earmarked as constraints, gives the master scheduler material availability, and considers supplier calendars for a more realistic schedule.

### Change Impact Analysis

See the immediate impact of proposed changes on other orders to make informed decisions about desired changes.

### Time Adjustment

Automatically take into account resource utilization and resource group efficiency for more accurate load calculation.

### Optimization Rules

Generate a schedule based on rules assigned to individual resources.

### Balanced Optimization

Concurrently consider priority, slack time, and setup time when determining load balance.

### Single Cell Scheduling

Schedule an entire job or assembly within a single work cell.

### Unlimited What-If

Create unlimited what-if scenarios to view the effect of changes on your shop floor.

### Multi-Plant Communication

Help to ensure that interdependent plant schedules are coordinated.

*(See figure 5.3)*

## Multisite Management

Not only are manufacturers and distributors looking for new tools to oversee multiplant operations, but they're also looking to maximize the use of existing resources. Alternative production methods management helps optimize the production processes for specific parts in each plant, based on the resources available. Another optimization tool includes the transfer of material or semi-finished components to another plant for completion.

*Note: Learn more about Multisite Management in the Global Business Management chapter*

## Supply Chain Management



- ▶ Purchase Management
- ▶ Supplier Connect
- ▶ Supplier Relationship Management
- ▶ Inventory Management
- ▶ Advanced Material Management
- ▶ Manifesting and Freight Management
- ▶ Shipping and Receiving
- ▶ Warehouse Management
- ▶ Handheld

A highly effective supply chain is critical to the success of your strategic growth initiatives. Top-performing manufacturers are empowering supply chain processes with innovative technology that is best-fit for unique operational needs, easy to use, and informed by industry best practices. Drive out costs, increase velocity, and enhance your customer experience with a strong supply chain that is ready for the future of manufacturing. Offering rich visibility and digital prowess, Epicor provides effective coordination from initial raw materials to the ultimate delivery of the finished product, transforming your supply chain into a results-driven value chain.

Epicor Supply Chain Management (SCM) is a full suite of enterprise application capabilities—including purchase management, sourcing and procurement, inventory management, advanced material management, shipping and receiving, and warehouse management—and is complemented by forecasting, order management, and analytics capabilities. Combined, you have the solution you need to meet—and even exceed—customer expectations in today's increasingly global market place.



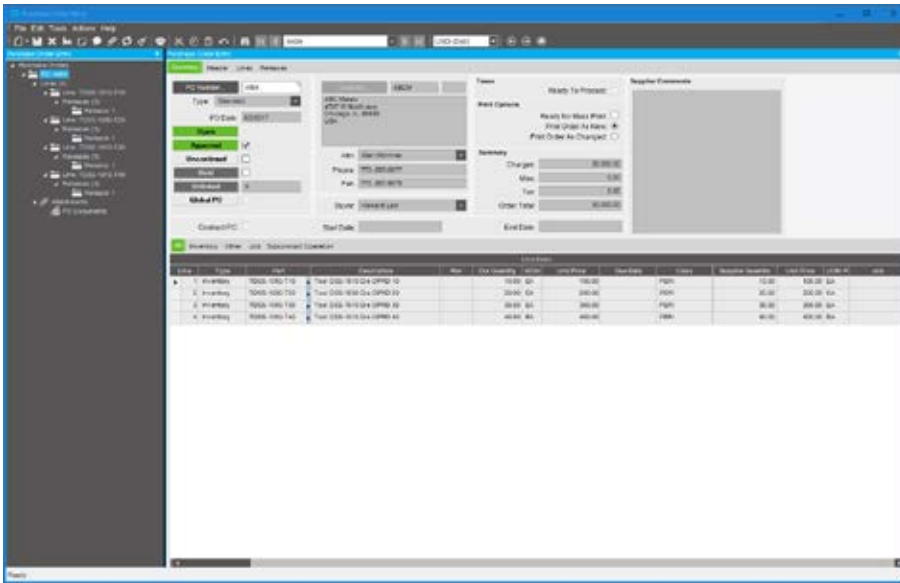
## Advanced Requisition Management

High-performing supply chains maintain a budget and control over items requisitioned for each stocking location for greater efficiency. Epicor Advanced Requisition Management (ARM) enables organizations to gain visibility and regulate procurement spending by providing an online workflow and purchase requisition tool. It gains information on spending to support negotiation of bulk purchase discounts from suppliers, assigns preferred suppliers for particular products, sets the right spend limits for individuals, and assigns the chain of authority for approving purchase orders.

## Supplier Connect

Strengthen your competitiveness by offering customers and business partners the ability to interact with your brand online. Supplier Connect is a supply-chain-focused feature of Epicor Commerce Connect—a complete, connected, and customer-proven business solution for modern digital commerce and omnichannel enablement commerce and omnichannel enablement. By providing the means for customer and supplier self-service on a whole range of inquiries—such as open orders, part information, and access to old invoices—Epicor Commerce Connect eliminates the need for inquiries to come in via email, phone, or fax to significantly reduce the amount of time staff need to spend answering them.

Supplier Connect is specifically tailored for suppliers to update their information via their own supplier portal, answer requests for information, and confirm changes to purchasing orders. It can deliver performance metrics and also allows user-defined fields to flexibly extend your data storage options and send custom messages between your online store-front and your centralized back-office. This not only



**Figure 6** Purchase Management—Enter, approve, and confirm purchase orders with multiple line items and releases.

## Purchase Management

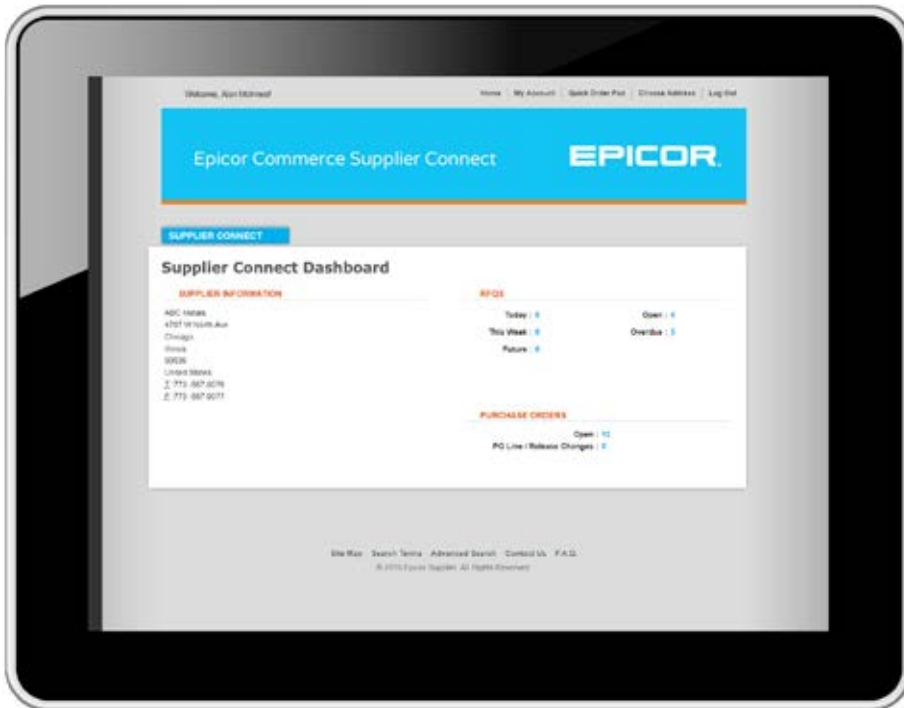
Purchase Management handles purchase order writing and the tracking of supplier performance to optimize results and improve negotiations. Multiple detailed line items indicate planned receipts to inventory or a job, direct receipts to a sales order, or direct receipts to a manufacturing job, although their destination may be changed at the time of actual receipt entry. Purchase order receipt processing updates suggested supplier and detailed purchase history files, which provides continual reference to aid in making purchasing decisions. With Purchase Management, you can reduce inventory levels, improve on-time deliveries, enhance your cash flow, and increase your profit levels. Purchase Management capabilities include:

- ▶ Automated purchasing tools
- ▶ Supplier cross-referencing
- ▶ Supplier approval capability
- ▶ Mass purchase order receipt
- ▶ Multiple location receipts
- ▶ Part master price breaks
- ▶ Purchase requisition
- ▶ Purchase history
- ▶ Purchase order tracker
- ▶ Supplier tracker

(See figure 6)

## Purchase Contracts

Epicor Purchase Contracts is designed to automate the process of purchasing inventory items on a recurring basis—including the establishment of recurring delivery schedules. Contract line items can be assigned to purchase orders, which automates your delivery schedules with delivery dates, prices, and corresponding quantities. Automatic requirement calculations—based on generated PO suggestions—are factored into delivery schedules, which you can adjust automatically to conform to supplier requirements or help with inventory control, production efficiency, and business expediency. Complete functionality includes part schedule maintenance for establishing the combination of part, plant, and calendar that makes up the part schedule, as well as periodicity code maintenance to establish the rules and terms under which orders periodically arrive from suppliers.



**Figure 6.1** *Supplier Connect—improves communication with suppliers to accelerate time to market, ensure accuracy, and drive out costs in your supply chain.*

provides for a more seamless relationship between you and your suppliers, but it also allows for your business to react much more quickly and accurately to any change of circumstances with supply.

(See figure 6.1)

## Supplier Relationship Management

Supplier Relationship Management (SRM) provides tools for buyers, procurement staff, and purchasing agents, to request quotes for raw materials or subcontract services from one or multiple suppliers. Request for quotes (RFQs) are generated with one or more lines, allowing you to evaluate the responses from suppliers to decide which businesses can provide your company with the quantities, price points, and delivery dates you need for your manufacturing and servicing business flow.

Supplier RFQ responses automatically build or add to existing part price-break tables with current effectivity dates to be used in other Epicor applications.

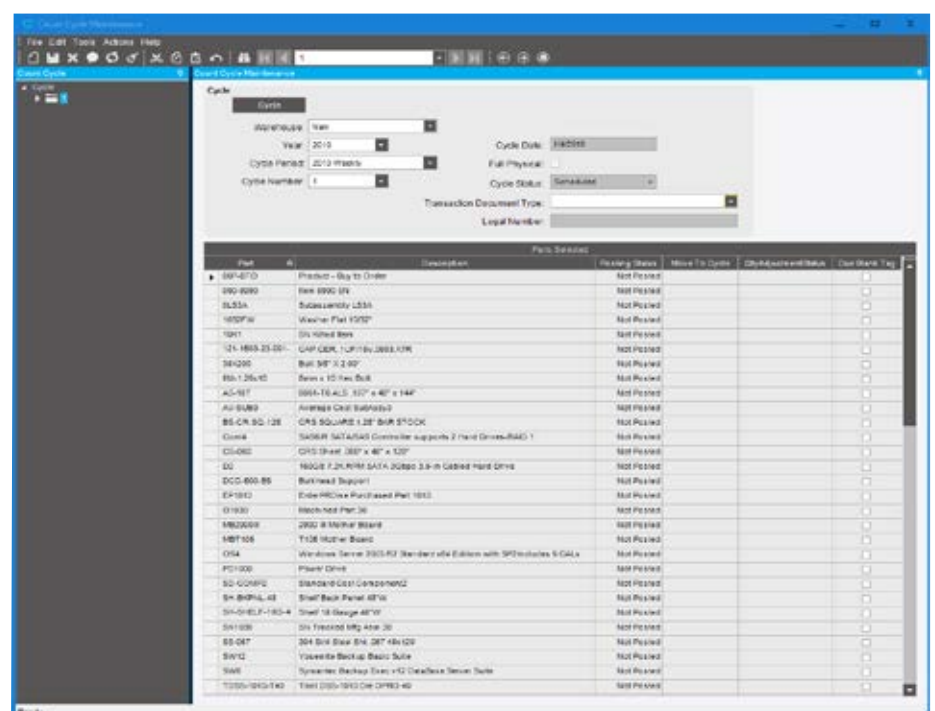
are continually replenished through the processing of purchased or manufactured item receipts into inventory. Receipt processing provides a continual update of inventory average, FIFO, lot, or last costs for every item. A variety of screen inquiries provide management analysis of Materials Requirements Planning (MRP), shortage monitoring, reorder analysis, stock status, valuation, and critical items. Functionality also includes:

- ▶ Alternate parts maintenance
- ▶ Costing management
- ▶ Country of origin tracking
- ▶ Cycle counting
- ▶ Global trade standards
- ▶ Manufacturers part
- ▶ Part cross-referencing
- ▶ Part master price breaks
- ▶ Physical and perpetual inventory
- ▶ RoHS compliance
- ▶ Time-phased material inquiry/report
- ▶ Unit of measure definitions

(See figure 6.2)

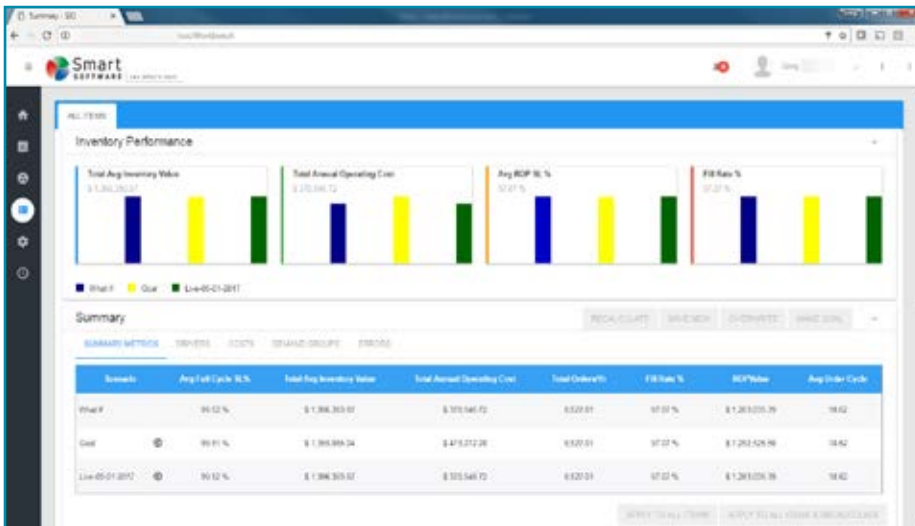
## Inventory Management

Inventory Management provides the key functions necessary to update and maintain raw materials, work in process (WIP), finished goods inventory quantities, costs, and on-hand requirements. Issued inventory reduces quantities on hand, which



**Figure 6.2** *Inventory Management—Control inventory and significantly reduce annual audit costs.*





**Figure 6.3** Epicor Smart Inventory Optimization —Easily visualize your inventory performance reports and share with key stakeholders

### Lot Tracking and Attributes

Improve supply chain efficiency with full visibility of parts by lot throughout your system. Record material received, keep traceable material on-hand, and maintain detailed usage information by lot with the option to auto-generate lot numbers based on part-specific rules. Additional lot attributes can also be stored for each part lot, which include Batch, Manufacture Lot, Heat Number, Manufacture Date, Expiration Date, Firmware Version, Cure Date, Best Before Date, etc.

### Serial Tracking

Serial tracking helps to ensure product traceability, allowing for greater control over parts within the facility. Comprehensive functionality ranges from no serial tracking to full serial traceability of each recorded move of a part and its components. Optionally, you can record serial numbers at the outbound stage only. This is particularly useful for companies that must record what serial numbers have been shipped to which customers and when, but have no need to undertake the overhead costs of recording serial numbers as inventory moves around the warehouse or internal production facilities.

### Customer-Managed Inventory

Lower business risk by enhancing control over customer-managed inventory that you store but never own. These items can be

used in the production of products for a customer or shipped by you directly to your customer's customer.

### Supplier-Managed Inventory

Epicor SCM allows you to designate material purchased as inventory you are storing as consignment inventory from the supplier. You can also use these part quantities on jobs, and once you consume it, your company legally owns the items.

### Epicor Smart Inventory Optimization

Epicor Smart Inventory Optimization delivers cloud-based inventory policy decision support and the means to share, collaborate, and track the impact of your inventory planning policy. Reconcile holding costs, ordering costs, and stock-out costs in order to prescribe the inventory policy and service levels that can help you yield the total lowest cost. To determine the right plan for your organization, assign service-level constraints and targets, evaluate proposed policies, and perform "what if" scenarios. Share proposed policies and agree on a plan that best meets the company's objectives. Epicor Smart Inventory Optimization will automatically upload the optimal planning parameters back to Epicor ERP, and works with a variety of replenishment policies including reorder point/order quantity, min./max., safety stock planning, and order up to levels.

(See figure 6.3)

## Epicor Smart Operational Analytics

Epicor Smart Operational Analytics is a cloud-based reporting platform that provides a fast, easily understood, current perspective on the state of your inventory. It performs against critical metrics, actual supplier lead times, and opportunities to rebalance stocks across facilities to help uncover operational inefficiencies. Inventory analytics offers a 360-degree view of your inventory to identify value, stocking trends, overstocks, understocks, potential order cancellations, and root causes of inventory issues. Supplier analysis provides comprehensive insight on your suppliers by measuring historical performance and lead times, which allows you to rank suppliers and identify trends. Operational performance analysis helps you continuously improve your operation by measuring and reporting on key performance indicators (KPIs) such as service level and fill rate performance, time to ship, number of stock-out events, and more.

## Advanced Material Management

Advanced Material Management (AMM) enables businesses to produce electronic requests for materials, dispatch those materials, and track inventory movements of all inventory—including raw materials and work in process. Using wireless terminals and bar coding technology, you are able to track inventory in real time with complete control and visibility of raw materials and work in process as it travels throughout the enterprise. Complete functionality includes:

- ▶ Bar coding on demand
- ▶ Material handler interface
- ▶ Material movement
- ▶ Order prioritization
- ▶ Sales order allocation
- ▶ Bar code tag scanning
- ▶ Handheld capability

## Package Control

Package Control functionality allows you to track, manage, or transact a group of items via a unique identifier, the Package Control ID (PCID). Track any item from receipt into a site, the movement of an item throughout the site, and eventually the shipment of that item to the customer. Also supporting the inbound generation of PCIDs, Epicor ERP allows you to reserve and allocate PCIDs for sales orders, issue material to jobs, produce PCIDs from jobs, and receive PCID finished goods in inventory to complete processing transactions. Perform pick transactions, shipping transactions, and job receipt to inventory transactions—among others—against a unique PCID.

PCIDs have an associated set of predetermined or user-defined physical and controlling characteristics, which comprise the package itself (properties and contents) and the label. Each can have its own rules of control, process flow, and status to give you greater control and visibility into your supply chain.

## Shipping and Receiving

The Shipping and Receiving module is designed to promote increased efficiency and accuracy by allowing you to perform and track all activity relating to shipments and receipts. This flexible module gives you the ability to auto-invoice in Accounts Receivable following customer shipment; print customizable bill of lading forms to your shipments; track container shipments and update the status and due dates of all purchase orders; track customer shipments; track landed costs against applicable parts, which reflects the true costs of materials, parts, or finished goods, and more. Complete functionality also includes:

- ▶ Mass ship
- ▶ Subcontract parts tracking
- ▶ Miscellaneous shipment tracking
- ▶ Miscellaneous receipts management
- ▶ Pack and ship/pack out processing

- ▶ Master pack tracking
- ▶ Phantom pack shipping
- ▶ Shipping performance reporting

## Manifesting and Freight Management

Today's customers have many different shipping options. Epicor Manifest, a multicarrier shipping software for Epicor ERP streamlines domestic and international shipping processes to help you meet your customers' demands. From rate shopping at order entry to manifesting your domestic or international shipments, Epicor Manifest communicates with various carriers and provides the information about that shipment back to Epicor ERP. As part of the shipping function, Epicor Manifest prints labels, bill of ladings, and export documents to be included with your shipment. Capabilities include:

- International shipments
- and documentation

- ▶ Multiaccount support
- ▶ Electronic Export Information (EEI) submittal and retrieval processing
- ▶ Configurable handling fees

- ▶ Automated hazmat paperwork
- ▶ Rate shopping
- ▶ Routing guide and best way
- ▶ Automated blind shipping
- ▶ Print or email return labels
- ▶ Order consolidations

## Warehouse Management

The Epicor Warehouse Management System (WMS) leverages Epicor ERP, mobile ID data collection, and wireless communications to seamlessly link your warehouse with your order processing and manufacturing operations—optimizing your pick, pack, ship, and receiving processes. Functionality includes:

- ▶ Bin management
- ▶ Warehouse team creation
- ▶ Fulfillment workbench
- ▶ Allocation template
- ▶ Wave picking
- ▶ Cross-dock tracking
- ▶ Paperless picking
- ▶ Queue management

(See figure 6.4)

Fullstack Overview														
File Edit Tools Actions Help														
Fullstack Overview														
Supply Chain Fullstack   Job Fullstack   Transfer Data Fullstack														
Fullstack % = 0.00    Use Count = 0    Selected Weight 0														
Release Count = 0    Selected Volume 0														
Fullstack Overview														
Index	Current Type	Current Desc	Current UoM	Part	Description	Rev	On Hand	Min Stock	Max Stock	Units	Weight	Volume	Weight	Volume
1	Order	800-011	0.00	1000000000	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
74	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	Order	800-011	0.00	0.00	Warehouse	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	Order	800-011	0.00	0.00	Warehouse	1								

**Figure 6.4** *Warehouse Management*—The Fulfillment Workbench offers a template-based approach to automate and streamline the fulfillment process for various techniques.

## Handheld

Whether doing physical inventory or material moves, or looking up serialized part information, the Epicor Handheld application offers an easy-to-use interface that is designed for plant and distribution employees. The Epicor Handheld module allows you to track your inventory as it moves throughout your enterprise with real-time data capture to improve inventory accuracy and speed up the order-to-ship cycle. Providing your users with event-based directing and routing of all managed tasks in real time, the Handheld module not only

helps you maintain complete transaction event history for analysis and reporting purposes, but when coupled with Advanced Material Management, it also provides detailed tracking of material requirements and WIP information through mobile access to the material and pick orders queue.

Complete functionality also includes:

- ▶ Auto-print-control support
- ▶ Seagull Scientific, Inc. BarTender® labeling support
- ▶ Auto putaway processing

(See figure 6.5)



**Figure 6.5** Handheld—See improved inventory accuracy with wireless device management of inventory functions, such as on-the-fly adjustments and viewing the material queue.

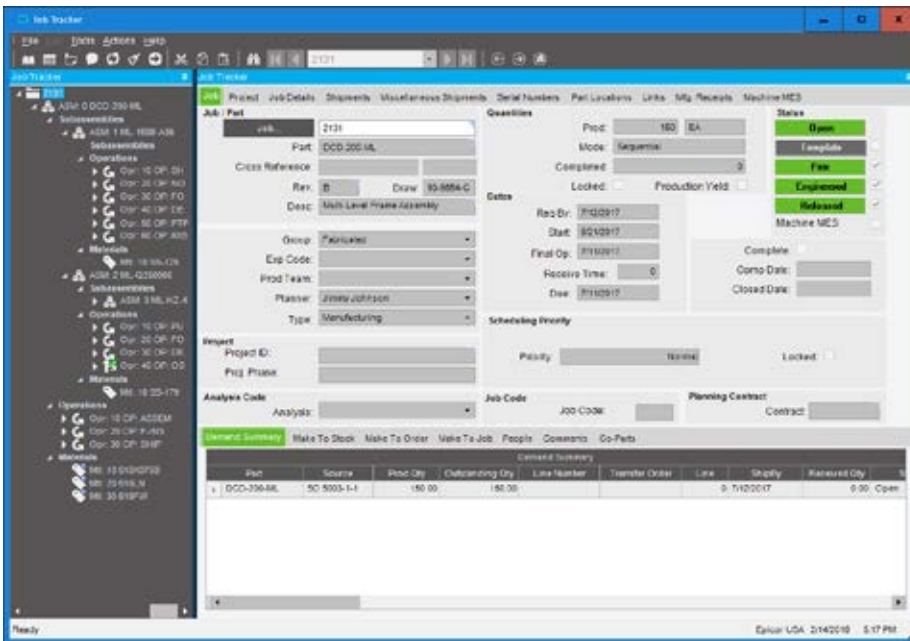


## Production Management



- ▶ Job Management
- ▶ Advanced Production
- ▶ Kanban Lean Production
- ▶ Manufacturing Execution System
- ▶ Advanced MES (Epicor Mattec®)
- ▶ Quality Assurance
- ▶ Enhanced Quality Assurance
- ▶ Advanced Quality Management

Whether you manufacture complex solutions or simple products, you need strong production control in order to build a competitive advantage. As the global marketplace continues to shrink profit margins and customers become more demanding, businesses are looking for agile solutions that can provide the infrastructure they need to respond quickly and efficiently. Epicor offers a comprehensive solution for make-to-order, mixed-mode, make-to-stock, engineer-to-order, and configure-to-order manufacturers; including light assembly features for distribution businesses. Modular in design, the production control suite of modules include Job Management, Advanced Production, Lean Manufacturing, Manufacturing Execution System (MES), Advanced MES, Quality Assurance, Enhanced Quality Assurance, and Advanced Quality Management.



**Figure 7** Job Management—Provides detailed information to the plant floor about every aspect of a job.

## Job Management

The Job Management module, in the Operations Core Package, is a comprehensive production control solution designed specifically for the planning, routing, scheduling, costing, and tracking of goods—including assembled, manufactured, and semi-finished products. It includes innovative tools for better planning and costing with historical run analysis that compares estimates to actuals on a run-by-run basis. Job Management functionality includes:

### Planning Workbench

Access all job related actions in a single view—the creation of new jobs, changing job requirements to match changing demand, and allocating and reallocating jobs to satisfy changing customer demand. The planning workbench allows seamless access to the scheduling board for more detailed job management.

### Job Manager

Quickly review the relationship between production jobs and demand. Make changes to the production plan to accommodate new and changing demand.

## Production Planners Workbench

The Production Planners Workbench is a dashboard that provides an overview of the material shortages of the selected jobs. Although this information is already available in each job, this overview gives the job planner a tool to quickly gather information for multiple jobs at once.

### Job Costing

Compare actuals to estimates online, review job costing for materials, material burden, subcontracting, operations (labor/burden), and compare projected and actual billings for profitability analysis. Job costing can be performed on a job-by-job, customer, part product group, or overall company basis.

### Order-to-Job Linking

Handle one job or one delivery, one job or multiple deliveries, blanket production runs, and internal work orders to build parts to finished goods inventory.

### New/Change Order Notifications

Verify that orders or changes don't fall through the cracks for viewing and selecting new orders and change orders from job entry. Optionally track all job changes via user ID, date and description.

## Drag-and-Drop Interface

Simplify the planning process. Use a tree interface to easily drag-and-drop components, operations or direct materials from another quote, BOM, or previously run job.

## Planned Overproduction of Assemblies

Produce and auto-receive overproduction quantities to inventory.

## Yield Scrap

Everyone has it. Yield Scrap. This functionality offers the ability for scrap reporting at an operation to affect the estimated production quantity of subsequent operations if the scrap exceeds a predetermined scrap allowance. Some users may just want a warning others may want automated predefined actions.

## Assemblies

Produce routings, costing, and tracking of single or multiple-level parts.

## Scheduling

Schedule jobs based on forward, backward, what-if, finite, and infinite capacity.

## Backflush

Backflush labor and/or materials for a single assembly, branch, or an entire job.

## Job Tracker

Review a specific job, and check the status of all assemblies, operations and materials, including subcontract status.

## Productivity

Track and analyze efficiency and utilization figures by employee, operation, work center, and department.

## Quality Control

Extensively track and analyze scrap, rework, and added operations.

## Material Shortage Indicator

Query material availability at the time of job entry to determine whether jobs can be



started within the scheduled time period.  
(See figure 7)

## Advanced Production

Advanced Production deploys batching technology that enables users to group multiple parts or operations together for key production processes. The result of this batching process is a single reporting entity or job for simplified scheduling, tracking, and reporting of labor and materials on the plant floor. This functionality is available in the job planning and resource scheduling functions within Epicor, with both planned and “on-the-fly” grouping flexibility to end users. Additionally, users can select to plan operations sequentially—one operation after another or concurrently—to be complete at the same time for nested operations. Advanced Production functionality includes:

### Support For Co-Product Production

Offers simplified production of co- or dependent products in the same production run.

### Support for Nested Product Production

Offers simplified production of nested or products of the same material or process in the same production run.

### Part and Operation Batching

Easily link multiple operations from the same part or different parts to be run either sequentially or concurrently.

### Visibility of Production Batching

Single source production enables full visibility and tracking of source operations and parts.

### Accurate Cost Control

Material and production costs can be applied accurately to multiple jobs as production is complete. Simplified labor entry allows plant floor employees to enter quantities for multiple parts in a single step.

## Simplified Plant Floor Interface

Single reporting entity enables multiple part quantities to be entered in a single plant floor interface while accurate labor and burden cost is accurately applied to each batched part and operation.

### Concurrent or Subsequent Flexibility

The user can select to either link parts and operations subsequently—to be run one after another or concurrently—at the same time.

### Single or Multiple Operations

The user can select either a single operation for linking or to link an entire job.

## Kanban Lean Production

With increased global competition and the demands of an online supply chain, customers more than ever before are demanding greater product flexibility, smaller and more frequent deliveries, and higher product quality—all at the lowest price. A component of the Job Management module, in the Operations Core Package, Lean Production provides you with the specific functionality your organization needs to meet these challenges and optimize your plant floor

operations, including the adoption of Lean Manufacturing Kanban functionality to pull rather than push products through the manufacturing process. Lean Production functionality includes:

### Manufacturing Without Work Orders (Kanban Flow)

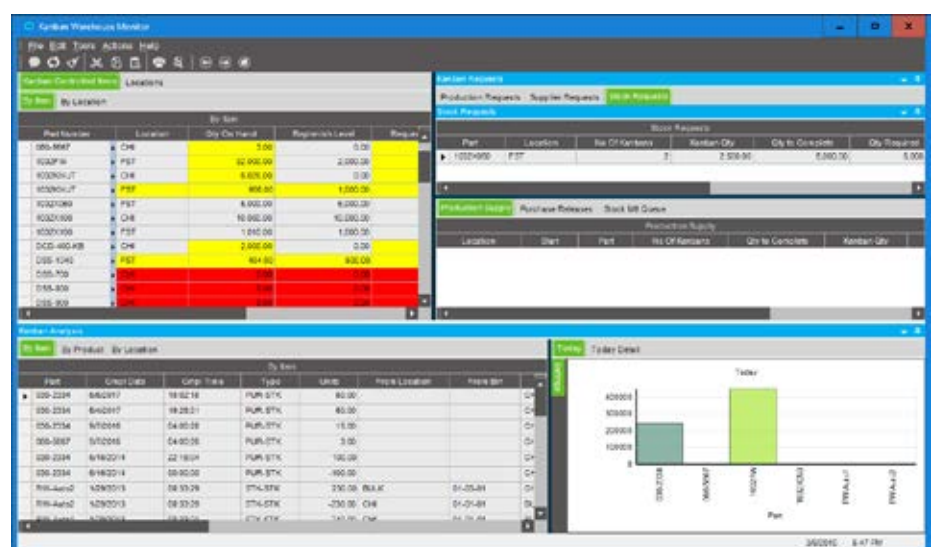
Epicor embedded Kanban functionality (i.e., a signal to manufacture or move product) offers the functionality required to manage several types of systems for Kanban control. As inventory levels or order demand require additional product, Kanbans, such as manufacturing real-time Kanbans, manufacturing flow Kanbans, purchase real-time Kanbans, and stock replenishment Kanbans, are automatically requested. The Kanban manages the stocking and order demand for parts flagged as needing Kanban control. User-defined rules enable parts to be flagged for Kanban control at the part, warehouse, or individual bin or cell location level.

### Cell-based Inventory

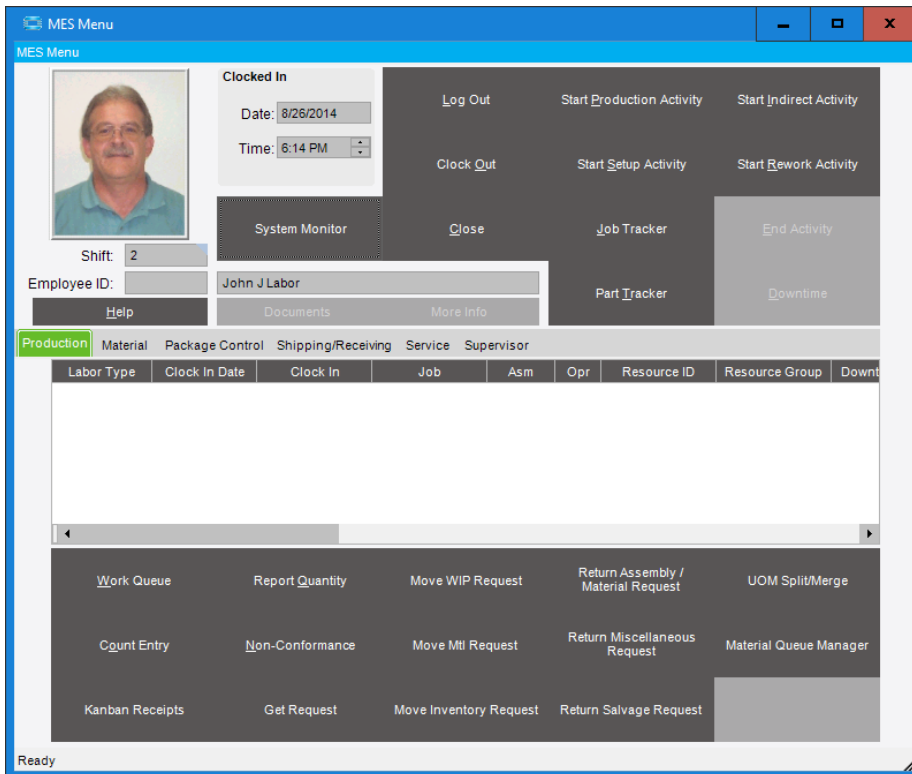
Manage, plan, and replenish materials within a cell.

### Real-time Manufacturing Kanban

Eliminate work orders and reduce on-hand inventories as parts are electronically



**Figure 7.1 Kanban Lean Production—Manage electronic queues for Kanban control with the Kanban Monitor. Optionally display on the plant floor information about current Kanban records in a dashboard format.**



**Figure 7.2** Manufacturing Execution System—Automatically collect and report the status of Jobs on the plant floor in real time.

triggered for replenishment as needed with real-time manufacturing Kanbans. Instead of planning for each order that is processed, parts are pulled through production as inventory or cell stocking levels fall below minimums. The cell is visually queued to produce based on the Kanban quantity for the part at its warehouse, bin or cell location.

### Manufacturing Flow Kanban

View future demand to dynamically calculate future replenishment Kanbans with the manufacturing flow Kanban. This gives downstream cells and suppliers visibility of future demand (although the actual Kanban events may differ during execution). As Kanbans are acted on, the downstream demand requirement is dynamically updated. All cells and suppliers have up-to-date visibility of future demand.

### Real-time Stock Replenishment Kanban

Move inventory as it is needed in a particular manufacturing cell, shipping area or customer consignment location with the

real-time stock replenishment Kanban using automatic triggering of stocked inventory.

### Real-time Purchase Kanban

Use the real-time purchase Kanban to replenish directly from the supplier and notify purchasing that a stock replenishment is required. Automatically send an e-mail to the supplier requesting additional inventory against an open purchase contract. Inventory can be received to the main stores, or directly to the production floor. Real-time purchase Kanban automates the replenishment of material from vendors and provides for visibility of current supply requests.

### Automated Material Flow

Authorize supplying cells to make a predefined quantity of an item being “pulled” by using operations.

### Measurement of Production Activity Against Lean Performance Metrics

Use the Production Activity function to capture production data automatically

through manufacturing center transactions. The data you capture through this process can then be analyzed as needed against any lean performance metrics you define.

### Lean Metrics

Indicate lean metrics by period, day, week, resource group, even free form parameters such as seasonal. Use the Production Activity tracker to dynamically evaluate the production activity for each resource group against the lean performance metrics you have established for your manufacturing processes.

### Support for Hybrid Approaches to Lean

Employ a phased approach to implementing lean practices for tracking material, MRP and Kanban in a mixed environment. By offering manufacturers the choice, at the part location level, how the part will be managed, manufacturers can more easily migrate to lean, while synchronizing MRP and Kanban execution.

(See figure 7.1)

## Manufacturing Execution System

MES is an easy-to-use, online system for the plant floor that allows plant-based transactions real-time visibility throughout the Epicor solution. Epicor MES enables accurate labor reporting, as well as online transaction tracking, which provides management with a real-time picture of what is occurring on the plant floor by employee and job. Integration with Epicor Job Management, Scheduling, Quality Assurance, and Advanced Material Management eliminates dual entry and provides online, real-time views of the latest plant floor scheduling priorities. In addition, an integration with the Epicor Document Attach Tool allows plant floor access to needed documentation, such as product drawings, process documents, and multimedia videos. Complete module functionality includes:

### Flexible Data Entry Technology

Use touchscreen, mouse, bar code, or keyboard interface to update labor information from the plant floor. Eliminate data entry mistakes and increase transaction speed by simply scanning a bar code tag to complete a transaction.

### Work Queue

Provide employees with prioritized work schedules and make information directly available to the plant floor. MES is optimized for use on the plant floor with the ability to select multiple operations for work at the same time, full sheet views, views specific to current, available, or expected work, ability to target work based on TAKT, pieces, hours, and setup group designations, and advanced search capabilities.

### Multiple Languages

Display the Manufacturing Execution System screens in the employee's primary language.

### Distributed Hours

Automatically split labor hours across multiple jobs being worked on simultaneously by an employee. Likewise, split resource or machine hours when two or more employees work on the same resource.

### Quality Reporting

Capture rework and scrap reason codes, along with miscellaneous employee comments from the plant floor. Use the Quality Assurance options to report setup inspection, first article, piece counts, and more.

### Shop Warnings

Shop warnings appear in various locations throughout the system when certain conditions exist or certain events occur. They are intended to keep supervisors informed of a job's status or an employee's performance.

### Grace Periods/Multiple Shifts

Manage clock-in and clock-out periods with adjustments made for user-defined grace periods. Accommodate split and staggered shifts.

### Trackers in the Plant

Users can access online trackers on the plant floor from within MES. Job Tracker, Order Tracker, Customer Tracker, Shipment Tracker, and more are available based on login and secure access. Shop Tracker shows who's here, who's not here, current work center activity, as well as user-defined alert conditions from the plant floor

### Shipping and Receiving

In combination with the Advanced Material Management module, maximize responsiveness in the warehouse with Shipping and Receiving functions from within MES.

### Inventory Management

In combination with the Advanced Material Management module, maximize responsiveness in the warehouse with Inventory functions such as adjustment, material issues, physical inventory counts from within MES.

### Material Handling

In combination with the Advanced Material Management module, maximize responsiveness of material handlers with material move queues and give operators the ability to request in-process WIP moves of product from one location to another, maximizing control of in process products while reducing delays. Additionally, move WIP products into inventory storage locations or stage WIP at the next resource based on available space and time. Quickly and accurately identify WIP and inventory containers with system generated bar codes.

*(See figure 7.2)*

### Advanced MES (Epicor Mattec®)

Advanced MES (Epicor Mattec® Manufacturing System) extends your Epicor system to provide automatic production monitoring and process monitoring, empowering manufacturers with production

data and the ability to eliminate inaccurate and time-consuming manual data collection; so operators can stop measuring and monitoring, and focus on making quality products.

You can achieve informed lights out manufacturing, and get the powerful metrics you need to improve performance—Overall Equipment Effectiveness (OEE), run rates, scrap, yield, energy consumption, material consumption, and much more. Accurate machine-related data, along with operator depth and dimension helps you pinpoint critical issues, reduce waste, and improve quality and customer service. Advanced MES functionality includes:

### Deploy Your Way

Epicor makes it easy to get there—Advanced MES runs on current Microsoft Windows Server® with SQL Server. Epicor Advanced MES has the industry know how to connect to or get a signal from any kind of machine, no matter how timeworn or modern, and the system uses machine interface units (MIUs), open connectivity protocol (OPC), programmable logic control (PLC), and personal computer (PC) interfaces.

### Usability

Advanced MES collects production data automatically—no more manual data collection to worry about. Operators use touch-screen technology to add depth and dimension to the automatic production data, so you get a clear picture of the what, why and when of downtime, cycle time, quality, and scrap. Operator help calls with automatic routing and notifications empower employees to respond quickly, improving productivity.

### Plant Notification

The system also has real-time automated alerts, notifications, escalation and other communications, so the people who need to know are in the know when it matters the most—immediately, so they can take

action to correct a problem, or improve performance on-the-spot. Automated alerts include machine conditions, cycle, process variations, efficiency, and scrap.

### Office, Mobile, and Global

Take the power of Advanced MES with you on a Web-enabled mobile device or tablet with browser-based dashboards, information, and analysis. Plus, it doesn't matter if you have a single operation, or a distributed network of plants internationally, the system is currently available in more than 10 languages, and suitable for language customization.

### Schedule Optimization

Advanced MES helps the plant change instantly based on new requirements with a click-and-drag production schedule. Or, you can watch the schedule update and adjust automatically based on actual machine speeds, production counts, equipment status, conditions, or job specifications. The system makes it easy to plan by showing resource availability based on machine/ part/ tool compatibility, and optimal plans based on prior part performance. What-if analysis combines with built-in machine capacity planning and labor and material forecasting for better planning. Advanced MES supports Kanban scheduling.

### Advanced MES Integration to Epicor ERP

Enhanced integration improves the efficiency and ease-of-use for Advanced MES with Epicor ERP software. Key integration points include:

- ▶ The Epicor ERP user interface includes the Pieces per Cycle operation standards used in Mattec MES.
- ▶ Epicor ERP offers support for machine parameters that can be used by production planners to keep track of machine parameters in both Epicor ERP and Advanced MES. This offers a single point of engineering definition that resides in Epicor ERP.

Some examples include:

- Injection pressures
  - Opening/closing speeds
  - Barrel/mold temperatures
  - Multiple locations/zones
- ▶ Users can clear the Advanced MES schedule from Epicor ERP.
  - ▶ Support for Advanced MES Resource Groups in the process sheet simplifies part engineering for users.
  - ▶ To better control information going to Advanced MES, users can limit the number of operations exported to Advanced MES.

*Note: For information on Mattec Analytics, refer to the "Business Intelligence and Analytics" section.*

### Quality Assurance

Extending your solution with the Quality Assurance module ensures that you gain complete visibility into your quality operations from a top-down view down to the individual item level, allowing you to tie together all quality functions, whether it's scrapping end parts, rejecting raw materials or tracking first article inspections. Accurate costing demands that products moved through quality accurately reflect their value and are removed from the appropriate work in progress.

Additionally, Quality Assurance includes processes for supplier returns with links to Accounts Payable for automated debit processing—closing the loop on traceability of products in and out of quality within the plant. Inspectors have queues of items to inspect with full disposition and corrective action follow-up, while plant floor employees can easily flag parts as nonconformant. Quality Assurance functionality includes:

### Social Quality

Collaboration among the right resources to improve quality often means redundant communication and events. Using social quality groups enables quality events to be resolved faster, and long term quality

improves as a result of this collaboration. Quality no longer needs to be an isolated department. In collaboration with engineering, production, and sourcing, quality naturally improves. Cost of quality is also reduced dramatically.

### Mobile Quality

Access to information at the point of checking and recording quality events reduces inaccuracies and improves efficiency of quality professionals. Whether they are recording inspection results or responding with root cause analysis to a corrective action, information about quality that is inclusive and tied throughout the business improves overall business quality.

### Inspection Workbench

Monitor WIP, review all inspections in priority and automatically take action on those requirements from the inspection workbench. Inspectors move passed parts back to jobs and failed parts into discrepant material report (DMR) processing, or they simply scrap them.

### Nonconformant Records

Create a nonconformant record (NCR) for all nonconformant parts. From a job, shop floor employees automatically create an NCR when they scrap an end part or raw material. Inventory personnel create an NCR when they scrap parts from inventory.

### Non-Netting Bins

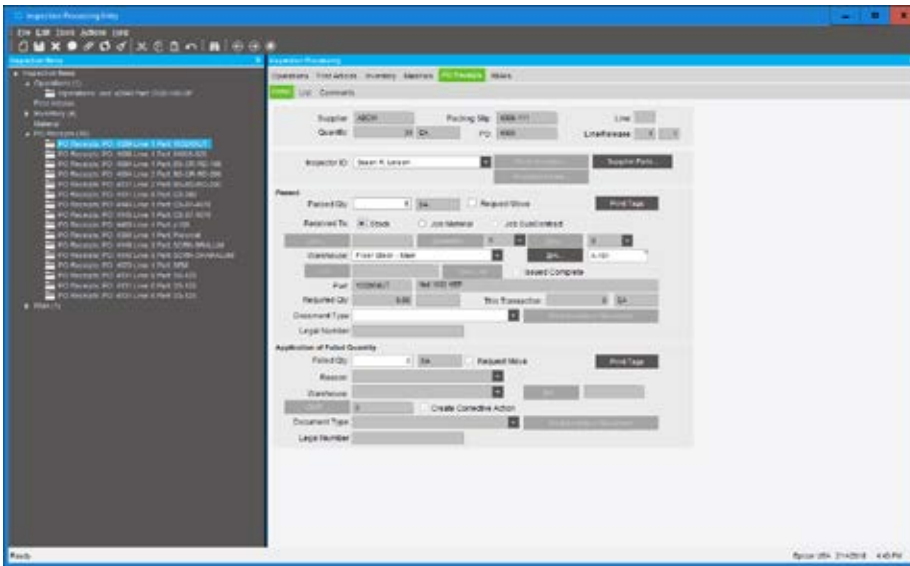
Use non-nettable bins to keep parts undergoing inspection or on-hand quantities.

### Discrepant Material Report Processing

After failing inspection, create a DMR to provide the MRB with an online queue of parts that need to be dispositioned.

### Corrective Action

Create and track all preventive and corrective actions online. With due dates, audit sign-offs and unlimited comments, corrective actions provide for follow-up of quality issues.



**Figure 7.3** Quality Assurance—Record and track quality data to fulfill customer requirements and promote continuous improvement.

## Material Review Board

Disposition parts by an MRB after they fail inspection. Online documentation provides an audit trail of MRB actions.

## Cost of Quality

Generate cost of quality reports to identify how much quality problems are costing you, whether parts are scrapped from inventory, a job or receipt inspection.

## Packing Slips

Print a customizable packing slip for all parts returned.

## Debit Memos

Create a debit memo in DMR processing and it is automatically tied to accounts payable.

## Audit Trails

View inventory transaction detail occurring in inspection and DMR processing with the material transaction detail report.

## Certificates of Compliance

Businesses are increasingly requiring detailed compliance documentation. Depending upon the industry, this documentation is commonly referred to as Certificates of Analysis (COA), Certificates of Quality

(COQ), or Certificates of Compliance. To help manage this documentation, Epicor includes the ability to check for Certificates of Compliance at receiving of materials from suppliers, receiving of in process parts from outside operation suppliers, and before shipping products to customers.

(See figure 7.3)

## Enhanced Quality Assurance

Traceability and audit of quality data drives businesses to develop “systems,” many times paper based, to support the collection and use of quality testing data. Enhanced Quality Assurance is designed to extend base Quality Assurance with support for the management of controlled test plans and the results for products, groups of products, processes, and other testing.

It offers the ability to define testing elements or attributes as well as lists of attributes to test which can be used to measure against testing results for pass/fail decision criteria. It includes the data used for Statistical Process Control (SPC) and is easily accessed to build SPC analysis. In essence, Enhanced Quality Assurance gathers the data and makes it available to ensure that your next audit goes smoothly.

## Inspection Plan

Build inspection plans that utilize specification lists and inspection attributes. Define unique business inspection attributes or characteristics. Attributes can be numeric, character, date, check box, combo box, or comments. Sets of attributes define test plan inputs with additional criteria including minimum and maximum values expected as well as combo box choices and document attachments. For optimum control, each specification list is revision controlled. Inspection plans use embedded configuration capabilities to build input screens tailored to each unique test plan and lay out fields and data to match quality department expectations. Default documents can be tied to the inspection plan. For optimum control, each test plan is revision controlled.

## Flexible Inspection Plan Configuration

In addition to the dynamic nature of the inspection plan (i.e. results entry form is dynamically built based on the tied specifications list), multiple inspection plan/specification lists sets can be tied to a part, operation, or equipment. This flexibility supports requirements for standardized test plans to sit alongside product or product group specific test plans with results entry and collection of data for both during inspection.

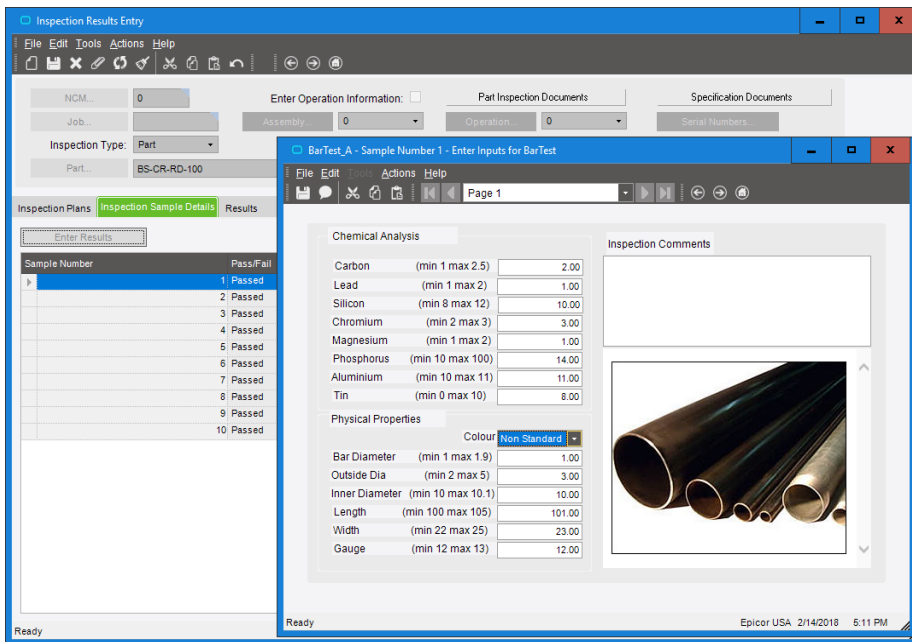
## Flexible Results Collection

Collect and store results data for each sample alongside appropriate job, part, inspection plan, serial number, lot number, purchase order data, and more. Results data can be used to produce compliance documentation and is available for audit purposes on-line through the Inspection Results Tracker.

## Support for Inspection Types

Make first article inspections and store results for audit and analysis. Tie inspection plan/specification combinations to an operation to trigger results entry for the operation during





**Figure 7.4** Enhanced Quality Assurance—Track inspection results data online.

collection of data on the plant floor. Perform receiving inspections on parts subcontracted to a specific supplier. Track results and generate supplier performance metrics with data from sample results.

### Skip Lot Cycle Definitions

Optionally categorize and setup cycles for receiving inspection with skip lot logic that follows optimum frequency of inspections for suppliers. Whether inspecting all lots or inspecting one and skipping the next ten lots, skip lot ensures that quality control manages the frequency of inspection.

### Resource Calibration Test Plans

Used in conjunction with Epicor Maintenance Management, Enhanced Quality Assurance offers the ability to predefine inspection plans for resource (gauge) calibrations along with managing the last calibration date.

### Training Course Management

Manage employee training events for both onsite and offsite training, including management of training costs. Assign instructors and set schedules for courses. Employees can be assigned appropriate

courses to attend or can request training themselves. Review employee training with the Training Course Tracker for proof of certification to perform work.

### Real-Time Quality Analysis

Whether responding to a bad test result immediately with Business Process Management (alerting a quality manager about a critical result), performing trends analysis or responding to an auditor request with data pulled from a Business Activity Query or reviewing supplier performance utilizing analysis cubes and dashboards. All the data you need is available with a robust tool set to support your unique business requirements.

Complete functionality includes:

- ▶ Statistical Process Control (SPC) data
- ▶ Returned Material Authorization (RMA) inspection
- ▶ Manufacturing execution systems enabled
- ▶ Serial and lot traceability
- ▶ Inspection collect results location
- ▶ Inspection Data Tracker

(See figure 7.4)

## Advanced Quality Management

Epicor Advanced Quality Management (AQM) provides the foundation for significant productivity improvements and cost reductions across your entire enterprise. It unifies the tools for quality processes, thus streamlining compliance for ISO 9001, ISO 13485, AS 9100, IATF 16949, and more. At its core, AQM serves as the hub for everything related to quality management. AQM yields actionable insight into performance, cost of quality and risk-related metrics including real-time visibility on supplier quality, production and customer satisfaction. AQM is an enterprise quality management solution that acts as your intelligence gateway into global performance, delivering objectively and truthfully, the who, what, where, when and why of all things quality. Reporting and analytics are built into the AQM solution. On-the-fly data visualization and deep analysis of multiple measures, across different processes for all levels of the enterprise is included. The complete web-based solution includes these modules:

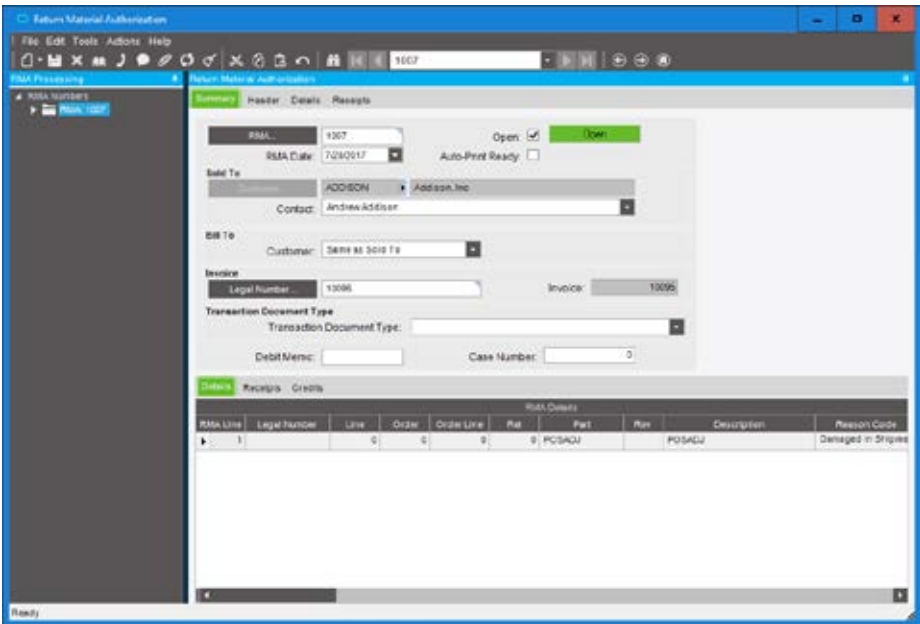
- ▶ Product Management
- ▶ Nonconformance
- ▶ Corrective Action
- ▶ Customer Management
- ▶ Supplier Quality
- ▶ Document Control
- ▶ Audit Management
- ▶ Risk Management
- ▶ Calibration
- ▶ Maintenance
- ▶ Inspection/SPC
- ▶ Quality Planning
- ▶ Training
- ▶ Supplier Portal

## Service and Asset Management



- ▶ Service Management
- ▶ Returned Material Authorization
- ▶ Service Contract and Warranty Management
- ▶ Case Management
- ▶ Social Service Management
- ▶ Maintenance Management
- ▶ Field Service Automation

Epicor® Service and Asset Management capabilities are designed to help manufacturers and service organizations maintain equipment, optimize customer service, and keep all technicians and customer-support personnel informed. We understand that your business needs to provide quick responses to customer incidents, keep your field operations informed and productive, and process returns quickly. The Epicor Service Management and Field Service Automation solutions provide the visibility and accountability your business needs. Effective enterprise maintenance management solutions for monitoring and managing the deployment, performance, and maintenance of company and customer assets may be the most important tools for preventing operational surprises. Epicor solutions enable manufacturers, distributors, and service organizations to save time and money by optimizing maintenance resources—improving equipment uptime and maintenance and field staff productivity.



**Figure 8** Returned Material Authorization—Initiate and track RMAs for customer returns and track reasons for rejected items.

## Service Management

Epicor Service Management is primarily designed for manufacturers who bring customer assets in house for repair or have light requirements for service or installations offsite that do not require purpose-built mobile access for field technicians. You can centralize all processes related to dispatching technicians and reporting costs of service calls in the field with support for drop shipment of service parts directly to the customer site.

## Returned Material Authorization

Enhanced return processing offers enterprise-wide tracking of pending returns and disposition of these parts by a unique returned materials authorization (RMA) number. Enter information about returns and transfer that information to the different groups that may need to take action—like inspection, billing, and order processing.

(See figure 8)

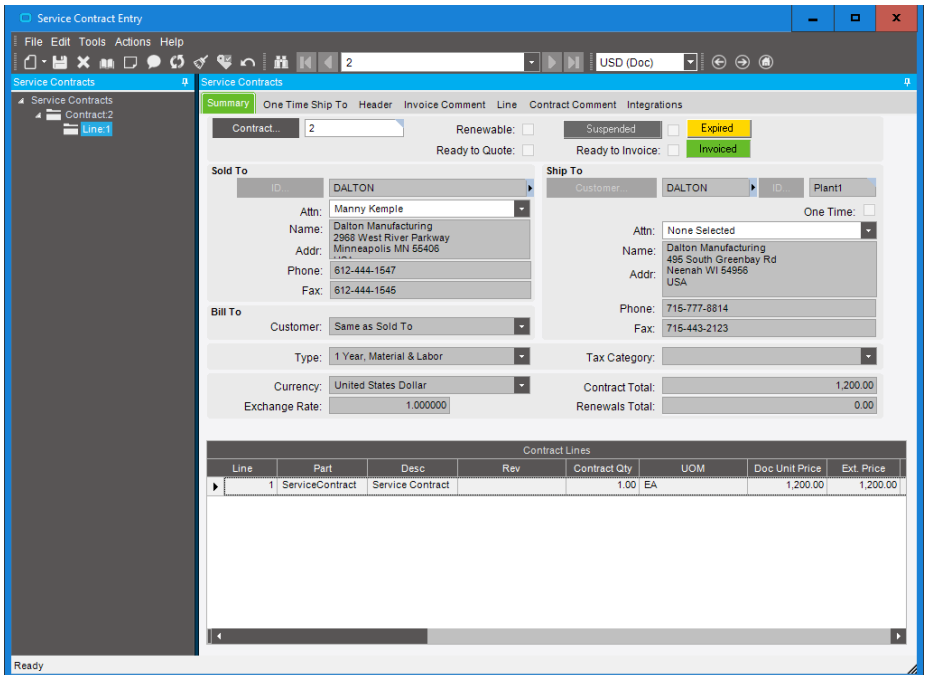
## Service Contract and Warranty Management

Epicor Contract Management—used in conjunction with Epicor Service Management—allows for the timely and accurate execution of service contracts—including the ability to generate service-level agreements with automatic billing options. Service contracts can be established for

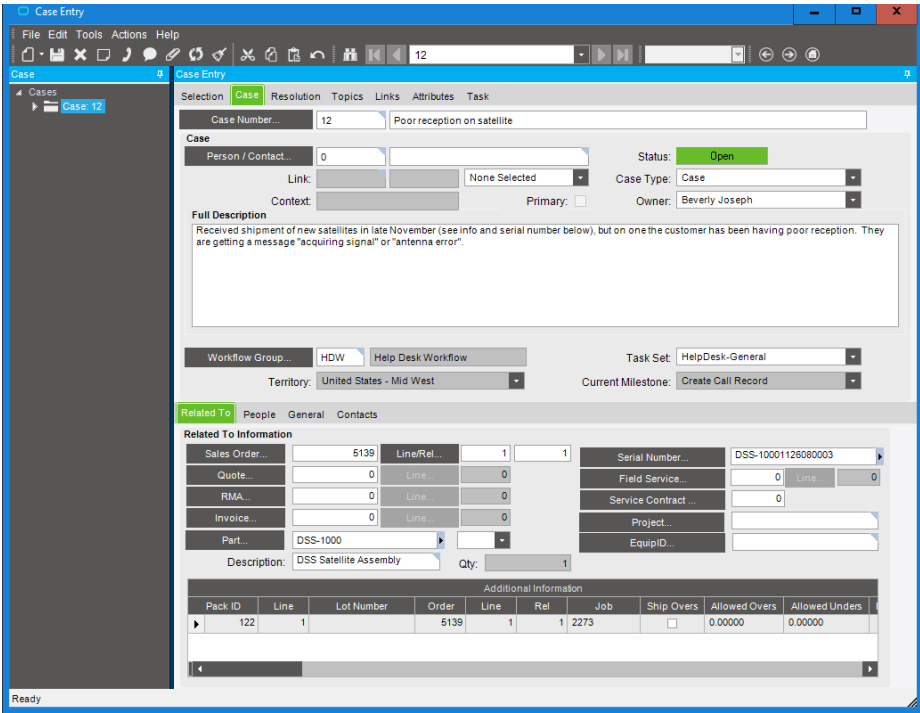
specific products, customers, and service-level agreements—each with an expiration date that is automatically tracked for easy manual look-up. The Service Call Center Workbench allows you to add or update service orders, schedule services, execute purchase and material planning, and manage warranty and service contracts. (See figure 8.1)

## Case Management

Fully integrated with Service Management, Epicor Case Management lets you easily access dispatching field activities and provide field service representatives with access to online knowledge bases, existing customer field service calls, warranty information, and service contracts. Comprehensive contact management, communication, and traceability capabilities allow you to efficiently manage and record all customer and staff interactions across the enterprise. You can also link documents and communication events like emails and calls.



**Figure 8.1** Service Contract and Warranty Management—Give customers fast and effective service with access to detailed information about service contracts and warranties.



**Figure 8.2 Case Management**—Shorten service response time by collecting detailed product problem information and using integrated features to initiate requests to the appropriate resource.

Social Service Management

Epikor Social Enterprise brings together contributions from across the organization and the value chain. This information can be collected in a single location with or without the user needing to interact with the ERP. Recommendation or endorsement of content supports the creation of knowledge bases and reusable content that can be referenced easily using powerful search capabilities. Issue resolution or frequently asked questions (FAQs) can be linked to a specific service job, asset, or serial number for the life of the object. (See figure 8.2)

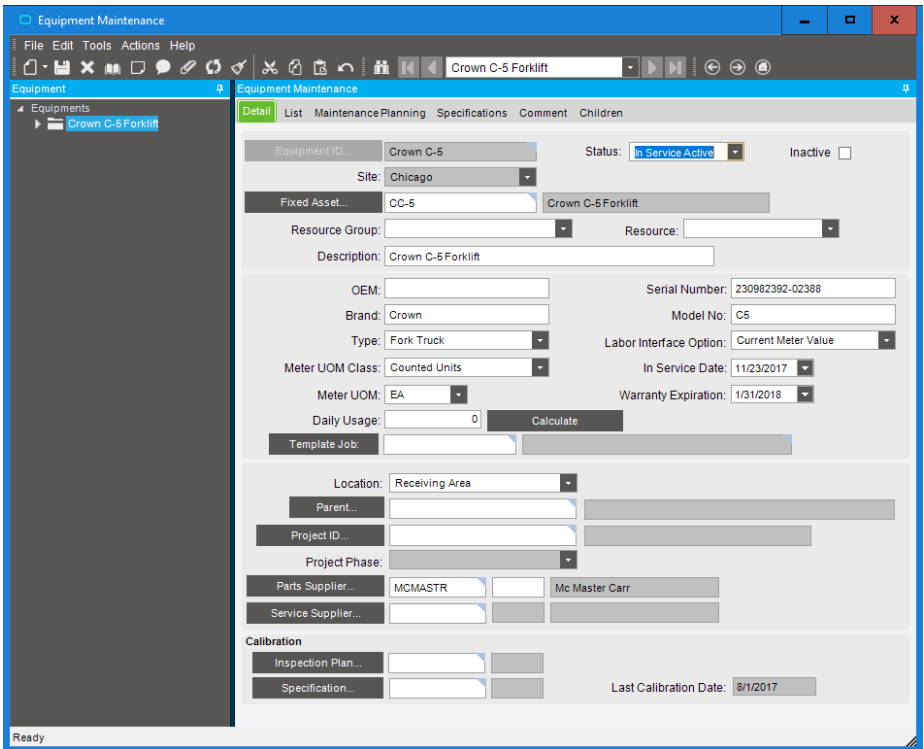
Maintenance Management

Epikor Maintenance Management provides a comprehensive toolset for critical production and facilities equipment maintenance. It was designed to address maintenance request processing, planned preventative maintenance—according to predefined schedules—and ad hoc break/fix maintenance processing for a single piece of equipment. Facilities and production equipment can be scheduled

for maintenance based on a predefined service interval, usage, time, or via manual requests. This can include internal capital equipment, tools, gauges, and fixtures—such as air conditioning units, forklifts, shelving, and shop floor tools. Eliminate

manual input by creating maintenance work orders automatically from templates for routine maintenance—like oil changes, filter replacements, or belt changes—to eliminate, and then complete preventative maintenance work plans. Automatically create maintenance work orders when preventative maintenance is due. Base maintenance plans on timing or meter frequencies. Once a preventative or regular maintenance work order is established, the maintenance planner can schedule equipment downtime and trade resources and materials as needed. Include scheduled maintenance events—such as resource requirements—in the production schedule for better capacity planning. When maintenance has been performed on equipment, the operators can record their hours, materials used, and closing remarks regarding the repair or service. The Maintenance Management module maintains all equipment, material, and work histories.

Produce complete repair histories for each piece of equipment—including parts and labor cost.



**Figure 8.3 Maintenance Management**—Maintenance technicians record events and resolution at the point of work.



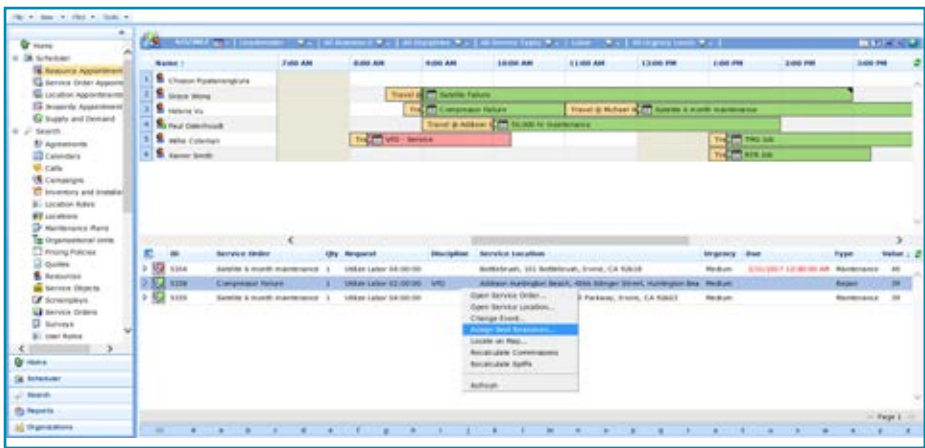


Figure 8.4 Field Service Automation—Easy-to-read schedule board.

Standardized reports—such as the Maintenance Work Order Request Report, Maintenance Work Order Report, and Equipment List—help maintenance technicians and managers organize and communicate maintenance events and review histories.

(See figure 8.3)

## Field Service Automation

Enhance productivity of field operations with mobile automation and integrated information flow. Connect your office and field staff with the information and processes they need to satisfy customers more efficiently. Epicor Field Service Automation (FSA) can help you drive field productivity for individuals and crews, shrinks response times, lowers costs, improves first-time completion ratios, and increases customer satisfaction to build a competitive advantage. Integrate people and information to empower your workforce to enhance the flow of business and technical information while connecting dispersed employees with convenient mobile devices. Automate manual processes, share best practices and procedural checklists, and track service inventory in real time. Speed up and optimize scheduling and dispatch. Quickly understand service urgency and resource status, and easily match the best resources for each task using best-fit assignment.

Streamline the work order life cycle with rapid-response call taking, and speed work order creation, assignment, dispatch, closure, and billing. Integrated information and automated processes eliminate manual tasks and redundant data entry. Manage contracts, warranties, and assets more efficiently. Track asset histories and automate work order generation and billing. Manage terms, rates, and timeframes. Gain real-time insight for improvement, and access operational and resource information at a glance. Track trends and understand costs, so you can manage performance and make better decisions for enhanced profitability. Provide customers with self-service capabilities—including work order status and new work requests.

Track service stock accurately at mobile and fixed locations to reduce write-offs.

Automatically adjust inventory records based on field use or in-route purchasing. Forecast materials requirements, and take advantage of bulk and just-in-time ordering. Check inventory locations and order materials directly from the field.

Take advantage of Bing® Maps integration to provide office and field staff with street-level mapping, route visibility, and turn-by-turn directions. Use any supported GPS tracking system in the field to quickly locate resources geographically from the office and optimize work assignment.

(See figure 8.4)

## Field Service Automation Mobile experience

Field service technicians are able to access and input information in real time with the use of a smart mobile device—whenever and wherever they need—to increase productivity, efficiency, and customer satisfaction. Complete work tickets, review service history, manage inventory, access customer pricing, and obtain electronic signatures—all with automated real-time capture. Our intuitive, user-friendly, and multiplatform HTML5 mobility solution runs on a variety of devices. Use smartphones, tablets, and laptops for both online and offline communications with the back office.

If you're looking to truly automate your field service organization, a mobile app with offline functionality needs to be a priority

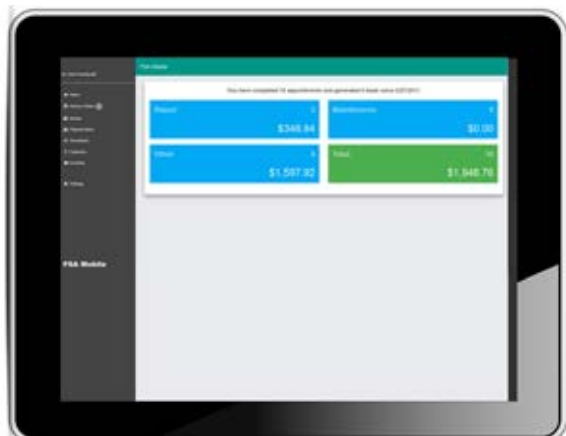


Figure 8.5 Mobile Experience—Service technicians can view service order status from mobile device.



for your technicians. With your serviceable assets located at countless types of job sites, it is imperative to have a mobile app that allows you to access the information you need to manage your inspections, work orders, and signatures without a cellular or Internet connection. For those organizations that service remote sites or equipment in a distant field, you cannot afford to arrive at the job site without access to your information. In order to truly streamline your field service organization, you need to go paperless with a mobile device, and equip your technicians with the right information—anywhere, anytime.

*(See figure 8.5)*

## Human Capital Management



- ▶ Core HR
- ▶ Analytics
- ▶ Global HR
- ▶ Candidate Self Service
- ▶ Employee Self Service
- ▶ Talent Management
- ▶ Training and Development
- ▶ Position Control
- ▶ Timesheets

Talent shortages and the changing nature of employment mean people must come first—even in the digital world. Businesses will not grow without a culture of growth that willingly embraces innovation and tackles game-changing initiatives. That means companies must ensure employees feel inspired, productive, valued, and rewarded. Herein lies a powerful opportunity for HR professionals to help their organizations navigate the talent pursuit, take a leadership role in digital transformation, and guide the way forward. Epicor is ready to partner with you in this journey.

Epicor Human Capital Management (HCM) comprehensively automates HR functions from recruitment to retirement in a single software system, enabling you to track, manage, and analyze all data for your employees. Through automated workflow, you can improve your efficiency. With powerful reporting and analytical tools, you gain greater visibility into your company's workforce for better strategic planning. With seamless integration to your Epicor enterprise resource planning (ERP), you gain a more complete view of your employees.

company's workforce for better strategic planning. Epicor HCM offers over 150 standard reports, including:

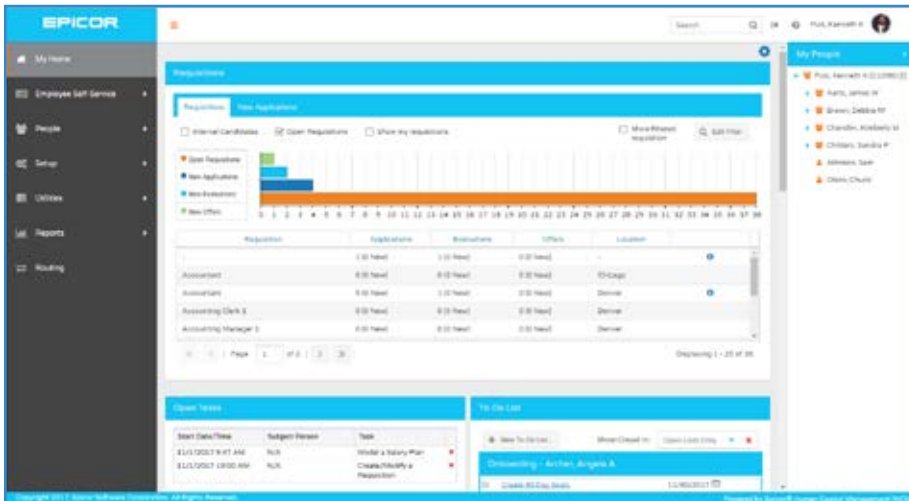
- ▶ Absence accrued cost by department
- ▶ Annual recruiting budget
- ▶ Applicant requisitions
- ▶ Qualification match
- ▶ Cost per hire
- ▶ Benefit statement
- ▶ Benefit enrollment by person
- ▶ EEO
- ▶ Drug test history
- ▶ Total compensation statement
- ▶ Audit report

U.S. Compliance includes:

- ▶ Affordable Care Act (ACA)
- ▶ Equal Employment Opportunity (EEO)
- ▶ Affirmative Action Plan (AAP)
- ▶ Veterans Employment and Training Service (VETS)
- ▶ Family Medical Leave Assistance (FMLA)
- ▶ OSHA Logs
- ▶ COBRA

## Integrations to Epicor ERP

Epicor HCM is integrated with Epicor ERP to help you collaborate on critical employee information through a more expedient and secure process. This integration simplifies your technology landscape by maintaining a single source of truth for employee leave,



**Figure 9.** Core HR—Epicor HCM helps you manage employees from recruitment to retirement, and it all starts from an easy-to-use home page that users can personalize to complete tasks faster.

## Core HR

HR professionals increase their value to the organization by helping decision-makers navigate workforce change. Access to accurate information is essential. The Epicor Human Capital Management software maintains your employee-related data in a single database—a true HR system of record that enables you to support your organization's strategic initiatives.

(See figure 9)

## Usability

Epicor HCM offers a highly intuitive user experience, which enables users across all roles—including candidates, applicants, HR professionals, employees, and management—to quickly learn and adopt the system throughout the organization. Inspired by consumer software, Epicor HCM allows you to instantly navigate anywhere within the solution—you can launch new activities worry-free with the Epicor HCM auto-save feature, and the software notifies you if you miss a field in a task.

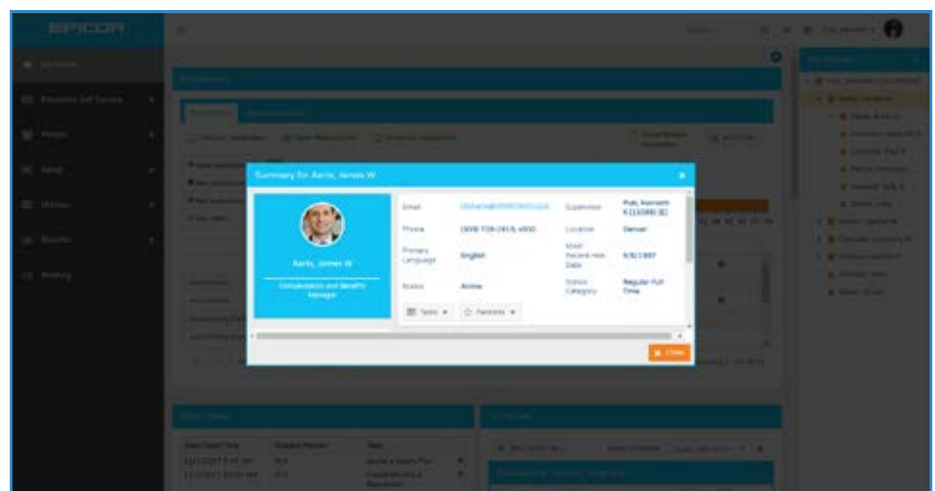
Epicor HCM has a powerful home page that serves as the launch pad for everything you and your users regularly do in the system. HR department users and administrators, business managers, and employees can personalize their home pages with their favorite data fields and tasks. With the

Epicor HCM home page, everyone can securely and quickly complete their assigned tasks—improving overall efficiency.

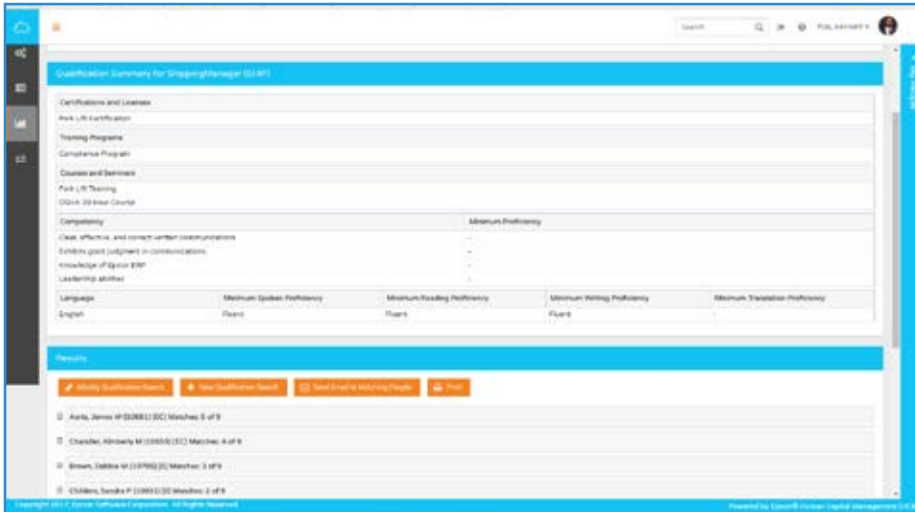
(See figure 9.1)

## Reporting

Through graphs and charts, you can analyze applicant and employee data to better manage your workforce and improve strategic planning. You can analyze costs of turnover and hires, predict effects of salary increases, monitor salary increases against performance ratings, keep tabs on equal employment data, compare benefit programs, and much more. Epicor HCM provides a complete picture of your



**Figure 9.1** Usability—Epicor HCM offers a pleasant user interface that expedites task completion, improves productivity, and supports employee satisfaction.



**Figure 9.2** Candidate Self Service—Quickly identify potential candidates for your open positions.

Approved requests for paid time off (PTO) can be shared from Epicor HCM to Epicor ERP to give managers visibility to employee availability directly from within the ERP scheduler. Managers have the ability to create rules around PTO requests using workflows to ensure they have appropriate coverage for any given period of time. An employee's actual time worked flows back into the HCM solution from Epicor ERP, allowing HR to run scheduling, payroll, and ultimately close the loop.

### Absence Points System

Support your absence and tardiness policies digitally with the absence points system in Epicor HCM. This system provides an integrated means to correlate absences with points and corrective action thresholds, making it easier to track and enforce on-time employee attendance.

### Analytics

Epicor HCM integrates with Epicor Data Analytics (EDA) for a modern view of workforce insights to drive more informed decision-making for HR professionals. EDA provides interactive dashboards of HR information so you can easily review, understand, and act upon data. Its reports, graphs, charts, and filters are designed to be very user-friendly so that any team member can build and modify dashboards to fit their

role. Types of HCM data that can be viewed as a dashboard with Epicor Data Analytics include:

- ▶ Absences
- ▶ Benefits
- ▶ Applications
- ▶ Requisitions
- ▶ Recruitment
- ▶ Qualifications
- ▶ Health and Safety
- ▶ Terminations
- ▶ Compensations

### Global HR

Epicor HCM is available via web-based access worldwide, automatically configuring data fields to reflect the appropriate format based on an employee location. Location-specific home pages deliver a blend of relevant communication and corporate standards at each site. The system can accommodate variable grades, different benefit and absence plans, multiple currencies, additional compensation types, and potentially different data tracking and reporting requirements. Epicor HCM enables employees to see their compensation in local currency or split payments into multiple currencies while maintaining the same information in the corporate currency for ease of reporting and analysis.

Select countries only. Contact your Epicor sales representative for more information.

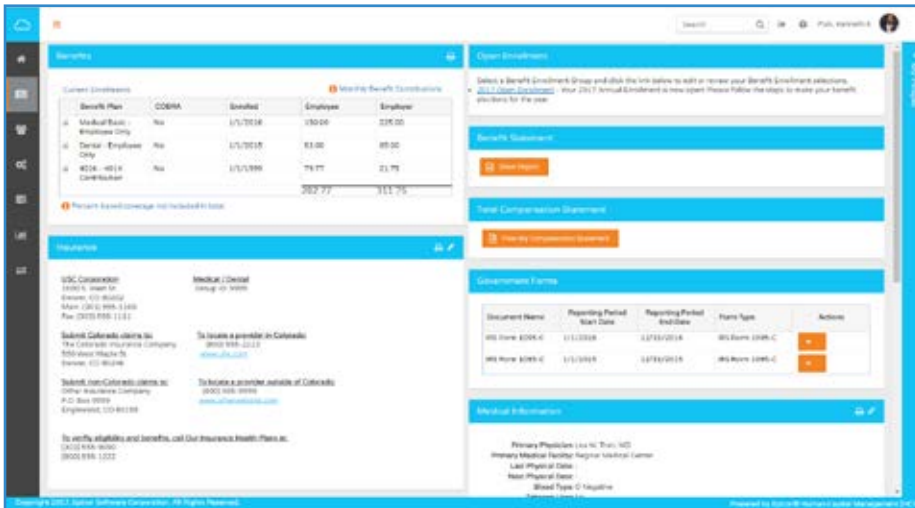
### Candidate Self Service

Epicor HCM gives you the tools you need to help you make the best possible hiring decisions and eliminate paper processes. Intuitive tools assist HR and hiring managers with workflows that walk you through the most common recruiting tasks—opening a requisition, interviewing, and hiring. Candidate Self Service allows individuals to submit online applications which are automatically connected to your HCM system and flow seamlessly to HR and hiring managers. Coupled with Core HR, this solution helps recruiters approve requisitions, filter applications through qualification matches and knockout questions, keep statuses updated, and record comments throughout the hiring process, shorten your recruiting process and control costs. Recruitment functionality includes:



**Figure 9.3** Mobile Candidate—Reach more candidates for less with an innovative mobile portal that extends recruiting by allowing applicants to search your job openings and apply via mobile devices.





**Figure 9.4 Benefits Management**—Epicor HCM makes benefits administration easier with simple solutions, such as a data feed to your carriers using a Section 834 format, to eliminate duplicate data entry and reduce enrollment errors.

- ▶ Requisition management
- ▶ Job board integrations
- ▶ Skills search
- ▶ Job-opening cost tracking
- ▶ Evaluation tracking
- ▶ Drug-test tracking
- ▶ Onboarding

(See figure 9.2)

## Mobile Candidate

Today's workforce is on the move and increasingly digital-first, so you need pragmatic tools that will attract tech-savvy talent. One of the mobile offerings in Epicor HCM, Epicor Mobile Candidate extends recruiting to reach more applicants for less through an innovative mobile portal.

(See figure 9.3)

## Employee Self Service

Adding employee self-service capabilities to your HR delivery methods is key to employee engagement, streamlining processes, and increasing service responsiveness across the organization. Epicor HCM Employee Self Service, creates a dynamic HR communication portal with easy-to-access information for employees at all levels of your organization. Allow employees to access their personal information whenever they like, find answers to common HR

questions, manage benefits, view openings, and more.

## Benefits Management

With Epicor HCM, administering your benefit plans is easy and efficient. You can track an unlimited number of benefit plans and manage complex benefit plans with ease.

The Epicor HCM intuitive interface enables benefit administrators to easily input your organization's plans, options, and costs. Key features include:

- ▶ Online open enrollment
- ▶ Online enrollment for life events
- ▶ Unlimited benefit plans and options
- ▶ Electronic signatures for benefit changes
- ▶ Rules and eligibility criteria
- ▶ Premium payment and employee contribution tracking
- ▶ Benefit cost and usage tracking
- ▶ Separations and continuation of coverage

(See figure 9.4)

## Absences

The impact and cost of employee absences to the organization can be very high, which presents an opportunity for driving out costs and demonstrating the return on investment (ROI) of HR programs. The absence-tracking

features in Epicor HCM enable you to manage employee absences online to help control those costs.

## Talent Management

Organizations are increasingly focused on retaining valuable employees through skills development, rewards, and employee satisfaction initiatives. Epicor HCM helps HR leaders define and leverage competency models that jumpstart talent management initiatives as part of a comprehensive HCM strategy. Functionality includes:

- ▶ Goal management
- ▶ Cascading goals
- ▶ Journaling
- ▶ Configurable appraisal documents
- ▶ Skills gap analysis
- ▶ Job Needs
- ▶ Competencies and certifications

## Performance Management

Performance management can be a powerful method to motivate employees, prioritize objectives, and focus organizational efforts on common strategic initiatives. With Epicor HCM, you can align corporate goals with employee performance while empowering managers to consistently monitor employee performance throughout the year. The 360-degree or traditional performance reviews facilitate the process of evaluating employees and reduce the cost of tedious paper-based appraisals.

(See figure 9.5)

## Talent Assessment

Epicor HCM offers a highly visual and detailed method for exploring the talent potential of your employees. The Employee 9-Box Talent Matrix allows you to evaluate your employees in terms of current contribution to the organization and their potential, as mapped out in a matrix format. This 9-box matrix is an especially useful tool to quickly evaluate your organization's talent pool, track an employee's career trajectory, identify potential leaders, and determine top candidates for coaching or mentoring.

## Training and Development

The Epicor HCM Training and Development module allows you to track a comprehensive training history on your employees so you gain a better understanding of the knowledge, skills, and abilities employees have added to their personal profiles, as well as any additional learning opportunities that may interest them. Encourage a culture of growth and opportunity among employees by empowering them to take control of their own career development.

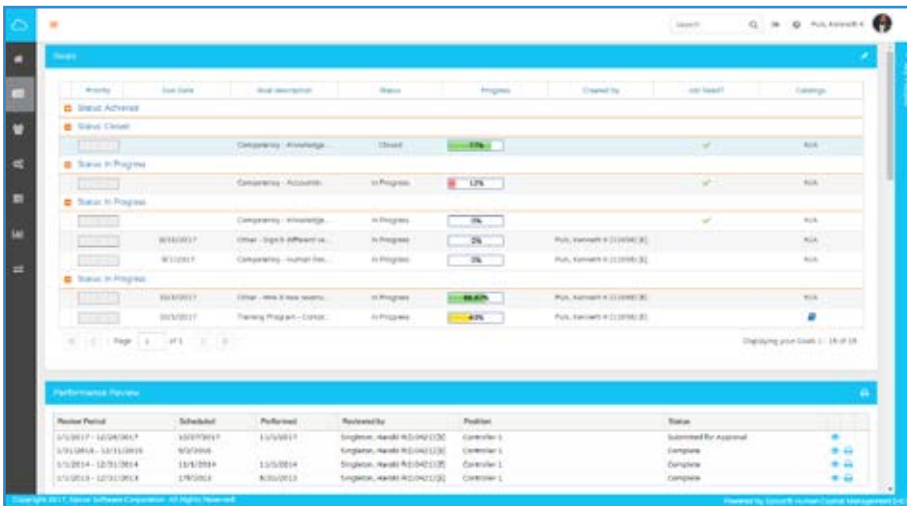
(See figure 9.6)

## Position Control

The Epicor HCM Position Control module lets you manage headcount and monitor funding allocations to better control the “people” budget. Whether it’s creating a new position and submitting a request for approval or measuring resources against budgeted headcounts, Position Control allows HR professionals to refine the attributes of a position for better administration of open, filled, and new positions while maintaining tight control on costs.

## Timesheets

Managing an employee’s work hours or time off can be overlooked as an area with potential cost savings. Reduce data entry time by empowering employees to be responsible for their own accurate time reporting with the Epicor HCM Timesheet module. Managers can filter the time sheets by those submitted, not submitted, or waiting for approval to make the time-worked approval process more efficient. Afterwards, managers can send the time records to payroll electronically, which drives efficiency to the payroll process and reduces administrative costs. With integrated absence functionality, even the requested time off is added to the employee’s timesheet to further support workforce planning and scheduling.



**Figure 9.5 Performance Management**—Align your organization from top to bottom on common goals that focus on achieving strategic objectives. Reduce the cost of tedious paper-based reviews with a 360-degree view of performance that encourages consistent feedback.

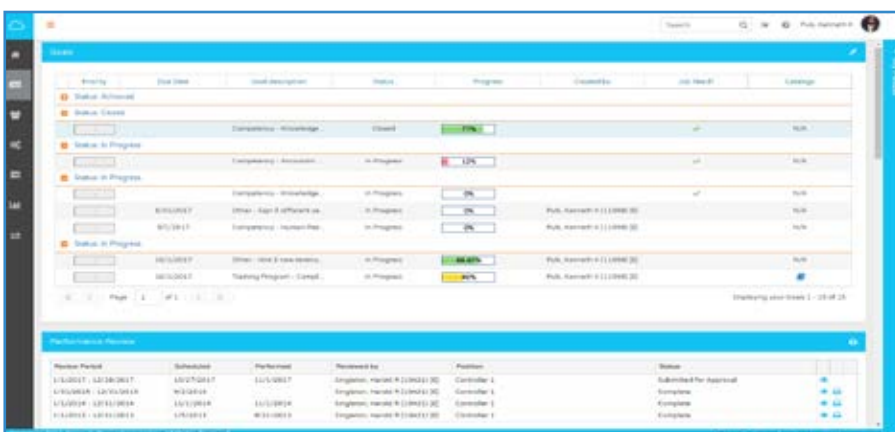
## Compensation

Compensation expenses typically account for a significant portion of an organization’s annual budget, so managing them optimally is vital. Proper planning and management of compensation strategies can help you retain the talent you need and ensure your overall success. With Epicor HCM, you can manage all types of pay and an unlimited number of grades and ranges—even allowing for different grade scales at different locations within your organization.

## Salary Planning and Administration

The Epicor HCM salary planning and modeling tools enable HR to create plans on a defined budget, which managers can use

to model various salary distributions among their employees. Upon submission, HR can route plans through the proper channels. Once plans take effect, HR can create a single view of your compensation strategy for the executive team. Empower managers to directly request salary changes for their employees through Epicor HCM. Requests can be routed through the proper channels for approval, and use electronic signatures for documentation. Routed requests can even be conditional (e.g., if a change is more than 3%, it requires executive approval; if it is less than 3%, it only requires department head approval) and requests may be edited by the approving authorities during the process.



**Figure 9.6 Training and Development**—Allow employees to schedule and track training requirements with an easy-to-use calendar view.

## Financial Management



- ▶ General Ledger
- ▶ Advanced Allocations
- ▶ Financial Planning
- ▶ Accounts Receivable
- ▶ Credit Card Processing
- ▶ Credit and Collections
- ▶ Accounts Payable
- ▶ Bank Electronic Payments
- ▶ Rebates
- ▶ Tax Connect and Tax Connect Global
- ▶ Cash Management
- ▶ Asset Management
- ▶ Advanced Financial Reporting

Epicor Financial Management offers a refreshing new approach to business. A suite of accounting applications built for insight, automation, and compliance in an increasingly global business world, it is built around a series of “global engines” that support effective financial management and control anywhere.

Our goal is to help every business go beyond sound financial management and control to efficiently deliver real value. Epicor Financial Management gives you access to real-time fiscal information and provides the modern platform you need to support business around the world.



## Global Engines

Epicor Financial Management is built around a series of unique global engines, which in turn support the global nature of business today, enabling effective operations in existing and new markets—as necessary. At the heart of the Epicor solution, Epicor global engines are designed to add accounting agility and flexibility to your business while simultaneously allowing you to meet the local financial and legal compliance requirements of individual markets. Complete functionality includes:

- ▶ Rules-based posting engine
- ▶ Configurable tax engine
- ▶ Legal numbering engine
- ▶ Multicurrency engine
- ▶ Rounding engine

## General Ledger

Epicor General Ledger (GL) is the heart of Epicor Financial Management, processing and posting all accounting transactions created throughout Epicor applications, as well as entries made directly within the ledger. The information and controls which flow from the General Ledger system enable an organization to operate efficiently, comply with fiscal regulations, underpin strong corporate governance, and drive enterprise performance. This powerful GL application provides the accounting controls and system security necessary to help ensure the integrity of your company's financial data. Complete functionality includes:

## Multiple Books

At the core of the General Ledger, Epicor Financial Management provides flexible financial accounting representations through multiple book functionality, which flows all the way through to financial reports and statements. “Multiple Books” allows the establishment of unlimited financial books to support a wide variety of financial requirements, such as budgeting and forecasting, statutory and government accounting versus management accounting

(for example, US GAAP and non- GAAP, etc.), and comprehensive consolidations. Epicor Financial Management provides the tools to seamlessly handle the accounting representations from your various subsidiaries while at the same time giving you a consolidated view of the one version of the financial truth for your organization.

Key highlights and benefits of using Multiple Books within your company:

**Chart of Accounts:** Create different chart of accounts by book, post transactions to different accounts within different books simultaneously using the posting engine.

**Reporting Currency:** Have a different reporting currency tied to each book and even, if ever needed, assign a different period calendar to each book. This flexibility allows users with a single journal to process both the management accounts and the statutory accounts at the same time without the need for multiple transaction entry.

**Multiple Closing Calendars:** As businesses acquire new businesses there is often a need to maintain different calendars for “stub” periods or for example up to 18 months to bring the acquired company in line with the fiscal calendar of the acquiring business. Each established book can operate a completely independent fiscal calendar as applicable.

**Calendar Adjustment Period:** General Ledger has built-in support for an additional year-end period to be defined as a part of your calendar that will be used for year-end adjusting entries.

## Chart of Accounts

Epicor Financial Management allows up to 20 user-definable segments within the chart of accounts (COA). These can be used for accounting and reference purposes providing the ability to record, store, allocate and report on important financial data at a highly granular level. With a total of

200 characters available, Epicor gives you the flexibility to manage your financial operations exactly as you need.

## Balance Controls

Epicor Financial Management allows users to define the frequency at which balances on accounts are captured and stored. Often used to facilitate the calculation of Average Daily Balances, this flexibility enables the user to update account balances as frequently as required by the organization: by hour, by day, by week, or by month.

## Consolidations and Eliminations

Epicor Financial Management meets the needs of businesses today through integral financial consolidation at either a summary or detailed transaction level, providing the flexibility to consolidate from different books and/or companies within a defined relationship.

- ▶ Merge balances (and underlying transactions) from one or more books into a single consolidated view of financial information, from which financial reports may be prepared, while at the same time creating the supporting elimination journal entries as a result of the process.
- ▶ Re-measure accounting transactions and financial results based on the differences in the consolidated currencies using differing rates types (e.g., spot fixed, etc.).

## Advanced Allocations

Automation and control of repetitive processes is one of the major benefits of using a Financial Management Suite. Manual processes such as monthly allocation and accrual entries slow down closing cycles and introduce multiple points of inaccuracy or error. Epicor Advanced Allocations automatically computes cost and revenue allocations and the resulting



journal calculations, streamlining processes, increasing relevance and improving accuracy. This results in shorter close cycles and more accurate financial statements. Advanced Allocations allows for sophisticated allocation of cost and revenue to multiple projects or departments or locations—ultimately to any entity represented in your corporate financial accounting structure. GL Allocations helps your finance staff to create, execute, retain, and reuse allocations to greatly simplify what can be an otherwise time-consuming and error-prone task.

An Allocation History Tracker keeps a detailed history of allocation runs which provides a comprehensive view of each Allocation run and all GL transactions created grouped by batches and tiers. The application allows for allocation reversal directly from the Allocation History Tracker.

Advanced Allocations allows you to:

- ▶ Allocate an amount in a single account to one or more accounts.
- ▶ Allocate balances or transactions using static or dynamic calculations.
- ▶ Pool accounts for allocation using a direct update or offset account.
- ▶ Make allocations based on statistical data
- ▶ Base allocations on Business Activity Query (BAQ)- derived dynamic data such as monthly revenue, help desk service calls per month, etc.
- ▶ Structure hierarchical or tiered allocations to run sequentially.
- ▶ Create and post allocation journals or simply use the output of the calculations elsewhere within the system.
- ▶ Maintain allocation history for reuse, review, and analysis.
- ▶ Reverse allocations where required by simply selecting the original allocation and flagging it for reversal with a user-defined apply date.

## Financial Planning

Epicor Financial Planner (EFP) is a fully cloud based solution for financial planning and

analysis. EFP features a web interface with a clear design that is available from multiple mobile devices, while the Microsoft Excel add-in helps with a more sophisticated data entry using the functions, conditional formatting or even charting for representing data. All the models, budget plans, scenarios and the data extracted from the ERP system are stored on highly reliable cloud servers. By being connected to the data in your ERP system, EFP has the ability to pull in information—such as previous actuals—in order to carry out comparisons and utilizes them in the spreading function. This makes it incredibly simple and intuitive for planners tasked with carrying out budgeting tasks, freeing them to concentrate on value added tasks. Optional packages extend EFP with cash flow analysis, capital expenditure (CAPEX), profitability analysis, consolidation, sales budgeting and more.

- ▶ Microsoft Excel toolset
- ▶ Integrated budget approval workflow
- ▶ Pre-built templates
- ▶ In-built security
- ▶ Real time collaboration
- ▶ Live forecast
- ▶ Financial and operational models
- ▶ Drill down and drill through

## Accounts Receivable

Accounts Receivable (AR) provides a comprehensive set of tools to manage your invoicing, credit, cash management, and customer management needs. With Accounts Receivable, you know who is buying what and who is paying their bills on time.

### Invoice Entry

Enter multiple shipments for an order on a single invoice, and write unlimited comments. Invoice entry supports advance/ progress billing deposits, credit memos, and standard invoices.

### Debit Notes

Ability to record Debit Notes (Chargebacks) sent from the customer. Debit Notes may now be entered as part of the AR cash

receiving process, and will then have their value applied as part of the settlement process. The Debit Notes may be related to specific invoices or remain unassigned.

The new Debit Note will remain as an open receivable until matched to a credit memo or subsequently paid. In addition, Debit Notes sent by customers can be recorded independently of the cash receipt process - for example, electronically received payments. They can then either be applied or produce an unapplied cash value.

### Interest Invoices

Create and apply interest invoices to manually charge an interest amount to an overdue or late-paid invoice. Select a customer and choose the single or multiple invoice lines against which to generate the interest invoice. Additionally, finance charges on invoices can be generated against a customer's overdue invoice balance. Users have the ability to include or exclude the impact of credit memos when calculating finance charges.

### Multiple Payment Instruments

Track the different types of credit instruments such as Promissory Notes and post-dated checks and their corresponding status, from initial generation or receipt through to clearance/ settlement. Track the movements of the payment instruments and generate status change updates within the Accounts Payable and Receivable applications, these changes can be reflected in the General Ledger to properly record to the financial status of the asset or liability. You can track how your customer credit is maintained through the life of the payment instrument reflecting the available credit based on the status and final settlement of the payment instrument. By using this functionality, you can be assured that complex, settlement-related taxes are correctly handled when payment is made via payment instruments.

### Invoice Logging and Numbering

Logging allows the recording of invoice details with applicable input tax while the invoice is in the process of review and approval. This allows you to reclaim the input tax in a timely fashion, where such practices are allowed. When an invoice is created, users have the flexibility to allow the system to automatically generate invoice numbers or you can manually enter numeric or alphanumeric invoice numbering schemes at the invoice type level.

### Aging Information and Customer Reminder

View aging information on the screen or print it in one of several formats. Accounts Receivable offers Customer Reminder features that allow companies to track the history of their customers' AR balances together with the option to issue them user-defined reminder letters.

### Automatic Finance Charges

Finance charge invoices can now be generated against a customer's overdue invoice balance. These finance charges are automatically calculated based on rules defined within the Finance Charge Maintenance program. The charges can also be reviewed before they are posted.

### Bill-To Customer

Provides the ability for a customer to maintain a list of allowed Alternate Bill-to (Alt-BT) customers, optionally with one set as a default. This will default onto the Quote/Order/Direct Invoice and can be changed by the user to a different authorized bill-to customer prior to posting the invoice. If no alternates have been set up then the Alt-BT customer is the sold-to customer (but using the 'Bill-to address' on that customer).

### Manual Selection of Invoices

A manual selection option to get Invoices and Recurring Invoices is available within Invoice Entry. This allows the selection of particular or multiple invoices or recurring

invoices for posting instead of selecting all available items at once.

### Credit Manager Workbench

Easily view all credit-related information surrounding a customer. The credit manager workbench provides a single point from which to manage credit status, order credit status and account management, with drilldown to all associated information.

### National Accounts (HQ Accounts)

The National Accounts (HQ Accounts) feature provides the ability to create customer relationships, either hierarchical or the more traditional parent/child type, within Accounts Receivable. This functionality allows customers within a National Account group to accept invoice payments from any customer within the relationship. The functionality also permits extensive credit checking across the National Account group with credit available to be split across levels with or without variable pooling.

### Flexible Tax Engine

Epicor Financial Management contains a feature-rich flexible Tax Engine which allows businesses to configure Epicor applications for local and international financial reporting standards, as well as unique local tax jurisdictions. Tax tables within the Tax Engine include the ability to define or override rate effective dates. The Sales Tax Register lists invoice totals and tax amounts by customer for codes on file.

### Settlement Currencies

You can record currency gains and losses at the time of settlement. Through this functionality, you post amounts correctly when you invoice in one currency but are paid by the customer in another currency.

### Settlement Discounts

The application contains two methods for handling early settlement discounts on sales and tax values. The settlement amount is taken by the customer on the AR invoice.

The potential discount is then included in the tax values calculated for VAT.

### Terms and Conditions

Epicor supports all of the most common business practice terms and conditions within Accounts Payable and Receivable. This feature also affords great flexibility for the definition of creative receipt and payments terms within countries where this functionality is not necessarily demanded but may offer a competitive advantage. Terms and Conditions are user defined, but typically include; End of month plus n days, End of following month, Specific due dates in a month, 2% 10 days and Net 20 days.

### Electronic Report Formats and Transmission

Submit various legal reports electronically, which are based on existing reports such as the EU Sales List, Intrastat and Tax Reporting. You can then reformat generic reports to meet your local requirements.

Complete functionality includes:

- ▶ Cash receipts
- ▶ Interest invoices
- ▶ Invoice GL account definition
- ▶ AR transaction adjustments
- ▶ Deferred revenue
- ▶ Consolidated invoicing
- ▶ Automatic credit holds
- ▶ Invoice/statement forms
- ▶ Invoice-based sales commission payment
- ▶ Multi-format sales analysis
- ▶ Credit card management and authorization
- ▶ Settlement currencies
- ▶ Settlement discounts
- ▶ User-friendly invoice and customer tracker
- ▶ General Ledger interface
- ▶ Cash management interface
- ▶ Reconciliation report

### Credit Card Processing

The Epicor ERP Credit Card Processing module gives access to several components that cover credit card processing

needs—available directly with Epicor ERP. These components are:

- ▶ Cloud Retail Environment (CRE)
- ▶ Epicor Payment Gateway
- ▶ Epicor Payment Exchange (EPX)

Cloud Retail Environment (CRE) is a new payment application. It provides a service that receives the transaction information from Epicor and then sends the request to the Epicor Payment Gateway.

The Epicor Payment Gateway service connects Epicor ERP to the credit card processing network in the cloud and transmits the requests of a credit card payment transaction to the gateway.

Epicor Payment Exchange (EPX) connects to full merchant services and credit processing businesses to perform credit card authorization, settlement and reporting, as well as credit, debit and PIN debit operations. American Express and Discover cards are supported and it is PCI Compliant. EPX is fully integrated with Epicor ERP and offers higher security, easier compliance, daily batch reconciliation, and streamlined processes.

CRE combined with the Epicor Payment Gateway stores all of the credit card data encrypted securely in the cloud, therefore the Payment Card Industry Data Security Standard (PCI DSS) scope for Epicor ERP users is reduced.



**Figure 10.1** *Credit and Collections*—Improve cash flow and reduce receivables balances.

For processing transactions in Canada, Australia, and New Zealand, the Epicor Payment Gateway connects with PayFlow Pro (PayPal). The EPX service is only available to U.S. customers.

(See figure 10)

## Credit and Collections

Accounts Receivable is one of the largest assets of any company, and it's typically one of its most fluid. Most businesses, however, have to write-off four percent of this asset every year. This is a substantial cost to the business that can be greatly reduced with better management. Take control of your outstanding receivables and reduce days

sales outstanding (DSO) through automated AR management. Complete functionality includes:

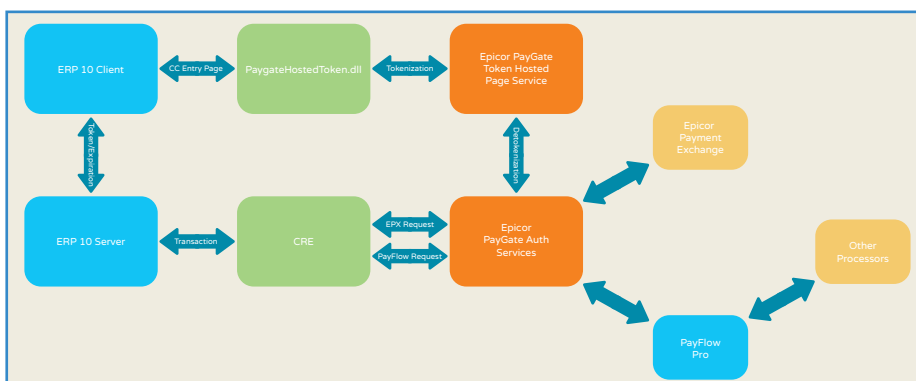
- ▶ Collection management
- ▶ Centralized activities
- ▶ Collection templates

(See figure 10.1)

## Accounts Payable

Accounts Payable (AP) allows you to enter supplier invoices for purchases that you make, and then create payments for the invoices you want to pay. The system can generate payments for all invoices due, those for a particular supplier, or only for specific invoices. If a supplier calls you to discuss an invoice, you will have complete information at your fingertips, and that history can be kept indefinitely.

AP allows you to update both purchase orders in Purchase Management as well as actual job costs. Adjustments are created if the purchase price does not match the invoiced price. With AP, you will know how much you owe and when it is due.



**Figure 10** *ERP 10 Credit Card Process Flow.*

## Invoices, Debit Memos, Payments

Record and post all payables instruments easily, including supplier or vendor vouchers and invoices, debit memos, automated check runs, and manual payments.

## Payment Instruments

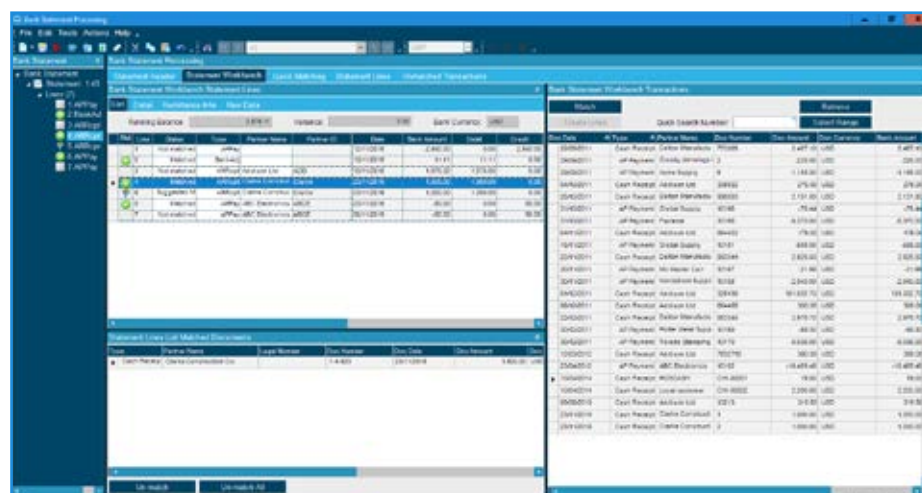
Track the different types of credit instruments such as Promissory Notes and post-dated checks and their corresponding status, from initial generation or receipt through to clearance/ settlement. Track the movements of the payment instruments and generate status change updates within the Accounts Payable and Receivable applications, these changes can be reflected in the General Ledger to properly record to the financial status of the asset or liability. You can track how your customer credit is maintained through the life of the payment instrument reflecting the available credit based on the status and final settlement of the payment instrument. By using this functionality, you can be assured that complex, settlement-related taxes are correctly handled when payment is made via payment instruments.

## Bank Electronic Payments

The ACH functionality in Epicor ERP helps to automate cash flow between your bank and the banks of strategic suppliers and main customers. Electronic Fund Transfers (EFT) through ACH contribute to eliminate check fraud to a great extent.

The ACH functionality is currently only available in the U.S. and Canada. The standard (domestic and international) and the Wells Fargo formats are not licensed and available for all users. It works with the Positive Pay capability in Epicor ERP, supporting the Bank of Boston, Chase, Fleet, Union Bank, and Wells Fargo systems.

By customizing the standard formats, it is possible for any Epicor ERP users to maintain and update the automated payment mechanism easily and quickly, decreasing the time and cost needed for professional services. Multiple banks are supported,



**Figure 10.1** Cash Management—Manage, report, and distribute financial information securely.

allowing to further reduce costs by using different banks for the domestic and the international transactions.

The ECH functionality supports direct debit operations that allow your company to collect either single or recurring payments from your customers in an automated way.

ACH is compatible with the Epicor ERP Payroll module, so transfers to employees, such as expense reimbursements, government benefits, tax refunds, interest payments it's fully automated.

## AP Terms and Conditions

Epicor supports all of the most common business practice terms and conditions within Accounts Payable and Receivable. This feature also affords great flexibility for the definition of creative receipt and payments terms within countries where this functionality is not necessarily demanded but may offer a competitive advantage.

Complete functionality includes:

- ▶ Recurring entries
- ▶ Deferred expenses
- ▶ Voided numbers
- ▶ Online cost updates
- ▶ Exchange rate at payment entry
- ▶ Supplier tracker
- ▶ Supplier statements
- ▶ General Ledger interface

- ▶ Cash management interface
- ▶ Checks
- ▶ Electronic funds transfer (EFT)
- ▶ Multiple remit-to
- ▶ Three-way match

## Rebates

The optional Rebates module provides you with a way to enter, update, and review any rebate program that your company runs with your customers. Use this module to define the active rebate programs for your company, generate rebate transactions, and pay rebate amounts to your customers through either an invoice check or a credit memo. Complete functionality includes:

- ▶ Rebate transaction process generation
- ▶ Get rebates
- ▶ Rebate-to-AP invoices/memo
- ▶ Rebate contract entry
- ▶ Rebate transaction adjustment
- ▶ Tracker programs

## Tax Connect and Tax Global

Collecting and remitting sales and use tax is a government-required, compulsory activity. It doesn't drive revenue, and it doesn't reduce expenses, so any time or money spent on tax compliance is—by nature—non-profitable. There are more than 14,500 United States and Canadian tax jurisdictions alone, and the rates, rules, and boundaries change relentlessly. Keeping up with all of the tax changes is an operational



distraction and a drag on the efficiency of your organization. Epicor Tax Connect gives Epicor ERP the option of determining sales taxes automatically based on the origin and destination of the sales transaction. It integrates to a constantly updated, comprehensive, online database of tax rules where each tax transaction can also be stored for historical and reporting purposes.

Tax Connect Global helps to determine sales tax in international business relations. Transactions in all directions between the United States and the European Union member states can take the advantage of tax determination thus making business easier and making tax compliance less taxing. Tax Connect Global also runs in a number of other geographies.

## Cash Management

Improve cash management through the automatic handling and reporting of discounts available, payment due dates, and payment selection methods. This module also allows you to specify the number and type of bank for each of your accounts—including currency—and reconcile your bank statement with entries generated in AR, AP, and payroll. Upload electronic bank statements and automatically reconcile them with transactions in the ERP system as well as performing manual allocations. Complete Cash Management functionality includes:

- ▶ Bank statement processing
- ▶ Fuzzy logic automated reconciliation
- ▶ Soft formats for EFT
- ▶ Petty cash management
- ▶ Cash flow dashboards
- ▶ Credit card processing
- ▶ Integration with industry-leading providers
- ▶ Supports industry standards to reduce fraud
- ▶ Flexible configuration
- ▶ Transaction flexibility
- ▶ Reauthorize reservation transactions
- ▶ Transaction reports

(See figure 10.1)

## Asset Management

Asset Management helps you record, track, and depreciate your fixed assets for optimal utilization. Asset Management also automates the tracking and management of the asset throughout its useful life—from acquisition to disposition. Using a unified source of asset data, standard asset management tasks—such as asset transfers, disposals, reclassifications, and adjustments—can be streamlined. Complete Asset Management functionality includes:

- ▶ Mass maintenance management
- ▶ Asset registers
- ▶ Asset valuations
- ▶ Asset relationships
- ▶ Maintenance
- ▶ Multicurrency management
- ▶ Asset depreciation methods
- ▶ Asset integrations
- ▶ Grants
- ▶ Asset locations
- ▶ Asset import
- ▶ Retroactive adjustments

## Advanced Financial Reporting

Epicor Advanced Financial Reporting (AFR) allows the creation and distribution of professional financial reports to company stakeholders. AFR fully supports both cloud and on-premises Epicor ERP deployments and works natively with Microsoft SQL Server Reporting Services (SSRS). It allows the management and viewing of financial data in a user-friendly environment. Financial reports are different from other reports, because each line has to be defined in terms of account ranges or sets for which a certain total needs to be calculated—versus other types of reports which do not require definitions of such complex groups. AFR simplifies report creation by exposing an intuitive interface which speaks to the user in familiar financial terms. Because the reports are parameter driven, the viewer can generate the report at any time by selecting the parameters of time, company, book or organizational element as required without the need for intervention by the financial team. Complete Advanced Financial Reporting functionality includes:

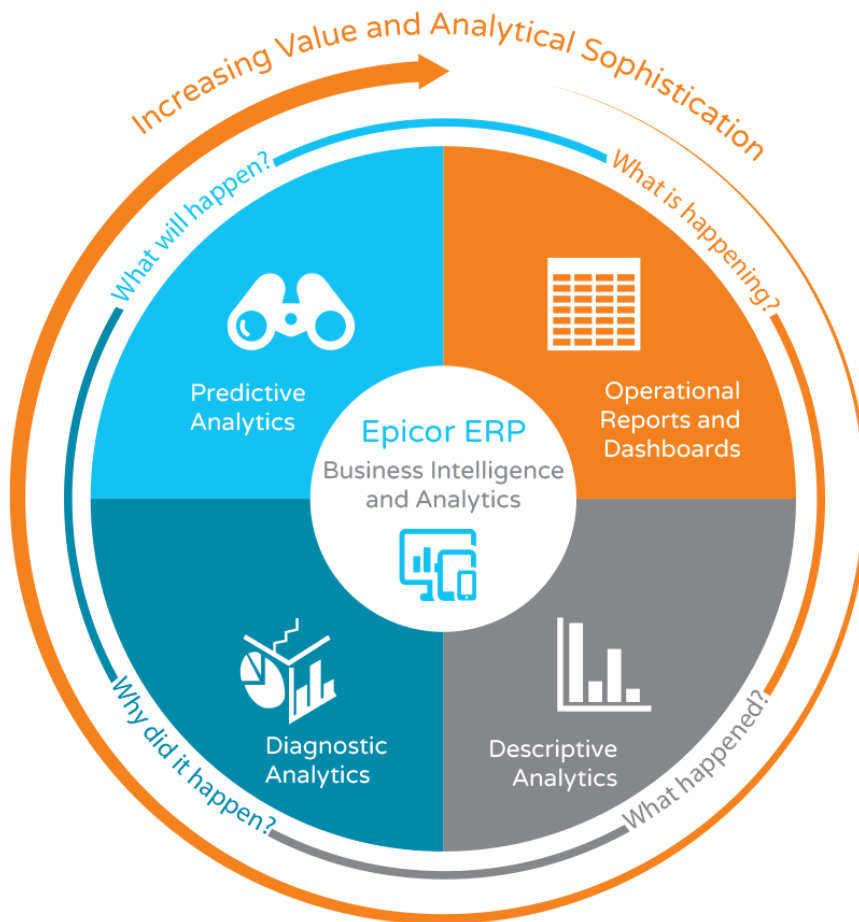
- ▶ Flexible graphical report designer
- ▶ Easily tailor vertical and horizontal report elements
- ▶ Visual representation of reporting hierarchy is available with the reporting tree
- ▶ Report against single book or multiple books
- ▶ Consolidation of enterprise-wide data
- ▶ Drill down into operational summarizations of key business units; drill down all the way to the transaction level
- ▶ Report viewer
- ▶ Non-financial data support

## Business Intelligence and Analytics



- ▶ Operational Reports/Dashboards
- ▶ Descriptive Analytics (Business and Financial User Reporting/Dashboards)
- ▶ Diagnostic Analytics (Scorecards/KPIs, Financial Planning)
- ▶ Predictive Analytics (Forecasting)
- ▶ Data Warehousing
- ▶ Role Based Analytics and Business Intelligence
- ▶ Mobile Business Intelligence

Business Intelligence and Analytics for the Epicor ERP system help you answer four essential questions—what happened, why did it happen, what is happening now, and what will happen next? Dashboards, trackers, and data visualization tools built into the core ERP platform help you get a better understanding of what is happening in your company right now. Additional modules also provide you with deeper trending, diagnostic, and predictive analytics to bring the future into focus.



## Business Activity Queries

Every business needs an intuitive and easy-to-use query engine, which is why Epicor created Business Activity Query (BAQ) in the core platform of the Epicor ERP system—allowing you to create personalized or copy standard SQL queries. Once created, queries can be used throughout the application to generate SSRS reports for quick searches, view results in a Dashboard or Epicor Data Discovery, and much more. Complete functionality includes:

- ▶ BAQ design wizards
- ▶ Graphical table links
- ▶ Embedded calculations
- ▶ Multiple data views
- ▶ Analyze/test query tabs
- ▶ Updatable BAQs
- ▶ External BAQs
- ▶ Configurable dashboard applications

(See figure 11)

## Microsoft SQL Server Reporting Services

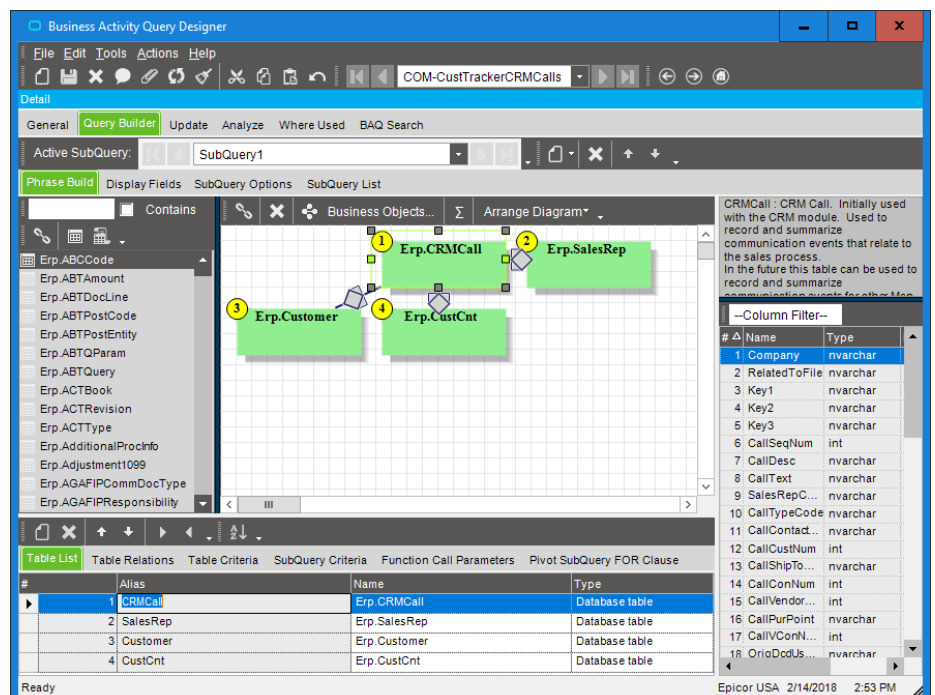
Microsoft SQL Server Reporting Services (SSRS) underpins the Epicor ERP system and provides a flexible reporting structure for

*Become a data-driven organization that can make fully informed decisions at every turn.*

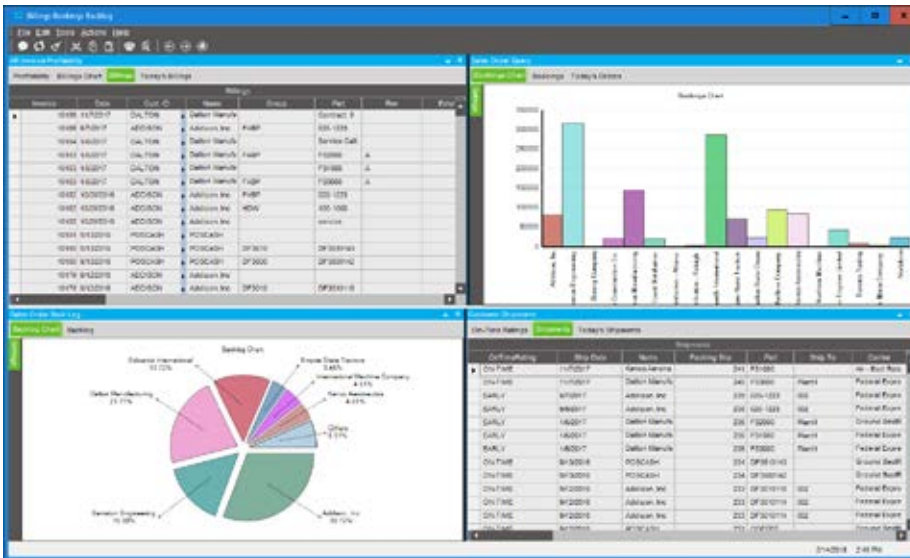
## Operational Reports and Dashboards

To gain insight into everything happening enterprise-wide, look to the operational reports and dashboards available in every area of the Epicor ERP system. It all starts with Business Activity Queries—SQL queries throughout the Epicor ERP system made with a visual drag-and-drop wizard. The dashboards provided with the Epicor Mattec Manufacturing Execution System (MES) also keep you up to date with what is happening with your machines on the production floor. The complete list of operational reports and dashboards features:

- ▶ Epicor ERP Business Activity Queries
- ▶ Microsoft SQL Server Reporting Services
- ▶ Epicor ERP Trackers and Dashboards
- ▶ Epicor Mattec MES



**Figure 11** Business Activity Queries—The BAQ Designer provides many easy-to-use features for creating business queries.



**Figure 11.1** Trackers and Dashboards—Closely manage customer and supplier performance with comprehensive role-based and interactive dashboards that offer a complete picture.

delivering professional reports and analysis to business stakeholders in a format that business users can easily consume. It is also used with Epicor ERP Advanced Print Routing for forms printing and routing. SSRS easily utilizes many types of data and can deliver it in a variety of formats. Because SSRS works with other applications and products in the Microsoft platform—such as Microsoft SharePoint, Microsoft SQL Server Analysis Services™, Microsoft Office, and Microsoft SQL Server Report Builder®—SSRS is an invaluable tool for improved analysis and decision making in the enterprise.

## Trackers and Dashboards

Epicor dashboards permit the combination of multiple capabilities like inquiries, ad hoc reports, workbenches, graphical analyses, tactical business intelligence, alerts, and business monitoring—all in a single dashboard. They provide a robust, one-stop interface that replaces traditional menu systems with personalized role or context-based views and links into core transactions of the system—including real-time, exception-driven indicator flags. Toolled with unique flexibility, dashboards enable users to develop their own workbenches using a series of online views of information. From monitoring your employee intranet site,

to live access to industry-related websites, each dashboard contains the information you and your employees need to more proactively run your business. Complete functionality includes:

- ▶ Role-based home page
- ▶ Real-time exception-driven management
- ▶ Real-time access to up-to-date information
- ▶ User/function-specific workbenches
- ▶ Drill-down trackers
- ▶ User-level personalized components
- ▶ Custom component generation
- ▶ Personalized functionality
- ▶ Open to related functionality
- ▶ Fully secured web interface
- ▶ Web deployable components
- ▶ Predefined dashboards
- ▶ Dashboard style sheets
- ▶ Dashboard charting
- ▶ Executive dashboards
- ▶ Dashboard assemblies
- ▶ Self-contained dashboards

(See figure 11.1)

## Mattec Manufacturing Execution System

The Epicor Mattec MES collects data directly from equipment and operators on the shop floor in real time, minimizing inaccurate and time-consuming manual data collection. Get the powerful metrics you need to improve performance—including Overall Equipment Effectiveness (OEE), run rates, scrap, yield, energy consumption, material consumption, and much more. Keep a unified picture of production planning and data with full integration into Epicor ERP.

(See figure 11.2)

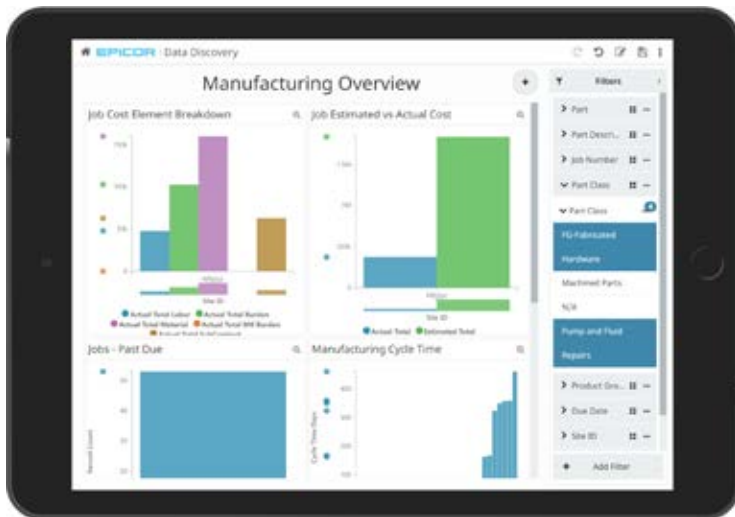


**Figure 11.2** Mattec Manufacturing Execution System (MES)—Monitor machines and analyze their production and performance data—24x7—with Mattec MES

## Descriptive Analytics

Let every department learn from its data with self-service summaries, animated and interactive data visualization, and tools to simplify report creation and sharing. Most of the products that fit this category





**Figure 11.3** *Epicor Data Discovery—Drag and drop measures and dimensions in the Data Discovery view for new insights.*

support analyzing larger amounts of data for more historical trending analysis. These products include:

- ▶ Epicor Data Discovery
- ▶ Epicor XL Connect 7
- ▶ Advanced Financial Reporting
- ▶ Executive Dashboard

## Epicor Data Discovery

Epicor Data Discovery (EDD) is a data visualization tool for the Epicor ERP system. With EDD, staff can use their natural visual abilities to quickly spot areas of interest in real-time production data that they might have otherwise missed by just looking at rows and columns of numbers. In the Data Discovery view, users can set filters and drag and drop measures and dimensions to produce rich visualizations—a process similar to manipulating a pivot table in a spreadsheet. They can then focus on a data point or area and drill down into the underlying ERP transactional detail. They can also combine views to create BI dashboards with shared filters and shared dimensions. Driven by real-time BAQs in the Epicor ERP system, EDD complements Epicor Data Analytics (EDA) by visualizing short-term, up-to-the-second enterprise data, whereas EDA provides for longer-term data exploration running in a data warehouse.

EDD is accessible via SmartClient, web browsers, tablets, and modern smartphones. The application is designed to work just as well on low-powered touch devices as it does on a powerful desktop with large screen real estate. EDD automatically adjusts its layout and behavior to the browser and device accessing it. Resizable data cards can be animated to cycle through multiple values like a stock ticker, providing a live feed of production data for applications such as Epicor Homepage. Advanced EDD gives access to Active Directory users who are outside of Epicor ERP, with data-level security set for the user or role. Advanced EDD also enables connection to cubes built in Microsoft SQL Server Analysis Services.

*(See figure 11.3)*

## Epicor XL Connect

Epicor XL Connect 7 is a self-service reporting and analytics add-in for Microsoft Excel that provides out-of-the-box functions for pulling Epicor ERP data directly into Excel. It saves you data extraction time and effort by downloading summarized data that you can analyze in-memory without further downloads. Imagine using functions like month-to-date beginning balance or year-to-date net budget to pull in just the data you need based on cell-based parameters like year, period, currency, segments, and reference codes. Dozens of functions

combine with drag-and-drop, drill-down analysis sets that already know your data to make report creation a snap. XL Connect 7 is an all-inclusive product that comes with:

- ▶ Pre-built content for financials, sales, materials, and production
- ▶ Multicurrency capability
- ▶ Access to any field in Epicor ERP—as permitted by ERP user security
- ▶ PackNGo—lets report recipients analyze a subset of data without a connection to Epicor ERP

## Advanced Financial Reporting

Epicor Advanced Financial Reporting (AFR) allows the creation and distribution of professional financial reports to company stakeholders. AFR simplifies report creation through an intuitive interface, which allows for the creation of reports using elements familiar to accountants or financial professionals. It also provides an additional element of reporting hierarchy or trees, allowing the viewer to generate the report for a specific business segment. Viewers can generate these parameter-driven reports as needed by selecting the time, company, book, or organizational element as required without the need for financial team intervention.

(See figure 11.4)

## Executive Dashboard

Executive Dashboard comes with a series of graphical components designed to give you summarized, cubed data inside the Epicor ERP system—enabling you to quickly make critical short- and long-term decisions. Executive Dashboard includes Plant Performance, Supplier Performance, Order Backlog, Scheduled Shipments, Shipping Performance, and Cash Flow.

Number	Description	Type	Expression	Visible	Boolean
1		Account Sum		True	
5		Account Sum		True	
10	Revenues	Account Sum		True	
20	Sales	Account Sum	4000:4065	True	
25	Sales	Expression	Sum ([r20] - [r20]-[r20])	True	
30	Sales Returns	Account Sum	4100:4850	True	
35	Sales Discount	Expression	[r30]-[r30]-[r30]	True	
40	Sales Discounts	Account Sum	4900:4960	True	
45	Sales Returns	Expression	[r40]-[r40]-[r40]	True	
50		Single line		True	
60	Net Sales	Expression	[r25]-[r35]-[r45]	True	
70		Account Sum		True	
80	Cost of Goods Sold	Account Sum	5000:5060	True	
90		Single line		True	
100	Gross Margin	Expression	[r60]-[r80]	True	
110		Single line		True	
12	Expenses	Account Sum		True	
130	Salary and Wages	Account Sum	6010	True	
140	Office	Account Sum	6011	True	
150	Supplies	Account Sum	6012	True	
160	Rent	Account Sum	6131:6135	True	
170	Travel	Account Sum	6013	True	
180		Single line		True	

Figure 11.4 Advanced Financial Reporting—Manage, report, and distribute trusted financial information securely.

## Diagnostic Analytics

Quickly and easily discover why certain product outcomes happened and perform what-if analysis with diagnostic analytics, including:

- ▶ Epicor Data Analytics
- ▶ Epicor Financial Planner
- ▶ Epicor Performance Management (EPM)

## Epicor Data Analytics

Powered by Phocas, Epicor Data Analytics (EDA) helps companies turn their data stored in the Epicor ERP system into actionable insights. EDA is an easy-to-use service in the cloud that takes a unique, intuitive approach to lead you on a journey of discovery through large cubed data sets contained in your data warehouse. With deeper insights, companies can grow by reducing cost, identifying new opportunities, supporting specific programs, and speeding up decision making.

EDA provides customizable and interactive dashboards to make it easy to analyze the data inside your business systems. The dashboards contain visual KPIs, graphs, charts, and tables, so you can quickly review important information about your business performance and make informed strategic decisions. Once you have spotted an area of interest in the visual metrics, the EDA grid is where you conduct most of your analysis, and unlike a spreadsheet, you can “drill down” into the data with a simple click to reveal additional levels of detail—all the way down to the ERP transactions—and find your answers.

EDA includes all Epicor ERP and Mattec (Advanced MES) content packs, and you can easily augment them with any other ERP fields or other data sources like historical databases or spreadsheets. These content packs include:



Figure 11.5 Epicor Data Analytics—Access cloud-based Epicor EDA from desktops or mobile devices.

- ▶ Sales Management
- ▶ Production Management
- ▶ Material Management
- ▶ Financial Management
- ▶ Mattec MES (Advanced MES)

(See figure 11.5)

### Epicor Financial Planner

The budgeting and forecasting process is a complex, time-consuming, and error-prone task for many organizations. Managing the processes and people and collating all of the information using tools that are not designed for this purpose can exacerbate an already challenging task. Epicor Financial Planner takes away this pain by giving back control and providing an oversight of the entire process—including approval workflow, creating multiple versions of plans, and defining templates to be used. Add to that a Microsoft Excel user interface—something nearly everyone in the workforce is familiar with—and you have the complete solution to relieve your budgeting headache. Key features include:

- ▶ Integration with the Epicor ERP system to bring in actuals for comparison, forecasting, and spreading purposes
- ▶ SQL Server storage for one version of the business model and data
- ▶ Modeling and what-if analysis
- ▶ Multiple budgets and budget versioning
- ▶ Sophisticated approval workflow

### Predictive Analytics

What will happen next? Plan for success using demand planning and inventory optimization tools in the Epicor Smart Inventory Planning and Optimization Platform.

### Smart Demand Planner

Epicor Smart Demand Planner provides cloud-based statistical forecasting that automatically selects the right forecast model for each item—accounting for trend, seasonality, and promotion-/event-driven demand. Once the baseline forecast is produced, it is available for collaborative review and consensus planning by authorized stakeholders. Forecast accuracy can be measured to ensure the best possible forecast is delivered to the business at both the aggregate and item mix levels.

### Smart Inventory Optimization

Safety stock levels, reorder points, lead times, and order quantity directly influence the service vs. cost relationship. Epicor Smart Inventory Optimization helps you maintain the balance between service and cost by providing inventory policy decision support and the means to share, collaborate, and track the impact of your inventory planning policy. Inventory Optimization reconciles holding costs, ordering costs, and stock out costs in order to prescribe the inventory policy and service levels that yield the total lowest cost. Users can optionally assign service level constraints and targets and propose multiple policies for consideration. Then, they can share proposed policies and agree on a consensus plan that best meets the company's objectives.

### Smart Operational Analytics

Epicor Smart Operational Analytics is a native cloud-based reporting platform that provides a fast, easily understood, and up-to-date perspective on the state of your inventory and its performance against critical metrics, actual supplier lead times, and opportunities to rebalance stocks across facilities—helping to uncover root causes of operational inefficiencies. Get a 360 degree view of your inventory to identify value, stocking trends, overstocks, understocks, and potential order cancellations. Also identify root causes of stock outs, excess inventory, and late deliveries.

### Mobile Business Intelligence

You need to make the best use of advanced analytics and Business Intelligence tools to make informed decisions and keep the pulse on your organization whether you are in the office or on the go. Access the Epicor robust business intelligence and analytics anywhere, anytime with the ability to pro-actively push this insight to any device so that you can turn data into decisions and take timely actions to help grow your business.

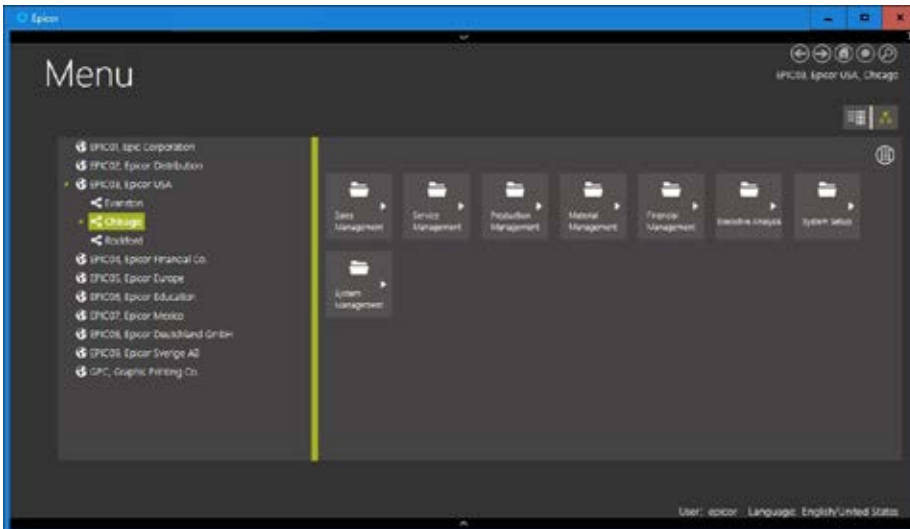
## Global Business Management



- ▶ Multicompany Management
- ▶ Multicurrency Management
- ▶ Global Multisite Management
- ▶ Multilingual Data Management
- ▶ Master Data Management
- ▶ Scalable Deployment
- ▶ Global Engines

Whether through acquisition or organic growth, more and more companies are wrestling with the complexities of managing multiple business entities. Epicor Global Business Management helps to ensure that no matter how distributed your organization becomes, you can maximize efficiency and drive business results. To support the needs of today's increasingly distributed business, Epicor offers robust global business functionality. You can perform transactional functions between systems and entities—including intercompany transactions such as intercompany orders, transfer orders, and shipments between plants and warehouses. Epicor facilitates these scenarios within a single application that is flexible enough to grow with you as you expand your business. Epicor Global Business Management offers organizations the essential tools needed to create and maintain a single version of the truth.





**Figure 12** Multicompany Management—Create user and role profiles across companies and move effortlessly between them using simple menu hierarchies.

## Multicompany Management

Streamline your business with Epicor Multicompany Management by consolidating operations such as procurement and accounts payable, and improve operational visibility across companies with advanced tools.

Automation and recognition of intercompany financial transactions can optimize enterprise performance to shorten lead times on key product lines. Additionally, from a financial perspective, multicompany organizations may choose to not only report as individual entities, but also consolidate multiple currencies and report across business entities to a single consolidation company. Underpinning this functionality is a comprehensive, scalable technology framework to support global enterprises that offers development choice, and includes a set of productivity enhancing tools designed to support global business operations. Multicompany Management functionality includes:

- ▶ Easy multicompany navigation
- ▶ Global management of customers, parts, and suppliers
- ▶ Comprehensive global credit management
- ▶ Flexible account management
- ▶ Centralized payments
- ▶ Consolidated purchasing
- ▶ Multicompany consolidation

- ▶ Global supplier price agreement
- ▶ Multicompany journal entry
- ▶ Intercompany trading and eliminations
- ▶ Multicompany views and dashboards
- ▶ Flexible company hierarchy

(See figure 12)

## Multicurrency Management

Multicurrency Management automates the process of both buying and selling in foreign currencies, including tracking of default currencies and extensive exchange rate tables. Lock transactions in at a specified rate with automatic gain or loss reporting, reducing the guesswork from handling foreign transactions. Throughout the Epicor system, the currency symbol is displayed to notify the user of the currency being used. Multicurrency Management functionality includes:

- ▶ Revaluation options
- ▶ Multiple currency tables
- ▶ Updatable exchange rate tables
- ▶ Gain/loss reporting
- ▶ Base currency reporting
- ▶ Flexible currency capabilities including price lists, quotations, orders, service contracts, invoices and vouchers, cash receipts, supplier pricing, and purchase orders

## Global Multisite Management

Supply chains demand synchronization of production with distribution and logistics. This is most effectively accomplished with a single system providing visibility and consolidation of resources in multiple facilities. Companies may also prefer to run business functions centralized with separate production and distribution functions, or they may run them separately with the ability to consolidate financials at month or quarter-end. Epicor supports both scenarios within Global Multisite Management, providing support for centralized accounting and purchasing, while allowing separation of production and distribution facilities. Manufacturing and distribution organizations can also leverage the planning and scheduling efficiencies with robust multiplant functionality. Complete functionality includes:

- ▶ Sourcing by plant
- ▶ Comprehensive production plant visibility
- ▶ Virtual plant support
- ▶ Shared warehouses
- ▶ Costing by plant
- ▶ Alternate BOMs and routings per plant
- ▶ Multiplant scheduling functions

## Multilingual Data Management

Corporate growth and expansion inevitably leads to new markets and new geographies. Epicor Multilingual Management—alongside Epicor Global Configurable Engines—facilitates this growth with resources that can manage your business wherever you take it, with support for country-specific requirements around tax, currency, and languages. Complete functionality includes Epicor Layered Client Framework, which separates the language of the business logic from the language of the end-user interface, so your organization can operate seamlessly.

### Master Data Management

The recent emphasis on regulatory compliance, the advent of service-oriented architecture (SOA), and mergers and acquisitions has made the creation, stewardship, and maintenance of accurate and complete master data a business imperative. Epicor Master Data Management (MDM) can help to ensure that your Multicompany and Multisite data meets regulatory requirements and also provides the consistency needed for real-time distributed operations—leading to greater customer satisfaction, operational efficiency, and business performance.

### Scalable Deployment

Deploy your companies on a single server/single database, or on multiple databases and multiple servers around the world. Many enterprises require their companies' data management systems to be geographically dispersed on different servers and different databases, to protect against site downtime.

- ▶ Multiple companies within a single database
- ▶ Single server with multiple databases
- ▶ Multiple servers with single or multiple databases
- ▶ Communication across databases and servers in all directions

### Robust, Flexible Global Engines

Epicor ERP delivers extensible functionality and flexible options that can help you minimize your organization's exposure to regulatory changes and mandates that can subject your business to financial penalties that adversely affect corporate credibility and compromise brand reputation. With a series of interlocking global engines, you can easily configure the rules that determine how transactions are posted, where they are posted how tax is calculated, how currency is handled, and how data is stored. These Epicor ERP global engines include tax, currency, rounding, legal, posting, compliance, and book engines.

## Governance, Risk, and Compliance



- ▶ Corporate Governance
- ▶ Risk Management
- ▶ Security Management
- ▶ Business Process Management
- ▶ Global Trade Compliance
- ▶ Electronic Compliance Reporting Tool
- ▶ Environmental and Energy Management

Effective Governance, Risk, and Compliance (GRC) initiatives help companies and their employees stay compliant and ensure that employees and partners at all levels of the organization are aware of the associated risks of non-compliance. GRC can touch every person and every function in an organization in some way. Whether GRC becomes an intolerable burden that increases company overhead or an enabler of efficiency and success depends upon its actual, day-to-day impact on the employees' work and whether that impact is enabling or debilitating.

## Corporate Governance

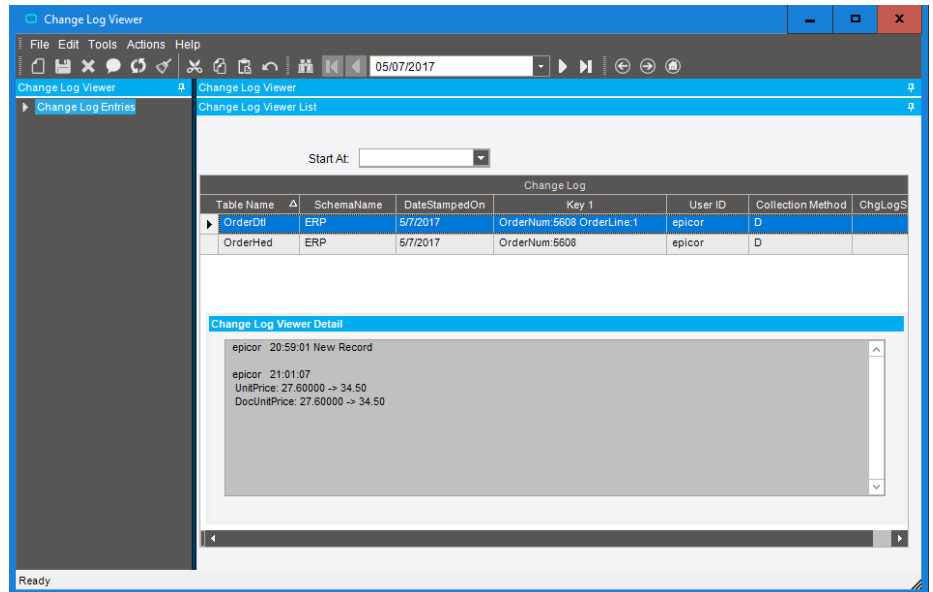
Organizations are under increased pressure to file accurate financial results in a timely manner. Epicor GRC can help organizations meet these shortened deadlines in a variety of ways—from consolidating financial information, to providing drill-down and drill-across access from financial reports, to transactional detail. Ultimately, when companies adequately report, plan, budget, forecast, and periodically review and update budgets and forecasts, they exhibit a more mature level of internal control. Integrated enterprise software applications go a long way in helping organizations document their internal controls, remove manual processes, and achieve greater visibility to their financial data. Complete Corporate Governance functionality includes:

- ▶ Epicor Financial Report Writer
- ▶ Financial planner
- ▶ Advanced financial reporting

## Risk Management

Enterprise Resource Planning (ERP) systems control the majority of corporate information that could potentially be at risk from piracy, fraud, and sabotage concerns. The only way to truly manage and mitigate risk across the organization is to have a fully integrated, end-to-end solution providing a single, verifiable set of financial and operational metrics. Epicor GRC provides an integrated enterprise solution with built-in, application level risk mitigation tools and Business Process Management (BPM) to audit trails and secure workflow automation—key elements of data integrity and security. It also incorporates the ability to infuse business insight through Epicor Business Intelligence and Analytics, as well as allows organizations to embrace data governance and data protection strategies, help control risk, and handle regulatory compliance.

(See figure 13)



**Figure 13** Risk Management—Automatically track changes with risk mitigation tools—such as table and field level audit capabilities

## Security Management

Epicor GRC provides comprehensive user and group security to restrict data and application accessibility as needed. Security can be granted at user and group levels for all security objects including forms, fields, reports, menus, and method calls. There is also an option to use Microsoft® Windows® Authentication to support a Windows single sign-on and password policy. Complete functionality includes:

- ▶ Product security
- ▶ Application security
- ▶ Access security
- ▶ Business security
- ▶ Automated change logs
- ▶ Audit logs
- ▶ Automation Tool for Epicor (ATE)
- ▶ Credit card authorization and encryption

## Business Process Management

Epicor BPM in combination with Epicor Service Connect—supports the ability to identify and mitigate risks to your organization through business-defined workflow by identifying and improving processes to make your business more

efficient, more disciplined, and better able to adapt to change. Together, they provide a framework for building GRC process-driven integration points that give companies seamless integration capabilities with other applications and businesses. BPM also automates delivery of information to employees in your organization that are responsible for managing and monitoring internal controls. Complete functionality includes the ability to build and execute workflow throughout the system for your unique business rules, as well as invoke and require electronic signatures for processes with secure authorization and password.

## Global Trade Compliance

In order to conduct business globally, you need enterprise business software that enables compliance with local laws, satisfies international security measures, and meets the myriad local and regional documentation requirements. Epicor Global Trade Compliance applications provide a comprehensive platform for managing these trade compliance necessities. Complete functionality includes:

- ▶ Global trade standards—items
- ▶ Landed cost management



- ▶ Country of origin tracking
- ▶ RoHS/WEEE Compliance
- ▶ Product lifecycle management
- ▶ International shipping and documentation
- ▶ Quality management
- ▶ Audit trail visibility
- ▶ Turnkey ISO, automotive (TS), aerospace (AS), and FDA (cGMP, FDA 21 CFR Part 11) support

## Electronic Compliance Reporting Tool

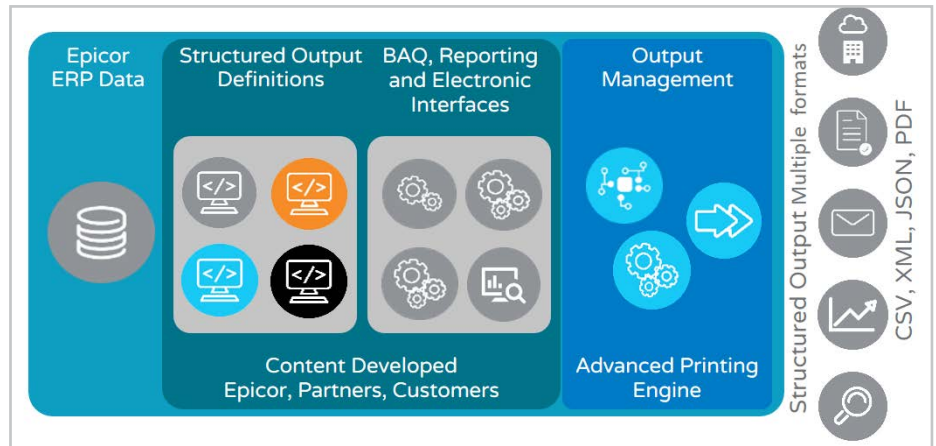
Reporting legislation is constantly evolving, and many tax authorities around the world are now starting to require comprehensive data submissions on a regular basis. Companies are increasingly expected to provide tax authorities with real-time visibility into all transactions—on top of existing requirements for regular submissions. A growing number of countries either have adopted or are planning to adopt tax reporting—such as Standard Audit File for Tax (SAF-T)—and others are introducing new e-invoicing requirements.

To help you meet these new and evolving requirements in a timely and efficient way, the Electronic Compliance Reporting Tool can help you facilitate ongoing management of your electronic reporting and compliance requirements. Using this, you can create or adjust custom electronic reporting or e-invoicing solutions in a timely manner.

(See figure 13.1)

## Environmental and Energy Management

As the world continues to analyze energy availability, businesses are also turning their attention to areas of opportunity—reduction of carbon emissions, energy conservation, and supply chain sustainability. Companies will look to IT and software solutions to help them find opportunities to extend the tangible benefits of corporate social responsibility (CSR) through the extended supply chain. Some of the more notable areas that corporations are emphasizing



**Figure 13.1** *Electronic Compliance Reporting Tool—Easily adapt to changes in electronic reporting and filings.*

when deciding on a path to good environmental and energy management include strategic sourcing and procurement, logistics, application of lean principles, and virtualization.

## Energy Monitoring

Energy Monitoring from Epicor Mattec MES, is a real-time, web-based application to monitor and analyze energy use in the manufacturing plant. This can help businesses reduce energy consumption and pinpoint energy savings opportunities right at the source—by monitoring energy use on equipment. Energy Monitoring analyzes load patterns, production requirements, and resource energy demands, giving you the power to reduce peak demand and capture energy savings. Easily capture and analyze energy performance indicators (EPIs) to reduce consumption and cut costs.

## Business Architecture



- ▶ Cloud or On-Premises Deployment
- ▶ Microsoft® .Net and SQL Server® Optimization
- ▶ Enterprise Experience
- ▶ Web Access, Mobile Framework
- ▶ Enterprise Query and Application Search
- ▶ Business Process Management
- ▶ Social Collaboration Platform
- ▶ Enterprise Content Management
- ▶ Compliance and Structured Reporting Framework
- ▶ Security Management
- ▶ Service Architecture, RESTful Services
- ▶ Business Integration and Orchestration Platform

Epicor designs and builds its enterprise applications from the ground up using state of the art connected systems architecture. A connected systems focus was chosen because enterprise resource planning (ERP) systems thrive as high-performing, approachable services that connect people, systems, and processes. Business strategy today is tightly coupled with technology strategy, and technology is partly responsible for shaping the culture within a company that ultimately drives competitiveness.

Epicor separates the design and development of our technology platform from the production of the applications themselves. The tools and frameworks that comprise the Epicor platform ensure users have a consistent experience across the system, allow for collaboration with ERP constantly in context, and provide the ability to create an optimized ERP experience. This unique blend of tools and technology is called Epicor ICE.

## Epicor ICE

Epicor ICE is the business architecture that underpins the Epicor enterprise business software and offers a true service-based Microsoft .Net architecture with SQL Server Optimization. This agile technology enables business process and builds on an already complete and robust framework. The toolset is helping our customers to both use and enhance Epicor applications at a business level—rather than a technology level—with minimum overhead. Epicor ICE addresses a number of key needs required by modern enterprises, including:

- ▶ Flexible deployment options—in the cloud or on premises
- ▶ Service-based architecture
- ▶ High-end scalability
- ▶ Web Access Framework
- ▶ Windows forms, web forms, and mobile device forms
- ▶ Built-in customization engine
- ▶ Comprehensive BPM Platform
- ▶ Embedded dashboards
- ▶ Connected people, systems, and processes

## Flexible Deployment Options

As your business grows and changes, you need a solution that can grow and change with you. Epicor can be deployed on premises or in the cloud, providing great flexibility. For example, if your business has limited IT resources, you may opt to initially deploy the solution in the cloud.

As your business changes, you may subsequently opt to redeploy Epicor ERP on premises. If your company has multiple sites or establishments, Epicor is one of the few leading vendors to have architected a cloud ERP software as a service (SaaS) offering—Epicor Cloud ERP—and an on-premises offering—Epicor ERP—out of a single product and is the only vendor who has deployed it to customers.

## Enterprise Experience

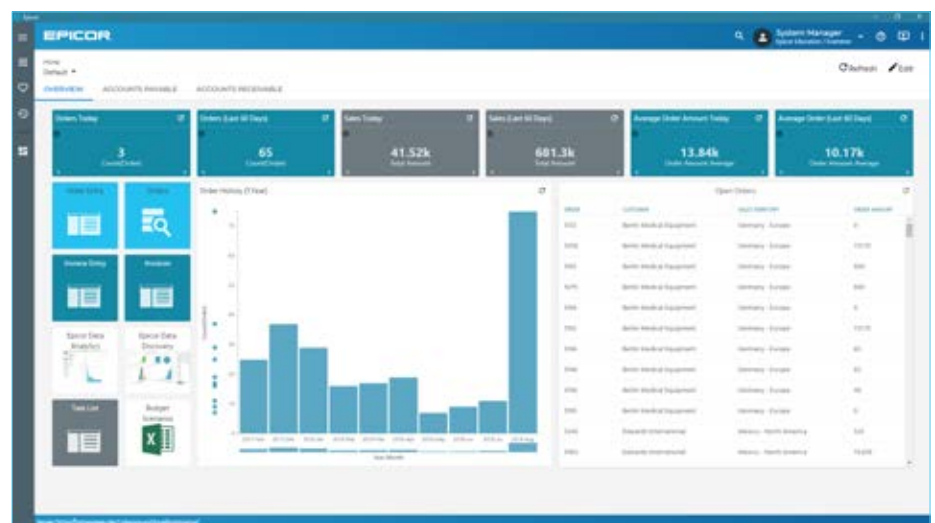
Epicor ICE delivers user interface (UI) options that are at once easy to use, rich and intuitive, and give users choice in deployment and experience. Unique technology within Epicor ICE offers the ability to support simultaneous access to the system by users who run many client applications concurrently—whether Windows® desktop, mobile, or browser based. All UI options are intuitive, flexible, aesthetic, and promote user productivity. Comprehensive features include:

- ▶ Mobile workers
- ▶ Personalized keyboard shortcuts
- ▶ Tool tips
- ▶ Simplified navigation
- ▶ User-defined searches
- ▶ Comprehensive cut-and-paste
- ▶ Transaction visualization
- ▶ Advanced grid management
- ▶ User based translation
- ▶ Styling and themes

## Active Home Page

The Active Home Page offers an intuitive experience for users with favorites, social streams, and custom links to other applications, and it delivers key indicators needed to help prioritize the day for optimum efficiency and satisfaction.

(See fig. 14.1)



**Figure 14.1** Active Home Page—Built on the Epicor Kinetic Framework, the Active Home Page offers a user experience that is both intuitive and visual for optimum productivity.

## Personalization

Personalize the way in which all forms look for users—including how many forms are viewable, tab order, fonts, colors, menu shortcuts, tree view, hide panels, change grid orders, and whether specific interaction dialogs should be suppressed.

## Customization

For businesses looking to tailor ERP to match unique business practices, Epicor ERP offers an embedded customization layer that saves modifications to forms based on Visual Studio .NET. Business tailoring includes multiple editions of any form, add user fields, add dynamic user defined field, add user logic, add sheets, add Microsoft Visual Basic® .NET or C# code, hide fields, and make fields mandatory. Modifications are upgradable as they are held in the data layer, reducing the impact on upgrades and potential version lock. Managing modifications is greatly simplified with the use of a Solution Manager where modifications can be bundled together and managed.

## Web Access Framework

Rather than rewriting application forms to support mobile devices and the web, we've developed the Web Access Framework—a unique technology that stores all client business logic as tagged XML metadata.



**Figure 14.2** Web Access Framework—Web Access provides a rich user experience over the Web.

This permits Epicor applications to run as smart clients or web clients or on mobile devices—all from the same source code. This framework also ensures that user customizations and personalization remain intact—whatever the UI. Web forms can be accessed from many different browsers, and for added flexibility, web forms can be accessed using most popular browsers—including Microsoft Internet Explorer®, Microsoft Edge®, Mozilla® Firefox®, or Apple Safari.

(See fig. 14.2)

## Information Worker

According to current industry surveys, desktop productivity tools are used by 95 percent of business workers, with Microsoft Office as the standard for desktop applications. Epicor Information Worker provides a secure, seamless interface to your Epicor application from within Microsoft Outlook®, Excel®, or Word—blurring the lines between enterprise software and desktop productivity software to create a single, immersive solution. The underlying architecture behind Information Worker provides direct access to updatable BAQs. Information Worker is also able to call Epicor Web Access forms—as well as desktop

application forms—from the Information Worker menus. Complete functionality includes the ability for authorized users to retrieve, view, and modify Epicor data; download the data you need directly into

your Microsoft Office application without leaving your current task; and provide support for customer relationship initiatives.

## Epicor Mobile Framework

The Epicor Mobile Framework (EMF) was developed at Epicor as a new user experience to meet the needs of a wide range of applications across the Epicor portfolio. It offers a flexible and responsive platform that supports modern HTML5-compliant browsers. EMF is responsive, as forms can be displayed in full size on a browser, but they can also be resized for mobile use. Some examples of mobile applications built using the EMF include:

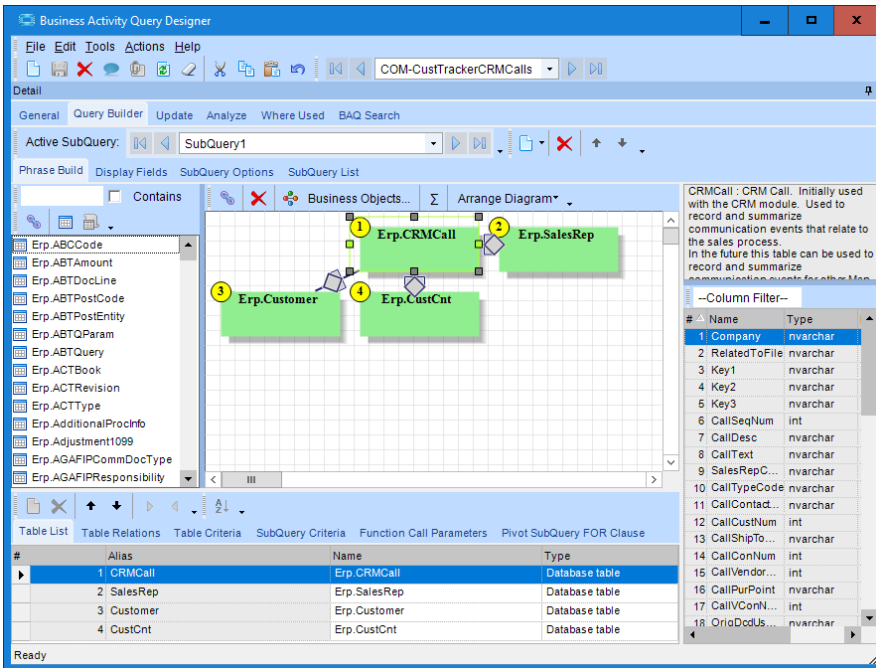
### Mobile CRM

Epicor Mobile CRM empowers your salesforce by providing mobile access to the entire CRM suite of capabilities on any iOS™ or Android™ device. You can manage the sales cycle from lead to order shipment—anytime, anywhere.



**Figure 14.3** Epicor Mobile Access—Epicor Mobile Access offers anywhere access to any Epicor ERP dashboard, including updatable capabilities to promote greater productivity.





**Figure 14.4** Business Activity Query—The BAQ Designer provides many easy to use features for creating business queries.

## Epicor Mobile Access

Epicor Mobile Access supports mobile dashboards that are rendered as web applications that may run on a number of mobile devices—including iOS or Android. Since the mobile dashboards that support Epicor Mobile Access are built using the dashboard technology and updatable BAQ technology, it is possible to create web applications that implement business functionality on mobile devices. Epicor ships with sample mobile forms that can be copied, modified, and customized to meet specific business requirements.

(See fig. 14.3)

## Epicor Data Discovery

Built to extend the existing Epicor dashboard capabilities, Epicor Data Discovery (EDD) is part of the Epicor data platform that enables Epicor ERP users to access greater visualization and self-discovery tools for their existing and growing library of dashboards and BAQs. EDD is an analytics solution intended to provide an easy-to-use data exploration and data visualization experience, and it is a major component of the overall Epicor data platform—which encompasses a broad set of capabilities for managing, accessing, sharing, cleansing,

visualizing, and extracting insights from data created by or related to Epicor-created data.

## Business Activity Query

Every business needs an intuitive and easy-to-use query engine, and for this, Epicor created business activity query (BAQ)—allowing you to create personalized queries or copy standard queries. Once created, queries can be used throughout the application to generate SSRS reports

or quickly search or view results in a Dashboard. Complete functionality includes:

- ▶ BAQ design wizards
- ▶ Graphical table links
- ▶ Embedded calculations
- ▶ Multiple data views
- ▶ Analyze/test query tabs
- ▶ Updatable BAQs
- ▶ External BAQs
- ▶ Configurable dashboard applications

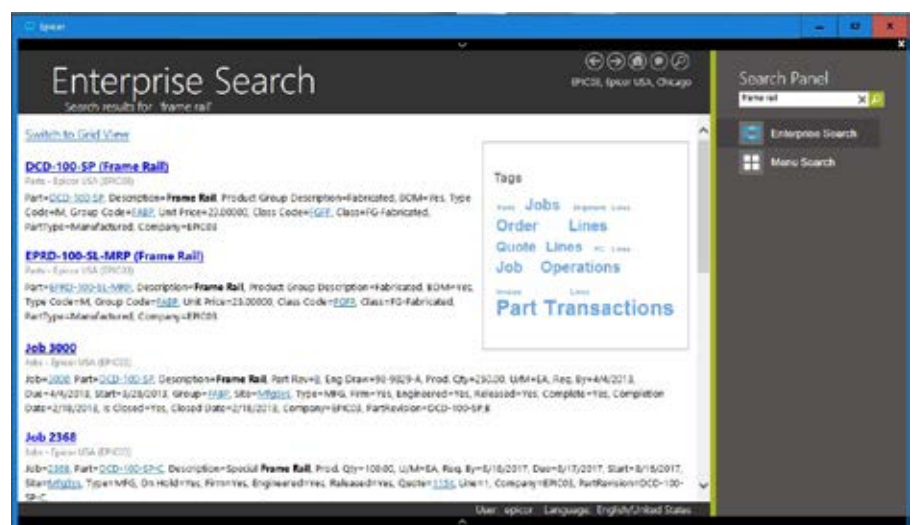
(See fig. 14.4)

## Enterprise Search

Epicor Enterprise Search brings the Internet search experience to ERP. Enterprise Search provides embedded search capabilities through tag clouds of Epicor structured data that span all Epicor applications built upon it, and it can also extend beyond enterprise data to unstructured data like Word documents—all in a secure manner. Complete functionality includes:

- ▶ Secure search results
- ▶ User-definable searching
- ▶ Easily find relevant business data
- ▶ Data drill-down capability
- ▶ Complete search results in browser
- ▶ Epicor Administration Console-Based System Configuration

(See fig. 14.5)



**Figure 14.5** Enterprise Search—Epicor Enterprise Search delivers search options for relevant business information in a format similar to Google.

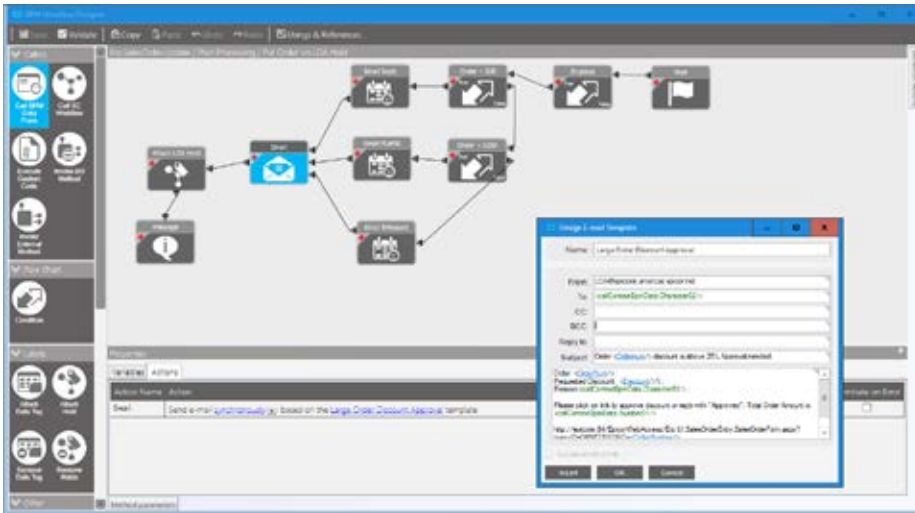


Figure 14.6 Business Process Management—Build new controls and validate easier with BPM.

## Workflow and Task Management

The workflow facilities available within Epicor enable you to quickly begin managing and automating even the most complex business processes—including working toward ISO certification. Epicor Workflow Management is comprised of four major components—Task Management, Workbench and Tracker Views, and Business Process Management (BPM).

The Epicor Task Management system allows you to connect your people with processes and the ERP system itself. As business processes become more complex and dynamic, it's important for any enterprise application to recognize situations and help drive people toward the right efforts and the right decisions. Complete functionality includes:

- ▶ Multi- and single-tiered task management
- ▶ Easily definable tasks
- ▶ Electronic sign-offs
- ▶ Type-based task categorization
- ▶ Definable task lists
- ▶ Detailed message log
- ▶ Automatic work assignment and routing
- ▶ Automatic WIP notification
- ▶ Automatic alert notification
- ▶ Automatic carry-out processes

## Workbench and Tracker Views

Workbenches and Trackers provide a focused, paperless, and single point for entry and review. Workbenches can automate and execute routine processes, while Trackers provide contextual information throughout the system to users with “view only” access. Designed with robust search, Trackers allow users to move easily between views—quickly getting to a 360 degree view of the customer, supplier, or part. Nearly every function is available for view. Epicor comes with many predefined workbenches—including purchasing, planning, engineering, inspection, service, sales, credit manager, and plant workbenches.

## Business Process Management

Building on and extending beyond the simple rules enforced by Business Activity Management (BAM), Epicor Business Process Management (BPM) is all about identifying and improving processes to make your business more efficient, disciplined, and better able to adapt to change. Epicor incorporates BPM technology to enable organizations to automate and streamline business processes for continuous improvement. Epicor BPM augments your current efforts of continuous improvement by allowing you to more closely tailor your Epicor solution to reflect the best practices you have developed. Complete functionality includes:

- ▶ Seamless integration and workflow capabilities
- ▶ Easy-to-use designer with wizard interface
- ▶ Pre-process condition builder
- ▶ Post-process routine automation
- ▶ Customizable base process

(See fig. 14.6)

## Social Enterprise

Epicor Social Enterprise (ESE) is a collaboration solution that provides a fundamental shift in the way organizations collaborate around a project, customer incident, quality issue, procurement

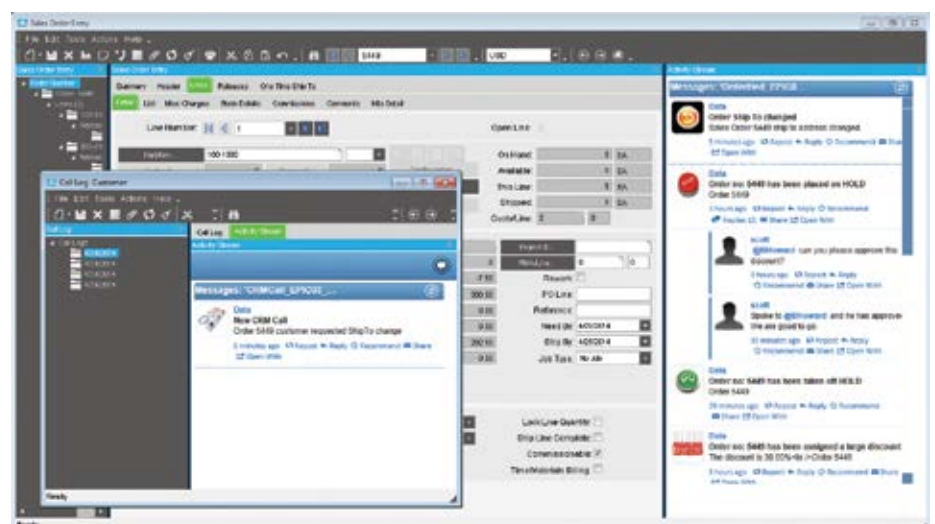


Figure 14.7 Social Enterprise—Monitor changes using activity streams within an Epicor application.

challenge, or planning event. It enables people to fully engage within their businesses and leverage their ERP data in the process to make more informed decisions. Online social engagement reduces the frequency of company meetings, improves the speed of decision making, and ultimately drives a new level of business efficiency. Fully embedded within Epicor ERP to deliver easier access to business information, ESE fosters cross-company collaboration by bringing social media concepts and contextual ERP information together in a single tool. This allows people to share information with each other—working together to solve problems while building up a knowledge base repository in which good ideas are never lost. Because it is an embedded component of Epicor ERP, users already have the ability to subscribe and unsubscribe to the information relevant to their role in the business. Complete functionality includes:

- ▶ Embedded capabilities
- ▶ Business notification
- ▶ In-context and on-demand
- ▶ Activity streams
- ▶ Collaboration
- ▶ Knowledge base

(See fig. 14.7)

## Enterprise Content Management

Enterprise Content Management (ECM) helps your business achieve growth by enabling you to streamline and automate reporting processes, reduce the risk of error, and improve business efficiency. ECM is the technology used to capture, manage, store, preserve, and deliver content and documents related to organizational processes. ECM tools and strategies allow the management of organizations' unstructured information—wherever that electronic information exists. Complete functionality includes:

- ▶ Drag-and-drop attachments
- ▶ Secure document repository
- ▶ Contextual retrieval

- ▶ Multiformat document viewing
- ▶ Automated product documentation workflow
- ▶ Advanced Print Routing
- ▶ Epicor DocStar ECM

### Advanced Print Routing

Epicor ERP Advanced Print Routing lets you email multiple recipients in multiple formats, send output to one or more designated printers, or save reports to a network folder in a desired format. With an easy-to-use graphical workflow builder, you can quickly and easily manage reports by filtering and assigning alternative reports styles. Advanced Print Routing allows you to send order confirmations or invoices to customers, generate and submit required financial reports, deliver parts reports or pick-lists to others, or save critical information to a business archive.

### Epicor DocStar ECM

Epicor DocStar ECM is an industry-leading solution that's built for the web and delivers deployment choice. Users can install DocStar ECM on their hardware or use DocStar in the cloud. The same software offers the same user experience and the same great results. DocStar ECM supports all popular browsers and mobile devices to deliver access anytime, anywhere. Epicor DocStar ECM manages electronic assets with:

- ▶ Security
- ▶ Audit Trail
- ▶ Data Center
- ▶ Workflow
- ▶ Intelligent Capture
- ▶ Custom Forms
- ▶ Search and Retrieve
- ▶ Document Retention

## Electronic Commerce Platform

Businesses looking to improve customer service, reduce lead times through new business efficiency, and deliver new opportunities to sales will often invest in eCommerce solutions. Epicor Commerce

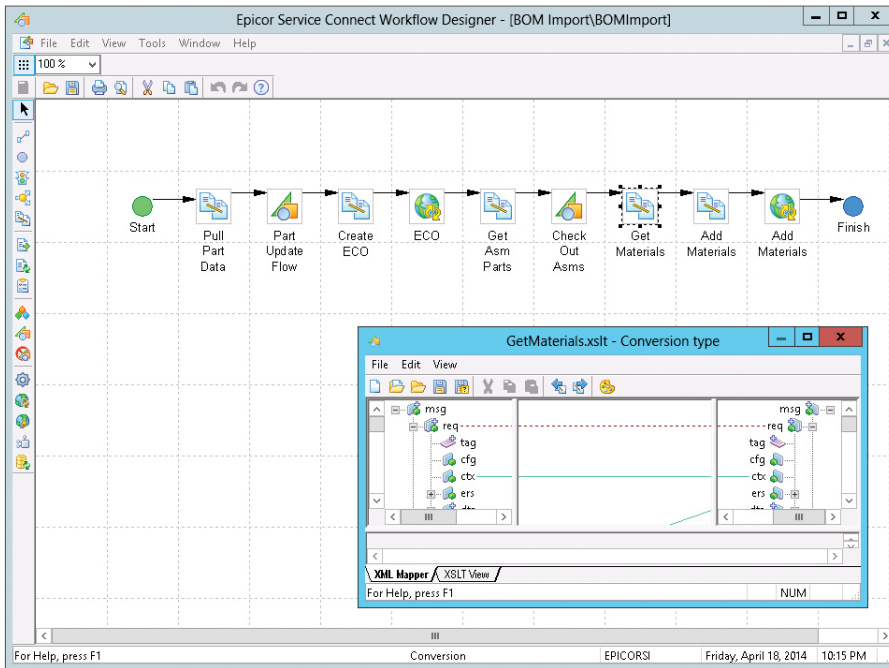
Connect (ECC) was designed to solve the challenges of manufacturers and their unique needs as they integrate an eCommerce solution. ECC is built on the Magento platform—a leader in eCommerce—with a comprehensive ecosystem and tooling in constant development to enable businesses to stay current with latest commerce trends. Epicor Commerce Connect is also fully integrated with Epicor ERP and offers the synchronization required by most commerce sites while boasting additional capabilities needed by manufacturers—including full integration with Epicor ERP product configuration capabilities. Finally, ECC easily extends to new data elements and provides a platform for eCommerce business growth.

While many companies can provide eCommerce services, very few leading providers are able to deliver the value and rapid results that Epicor Commerce Connect affords. It can extend business boundaries with a proven commerce architecture that connects businesses to consumers, customers, and suppliers—and enables Epicor ERP customers to utilize their websites to help drive revenue, increase customer satisfaction, and grow their businesses.

## System Tools

Epicor ICE offers a series of system facilities and tools to enable the effective management of Epicor applications—extending to system security, document management, advanced software development, software deployment, and product documentation. System tool functionality includes:

- ▶ Centralized administration console
- ▶ Comprehensive system monitor
- ▶ Email integration
- ▶ Separation of Epicor ICE from Epicor Applications
- ▶ Multiple system agents
- ▶ Extended reporting framework
- ▶ Customizable printed forms
- ▶ Auto print control



**Figure 14.8** *Epicor Service Connect—a rapid platform for incorporating workflow and system orchestration through visual designers with little to no programming effort.*

## Security

Epicor comprehensive security features secure access to multiple companies without having to close all forms or carry out different logins when switching companies. Plus, Epicor ICE provides the option for Microsoft Windows Authentication, Windows Single Sign-on, and Password Policy, as well as method security protocols to secure types of processing users are able to carry out—like allowing a user to update an existing part but not add a new part—by user or group. Complete Security features also include:

- ▶ Data level security
- ▶ Security reporting
- ▶ Online edits and audits
- ▶ Date and time—using server time—and user name for auditing
- ▶ Product security
- ▶ Application security
- ▶ Access security
- ▶ Business security
- ▶ Change logs
- ▶ Complete audit control
- ▶ HTTPS protocols

## Automation Tool for Epicor

The Automation Tool for Epicor (ATE) can do everything your users can do in Epicor ERP and is a very efficient way to either run repetitive tasks that may differ only in the selection criteria or run tasks that need to be launched late at night when other users are off the system—like data intensive tasks such as very large print runs, MRP, etc. ATE can also be used as part of your change management process to test the latest Epicor hotfixes using automated test scripts matched to your business activities and data. Users can easily revalidate results with ATE.

## Epicor Service Connect

Epicor Service Connect is a powerful business integration platform—functioning as a central integration point for secure workflow orchestrations within Epicor applications, as well as external connectivity to Epicor and non-Epicor applications. Because Epicor Solutions are built using Epicor SOA, the power of Service Connect can be used to streamline processing within the application framework. Epicor Service Connect enables you to promote lean principles, continuous performance initiatives, and Six Sigma quality throughout

the organization. You can also incorporate workflow and system orchestration through visual designers with little to no programming effort, easily link and transform XML documents to map to different systems, quickly review and track in-progress processes or after the process completes with Service Connect workflow logs, and perform full dataset and multiple record updates in the same way as the web service update method processes data.

(See fig. 14.8)

## REST Services

Representational state transfer (REST) services are a type of web service based on the architecture of the internet. Through this application program interface (API), these services link applications more easily through Internet type connections.

These services use the OData REST Protocol, which adds query capabilities and metadata descriptions to enable OData aware applications such as Microsoft Excel, Power BI®, or similar third-party applications to display real-time Epicor data. REST does this by exposing data and functions as unique Uniform Resource Locators (URLs) resources. Applications can then communicate with the REST services in the same way a web browser interacts with a website.

The REST services implement the full functionality of the Epicor ERP business objects. As with any use of the business objects, the services can be used to extract data to other systems and to provide interfaces for data Import and Update, but they should not be used in applications designed to provide transactional functionality that would otherwise require a concurrent user login.

## Compliance and Structured Reporting Framework

The Compliance and Structured Reporting Framework consists of functionality designed to allow definition, generation,



and distribution of electronic documents in formats such as XML, JSON, and CSV. In many countries, there are specific reporting requirements—including electronic accounting, invoicing, and SAF-T reporting—mandated by government agencies that must be generated from the ERP system. Such regulatory requirements can change periodically and rapidly. The functionality is designed to allow definition and distribution of document formats. The functionality also has broad use for generation of document formats used for system integrations and other data reporting applications.

## Epicor Education and Content Delivery

Epicor University delivers a suite of tools, aligning to the different learning styles and needs of your employees. Resources include:

- ▶ Training on Demand videos
- ▶ Embedded Education self-paced courses
- ▶ Role-based training agendas
- ▶ Course tests
- ▶ Live training
- ▶ Online help
- ▶ System and user documentation

## Embedded Education

Embedded Education is a self-paced training module accessed directly within a training installation of Epicor ERP. Users can access more than 100 courses—each with detailed explanations and hands-on exercises. Learners are able to easily navigate between courses and the related application using real-life business data through an Epicor education database. The courses provide a structured and repeatable learning experience for initial and ongoing training. As this is a licensed module, new training comes with each release of Epicor ERP, so users can more easily be trained and ready.

## Epicor Learning Center

Your Epicor Learning Center (ELC) allows you to deliver, manage, and track your company's training needs from one central location. Here, you can access course materials, set and manage employee assignments, register for classes, and track training progress and test scores. The ELC contains a broad catalog of Training on Demand courses and tests. Role-based agendas help you align courses and exams to each employee's training needs, so they can learn a new topic, prepare for an upgrade, launch a new application, or dive more deeply into current applications. Administrators may view individual test results or aggregate scores across the entire organization to easily track knowledge levels. Best of all, tests are not limited to Epicor content. You can add proprietary questions and tests to the ELC, and then assign and track them as desired.

(See fig. 14.9)

## Documentation

Epicor provides an extensive set of documentation to help users get the most out of their Epicor solution. Developed

for a wide audience that includes management, technical staff, and end users, the resources provide detailed information on installing, configuring, and using Epicor ERP applications.

- ▶ User guides and eBooks—illustrated, detailed instructions that walk users through major application functions are available both in printed and electronic formats
- ▶ Feature summaries—concise overview of the new functionality within each Epicor ERP version and release
- ▶ Knowledge base—an extensive collection of documents—including answers to frequently asked questions, procedural documentation, release notes, tips from Epicor staff, and more
- ▶ Online help—reference tool that documents application features and functionality—including field definitions, technical detail, calculations, tips, and examples
- ▶ Installation guides—comprehensive instructions on installing applications
- ▶ Technical reference guides—in-depth information on the most complex topics



**Figure 14.9** Epicor Learning Center—Epicor Learning Center offers Training on Demand for users for optimum productivity and greater utilization of ERP.

## Notes

[illegible]

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## About Epicor

Epicor Software Corporation drives business growth. We provide flexible, industry-specific software designed to fit the precise needs of our manufacturing, distribution, retail, and service industry customers. More than 45 years of experience with our customers' unique business processes and operational requirements are built into every solution—in the cloud or on premises. With this deep understanding of your industry, Epicor solutions dramatically improve performance and profitability while easing complexity so you can focus on growth. For more information, [connect with Epicor](#) or visit [www.epicor.com](http://www.epicor.com).



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