SYSPRO Manufacturing Operations Management (MOM)

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Increase productivity, minimize loss and lower production costs with SYSPRO Manufacturing Operations Management (MOM)

To gain a competitive edge, manufacturers must be agile enough to respond to market demands at all levels of production without increasing costs and waste, or sacrificing efficiency. Adoption of new technologies can mean the difference between success and failure. Industry 4.0 – the 'Fourth Industrial Revolution' – is gaining momentum and the changes it promises are significant to any business. Over the next decade, forward-thinking businesses will transform themselves using connectivity, data, automation, and an increasingly sophisticated workforce.

SYSPRO Manufacturing Operations Management (MOM) solution can help you transform your company and gain a competitive advantage in today's market. SYSPRO MOM is a manufacturing solution designed to world-class standards within SYSPRO Enterprise Resource Planning (ERP). It is built for manufacturers who want one system to optimize their entire factory and provides capabilities that can help increase productivity, reduce loss and lower production costs. With SYSPRO MOM your manufacturing execution system is fully-integrated into your ERP, giving you a single platform to monitor and improve your factory's performance.

SYSPRO Manufacturing Operations Management (MOM) enables organizations to analyze and generate accurate schedules that consider constraints around resources like people, machines, tooling and materials. Manufacturers are then able to ensure they obtain the best use of their available capacity to deliver to customers on-time and in the most cost-effective way, with reduced production costs.
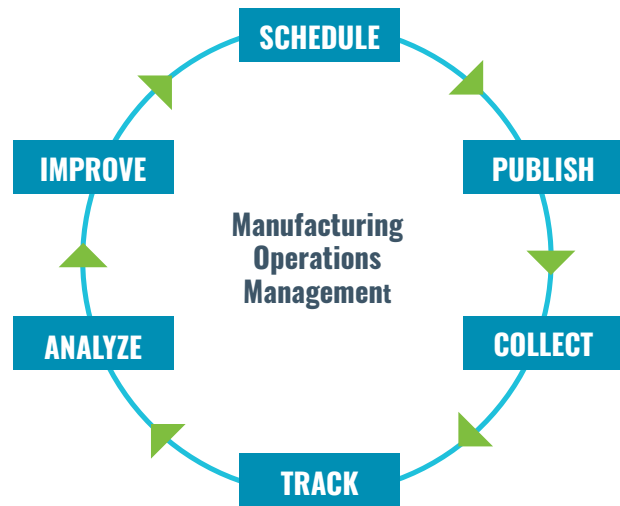
The solution helps manufacturers:

- **Drive world-class manufacturing standards**
  Optimize operational and back-office processes with one system that gives real-time data and insights to continuously improve factory performance.

- **Optimize the factory with one system**
  Drive world-class manufacturing standards within the factory by focusing on equipment, labor effectiveness, and performance. This ultimately delivers on higher quality products that drive customer satisfaction.

- **Address key manufacturing challenges**
  Effectively manage planning and data collection that is specifically suited to discrete and process manufacturing while applying industry best-practice to challenges.

- **Fast-track towards the smart factory**
  Digitalize the factory by collecting data from machines and other devices automatically, fast-tracking the journey towards the smart factory.

- **Drive better business performance**
  Stay competitive by transforming how the organization manages people, equipment and processes to drive better business performance and strategic outcomes).

A 360° View of Production

SYSPRO Manufacturing Operations Management (MOM) supports your complete manufacturing lifecycle, providing you with a 360° view of your production processes. The solution enables you to connect with your machines and read real-time data allowing accurate management decisions.

- **Schedule** – quickly and accurately schedule processes to maximize order fulfilment and resource utilization.

- **Publish** – publish schedules and job lists to the shop floor and other departments easily.

- **Collect** – collect data from the shop floor i.e. employees and machines.

- **Track** – gain real time visibility of employees, equipment performance and job progress.

- **Analyze** – access out-of-the box analytics for OLE, OEE and TEEP to analyze plant performance.

- **Improve** – drive continuous improvement by analyzing the Six Big Losses, online documents and more.

SCHEDULE → PUBLISH → COLLECT → TRACK → ANALYZE → IMPROVE

Manufacturing Operations Management

Any Device, Anywhere and Anytime

SYSPRO MOM, being fully integrated within SYSPRO ERP, allows you to monitor and gain visibility from a single, web-based browser user interface at any stage of the manufacturing process. Analyze data and monitor productivity any time, from any device, anywhere in the world!

Smart Factory

SYSPRO's innovative solution supports your unique Industry 4.0 journey and is the foundation to building your Smart Factory. We realize Smart Factories are not built overnight, and one size does not fit all, therefore MOM allows you to build your own Smart Factory based upon your own unique set of requirements. By embedding interactive technology in key machines, manufacturers can look to creating more intelligent manufacturing processes, ultimately combining humans with machines and resources with processes and systems. Simply put, you can collect data and communicate with any piece of equipment on the shopfloor that is connected – allowing you to custom-build your own connected factory.
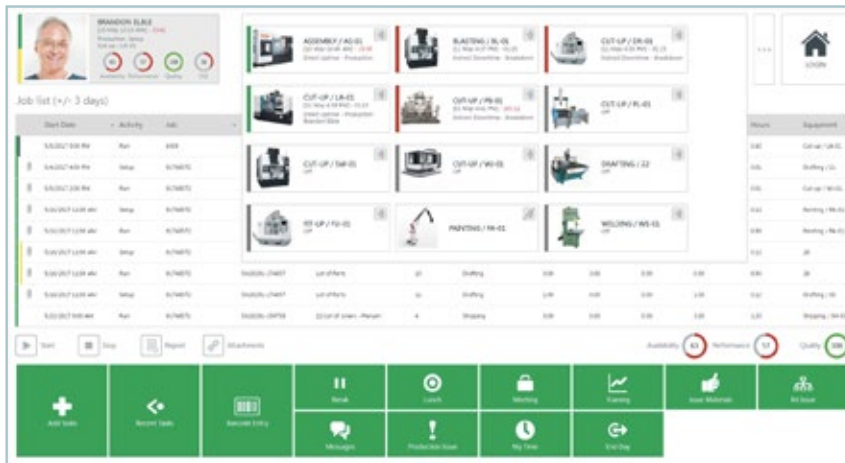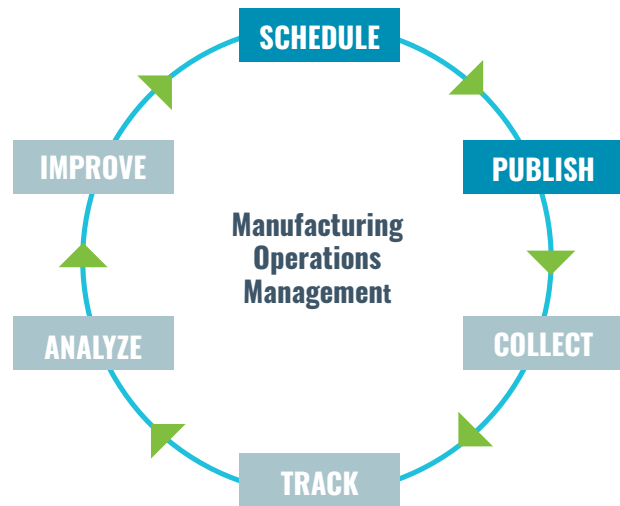
Advanced Planning and Scheduling

Planning and scheduling are major challenges for many manufacturing organizations. The uncontrolled variables within most factory processes can make or break a company, and unsatisfactory production planning leads to higher operating costs and unforeseen customer delivery problems.

To help avoid this, SYSPRO Manufacturing Operations Management (MOM) solution incorporates an advanced, finite capacity-based, planning and scheduling (APS) system allowing you to quickly and accurately schedule while minimizing downtime.

The solution enables organizations to create accurate schedules that factor in constraints around tooling, machines, personnel, and inventory. Manufacturers are then able to make smarter use of materials and resources helping them deliver to customers faster and in the most cost-effective way possible.

SYSPRO Manufacturing Operations Management (MOM) meets all of your production planning and scheduling needs:

- **Visual Planning Board –** define your resources and their available capacity by the shifts that they operate. Create, optimize and share your production schedule online. Publish job lists to specific resources for easy data collection.
- **Dashboard –** balance equipment utilization and order fulfilment to maximize factory output. View your most/least utilized resources, top orders by value and popular products by volume.
- **Production Plan –** view the agreed production plan. List and print Job Cards. Review progress including hours reported, quantities produced and issues logged to expedite and/or provide delivery information.
- **Equipment Plan –** review the impact of the production plan on your equipment. Analyze equipment to view loading detail and expected daily output.
- **Production Status –** review open jobs to check their status. Use progress bars to gain visibility of hours booked, materials issued and overall progress at a glance. Analyze specific job details including attached documents and issues recorded.
- **Material List –** view specific material requirements by individual resources for daily or weekly demand to support cellular manufacture.
- **Job Lists –** view job lists allocated by resource groups for daily and weekly objectives, which are designed for use with mobile devices.
- **Production History –** view activity history in relation to both open and closed jobs.

Benefits include:
- Flexible and simple to use.
- Easily create, update and share schedules.
- Shorten delivery times with smarter use of materials and resources.
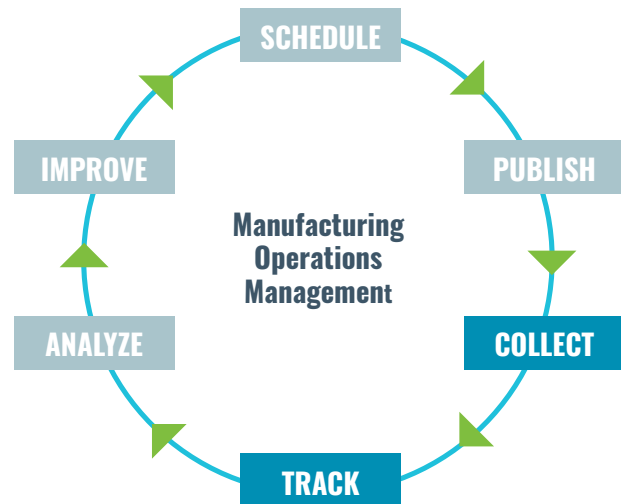- Give accurate customer delivery dates by quickly simulating scenarios based on real-time.

Shop Floor Data Collecting and Tracking

Frontline managers need complete visibility and control of the shop floor to prevent problems such as overruns, bottlenecks, downtime, poor employee or machine performance and excessive scrap. Collecting this data by conventional methods can be complicated, time-consuming and expensive.

SYSPRO Manufacturing Operations Management (MOM) incorporates shop floor data collection (SFDC) from your employees and equipment, with options to connect your machines and read data without manual inputs, helping to digitize your factory (an Industry 4.0 cornerstone).

The solution provides manufacturers with real-time shop floor visibility, while eliminating manual processes and therefore increase productivity. It enables you to simply execute production plans by accurately capturing and measuring activities on the factory floor such as labor hours, materials issued, quantities reported, scrap and more.

SYSPRO MOM meets all of your shop floor data collection and tracking needs:

Manufacturing Operations Management

- SCHEDULE
- PUBLISH
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- TRACK
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- IMPROVE

- ■ **Workbench** – collect shop floor data from your employees and equipment in real-time using a "stopwatch" style for accurate recording. Data recorded is used to support the calculations of overall labor effectiveness (OLE) and overall equipment effectiveness (OEE).
- ■ **Connect Equipment** – digitize your factory by connecting resources and collecting data from these resources automatically.
- ■ **Dashboard** – high level view of your orders, products, employees and equipment. Select specific employees and equipment to view status and performance for a selected time period.
- ■ **Employee Status** – at-a-glance live view of your employees, their current status, their current jobs, and how well they are performing during their shift. Analyze each employee for a more detailed view. Use status indicators to access their workbench to help with clocking and other management issues.
- ■ **Equipment Status** – at-a-glance live view of your equipment, the current status, which jobs are currently running, and how it is performing during the shift. Analyze each piece of equipment for a detailed view. Use status indicators to access the equipment workbench for management purposes.
- ■ **Job Status** – review open jobs to check status. Use progress bars to gain visibility of hours booked, materials issued and overall progress at a glance. Analyze specific job details including attached documents and issues recorded against the job.
- ■ **Transaction Review** – review (edit, delete, add) and/or approve all transactions generated via the workbench or entered from timesheets. Automated, scheduled posting of approved transactions to SYSPRO for financial analysis. A manual "sync now" option is also available. Ability to export to payroll systems (optional).
- ■ **Employee Performance** – detailed analysis of each individual's performance with supporting detail including audit trails and a record of the issues encountered.

- **Equipment Performance** – detailed analysis of individual equipment performance with supporting detail including audit trails and a record of the issues encountered.

- **Management Reports** – report on employee availability (uptime/downtime) for management purposes, including daily timekeeping. Option to create custom management reports.

Benefits include:

- Simple and accurate data collection.
- Real time status tracking of jobs, employees and equipment.
- Powerful employee and equipment performance analysis.
- Seamless integration with SYSPRO ERP.
- Option to export data to your payroll systems.

Factory Digitization

Helping you take the first steps towards the digitization of your factory and ultimately Industry 4.0. SYSPRO Manufacturing Operations Management (MOM) provides the platform to digitize your factory by allowing you to connect machines, measuring equipment and other devices, and gather critical data without manual inputs of the data.
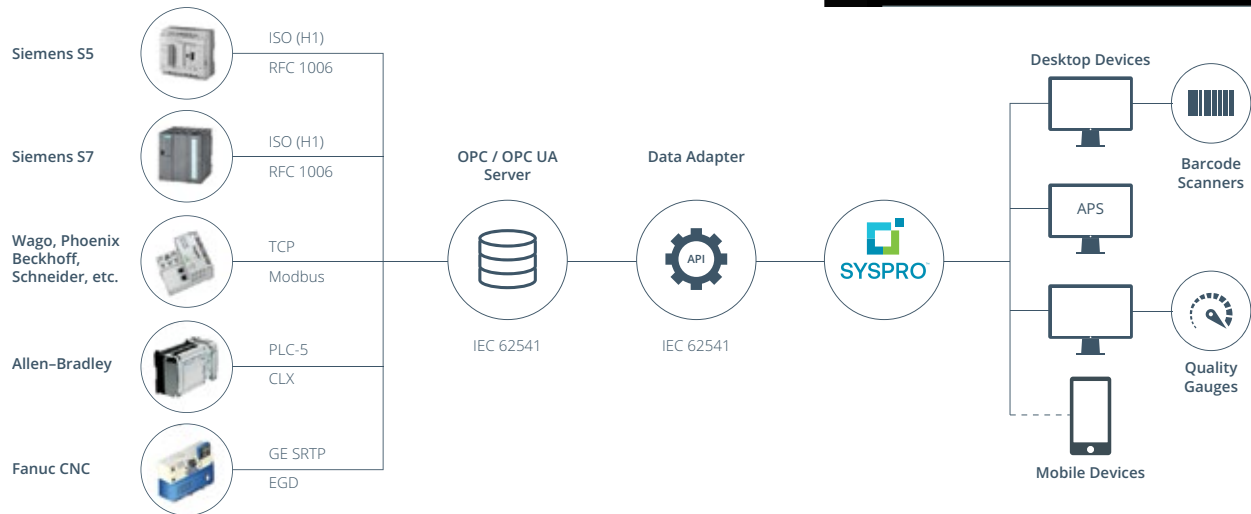
Gain real time visibility of:

- Start/stop and downtime.
- Job assignment.
- Job status (e.g. operation completed).
- Machine status (e.g. warming up; idle; running; down).
- Parts count (total, good and bad).
- Component count (total, good and bad).
- Performance issues (e.g. slow running; equipment wear; component jam).
- Custom values (e.g. temperature; pressure; spindle speed).

How it Works

SYSPRO Manufacturing Operations Management (MOM) uses OPC unified architecture (IEC62541) to allow information to be easily and securely exchanged (https://opcfoundation.org/). Once data has been converted it can be published and then analyzed within the solution.

Depending on whether your machines are already data-enabled or not, you will either be able to extract the data directly from the machine, or you will need additional sensors that will provide raw machine data which needs to be recorded centrally before being digitized and transformed into readable data.

Integration Services

Digitization of your factory requires specialist hardware, software and skill sets. SYSPRO Machine and Device Integration Services are there to help to get you started. We can evaluate and assess the equipment you have and provide guidance regarding the hardware (servers and sensors) you need, saving you time and money.
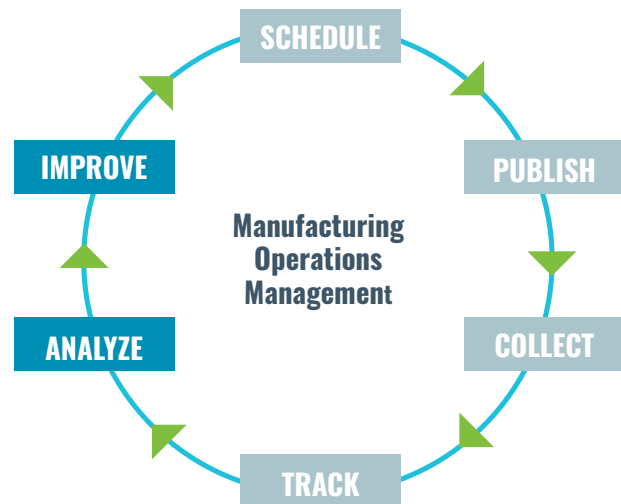
Become part of the revolution to stay competitive by embracing the Industrial Internet of Things (IIOT) and establishing your path towards Industry 4.0.

Factory Performance Analysis and Loss Management

If you can't measure it, you can't manage it. To increase your productivity and lower production costs you need to measure your performance and then minimize the losses within your manufacturing processes.

SYSPRO Manufacturing Operations Management (MOM) provides out of the box factory performance and loss analytics to allow your organization to drive to world class standards for overall labor effectiveness (OLE), overall equipment effectiveness (OEE) and total effective equipment performance (TEEP).

The solution utilizes the Six Big Losses analysis to identify, classify and quantify your losses, enabling you to determine the appropriate counter-measures that will help to reduce them.

SCHEDULE

PUBLISH

IMPROVE

Manufacturing
Operations
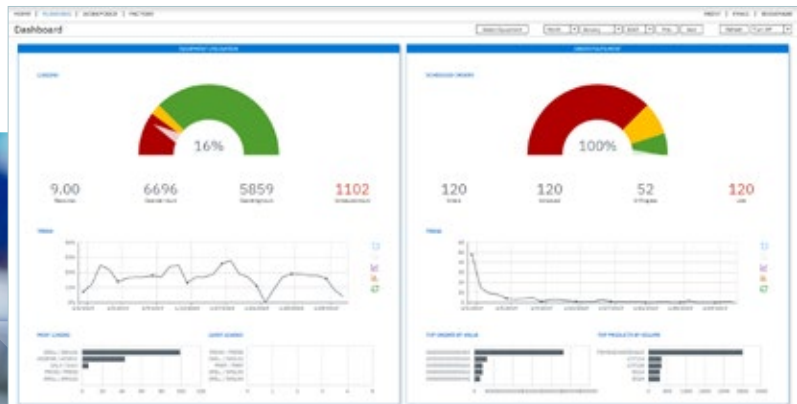Management

COLLECT

ANALYZE

TRACK

- **Loss Management** – visibility of the losses across your manufacturing operations on a dashboard, with every loss identified, classified (Six Big Losses) and quantified, allowing for counter measures to be implemented and continuous improvement to be made.
- **Dashboard** – factory level analytics of your equipment showing both the OEE and TEEP indicators. Interrogation of supporting metrics and measurement of Loading, Availability, Performance and Quality.

- **Employee Analysis** – detailed analysis of your employee performance. Filter by individual employees or analyze performance for a specific group of employees. Further ability to analyze by date or division.
- **Equipment Analysis** – detailed analysis of your equipment performance. Filter by individual equipment or analyze performance for a specific group of equipment. Further ability to analyze by date or division.
- **Product Analysis** – output and quality analysis for your products by employee and/or equipment.
- **Loading** – detailed analysis of the loading of your resources, with comparisons to previous month and/or quarter to identify trends. Use of this information to plan uptime against available time (calendar time) to improve asset utilization, as well as to support capital expenditure and other management decisions.
- **Availability** – detailed analysis of the availability of your employees or equipment with comparisons to previous month and/or quarter to identify trends. Use this information to analyse your actual uptime compared with your planned uptime and see where unplanned downtime occurs due to equipment breakdowns, tooling failures, operator shortages and more.
- **Performance** – detailed analysis of the performance of your employees or equipment with comparisons to previous month and/or quarter to identify trends. Use this information to analyse why your actual run rates differ from your planned run rates and identify where performance loss occurs due to operator inefficiencies, equipment wear and tear, minor stops from component jams and more.
- **Quality** – detailed analysis of the quality output from your employees or equipment with comparisons to previous month and/or quarter to identify trends. Use this to gain insight by resource where product quality issues have affected your output.

Benefits include:

- Out–of–the–box analytics.
- Lower production costs and higher margins.
- Increased productivity and output.
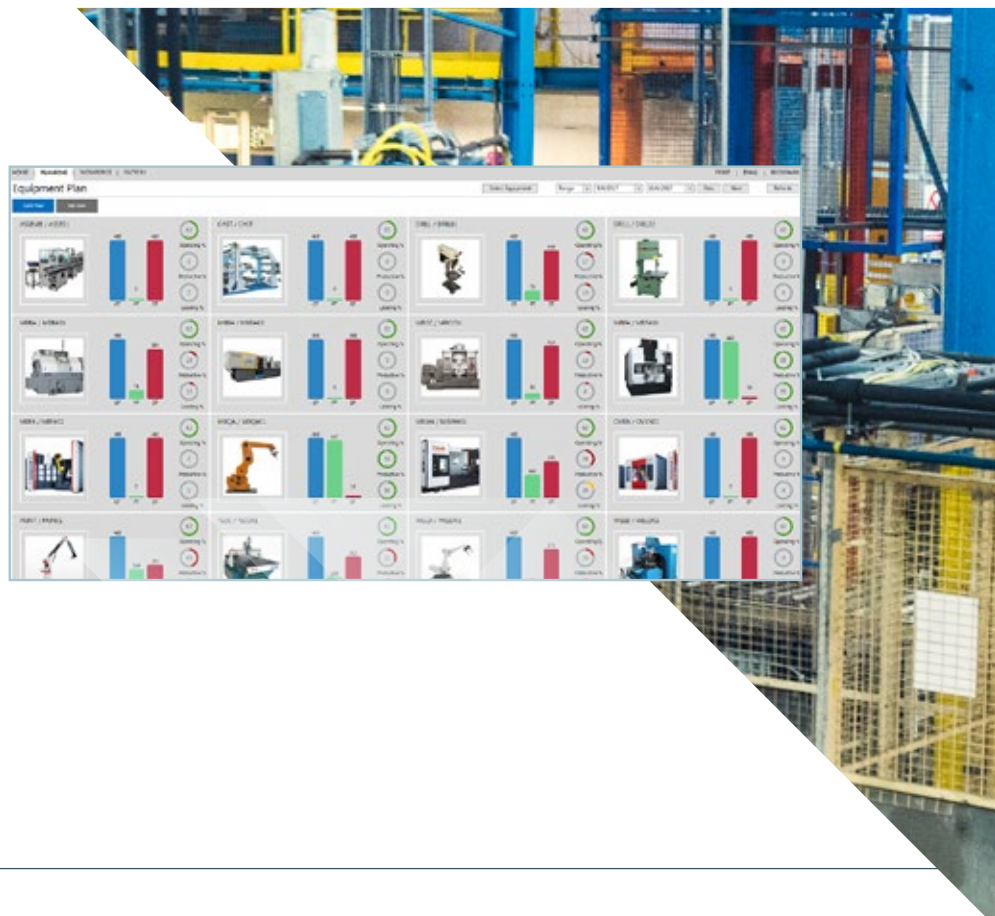- Competitive advantage.

Lean Manufacturing and Continuous Improvement

To gain a competitive advantage in the global marketplace you need to understand the performance of your resources against world class standards and then focus on improving them.

SYSPRO Manufacturing Operations Management (MOM) solution helps to drive Best Practice and continuous improvement initiatives with management alerts, issue logging and workflow, online documents and more.

- **Management Alerts –** receive performance management alerts to improve response times to issues.
- **Messaging –** send and view messages to and from the shop floor.
- **Issue Workflow –** view, assign and resolve custom and/or performance related production issues.
- **Paperless Shop –** manage and maintain static attachments or online forms related to jobs, operations, employees, equipment. Add hyperlinks to videos and/or document management systems where audit trail or document versioning control is required.
- **Anytime, Anywhere –** access mission critical information whenever and wherever you need it via tablet and/or mobile devices.
- **Safe and Secure –** sign in authentication with full organizational control to restrict information that can be viewed by workgroup or individual.
- **Quality Assurance –** the solution has been formed around the globally recognized standard for manufacturing operations management, IEC62264 providing the tools and analytics essential for effective manufacturing operations management to help you succeed in todays' market.

About SYSPRO

SYSPRO is a leading, global Enterprise Resource Planning (ERP) software provider specializing in key manufacturing and distribution industries. For over 40 years, SYSPRO's team of specialists have continued to address unique industry needs and enable customers to easily adapt and grow. The solution is scalable and can be deployed in the cloud, on-premise, or both, and accessed via the web on any device to provide customers with choice and flexibility.

SYSPRO remains focused on the success of partners and customers. Our evolving solutions are aligned with industry trends to leverage emerging technology that will enable partners and customers in securing a digital future.

With more than 15,000 licensed companies in over 60 countries across six continents –SYSPRO offers guidance and support every step of the way as a trusted advisor.

For more information, visit www.syspro.com.

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For additional information.

RAD ASSOCIATES

RAD Associates is a professional services company that specializes in ERP software implementation with a focus on manufacturing, distribution, construction, and eCommerce companies. Founded in 1991, we provide consulting, support, and implementation services that focus on improving productivity, reducing process inefficiencies, and increasing profitability.

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