



CAD MAcRO

MES / ERP **Shop Plan**

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Complete Solutions
Tailored to Your Industry!

Overview Shop Plan

As the digital revolution takes shape, leading organizations will need to maintain competitive advantage through a focus on speed to market and the ability to rapidly navigate changing business environments. Ultimately, Shop plan give a competitive advantage in your organization's ability to optimize and drive value from manufacturing using technology. Customer order to delivery requires a cross organization chain of extensive coordination between human and mechanical inputs. Manufacturing are the subject of continued innovation to improve end-to-end visibility, order, BOM, project tracking, inventory, shop floor operations, quality, contracts, regulatory compliance, delivery speed, and settlements. The ability to capture, translate and interpret data through a cycle of physical inputs to digital analysis driving physical results has the potential to deliver tremendous value to the enterprise.

Shop plan is designed to support the various manufacturing processes including discrete, make-to-order (MTO), engineer-to-order (ETO), configure-to-order (CTO), mixed-mode and make-to-stock environments.



Shop Plan Features

Seamless and efficient implementation Shorter implementation period: ~30% below the market average Cost transparency and budget compliance Quicker return on investment (ROI)

- CRM & Sales And Service Management
- Project Configuration (Design, BOM, Process, Routing)
- Project Management
- Advanced Planning And Scheduling
- Materials Management
- End-To-End Management Of Complex Multi-Phase Projects
- Real-Time Production And Process Monitoring (MES)
- Quality And Compliance Management
- Inventory Management
- Project Costing
- Extensive Product Data Management
- Support For Lean Initiatives
- Dashboards, OEE, And 100+ Reports
- Access Data And Through Traditional Desktop Apps, Web Access, Or Mobile
- Solution Deployment On Premise

Shop Plan





Sales & CRM

Sales & Customer relationship management (CRM) strategies are as important to businesses today as they have ever been.

- Contact Management
- Marketing Management
- Lead and Opportunity Management
- Contract Pricing Management
- Estimating and Quotation Management
- Order Management

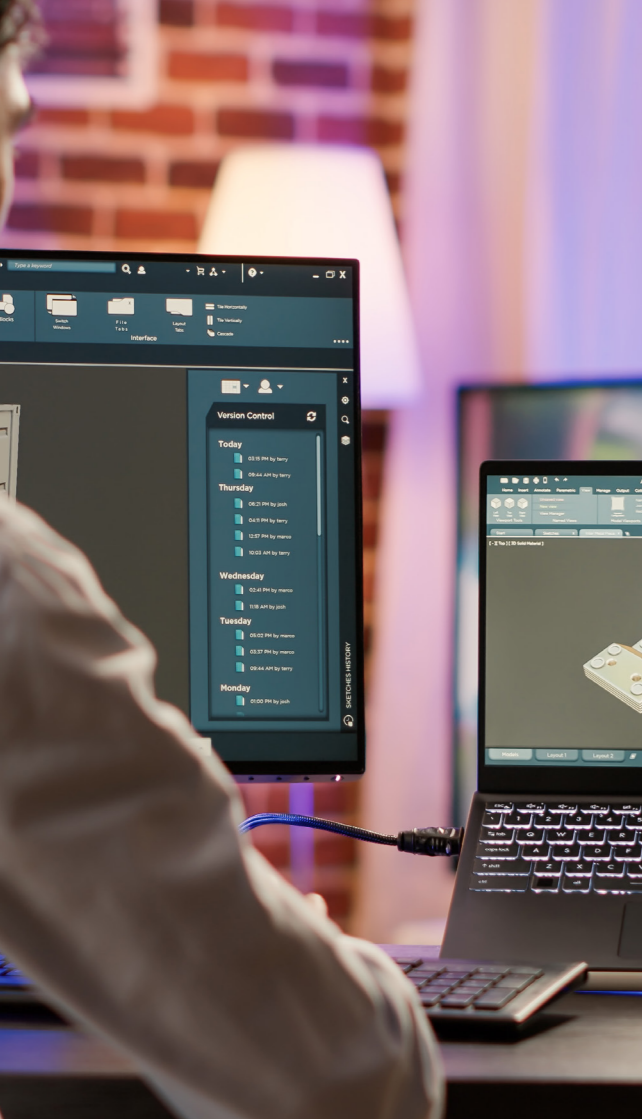
We've designed Shop Plan to help you stay a head of the curve and successfully meet the challenges that manage your entire customer life cycle, improve operational efficiency, and accelerate operational efficiency, and accelerate growth both internally and externally. Shop plan CRM can control every 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 services, payment, and ongoing support of the customer.

Shop Plan provides a complete view of the complete customer, supplier, or partner relationship. Shop Plan broadens the scope of customer information to everyone within and across the organization and to stakeholders beyond. Shop Plan CRM delivering up to date contextual information to key stakeholders for the life of the customer relationship.

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.

Generate estimates easily utilizing the tree interface to import 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 subcontracting.

Review responses once submitted for inclusion in the estimate. When the order arrives the Order Job Wizard generates appropriate jobs for new orders in a single step that enables the user to create, plan, schedule, and punch a few keys and the detailed routing will be ready to go to the floor or to make additional changes.



Product Management

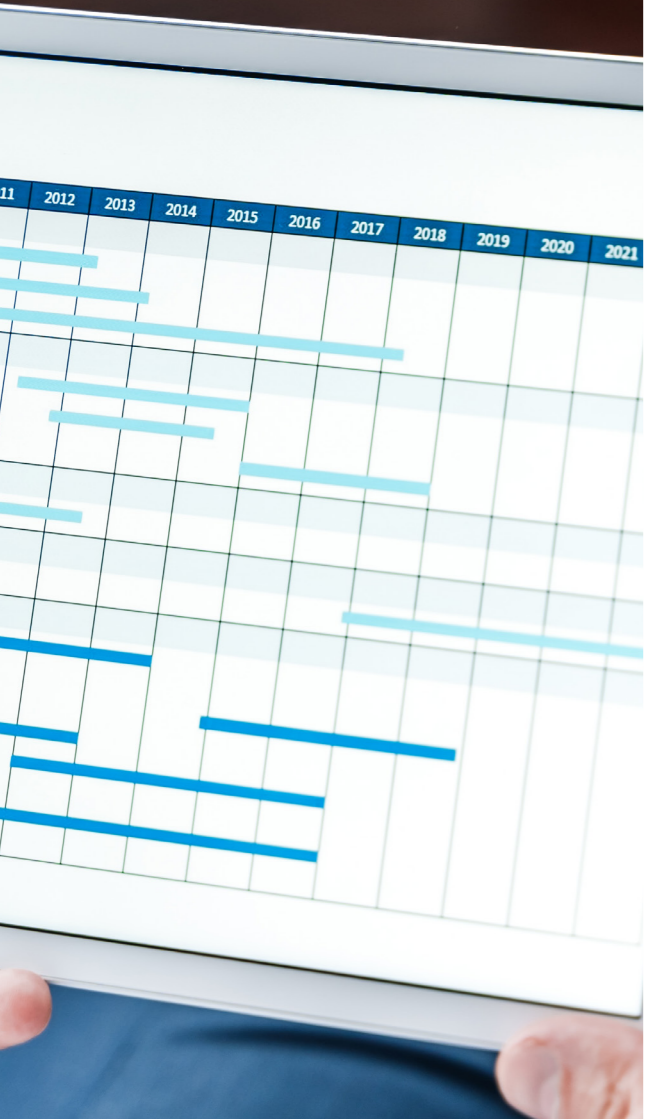
Shop Plan Product Management serves as the central hub for your process and product data and history. It provides collaboration and data exchange among enterprise users who interact with your products including product managers, engineers, salespeople, and quality assurance representatives. Shop Plan Product Management provides a comprehensive end-to-end solution to manage all aspects of a products.

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

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.

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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 only one visibility of the latest routing production notes, as well as standards and resource requirements.



Project Management

Project Management is a comprehensive solution for companies that plan and execute either simple or complex projects. Shop Plan Project Management utilizes detailed estimation, planning, scheduling, costing, and supply chain 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 provides accurate and up-to-date status information and meaningful alerts.

Project Planning provides flexible Work Structure capabilities—including multilevel phases within a project. Project Management offers the robust Shop Plan scheduling engine for complete visibility and management of the project

- Project Planning
- Project Analysis
- Project Generation
- Project Billing
- Resource Management
- Contract Management
- Planning Contract
- Time Management
- Expense Management

schedule. The Project Planning module also includes the ability to accumulate and roll up costs to the main project supporting budgets, estimated completion values, and calculated, estimated, and actual costs accumulated at the element 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.

Project Billing 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 Shop Plan Project Billing.

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 Shop Plan. Resource Management additionally provides the comprehensive costing and default burden and billing data used throughout the application—from planning and scheduling to labor bookings.



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, enterprise or a single site manufacturer, precise and flexible planning and scheduling is imperative to efficient and profitable operation. Shop Plan offers a comprehensive solution for forecasting, material requirements planning, scheduling, and advanced planning and scheduling to meet the needs of today's agile businesses.

- Forecasting Production Scheduling
- Material Requirements Planning
- Time & Element Plan
- Scheduling and Resource Management
- Advanced Planning and Scheduling
- Infinite, Finite and Constraint Based Scheduling

Forecasting Production Scheduling in Shop Plan are included with the Material Requirements Planning module and are designed to assist manufacturers and Shop floor with both day to day control and long range planning and decision making. Forecasting and support businesses that operate multiple, mixed mode strategies simultaneously. Forecasting & Master Production Scheduling. Bill of Materials Check 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.

Material Requirements Planning Built for the needs of a single site as a well as extended enterprise. Enhanced to offer plant source as well as product group sourcing of materials and assemblies, automatically and visually extends the enterprise to efficiently manage supply and demand

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, scheduling, capability and dependent capability based scheduling, real time capable to promise functionality, and advanced material planning functionality. Finite, Infinite & Backward Capacity Define each resource with either finite or infinite & backward capacity. When a piece of the schedule is moved, the resource is rescheduled according to its type.



+ Material Constraints

Material Constraints Consider material availability as a scheduling constraint. Integrated directly with Inventory and Purchasing,

+ Balanced Optimization

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

+ Bottlenecks

Display each date and resource / resource group, where scheduled hours exceed capacity based on what-if or actual job schedules.

+ Multiple Constraints

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

+ Calculate Manufacturing

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

+ Multilevel Assemblies

Manage complex assemblies by matching the schedule to actual production output

+ Alerts

View indicators, such as late status and material availability, to proactively alert the master scheduler

+ What-If and Change

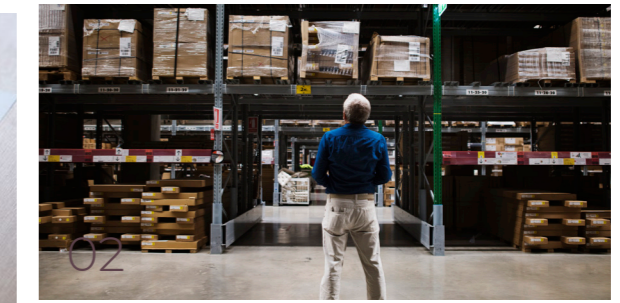
Impact Schedule jobs in a what-if mode, with the ability to analyze potential bottlenecks before finalizing the actual schedule.

Capacity Planning



01

Material Constraints

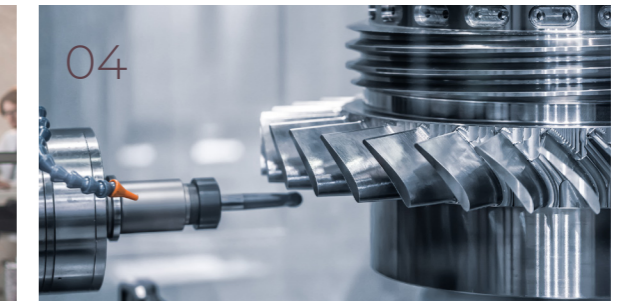


02



03

Scheduling



04

Manufacturing



Materials Management

Shop Plan delivers high-performance requirements planning for businesses with demanding logistical processes. Shop Plan's materials management is a JIT material requirement planning with foresight that tracks all requirements from, purchasing, warehousing and production to ensure required materials get to where they're needed. Warehousing, and stock taking are all under your control. Material Management capabilities including purchase management, sourcing and procurement, inventory management, advanced material management 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.

- Purchase Management
- Vendor Relationship
- Procurement Management
- Inventory Management
- Shipping and Receiving
- Warehouse / Store Management

Material Management 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 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.

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 purchase order, or direct receipts to a manufacturing job, although their destination may be changed at the time of actual receipt entry. purchasing decisions. With Purchase Management, you can reduce inventory levels, improve on-time deliveries, enhance your cash flow, and increase your profit levels.

Vendor Relationship Management 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.

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 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.











MES

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

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.

Flexible Data Entry Technology using Mobile, touchscreen, bar code, or keyboard and Job sheet interface to update labor information from the Shop 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 Shop floor.
-  **Distributed Hours**
Split 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 Shop floor.
-  **Quality Assurance**
Module ensures that you gain complete visibility into your quality operations from a top-down view down to the individual item level,
-  **Corrective Action**
Create and track all preventive and corrective actions online. With due dates, audit sign-offs a, corrective actions provide for follow-up of quality issues.
-  **OEE Dashboard**
Overall Equipment Effectiveness Dashboard, run rates, yield, Alert, material consumption, and much more. Accurate machine-related data, along with operator.
-  **Maintenance**
Provides a comprehensive toolset for critical production and facilities equipment maintenance in the production schedule for better capacity planning.
-  **Timesheets**
Managing an employee's work hours or time off can be overlooked as an area with potential cost savings.



+ CAD Integration

Whenever the drawing is saved, it synchronizes the dimensions and their tolerances to the part specification list.

+ Setup Monitoring

Place to record workcenter setup times and issues, including detailed data on reasons for setup delay.

+ IOT Ready

Machine integration & Capturing shop floor activity as it happens is a powerful way to increase overall visibility.

+ Predict

Predict overruns and shortfalls before they happen then reschedule your orders to optimize based on material, equipment and personnel availability

+ Production Monitoring

Robust production Monitoring provides Monitor of machine production, including detailed Data is more valuable when it is highly integrated with inventory, tool tracking, and scheduling, and summarized reports.

+ Reports

Real-time, accurate production data, planned production schedules, quality checks, machine breakdowns, inventory levels, and more.

+ Job Monitoring

Job monitoring offer a simple-to-use, yet powerful way for shop-floor personnel to retrieve instructions, track activities, and record production against jobs as they are processed.

+ On-Time Delivery

Improve on-time delivery performance and respond optimally and with agility to late stage changes, gain up-to-date visibility of all work-in-progress orders

Manufacturing are the subject of continued innovation to improve end-to-end visibility, order, BOM, project tracking, inventory, shop floor operations, quality, contracts, regulatory compliance, delivery speed, and settlements.

▶ Inspection

Inspection plans in the Parts module, and Inspection then execute those inspection plans on Work Orders. Inspection plans can be assigned to any operational step of a Part router.

▶ Time Clock

Built-in Time Clock for punching in and out of work. A simple interface allows any User to clock in or out from any computer quickly, using a password. Employees and managers.

▶ Job Assign

Assign and reassign jobs to operators who can start, pause, and resume tasks to keep you up to date on production

▶ Role based Access

Dashboard for Plant Manager and Supervisors monitor and Track the performance of assets and production processes in a single window of application.

▶ Production Metrics

Metrics Includes: Runtime Vs Downtime, Planned Production Vs Schedule Loss, Net Runrate, Production Vs Quality Loss.

▶ Detect the Unexpected

Easily interrogate and analyze vast amounts of historical data to identify trends and patterns.

▶ Data collection

Allows real time, shop floor, digital data collection in a paperless environment. PC, tablet, smartphone or MESWatch.

▶ REWORK MANAGEMENT

New re-work order generation or queuing of suspended quantities to existing work orders

MES

Our Clients



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