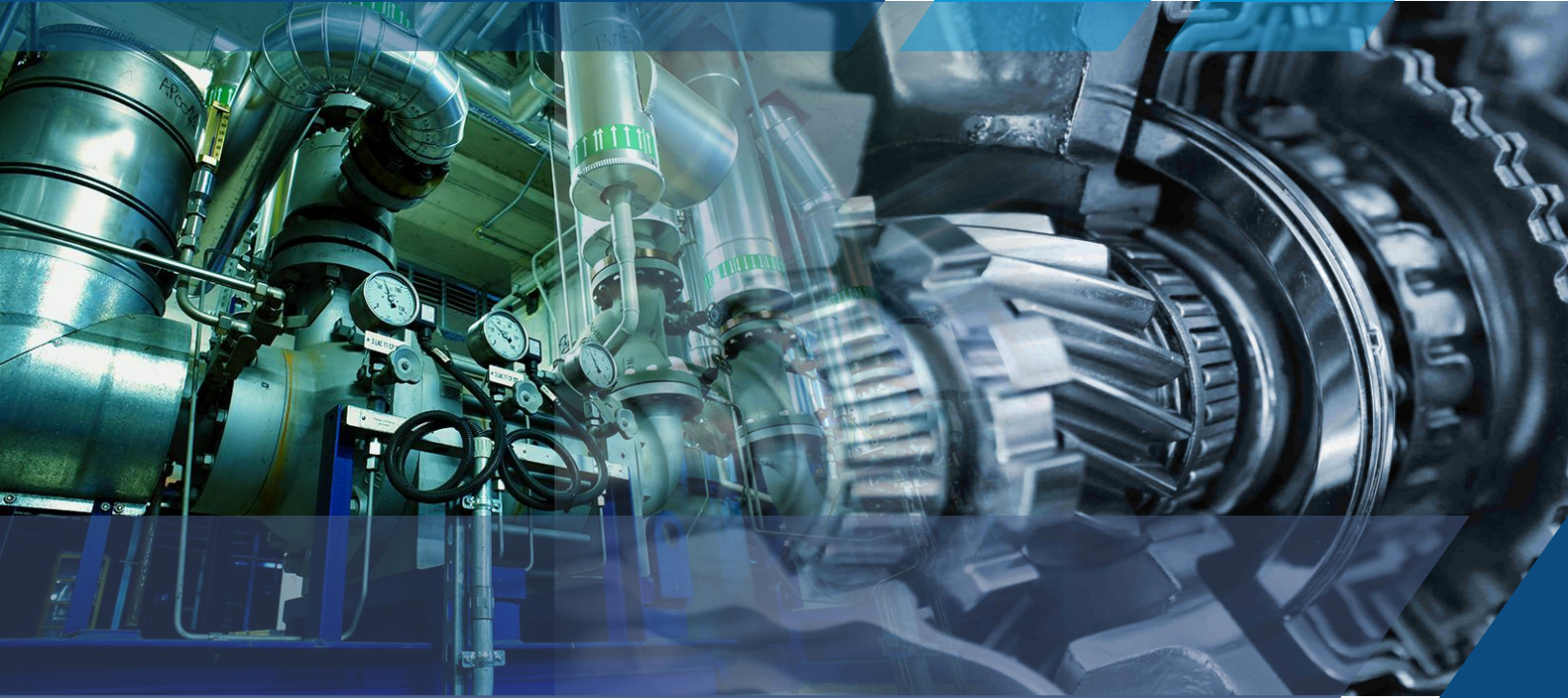


ERP Software for Industrial Equipments & Machinery Manufacturing Industries

CASE STUDY



Roadmap IT Solutions (P) Ltd.



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About Company

Roadmap IT Solutions with more than two decades of experience has successfully implemented "Roadmap ERP" in 150+ companies in 20+ vertical across India and KSA. Roadmap Business Process experts understand the complexities, unique challenges in Industrial Equipment / Machinery Manufacturing (IEMM) industries and constantly enhances its ERP software functionality to further streamline business processes in IEMM Industries. With its gaining expertise in IEMM industries, Roadmap provides powerful, industry-specific features designed to address unique needs of IEMM Industries.



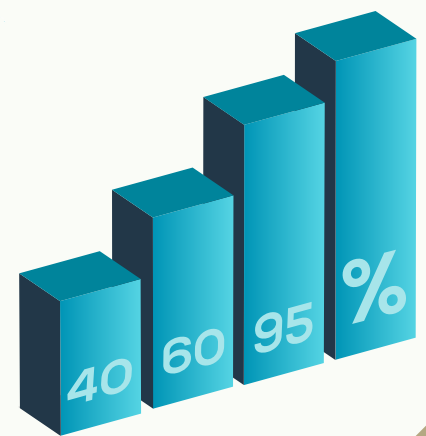
Roadmap ERP

Roadmap ERP software for industrial equipment / machinery manufacturers is packed with best practices and world-class capabilities for ease use of smaller and mid-sized companies.

Industrial equipment manufacturers face numerous challenges while meeting customer expectations in terms of on time delivery, quality and costs; Roadmap ERP, facilitate to meet customer demand and ensures timely delivery despite of complex specifications and rapid designs changes.

Seamless integration between Roadmap modules improves forecast accuracy and operational responsiveness to ever changing customer demand. Scheduling & Capacity Planning ensures your production capabilities with material supply. Manage and monitor the scheduled dates of production order operations required to meet the MRP production Order's Scheduled Due Date into Stock.

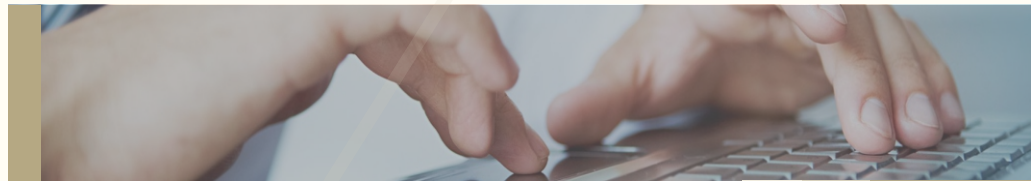
Some of highly important features required by industrial equipment / machinery manufacturer is discussed below.



BOM (Bill of Material)



- ◆ **Routing:** Roadmap Routings define the steps or processes required to assemble and/or manufacture an item on the shop floor or through OS process. Organization often needs to control the issuance of components at specific routing steps in their production process. Routings can be configured in Roadmap to ensure that components are issued to the proper work center as the production work order is released and completed.
- ◆ **Multi-Level Bills of Material (BOM):** Bill-of-materials for Industrial Equipment & Machinery Manufacturers are often multi-level and comprise thousands of components.
- ◆ **Phantom:** Defining bills of materials as phantoms can provide the flexibility to adjust the manufacturing process.
- ◆ **Cost Rollup:** Cost accumulated at each level of BOM and rolled up to Final Assembly.



- ◆ **Mass Update:** Roadmap ERP makes it easy to update BOMs with Mass Add, Copy, and Replace functionality.
- ◆ **ECR & ECN:** Roadmap ERP Equips the organization with an engineering change control system to manage BOM and routing revision changes.
- ◆ **Engineering Routing & BOM:** Supports to define engineering routing and bill of materials.
- ◆ **Configure To Order:** Organization can define configurable model with different variant group, from which user can choose the required configuration to arrive the end product while booking an enquiry.
- ◆ **Variant Groups & Variants:** Roadmap ERP supports define multiple variant groups & variants, and effective use of the same in BOM, purchase, production order etc.
- ◆ **Bill of Resources:** Roadmap ERP supports to define manpower, machine and other resources required in each operation/process of the product routing. Later the same is used for capacity planning and scheduling the resources.

operational efficiency

Marketing

Enquiry Registration: While booking an enquiry user can easily configure required FG from the Configure To Order Model BOM.

Quote preparation: Roadmap ERP picks the price from the FG price list or sums and arrives the price based on the configuration chosen.

Order Conversion: Conversion of quotation to sales order can be easily done by a single click of button.

Individual Planning: This option in sales order enables the user to track order wise material from planning to final dispatch.

Payment Receipt Schedule: Sales Order can be registered along with payment receipt schedule and system driven notification to users when amount becomes due.



Demand Management

Sales Forecast: Organization can generate the sales forecast from the historical transaction by (1) Statistical method (2) Focus Forecasting method.

Forecast Consumption: Actual demand from sales order /customer schedule consumes forecast based on (1) Forward consumption by n days (2) Backward consumption by n days (3) Forward and Back consumption by n days.



Material Requirement Planning (MRP)

- **MRP Run Option:** Planner can run the MRP, Plant/Unit wise, Product group wise, customer group wise. The option can be chosen for the demands are Sales Forecast, Sales Order, customer schedule, project, manual demand, and safety stock. The option can be chosen for the supply are Purchase Request, Purchase Order, Supplier Schedule, Stocks, Production Order etc.
- **Independent /Dependant Demand Planning:** MRP effectively calculates the spares demand from parent product as dependent demand and as independent demand if the spare is entered in sales forecast, sales order, customer schedule, safety stock etc.
- **Material Allocation:** MRP Run allocates free stocks against the sales orders/projects. User may have an option to override the allocation or allocate manually before running MRP.
- **Lot Multiplier:** MRP supports to inflate the net quantity of the items through the following lot multipliers (1) Fixed Lot Size (2) MOQ
- **Excess Material Reporting:** Excess material is notified in the MRP run to take corrective action.
- **Drill down:** Planner can drill down from the net material requirement to the source of demand and analyze.
- **Sales Order / Project Wise Net Material Requirement:** User can view the net material requirement by individual sales order / project.
- **Planned Order Release:** Procurement Orders such as purchase request for the purchase items and production order can be raised from the MRP Release. Planned Orders can be consolidated for specific period and released or released date wise.
- **Capacity Requirement Analysis:** MRP generates resource required for the net material requirement and compares with actual resources available.





Shop Floor

- ▲ **Production Orders:** Production orders are created with or without sales order Reference from MRP Release for the Final Assembly / Subassemblies.
- ▲ **Routing & BOM Copy:** Roadmap Production Orders automatically copies standard routing and bill of material of the item.
- ▲ **Production Suggestion Quantity:** System suggests producible quantity for selected items/production order based on stock availability and item priority.
- ▲ **Sequencing:** System sequences the production orders for scheduling the resources on the following methods (1) CRR (2) EDD (3) SPT (4) STRR
- ▲ **Scheduling:** Organization can effectively schedule the resources (machine & manpower) against the production orders.
- ▲ **Material Issuance & Consumption:** Components issued to a production order (Push/ Pull) is consumed during production order process completion.
- ▲ **Machine / Tool Setting Approval:** User enters the machine & tool setup details and gets approval before production.
- ▲ **Material Swap:** Stocks allocated to one sales order can be reallocated to other sales order with approval.
- ▲ **Outside Process:** Organization can send the raw material/ semi-finished material to subcontractor for outside processing and option to receive the completely processed, partially processed and scrap materials from the subcontractor.
- ▲ **Budget Control:** Budget is fixed for the sales order lines, actual labor, material, and other charges are tracked and visible in real-time. Up-to-date project actual vs. project budget numbers can be compared at any time.
- ▲ **Traceability Report:** Organization can track components serial number/batch number and its purchase/build details from Final Assembly Serial number.
- ▲ **Repair/Rework:** Through Repair/Rework functionality, rejected materials can be repaired, disassembled or scrapped.
- ▲ **Production Monitoring System:** User can track the Final Assembly /Sub assemblies in shop floor by sales order wise, production order number wise, process wise, lot number wise and work center wise.
- ▲ **BOM Revision:** Whenever BOM is changed for the Sales Order referred items, changes will be applied into the production order automatically

Quality

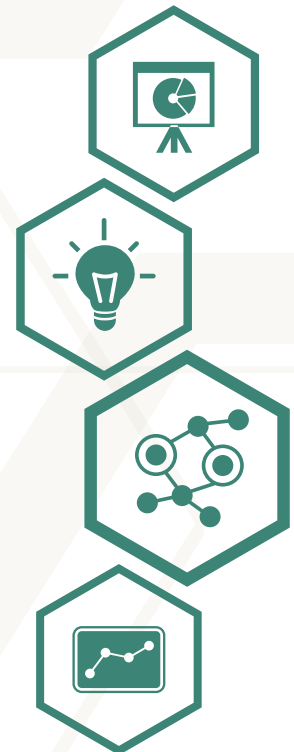
Control



- **Process/operation wise Inspection:** Process/Operation wise QC required option is set at routing and system ensures inspection at the time of production process/operation completion.
- **Final Product Inspection:** Organization can optionally have Final Product Inspection.
- **Pre-Dispatch Inspection:** This kind of inspection normally required before dispatching. FG is stored in separate warehouse, where pre-dispatch inspection is requested, FG is moved to PDI warehouse, upon completion of the warehouse material moved to shipping warehouse from where the material can be invoiced and shipped to customer.

◀ Customer Support

- **Installation Request:** System generates installation request automatically after invoicing.
- **Warranty/AMC Expiry Notification:** System generates alerts for machines whose warranty/AMC is going to expire / expired already.
- **Service Requests:** Easy creation of service request by customers and conversion of Service Requests into Service Orders
- **Track Service Order:** Support manager can track pending service order by Area / territory / sub-territory / Field Executive.
- **Warranty Serial No.:** Easy to track warranty for the spare items and validity period.
- **Supplier Spare Warranty:** Track supplier warranty validity for the defective spares with serial number.
- **Defective Spare Return:** Track defective spares to be returned by the field executives/dealers/distributors.



Roadmap team has done an excellent job in meeting the extremely aggressive time-line for our Business; we are highly pleased with their performance and realize that, they have worked round the clock, to make this happen for us...

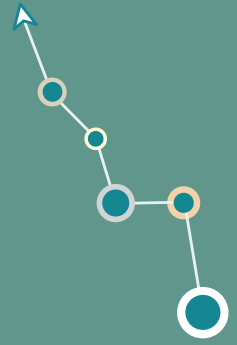
We are very impressed with the ability to deliver what was promised, on budget, and ahead of schedule.



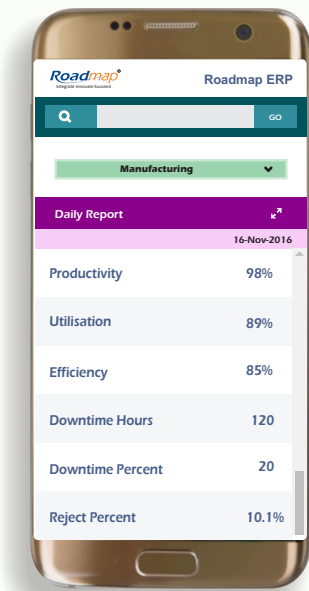
Mr. MANANATHAN
Managing Director, Manatec Electronics

Salient Features

- ◆ **Multi Unit Support (Highly Scalable):** Roadmap ERP supports the organizations having one or multiple plants/units in different locations. The plants/units may produce various finished product, subassemblies or may do specific processes only.
- ◆ Web Enabled software
- ◆ Multi Currency Support
- ◆ Supplier Portals, Customer Portals, Employee Self Service portal, Mobile Approvals
- ◆ Periodical / Perpetual Accounting

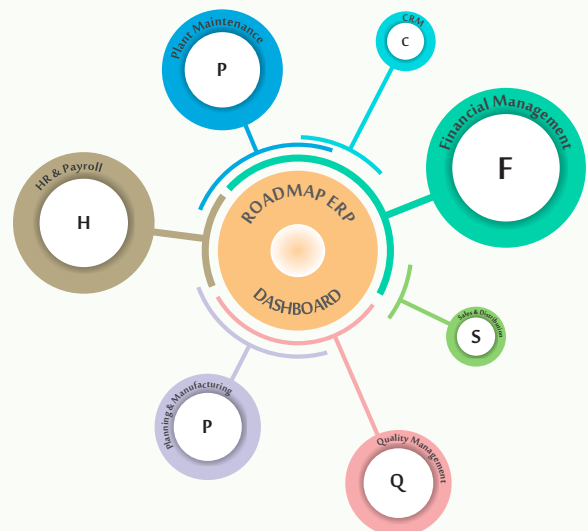


Roadmap ERP DASHBOARDS / KPI



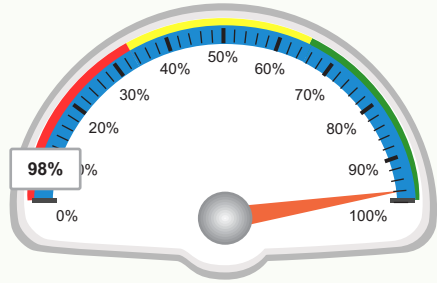
KPI Dashboards are exclusively designed to offer you the complete visibility into the critical information and to have better control over the business processes in your organization; dashboards are powerful enough to convert large volume of data into visual cues that enables you to perform efficient decision making. Key performance indicator (KPI) dashboards in Roadmap ERP software gather critical information from across your business operations and all the way through your database, to present it in a simple format that can be interpret at one glance.

Dashboards, designed for companies to analyze their data, optimize business processes, easily identify issues within the business, and identify opportunities, thereby increase efficiency or revenue which can also be configured in precise to business process. The importance of Roadmap dashboards/KPI is to visualize real time critical information in an easy-to-interpret formats.

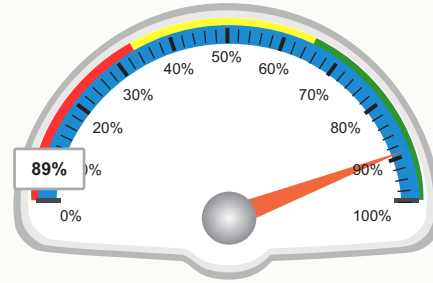




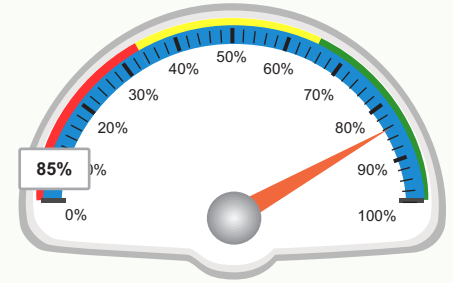
Productivity



Utilisation



Efficiency

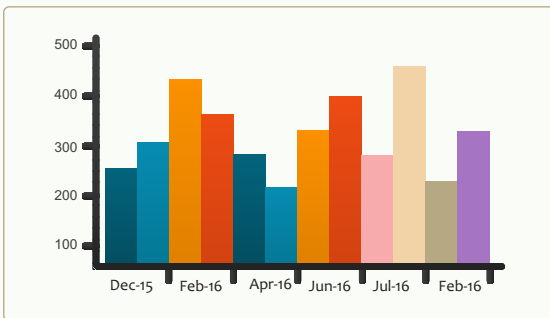


Critical Information

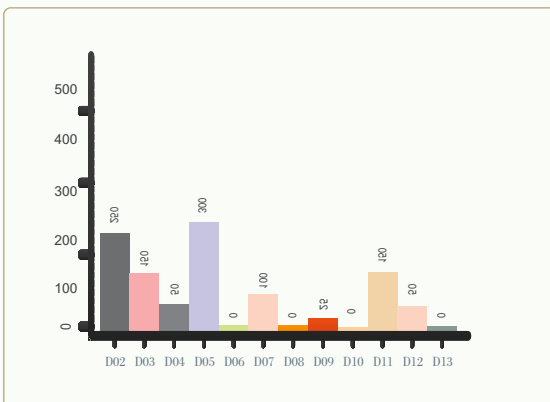
This goes to the heart of measurement systems in general – you must measure those things that are important to the success of the business. Any other measurement, not aligned with company objectives, is likely to drive activities and decisions in the wrong direction. So dashboard KPIs must relate to corporate goals and performance in support of customer service (On-time Delivery, Production Profitability, Orders Booked and Shipped).

Naturally, KPIs will differ based on the nature of the business being measured. A Industrial Equipment manufacturer will be more concerned with the effective utilization of expensive plant and equipment resources (Production Capacity, Efficiency, and Downtime). Top-level executives in a Industrial Equipment manufacturing company will certainly want to watch the same financial indicators that any other manufacturer watches – things like sales, profit, and return on investment. When it comes to operational measurements, the focus will be on meeting schedules, having the right inventories to support production and customer demand, and quality, among others.

No. of Rejections



No. of Defects



A Industrial Equipment / Machinery Manufacturer's dashboard would likely have operational performance indicators for some or all of the following by day, week or month:

- ▲ Productivity
- ▲ Utilisation
- ▲ Efficiency
- ▲ Downtime
- ▲ Scrap by type or cause
- ▲ Current Inventory value
- ▲ Sales Order booking
- ▲ On-time delivery
- ▲ Cash Flow

Easy to Interpret

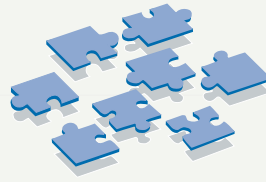
Roadmap Dashboard/KPI's are to quickly identify of anything that may need attention and the point is to quickly eliminate any concerns about aspects of the business that are performing properly and allow the executive to focus on where their attention is really needed without having to run multiple reports or even log into the business solutions software.

Busy executives will have less time to dig into the ERP system to track performance and analyze the business – nor should they have to. Roadmap dashboard summarizes and displays relevant information that allows the executive to 1) Configure their independent dashboard highlighting their most relevant KPI's and 2) focus quickly on the overall operations of the business and where his or her attention is most needed – and can do best.

Properly defined Roadmap KPIs can provide early warning of developing situations and help companies prevent serious challenges by alerting decision-makers to the opportunities to avert a problem before it hurts customer service, sales or profit.

Roadmap Dashboards thus allow companies to easily analyze data and identify potential gaps or opportunities within the business.

MODULES



Financial Management

- General Ledger Management
- Accounts Payables Management
- Accounts Receivables Management
- Cash Management
- Fixed Assets Management
- Taxation

Quality Management

- Inspection
- SPC
- Auditing
- MSA

Planning & Manufacturing

- Routing
- Bill of Material (BOM)
- Demand Management
- Master Production Schedule
- Material Requirement Planning
- Manufacturing Resource Planning
- Shop Floor Control (SFC)
- Manufacturing Schedule

Sales & Distribution

- Inventory Control Management
- Purchase Order Management
- Subcontract Order Management
- Gate Entry Management
- Transportation
- Sales Order Management

HR / Payroll

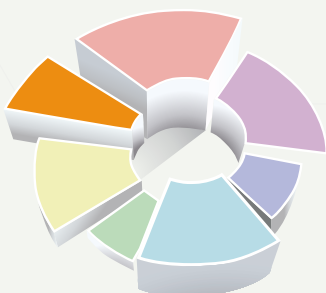
- HR-Employee Portfolio
- HR-Leave & Time Management
- HR-Loan Management
- HR-Payroll

Add-on modules

- Plant Maintenance
- Engineering R & D
- Project Management
- Cost Management
- CRM

Mobile Apps

- Supplier Portal
- Customer Portal
- Workflow Approval
- Marketing CRM
- Employee Attendance
- Employee Self Service Portal



INDUSTRY VERTICALS

- Industrial Equipment / Machinery Manufacturers
- Aluminum Die Casting Industries
- Iron Casting Manufacturer
- Plastics Manufacturer/Injection Molding
- Sheet Metal Industries
- Ferro Alloys Manufacturers
- Cast Alloys Manufacturers
- Lead Alloys Manufacturers
- Tools & Dies Manufacturers
- Auto Component Manufacturers
- Valves Manufacturer
- Electrical Panel Manufacturer
- UPS Manufacturers
- Food Products Manufacturers
- Cosmetics Manufacturers
- Bi-Metal Bearing Manufacturers
- Gelatine Manufacturers
- Garments Manufacturers
- Heat Exchanger Manufacturer
- Façade Industries
- Carbon Manufacturers
- Pump Industries
- Packing Industries
- Spinning Industries

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