



MATERIAL REQUIREMENTS PLANNING

Qmuzik material requirements planning (MRP) is an extremely feature-rich and powerful planning tool. MRP dynamically plans to balance supply and demand as per predefined lot sizing policies, lead-times, contract requirements, shelf life expiration and quality requirements.

MRP considers demand from the sales forecast, open sales orders for products, spare parts and customer specials and- repairs, internal requirements for maintenance and equipment refurbishment, project requirements, subcontracted purchase orders, safety stock levels and stock requisitions.

MRP provides excellent multi-level pegging to the source of demand and identifies pegs and retains stock allocation and stock ownership of customers and projects during its projected-available and balancing process.

It has the ability to perform discrete contract- and project planning where contracts and projects have specific bills of material, routings, make/buy decisions, customer furnished item requirements and sourcing rules. It provides dynamic workbenches for materials planners, production planners and buyers to analyse supply and demand, to act on order release and rescheduling and to meet inventory turnover goals and minimize excess stock and obsolescence. MRP provides for multiple what-if simulations and MRP runs can be executed real-time in normal working hours.



Some special features of Qmuzik MRP include:

- **Real-time** – Qmuzik supply chain activities constantly informs planners and buyers of unplanned events via mail prompts. These events may include stock adjustments, scrap, quarantine, new sales demand, engineering changes and others that may drastically cause an imbalance in supply and demand and threaten cost- and delivery targets. The MRP tools provide real-time, online MRP runs (for selective parts or Global) to be performed to immediately analyse the impact and the actions to be launched as required.
- **Discrete project planning** – Qmuzik ERP allows for the specifying of contract- and project specific rules, priorities and tactics. These may extend to contract-specific bills of material, routings, make-buy decisions, substitution rules, QA and test piece requirements, customer furnished items per contract, and sourcing rules enforcing the use of customer approved suppliers or OEM suppliers only and many others.
- **Order splitting and auto-release** – Qmuzik MRP makes extensive provision for Supplier catalogues which also accommodates pre-negotiated pricing with your suppliers where the negotiated terms and conditions, lot sizing rules, lead-time, data-based prices and discount per item can be specified. Where contracts were negotiated as such, automatic call-off against the contract can be made by MRP with recognition of the predefined preferences and via the auto-releasing of orders to a supplier. Settings also allow for the auto-splitting of planned purchase orders between suppliers as per user-defined ratios and preferences.
- **Simulation capability** – Qmuzik ERP allows for multiple simulation scenarios. These may serve the purpose to assist in quotes and deliver-to-promise analysis, to test forecast feasibility in terms of material availability and shop floor capacity, to analyse the impact of contract cancellations, supply interruptions, major engineering changes or new product releases.
- **Order operations and shop floor load** – Qmuzik ERP provides the option to auto-create order operations for planned replenishment orders within a specified horizon. This provides future visibility of shop floor load versus shop floor capacity and thus allows advance planning to reschedule, to increase capacity or to time the downtime of machinery and equipment for maintenance or upgrades.
- **Work benches** – Qmuzik ERP provides multiple workbenches in all areas of the supply chain (Procurement, Production, Sales, Maintenance, Engineering) to analyse inventory, to identify and act on planned order releases, rescheduling, cancellation of excess on order, as well as detailed and graphical supply and demand analysis. This includes shortage checking, identification of standard items and substitute items that may be applied, shelf life expiry details and extension options, quality - and quarantine analysis and many more.