Case Study: Materials Requirements Planning (MRP) Saves the Day

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Overview

▸ Review Planning Systems
▸ The Situation
▸ The Implementation
The Planning Systems

- MPS
  - Master Production Scheduling
- MRP
  - Materials Requirements Planning
Key Concepts

- Production Plan (Forecast)
- Forecast Netted
- Cumulative MPS
- Time Fence
- Order Parameters
- Planning Item
- Runs before MRP – Drives MRP
MRP

Key Concepts

- Demand and Order Parameter Driven
- No Forecast
- “Black Box” Planning System
- Simple Hands Off
MRP

Key Concepts

- Supply
- Demand
- Availability
- Lead Times
- Planned Orders
- Order Release
- Make or Buy
- Item Order Modifiers (Item Site Settings)
Item Site Settings

- Order Parameters
  - MRP honor item site order parameters:
    - Reorder Point
    - Outer Up To
    - Minimum
    - Maximum
    - Order Multiple
    - Safety Stock
    - Lead Time
The Situation

- Small rapidly growing company
- Assemble to order (same/next day shipping)
- Competes on
  - Service
  - Speed
  - Wide variety of products
- Few finished products held in stock
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The Implementation

- Core subassemblies and component held in stock
- Sales Orders generate work orders
- MRP ensures that stock is available to build final products as they are ordered
  - xTuple Connect nightly job
  - Purchasing Manager and Shop Supervisor collaborate through MRP advice
- Significant attention given to inventory / BOM accuracy
- Utilities used to determine ROPs and OUT levels
The Payoff and The Future

- Lower inventory levels
- Higher service levels
- Forecasts end items that drive buying plan for long lead time lower level items
Thank you for attending

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