# 15 Minute Tip Talk – June 7, 2018
# MRP 101

**Background**

SAP Business One provides the Material Requirements Planning (MRP) module to help you plan inventory effectively so that components are available for production and products are available for sales when and where they are needed without having to keep overly high stock levels.  MRP compares future demand for items against the item quantity in stock and the planned supply from purchasing, producing, or transferring those items to meet the demand.

The function of MRP recommendations can be simplified using the following formula:
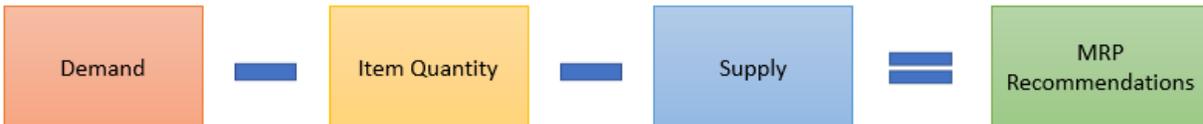


The sources of demand and supply can be summarized as follows:

| Demand | Supply |
| --- | --- |
| Sales Order | Purchase Order |
| Sales Blanket Agreement | Purchase Blanket Agreement |
| Reserve Invoice | Production Order (for parent items of a BoM) |
| Recurring Order Transactions | Inventory Transfer Request |
| Forecast | |
| Production Order (for child items of BoMs) | |
| Defined Inventory Levels* | |
| Inventory Transfer Request | |

*Defined inventory levels are set in the item master data and include minimum, maximum, and required inventory levels.*

Based on these sources of supply and demand, MRP will generate recommendations to:

**Buy**
- Purchase Order
- Purchase Request

**Transfer**
- Inventory Transfer Request

**Make**
- Production Order

**Item Master Data Settings**



For MRP to be able to generate recommendations for as item, the planning method must be set to MRP in Item Master Data. The Procurement Method field determines whether MRP will recommend a purchasing document or a production order. If you select Make without creating a Bill of Materials for the item, you will not be able to add the production order.

The timing and quantity of recommendations are also affected by the following fields:

| Quantity | Timing |
|---|---|
| Order Multiple (Planning Data) | Order Interval (Planning Data) |
| Minimum Order Quantity (Planning Data) | Lead Time (Planning Data) |
| Required (Inventory Data) | Tolerance Days (Planning Data) |
| Minimum (Inventory Data) | |
| Maximum (Inventory Data) | |

## MRP Wizard

Remember that the function of the MRP is to generate orders to satisfy the following:
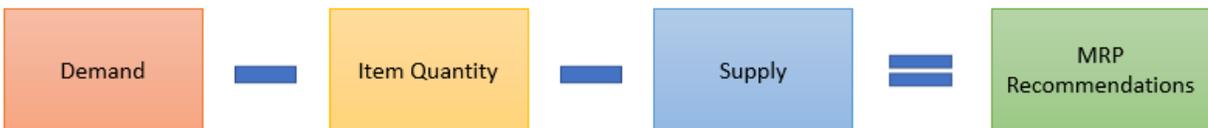


The MRP Wizard allows you to create and select a scenario to define which items for which you would like to generate recommendations as well as the planning horizon and display preferences.

**MRP Wizard**

## Scenario Selection

To run an existing scenario, select "Select Existing Scenario". If you select "Create New Scenario", enter a unique name for the scenario.

- ⦿ Create New Scenario
- ○ Select Existing Scenario

| | |
|---|---|
| Scenario Name | Printers |
| Description | Printers |

**MRP Wizard - Printers**

## Scenario Details

Define the planning horizon that you want to display in the MRP report.

| | |
|---|---|
| Description | Printers |

Planning Horizon

| | | |
|---|---|---|
| Start Date | 06/01/2018 | |
| End Date | 06/30/2018 | |
| View Data in Periods Of | 1 | Days ▼ |
| Planning Horizon Length | 30 | Days |

| Consider Holidays For | ☑ Production Items |
|---|---|
| | ☑ Purchase Items |

☐ Ignore Cumulative Lead Time

Display Preferences

| Sort By | Assembly Sequence ▼ |
|---|---|

☑ Display Items with No Requirements
☐ Display Selected Items Only
☐ Simulation

**MRP Wizard - Printers**

**Item Selection**

To plan material requirements for all items with the planning method "MRP", select "All Items". To plan the requirements of specific items, select "Selected Items" and choose the "Add Items" button.

Item Selection
- ○ All Items
- ⊙ Selected Items

| # | Item No. | Item Description |
|---|----------|------------------|
| 1 | A00001 | J.B. Officeprint 14205 |
| 2 | A00002 | J.B. Officeprint 1111 |
| 3 | A00003 | J.B. Officeprint 1186 |
| 4 | LM4029PS | LeMon 4029 Printer Power Supply |

You can also select the locations for which you would like to run MRP:

**MRP Wizard - Printers**

**Inventory Data Source**

Define which storage locations and warehouse as well as which sources of demand and supply to include in the MRP run.

Run By
- ○ Company - Consolidate existing inventory, demand, and supply into default warehouse only.
- ⊙ Warehouse - Include existing inventory, demand, and supply separately for each warehouse.

Include Data Source

| Include Existing Inventory | Include Demand | Include Supply | Location | Warehouse Code | Warehouse Name |
|:---:|:---:|:---:|---|---|---|
| ✔ | ✔ | ✔ | ▼ | | |
| ✔ | ✔ | ✔ | | 05 | Reserve Warehouse |
| ✔ | ✔ | ✔ | | 06 | Showroom Warehouse |
| ☐ | ☐ | ☐ | ▼ New York | | |
| ✔ | ✔ | ✔ | | 01 | General Warehouse |
| ☐ | ☐ | ☐ | | 03 | Dropship Warehouse |
| ✔ | ✔ | ✔ | | 04 | Consignmentl Warehouse |
| ✔ | ✔ | ✔ | ▼ Los Angeles | | |
| ✔ | ✔ | ✔ | | 02 | West Coast Warehouse |

In the final selection screen, you can select the time horizon for which to run MRP, sources of supply and demand, as well as the target document types for order recommendations:

**MRP Results**

Running MRP will generate a report containing the results as well as recommendations. In the Report tab, you will be able to see sources of demand or supply (including recommendations) for a particular day within the planning horizon:

If there are potentially unfulfilled sources of demand, SAP will generate order recommendations in the Recommendations tab:



Note: if you have sufficient quantities to fulfill the sources of demand within the selected scenario, the system will generate any recommendations.

If you would like to add those orders, click Save Recommendations.

**Order Recommendation**

To add the orders that MRP has recommended, navigate to MRP > Order Recommendation

In the Order Recommendation – Selection Criteria window, you must select the scenario which generated the recommendations. You may also filter the order recommendations by document type.
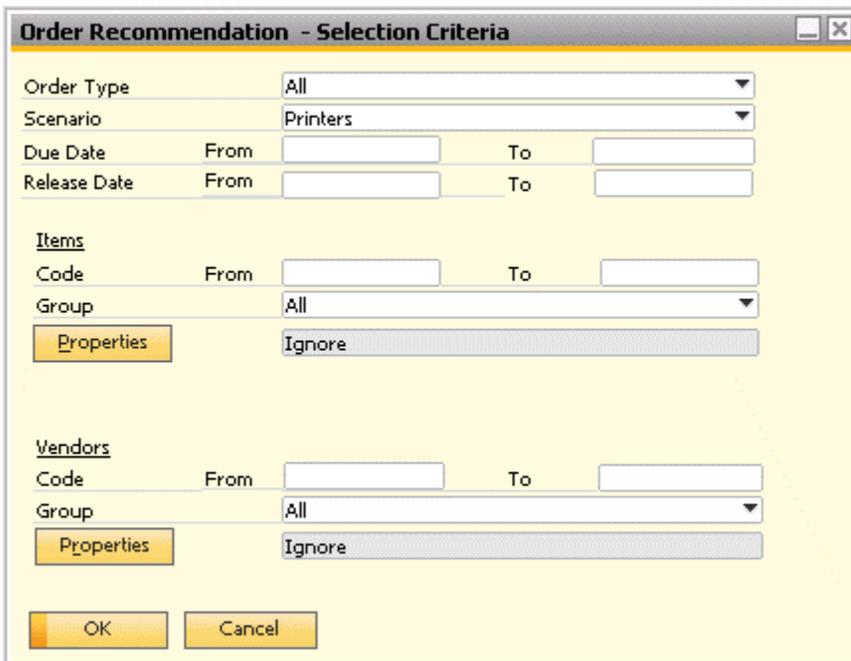


Upon hitting OK, the system will display the recommendations from the selected MRP run. You can select the checkboxes for the corresponding recommendations and click Update to generate the documents:

## Order Recommendation

| | Create | Order Type | Item Number | Item Description | Quantity | UoM Name |
|---|---|---|---|---|---|---|
| | | Planning Horizon 06/01/2018 - 06/30/2018 | | Calculated At | 06/06/2018 14:35 | |
| | | Find Item No. | | | | |
| 1 | ☑ | Production Order ▼ ⇨ | LM4029 | LeMon 4029 Printer | 33 | |
| 2 | ☑ | Inventory Transfer ▼ ⇨ | LM4029MC | Memory Chip | 16 | |

[ Update ]   [ Cancel ]

**Summary**

MRP assists you in planning material requirements for items by processing the demand, supply and item quantity. The demand for the items is derived from sales documents, forecasts, production orders (for component items), defined inventory levels, and inventory transfer requests. Sources of supply include purchase orders, production orders (for parent items), and purchase blanket agreements. Running the MRP wizard results in MRP recommendations for unmet needs. These recommendations can take the shape of purchase orders, purchase requests, inventory transfer requests, and production orders.

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