Production Planning

Lesson 14 : Production Planning Overview

Lesson Objectives

Objectives -On successful completion of this training
module, you should have:

- Understood the basics of how SAP PP Module
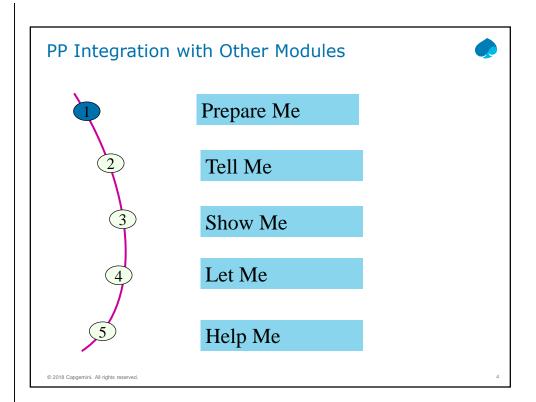 Integrated with other logistic modules
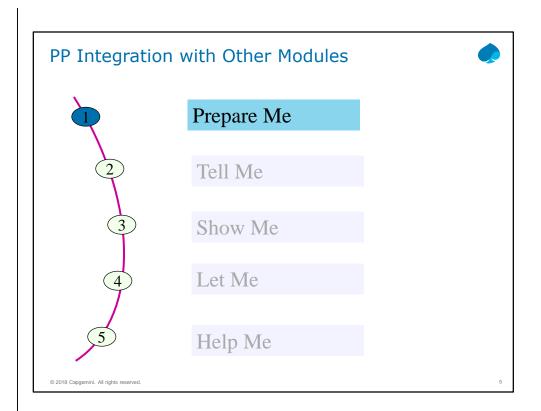
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Training Agenda

- SAP PP Integrated with other logistic modules

- Logistics Process Flow

- SAP PP-QM Integration

- SAP PP-MM Integration

- SAP PP-SD Integration

- Cross Functional Transactional Codes

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Add instructor notes here.

PP Integration with Other Modules

1 — Prepare Me

2 — Tell Me

3 — Show Me

4 — Let Me

5 — Help Me

4

PP Integration with Other Modules

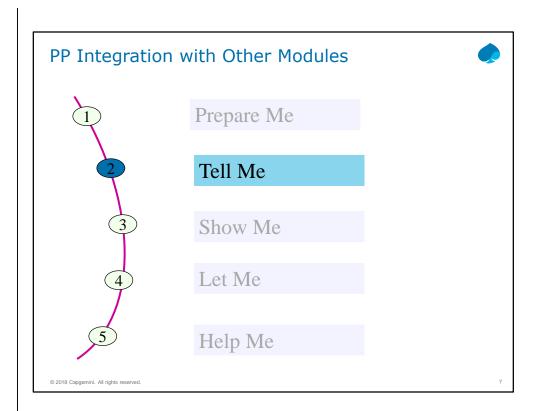|	
1	**Prepare Me**
2	Tell Me
3	Show Me
4	Let Me
5	Help Me

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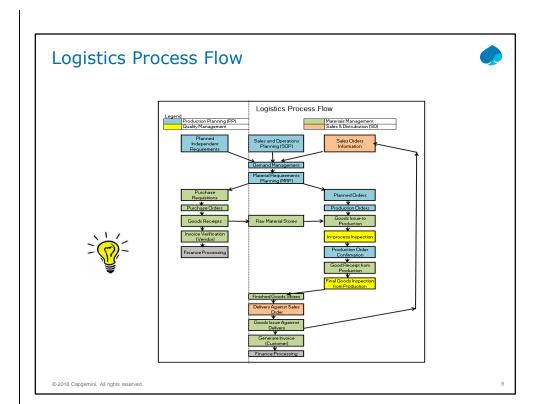
Prepare Me

- SAP PP integrated with other logistics modules like
  - Quality Management (QM)
  - Materials Management (MM)
  - Sales and Distribution (SD)

- SAP PP Integration with Controlling (CO) modules is separately covered in other session

- SAP PP also integrated with Plant Maintenance (PM) and Project Systems (PS)

- Cross module integration is maintained as customization data and master data in related modules

- Some transactions will automatically update transactional data in different cross module objects.

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PP Integration with Other Modules

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4 Let Me

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Logistics Process Flow

Logistics Process Flow

Legend
- Production Planning (PP)
- Quality Management
- Materials Management
- Sales & Distrubution (SD)

- Planned Independent Requirements
- Sales and Operations Planning (SOP)
- Sales Orders Information
- Demand Management
- Material Requirements Planning (MRP)
- Purchase Requisitions
- Purchase Orders
- Goods Receipts
- Invoice Verification (Vendor)
- Finance Processing
- Raw Material Stores
- Planned Orders
- Production Orders
- Goods Issue to Production
- In-process Inspection
- Production Order Confirmation
- Good Receipt from Production
- Final Goods Inspection from Production
- Finished Goods Stores
- Delivery Against Sales Order
- Goods Issue Agaisnst Delivery
- Generate Invoice (Customer)
- Finance Processing

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SAP PP-QM Integration

Integration Points: In-process Inspection

▪ Inspection specifications are maintained in material routing (PP Master Data) and inspection type "03" activated in material master
▪ In-process Inspection lot is created for each production order while releasing it
▪ Inspection observations, test results are stored in inspection lot
▪ Inspection observations, test results can be collected against various field combinations
▪ The field combinations can be day, shift number, operator number, machine number, bin number etc
▪ Quality department can restrict some of production functions if actual test results are out of specifications
▪ Goods movements cannot be controlled via in-process inspection lots
▪ After all test results are completed usage decision is made for the inspection lot

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SAP PP-QM Integration

Integration Points: Final Inspection From production

- Inspection specifications are maintained in inspection plan(QM Master Data) and inspection type "04" activated in material master
- In-process Inspection lot is created for each production order during goods receipt
- Inspection observations, test results are stored in inspection lot
- Inspection observations, test results can be collected against various field combinations
- The field combinations can be day, shift number, operator number, machine number, bin number, sample number etc
- Quality department can restrict material movements (like move to blocked stock) if actual test results are out of specifications
- Goods movements can be controlled via these inspection lots
- After all test results are completed usage decision is made for the inspection lot

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SAP PP-MM Integration

Integration Points: Procurement

▪ Procurement related master data maintained in material master (MRP2)

▪ Purchase Requisitions (Request to procure materials or services) are created by MRP or manually

▪ Planned orders can also be converted to purchase requisitions

▪ External operations in routing are integrated with procurement

▪ Lot size procedure integrated with procurement

▪ Sub contracting process is integrated with PP

▪ Consignment process is integrated with PP

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SAP PP-MM Integration

Integration Points: Goods Issue to Production

- Components required for production order are issued from inventory
- Material Reservations are created for production order components
- Goods issue can be executed manual or automatic.
- Partial goods issues also can be performed
- Goods issue can be executed against single or multiple production orders at a time
- Material documents generated for all goods issues
- A material document can contain multiple goods issue line items
- Additional components can be issued to production order manually
- Batch determination of production order components is integrated with inventory management
- Movement type for goods issue from inventory to production order is "261"
- Back-flushing (Transaction MFBF) can be used for goods issue in some cases.

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SAP PP-MM Integration

Integration Points: Goods Receipts from Production

- Goods receipts are performed final products from production to inventory
- Goods receipts can be manual or automatics
- Goods receipts can be executed against single or multiple production orders at a time
- Material documents generated for all goods receipts
- A material document can contain multiple goods receipts line items
- Movement type for goods issue from production order to inventory is "101"
- Back-flushing (Transaction MFBF) can be used for goods receipt some cases.
- If quality inspection for final inspection from production is active for the final product, material can be moved to blocked stock instead of un-restricted stock

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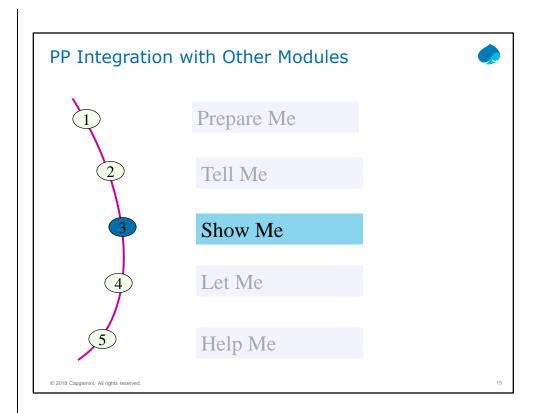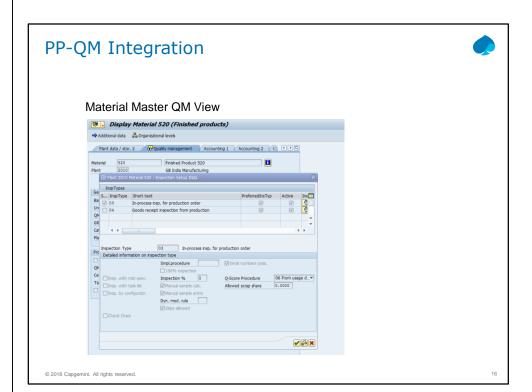
SAP PP-SD Integration
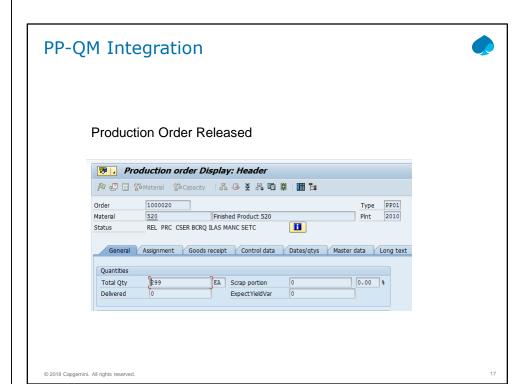
Integration Points:
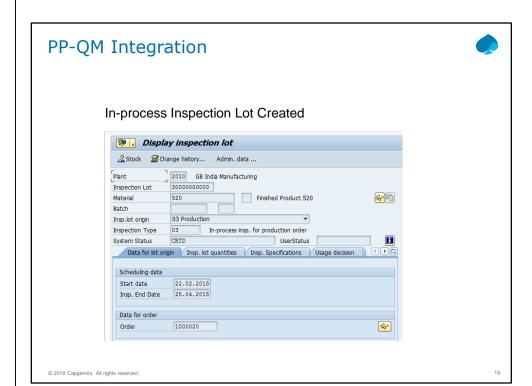
▪ Creation of sales order & sales requirements impacts material requirements planning

▪ Delivery against sales order impacts material requirements planning

▪ In make to order production (MTO), production order is created with reference to sales order

▪ Material availability check can be performed against sales orders

▪ Specifications from sales orders are transferred to production in case of variant configuration products

▪ In case MTO planning strategies without final assembly, sales order creation impacts planned order to production order conversion.

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PP Integration with Other Modules

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PP-QM Integration

Material Master QM View

PP-QM Integration

Production Order Released

PP-QM Integration

In-process Inspection Lot Created

Display inspection lot

Stock Change history... Admin. data ...

Plant	2010	GB India Manufacturing
Inspection Lot	30000000000	
Material	520	Finished Product 520
Batch		
Insp.lot origin	03 Production	
Inspection Type	03	In-process insp. for production order
System Status	CRTD	UserStatus

Data for lot origin | Insp. lot quantities | Insp. Specifications | Usage decision

Scheduling data

Start date	22.02.2015
Insp. End Date	25.04.2015

Data for order

Order	1000020

PP-QM Integration

Goods Receipt from Production Executed

Display inspection lot

Stock | Change history... | Admin. data ... | Acc.assgnmt... | Material documents...

Plant	2010	GB India Manufacturing
Inspection Lot	40000000001	
Material	520	Finished Product 520
Batch	0000000021	0001
Insp.lot origin	04 Goods Receipt from Production	
Inspection Type	04	Goods receipt inspection from production
System Status	REL CALC SPRQ	UserStatus

Tabs: Data for lot origin | Insp. lot quantities | Insp. Specifications | Usage decision

Scheduling data

Start date	22.02.2015
Insp. End Date	22.02.2015

Data for goods receipt

Material Doc.	5000000303	Item	1	PlantStock	2010

Data for order

Order	1000020

PP-QM Integration

Inspection Lot for GR from Production Created

PP-MM Integration

Procurement Data in Material Master

PP-MM Integration

Material Reservations against Production Order
Components

Stock/Requirements List as of 08:29 Hrs

Show Overview Tree | 🔍 🔁 🔽 🔁 🔽

Material	518		MS Fastners				
MRP area	2010		GB India Manufacturing				
Plant	2010	MRP type	PD	Material Type	ROH	Unit	KG

A.. Date	MRP ...	MRP element data	Rescheduli...	E..	Rec./reqd.qty	Available qty
22.02.2015	Stock					21
12.12.2014	OrdRes	520			0.100−	20.900
22.02.2015	OrdRes	520			2.990−	17.910

Additional Data for MRP Element

Reservation	0000000182	0002	Reqmt Date	22.02.2015	DKey	
Reqmt Qty	2.990	KG	Latest req.date	25.04.2015		
Pegged reqmt	520	Finished Product 520				
ProdOrder	1000020	Oper./Act.	0010			

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PP-MM Integration

Material Document-Goods Issue Against Production Order

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PP-MM Integration

Material Document-Goods Receipt Against Production Order

PP-SD Integration

Sales Order for Make To Order Production

Display Standard Order 27: Overview

Standard Order	27	Net value		50,000.00	USD
Sold-to party	100010	MILLION AIR / 8501 Telephone Rd / Houston 77061			
Ship-to party	100010	MILLION AIR / 8501 Telephone Rd / Houston 77061			
PO Number	20150222	PO date	01.02.2015		

Sales | Item overview | Item detail | Ordering party | Procurement | Shipping | Reason for rejection

All items

Item	Material	Plnt	Confirmed Qty	SU	Mat.Av.Dt.	SLCa	RqTy	I.	A	D	Delivery D...	N.	ATP quantity	Loading D...	Route	P..	D..
10	520	2010	0	EA	23.02.2015	CP	KEB			D	23.02.2015	☑	0	23.02.2015			0
			500	EA	09.03.2015	CP				D	09.03.2015	☑		09.03.2015			

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PP-SD Integration

Production Order for Make To Order Production

Production order Display: Header					
Order	1000021			Type	PP01
Material	520	Finished Product 520		Plnt	2010
Status	CRTD PRC CSER BCRQ MANC SETC				

General | Assignment | Goods receipt | Control data | Dates/qtys | Master data | Long text | Administration

Quantities

Total Qty	500	EA	Scrap portion	0	0.00 %
Delivered	0		ExpectYieldVar	0	

Dates

	BasicDates		Scheduled		Confirmd
Finish	07.06.2015	00:00	06.06.2015	09:00	
Start	22.02.2015	00:00	22.02.2015	00:00	00:00
Release			20.02.2015		

Sales Order

Sales Order	27	10	0	G.DelDate	23.02.2015	1.del.dat	09.03.2015
Ordering prty	100010	MILLION AIR				Houston	

PP-SD Integration

Stock Requirements List in Make To Order Production

PP-SD Integration
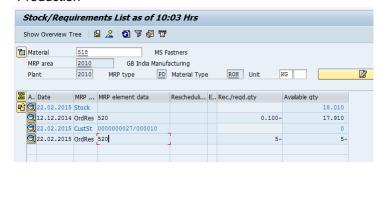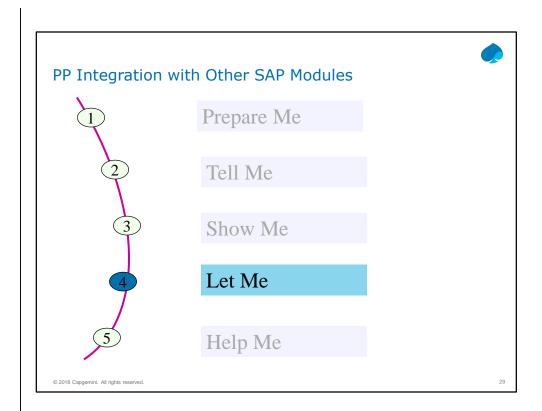
Stock Requirements List of Components in Make To Order Production

Stock/Requirements List as of 10:03 Hrs

Show Overview Tree | 🔲 🔏 | 🔁 ☷ 🔳 🔳

Material	518		MS Fastners				
MRP area	2010		GB India Manufacturing				
Plant	2010	MRP type	PD	Material Type	ROH	Unit	KG

A..	Date	MRP ...	MRP element data	Rescheduli...	E..	Rec./reqd.qty	Available qty
	22.02.2015	Stock					18.010
	12.12.2014	OrdRes	520			0.100-	17.910
	22.02.2015	CustSt	0000000027/000010				0
	22.02.2015	OrdRes	520			5-	5-

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PP Integration with Other SAP Modules

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Let Me SAP PP-QM Integration

- MM02-Activate In-process Inspection Type "03"

- MM03-Activate GR from Production Inspection Type "04"

- CO01-Create Production Order

- CO02-Release Production Order

- QA33-Display In-process Inspection Lot type "03"

- MIGO-Perform Goods Receipt for Production Order
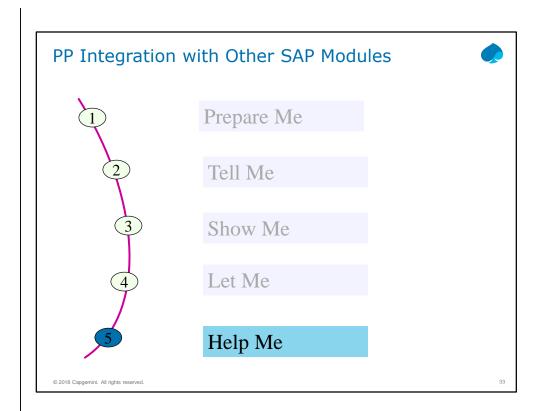
- QA33-Display GR from Production Inspection Lot type "04"

Let Me SAP PP-MM Integration

- MM02-Activate Procurement Data in MRP2 view

- CO01- Create Production Order

- CO02-Release Production Order

- MD04- Display Reservations for Components

- MIGO-Goods Issue for Production Order-Movement Type-261

- MIGO-Display Goods Issue Document

- CK11N-Confirm Production Order

- MIGO-Goods Receipt for Production Order-Movement Type-101

- MIGO-Display Goods Receipt Document

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Let Me SAP PP-SD Integration

- MM02-Activate Sales Data in Sales Views

- VA01-Create Standard Sales Order with Requirement Type Make to Stock

- CO08- Create Production Order with reference to above Sales Order

- CO03-Release Production Order

- MD04- Display Stock & Requirements List

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PP Integration with Other SAP Modules

1. Prepare Me

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5. **Help Me**

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Cross Functional Transaction Codes

- MM02-Activate Data in Sales Views
- MM02-Activate Inspection Type "03" and "04" in   Quality Management View
- QP03- Display Inspection Plan
- QA03-Display Inspection Lot
- QA33-Display Quality Management Work List
- MMBE-Stock Overview
- ME51N-Create Purchase Requisition
- ME21N- Create Purchase Order
- MIGO-Goods Movements (All Types)
- MB51- Material Documents List
- VA01- Create Sales Order