Using Oracle ASCP Engine in Developing a Successful Global Sourcing Strategy





Agenda

- Introduction
 - Global Supply Chain Management
 - Advanced Supply Chain Planning (ASCP)
 Demand and Supply
 Planners Workbench
 - Other Production Procurement Modules
 Purchasing and e-Commerce Gateway
 iSupplier and iProcurement
 The "Virtual MRB" using Oracle Quality
 - Question & Answer







Paul Kirch Qualifications

- B.A. Spanish/ Economics from Dartmouth College
- Certificate, European Studies, the University of Coimbra, Portugal
- MBA in International Finance; CPA (licensed in the State of Maryland); Stanford's "Global Supply Chain Management" program; CFA candidate.
- 7 years experience with the Big 4 and 5 years experience with Oracle Consulting as a Practice Manager in Oracle's global consulting practice
- Director, Oracle Consulting at The Hackett Group
- More than 5 years experience living and working "in-country" in Europe, the Middle East, North and South America, and Asia
- More than 12 years experience with Oracle applications and more than 15 years experience in consulting. 20 years experience overall





Agenda

Answerthink

- Introduction
- Global Supply Chain Management
- Advanced Supply Chain Planning (ASCP) Demand and Supply
 - **Planners Workbench**
- Other Production Procurement Modules
 Purchasing and e-Commerce Gateway
 iSupplier and iProcurement
 The "Virtual MRB" using Oracle Quality
- Best Practices Applied
- Question & Answer





Global Supply Chain Context

• A Supply Chain describes the facilities and systems that support the flow of information between a company and it's suppliers – and their suppliers – and itself; as well as the flow of information between a company and it's customers

• As supply chains become more global, companies find themselves challenged managing sales, manufacturing and distribution across companies and region

• The typical multinational looks like this:

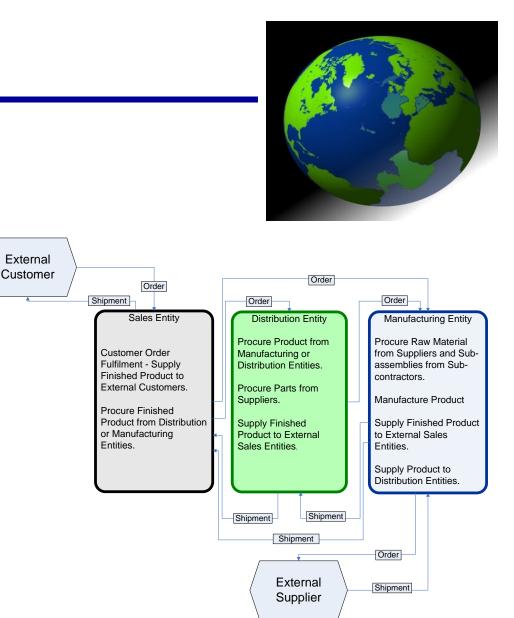
Sales entities	Distribution Entities	Manufacturing Entities
North America	Houston	
Mexico		San Luis Potosi
UK/Mechelen	Big Blue	Stamford
	Mechelen	
Norway	Oslo	
Italy	Milan	
Spain	Madrid	
Dreieich		Ingolstadt
		Craiova
India		Ahmednagar
Singapore	Singapore	
Australia	Australia	
China		Wuxi





Definition of Terms

- A company's operations may be divided into sales, distribution and manufacturing operations
- Sometimes these operations can be found within one facility, oftentimes for the modern MNC, these facilities are scattered around the world



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Global Supply Chain Issues

• How do you manage reliable delivery lead times to the customers, in the face of varying supply lead times from factory?

• How do you manage inventory required to respond to fluctuating customer demand, so that the inventory is available when you need it, but it is not necessarily "on the books"?

• How do you provide supply chain visibility to internal and external supply chain partners?

• How can you automate the entire Supply Chain process from initial Sourcing through PO generation, material receipt, quality inspection, to create the "touchless PO" (Cisco) or "virtual supply chain" (Qualcomm)?





Identification of "Push" vs. "Pull" Point

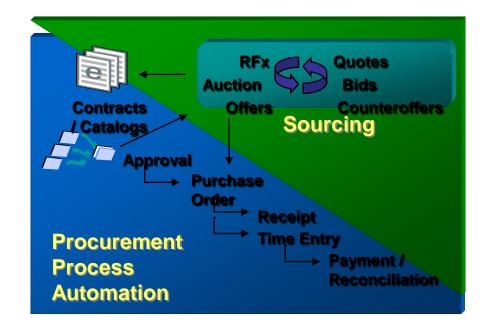
FROM:	ТО:
Predominately "Push"	"Pull" from the Customer
Build to Stock	Kanbans (mostly), Safety Stock Demand Triggers
Sales/ Manu disconnected	Sales forecast drives Manu
Poor Information Flow	Defined Information Flow
Complex Processes	Simplified Processes
McDonalds "We do it for you"	Wendy's "We do it your way"

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Global Supply Chain Management

- Oracle Sourcing module works in tandem with Oracle Procurement
- Once a supplier has been identified and the contract negotiated, the relationship with the supplier is maintained through the Approved Supplier List (ASL) functionality in Oracle
- Oracle Sourcing allows users to:
 - Source globally
 - Conduct auctions on-line
 - Rank responses
 - Qualify winner
 - Negotiate contracts







Global Supply Chain Management

Assess Needs

- Identify opportunity
- Establish sourcing strategy

Gather Info

- Identify sources
- Qualify supplier
- Develop Bidder's List

Optimize Decisions

- Weight attributes
- Rank bids
- Evaluate scores

Evaluate

Analyze / Develop

Qualify

Award

Develop Requirements

- Gather Specifications
- Define key attributes
- Aggregate items & services

Manage RFx

Define rules of engagement

egotiate 🗡

- Initiate negotiation
- Receive Responses

Award

- Determine winner
- Notify participants
- Send POs/Contracts

Monitor Supplier Performance

- Price, quality, delivery, service
- Basis for new supply decisions





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 The "Virtual MRB" using Oracle Quality
- Question & Answer



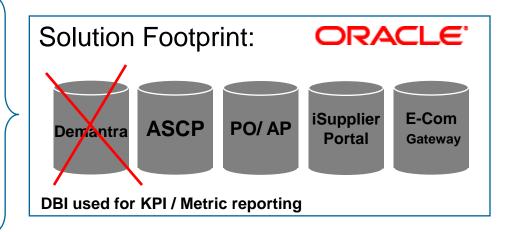




Functional Footprint

- Demand driven by forecasts and Sales Orders
- Business Process: Demand drops into the Planners Workbench, Planners route "make" orders to the Shop Floor Control System and Buyers "buy" items to the supplier; PO's are created and transmitted to Suppliers via EDI
- Entire production procurement process is automated, end-to-end

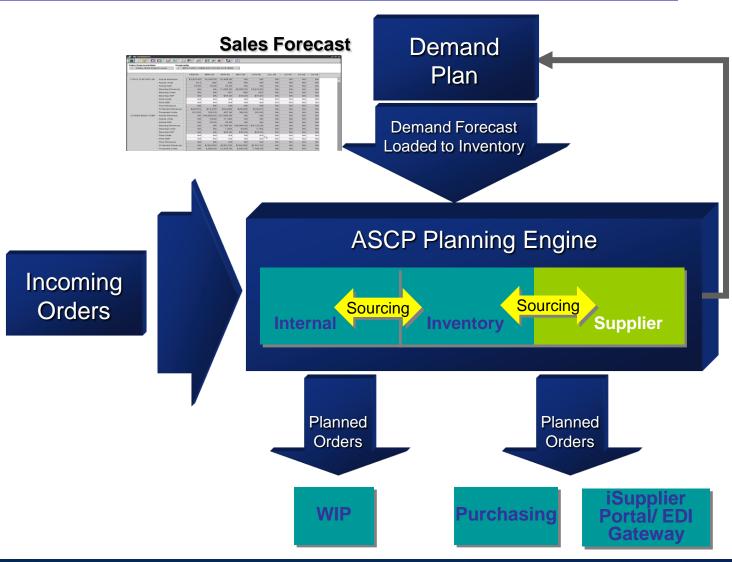
Generate Baseline Forecast	Generate Constrained Long Term Supply Plan
Collaborative Demand	Generate Short Term
Planning	Manufacturing Plan
Generate Consensus	Release Work Orders
Forecast	to Contract Manufacturer
Capture Inventory	Release Purchase Orders
Visibility	to Component Vendor(s)
Collaborate with	Check Availability
Contract Manufacturer	& Capacity (ATP)



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Demand Management







ERP Module(s) vs. ASCP Module

ERP

(Dynamic Data)

- Sales Orders
- Customers
- Forecast
- Items
 - Master Data
- BOM
- WIP
- Inventory
- PO
- Suppliers
- Cost
- Shipping Networks
- Sourcing Rules

ASCP

(Static Data)

- Plan (MFG-REGEN)
- Material Scheduling Method
- Plan Horizon
- Forecast Spreading
- Consumption Rules
- Organizations
 - Forecasts
 - Netting Rules
- Planner's Workbench
- Data Collection







ASCP Plans defined to the Planners WB ...

MFG-REGEN: Weekly Regen Weekly Production run

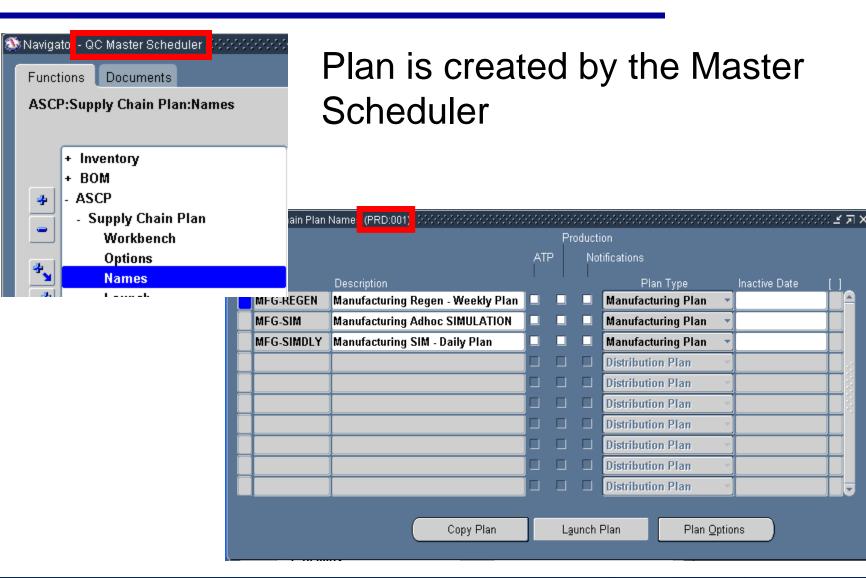
MFG-SIMDLY: Nightly Plan Weekly inventory, order status changes

MFG-SIM: Simulations, 'what-if' scenarios





Plan Creation







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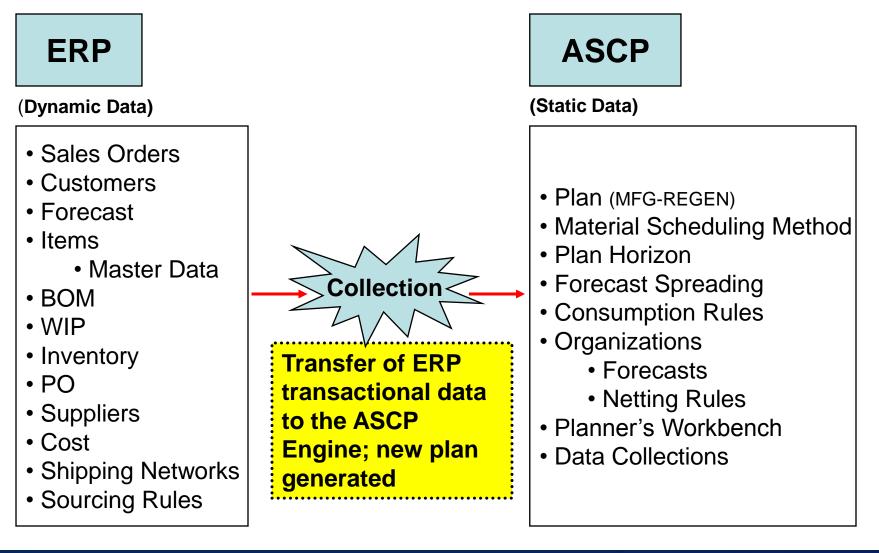
ASCP Plan Definition

Plan Options (PRD:001) CONSCRIPTIONS (PRD:001) CONSCRIPTIONS (PRD:001) CONSCRIPTIONS (PRD:001) CONSTRAINT Plan MFG-REGEN Manufacturing Regen - Week Main Aggregation Organizations Constraint Planned Items All planned items Material Scheduling Method End Item Substitution Set	ly Plan Plan Type Manufacturing Plan □	
Demand Time Fence Control	☑ Append Planned Orders	. ,
☐ Planning Time Fence Control ☑ Display Key Performance Indicators	Move Jobs to PIP Plan Ontions (PRD:001)	
Forecast Allocation and Consumption		gen - Weekly Plan Plan Type Manufacturing Plan 💷
⊂ Do <u>N</u> ot Spread Forecast ● Spread Forecast Evenly	Main Aggregation Organizations	Constraints Optimization Decision Rules
Consume by Forecast Bucket	- Organizations	
Backward Days 120	Add All Authorized Orgs	
Enable Pegging	Org Description WIP	Net Net Plan Include Reservations Purchases Safety Stock Sales Ordi
Peg Supplies by Demand Priority	PRD:050 PRD:QWBS SAN DIEGO	
	PRD:125 PRD:QGOV	
	PRD:100 PRD:QWS	
	- Demand Schedules	
	Name Description Type MFG-FS QWBS MANUFACTURI FCST	Inter Plant Name Description Type

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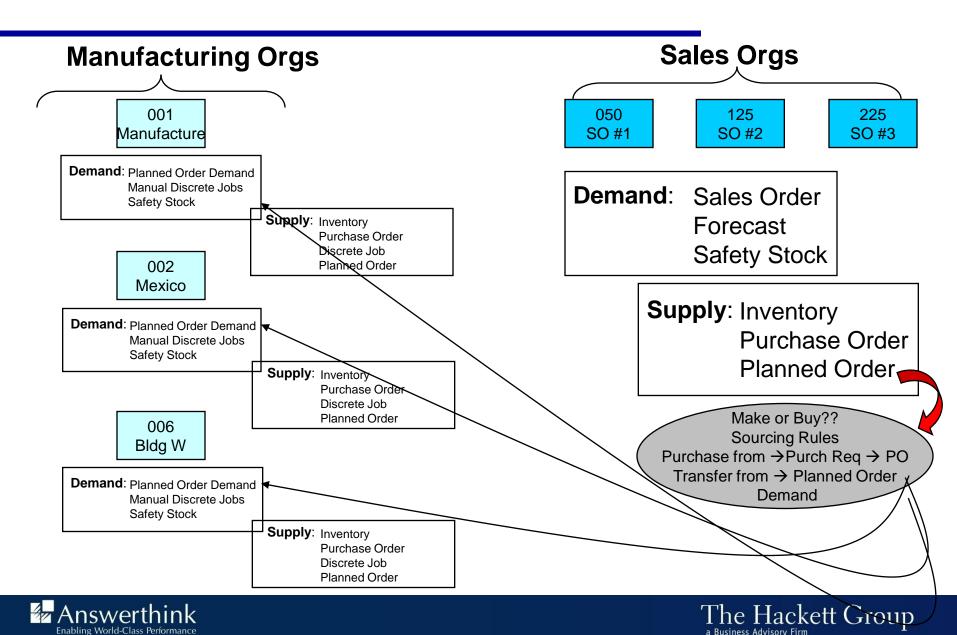
How does the data get from ERP to ASCP?



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ASCP Supply / Demand





Supply Demand View







Planned Order Life Cycle

Sales Order Forecast Planned Order Demand Planned Order	Release Make or Buy?	Unreleased Discrete Job Purchase Requisition	 → Released Discrete Job (WIP) → Purchase Order 	Inventory
• Demand	• Release	 ASCP may recommend to 	• ASCP will not move a	• Supply
No Demand, No	 Sourcing Rules/ ASLs for 	reschedule	Firmed	Discrete
Planned Order	Buy items indicate Supplier	existing POs,	discrete job	job
	ý	PORs and	····· · ··· · ···	completions
Drives Planned	 Sourcing Rules for Make 	discrete jobs	• ASCP will	become
Order Demand for	items specify which Org to		generate	inventory
components	make the assembly in	ASCP will	exception	
		generate	messages	PO receipts
 Negative 	 Unreleased Planned 	exception	to	become
inventory drives	Orders are regenerated each	messages for	reschedule	inventory
demand	time the ASCP plan runs	all items	as needed	

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Discrete Job Definitions

Assembly: Item to be stocked at completion of Discrete Job

BOM: Creates the Discrete Jobs Parts List (11 levels deep)

Routing: Applies the Discrete Jobs Lead Time

Supply Type: Dictates how components are issued to the Job

- A) **<u>Push</u>** = issue components to job at job start
- B) **<u>Assy Pull</u>** = backflush components at job

completion

- C) **<u>Bulk</u>** = 'as required' components, no issue
- D) **Operation Pull** = not in use in phase 2

WIP Acct Class: Contains accounting information for the discrete job





Querying in Planner's Workbench

0	Nav	igat	or DO-		**************	000년 제 X	
ſ	Pla	ans	Qu	Jeries			
l	-		v By Plan	<u> </u>	inizations	-	
		ŧ		2B-PL IFG-RE PRD PRD PRD PRD	Cut Copy		Top 1. (2. 3. 4. 3 5. 6. (
l				≥PRC ≥PRC ≥PRC ≥PRC	Supply/Demand I Items I	Supply Demand <mark>Supply/Der</mark> Onhand	nand
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Right click over the plan or organization, select Supply/Demand and Supply/Demand



Querying in Planner's Workbench

Enter your search criteria:

Criteria	Condition	From	То	
)rder Type	Among	Non-standard	job, Disc	
'lanner	··· Equals	✓ M1		
		-		
		-		
			1	

Condition

Among	•
Equals	•

Conditions: Equals Is Not Less Than





Querying in Planner's Workbench

You can search for the following Criteria:

BOM Item Type Buyer Category Compression Days Day from Today **Demand Satisfied Date** Disposition Status Type Firm First Unit Start date Implemented Quantity Item Last Unit Completion Date Last Unit Start Date Lending Project Number Lending Task Line MRP Planning Method Make or Buy

New Date New Qty Old Due Date Old Order Quantity Order Number Order Priority Order type Organization Original Item Po Line No Planner Planning Group Project Quantity in Process **Primary Supplier** Repetitive Standard Cost WIP Supply Type

Selected for Release Source Organization Source Supplier Suggested Dock Date Suggested Due Date Suggested Order Date Suggested Start Date Supplier Task Using Assembly VMI Flag WIP Supply Type

Criteria

Order Type..

Planner





View Planned Orders Current Week

😑 Find Supply/Demand – belede 🗹 🗩 🗙

ä

_ Criteria	Condition	From	То
Order Type	Equals 🔹	Planned order	
Suggested Start Date	Days From Today 🔹 🔻 🔻	5	
Org	Equals 🔹	PRD:001	
Planner	Equals 🔹	CE	
			
	¥		
		Find	<u>C</u> lear





View Planned Orders Current Week

	an MFG-REGEN Ma	nufacturing Re	gen - m	ескіўттап	i i î î	Aanufacturing			
Order R	elease Properties So	urcing Line	Proje	ect					
		E D-l	 ;	Ouden Tune	Curry Charle Date	Quan Due Dete	Otu/Data	Onden blumber	0
Org	ltem	For Release	Firm	Order Type	Sugg Start Date	Sugg Due Date	Qty/Rate	Order Number	
PRD:001	10-6501-2			Planned order	09-22-2006 00:00:00	09-29-2006 00:00:00	2	18062840	Release
PRD:001	10-6518-2			Planned order	09-22-2006 00:00:00	09-29-2006 00:00:00	1	18062842	Release
	,			ंत	• • • • • • • • • • • • • • • • • • • •			,	í III

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Actions and Exceptions

Actions (PRD:001) COOCCORD: CO		000000000000000000000000000000000000000
4		
Action Type	Version	Count
- Late Sales Orders and Forecasts	current	905
Past due sales orders	current	291
Past due forecast	current	614
- Shortages and Excess	current	16682
Items with excess inventory	current	16682
- Reschedules	current	3889
Past due orders	current	1026
Orders to be rescheduled out	current	629
Orders to be cancelled	current	1381
Orders to be rescheduled in	current	853
Litem Exceptions	current	103902
Items with negative starting or	current	27
Items with no activity	current	88753
Items with Overconsumption	current	15122

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Supply and Demand

Org	ltem	For Release	Firm	Order Type	Sugg Due Date
PRD:001	201-15059-1014			Planned order	09-28-2007 00:00:00
PRD:001	201-15059-1014			Planned order	12-28-2007 00:00:00
PRD:001	105-11236-0102			Planned order	08-24-2007 00:00:00
PRD:001	105-11236-0102			Planned order	12-28-2007 00:00:00
PRD:001	252-23404-3977			Planned order	03-23-2007 00:00:00
PRD:001	252-23404-3977			Planned order	07-27-2007 00:00:00
PRD:001	252-23404-3977			Planned order	10-26-2007 00:00:00
PRD:001	202-01105-0164			Planned order	02-14-2007 00:00:00
				 3000 	•





Vertical Plan

Org	ltem	For Release	Firm	Order Type	Sugg Due Date
PRD:001	25-V9361-1			Purchase order	02-23-2007 00:00:00
PRD:001	25-V9361-1			Planned order demand	02-23-2007 00:00:00
PRD:001	25-V9361-1			Discrete job demand	02-27-2007 23:59:00
PRD:001	25-V9361-1			Discrete job demand	02-27-2007 23:59:00
				COSC	





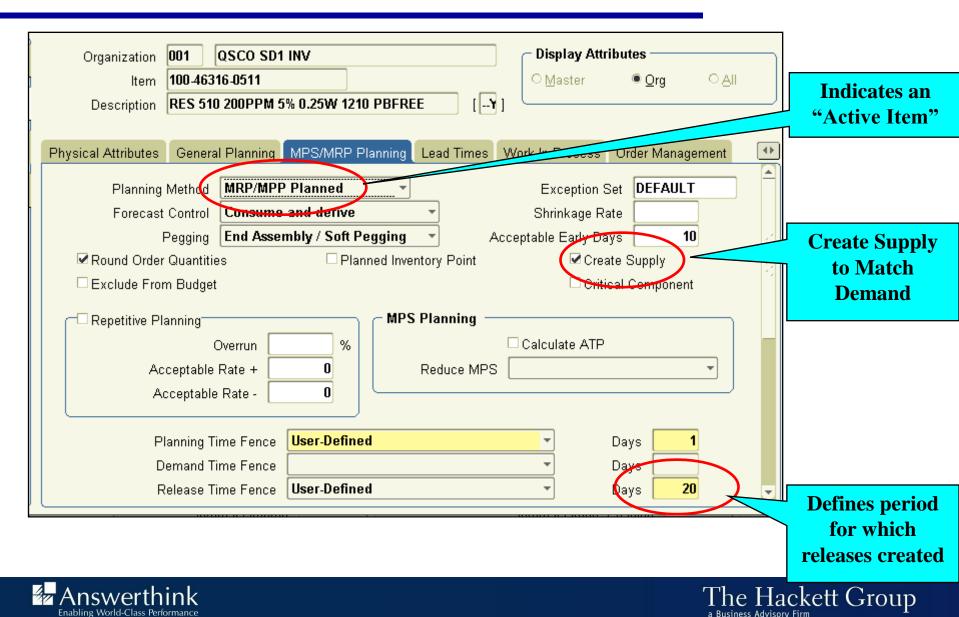
Planning Time Fence Setup

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	Organization 000	ITEM MASTER	R		🖵 Display Attr	ibutes ———		
		10-0123			∕ ○ <u>M</u> aster	⊖ <u>O</u> rg (• All	
	Description INDUC	OR,CHIP FLA	T-TOP 12UH 5%	PD/PT/A [85]] [
	Physical Attributes Gener	al Planning 🛛 M	IPS/MRP Planning	Lead Times	Work In Process	Order Manageme		
	Planning Method	MRP/MPP P	<mark>lanned 🔹</mark>		Exception S	Set DEFAULT		
	Forecast Control	Consume an	nd derive	_	Shrinkage Ra	ate		
	Pegging	End Assemb	ly Pegging	- A	Acceptable Early Da	iys 10	2	
	Round Order Quantities Planned Inventory Point Create Supply							
	Exclude From Budget							
	MPS Planning							
	Overrun % Calculate ATP							
	Acceptable Rate + 0 Reduce MPS -							
	Acceptabl	e Rate -						
	Planning 1	ime Fence 🛛	ser-Defined		•	Days 🧧 1		
	Demand 1	ime Fence 🛄				Days		
	Release 1	ime Fence 🛛	ser-Defined		•	Days <mark>28</mark>		

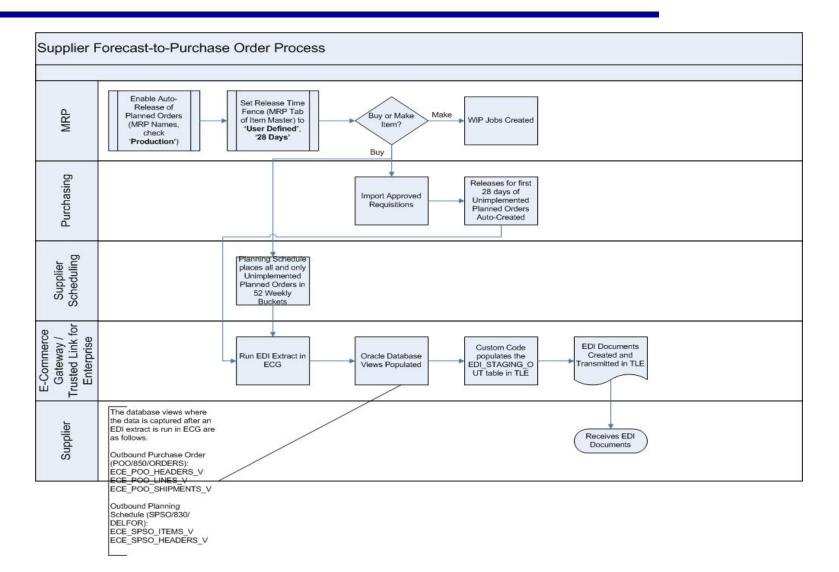




Item Master Planning Tab



ASCP Process Overview







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iSupplier Functionality Overview

- Self-Managed Supplier Profile
- On-line Invoicing
- View and Acknowledge Purchase Orders
- Supplier Change Requests
- Audit Purchase Order Changes
- Access Attachments
- Advanced Shipment Notices (ASNs)
- Advanced Shipment Billing Notices (ASBNs)
- Supplier Owned & Vendor Managed Inventory
- Supplier Forecast



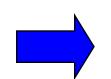


Oracle iSupplier Registration

Register Existing Supplier Responsibility: iSupplier User Administrator Navigation: Supplier User Creation > Register Supplier User



The iSupplier User Registration portal will open



ORACLE' iSupplier Portal		Close Window Preferences Help
Register a Supplier User		
Indicates required field		Cancel Register
		Caucat Configura
Supplier Name Add new suppliers using the Create Supplier form in Purchasing.		
* Supplier Number		
User Information		
* Email		* Phone
* Usemame	Ph	Phone Extension
By default, the user's email address will be used as their		Fax
Contact Title		Note
Contact Title First Name		
Middle Name		
* Last Name		
Job Title		Note will be included in the registration notification sent to the supplier user
000 1110		
User Access		
Responsibilities		
Select All Select None		
Select Responsibility	Application	
QC iSupplier Portal Full Access	iSupplier Portal	
QC iSupplier Profile Manager	iSupplier Portal	
QC iSupplier Portal View Only Access	iSupplier Portal	
Provide the state of the state		
User Access Restrictions If no Supplier Sites or Contacts are specified, the user will be able to access all the data for this supplier.		
Supplier Restrictions		
Modify Suppliers		
Suppliers		
Access restricted by Supplier.		
Site Restrictions		
Modify Sites		
Supplier Name	Site	Organization Name
Access not restricted by Supplier Site.		
Contact Restrictions		
Modify Contacts		
Supplier Name Access not restricted by Supplier Contact.	Contact Si	Site Organization Name
Access hot restricted by Supplier Contact.		





Oracle iSupplier Functionality

Purchase Order Summary Screen

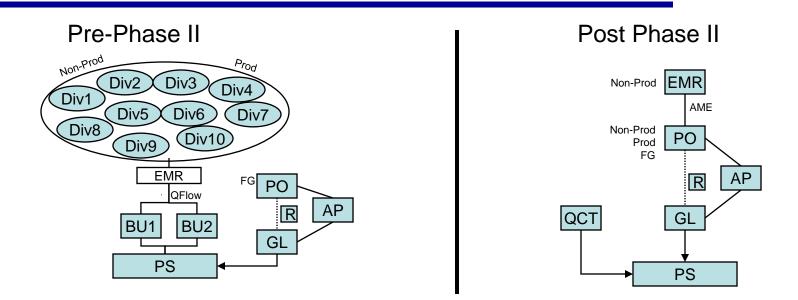
One of the benefits of the iSupplier portal is the ability to view Purchase Orders and Releases. The Orders At A Glance region will display the 10 most recently submitted Purchase Orders.

	Portal			Home Logout Preferences Help
			Home Orders	Shipments Planning Account Product
Search PO Number	v			
I Notifications		Full List		Planning Forecast Schedules
Subject Default enterprise name Supplier	Collaboration Network: Confirmat	Date 05-25-2006 15:10:42		Orders Agreements Purchase Orders
Orders At A Glance		Full List		Purchase Droers Purchase History Shipments Delivery Schedules
PO Number	Description	Order Date		Overdue Receipts
200003399	Test PO for CRP2	06-14-2006 16:55:26		Advance Shipment Notices
200003398	abc	05-14-2005 16:33:09		Receipts
200003397	Test PO for CRP2	06-14-2006 16:24:38		Receipts
200003396	Test PO for CRP2	06-14-2006 15:54:50		Returns
200003200	MRP 4/17/06	05-06-2006 13:22:55		On-Time Performance
Shipments At A Glan	ce	Full List		Invoices Invoices Payments Payments
Shipment Number	Shipment Date	Packing Slip		<u></u>
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Copyright 2000-2005 Oracle Corporation. All	Home Orders Sh rights reserved.	ipments Planning Account Product Home	Logout Preferences	2 Help Privacy Statement





iProcurement Implementation

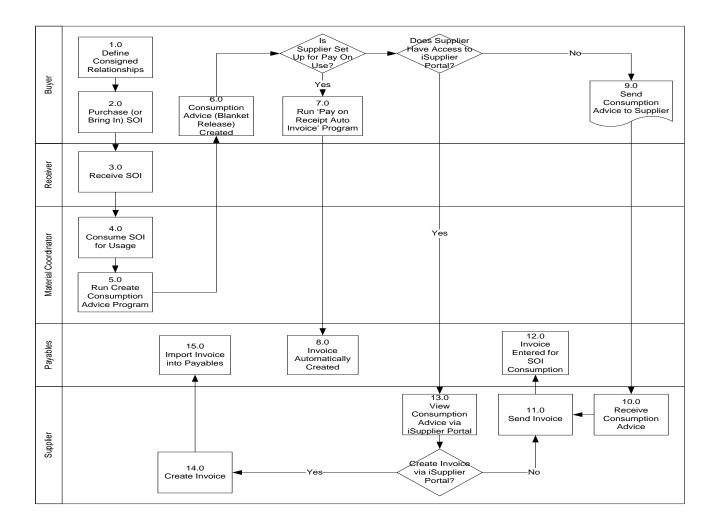


- Used EMR as iProcurement "stand in"
- iProcurement rollout potentially complex
- "Chicken and the egg" problem





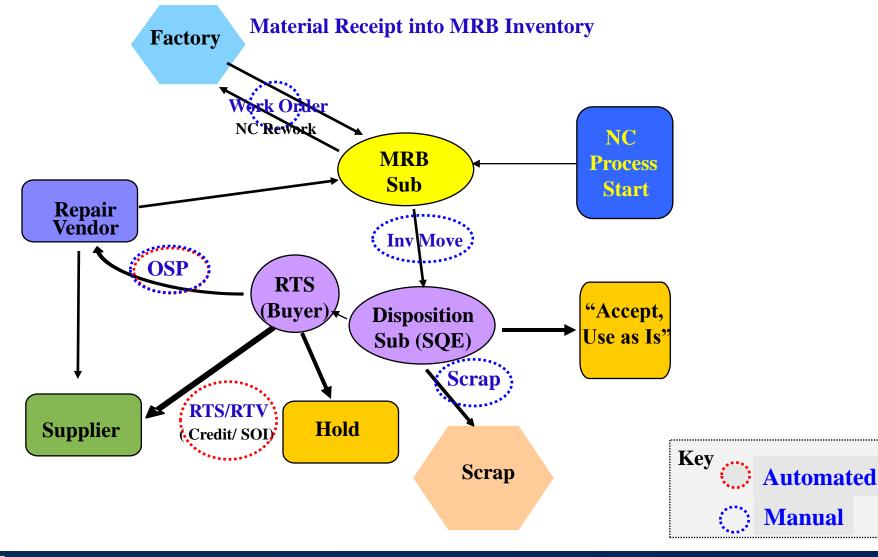
Supplier Owned/ Vendor Managed Inventory







"Virtual" MRB Process/ Oracle Quality



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Conclusion

- Q: How do you manage reliable delivery lead times to the customers, in the face of varying supply lead times from factory?
- A: Delivery lead times can be managed setting the delivery time fence parameter and ASL parameters.
- Q:How do you manage inventory required to respond to fluctuating customer demand, so that the inventory is available when you need it, but it is not necessarily "on the books"?
- A: Use SOI/ VMI to mange vendor inventory and ensure that inventory from critical suppliers is available when needed.
- Q: How do you provide supply chain visibility to internal and external supply chain partners?
- A: iSupplier Portal





Next Steps

- Copy of presentation \rightarrow business card
- Needs assessment \rightarrow meeting
- More information \rightarrow e-mail

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