

Oracle Rapid Planning

NorCal OAUG Jan 2011

Presented by Supply Chain Fusion, Inc.

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Program Agenda

- Introduction to Supply Chain Fusion, Inc.
- The Need for Event Driven Planning
- Supply Chain Model
- Rapid Planning Workbench Overview
- Reviewing Plan Outputs
- Simulations
- Implementing the Plan
- Wrap Up





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At A Glance....

Who We Are

- Specialized consulting firm focused on leading edge supply chain processes & metrics
- Process experts with the real-world industry experience and system "know-how" to drive process and organizational change through successful implementations
- Through years of experience, developed a progressive methodology fusing people, process and technology to accelerate implementations without compromising quality

What We Do

- Enable supply chain processes through Oracle Value Chain Technology
- Add value at any or all stages: Strategic road-mapping, assessments, Project Mgt., full implementations, and/or support

Our Mission

Drive the right supply chain solutions with our clients by providing unparalleled professional services with consultants who have real **industry** and **process** experience and understand how **systems** can be **properly** leveraged to drive metrics and add the desired **value**, and change.........**Where Strategy Meets Execution**.



Oracle "Value Chain "Specific Capabilities Assessment

Oracle Value Chain Modules	Experienced Expert
Demantra DM, AFDM and S&OP	*
Demantra Predictive Trade Planning (Promotions)	**
Demantra Trade Promotion Optimization	*
Inventory Optimization (IO)	*
Strategic Network Optimization (SNO)	**
Advanced Supply Chain Planning (ASCP)	
Production Scheduling	**
Manufacturing Operations Center (MOC)	
Demand Signal Repository	
Spare Parts Planning	
Collaborative Planning (VMI, CVMI, iSupplier)	**
Global Order Promising (GOP)	**
Advanced Planning Command Center (APCC)OBIEE	**
Rapid Planning	*
Order -to-Cash, Purchase-to-Pay, -Manufacturing and Distribution EBS Modules	**

In Addition....

- Solution Architect / Strategic
 Systems Road-Map
- Solution and Process Map to Required Value Chain modules
- Solution and Process Map to Required EBS Mfg and Distribution modules
- Solution / System -> Process Optimization

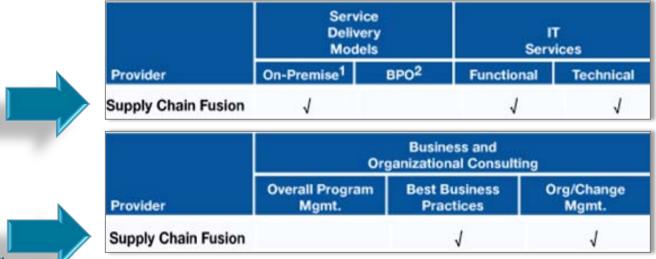
What Separates SCF......

- Award Winning Referenceable Implementations (Process & Technology)
 - Pioneer of the Year
 - Aberdeen Group: SCF process design resulted in the client being a finalist for the "Supply Chain Process Excellence Award"
 - Solution featured in a "Logistics Viewpoints" Article by the ARC Advisory Group.
 - Solutions presented at the Open World conference 2006-to-present
 - Solutions / Clients have presented at OAUG and CES (Consumer Electronics Show)
- Accelerators: Proven design templates, industry best practice process templates, and training tools & content all wrapped into a methodology framework that allows rapid design-to-implementation without compromising on quality
- Strategic "Value Chain" partner for Oracle, allowing us to leverage our access to development, value chain resources and the PMO office
- "Well Oiled Machine" Due to the extensive experience our consulting team has working together, we bring an immediate Synergy, Chemistry and Cohesiveness to the project team
- Passion & Focus.....This is what we do, This is all we do! Just ask our clients.

What Separates SCF.....

- Acknowledged leaders in Best Practice Processes and Change Management
 - Demantra
 - Advanced Supply Chain Planning
 - Collaborative Planning (VMI, Consignment) & iSupplier







What Is Rapid Planning

- Complementary product to ASCP for "What if" and "Simulation"
 - Built by Oracle, Released Dec 2009
- Integrations to EBS, JDE, APCC, GOP, Demantra....more coming
- Enhanced GUI user experience
- Built in analytics and graphing
- Require Latest Technology Stack
 - Database 11g
 - Weblogic Application Server



How is Rapid Planning Different From ASCP

Rapid Planning

Single pass

- Constructive heuristic
- No mathematical programming

Pegging is post-process

- > FIFO only
- No cross-pegging

Incremental solve

- Output created demand by demand
- Freeze existing output, add changes (e.g., "hot demands") on top
- Safety lead time
- No detailed scheduling
 - > Resource capacity at day level
- Day boundaries for resource loading

ASCP

3 phases

- Supply Chain Optimization (linear program),
 Memory-Based Planner, High Level Scheduler
- Embedded pegging
 - In middle (MBP) solution phase
 - FIFO or priority-based Quantity-based safety stock targets
- Bulk solve
 - SCO must first solve to completion, then provides output in its entirety
- Quantity-based safety stock targets
- Detailed scheduling
 - Minute-level resource capacity



How is Rapid Planning Different From ASCP

Rapid Planning

Designed for rapid simulation

- Fast one-pass heuristic
- Simulation results in memory
- Quickly edit planning inputs (demands/supplies, BOMs, routings, etc.) for simulation
- > UI: mass edits, plan compare

Multi-plan collaboration

Merge changes from multiple plans into single master plan

Planning modes

- Unconstrained, Enforce Capacity Constraints
- Enforce Demand Due Dates after initial release
- > Decision rules only, no cost optimization
- Limited process, project mfg support

ASCP

Batch planning oriented

- Multi-phase, math programming
- Simulation results flushed to database
- Make changes on transaction source instance, re-collect
- No mass edits; plan compare requires
 Advanced Planning Command Center

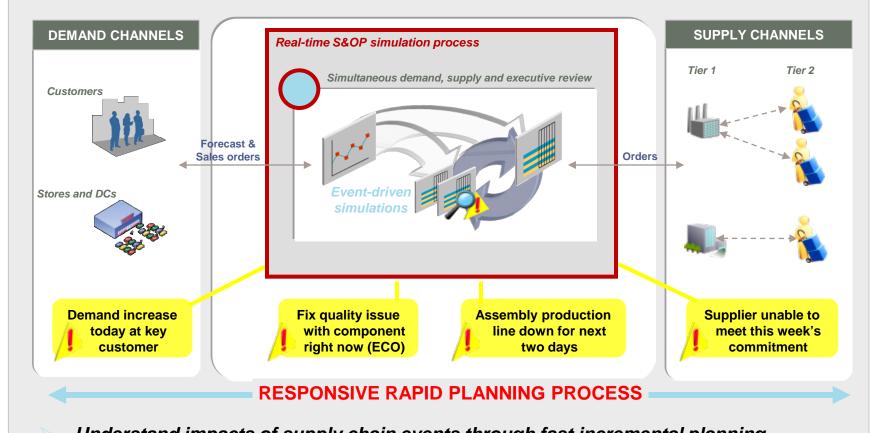
Single-plan collaboration

- Multiple planners must work on same plan
- Planning modes
 - Unconstrained, Enforce Capacity Constraints, Enforce Demand Due Dates
 - Optional cost-based optimization
- Process manufacturing support
- Project manufacturing support



Better approach

Event-driven planning and fast S&OP simulation

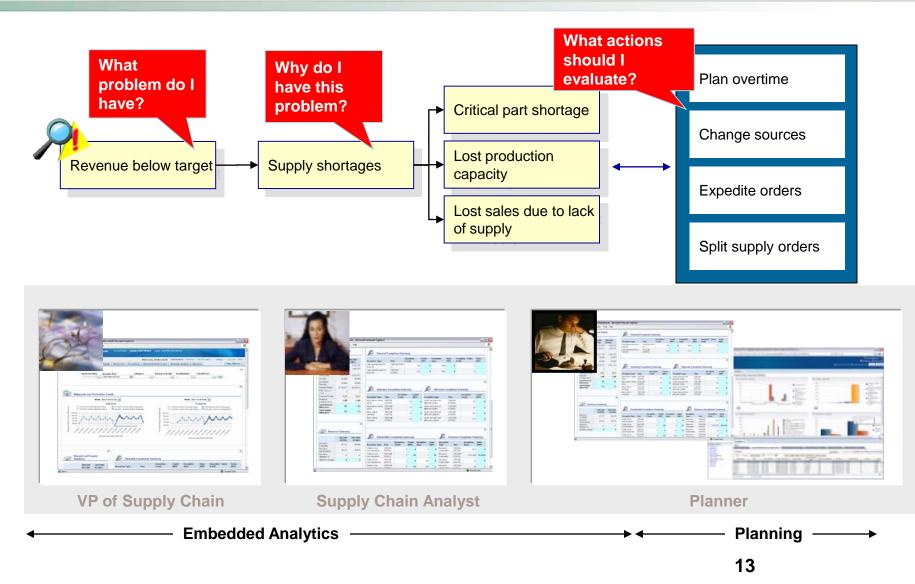


- Understand impacts of supply chain events through fast incremental planning
- Get visibility to changing conditions directly into planning no ERP latency
- Fast S&OP: Quickly simulate demand shaping actions and constrained supply



Enables closed-loop planning

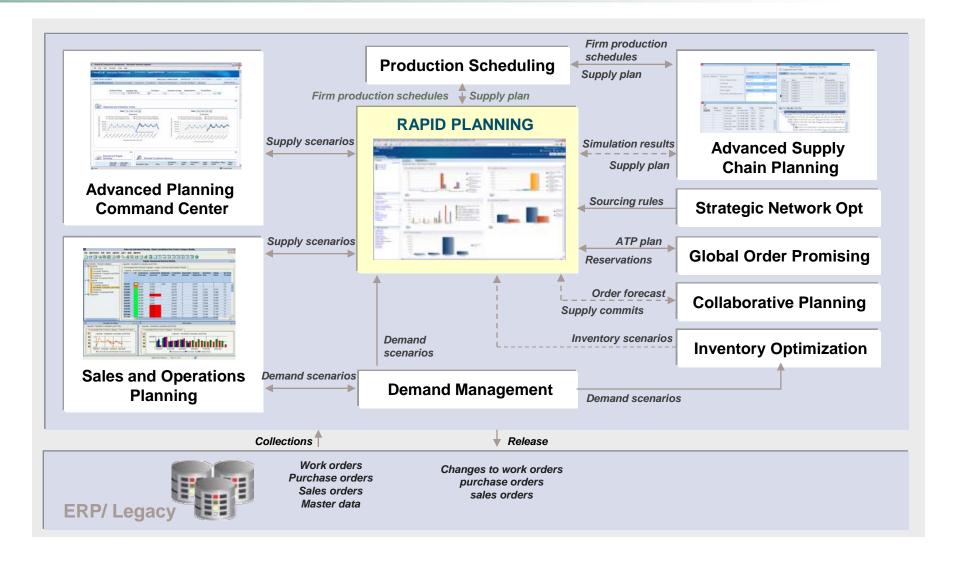
Problem Cause Alternative solution evaluation





Common Foundation

Quick ROI when deploying incremental components





What happens if...

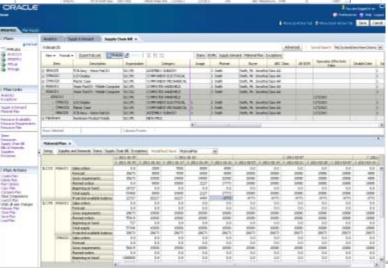
- You get an hot order from an important customer
- Supply we thought was good, isn't
- The PO is going to be late
- You experience unanticipated downtime
- ECO timing changes
- Item lead time increases
-



Oracle Rapid Planning

Enabling event driven real-time planning





Empower planners with rapid what-if scenario planning

- React quickly to supply chain events with fast incremental plan runs – make decisions in minutes
- Easily manipulate plans (mass edits)
- Enable fast sales and operations planning simulations

Leverage a strong UI for insightful analytics

- Predictive and actionable insight via embedded analytics and spreadsheet-style UI
- Compare exceptions and key performance indicators

Make faster decisions through collaboration

- Planners collaborate on a single holistic plan
- Multi-enterprise visibility and planning

Translate decisions into actions

- Out-of-the-box integration with ERP
- No latency: release directly to execution



Make better decisions faster

Automate planning decisions and model the constraints of your supply chain

Decisions

Fulfill demand with substitutes

- End items
- Components

Offload to alternates

- Source (mfg sites, distribution centers, suppliers)
- Routing
- Bills of material
- Resource
- Ship method

Account for effectivity

- BOM effectivity
- > Engineering change orders
- Sourcing effectivity

Constraints

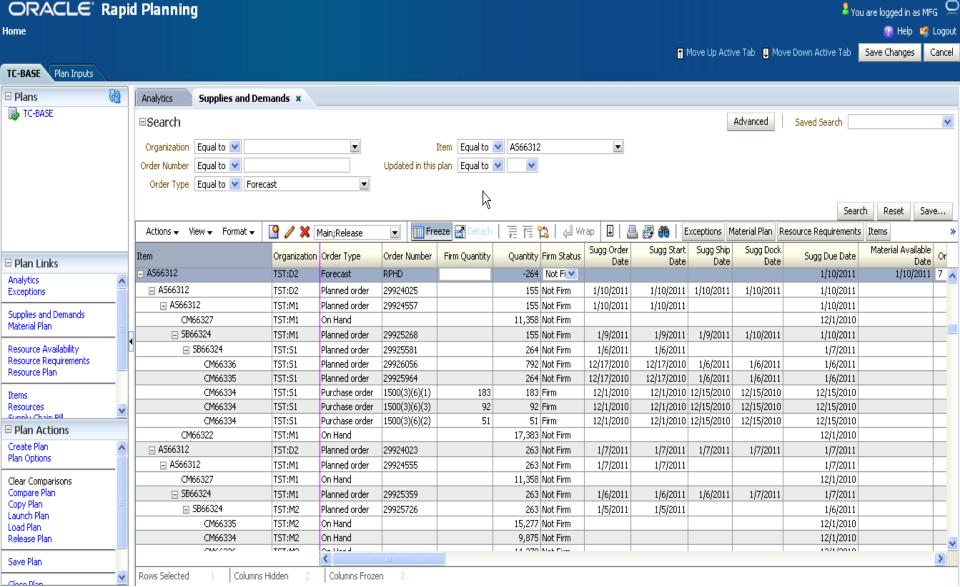
- Order modifiers
 - Item, supplier
- Lead times
 - Item, supplier, manufacturing
- Planning time fence and calendars
 - Shipping, receiving, supplier, resource work days
- Co- and by-products
- Firm orders
- Inventory reservations
- Forecast spreading and consumption
- Routings
 - Operation yield
 - Max assigned units
 - Resource efficiency



Consider user-defined ranks and priorities

Supply Chain Model

ORACLE' Rapid Planning





18

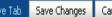
ORACLE' Rapid Planning

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Exceptions Supplies and Demands Material Plan

Resource Availability Resource Requirements Resource Plan

Items Resources

□ Plan Actions

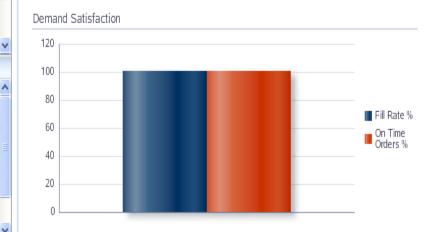
Create Plan Plan Options Clear Comparisons Compare Plan Copy Plan Launch Plan

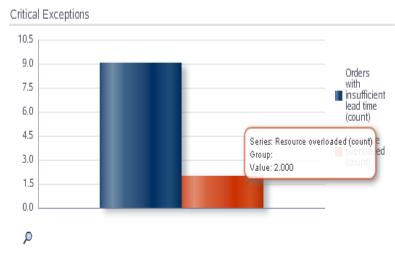
Release Plan Save Plan

Load Plan

SUPPLY CHAIN FUSION









1/24/11

2/21/11

2/7/11

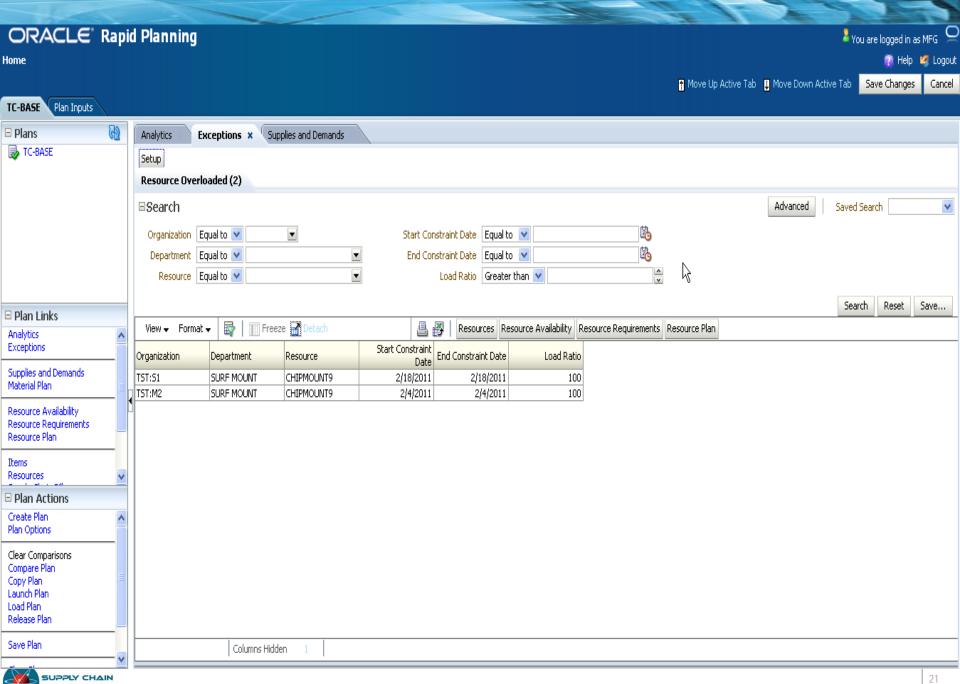
Critical Resources

12/1/10

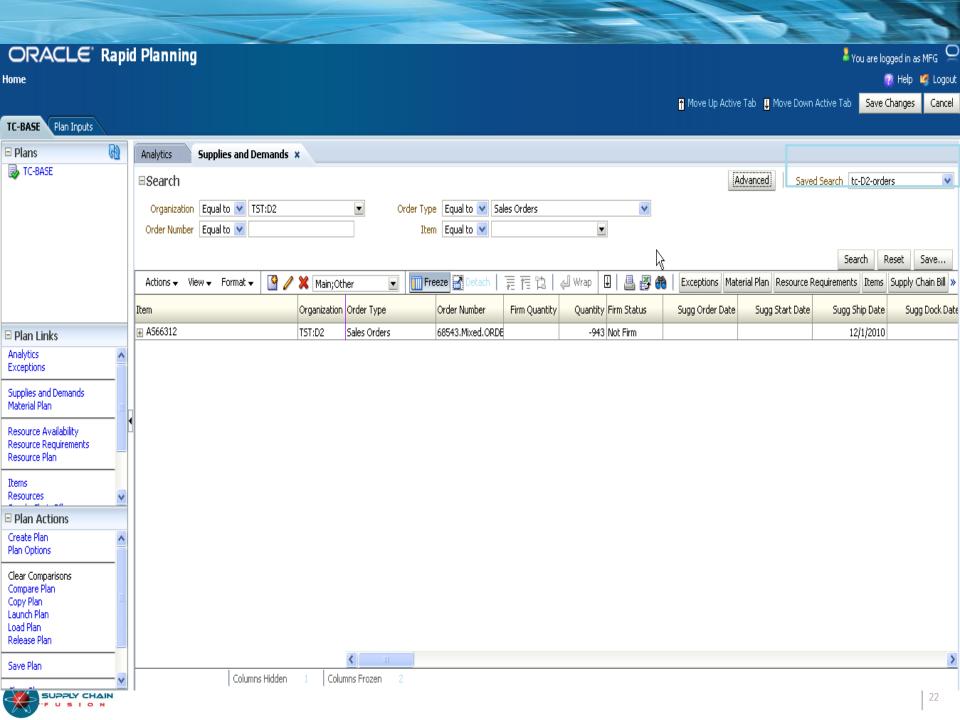
12/13/10

12/27/10

1/10/11



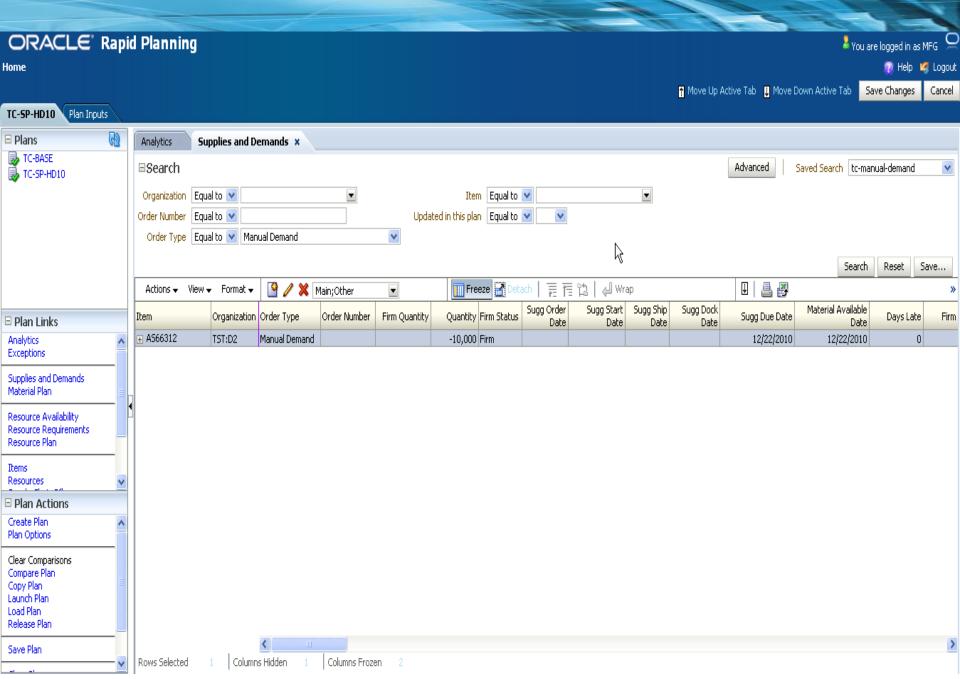
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What happens if you get an unanticipated order from an important customer?

customer? ORACLE' Rapid Planning Home Move Up Active Tab 📳 Move Down Active Tab Save Changes Cancel TC-BASE - Plans Analytics × TC-BASE Create New Metric Metric Layout Fill Rate by Customer Critical Exceptions 9.0 Orders with 88 Copy Plan insufficient lead time * From Plan TC-BASE Plan Links 40 * To Plan TC-SP-HD10 Resource overloaded Analytics Load and switch to copied plan Exceptions Supplies and Demands OK Cancel Fremont Unified School District Material Plan Himan and Associates Resource Availability Resource Requirements Resource Plan Demand Satisfaction Items Resources E Plan Actions Milization % | CHIPMOUNT9 Create Plan 88 80 Plan Options Resource Fill Rate % Utilization % 1 60 Clear Comparisons **CHIPMOUNTS** On Time Compare Plan 40 Resource Copy Plan 40 Utilization %] Launch Plan 20 ROBOT9 | Load Plan TST:M1 Release Plan Save Plan 12/13/10 1/10/11



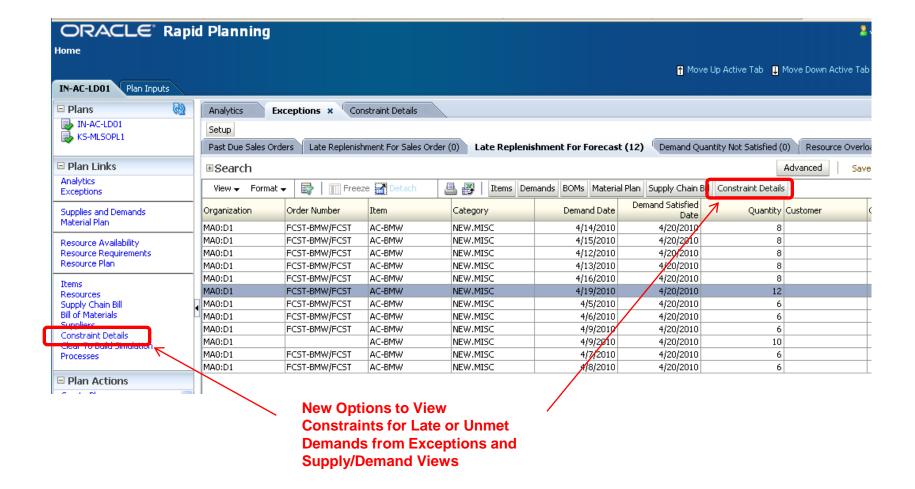




ORACLE' Rapid Planning 🏄 You are logged in as MFG 🔎 Home Help Logout Cancel ↑ Move Up Active Tab ↓ Move Down Active Tab Save Changes TC-SP-HD10 Plan Inputs ■ Plans Analytics Supplies and Demands × TC-BASE Advanced Saved Search tc-manual-demand ■Search TC-SP-HD10 Organization | Equal to | 🗸 Item Equal to 🔻 • Updated in this plan | Equal to | 🗸 Order Number | Equal to | 🗸 Order Type | Equal to | V | Manual Demand ٧ Search Reset Save... Main;Other Freeze 🛃 **温**育智 ∠ Wrap <u>a</u> 🗗 🦚 Exceptions | Material Plan | Resource Requirements Sugg Order Sugg Start | Sugg Ship Sugg Dock Material Available Sugg Due Date Organization Order Type Firm Quantity Quantity Firm Status Days Late Item Order Number Firm □ Plan Links Date Date Date Date Date Analytics -10,000 Firm 🔻 ⊕ AS66312 Manual Demand 12/22/2010 1/31/2011 40 TST:D2 Exceptions Supplies and Demands Material Plan Resource Availability Resource Requirements Resource Plan Items Resources □ Plan Actions Clear Comparisons Compare Plan Copy Plan Launch Plan Load Plan Release Plan Save Plan Close Plan Delete Plan Undo all user changes Columns Hidden Columns Frozen Rows Selected 26 SUPPLY CHAIN

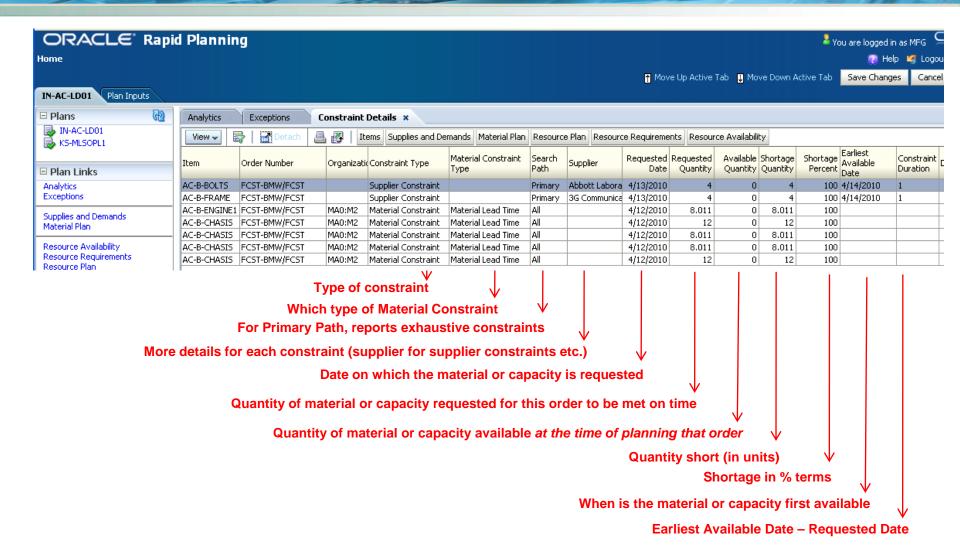
FUSION

Late Demand Analysis Process Flow Details





Late Demand Analysis Process Flow Details





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Home



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Cancel



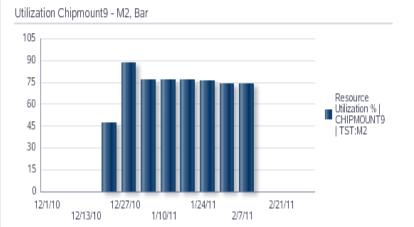




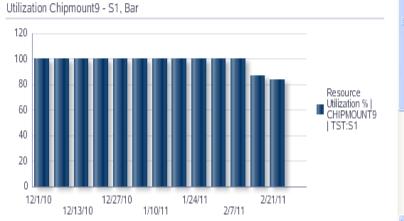






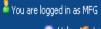






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Home



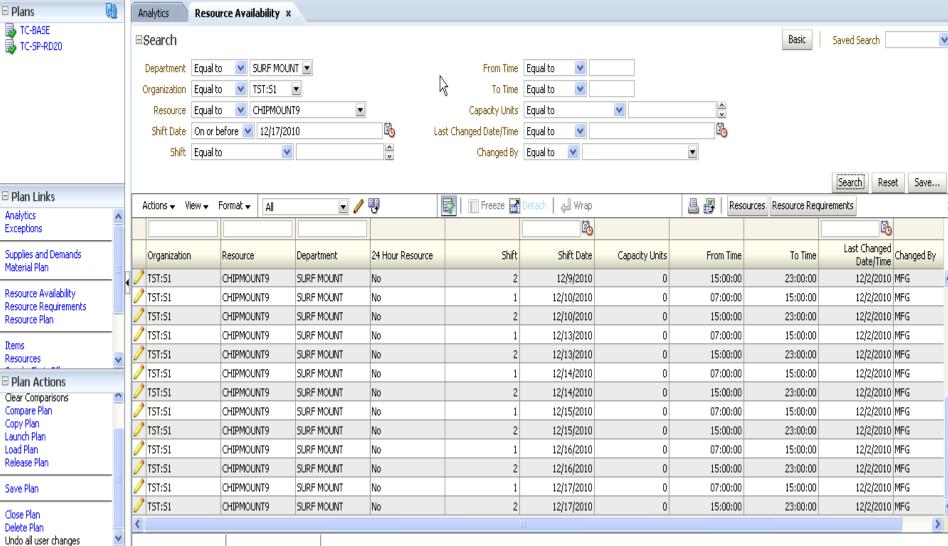
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🍘 Help 🧣 Logout

Save Changes

Cancel

Plan Inputs TC-SP-RD20



ORACLE Rapid Planning Melp Karana Logout Home ↑ Move Up Active Tab 👢 Move Down Active Tab Save Changes Cancel TC-SP-RD20 □ Plans Analytics: Resource Availability × TC-BASE ■Search Basic Saved Search TC-SP-RD20 ٧ Department | Equal to ✓ SURF MOUNT ▼ From Time | Equal to ▼ TST:S1 ▼ V Organization | Equal to To Time | Equal to ^ V Resource | Equal to CHIPMOUNT9 v Capacit Units | Equal to ٧ 120 2 Shift Date | On or before | 12/17/2010 Last Changed Date/Time | Equal to ٧ Shift | Equal to ٧ × Resource Avail Update Search Reset Save... Number of rows selected for update: 26 Plan Links **2** / **B** Resources Resource Requirements All Analytics Please enter a number greater than or equal to zero ٧ Shift Date Set to 170 Exceptions ٧ Last Changed Date/Time Changed By Set to 0 Units Supplies and Demands 24 F From Time Organization Department To Time Resource Material Plan ٧ Set to From Time TST:S1 CHIPMOUNT9 SURF MOUNT No 15:00:00 23:00:00 12/2/2010 MFG Resource Availability Set to ٧ To Time TST:S1 CHIPMOUNT9 SURF MOUNT No 07:00:00 15:00:00 12/2/2010 MFG Resource Requirements CHIPMOUNT9 12/2/2010 MFG SURF MOUNT No Resource Plan Apply and Close Clear Cancel 07:00:00 15:00:00 12/2/2010 MFG CHIPMOUNT9 SURF MOUNT No Items CHIPMOUNT9 SURF MOUNT No. 15:00:00 12/2/2010 MFG Resources TST:S1 CHIPMOUNT9 SURF MOUNT No. 12/14/2010 07:00:00 15:00:00 12/2/2010 MFG □ Plan Actions TST:S1 CHIPMOUNT9 SURF MOUNT No 2 12/14/2010 15:00:00 12/2/2010 MFG Clear Comparisons Compare Plan CHIPMOUNT9 SURF MOUNT 0 07:00:00 15:00:00 12/2/2010 MFG No Copy Plan CHIPMOUNT9 SURF MOUNT 2 0 15:00:00 23:00:00 12/2/2010 MFG No Launch Plan CHIPMOUNT9 SURF MOUNT 0 07:00:00 15:00:00 12/2/2010 MFG Load Plan No. Release Plan CHIPMOUNT9 SURF MOUNT No 2 0 12/2/2010 MFG Save Plan CHIPMOUNT9 SURF MOUNT No 0 15:00:00 12/2/2010 MFG 2 12/2/2010 MFG TST:S1 CHIPMOUNT9 SURF MOUNT 12/17/2010 0 15:00:00 23:00:00 No. Close Plan > Delete Plan Undo all user changes



Rows Selected

Easily manipulate plans – mass edits

Quickly assess impact of engineering, demand, and supply changes

Mass edit item attributes

Mass edit key item attributes such as lead times and order modifiers

Change supply chain bill

- Sourcing rules
- Ship methods
- Supplier lead times, capacity, calendar
- Simulate the impact of engineering changes by editing:
 - Bills of materials
 - Routings

Simulate resource and capacity changes

- Change resource availability
- Change resource calendar

Simulate demand changes

- Change existing demand
- Enter new (high priority) demand

Simulate supply changes

- Change existing supply
- Enter new supply
- Change manufacturing order resource requirements
- Change manufacturing order operation networks

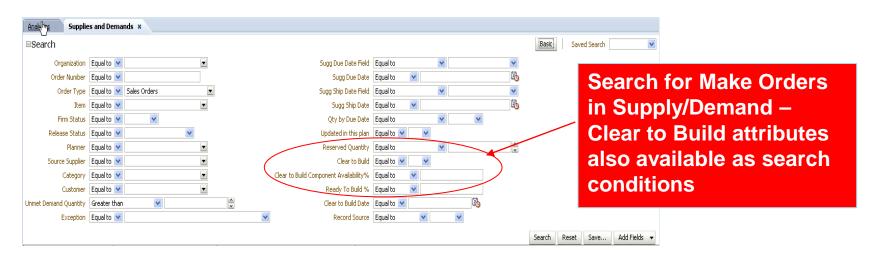


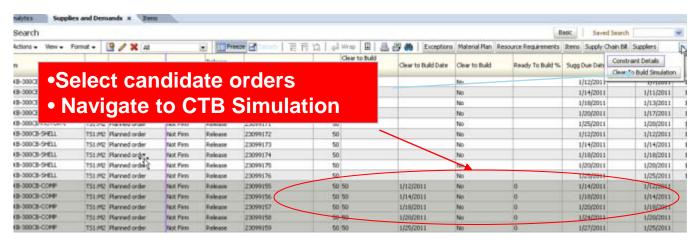
Clear to Build Process Flow

- Identify critical make orders and view their Clear to Build status
- Identify orders contending for the same on-hand
- Run Clear to Build Simulations
- Release Clear to Build prioritized make orders to execution



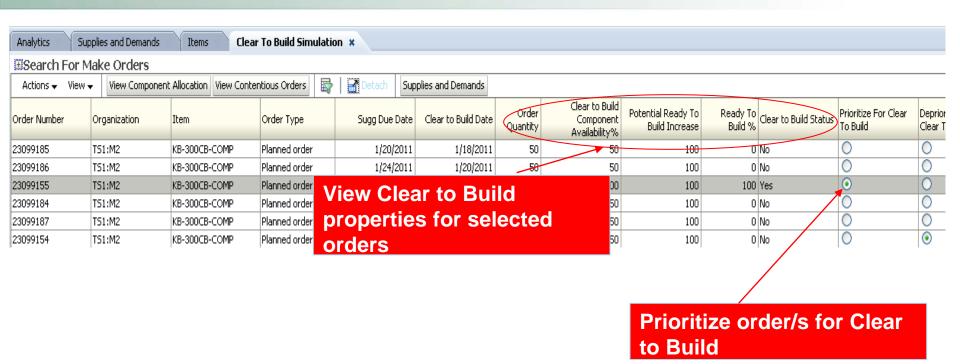
Clear to Build Demo Identify Critical Make Orders





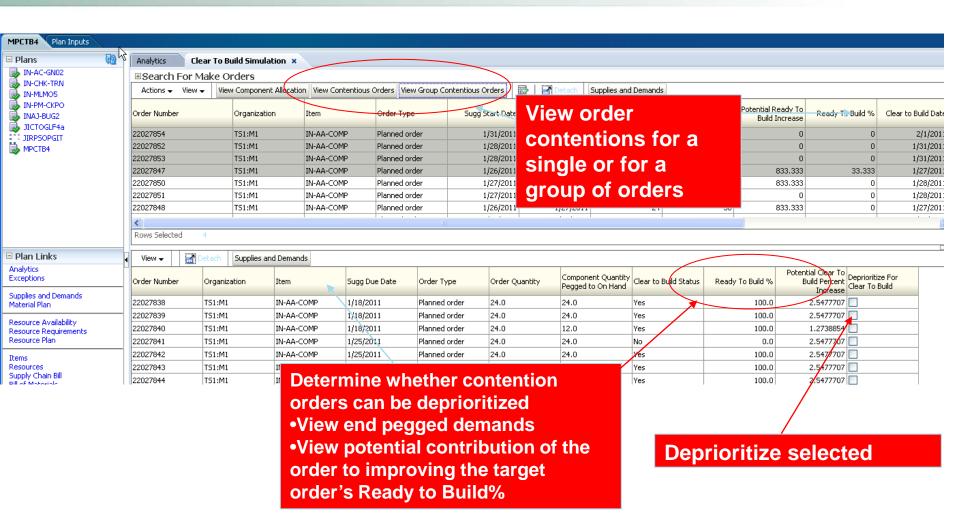


Clear to Build View Make Orders in Simulation Workbench



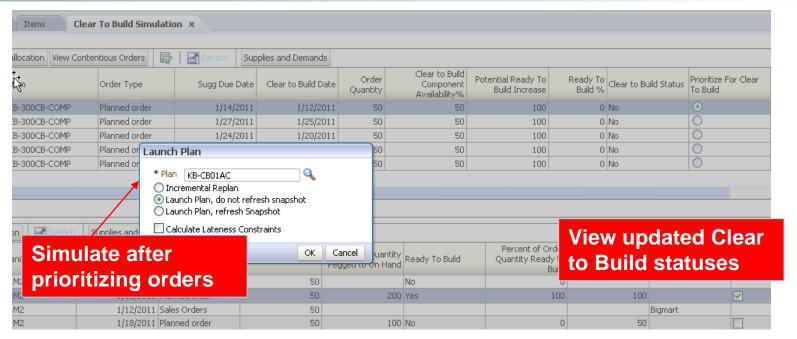


Clear to Build Demo View Order Contentions





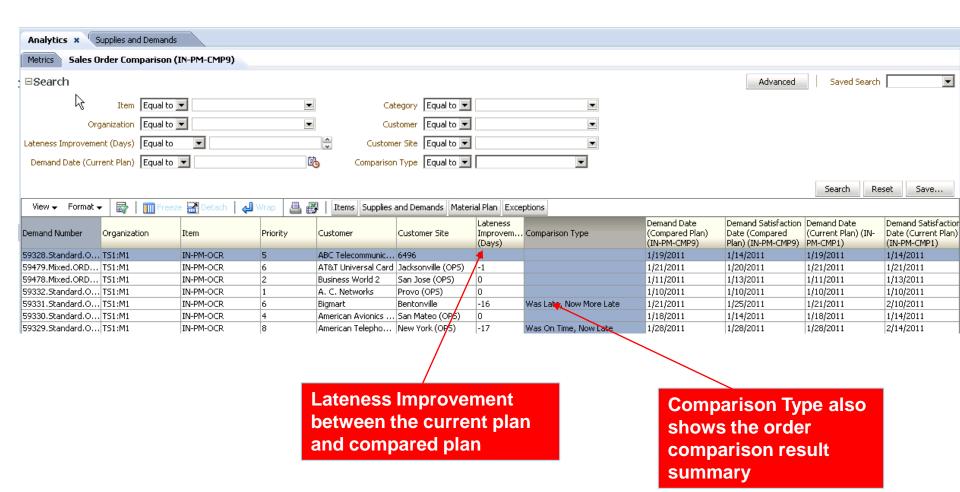
Clear to Build Demo Launch Plan to consider prioritization



- Run simulations multiple times as required
 - Once Key Make Orders are Clear to Build;
 - Overall analytics, metrics are acceptable
 - Release relevant Make Orders to execution once simulation has completed

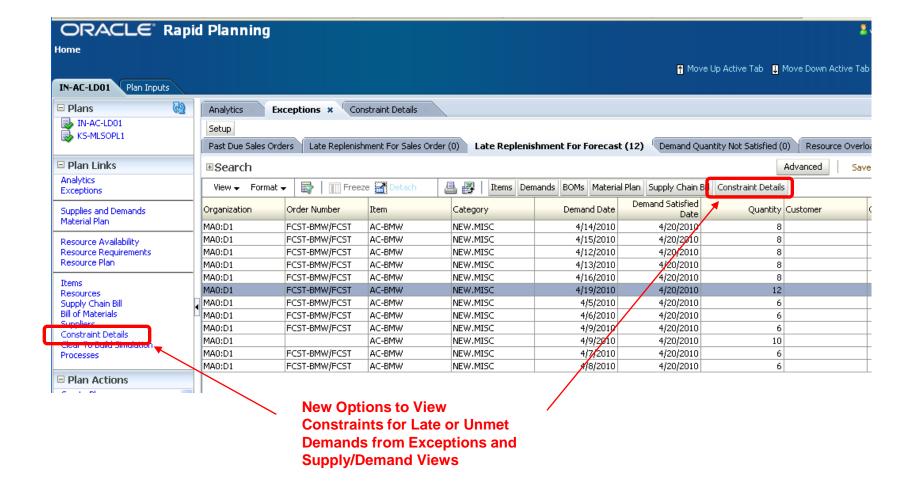


Order Comparison Results



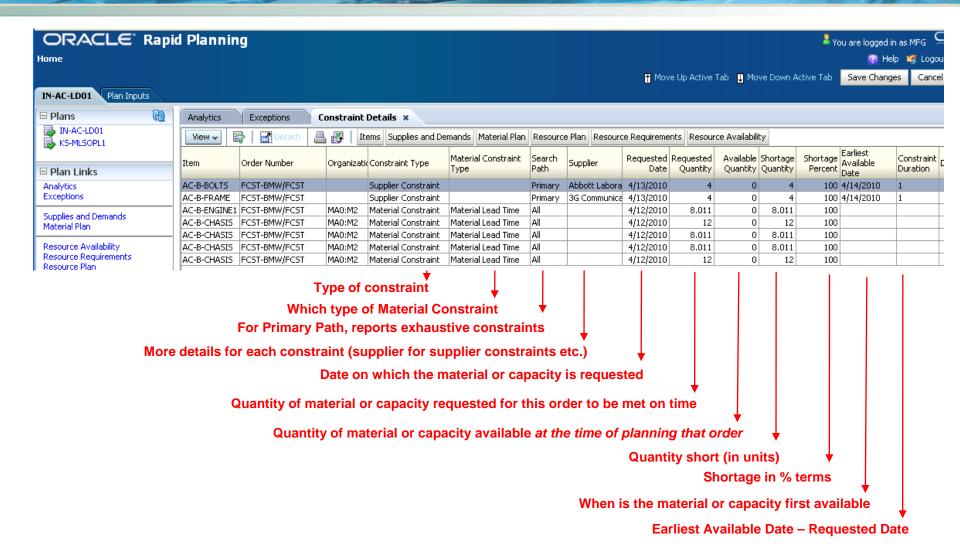


Late Demand Analysis Process Flow Details



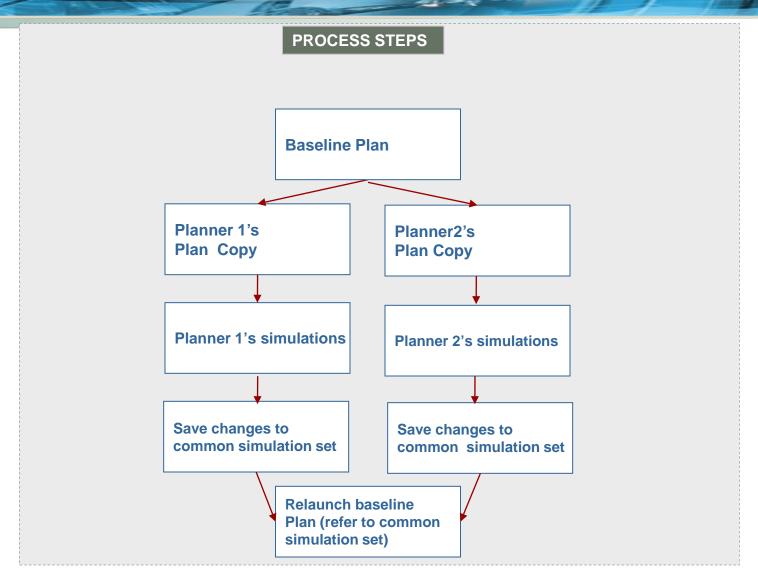


Late Demand Analysis Process Flow Details



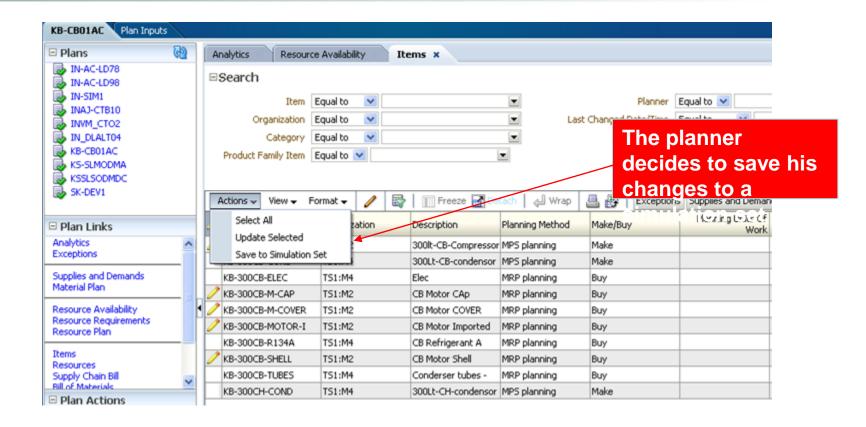


Multi-Planner Collaboration Process Flow



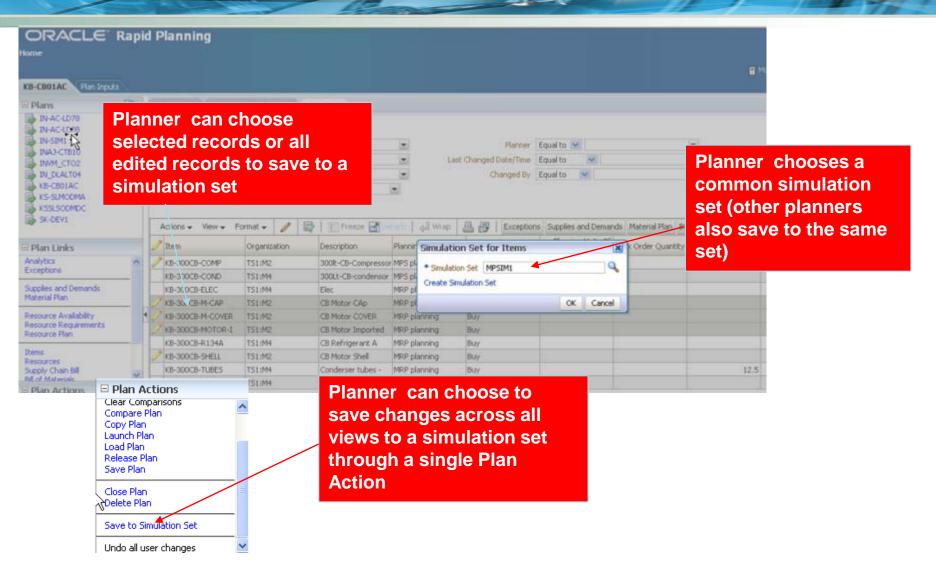


Multi-Planner Collaboration Simulation Sets



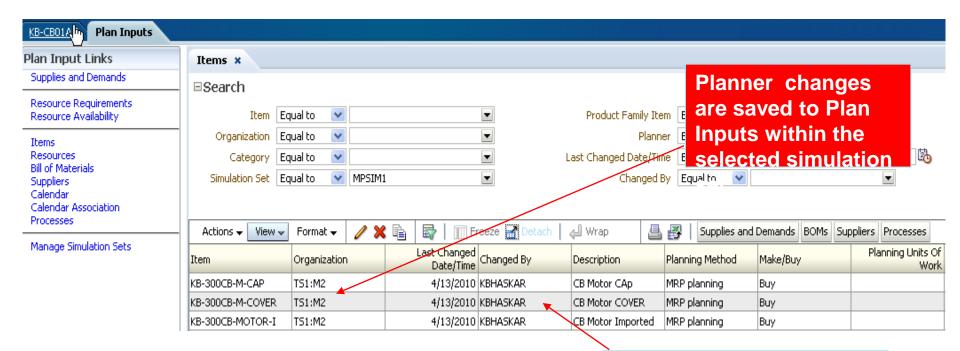


Multi-Planner Collaboration Process Flow Demonstration





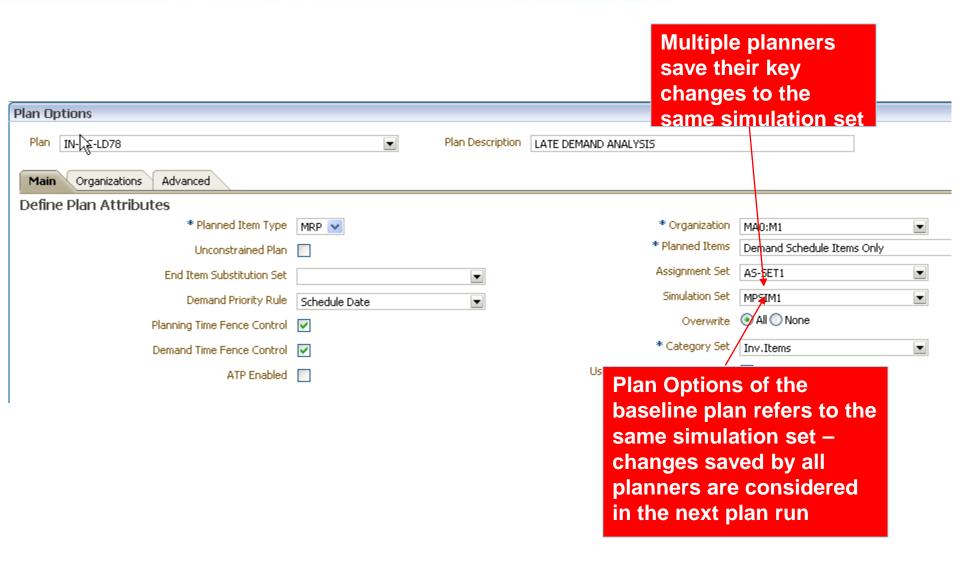
Multi-Planner Collaboration Process Flow Demonstration



Changed By and Last Changed fields provide visibility into who/when of the changes

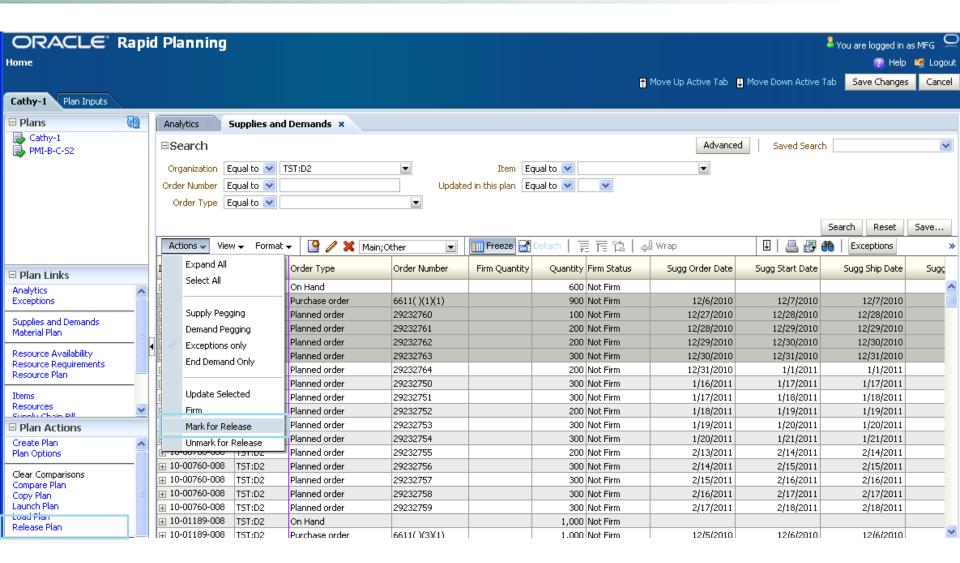


Multi-Planner Collaboration Process Flow Demonstration

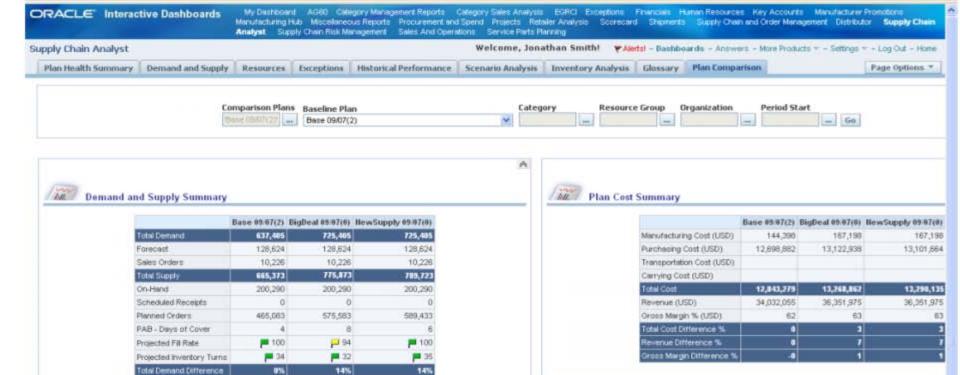




Implementing the Plan







Total Supply Difference

8%

17%

19%



Key Takeaways

- Out of the box integration to Oracle eBusiness Suite
- Planner self-sufficiency
- Eliminate multi-planner fire drills. No guessing.
- Simulate supply, change orders, resource loads, etc.
- Get information day 1 with pre-built dashboards and reports



The Oracle Road Map

