

PTC® Live Global

PTC 126 - Leveraging Service to Lead an Industry and Improve Customer Satisfaction

Doug Turlip

Manager, Technical Operations Supply Chain Management,
Southwest Airlines

8 June 2015





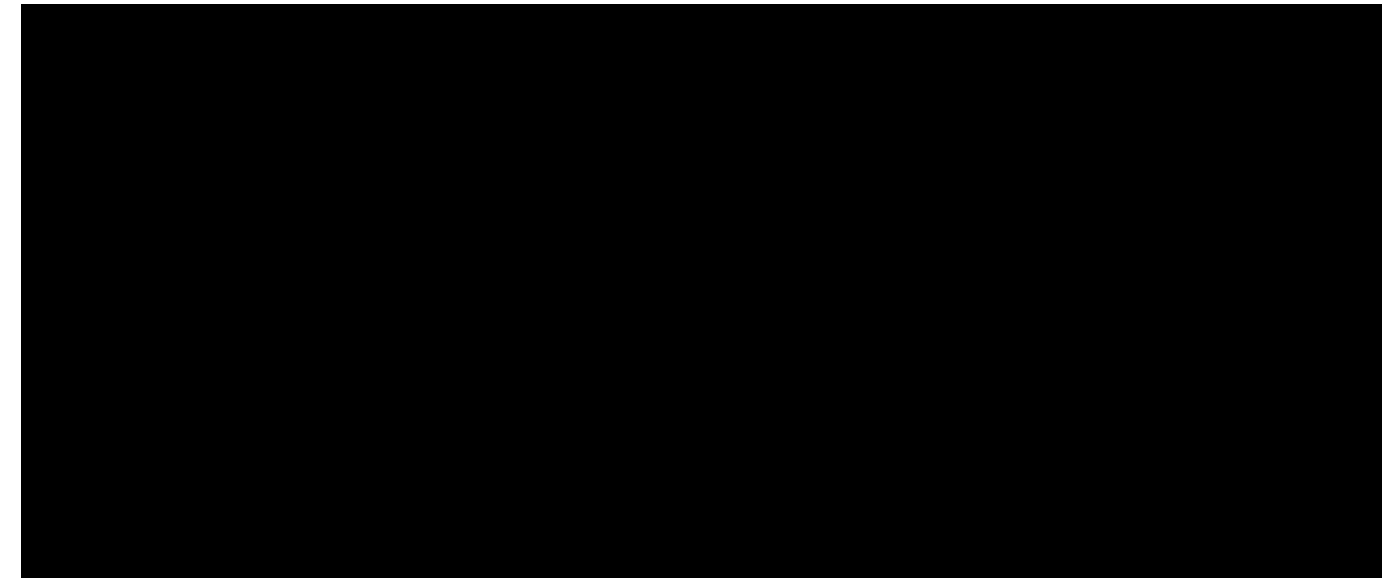
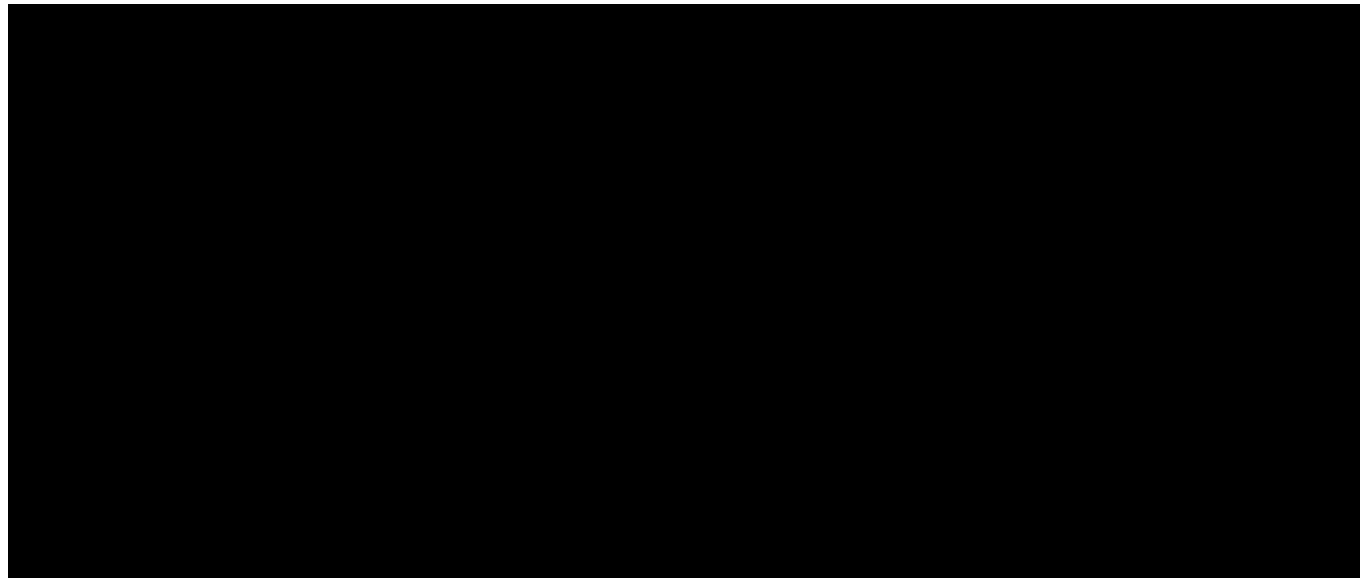
Supply Chain Management – Technical Operations

June 8, 2015

Today's Agenda

- Introduction to Southwest Airlines?
- Comparing Southwest Airlines and Other Carrier Operations
- Southwest Airlines Maintenance and Supply Chain Architecture
- Our Approach to System Implementation
- Our Timeline
- Our Results
- Our Opportunities
- Our Next Steps

This is Southwest Airlines: “Without a Heart It’s Just a Machine”



Southwest's Core

OUR PURPOSE

Connect People to what’s important in their lives through friendly, reliable, and low-cost air travel.

OUR VISION

Become the world’s most loved, most flown and most profitable airline.

OUR MISSION

The mission of Southwest Airlines is dedication to the highest quality of Customer Service delivered with a sense of warmth, friendliness, individual pride, and Company Spirit.

TO OUR EMPLOYEES

We are committed to provide our Employees a stable work environment with equal opportunity for learning and personal growth. Creativity and innovation are encouraged for improving the effectiveness of Southwest Airlines. Above all, Employees will be provided the same concern, respect, and caring attitude within the organization that they are expected to share externally with every Southwest Customer.

Fast Facts

- 40+ year track unbroken record of profitability
- Fleet size: ~700 Boeing 737s
- ~3400 flights daily
- 10 Years Ranked as Most Admired US Corporation (Fortune)
- ~86% Unionized Labor Force
- Never had a lay off

Southwest Resource Staging vs Legacy Carriers

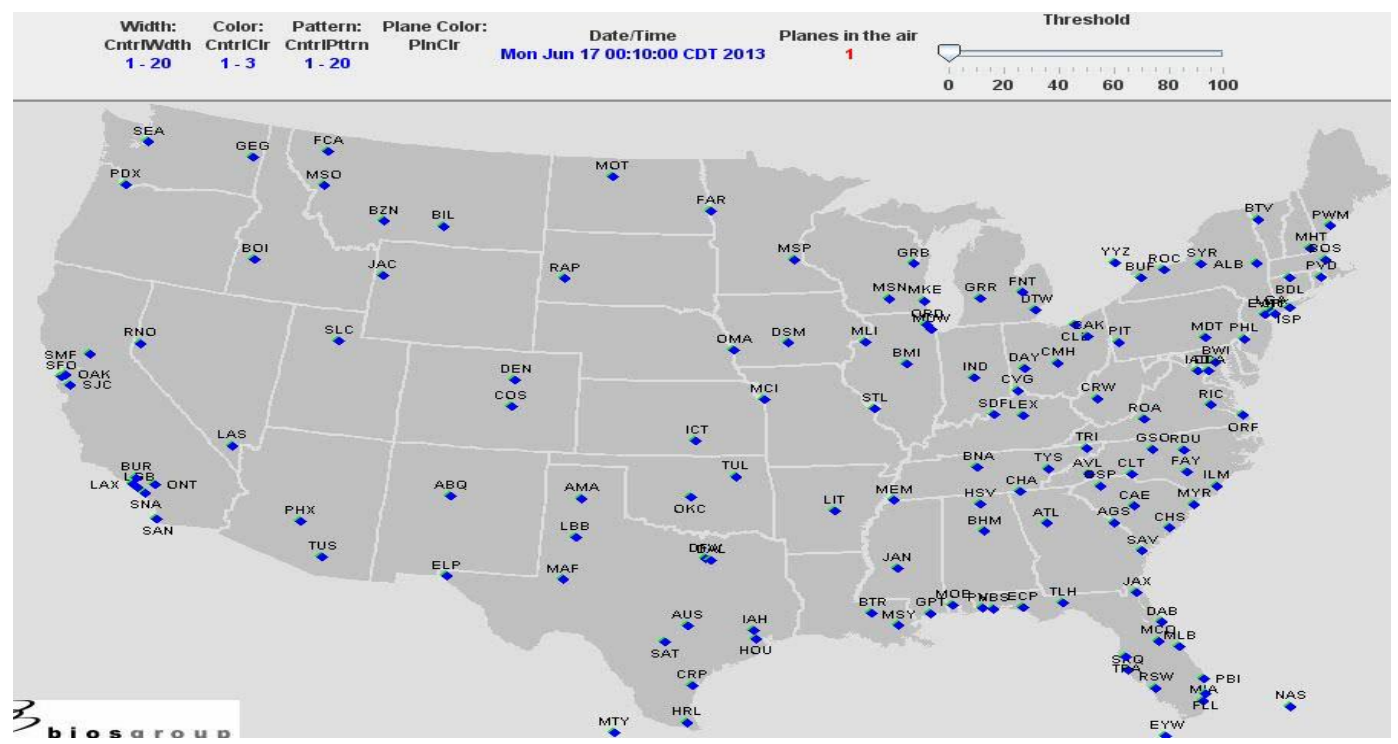
Southwest Operations

Point-to-point operations multiply material staging decisions

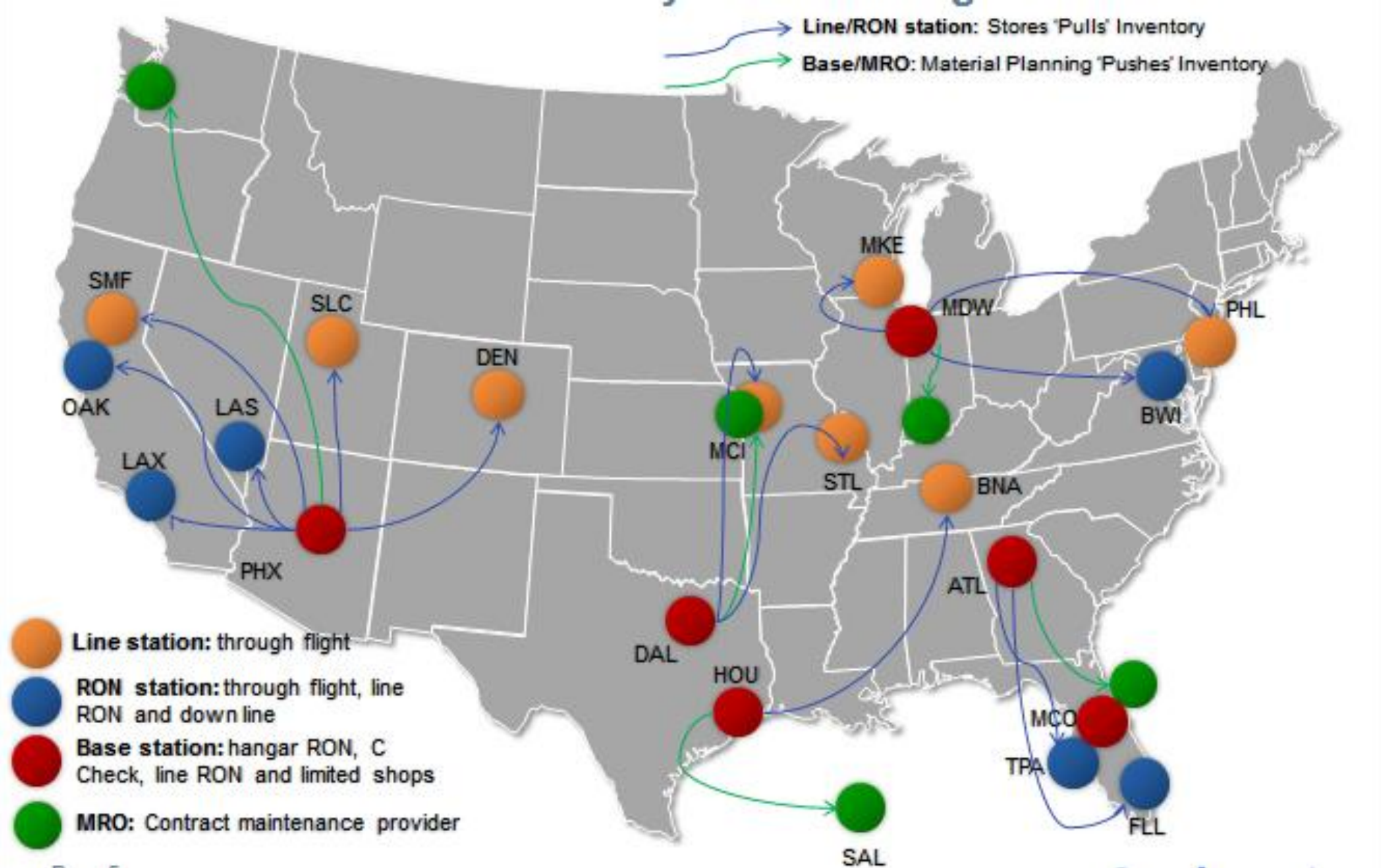


Legacy Carrier Operations

Hub-and-spoke operations create concentrated locations to ease material staging decisions



Maintenance Cities-Inventory Provisioning



Our Approach

- Motivated Senior Leadership Advocates (both Technology and Supply Chain)
- Assigned SWA Business Process Owner
- Dedicated SWA Project Manager
- Dedicated SWA System/IT SMEs
- Dedicated Supply Chain SME
- Dedicated PTC Project Manager and Implementation Team
- Communicate, Communicate, Communicate
 - Notified and provided frequent updates to Internal Customers and Stakeholders to explain value SPM provided in order to build commitment:

- **Why**

- Forecasting systems have evolved in the last 15 years..
- i2 (previous system) was not compliant with Southwest's Technology standards (would only run in Windows XP).
- I2 would 'crash' every month for multiple days.

- **What**

- SPM forecasts all line, MRO and accommodates future locations.
- Simplifies process line allocations and better controls Southwest owned inventories located at MROs suppliers.
- Balances cost vs service level in stocking recommendations.
- Instead of using only historic usage to estimate demand, scheduled event management (SEM) sees parts required for scheduled work cards and life limited parts.

- **Business Case based on Removing Technology Debt and Improved UAD, not Inventory Reductions**

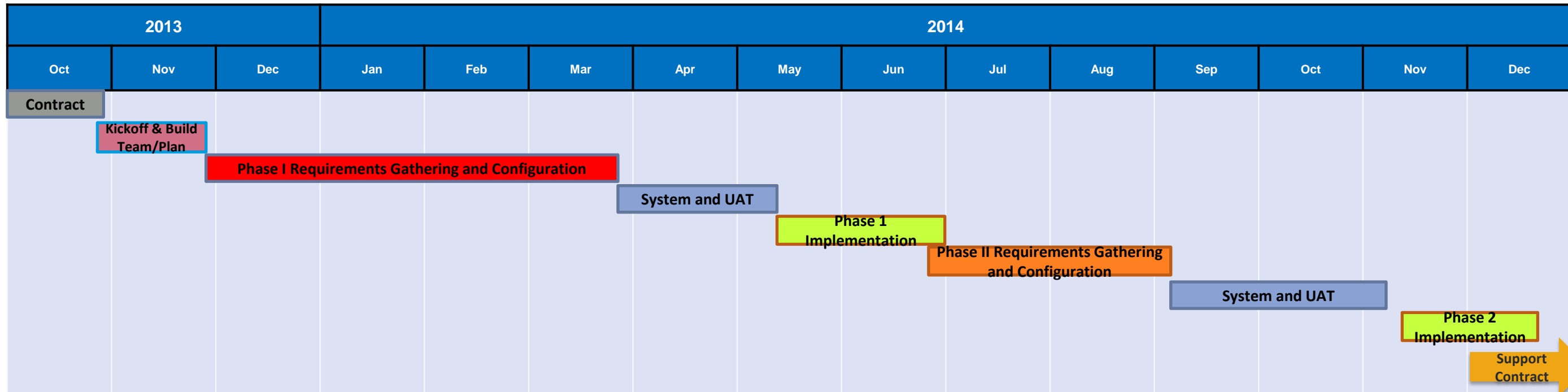
Phased Implementation

Phase I

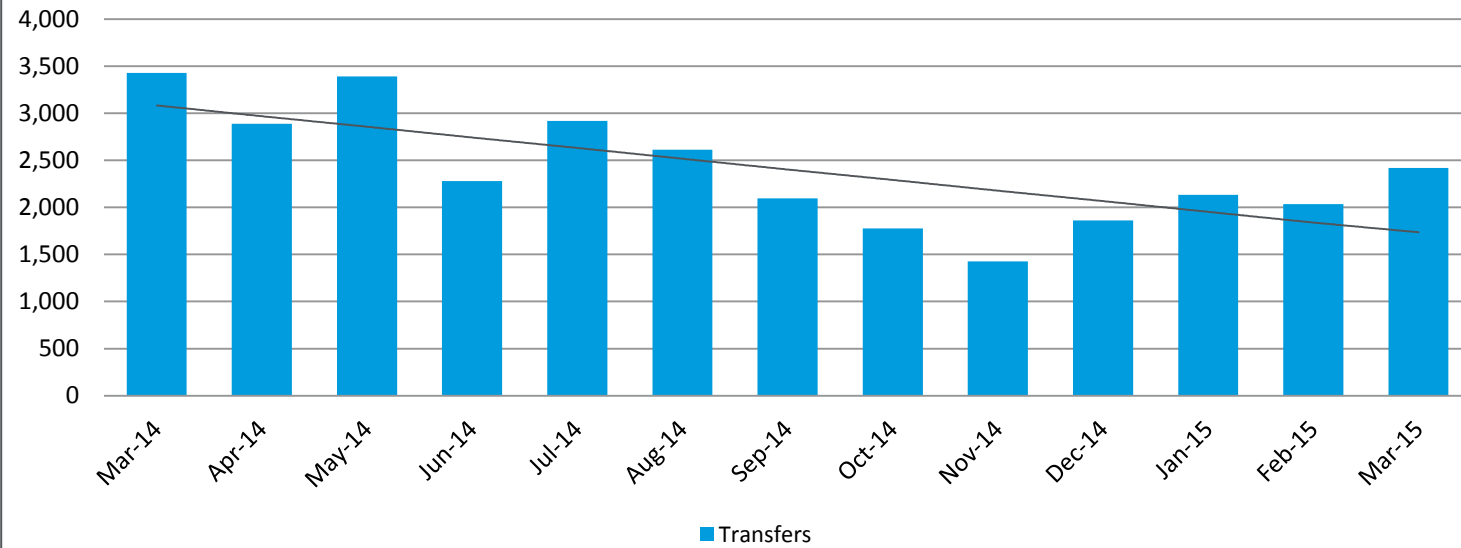
- Replace i2
- No other new functionality (aside from covering all STOR locations)

Phase II

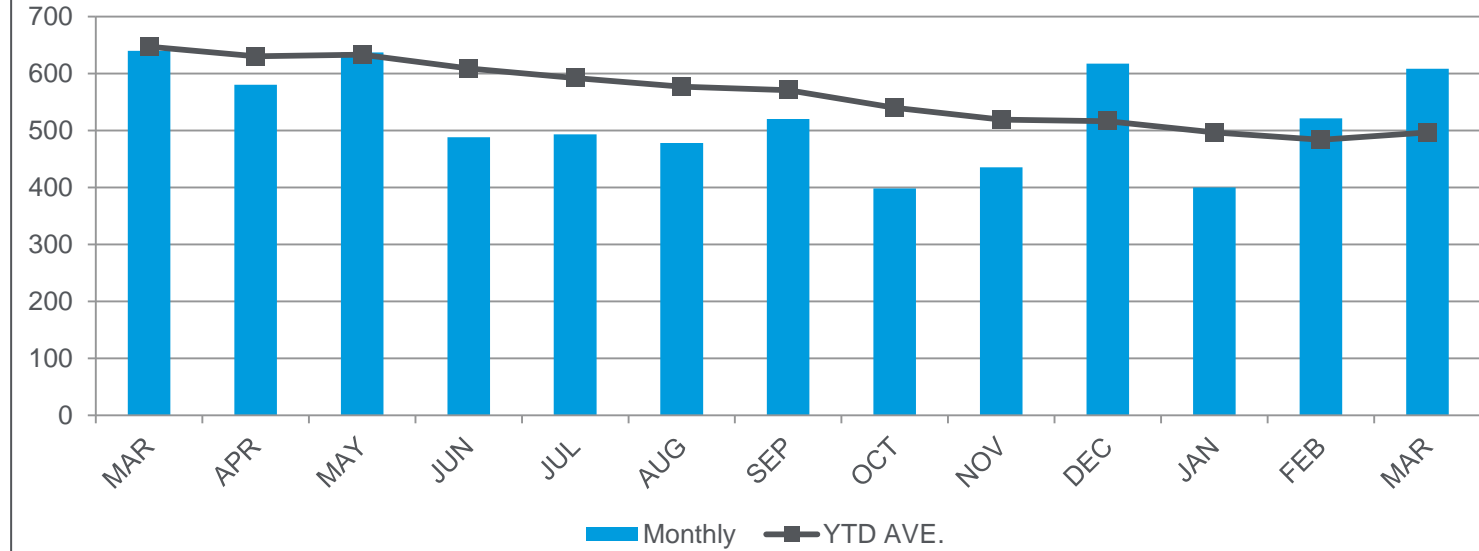
- Enhanced SPM capabilities
 - Causal Forecasting
 - Scheduled Event Management
 - Rotable Forecasting
 - MRO Forecasting



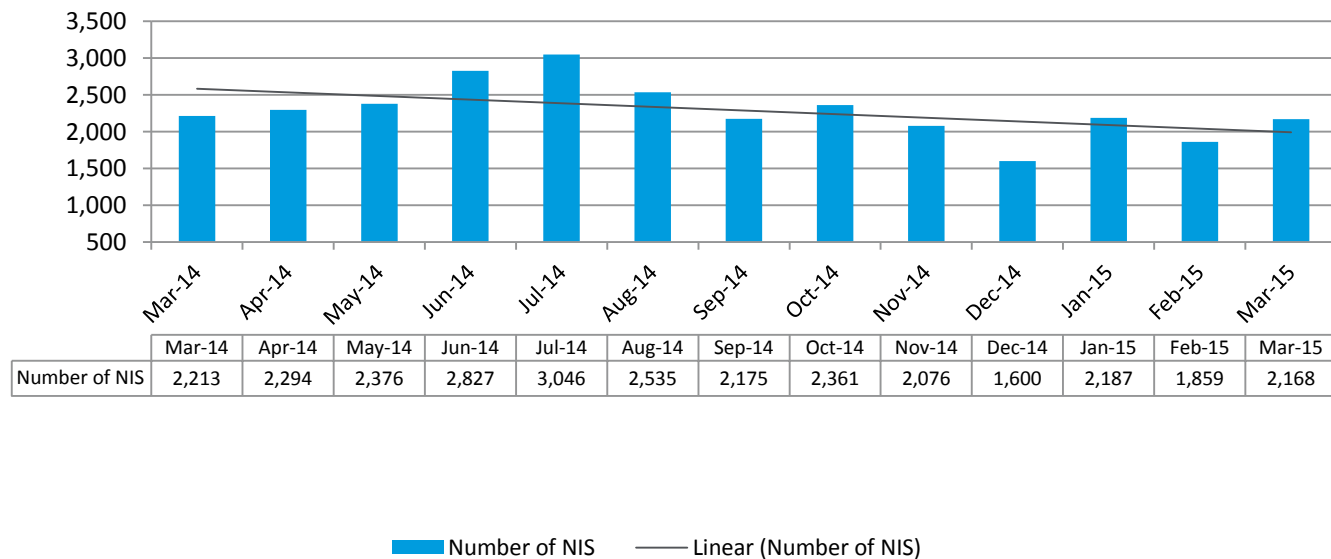
Outbound Store to Store Transfers



Material UAD



All Work Scopes NIS Report 3/1/14 to 3/31/15



Distribution of Rotables Across SWA System

	Prior to SPM	Since SPM	Net Change
ATL	0.68%	2.09%	1.41%
DAL	53.39%	37.26%	-16.13%
HOU	22.22%	24.78%	2.56%
MCO	0.00%	1.16%	1.16%
MDW	6.87%	11.38%	4.51%
PHX	16.84%	23.32%	6.49%

Our “Opportunities”

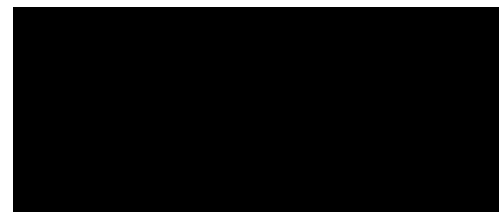
- Technology challenges (both resources and systems integration) in identifying the correct data feeds to SPM
- Process changes resulted in new roles that needed a “home”
- SPM implementation, combined with implementation of an electronic data exchange portal almost simultaneously, revealed bugs in SPEC2000 implementations (both SWA’s and our Suppliers), and gaps in our SPEC2000 order management process (exception monitoring)
- Maxi-Merlin (our ERP) reuses order numbers, which is a problem when it occurs within 10 years!
- Inventory located at our LINE locations is considered expended, so had to reverse engineer a means of determining LINE usage in order to drive SPM allocation recommendations.
- Causal forecasting was thought to be a significant benefit of implementing SPM, but did not meet expectations due to data limitations of the legacy supply system, and led to significant parts shortages until reverting to statistical forecasting.
- Hosted application (aka., software as a service) has proven to be very beneficial, with exception of system processing time, which often exceeds target thresholds.

Our Next Steps

- Continuing to leverage contracted PTC on-site support to wring maximum value from SPM and serve as liaison to PTC Cloud Services
- Address current shortcomings in Rotable and Tooling Forecasting, and Line Allocation recommendations that are due to incorrect data feeds from Wizard
- Upgrade to SPM Ver 11.X to stay ahead of technology obsolescence – MIME of great interest!
- Seeking to join/integrate SPM instances between SWA and Strategic Suppliers also operating on SPM in order to provide maximum visibility across Supply Chain
 - Improves response time to emerging conditions
 - Reduces time lag between demand spikes and Supplier awareness of those spikes
- Configure and implement new Technical Operations Maintenance, Repair, and Overhaul system and configure SPM to work with the new system



Supply Chain Nightmares



- Your feedback is valuable
- Don't miss out on the chance to provide your feedback
- Gain a chance to win an instant prize!
- Complete your session evaluation now

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