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WHIRLPOOL WAREHOUSING

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# JOURNEY TO 'BEST IN CLASS' FACILITIES

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March 16<sup>th</sup>, 2011

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## OBJECTIVES

- Overview of Whirlpool Corporation
- Maytag Integration
- Network Consolidation
- Perris (California) Case Study
- Warehousing Concepts
- Implementation of Labor Management

- World's leading marketer and manufacturer of home appliances
- More than \$18 billion in revenues in 2010
- 71,000 employees
- 67 manufacturing and technology centers

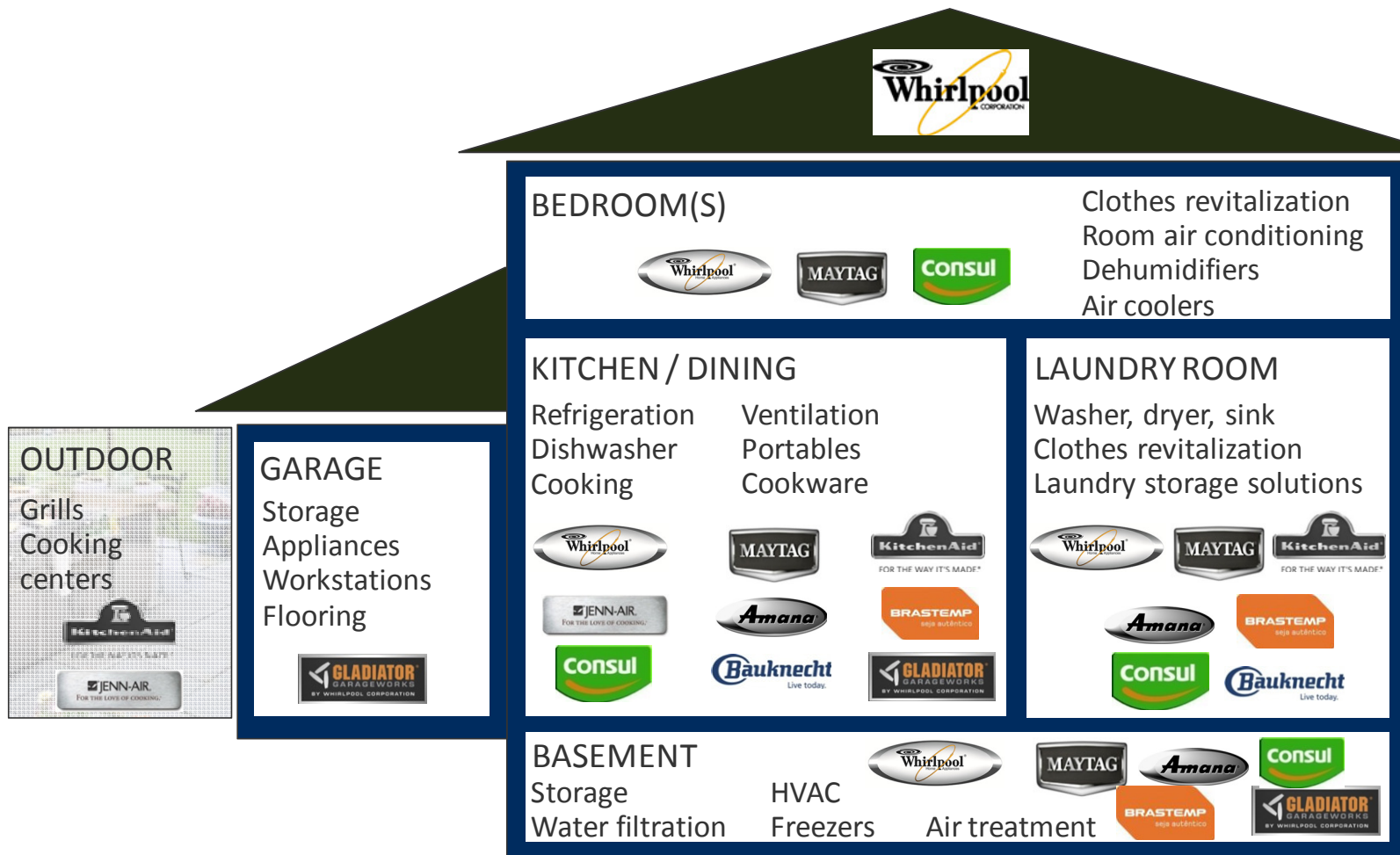
## LEADING BRANDS:



# WHIRLPOOL PRODUCTS



Every Room ... Every Home ... Everywhere



# SUPPLY CHAIN – MAYTAG INTEGRATION



- Goals
- Network Consolidation
- Perris (California) Case Study



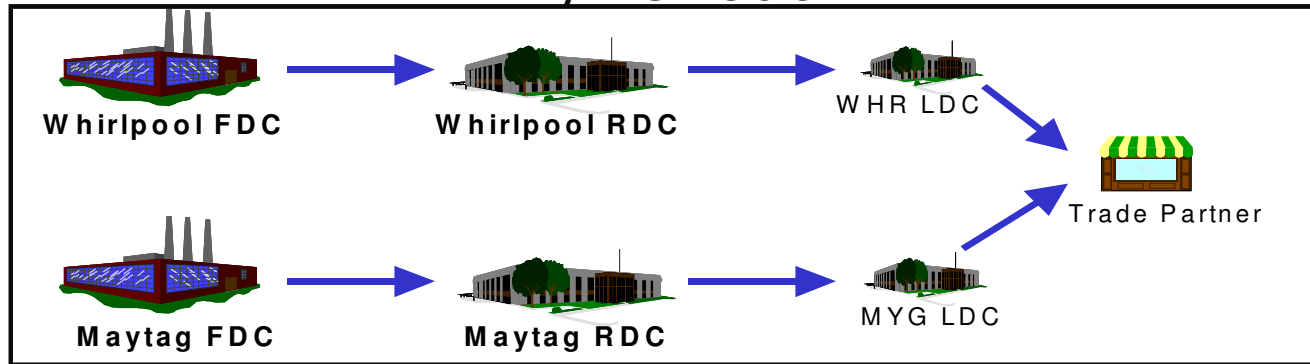
**Total Business Case Efficiencies:**  
Driven primarily by efficiencies in Manufacturing, Procurement & **Supply Chain**



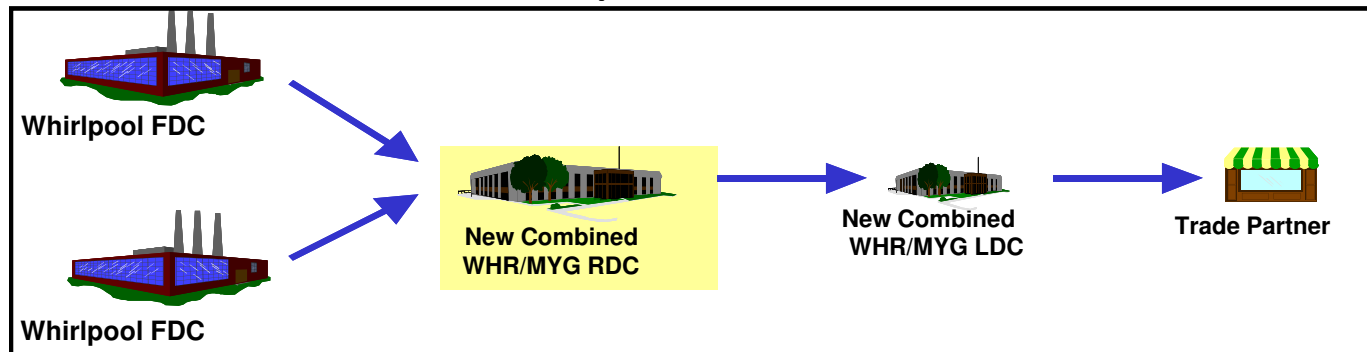
- Logistics Roadmaps**
- S&OP Process
  - Trade Partner Collaboration
  - Call Center Consolidation
  - Inbound Transportation
  - Elimination of Private Fleet
  - **FDC Consolidation**
  - **RDC Integration and Consolidation**
  - **LDC Integration and Consolidation**
  - International Supply Chain

# REGIONAL AND LOCAL DISTRIBUTION CENTER CONSOLIDATION

**WHR/MYG "Before"**



**WHR/MYG "Current"**



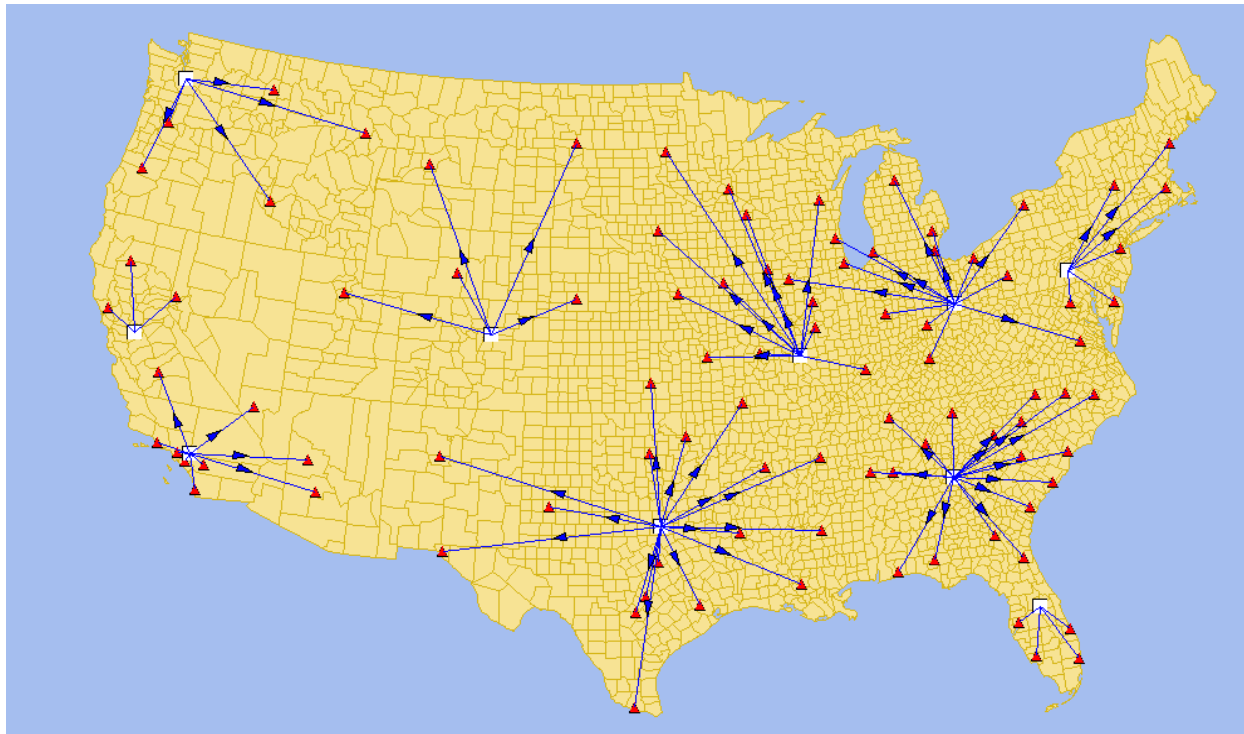
**Key Challenges Regional DC's:**

- 1) Funding
- 2) Operational Efficiency (Size of Facility)
- 3) WMS Functionality

**Key Challenges Local DC's:**

- 1) Engineering Bandwidth
- 2) Procurement (specialized providers)
- 3) Service Disruption Risk

# RESULTS – WHIRLPOOL 2011 DISTRIBUTION NETWORK



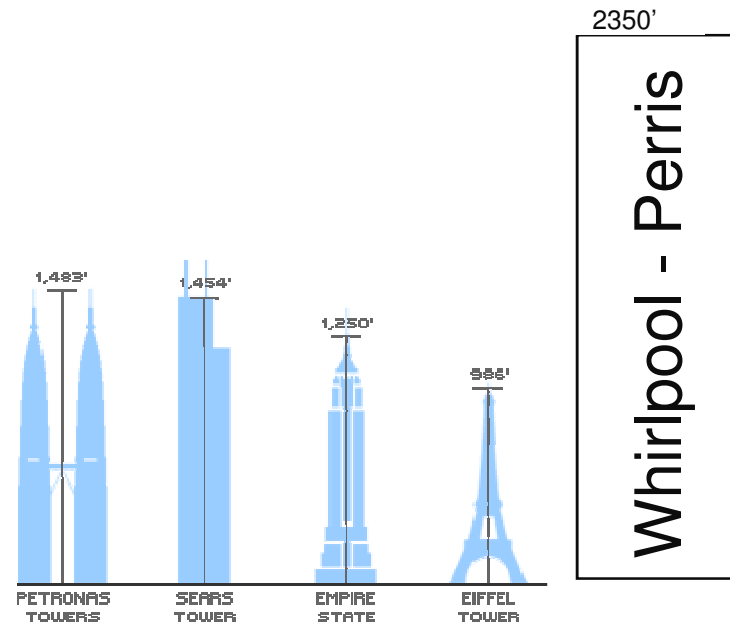
	FDC Operations	RDC Operations	LDC Operations	Total Facilities
Current Facilities	18	16	155	189
End State Facilities	15	10	106	131
<b>% Change</b>	<b>-17%</b>	<b>-38%</b>	<b>-32%</b>	<b>-31%</b>

**We have built, re-located, re-bid, and/or shut down more than 75 facilities  
(~ 1 facility/week)**

# PERRIS - RDC & FDC

## Facility Highlights:

- 1.70 million square feet
- 40 acres under roof / 38 Football Fields
- Consolidated 4 legacy operations
- ¼ Mile in Width
- ½ Mile in Length



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# PERRIS CASE STUDY - MAYTAG INTEGRATION ONE CHANCE TO CHANGE EVERYTHING

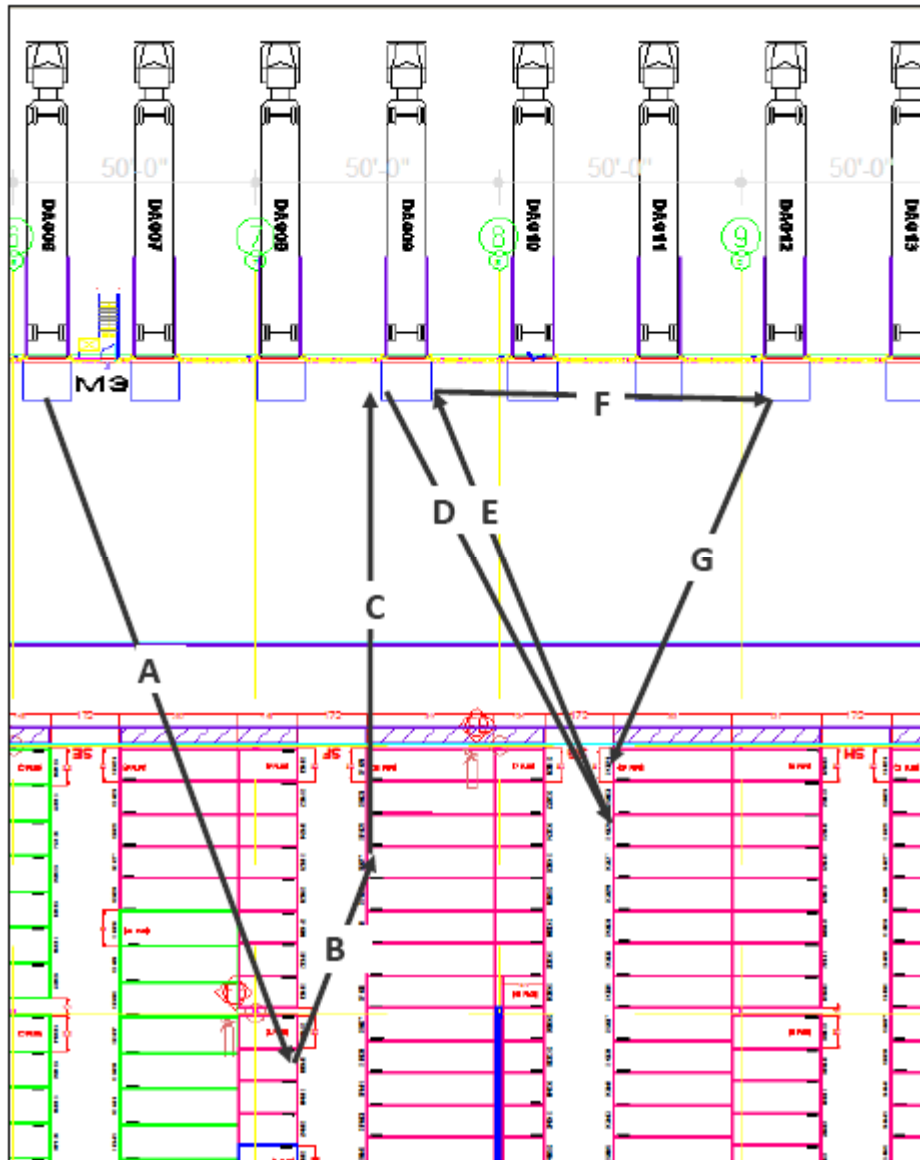


We would like to discuss a few of our introduced concepts

- Interleaving
- Opportunistic Substitution

**The merger gave us the resources and platform to entirely redesign our warehouse practices**

# INTERLEAVING



- Whirlpool's high cube/low units per touch environment would benefit significantly from introduction of task interleaving in clamp truck operations.
- Benefits include decreased travel times by allowing for put-away, replenishment, and packing tasks to be alternated based on algorithms which optimize pick path.
- **But you need to ensure that the facility meets due out times**

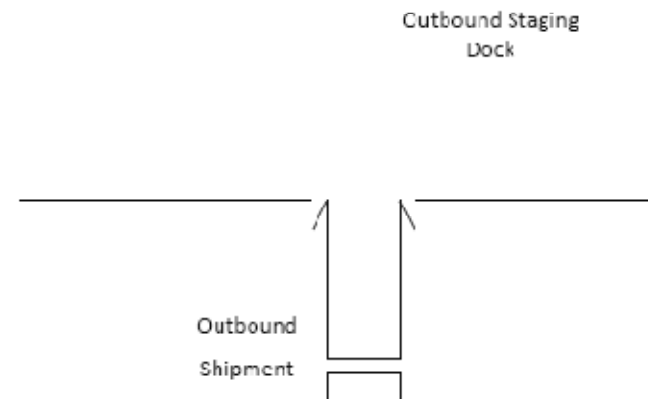
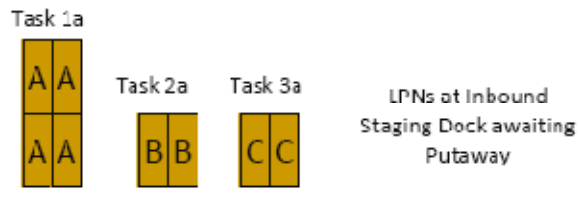
# OPPORTUNISTIC SUBSTITUTION

- Opportunistic Substitution is the functionality in WM that enables units to be “put away” from an Inbound Staging Location to an Outbound Staging Location.
- Systematically, the Picking task will be “substituted” by a Putaway task provided the SKU and quantity on both tasks are an exact match.

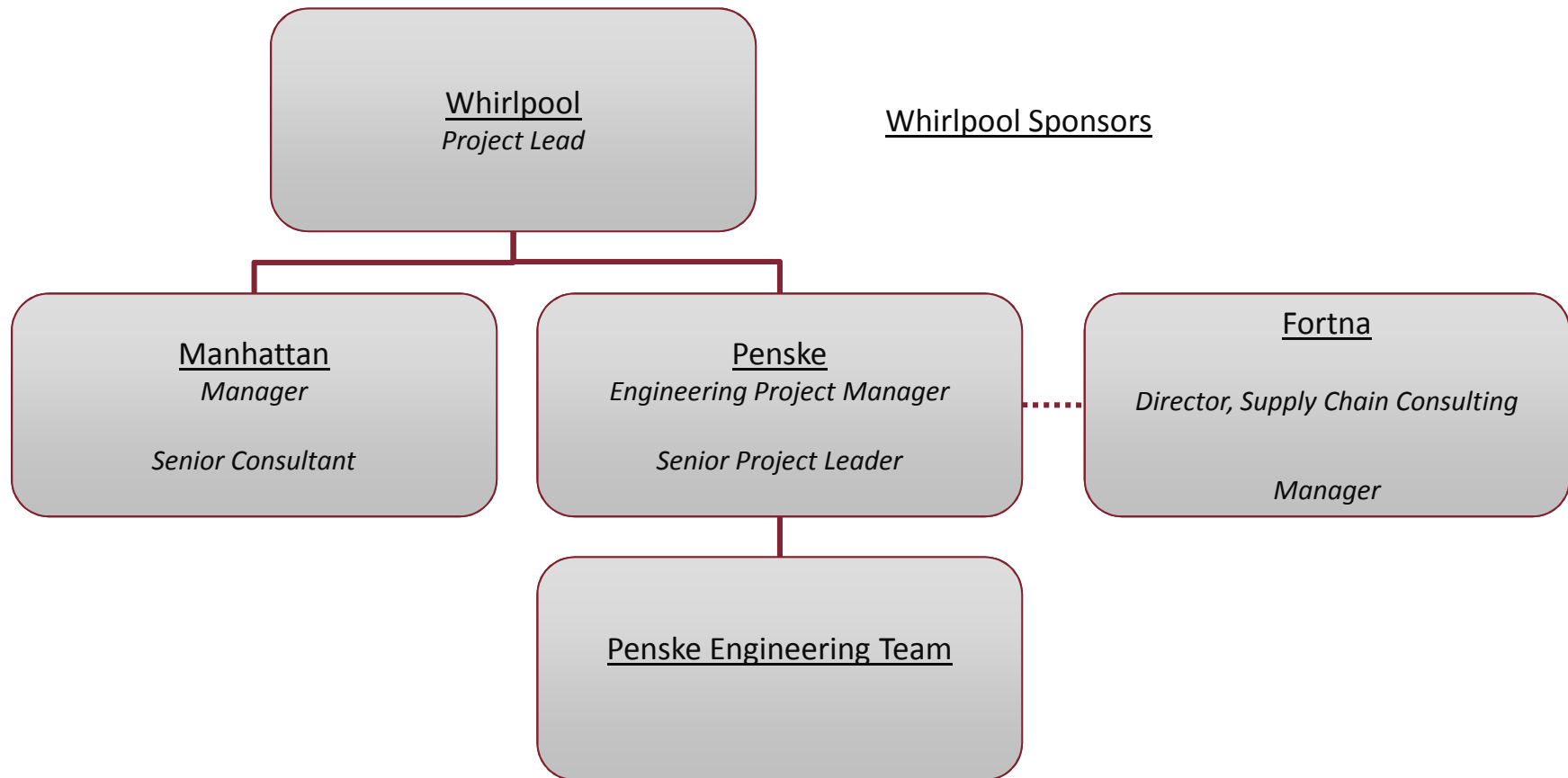
## Existing Picking Tasks for Outbound Shipment



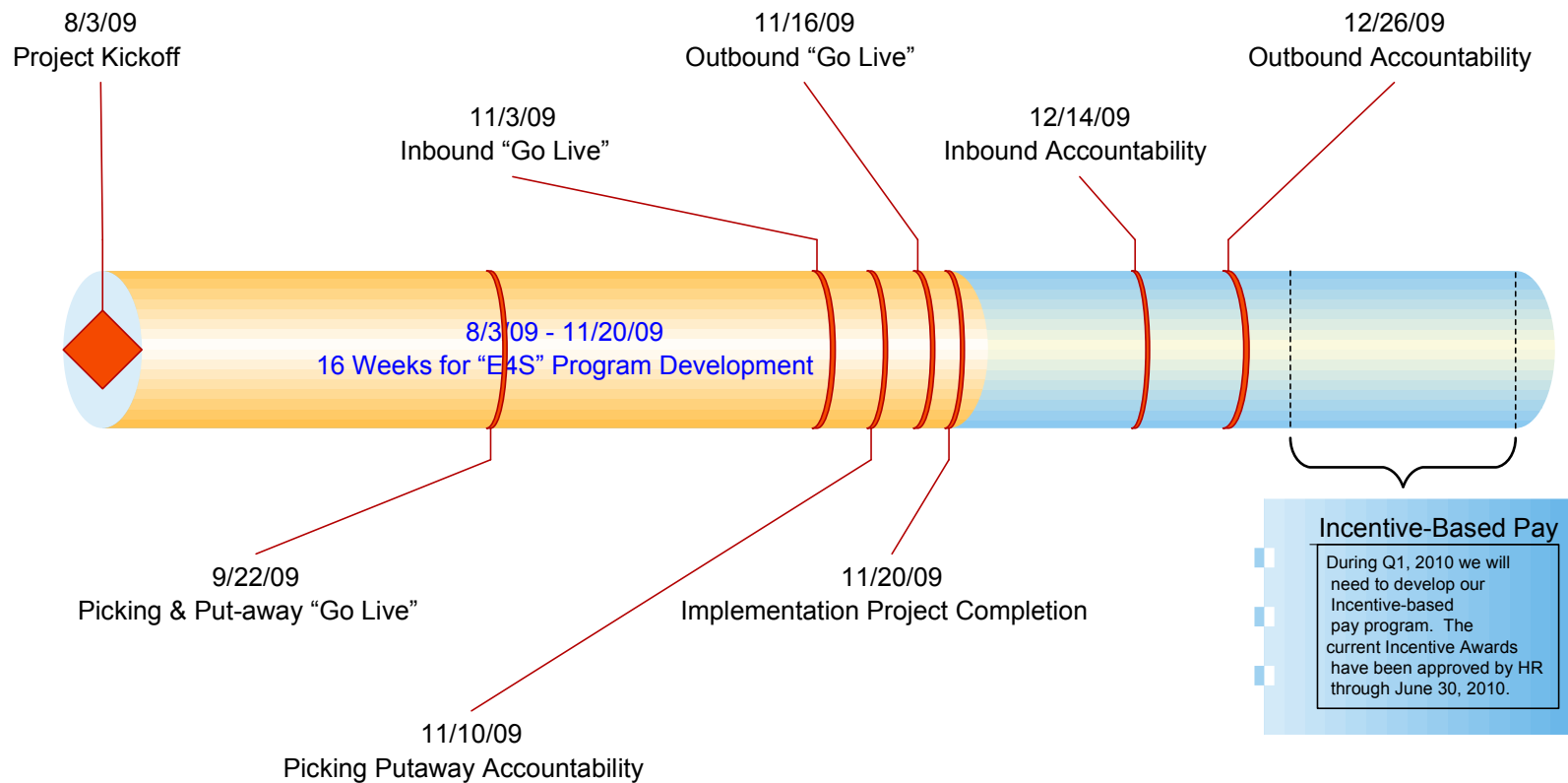
## Existing Putaway Tasks for Inbound Shipment



# PERRIS LABOR MANAGEMENT ORGANIZATION CHART



## E4S – Employees for Success Timeline

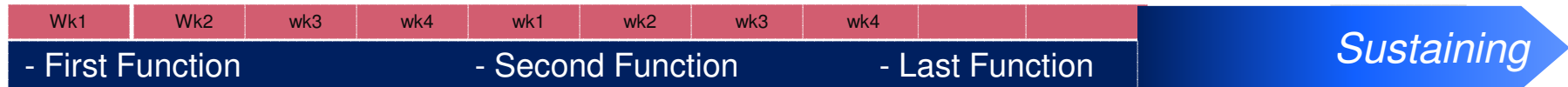


# EVOLUTION OF THE PERRIS FACILITY



Accountability  1<sup>st</sup> Function

Tollgate Review of all Standards 



<i>Go-Live &amp; Ramp-Up Performance is posted</i>	<i>Accountability Coaching &amp; Mentoring</i>	<i>Incentive Base Pay</i>
<b>Week 1 - 4</b>	<b>Week 5 - Ongoing</b>	<b>Sustaining</b>
<ul style="list-style-type: none"> <li>• Visibility to performance by employee by day</li> <li>• Management observing &amp; coaching clamp drivers during Go-Live week 1 and ramp up period (week 2-4)</li> </ul>	<ul style="list-style-type: none"> <li>• Ensures adherence to the standard</li> <li>• The associate understands the “pace” of work required to meet standard</li> <li>• Award/Discipline process is in place</li> </ul>	<ul style="list-style-type: none"> <li>• After all functions are LIVE and ramped up</li> <li>• Quality, Safety, and Accuracy “GATES” are met.</li> <li>• HR will develop the details of the program.</li> </ul>

**Timeline:**

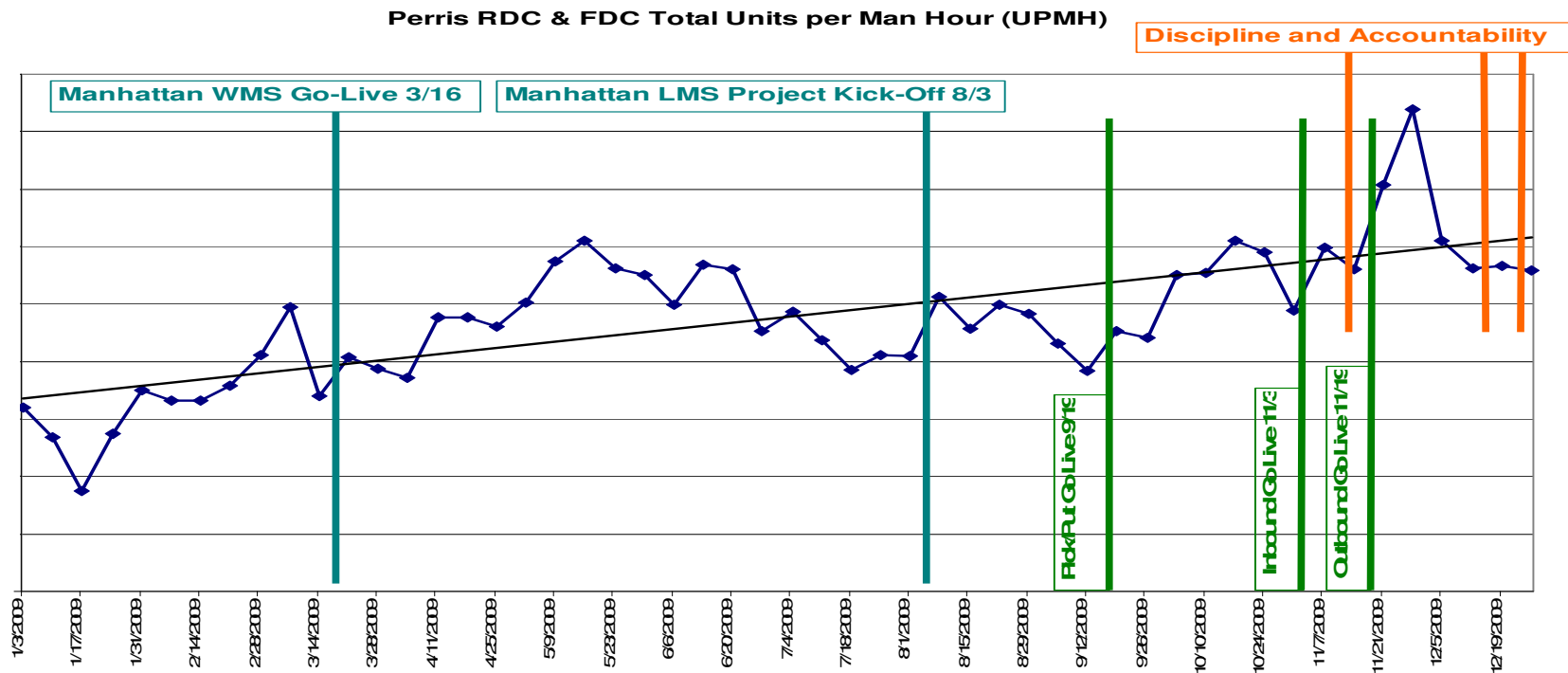
- October 12th – the first standard is held accountable
- December 7th – the last standard is held accountable

**Timeline:**

- 2009 – Award Based Incentive
- 2010 – Incentive Based Pay

# PERRIS - LABOR MANAGEMENT PROGRAM

- 420 Time Study Hours to Create Standards
  - System Functionality - “Heal-to-Toe”
  - EP% Employee Performance
  - Award / Discipline Programs
  - Next Steps (Continuous Improvement Teams, Weekly E4S meetings)
- 
- Keys to a Continuous Improvement Culture
  - Change Management Program
    - Preferred Methods Development
    - Supervisor Observations of Employees
    - Coaching/Mentoring Sessions
    - Accountability & Reporting



# PERRIS, CA - LABOR MANAGEMENT REPORTING



## Employee Detail Performance by Job Function Report

**WAREHOUSE:** FDF

**JOB FUNCTION:** EMPLOYEE

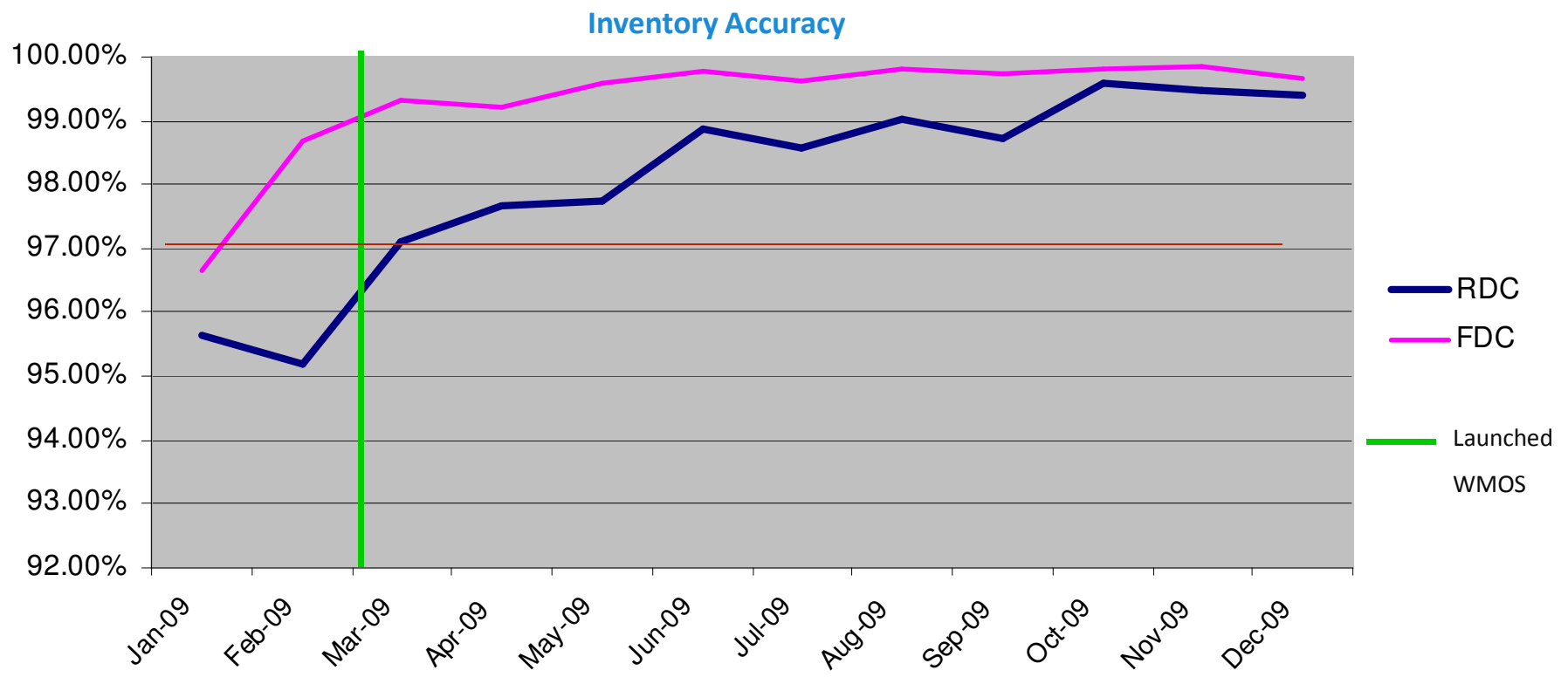
**DATE/TIME RANGE:** May 06, 2004 00:00 to May 06, 2004 23:59

On Std Direct Labor = OSDL-ADJ\_OSDL+UIL  
 On Std Indirect Labor = OSIL-ADJ\_OSIL  
 Non Std Direct Labor = NSDL-ADJ\_NSDL  
 User Def & Sched Indir Labor = UDIL+SIL-ADJ\_UDIL  
 Breaks = PAID\_BRK+UNPAID\_BRK  
 Adjustment = ADJ\_OSDL+ADJ\_OSIL+ADJ\_NSDL+ADJ\_UDIL

Note: The field header in gray denotes that it is a customizable field.  
 All the time columns are in minutes.

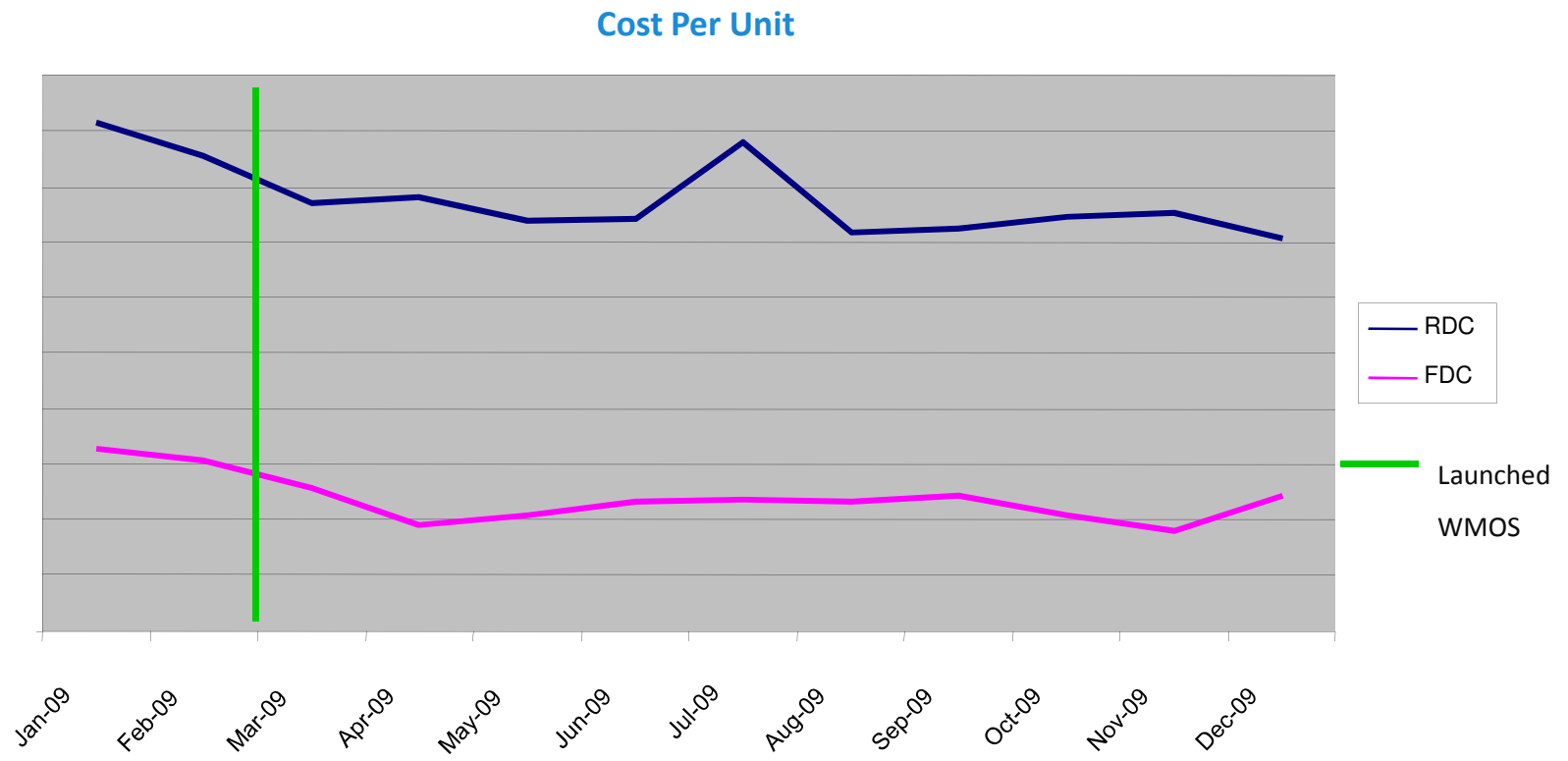
EMPLOYEE	TOTAL TIME	EARNED MINS	On Std Direct Labor	On Std Indirect Labor	Non Std Direct Labor	User Def & Sched Indir Labor	Breaks	Adjustment	EP%	UTIL%	OS%
AGONERF	360.00	330.00	345.00	0.00	0.00	15.00	0.00	0.00	95.65	16.67	16.67
AGUILERA	540.00	520.00	0.00	0.00	0.00	540.00	0.00	0.00	0.00	0.00	0.00
AWHITRF	1,320.00	1,260.00	1,260.00	0.00	0.00	60.00	0.00	0.00	100.00	9.09	9.09
BBABERF	1,980.00	1,950.00	1,890.00	0.00	0.00	90.00	0.00	0.00	103.17	52.27	52.27
BTHOM	3,300.00	3,220.00	3,300.00	0.00	0.00	0.00	0.00	0.00	97.58	36.36	36.36
CBAKERF	3,300.00	3,310.00	3,300.00	0.00	0.00	0.00	0.00	0.00	100.30	18.18	18.18
<b>ALL EMPLOYEE</b>	<b>10,800.00</b>	<b>10,590.00</b>	<b>10,095.00</b>	<b>0.00</b>	<b>0.00</b>	<b>705.00</b>	<b>0.00</b>	<b>0.00</b>	<b>104.90</b>	<b>27.92</b>	<b>27.92</b>

# PERRIS - INVENTORY ACCURACY



Stow Accuracy	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
<b>RDC</b>	95.65%	95.18%	97.12%	97.67%	97.76%	98.89%	98.58%	99.04%	98.73%	99.59%	99.47%	99.39%
<b>FDC</b>	96.66%	98.68%	99.33%	99.22%	99.60%	99.76%	99.63%	99.81%	99.75%	99.81%	99.86%	99.67%

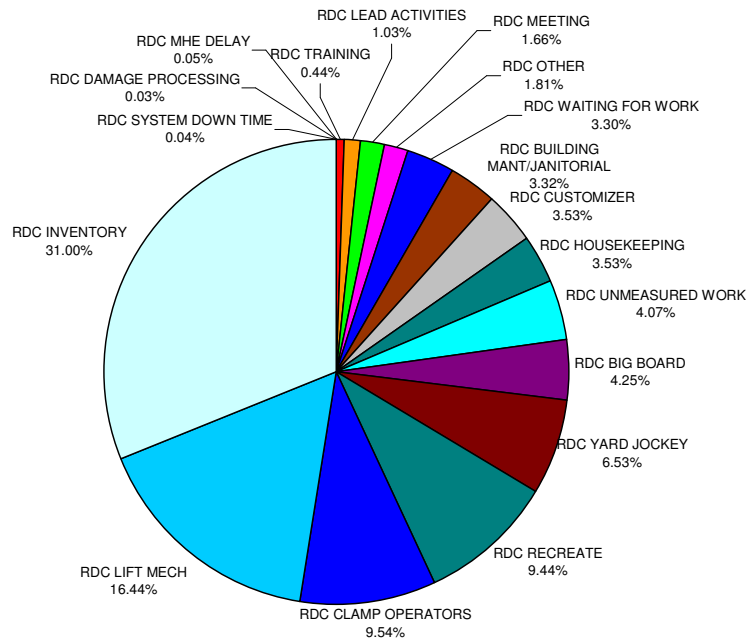
# PERRIS – TOTAL PER OUTBOUND UNIT



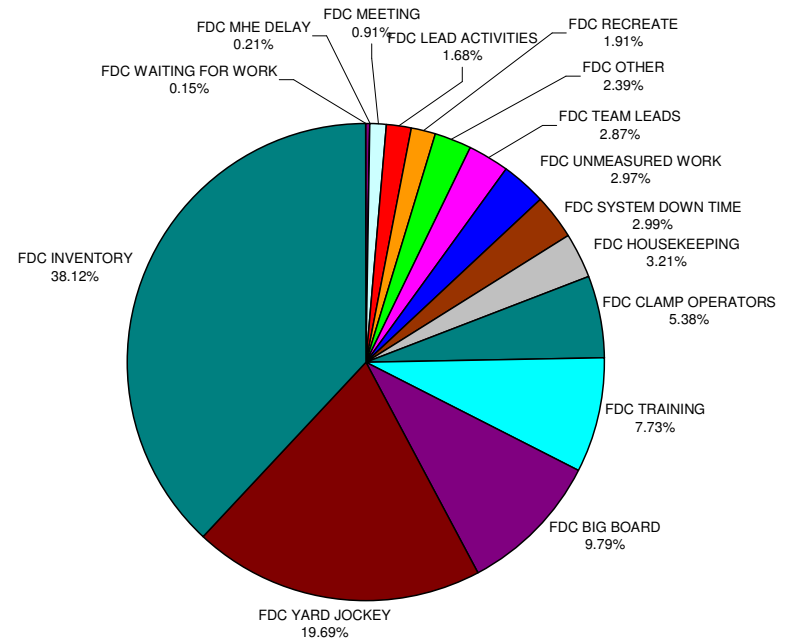
**23% improvement on RDC CPU and 26% improvement on the FDC CPU**

# RDC vs. FDC INDIRECT HOURS

## RDC Indirect Hours



## FDC Indirect Hours

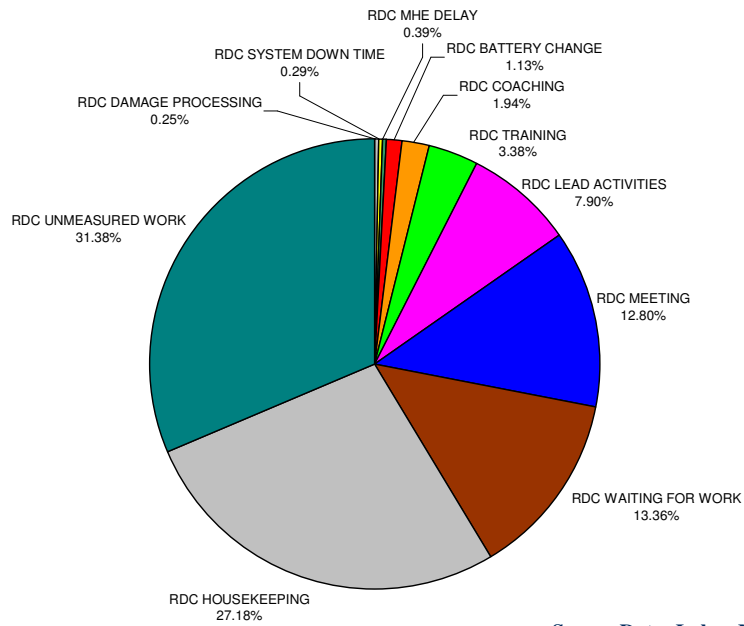


Source Data: Penske ROM Tool and Labor Management / Date: Week of 11/16/2009

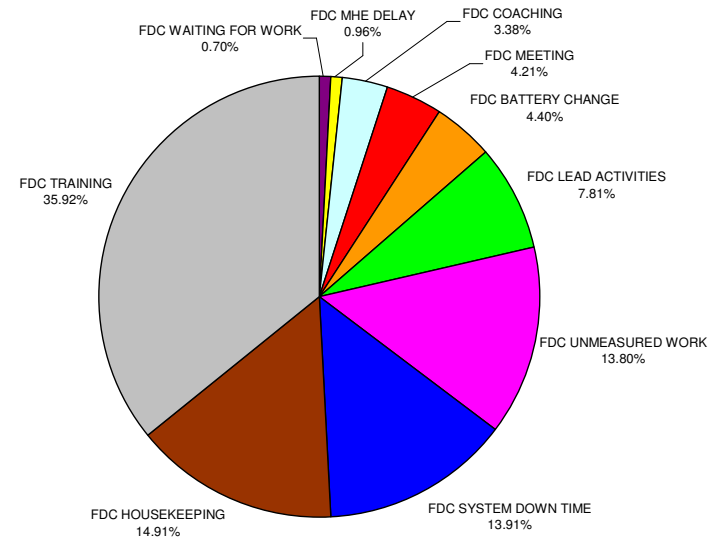
# RDC vs. FDC DRIVERS AND SCANNERS INDIRECT



### RDC Indirect Activities



### FDC Indirect Activities



Source Data: Labor Management / Date: Week of 11/16/2009

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# SUCSESSES AND LESSONS LEARNED FROM PERRIS

## WAREHOUSE MANAGEMENT

- Mock Go-Live ensured system readiness and allow time for issue resolution
- Engage End Users in testing ensure a deeper understanding of system functionality
- Visibility to all associates transactions
- Standard configuration that can be utilized across the network
- Understanding of how activating work impacts the floor

## LABOR MANAGEMENT

- Developed standards that can be deployed across Whirlpool Corporation's supply chain network
- Data driven decisions
- True visibility to performance
- Open communication with WM team to ensure seamless data flow
- Labor Management design renovation
- Defined layout of roles and responsibilities
- Testing over and over
- Ensure 100% confidence level before going live with standard
- Importance of Change Management

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# Recognition

## LEED AND USGBC

- LEED: Leadership in Energy and Environmental Design
- USGBC: United States Green Building Council

## What is Green Design?

Design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants. These practices include;

- Storm water Quality Control in place to minimize pollutants in runoff
- White roof and colored concrete utilized to mitigate hest island effect
- Water Use controls in place (low flow faucets)
- Recycled Content, Regional Materials and Certified Wood utilized
- Low Emitting Materials utilized to improve indoor air quality
- Lighting proximity sensors utilized in the facility
- Electrical clamp trucks utilized to minimize emissions
- Skylights utilized for ambient lighting

## WERC

- Orlando and Perris facilities are WERC Warehouse Management certified

## LEED Certified Buildings:

- **Gold Level** - Atlanta and Seattle
- **Certified Level** – Columbus, Denver and Greenville
- **Future Projects** – Marion FDC and Wilmer RDC

## Benefits of Sustainable Buildings:

- Reduce Environmental Impact
- Optimize Performance
- Lower Operational Costs
- Increase Asset Value
- Improve Productivity
- Reduce Absenteeism



**Results - Whirlpool has one of the largest Green certified distribution networks**