Whirlpool Europe
Supply chain introduction

- Whirlpool Corporation  & Whirlpool Europe
  - Who we are

- Whirlpool Europe Supply chain
  - Supply Chain organization
  - Supply chain network
  - Supply chain processes
  - Supply chain KPI
  - Supply chain planning system architecture
  - Demand management
    - Operational demand management & S&OP
    - Product introduction process (Perfect launch)

- Whirlpool Europe Supply Chain strategy

- Whirlpool Europe Employees Engagement
World Leader in Domestic Appliances

WHIRLPOOL CORPORATION

- Operates in 170 countries
- 40% bigger than nearest competitor
- 95 years specialist in home appliances
- “At home” in over 200,000,000 households world-wide

World Leader in Domestic Appliances

**Products:** Full line of major home appliances

**2006 revenues:** $18.1 billion

**2006 net earnings:** $ 486 million

**2006 units shipped:** 55,000,000

**Manufacturing:** 13 countries in 4 continents

**Marketing:** 170+ countries

**Employees:** approximately 80,000 worldwide

**Brands:** Compelling portfolio of consumer preferred brands
Brand Portfolio
We Touch All Key Consumer Segments

- Cooking passionates
- Creative & modern mentality
- Look for professional-like results

- Premium segment
- Quality minded
- Very brand conscious
- Home enthusiast

- Up market
- Style and design minded
- Time pressure
- Fashion oriented
- Technology / design driven

- Mass market
- Young families
- Value sensitive
- Looking for reassurance

Whirlpool values

Respect
Respect others and believe in individual ability

Integrity
Always do the right thing

Diversity and Inclusion
Make the most of diversity to obtain better results

Teamwork
Achieve more working together

Spirit of Winning
Win in business by winning
The hearts and minds of our customers
Whirlpool in Europe

- #4 position as manufacturer; #1 as Whirlpool brand
- Sales US $3.4 billion
- Brands: Whirlpool, Bauknecht Ignis, KitchenAid across the region; Maytag in some markets, Laden in France, Polar in Poland
- Serves Europe, Middle East and Africa
- 31 sales offices, export in other 38 countries
- Shared Services Center, Dublin, Ireland
- 14,000 employees approx

Supply Chain the key elements

- Business processes
- Business models
- Distribution Models
- The 3 Axises
  - Markets
  - Products
  - Product sourcing
Supply Chain Process

- S&OP
- Supply Planning
- Production Planning
- Order Intake
- Demand mgmt
- Built To Order
- Make To Stock
- Deliver From Stock
- Distribution mgmt
- Service level mgmt
- Logistics providers selection & negotiation
- Carriers mgmt
- Warehouses mgmt
- Order to Delivery
- Trade
- Factories
- Suppliers
- Customer

Supply Chain Business Models

- Suppliers
- Factory
- FDC/CDC
- RDC
- TP’s Customer

- PUSH - Forecast driven
- PULL - Order driven
- VMI Vendor management inventory
- USS Upstream Stock
- BTO Built To Order

Decoupling point = point synchronisation between TP order and supply

WE business models well supported by organisation, processes and systems
## Planning Processes & time horizons

<table>
<thead>
<tr>
<th>Month/MI</th>
<th>M+1 to current year end</th>
<th>Next Year</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>Week 2</td>
<td>Week 3</td>
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<tr>
<td></td>
<td>Week 4</td>
<td>Week 5</td>
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<tr>
<td></td>
<td>M+1</td>
<td>M+2</td>
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<td>M+3</td>
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<td>M+6</td>
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<td>M+7</td>
<td>M+8</td>
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- **Forecast**
  - Visibility only
  - Forecast at SKU / location level / category including GSP generation
  - Mid to Long term Demand Planning

- **Supply Plan**
  - Supply Plan by SKU / location
  - Distribution planning
  - Daily buckets rolling

- **Production Schedule**
  - Rolled to M+3
  - Mid to Long term Demand & Supply Matching
  - Daily buckets rolling
  - Weekly buckets rolling
  - Daily run

- **Component requirements**
  - Production Schedule
  - Weekly / Monthly

- **Deployment**
  - BBP run

### Whirlpool Europe’s delivery models

![Whirlpool Europe's delivery models diagram](image)

- Factory DCs
- Regional DCs
- BBP’s
- Trade
- Consumer

- Profit plan per SKU / Market: Oct/Nov
  - For running year
The 3 axes

- Markets
  - Distribution profile
  - Trade partners
  - Brand value & positioning

- Products
  - Brand portfolio
  - Product portfolio
  - SKU Management

- Product sourcing
  - Factories
  - Suppliers
  - Low cost country localization

Whirlpool Europe
KPI
Whirlpool Europe KPI

• Markets
  • ATR available to request
  • DTP Delivery to promise
  • DFA Demand forecast accuracy
  • DOS Day of sales

• Products
  • SKU counting
  • Obsolescence

• Product sourcing
  • PSA Production scheduling accuracy

• Distribution
  • CPU Cost per unit

Processes & Performances
<table>
<thead>
<tr>
<th>Title: Available To Promise (ATR)</th>
</tr>
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<tbody>
<tr>
<td><strong>Description:</strong></td>
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<tr>
<td>It measures our ability to promise on the TP’s request (product, quantity, requested delivery date) at the time of order entry. A Trade Partner request (product, quantity, requested delivery date) is considered successful when the product/quantity is promised at the requested delivered date (first commitment).</td>
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<tr>
<th>Frequency:</th>
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</table>

| Formula Description:            |
| Element of count: successful requested qty, requested qty |

\[
\text{ATP} = \frac{\text{total successful requested qty}}{\text{total requested qty}}
\]

<table>
<thead>
<tr>
<th>Source (Dept., System, Report Name):</th>
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<tr>
<th>Ownership (Function, Dept, Name):</th>
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Key business requirements drove the design of the to-be Supply Chain processes in scope

- What-if analysis
- Exception based planning
- One consensus plan

Constrained Supply Planning
- Full BTO / DD potential
- Forecast consumption
- Improved feasibility of master schedule
- Flex. allocation of capacity to countries
- Daily planning
- Order type visibility
- Inventory target setting
- Deployment planning

Production Planning & Scheduling
- Improved feasibility of production plan.
- Order type visibility
- Critical components planning
- Daily planning
- Frozen period on daily rolling horizon
- Closed loop planning

Demand Management
- Consensus based forecasting
- Demand differentiation / Order type visibility
- Component demand planning

Order Intake / GATP
- Differentiated TP’s service level
- Allocation planning
- Real time order promising

Whirlpool process & System tree

Yearly / Half yearly
- Profit Planning / Spring & September Forecasting
  - Profit Plan
  - Financial Target

Monthly/ Weekly
- Demand Planning
- Gross Demand Plan
- Net requirements / Finished Good

Monthly /Weekly/ Daily
- Master Planning
- Supply Plan
- Production Plan

Daily
- Production Planning
- PP/DS
- COPICS

Transactional
- Production Execution
- SNP
- SAP

Weekly / Daily
- Deployment
- Deployment Plan
- B/D

Transactional
A demand forecast will never be perfect.

However more reliable demand planning has implications:
- Sales volume increases, because of the higher service level and reduced out of stock
- Reduction of operational costs, less obsolete inventory risks, less capital cost and lower demand for safety stock

APO is the tool to support Whirlpool Demand Driven Planning Process

Demand Planning is the APO Module used to update Demand Forecast
**Monthly Key Process - Operational Demand Plan (ODP)**

**Objectives**
- ODP Preparation
- ODP Consolidation
- ODP Submission

**Participants**
- OTD
- MKTG
- Sales
- Finance

**Timing**
- Every month, w1/w2 (*)
  (*) Iberia try to anticipate to last week M-1

**Preparatory Meetings**

**Activity**
- **Meetings**
  - When: Weekly / By weekly
  - Who: Planning, Sales, MKTG
  - Focus: M+1 / M+2
  - What: Promo, Special Actions, BTO plans

**M-1 Result Meetings**
- When: Start CM
- Who: Planning, Sales, MKTG
- Focus: M-1
- What: Trends, Results vs plans

**Tools**
- ALL:
  - Previous ODP
  - Profit Plan
  - Future Promotions/BTO outlook
  - Previous month detailed results
  - PIPO outlook
  - Current Orderbook
  - Run Rates & Historical by aggs
  - EOQ & Stock
  - S&OP Inputs
  - BW Monthly GMs

**SPECIFIC**
- Sales SKU forecast
- Buying Groups Total Fcst
- Previous year orderbook (same period)
- Excess Stock
- S&OP Inputs
- BW Monthly GMs

**Outcome**
- ODP Update
- ODP Submission

**Monthly Analyses**
- DFA AGG results
  - When: Beginning M-2
  - Who: Planning, MKTG, Sales
  - Focus: M-1
  - What: Actual demand vs Fcst

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**Focus on volumes ------> CM / M+1 / M+2 onwards**

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**Whirlpool Europe**

**Skills & Competencies**
Skills & Competencies

- **Project Macro Steps**

  - **Project Set-up**
    - Logistics Staff
      - Macro objectives definition
      - Methodology & tools identification

  - **High Level Mapping**
    - Logistics Staff
      - Org. charts gathering
      - STD functional scheme definition
      - Job activities mapping
      - Reference job titles set
      - Role/Level by job title
      - Functional Champions identification

  - **Skills Inventory**
    - Logistics Staff
      - Skills mapping by Function/Functional Area
      - Skills matching by Education/Experience
      - Progression steps (1 to 5)
      - STD value distribution

  - **Standard Role**
    - Logistics Staff
      - Roles & skills progression matching

  - **Skills Assessment**
    - Logistics Staff
      - Self Assessment
      - Supervisor Assessment
      - Calibration

**WHO**
- Senior Logistics Staff
- Project Team

**DELIVERY**
- Common approach within Operations
- Key disciplines identification by Function

**Process Steps in defining Gap Recovery Plan**

- **MAINTAIN**
  - Day by Day activities support
  - Focus on: BASIC TOOLS & PROFESSIONAL EXPERTISE

- **IMPROVE**
  - Supply Chain Strategy
  - Functions mission/goals
  - PMP discussion
  - Focus on: Ad hoc RECOVERY PLAN
  - SUPPLY CHAIN "TOP 5"

- **BREAKTHROUGH**
  - Supplier's competency consistency
  - Focus on: TALENT POOL
  - KEY PEOPLE/POSITIONS
  - DEVELOPMENT ACTIONS