WHIRLPOOL Slovakia

Whirlpool Production System

28/10/2008

SENSING THE DIFFERENCE

AGENDA

- Whirlpool History & Present
- Production & Milestone 2008
- WER Strategy & Whirlpool Production System
- Poprad Lean Journey
- Whirlpool Production System
  - Standardized Work
  - Material Management Strategy
  - Equipment Management
- Change Project
- Questions & Answers

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

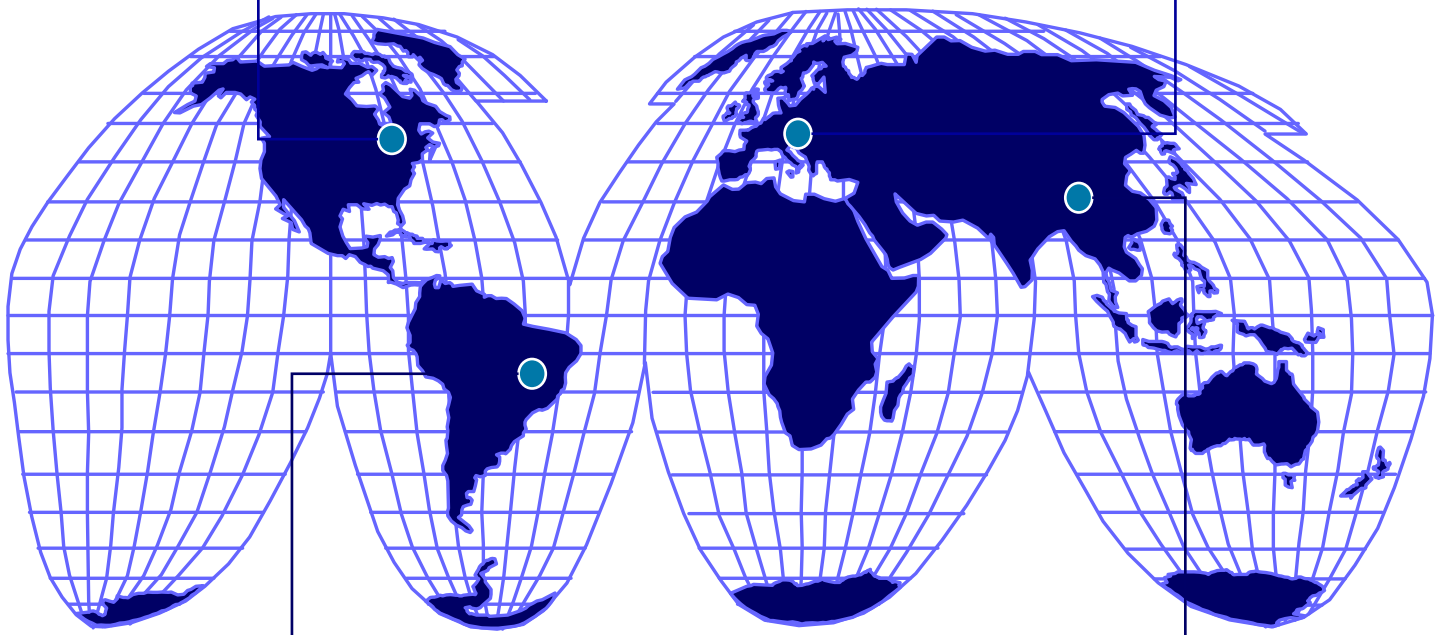
2007 revenues

- **2007 revenues : $ 19.4 B**
- **2007 Net earnings: $ 647 M**

Whirlpool's Global Position Today

#1 in North America
#1 major appliance market share

In Europe
#1 as brand



#1 in Latin America
#1 consumer position in Brazil and Argentina

Strong position for growth in Asia
#1 consumer-preferred brand in India

Whirlpool Slovakia in Poprad- Matejovce

WHO WE ARE

• **Whirlpool Slovakia** is the largest manufacturing plant for washing machines of **Whirlpool Europe.**

• **Whirlpool Europe** Headquartered in Italy (Comerio). WE is a wholly owned subsidiary of **Whirlpool Corporation.**

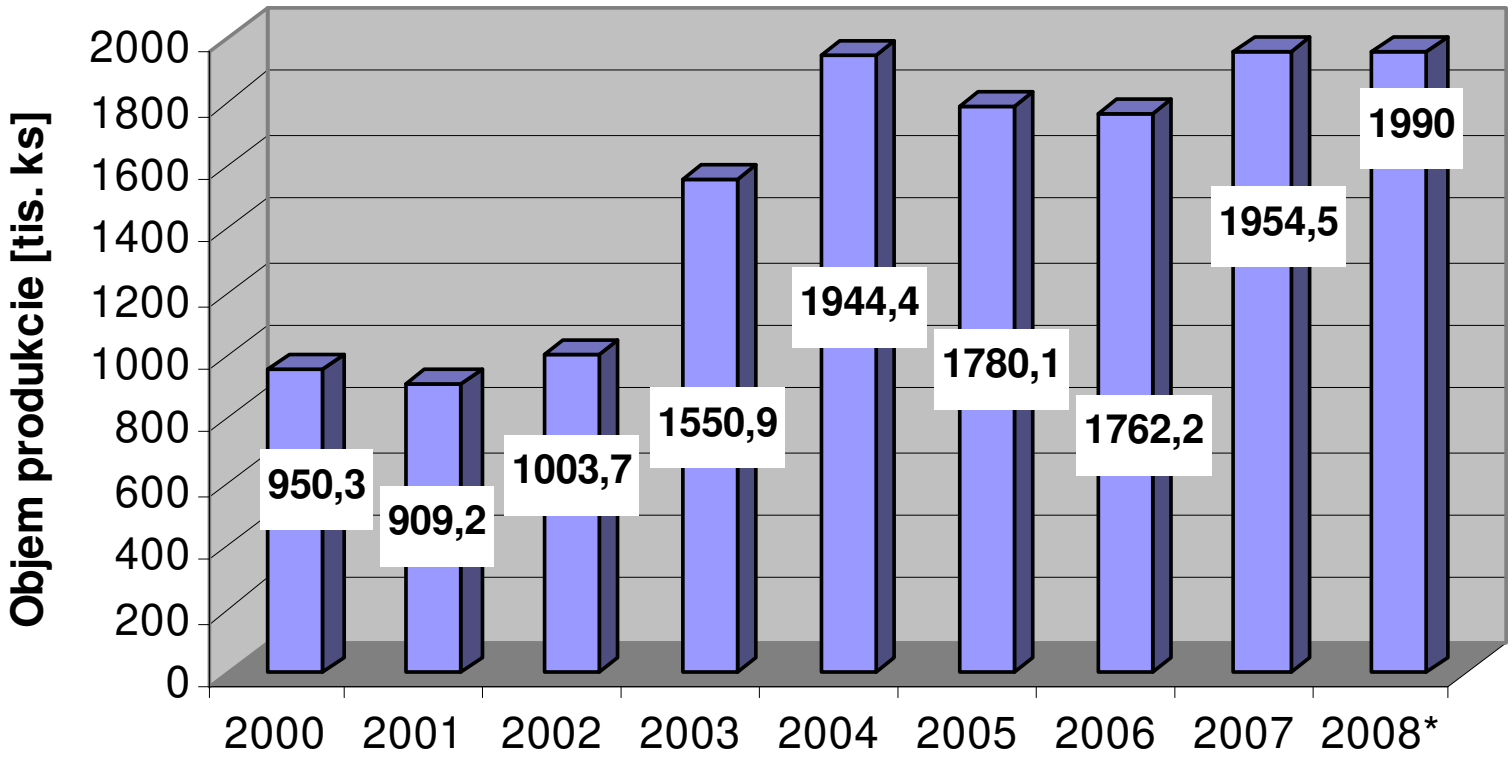
• Headquarter of Whirlpool Corporation is in USA, Benton Harbor, state Michigan.

WHAT WE PRODUCE TOP and FRONT LOADERS

ANNUAL PRODUCTION up to 2 millions washing machines

NUMBER OF EMPLOYEES **1 300**

Production evolution 2000 - 2008



* 2008 volume represents the plans.

Milestone 2008

On the 15th of May 2008

we produced **15-millionth washing machine** from the start of production.

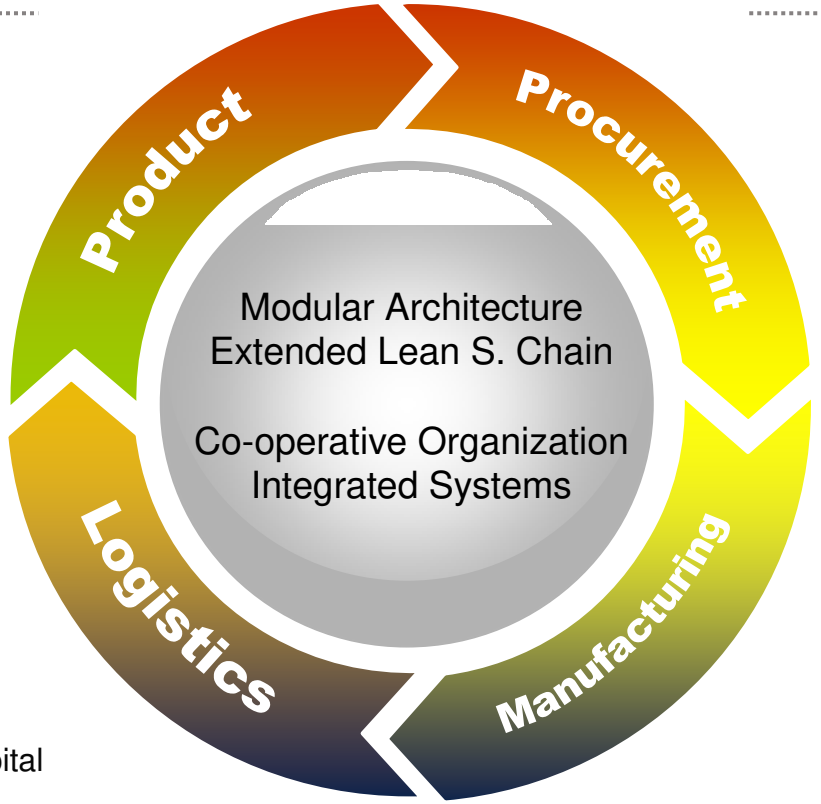
WER Operations Strategy

Mission:

"To support our Brand Value Creation Strategy we will deliver sustainable competitive advantage"

Product
Modular Architecture
Module Set approach
Component Architecture
Perfect Launch

Procurement
Best Total Cost of Ownership
Lean @ Suppliers
Best Cost Country Sourcing
Soft GOP/Component Arch.
Supplier Std Approach

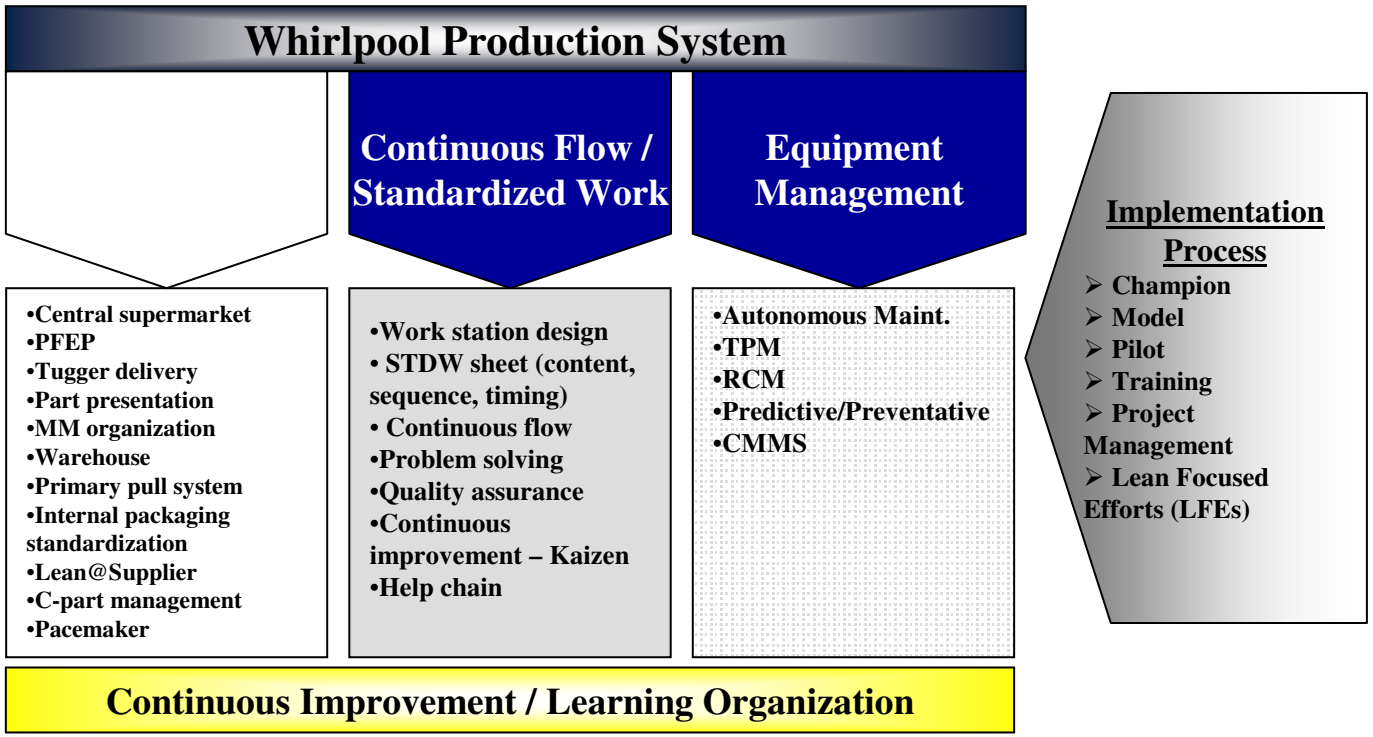


Logistics
Differentiated Service Excellence
Differentiated Business Models
Integrated Planning Systems
Total Chain Cost and Working Capital

Manufacturing
Uniform WPS
Material Handling Strategy
Standardized Work
Standard Quality System

Operating Advantage across the value chain as a basis for Competitive Advantage

Whirlpool Production System (WPS)
Approach a Production System with Lean Principles



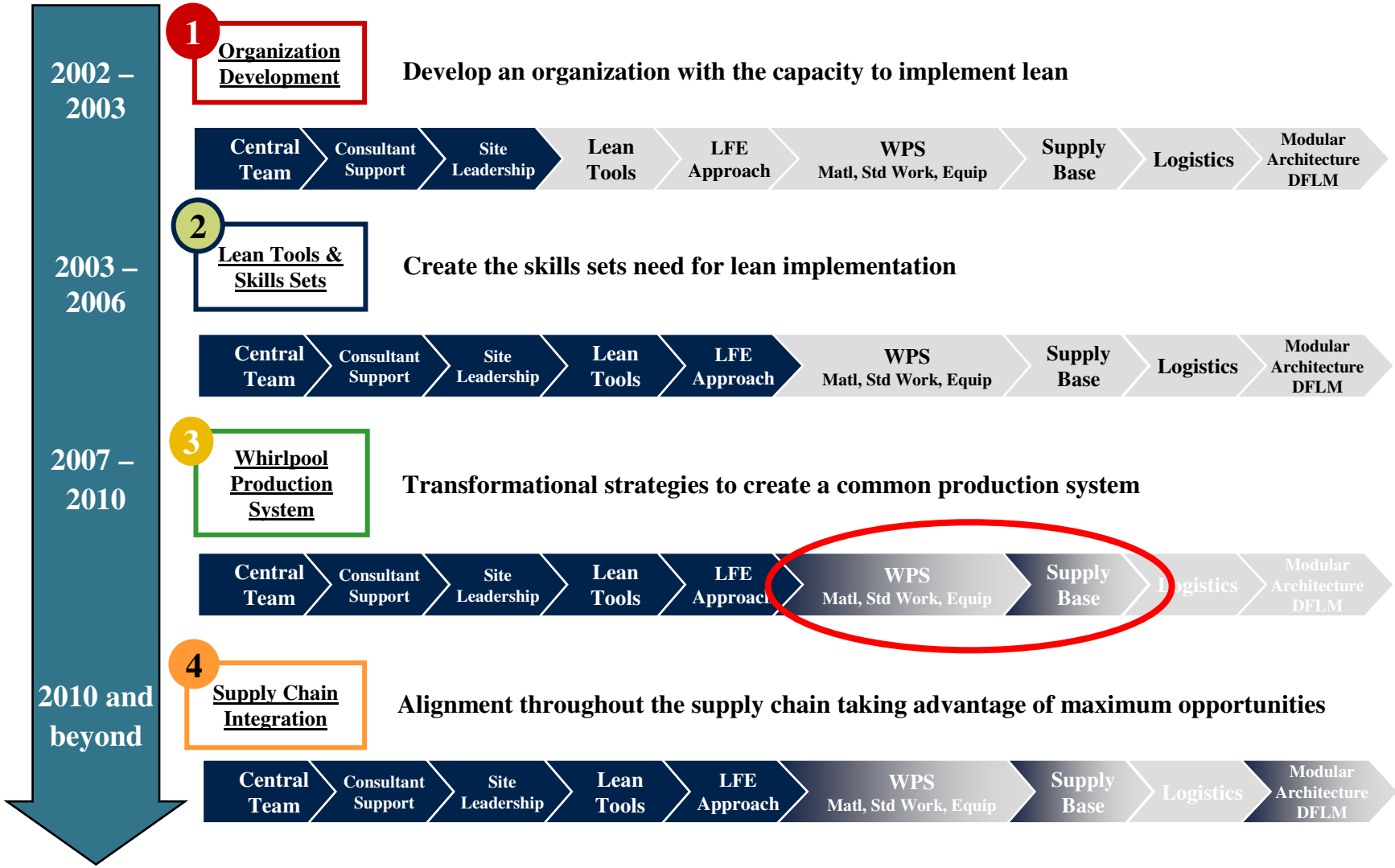
Implementation Process

- Champion
- Model
- Pilot
- Training
- Project Management
- Lean Focused Efforts (LFEs)

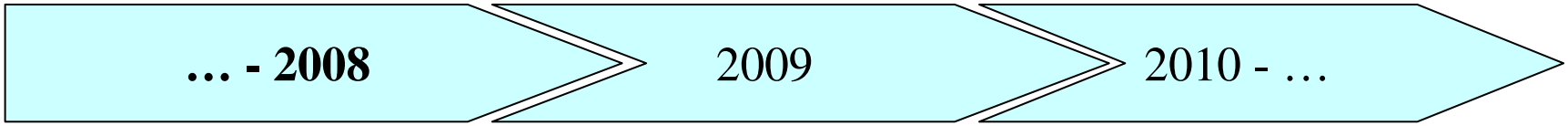
Expectations:

- Uniform Production System
- Common link with Supply Chain
- Implementation: Model / Rollout / Continuous improvement
- Organization Alignment, Change Management, Sustainability

Poprad Lean Journey – WPS implementation



Strategy Deployment for Poprad Plant
Strategic Activities plans



• Factory layout reengineering – Lean layout

• **Base pillars for WPS implementation:**

  • *Standardized Work,*

  • *Material Handling Strategy*

  • *Equipment Management*

• **Change Project & Organization Transformation**

• **Lean @ Supplier Project**

• **SAP Manufacturing Implementation**

•Integration of all Information systems

• Deployment of Std. Work confirmed after Pilot to Top Loader Part

• Equipment management activities extension

• Lean@Supplier extension

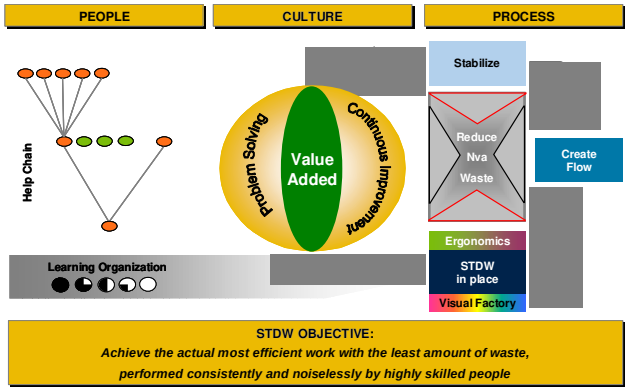
•Support Supply Base strategy

• Continuous Improvement (Kaizen Events) culture in place

Standardized Work – Processes and Tools

2006

- First continuous flow assembly line



2007

- Second advanced continuous flow assembly line
- First Andon - visual signal implementation
- STD Work sheet definition and implementation on assembly line

2008

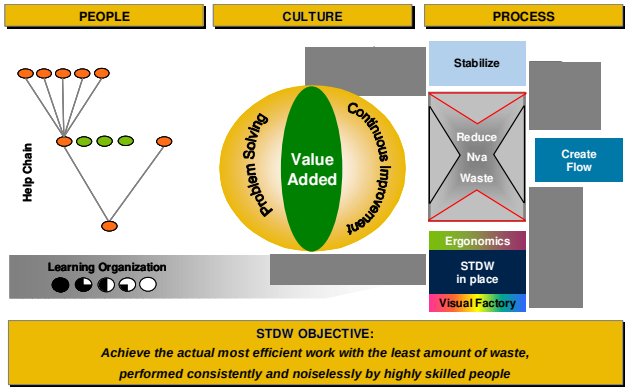
- Visual management in production
- Value Added, None Value Added and Waste analyze, Balance Chart
- Part presentation improvement
- Components Delivery Methods and Strategy (link to MHS)

Central Team → Consultant Support → Site Leadership → Lean Tools → LFE Approach → **WPS Standardize work** → Supply Base → Logistics → Modular Architecture DFLM

Standardized work – Culture and People

2007

- STDW training and education (production and IE)
- Creating concept of Team leader
- Job description definition and deployment



2008

- Revision of job description for production (Team leader, Group leader) and Help Chain
- WPS STDW pilot (by end of 2008)
- Deep selection and training of people enable to sustain continuous improvement culture
- Proper communication of STDW pilot as one element of change project

Whirlpool

Material Management Strategy

2007

- Change of factory lay-out – 75% of factory layout was changed
- Central supermarket creation
- PFEP database creation in EXCEL data sheet
- Lean@Supplier pilot program

2008

- Warehouse optimisation (change from pallete to box handling)
- Supermarket optimisation (visual management and ergonomy)
- PFEP inserted into ACCESS database for automatic update
- Kanban system set up for line feeding
- Tugger system delivery for 100% small and 80% big components

Equipment management

2008

- Preventive and Autonomous maintenance
- Pilot program: two lines in primary process and one assembly line
  - Results:
    - Yearly plan maintenance divided into monthly, weekly and shiftly activities and posted near by the line
    - Clear responsibilities for preventive and autonomous maintenance
    - Visual check list for autonomous maintenance
    - Audit of autonomous and preventive maintenance
    - Clear help chain for operative maintenance

Change Project

- To become FASTER (effective, profitable ...) - by maximizing internal ENERGY – Internal Potential
- All employees survey - 77% participation rate
- What are the factors influencing increase of internal potential – ENERGY?
  - management style
  - problem solving style
  - engagement level
  - communication
  - decisionmaking process
  - performance ...

- Most important take a way is that We have ambitions to make the change!

How we know, where we are?

Evaluation:

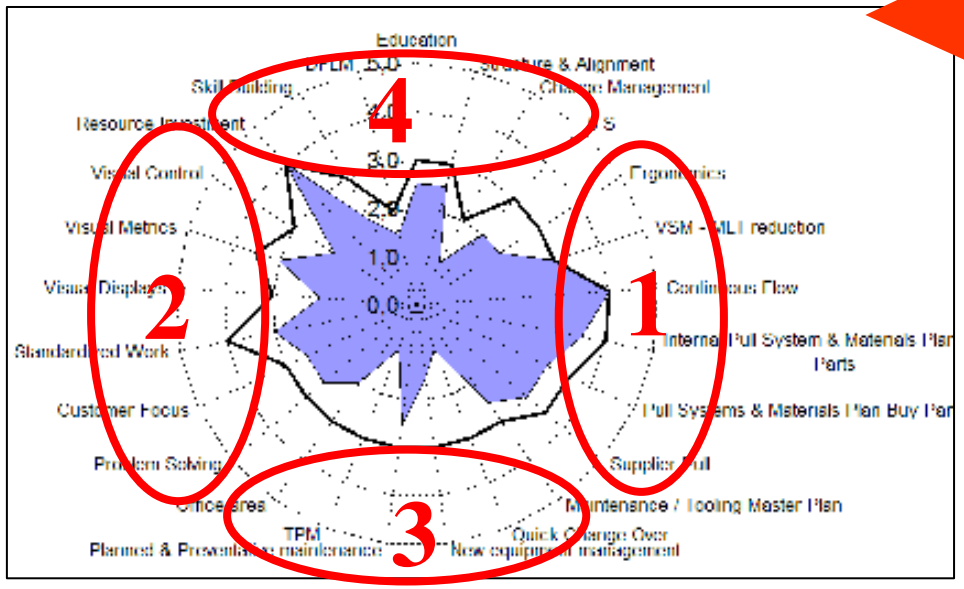
- One time per year assessment audit done by central team
- During year self-assessment audit done by plant lean team

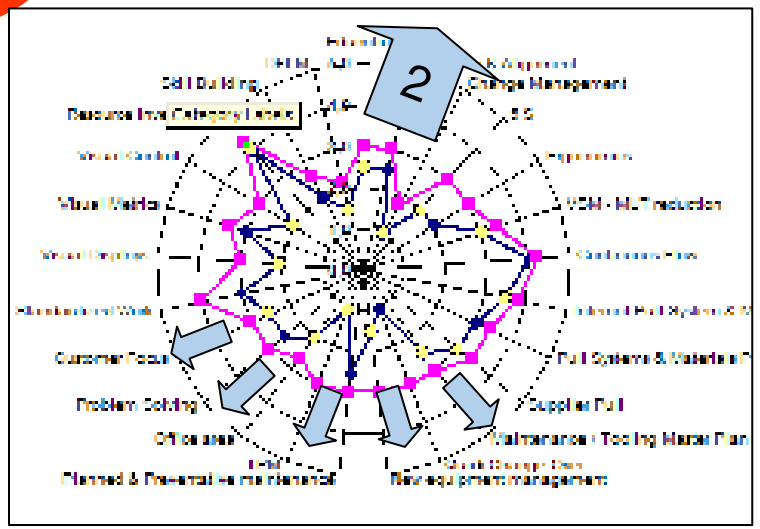
Main category:

(1) Material Management
(2) Continuous Flow / Standardized Work
(3) Equipment Management
(4) Education / Lean Org. Development

Our result Nov 2007: 2,38
Vs. average 2007: 2,41

Our plan for 2008: 3.10





THANK YOU FOR YOUR ATTENTION
QUESTIONS AND ANSWERS

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