

A photograph of two sprinters in starting blocks on a red track. The runner on the left is wearing a red and blue uniform with bib number 6 and the Adidas logo. The runner on the right is wearing a blue and white uniform with bib number 3, the BNP logo, and the Adidas logo. The text "Observations for a Better World Vaisala Production System" is overlaid in large white font.

# Observations for a Better World Vaisala Production System

Vaisala Capital Markets Day, June 13, 2017

Vesa Pylvänäinen

**VAISALA**

# We Deliver.

More than **6,000** Products and over **50,000** items in them

**900** engineering changes in products annually

**20+** year-long product life cycles

**500+** Production machines

**2** Factories  
**400** Employees

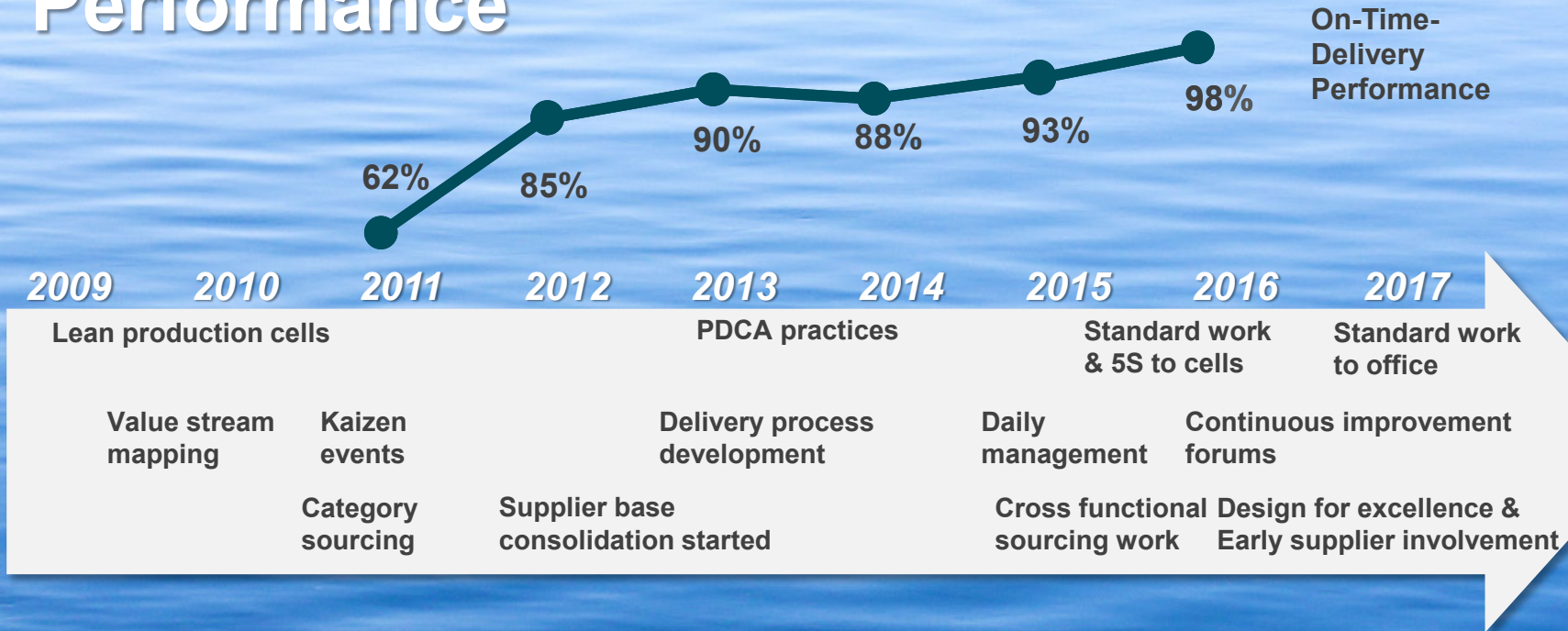
**400+** Suppliers

More than **1,000** shipments weekly

Serving Customers in over **150** countries annually



# Developments Correspond with Delivery Performance





# Operations

## Vision

Winning high mix – low volume supply chain and awesome place to work

## Mission

We create value for our customers with reliable and flexible supply chain network

# Vaisala Production System – Way to Drive Operational Excellence



Create systematic improvement culture and make focused developments to core processes and capabilities

### Strategic Development Initiatives

- Sourcing processes and practices
- Life cycle management processes
- High performing teams
- Core technologies



Entire organization engaged in improving our ways of working

### Improvement Elements

- Systematic collection of feedback
- PDCA for everyone
- Process improvement forums
- Problem solving skills



Agreed, standard ways of working lay foundation for efficient and scalable operations

### Our Standards Cover

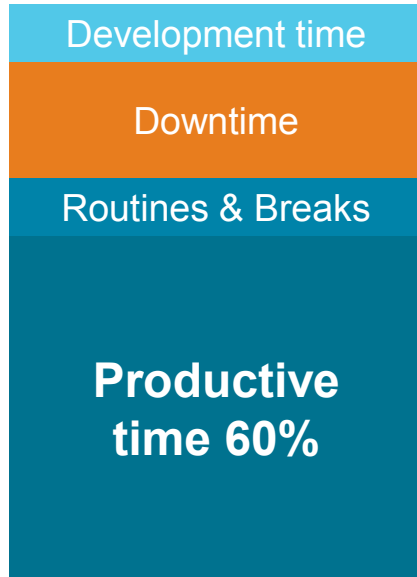
- Processes and instructions
- Work environment
- Standard work for key roles
- Modularity in production

# Strategic Development Initiatives

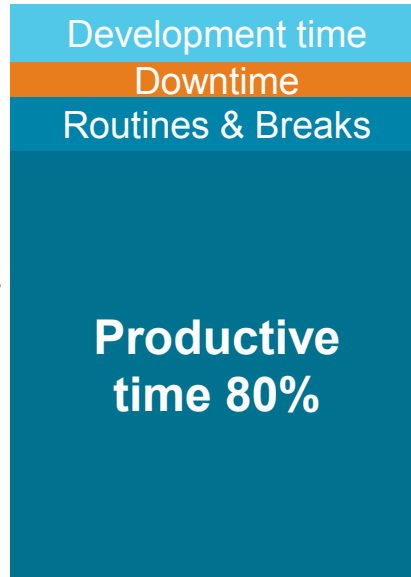
- **Sourcing Processes and Practices**
  - Processes and capabilities development
  - Supplier base consolidation continues
- **Developing Life Cycle Management Processes**
  - Emphasis on design for excellence
  - Controlled product changes and ramp-downs
- **High Performing Teams**
  - Increase productivity of production and logistics work force
- **Sensor Manufacturing and Calibration Core Technologies**
  - Renewal of clean room equipment and early involvement of manufacturing to new sensor design
  - Renewal of calibration stations to a new software platform and to in-cell calibration



# Goal 80% Productivity in 2020



**Productivity 2016**



**Productivity 2020**

## Benefits

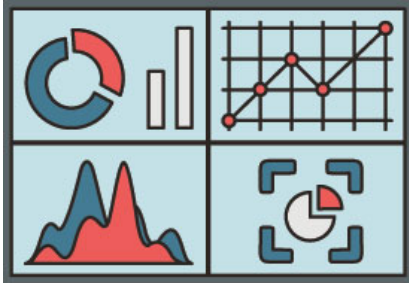
- Better efficiency  
60% → 80% = ~ 2M€
- Smoother production and higher delivery accuracy

## Main actions

- Reduction of machinery down-times and material shortages
- Production employee incentive system
- Advanced production planning and supervision of work

# Systematic Improvement

## Harvesting Ideas



- Customer feedback
- Employee feedback
- Assessments and audits
- Daily management GEMBA-walks

## Prioritization



Clear ownership of development, prioritization and escalation path

- Team PDCA board
- Cross functional improvement forums
- Visualized project portfolio

## Executing Improvements



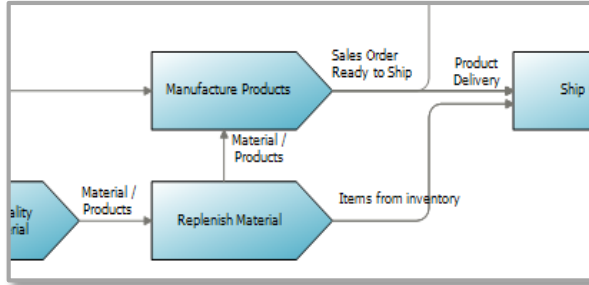
Using systematic problem solving methods

- Lean & PDCA, DMAIC, A3, 8D
- Project management & steering
- Root cause analysis
- Training portfolio



# Standard Way of Working

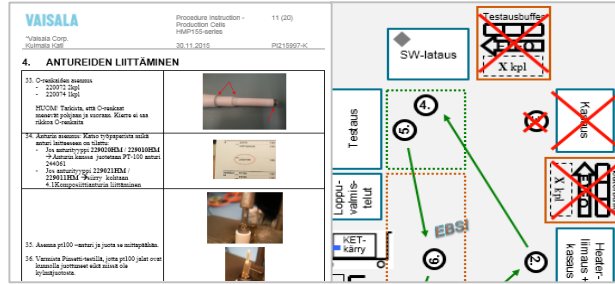
## Processes



Processes documented and trained

- Process flow charts
- Process maps
- Check lists
- Templates

## Instructions & Work Environment



- Standard work sheets
- Work instructions
- Team leader standard work
- Information hierarchy
- Daily management
- Buyer's Handbook
- Supplier relationship management

## Organized, Scalable Platforms



Standardized platforms for

- Production cells
- Calibrations and tester platforms
- ERP and other IT systems
- Factory visualization

# Cultural Change via Gamification

- All employees participate to Awesome Place to Work game in 2017 to enable cultural change towards
  - Everyone engaged to improvement
  - Standard ways of working
  - Cooperation & positive spirit
- Game has been received well, and there is a positive competition between 40 participating teams



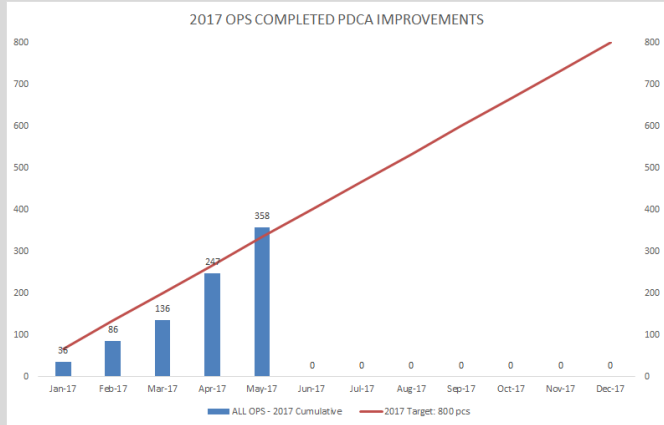
# Progress of Improvements

PDCAs in 2016: **370**  
 Goal in 2017: **800**



| Category | Daily Activities   | Weekly   | Monthly  | Semi-annually   |
|----------|--|--|--|---|
| Task     | <ul style="list-style-type: none"> <li>Handle email processing</li> <li>Factory audits</li> <li>Update of inspection plan</li> </ul> | <ul style="list-style-type: none"> <li>Weekly reports update and review</li> <li>Multi-hour reports approvals</li> <li>Invoice approval</li> <li>Team meeting</li> <li>Topic X work meeting</li> </ul> | <ul style="list-style-type: none"> <li>Scorecard report updates</li> <li>Monthly function meeting</li> <li>QCL monthly status slide call</li> <li>Team's with manager</li> <li>Financial forecast updates and follow-up</li> </ul> | <ul style="list-style-type: none"> <li>Investors' Courts</li> <li>Financial plan</li> </ul> |
| Others   |  |  | <ul style="list-style-type: none"> <li>Office planning</li> <li>POC discussions</li> </ul>   |   |

Standardization of work



**13** New teams started PDCA practice

**4** PDCAs / employee in most active teams



# Vaisala Operations We Deliver.





# Observations for a Better World