Observations for a Better World
Vaisala Production System
Vaisala Capital Markets Day, June 13, 2017
Vesa Pylvänäinen
We Deliver.

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

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

**900** engineering changes in products annually

**500+** Production machines

**400** Employees

**400+** Suppliers

**2** Factories

**1,000** shipments weekly

Serving **150** countries annually

Serving **Customers** in over **150** countries annually

BOULDER CO, USA

HELSINKI FINLAND
Lean production cells

Value stream mapping

Kaizen events

Delivery process development

Supplier base consolidation started

PDCA practices

Daily management

Continuous improvement forums

Standard work & 5S to cells

Cross functional sourcing work

Design for excellence & Early supplier involvement

On-Time-Delivery Performance


62% 85% 90% 88% 93% 98%
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

Operations Strategy
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

Systematic Improvement
Entire organization engaged in improving our ways of working

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

Standard Way of Working
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 workforce

- 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

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 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

13 New teams started PDCA practice
4 PDCAs / employee in most active teams

Standardization of work
Vaisala Operations
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