Valmet develops its Industrial Internet solutions building on the unique combination of process technology, services and automation.
Valmet has a long history in the digitalization of process industries - e.g. Automation

Advantages to customer industries:
- Distributing controls & gathering performance data
- Embedded intelligence & advanced information
- Increasing availability
- Increasing productivity through information services
- Benchmarking and best practice sharing capability

1960
- The Airmatic, a pneumatic measurement and control system

1970
- Elmatic-100 system, electronic instrumentation

1980's
- Damatic, the first Distributed Control System (DCS)
- Sensodec, Condition Monitoring System
- Damatic XD, modular second generation DCS

1990's
- PaperIQ, QCS
- metsoDNA, Dynamic Network of Applications

2000's
- Multivariable Model Predictive Controls (MPC)
- 24/7 ProCenter for DCS/QCS
- PaperIQ Select

2010's
- Metso PQV, web inspection system

2015
- Valmet DNA

2017
- Augmented and virtual reality applications

Valmet Performance Centers
The True Causes of Instability

What if all your decisions were based on facts?

Instability root causes*

- Machines/Instrumentation technical issues
- Characteristics variability
- Human
  - Wrong settings
  - Bad decisions
  - Over-processing
  - Manual mode
- Equipment
  - 15%
- Raw material
  - 10%

% of Impact

*source: study based on more than 1000 problem solving analysis by IP Leanware customers from 2010 to 2013
Valmet Industrial Internet – Connectivity Network
One Platform for All Needs

Valmet DNA

• Same platform for different types of controls
• Process, machine, quality, drive controls and optimizations
• Asset management solutions
  – Field device and machine condition monitoring
• Integrated Safety related controls
• Benefits
  – One user interface and alarm handling
  – No links between systems
  – One history data collection and trending
  – Common engineering tools
  – Spare parts and trainings
Valmet KPI Dashboarding
Active Support – Mainly for Operators

Managerial level
- Indicators are 5…10 digital twins / models on productional & operational “pains”
- Laptop in office and mobile

Operator level
- App. 50 single parameter indicators, where operators can influence relevant to managerial indicators
- Operator task is to keep them green
- Red ones are all ways the first
- Screen in control room
Valmet Customer Portal
Takes Digital Customer Collaboration into a New Level

Share action plan and ideas • Contact experts • Benchmark performance • Build capabilities
Valmet Performance Center
Easy access to the expertise you need

Remote monitoring and optimization
On-demand expert support
Data discovery and analysis process

Performance Centers for:
- Energy
- Pulp
- Board & Paper
- Tissue
- Automation
- Industrial Internet
Predictive Condition Monitoring and Fleet Management with Remote Support for Valmet Breast Roll Shaker
Predictive condition monitoring and fleet management with remote support for Valmet Breast Roll Shaker
Analytics of Energy Usage

Optimal forming section water removal based on dryer section steam consumption

Water removal MD profile in former should be tuned so that water removal amount of elements are as shown below (left red circles 610, 580, 450 and 790 dm³/min with basis weight 125 g/m² and production 45 t/h)
Digital Twin
of Paper CD Tear strength

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Valmet Condition Monitoring+
Valmet Training Simulators

For Example: Main Pulp Mill Processes
VR Collaboration

Multiple users: Valmet & Customers meeting in VR
Dialog with data