Operational Data Enables Industry Transformation

Ing. Miroslav Škrabánek

Mondi group - Broad portfolio

mondi

Packaging Paper	Fibre Packaging	Consumer Packaging	Uncoated Fine Paper
10 operating sites	**60** operating sites	**30** operating sites	**6** operating sites
10 countries	**24** countries	**12** countries	**4** countries

Packaging Paper
- Containerboard
- Sack kraft paper
- Speciality kraft paper

Fibre Packaging
- Corrugated packaging
- Industrial bags
- Extrusion coatings

Consumer Packaging
- Consumer goods packaging
- Personal care components
- Release liner
- Technical films

Uncoated Fine Paper
- Office paper
- Professional printing paper

Our global footprint

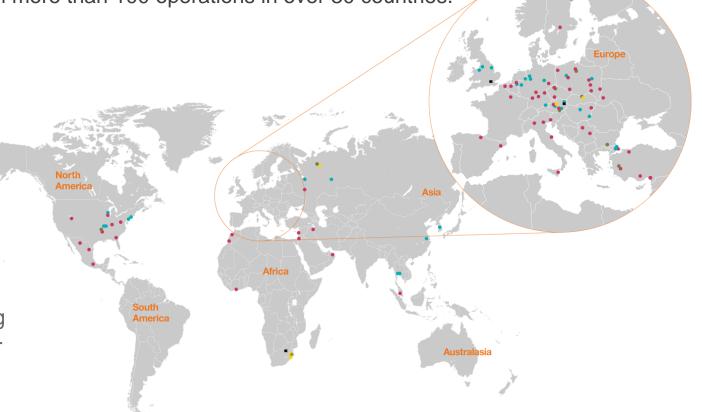We operate locally with more than 100 operations in over 30 countries.

Group offices

Johannesburg	◄
London	◄
Vienna	◄

Key

- Packaging Paper
- Fibre Packaging
- Consumer Packaging
- Uncoated Fine Paper

Our Digitalization Commitment

Our Planet has only finite resources.

 4

Mondi Štětí

Mondi Štětí Today

550.000 t/y. Exports > 75% of production to >70 countries

Bleached Pulp

Sack Kraft Paper

Containerboard

Machine Glazed Paper

Mondi Štětí Transformation - ecoflex

Vision:

We build a mill that produces over one million tons annually of top quality specialty and packaging papers.
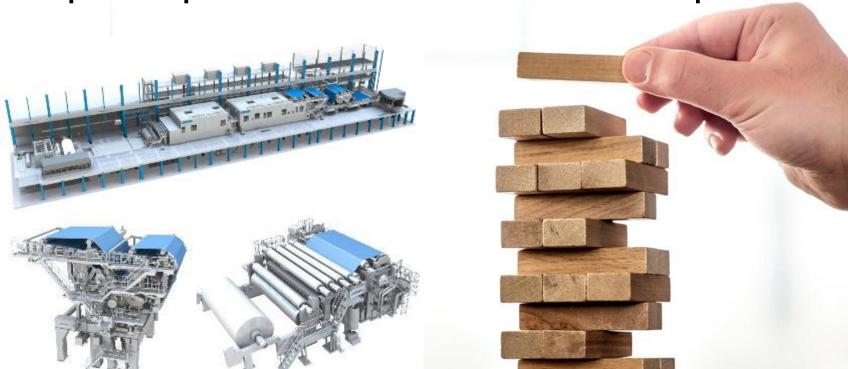
Mondi Štětí Upgrades

- New recovery boiler (RB12) - max. output 480 t/h of HP steam

- 2 new pulp digesters, increasing production of bleach plant

- Changing of DCS for Causticizing & Evaporation

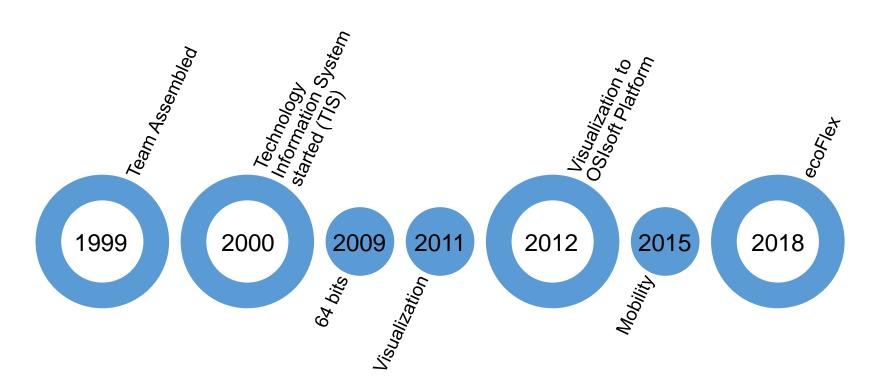- New steam turbogenerator TG7 – max. output 70 MW

Challenge

Startup of new production line   &   Stabilization of new processes

Technology Journey

1999 — Team Assembled
2000 — Technology Information System started (TIS)
2009 — 64 bits
2011 — Visualization
2012 — Visualization to OSIsoft Platform
2015 — Mobility
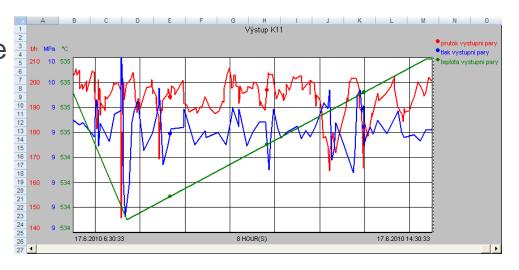2018 — ecoFlex

TIS – Technological Information System

1999 – team found solving for technological data platform

- OPC – unified protocol
- Historical data – PI Data Archive
- Online visualization – Iconics
- Excel – unified form

Start of TIS (2000)

- 3 OPC servers
- PI Data Archive (10.000 tags) - 1.set of tags created in June 2000
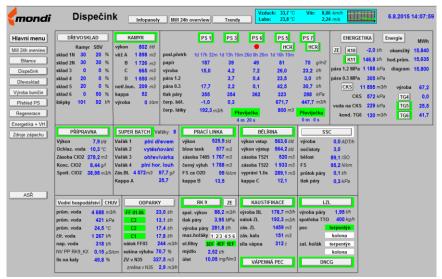- PI DataLink (100 licenses)

TIS – milestones

2009   PI Data Archive upgrade, 64bit Windows server 2008

     +5.000 licensed tags

2011   PI Data Archive migration to VMware

2012   Break-point decision – change of visualization to **_OSIsoft platform_**

TIS – "new age"

2013 - Upgrade of **PI Data Archive**

- Starting with **PI ProcessBook**

- Buying 5.000 additional tags

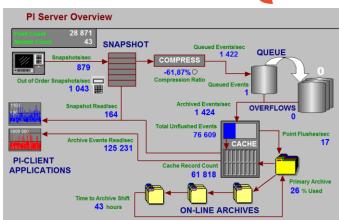**2014** - Buying **PVS** (PI Visualization Suite)

- Creating displays in **PI ProcessBook**

- Starting with **AF** – making structure for production and SPCC (Single Process Control Chart)

2015 - Creating remainder of displays in **PI ProcessBook** (in total 300+ displays)

- Start using **PI Coresight**

- **PI Coresight** in tablets and smartphones
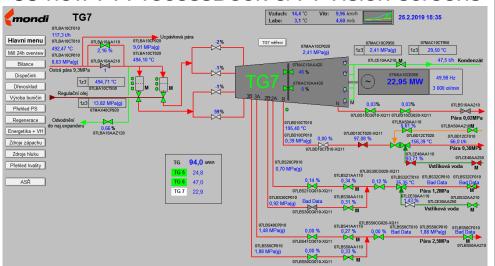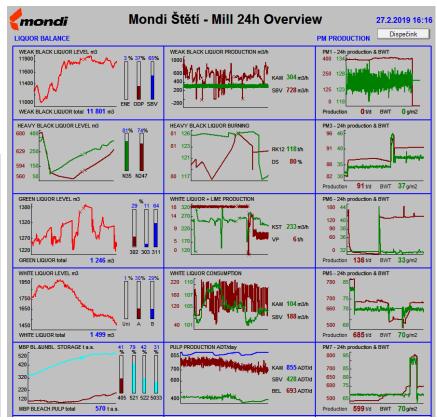
2019 - Buying **PCS** (PI Connection Suite)

TIS vs. ecoflex

- +10k licensed tags
- >5000 new tags
- >1000 new AF attributes & analyses
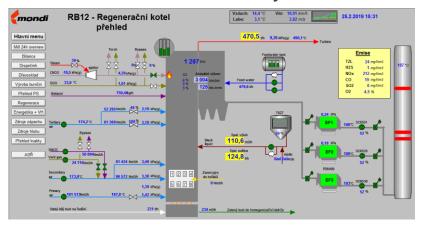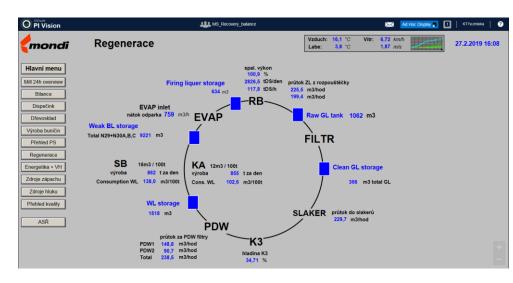- 55 new PI ProcessBook & PI Vision screens

TIS vs. ecoflex

TIS helps Operators, technologist and managers

- Tune and stabilize integrated processes

- Better balancing

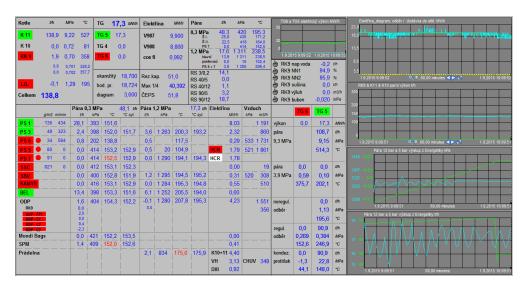- Quicker problem solving

- Overview of whole factory

TIS – Use Cases & Benefits

- Energy department

- Paper breaks, machine stops, etc.

- Faster reaction from operators with PI ProcessBook saving energy and money
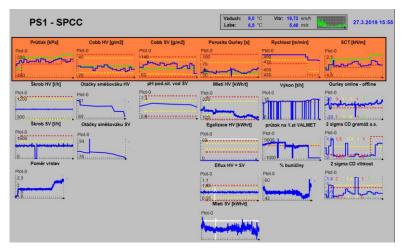
- Approx. savings of 38 000 EUR/y

- Dispatcher

- Purchasing diagram of gas –based on AF and calculated tags for better control of gas consumption – save money
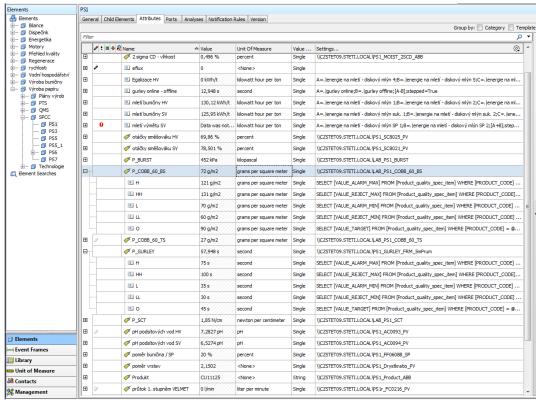
- Exceeding of diagram – 14 000 EUR/y

TIS – Use Cases & Benefits cont.

- SPCC – Single process control chart

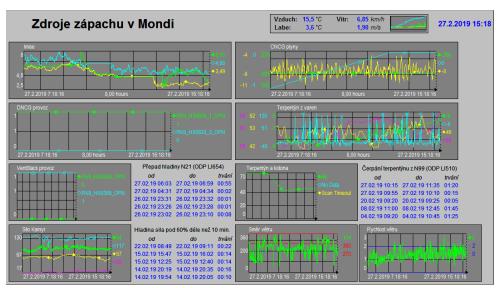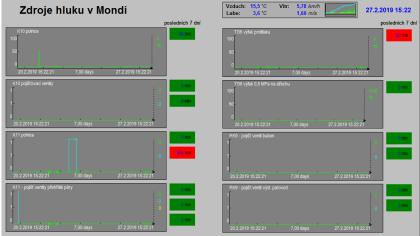- Calculations & limits in PI AF

- Visualization in PI Vision

Improved Environmental Conditions

*We care about **protecting the environment**.*

By 2030, reduce specific CO2 emissions by 15% against 2014

- Lower Specific Values of:
  - Water consumption by 5%*
  - Waste to landfill by 7.5%*
  - NO$_x$ emissions by 7.5%*
  - Effluent load (chemical oxygen demand, COD) by 5%*

* against 2015

ecoflex New Central Control Room

*We create a place where **people want to work**.*
*We are **patriots** of our region.*

DEMO

Live data from Mondi Štětí

CHALLENGES

Starting of new production lines

Tuning and stabilizing new processes

SOLUTION

Creation of new tags and dashboards

New AF attributes, calculations and analyses

BENEFITS

All users can use TIS
for their jobs (technologist, labs, managers, etc.)

Better tuning and analyzing of new processes

62,000 EUR/y in aggregated energy savings

Environmental KPIs improvement 5% - 7.5%
(specific consumptions and emissions)

Contact information

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Questions?

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