WE NOW LIVE IN THE TIME OF DATA-DRIVEN ACTIONS
10+ YEARS EXPERIENCE OF IMPLEMENTATION OF AI TO REAL LIFE

INSTITUT "JOŽEF STEFAN" LJUBLJANA, SLOVENIJA

BLOOMBERG  

BT

THE NEW YORK TIMES

HELLA

CABLEX
Challenges in manufacturing
Challenges in manufacturing companies:

- Long delivery of raw material
- Overflow of information and alerts
- Inefficient information transfer
- Unrealistic normatives for production plans
- Dependency on individuals
- Inaccurate demand forecasts

Resulting in:

Excess inventory & Long lead time
Industrie 4.0

Digitalisation

Value

1. Computerisation
2. Connectivity
3. Visibility
4. Transparency
5. Predictive capacity
6. Adaptability

How can an autonomous response be achieved?
"Self-optimising"

What will happen?
"Being prepared"

Why is it happening?
"Understanding"

What is happening?
"Seeing"
Industrie 4.0

[Diagram showing phases of Digitalisation and Industrie 4.0 with questions and concepts like "Self-optimising," "Being prepared," "Understanding," etc.]
Industrie 4.0

Digitalisation → Industrie 4.0

1. Computerisation
2. Connectivity
3. Visibility
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5. Predictive capacity
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Value

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DIGITAL TWIN (AI)
Forecasting time of arrival and suggestions of alternative routes

Forecasting realization and suggesting actions in case of unplanned events
How it works?
Manufacturing process

Real-time data stream (ERP, MES, PLC, IoT…)

Historical data

Real time

Learning (digital twin)

Forecast

Dashboard

Action

insights / alerts / info

Qlector LEAP
STATUS OF FACTORY

Real-time screens showing KPIs and alerts

What is happening?

Shop floor overlay
**INTELLIGENT ALERTS**

- **Prioritized** - based on the impact on your KPIs (e.g. OEE, due date...)
- **Targeted** - notify your employees with direct impact on the root-cause
- **Predictive** - notify to pre-act on probable downtime

Notifications via app.

Anomaly detection and route-cause

**What is happening?**

**Why is it happening?**
INTELLIGENT PRODUCTION PLANS

Realistic - Up-to-date - Optimal - Insightful

Chart

Realization and prediction of work orders

Production line level

- Realization from MES
- Most probable realization

What is happening? Why is it happening? What will happen?
Benefits?
Overall benefits

1 day/week
time saved for team controllers and planners

3 day
prediction of organizational downtimes

10%
shorter production time on assembly lines

25%
less organizational downtimes