

AI Aplikovaná Inspirace

Chcete vidět, jak umělá inteligence dokáže reálně měnit byznys? Pak si nenechte ujít přednášku, kde s vámi podělíme o konkrétní ukázky nasazení AI, od počítačového vidění, přes forecastování a optimalizační úlohy, až po digitální asistenty. Spolu s DNAi a zástupcem společnosti SOMA, lídrem v oboru flexotisku, si ukážeme, jak může vypadat praktický vývoj a implementace AI řešení. Připravena bude i živá ukázka, abyste viděli konkrétní řešení v akci.

30 minut

Jazyk CZ

DNAi

**Hello,
We are DNAi,
ARCHITECTS of the
FUTURE**

220

Leading multidisciplinary experts

in Big Data, Mathematics, Statistics,
Multiple AI domains, Latest R&D

20+

Years of experience in Large
scales IT architectures & new IT
technologies

Helping you define an AI strategy

and operating model, integrate AI
applications into flexible business processes
and the wider ecosystem.

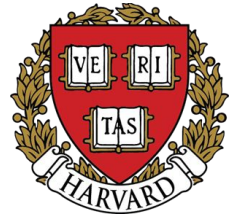
DORMER PRAMET



ZENTIVA
Part of the sanofi-aventis group



Honeywell



Digitalization

Design support
Management, and implementation
of digital transformation

Modernization of IT, business
processes and applications

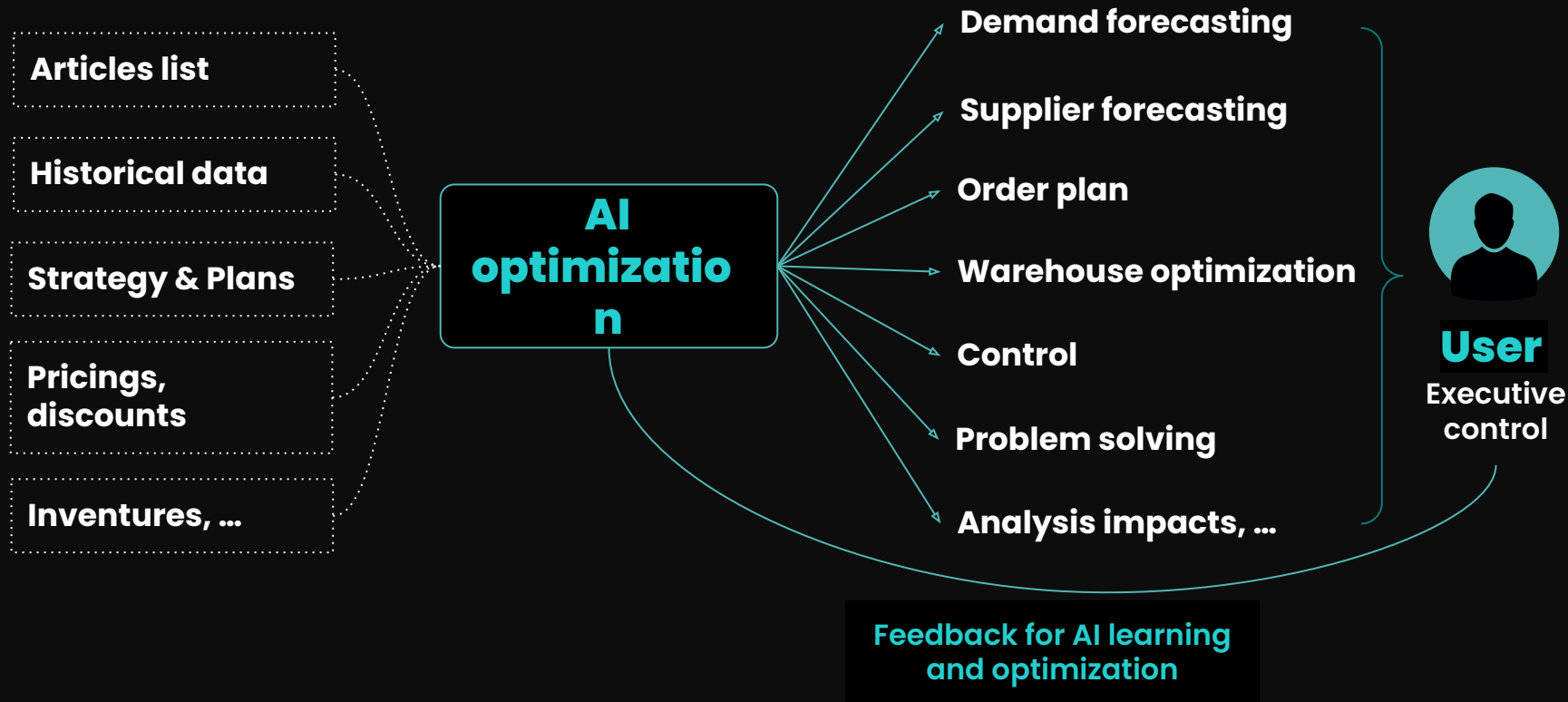
AI

Large language models: chatbots,
voicebots, internal knowledge
management, decision support

Computer Vision: quality
assessment, machine-based
analysis of images and video

- **Supply Chain**
- **Computer Vision**
- **Digital Assistants**
- **Manufacturing**
- **Healthcare**
- **Education**
- **Digitalization & Transformation**

Supply Chain





45 000 000 +

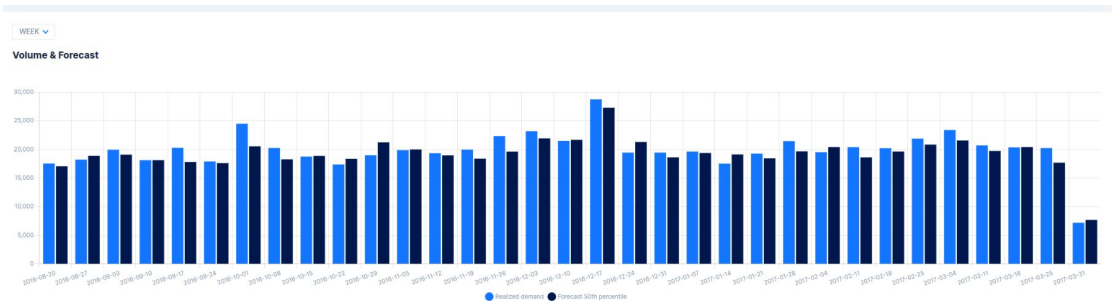
Packages yearly (Forecast Q1 2023)

80% → 5%

80% errors under only 5%

↳ 3,9% Average global error

↳ **Industries: Retail, Logistics,
Manufacturing**

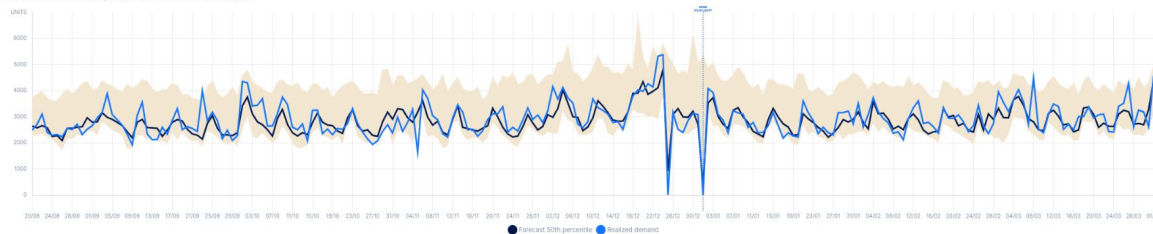


DF / Forecast Performance / 2111

05/07/2016 - 01/04/2017 Q 2111

Backtesting

Evaluate how the forecasting model would have performed in the past

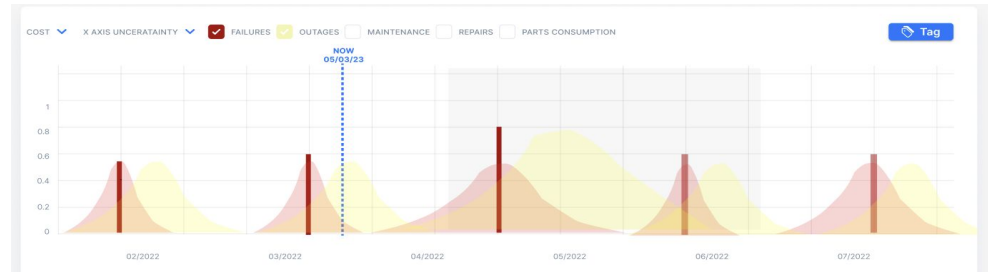
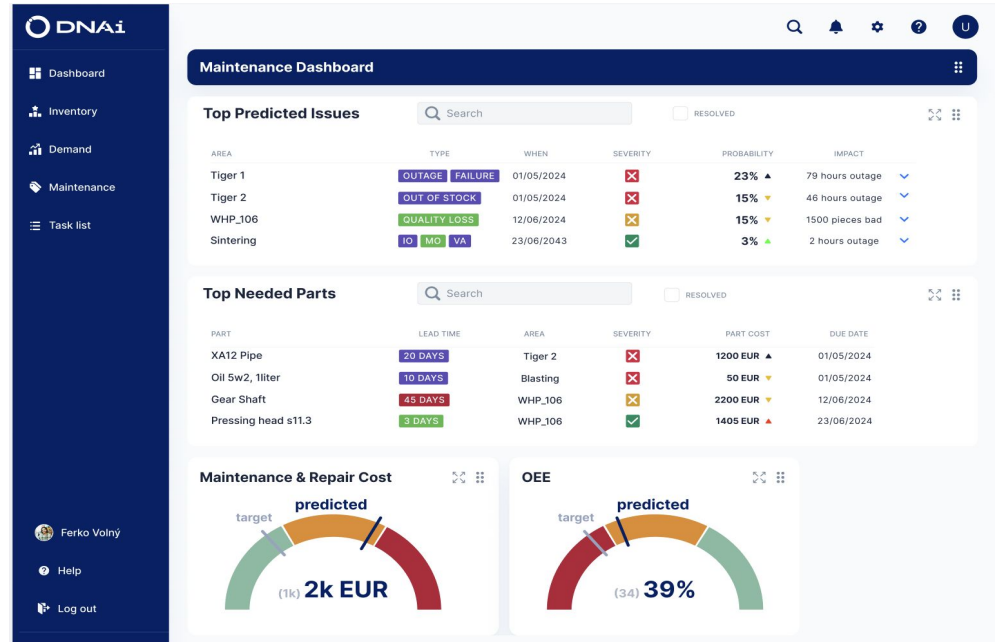


DORMER PRAMET

PREDICTIVE MAINTENANCE

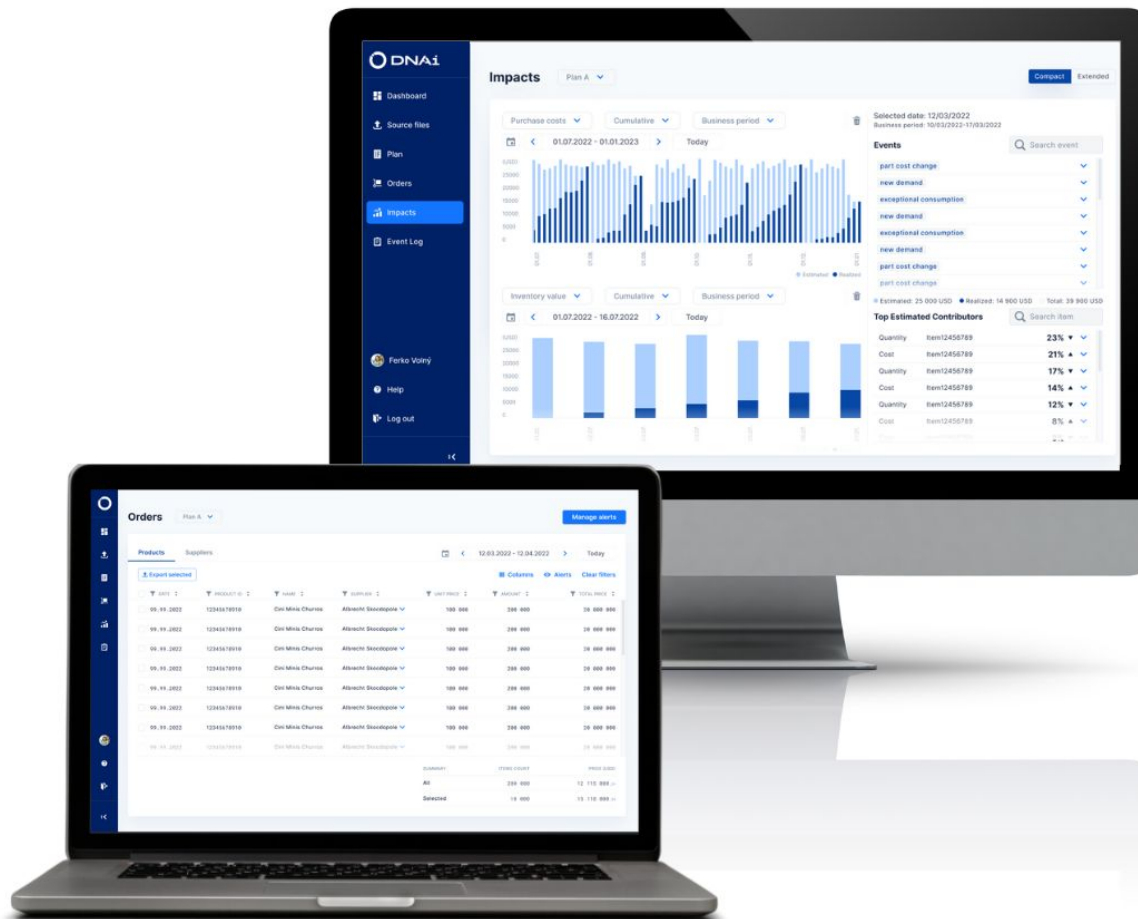
10 000 +

**Spare Parts Demand Forecasting &
Inventory Optimization (PoC)**

DNAi

MyIO

↳ Order
↳ Optimize
↳ Control
↳ Maximize
efficiency



Computer Vision

The background of the slide is a dark navy blue. It features several spheres of varying sizes and colors. A large, dark blue sphere is the central focus, partially obscured by the text. Above it is a smaller, lighter blue sphere. Below it are two more spheres: one is a small, dark blue sphere, and the other is a medium-sized sphere with a gradient of blue and green. At the very bottom center is a tiny, bright blue sphere.

Inspection of defects

Accuracy

98,8%

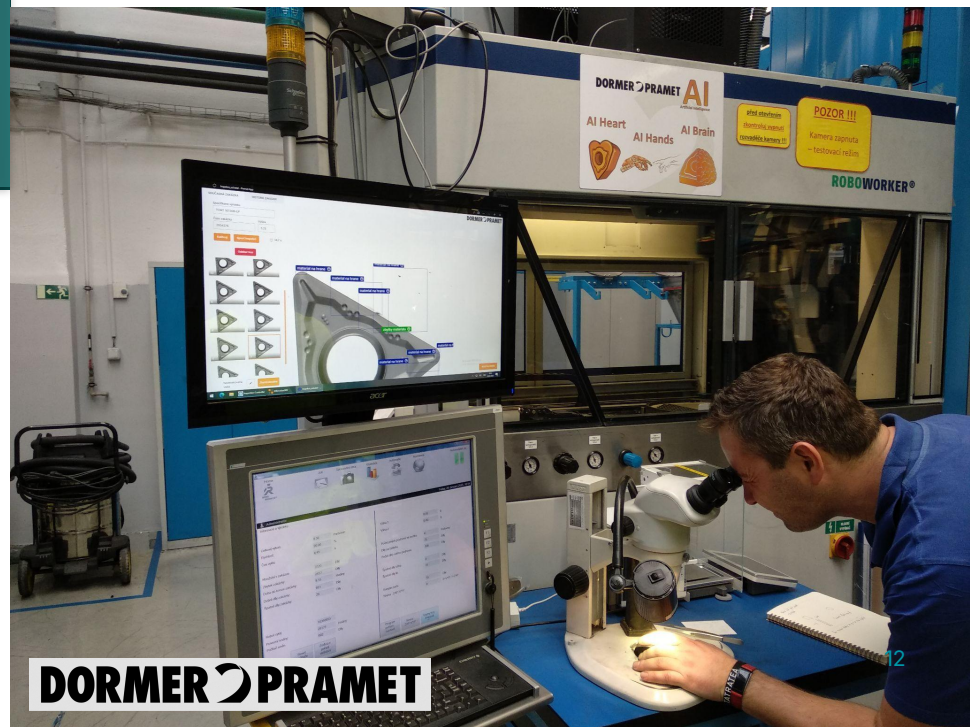
and still improving

10 000 different articles.

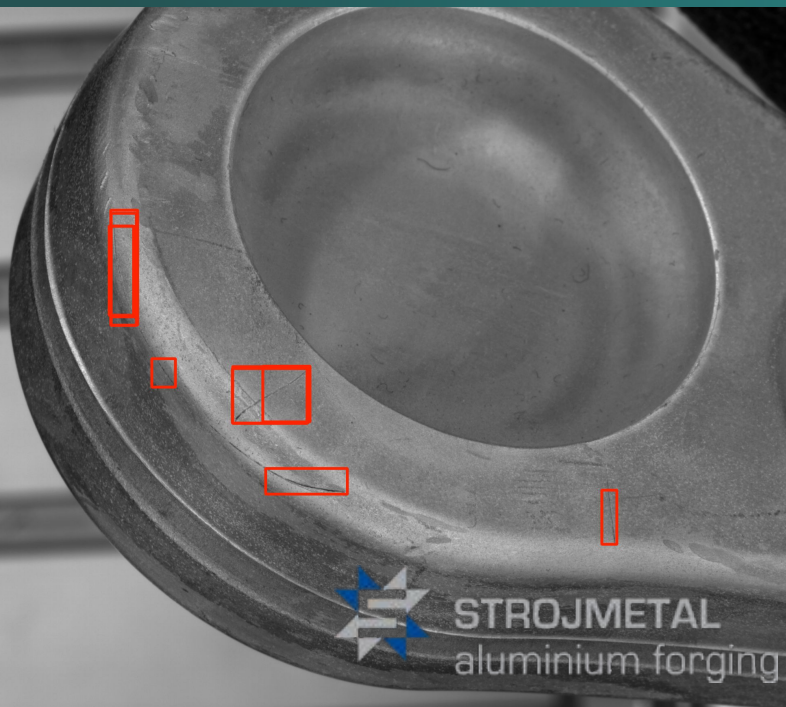
Defects from 10 μm .

DNAi

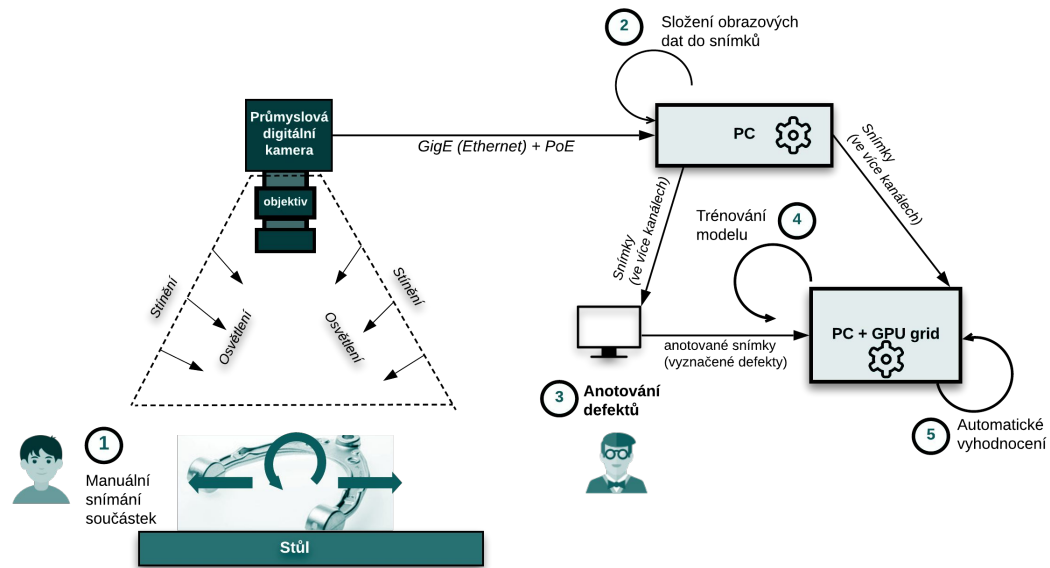
Edge cutting inserts



Quality Control



 **STROJMETAL**
aluminium forging



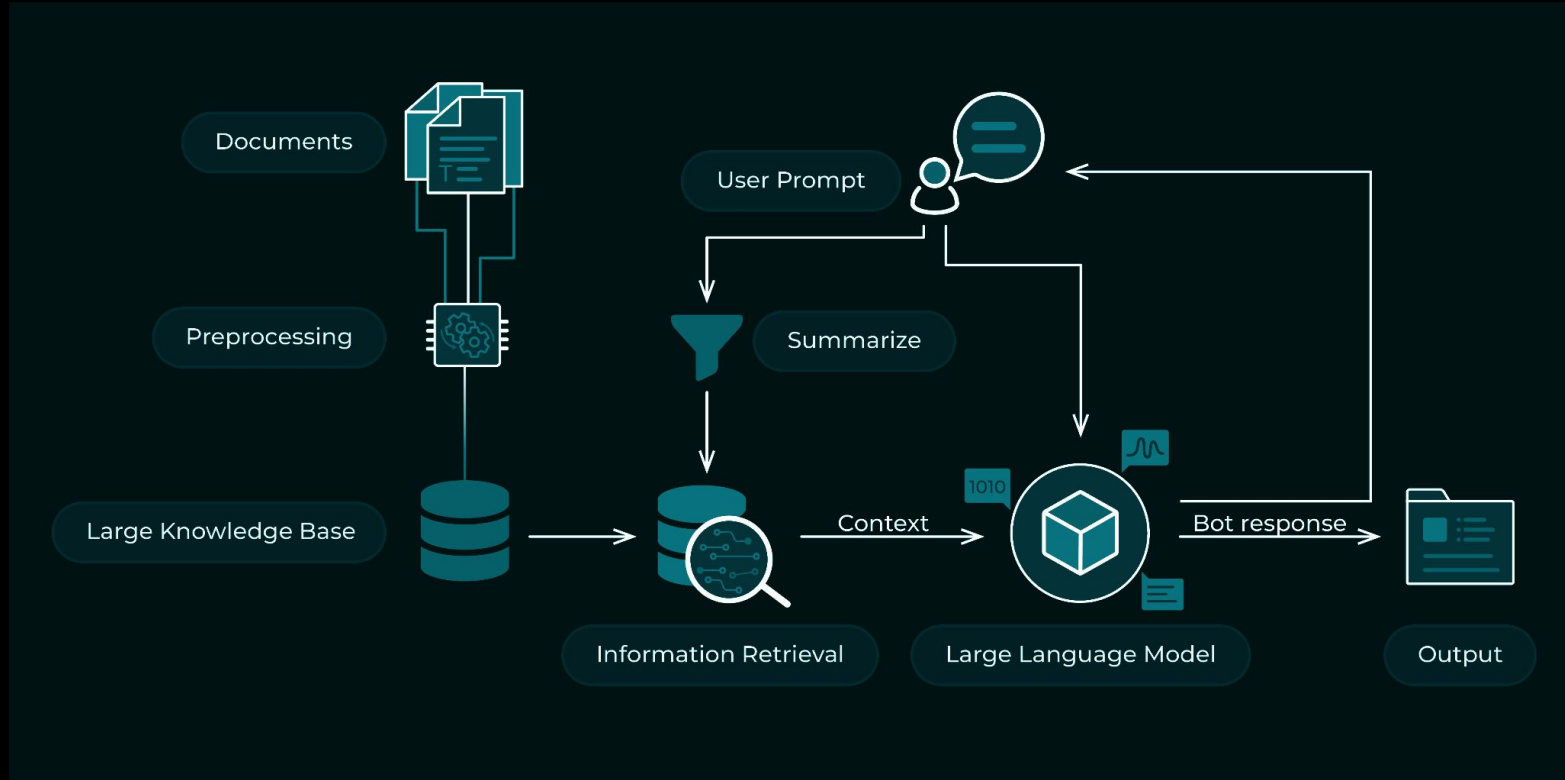
Quality inspection of aluminum forged automotive parts.

Cognitive Assistant



Knowledge
management

Cognitive assistant architecture





- ↳ Financial Aid Access
 - ↳ Call Center Efficiency and Multilingual Support
 - ↳ Prompt and Accurate Assistance
 - ↳ Traditional call-centrum: 200 employees
(4 shifts/day, 50 empl./shift)
Salary costs: 6 000 000 CZK monthly
- vs.**
- ↳ Automated call-centrum: 50 parallel calls 24/7
Salary costs: 500 000 CZK monthly

+ **Cost Savings**

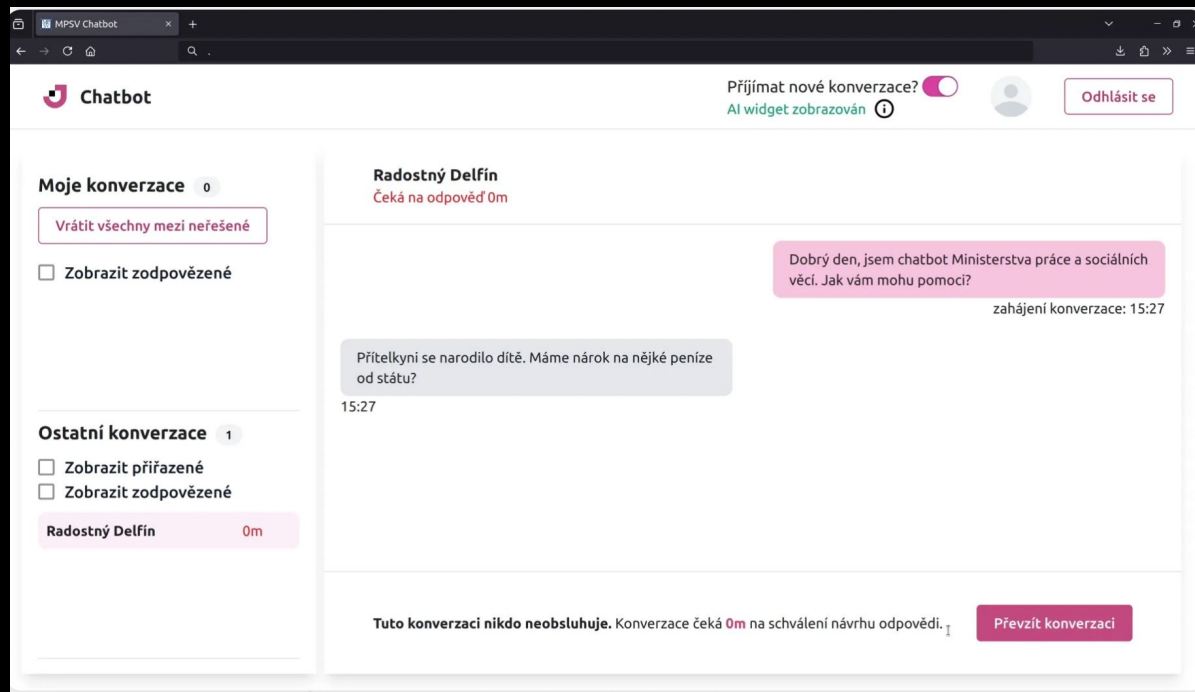
+ **Cloud based**

+ **ROI** Quick return on investment

+ **up to 50 %** Reduced Waiting Times

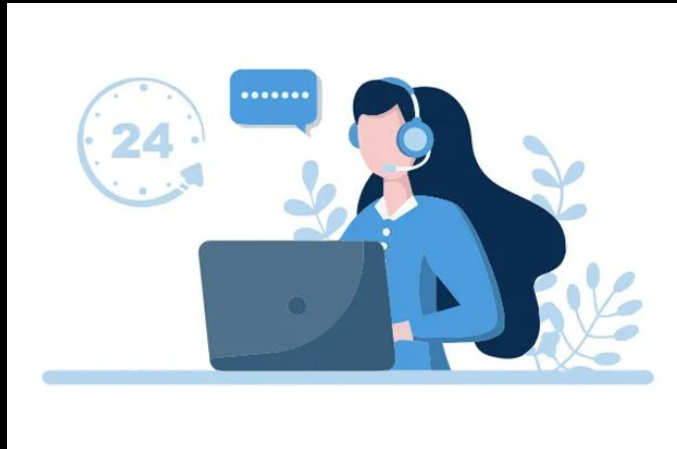
+ **powered by**

EVA digital assistant for CC



MINISTERSTVO PRÁCE
A SOCIÁLNÍCH VĚCÍ

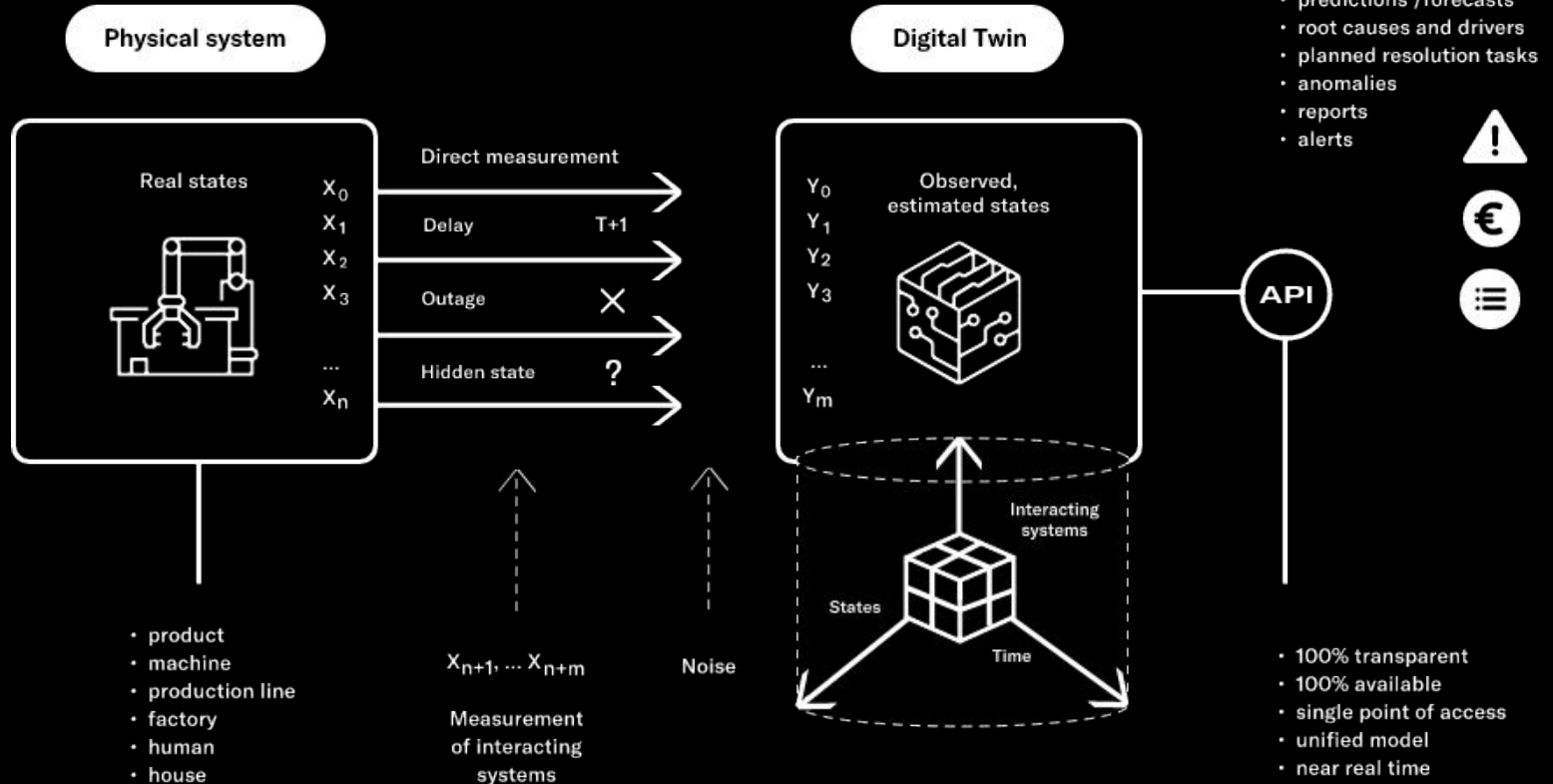
Demo: Call Assistant EVA +420 950 191 590



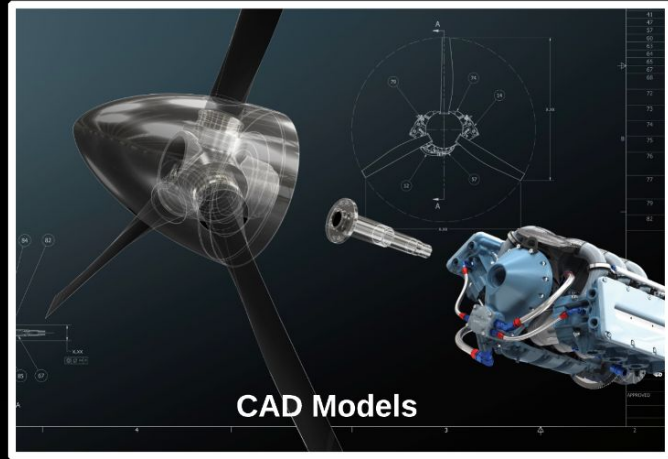
Manufacturing



Digital Data Twin



AI Solution | Construction Design



measured
performance
parameters

training output

$$\hat{Y} \stackrel{?}{=} Y$$

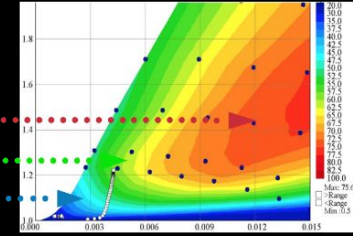
physical laws,
engineering
hints

geometrical
parameters

new geometrical
parameters

model
training
trained
model

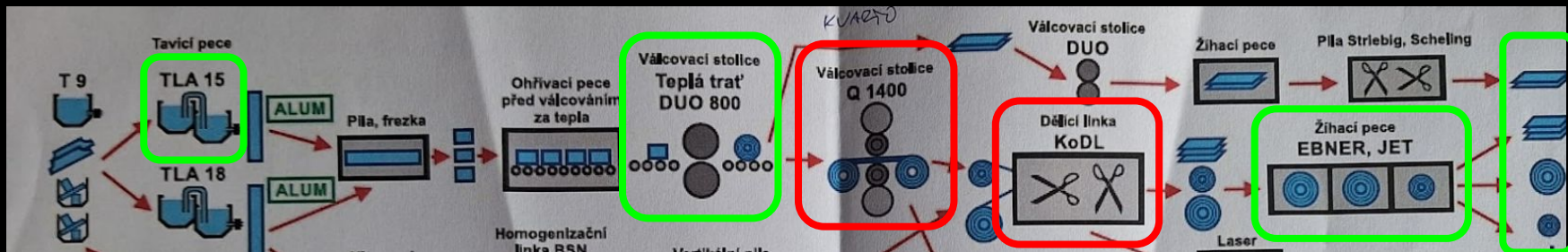
all operating
conditions



Data processed

Analýza zmetkovitosti plechu AlMg3 H22 Magna

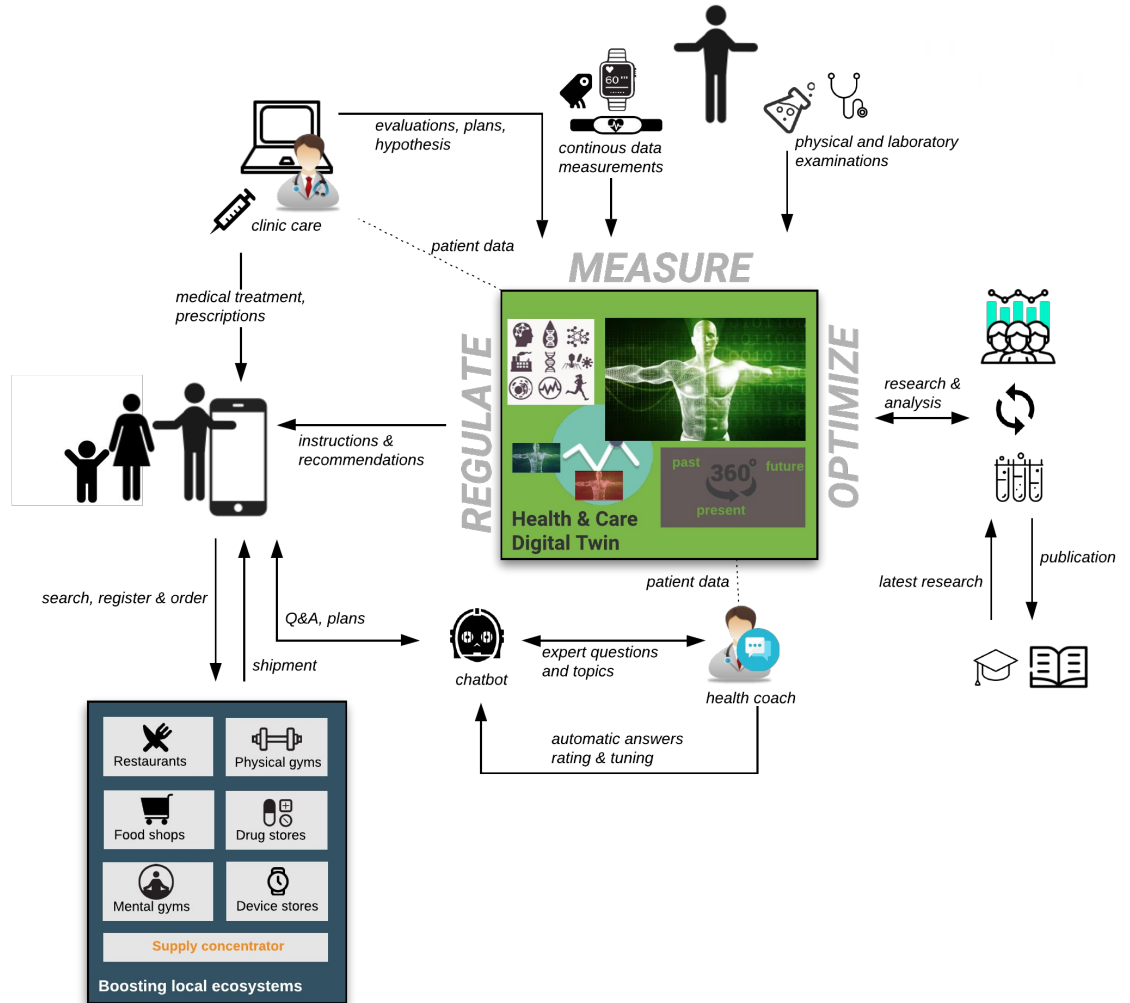
- tavicí pec (zastoupení cca 30 prvků v materiálu)
- lití (pouze veličina “část tavby”)
- DUO 800
- žíhací pec
- mechanické zkoušky finálního produktu



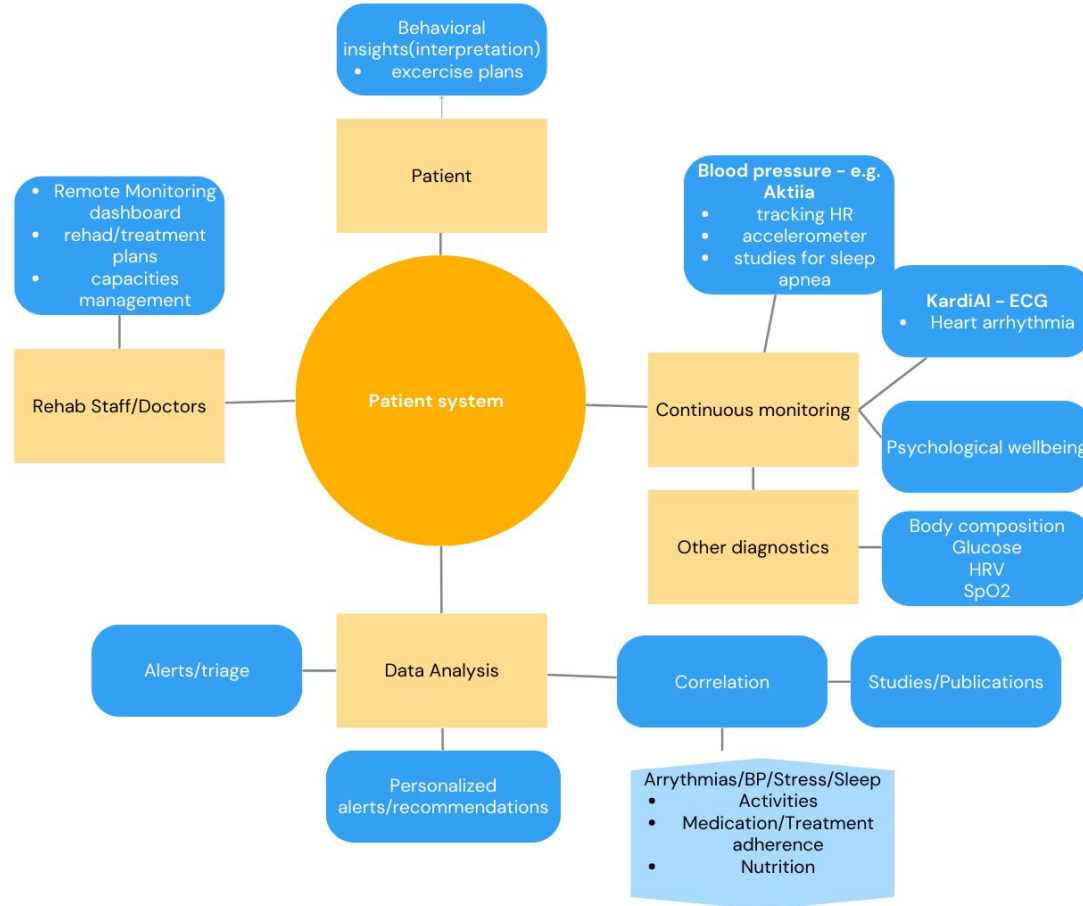
Healthcare

Digital Twin

Digital twins are represented by different models. The main function of these models is to **accurately reproduce** the **properties, behaviour** and **rules of a physical object**.



Metabolic syndrome



Education



Digital Twin and AI

The main pillar of our personalized learning model is a digital twin of the student which is connected to our AI-powered cognitive tutor. The data collected by the digital twin is used by the cognitive tutor to optimize teaching.



Digital Twin of Student

- Personal information
- Initial level of language knowledge
- Learning style
- Student's goals and motivations
- Student's interests & hobbies
- Learning speed
- Memory retention



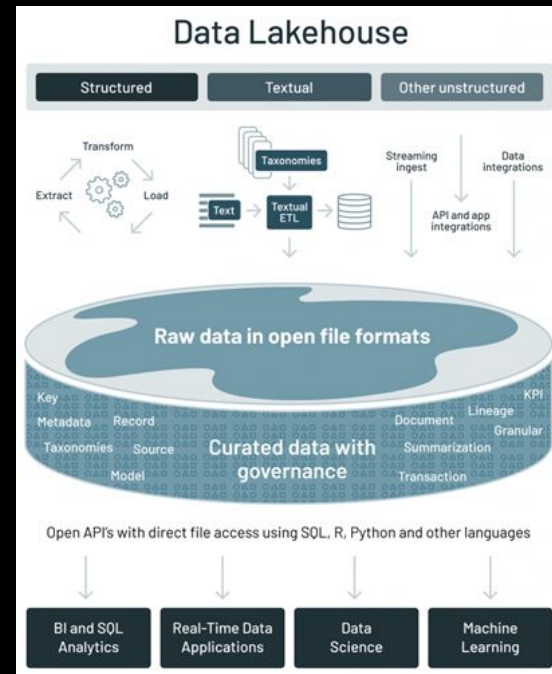
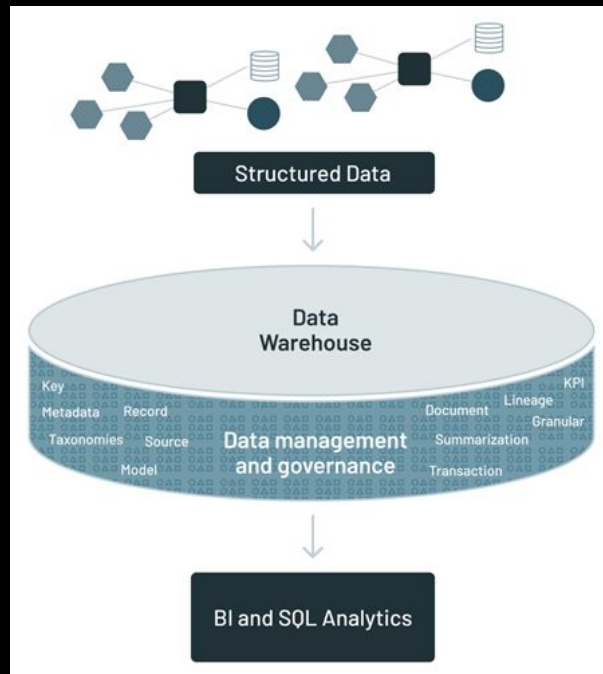
Cognitive Tutor

- Own learning plans & goals
- Individualized feedback
- Repetition cycles
- Learning speed
- Personalized content
- Cognitive workload

Digitalization & AI Transformation

A large, abstract graphic consisting of several concentric, slightly offset teal rings that create a sense of depth and motion, resembling a stylized eye or a futuristic lens. It is positioned on the right side of the slide, partially overlapping the main title text.

Digitalization



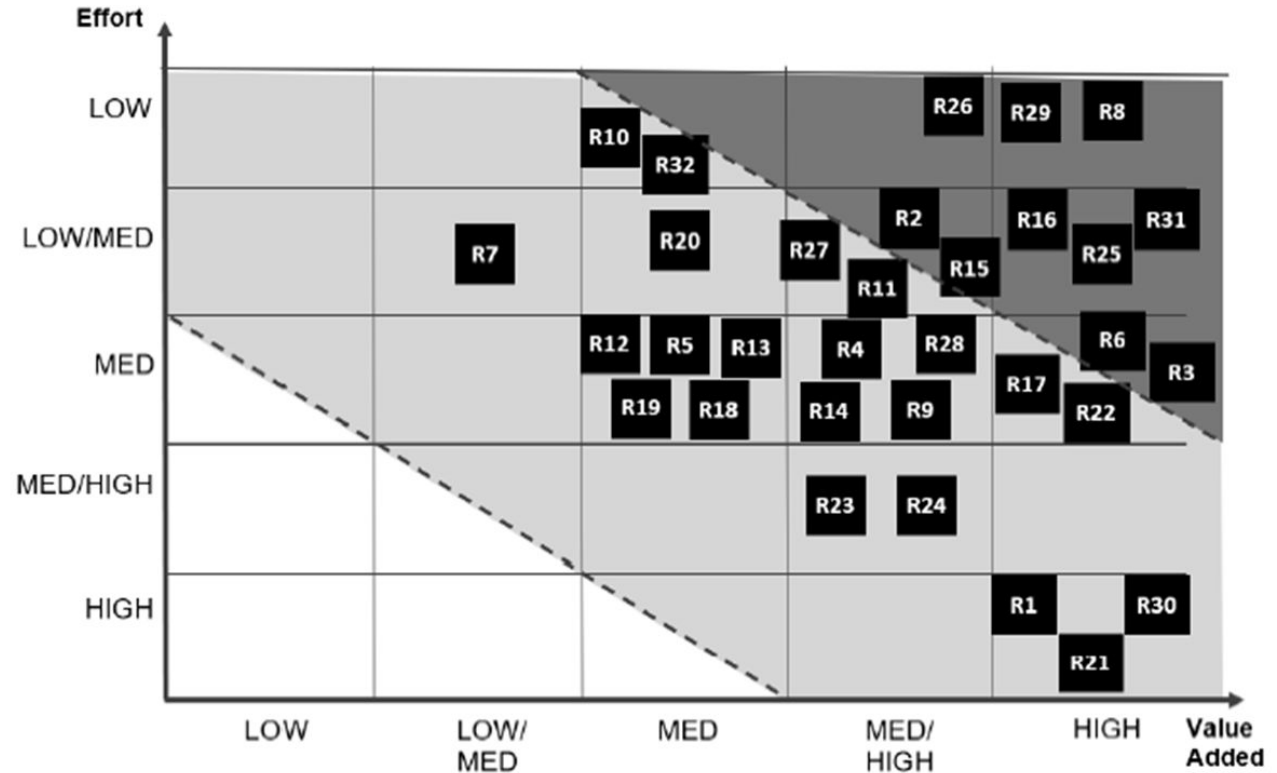
Money Wasting Option
!!!

Only Right Journey
□□□

AI readiness AI capability assessment

- T-mobile Customer operations
- Zentiva AI data lake

Figure 1: VALUE ADDED - EASY TO-DO MATRIX



Thank you!



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/ @dnaigroup

DNAi is the incubator of tomorrow's innovations, where AI architecture meets the DNA of your company.

Virtual & Augmented Reality



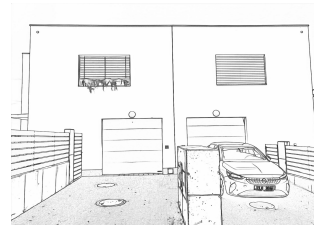
1.

ORIGINAL IMAGE



2.

AI BUILDING
ELEMENTS



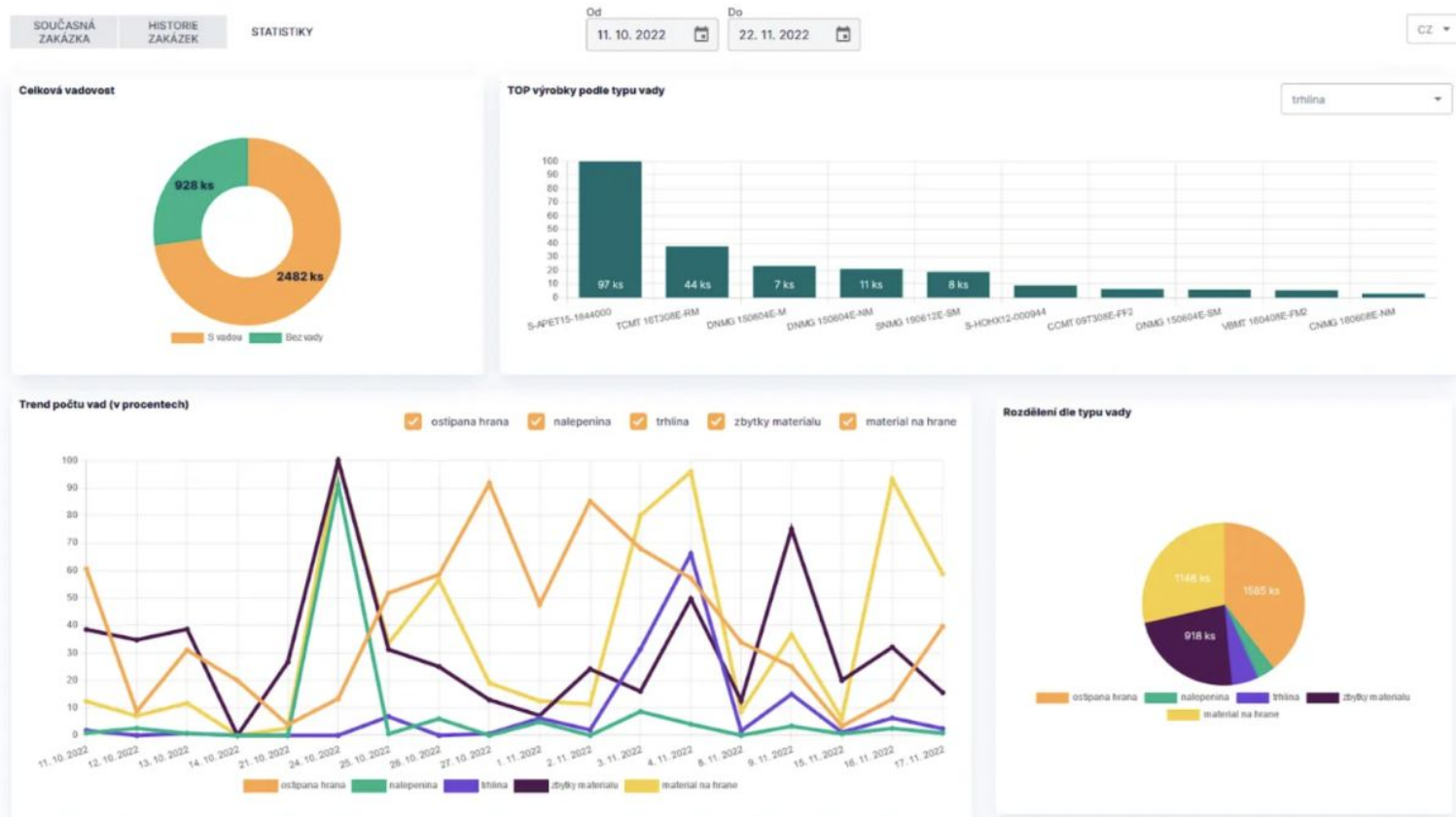
3.

NEW FACED



Quality control dashboard preview

DORMER PRAMET



**20
000+**

Items Inventory
optimization

35%

Improvement on daily
forecasts against base solution

15%

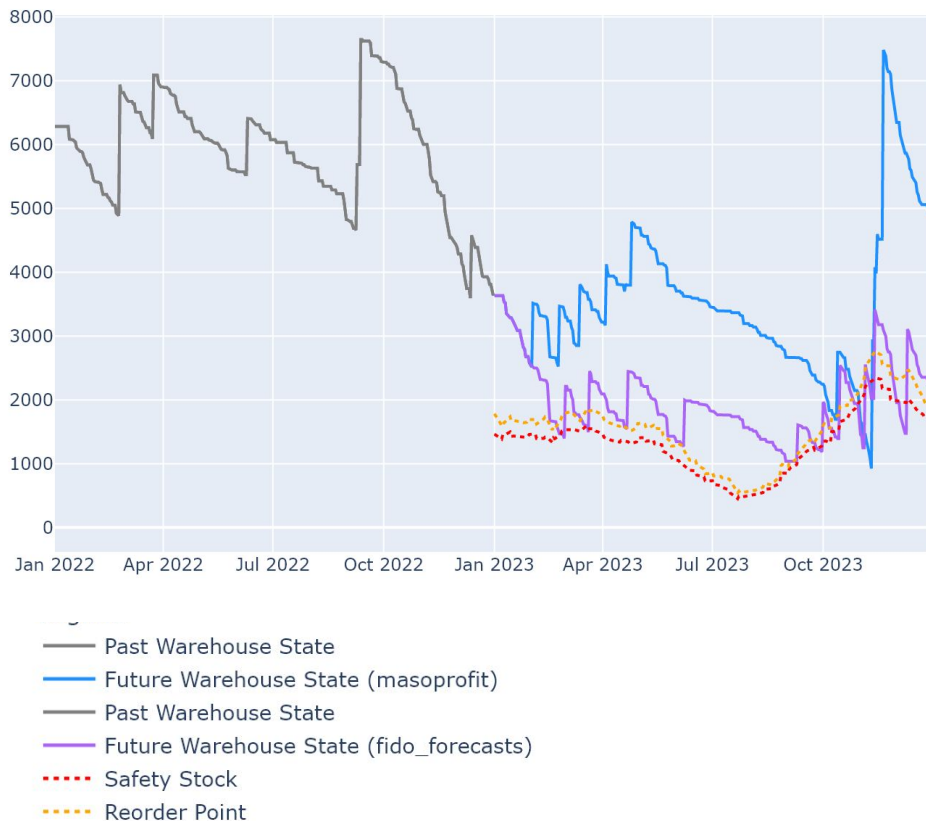
**Stock level
improvement**

Forecasting model per time series

↳ Taking into account large seasonality

↳ Aggregation Weekly, Monthly

↳ Preliminary results suggest **15% stock level improvement**, while reducing stockouts



DORMER PRAMET**10 000 +****Spare Parts Demand Forecasting & Inventory Optimization (PoC)****20%****Reduction in Stock Levels****30%****Improvement in Daily Forecast Accuracy vs. Baseline**↳ **Industry: Manufacturing****DNAi**



PORTFOLIO DECISION ASSISTANT

- ↳ **A tool that unifies data for faster and more accurate decision-making.**
- ↳ **Streamlining decision-making processes for the product portfolio**
- ↳ Optimized production processes and enhanced flexibility during changes
- ↳ Reduced financial uncertainty through advanced analytics and forecasting

- + **Faster**
- + **More efficient**
- + **Cost transparency**
- + **Enhanced flexibility**
- + **Optimized production**



COST OF GOODS

↳ **Better management of production costs through centralized data.**

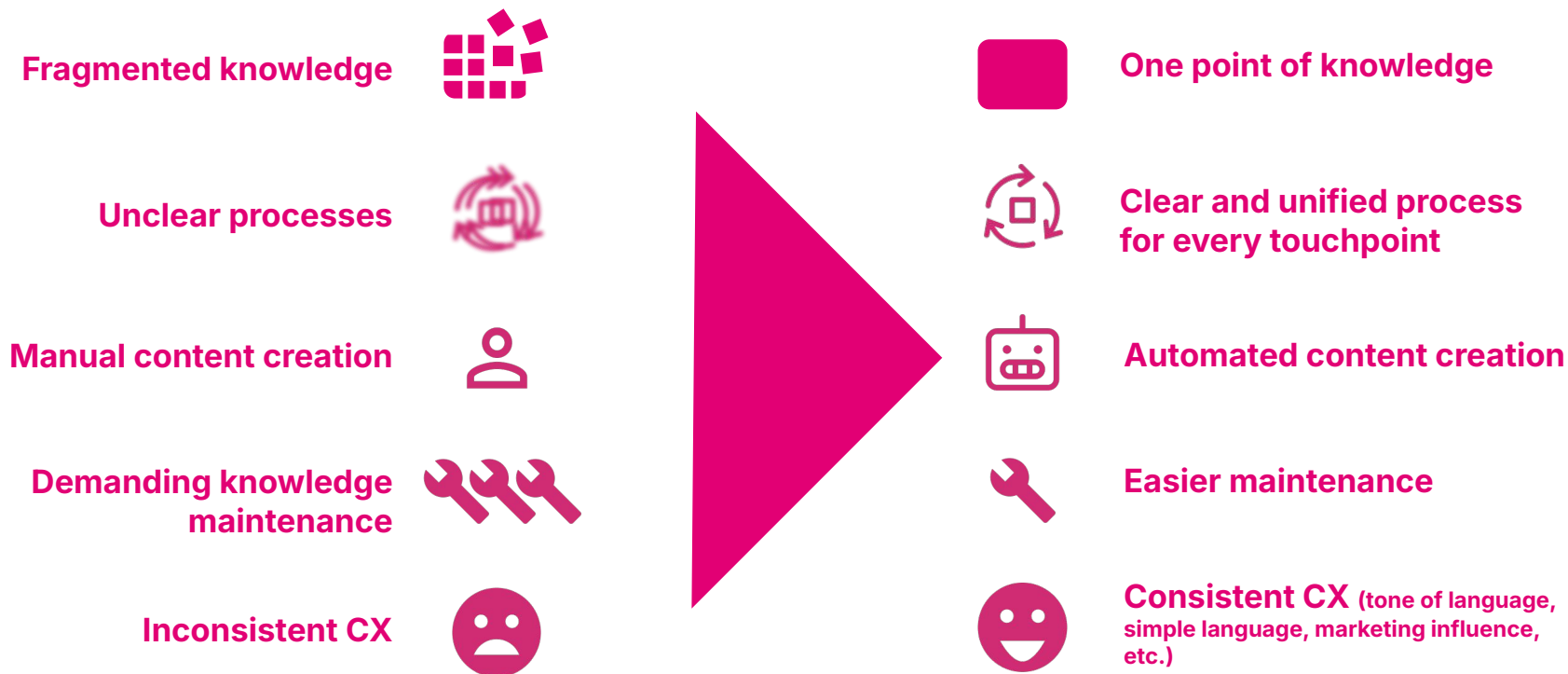
↳ **Cost overview with forecasts of the impact of changes in raw material prices and production processes.**

+ 10x faster calculation
+ Higher flexibility
+ Enhanced prediction

Single Point of Knowledge



Benefits of SPoK



AI capability assessment

