



PROVEN DIGITAL SOLUTIONS FOR INDUSTRIAL INNOVATION

● SmartEAM

● Anna Maly

● SmartFactory

● Cable Designer

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About IT-Enterprise



**Client Success
Powered By
IT-Enterprise**



**Enterprise Assets and
Facility Management
Solution**



**Intelligent
Maintenance and
Operations with AI**



**Integration with
IIoT (Data Collection)**



**Predictive
Maintenance and
Operations with AI**



About IT-Enterprise

About IT-Enterprise

> 1350

implemented projects

26

business areas

1M

users

15

countries

+35

years of experience
in digital solutions



IMPLEMENTATION AND SUPPORT PARTNERS

- Ukraine
- Czech Republic
- Poland
- Saudi Arabia
- Kazakhstan
- Uzbekistan



INDUSTRY 4.0 ECOSYSTEM LEADER

- R&D center for Industry 4.0, 5.0
- First Industry 4.0 Forum in Eastern Europe
- World trade shows

Expertise in ready-made configurations for digital transformation across industries



AEROSPACE INDUSTRY



AGRARIAN AND FOOD INDUSTRIES



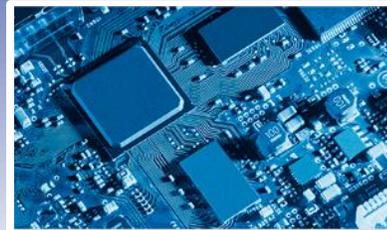
CABLE & WIRE INDUSTRY



CHEMISTRY AND PHARMACEUTICALS



DEVELOPMENT, ENGINEERING AND CONSTRUCTION



ELECTRICAL INDUSTRY, INSTRUMENTATION



EXTRACTION OF OIL, GAS AND HYDROCARBONS



FINANCIAL AND SERVICE COMPANIES



LOGISTICS AND TRANSPORTATION



MECHANICAL ENGINEERING



METALLURGY AND MINING INDUSTRY



PRODUCTION OF DGO AND FMCG



RETAIL



STATE AND COMMUNAL ORGANISATION



TRADITIONAL AND RENEWABLE ENERGY

SALES. CRM

- Marketing CRM (Customer Relationship Management) Order and Billing Management
- Contract Management
- Product and Pricing Management
- Sales Planning
- Self-Service Portal
- Business Process Management (BPM)
- Sales Analytics (KPIs)

INVENTORY & PROCUREMENT

- Inventory Management
- Procurement Management
- Tender Management
- Transportation Management
- Warehouse Management (WMS)
- Supply Chain Management (SCM)
- Contract Management

FINANCE & TREASURY

- Operational Financial Management
- Accounts Receivable & Accounts Payable Management
- Budgeting Process
- Budgets
- Digital Payments System
- Financial Analytics

ACCOUNTING

- Company Accounting Policies
- Fixed Assets Accounting
- Cash and Cash Equivalents Accounting
- Inventory Accounting
- Financial Settlement Operations
- Production Cost Accounting
- Tax Accounting and Reporting
- Regulatory Reporting (SAF-T UA)
- Accounting in Compliance with International Financial Reporting Standards (IFRS)

HUMAN RESOURCES (HR)

- Recruitment
- Learning Management System (LMS) Portal
- HR Administration (Personnel Records)
- Employee Development
- Time & Attendance Tracking with Access Control System Integration
- Payroll Management
- KPI-Based Employee Motivation
- Employee Self-Service Portal (Front HR System)
- HRM Process Analytics

COSTS & CONTROLLING

- Planned Costing
- Operational Cost Management in Production
- ABC Costing

R&D MDM / PDM / PLM / TDM

- Master Data Management (MDM)
- Product Data Management (PDM)
- Technical Document Management (TDM)
- Product Lifecycle Management (PLM)
- Production Preparation Process Analytics (KPIs)

MANUFACTURING

- Order Management & Production Capacity Planning
- Advanced Production Scheduling (APS)
- Manufacturing Execution System (MES) – Process Monitoring & Operational Control
- Production Logistics Management
- Quality Management
- Augmented / Virtual Reality
- Industrial Internet of Things (IIoT)
- Digital Twin

MAINTENANCE & SERVICE

- Equipment Information Management
- Equipment Condition Monitoring & Tracking
- Operational Management and Planning of Maintenance Work
- Calendar and Resource Planning for Maintenance
- Maintenance Performance Analysis
- Predictive Maintenance 4.0
- Technical Support Portal – MasterFix

PROJECT MANAGEMENT

- Project Scope and Timeline Management
- Project Resource Management



DIGITAL PLATFORM FOR INDUSTRIAL SOLUTIONS

Industry 4.0 & Industry 5.0

RETAIL

- Trade Management
- Loyalty Management
- Point of Sale (POS) / Cashier Workstation
- Software-based Fiscal Cash Register (e-Receipt / DeCheck)

DOCUMENT MANAGEMENT & BPM

- ECM Document Management
- Business Process Management (BPM)
- Task Management
- Document and Process Analytics (KPIs)

AI ASSISTANTS & AI AGENTS

- AI HR Assistant
- AI Finance Assistant
- AI Support Assistant
- AI Document Import Agent
- AI Predictive Maintenance Agent
- 45+ AI Assistants for Any Use Case

ADMINISTRATION & DEVELOPMENT TOOLS

Built-in BPM-configurator for setting up all business processes

Open Low-code / No-code configuration platform

SIMPLE AND CONVENIENT BUSINESS PROCESS DESCRIPTION

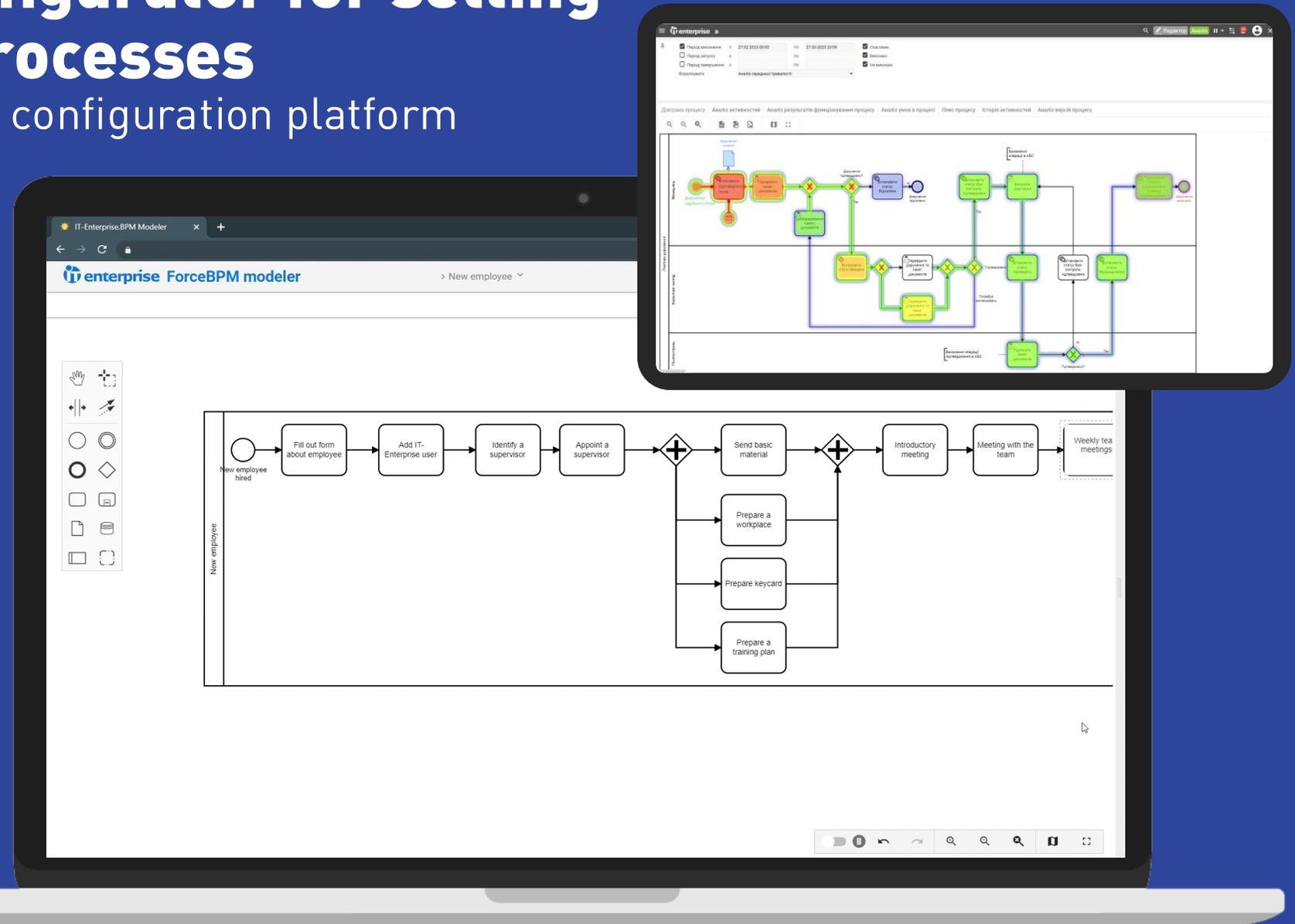
You only need a web browser and a computer mouse

ANYONE CAN DESCRIBE A BUSINESS PROCESS

No programming skills required — thanks to the use of No-Code / Low-Code approaches in BPMN 2.0 notation

TRANSPARENCY OF BUSINESS PROCESSES

Comprehensive analytics of your processes' efficiency for continuous improvement and bottleneck identification



Business Analytics Designers

- Built-in report designers
- Built-in BI designers
- Embedded use of business analytics systems:
 - **QlikView**
 - **Power BI**



IT-Enterprise — Digital Platform for Industrial Solutions

PDM/PLM R&D



- Master data management (MDM)
- Product data management (PDM)
- Technical documentation management (TDM)
- Product lifecycle management (PLM)
- Business Intelligence of production setup processes (KPI)

SmartFactory PRODUCTION



- Order management and capacity requirements planning
- Operational production scheduling (APS)
- Control and operational management of manufacturing processes (MES)
- Production logistics management
- Quality management
- Augmented/Virtual reality (AR/VR)
- Industrial Internet of Things (IIoT)
- Digital Twins

SmartEAM MAINTENANCE



- Equipment information management
- Monitoring equipment condition
- Operational management and organization of maintenance jobs
- Scheduling and resource planning, maintenance budgeting
- Maintenance efficiency analysis
- Predictive Maintenance 4.0 — new generation maintenance

Industrial AI AI-ASSISTANTS



- Automatic calculation of the technological process based on 2D/3D models
- Intelligent analysis of equipment maintenance history
- Data-driven maintenance planning
- Intelligent analysis and translation of technical documentation
- Failure prediction based on data
- Reduction of downtime and maintenance costs
- Real-time equipment condition analytics
- Integration with PLM/MES/EAM systems

IT-Enterprise's Benefits by Roles

 INVESTORS & MANAGEMENT	 PLANT			
	 R&D	 PLANNING	 MANUFACTURING	 MAINTENANCE
<ul style="list-style-type: none"> - Better understanding of real profit and loss structure - Room for margin increase due to transparent product cost structure - Data-driven decision making - Increased output with the same production resources - Cost-saving due to optimal equipment performance and managing semi-finished products - More clients and higher satisfaction level due to faster service and guaranteed quality 	<ul style="list-style-type: none"> - Structured repository of all designs - Comprehensive tool for fast and accurate design & quotation - Shorter time to market - Engineering of both materials and technology - Production cards synchronization in real-time - Minimized risk of error 	<ul style="list-style-type: none"> - Optimal production planning - Real-time automated production rescheduling - Strict compliance with the Bill of Materials and manufacturing parameters - Cross-cutting stock management: materials, semi-finished products, spare parts - Monitoring work in progress - Understanding maintenance periods - Waste and scrap reduction, optimal use of energy and natural resources 	<ul style="list-style-type: none"> - On-time production execution - Real-time automated production rescheduling - Real-time automated production rescheduling - Batch traceability - Autogenerated digital role-based production tasks with all parameters - Human errors minimization, higher staff effectiveness - Guaranteed and stable quality of products 	<ul style="list-style-type: none"> - Breakdown prediction, increased availability - Parts replacement scheduling - Life cycle extension - Control over compliance with equipment maintenance standards - Tool for maintenance budgeting - Tracking expensive tools and gear, stock management - Tool for work orders balancing and prioritization - Online equipment control - Working hours calculation

A photograph of an industrial manufacturing environment. In the foreground, a robotic arm is welding a metal beam, creating a bright light and a spray of sparks. Two workers, a woman and a man, are standing behind the robot. They are wearing high-visibility safety gear, including hard hats and safety glasses. The woman is wearing a blue uniform and the man is wearing a green uniform. The man is holding a tablet computer and looking at it. The background shows a factory setting with various equipment and structures. The overall scene is lit with a cool, blueish light, suggesting an indoor industrial environment.

Client Success Powered By IT-Enterprise

FACT FILE

- No. 1 sugar producer in Ukraine with a 20%+ market share in Ukraine
- No. 1 industrial milk producer, 22,000 livestock
- No. 2 for soybean processing in Ukraine, 230,000 tons / year
- 220 thousand hectares of land, Agricultural production
- > 10,000 employees



No paper
No desktop



Only mobile



PROJECT DELIVERABLES

9 business enterprises (sugar factories and silos)

- Improving equipment reliability according to RCM-2 methodology
- Many tasks are performed in the smartphone – equipment maintenance, inspection, efficiency control
- IIoT (Industrial Internet of Things) - automated control system, quality control system, laboratory, other indicators combined into a single hub
- Tasks of artificial intelligence and machine learning
- Online selection of technological indicators for a stable production process
- Detection of abnormal operating modes to control equipment reliability

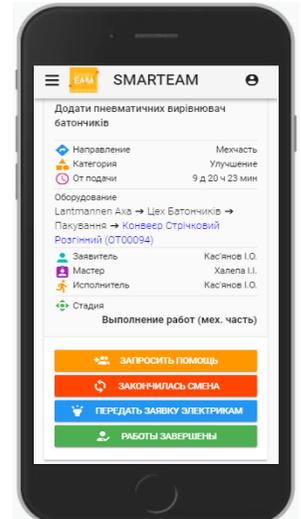
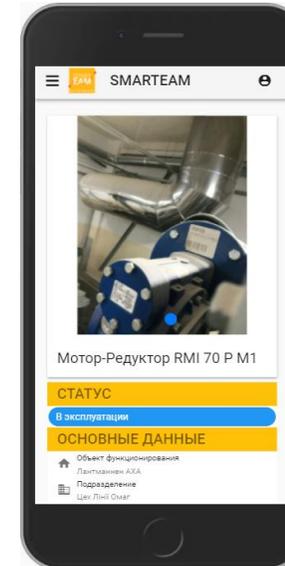
FACT FILE

Lantmännen is an agricultural cooperative in the Nordic market in sectors such as agriculture, mechanical engineering, bioenergy and the food industry

> 300 employees

INDUSTRY 4.0 PROJECT:

- Operational planning and execution of maintenance activities using IIoT technologies
- Management of works and service engineers via mobile devices
- Control of the use of material resources for repair work





BUSINESS CASE OF INTERPIPE

ABOUT

A single system for the entire business: management company + sales + the entire production chain: from scrap procurement to finished products 70+ companies, incl. INTERPIPE Europe (Lugano), K LW Whilco (Lugano), INTERPIPE Middle East (Dubai), North American INTERPIPE Inc

TOP 3

of railway wheels world producers

TOP 10

oil & gas tube producers worldwide

60%

of power coaches in Europe use wheels from INTERPIPE

Every 3rd building in Dubai is equipped with pipes from INTERPIPE

STATISTICS



all business processes are controlled by IT-Enterprise

14

years of partnership

50

legal entities under control in IT-Enterprise

>3000

users

BUSINESS SOLUTIONS

- Ordering
- Manufacturing
- Finance & Accounting
- HR management
- Purchasing
- Warehousing
- Maintenance and Repair



INTERPIPE: Digital Transformation Results



+95%

fulfillment of orders on time

+20%

stock reduction unfinished production

100%

Online production accounting at each operation

Online

Control of delivery times to the client with the accuracy of the time

15%

reduction of expenses for repairs

+15%

increase in OEE

FACT FILE

KNESS GROUP consists of 6 business units. The company entered to Ukrainian energy market services in 2009. Since its foundation, the company has been designing and constructing energy facilities for electric power companies and industrial enterprises.

Since 2012, the key activity is integrated implementation of solar energy projects — design and construction of industrial solar PV systems

PROJECT DELIVERABLES:

- The hierarchical catalog of the equipment of all stations was built and an archive of technical documentation was organized
- Equipment operational statistics are monitored and an electronic list of failure is maintained
- Current maintenance of the Solar Station is carried out using standardized repair cards, where the operations technology is fully described
- Planning of resources for work is carried out with reference to specific work and equipment



BUSINESS CASE OF DONBASENERGO

FACT FILE

Ukrainian energy company engaged in the production of electricity and heat, repair and adjustment of thermal, mechanical and electrical equipment, manufacture of spare parts, and design work.

PROJECT CONCEPT:

Technical section

- Equipment classifier
- Number accounting of node movement
- Archive of technical documentation
- PPM cards / labor intensity standards
- Plans for equipment walkthroughs and inspections
- Accounting and classification of downtime
- Centralized and nodal planning
- Time-based scheduling
- Management of maintenance and repair requests

Economic section

- Resource planning and accounting
- Management of spare parts targets
- Registration of plan and cost

Analytical section

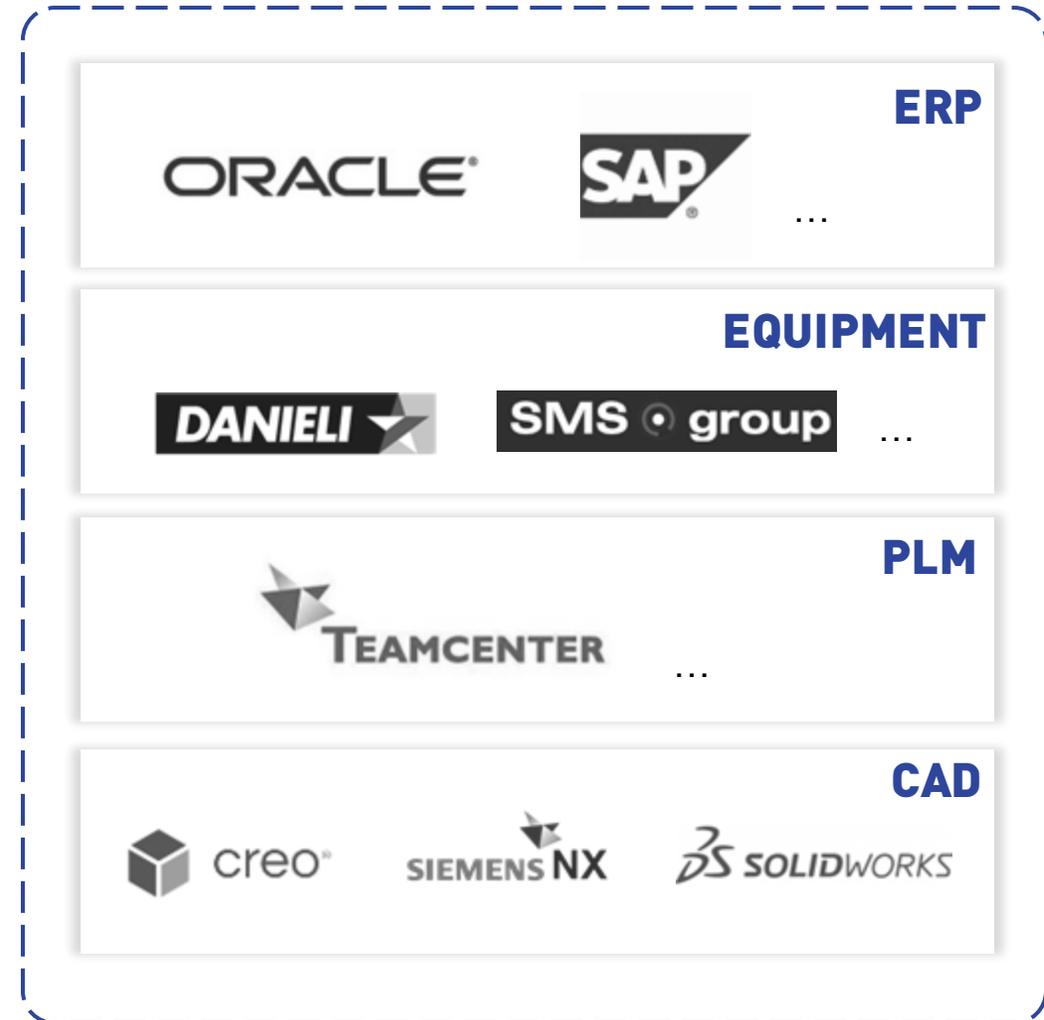
- Failure investigation / RCA analysis
- Analysis of plan / actual costs
- BI data analysis
- Calculation of KTG and KRO

PROJECT RESULTS:

- The main functions are implemented in the mobile application
- The system monitors 178 parameters for 700 machine models
- Monitoring frequency - from "every 2 hours" to "once every 5 years (for buildings and structures)"
- Many parameters are monitored automatically - temperature, vibration, pressure, etc.
- Implemented the functionality of automatic accounting of man-hours of the main equipment of the enterprise
- Automatic accounting and classification of equipment downtime allows you to control its efficiency
- Analysis of indicators that are monitored automatically, collection of equipment inspection results, analysis of dynamics and trends make it possible to predict equipment failures

System Integration and Interoperability

- Our team has vast experience in implementing integration projects
- The system has multiple tools to provide strong interaction among parts of the Customer's IT solution



Enterprise Assets and Facility Management Solution



System for Reliable Equipment Operation

We know what was, what is, and what will be with your equipment

RELIABLE EQUIPMENT OPERATION GUARANTEES COMPETITIVE ADVANTAGES DUE TO:

- Reduction of equipment downtime
- Reduction of repair costs
- Increase in OEE of equipment
- Performance of works, services or production of products within a specified period
- Reducing the cost of products/services



Mobile solutions



Advanced methodology



Innovative tools



Implementation experience for 50+ enterprises



Equipment classifier



Visual inspections



Calculation of planned repair plans



Accounting for maintenance and repair costs



Archive of technical documentation

IIoT – integration with equipment



Mobile technologies



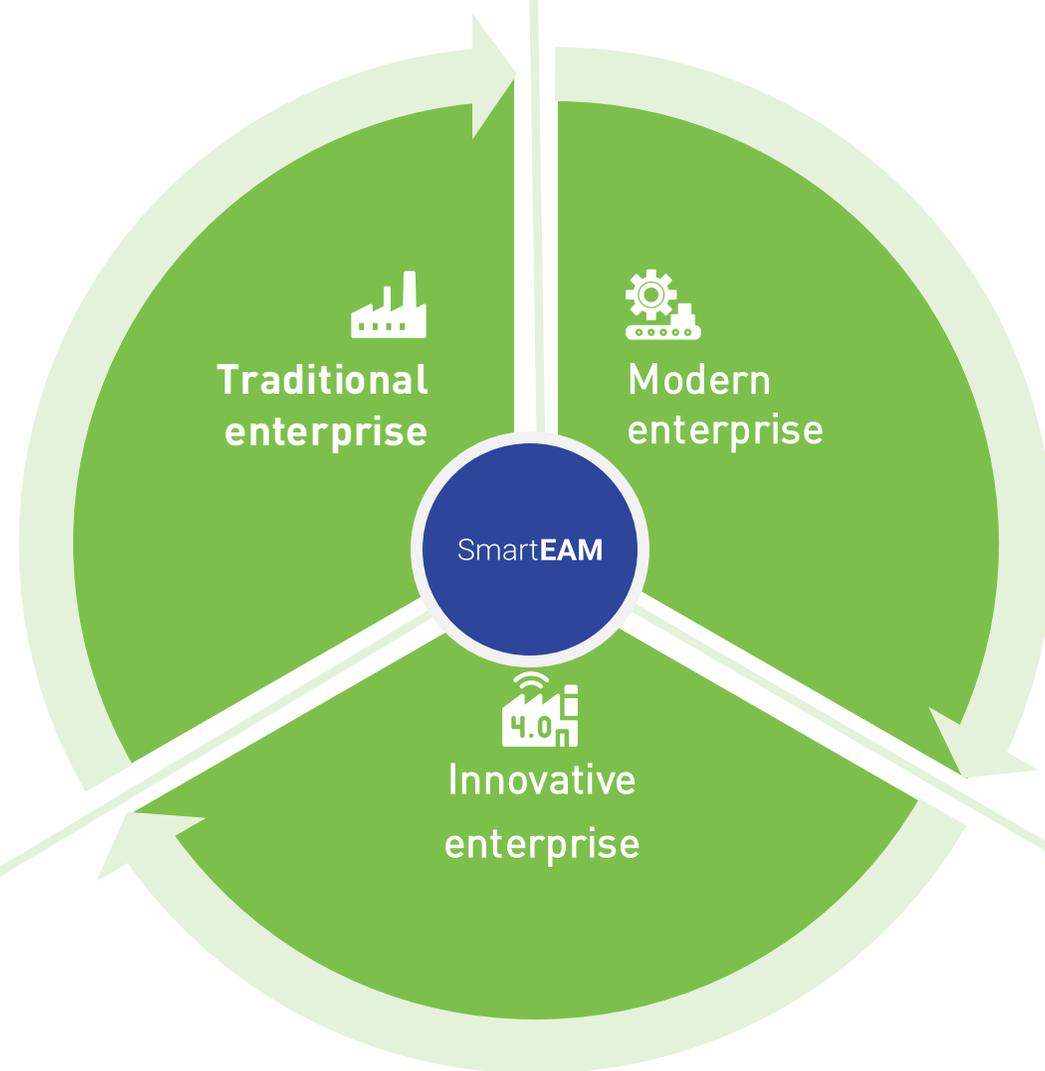
Personnel workload management



Automated accounting of operating hours



Forecasting inventory of goods and materials



Artificial intelligence



Digital twin



SmartDevices — Google Glass

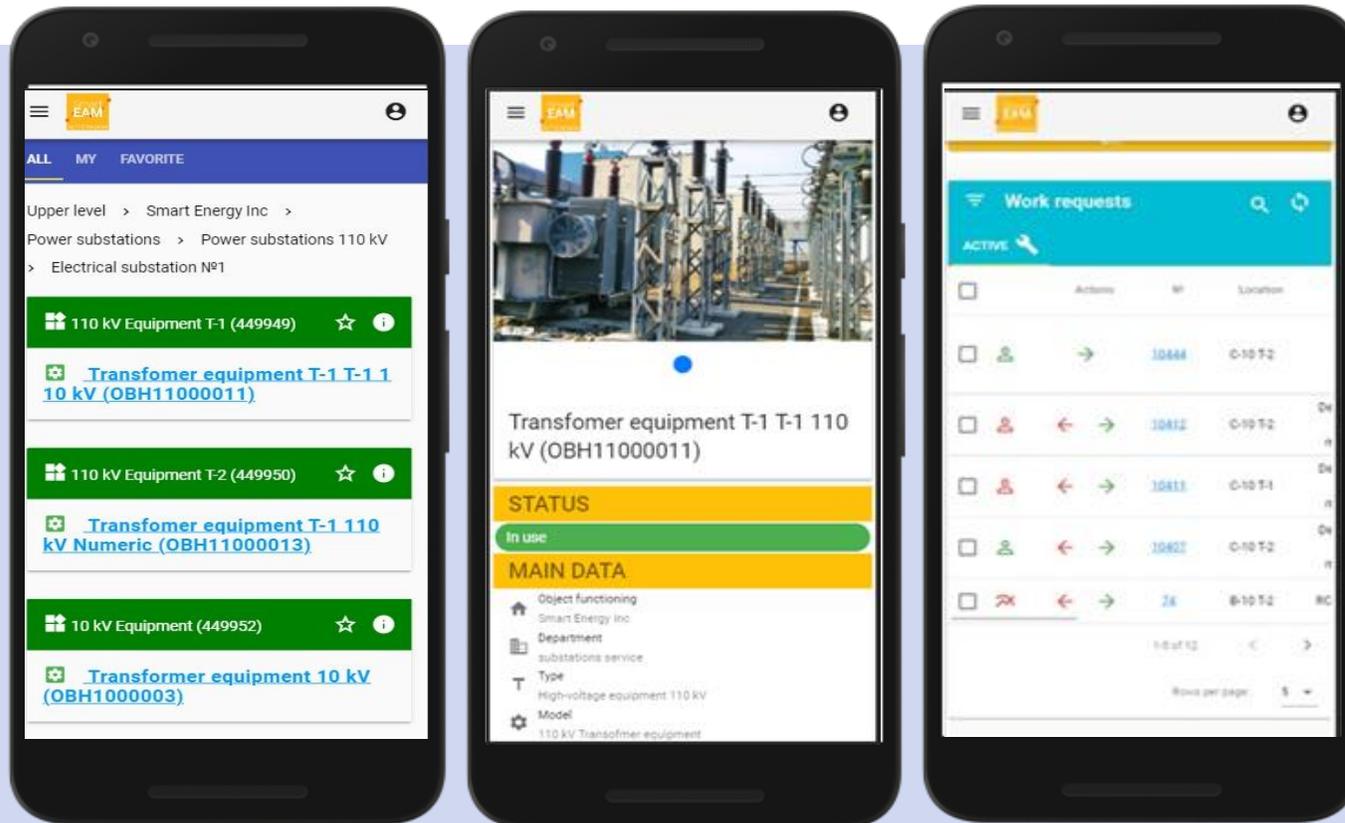


Augmented reality

Intelligent Maintenance and Operations with AI

All Data About an Equipment Operation

Electronic passport and all information about the equipment in the smartphone

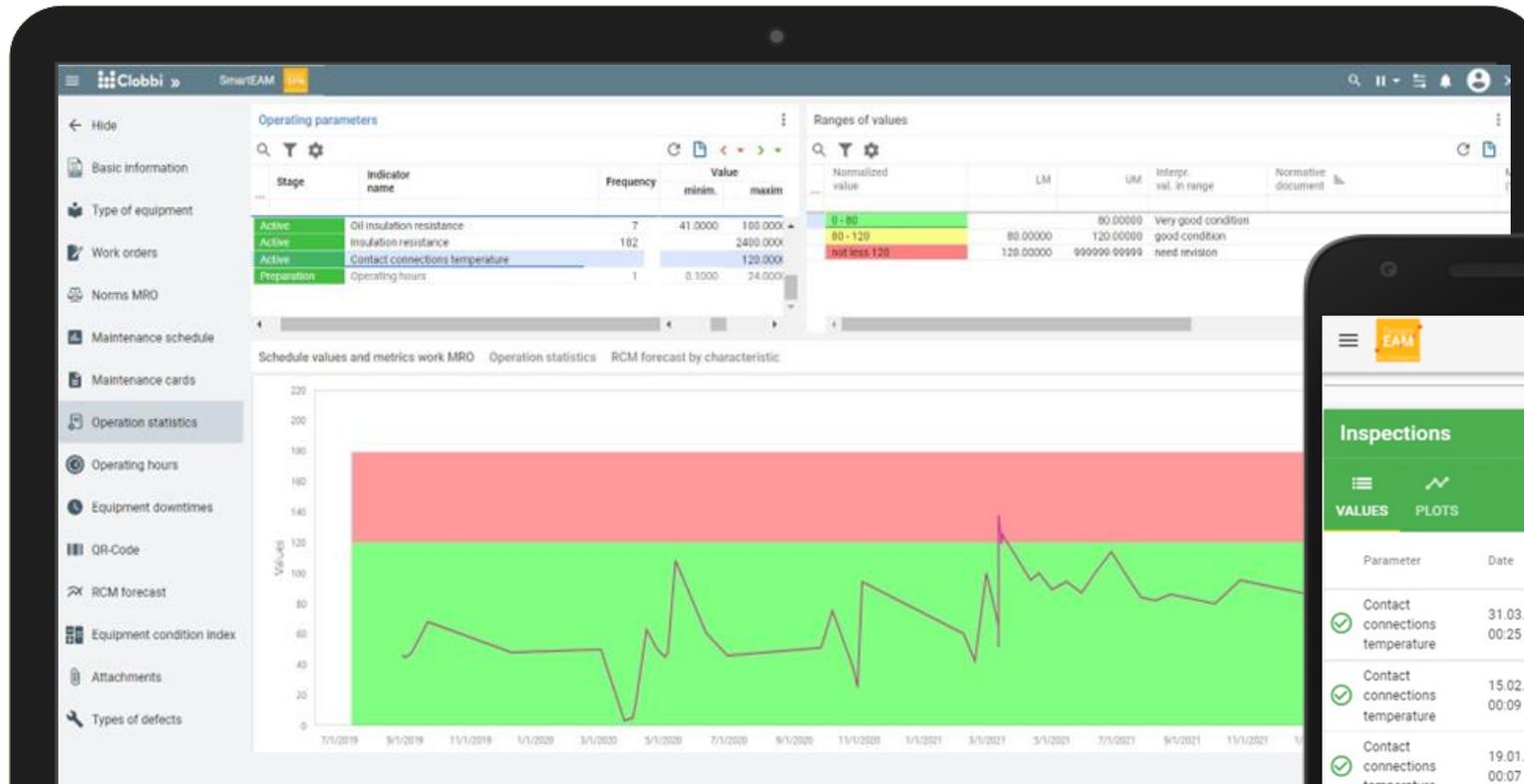


24/7 information availability
Smartphones only



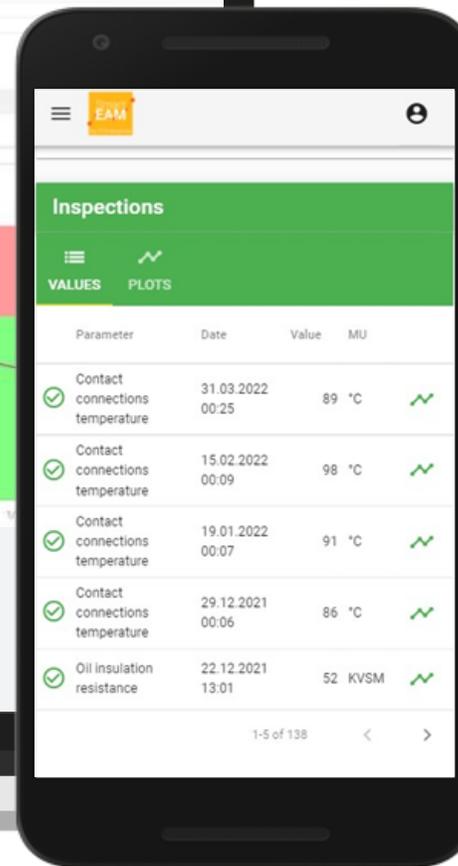
Paperless
Without computers

Monitoring of operational statistics



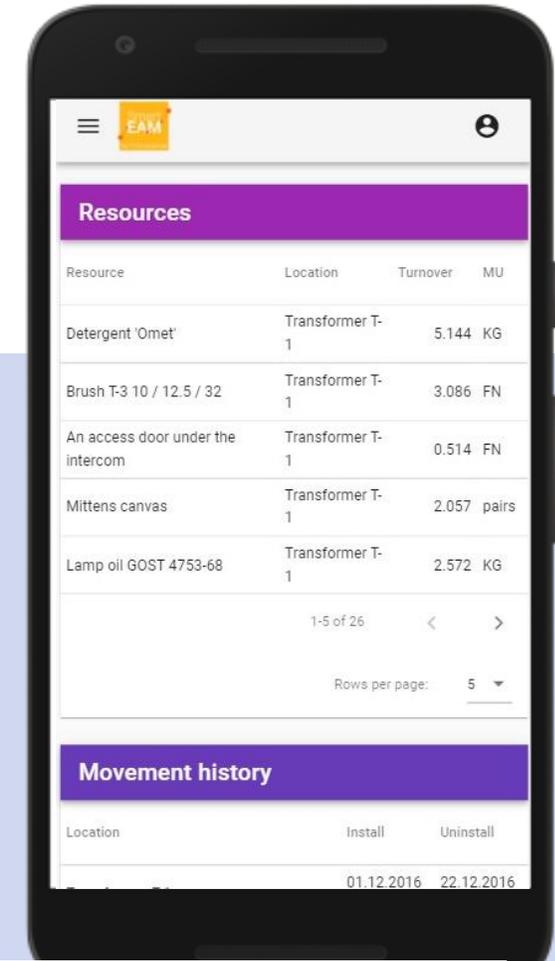
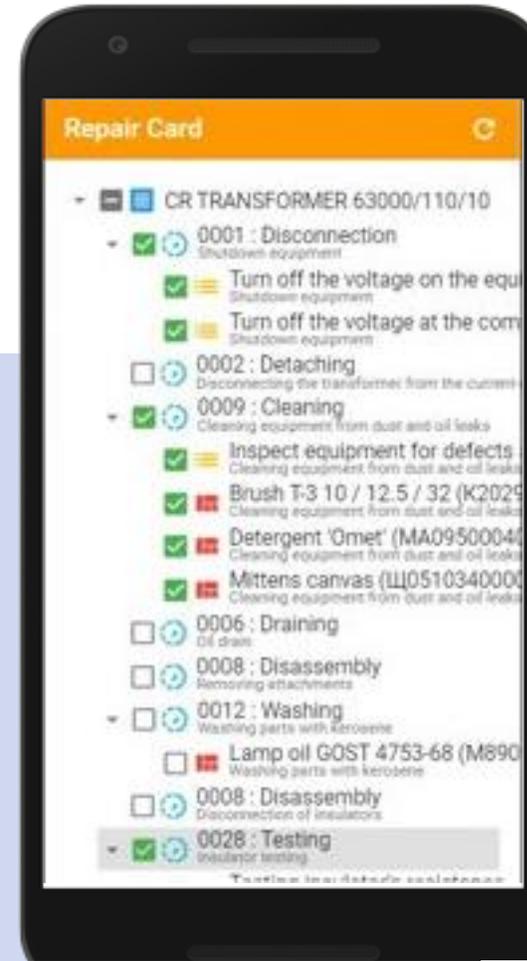
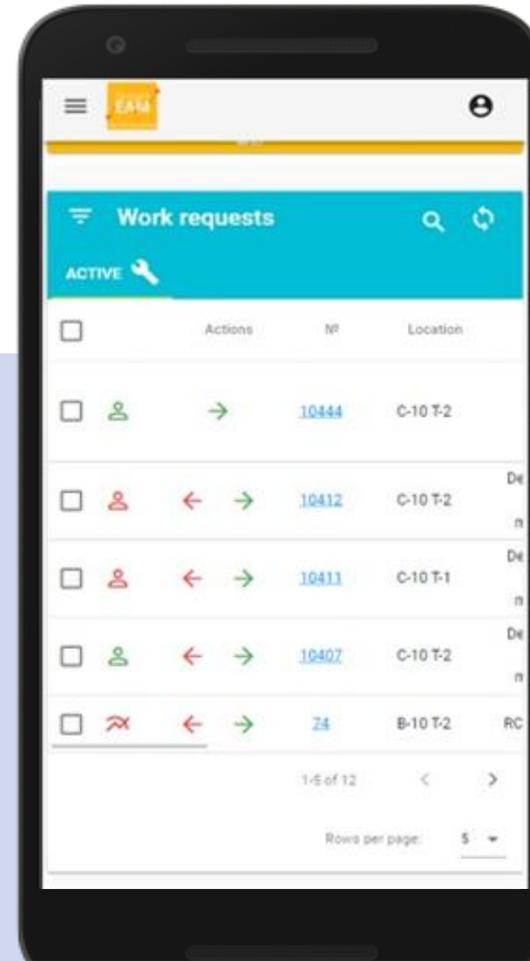
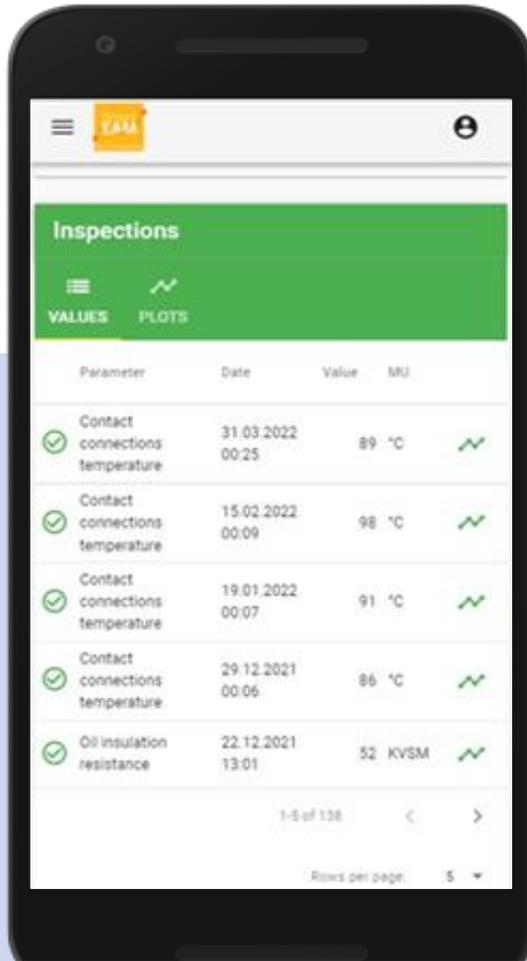
SYSTEM FUNCTIONALITY:

- Schedule equipment inspections, create variable tasks for technicians
- Create a list of status parameters for each type of equipment
- Automated registration of equipment inspection results and creation of work orders
- Lower labour costs for equipment inspection
- Confirmation of inspection and time recording
- Collect, summarise and analyse inspection results for use in maintenance planning



You can effectively plan centralised and decentralised services and create maintenance schedules based on the calendar or elapsed time. The system also allows you to automatically adjust schedules if necessary, draw up timely purchase orders for materials in accordance with work orders and monitor their implementation

End-to-end process of equipment management using a mobile phone



Inspection of equipment technical condition

Create a maintenance request

Selection of repair operations

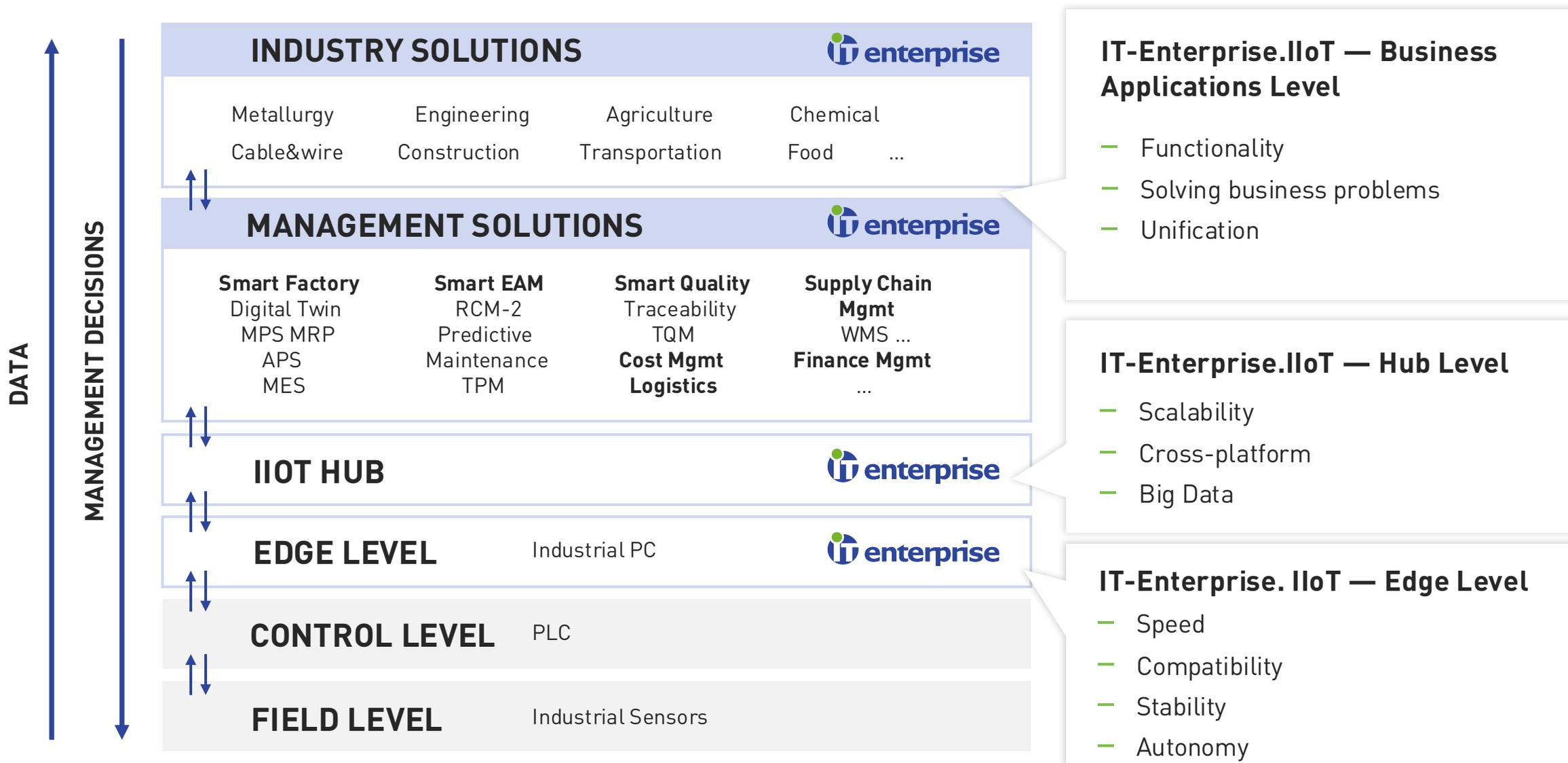
Resource and personnel management

Integration with IIoT (Data Collection)



IT-Enterprise.IIoT — a fully functional IIoT platform

Architecture – from sensor to control solution



Predictive Maintenance and Operations with AI



Do you display data on a big screen?

- Most of the process is controlled by a specialist — a person
- A person will begin to act only after he notices that something went wrong with the controlled process
- When later the deviation in the controlled process is detected, that greater the losses will be



You depend on the attentiveness and experience of the dispatcher
A person can simultaneously analyze from 5 to 9 parameters
The concentration of attention of an adult is not more than 90 minutes



Anna Maly

Reduced downtime costs by
15%

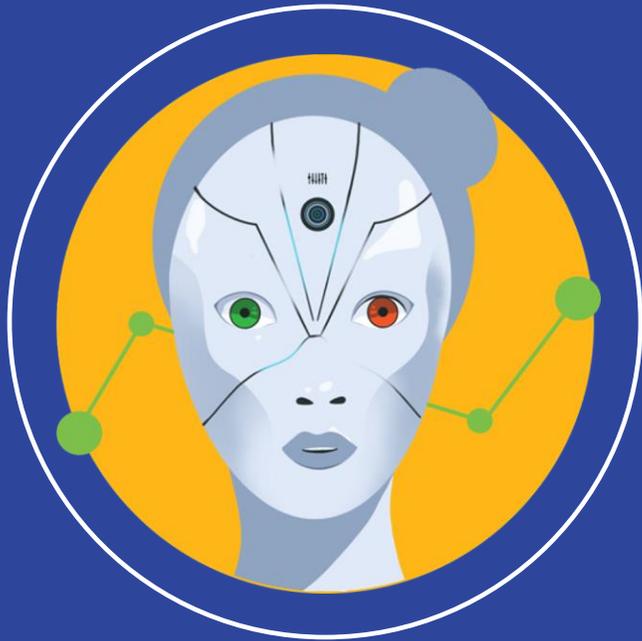


Hello!

My name is Anna Maly

Anna Maly

- **Knows and uses** more than 50 methods of artificial intelligence and machine learning
- **Able to learn quickly** when identifying new types of failures
- **Able to analyze** previous experience of process development
- **Detects anomalies** without human intervention
- **Open 24/7** — no holidays, no days off, no COVID
- **Does not require** maintenance and support from analysts, mathematicians and IT specialists
- **Works** as a separate service or part of the EAM system



Please, choose an equipment

☰ EAM SMARTEAM-AI AI
⊗

Grace Taylor
USER

Connected equipment

Anomalies

Dashboard

Models

Presets

ENG PYC YKP

Globetrotter Close-Coupled Pump Motor 284JM

Marathon Globetrotter 25 HP Close-Coupled Pump Motor 3 phase, 1800 RPM, 230/460 V, 284JM Frame. Meets or exceeds NEMA Premium® efficiency. Model is in compliance with EISA2007 Hazardous Duty Division 2, Zone 2, Class I, Groups A,B,C,D, Temperature code T2B IP55 enclosure on cast iron frames Inverter Duty 20:1 Variable Torque and 10:1 Constant Torque Class F Insulation Standard F1, reversible to F2 assembly. Dual frame mounting holes.

STATUS

In use

MAIN DATA

Object functioning	Smart Energy Inc
Department	Production
Type	Electrical equipment
Model	Electric motor
Factory number	532FD2345

STATE

Last work request date 15.07.2022

SELECT A PERIOD OF NORMAL OPERATION

CONNECT WORK MODE SENSOR

Parent equipment [Vertical Centrifugal Pump ATO-VCP-18d](#)

SINGLE PARAMETER MODELS

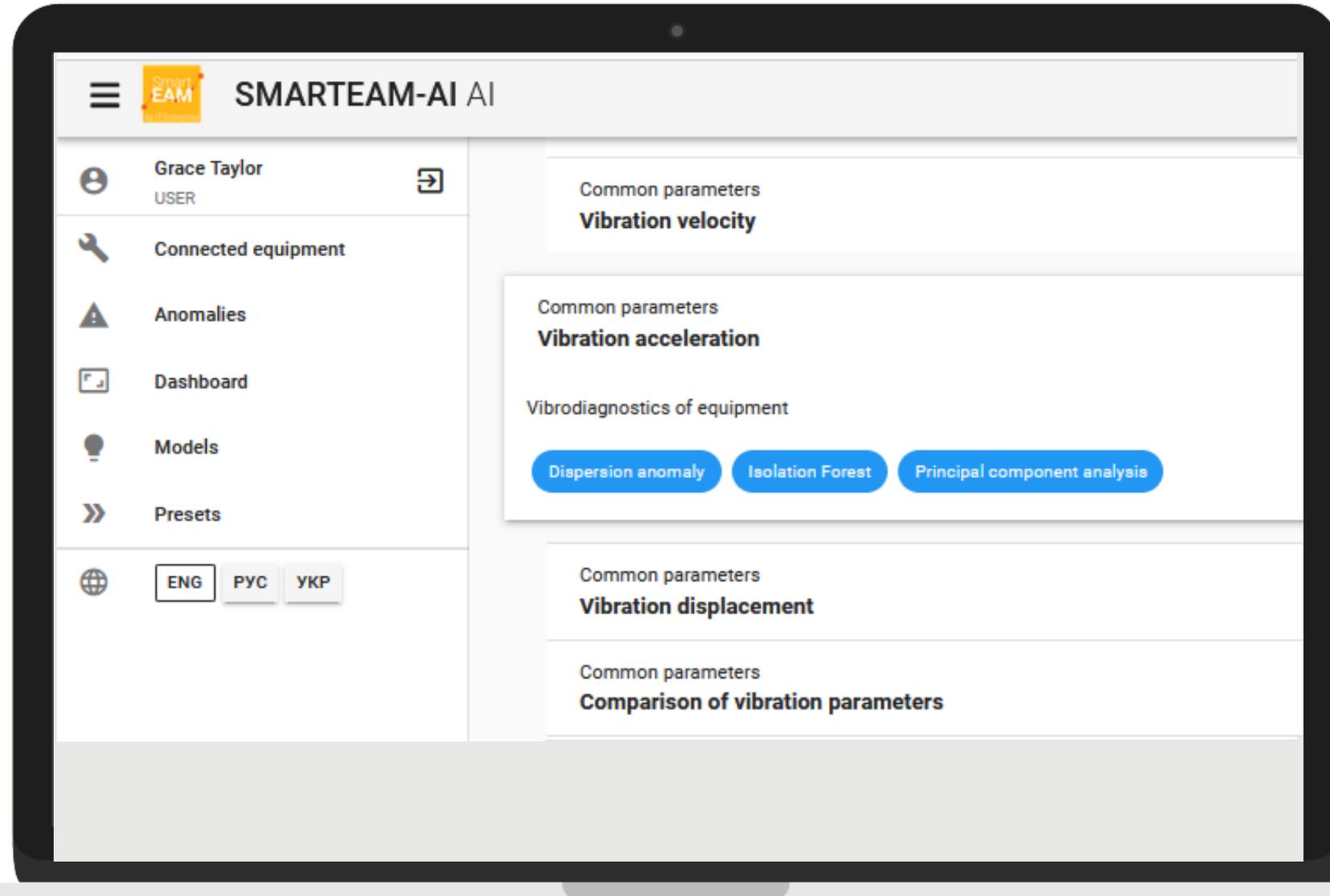
MULTY PARAMETER MODELS

Sensors : 10

MOTOR CASING VIBRATION MOTOR SPEED MOTOR CURRENT MOTOR ACTIVE POWER MOTOR SHAFT POWER MOTOR COUPLING VIBRATION >

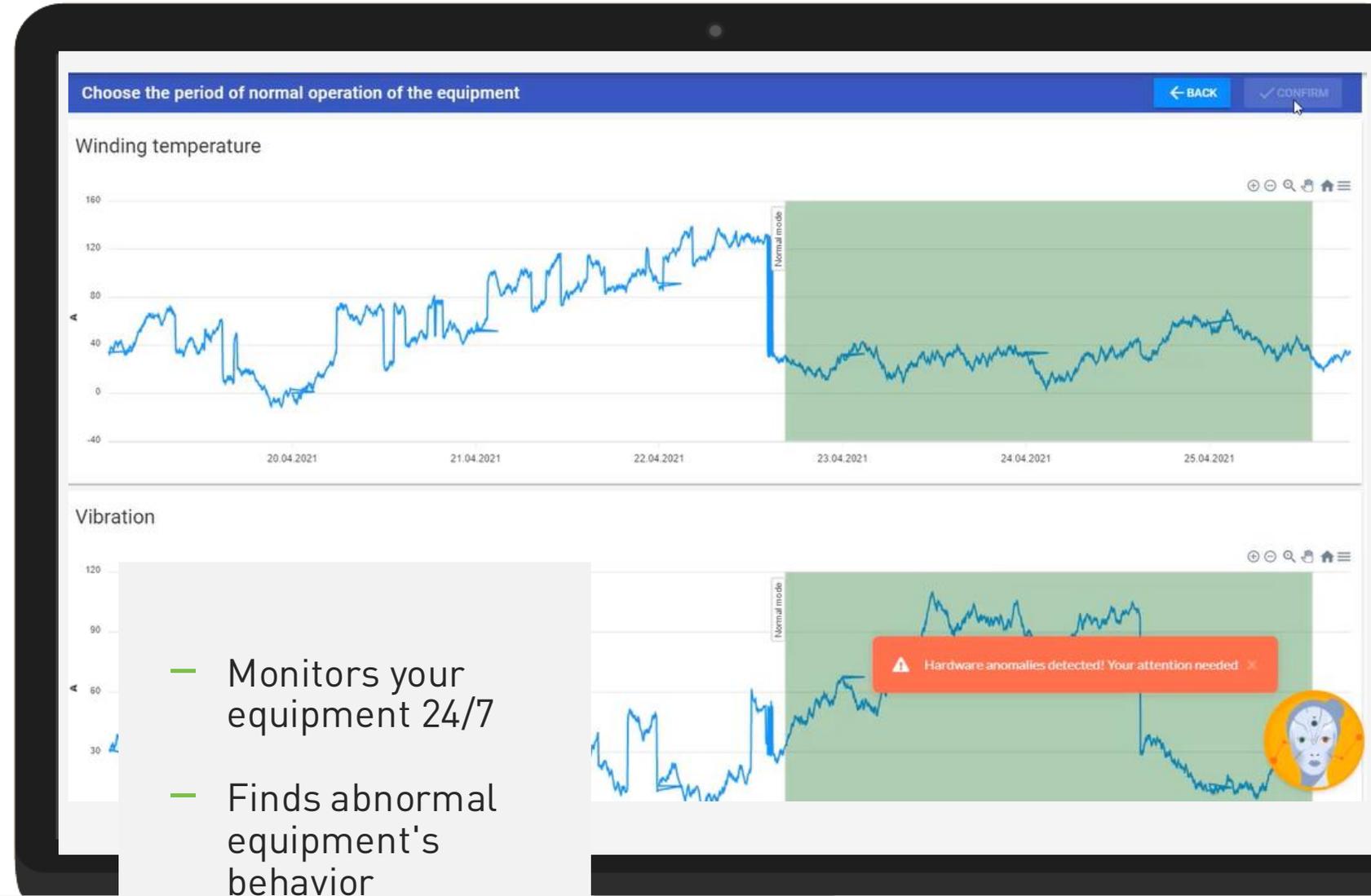


I have a set of libraries for different types of sensors and equipment





Hardware anomalies detected!
Your attention needed



- Monitors your equipment 24/7
- Finds abnormal equipment's behavior



I have a list of anomalies:
 maintenance expert can trace and figure out why this anomalies happened

EQUIPMENT INFORMATION

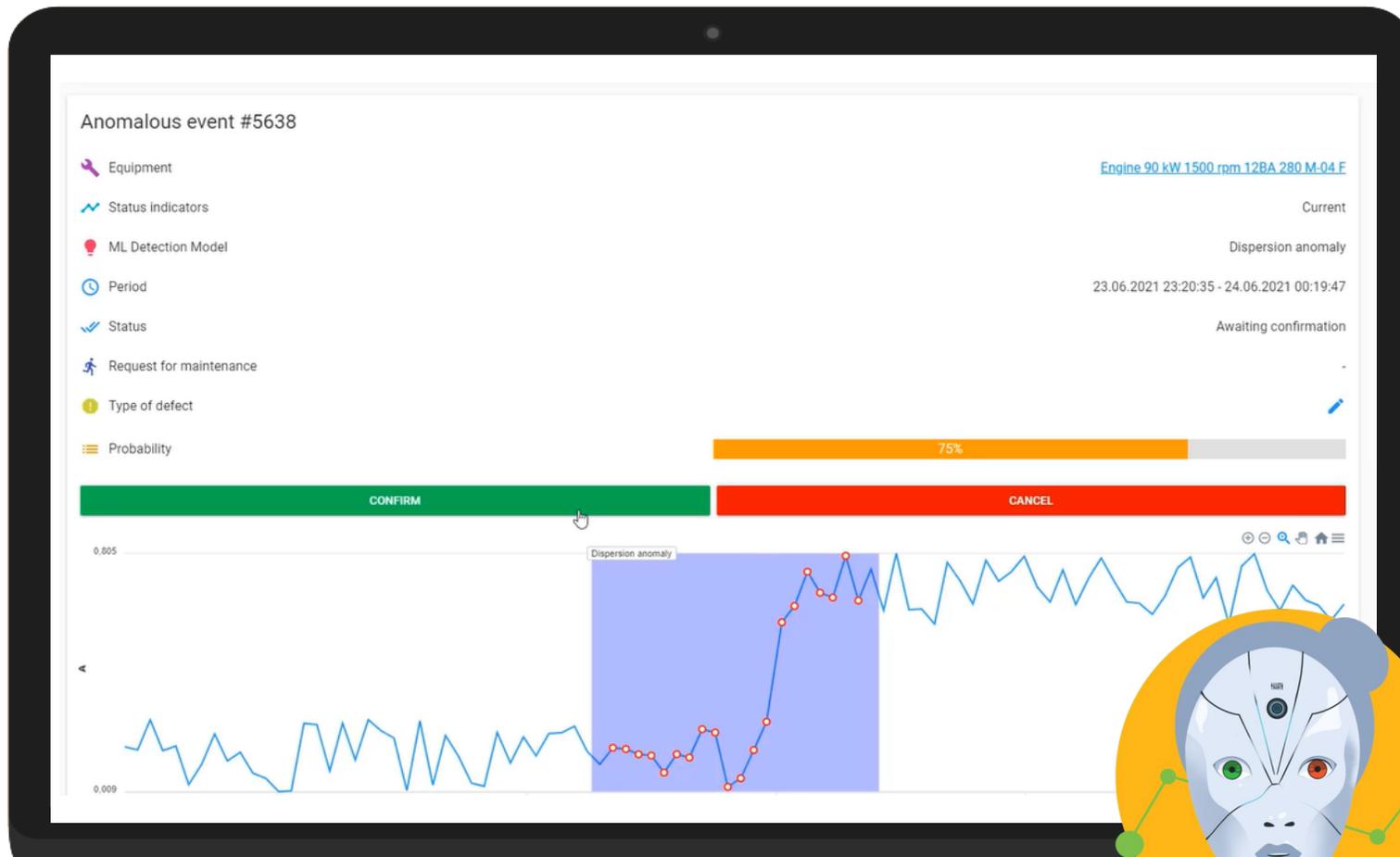
Last Anomaly

Engine 90 kW 1500 rpm 12BA 280 M-04 F Current 22.04.2021 05:25:00 - 22.04.2021 14:44:54 Anomaly trend 75%	Engine 90 kW 1500 rpm 12BA 280 M-04 F Current 21.04.2021 15:50:00 - 22.04.2021 02:15:00 Anomaly trend 75%
Engine 90 kW 1500 rpm 12BA 280 M-04 F Current 21.04.2021 08:25:00 - 21.04.2021 13:20:00 Anomaly trend 75%	Engine 90 kW 1500 rpm 12BA 280 M-04 F Current 20.04.2021 20:40:00 - 21.04.2021 07:25:00 Anomaly trend 75%
Engine 90 kW 1500 rpm 12BA 280 M-04 F Current 20.04.2021 10:30:00 - 20.04.2021 15:55:00 Anomaly trend 75%	Engine 90 kW 1500 rpm 12BA 280 M-04 F Current 04.07.2021 23:17:36 - 05.07.2021 00:19:56 Dispersion anomaly 75%
Engine 90 kW 1500 rpm 12BA 280 M-04 F Current 23.06.2021 23:20:35 - 24.06.2021 00:19:47 Dispersion anomaly 75%	Engine 90 kW 1500 rpm 12BA 280 M-04 F Current 22.06.2021 23:17:45 - 23.06.2021 00:17:01 Dispersion anomaly 75%

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When Anna Maly found the anomaly



Engineer should explain, what was a cause for this anomaly:

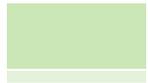
1. The filter in the cooling system is clogged
2. The coolant tube is damaged
3. Fan jammed

If it was defined that it is not Anomaly.

Formerly this period (operation mode) was unknown for Anna Maly but is normal for Technological process

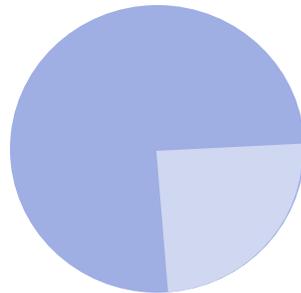
Our Clients Digital Transformation Results

Up to 15%



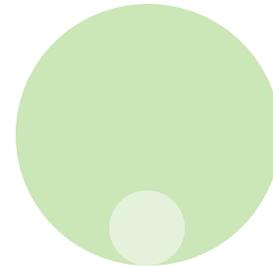
Fewer rejections

3+ times



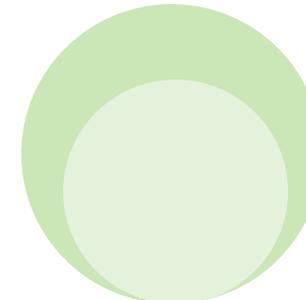
Faster documentation processing

10 to 40%



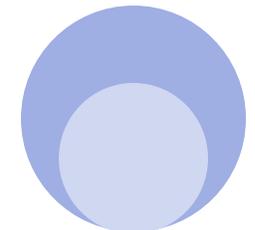
Reduction of maintenance costs

30 to 50%



Less total machine downtime

20 to 30%



Higher overall equipment efficiency (OEE)

Our Team — Your Trusted Experts

IT-ENTERPRISE has one of the largest teams of experts with significant experience in optimizing business processes across all areas



A stable team—more than 500 IT-Enterprise specialists are carrying out digital transformation projects



Over 50 specialists have experience from more than 20 successfully completed projects.



The company employs top specialists with unique experience in implementing new modern methodologies and standards for business optimization



Important decisions are made based on the consolidated experience and project solutions from more than 1000 implementations (enterprises, financial structures, holdings, conglomerates)



TIME TO TRANSFORM!

CONTACT US



IT-ENTERPRISE.COM



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+380506777931

● PDM/PLM

● Smart**F**actory

● Smart**E**AM

● Industrial **A**I