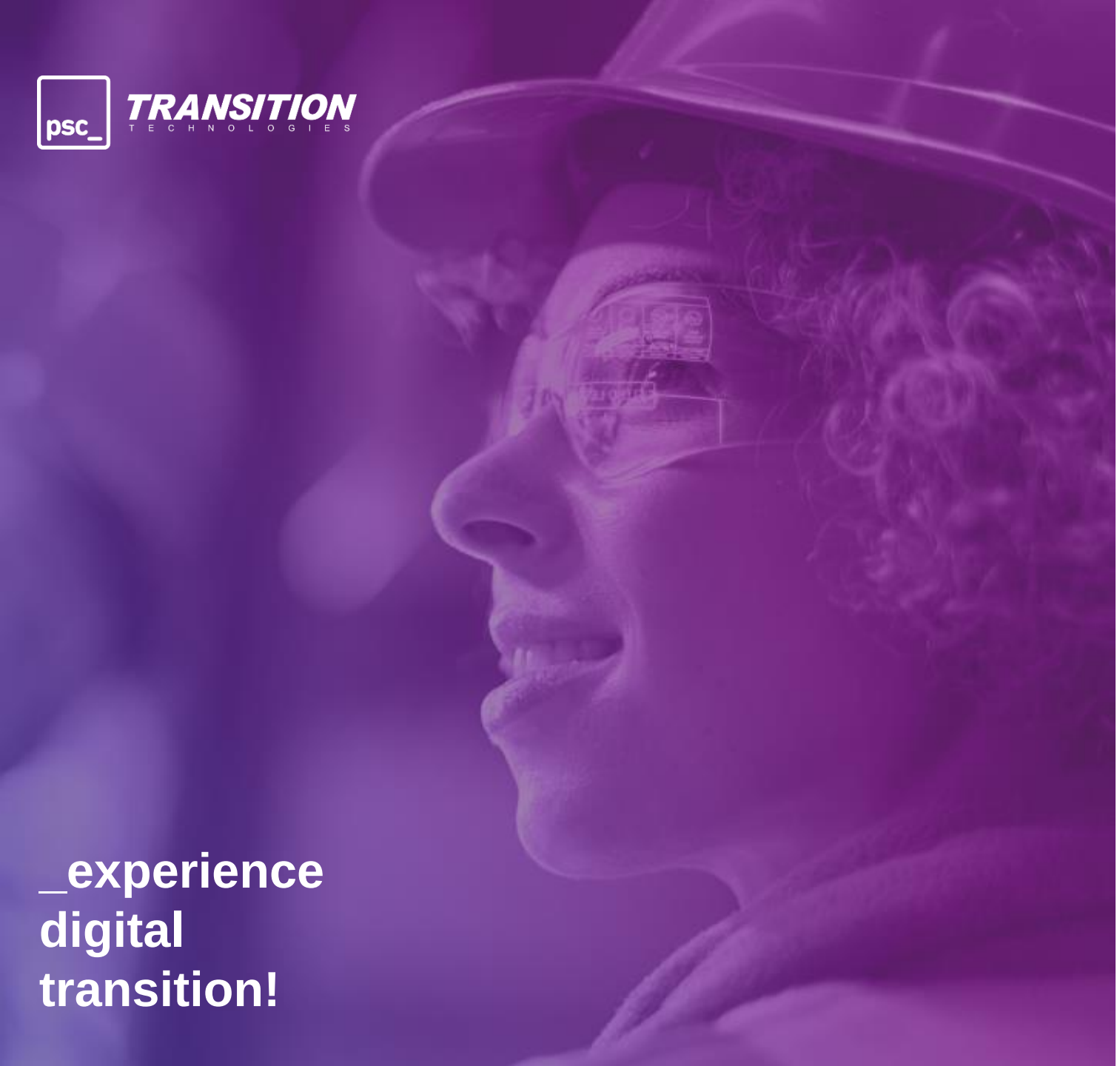

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_experience
digital
transition!

Start your first
IoT and AR journey
with Transition Technologies PSC

About us

Transition Technologies PSC

We are a member company of the Transition Technologies Group – a Polish IT holding. TT is creating and developing innovative ICT solutions for both national and International Customer since 1991.

- We specialize In IT solutions for the manufacturing Industry
- We employ over 200 of programming enthusiasts
- We own 12 years of experience in development and delivery of Product Lifecycle Management solutions
- We specialize in Augmented Reality and Internet of Things technologies
- We own a Software Integrator and Value Added Reseller status for PLM, IoT and AR software
- We conduct IoT and AR workshops
- We implement Application Enablement Platforms solutions
- We implement individual, custom-tailored solutions for our Customers
- We conduct R&D activities for our strategic partners

Transition Technologies PSC's offices

Transition Technologies Group's offices

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What we do?

Data acquisition and integration

We integrate corporate and industrial systems in order to acquire data – SCADA, PLM, ERP, IoT, CRM.

PLM

We deliver Product Lifecycle Management software and implement the concept of Connected-PLM.

IoT

We implement and deliver Internet of Things solutions.

Digital Twin

We deliver products and technologies necessary to create a digital equivalent of a product – a Digital Twin.

Machine Learning

We develop analytical and prognostic tools based on collected data.

Data Visualization

Augmented Reality-based data visuzalization, mobile apps and rapid application development platforms.

ptc

windchill

thingworx

Microsoft Azure

unity

IBM Bluemix

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_Example IoT project implementations

_01

Experience in implementation of the Factories of the Future projects. We are the first Polish company to actually implement one.

_02

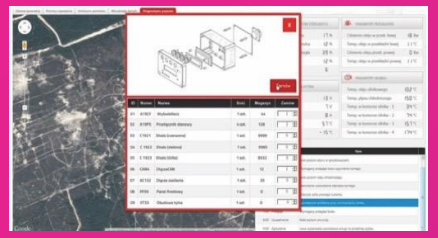
We are delivering product lifecycle management systems for world-leading companies manufacturing equipment, vehicles, machinery and electronics.

_03

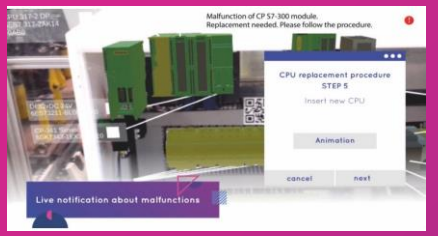
We deliver Augmented Reality systems for support of Maintenance, Repair and Overhaul divisions, which also serve for training purposes as well as handling, building and service guides.

_04

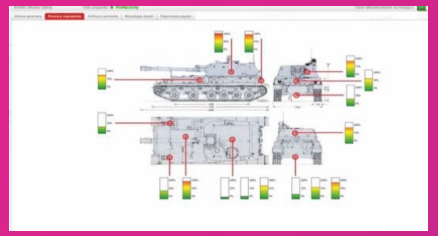
We have implemented an IoT solution for special heavy-duty vehicles. Exploitation support combined with data aggregation and usage analytics.



Factory role-based apps

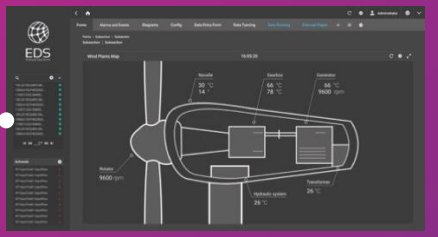


Support of device service and maintenance, live remote expert communication, dynamic creation of a service knowledgebase in AR



Exploitation analytics including design and implementation of a sensor architecture

Intelligent analytics for fleet management



Failure prediction

Solution Description

AR Assisted Equipment

AR Assisted Equipment Solution Summary

Problems Addressed

AR Assistance provides augmented reality content creation and delivery for **service, manuals and training preparation**. Users benefit from AR at the point of service with relevant content overlaying their equipment views. This improves labor-intensive and error-prone asset inspection/verification. This provides more efficient way to create and store service knowledge database, to **deliver guidelines to the end users and to connect them with technicians.**

Key Functionalities

AUGMENTED REALITY CONTENT AUTHORING

SMART CONNECTED PRODUCT INFORMATION OVERLAY – Contextual information for specific device and situation, using AR to overlay relevant sensor, alert, and business data on the asset, in the context of the task-at-hand

GUIDED WORK INSTRUCTIONS AND PARTS IDENTIFICATION

Provide visual step-by-step instructions that include 2d AND 3D content workflow and animations designed to make work easier and faster

TRAINING AND SIMULATION

Reuse guided work instructions for on-equipment training and simulation

Benefits

SERVICE PROCESS INTEGRATION

- Service event efficiency improvement for labor, first-time-fix - 20%
- Decreased cost of maintenance and repair overhaul
- Training and inspection cost reduction
- First line support cost reduced
- Improved service knowledge database

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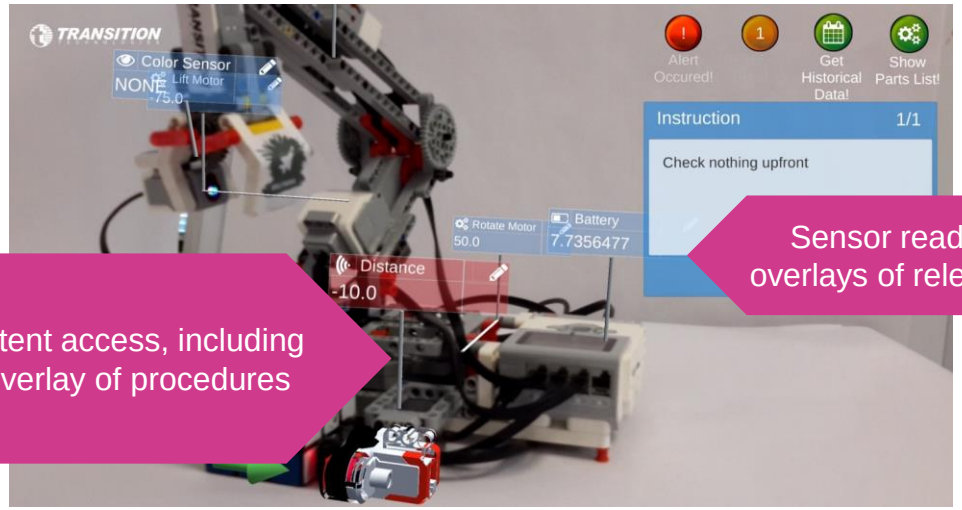
_AR Assisted Equipment Solution Summary

CAPABILITIES

- Work instructions delivery to field technicians
- Contextual Remote Expert Assistance
- Application for user manuals
- Alert, sensor, and business-system data overlay
- Service knowledge storing and sharing
- Tracking employee's performance



Service content access, including graphical overlay of procedures

Sensor reading, alert, and other overlays of relevant asset information

Available for tablets and AR glasses

BENEFITS

- Service efficiency Improvement
- Decrease cost of maintenance and repair overhaul
- Training and inspection cost reduction
- First line support cost reduction

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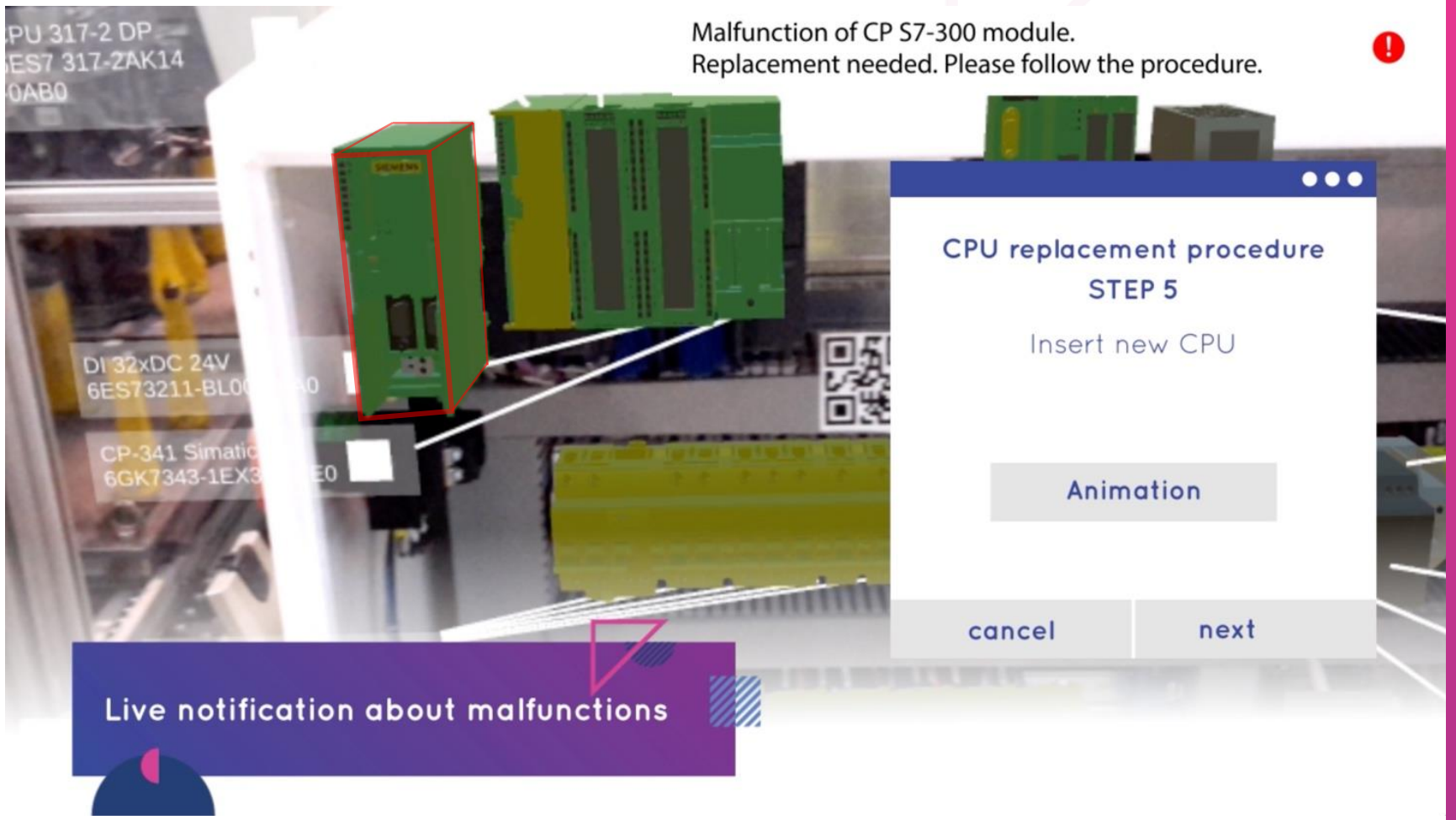
_AR Assisted Equipment Solution References



Augmented Reality was applied to hazardous robots operations and maintenance procedures in automotive production of **Fiat Chrysler Automobiles Poland**

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AR-ASSISTED SERVICE FOR PACKAGING MACHINES

OCME turns to TT for new ways to help customers develop their business ideas in the most efficient ways with Assisted Reality.

Established in 1954, OCME is a leading packaging machinery company, headquartered in Parma – Italy and operating globally, providing customers with premium, innovation-based solutions for packaging consumer goods.

OCME is not a product provider, but a solution provider, anticipating trends through innovation.. That is why OCME turned to us |to deliver new ways in which they can innovate and help their customers benefit in more ways from OCME's highly valueable line of proposal.

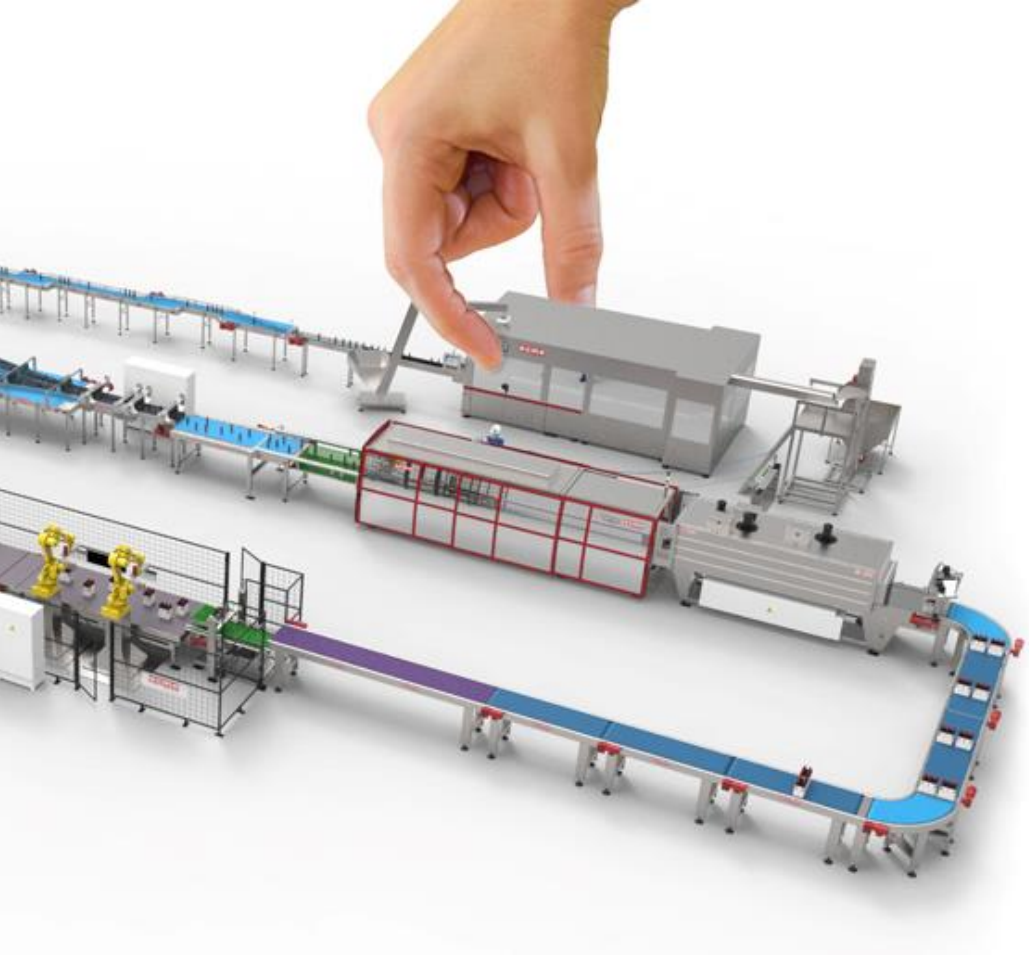
What has always been OCME's trademark: technical efficiency, safety, ergonomics, TCI, sustainability; has now been expanded with next-generation maintenance and repair services with Assisted Reality by Transition Technologies.

Through taking part in IMPROVE - Factories of the Future project along with TT, they implemented factory floor proces optimization through IoT and Big Data. That allowed them to manufacture with better efficiency then ever before, resulting in higher quality products.

As they wish to comply with the values of responsiveness, proactivity and proximity in their service and suport activities, OCME needed to achieve **better efficiency in field service operations. Maintenance, Repair and Overhaul (MRO) and personnel training**.

To do that they needed a **reliable partner** with **confirmed skills** and strive for success. Through our cooperation they have recognized us for our effectiveness and expertise in IoT and Augmented and Assisted Reality.

ocme
MOVING IDEAS



„The distance isn't an obstacle anymore."

Up to date OCME's Service & Support activities have been based on regular diagnostic visits, emergency interventions to fix problems and programmed maintenance according to information supplied during inspection visits. This has been sufficient to achieve success – through the 20th and early 21st century.

Taking the next step required introducing Connected Machines and the **Digital Twin**. The **Digital Feedback Loop** has enabled OCME to constantly be aware of the their customer's machines and plan service activities based on their actual condition. Thanks to IMPROVE, this was possible already.

TT has allowed OCME to change the way they assist and help their customers after the purchase. Thanks to the use of wearable devices, they are able to give real-time technical support to engineers and customers.

AR-Assisted Operations provides **audio-video connectivity, contextual information on parts and their conditions** as well as **animated work instructions**. Through **tracking work progress** it lets OCME **better manage their employees** in time and space, further **reducing operational costs**.

AS-Assisted Operations is also used in **technical staff training**, significantly **improving training effectiveness** while at the same time **reducing time consumed** and **eliminating a great part of Travel & Living costs**.

_AR Assisted Equipment Solution Road Map

_phase 01

- AR Assisted Instructions
- AR Service Knowledge Database
- AR Authoring

_phase 02

- Augmented Reality communication with experts and technicians within your organization
- Dedicated Role Based AR applications

_phase 03

- AR User’s manuals and troubleshooting for end users
- Augmented Reality communication with support from end customers and users (outside of your organization)
- New business model

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