



Augmented Reality – A Key Technology for Engineers?

Forum Digital Reality, October 8, 2020



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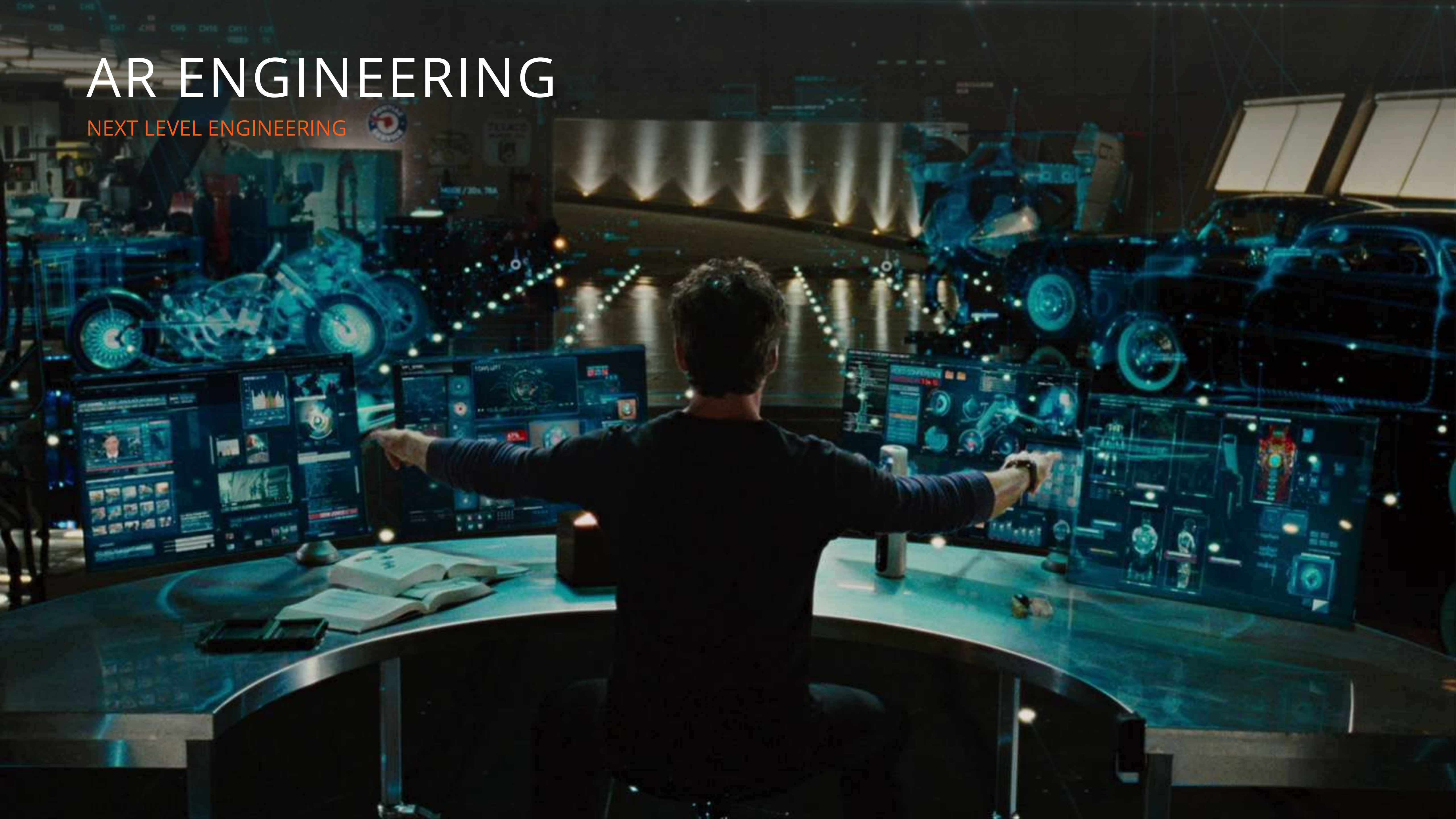


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AR Special Consultant, INNIO



AR ENGINEERING

NEXT LEVEL ENGINEERING

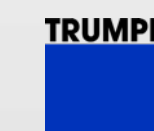


WE ARE

AR EXPERTS WITH INDUSTRIAL BACKGROUND



INNOVATING AR FOR OVER 5 YEARS
+40 EMPLOYEES
LOCATIONS IN MUNICH & INNSBRUCK



PRODUCT SUITE

HERE'S WHAT WE OFFER

ISAR SDK



Remote Rendering SDK
enabling high-quality
experiences in AR.

For Data Junkies

ARES



Augmented Reality Software
Platform enabling
AR engineering.

For Engineers, Designers
and Industrial Workers

STYLUS XR



Intuitive input device for
smart glasses with millimeter
accuracy.

For Creatives

PAIN-POINTS

IN ENGINEERING TODAY



PROTOTYPING (COSTS)



LONG TIME-TO-MARKET



CONSTRUCTION FAULTS

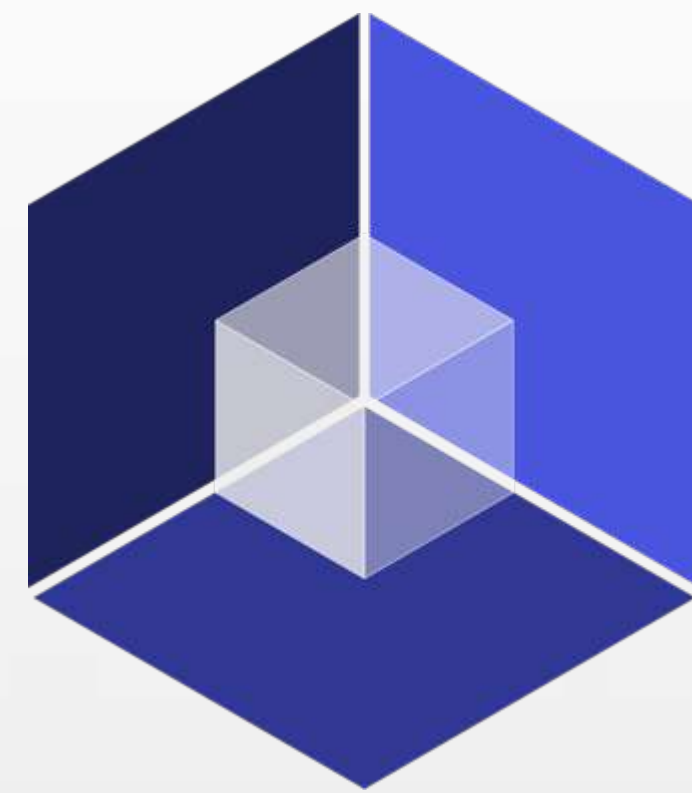


INEFFICIENT COLLABORATION



DATA PREPARATION





ARES

AUGMENTED REALITY ENGINEERING SPACE



FEATURES

A QUICK OVERVIEW



VIEWING

Import and view all your JT files in your AR space. Use the power of our Remote Rendering technology ISAR to visualize your 3D models in high-quality and secure.



MANIPULATING

Fully manipulate your CAD objects and assemblies. Place, rotate, adjust, resize, slice and dice. Our input device Stylus XR allows you to interact more precise and intuitive than ever before.



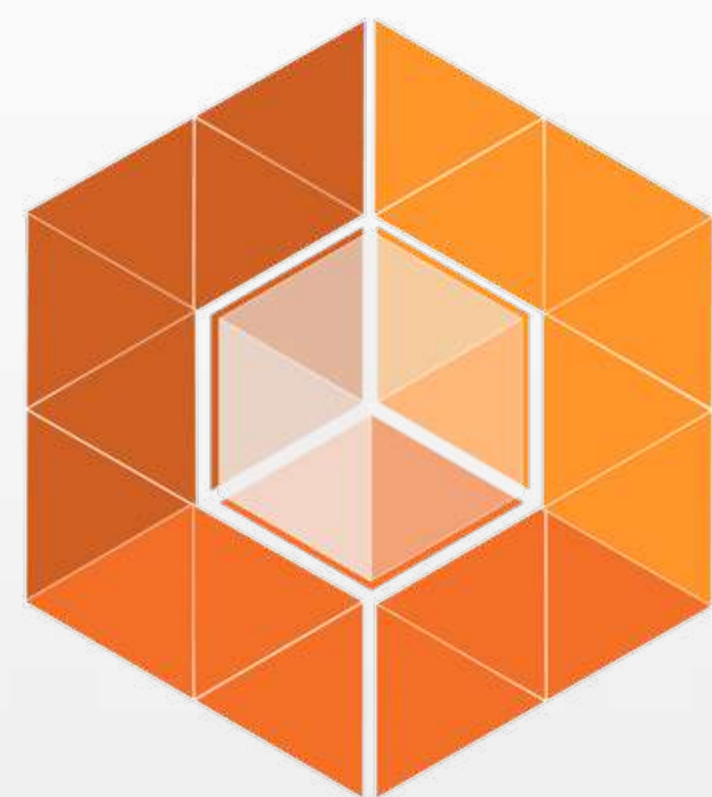
REFERENCING

Get a better look at the feasibility of your CAD designs. Place your designs in the real world and gather insights of realism, approach and implementation before your product rolls into production.



USER MANAGEMENT

Manage users, groups, access as well as individualized preferences for each dedicated workspace. Whether in a single user session or shared space, collaborate on your iterations, gather feedback and align on consensus faster than before.



ISAR

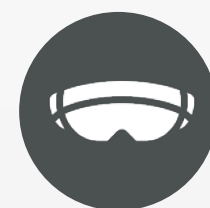
INTERACTIVE STREAMING FOR AR



FEATURES

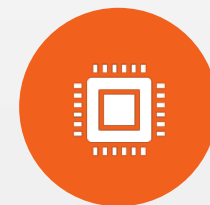
GREAT FEATURES FOR EVEN GREATER CREATORS

ISAR SDK. Holo-Light's Interactive Streaming for Augmented Reality solution enables streaming flexibility for your organization's demanding tasks and application. Getting your creations to where they're needed in real-time.



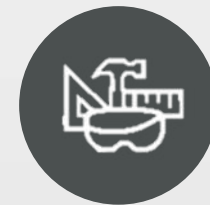
HoloLens 1 & 2

Fully compatible, no compromises.



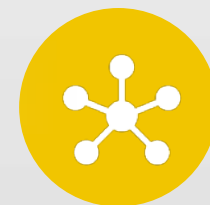
Remote Workload

Keep your workload remote and only focus on the task at hand locally.



MRTK Friendly

Simplified MRTK integration, allowing for faster custom-porting.



Connecting Simplified

Connect without IP number jumbling in your local environment using DNSSD.



Transparent

Source code is available for your team to review; allowing compliance on all levels



Unity 3D

Native Unity 3D integration.



Environment Agnostic

Want to run locally, no problem. Want to run in the cloud, even better!



World Class Support

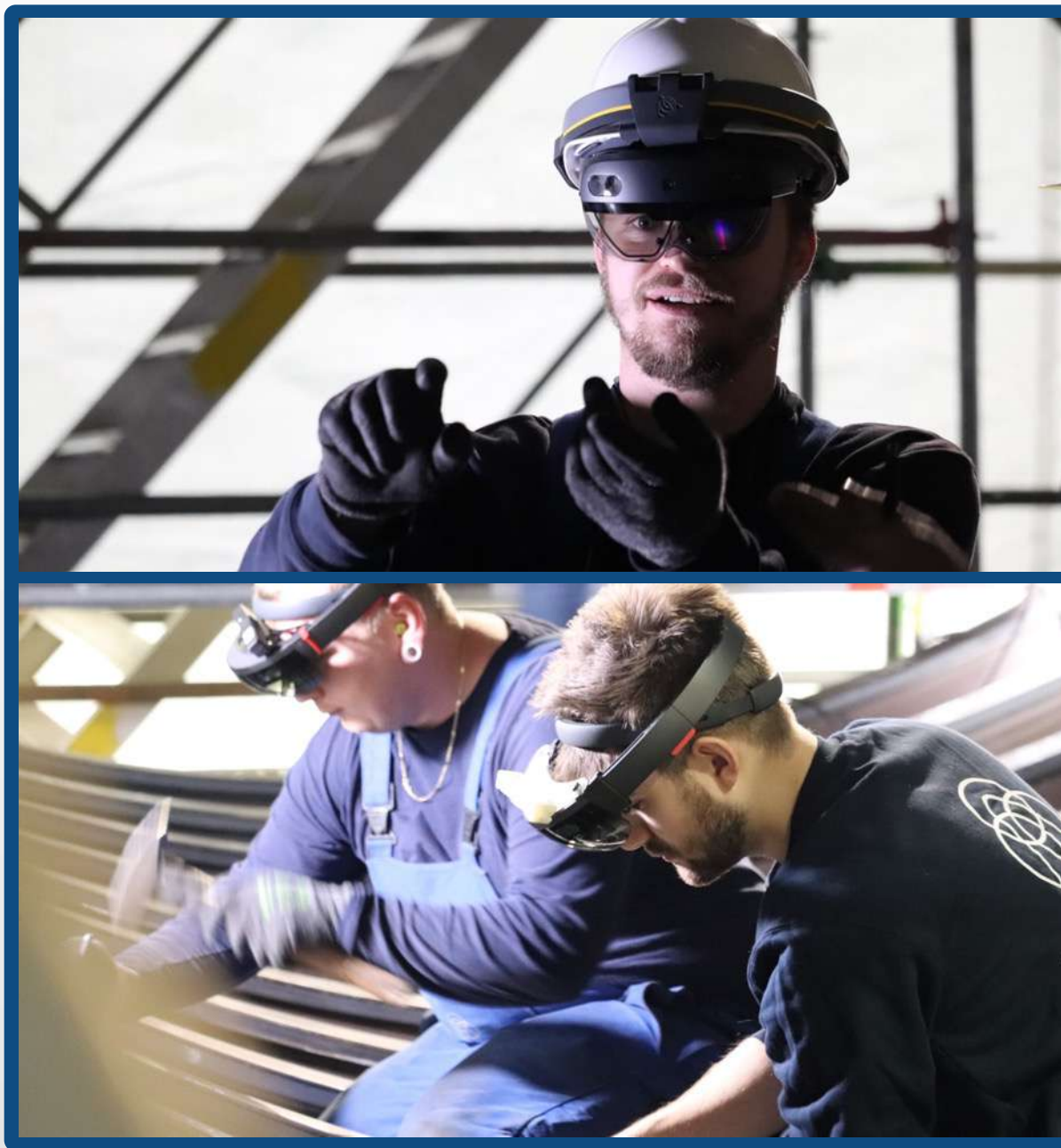
Continuous support, updates & improvements included in every license
Help is only one click away!

BENEFITS

CASE STUDIES



ENGINEERING IN SUBMARINES AT TK MARINE SYSTEMS



- Digitization of engineering process
- Detection of 5-20 construction faults
- Improved correction and quality assurance
- Speed-up of planning and assembly process
- Reduction of time & costs



FAST PROTOTYPING AT BMW



- Concepts can be seen up to 12 months earlier
- Rapid error identification & avoidance
- Improved communication via AR meeting
- Cost reduction for prototypes
- Faster time-to-market



FACTORY PLANNING AT BASF



- Reduction of incorrect installations
- Standardized communication pipeline
- Reduction of downtime
- On-site changes accelerate planning process
- Cost-savings across all installations

Deployment of ARES at INNIO

JENBACHER



Waukesha



Daniel Lintner
AR Consultant

Deployment of ARES at INNIO

Agenda.

01 Company presentation

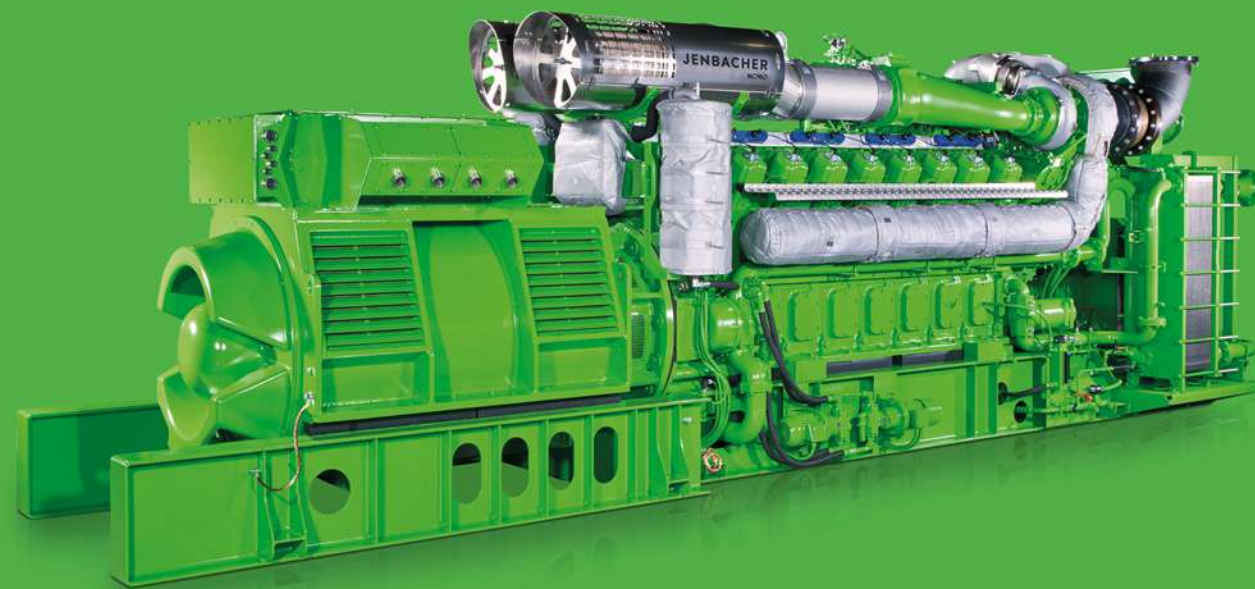
02 Initial situation and our requirements to an Augmented Reality solution

03 Applications, benefits, and challenges of using ARES in Engineering and Training



INNIO

JENBACHER



**ENERGY
SOLUTIONS.
EVERYWHERE,
EVERY TIME.**



Waukesha



ENERGY SOLUTIONS

Jenbacher* and Waukesha* gas engines work together in one common direction—supporting the global energy transformation and enabling sustainable energy into the future.

EVERYWHERE

With a wide range of applications, INNIO* ensures our customers' success—wherever they are—on or off the grid, from cities to the most remote areas. We deliver high-value Jenbacher and Waukesha products and services for decentralized applications.

EVERY TIME

INNIO's gas engines provide reliable power under the most demanding circumstances. And we continue to develop technologies that deliver greater flexibility and uptime while making our gas engines more efficient and last longer.

*Indicates a trademark

Deployment of ARES at INNIO

Initial situation and requirements to an Augmented Reality (AR) solution.



Initial situation

- Challenge to show 3D models on a 2D monitor.
- Potential of AR in Training?

Requirements to AR

- Collaborative manipulation of holographic products.
- Short setup time

Deployment of ARES at INNIO

Applications, benefits, and challenges of using ARES in INNIO's department of Engineering and Training.



APPLICATIONS

Engineering

- Collision investigation
- Cut section
- Assembly accessibility
- Tool accessibility in Manufacturing
- Holographic assembly on physical products
- Test commissioning at the customer's site

Training

- Demonstration of holographic products
- Assembly and disassembly of holographic products and components
- Cut section
- Video recordings, animations, and instructions



BENEFITS

- Process efficiency due to collaborative features
- Flexibility in terms of file formats
- Increase of training effectiveness
- Reduction of training time
- Physical presence not necessary



CHALLENGES

- Familiarization with AR device and ARES
- Set up time for collaborative experience
- File size

STAY CONNECTED

EASY WAY TO GET IN TOUCH

ADDRESS

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Thank You