GERMER

GERMER TECHNOLOGIES PVT. LTD.

BROCHURE

GERMER XR (Extended Reality)

GERMER XR (Extended Reality) incorporates Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR) into a single industrial software to overcome today´s challenges in engineering projects and plant operations and maintenance.

GERMER XR empowers the workforce with enhanced Design Review and Commissioning, Training and Competency Assurance, and Operations and Maintenance to help you make better decisions. It also increases efficiency and asset longevity, ensuring profitable, safe operations every day.

Empower your workforce

The workplace is quickly changing, and traditional industries must evolve with it. Empowering your workforce is critical to increasing productivity and retaining employees, thus guaranteeing you stay competitive in your industry.

The pace of change in the industrial landscape today is faster than ever before:

Challenges at the workforce level

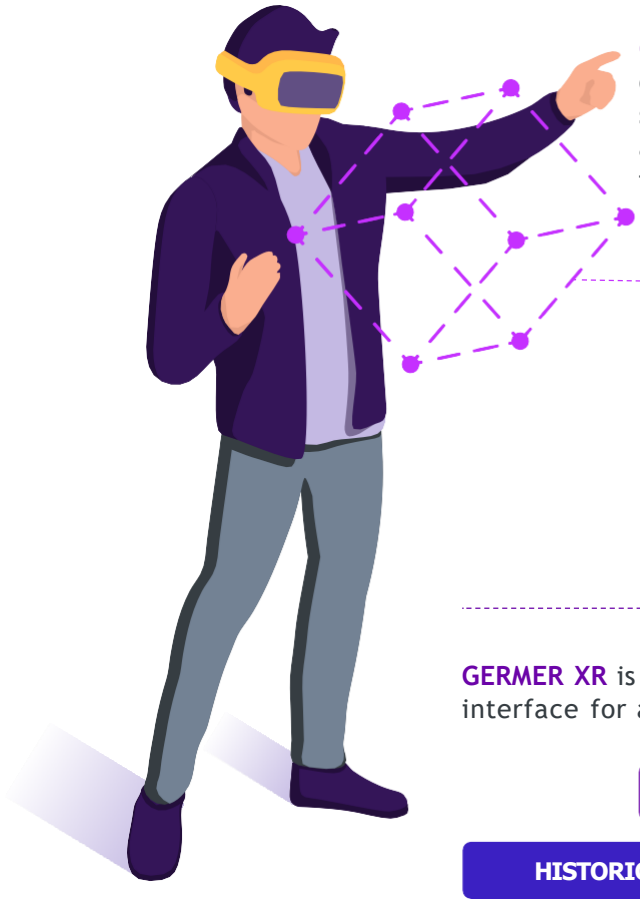
- **More experienced personnel retiring**
- **Increased need for hiring young people who need to be trained and are attracted by new technology**
- **Less time to mentor new hires**
- **More requests to reduce staff and cut costs**

Challenges at the workplace level

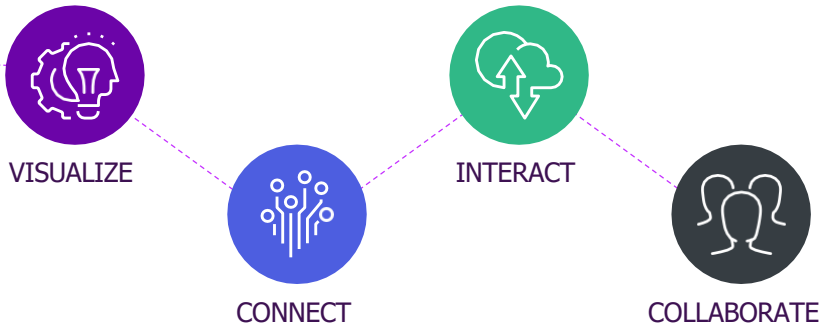
- **Ever changing regulatory compliance, with less tolerance for mistakes**
- **More complex assets, requiring advanced knowledge from field personnel**
- **More sophisticated control and safety systems, limiting operators' actions and on-the-job training**

The challenges at the workforce and workplace levels are a common scenario for several industries. In all cases, technology is the key to transform how the work is done. IIoT, Artificial Intelligence (AI), machine learning, process simulation, and real-time optimization help workers make better decisions. However, **technology can only be effective** if it is available

in the right form, **to the right person,** **at the right time!**



GERMER XR (Extended Reality)* software is the first solution capable of exploring all forms of XR* (AR, VR and MR) to create the most suitable interface for workers, connecting assets, documentation, and real-time information, always enabling the best decision and the most efficient work execution.



GERMER XR is hardware/device-agnostic and provides a friendly interface for accessing information from:

ENGINEERING & DESIGN **OPERATION STATUS**

HISTORIC DATA **PREDICTIVE ANALYTICS** **OPTIMIZATION RESULTS**

GUIDED PROCEDURES **TRAINING SYSTEM**

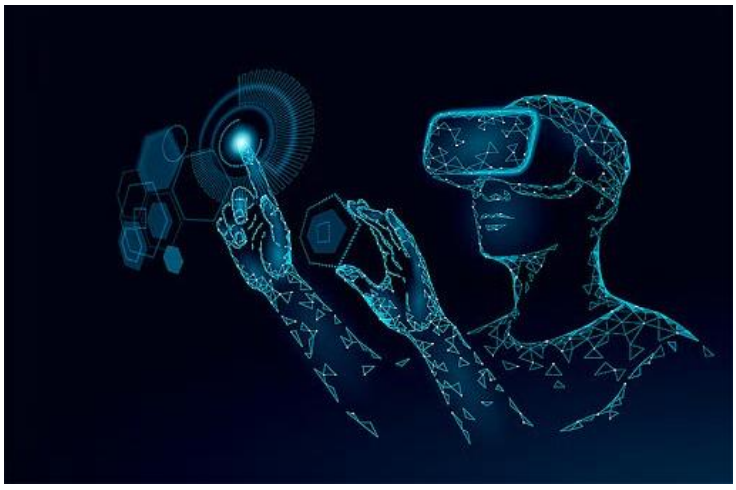
* XR - Extended Reality refers to any interaction between the virtual and real worlds through digital technology and devices, including Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR).

GERMER XR for Design Review

Step inside the virtual plant before the steel is even ordered. In only a few minutes, engineers can import the plant's 3D model into an immersive environment. Then, the ergonomic design is reviewed and improved before any equipment is purchased. The virtual plant, allows real-time collaboration between engineers at different offices or even on different continents. With this approach, the project can access diverse expertise without wasting time and money on travel. GERMER XR for Design Review lowers time, cost, and risk of capital project engineering.

Highlights:

- Make virtual reality a part of everyday engineering work
- Get an accurate preview of the as-built environment
- Collaborate globally without travel time or costs
- Avoid costly rework by exploring plant ergonomics before equipment is ordered

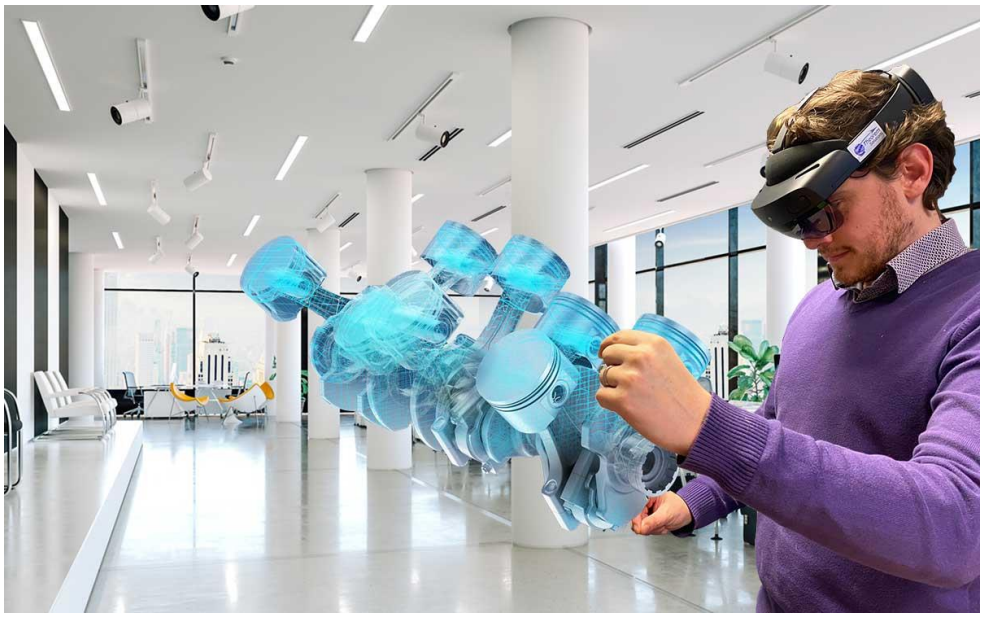


GERMER XR for Training

Accelerate competency development with realistic interaction in a safe, controlled virtual environment. GERMER XR for Training provides operators, engineers, maintenance, and HSE personnel with efficient knowledge transfer and skill development to make safe, efficient operation second nature.

To build the training environment, the same 3D model used in the design phase is imported into GERMER XR. In a brownfield environment, you can also scan the existing plant and import the digitized material to create the model. Through GERMER XR adds logic, lighting and shadow to the virtual plant. Once you have the virtual plant, effects like fire, leakage and equipment transparency are added to build operating procedures and training scenarios. Finally, the virtual plant can be connected to a high-fidelity dynamic simulator, so that process behavior responds to trainees' actions realistically.

GERMER XR for Training can be integrated into a comprehensive training program. When it is connected to the GERMER Enterprise Learning system, managers can track and monitor trainees' performance and help guide them in areas that require improvement.



Highlights:

- Digitally capture best practices and speed up knowledge transfer
- Train for standard operating procedures, abnormal conditions, desired behaviours, and emergency preparedness
- Train field operators with control room operators as a team to solve problems together
- Access training from anywhere, anytime from the cloud
- Attract and retain the next generation workforce with innovative methods like self-learning, micro-learning and more

GERMER XR for Operations & Maintenance

GERMER XR for Operations and Maintenance is used to deliver the Digital Asset with AR, VR, and MR capabilities. Connected to real-time information, it enables field personnel to have more context and make better decisions. It runs on a mobile device such as a tablet, and it is not limited to any specific device as GERMER XR is hardware/ device-agnostic.

A typical tablet-based XR application will have:

- Visual representation of the asset (3D and AR)
- Equipment recognition through the device camera
- All available asset information (drawings, 2D and 3D models, manuals, etc.)
- Connection to other systems pulling information from historical data, predictive analytics model, etc.
- Connection to identify and recognize alarms
- Digitalized procedures that can be visualized through 3D or AR
- Remote support, so an expert in another location can see the actual equipment and provide valuable guidance

Highlights:

- Smart maintenance and operations come from putting the right information in context in the hands of the workforce
- Standardize procedures across the team
- Better work execution to prevent costly failures, reduce downtime, and increase reliability and safety

Dig deeper!

Access the website for
https://www.germer.co.in/

For more information on **GERMER AR/VR XR** (Extended Reality), please visit: **https://www.germer.co.in/**

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