



THEOREM-XR



Theorem XR is an enterprise ready, collaborative visualization suite, powered by a Visualization Pipeline, which gets **your** 3D CAD into XR quickly and easily!

The application is available on desktop, tablet, in virtual reality headsets (such as the HTC Vive or Oculus Rift) or Mixed Reality devices (such as the Microsoft HoloLens).

| Who should use Theorem XR?

Anybody who needs to view and interact with 3D CAD data to perform engineering tasks such as Design Reviews, Factory Layouts or Guides for Training and Works Instructions, either individually or as part of a globally located team. If you're already experimenting with working with XR, but struggle to get your data into the devices, then the Theorem Solutions Visualization Pipeline provides a quick and easy solution.

| Why choose Theorem XR?

We have been working with 3D CAD for over 25 years! We understand your 3D data better than anyone else, because we partner with all of the main CAD/PLM companies. Whether you want to visualize your 3D assets in AR, MR or VR, we can get your 3D CAD into your device in minutes. That's why so many companies choose Theorem Solutions.

| Our 3-step approach

1. Consultative services to assist you in identifying how XR technology can improve your business and consider the options available to you.
2. Our consultants will help you create the business case to unlock the investment, by working with you to identify the key benefits to your business
3. Our XR specialists will provide on-site professional implementation services, so you can achieve maximum value as quickly as possible.

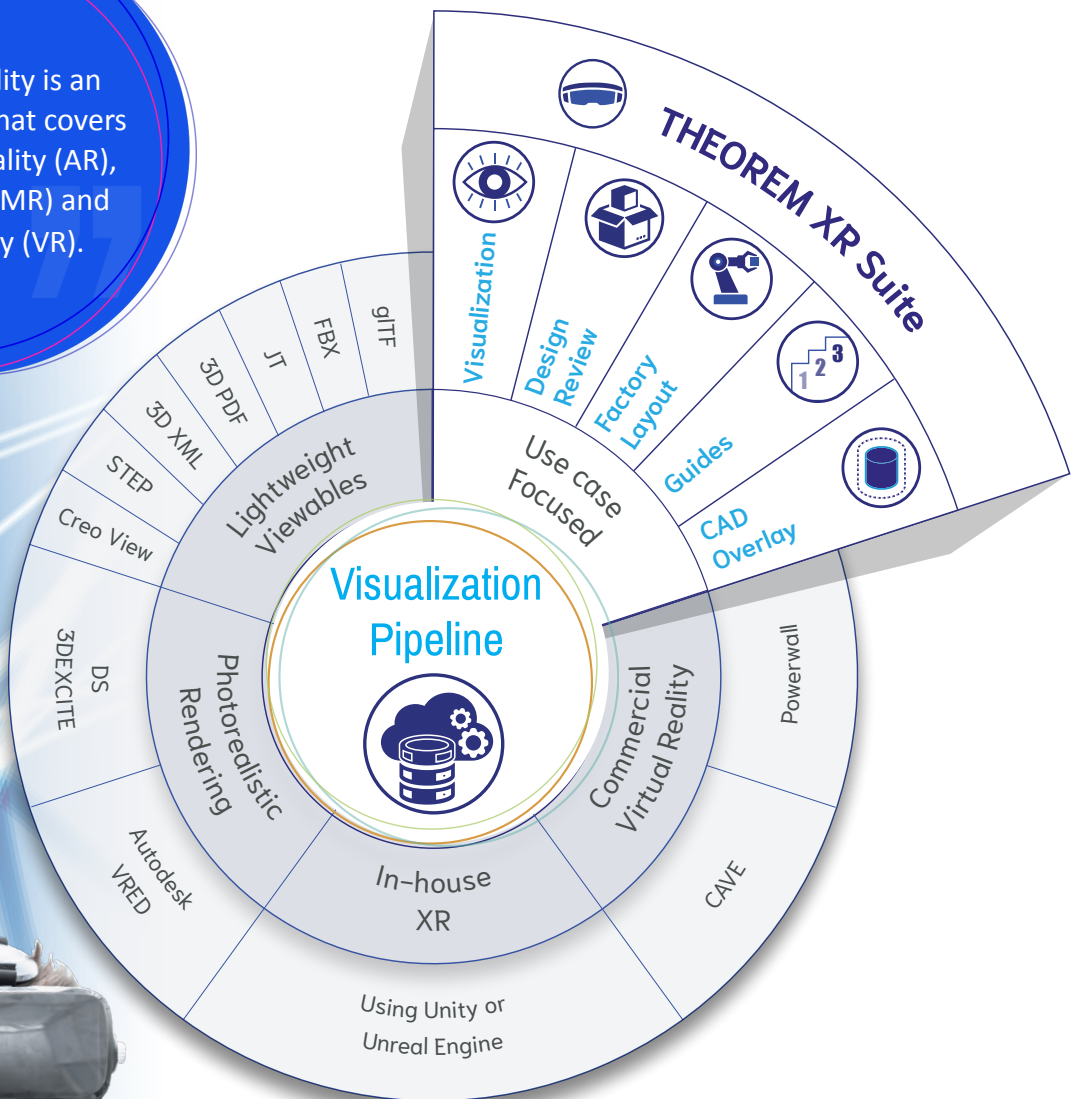


| How

Manufacturing and engineering companies already carry out tasks relating to factory layouts, design reviews, work instructions etc. on a daily basis. But using innovative XR technology takes away the need to get everyone in the same room at the same time, or spend time (and money) creating physical prototypes, travelling, or use up valuable physical resources on training people. When a lot of these tasks can now be done 'virtually', the benefits of the reduction in cost, time, and use of resources are easy to see.

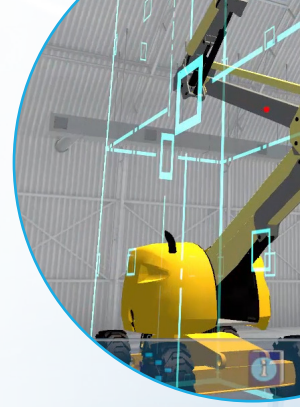
XR

eXtended Reality is an umbrella term that covers Augmented Reality (AR), Mixed Reality (MR) and Virtual Reality (VR).



| Visualization Pipeline

Theorem Solutions has designed a solution that enhances visualization in every business; The **Visualization Pipeline** is a server-based technology that enables fast, efficient, flexible, and automated processing of all of your CAD, PLM and visualization data, while maintaining the associated metadata.



| Experiences

Theorem's XR suite comprises of a range of use-case based, out of the box experiences. The Visualization Experience is the foundation layer that provides an entry point for the Theorem XR suite of experiences. Additional functionality is available by adding on one, or more, of the other XR Experiences which are focused on these specific use cases.



Visualization

The **Visualization Experience** provides the essential tools for you to view, navigate, explode and section your data at full-scale in either a virtual context (virtual reality); a projection of your 3D assets at full size in the 'real world', giving true spatial context to the model (mixed reality), or by viewing your digital content overlaid in a 'real world' environment (augmented reality).



Design Review

The **Design Review Experience** aids collaboration, bringing together your distributed design teams to review, debate and resolve issues in real-time using robust and proven XR technologies. You can use the experience simultaneously in a single collaboration session across virtual and mixed reality devices. The out of the box experience seamlessly integrates into existing workflows and processes.



Factory Layout

The **Factory Layout Experience** provides you with all the functionality you need to optimize your factory layouts through immersive visualization. Creating new layouts can be expensive and disruptive, so prototyping a concept in XR makes the process more flexible, modular, and easier to reconfigure without traditional expense. Your existing or new library components can be imported and repositioned using 'grab and move' capabilities; with a simple snap-to functionality for easy and accurate object positioning.



Guides

The **Guides Experience** harnesses the power of Mixed and Virtual Reality to create interactive, immersive training or visual assistance. This enables you to train your operatives in complex build processes using full-scale digital representations of your CAD and PLM data in a real world or immersive environment, accelerating planning, commissioning, and operation.



Visual Digital Twin

The **Visual Digital Twin Experience** enables digital 3D design data to be overlaid on top of a physically manufactured component using Edge Detection and SnapTo Functionality, for inspection and quality purposes. As an Augmented Reality tool, data can be viewed spatially and in the context of the 'real world', and the physical components manufactured from the 3D design.

| Collaboration

Today's products are rarely developed with the luxury of co-located teams. Globally distributed design is practically unavoidable, and this is increasingly placing a challenge on effective collaboration between design teams.

With the addition of the collaboration module to the Visualization Pipeline, the applications are further enhanced with the goal of bringing globally distributed teams closer together.



| Uniquely

Only Theorem Solutions can provide access to your 3D to anyone that you want, anywhere in the world!

Our unique approach to the challenge of an enterprise level workflow is built from years of experience with CAD to CAD conversion, and PLM data exchange, providing a robust application that offers full control over your 3D data preparation and optimization for the target formats.

No one else has a tool anything like the Visualization Pipeline. This is a truly enterprise ready solution for all of your Virtual Reality or Augmented/Mixed Reality needs.

About Theorem Solutions

Theorem Solutions have been helping engineering and manufacturing users leverage the value of their CAD and PLM assets for over 25 years. We help the world's leading Automotive, Aerospace, Defense, Power Generation, Transportation, and White Goods manufacturers and their end-to-end value chains to optimize the use of their Digital assets. Our solutions enable product development and manufacturing businesses to compress design and manufacturing lifecycles, whilst improving product quality. Our core strength is in the visualization and utilization of data across complex organizations to maximize efficiency.

Theorem Solutions offers a consultative approach to help customers get the most from technology. We advise on optimum use cases, deployment strategy, and custom development as required to maximize the Return on Investment.

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