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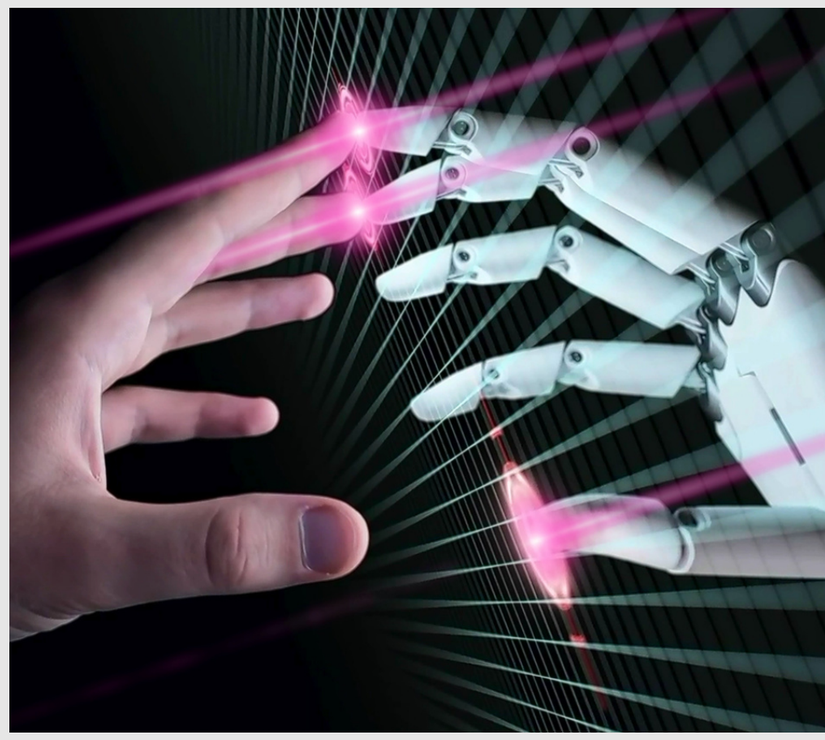

INNOVATIONS
AT ITS HEART

4.0 & ABOVE

DIGITAL THREADS

INFORMATION BROCHURE

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Our services

Product Innovation

New Product Designing

Simulation and Analysis

Innovative Manufacturing

Reverse Engineering

Rapid Prototyping

Smart Factory

Inspection Automation

Industrial Robotics

Autonomous Supply Chain

Digital Twin

Asset Lifecycle

Sensors and Edge Connectivity

Connected Assets

Predictive Analytics

Extended Reality

Augmented Reality

Virtual Reality

The revolution in modern Industrial systems is one of the most critical business and societal changes we're experiencing. Urbanization, global environmental impacts, and government regulations are accelerating the demand for automation. Developing a product with adequate range, capabilities, and multiple design variants is a great challenge. Achieving all this with the same (or lower) cost of ownership requires bringing innovations and engineering efficiency that has been unheard of in the industry - without risking safety, reliability, and quality.

We require a simulation and testing solution covering every aspect of Automation. This will not only enable companies to achieve a significant competitive advantage, ROI, and operational performance edge and also empowers them to adapt and evolve in the fast-approaching era of new mobility.

INNOVATIONS AT ITS HEART

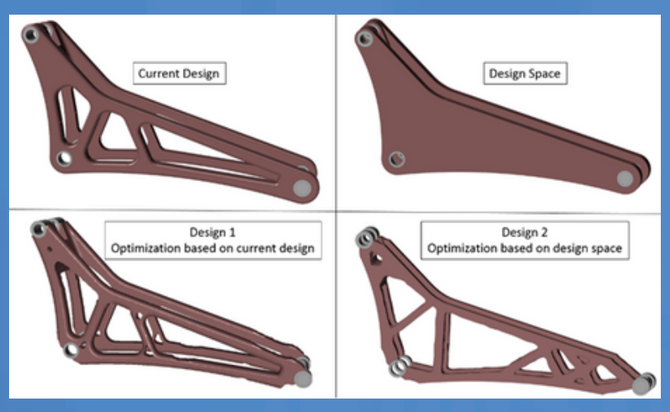
Innovative Manufacturing

Use a 3D scanner to capture the physical object you want to reverse engineer. Import the scanned data for processing 3D point cloud data. Powerful CAD capabilities enables us to effectively reverse engineer existing products, recreate their digital models, and make modifications or improvements.

3D Printing is another valuable tool for accelerating product development, facilitating design iteration, and bringing innovative ideas to life quickly. It enables designers and engineers to test and validate their concepts, leading to improved products and reduced time to market.

Reverse Engineering

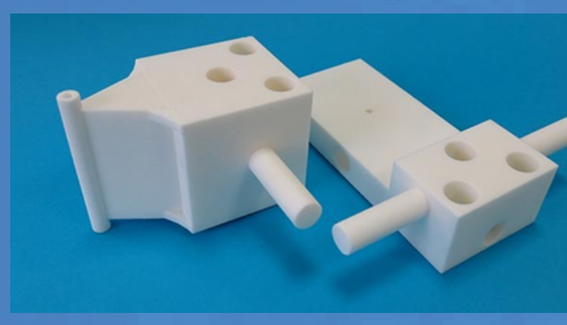
3D Scanning



Design Optimization

Rapid Prototyping

Plastic Printing



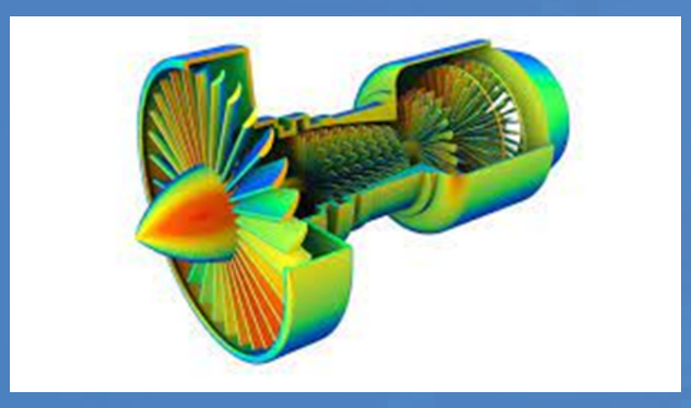
Composite Printing

Metal Printing

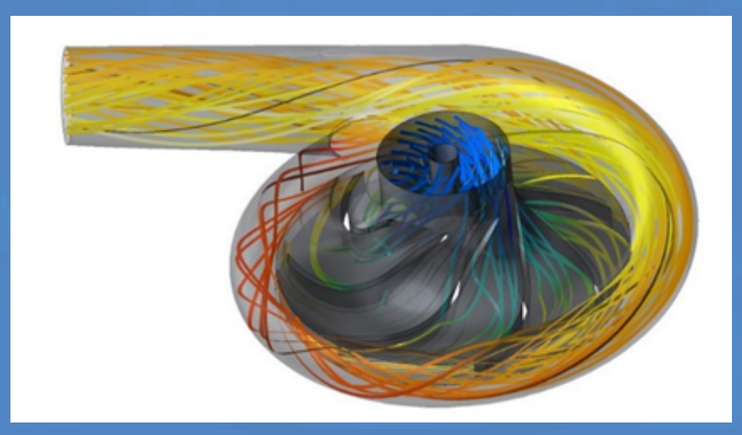
Product Innovation

Begin by clearly defining the requirements and specifications for your new product. Consider factors such as functionality, size, materials, aesthetics, and performance. Create initial concept sketches, explore different possibilities and iterate on the concepts to narrow down the best approach.

Simulation and Analysis

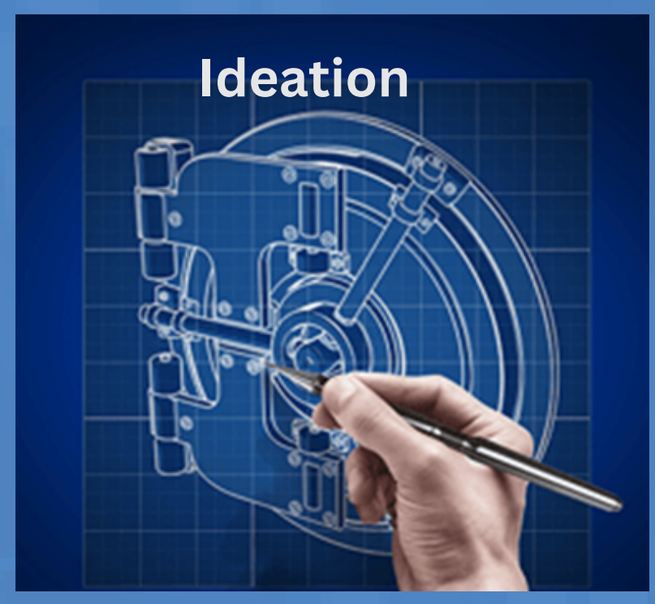


Finite Element Analysis

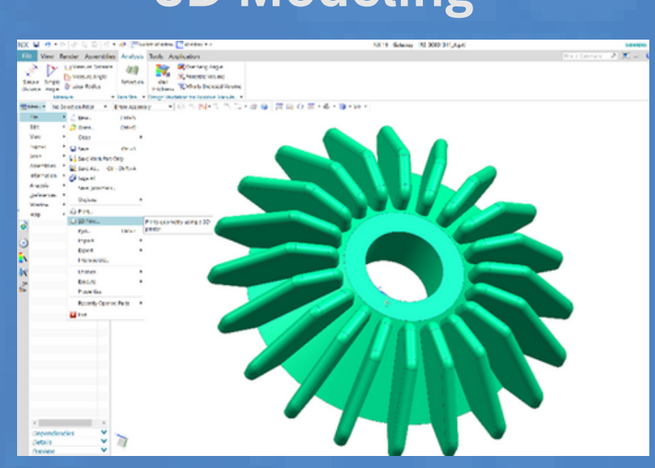


Fluid Flow Analysis

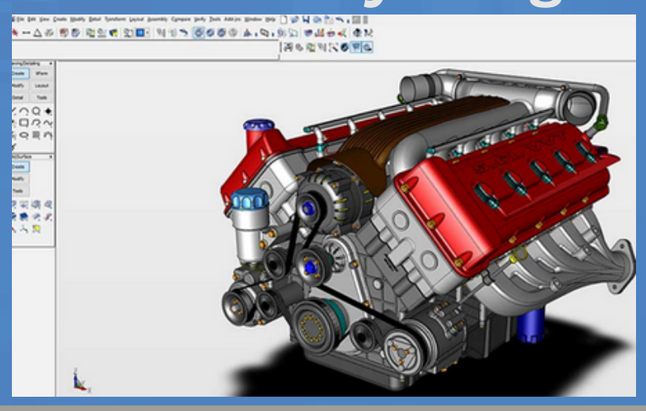
New Product Design



3D Modeling



AssemblyDesign



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Smart Factory

Inspection Automation

Machine vision-based quality inspection offers several advantages, including increased inspection speed, improved accuracy, reduced labor costs, and the ability to perform non-destructive testing. It is commonly used in industries such as manufacturing, automotive, electronics, pharmaceuticals, and food processing, where consistent quality control is essential

Industrial Robotics

Machine vision-based quality inspection offers several advantages, including increased inspection speed, improved accuracy, reduced labor costs, and the ability to perform non-destructive testing. It is commonly used in industries such as manufacturing, automotive, electronics, pharmaceuticals, and food processing, where consistent quality control is essential

Robot Gantry System

Collaborative Robot

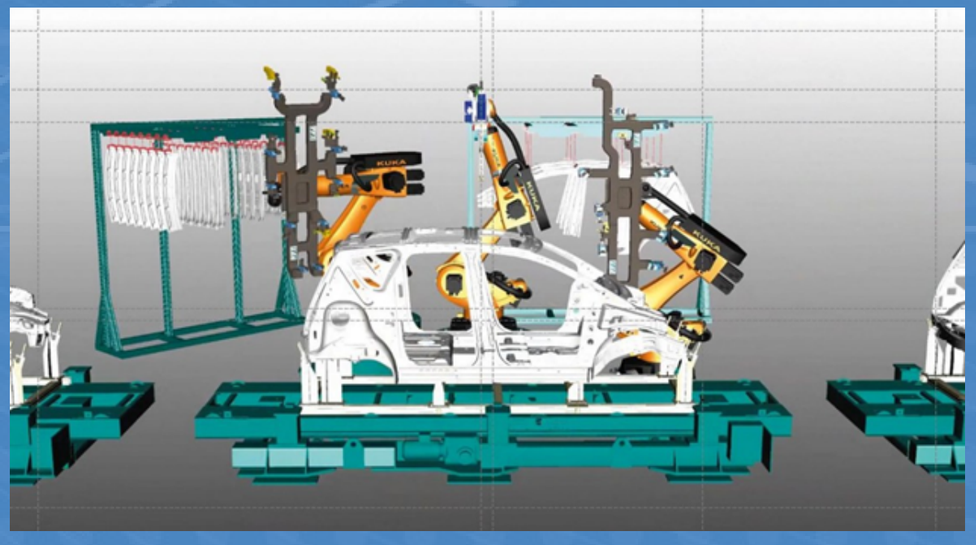
Autonomous Supply Chain

An autonomous supply chain utilizes Autonomous Guided Vehicles (AGVs) and Autonomous Mobile Robots (AMRs) to automate material handling and logistics processes. AGVs and AMRs are self-guided vehicles that navigate and operate within a facility or warehouse without the need for human intervention

AGV

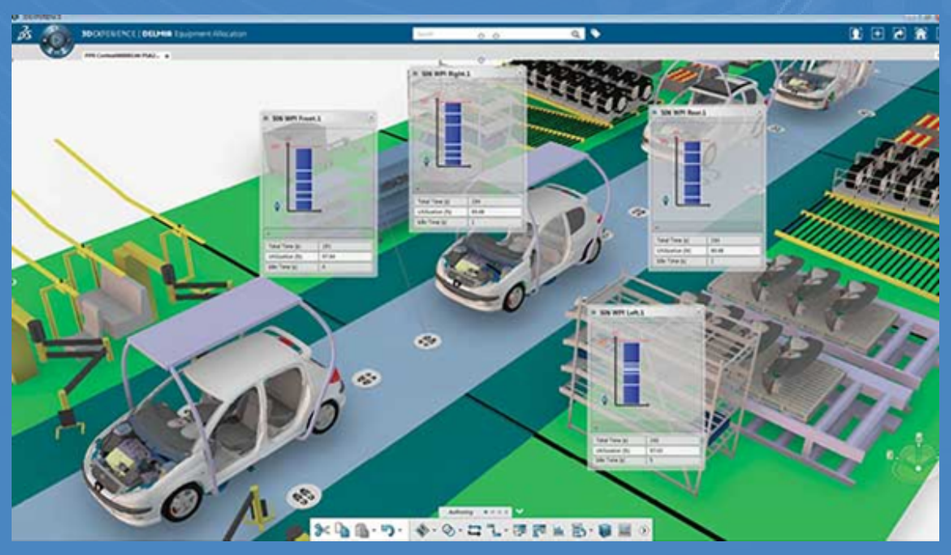
AMR

Digital Twin



Process Twin

A digital twin is a virtual replica or representation of a physical object, process, or system. It is a digital counterpart that provides a real-time simulation and reflection of its physical counterpart. Digital twins leverage data, sensors, and connectivity to create a virtual model that mirrors the physical entity's behavior, characteristics, and performance



Plant Twin

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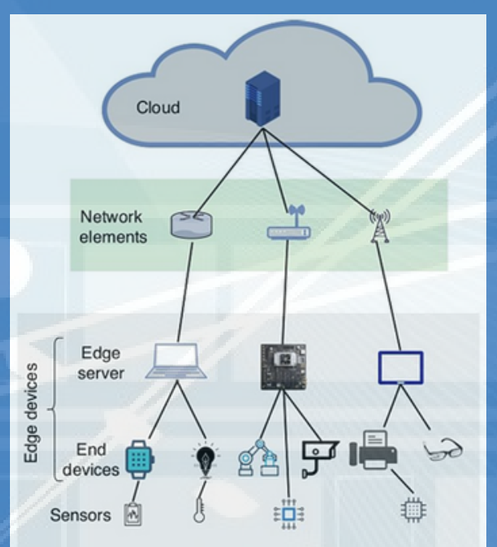
Asset Lifecycle

Sensors and Edge Connectivity

They enable real-time monitoring, data collection, and local processing, offering several benefits such as reduced latency, improved scalability, enhanced privacy, and cost-efficiency

Sensor Integration



Edge Connectivity

Asset Performance

Monitoring asset performance using sensors involves deploying sensors on equipment or assets to collect data and gain insights into their operational conditions and performance. By capturing relevant metrics, such as temperature, vibration, pressure, or energy consumption, sensors enable real-time monitoring, predictive maintenance, and optimization strategies

Asset Monitoring

Asset Management

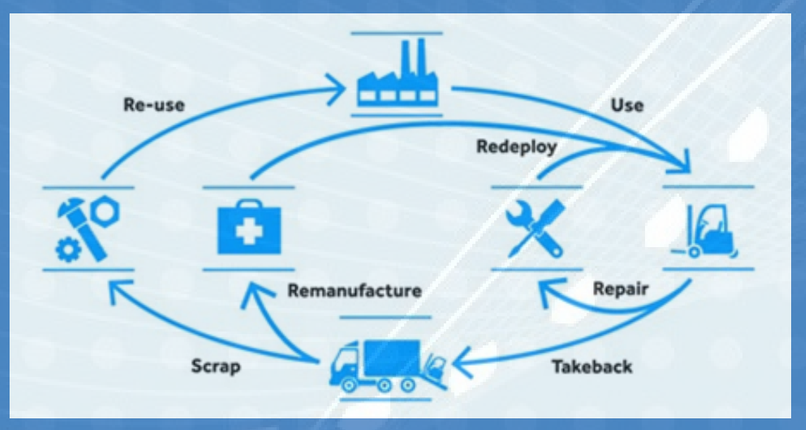
Connected Assets

Monitoring asset performance using sensors involves deploying sensors on equipment or assets to collect data and gain insights into their operational conditions and performance. By capturing relevant metrics, such as temperature, vibration, pressure, or energy consumption, sensors enable real-time monitoring, predictive maintenance, and optimization strategies

Machine Learning

Predictive Analytics

Using data, statistical algorithms, and machine learning techniques to analyze historical data and make predictions about future events or outcomes. It involves extracting valuable insights from past patterns and trends to forecast what might happen in the future



Artificial Intelligence

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Extended Reality

Augmented Reality

Technology-based system or application that overlays digital content onto the real-world environment, enhancing the user's perception of reality. AR solutions use cameras, sensors, and software to identify real-world objects and surfaces, and then superimpose virtual elements onto them in real-time

Product VIsualization

AR Navigation

AR Assisted Maintenance

Virtual Reality

Computer-generated, immersive, and interactive simulation of a three-dimensional environment, which users can experience and interact with using specialized hardware and software. VR allows individuals to be fully immersed in a digital environment that can be entirely fictional or based on real-world scenarios

Process VR Simulation

Product VR Simulation

Healthcare VR Simulation

Artificial Intelligence

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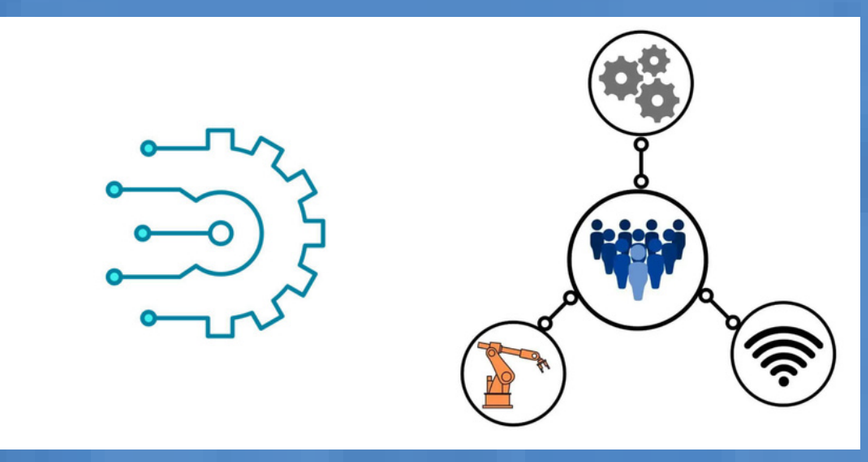

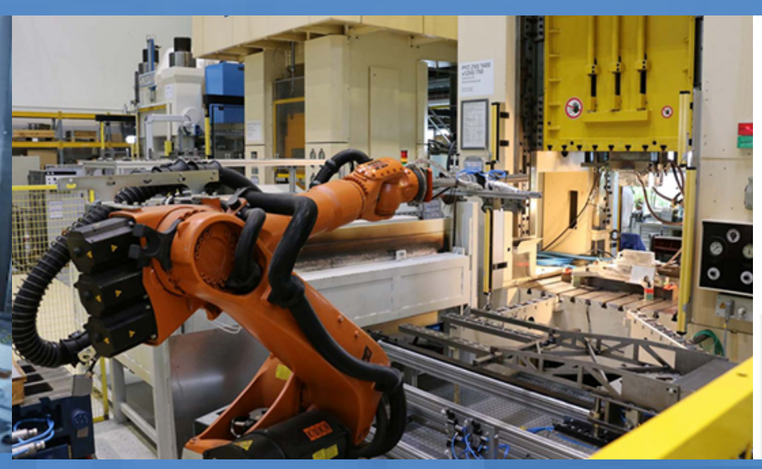

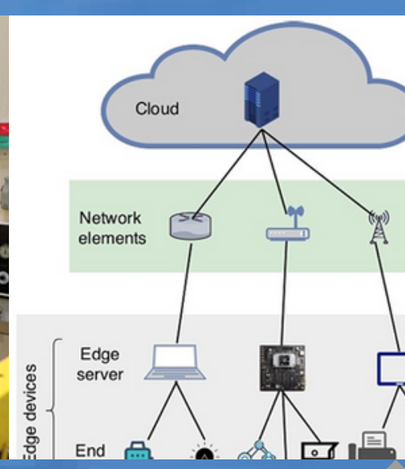

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