



# **Siemens - Integrated Technology Company**



## **SIEMENS**

Shipbuilding, Energy

# 71,000 customers and 7M lics

Aerospace & Defense BOEING **Rolls-Royce** BAE SYSTEMS United **Technologies** GENERAL DYNAMICS
Land Systems Honeywell SUKHOI Jet Propulsion Laboratory California Institute of Technology

**Automotive** & Transportation DAIMLER VOLKSWAGEN SUZUKI ISUZU CHRYSLER WW AUTOCAR VOLVO Visteon DELPHI MERCURY PACCAR

**FMC**Technologies HEIDELBERG-SANDVIK **OIHLER** MORI SEIKI
THE MACHINE TOOL COMPANY 玉柴集団  $Q_{b}$  KBA HALLIBURTON ENGEL ALSTOM ) KRONES FLUOR, INDEX

Machinery &

Ansaldo Energia **SIEMENS FMC**Technologies **TOSHIBA edf** ınterwell P B M R

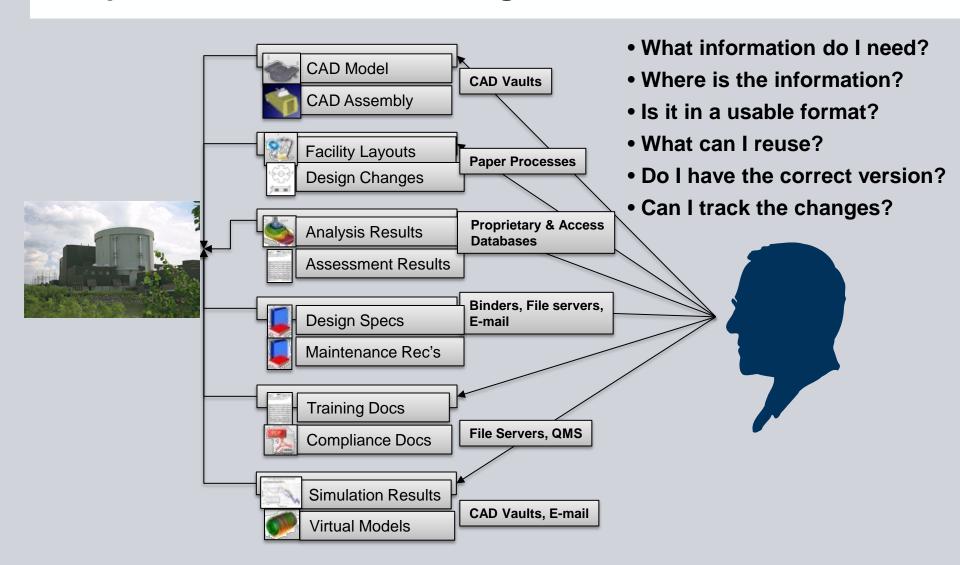
**Energy & Utilities** 

CPG & Life Sciences NORTHROP GRUMMAN GENERAL DYNAMICS Electric Boat GFC FINCANTIERI HOW LÜRSSEN FLENSBURGER ThyssenKrupp Blohm+Voss *lego* P&G 3M DICK'S JONES APPAREL GROUP PZ &CCC OTARGET marimekko Tiffany&Co. TOYS TOUS Johnson Johnson Abbott Baxter Edwards Lifesciences

10,700 Academic Partners... training over 1 million students per year



# **Dispersed Data and Knowledge**



## **SIEMENS**

# **Siemens PLM Energy and Utilities Customers**

# **OIL AND GAS** WATTOWAL OILWELL VARCO Oil & Gas ENCANA. CAMERON (CAMERON) *∐seas* FLUOR Design Your Energy **「**要志る明日を OSAKA GAS GDF SVEZ







**UTILITIES AND** 

**INFRASTRUCTURE** 



# **Unified Platform Enabling Digital Lifecycle Management**

## **SIEMENS**

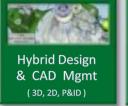


# **Unified Platform Enabling Digital Lifecycle Management**



























**EPC** 











**Equipment Manufacturer** 













# **Unified Platform Enabling Digital Lifecycle Management**

















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**EPC** 

**Equipment Manufacturer** 



# **Hybrid Design**



Operate and Maintain



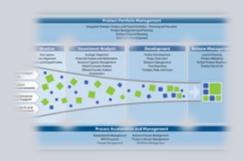
# Planning & Requirements Mangement Ensuring Strategic Planning and Execution Alignment



#### **Capital Project Planning**



Manage a global portfolio of project and assets. Build Net Present Value calculations



#### **Requirements Management**

Full requirements and specifications traceability to ensure licensing and building compliance





#### **Compliance Management**



Documents and records management for full compliance audits



# **Hybrid Design** Delivers Cross Discipline Collaboration & Process Automation





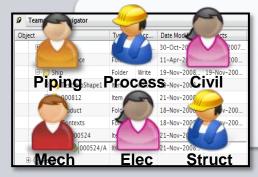
#### **Multi-CAD Management**

Teamcenter provides unmatched experience in data management for MCAD, ECAD, Process, P&ID, Civil



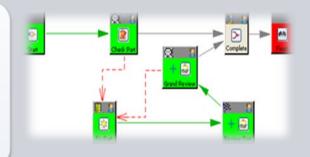
#### **Cross discipline collaboration**

Cross discipline design collaboration with Civil, Structural, Mechanical and **Process Engineering** 



#### **Integrated process automation**

Process automation for configuration, check-in/out, where-used, wherereferenced across disciplines





Multi CAD

**TEAMCENTER** 

# Fabrication and Construction Highly Automated and Integrated

## **SIEMENS**



#### **Digital Design & Manufacturing**

Accelerate manufacturing and fabrication with totally integrated and automated process optimization and simulation



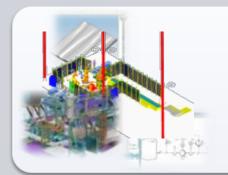
#### **Integrated Project Execution**

Cross discipline collaboration with Civil, Structural, Mechanical and Process Engineering for project execution





#### **Virtual Commissioning**



3D environment for pre-job briefing, virtual assessments and compliance to requirements and audit trail



# **Operate and Maintain**



## Extending and leveraging Asset Lifecycle Management

#### **Asset Configuration Mgmt**



As-Designed, As-Built, As-Maintained structure management for licensing, maintenance and compliance



#### **Maintenance Planning & Exec.**





Cross discipline collaboration for MRO on assets driven from the asset driven from configuration vs. task based

#### **Virtual Training**



Comprehend the big picture with 3D presentation and immersive technology of digital data for operations, safety and compliance training



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## **Conclusions**



Manage accurately Licensing, Permitting, Codes and Customer Specifications with Requirements Management



Enable integrated project development with process automation



Accelerate and automate fabrication and manufacturing with digital manufacturing



Optimize handover using virtual commissioning via virtual walkthroughs and virtual manuals



Reduce maintenance and repair costs with configuration management of assets throughout the entire lifecycle

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