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Announcing Teamcenter 9

The Backbone of the Collaborative Decision Support Platform

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Welcome to Teamcenter!

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Teamcenter Proven Global Leadership
More than a Decade at #1 According to CIMdata

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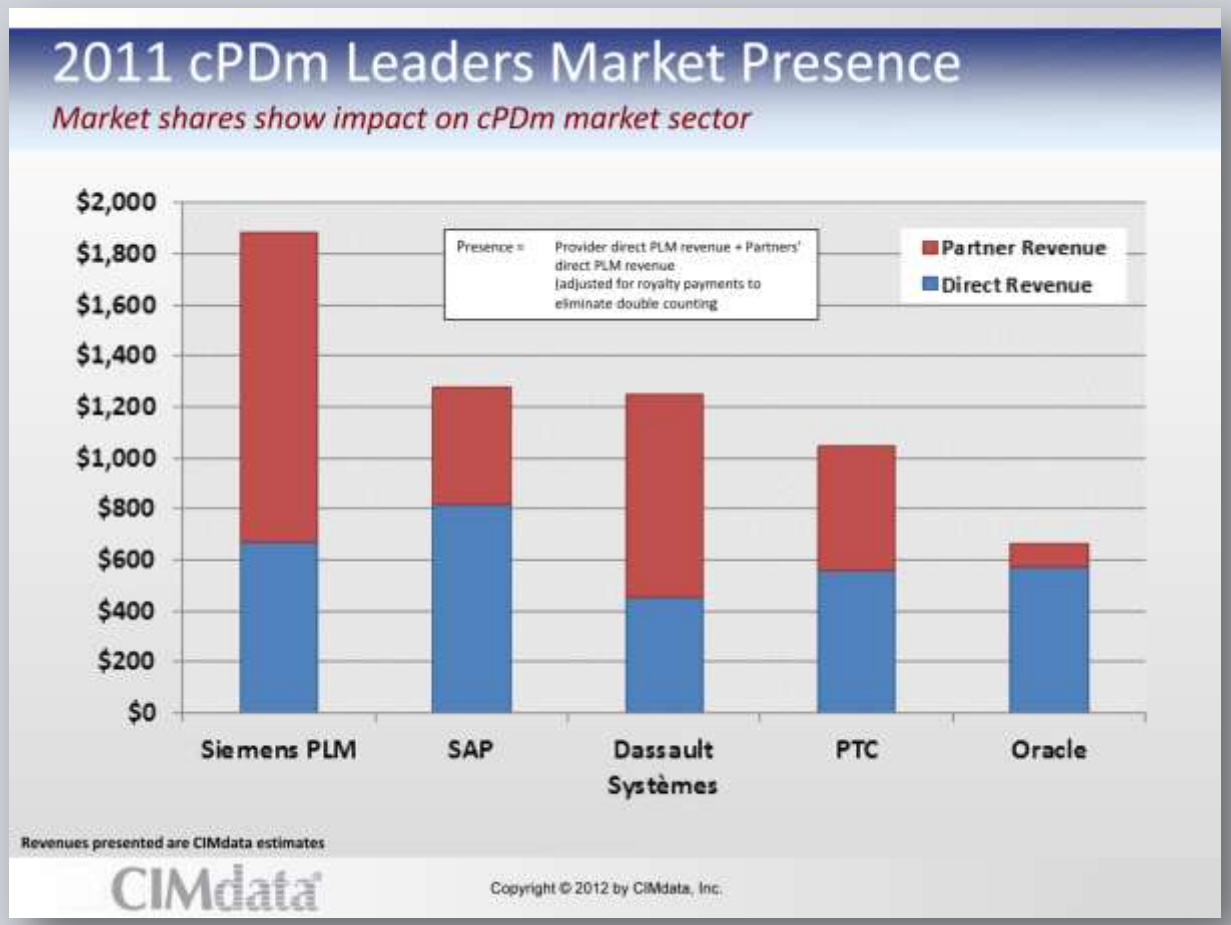

"Siemens PLM Software continues to **set the pace in the cPDm market segment with their Teamcenter solution** suite, as shown in our annual market survey"

Peter Bilello
President of CIMdata

CIMdata

Source: CIMdata 2011 Market Analysis Results, PLM Market & Industry Forum

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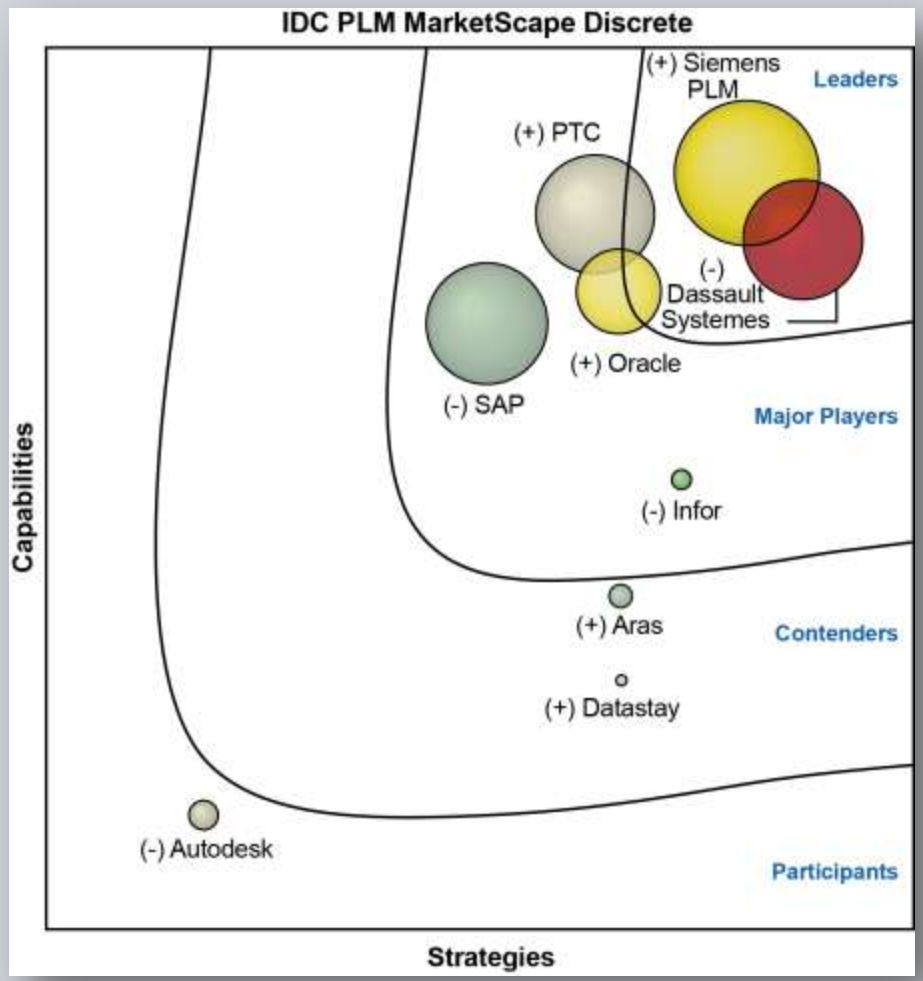
Teamcenter Proven Global Leadership



"An enterprise approach backed by openness as the central theme has helped SPLM's Teamcenter achieve a de facto enterprise solution standard in the discrete industries. Teamcenter answers the needs of end users looking for a stable, end-to-end solution with core enterprise engineering functionality depth in the discrete PLM segment."

IDC Manufacturing Insights

Source: IDC MarketScape: Worldwide Product Life–Cycle Management (PLM) Applications 2011 Vendor Assessment: CAx, Discrete, and Process PLM

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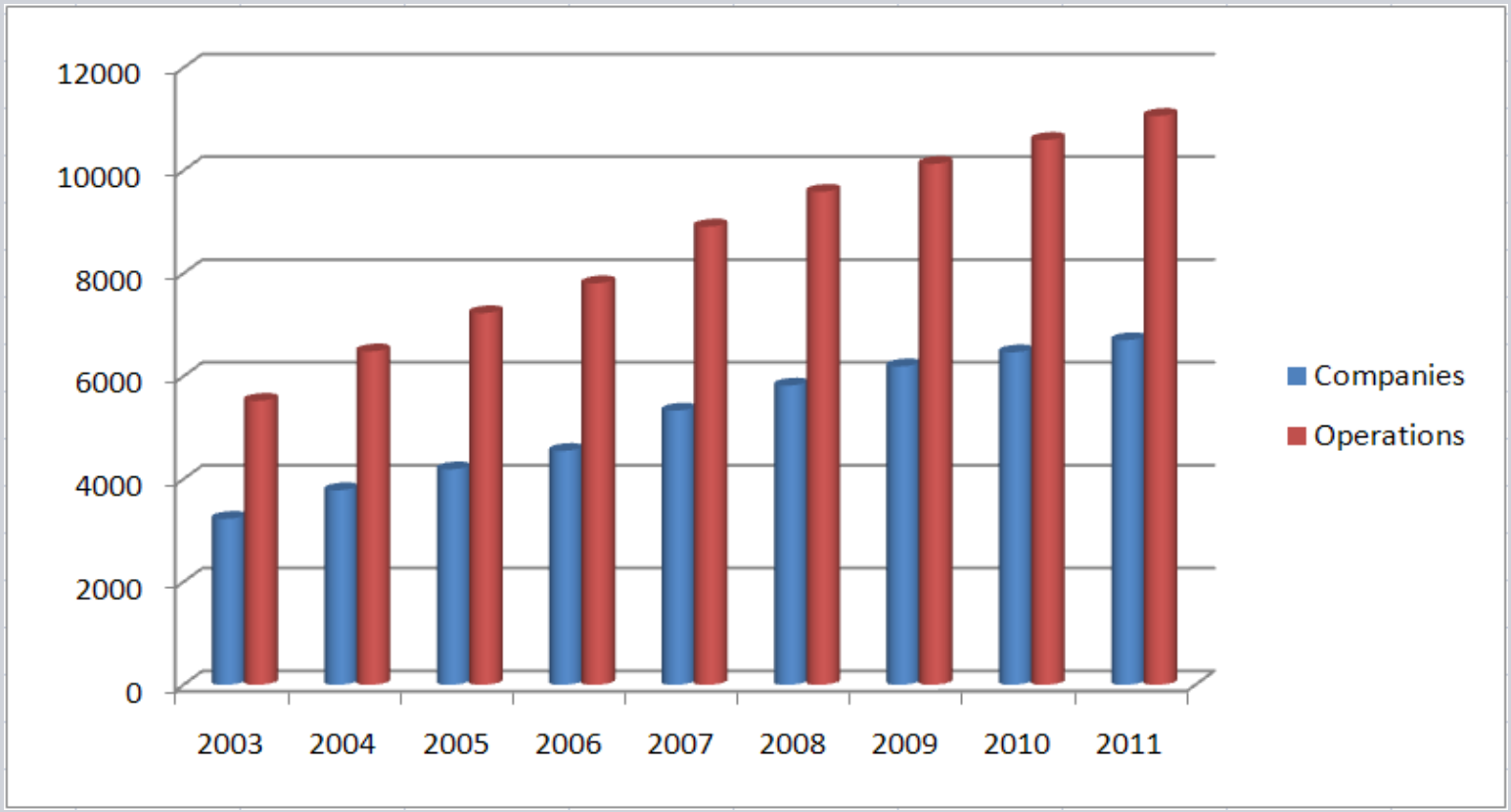
Teamcenter Customer Growth in CY2011

Continued growth → 6700 Companies at 11,100 operations!



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Teamcenter
Mission-critical in Aerospace

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90% of sector leaders use Teamcenter

Top Engine Manufacturers	Collaboration
GE	TEAMCENTER
Pratt Whitney	TEAMCENTER
Rolls-Royce	TEAMCENTER
MTU Aero Engines	TEAMCENTER
Snecma	TEAMCENTER
Volvo Aero	TEAMCENTER
Avio	TEAMCENTER
Honeywell	TEAMCENTER
CATYPH	TEAMCENTER
Shenyang Liming	TEAMCENTER

Top Airframe Manufacturers	Collaboration
Boeing	TEAMCENTER
EADS	Other
Lockheed Martin	TEAMCENTER
Northrop Grumman	TEAMCENTER
BAE Systems	TEAMCENTER
Alenia Aeronautica	TEAMCENTER
SAAB	TEAMCENTER
L3 communications	TEAMCENTER
EMBRAER	Other
SUKHOI	TEAMCENTER

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Teamcenter
Leadership in Automotive

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10 of the top 15 Automotive OEMs & 12 of the top 15 Suppliers

Top 16 Global OEMS	Enterprise Collaboration
Toyota	In-house
GM	TEAMCENTER
VW/Audi	TEAMCENTER
Hyundai	Other
Ford	TEAMCENTER
Nissan	TEAMCENTER
Honda	Other
PSA	Other
Suzuki	TEAMCENTER
Renault	Other
Fiat	TEAMCENTER
Daimler	TEAMCENTER
Chrysler	TEAMCENTER
BMW	In-house/Other TEAMCENTER
Mazda	TEAMCENTER

Top 16 Global Suppliers	Enterprise Collaboration
Robert Bosch	TEAMCENTER/Other
Denso Corp	TEAMCENTER/In-house
Continental	TEAMCENTER/Multi
Aisin Seiki Co.	Other
Magna Intl	TEAMCENTER/Multi
Faurecia	TEAMCENTER/Other
Johnson Controls	TEAMCENTER/Other
ZF Friedchshafen	TEAMCENTER/Other
LG Chen Ltd.	Other/In-house
Hyundai Mobis	TEAMCENTER/Other
TRW Auto.	TEAMCENTER/Other
Delphi Corp	TEAMCENTER
Yazaki Corp	TEAMCENTER/Other
Lear Corp	TEAMCENTER/Other
Sumitomo	TEAMCENTER/Other

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Teamcenter
Leadership in Electronics & Semiconductors

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All leaders in Electronics and Semiconductors rely on Teamcenter

Top Consumer Electronics & Semiconductor	
Consumer Device Leader	Other/**TEAMCENTER**
Bose	Other/**TEAMCENTER**
Microsoft E&D	**TEAMCENTER**
Canon	**TEAMCENTER**
Philips	**TEAMCENTER**
Seagate	**TEAMCENTER**
Intel	**TEAMCENTER**
Infineon	**TEAMCENTER**
Samsung	**TEAMCENTER**
B/S/H/	**TEAMCENTER**

Top Consumer Electronics & Semiconductor	
Applied Materials	**TEAMCENTER**
ASML	**TEAMCENTER**
Kodak	**TEAMCENTER**
Lam Research	**TEAMCENTER**
Lexmark	Other/**TEAMCENTER**
Mettler-Toledo	**TEAMCENTER**
Nikon	**TEAMCENTER**
Teradyne	**TEAMCENTER**
Xerox	**TEAMCENTER**
Haier	**TEAMCENTER**

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Teamcenter
Leadership in Machinery & Heavy Equipment

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14 / 16 top Machinery and 9 / 16 top heavy equipment rely on Teamcenter

Top 16 Industrial Machinery	Enterprise Collaboration
Siemens	TEAMCENTER
Sandvik	TEAMCENTER
ABB	TEAMCENTER
Voith	TEAMCENTER
Emerson	TEAMCENTER
Wartsila	TEAMCENTER
Air Products	TEAMCENTER
JTEKT	TEAMCENTER
Mori Seiki	None
Sauer Danfoss	TEAMCENTER
Hermle	TEAMCENTER
KBA	TEAMCENTER
Heidelberg	TEAMCENTER
Timken	TEAMCENTER
FMC	TEAMCENTER
MAG	Other

Top 16 Heavy Equipment	Enterprise Collaboration
Caterpillar	TEAMCENTER
John Deere	Other
Volvo	Other
CNH	TEAMCENTER
Terex	Other
Komatsu	Other
AGCO	Other
Metso	TEAMCENTER
JCB	TEAMCENTER
Sandvik	TEAMCENTER
Hitachi	TEAMCENTER
Doosan	Other
Krone	Other
Gehl	TEAMCENTER
Hyundai	TEAMCENTER
Zoomlion	TEAMCENTER

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Focus Industries

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Automotive and Transportation

Environment
Information
Globalization
Safety

Electronics and Semiconductor

Sustainability
Information
Globalization
Quality

Industrial Machinery and Equipment

Innovation
Globalization
Sustainability
Profitable Services

Aerospace and Defense

Environment
Information
Globalization
Profitable Services

Consumer Products and Retail

Environment
Brand Image
Speed to Market
Reduce Costs

Marine

Information
Globalization
Sustainability
Lifecycle Support

Energy and Utilities

Operations
Sustainability
Innovation
Globalization

Medical Devices and Pharmaceuticals

Quality
Globalization
Innovation
Compliance

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Smarter Decisions, Better Products

Key PLM investment areas

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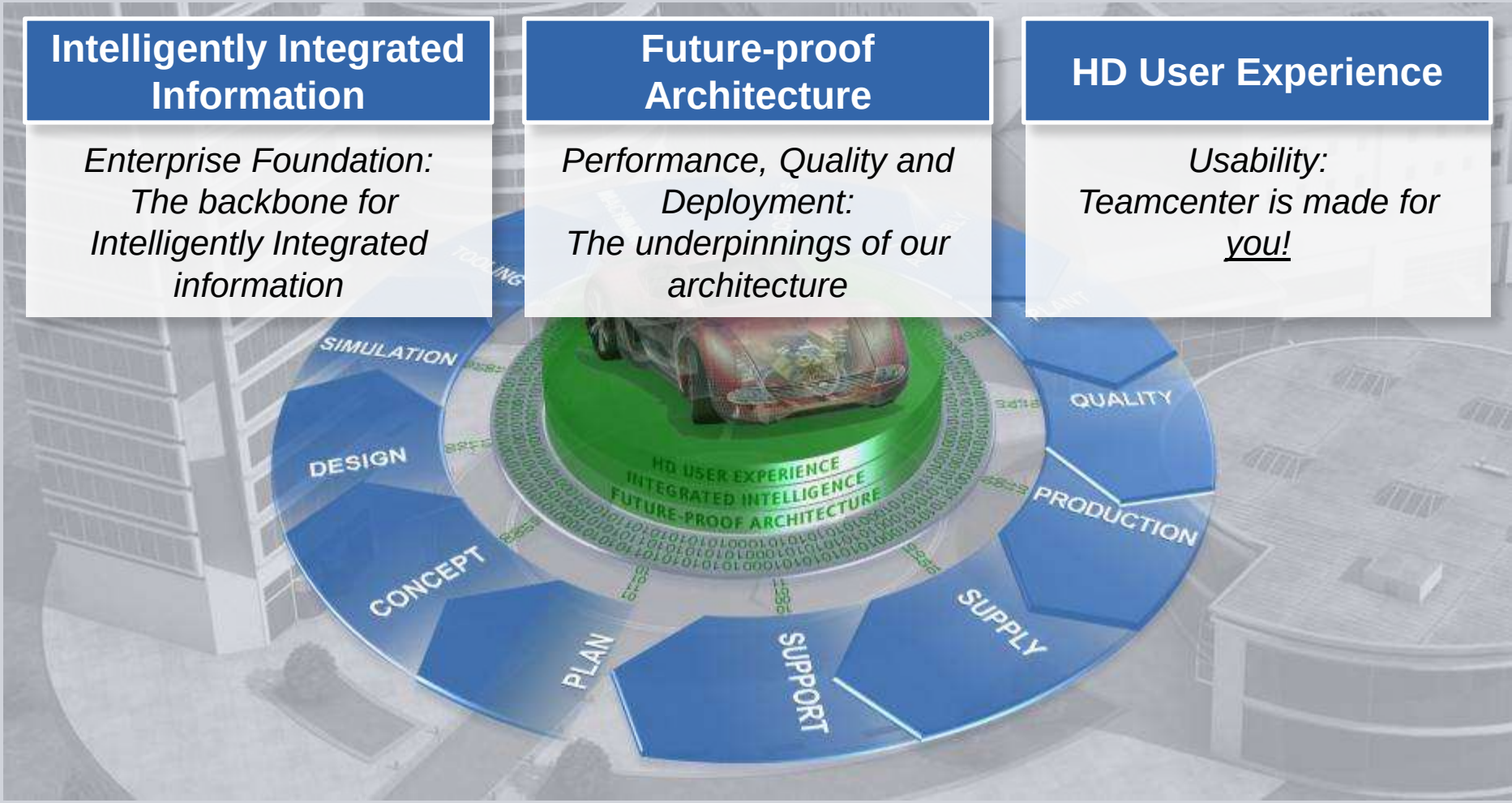
Intelligently Integrated Information	Future-proof Architecture	HD User Experience
Enterprise Foundation: The backbone for Intelligently Integrated information	*Performance, Quality and Deployment: The underpinnings of our architecture*	*Usability: Teamcenter is made for <u>you!</u>*



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Understand <u>why</u> information is connected

The Semantics of relationships

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Challenges in Product Development
Systems of Systems

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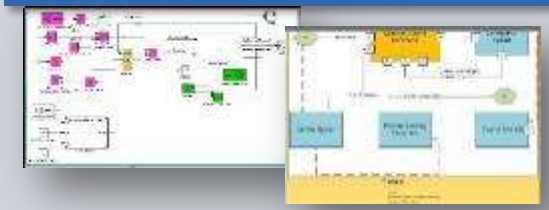
Requirements

Mechanical Sub-systems

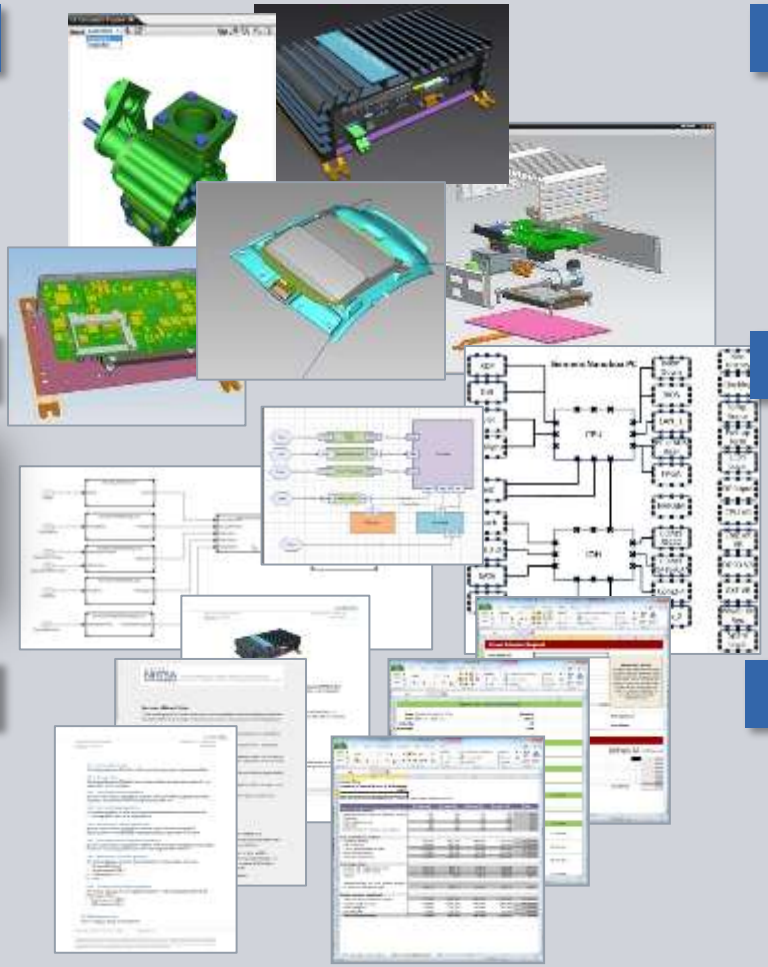
System Design



Software Sub-Systems

System Test & Validation

Electrical Sub-Systems



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Smarter Decisions, Better Products

Key PLM investment areas

SIEMENS

Intelligently Integrated Information | **Future-proof Architecture** | **HD User Experience**

Enterprise Foundation: The backbone for Intelligently Integrated information

- Systems Engineering
- Engineering Process Management
- Simulation Process Management
- Manufacturing Process Management
- Content Management
- Maintenance, Repair, and Overhaul

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Key PLM investment areas

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Intelligently Integrated Information | **Future-proof Architecture** | **HD User Experience**

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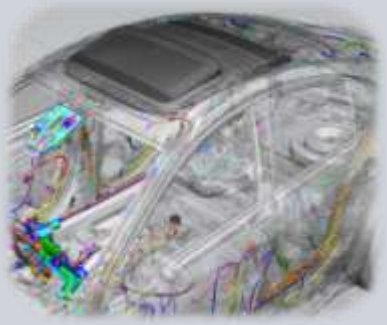
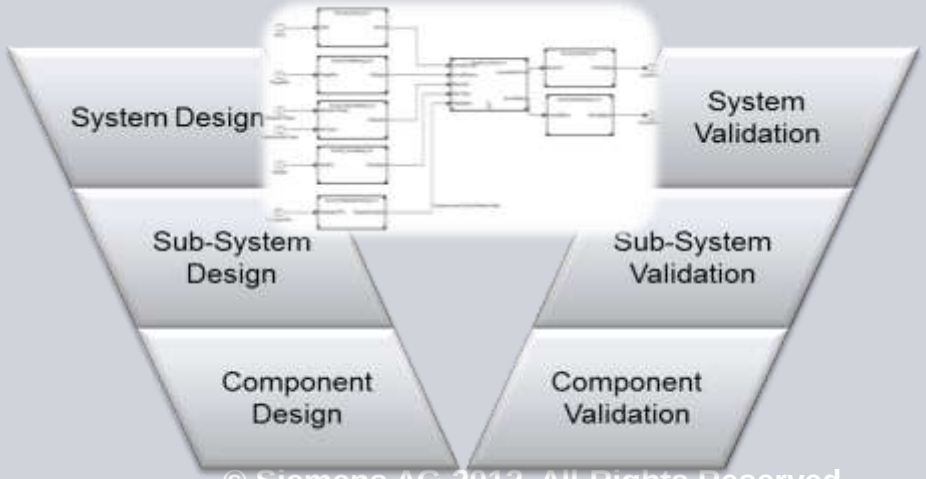
Late stage discovery of system/sub-system integration issues

- Tracing customer requirements across the entire lifecycle
- Collaboration across multiple systems functions, domains and suppliers
- Validating system performance before systems/sub-systems are integrated
- Assessing the impact of change across multiple product configurations





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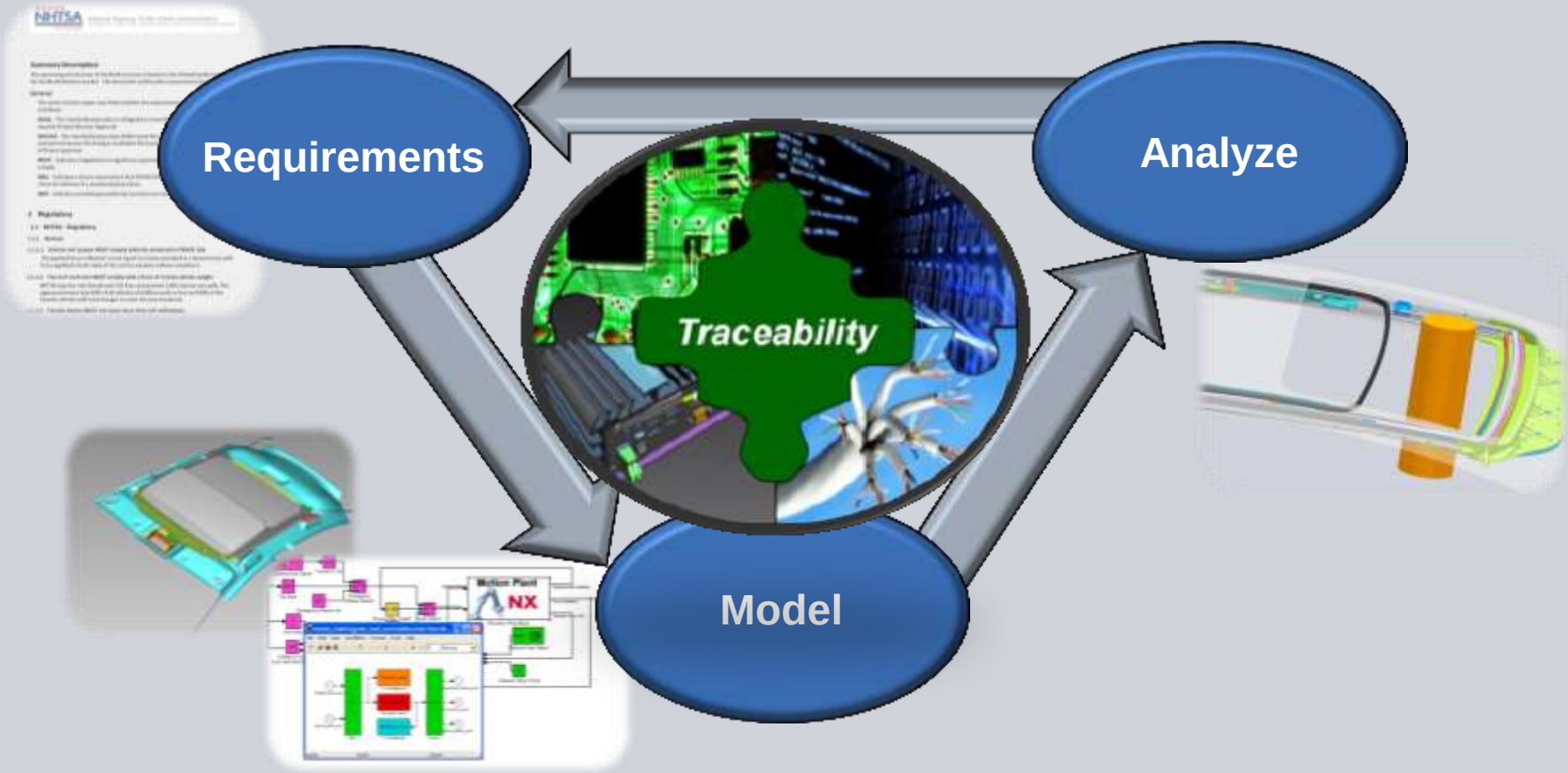
Intelligently integrated information to deliver higher quality products



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requires Project Director Approval.

SHOULD - The standardized product SHALL meet this requirement unless the technical / commercial reasons for doing so invalidate the business case. Departure requires Chief of Project approval.

MUST - Indicates a legislative or regulatory requirement with which the company SHALL comply.

WILL - Indicates a future requirement that SHOULD be catered for unless it impacts cost / time for delivery of a standardized product.

MAY - Indicates something is preferred, but does not establish it as a requirement.

1 Regulatory

1.1 NHTSA - Regulatory

1.1.1 Rollover

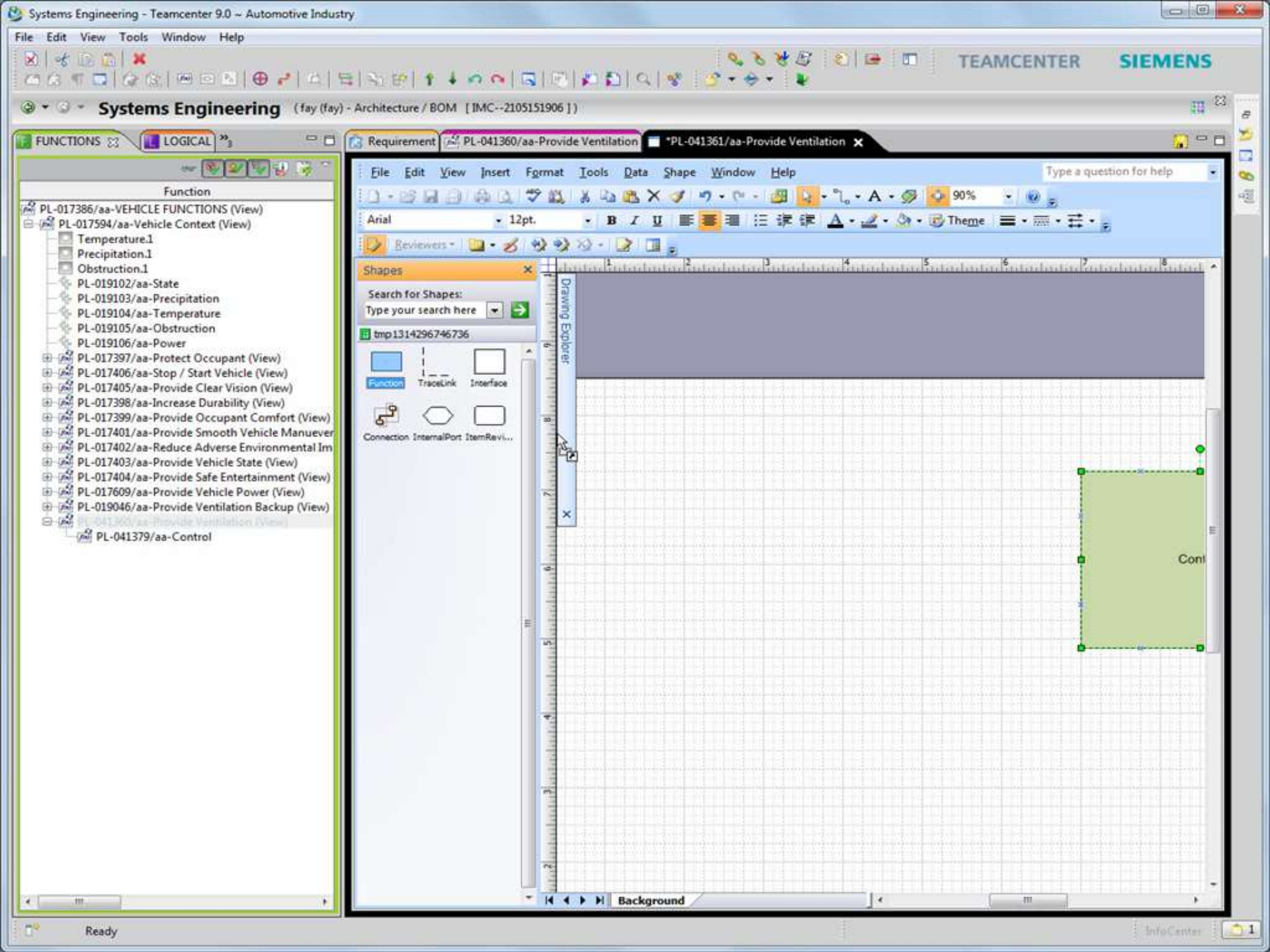
1.1.1.1 Vehicle roof system MUST comply with the standards in FMVSS 216.

The applied force in Newton's must equal to 3 times standard in a dynamic test with force applied to both sides of the roof to simulate rollover conditions.

1.1.1.2 The roof crush test MUST comply with a force of 3 times vehicle weight.

NHTSA says the rule should save 135 lives and prevent 1,065 injuries annually. The agency estimates that 82% of all vehicles of 6,000 pounds or less and 40% of the heavier vehicles will need changes to meet the new standards.

1.1.1.3 The test device MUST not move more than 127 millimeters.


Systems Engineering - Teamcenter 9.0 ~ Automotive Industry
File Edit View Tools Window Help
TEAMCENTER
SIEMENS
Systems Engineering
(fay (fay) - Architecture / BOM [IMC--2105151906])
FUNCTIONS
LOGICAL
Function
PL-017386/aa-VEHICLE FUNCTIONS (View)
PL-017594/aa-Vehicle Context (View)
Temperature.1
Precipitation.1
Obstruction.1
PL-019102/aa-State
PL-019103/aa-Precipitation
PL-019104/aa-Temperature
PL-019105/aa-Obstruction
PL-019106/aa-Power
PL-017397/aa-Protect Occupant (View)
PL-017406/aa-Stop / Start Vehicle (View)
PL-017405/aa-Provide Clear Vision (View)
PL-017398/aa-Increase Durability (View)
PL-017399/aa-Provide Occupant Comfort (View)
PL-017401/aa-Provide Smooth Vehicle Manuever
PL-017402/aa-Reduce Adverse Environmental Im
PL-017403/aa-Provide Vehicle State (View)
PL-017404/aa-Provide Safe Entertainment (View)
PL-017609/aa-Provide Vehicle Power (View)
PL-019046/aa-Provide Ventilation Backup (View)
PL-041379/aa-Control
Requirement
PL-041360/aa-Provide Ventilation
*PL-041361/aa-Provide Ventilation
File Edit View Insert Format Tools Data Shape Window Help
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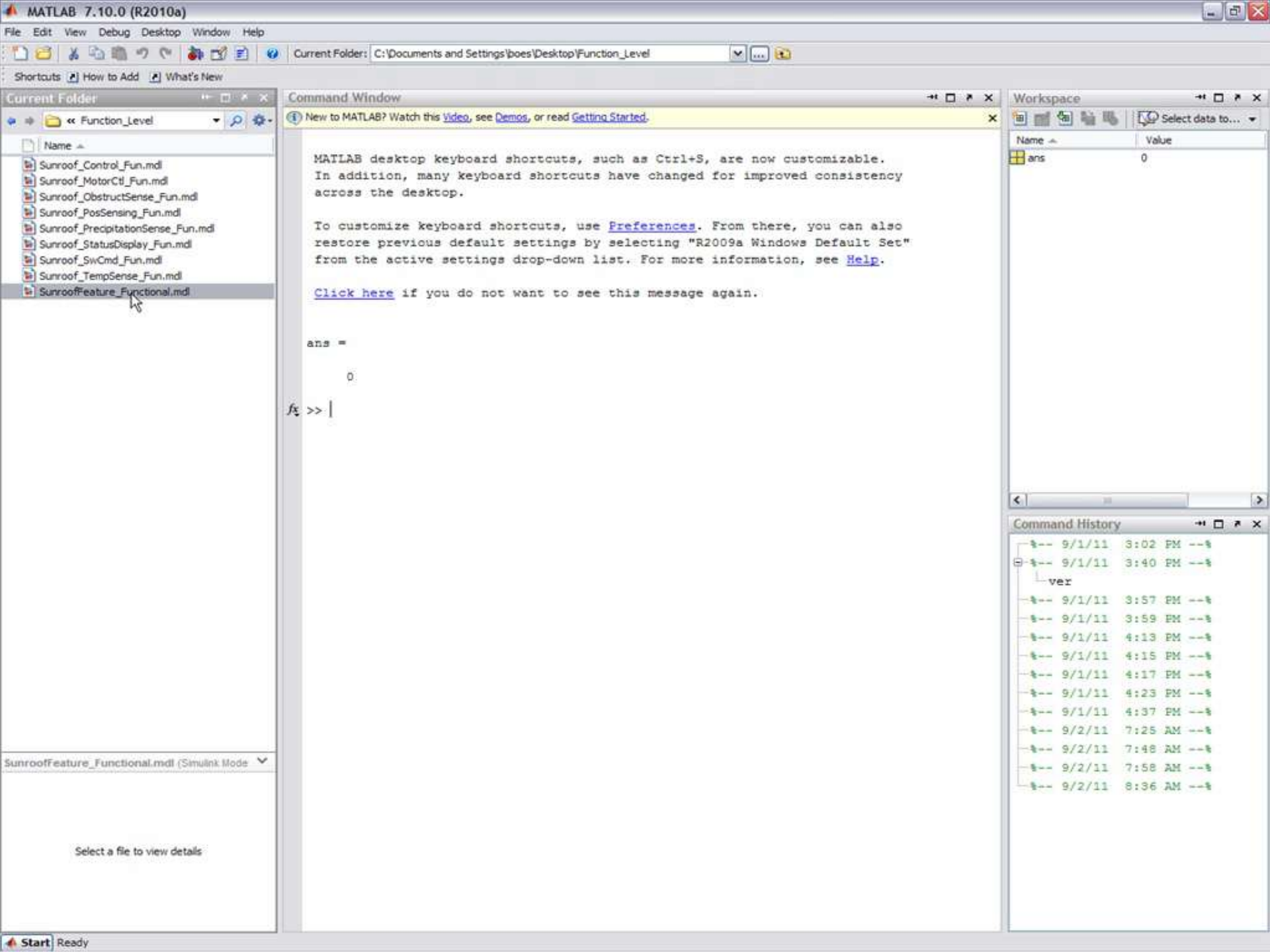
MATLAB 7.10.0 (R2010a)
File Edit View Debug Desktop Window Help
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Shortcuts How to Add What's New
Current Folder
« Function_Level
Name
Sunroof_Control_Fun.mdl
Sunroof_MotorCtl_Fun.mdl
Sunroof_ObstructSense_Fun.mdl
Sunroof_PosSensing_Fun.mdl
Sunroof_PrecipitationSense_Fun.mdl
Sunroof_StatusDisplay_Fun.mdl
Sunroof_SwCmd_Fun.mdl
Sunroof_TempSense_Fun.mdl
SunroofFeature_Functional.mdl
SunroofFeature_Functional.mdl (Simulink Mode
Select a file to view details
Command Window
New to MATLAB? Watch this Video, see Demos, or read Getting Started.
MATLAB desktop keyboard shortcuts, such as Ctrl+S, are now customizable.
In addition, many keyboard shortcuts have changed for improved consistency
across the desktop.
To customize keyboard shortcuts, use Preferences. From there, you can also
restore previous default settings by selecting "R2009a Windows Default Set"
from the active settings drop-down list. For more information, see Help.
Click here if you do not want to see this message again.
ans =
0
>>
Workspace
Select data to...
Name
Value
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Command History
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%-- 9/1/11 3:57 PM --%
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%-- 9/2/11 7:58 AM --%
%-- 9/2/11 8:36 AM --%
Start
Ready

Smarter Decisions, Better Products

Key PLM investment areas

SIEMENS

Intelligently Integrated Information | **Future-proof Architecture** | **HD User Experience**

Enterprise Foundation: The backbone for Intelligently Integrated information

- Systems Engineering
- Engineering Process Management
- Simulation Process Management
- Manufacturing Process Management
- Content Management
- Maintenance, Repair, and Overhaul

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Managing Globally Distributed Design Chains
Challenges

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Having the right information to make good engineering decisions

- Understanding the right context for decision making
- Working efficiently with multi-CAD data
- Accurately capturing, communicating and executing on issues as they arise

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What's New: Engineering Process Management
Multi-CAD Design Management

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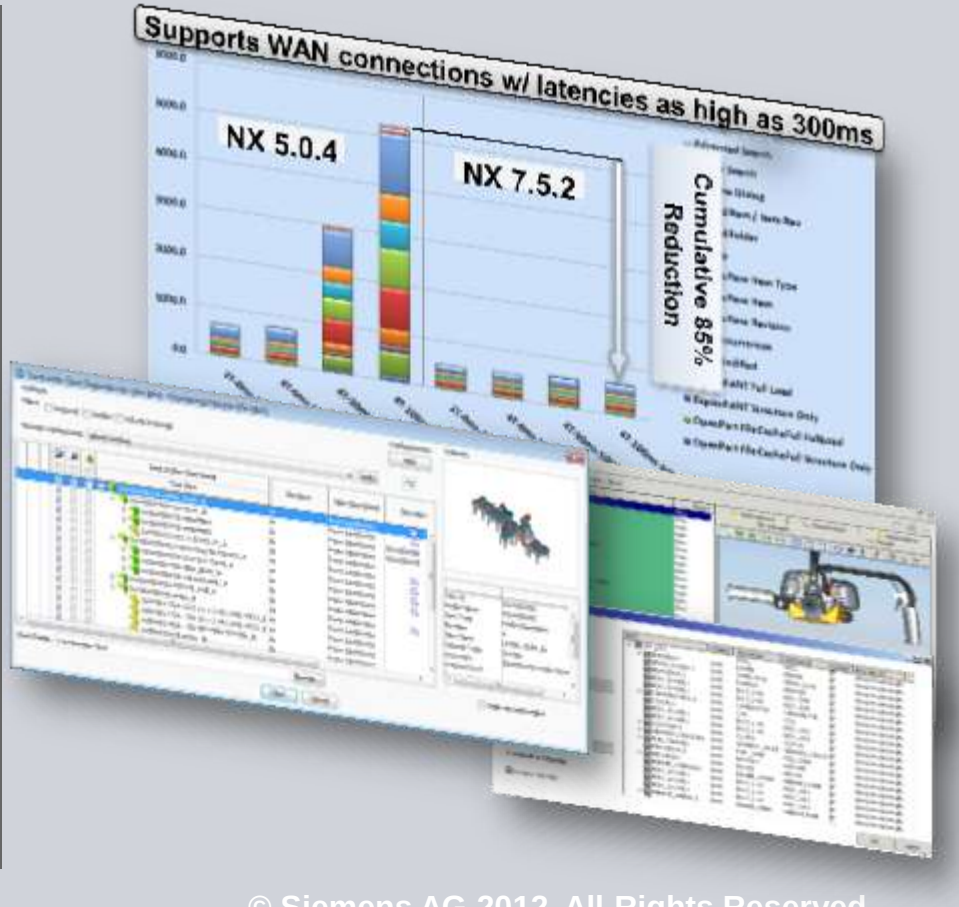
Expanding our leadership in multi-CAD

- Reduced customer overhead by enabling remote users with latencies up to 300msec
- More intuitive user experience and higher performance integrations
- Enhanced reuse capabilities when working with ProE designs



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What's New: Engineering Process Management
Change Management

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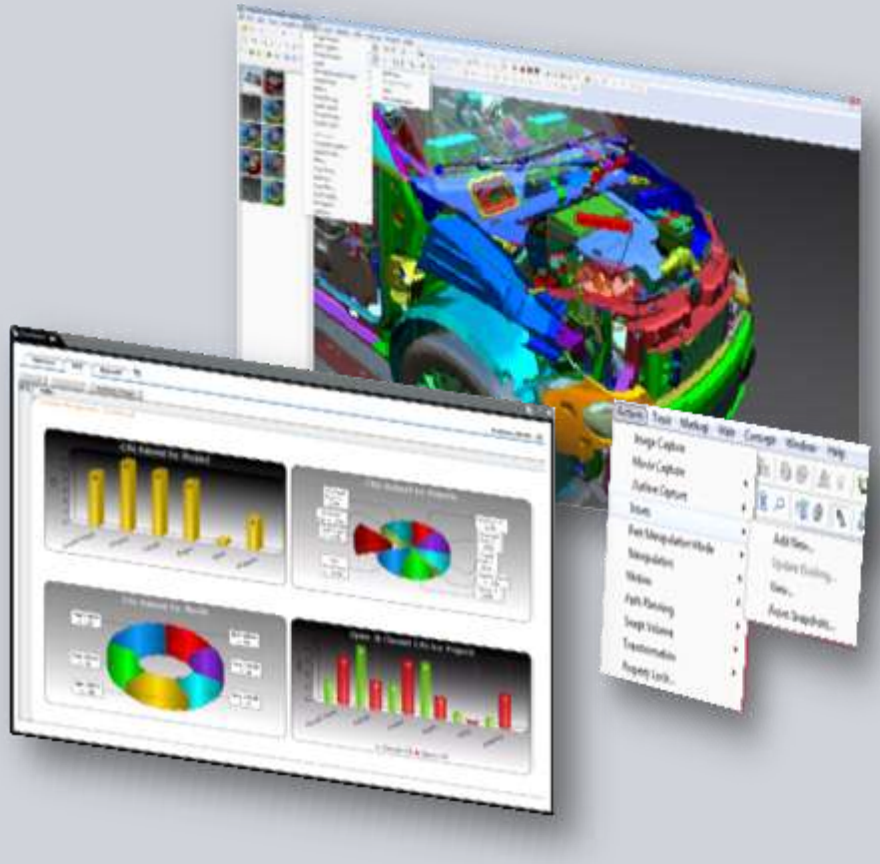
Increasing visibility throughout the change process

- Capture and manage visual issues
- Promote visual issues to formal change process
- Create embedded dashboards for increased change process visibility



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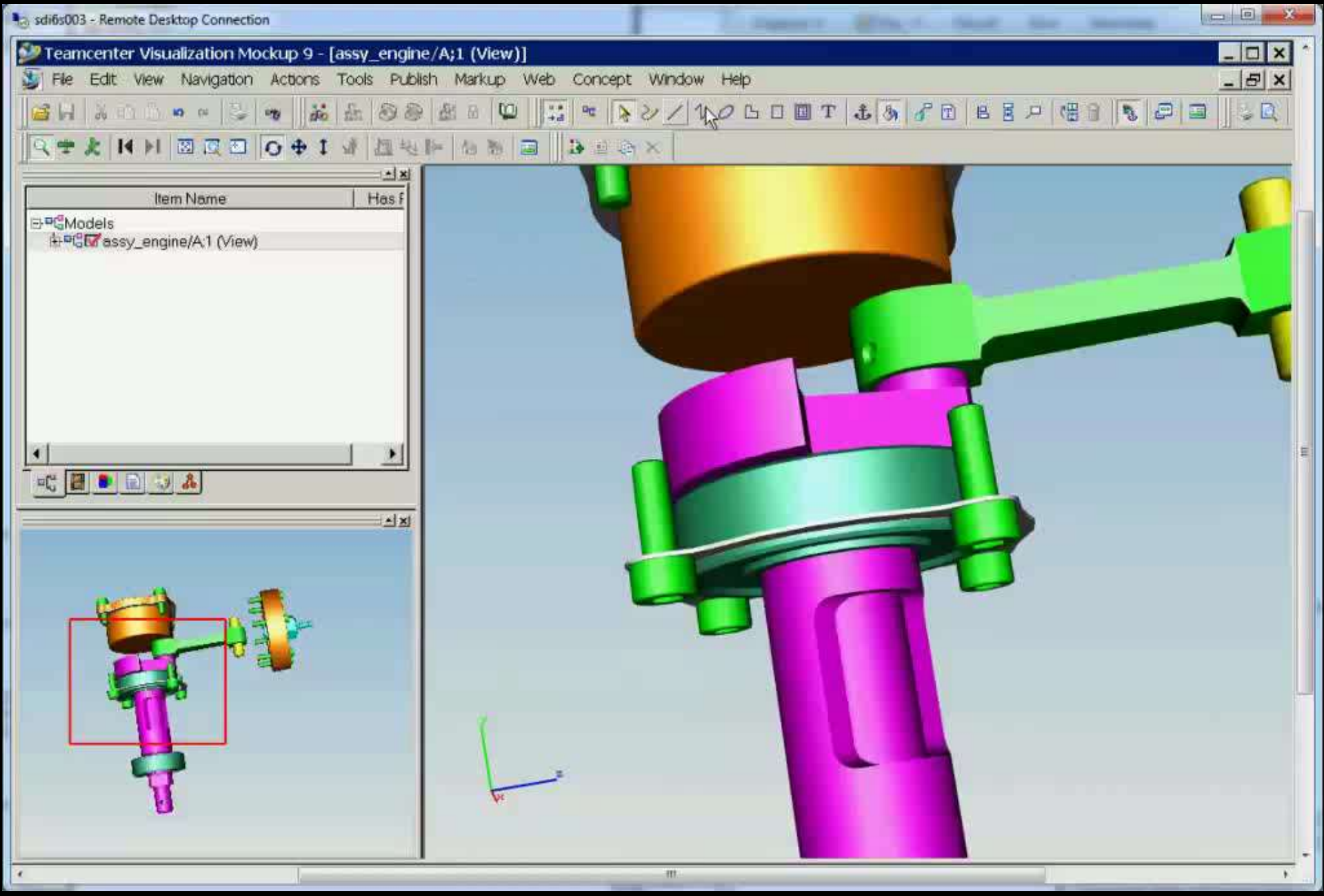
sdi6s003 - Remote Desktop Connection
Teamcenter Visualization Mockup 9 - [assy_engine/A;1 (View)]
File Edit View Navigation Actions Tools Publish Markup Web Concept Window Help
Item Name
Has F
Models
assy_engine/A;1 (View)

Smarter Decisions, Better Products

Key PLM investment areas

SIEMENS

Intelligently Integrated Information | **Future-proof Architecture** | **HD User Experience**

Enterprise Foundation: The backbone for Intelligently Integrated information

- Systems Engineering
- Engineering Process Management
- Simulation Process Management
- **Manufacturing Process Management**
- Content Management
- Maintenance, Repair, and Overhaul

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Introducing Teamcenter 9
Manufacturing Process Management

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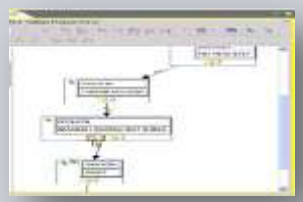
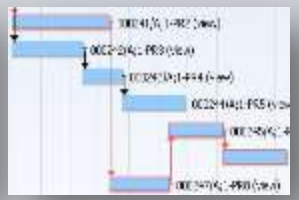
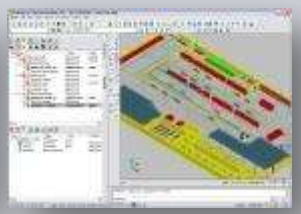
Intelligently Integrate product & process Information



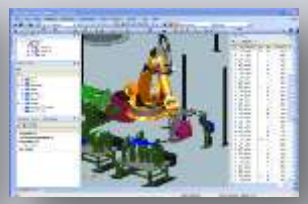
Pert Chart



Gantt Chart

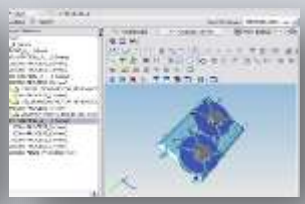


Plant Layout

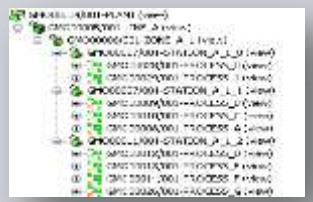


Process Simulation

Work Instructions

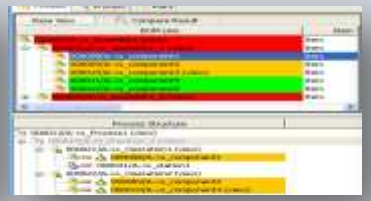


Embedded Viewer



Process Structure

Time Management



Accountability Check

Tools Library

Reports

Live Excel Integration

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Key PLM investment areas

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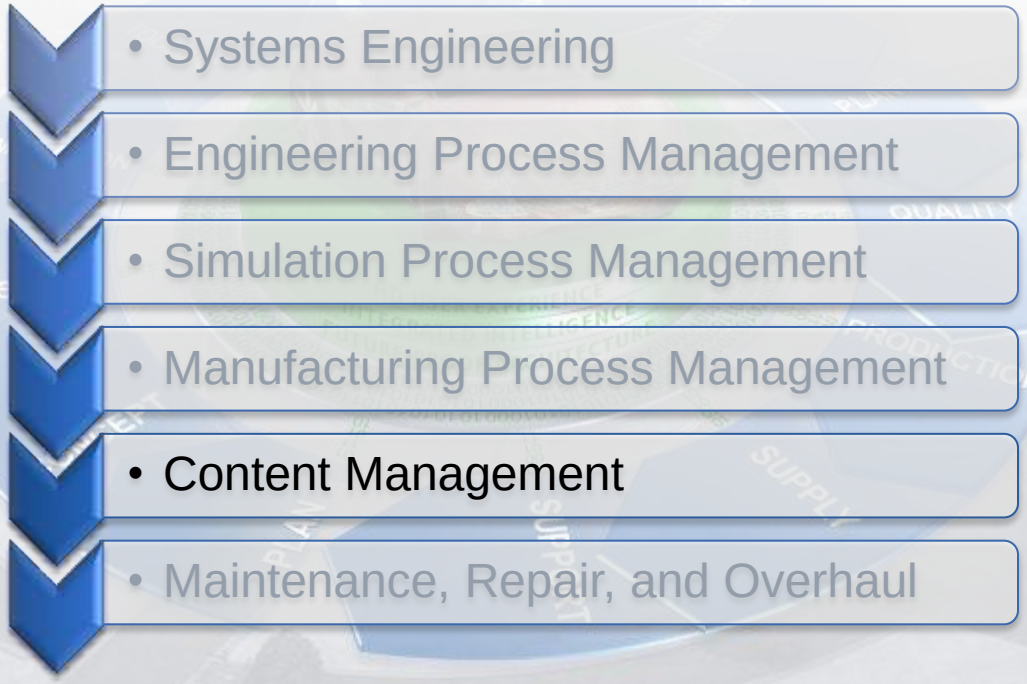
Intelligently Integrated Information | **Future-proof Architecture** | **HD User Experience**

Enterprise Foundation: The backbone for Intelligently Integrated information



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What's New: Content and Document Management

Integrated documentation authoring

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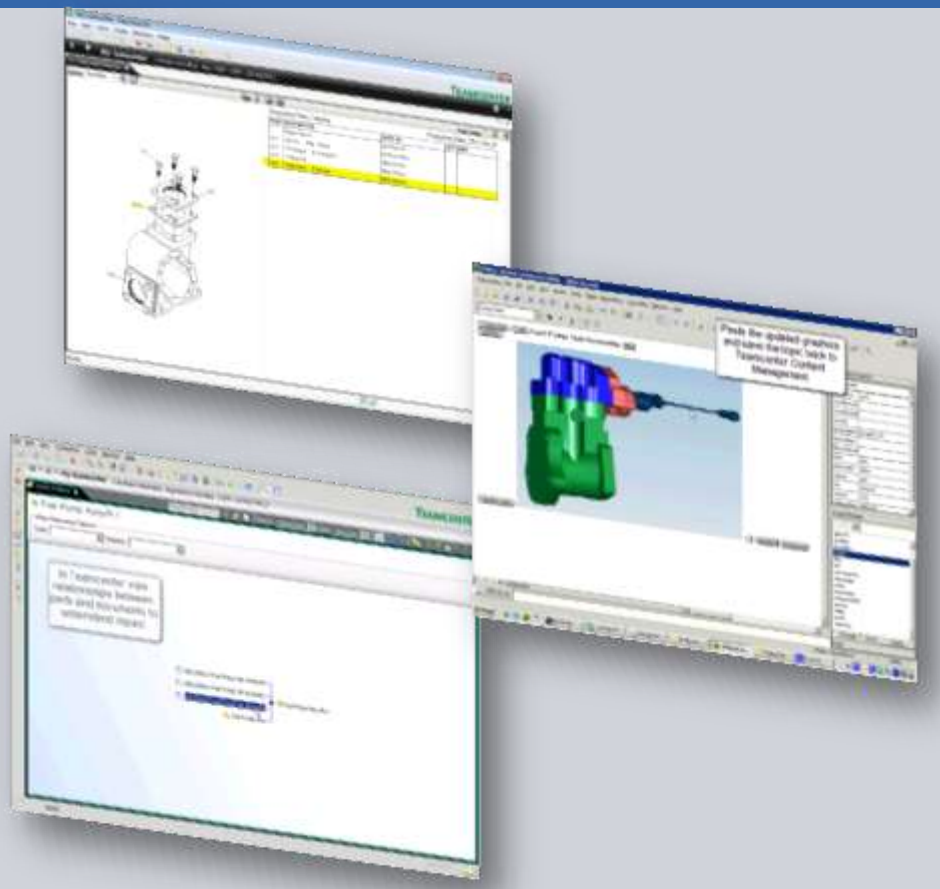
Reduce authoring time and costs, ensure documentation quality

- Author and reuse content as components
- Generate and manage 2D and 3D graphics components
- Automate communication of change impact in context with engineering processes



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Smarter Decisions, Better Products

Key PLM investment areas

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Intelligently Integrated Information | Future-proof Architecture | **HD User Experience**

Usability: Teamcenter is made for you!

- Evolution to HD User Experience
- Teamcenter Inside
- Visual Reporting
- Stylesheets
- Mobility
- Active Workspace

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User Experience
Evolution to HD PLM

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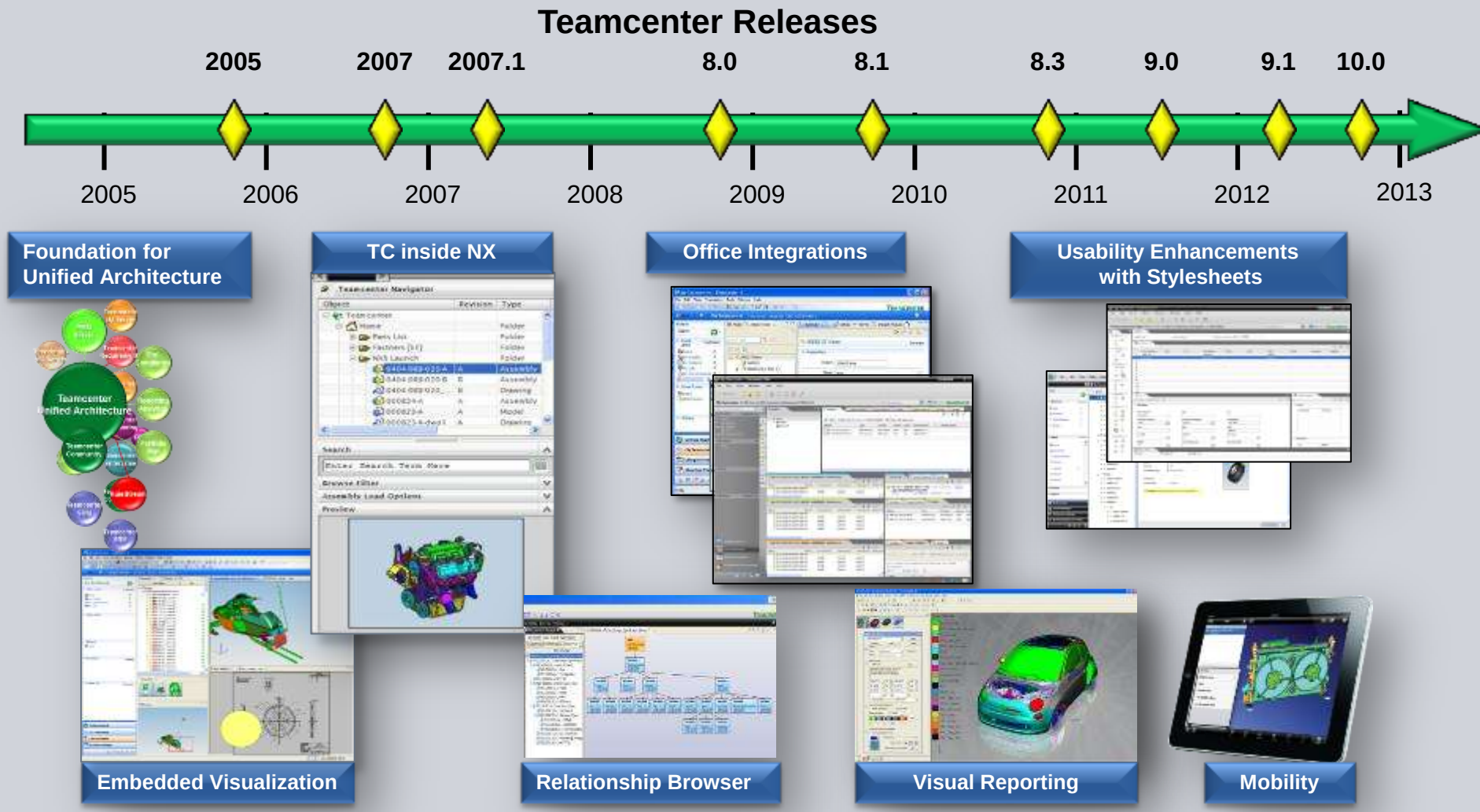

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What's New: Teamcenter Mobility

Enabling High Definition Decision Support, Anywhere

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Delivering Value to Real-World Activities

- Mobility 2.0 – From Consumer to Author
- Teamcenter AppShare on the iPad
- Mobility 2.5 – More Functional, Easier to Use

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Making Good Decisions with Increasingly Complex Products and Processes

- Find information required for decision making
- Understand impact of change and supporting information
- Identify key stakeholders
- Clearly understand product performance

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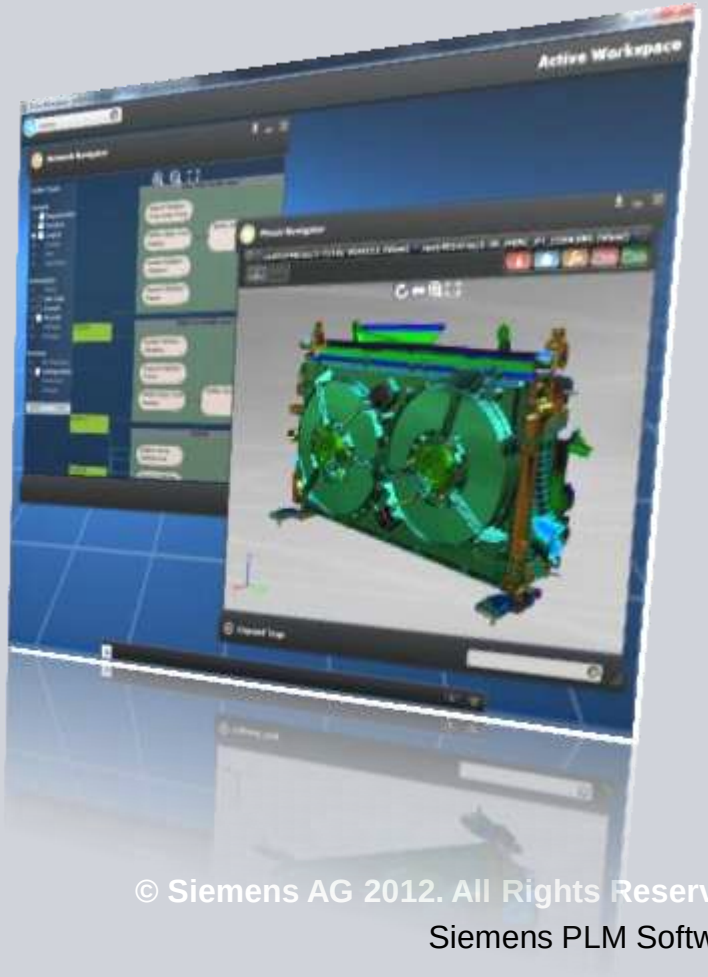
A New Level of Ease-of-Use

- **Find the *right* information, fast** with intuitive search tools that understand all your data
- **Increase confidence in decisions** by understanding all critical impacts
- **Make *faster*, *smarter* decisions** by quickly identifying key stakeholders



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Visual Navigator

<< Siemens PLM Wind Farm/A;1 (View) ▶ Wind Turbine Farm/A;1 (View)

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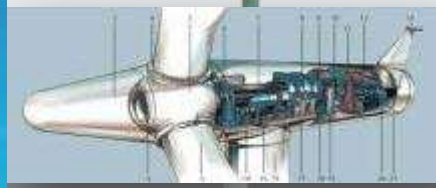

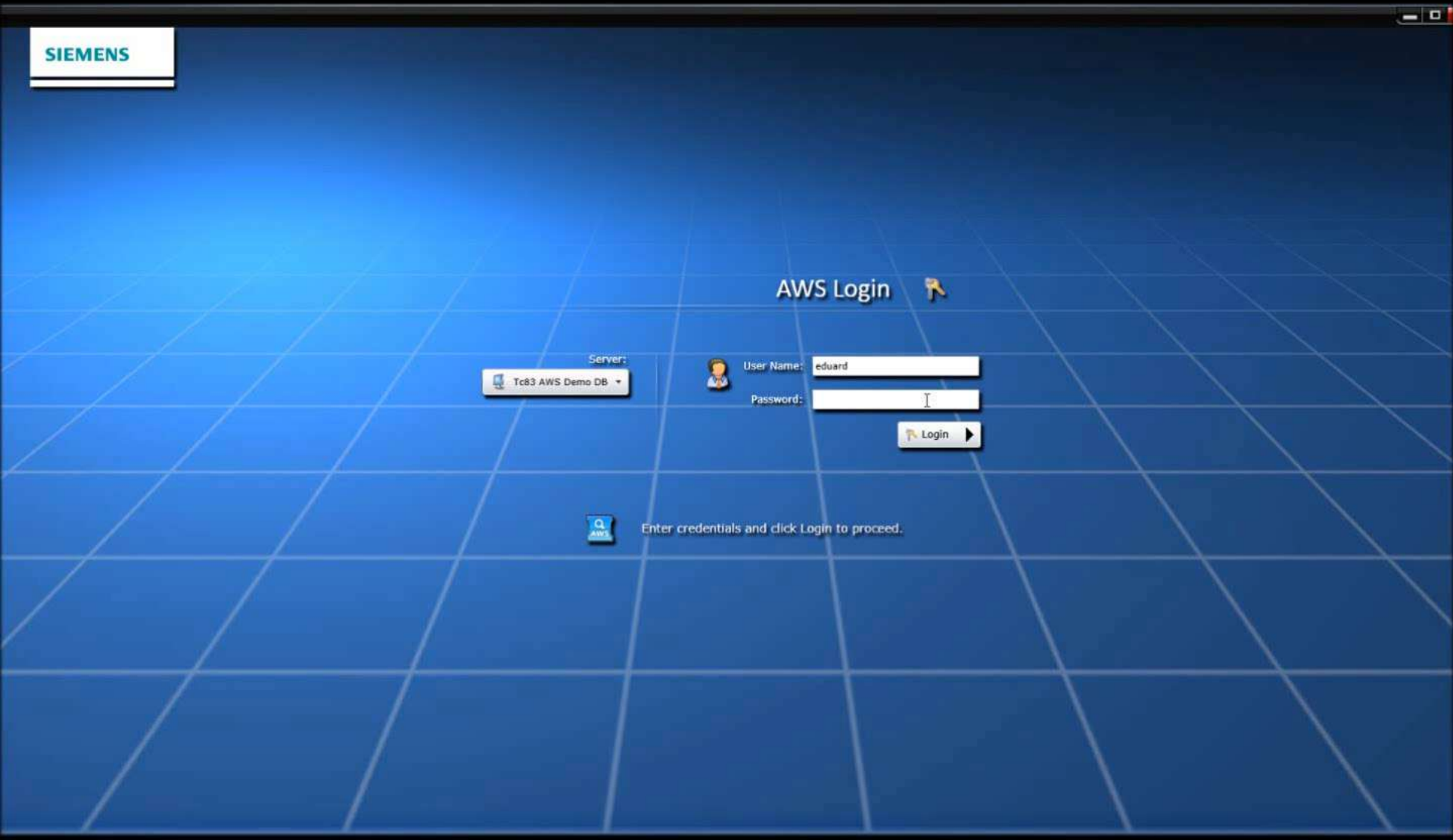
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AWS Login
Server:
Tc83 AWS Demo DB
User Name:
eduard
Password:
Login
Enter credentials and click Login to proceed.

Smarter Decisions, Better Products

Key PLM investment areas

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Intelligently Integrated Information	Future-proof Architecture	HD User Experience
Enterprise Foundation: The backbone for Intelligently Integrated information	*Performance, Quality and Deployment: The underpinnings of our architecture*	*Usability: Teamcenter is made for you!*

End-to-End PLM solutions intelligently integrated across the lifecycle

High performance, scalable, and open architecture for lower TCO

High definition user experience for increase productivity with less training

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Thank You

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