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PTC210: Leveraging PTC Creo Unite in a Data Managed Environment

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June 9th, 2015

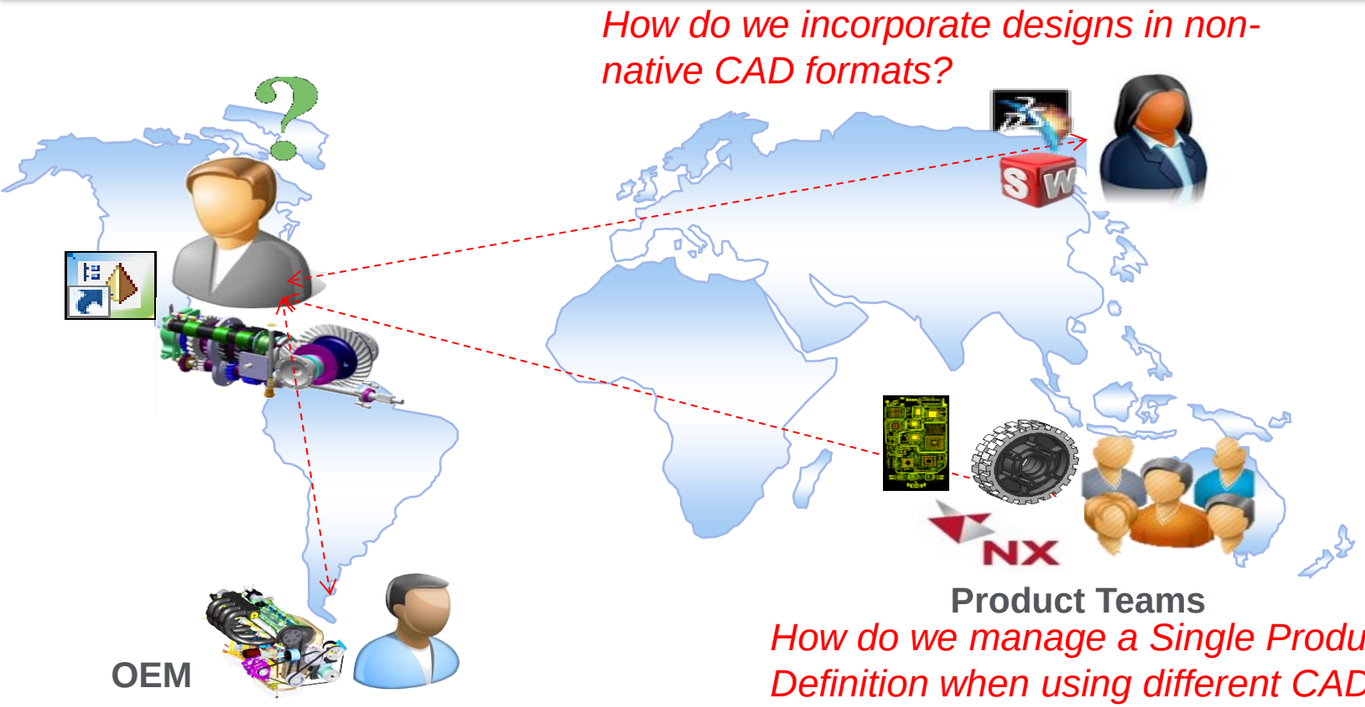
Topics

- PTC Creo Unite Technology Overview

- PTC Creo Unite and PTC Windchill
  - Best Practices
  - Demo Scenario
  - Where to find more information

- Q&A

Multi-CAD Collaboration Customer Challenges



Common Challenges

Manage a Single Product Definition when designing in multiple CAD environments

Need to deliver data is specific CAD formats to customers/suppliers

Limited reuse and/or sharing of existing designs available in different CAD formats

Negative Consequences

Inability to validate and verify the Product Definition during the lifecycle

Data duplication as designs are re-created from scratch in native CAD environment

Limited traceability of data provided to customers / partners in non native CAD formats

Metrics

Money lost due to late changes causing product delays

Time spent in recreating design in native CAD environment

Time spent on reworking designs due to incorrect deliverables

PTC 2015: Forward-looking information - Subject to change without notice

PTC Creo 3.0 Unite Technology

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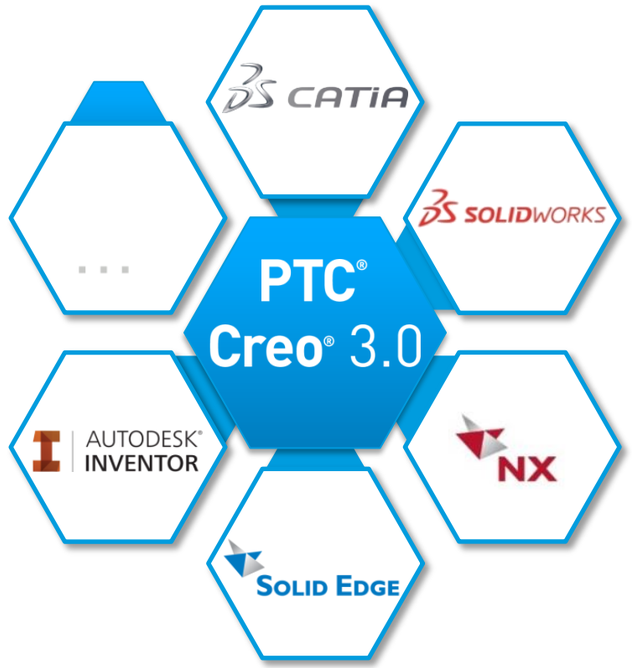
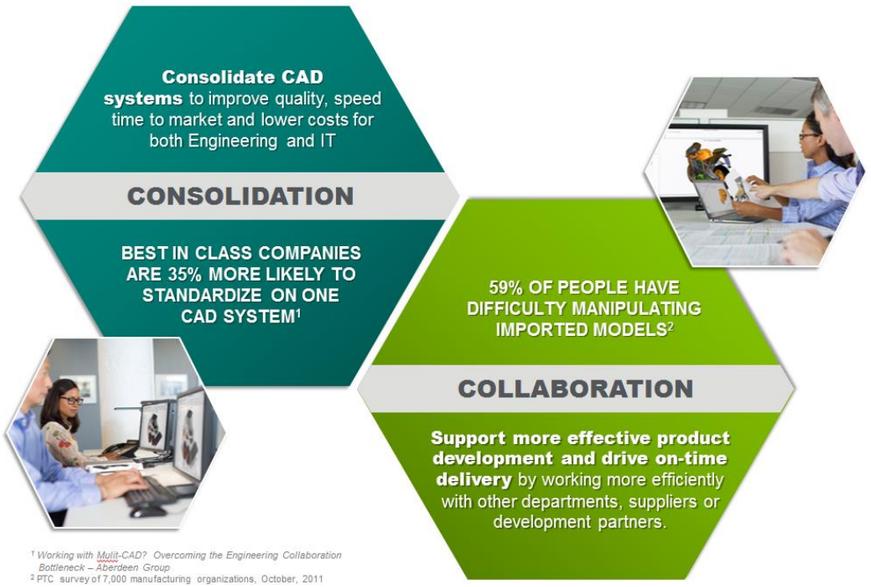
Enabling Optimal Multi-CAD Collaboration and Consolidation

- ***Import*** common 3D CAD formats
  - SolidWorks, CATIA, NX, Solid Edge, Inventor formats
- ***Open*** key 3D CAD formats
  - SolidWorks, CATIA, NX formats
- ***Automatically update*** new versions of non-PTC Creo data within your designs
- ***Save As*** key 3D CAD formats
  - SolidWorks, CATIA, NX formats





[1] Working with Multi-CAD? Overcoming the Engineering Collaboration Bottleneck – Aberdeen Group
[2] PTC survey of 7,000 manufacturing organizations, October, 2011

How Unite Technology Can Help You

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Consolidate CAD systems to improve quality, speed time to market and lower costs for both Engineering and IT

CONSOLIDATION

BEST IN CLASS COMPANIES ARE 35% MORE LIKELY TO STANDARDIZE ON ONE CAD SYSTEM[1]

59% OF PEOPLE HAVE DIFFICULTY MANIPULATING IMPORTED MODELS[2]

COLLABORATION

Support more effective product development and drive on-time delivery by working more efficiently with other departments, suppliers or development partners.

[1] *Working with Mulit-CAD? Overcoming the Engineering Collaboration Bottleneck – Aberdeen Group*

[2] PTC survey of 7,000 manufacturing organizations, October, 2011

Enable Effective Collaboration with Unite Technology

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PTC Creo 3.0 supports CAD Collaboration:

- ***Import*** common 3D CAD formats
  - SolidWorks, CATIA, NX, Solid Edge, Inventor formats

- ***Open*** key 3D CAD formats
  - SolidWorks, CATIA, NX formats

- ***Automatically update*** new versions of non-PTC Creo data within your designs

- ***Save As*** key 3D CAD formats
  - SolidWorks, CATIA, NX formats

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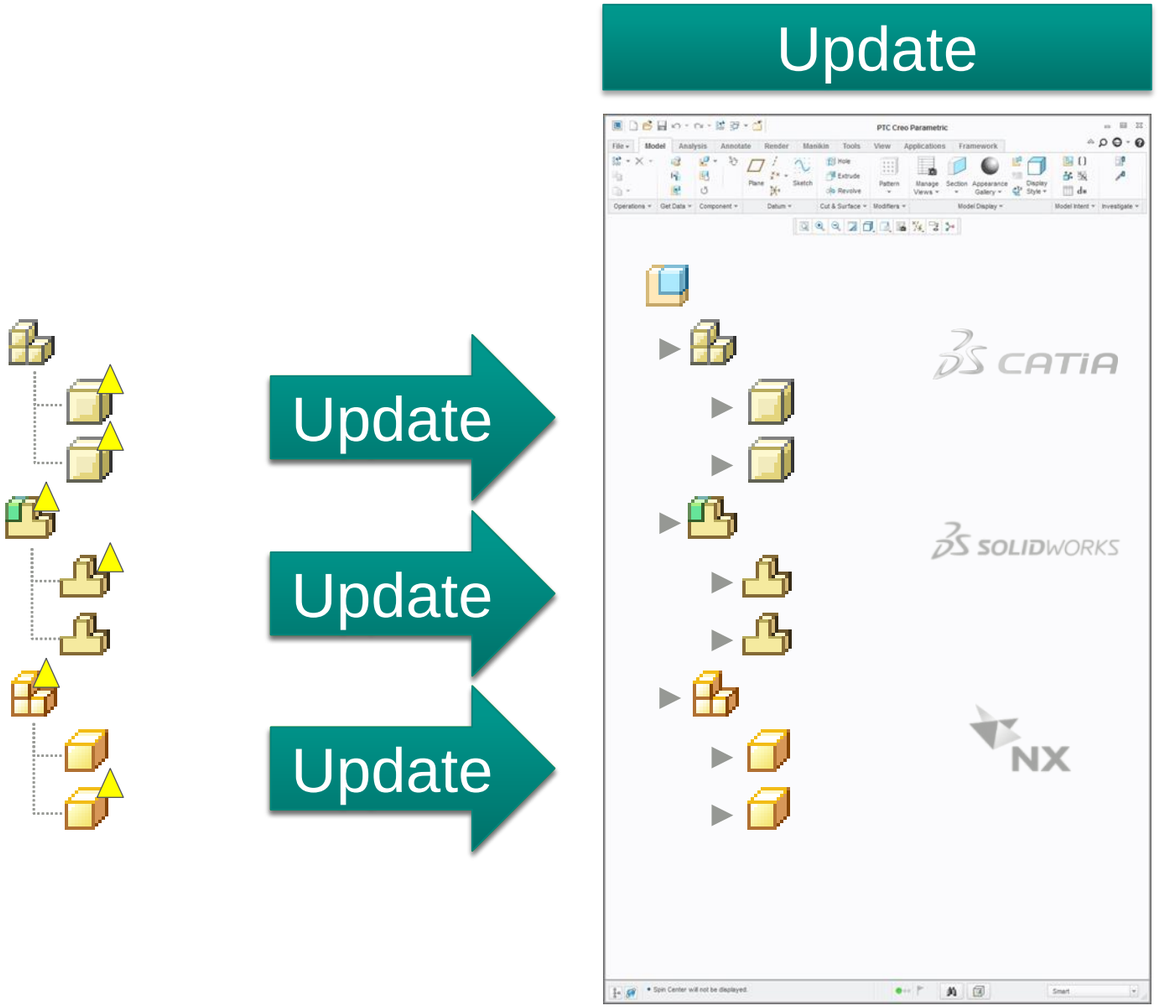
Collaboration with PTC Creo Unite Technology



With the PTC Creo Collaboration Extensions, you can easily update and incorporate changes from SolidWorks, CATIA or NX formats.

Collaboration with PTC Creo Unite Technology

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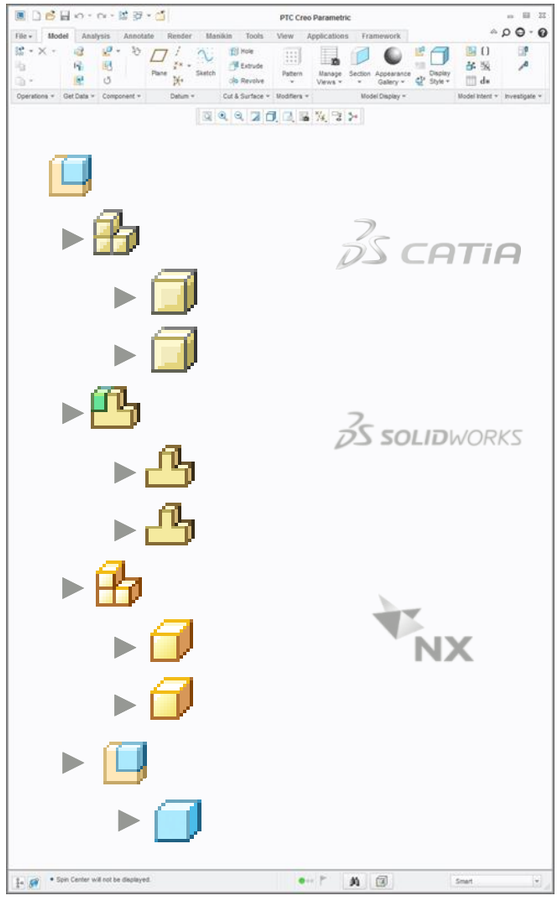
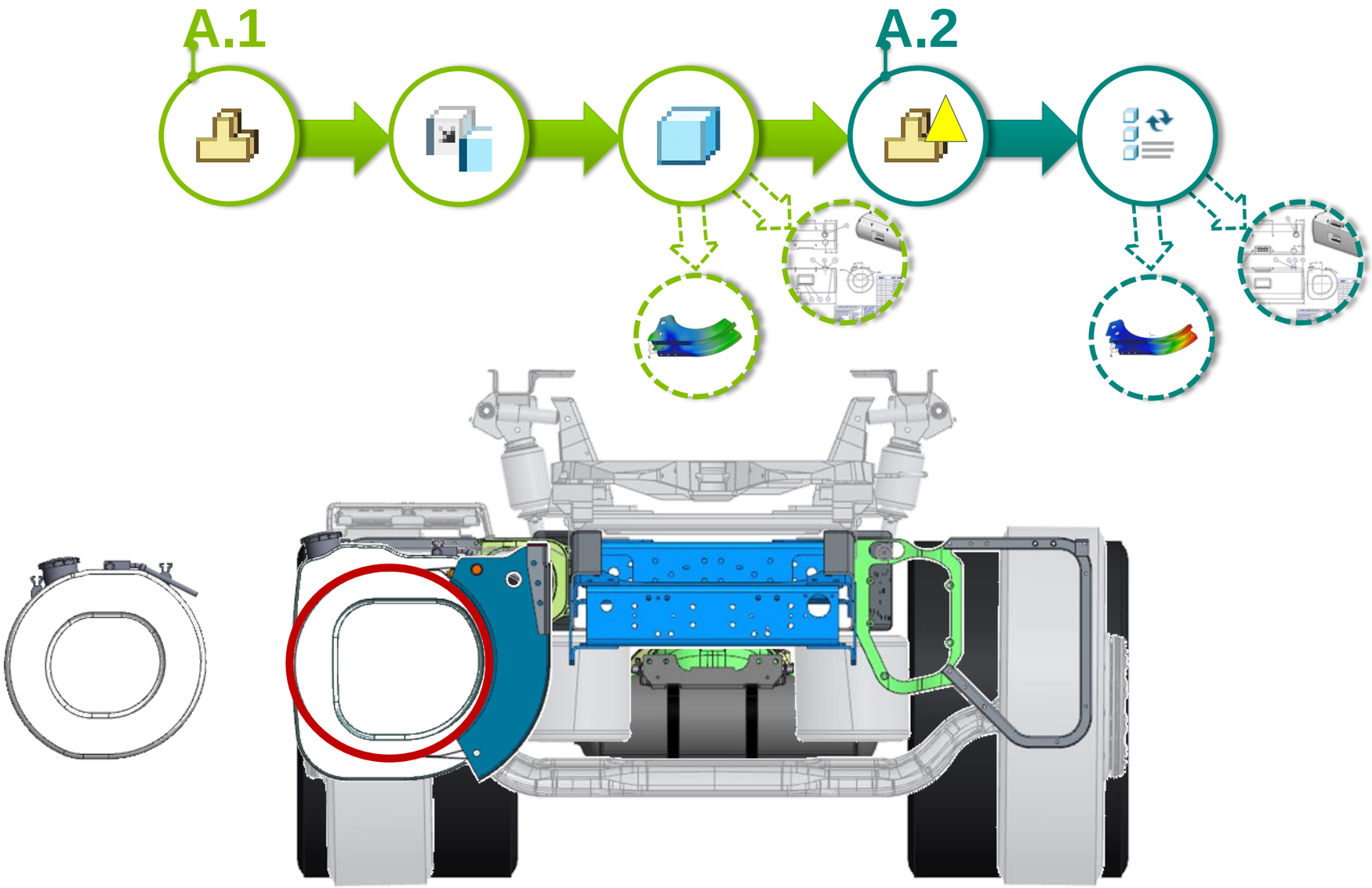
With the PTC Creo Collaboration Extensions, you can easily save your data in SolidWorks, CATIA or NX formats.

Save As



Save As

Collaboration Example with PTC Creo Unite Technology



PTC Creo Unite and Collaboration in PTC Windchill

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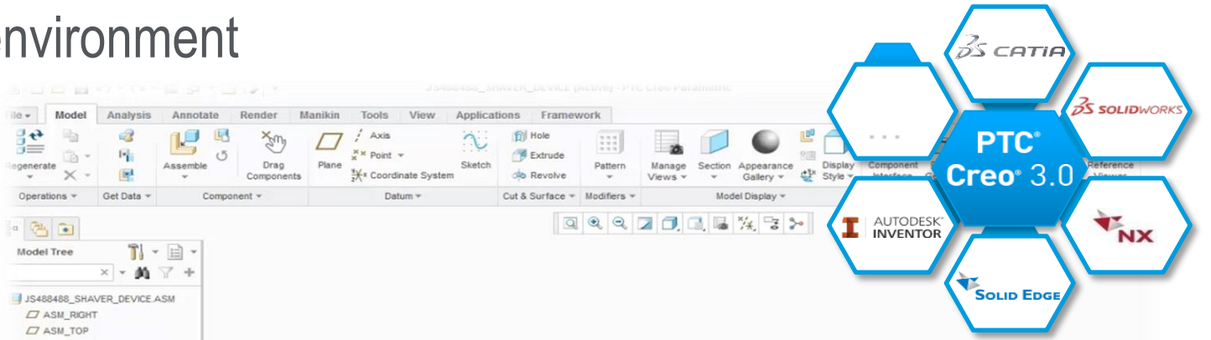
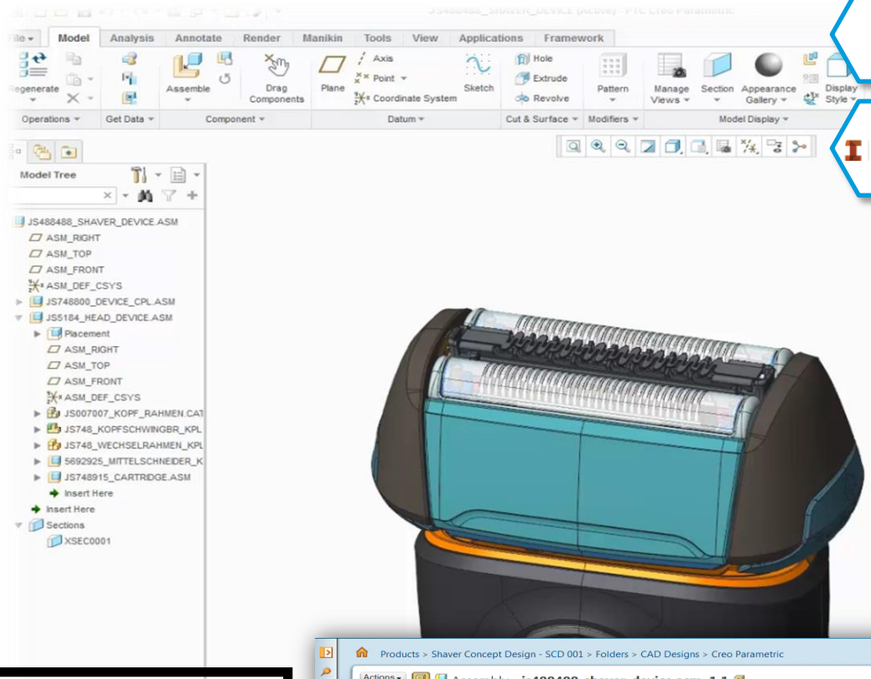
Multi-CAD Collaboration in a data managed PTC **Windchill** environment

- Leverage SolidWorks, NX or CATIA data from Windchill directly in PTC Creo
  - Directly Open (not Import) from Windchill
  - Get PDM updates via PTC Creo workspace / PTC Creo Notification Center (Note: Collaboration Extension license pre-req)





- Streamlined data management of Multi-CAD Creo Designs
  - Single CAD structure in PTC Windchill including foreign CAD documents

js488488_shaver_device.asm	JS488488_SHAVER_DEVICE.ASM	Creo
js5184_head_device.asm	JS5184_HEAD_DEVICE.ASM	Creo
js748_kopfschwingbr_kpl.sldasm	0000000566	SolidWorks
js748_wechselrahmen_kpl_nx_asm.prt	0000000580	NX
5671130-unterrahmen-kpl_nx_asm.prt	0000000575	NX
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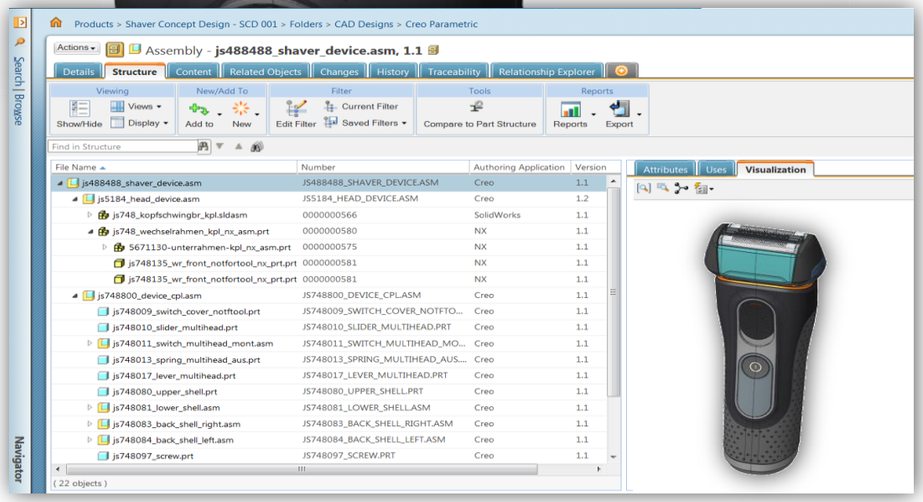
js748135_wr_front_notfortool_nx_prt.prt	0000000581	NX
js748800_device_cpl.asm	JS748800_DEVICE_CPL.ASM	Creo



PTC Creo Unite and PTC Windchill

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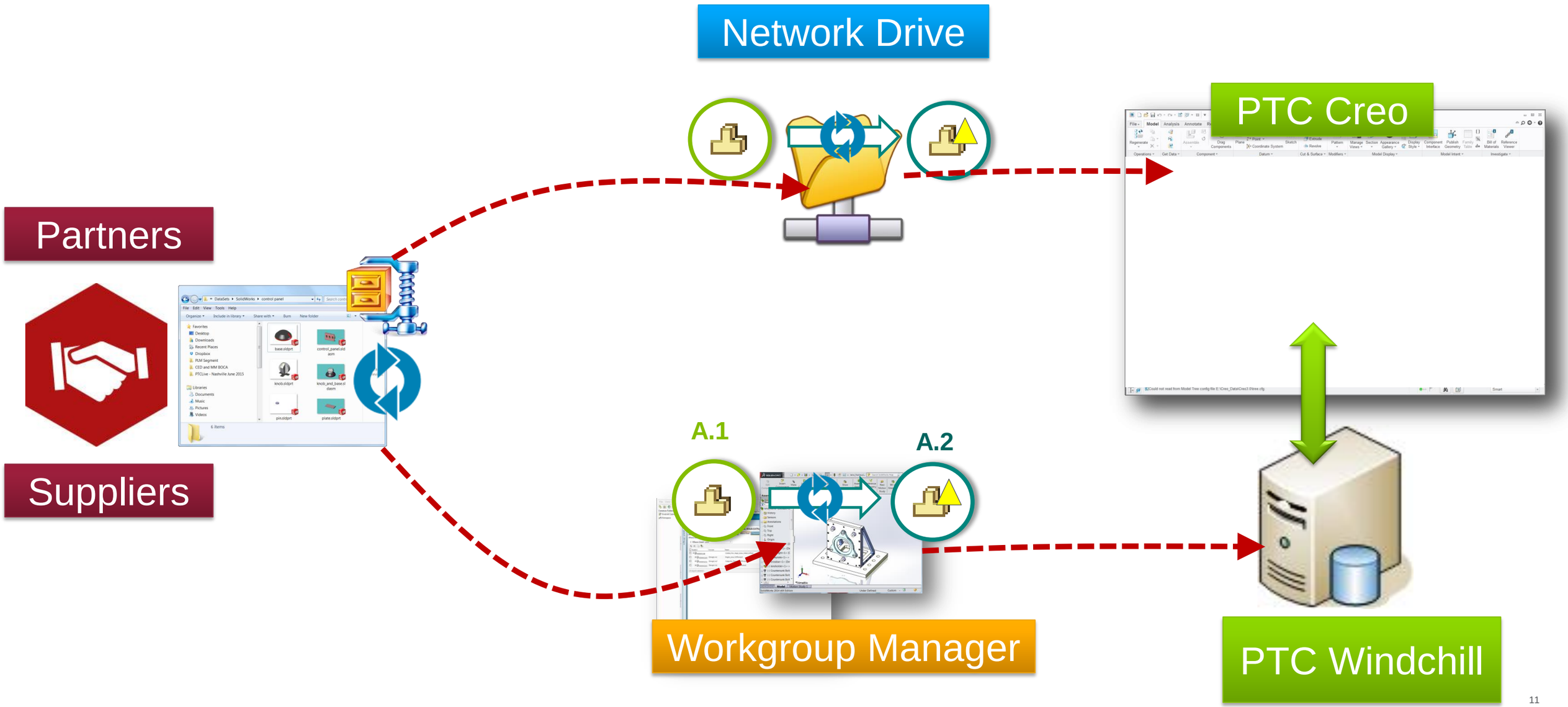
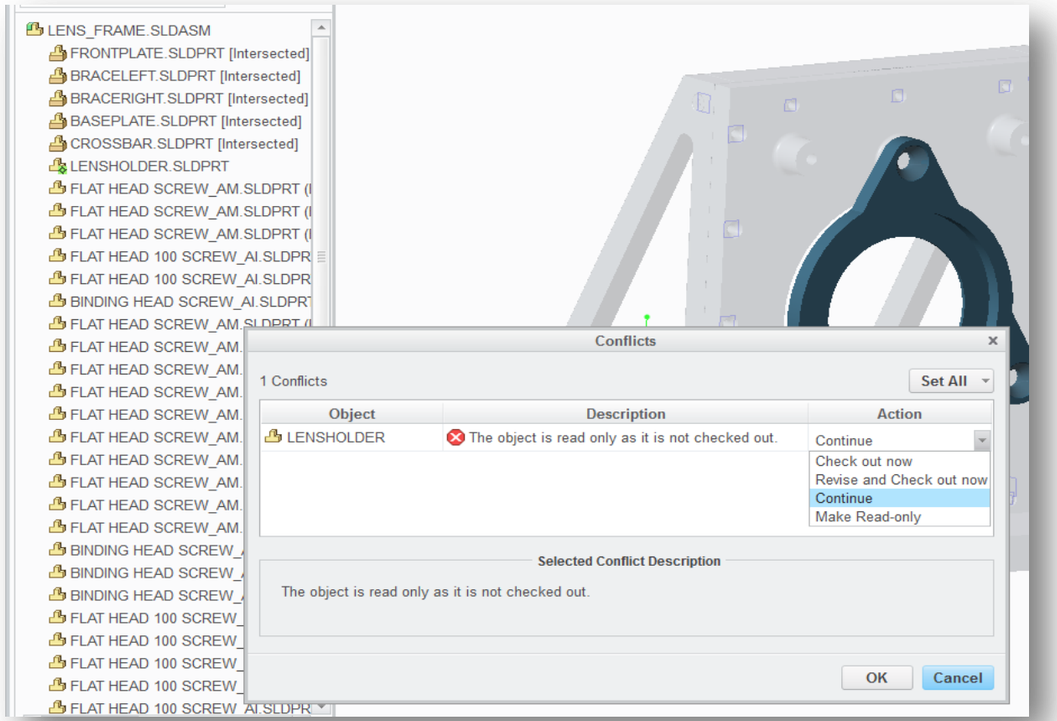
Collaborating with Suppliers/Partners providing Foreign CAD data



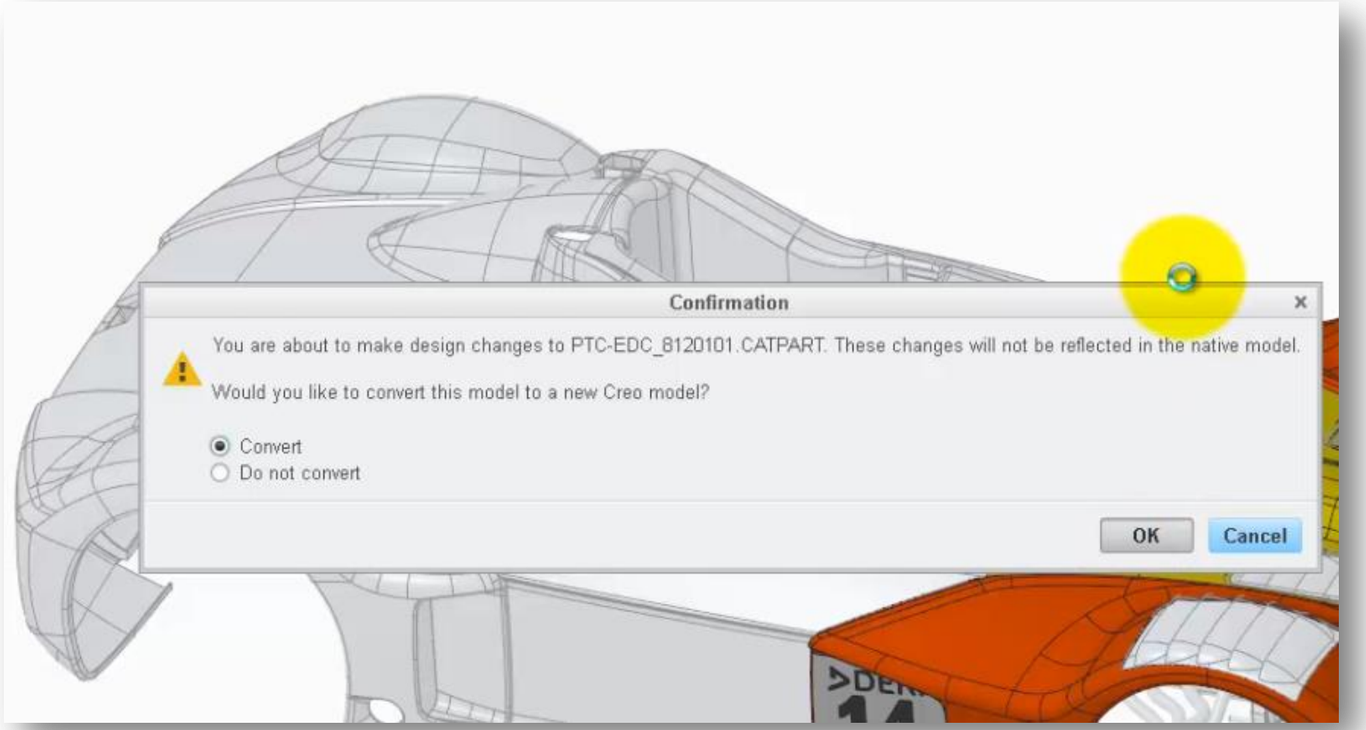
Managing changes on Foreign CAD data in PTC Creo

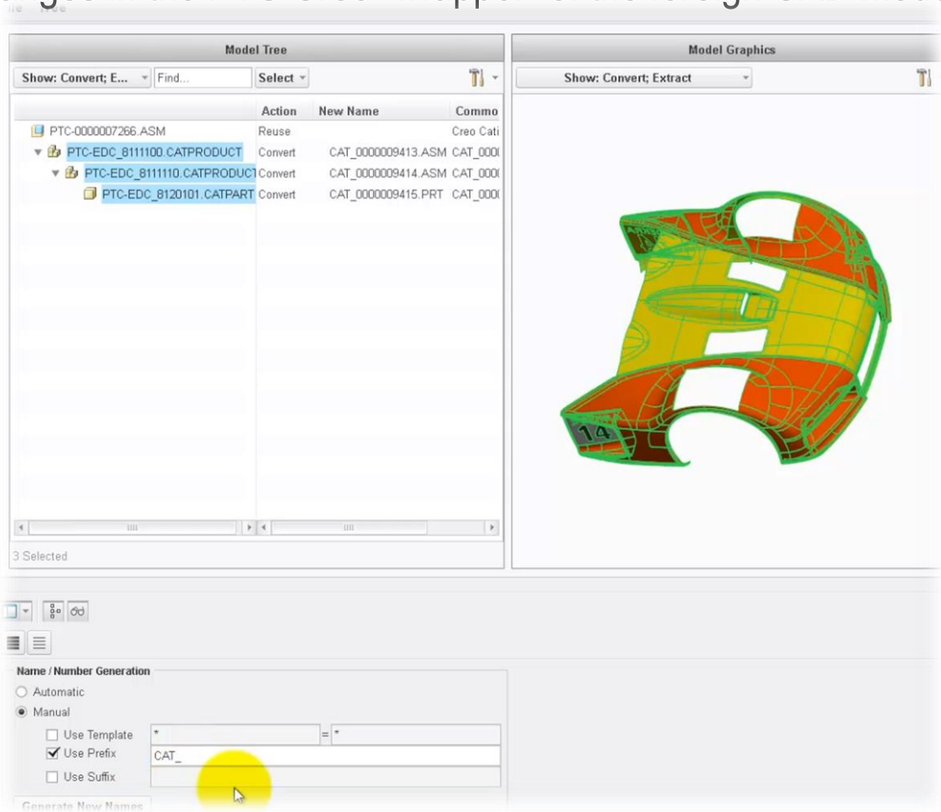
- Conflict Management options
  - All changes made in the Foreign CAD model in PTC Creo will NOT be reflected back in the (foreign) CAD model as viewed in Authoring Applications
  - For ‘What If’ scenarios in PTC Creo, use ‘Continue’ as Conflict resolution option as Check out Now will attempt to check out the model
    - Note: If you do ‘Check Out’ the foreign CAD document, make sure you perform a ‘ Cancel Checkout’ in PTC Creo (or in workspace)



Managing changes on Foreign CAD data in PTC Creo

- Converting Foreign CAD data to PTC Creo
  - Options:
    - ‘Convert’ : Choose this option if you’d like to keep modifying this model in PTC Creo going forward. Creates a TIM PTC Creo Model (with source-image link to the native CAD model.
    - ‘Do not Convert’ : Choose this option if you’d like to make temporary changes in the PTC Creo “wrapper” of the foreign CAD models





Demo Scenario: Hybrid Engine Design for 2015 Race Car model

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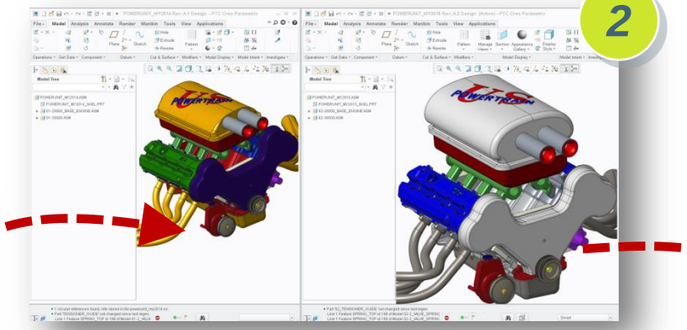
Engineering Requirements: Increased horsepower needs larger air flow and re-design of plenum and corresponding body design change

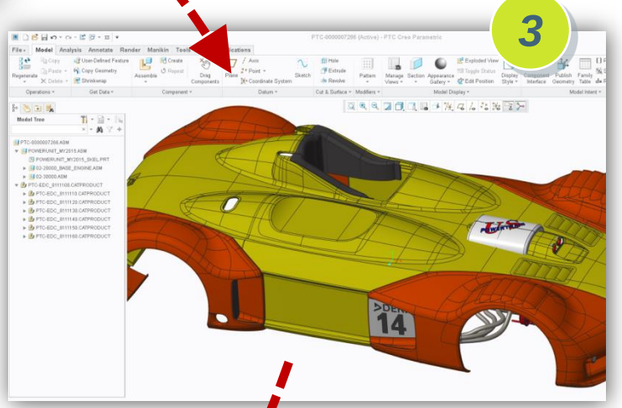
Mechanical Engineer

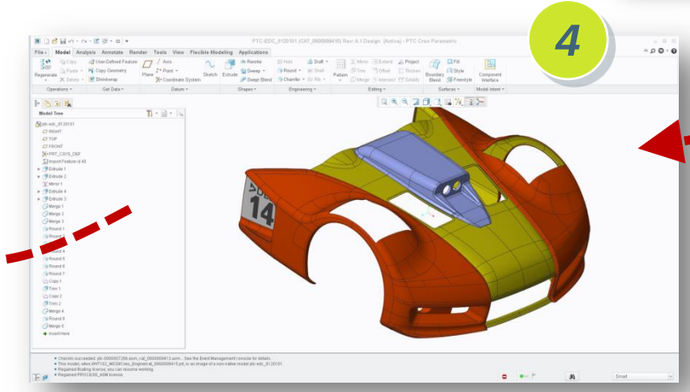
Start

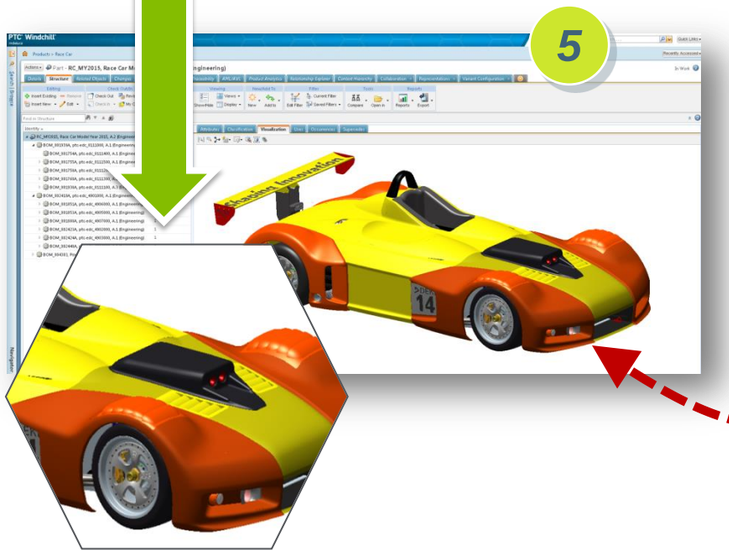
1. Setup 2015 Race Car Product Structure
2. Re-design Engine in Creo to new requirements
3. Assemble Body (CATIA) and new Engine in Creo
4. Propose changes to Body in Creo to address clash
5. Complete 2015 Race Car Product Engineering

End









PTC Creo Unite and PTC Windchill

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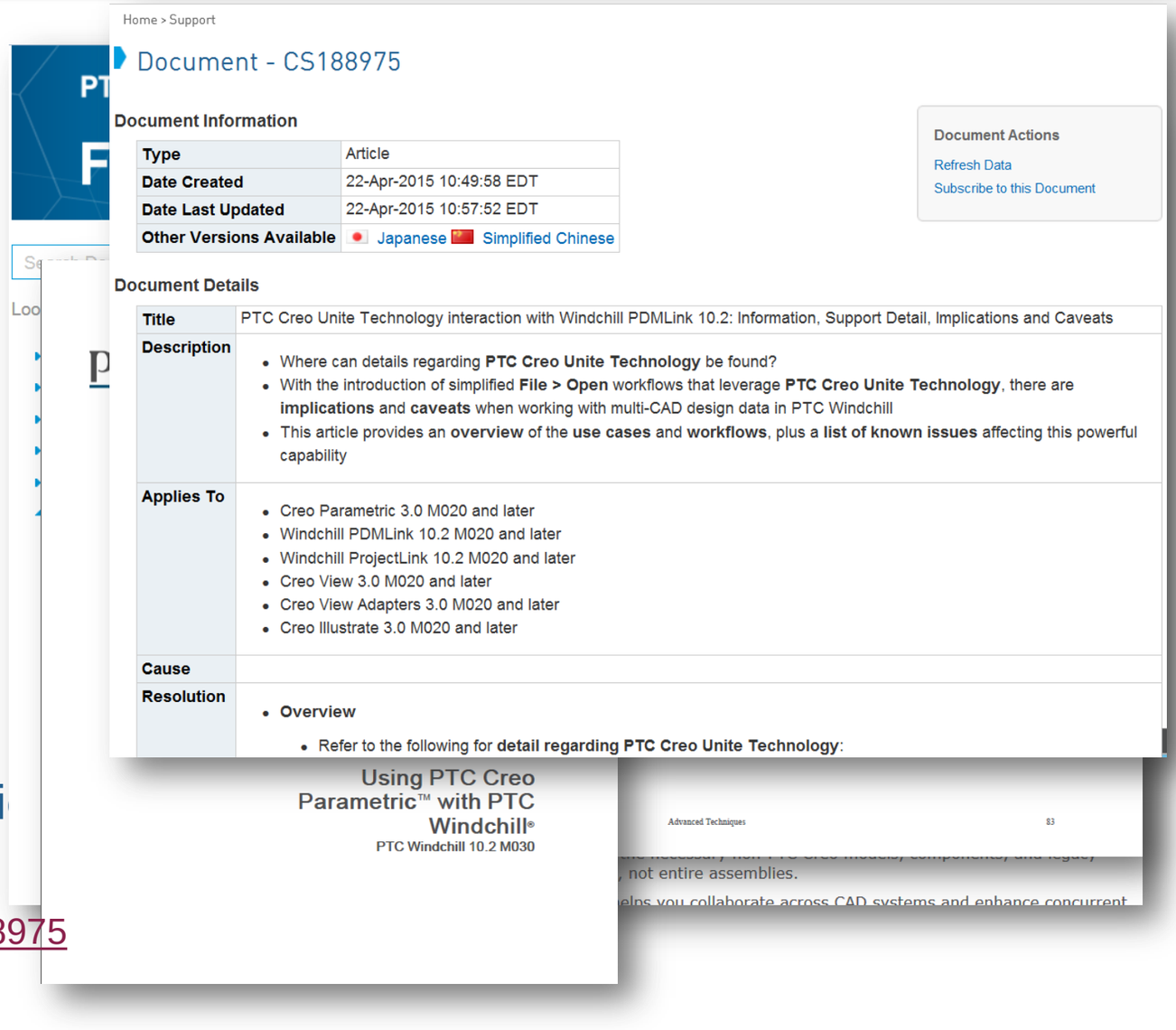
Where to get more information….

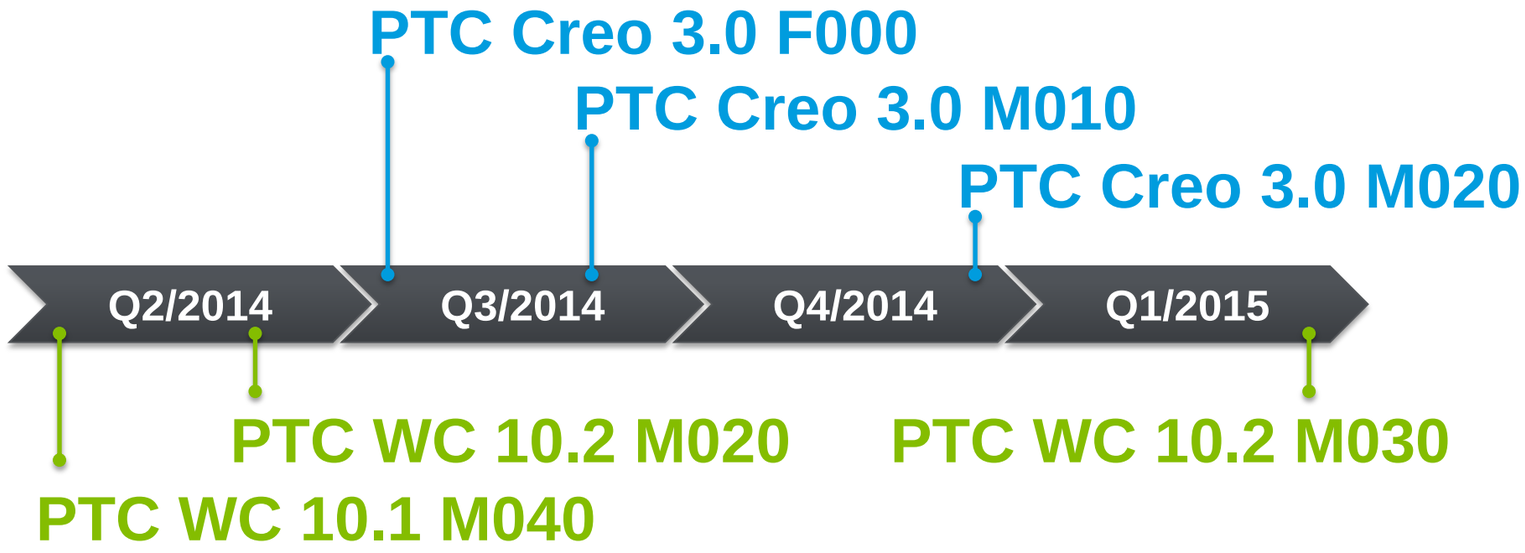
- PTC Creo Parametric Help Center
  http://help.ptc.com/creo_hc/creo30_pma_hc/usascii/

- Using PTC Creo Parametric with PTC Windchill
  https://support.ptc.com/view?im_dbkey=157383

- **CS188975**: PTC Creo Unite Technology interacti
  Support Detail, Implications and Caveats
  https://support.ptc.com/appserver/cs/view/solution.jsp?n=CS188975



PTC Creo 3.0 Unite Technology timeline & compatibility



- Availability of Unite Technology:
  - PTC Creo 3.0 F000:
    - SolidWorks, CATIA, NX & Inventor Import
    - SolidWorks, CATIA & NX Update and Save As
  - PTC Creo 3.0 M010:
    - SolidEdge Import
  - PTC Creo 3.0 M020:
    - Simplified Open, Update and Convert on-demand workflows for SolidWorks, CATIA & NX

- PTC Windchill compatibility:
  - Unite Technology available with PTC Creo 3.0 F000 and M010 will be compatible with
    - PTC Windchill 10.1 M040 and
    - PTC Windchill 10.2 M020
  - Simplified Open, Update & Convert on-demand workflows available in PTC Creo 3.0 M020 will be compatible with
    - PTC Windchill 10.2 M030

Collaboration with PTC Creo Unite & with PTC Windchill

PTC Creo Unite Technology enables Superior Collaboration

- Update and Save As Key 3D CAD Formats
- Build Better Designs
  - Start collaborating between Multi-CAD design teams early
  - Design in Context of Multi-CAD assemblies with confidence
  - Build design intent across 3D CAD formats easily
  - Keep all models updated
- Complete Enterprise Process Coverage
  - Build associative drawings
  - Build associative structural, thermal, dynamic analyses
  - Build Multi-CAD modular product architecture
  - Full support of downstream manufacturing and documentation processes

- Your feedback is valuable
- Don’t miss out on the chance to provide your feedback
- Gain a chance to win an instant prize!
- Complete your session evaluation now

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