

TCI – 3DEXPERIENCE Teamcenter Integration

T-Systems PLM Applications

T Systems

Let's power
higher performance



About T-Systems

T Systems

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T-Systems – Trusted Partner in Digital Transformation



Advisory



Security



Cloud
Services

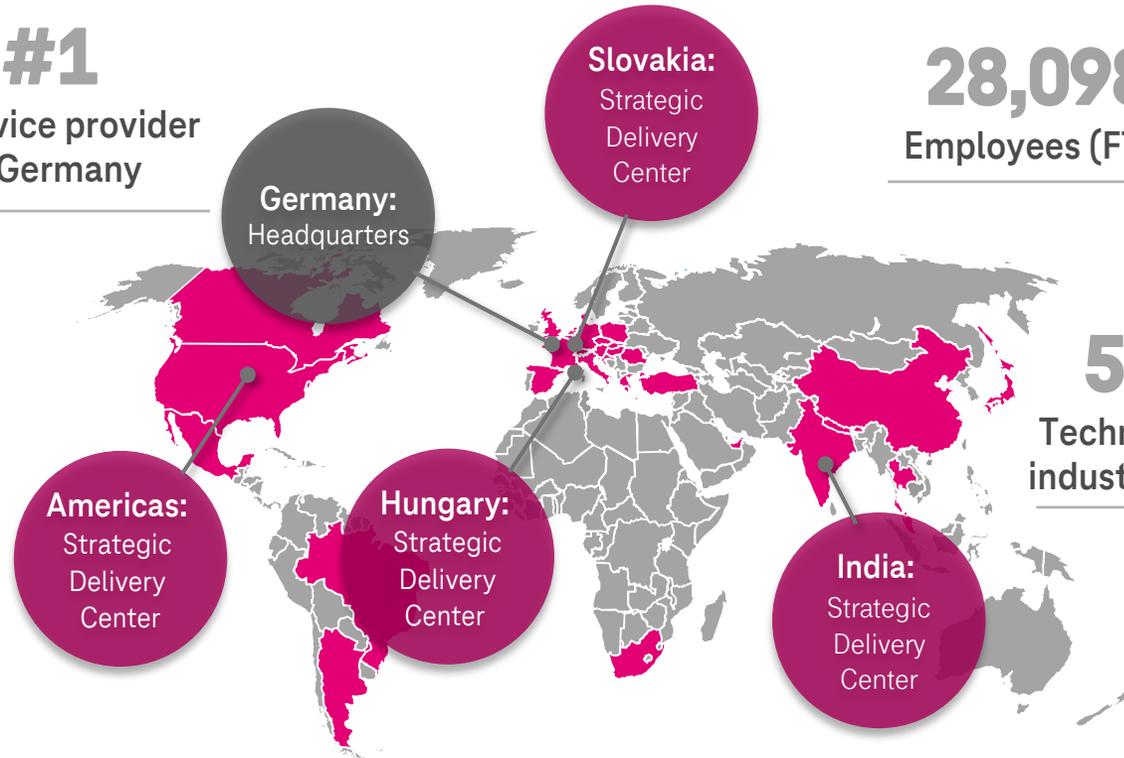
1010

Digital
Enabler

#1
IT Service provider
in DACH

20
Countries

#1
IT Service provider
in Germany



28,098
Employees (FTE)

500+
Technology and
industry partners

700+
PLM Experts

20+
Years of
experience in PLM

100+
PLM Success Stories

T-Systems PLM Solutions

**CUSTOMER
REFERENCES**



More than 700 PLM experts in our multiple PLM Competence Centers

T-SYSTEMS PLM OFFERING



**STRONG
PARTNERSHIPS**



T-Systems PLM Solutions – Partnerships

Siemens PLM Software

Technology
Partner

Digital Industries
Software

The Siemens logo, consisting of the word "SIEMENS" in a bold, teal, sans-serif font, centered within a white square with a thin black border.

- Development Partnership
- Reseller Agreement for CMI
- Service Agreement
- JT Open Partner

Dassault Systèmes



- CAA V5 Gold Partner
- DS V6 apps Community Partner
- Service and Integration Agreement

The Product

3DEXPERIENCE Teamcenter Integration

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XCI – 3DEXPERIENCE PDM Integration Product Family

Unified access to 3DEXPERIENCE

- A dedicated solution to connect 3DEXPERIENCE to another PLM system
- Functional enhancements from all integrated PLM systems contribute to the solution
- The access to 3DEXPERIENCE is independent from the integrated PLM-system
- Combines specialized functionality within a common integration platform
- T-Systems is certified by Dassault Systems as Application Partner for the XCI integration software

Unified access to 3DEXPERIENCE (XPDM, REST, CAA, batch management, file cache, web client, operating, mapping db)

XCI
common process engine
common integration
infrastructure

TCI
access to
Teamcenter

ACI
access to
Aras Innovator

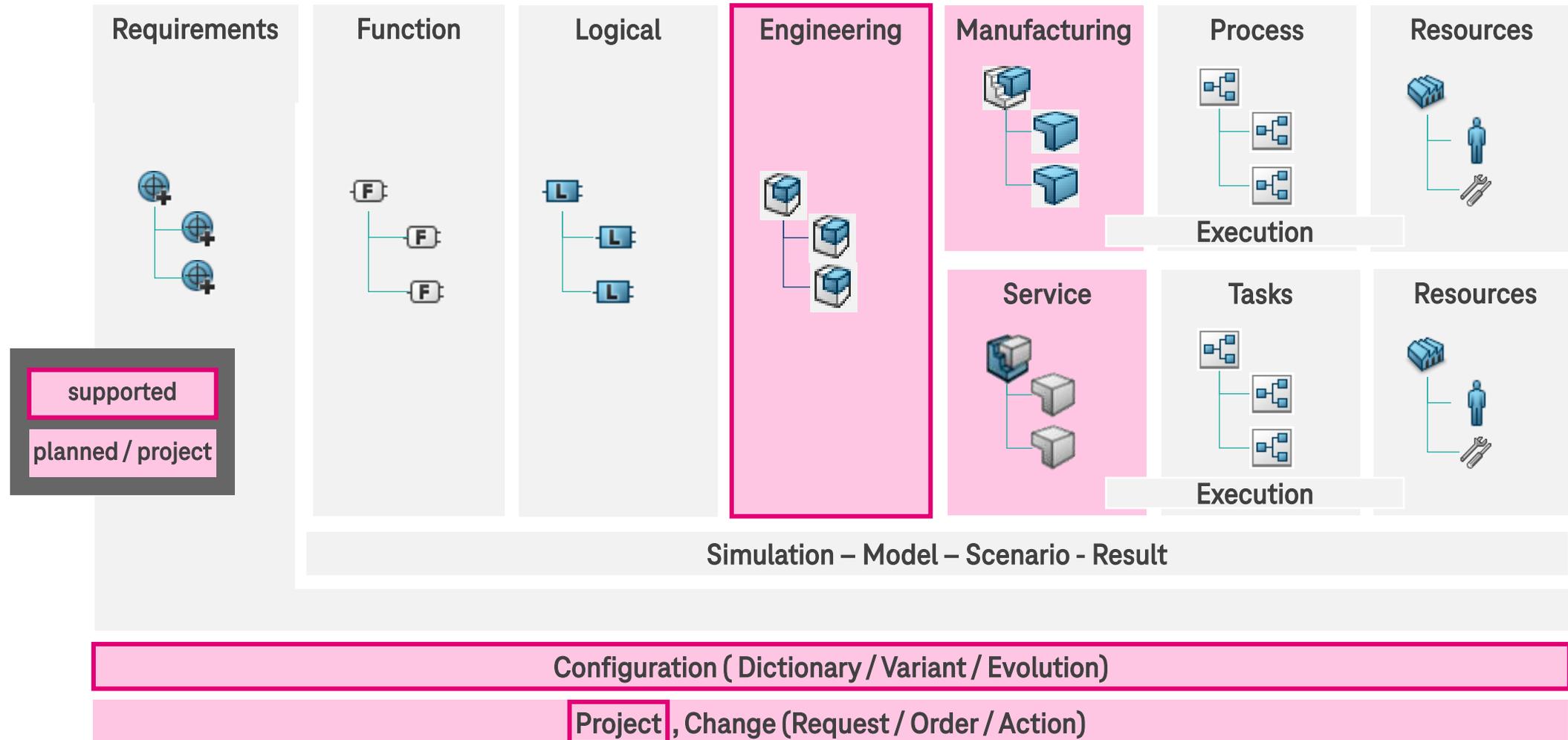
CCI
access to
CIM Database

access to
other PLM
systems ⁽¹⁾

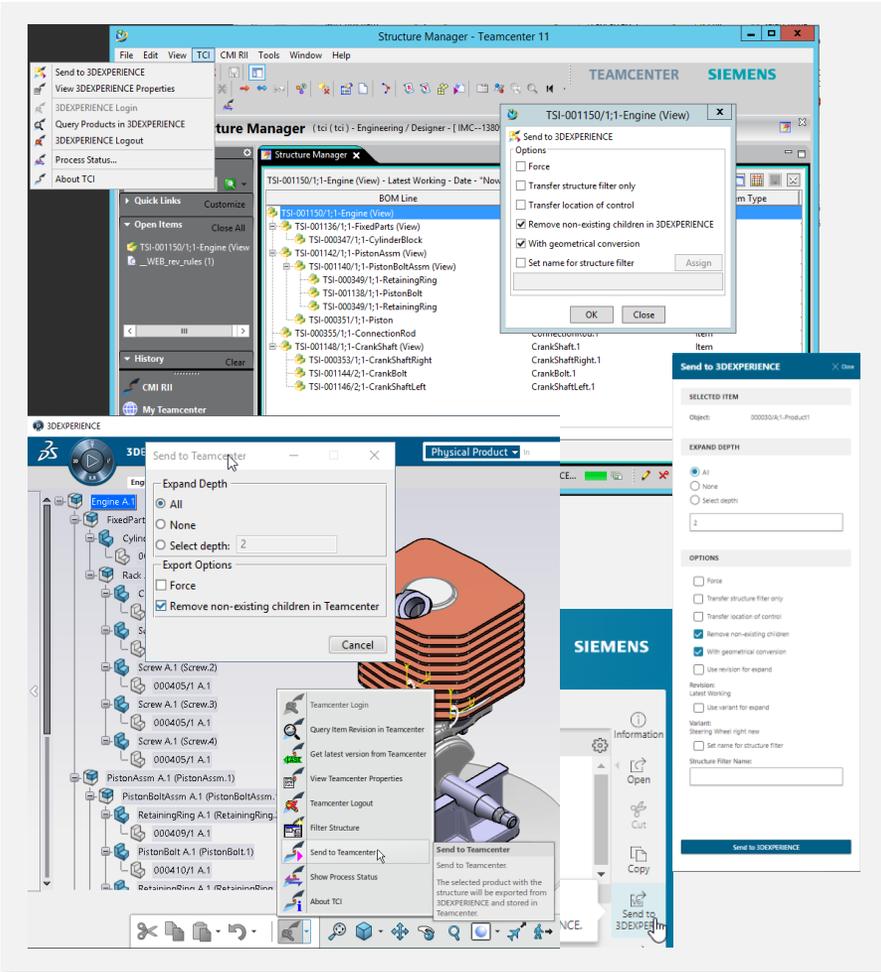
⁽¹⁾ As project

TCI – 3DEXPERIENCE Teamcenter Integration

Supported 3DEXPERIENCE domains



TCI – 3DEXPERIENCE Teamcenter Integration Overview



3DEXPERIENCE Teamcenter Integration (TCI)

TCI integrates asynchronously in the background

- Serves coexistence, cross-system border collaboration and migration scenarios
- Configurable for custom object, life cycle, revision, attribute mapping
- Integrates CAD data format conversion in both directions
- Supports exchange of configuration data (effectivity) and filtering
- Offers flexible support of customized data models
- Scheduled and triggered data transfer
- Compatible with TcIC (CATIA Manager) and CMI data model in Teamcenter

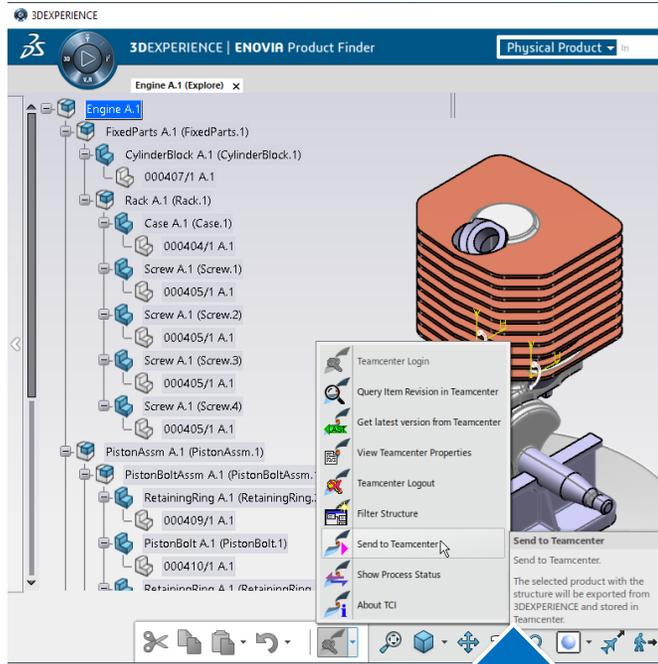
The integration is enhanced with interactive and synchronous functionality

- Client UI for Teamcenter Rich Client, AWC and 3DEXPERIENCE Rich Client
- Administrative functionality in TCI web client

More information is available on: [3DEXPERIENCE Teamcenter Integration](#)

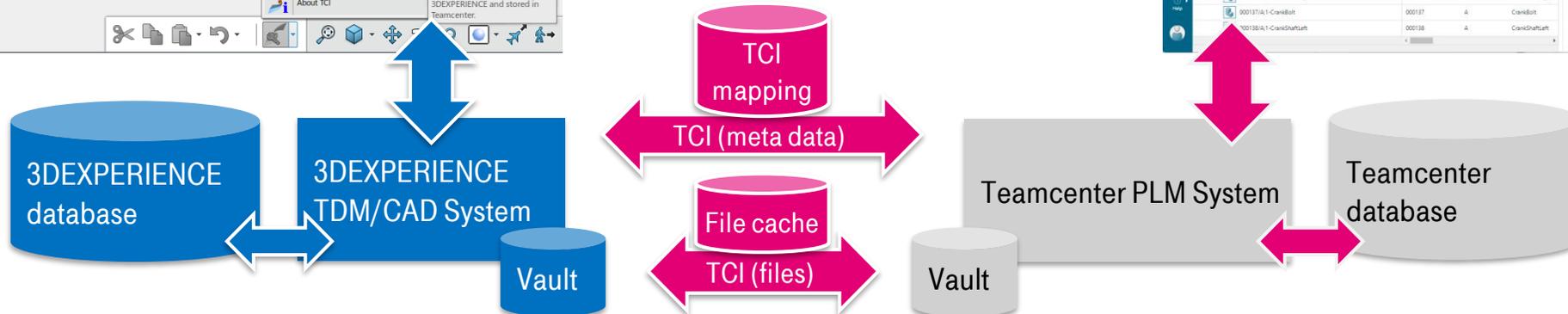
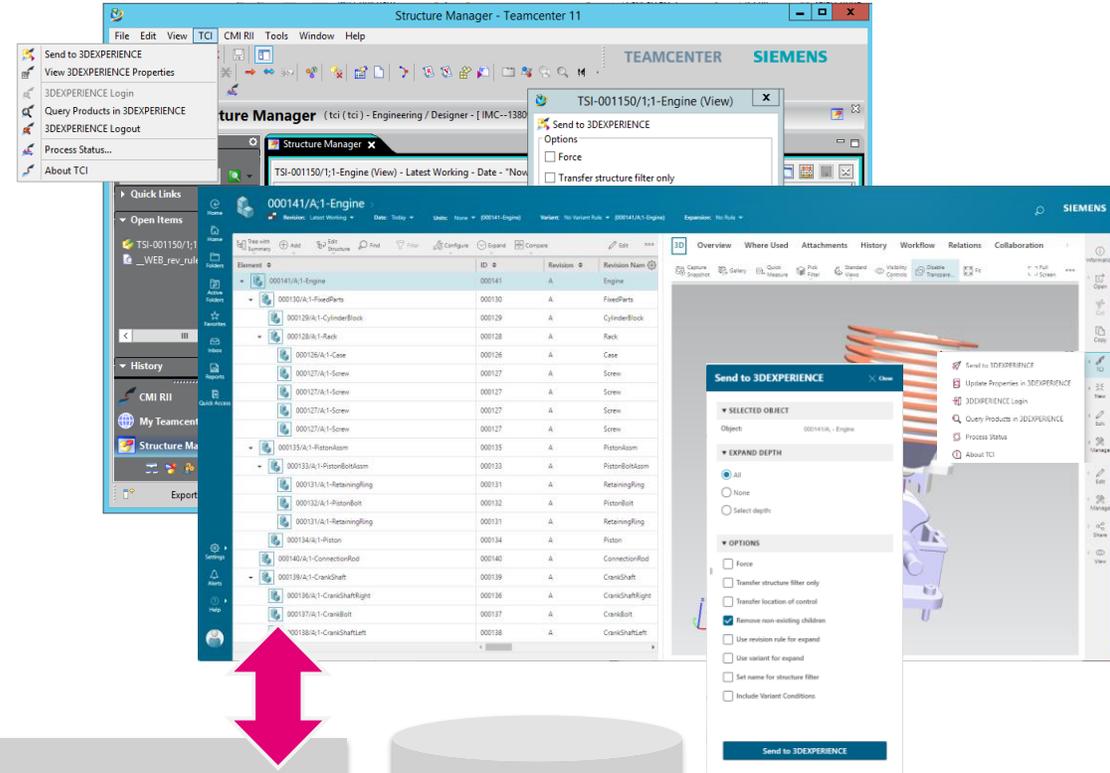
TCI – 3DEXPERIENCE Teamcenter Integration

Basic Data Exchange Concept

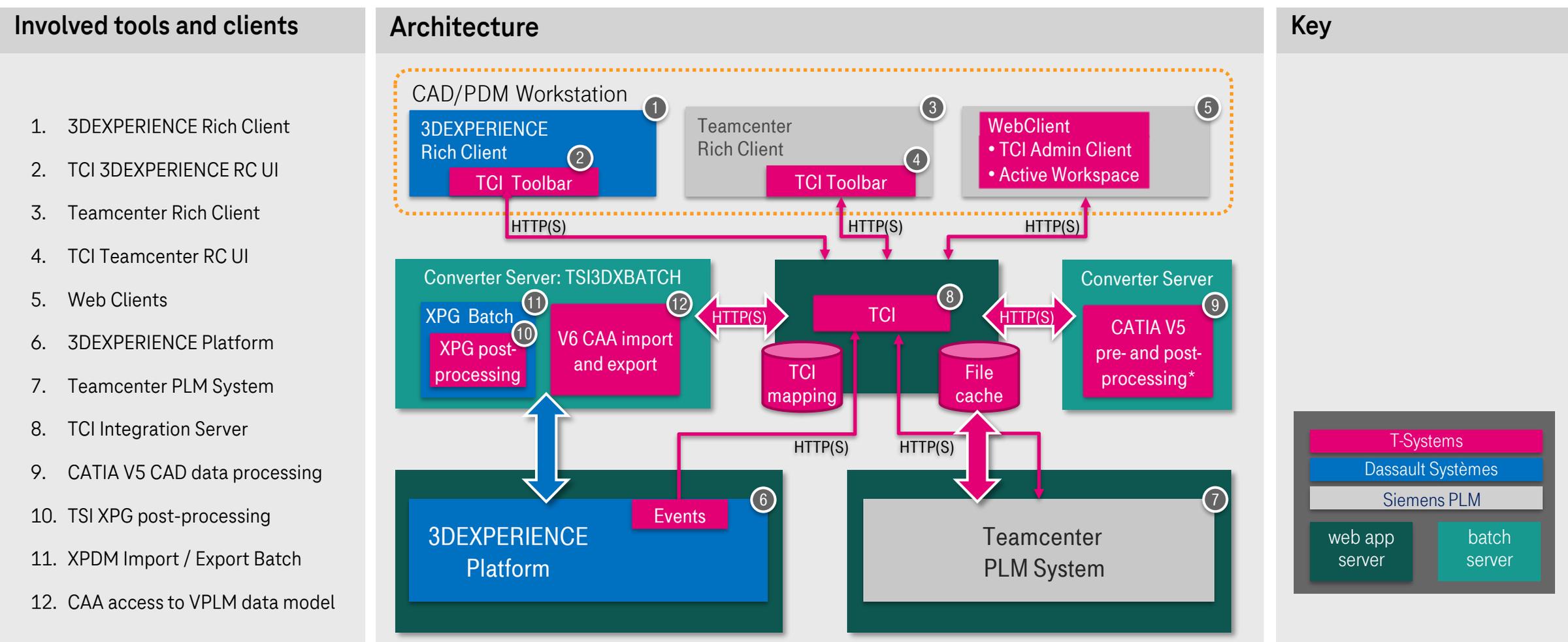


Mapping and Update of:

- Properties
- Revisions
- Product Structures
- V6 Maturity / TC Status
- V6 Workspace / TC Group



TCI – 3DEXPERIENCE Teamcenter Integration Extended XPDM Architecture for Teamcenter



TCI – 3DEXPERIENCE Teamcenter Integration Administration Client

The screenshot displays the TCI Administration Client interface. At the top, there are navigation tabs: About, Teamcenter, 3DEXPERIENCE, LIST, Process, Monitor, and Tools. A secondary menu is open, showing 'Operations Persistent', 'Configuration', and 'Job'. A 'Send to Teamcenter' dialog box is open, showing options for 'Expand Depth' (All, None, Select depth) and 'Export options' (Force, Remove non-existing children in Teamcenter). A pink arrow points from the 'send to Teamcenter' button in the list to the dialog box.

Navigation tabs (from left to right): System Information, Access to Teamcenter, Access to 3DEXPERIENCE, List Processing, Process Management, System Monitoring, Cache and Configuration, Initiate Data Transfers.

TCI · 3DEXPERIENCE Information

- prd-86726912-00002829 A.1 Engine
- prd-86726912-00002821 A.1 FixedParts
- + prd-86726912-00002807 A.1 CylinderBlock
- + prd-86726912-00002820 A.1 Rack
- + prd-86726912-00002828 A.1 Cylinder
- + prd-86726912-00002817 A.1 ConnectionRod

Name	Value
ID	25060.11264.26307.21193
Type	VPMReference
Name	prd-86726912-00002817
Revision	A.1
Vault	vplm

TCI – 3DEXPERIENCE Teamcenter Integration

Processed Teamcenter Objects

Data objects

- Item
- Item Revision
- Datasets with Named References
- Forms (e.g., IMRF, IRF)
- Folders

Product structures and relations

- BOM View, BOM View Revision, PS-Occurrence
- TC 2007: BOM Line, BOM Window
- IMAN_specification, IMAN_Rendering (JT)

Configuration*

- Revision Rule, Stored Option Set
- Variant Rule
- Options, default Options
- Variant Conditions

Cross system Change processes*

- Change objects (e.g., ECN, ECO)

*in customer specific implementation projects

TCI – 3DEXPERIENCE Teamcenter Integration

Processed 3DEXPERIENCE Objects

Data objects

- Physical Product
- 3DPart
- Shapes
- Drawings
- Documents
- Bookmarks

Product structures and relations

- Physical Product instances
- 3DShape instances
- Drawing instances
- Document instances

Configuration*

- Model and Hardware Product
- Configuration Features
- Configuration Options
- Product Configuration
- Effectivity

Cross system Change processes*

- Change Action

*in customer specific implementation projects

TCI – 3DEXPERIENCE Teamcenter Integration

Access to Teamcenter

SOA Client Framework

- Follows the Teamcenter rule tree
- Access rules can be configured at the Teamcenter server specifically for the SOA client

File access

- SOA file APIs (uses Teamcenter File Cache Client)
- No direct data base access (e.g. via SQL)
- No Teamcenter server extensions, e.g. IDK Server customization
- Specific policy settings are supported!

TCI – 3DEXPERIENCE Teamcenter Integration

Supported File Formats

Supported file formats

- 3DEXPERIENCE to Teamcenter
 - 3D: CATPart, 3DXML, JT, STEP, CATProduct
 - 2D: CATDrawing, DWG, 2D PDF
 - Any other non-CAD formats
- Teamcenter to 3DEXPERIENCE
 - 3D: CATPart, CATProduct, CATIA V4 model, JT*
 - 2D: CATDrawing
 - Any other 3D CAD format*
 - Any other non-CAD formats

*3rd party converter required

TCI – 3DEXPERIENCE Teamcenter Integration

Supported Software Versions

Continuously developed product

- Support of the three latest 3DEXPERIENCE Platform releases
- Support of the three latest Teamcenter releases
- Older releases on request (down to 3DEXPERIENCE R2015x and Teamcenter 10.2)
- Teamcenter releases
 - 11, 12, 13, 14
- 3DEXPERIENCE Platform releases
 - R2020x, R2021x, R2022x, R2023x, 2024x
 - 3DEXPERIENCE Cloud

How to start?

3DEXPERIENCE Teamcenter Integration

T Systems

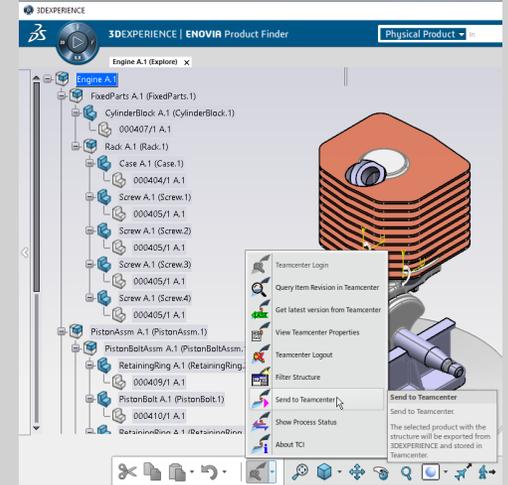
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Teamcenter – CATIA V6 / 3DEXPERIENCE Integration (TCI) Express Installation Package

10-days Express Installation Package



- ✓ Installation and configuration in an existing Teamcenter environment.
- ✓ Basic configuration of T-Systems' TCI and Teamcenter.
- ✓ Initial test of the environment.
- ✓ Training on the environment and methodology of Teamcenter and TCI.



Easy Configuration & Installation
→ either by the customer or with the help of T-Systems experts.



T-Systems Product Support
with product and industry expertise
are available whenever needed

Customer References

3DEXPERIENCE Teamcenter Integration

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XCI – 3DEXPERIENCE PLM-Integration

Key References



Automotive OEM



TCI –3DEXPERIENCE Teamcenter Integration

United Kingdom, in use since 2014, company license

Full scale migration of configured vehicle structures and back-propagation of changes

BVLGARI

Jewelry Manufacturer

ACI –3DEXPERIENCE Aras Innovator Integration

Valenza in Italy, in use since 2016, one server license, 10 user licenses

3DEXPERIENCE design structures are updated to a marketing BOM in Aras Innovator



Mahindra

Automotive OEM

TCI –3DEXPERIENCE Teamcenter Integration

India, in use since 2022, one server license

Full scale migration of configured vehicle structures with classification



翌耀科技

Easun Technology

CCI –3DEXPERIENCE CIM Database Integration

China, in use since 2022, one server license

Export of 3DEXPERIENCE product structures and import as CIM DB Document Structures with Part creation. Export of various file formats, also for visualization in CMI DB

Release Plan

3DEXPERIENCE Teamcenter Integration

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TCI – 3DEXPERIENCE Teamcenter Integration Roadmap 2024

V 3.10 – Supported PDM System Versions

Teamcenter 10.1 (4-tier) ⁽²⁾

Teamcenter 11.x (4-tier)

Teamcenter 12.x (4-tier)

Teamcenter 13.x (4-tier)

Teamcenter 14.x (4-tier)

3DEXPERIENCE R2019x⁽²⁾, R2020x⁽²⁾

3DEXPERIENCE R2021x

3DEXPERIENCE R2022x

3DEXPERIENCE R2023x

3DEXPERIENCE R2024x

3DEXPERIENCE Cloud

⁽¹⁾ With availability

⁽²⁾ On demand

V 3.10 – Selected Features

- TCI plugin for Teamcenter Active Workspace
- Support custom attribute export via 3DEXPERIENCE web-services
- Improvements in TCI admin client:
 - List processing
 - UI improvements

Q1 2024

Q2 2024

Q3 2024

Q4 2024

TCI – 3DEXPERIENCE Teamcenter Integration Roadmap 2023

V 3.9.0 – Supported PDM System Versions

Teamcenter 10.1 (4-tier) ⁽²⁾

Teamcenter 11.x (4-tier)

Teamcenter 12.x (4-tier)

Teamcenter 13.x (4-tier)

Teamcenter 14.x (4-tier)

3DEXPERIENCE R2015x ⁽²⁾, R2016x⁽²⁾, R2017x⁽²⁾, R2018x⁽²⁾,
R2019x⁽²⁾, R2020x⁽²⁾

3DEXPERIENCE R2021x

3DEXPERIENCE R2022x

3DEXPERIENCE R2023x

3DEXPERIENCE Cloud

⁽¹⁾ With availability

⁽²⁾ On demand

V 3.9.0 – Selected Features

- Structure Compare
- Configuration Transfer Teamcenter to 3DEXPERIENCE
- Add checkbox for split transfer to 3DX Rich Client plugins
- Create missing instances in XpgPostprocessing (OnPremise)
- Add effectivity export for step export (Cloud)
- Open in 3DEXPERIENCE web client
- Validation on export from PLM

Q1 2023

Q2 2023

Q3 2023

Q4 2023