ACI – 3DEXPERIENCE
Aras Innovator Integration

T-Systems PLM Applications

·T· · Systems·

Let's power
higher performance

About T-Systems

T-Systems – Trusted Partner in Digital Transformation

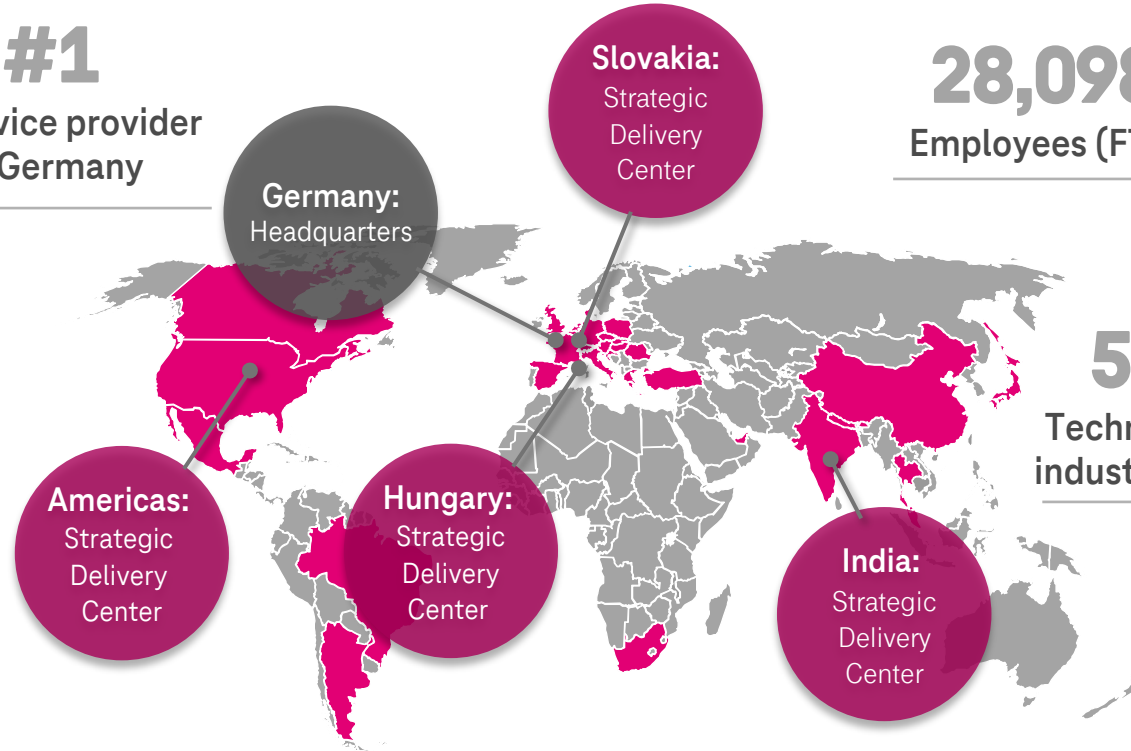**Advisory** **Security** **Cloud Services** **Digital Enabler**

#1
IT Service provider in DACH

20
Countries

#1
IT Service provider in Germany

Germany:
Headquarters

Slovakia:
Strategic Delivery Center

Americas:
Strategic Delivery Center

Hungary:
Strategic Delivery Center

India:
Strategic Delivery Center

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 / ACI - 3DEXPERIENCE Aras Innovator Integration

T-Systems PLM Solutions

Mercedes-Benz · Volkswagen · BMW · Porsche · Jaguar Land-Rover · Audi · AIRBUS GROUP · BOSCH · Gestamp · ZF · PREMIUM AEROTEC · GETRAG · MULTIVAC BETTER PACKAGING · LEONARDO INGENUITY AT YOUR SERVICE · KAESER KOMPRESSOREN · MEILLER · MANN+HUMMEL

More than 700 PLM experts in our multiple PLM Competence Centers

T-SYSTEMS PLM OFFERING

PLM CONSULTING
WE ADVISE YOU TOWARDS FUTURE ENGINEERING

IMPLEMENTATION
WE ENABLE YOUR BUSINESS WITH MODERN PLM PLATFORMS

APPLICATION MANAGEMENT & MODERNIZATION
WE KEEP YOUR APPLICATIONS RUNNI...

INTEGRATION AND MIGRATION
WE FACILITATE SEAMLESS PLM WITH OUR PROVEN PLM PRODUCTS

SMART ENGINEERING WITH THE DIGITAL TWIN
WE LINK YOUR DATA

PLM CLOUD
WE CLOUDIFY YOUR PRODUCT DEVELOPMENT

STRONG PARTNERSHIPS

aras corp · CONTACT Software · DASSAULT SYSTEMES · ptc · SIEMENS · SAP · CONWEAVER · Rocket

T-Systems PLM / ACI - 3DEXPERIENCE Aras Innovator Integration

T-Systems PLM Solutions
Our Partners

Aras Corp.

- Aras Business Partner
- Aras Solution Partner
- Reseller Agreement

Dassault Systèmes

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

The Product

3DEXPERIENCE Aras Innovator 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, ADK, CAA, web services, converters, file cache, web client, operating, mapping)

| **XCI** common process engine common integration infrastructure | **ACI** access to Aras Innovator | **TCI** access to Teamcenter | **CCI** access to CIM Database | access to other PLM systems [1] |

([1]) As project

ACI – 3DEXPERIENCE Aras Innovator Integration
Overview
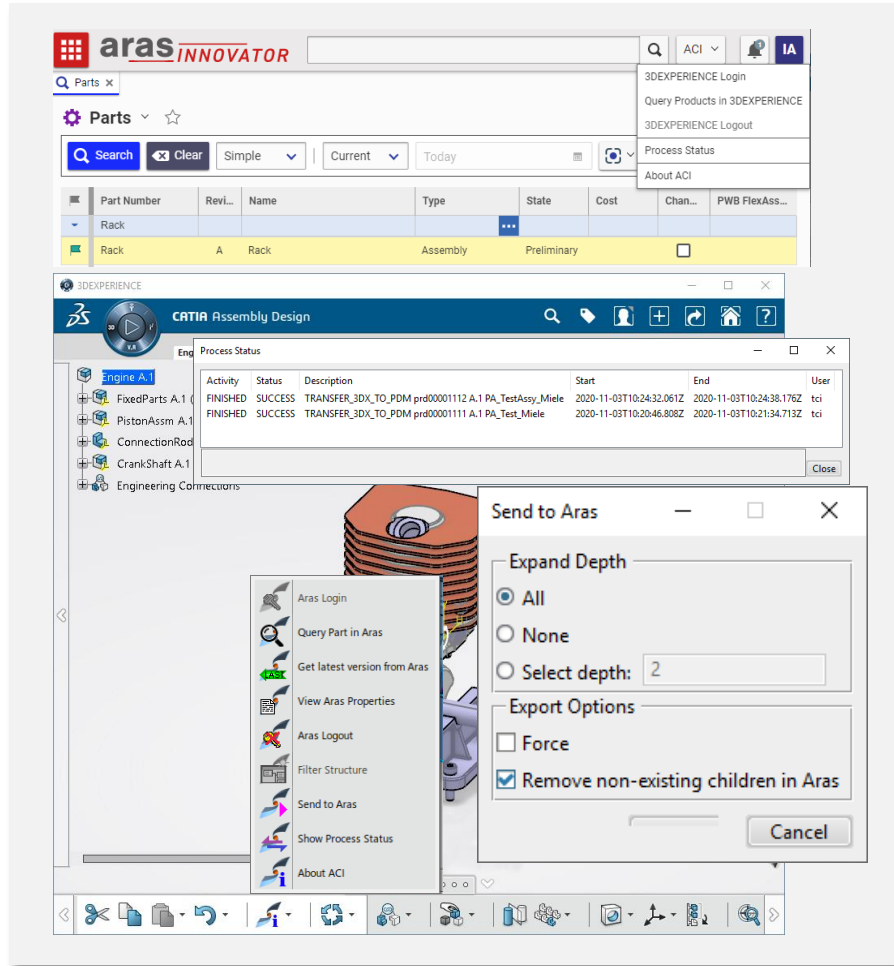
3DEXPERIENCE Aras Innovator Integration (ACI) is a standard product

ACI 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

The integration is enhanced with interactive and synchronous functionality
- Client UI for Aras Innovator client and 3DEXPERIENCE Rich Client UI
- Administrative functionality in ACI web client

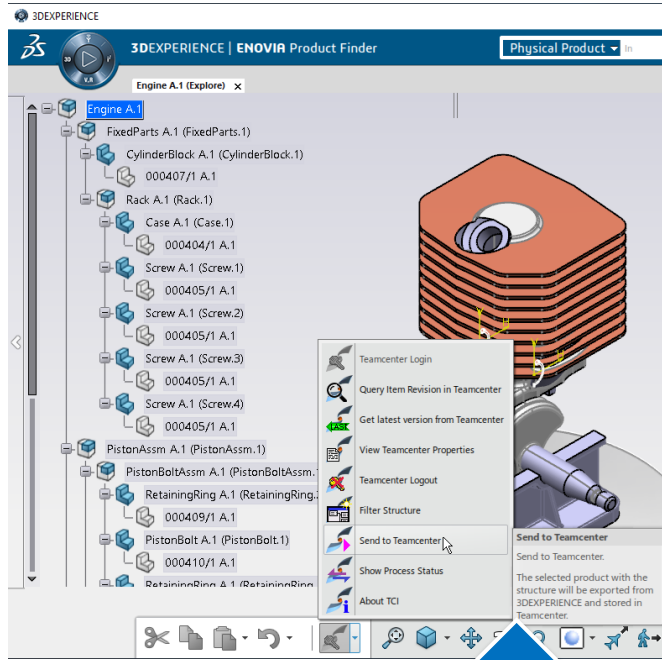**More information is available on:** 3DEXPERIENCE Aras Innovator Integration

ACI – 3DEXPERIENCE Aras Innovator Integration
# Supported 3DEXPERIENCE domains

Requirements	Function	Logical	Engineering	Manufacturing	Process	Resources

				Service	Tasks	Resources

supported

planned / project

Execution

Simulation – Model – Scenario - Result

Configuration (Dictionary / Variant / Evolution)

Project , Change (Request / Order / Action)
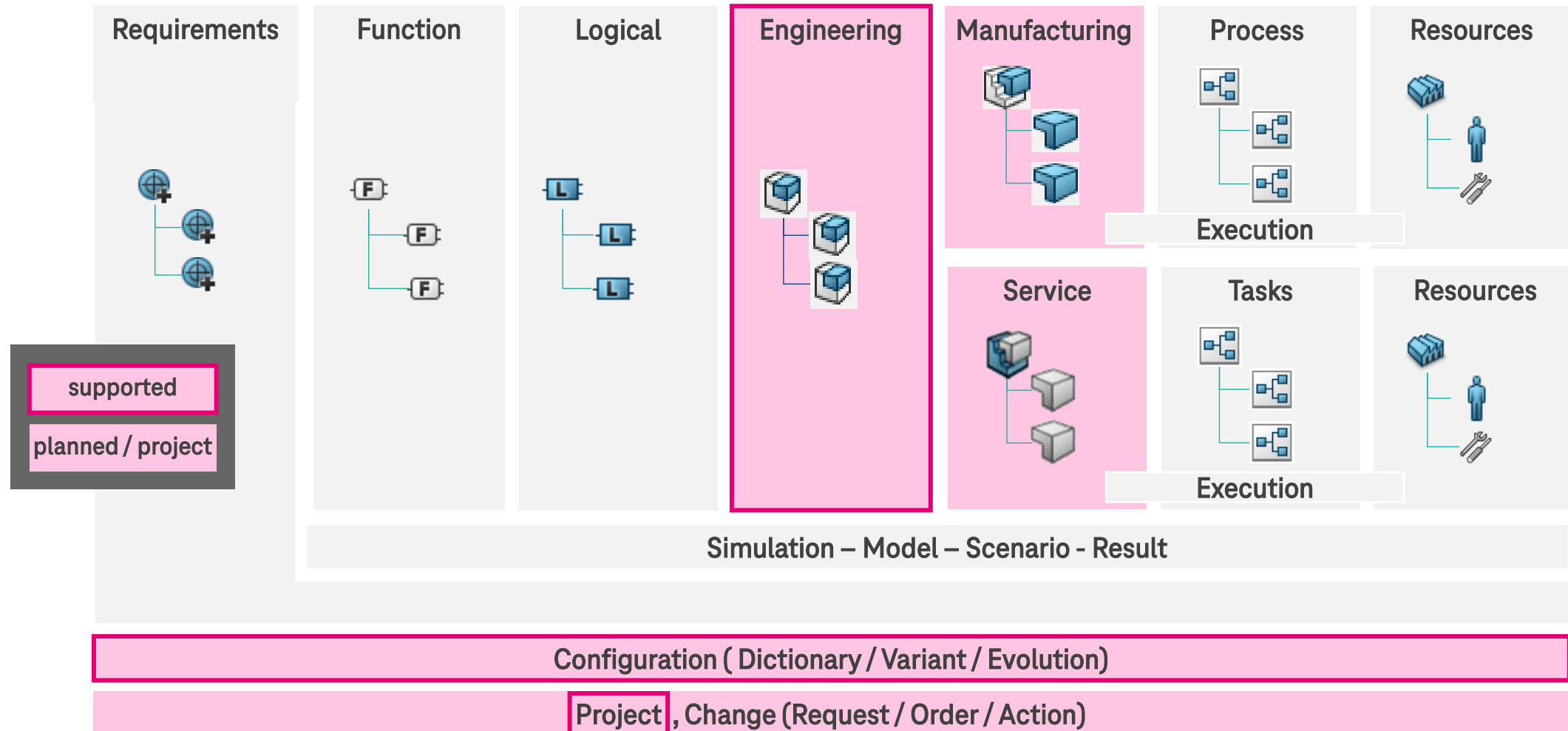
ACI – 3DEXPERIENCE Aras Innovator Integration
Basic Data Exchange Concept

Mapping and Update of:

- Properties
- Revisions
- Product Structures
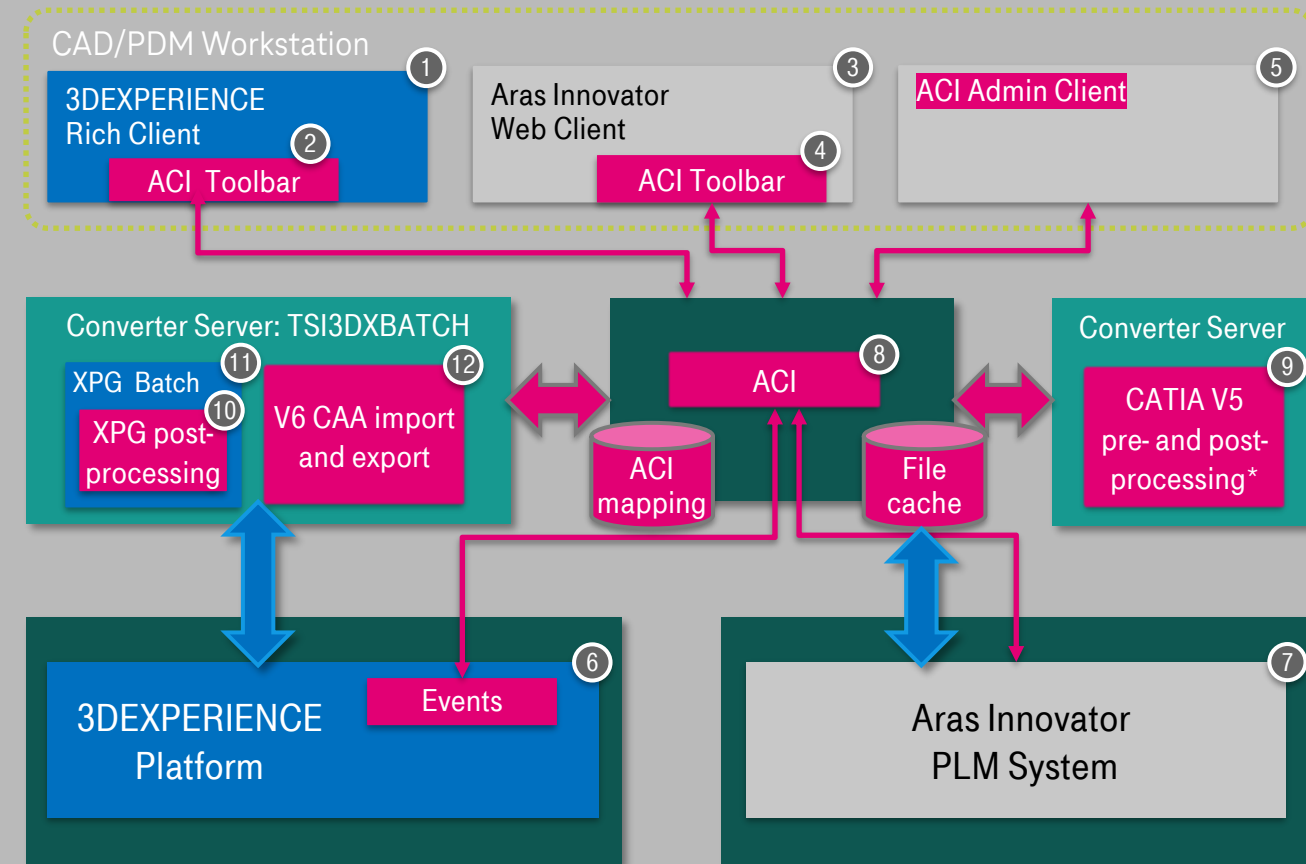- V6 Maturity / LC Status
- V6 Workspace / User Group
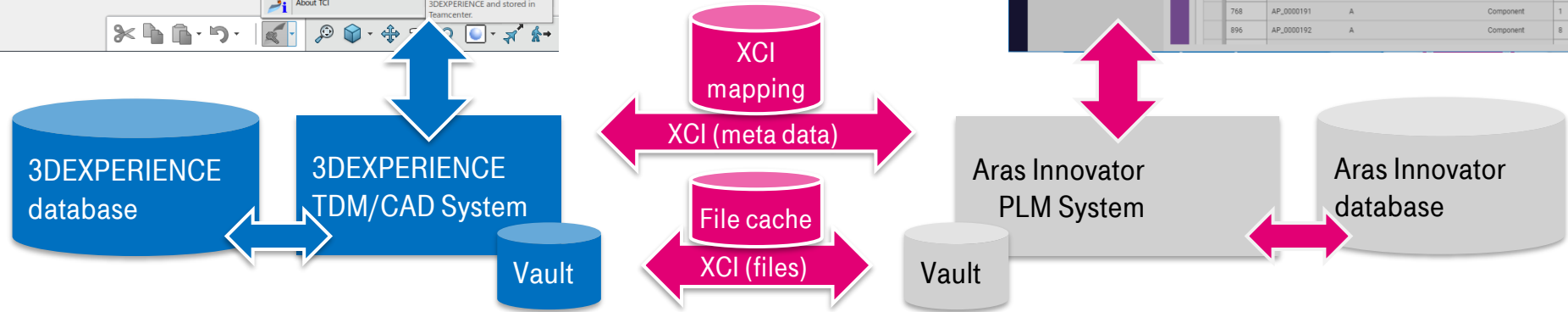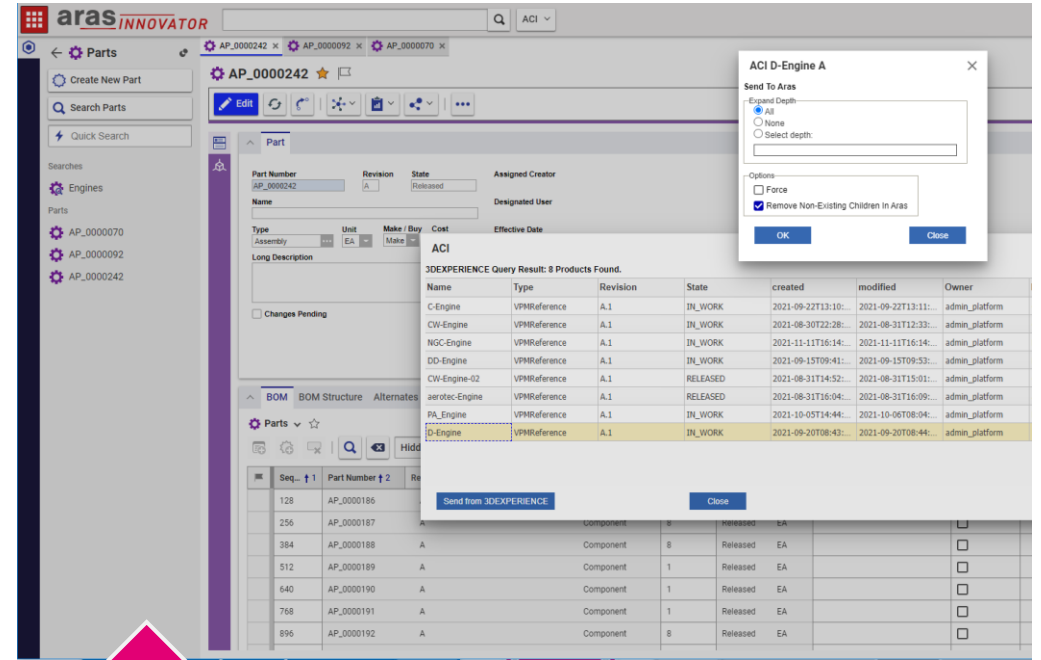
ACI – 3DEXPERIENCE Aras Innovator Integration
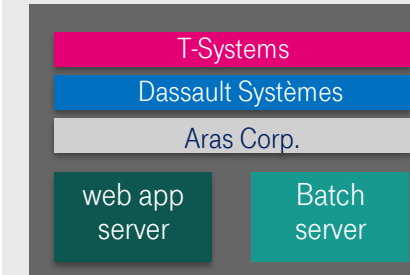# Extended XPDM Architecture for Aras Innovator

Involved tools and clients

1. 3DEXPERIENCE Rich Client
2. ACI 3DEXPERIENCE RC UI
3. Aras Innovator Web Client
4. ACI Aras Innovator Add In
5. ACI Admin Client
6. 3DEXPERIENCE Platform
7. Aras Innovator PLM System
8. ACI Integration Server
9. CATIA V5 CAD data processing
10. TSI XPG post-processing
11. XPDM Import / Export Batch
12. CAA access to VPLM data model

Architecture

CAD/PDM Workstation

3DEXPERIENCE Rich Client ①
ACI Toolbar ②

Aras Innovator Web Client ③
ACI Toolbar ④

ACI Admin Client ⑤

Converter Server: TSI3DXBATCH
XPG Batch ⑪
XPG post-processing ⑩
V6 CAA import and export ⑫

ACI ⑧
ACI mapping
File cache

Converter Server
CATIA V5 pre- and post-processing* ⑨

3DEXPERIENCE Platform
Events ⑥

Aras Innovator PLM System ⑦

Key

T-Systems	
Dassault Systèmes	
Aras Corp.	
web app server	Batch server

ACI – 3DEXPERIENCE Aras Innovator Integration
Processed Aras Innovator Items

Data objects

- Part Version

- CAD document with native_file and files

- Documents

Product structures and relations

- Part BOM

- BOM Instance

- Part CAD

ACI – 3DEXPERIENCE Aras Innovator Integration
Processed 3DEXPERIENCE Objects

Data objects

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

Configuration*

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

Product structures and relations

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

*in customer specific implementation projects

ACI – 3DEXPERIENCE Aras Innovator Integration
Supported File Formats

Supported file formats for native V6 exchange (with conversion)

- 3DEXPERIENCE to Aras Innovator
  - 3D: CATPart, CATProduct, 3DXML, STEP,
  - 2D: CATDrawing, DWG, 2D PDF
  - Any other non-CAD formats
- Aras Innovator to 3DEXPERIENCE
  - 3D: CATPart, CATProduct, STEP
  - 2D: CATDrawing
  - Any other 3D CAD format*

Supported PowerBy' CAD formats (without conversion)
- CATIA V5, NX

Any other non-CAD formats
- PDF, XLS, …

*3rd party converter required

ACI – 3DEXPERIENCE Aras Innovator Integration
Administration Client

System Information

Access to Aras

Access to 3DEXPERIENCE

List Processing

Process Management

System Monitoring

Cache and Configuration

Initiate Data Transfers

ACI · 3DEXPERIENCE Information

About | Aras | 3DEXPERIENCE | LIST | Process | Monitor | Tools ▾ | Logged

Operations
Persistent

Configuration

Job

Send to Aras

VPMReference: 000398 A

Expand Depth
- ● All
- ○ None
- ○ Select depth

Export options
- ☐ Force
- ☑ Remove non-existing children in Aras

Send to Aras

send to Aras

| — ⟳ 000398 A.1 Engine |
| — ⬤ 000387 A.1 FixedParts |
| ✚ ⬤ 000385 A.1 Rack |
| ✚ ⬤ 000386 A.1 CylinderBlock |
| ✚ ⬤ 000392 A.1 PistonAssm |

Name	Value
ID	15204.30390.14088.46377
Type	VPMReference
Name	000398
Revision	A.1
Vault	vplm

ACI – 3DEXPERIENCE Aras Innovator Integration
Supported Software Versions

Continuously developed product

- Support of the three latest 3DEXPERIENCE Platform releases

- Support of the two latest Aras Innovator releases

- Aras Innovator releases
  - 12 (all SPs), 14 and above (with availability)
  - Other Service Packs as required
- 3DEXPERIENCE Platform releases
 - R2020x, R2021x, R2022x, R2023x
  - 3DEXPERIENCE Cloud

(1) On demand

ACI – 3DEXPERIENCE Aras Innovator Integration
Express Installation Package

10-days Express Installation Package

✓ Installation and configuration of an Aras Innovator environment.

✓ Import and validation of the Aras Innovator CAD data model.

✓ Basic configuration of T-Systems' ACI.

✓ Initial test of the environment.

✓ Training on the environment and methodology of Aras Innovator and ACI.
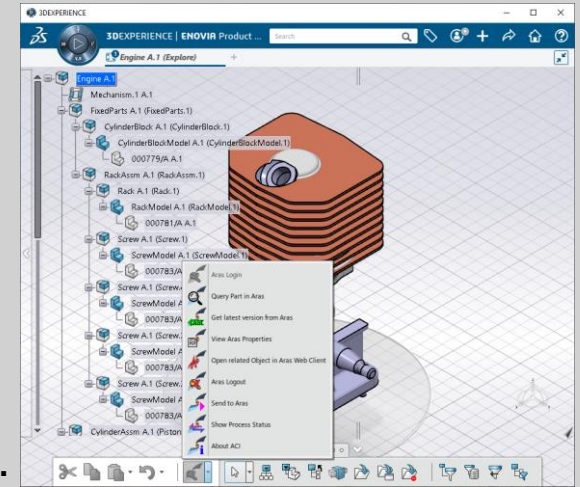
Easy Configuration & Installation
→ either by the customer or with the help of T-Systems experts.

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

Customer References

3DEXPERIENCE Aras Innovator Integration

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XCI – 3DEXPERIENCE PLM-Integration
Key References

Automotive OEM *(Jaguar, Land Rover)*	**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, 10 user licenses 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
with history

ACI – 3DEXPERIENCE Aras Innovator Integration
Roadmap 2024

V 3.10.0 – Supported PDM System Versions

Aras Innovator 12 (all SPs)

Aras Innovator 14+

3DEXPERIENCE R2019x[2], R2020x[2]

3DEXPERIENCE R2021x

3DEXPERIENCE R2022x

3DEXPERIENCE R2023x

3DEXPERIENCE R2024x

3DEXPERIENCE Cloud

[1] With availability
[2] On demand

V 3.10.0 – Selected Features

- Quality release for 3DEXPERIENCE Cloud support with EIF and REST

- Support custom attribute export via 3DEXPERIENCE REST

- Improvements in ACI admin client:
  - List processing
  - UI improvements

| Q1 2024 | Q2 2024 | Q3 2024 | Q4 2024 |

ACI – 3DEXPERIENCE Aras Innovator Integration
Roadmap 2023

V 3.9.0 – Supported PDM System Versions

Aras Innovator 12 (all SPs)

Aras Innovator 14+

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 |

Thank you!

T Systems

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