ELYSIUM

MBE Workshop:

Elysium Intro
MBE Technology
Implemented Workflows

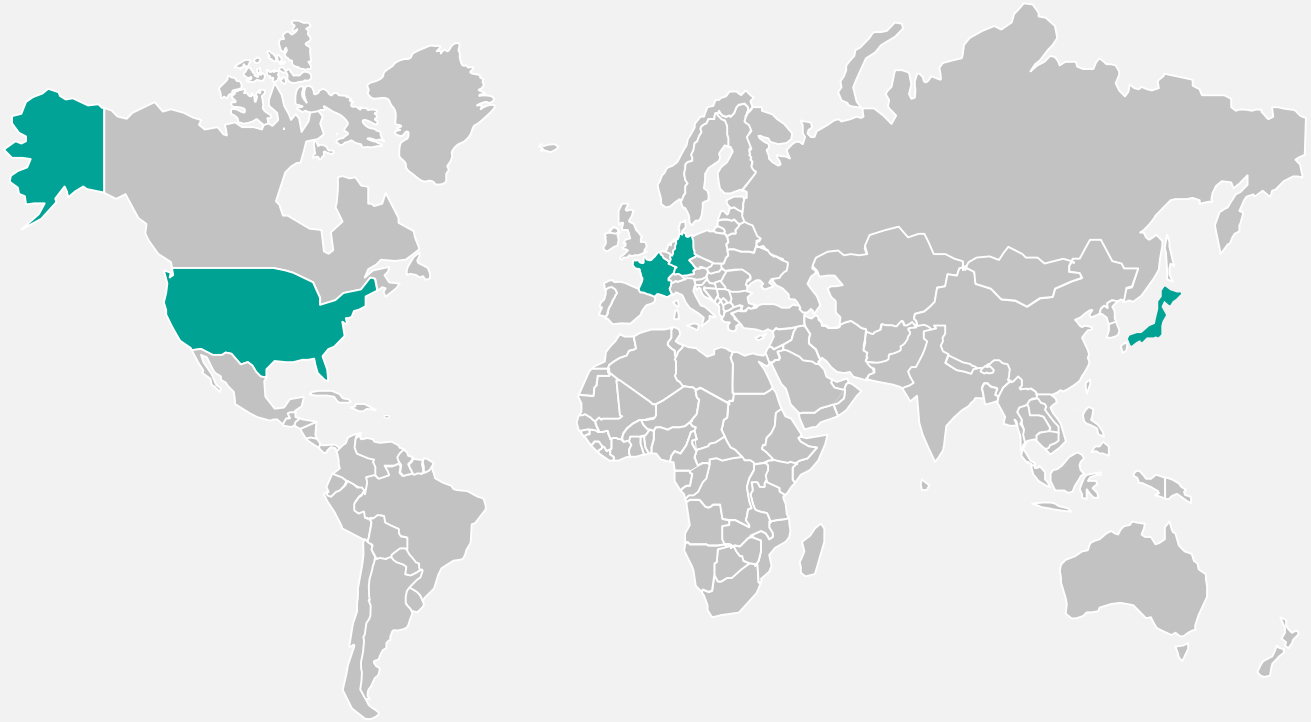
Annalise Suzuki

Director of Technology & Engagement

ELYSIUM GLOBAL

Specialized + dedicated technologies with a global reach

- 35 years of CAD Expertise
- Strong partnerships with CAD Vendors
- 3D Data Interoperability Expertise
- Off-the-Shelf Software
- Development Projects
- Migration Services



AUTODESK. SIEMENS DASSAULT SYSTEMES

SOLIDWORKS ptc aras corp

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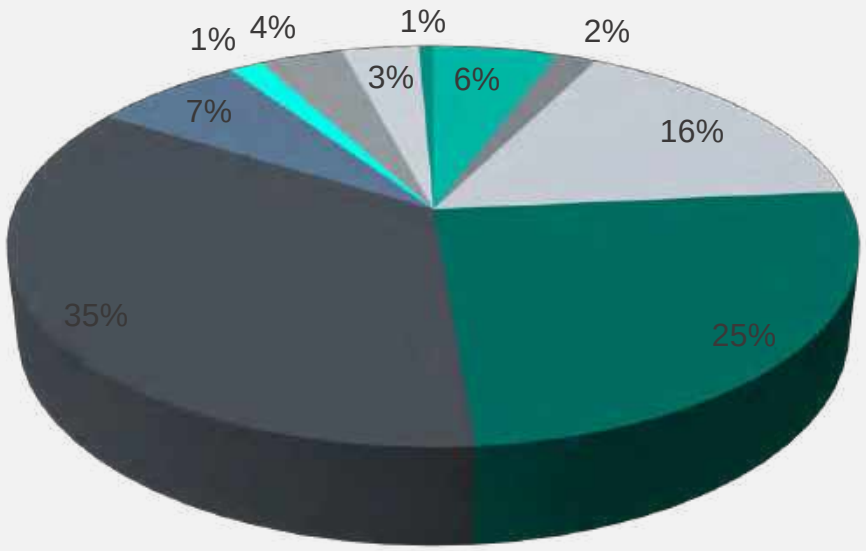
INDUSTRIES SERVED

ELYSIUM has over 2800 customers around the world with a strong position in the manufacturing industry.



- Aerospace & Military
- Architecture & Construction
- Automotive OEM
- Automotive Supplier (Tier-1)
- Automotive Supplier (Tier-x)
- Consumer Electronics & Products
- Energy | Oil & Gas
- Heavy Industry
- Engineering Services
- Shipbuilding

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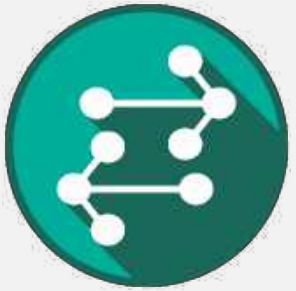
Model Quality in all 3D Applications

Many solutions to help your 3D data interoperability



Translation

Healing

Simplification

Validation

Migration
(Feature-Based Translation)

Quality Check

Solid Enveloping

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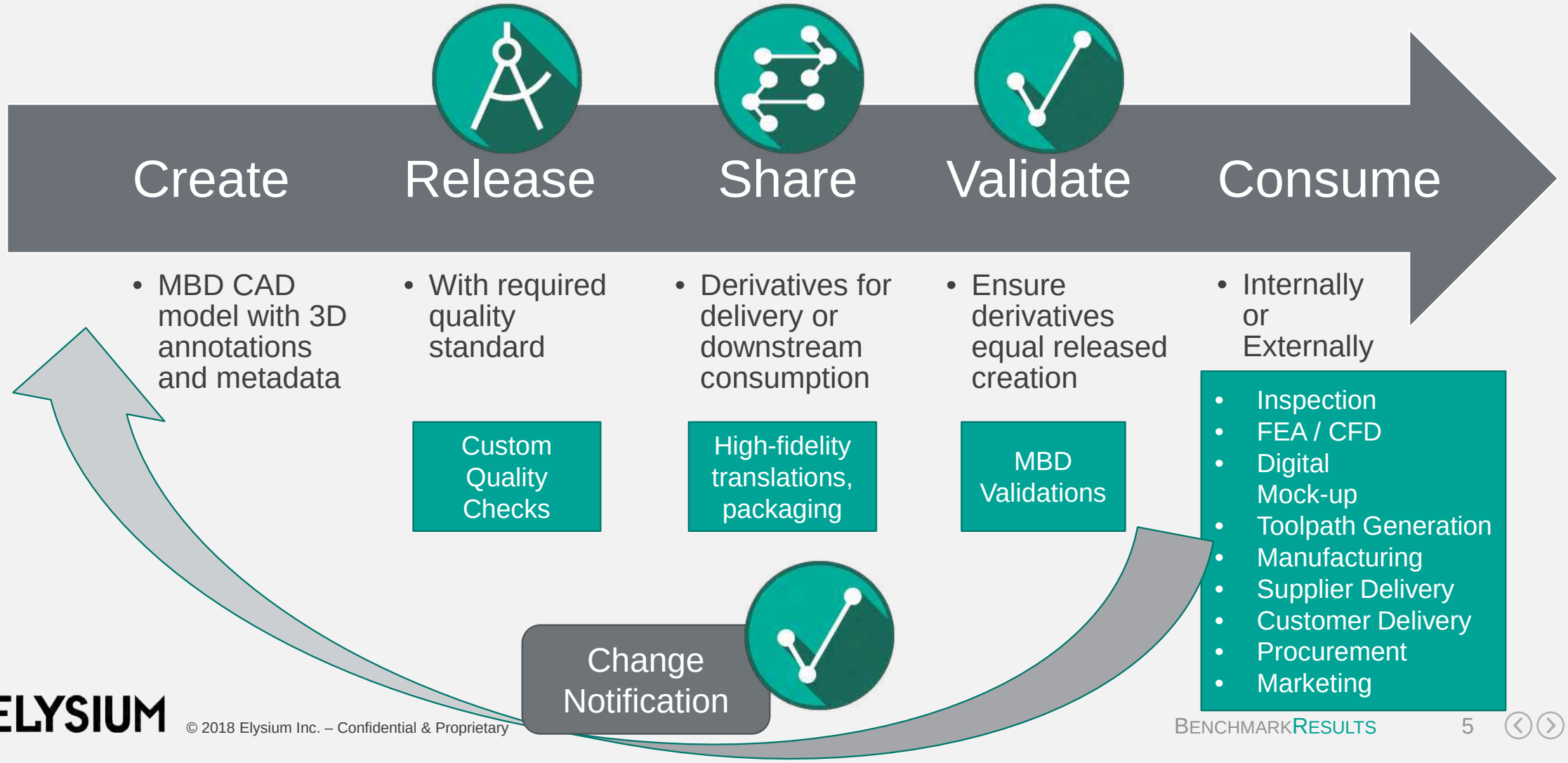
Steps in Model-Based Lifecycle



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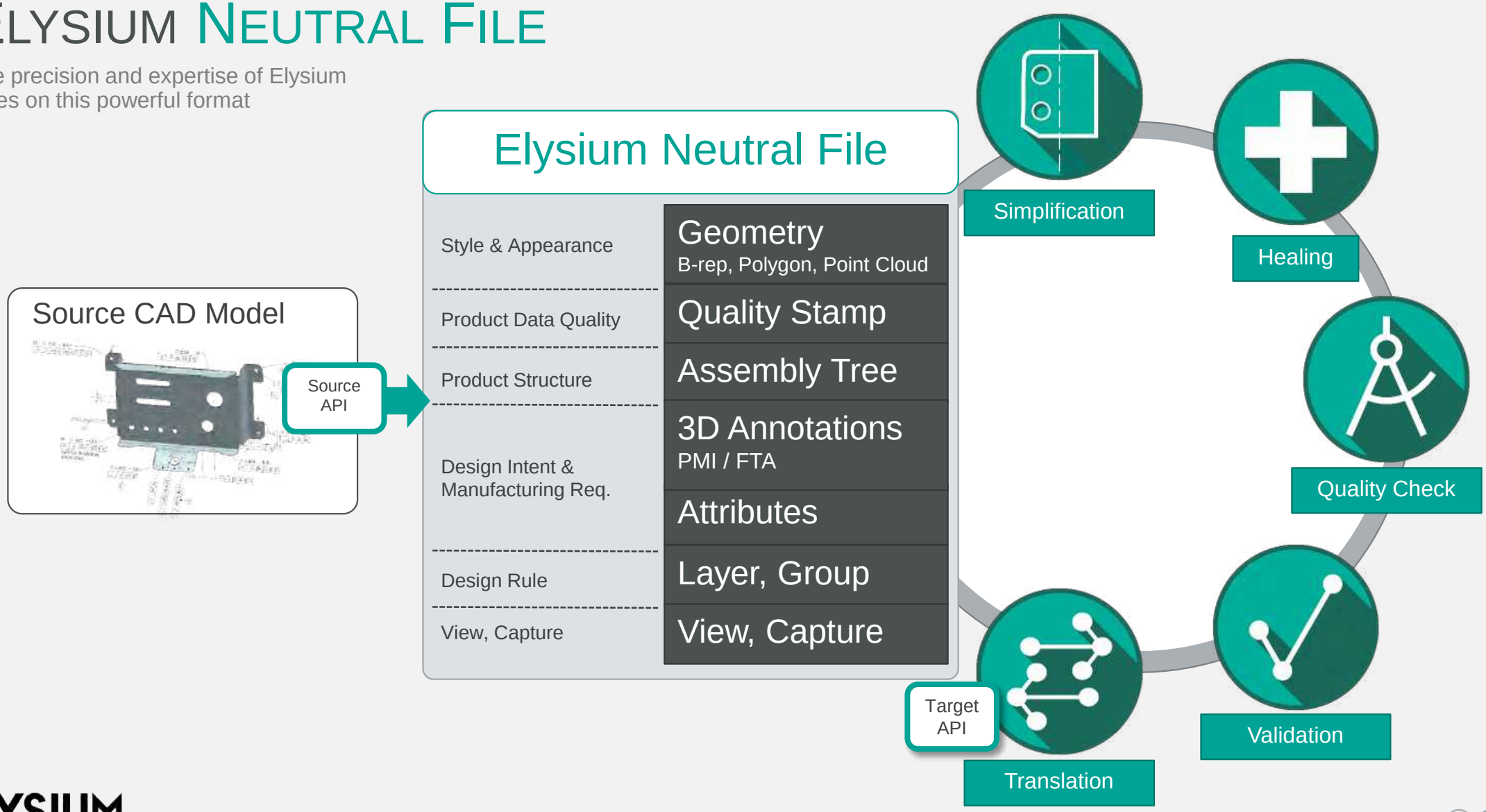
ELYSIUM NEUTRAL FILE

The precision and expertise of Elysium relies on this powerful format



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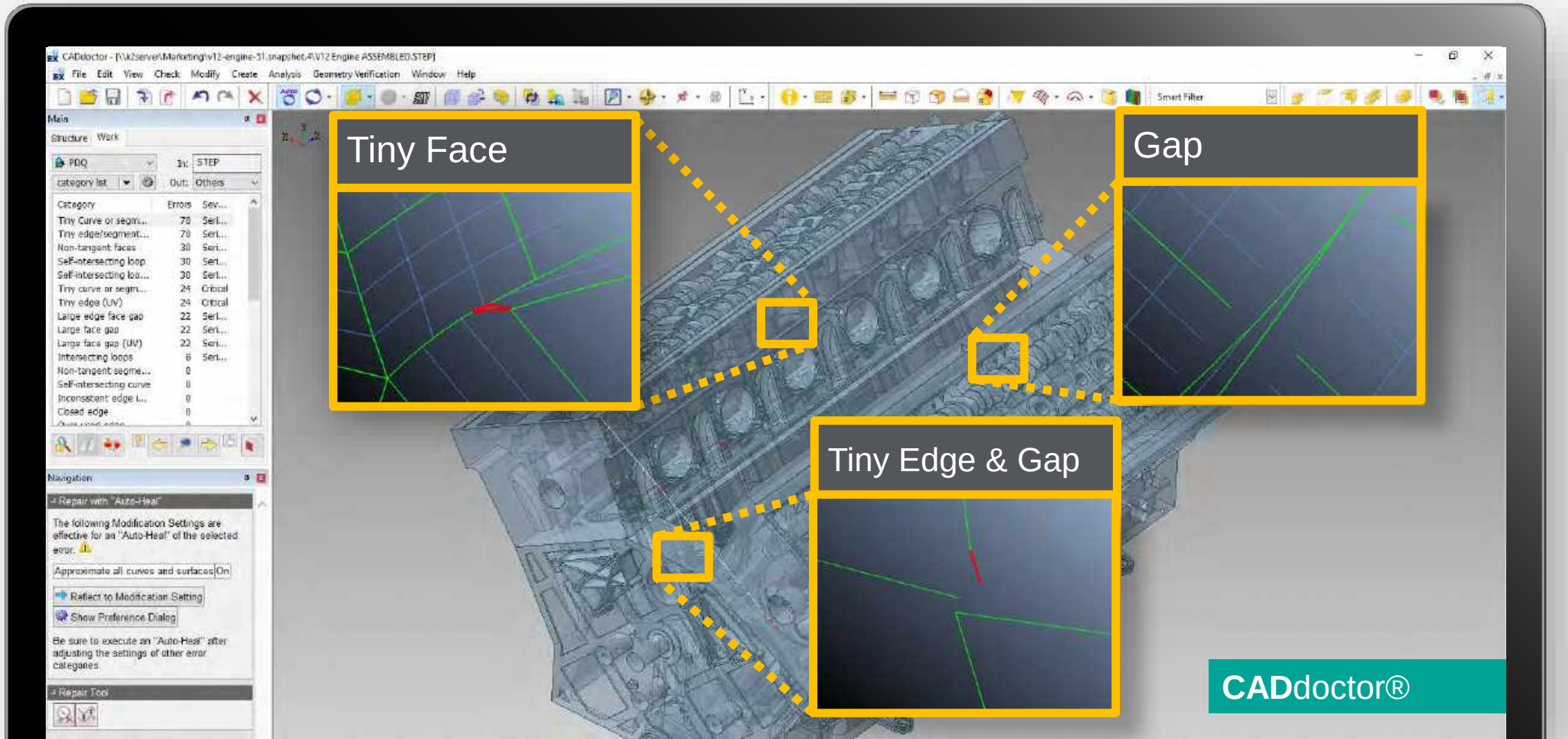
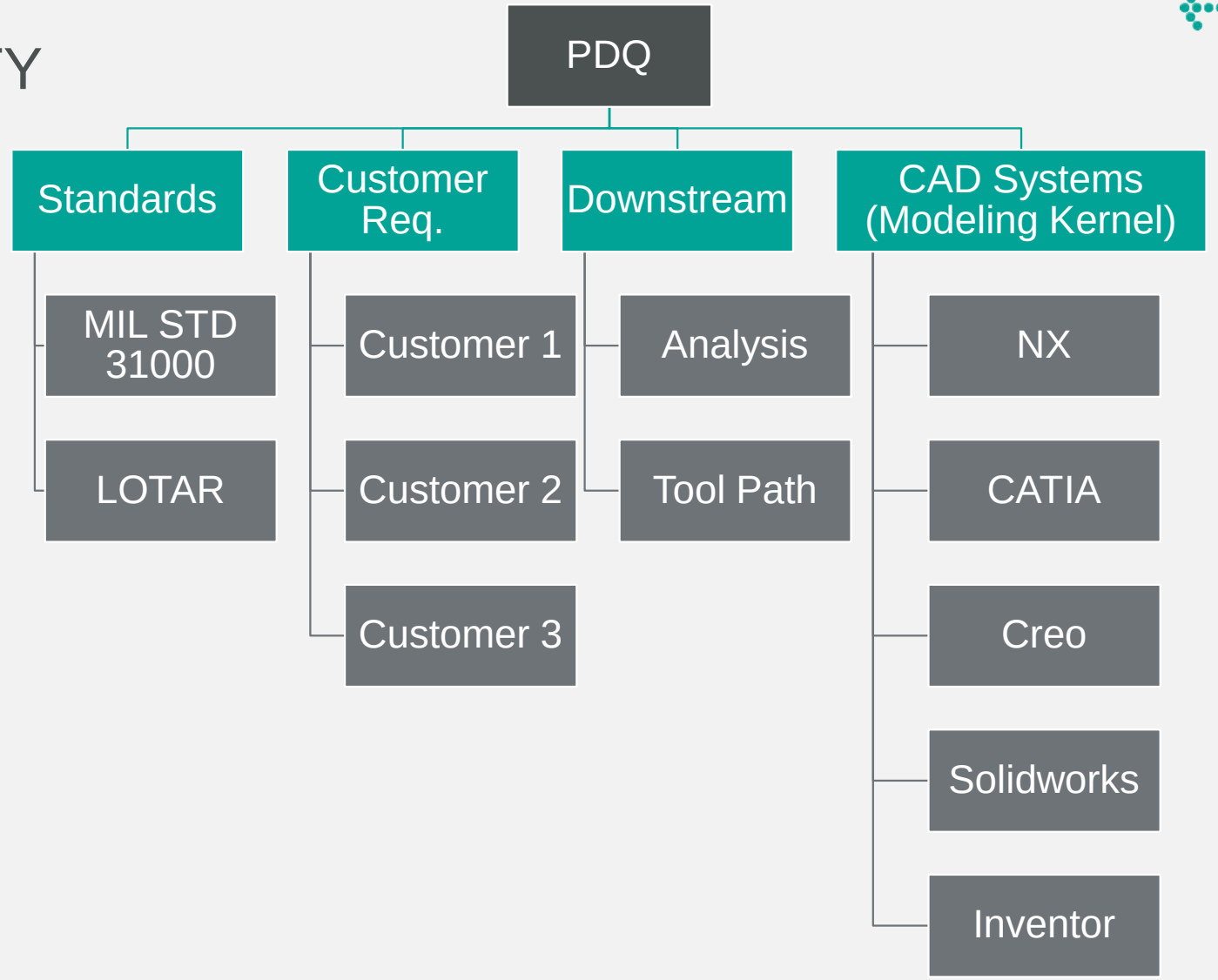
Accurate Geometry Error Checking

Elysium provides Product Data Quality (PDQ) checking to assure 100% high fidelity models for an enterprise.



Product Data Quality Check/Verification

- Elysium offers 78 PDQ check items
- Customize checking criteria
- Check against multiple criteria



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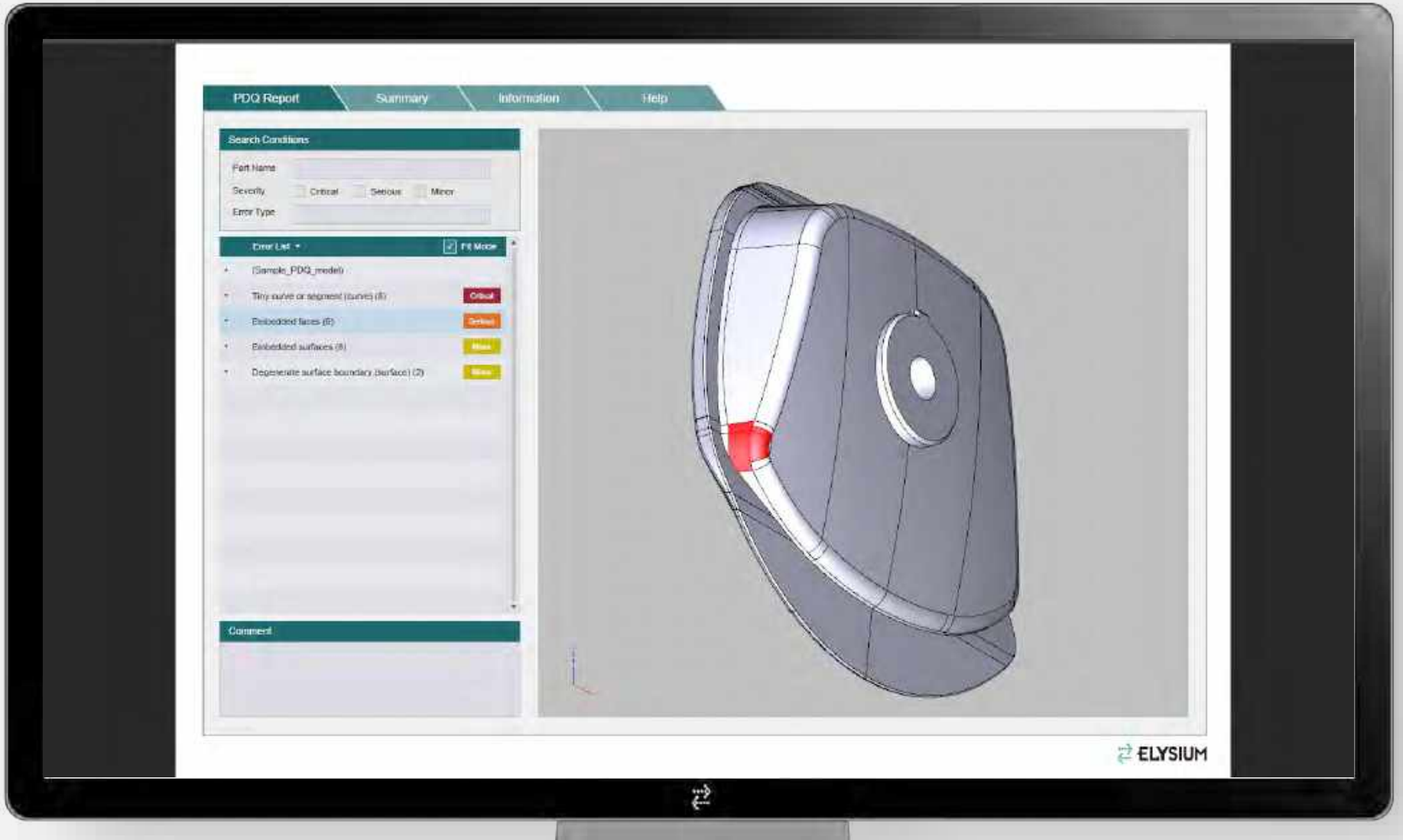
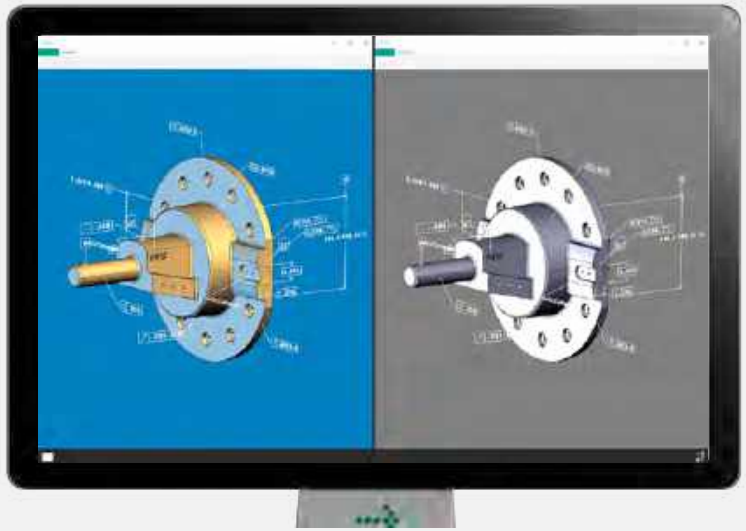
PDQ Report in 3D PDF

Check model quality to a standard (SASIG, LOTAR, MIL STD 31000) and customer requirements



Data Translation Support

Elysium supports a variety of different



AUTODESK. ptc SIEMENS

DASSAULT SYSTEMES SOLIDWORKS

Entities	CAD Platforms	Neutral/Viewable
Geometry	CATIA V4 / V5 / V6	STEP
Product Structure	NX	JT
PMI/FTA	I-Deas	Parasolid
Attributes	Creo	ACIS
Features	Solidworks	STL
Sketches	Inventor	OBJ
Constraints	Co-Create	3D PDF
Associative 2D Drawings		HTML
		IGES

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GEOMETRY SIMPLIFICATION

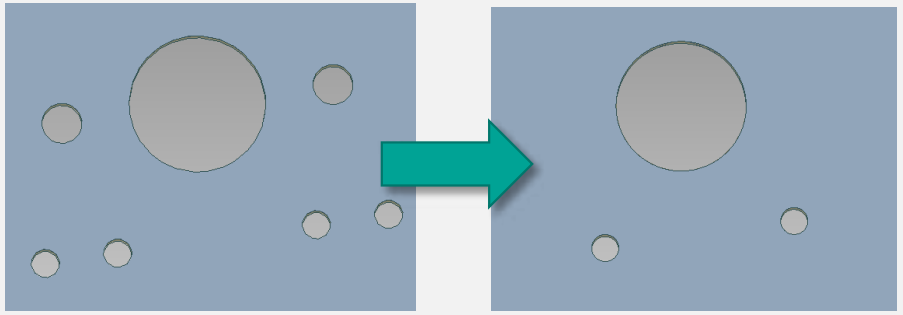
Optimize models for CAE analysis and intellectual property protection

Feature Recognition and Simplification

Automatically recognize geometric features like fillets or holes and remove them. Enable to recognize and remove overlapped/converging fillets and variation fillets.

Flexibility for Feature Removal

Choose which features you want to remove and which ones you want to remain. Allowing you to have full control of information shared.



Automatically recognize features, such as holes, and allow you to remove all or select the ones you want to remove

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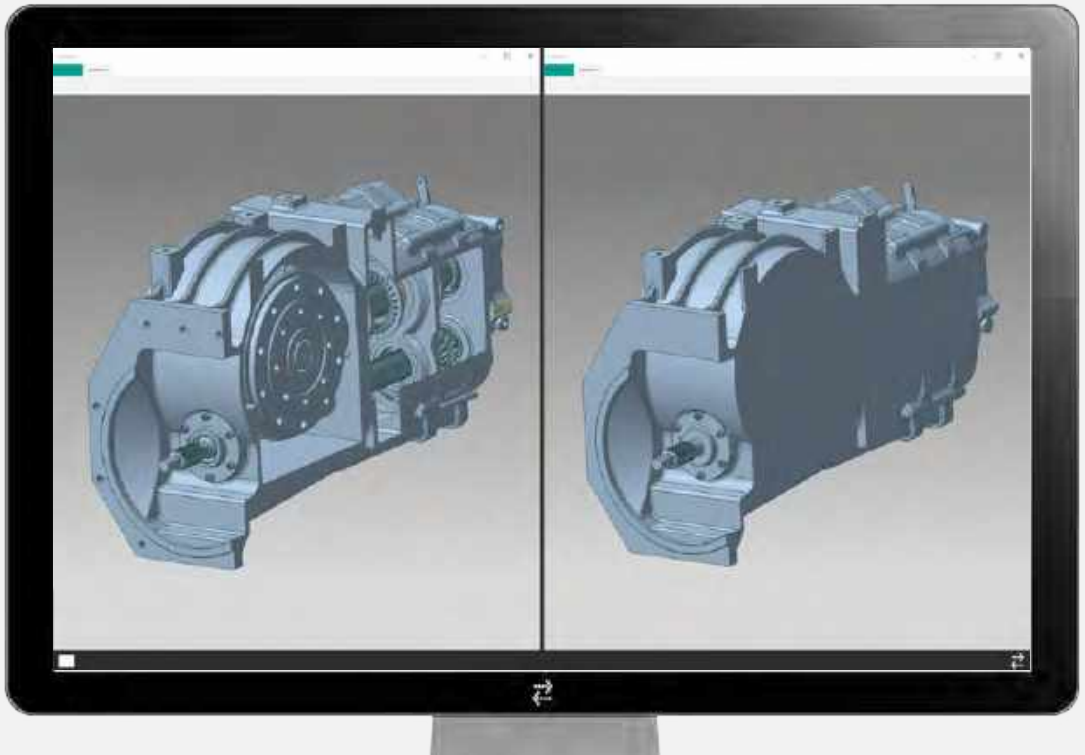
SOLID ENVELOPE | SURFACE EXTRACTION

Automatically simplify models for CAE, DMU or other downstream processes

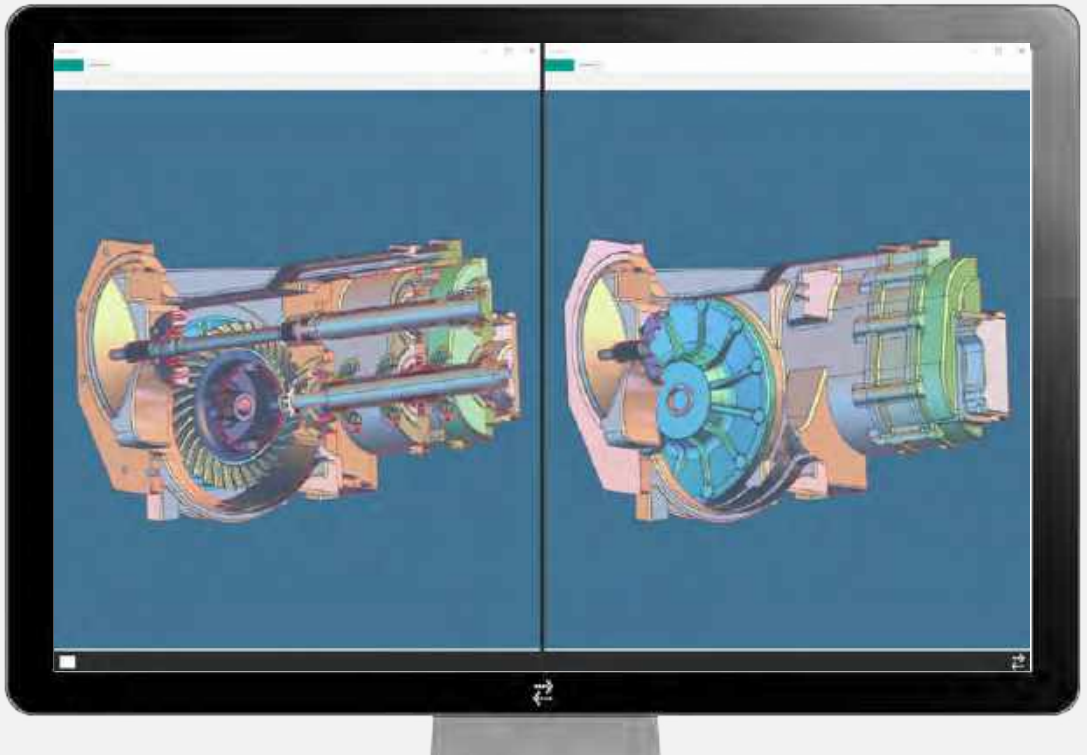
Solid Envelope

Fill inside of assembly model to create a solid model for size reduction and protect IP.



Surface Extraction

Extract the outline of the exterior parts or interior parts.



VALIDATION OF MBD DATA

Quickly identify differences between 2 files

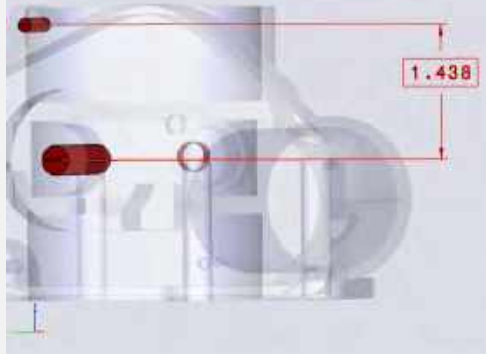
Elysium provides validation reports in 3D PDF, HTML, and XML for easy share across organization(s). No CAD system required.

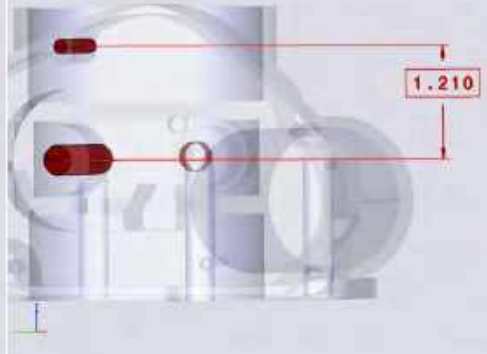
Use Cases

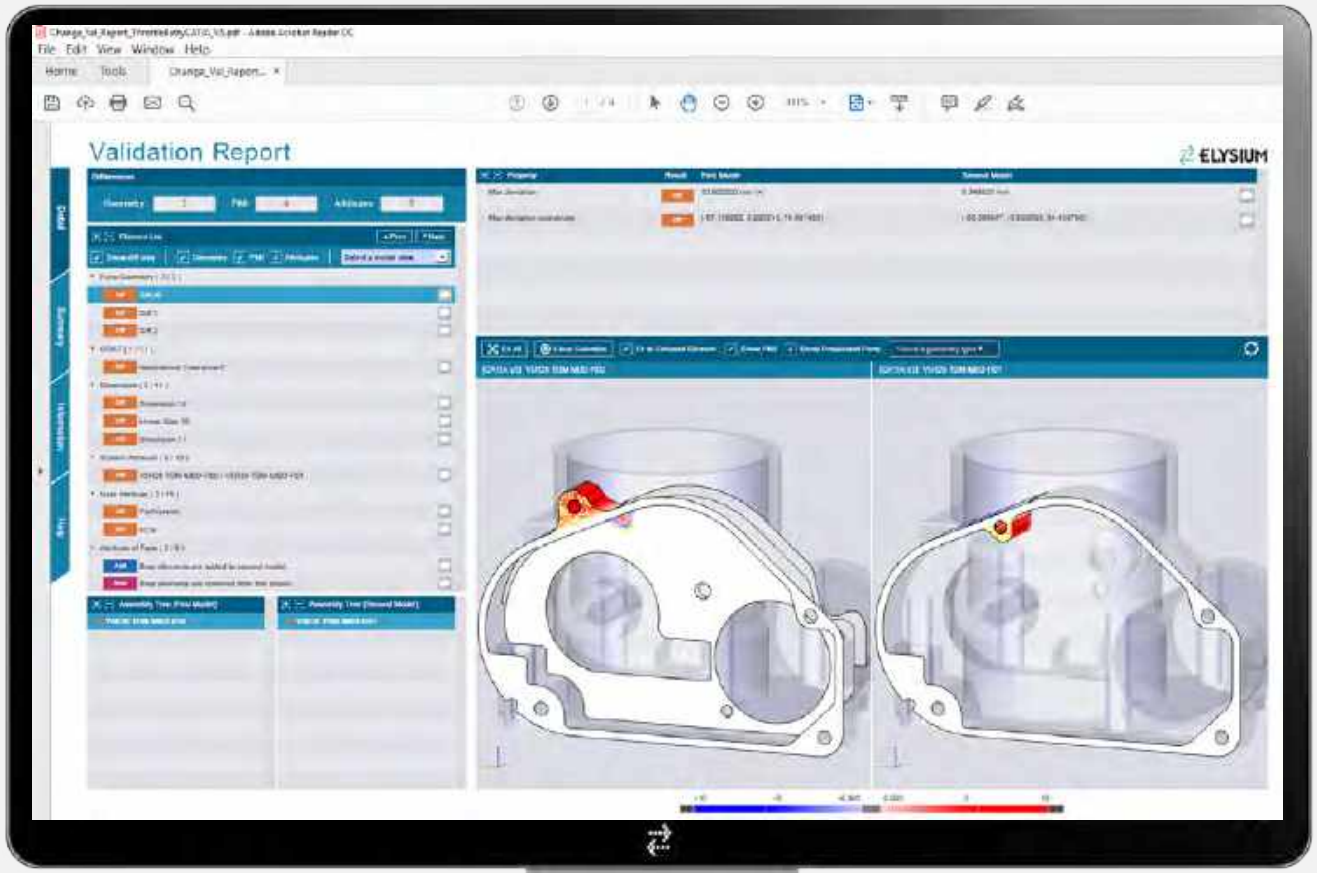
- Conversions
- Engineering Changes
- Archival
- CAD Upgrades

Report Types

- 3D PDF
- HTML
- DiffViewer
- XML







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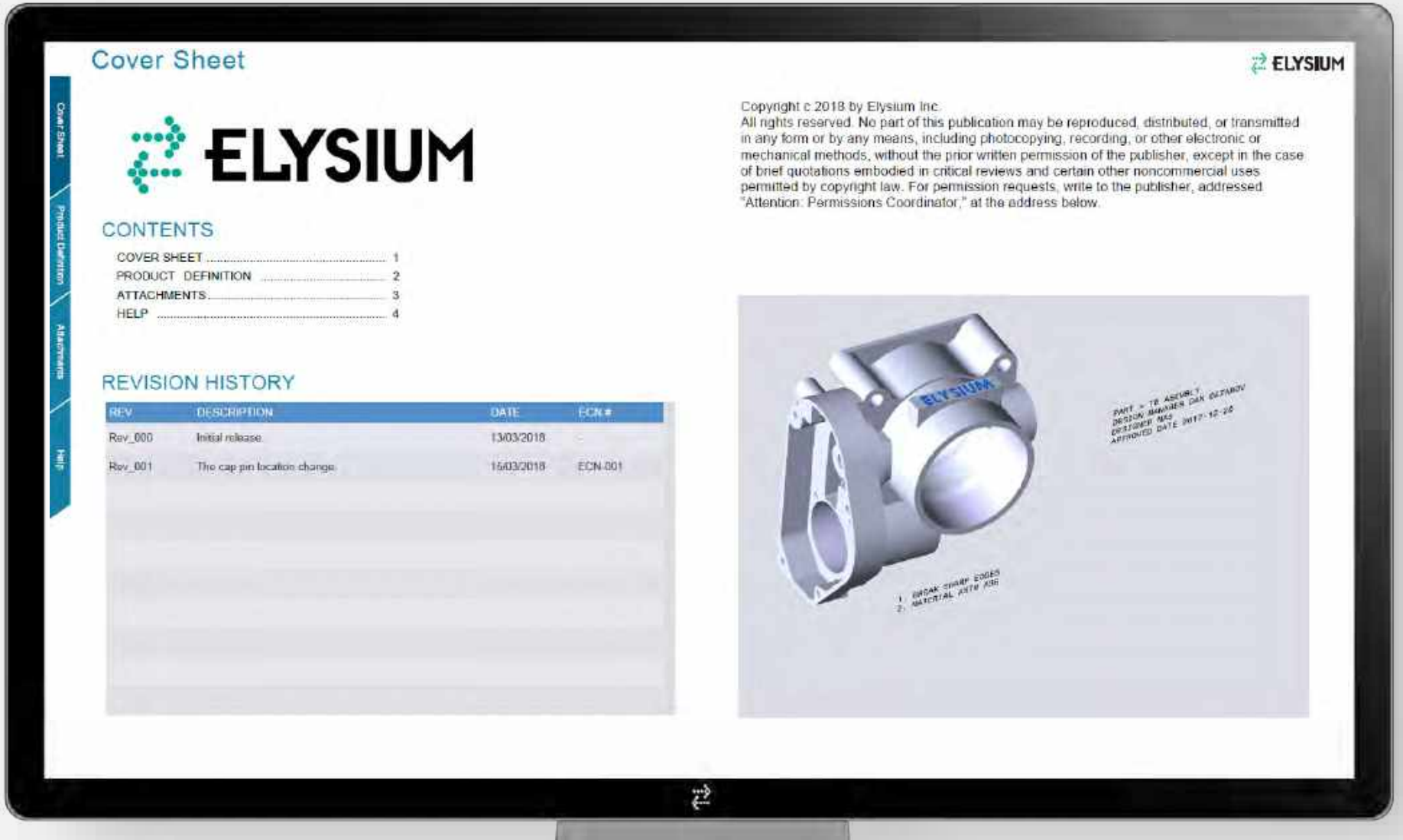
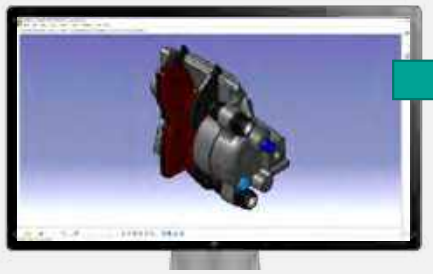
DATA PACKAGES

Create easy to share Data Packages that includes 3D model viewing and ability to add support docs (spreadsheets, BOM, etc.)



ASFALIS™ FUNCTIONALITY

Enterprise system for automated translation and optimization of 3D CAD data



Native CAD
Neutral CAD

Data Exchange Kernel

Check PDQ

Validate

Simplify

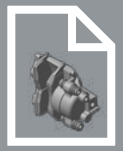
Translate

Package

Edit

CADdoctor®
Interactive Healing

Deliverables & Outputs



CAD File(s)

PDQ Report(s)

Validation Report(s)

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MBE: ACHIEVING THE GOAL STARTS WITH THE BASICS

Momentum starts here.

- Automating processes to support MBE workflows
  - Concentrate on 3D / digital data quality
    - Share-ability
  - Concentrate on foundational strengths
    - Integrate-ability
    - Adaptability
    - Configurability
    - End-user Adoptability
  - Enable opportunities to build, grow, advance, and re-use
  - Maximize ideal tools where appropriate
    - Connect / integrate
  - Leverage standards where appropriate

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Actual Customer Use Cases

PDQ | Translation | Validation

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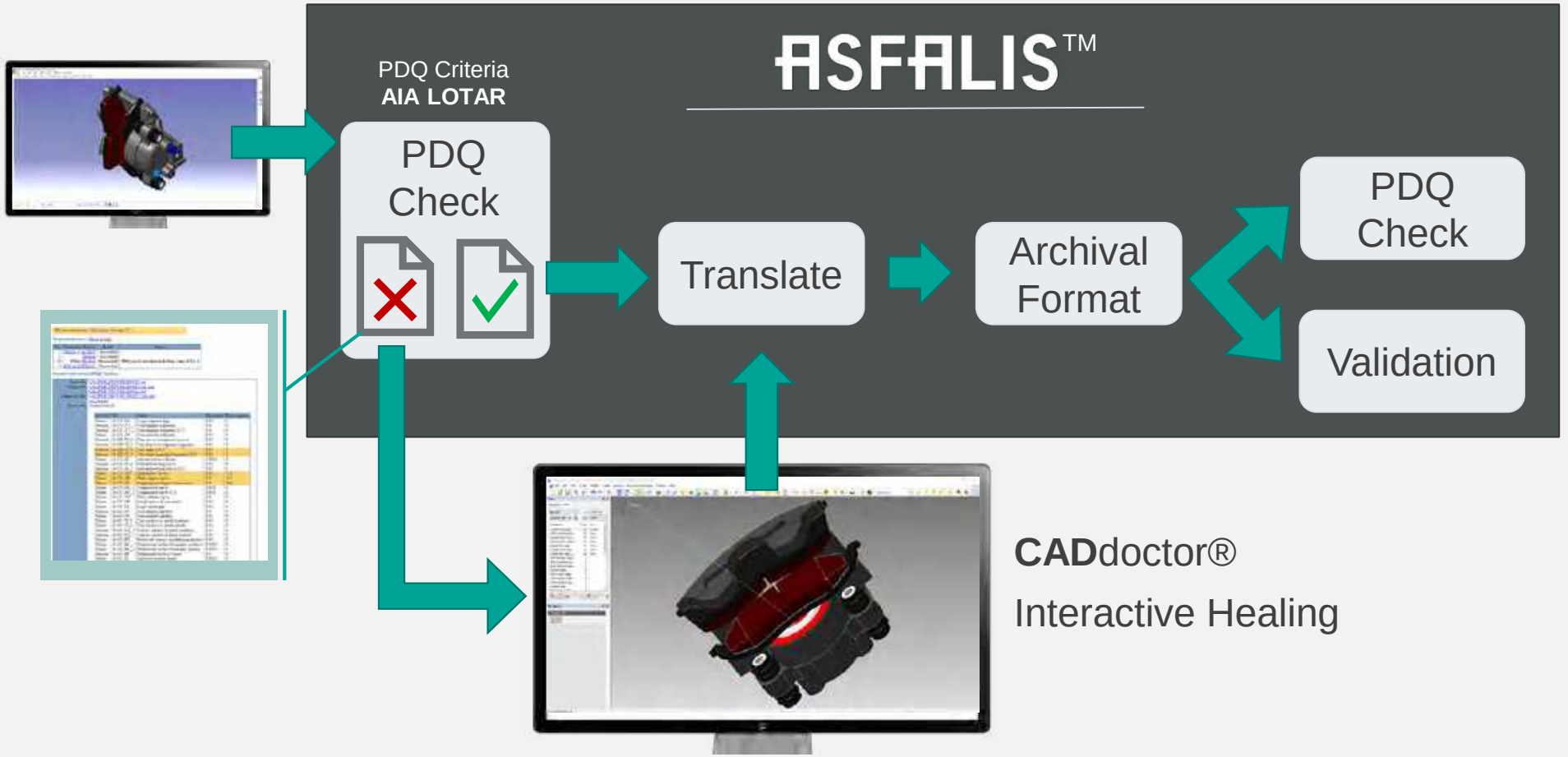
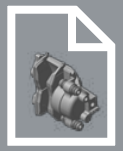
ARCHIVAL PROCESS

Elysium's technologies can simplify your archival process for accurate and shareable documents for future use



Deliverables & Outputs



Archival Format

PDQ Report

Validation Report

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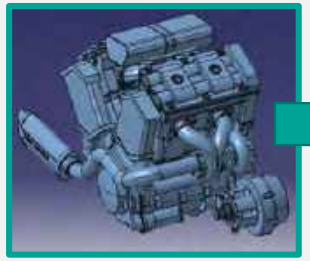
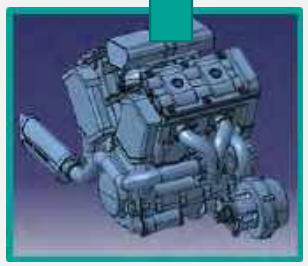
Work in Progress [WIP] Validation

Tier One Automotive Supplier



Initial CATIA V5 OEM Delivery

Supplier begins work



Additional CATIA V5 OEM Delivery

Supplier doesn't know what has changed / OEM provides no change information

ASFALIS™

1st V5 Delivery

2nd V5 Delivery

Validation

Product Structure, Geometry

Deliverables & Outputs

Validation Reports

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ACHIEVING QUALITY DELIVERABLES

Optimize quality and translation to meet customer deliverables ***the first time. Every time.***

CATIA V5 Tier-1 Auto Supplier

GM Checkmate

GM

PDQ Check

ASFALIS™

Translate

GM

NX

Deliverables & C

NX

CADdoctor®

Interactive Healing

Process re-used for:

- Nissan > NX
- FCA > NX
- Daimler > NX
- NX OEM > Supplier

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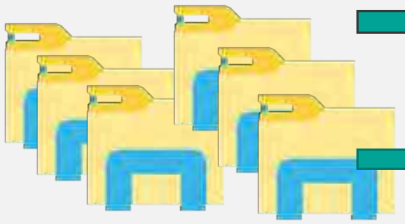
CAD Version up Validation

Aerospace OEM



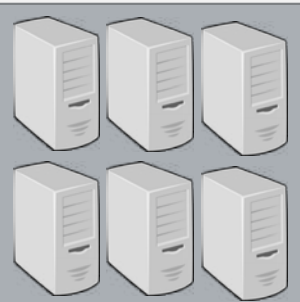
Current CATIA V5 Version

ASFALIS™

Current CATIA V5 Version

Future CATIA V5 Version

Validation
Geometry, PMI, Attributes



Multiple Servers

Deliverables & Outputs

Machine Readable Summary Reports

Validation Reports

500K files in less than **2 months**

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THANK YOU

ELYSIUM