# Glovius - Modern CAD Viewer

Product Presentation
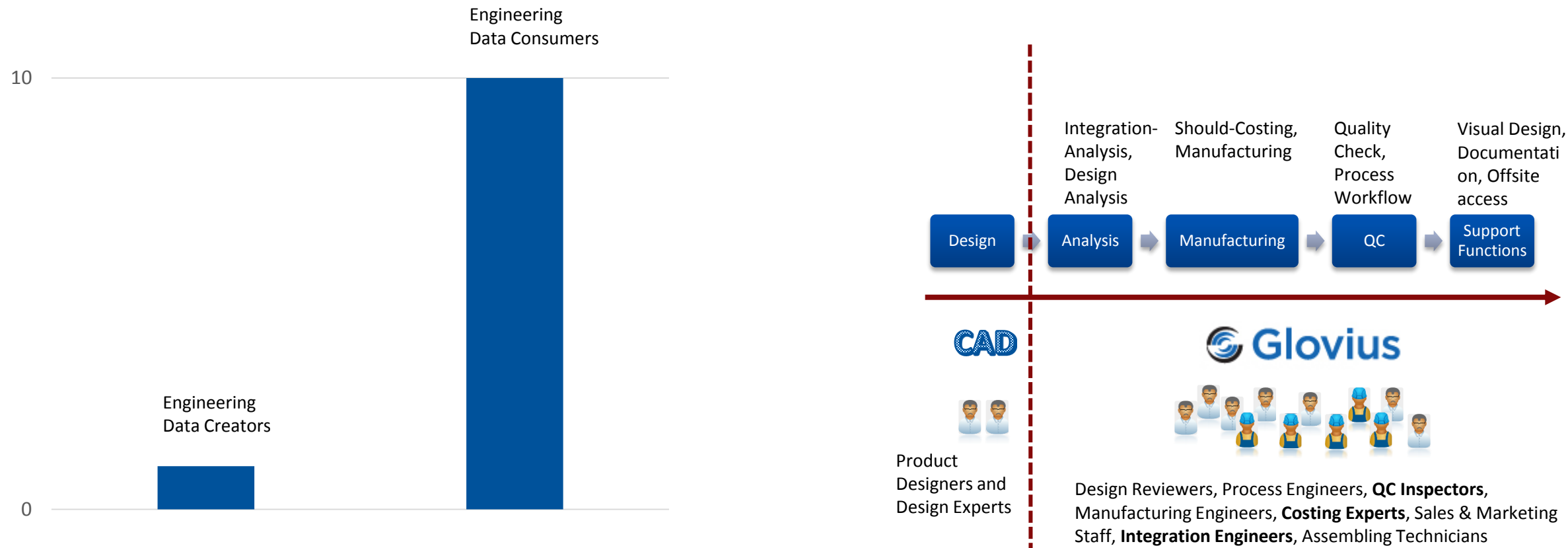
**GeometricTech**
by HCL Technologies

HCL
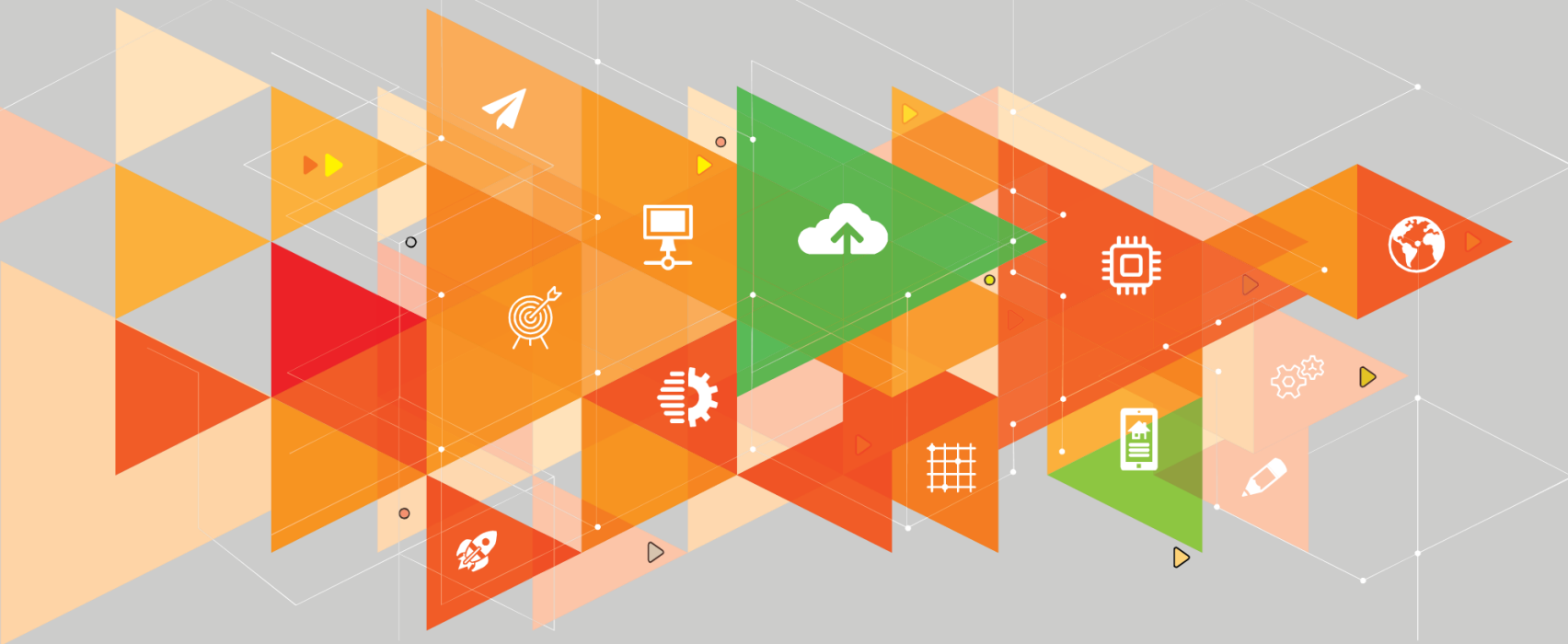
# CONSUMPTION OF 3D DESIGN DATA

Requirements and Challenges

# Consumption of Design Data

## Engineering Data (2D/3D Models) consumption is increasing across the Extended Enterprise

Engineering Data Consumers

10

Engineering Data Creators

0

**Integration-Analysis, Design Analysis**

**Should-Costing, Manufacturing**

**Quality Check, Process Workflow**

**Visual Design, Documentation, Offsite access**

Design → Analysis → Manufacturing → QC → Support Functions

CAD

**Glovius**

Product Designers and Design Experts

Design Reviewers, Process Engineers, **QC Inspectors**, Manufacturing Engineers, **Costing Experts**, Sales & Marketing Staff, **Integration Engineers**, Assembling Technicians
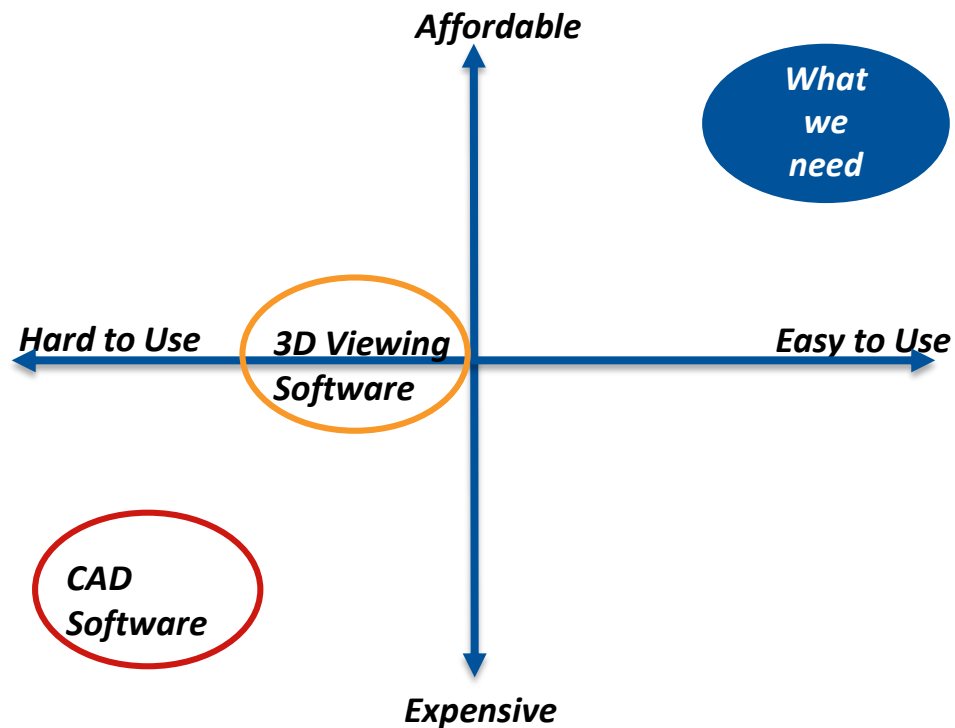
*There are 10X Engineering data consumers vs. creators*

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# Consumption of Design Data – Challenges

## Software used for consuming Engineering data is still too complex, expensive and Windows only
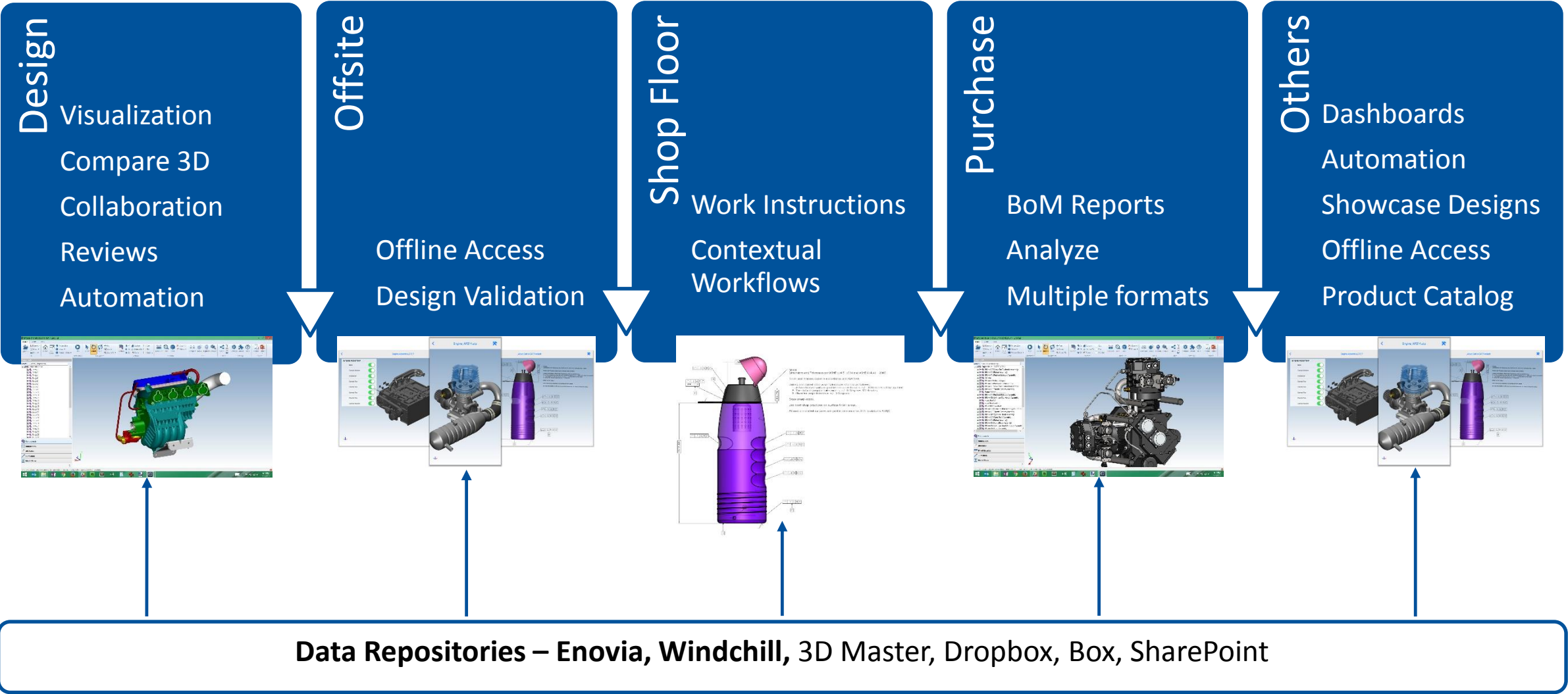
- When used just for viewing, **CAD is complex**, **expensive** and Windows-only. Modern mobile and web platforms are ignored
- Hidden training, maintenance and installation **costs**
- **Collaboration** is difficult and time-consuming
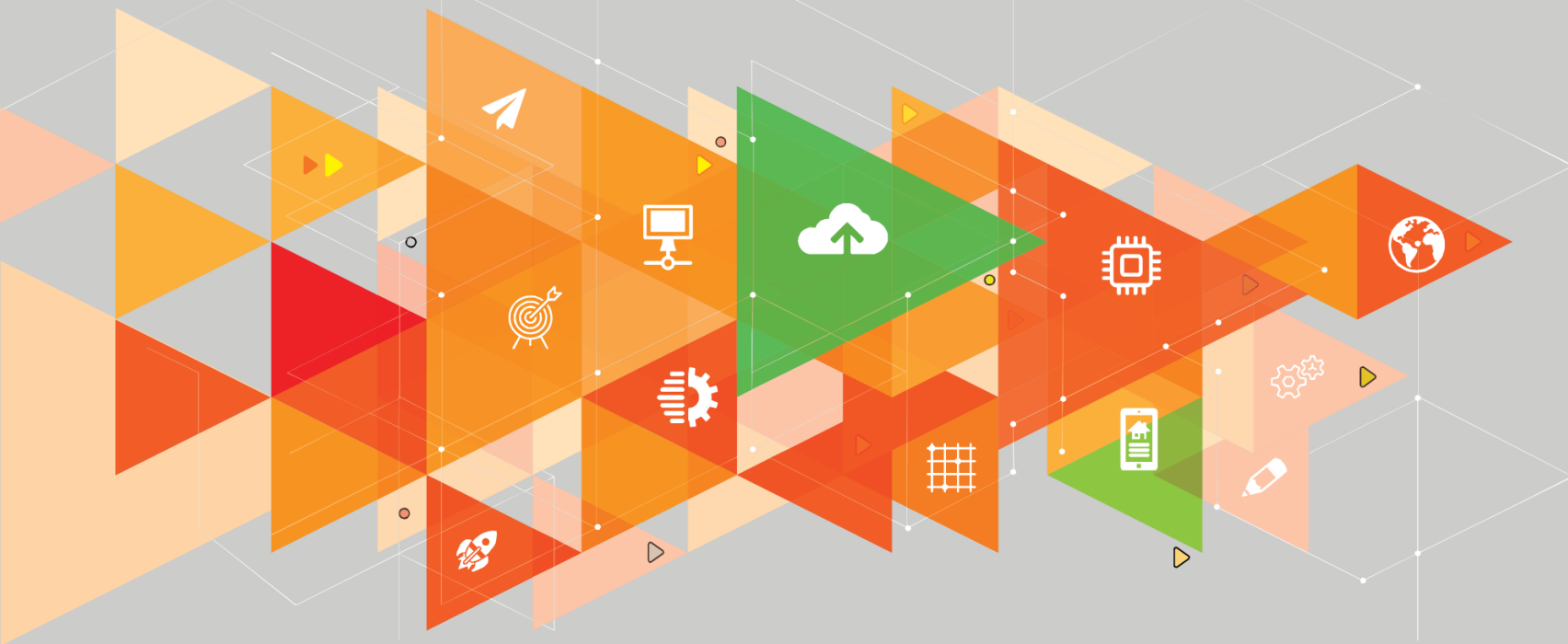- **Automation, integrations** and **customization** are not possible

*Affordable*

**What we need**

*"72% of workers are predicted to be mobile by 2020"*
- IDC, US Mobile Worker Pop.

*Hard to Use*        *3D Viewing Software*        *Easy to Use*

**CAD Software**

*Expensive*

| | | | | |
|---|---|---|---|---|
| **3D Viewing Software** | ✔ | ✔ | ✖ | ✖ |
| **CAD Software** | ✔ | ✔ | ✖ | ✖ |

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# Consumption of Design Data - Requirements

## Design
- Visualization
- Compare 3D
- Collaboration
- Reviews
- Automation

## Offsite
- Offline Access
- Design Validation

## Shop Floor
- Work Instructions
- Contextual Workflows

## Purchase
- BoM Reports
- Analyze
- Multiple formats

## Others
- Dashboards
- Automation
- Showcase Designs
- Offline Access
- Product Catalog

**Data Repositories – Enovia, Windchill,** 3D Master, Dropbox, Box, SharePoint

# GLOVIUS

Modern CAD Viewer for Windows, iOS, Android, and Cloud

# Glovius – Modern CAD Viewer

## Glovius is used in Manufacturing, Automotive, and Aerospace industries for –

### Paperless Manufacturing

- Open native CAD files from CATIA, NX, Creo, STEP, and more…
- Eliminate the use of 2D drawings for assembly and part analysis
- View 3D geometry, full PMI and GD&T information, attributes
- Take accurate measurements, cut dynamic sections

### Purchasing and Quotation

- Analyze key attributes and dimensions of a model with a click
- Perform thickness analysis, calculate projected area, compute draft angles
- Calculate bounding box, billet volume, mass, and surface area
- Compare design revisions and Generate Bill of Materials (BoM) report
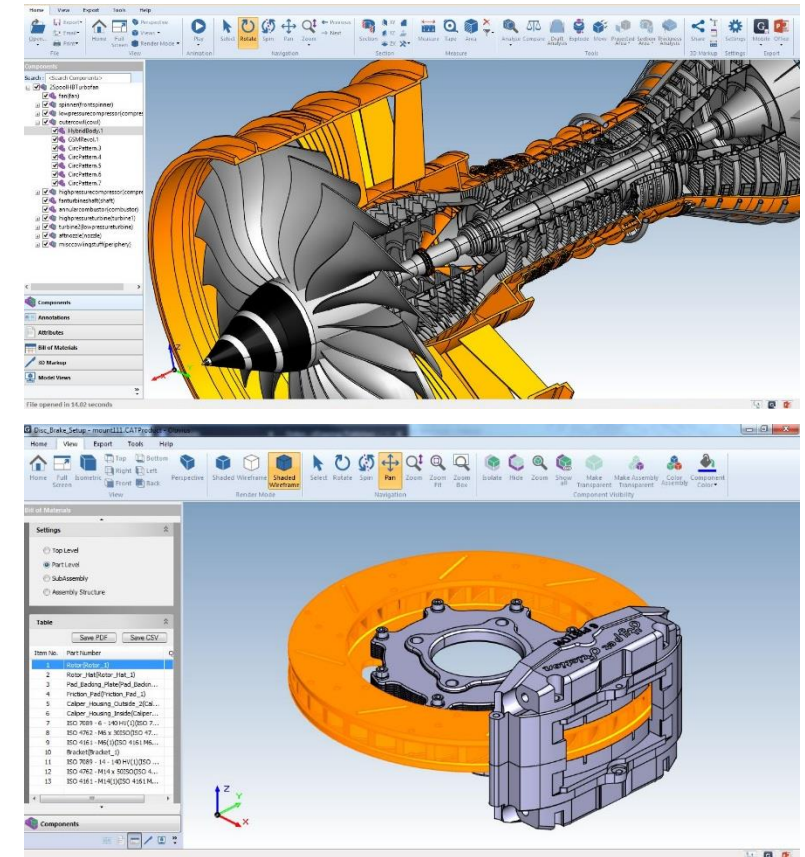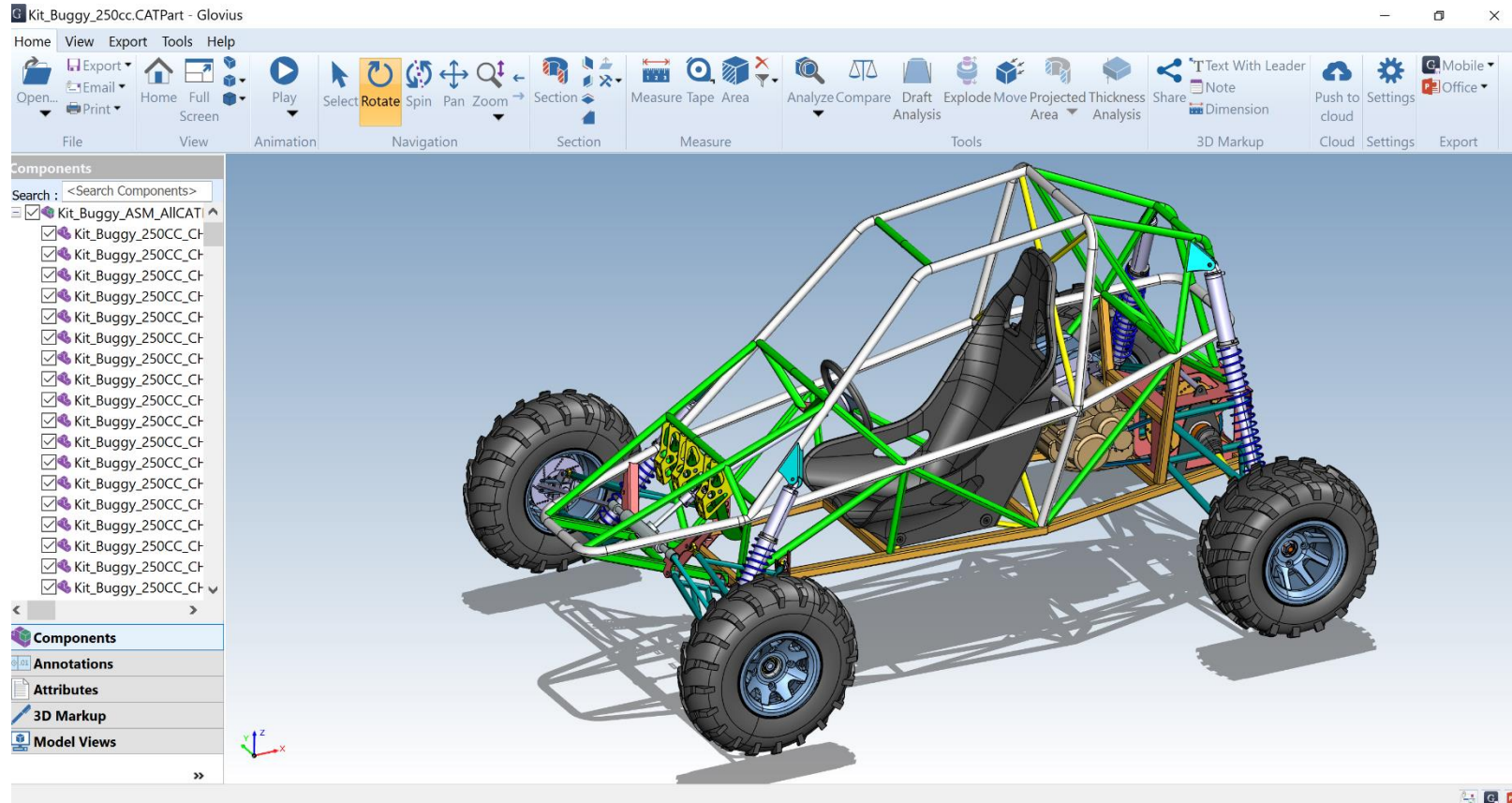
### Sales and Marketing

- Carry designs in your pocket, showcase on the go (free iOS, Android, cloud apps)
- Collaborate on the go, with text comments and freehand markup
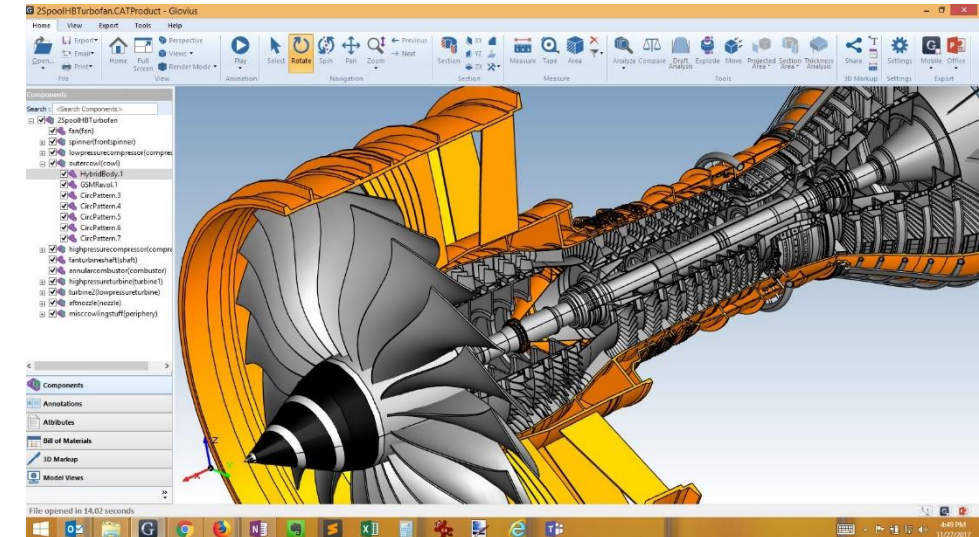
*"Glovius delivers a strong collaborative visualization choice for users looking to improve their data sharing experience during product development."*
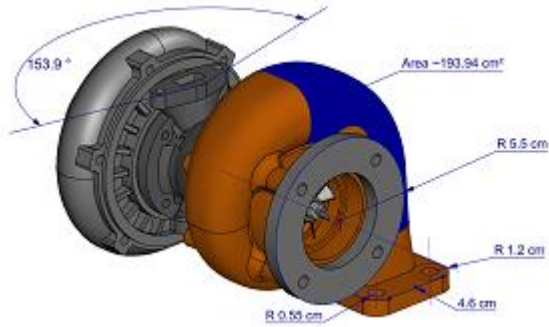
**- CIMdata**

# Glovius for Windows



## Modern CAD Viewer for Windows

‣ Simple, easy-to-use and instantly familiar

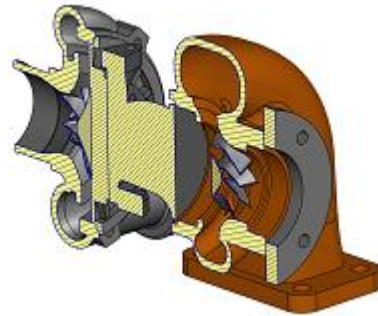‣ Powerful tools for Measurement, Sectioning, BOM, Comparison, Collaboration and Export

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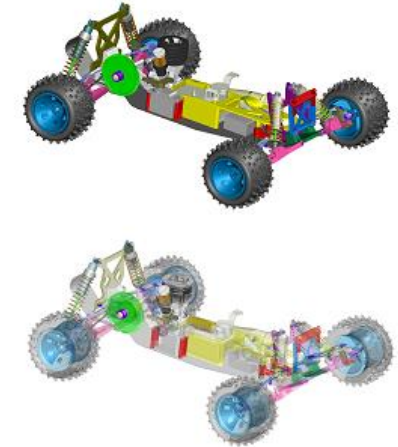
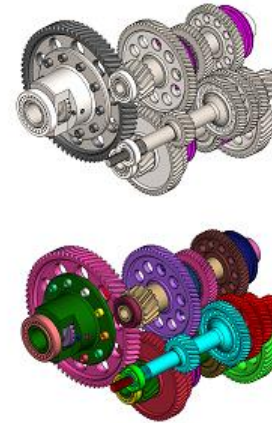**HCL**

# Analysis Tools

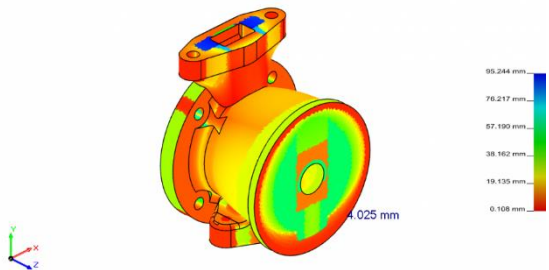▶ **Parts and Assemblies**

Measure

Take Sections
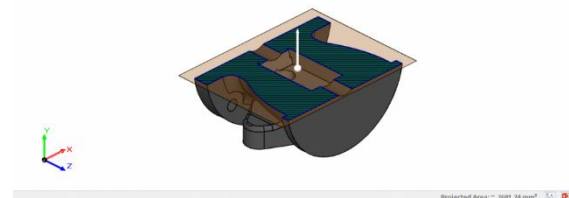
Apply Color and Transparency Effects
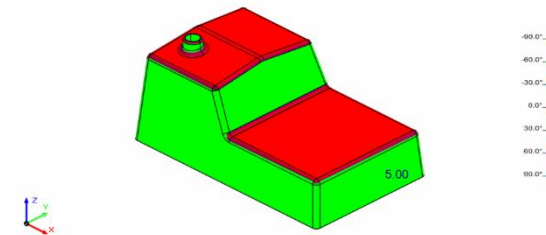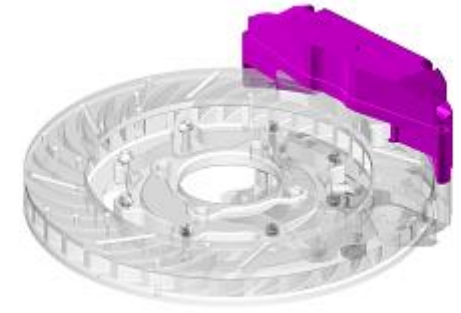
▶ **Part Design**

Analyze Thickness/Thinness

Calculate Projected/Section Area

Analyze Draft Angles

Compare in 3D

# Collaborate with Glovius Cloud

- **Carry your 3D designs**
  - View your CAD files **on any device**
  - Check Meta data - Product Structure, PMI, Attributes
  - Analyze 3D components

- **Collaborate with your team**
  - Add and review comments
  - Instant feedback with real-time **notifications**
  - Work in 3D and not images

- **Leverage the cloud**
  - Automatic BOM and 3D PDF reports
  - Download files for offline use
  - Native apps and modern stack for superior performance
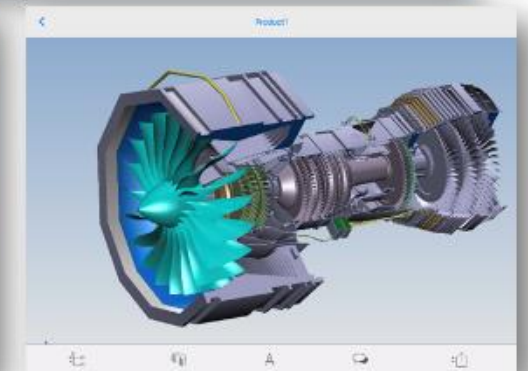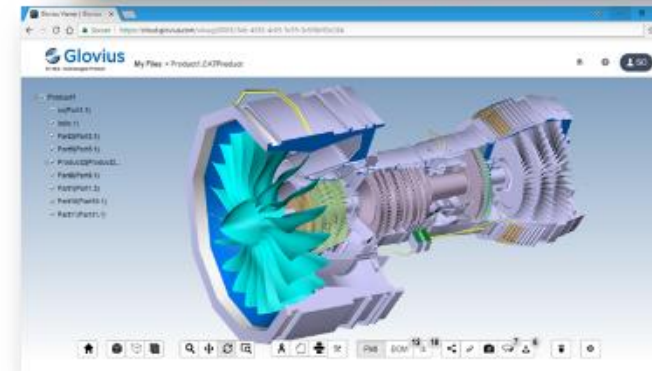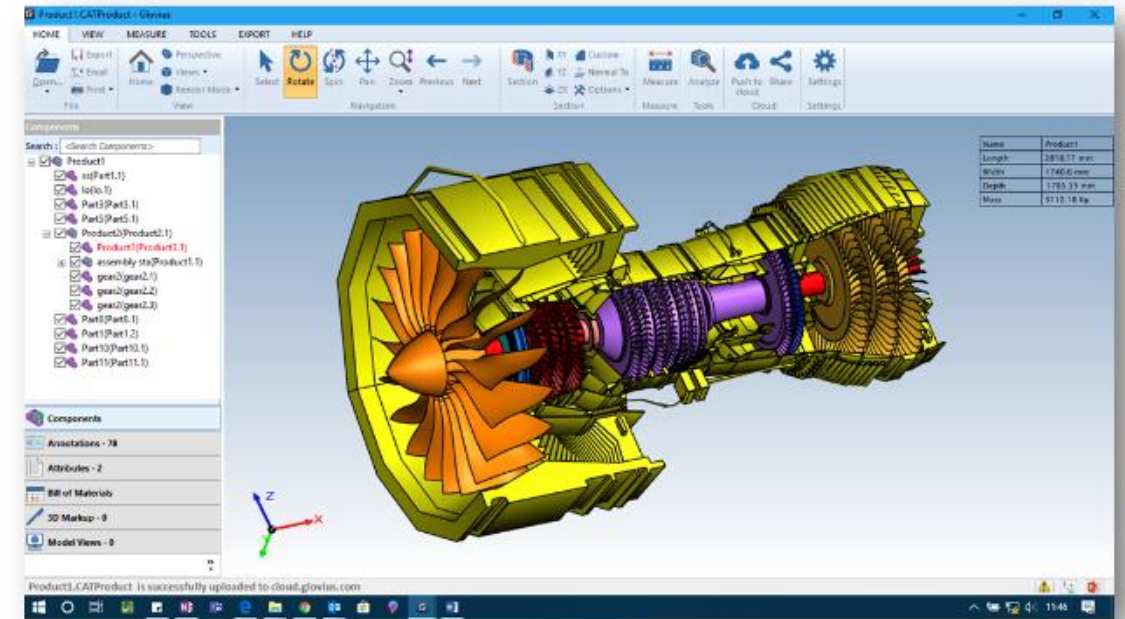
# Majority of Glovius Customers are Small and Medium Manufacturing Companies

- View multiple CAD formats with one application
- Best in class support for viewing CATIA, NX, Creo files, with PMI information
- Purpose built tools for design analysis, estimation, and quoting
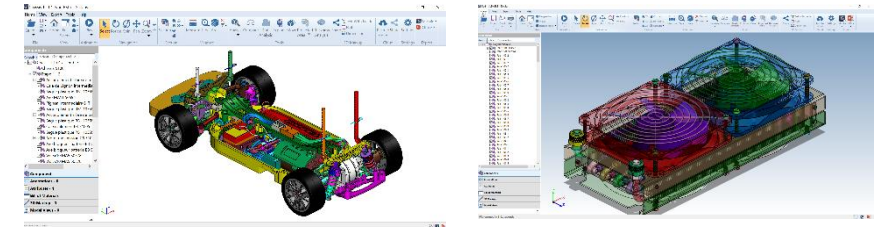


"…Not only on the work floor but also our purchasing, our sales and our service department have big benefits by using Glovius.
It has made our **assembling department paperless**, has given our sales the opportunity to open and review 3rd party 3d files and helps our purchasers to provide information needed for our suppliers."
**- Jacco Legerweij, BrinkBV**

"I really like your product. Very helpful for someone in **aerospace** who does **a lot of quoting** and has to open a lot of different types of files."
 **- Pat Rowell, Cutting Dynamics, Inc.**

"Advanced Systems and Controls uses Glovius in it's estimating department. **Estimators** need the ability to open and view a wide variety of customers drawings…"
**- Kevin Pray, Advanced Systems & Controls Inc.**

# Select Customers

## Automotive

R&D
Honda R&D Co.,Ltd.

DENSO EUROPE

TENNECO

MAGNA

MAHLE
Driven by performance

MAGNETI MARELLI

TS Tech
TS TECH AMERICAS,INC.

ALLGAIER
Allgaier-Group

## Manufacturing

BRINK

Halmosi
Auftragsfertigung
Industrieservice

OWENS CORNING INNOVATIONS FOR LIVING™

Craftsman
AUTOMATION

chiron

HERBORNER
PUMPENTECHNIK

MAGNODE

ROCAND

## Aerospace

Advanced Integration Technology
Turnkey Factory Automation for the Future of Aerospace

CAT LLC

DYLAN AEROSPACE

LTK

AEROTEK MANUFACTURING LTD.

AZMARK
AERO SYSTEMS

AFG AEROSPACE
FABRICATIONS
OF GEORGIA

AERO CHIP
INCORPORATED

Godrej AEROSPACE

CPG
AEROSPACE

Sigma

Patricomp
Aerospace Industry

HCL
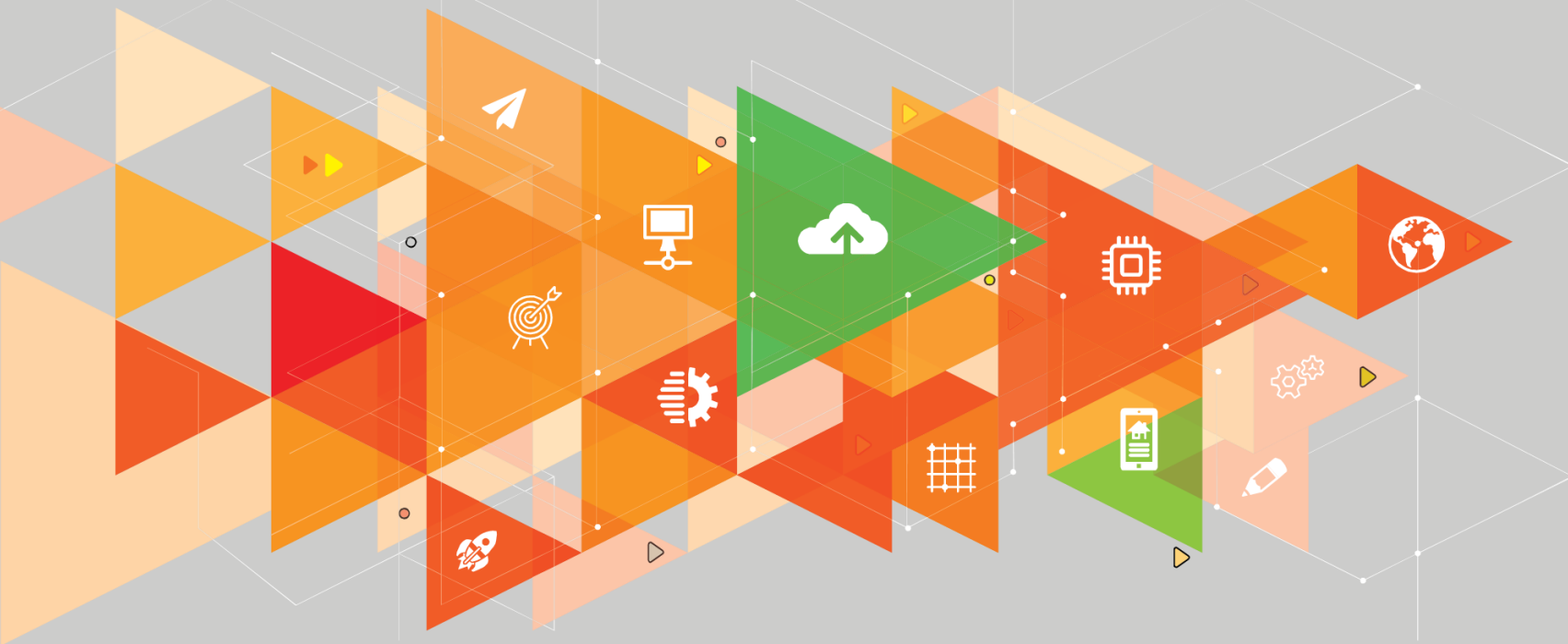
# ENTERPRISE VISUALIZATION

Case Studies

# Case Study – Enabling estimation teams to quote faster

**Leading Automotive Tier-1 Supplier serving Multiple OEM partners**

**Quickly Access and Estimate the Cost of Components to win projects**

## Challenges

- OEM's share 3D data in different CAD formats

- Multiple tools needed to accomplish task of quickly generating the quotation for a component
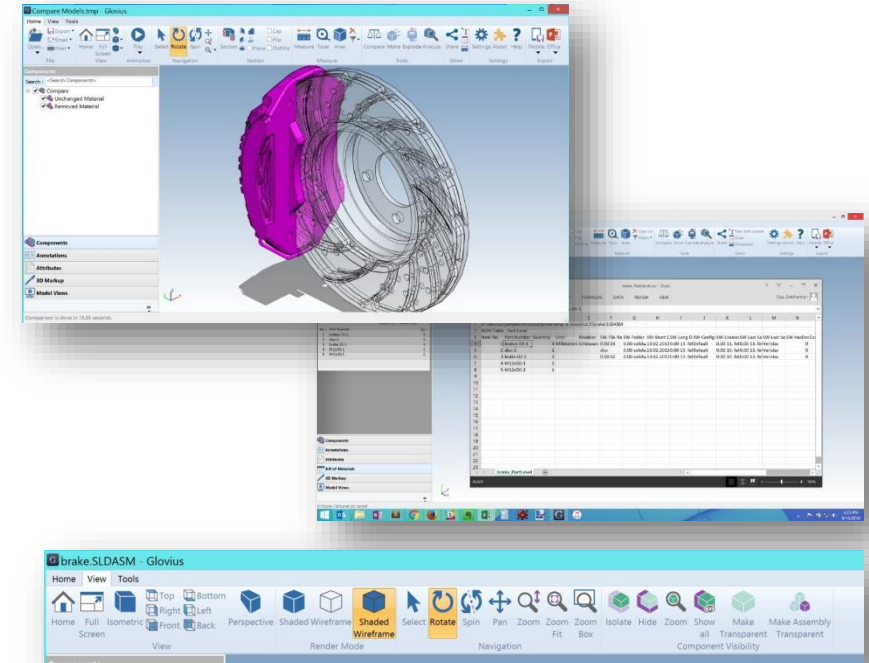
- Lack of reporting tools

## Solutions

- Glovius tools and functions developed for estimation teams

- Glovius functions for Fast Visual Analysis, BoM reports, Measurement and Compare tools

## Benefits

- Single application to View Multiple 3D file formats. License cost savings of more than $500,000

- Improved turn around time for quotations

- Lower IT and training spend

## Value delivered

Lower license, hardware and training costs. No dependency on CAD applications for quotes.

Specialized tools and functions enable increased accuracy and fast quotation

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# Case Study – Digitize technicians' workflow

**Japan's leading manufacturer of Automobiles and Motorcycles**
**Digitize technicians' workflow on the shop-floor by enabling 3D design access on multiple platforms**

## Challenges

- Use of paper drawings for technical references

- Lack of traceability and inability to capture work data seamlessly for process improvements

- Integration with multiple backend systems

## Solutions

- Glovius deployed on multiple platforms viz. iOS, Web browser, ActiveX and Windows desktop app.

- Integrated Glovius with existing IT infrastructure to present a unified User Experience for technicians

## Benefits

- On demand access to designs, replacing paper drawings.

- Multi-platform solution that repurposes existing assets for new use cases

- Up to $1Mn saved in license, maintenance and training costs
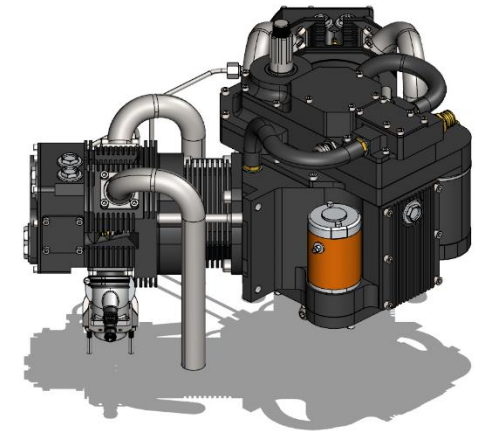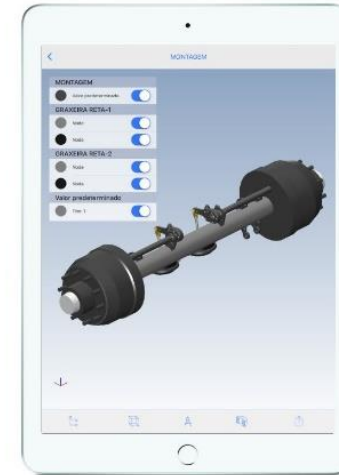
### Value delivered

Digitize the workflow for technicians enabling real-time feedback loops

Multi platform strategy re-uses the solution for multiple use cases

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# HCL

*Relationship* ™

BEYOND THE CONTRACT

**$7** BILLION ENTERPRISE | **115,000** IDEAPRENEURS | **32** COUNTRIES

▶ WATCH THE FILM

21ST CENTURY TECHNOLOGIES

# Thank You!

support@glovius.com