

HGKtech

VIRTUALNO KREIRANJE PROIZVODA

CADCAM Grupa

Zlatko Šimunec
CEO, CADCAM Grupa

DIGITAL TRANSFORMATION
ROBOTICS
SUSTAINABLE GROWTH
GLOBAL ECONOMY

PLANNED
Time in Planned Downtime
01:29:18

RUNNING

01:51:33
Time in Running Job / Daily
01:51:33 / 01:58:18

CAD/CAM
G R O U P

Od proizvoda do iskustava

Traditional
development

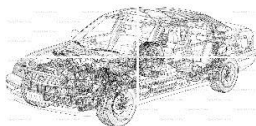
New Product
Development
(NPD)

New
Experience
Development
(NED)

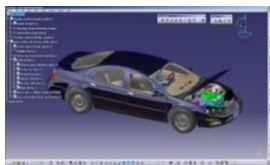
*Product
virtualization*

*Experience
virtualization*

Virtual development



5 to 6 years



3 to 4 years



12 to 18 months

Virtual validation



**>700 physical
prototypes**



**100 physical
prototypes**



**<10 physical
prototypes**

Virtual production



**Mass manual
production**



**Automated
production**



Smart production

Virtual sales



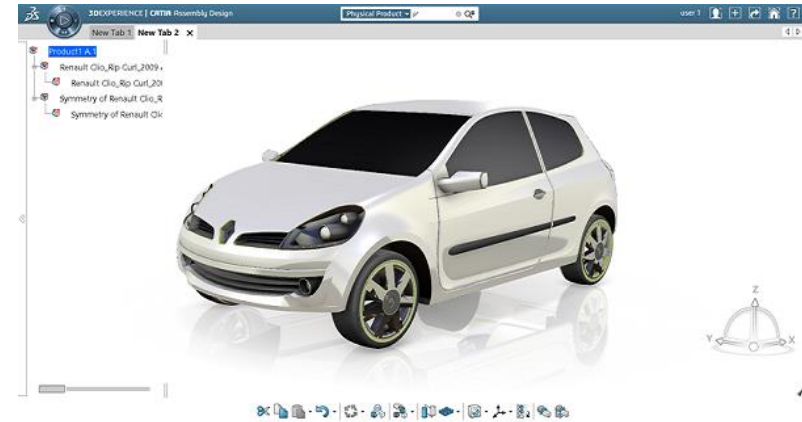
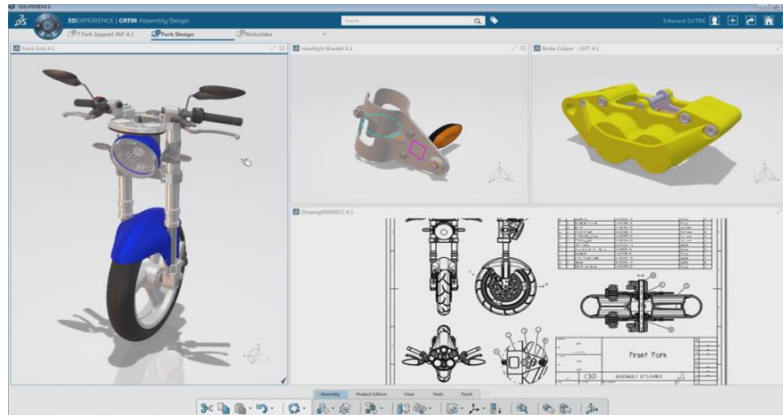
Traditional 4S shop



**Showroom - 0
product**

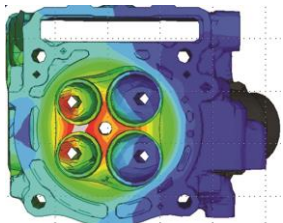


Online - 0 shop

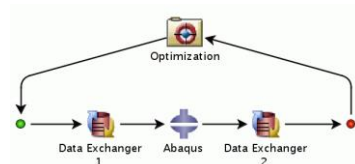


Paketi simulacijskih alata

FEA Multiphysics Simulation



Process Integration & Design Optimization



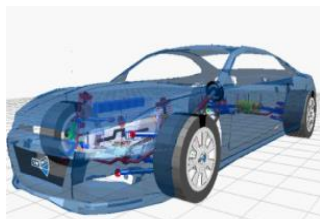
Non-parametric Optimization



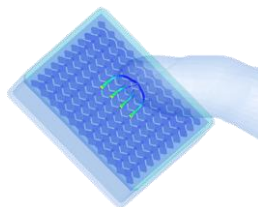
Durability & Fatigue



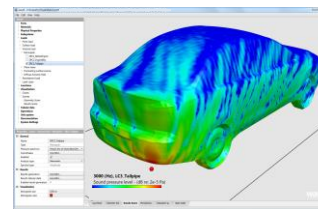
Multibody simulation



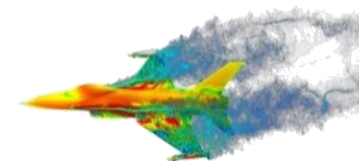
Electromagnetic & Electronic Simulation

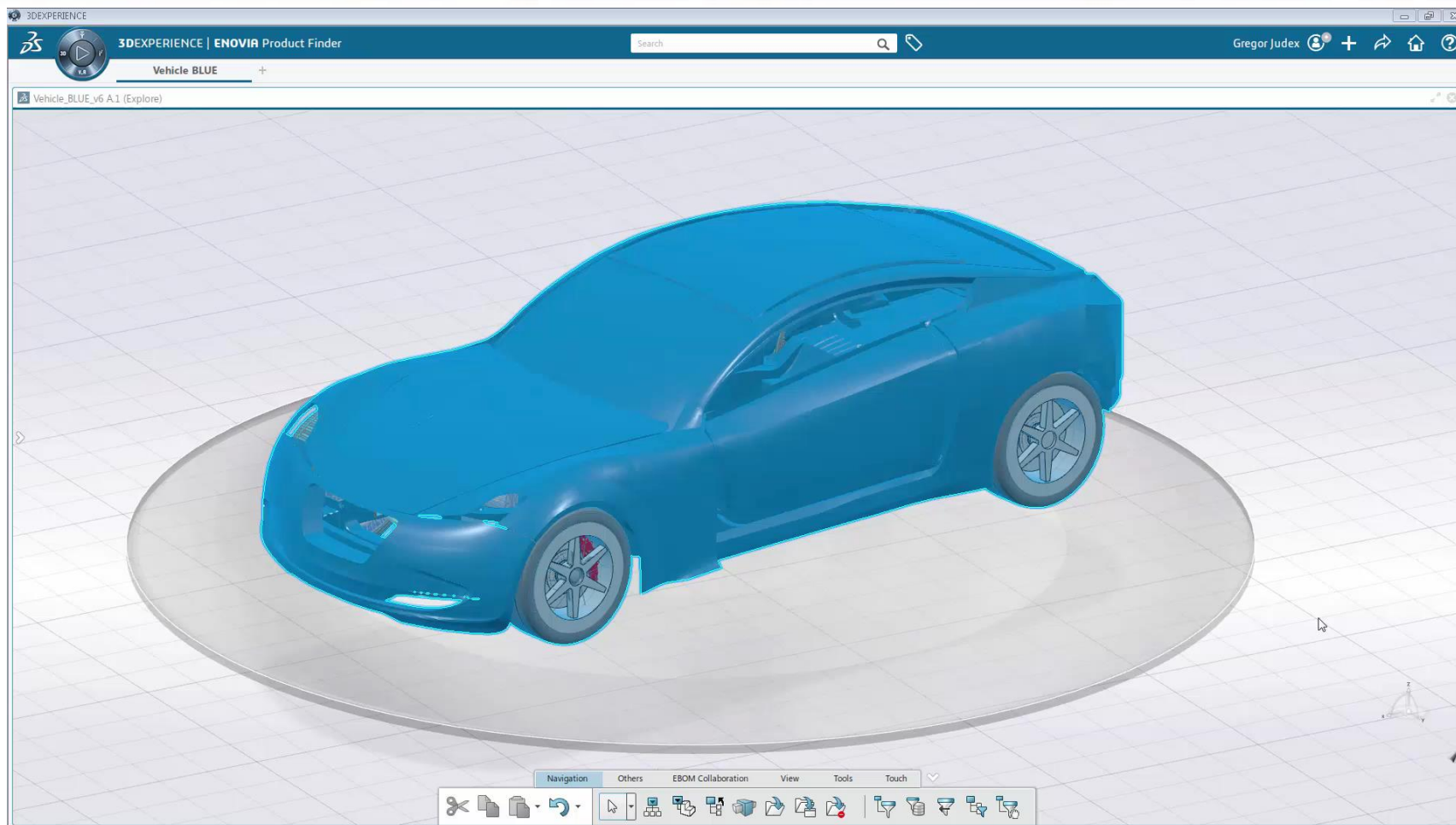


Vibro-acoustic Simulation



Lattice Boltzmann CFD





Multifizikalna simulacija

1

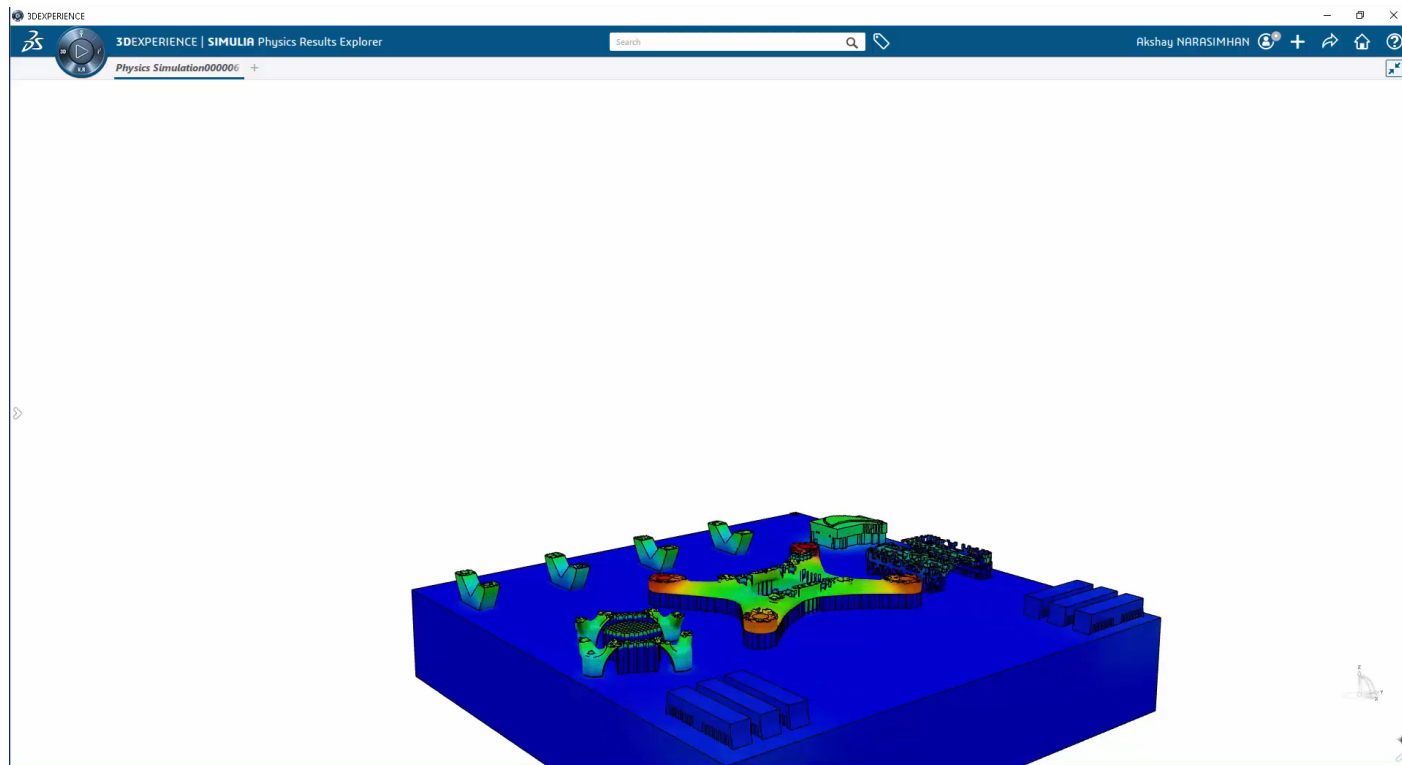
Thermal and
Stress Analysis

2

Simulated
Build Environment

3

Simulation
feedback for better
print performance



3D Market place

23 results


Proto Labs USA

Tolerance: **0.1%**
0.05 mm minimum

Turn around time: **3 days**

Capacity:

Prototype Small series Series

[More information](#) [Request Print](#)


3D Systems On Demand Manufact

Tolerance: **0.2%**
0.127 mm minimum

Turn around time: **4 days**

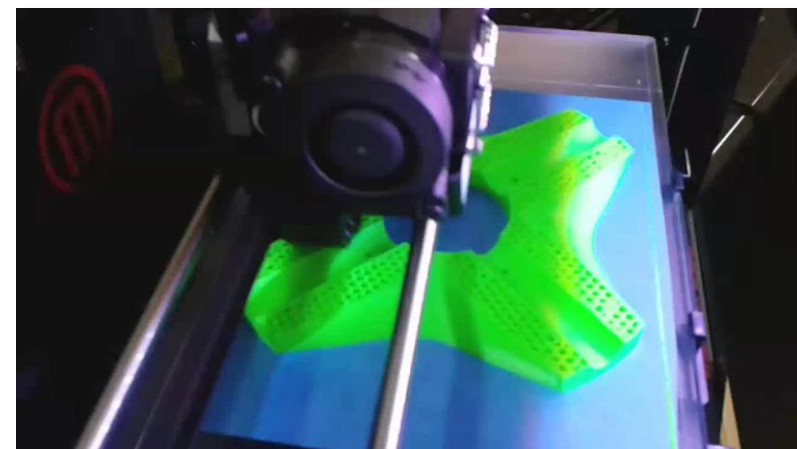
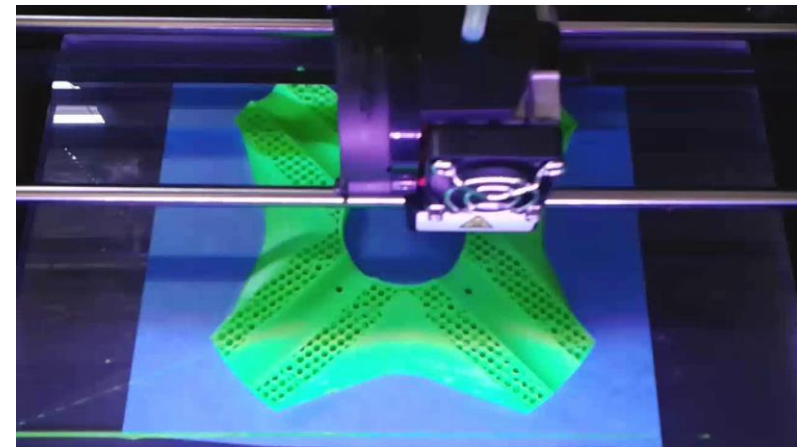
Capacity:

Prototype Small series Series

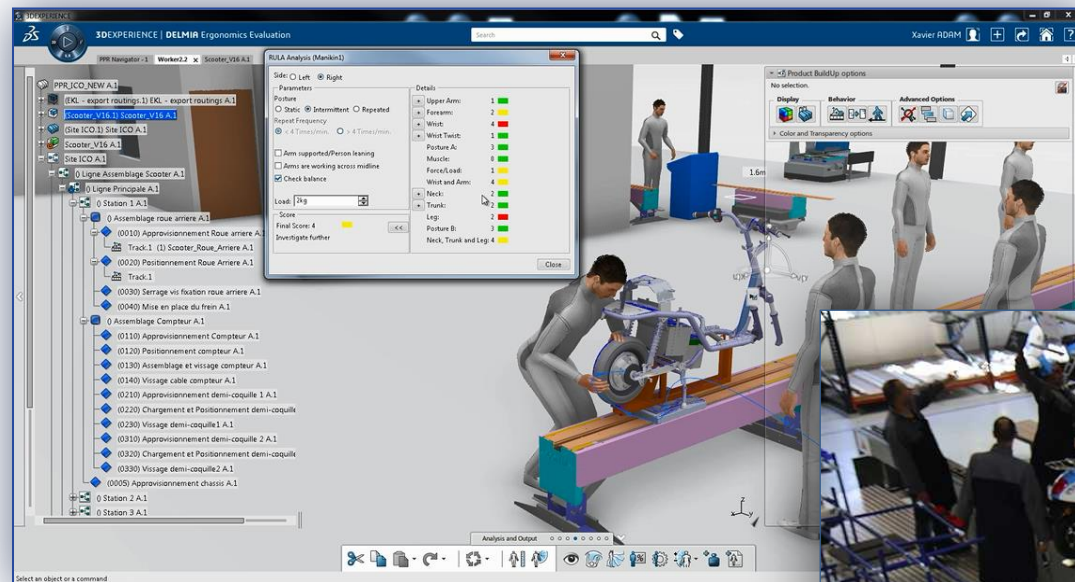
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Leaflet | 3DS



Inovacijski centar za operacije (ICO)



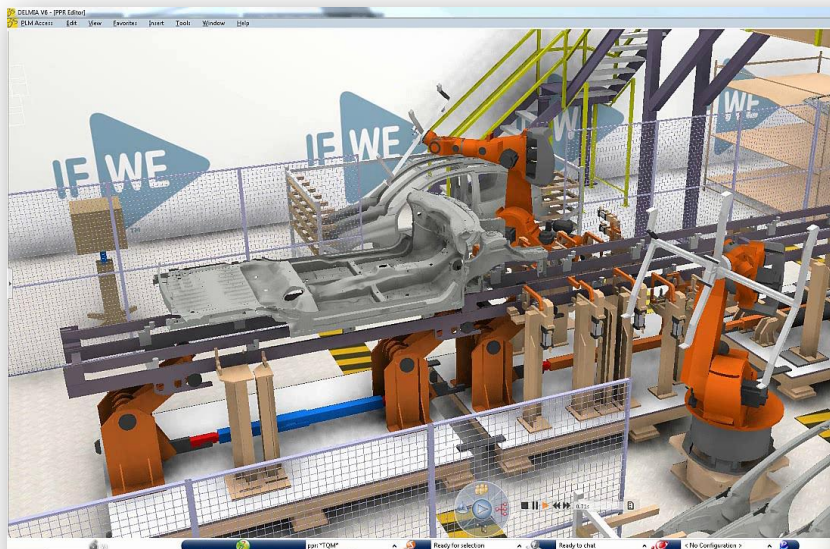
Manufacturing Execution



Virtual Modeling and Simulation

Modeliranje i simuliranje proizvodnje

- Process Planning
- Assembly Process & Ergonomic Simulation
- 3D Work Instructions



- Machine & Robotics Programming
- Single 3D data model across engineering and manufacturing

Planiranje i predviđanje proizvodnje i proizvodnih operacija

- Real time analytics
- Back office analytics
- Predictive analytics
- KPI-based planning
- Visibility
- Control
- Synchronization across operations



Povezivanje različiti disciplina za integrirani razvoj proizvoda

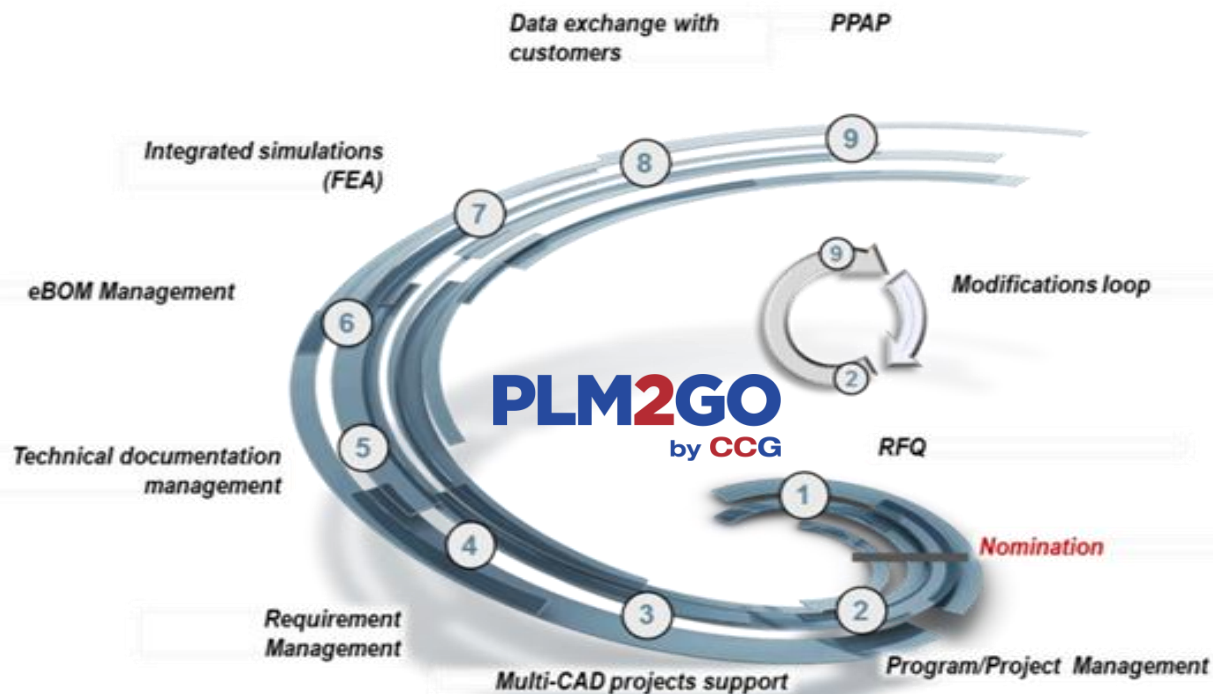
MEchatronic **CO**llaboration **DE**sign **S**olution

- Electro-mechanical design
- MCAD and ECAD collaboration
- Data exchange formats and protocols
- Advanced product analysis of cross discipline results by 3D product representations

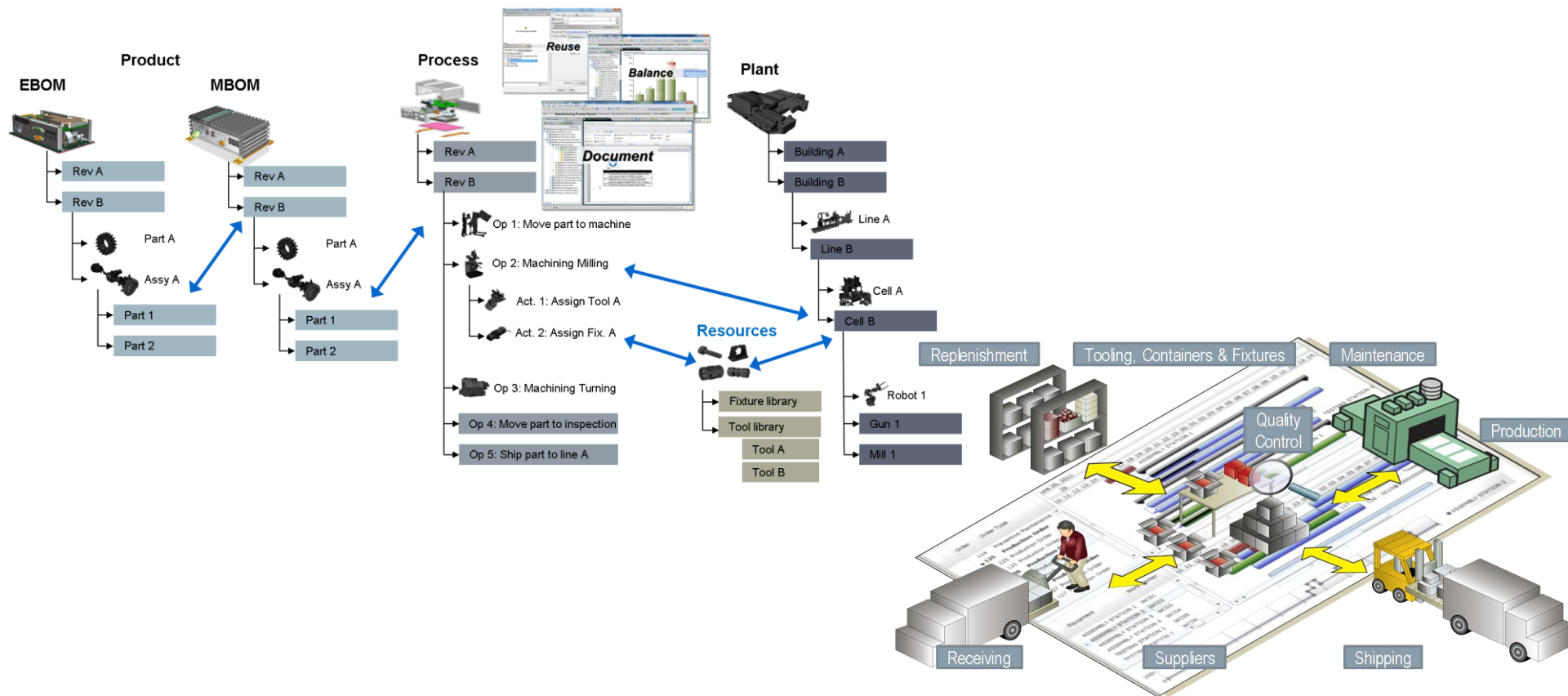


Lakši put do PLM-a

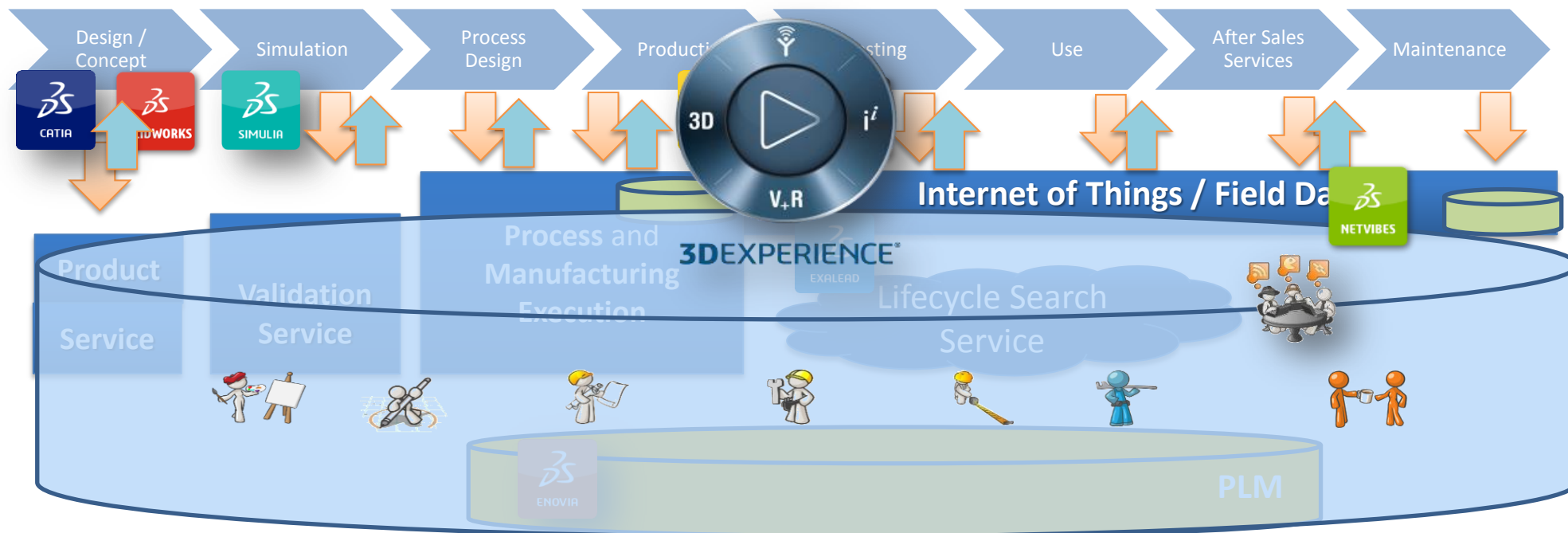
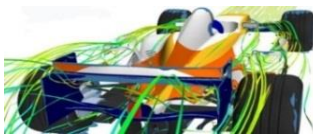
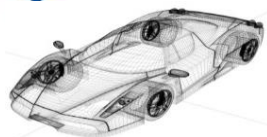
- Data Management
- CAD Management
- BOM Management
- Change Management
- Project Management



Digital Continuity



Jedinstvena integracijska platforma



Virtualna stvarnost



O CAD/CAM Grupi

- Spajamo programska rješenja za mehaničke, električke i elektroničke sustave, inženjerske usluge i naš intelektualni kapital, fokusirano na specifične zahtjeve i izazove naših klijenata
- 65 ECAD/MCAD inženjera za implementaciju, razvoj proizvoda, obrazovanje i inženjering
- Jedini Dassault Systemes certifikacijski centar u Hrvatskoj, Sloveniji, Srbiji i Bosni i Hercegovini

3DEXPERIENCE rješenja za industrije

ECAD rješenja

PLM2GO

ECAD/MCAD
suradnja

Certifikacijski
centar

Inženjerske
usluge



Povijest CAD/CAM Grupe



- 1991. CAD/CAM Design Centar, Zagreb, Hrvatska
- 1995. IBM Business Partner
- 2001. CAD/CAM Lab, Ljubljana, Slovenija
- 2002. CAD/CAM DATA, Beograd, Srbija
- 2007. CAD/CAM Solutions, Sarajevo, BiH
- 2007. MECODES
- 2012. SolidWorld Adria
- EDMD Solutions

Portfolio proizvoda

- Dassault Systemes
- Mentor
- Pc Schematic
- CAM 350
- Q-Checker
- Tracepart



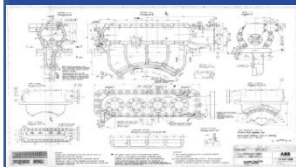
Portfolio usluga

Project Management

- Establish a Project Structure for the Design Task
- Responsibilities and Expectations
- Secured Required Resources and Expertise
- Involve key stakeholders and functional users during the design
- Understanding the business and design issues
- Validate Performance and Quality commonly

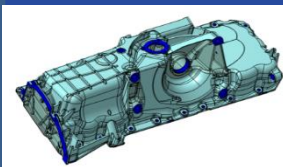
2D Drawings

- Drawing Creation
- BOM's



Basic 3D Design

- Design according to specification
- Parametric associated design



Advanced 3D Design

- Design Mechanism
- Styling
- Composite Design



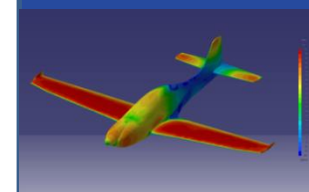
Consulting Services

- Process Optimization
- Methodology



Analysis Simulation

- Finite Element Analysis
- Kinematics Analysis



Neke od referenci CAD/CAM Grupe

KONČAR
KONČAR
 Končar alati d.d.

DALEKOVOĐ
YAZAKI
OMCO
TEH-CUT
Salona
AD Plastik
ATAC
ALSTOM Power

BRODARSKI INSTITUT


BUCK
IKARBUS

GOMMA
 LINE

gorenje
 Gorenje MDM d.o.o.

mi milanović
 inženjering

GAZPROM
PEŠTAN
YUGOIMPORT
 IMPORT/EXPORT

Eurozeit
 Sremska Mitrovica

gorenje
 Gorenje Orodjarna, d.o.o.

elan
CIMOS
AKRAPOVIČ
CARRERA
 RACING SINCE 1956

RENAULT
YASKAWA
HELLA

bh
prevent.
 Materials, Seats, Interior.

BEGROUP
CORE
 DO MORE WITH LESS

ORAO
 1944

MANN+HUMMEL
BEKTO PRECISA

RIMAC
 AUTOMOBILI

KIT
 Karlsruher Institut für Technologie

SWATCH GROUP
Valeo
GEBERIT
GENTEX
 CORPORATION
 A Smarter Vision®

META
 SYSTEM

Kontaktirajte nas

- 01 2016 100
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- Live chat
- My CAD/CAM portal
- Newsletter
- Facebook
- LinkedIn





Hvala!



www.cadcam-group.eu