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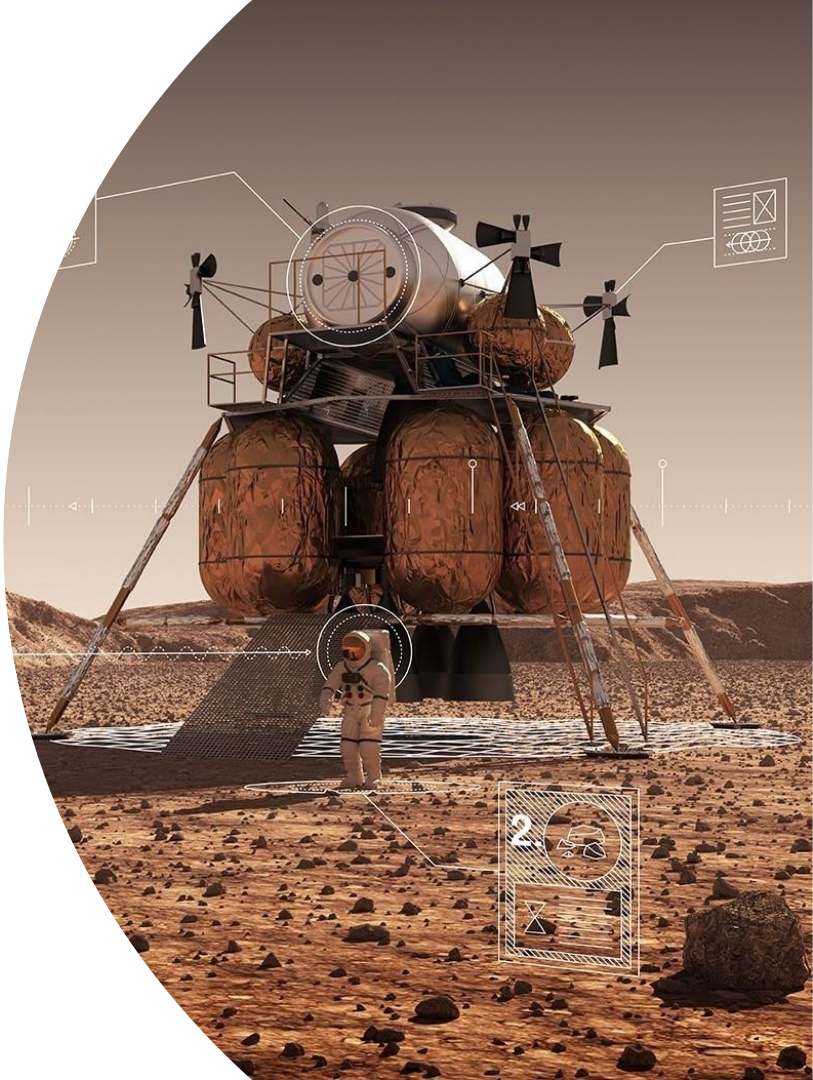
3DEXPERIENCE®

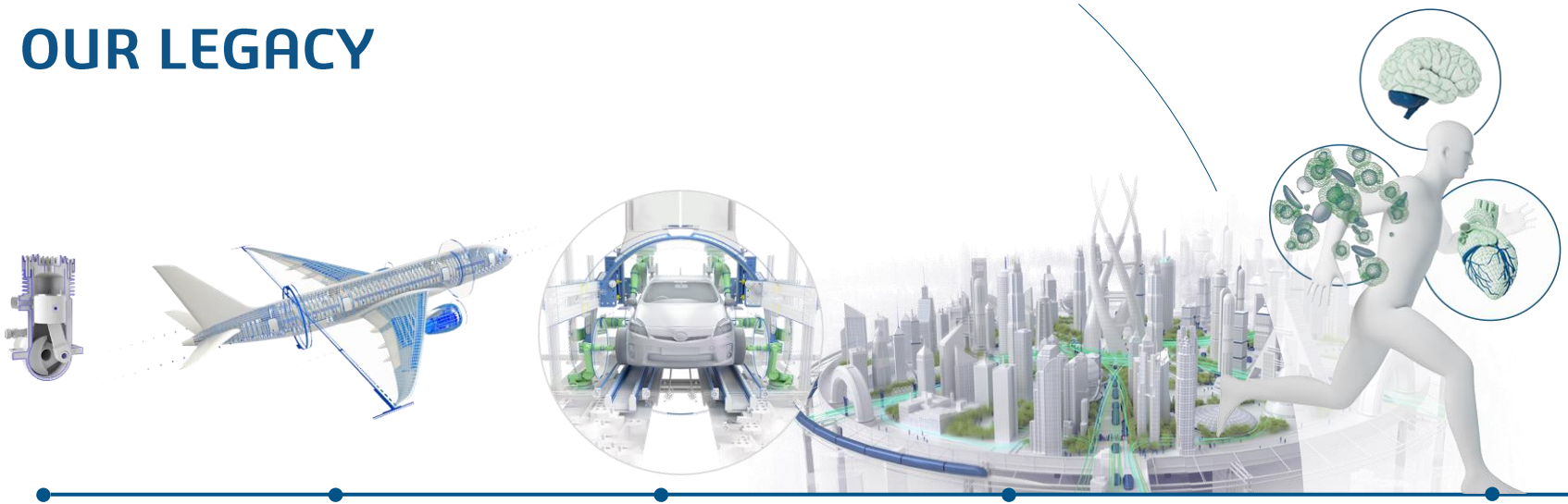
ENOVIA

Plan Your Definition of Success

DASSAULT SYSTEMES | The 3DEXPERIENCE® Company



OUR LEGACY



1981
3D Design

1989
3D DMU
Digital Mock-up

1999
3D PLM
Product Lifecycle Management

2012
3DEXPERIENCE **platform**
Business Experience

2020
Virtual Twin Experience of **Humans**

ENOVIA

VPM
Virtual Product Model

PLM PLATFORM & Apps
Product Lifecycle

BUSINESS Apps & Roles
Leveraging the Power of the **3D**EXPERIENCE Platform

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ENOVIA

DASSAULT SYSTEMES

FROM ENOVIA TO 3DEXPERIENCE ENOVIA

1996

ENOVIA
VPM

1998

SMARTEAM

2008

V6

V6 Platform

MatrixOne

exalead

2014

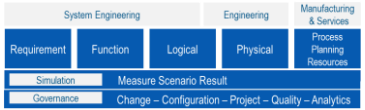
3DEXPERIENCE

netvibes
Dashboard Everything

2017

3DEXPERIENCE

POWER'BY
Next Generation
Configured
Product Development



2020

Virtual Twin

Continuous
Business-Driven
Product Development

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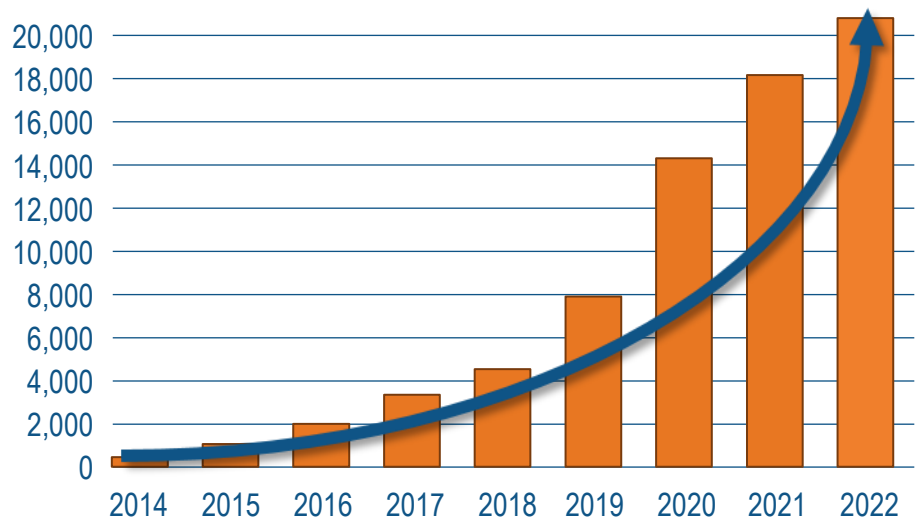
DASSAULT SYSTEMES

3DEXPERIENCE ENOVIA ADOPTION

DYNAMIC & SCALABLE

Strong Customer Adoption Trend of 3DEXPERIENCE



60% Cloud Clients

20,017 Clients

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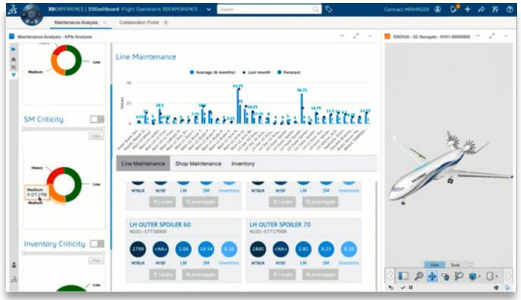
3DEXPERIENCE PLATFORM
VIRTUAL TWIN EXPERIENCES

3DEXPERIENCE

Virtual Twin for Products

Virtual Twin for Enterprises

Virtual Twin for Operations



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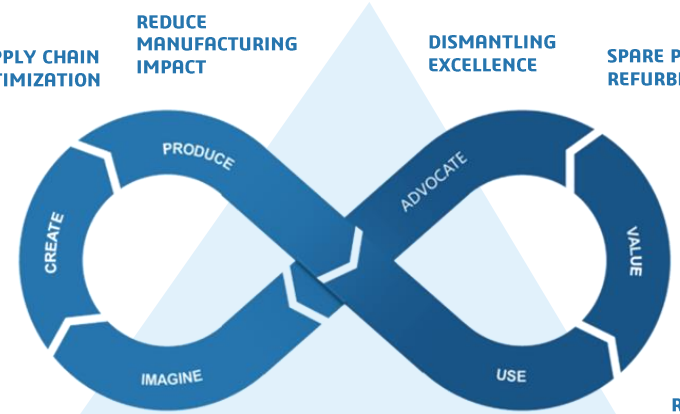
DASSAULT SYSTEMES

SUSTAINABILITY INNOVATION INTELLIGENCE

Accelerating Sustainability through Virtual Twin Experiences



SUPPLY CHAIN OPTIMIZATION

REDUCE MANUFACTURING IMPACT

DISMANTLING EXCELLENCE

SPARE PART REFURBISHING

VIRTUAL V&V

MODERNIZATION ASSESSMENT

DESIGN FOR CIRCULARITY

VIRTUAL COMMISSIONING

DECREASE ENERGY CONSUMPTION DURING OWNERSHIP

REDUCE FLEET EMISSIONS

REDUCE ERGONOMIC RISK

SUSTAINABILITY DRIVEN PROJECT MANAGEMENT

3DEXPERIENCE®

LIFECYCLE ASSESSMENT

DESIGN FOR CIRCULARITY

REDUCE WASTE, EMISSIONS & RISKS

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ENOVIA

REAL WORLD EVIDENCE

RENAULT Passion for life
CLAAS
CAF
Zurich
VERTICAL Aerospace
KREOD
FAMILIA TORRES
NIO
Metsä
PASOTTI DESIGNWORKS
AMF GROUP
HYUNDAI
JAGUAR
LAND ROVER
biomega value vitality
XOS
HEATWORKS
中国电建 POWERCHINA
INTERSTELLA
西北勘测设计研究院有限公司 NORTHWEST ENGINEERING CORPORATION LIMITED
CECI CECI Engineering Consultants, Inc., Taiwan
YEŞİLOVA
Sabelt
xsun
JAKSCHE
General Aeronautics
DEUTSCHE LICHTMIETE
CAPPELLOTTO
evolectric
TEXELIS
DIGITAL ORTHOPAEDICS
IDeCOM
AXELENT
KG constructions
iter
olenergies
drive less do more
EVUM MOTORS
UNITED TRACTORS
FANGDA PARTNERS 方達津師事務所
riZE
WANXIANG GROUP

3DEXPERIENCE PLATFORM
A CATALYST FOR INDUSTRY RENAISSANCE

FROM…	…TO
Siloed Disciplines / Product Centric	Virtual Twin Experience of Products
Siloed Departments / Transaction Centric	Virtual Twin Experience of Enterprise

From **Product** to **Experience Economy**

From **Business Operations** to **Business Experiences**

Transformation

3DEXPERIENCE PLATFORM
UNIQUE VALUE TO CREATE VIRTUAL TWIN EXPERIENCES

3DEXPERIENCE

SCIENCE:
MOD | SIM

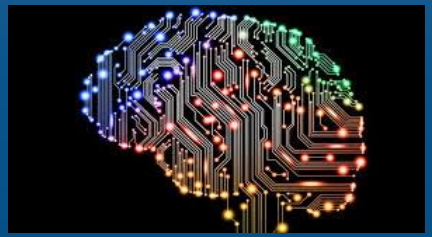
Enterprise in the Value Network

Production Sites

Products

+

SCIENCE BASED
Real World Evidence
BIG DATA+ARTIFICIAL INTELLIGENCE



+

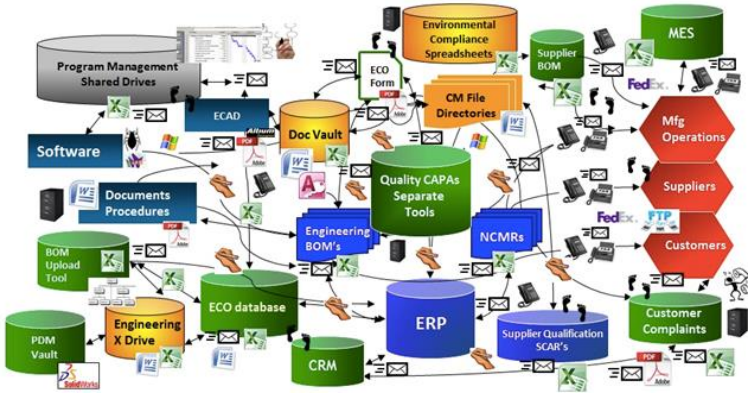
COLLABORATION

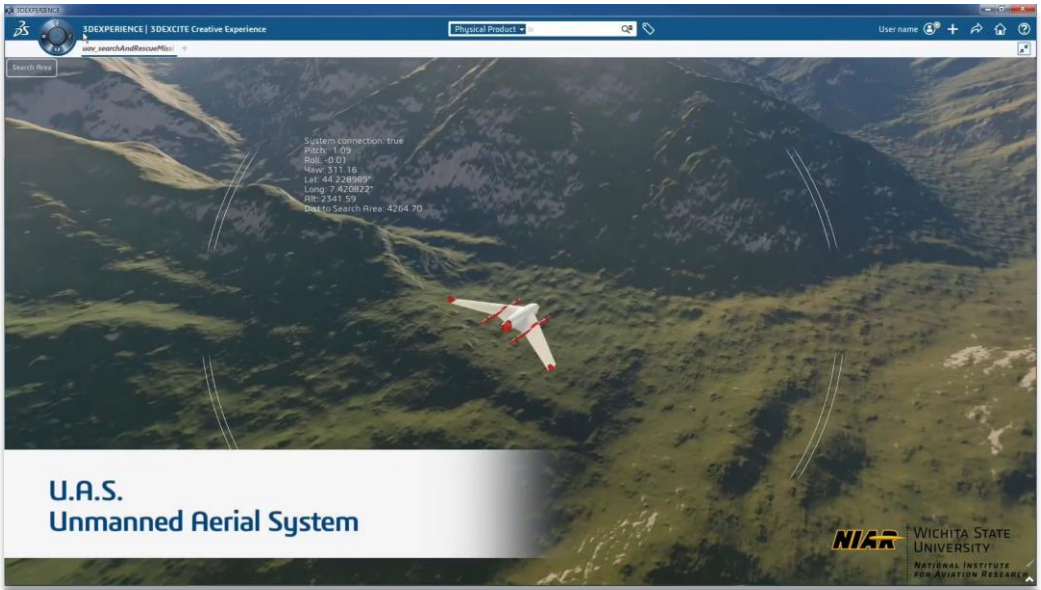
DASSAULT SYSTEMES

TRANSFORMATION 1

Digital continuity is the capability to transfer information throughout the product life cycle. But it is static data processing. Virtual twin is about mirroring the virtual and real world.

From Digital Continuity...





...to Virtual Twins

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TRANSFORMATION 2

In a dispersed value network, sequential processing is not sustainable. Product Development must be experience-, performance- & sustainability-driven.

From Sequential...

...to DevOps

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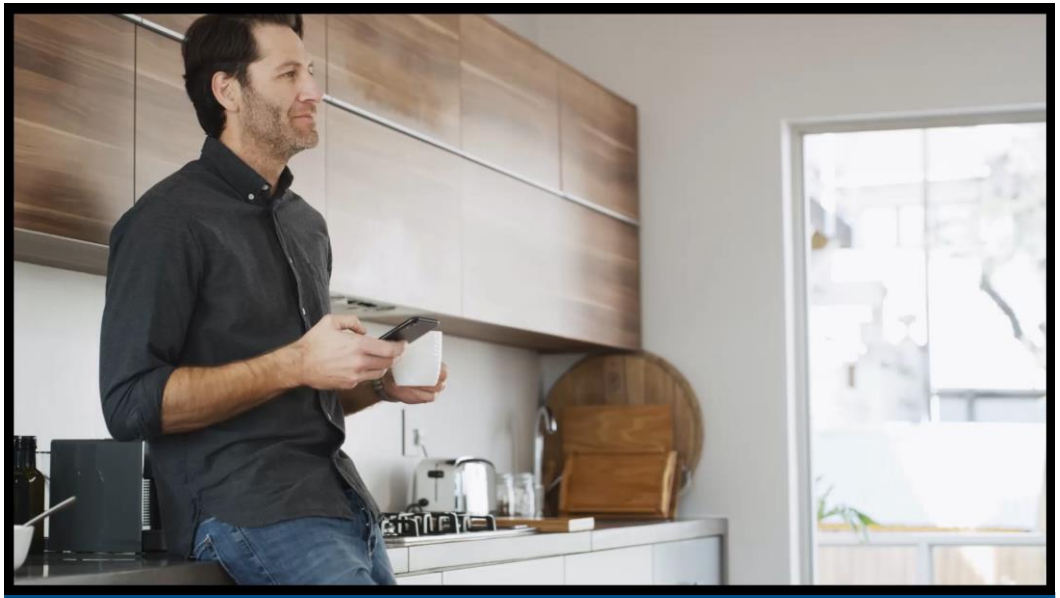
TRANSFORMATION 3

User expectations have increased. The experience must be mobile, easy to learn and FUN!!

From Desktop…



…to Inclusive User Experiences

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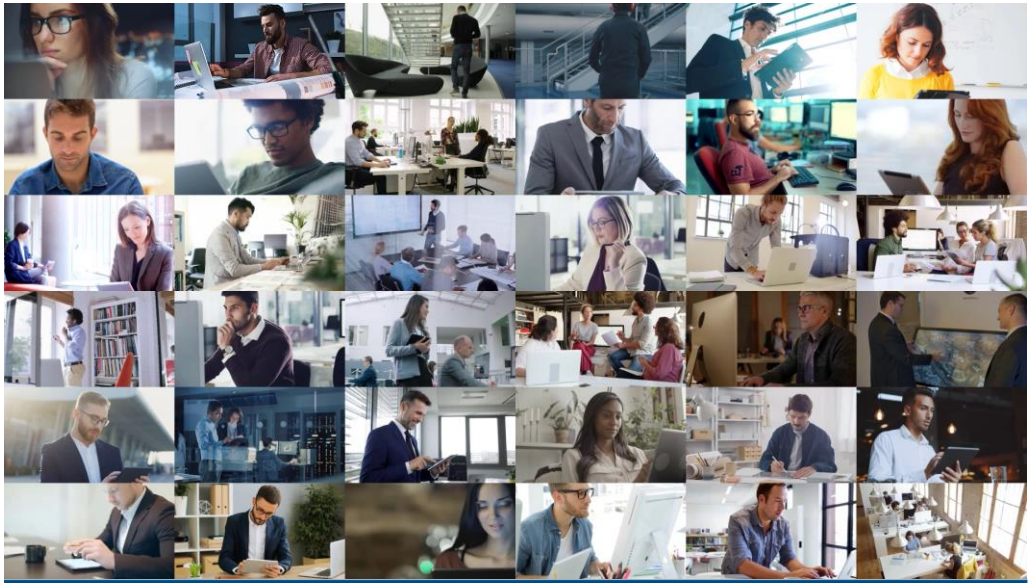
TRANSFORMATION 4

Multi-discipline teams must break down operational silos and work together in a common environment to drive continuous innovation.

From a patchwork of tools...



...to inclusive Business Experiences

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3DEXPERIENCE IS MORE THAN PLM...

"I was really surprised how different **3D**EXPERIENCE is from other PLM systems because **I quickly realized that it is first and foremost a collaboration platform** enabling different functions to work together."

Jose Garcia-Urruchi
Head of Digital Design Engineering, Jaguar Land Rover

"**Social collaboration is the power of companies**. Because that's where all our ideas are going to become reality when we ramp up projects. Back in the day, we were running all these activities in a completely disconnected environment... we thought why? We can collect everything in one single place that can become a source of truth for everybody."

Luigi Ferracutti
Sr Director 3D Development & Tooling , Crocs

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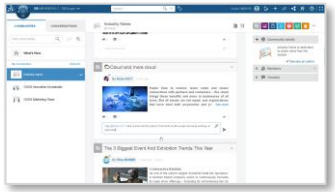
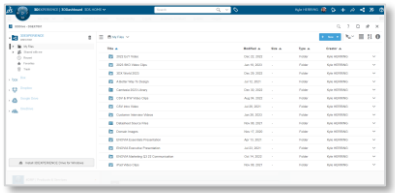
3DEXPERIENCE PLATFORM: CORE ROLES

3DSwymer — **Collaborative Industry Innovator**

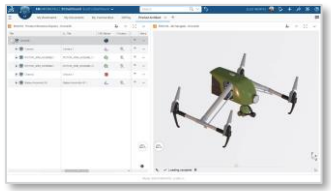
Social Collaboration — Structured Collaboration



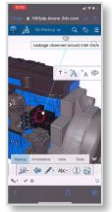
Establish social communities and conversations



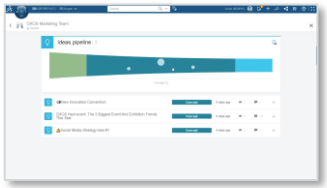
Flexibly organize content and share experiences



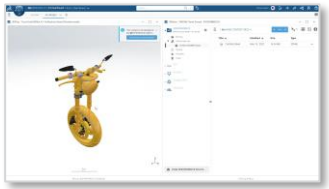
Single, unified engineering definition



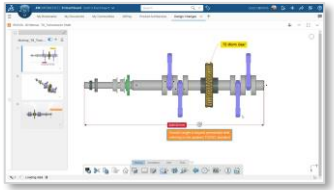
Navigate product structures at any time, on any device



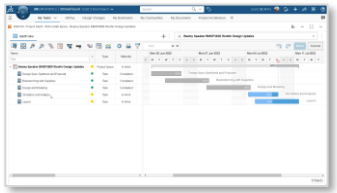
Capture knowledge and know throughout the innovation process



Make accurate decisions based on current data



Review and validate current 3D designs



Standardize project execution and change management processes

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3DSWYMER

Unite everyone in the value network for sustainable innovation

- Establish social communities and conversations to share, experiment and collaborate
- Flexibly organize content and share experiences
- Capture knowledge and know how
- Easily store, share and search information for reuse

3DSwym
Engage in communities and conversations

3DDashboard
Customize the display of apps and information

3DSearch
Intuitively search across platform apps and data

3DDrive
Securely store, access and share files

3DSketch
Sketch the world you live in

3DPlay
Experience 2D and 3D content in real-time

- NEW APPS -

3DSwym IOS & Android App
Stay connected to 3DSwym on your phone

3DWhiteboard
Contribute to collaborative ideation and innovation

Channel
Follow identified topics and sources in a single view

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COLLABORATIVE INDUSTRY INNOVATOR

Organize, manage and collaborate on content in a secure manner

- Navigate through product structures at **any device**
- Review and validate current **3D designs**
- Contribute to engineering definition in **real-time**
- **Standardize** project execution and change management processes

Change Execution
View and work on assigned changes (CO/CR)

Issue Management
Create, assign and manage issues

3DMarkup
Explore, annotate, section and measure 3D models

Bookmark Editor
Logically organize data and PLM objects in folders

Document Management
Create, search and manage engineering documents

Collaborative Tasks
Simple and intuitive task management

Route Management
Create repeatable routes to help members complete tasks

Collaboration for Microsoft
Manage MS Office documents and capture information

Compare
Identify differences between structures, data and geometry

IP Classify and Reuse
Store, manage and access files across apps

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3DEXPERIENCE PLATFORM ARCHITECTURE

3DEXPERIENCE®

Roles & Apps

Semantic Data Model

Big Data Infrastructure

Legacy TRANSITION

xMCAD, xECAD

INTEGRATED APPS / ROBOTS

DATA DRIVEN

MODEL BASED

TAILORED ONTOLOGIES

CLOUD-READY

COLLABORATION-READY

DEVICE-READY

ARTIFICIAL INTELLIGENCE

Open (Extension, Integration, ...)

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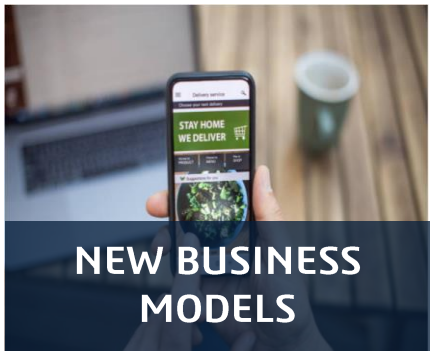
DASSAULT SYSTEMES

INDUSTRY CHALLENGES
FROM PRODUCT TO EXPERIENCE ECONOMY



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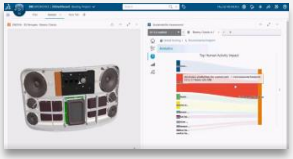
ENOVIA

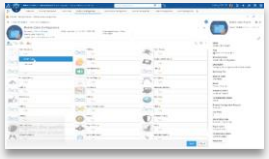
DASSAULT SYSTEMES

ENOVIA | DOMAINS

Planning

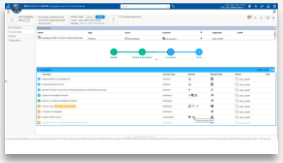


Sustainable Strategy



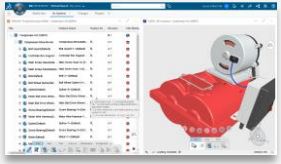
Portfolio

Program & Project Performance & Execution



Quality & Compliance

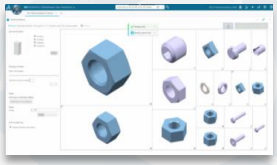
Virtual Product Development



Multidiscipline Configured Product Development

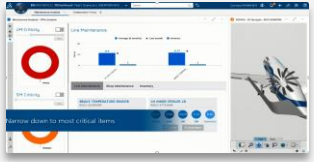
Value Network

Value Network Development



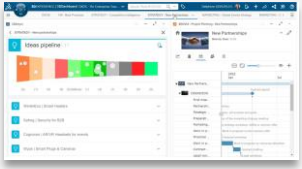
Sourcing & Standardization

Customer Experience

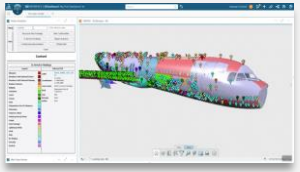


Asset Experience

Collaboration & Intelligence



Social Collaboration & Structured Collaboration



3D for All

Collaborative Content

Information Intelligence for All

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ENOVIA

DASSAULT SYSTEMES

PLANNING

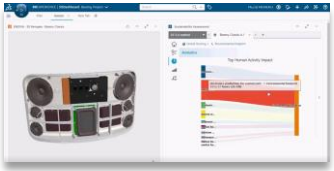
From Enterprise to Value Network Planning

Intelligently plan products and services aligned with business strategy to capitalize on market opportunities.

ENOVIA + NETVIBES

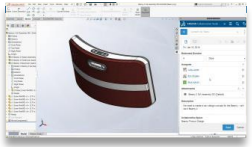
Define a Sustainable Strategy

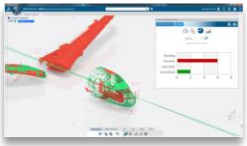
Rethink sustainability as a constraint to a competitive advantage and industry as the solution for a sustainable world.



Portfolio Driven Product Development Planning

Connect Portfolio Definition to Product Development Project execution and review in context of the product definition.





Scalable & Industry Tailored Planning

Planning that meets the unique industry needs.

Value Network Capital Project

Large Enterprise Project

Team Project

Data Driven Quality and Compliance

Move from document based to data & knowledge driven governance (Quality, Regulation, Compliance and Export Control).

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DASSAULT SYSTEMES

ENOVIA | DOMAINS

Planning

Ferrit | GLOBAL MINING SOLUTIONS

posco

Sabelt

kindof

Virtual Product Development

MER CONCEPT

irizar

HOPIUM

General Aeronautics

Value Network

CREATE

VALUE

XOS

EVERGREEN AVIATION TECHNOLOGIES CORP.

AXELENT ENGINEERING

Customer Experience

Flight Operations

Collaboration & Intelligence

FAMILIA TORRES Desde 1870

BOUYGUES CONSTRUCTION

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Ferrit

Ferrit is a mining equipment specialist that develops complex, cost-efficient transportation solutions for material and personnel.

"Project management is one of the core processes being implemented. Using the management dashboard, we can track all project statuses and KPIs in real-time to support quick and effective decision making."

Martin Kopecek, IT Manager, Ferrit

Challenge

Mining is one of the most energy intensive industries in the world. Ferrit sought a way to radically transform operations and identify more sustainable revenue streams. To do this they embarked on a digital transformation journey to boost its competitive edge and operate more nimbly.

Solution

With the 3DEXPERIENCE platform, Ferrit has digitized their product lifecycle management (PLM) solution

Benefits

By easing access to data and reducing manual data entry, Ferrit expects to improve productivity of PLM users by 10% while simultaneously increasing the accuracy of BOMs. This also allows for future gains from streamlining production from purchasing to production, service and maintenance.

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VIRTUAL PRODUCT DEVELOPMENT

From Product to Experience Innovation

Deliver transformational innovations through multi-discipline collaboration and maximize legacy investments with POWER'BY.

ENOVIA

+

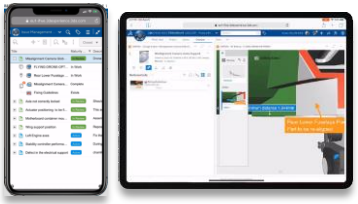
NETVIBES CATIA SIMULIA DELMIA

Configured Virtual Twin Experience

Configured & multi-discipline (mechanical, electrical, software) virtual product.

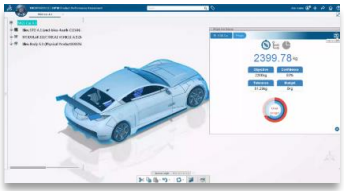
Inclusive Engineering & Manufacturing Collaboration

Co-development & co-innovation between all value network actors from Design to Manufacturing.



Business and Real World Data Driven

Best trade-off between variability and standard to be competitive.
Business driven decisions (impact of weight, cost, standardization).



Maximize Legacy Investments

Connect third party design data with the **3D**EXPERIENCE platform to leverage collaborative model-based engineering.

SW CATIA

xMCAD, xECAD

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Virtual Product Development

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HOPIUM

General Aeronautics

Value Network

CREATE

VALUE

XOS

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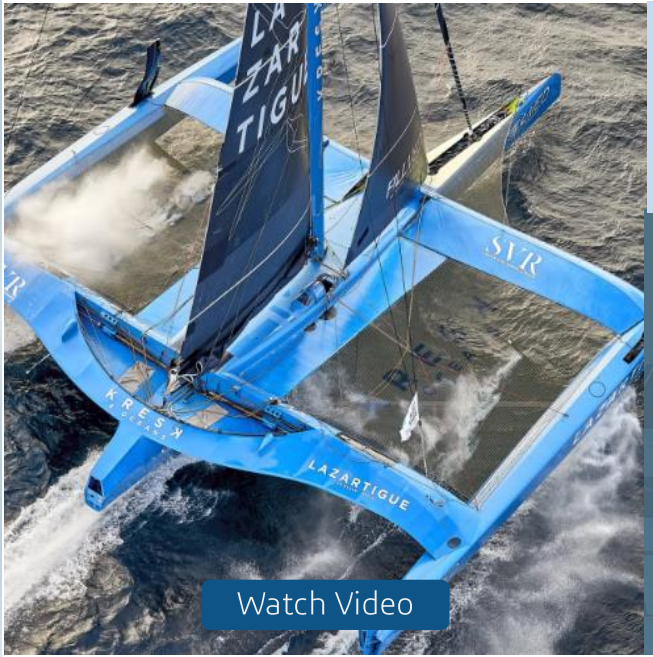
MerConcept

Innovative by nature, MerConcept pushes the limits of ocean racing by harnessing the aerodynamic power of the SVR-Lazartigue.



"Using ENOVIA, the construction and design phase is as smooth as it can be, and that we can support effective information sharing among all the different parties."

Thomas Normand, CEO, MerConcept

Challenge

With more than 150 external collaborations, MerConcept had to keep everyone up to date with progress and ensure they were all working on the latest version.

Solution

With multiple people working on the design at any one time, ENOVIA helps to ensure that technical modifications are correctly implemented, and all affected stakeholders are notified.

Benefits

Collaborating on a virtual twin provides a common data environment, where everyone can work together on the same 3D model – so that everyone can see what has been done, and avoid interference issues.

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VALUE NETWORK

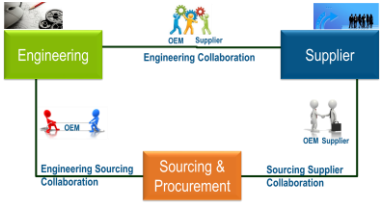
From Supplier Management to Sustainable Value Network

Model, simulate, build and run sustainable, responsive and resilient supply value network.

ENOVIA + NETVIBES

Engineering, Manufacturing & Sourcing Collaboration

Upstream involvement of Sourcing during Product Development for optimized product cost and leveraging marketplace for product & service opportunities.

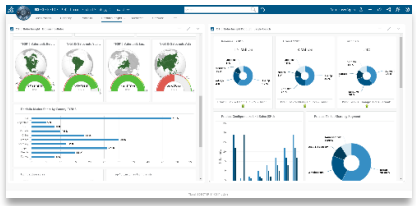


Marketplace Trading Services

Online qualified ecosystem of industrial service providers worldwide.

Sustainability Driven Value Network

Drive Value Network & Sourcing decisions based on sustainability KPIs (localization, corporate responsibility, footprint).

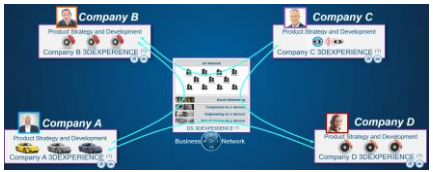


Continuous Learning Organic Value Network

Dynamic & event based Value Network accelerating resilient partnerships and qualified business opportunities in a fast evolving market.

Network Discovery

Supplier Risk Intelligence



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Planning

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General Aeronautics

Value Network

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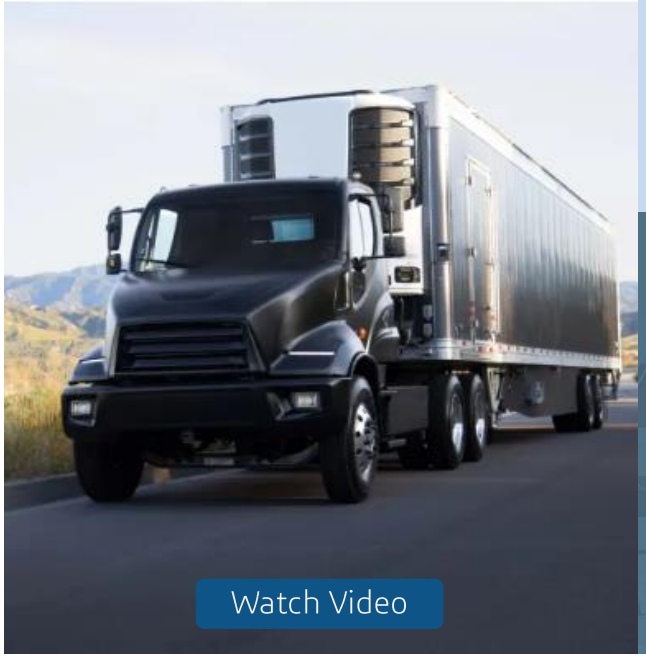
Xos

Xos is on a mission to decarbonize commercial transportation and facilitate fleet owners' seamless transition from traditional internal combustion engines to 100% battery-electric.



"We manage innovation with our value network by being collaborative, so we really appreciate the ability to interface with everyone quickly in an efficient way that's not through email."

Dakota Semler, CEO, Xos

Challenge

The demand for Xos products and services is high. They need to work closely and securely with its value network. Disparate systems put them at risk for making mistakes. Xox needed a powerful technology platform to collaborate with their value network and keep all its product development processes in one place.

Solution

ENOVIA on the **3D**EXPERIENCE platform allows efficient collaboration with the value network by seamlessly adding them to environments and giving them secure access to the data they need.

Benefits

Being on the cloud offers seamless interoperability across the value network. This allows XOS partners from across time zones to come together around projects and drive much greater levels of productivity than what was available in traditional CAD environments.

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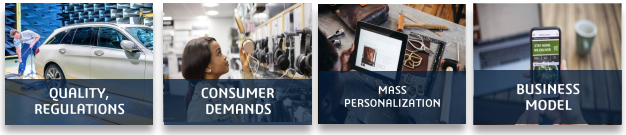
CUSTOMER EXPERIENCE

From Connections to Relationships



From connection to relationship at all stages of the Client Journey, from discovering to using and re-purchasing.

ENOVIA + 3DEXCITE + NETVIBES

Asset Experience

Secure highest asset performance & availability while monitoring usage.

Client Success

eni

RENAULT

DASSAULT AVIATION

Immersive Product Experiences

Maximize sales performance with immersive product experience.

Customer Interaction & Satisfaction

Empower client facing teams with relevant elevated data on users & usage.

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Value Network

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Flight Operations

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COLLABORATION AND INTELLIGENCE

From Specialized Business Users to People in Business

Digitally connect all users in the value stream for sustainable innovation.

3DEXPERIENCE®

Inclusive Collaboration

Ensure everyone in business securely collaborates to drive business innovation – move from documents to knowledge and know-how capture and capitalization.

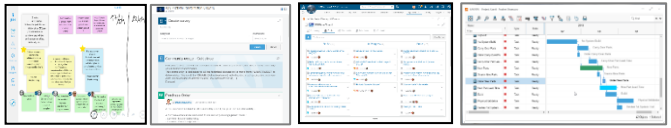
Structured Collaboration

Enable project planning for all, document and product lifecycle management to improve productivity, quality and reduce costs.

People-centric Flexible Planning to Foster Innovation

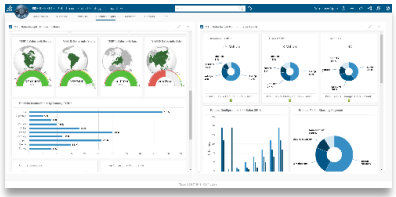
Inclusive and collaborative planning combining structured and unstructured. People role & skills driven assisted planning.

UNSTRUCTURED ← → STRUCTURED



360° intelligence

Information Intelligence driven contextual decision support leveraging holistic insight (marketing, financial, quality, technical, operation).



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Planning

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Sabelt

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Virtual Product Development

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CREATE

Value Network

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VALUE

Customer Experience

Flight Operations

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Familia Torres

A five generations old Spanish wine producer.

*"With the **3D**EXPERIENCE platform, […] **we've halved the time it takes to approve projects**."*

Francesc Gómez Montenegro, Chief Operating Officer, Familia Torres

Challenge

Familia Torres is renowned for combining tradition and innovation. The Spanish wine producer has more than 24 different brands on the global market. It needed a powerful platform to bring together its product development activities and empower it to manage its growing project portfolio more effectively.

Solution

The company implemented *Perfect Package* on the **3D**EXPERIENCE platform on cloud to transform the way it manages projects, documents and the digital approval process of its packaging.

Benefits

With ENOVIA's project management tools, Familia Torres has halved the time it takes to approve projects. Effective communication, seamless information sharing and total visibility of every step of the product development process has helped to reduce rework and late-stage changes, and speed up time to market.

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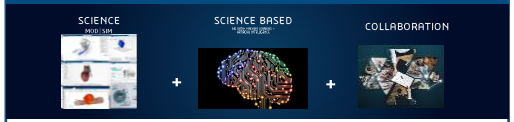
ENOVIA | SUMMARY

The 3DEXPERIENCE Platform is Unique



VIRTUAL TWIN EXPERIENCE
Unique Value

3DEXPERIENCE

ENOVIA Helps Address Your Challenges

- Planning
- Virtual Product Development
- Value Network
- Customer Experience
- Collaboration & Intelligence

Proven Client Success

AIRBUS, ZAHNER, RENAULT, CAF, TESLA, BOEING, Metsä, HONDA, 中国电建 POWERCHINA, P&G, JAGUAR, LAND ROVER, DOOSAN, TOYOTA, LG, BOSCH, GE, DANONE, TOYO TIRES, VE COMMERCIAL VEHICLES, ALSTOM

DEUTSCHE LICHTMIETE, EVIATION, REHMUS, VERTICAL Aerospace, TORRES, NIO, Quickstep, EVUM MOTORS, MUSASHI, electric, vlp, NAURA, sh p, NowyStyl, DASAN CONSULTANTS, 长江设计集团有限公司, General Aeronautics, YEŞİLOVA, flow robotics, ALPS ALPINE, Marcopolo, AMF GROUP

eddrop, GRIP, MORGAN POLYMER SEALS, VORTEX, SEED TERMINATOR, square robot, RockFarm, uvoji

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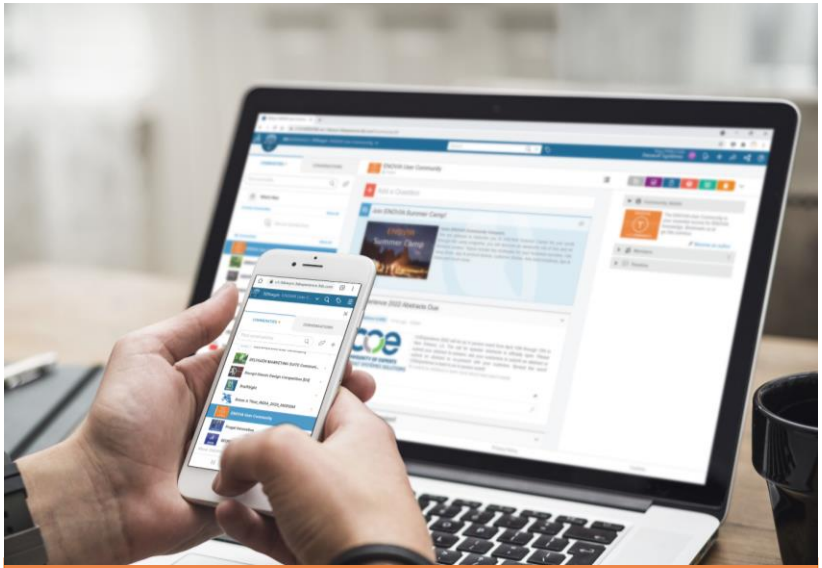
NEXT STEPS

Let's continue the discussion on how ENOVIA can bring value to your business.

Set up a meeting with one of our Sales Executives today.



Join us in the ENOVIA Community:
www.3ds.com/products-services/enovia/communities/

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