



Morgan
ZIMMERMANN

CEO Netvibes
Dassault Systèmes

A decorative graphic on the left side of the slide, featuring a network of interconnected nodes and lines in various colors (red, yellow, orange, black, white, blue) against a blue background. The nodes are arranged in a roughly circular pattern, with some lines extending outwards.

AI-POWERED VIRTUAL TWIN EXPERIENCES



3DEXPERIENCE®

3DEXPERIENCE

Science Based Real World
evidence

To power

Virtual Twin Experiences

DASSAULT SYSTÈMES & AI

We leverage

MOD|SIM|DATA]^{AI}



To deliver

AI-powered Business Experience

AI-powered Industry Process Experience

...

AI-powered Virtual Twin Experience

GENERATING SCIENCE BASED UNIVERSES

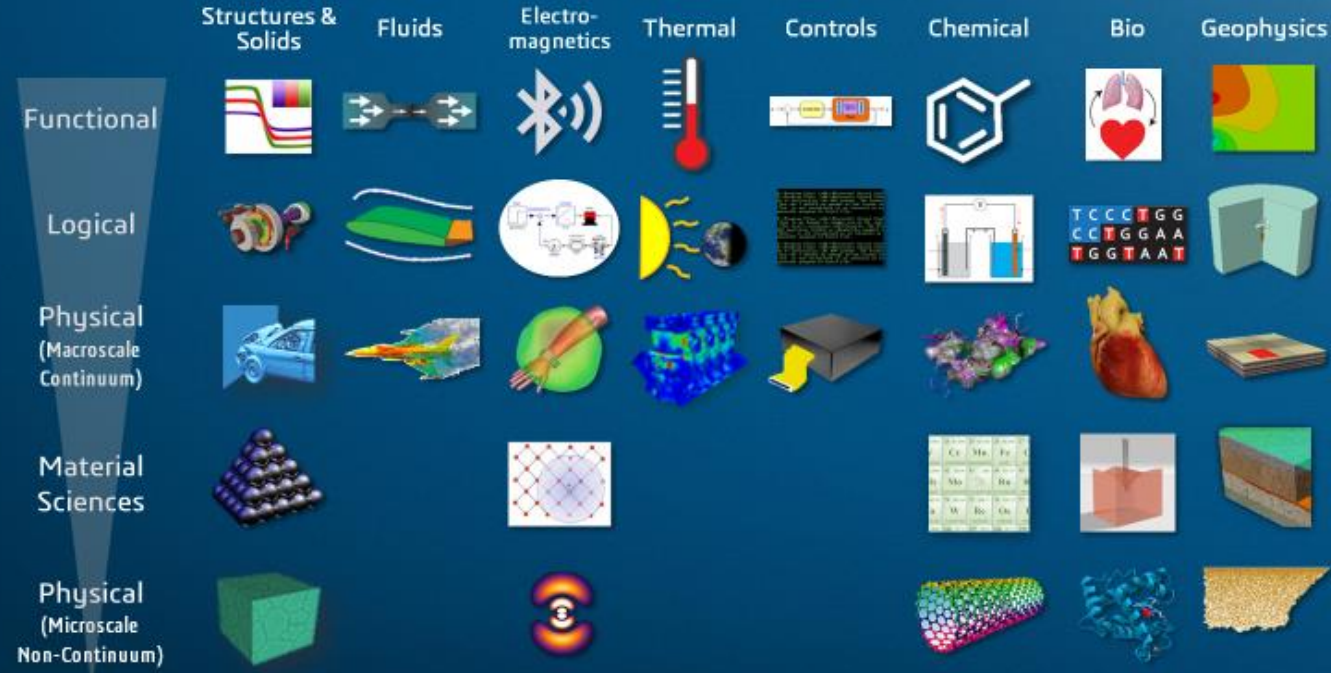
2020

Multiscale

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4

Multiphysics



Multi-Media



REPRESENTATIONS & MODELS

IMAGINEERING WITH MODELING & SIMULATION



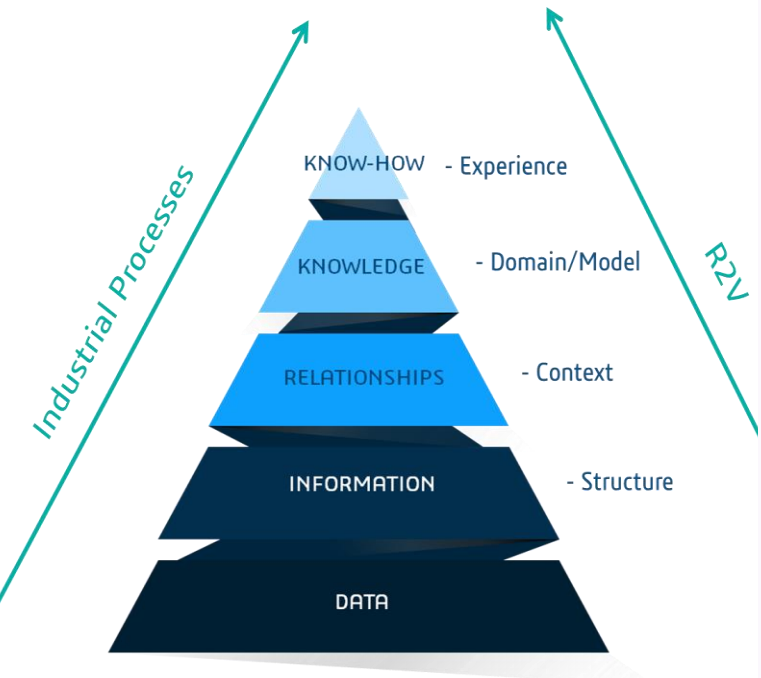
3DEXPERIENCE®

OBSERVATIONS & EXPERIMENTS

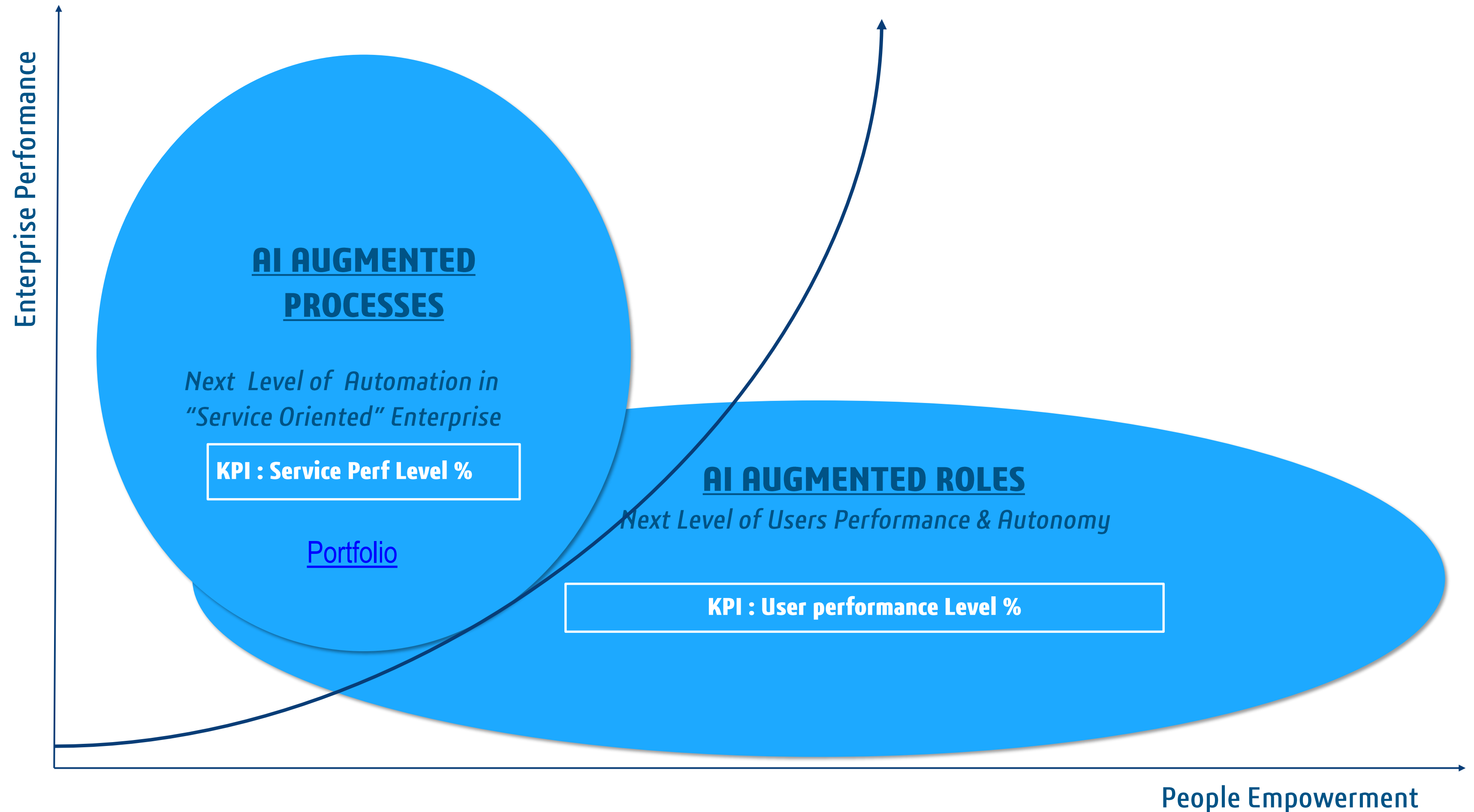
GENERATIVE AI ON REAL WORLD EVIDENCE

GENERATIVE VIRTUAL TWIN EXPERIENCES TO UPSKILL & EMPOWER PEOPLE & BUSINESSES

The screenshot displays a 3D software interface with a dark blue header. The header contains the Dassault logo, the text '3DEXPERIENCE | 3DDashboard Next-Gen Design', a search bar, and the user name 'Malika BOULKENAFED'. Below the header, there are two tabs: 'Learn from Patrimony' and 'Patrimony Graph Explore'. The main workspace is divided into two panels. The left panel, titled 'Media - Patrimony Lake', shows a grid of nine 3D car models in various colors and configurations. The right panel, titled 'Web Page Reader - Knowledge & Know-how CoBot', is mostly dark with a white dialog box in the center that says 'Parsing Patrimony Data' and has a red circular loading indicator.



OUR CONVICTION ABOUT AI STRATEGY



3DEXPERIENCE PLATFORM

A CATALYST FOR INDUSTRY RENAISSANCE



FROM... ...TO



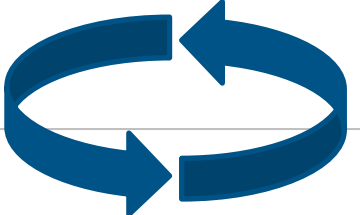
Siloed Disciplines / Product Centric



Virtual Twin Experience of Products



From **Product**
to
Experience Economy



| Today's Organization | | | | |
|----------------------|----------------------------|------------------------|---------------------------|--------------------------|
| Corporate | | | | |
| Strategy definition | Financial Management | HR Management | Infrastructure Management | Risk, legal & compliance |
| Product centric | Customer centric | Supply centric | Operations centric | |
| Product planning | Customer Service & Support | Logistics | Production Operations | |
| Product development | Marketing | Supplier Relationships | Maintenance Operations | |
| Product after-sales | Sales | | Service Operations | |

Siloed Departments / Transaction Centric



Virtual Twin Experience of Enterprise



From **Business Operations**
to
Business Experiences

Transformation



VIRTUAL TWIN EXPERIENCE



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MODEL
Context
MOD | SIM

DATA SCIENCE
Real World Evidence
BIG DATA + ARTIFICIAL INTELLIGENCE

COLLABORATION
Actionability

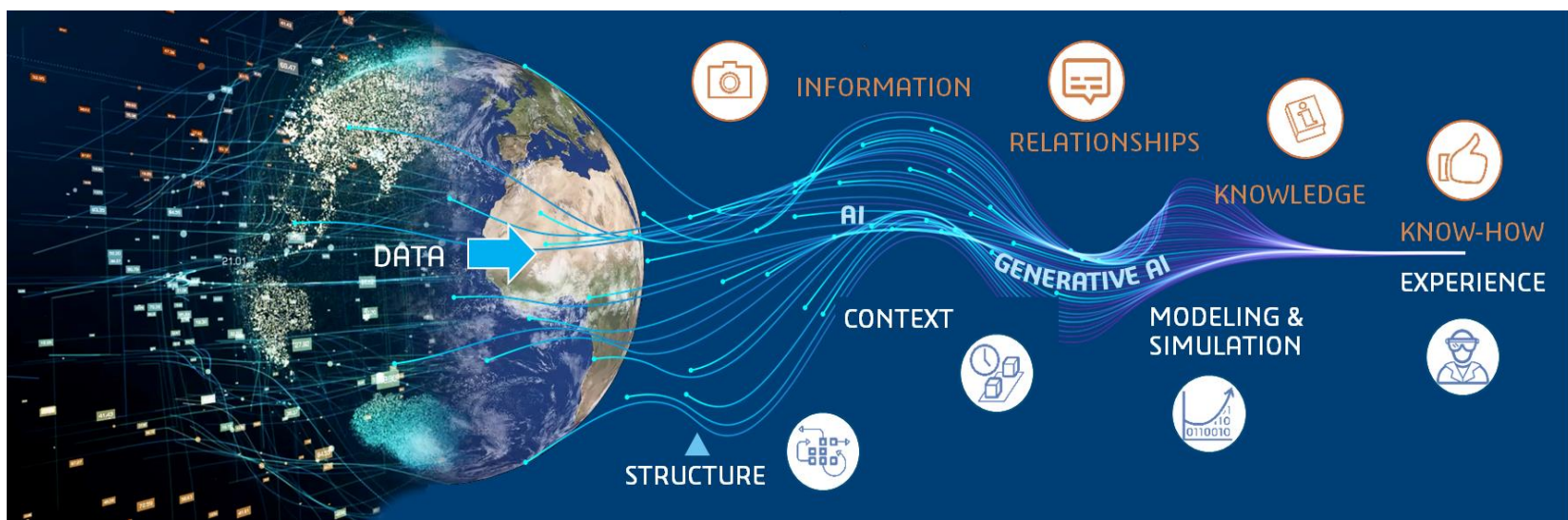
Enterprise in the Value Network



Production Sites

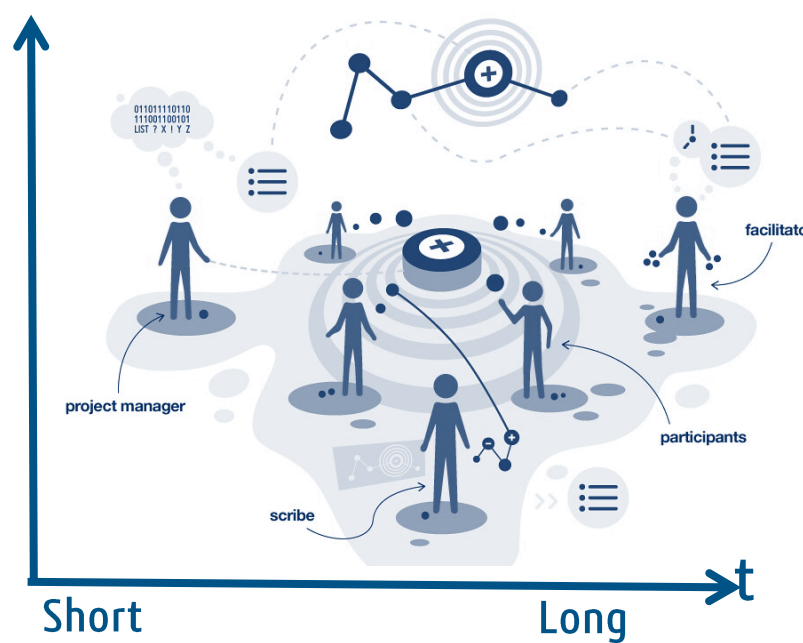


Products



divergence

convergence



Renault Group War Room



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NETVIBES - Data Perspectives - Value Chain

Supplier Profiling > Part Profiling

Vehicle profiling

- Vehicles...**
 - BLEU 2... BLEU 2018 Risk: ▲ ▲ ▲ ▲ ▲
 - BLEU 2... BLEU 2020 Risk: ▲ ▲ ▲ ▲ ▲
 - ECAR P... ECAR Prem... Risk: ▲ ▲ ▲ ▲ ▲
 - ECAR S... ECAR Sport Risk: ▲ ▲ ▲ ▲ ▲
 - ECAR S... ECAR Stan... Risk: ▲ ▲ ▲ ▲ ▲

BLEU 2018

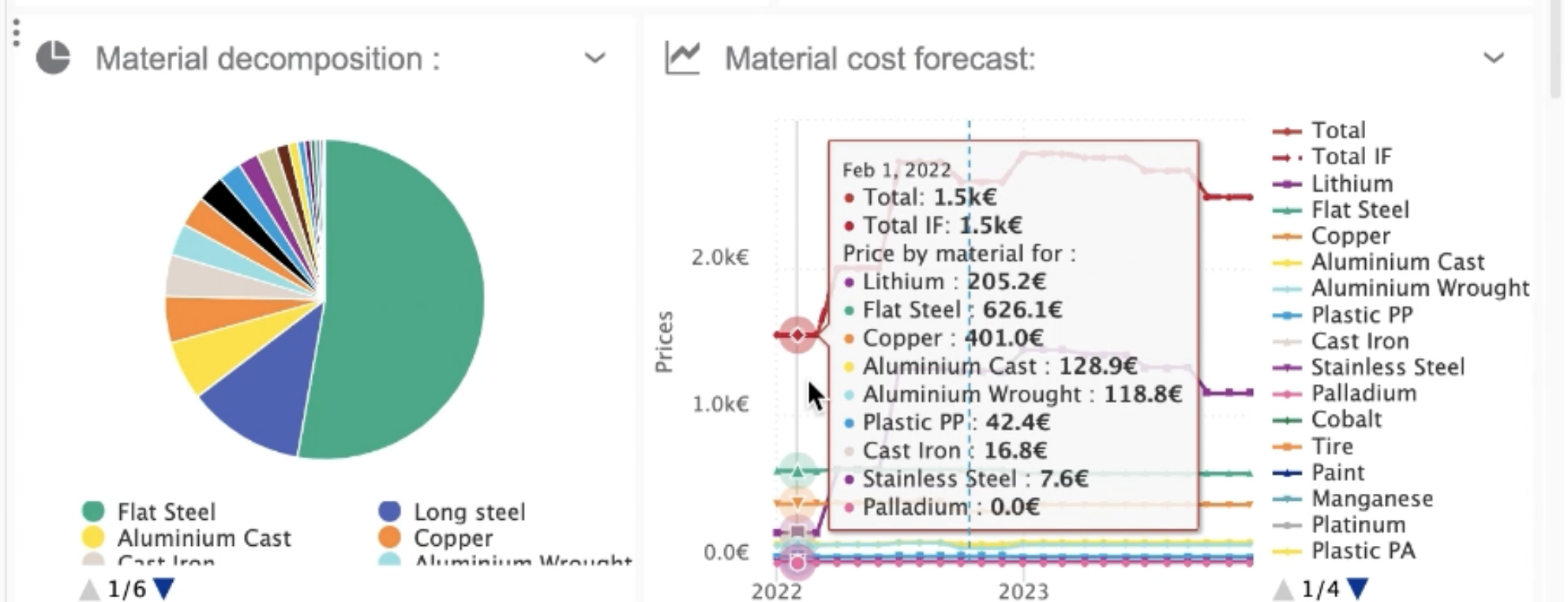
Velizy

| Configuration | Performance |
|----------------|---|
| Body: BLEU | Risk: ▲ ▲ ▲ ▲ ▲ ▲ |
| Engine: 170kW | |
| Wheels: 19inch | |

Material data sources: Engineering data source, IMDS, Inference, Supplier data source

Impact dec 2022 vs dec 2021: **1.0k€**

Impact dec 2023 vs dec 2022: **936.3€**



Most impacted vehicle's parts

ENOVIA - Risk Management - All (3)

Summary Risks

Search For Context

| Title | Menu |
|--|------|
| ▲ Possible increase of Aluminium price | ▼ |
| ▲ Supplier BASILHas Been Bought by OEM X | ▼ |
| ▲ Copper Material Risk | ▼ |

Selected Rows: 0 Total Rows: 3

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XVT: Digital War Room

Avoid sourcing of a new Supplier

Traditional solution:
35 weeks



Solution with XVT:
3 days

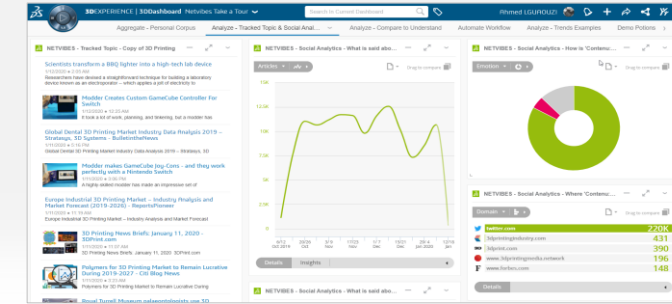
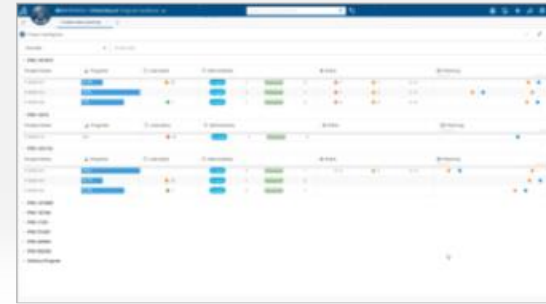
118 parts developed End to End, done in < 90 days
113 000 vehicles saved





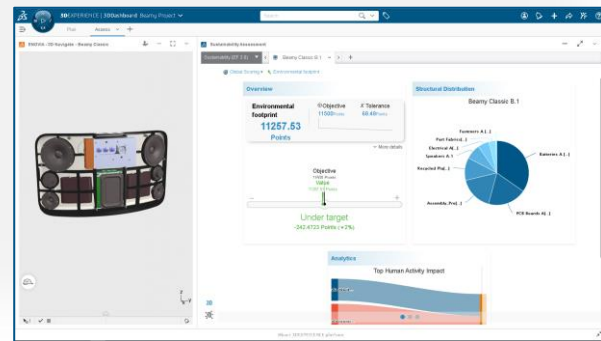
PLANNING

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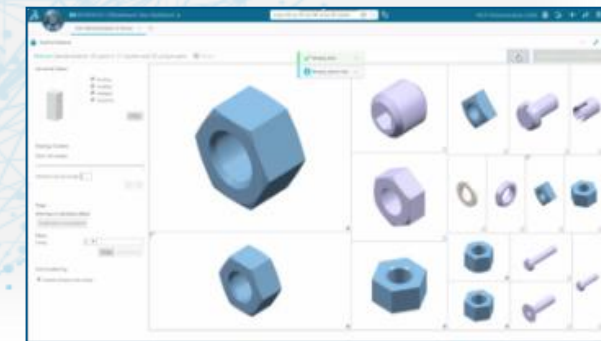
VIRTUAL PRODUCT DEVELOPMENT

Contextual insights for business-driven design decisions (Sustainability, Cost, Weight)



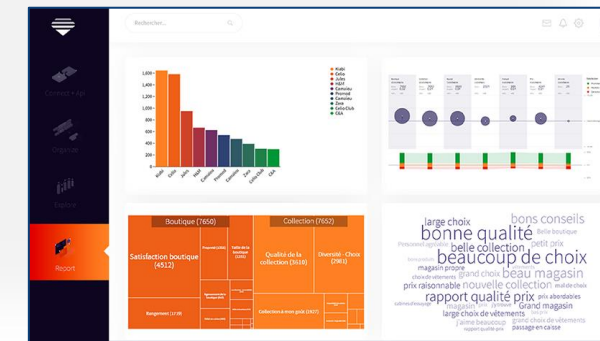
VALUE NETWORK

AI-driven standardization & sourcing optimization, for resilient supply-chain



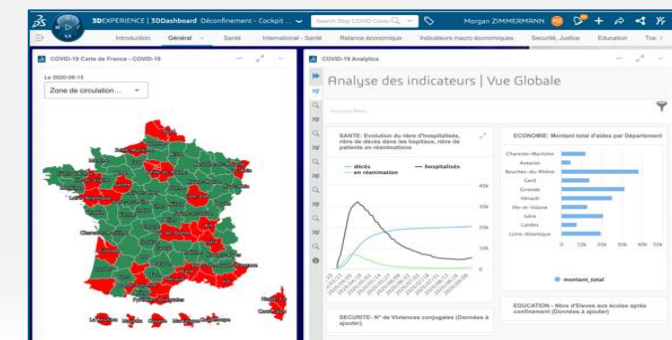
CUSTOMER EXPERIENCE

360° insights on assets in operations, toward enhanced availability & customer satisfaction



COLLABORATION & INTELLIGENCE

Contextualized actionable knowledge & know-how to unlock collective intelligence and trigger new collaborations across organizations

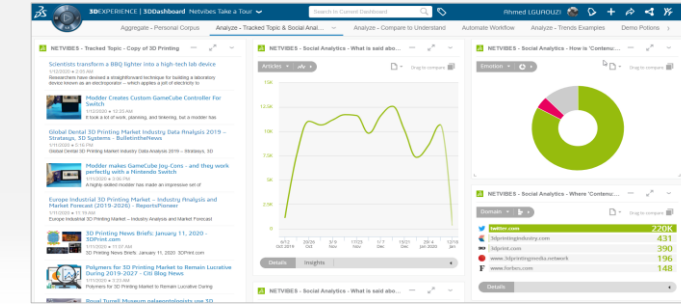
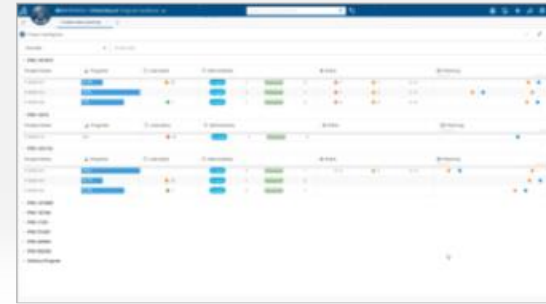


NETVIBES | DOMAINS WE SERVE



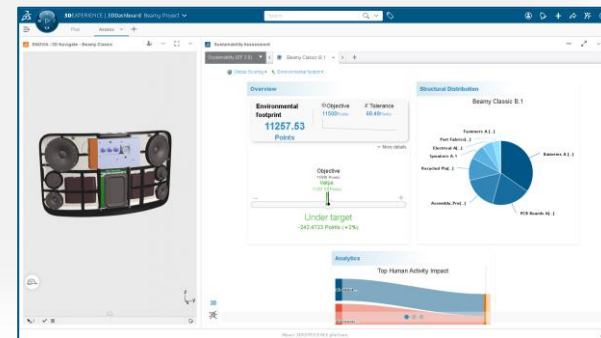
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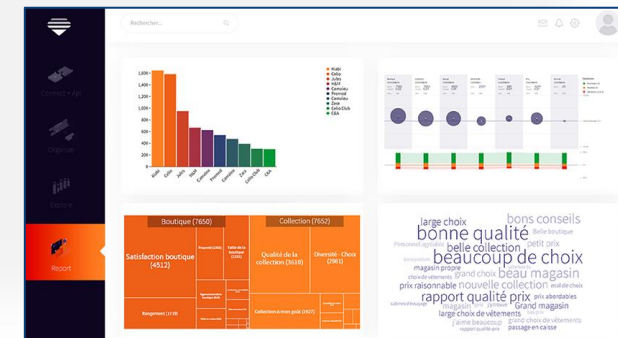
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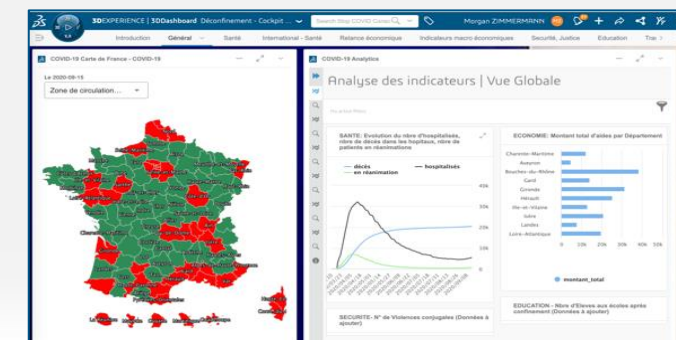
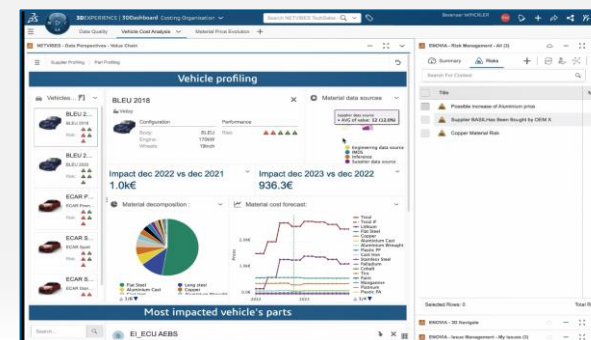
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L&T ENERGY - HYDROCARBON : BUSINESS VERTICALS

Onshore



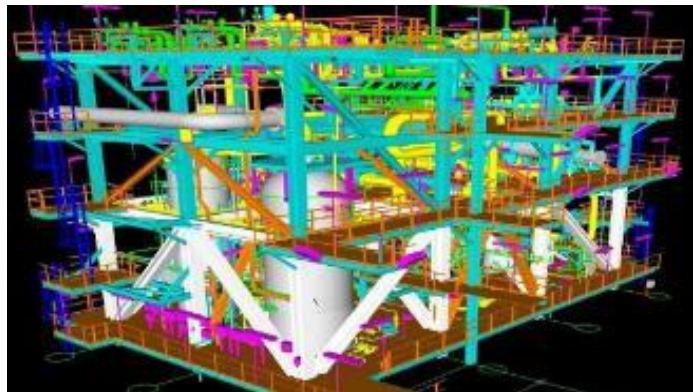
Offshore



Modular Fabrication



**AdVENT
Engineering Services**



**Asset Management
Services**



**Offshore Wind
EPC Projects**

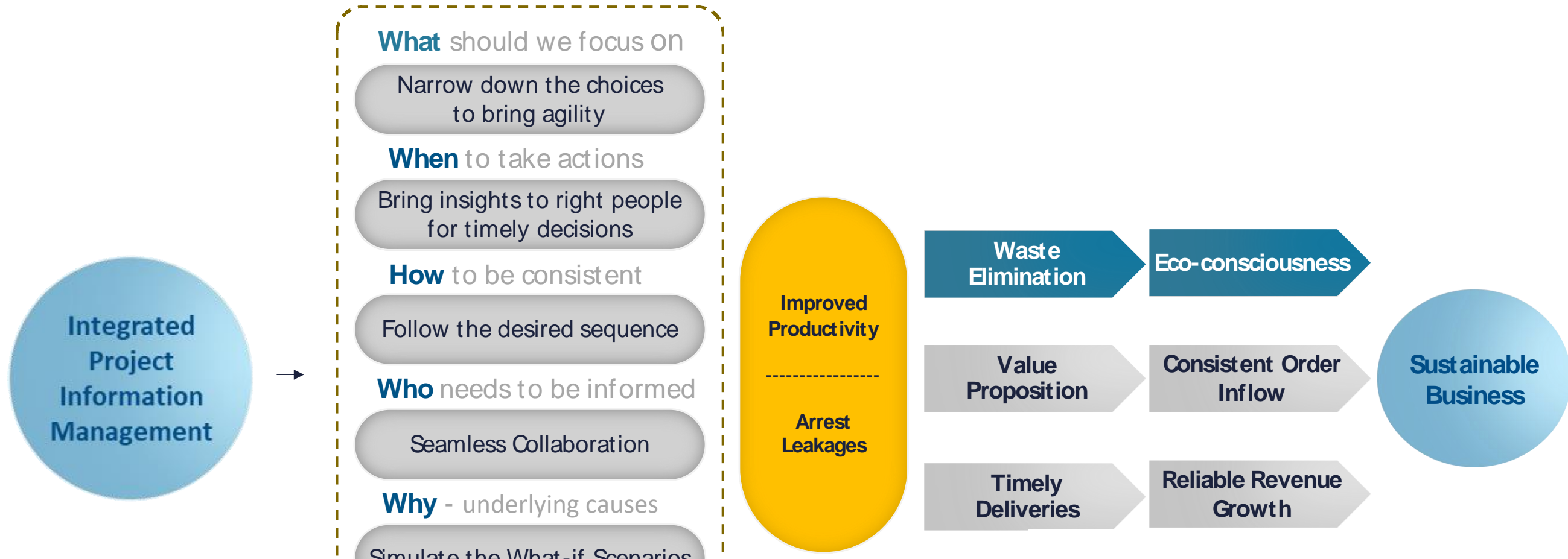


600 + projects (150+ Projects in International)

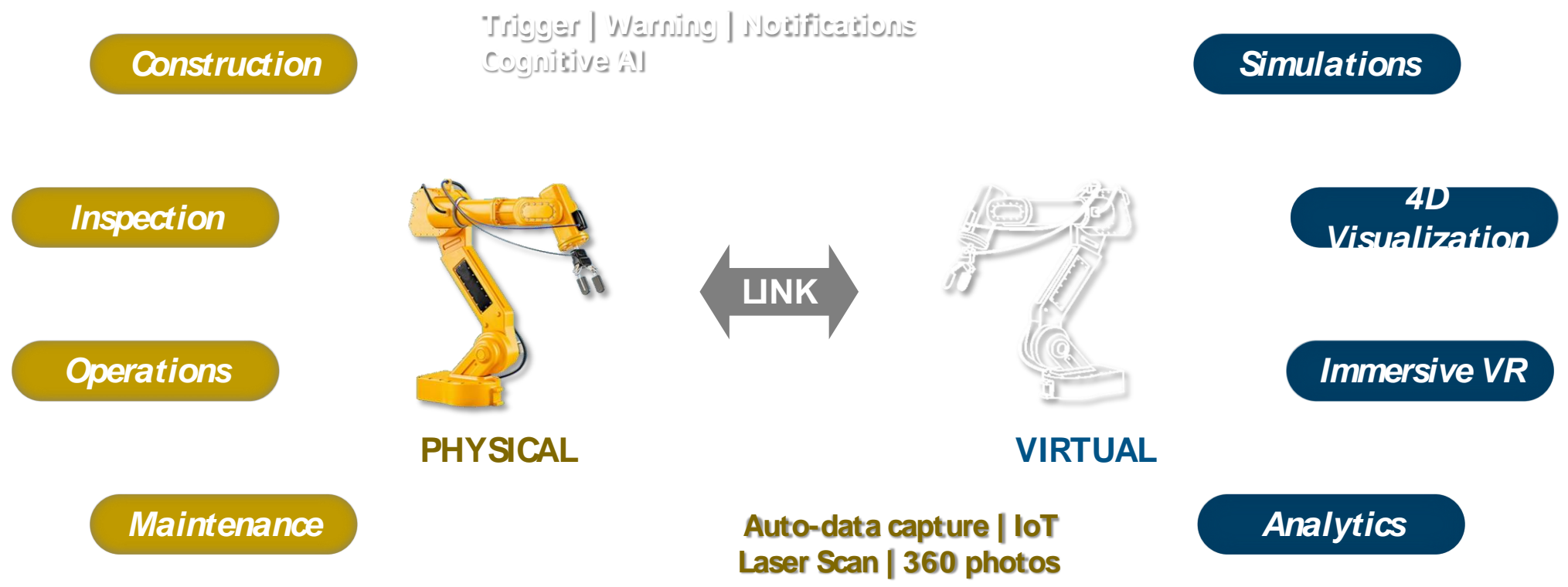
2800+ Design Engineers | 7400+ Staff | ~30,000 Manpower in Yards & Sites

CHARTING A COURSE FOR SUSTAINABLE BUSINESS

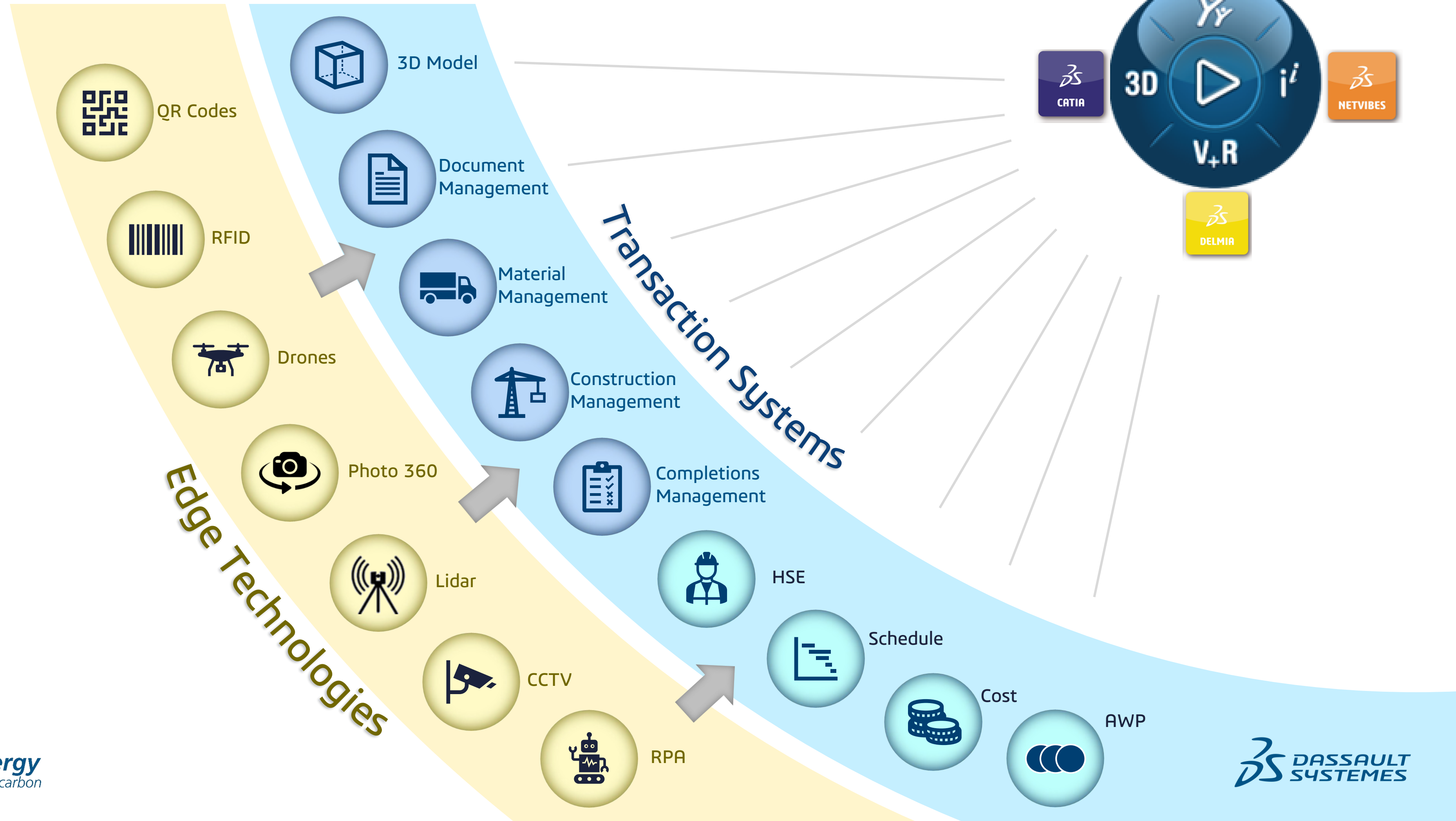
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VIRTUAL TWIN | A digital representation of a real-world objects, systems, processes or scenarios




01 PM Cockpit

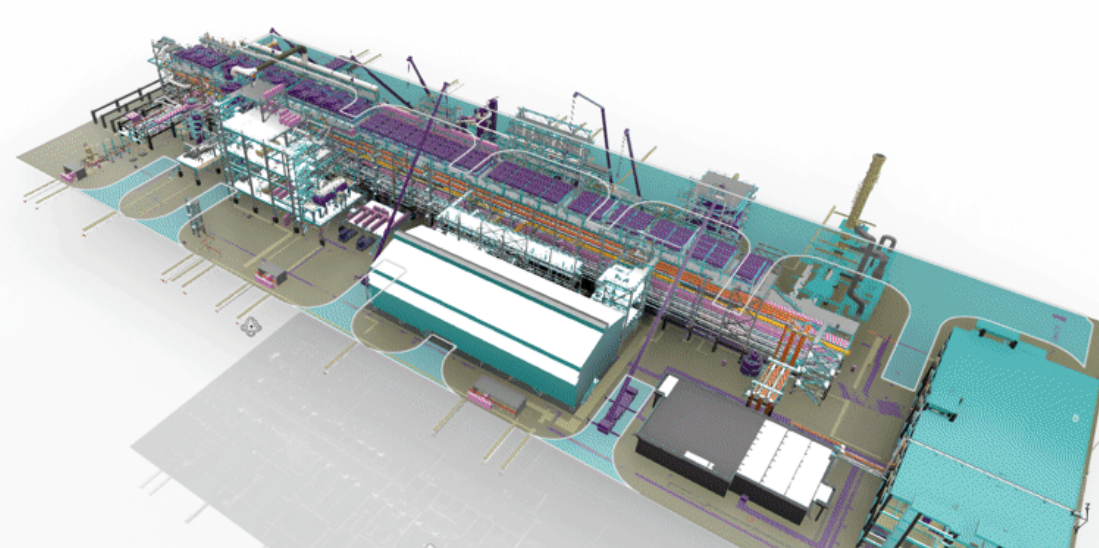


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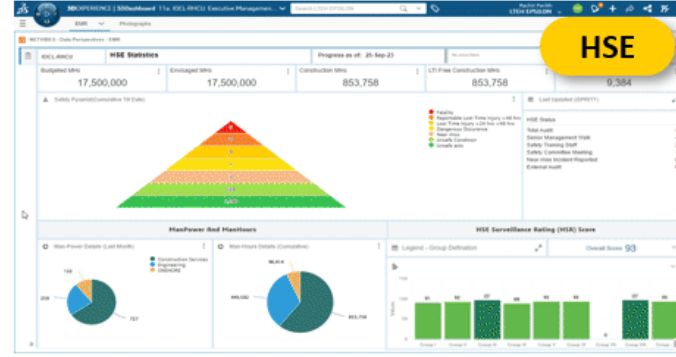
USE CASES @ LARSEN & TOUBRO

PROJECT MANAGEMENT COCKPIT

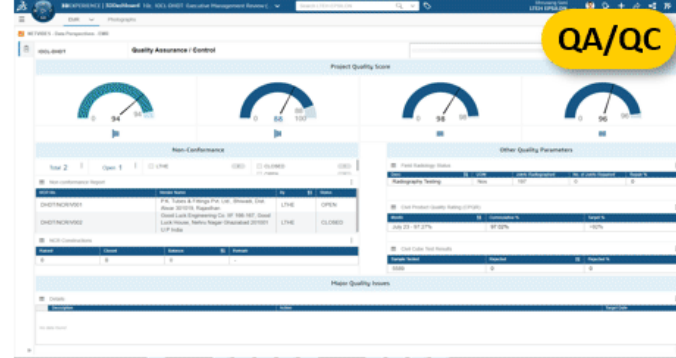





HSE




QA/QC



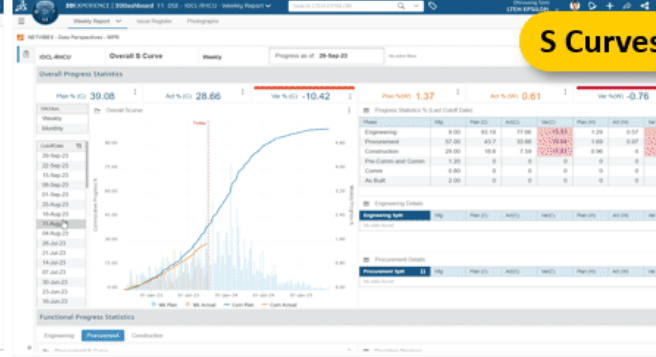
Engg.



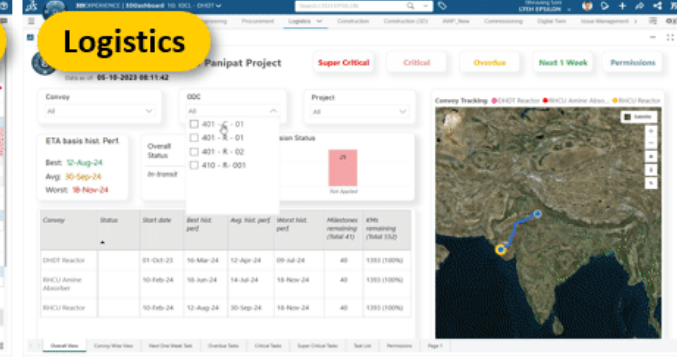
Risks



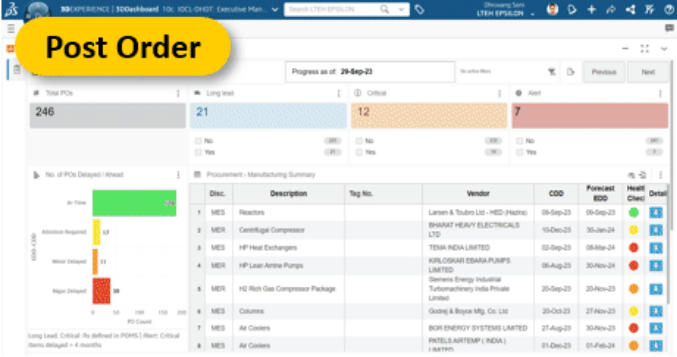
S Curves



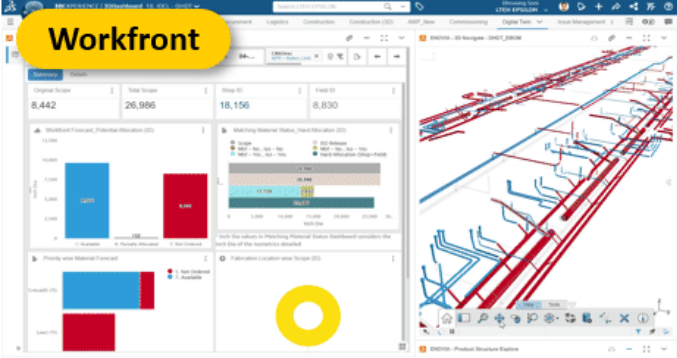
Logistics



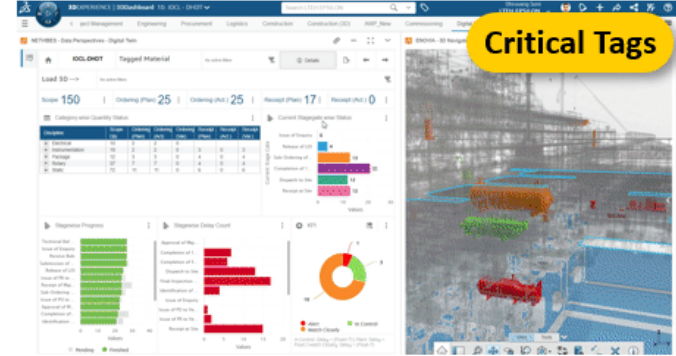
Post Order



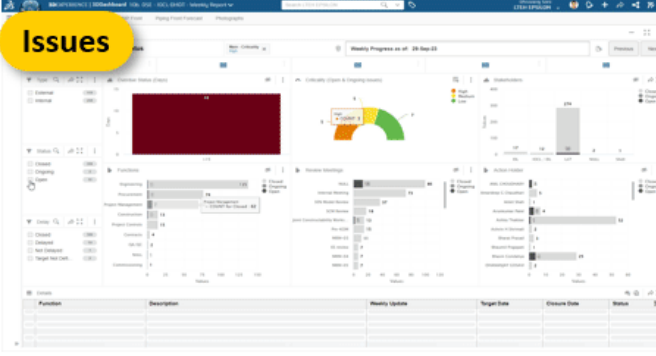
Workfront



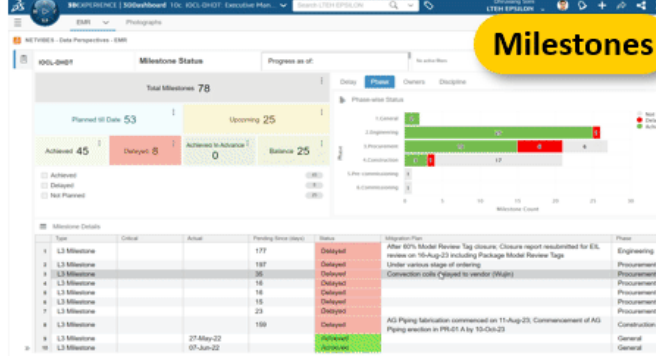
Critical Tags



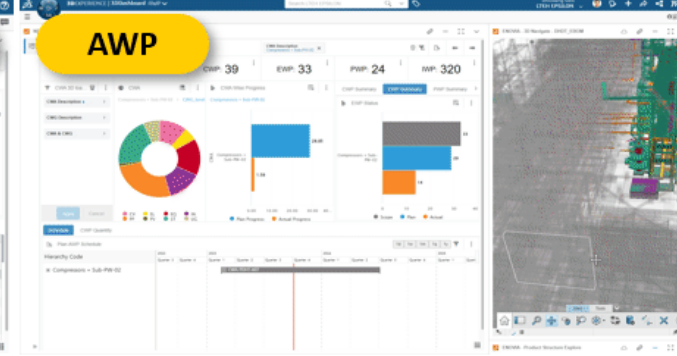
Issues



Milestones



AWP





Clean Fuel
Projects

Hydrogen Generation

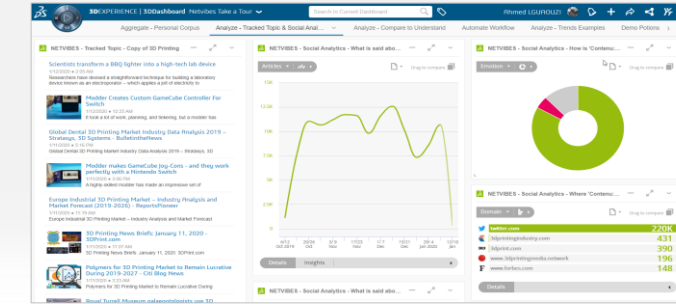
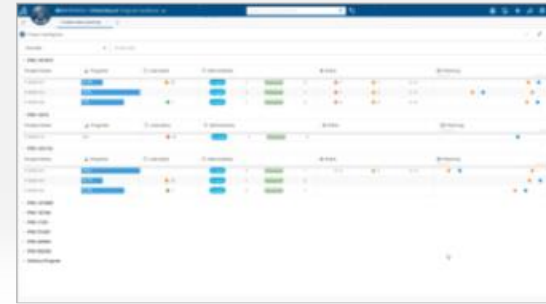


NETVIBES | DOMAINS WE SERVE



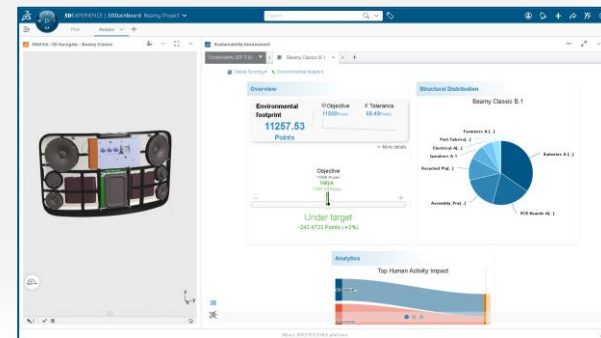
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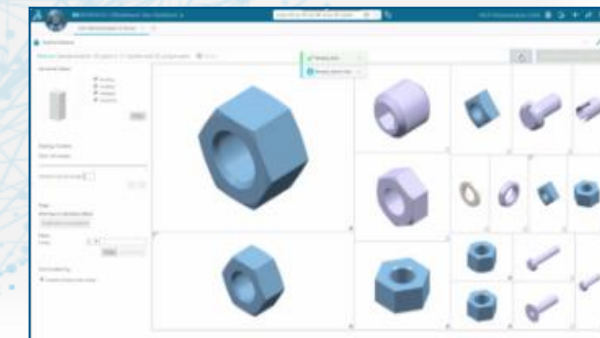
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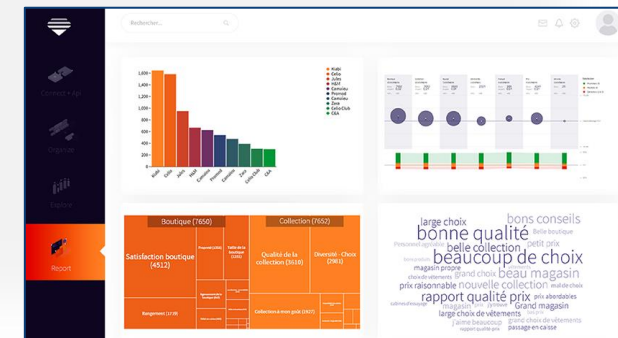
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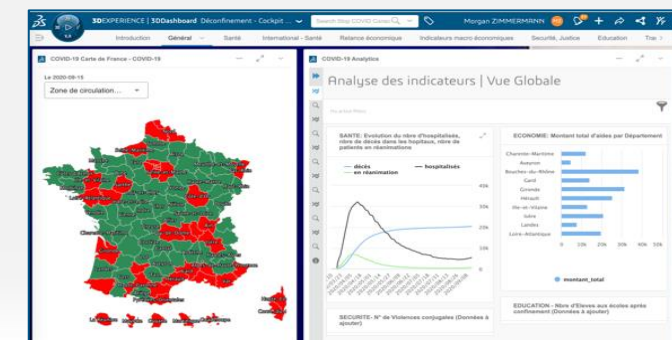
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COLLABORATION & INTELLIGENCE

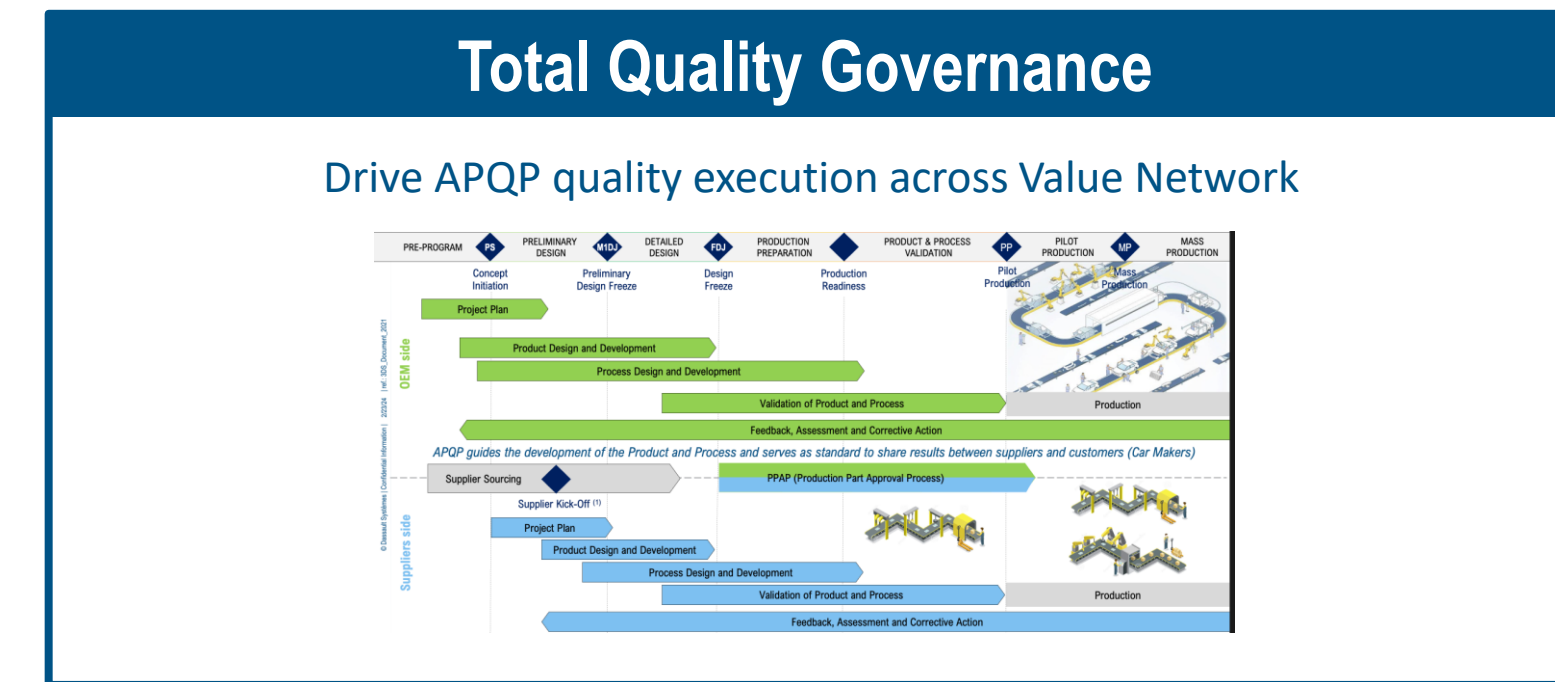
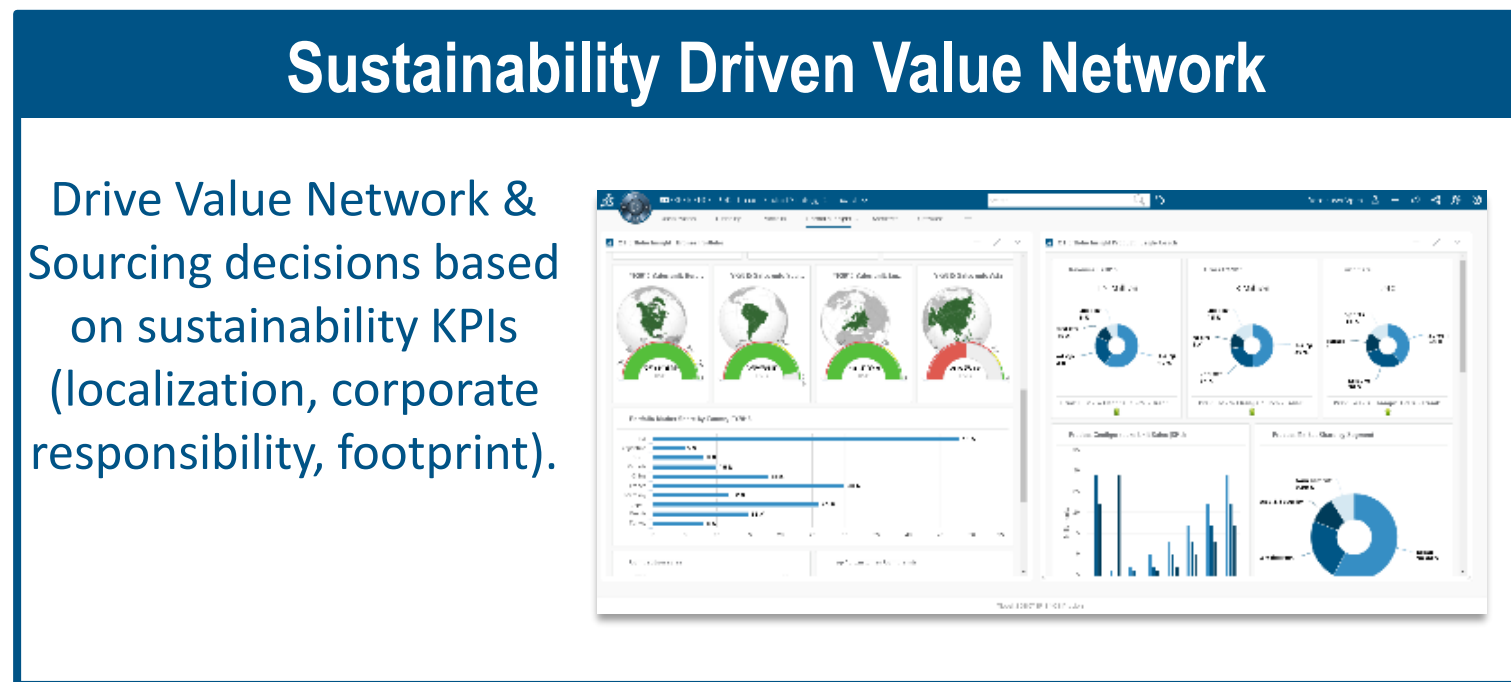
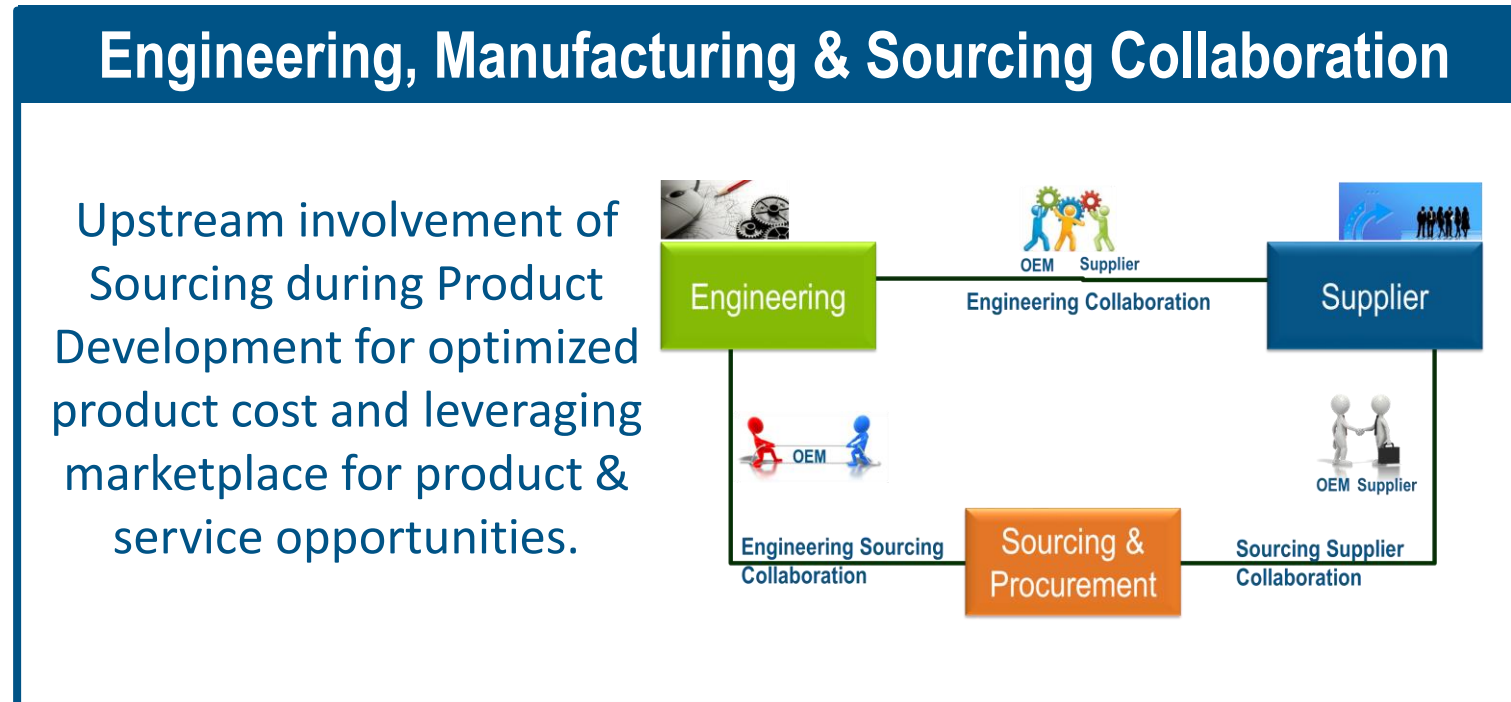
Contextualized actionable knowledge & know-how to unlock collective intelligence and trigger new collaborations across organizations





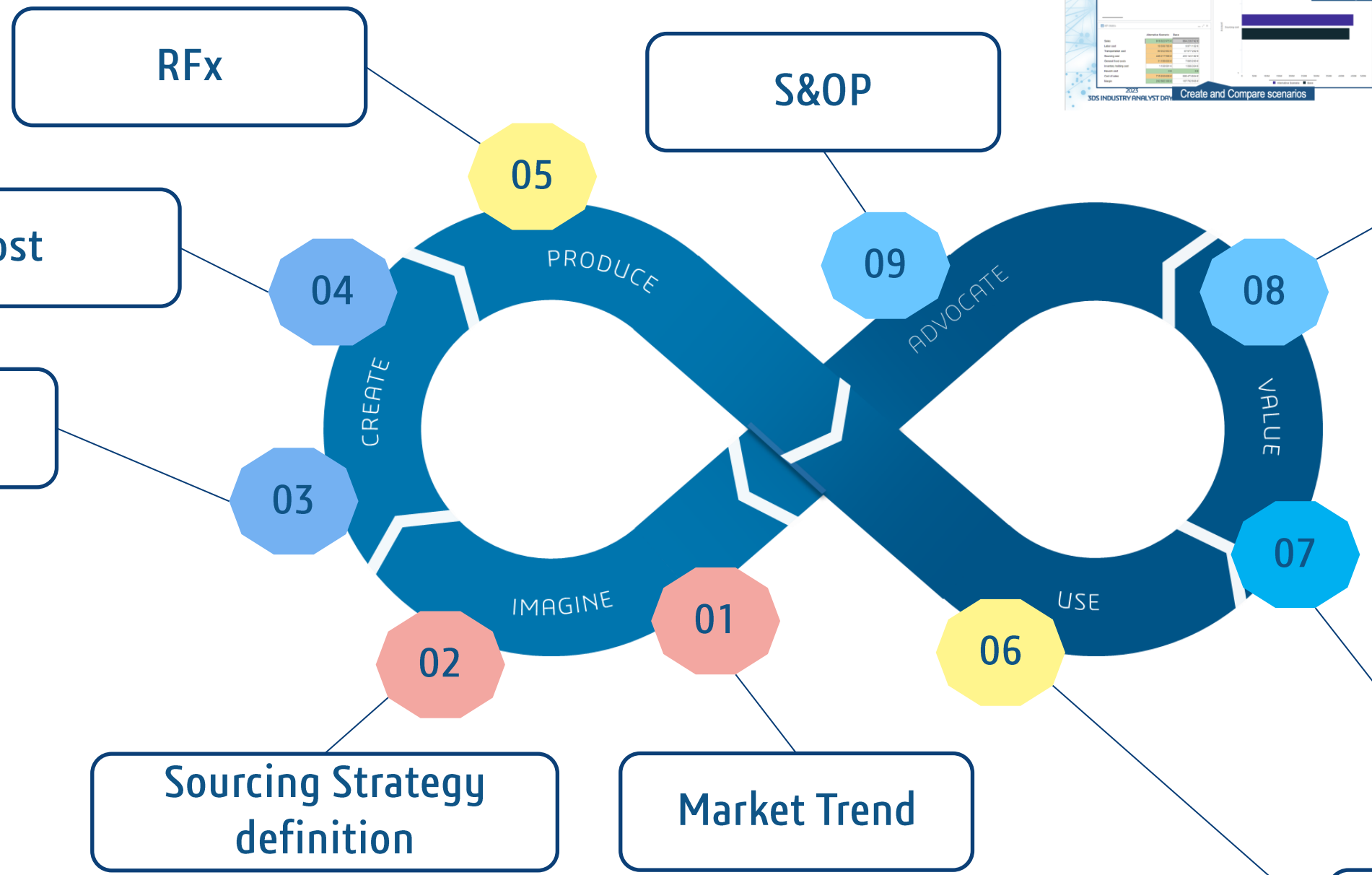
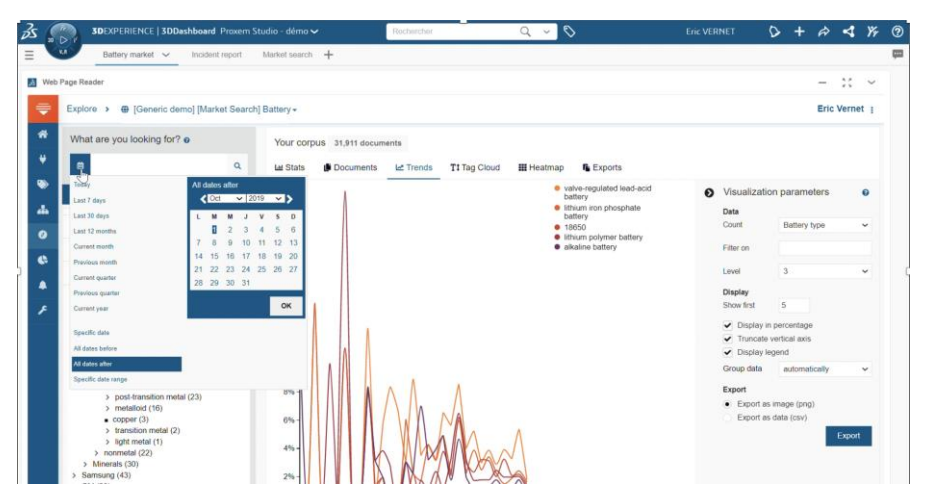
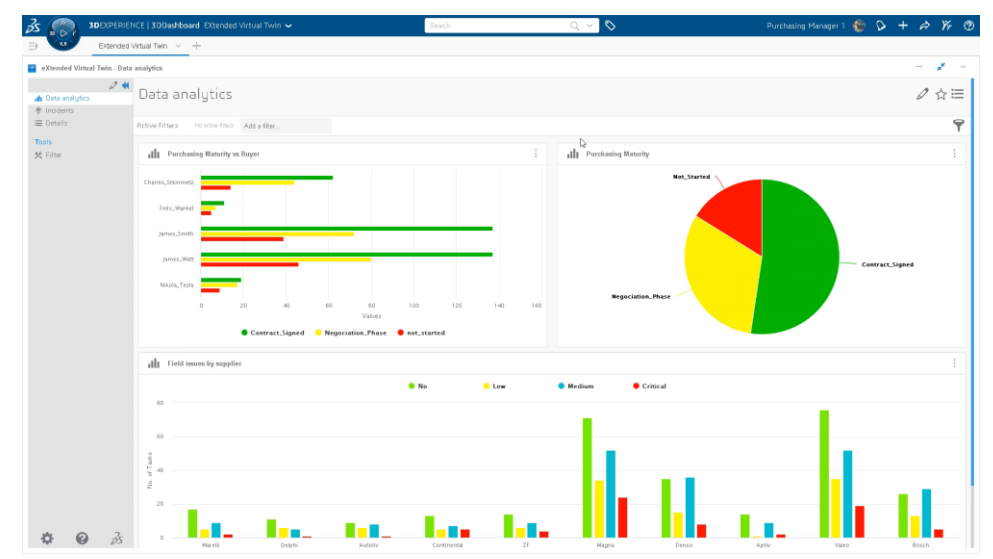
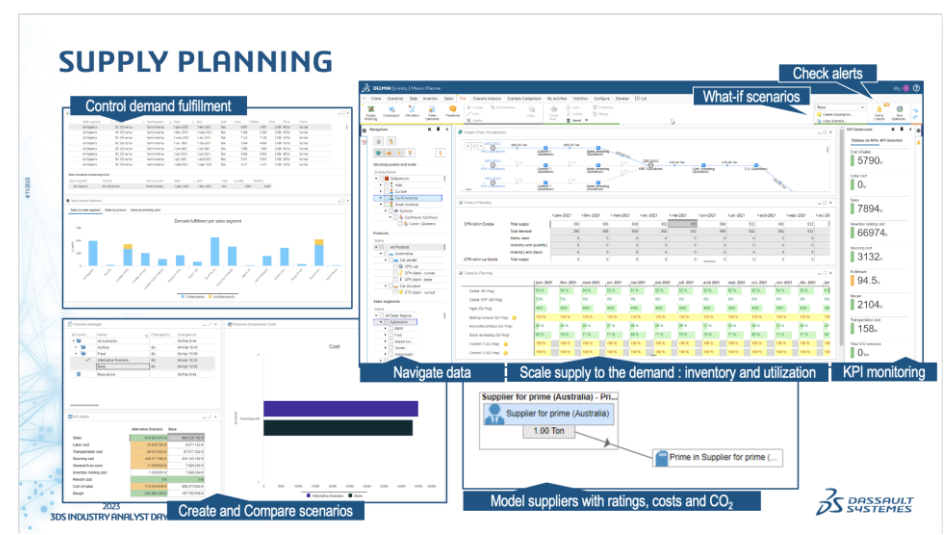
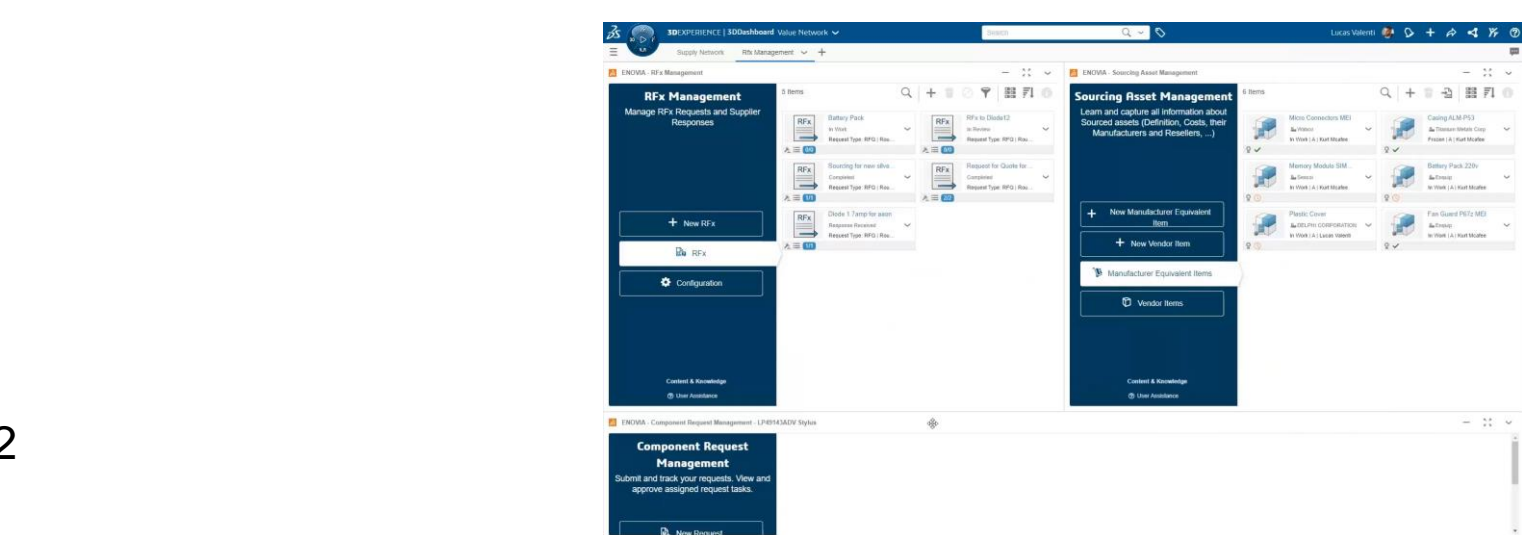
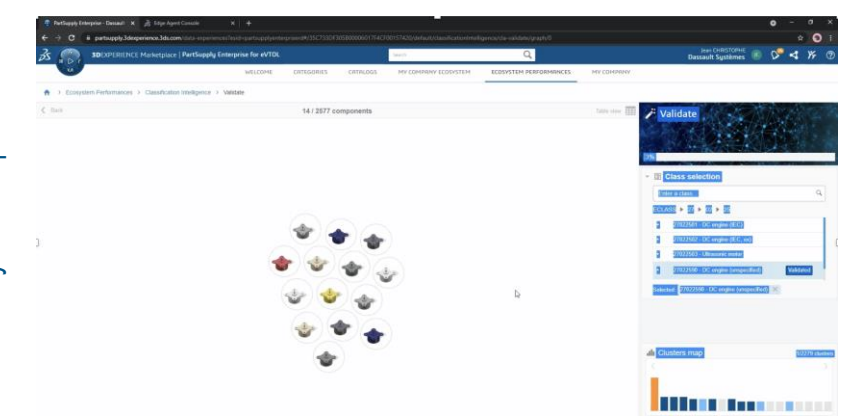
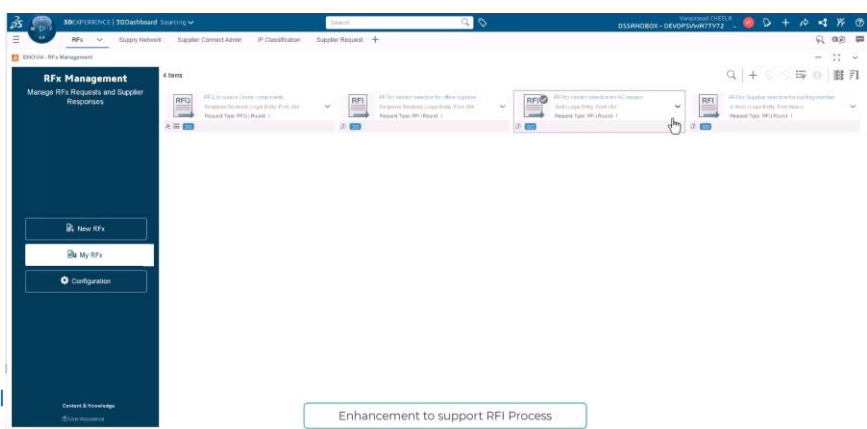
From Supplier Management to Sustainable Value Network

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



DISTRIBUTED COLLABORATION END TO END SOURCING

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Standards & Diversity Management

Cost

RfX

S&OP

Spend Analysis

Sourcing Strategy definition

Market Trend

Quality APQP

Award & Contractualisation



DATA-DRIVEN AND COLLABORATIVE SOURCING

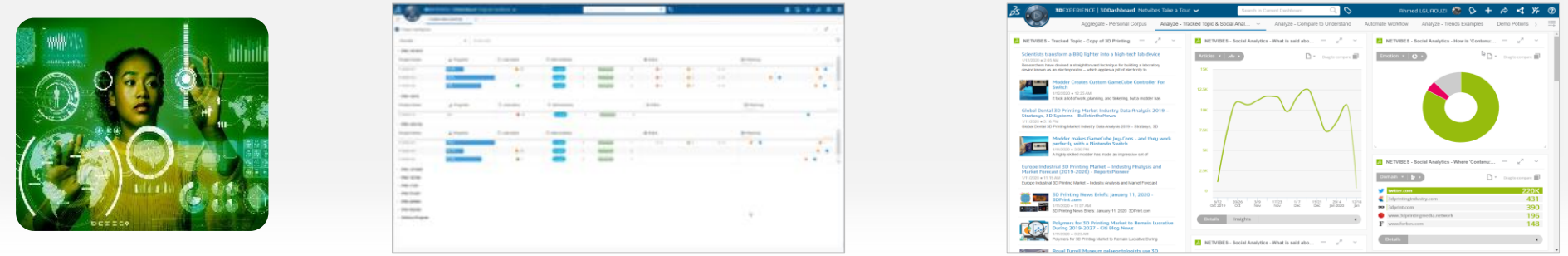


3DEXPERIENCE™



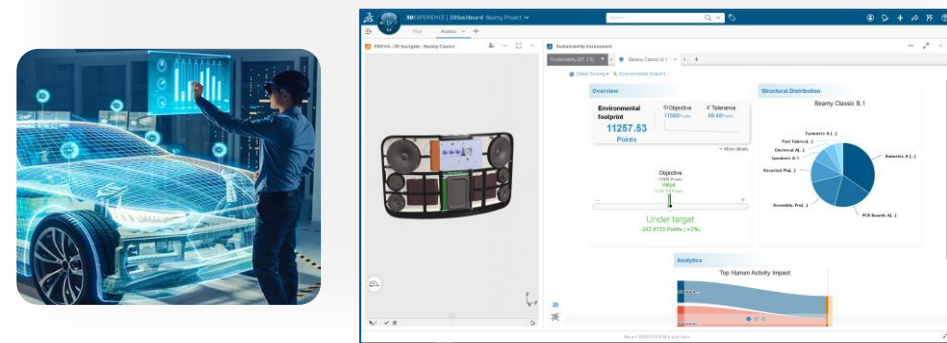
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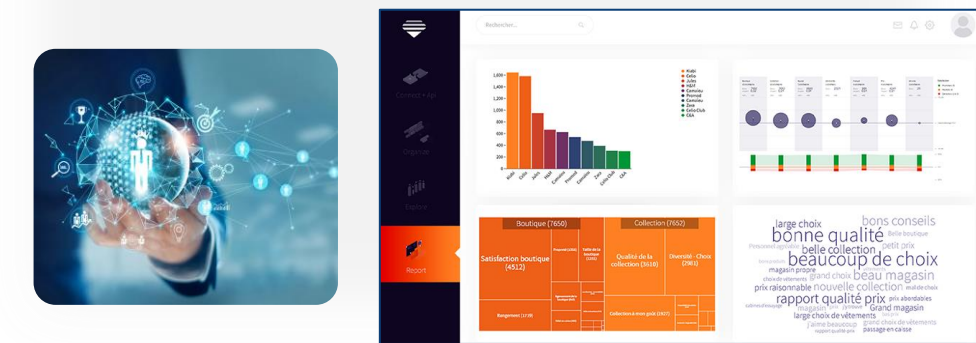
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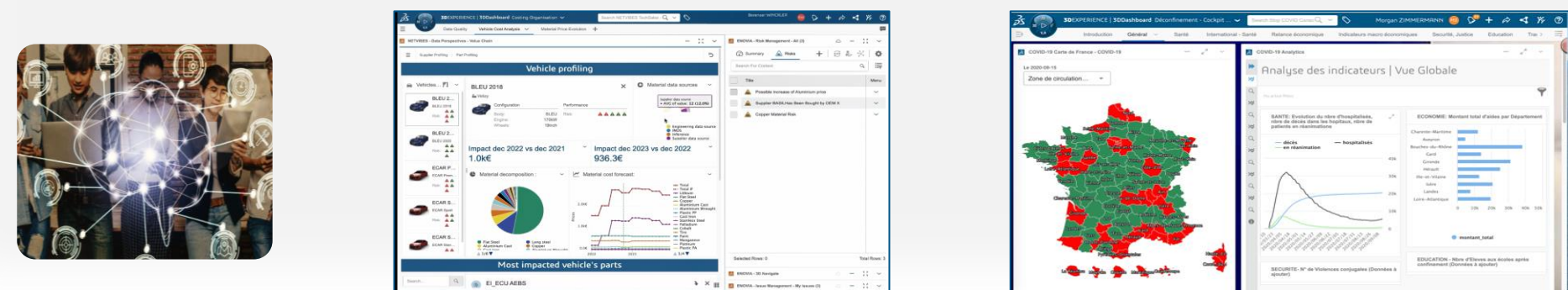
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11/6/2024

Rafale - Big Data for Maintenance Optimization

 **Improving operational fleet availability**

 **Improving asset reliability**

 **Reducing Mean Time To Recovery**

 **Improving supply chain availability**

Improving equipment reliability

Anticipating future failures

Improving processing of technical reports

Reducing MTBF

Improving availability of spare parts

Improving availability of consumables

Enrich & Control | Data sources abstraction | Data acquisition | Data cleansing | Data normalization | Data Contextualization | Data access control

Investigation

- Internal/external Collaboration
- 360°view Fleet/Asset/Systems
- Capitalize knowledge & know-how

Predictive analytics

- Creation of machine learning models
- Feature engineering
- Training of Models

Technical facts

- Internal/external Collaboration
- Unsupervised learning from unstructured fact sheets
- NLP processing and search for similarities

Predictive maintenance

- Run trained models
- Remaining Useful Lifetime estimation
- Consolidation with FMEA

Traceability of critical systems & sub-systems

- Tracking genealogy of serialized items
- 360°view of supply chain for spare parts for Systems/Services
- Watch stock availability & suppliers risk management

Traceability of secondary spares, tools & consumables

- Optimize usage, availability
- Track consumption

Benefits | Improving Operational Efficiency | Anticipating breakdowns | Increased responsiveness | Enforced standardization | Capitalization | Cost control | Risk management



Anomaly Detection and Explanation

Berenger Winckler

Data Analyst for Predictive Maintenance

THANK YOU FOR YOUR INTEREST

