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AI-POWERED VIRTUAL TWIN EXPERIENCES





COVID







RHEUMATOID
ARTHRITIS



AI

***What does COVID,
RHEUMATOID ARTHRITIS and
AI have in common?***

WHAT IS AI?

1950's	 Artificial intelligence (AI) <i>Human intelligence exhibited by machines</i>
1980's	 Machine learning <i>AI systems that learn from historical data</i>
2010's	 Deep learning <i>Machine learning models that mimic human brain function</i>
2020's	 Generative AI (Gen AI) <i>Deep learning models (foundation models) that create original content</i>

Credits: IBM

AI POWERED VIRTUAL TWINS & VIRTUAL WORLDS

OMNIVERSE



PHYSICS | MATERIALS | PATH TRACING | AI

METAVEVERSE



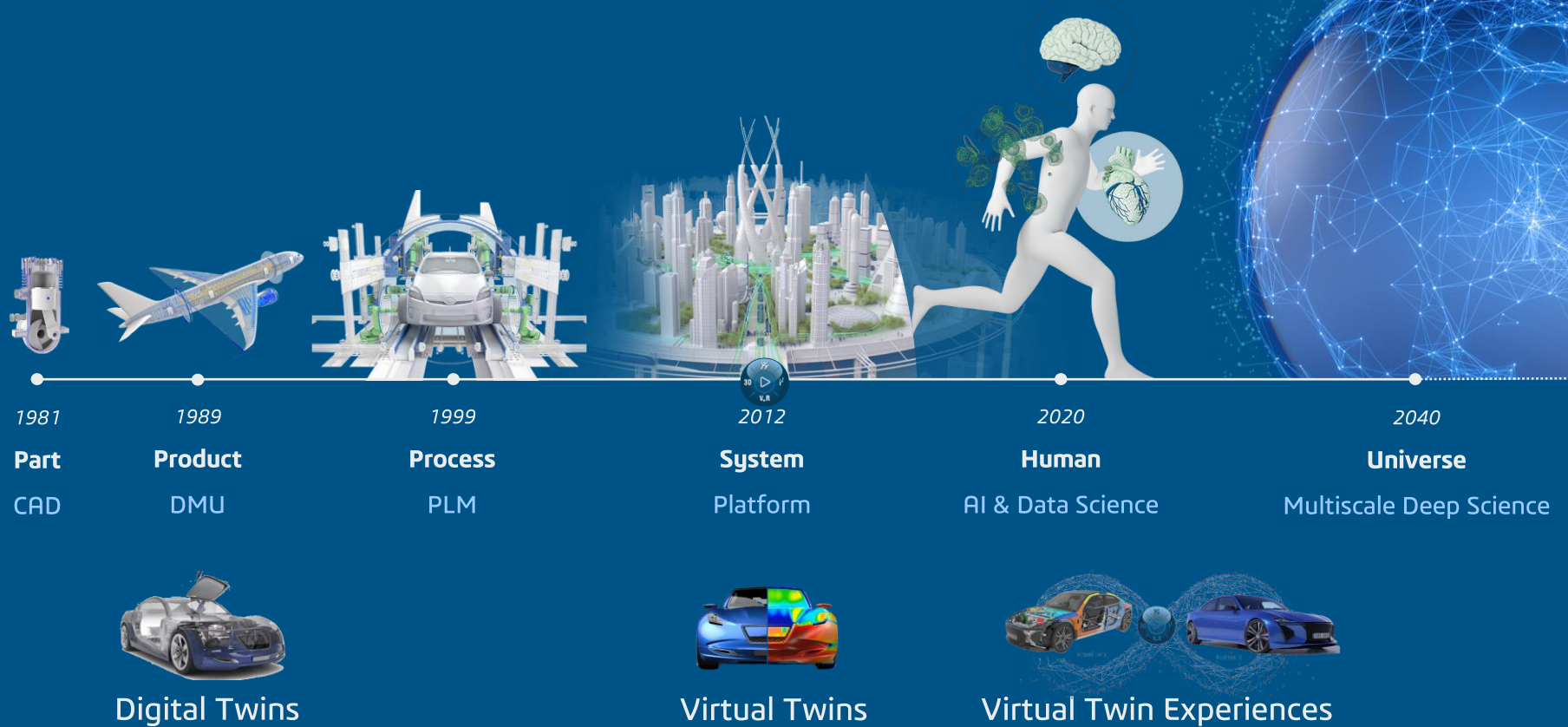
COMMUNICATION | AUGMENTATION | AI

UNIVERSE



SCIENCE | DATA | AI

TOWARDS AI POWERED VIRTUAL TWIN EXPERIENCES



VIRTUAL TWIN EXPERIENCES ARE MADE OF...

SCIENCE

MOD|SIM

Products



Production Sites



Enterprise in the Value Network



DATA SCIENCE

Big Data + AI



IoT

WEB

ERP

CRM

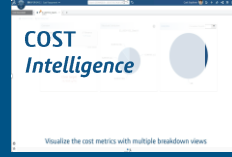


COLLABORATION

Knowledge Capital + Action



AI POWERED VIRTUAL TWIN EXPERIENCES: MANY USE CASES



AI POWERED VIRTUAL TWIN EXPERIENCES

Enterprise
Performance

1

AI AUGMENTED PROCESSES

*Next Level of Automation in
"Service Oriented" Enterprise*



2

AI AUGMENTED KNOWLEDGE

Next Level of Expertise, Empowerment & Autonomy



People Performance

AI AUGMENTED PROCESSES

The image displays the 3DEXPERIENCE Project Planner interface, which is used for managing project schedules and tasks. The interface is divided into several sections:

- Left Panel:** A hierarchical tree view of the project structure. The main project is "APQP Project for Supplier Quality Improvement". It is divided into phases:
 - PHASE 1: PLAN AND DEFINE PROGRAM (tasks 1.00-1.12)
 - PHASE 2: PRODUCT DESIGN AND DEVELOPMENT (tasks 2.00-2.02)
- Center Panel:** A Gantt chart showing the project schedule. Tasks are represented by colored bars indicating their duration and dependencies. The current task selected is "2.07.1 Redesign Electric Drive for Quality Improvement (APQP 2.07.1)".
- Right Panel:** A detailed view of the selected task, including:
 - Title:** 2.07.1 Redesign Electric Drive for Quality Improvement (APQP 2.07.1)
 - Name:** Task 26
 - Description:** Must to redesign the tool to improve quality of product.
 - Parent:** PHASE 2: PRODUCT DESIGN AND DEVELOPMENT
 - Priority:** A visual indicator showing the task's priority level.
 - Maturity State:** To Do
 - Planned Start:** 16th Jul 2024
 - Planned End:** 26th Jul 2024
 - Estimated Duration:** 11 days
- Right Panel (3D Model):** A 3D CAD model of an electric drive assembly, showing the motor housing and internal components. The model is rendered in a semi-transparent green color, highlighting the internal structure.

AI AUGMENTED KNOWLEDGE



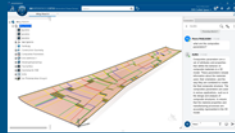
Talk to the 3DEXPERIENCE Platform

Guide users with AI augmented conversational experience in all 3DS solutions



Get Knowledge

Empower individuals with domain specific expertise and reliable information in their context



Ex: Composite Expert Assistant

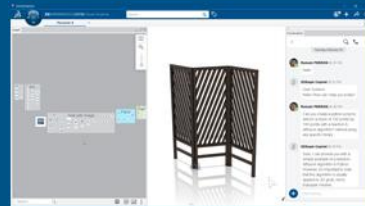


Ex: Market Intelligence Expert Assistant



Get Skills

Augment people with specific skills at their fingertips to realize themselves a task they could not do



Ex: Create without having coding skill



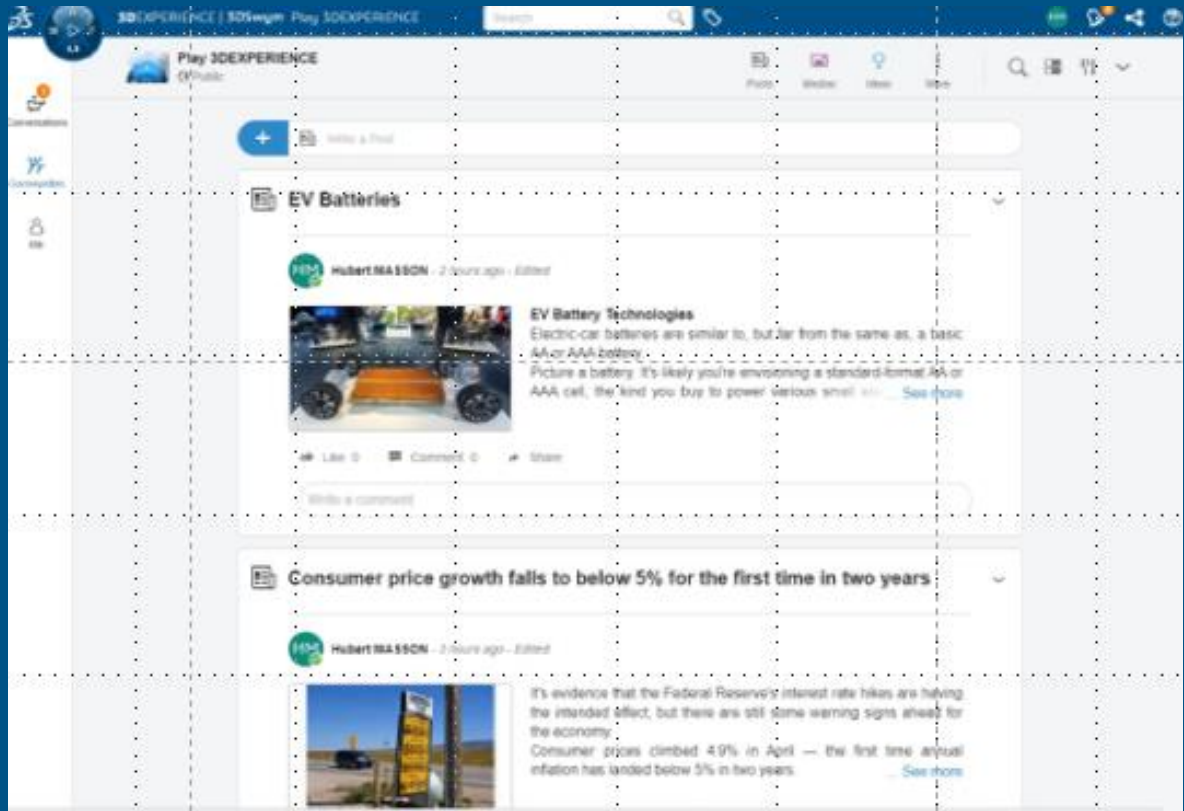
Get Know-How

Augment individuals with full companionship to realize their activities by leveraging all solutions from general requests



Ex: From ideas to reality

AI AUGMENTED KNOWLEDGE



SUPPLIERS AND COST INTELLIGENCE

3DEXPERIENCE | 3DDashboard Purchasing Organisation

Search NETVIBES TechSales

Berenger WINCKLER

Supplier 360 Supplier negotiation Buyer Group Purchasing strategy

NETVIBES - Data Perspectives - Value Chain

Suppliers

Search...

Suppliers : (14)

- BRASI
- BRIMBA
- BUSCH
- MAGLA
- MAHLI
- MARILLU

BASCH

Basch Ltd is a holding company of subsidiaries manufacturing and tra...

Rating

Main rating: ★★★★★
 Quality Performance: ★★★★★
 Cost Performance: ★★★★★
 Time Performance: ★★★★★

Sustainability index

ESG Ranking (%)

Locations & Plants

Supplier Sites

OnePart Reuse - Exalead OnePart

- 19.33 MB 3dxml on 10 Oct 2022, 11:56
- EI_007111_Chassis Motor Fix High ...
- EI_007111_Chassis Motor Fix High ...
- Built - Nut (prd-28427415-00004179)

ENOVIA - Issue Management - My issues (3)

Title	Name	Actions
Bracket price increase due to Aluminium material	ISS-000015	▼
Replacement Part	ISS-000012	▼
Decrease of font	ISS-000011	▼

ANOMALY ANALYSIS

3DEXPERIENCE | 3DDashboard Troubleshooting

Maintenance Predictive | Anomaly Analysis | Collaboration with Expert

NETVIBES - Data Perspectives - Troubleshooting

Anomalies Detection with 3DS Artificial Intelligence

■ Anomalies per Aircraft
■ Data Point Higher Than Usual
■ Outlier Point In Signal
■ Signal Shape different than Usual
■ Signal Out Of Envelope
■ Data Point Lower Than Usual

■ Criticity
■ Anomalies Distribution

Sensor	Flight	Phase	Timestamp	Criticity	Aircraft	Search
alpha 2906	flight 3274	Take-Out	18	Medium	Aircraft 1	Search
alpha 2906	flight 7109	Cruising	94	Medium	Aircraft 4	Search
alpha 2982	flight 3274	Take-Out	4	Low	Aircraft 5	Search
alpha 2982	flight 3274	Take-Out	28	Low	Aircraft 2	Search

Sensor	Flight	Phase	Timestamp	Criticity	Aircraft	Search
alpha 2906	flight 7109	Take-Out	31	Low	Aircraft 3	Search
alpha 2906	flight 7109	Cruising	118	Low	Aircraft 4	Search
alpha 2906	flight 7109	Take-In	124	Medium	Aircraft 4	Search
alpha 2982	flight 3274	Take-Out	7	Low	Aircraft 5	Search

Sensor	Flight	Phase	Timestamp	Criticity	Aircraft	Search
alpha 2906	flight 3274	Take-Out	28	Medium	Aircraft 2	Search
alpha 2906	flight 7109	Take-In	140	Low	Aircraft 5	Search
alpha 2982	flight 7109	Take-In	124	High	Aircraft 4	Search
alpha 3049	flight 7109	Take-In	134	Low	Aircraft 5	Search

Sensor	Flight	Phase	Timestamp	Criticity	Aircraft	Search
alpha 3267	flight 3193	Take-In	130	High	Aircraft 4	Search
alpha 3267	flight 7109	Take-In	132	High	Aircraft 5	Search
alpha 3267	flight 5612	Take-In	134	High	Aircraft 5	Search

Systems Traceability

ENOVIA - 3D Navigate - N101.00000000

THANK YOU FOR YOUR ATTENTION

LETS KEEP IN TOUCH



[linkedin.com/in/gliszczyński/](https://www.linkedin.com/in/gliszczyński/)

MORE RESOURCES TO FOLLOW



Helping industry
leverage data science
and AI to enter the
Generative Economy

AI POWERED VTE – NEXT ON THE STAGE

Jakub Jasiński
PESA

**Usage of AI and 3DEXPERIENCE within PESA
projects realization with 3rd Parties Supplier**

Udo Lange
CAPGEMINI

What if your Digital Twin is smarter than yourself?

Dr. Stefan Herrmann
CSI GROUP

**AI-powered Virtual Twin Experiences and
Sustainable Development in Automotive
Engineering**

THANK YOU FOR YOUR INTEREST

