

## AUGMENTED REALITY FOR WORKER GUIDANCE IN HIGHLY VARIANT ASSEMBLY PROCESSES



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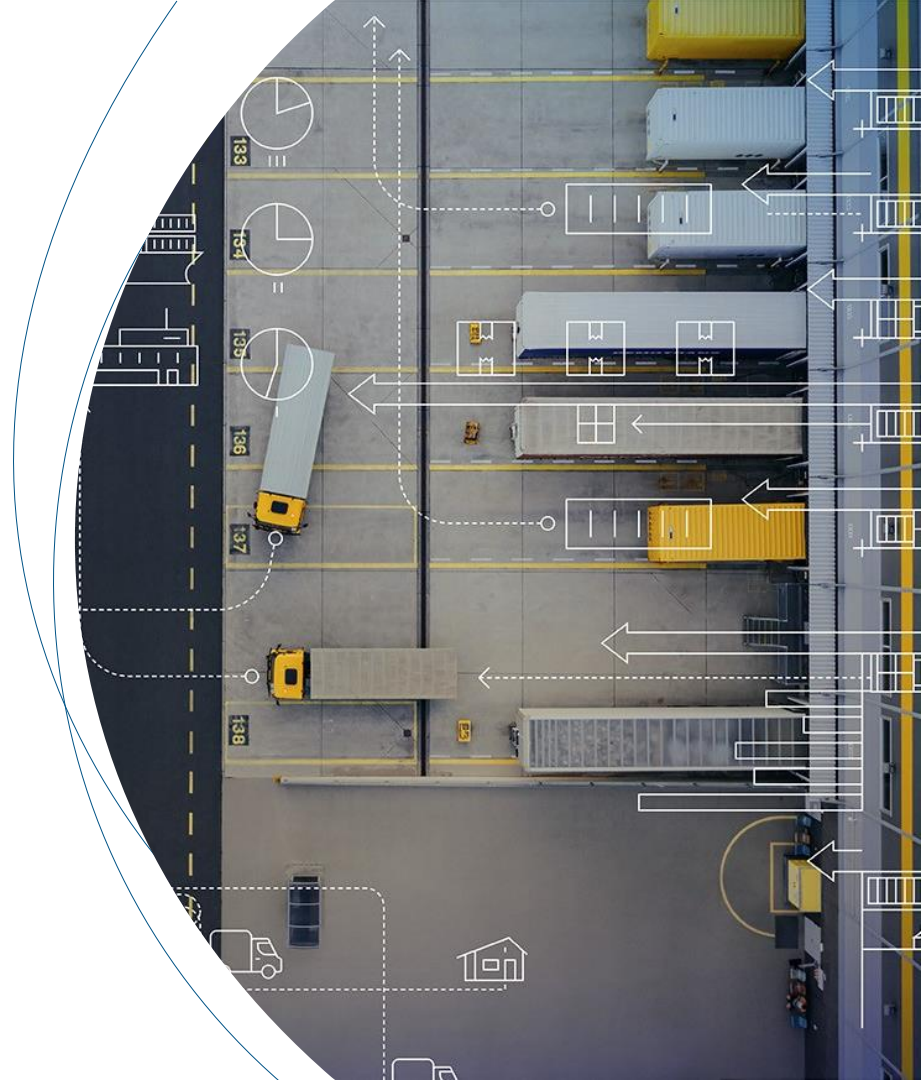


# DELMIA MAKE IT HAPPEN

Guillaume VENDROUX  
CEO DELMIA



3DEXPERIENCE®



# AGENDA

## About DELMIA

The Power of the Virtual Twin Experience – Beyond Digital Twin

The Virtual Twin Experience in Action

DELMIA Domains

DELMIA Capabilities Summary

Key Considerations and the Way Forward

# ABOUT DELMIA

## 2,500 Passionate Customers

with 1.5M users from 11 industries

From suppliers, manufacturers, logistics and transportation providers, to service operators and workforces  
Across discrete, batch, hybrid, and process manufacturing and services

## Enabling Sustainable Innovation with the Virtual Twin Experience

Empowering the workforce of the future  
Transforming supply chains to value networks  
Building resiliency for future-proofing operations



## Global Sustainable Operations

- Collaborative Operations with Data Sciences
- Industrial Engineering
- Supply Chain Planning & Optimization
- Manufacturing & Operations



## 3DEXPERIENCE Platform

Powered by the 3DEXPERIENCE® platform, DELMIA helps industries and service to **Collaborate, Model, Optimize, and Perform** through integrated decision support and real world data evidence



## Connecting the Virtual & Real

Providing solutions to leverage the virtual world of modeling, optimization and simulation with the real world of operations with an actionable virtual twin experience.



# DELMIA EQUITY



## WHO

Producers of Goods and Services



## WHAT

**MAKE** it happen



## HOW

Powered by the **3DEXPERIENCE** platform  
Replicable and industry-relevant (apps, services, content)  
Magic user Experience | Online & Mobile  
Power of communities

### KEY EQUITY ELEMENTS

**Our spirit** : IFWE  
**Our focus** : From documentation to Experience  
**Our character** : Game Changers

**Our Key visual/navigation** : the Compass  
**Our User Experience** : Magic | Irresistible | Online  
**Our core Values** : The 4 IFWE values

# MANUFACTURING LEADERS USE DELMIA

## 1 Build to Order / Build to Stock

- 8 of 10 top global automotive OEMs
- 60% of electric vehicle (EV) manufacturers
- Worldwide, **every second**, a new car is assembled with a part manufactured using DELMIA
- 50% of the world's largest **farm equipment manufacturers**
- 40% of the world's largest **construction equipment manufacturers**
- 9 of 10 world's largest **aircraft manufacturers**



## 2 Process Manufacturing

- 80% of rolled aluminum products worldwide are planned and produced using DELMIA



## 3 Batch Manufacturing

- 3 of 5 top global cosmetics companies

## 5 Repetitive Manufacturing

- 2 of the world's largest robotic surgery suppliers with **over 80%** market share
- 2 of 3 world's top orthopedic device suppliers



## 4 Hybrid Manufacturing

- 85% of the world's battery cell capacity is designed and produced using Dassault Systèmes

# DELMIA SUPPLY CHAIN EXCELLENCE

## 1 Supply Chain Planning

- 80% of rolled aluminum products worldwide are planned and produced using DELMIA
- Delivery performance improved from 40% to 90%
- Stock reduced by 33%
- Output increased by 44%

2

## Sustainability

- The virtual twin/digital twin use cases alone can deliver combined incremental benefits of USD \$1.3 Trillion of economic value and 7.5 Gt CO<sub>2</sub>e emissions reductions between now and 2030<sup>1</sup>
- In Metals, 3.5 Kt CO<sub>2</sub>e savings on scrap/waste

3

## Workforce Planning

- Roster air traffic controllers who manage 70% of the world's airspace

4

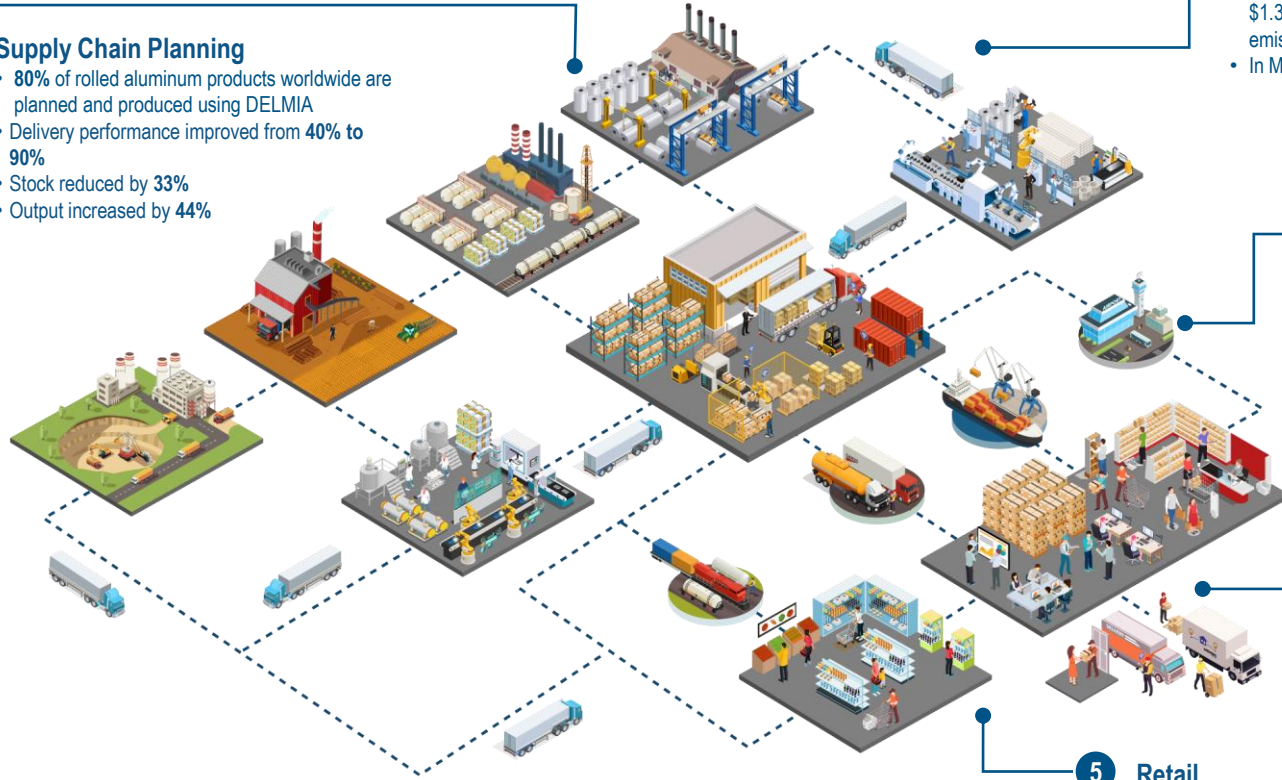
## Logistics Planning

- 2 of 10 top logistics companies worldwide
- The world's largest liquid natural gas producers use DELMIA for fleet optimization
- Optimizing delivery of more than 1.8 billion global shipments annually

5

## Retail

- Supporting global retailers that supply more than 20,000 stores worldwide



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# INDUSTRY CHALLENGES ARE DRIVERS FOR DIGITAL TWINS



## Transformation

- Digital technology adoption: Digital Twin technology, big data, advanced analytics, human-machine Interfaces (AR/VR), AI/ML
- Flexible, scalable and secure technology
- Increasing performance and quality delivered to the customer



## Sustainability

- Reducing environmental footprint of the product/company
- Reducing fuel consumption and machine CO2 emissions
- Energy transition to hybrid, electric or hydrogen



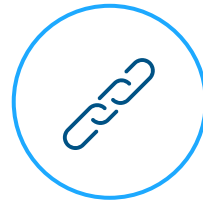
## Workforce Challenges

- Ongoing talent shortage
- Employee retention and turnover
- Increasing wages and competition
- Knowledge capture and new worker training



## Product Complexity & Diversity

- Increasing demand for personalization without sacrificing quality
- Alternative energy sources
- Regional rules and regulations
- Demand volatility



## Supply Chain Instability

- Covid-related issues that continue past 2022
- Supply Chain “Bullwhip” effect
- Transforming supply chains for advantage beyond the next disruption

# UNIQUE VALUE | VIRTUAL TWIN EXPERIENCE FOR SUSTAINABLE OPERATIONS



## REVEAL POSSIBILITIES

MODELING + SIMULATION + OPTIMIZATION



Value Network



Factories, Assets, Logistics,  
Warehouses, Service Centers



Products, Operations,  
Processes

## MAKE INFORMED DECISIONS

DATA + ML+ AI with  
PRACTICAL KNOWLEDGE



## COLLABORATE UNIVERSALLY

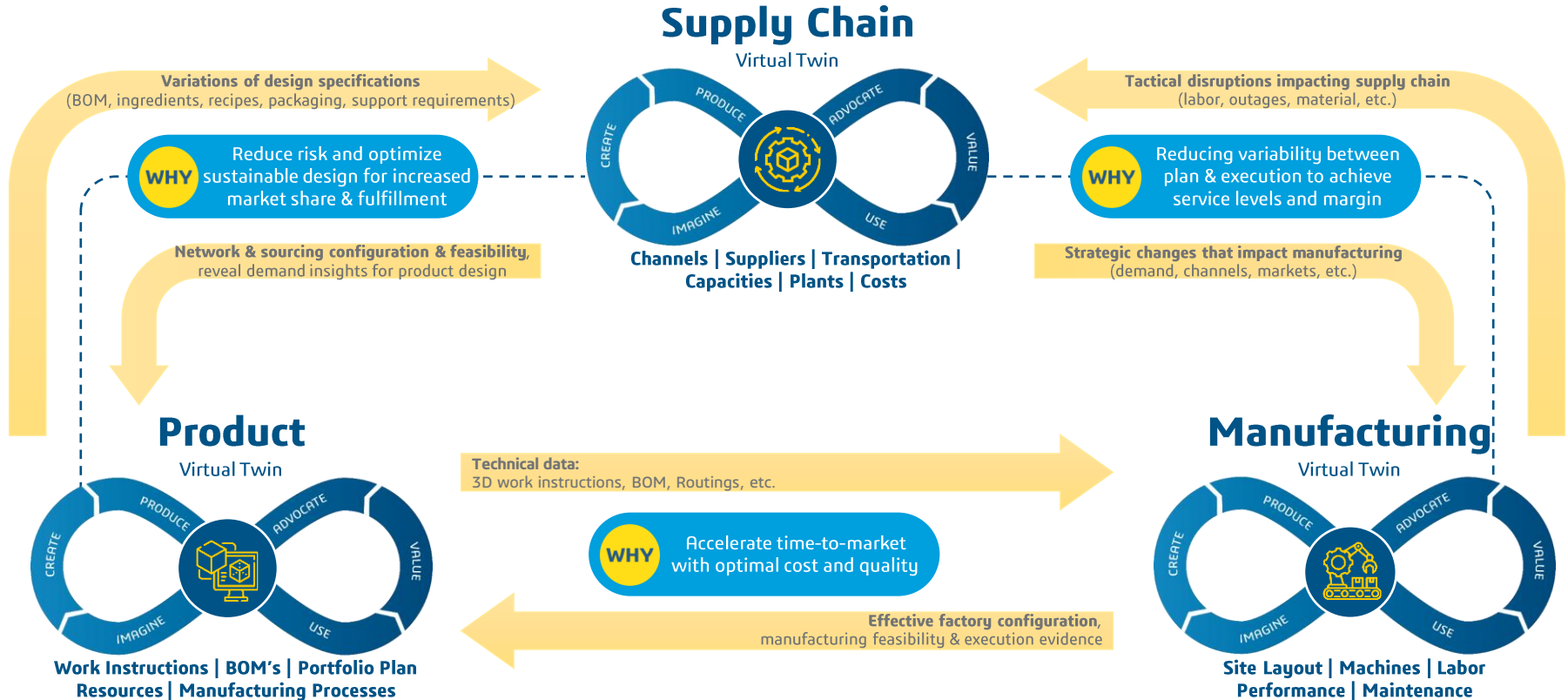
VISIBILITY + AUGMENTED + CONTEXTUALIZED



*Transform and Deliver Sustainable Performance*

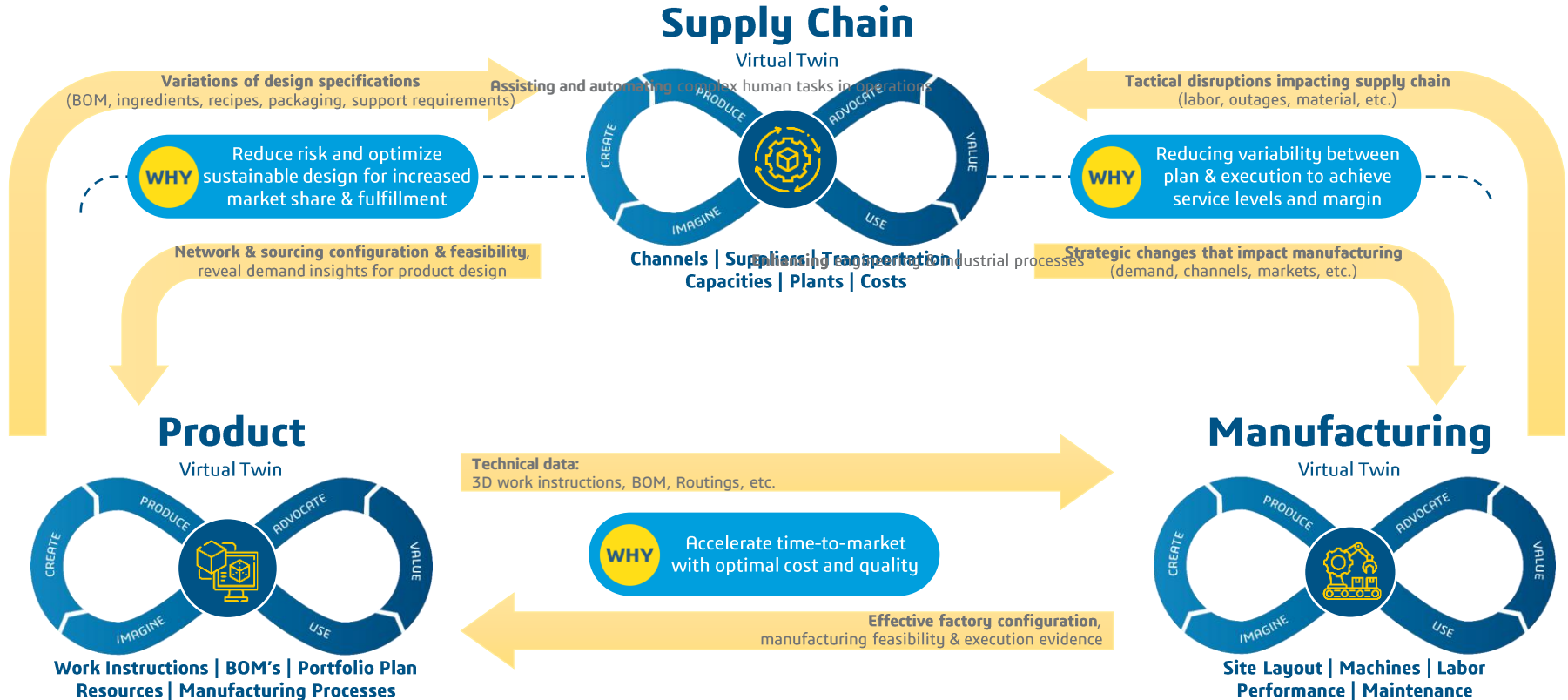
# A UNIQUE PORTFOLIO FOR INDUSTRIAL OPERATIONS

Dassault Systèmes is uniquely positioned to break functional silos and orchestrate end to end performance



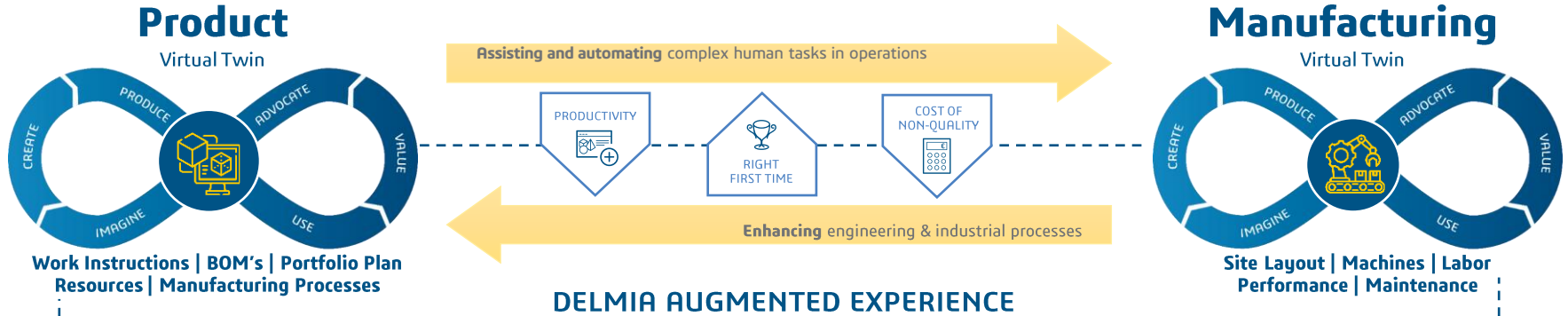
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Rendering digital data for worker guidance in the operating space

- Models
- Work instructions
- Quality parameters



Referencing operational data with digital models creating rich feedback

- Assembly performance
- Quality Inspection performance
- Results and variances

## Integrating cutting-edge technologies



Augmented Reality



Computer Vision



Artificial Intelligence



Deep Learning



Interactive 3D



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## AUGMENTED REALITY FOR WORKER GUIDANCE IN HIGHLY VARIANT ASSEMBLY PROCESSES

CHANNEL 2



# KEY TAKEAWAYS

## Reimagine the Future. Transform Today with Virtual Twins:

- Unparalleled precision and efficiency throughout the product lifecycle from design to operations
- Accelerated time-to-market with the highest quality standards
- Modern technologies, including AI, are revolutionizing operations
- Contributes to sustainability objectives





**BREAK!**

ALL YOU NEED TO  
KNOW ON THE  
BACK OF YOUR  
BADGE.