Concept to Factory:
Enabling Smart Manufacturing with the Digital Thread

September 10th, 2025

AIM
Advancing Innovation in Manufacturing

DELL Technologies

Funded by the European Union

Agenda

- Welcome & Introduction
- What is the Digital Thread
- Why it Matters
- From Concept to Factory
- Skills and Competencies
- Actionable Takeaways
- Q&A

AIM Centre

TRANSFORM

Training & Re-skilling for Smart Manufacturing

- Digital training in MES, AI & connected systems
- Future-ready skills for adults & SMEs
- Flexible, accessible learning framework
- International collaboration

AIM
Advancing Innovation in Manufacturing

IESE Business School
University of Navarra

ESTIA
INSTITUTE OF TECHNOLOGY

DELL Technologies


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From Concept to Factory

From Concept to Factory

1. Design Phase (CAD/PLM)

Capture and version system changes

2. Engineering Validation

Using Simulation & AI to validate performance virtually

From Concept to Factory

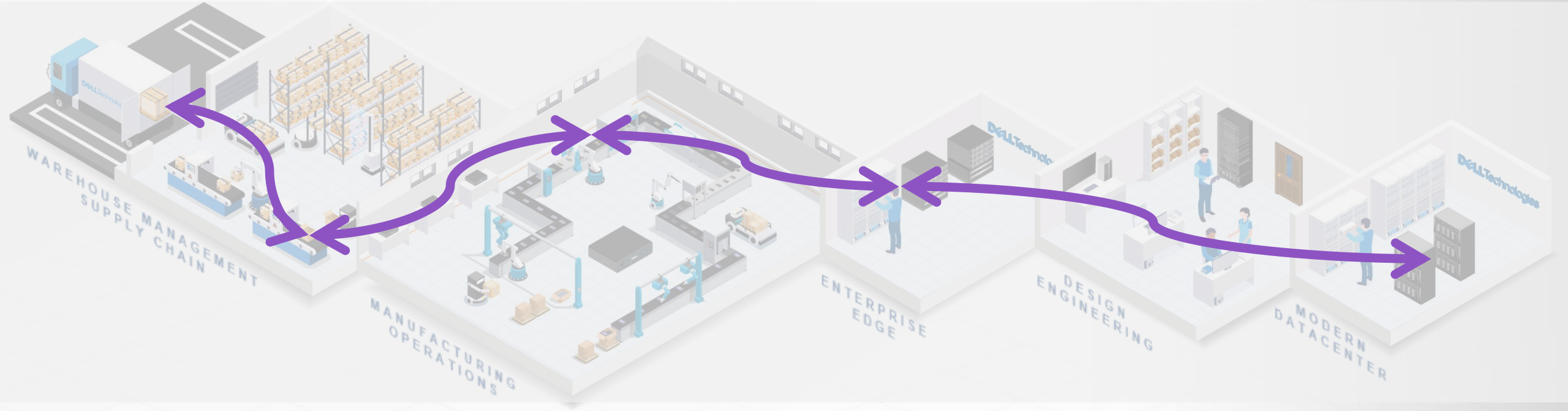
3. Manufacturing Execution

Linking design data directly with MES

4. Production Monitoring

IoT sensors and edge computing track real-time performance

From Concept to Factory



5. Continuous Improvement

The feedback loop – insights form production feed back down to design

Skills for a Digital-Thread Enabled Workforce

- Technical Skills: MES, IoT, AI, Cybersecurity
- Process Skills: End-to-end integration, Collaboration, Adaptability
- Analytical Skills: Data-driven decisions, Problem-solving, Improvement

Key Takeaways

Data & Integration

Security

Continuous Learning

Thank You
Q&A

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