

Building a foundation for informed decisions

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Design & Manufacturing | Autodesk



CHANGE



**Building
information modeling**

**Augmented &
virtual reality**

**Generative
design**

**Advanced
manufacturing**

**IoT/Digital
twins**

**Artificial
intelligence**



DATA

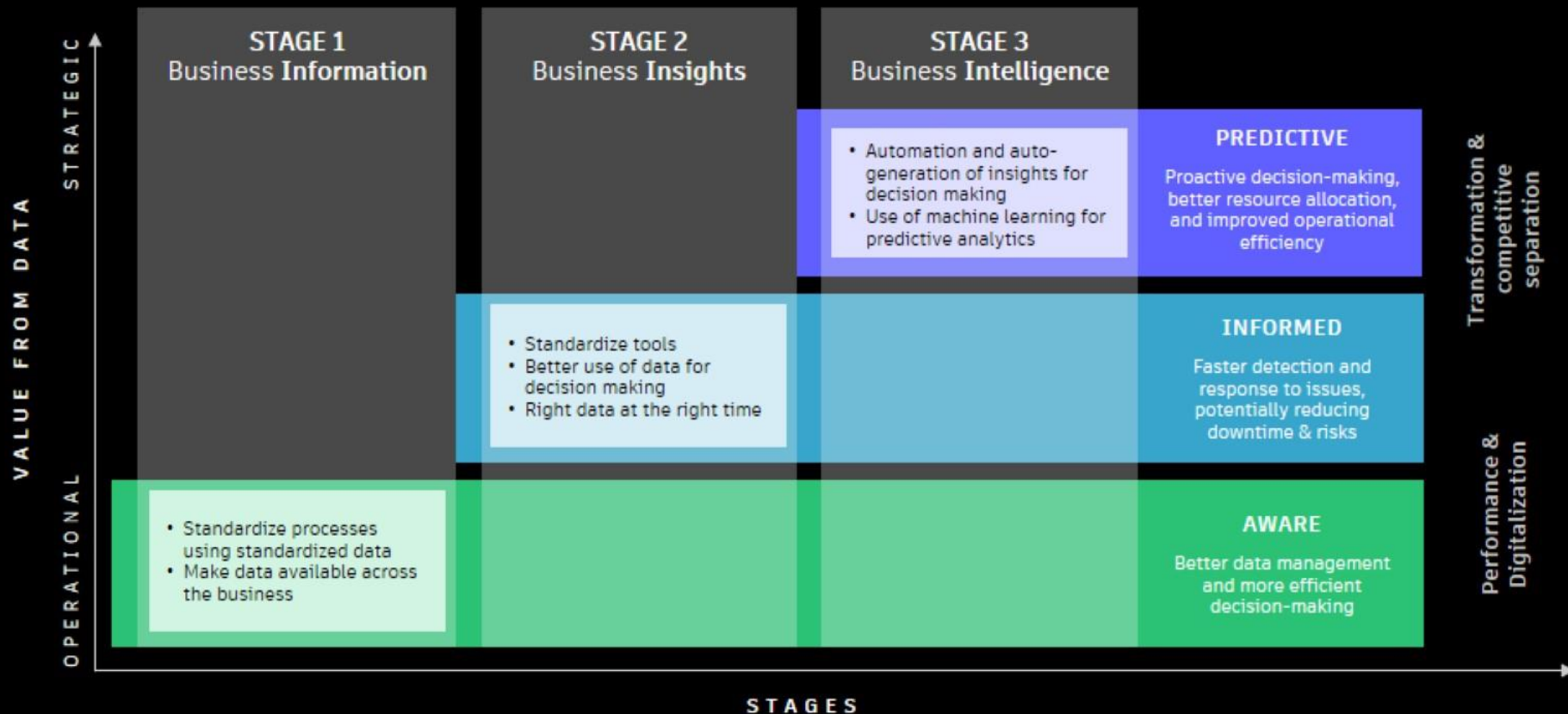
A photograph of a modern, multi-story building with a glass facade, partially obscured by a semi-transparent teal overlay. The building has multiple balconies and a complex geometric design.

**Technological
change**

A close-up image of a medical scan, possibly an MRI or CT scan, showing a circular cross-section of a body part. The image is overlaid with a semi-transparent teal filter and features a vertical scale on the left side with markings at 100, 200, 300, 400, and 500.

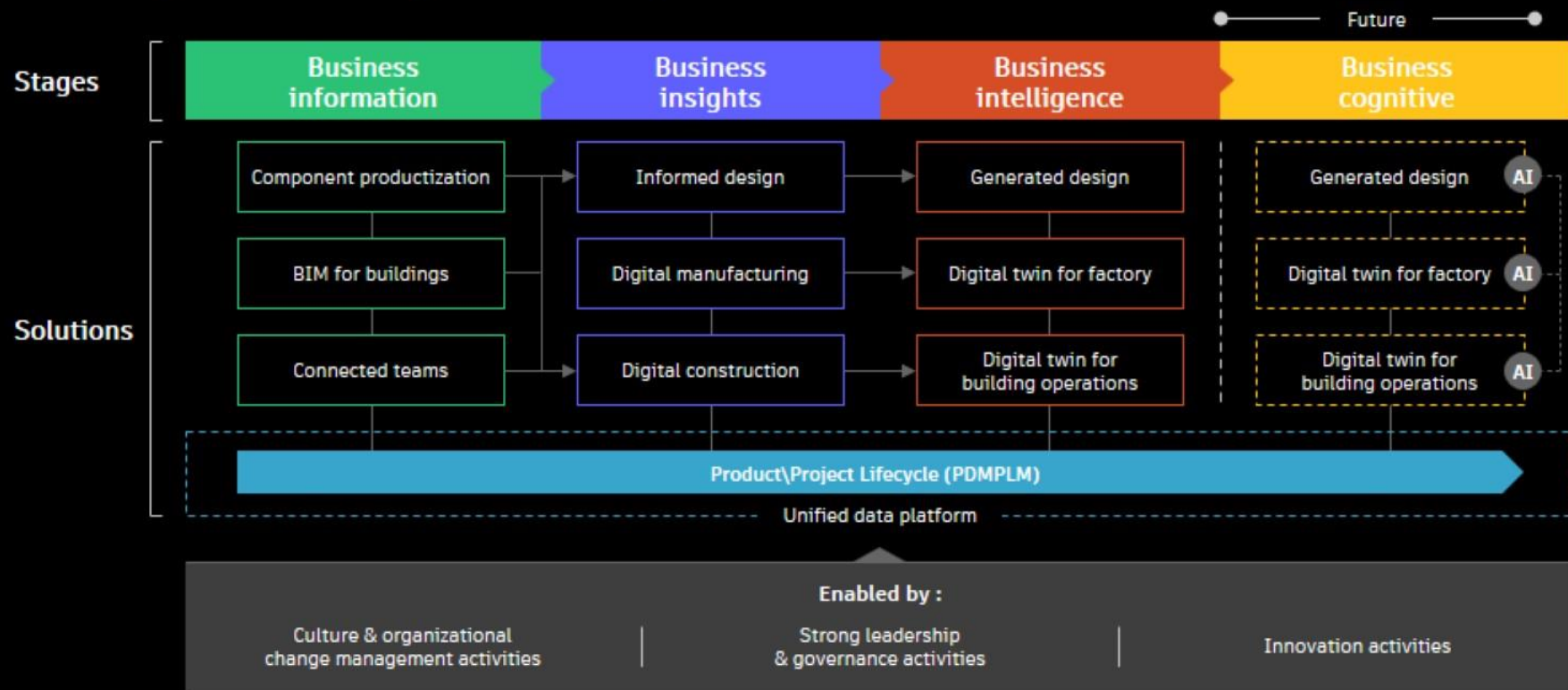
**Human
change**

Transformation stages



Data-Centric Solutions

Delivering advanced capabilities to your business



A Data-Centric Environment

Data & Information

Systems

- Resources
- Budgets
- Materials

Field

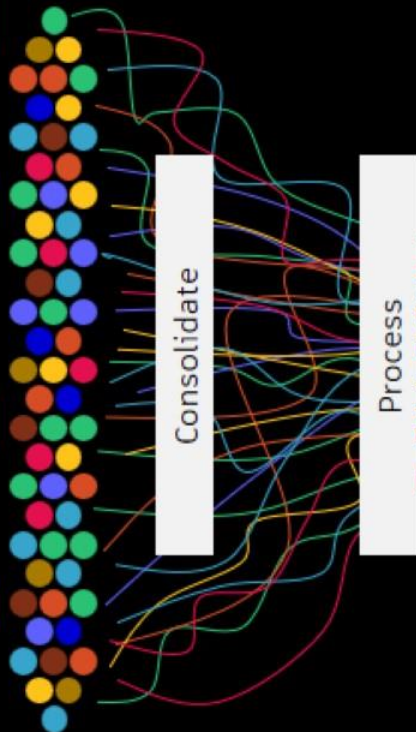
- Issues
- Checklists
- Assets
- RFI's

Project

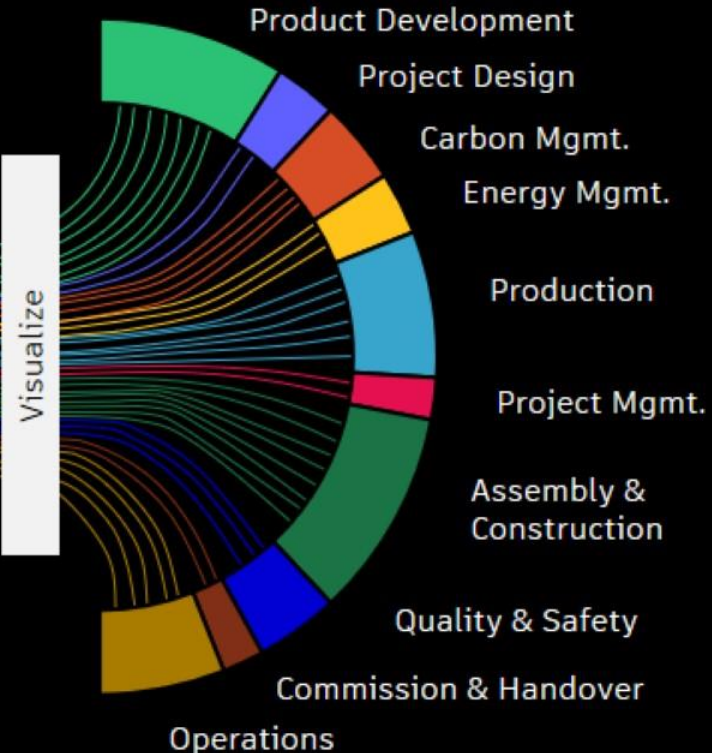
- Delays
- Forecast
- Deliveries

Design

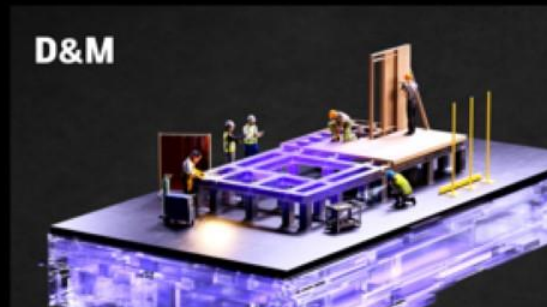
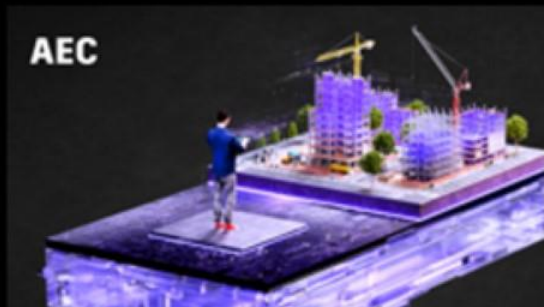
- Specification
- Requirements
- Sustainability
- Compliance



Data-Centric Capabilities



An industry in transition...



79%

76%

83%

Future growth of the company will depend on digital tools

Companies' investment in the coming years...

70%

in data management
and analytics

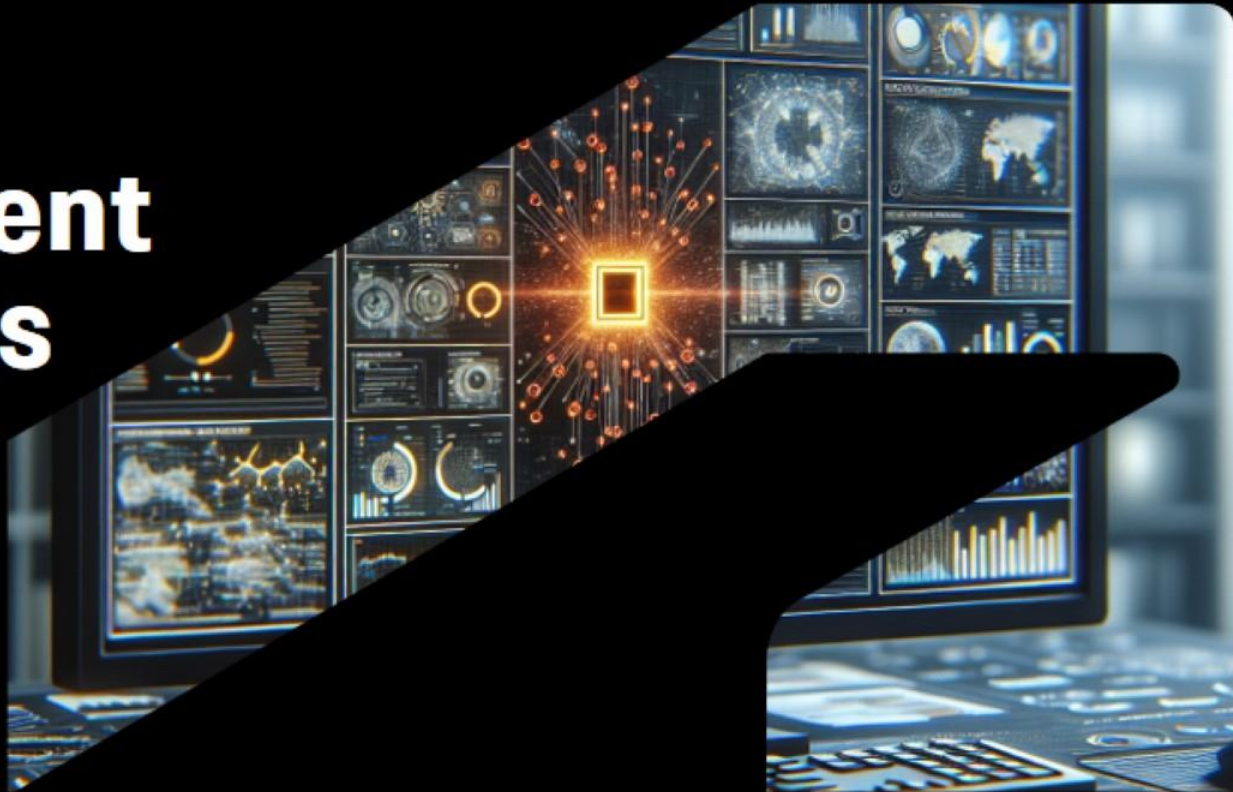
73%

in product and
service innovation

74%

In technology to
deliver project
outcomes

Data Management & Analytics



A photograph of a server room with rows of server racks. The racks are filled with server units, and blue cables are visible on the right side. The image is slightly blurred and has a blue tint, serving as a background for the text.

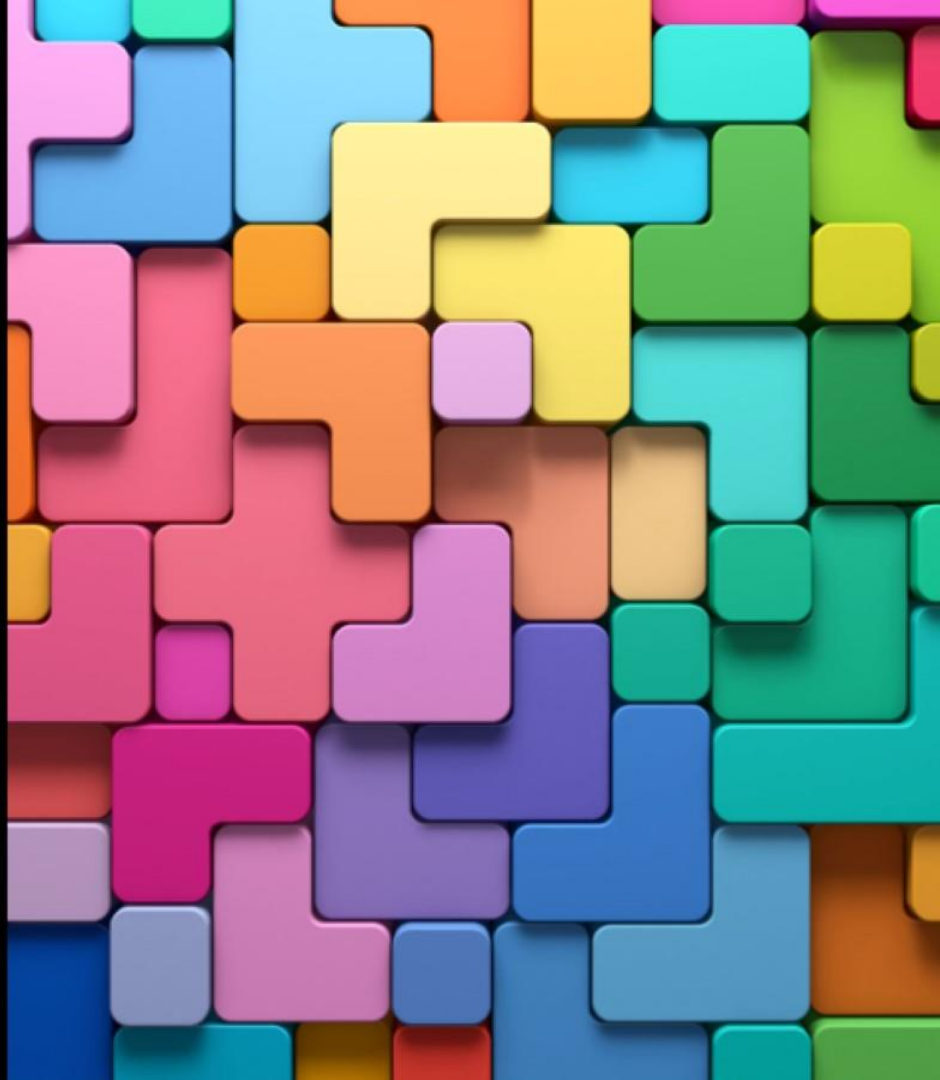
32%

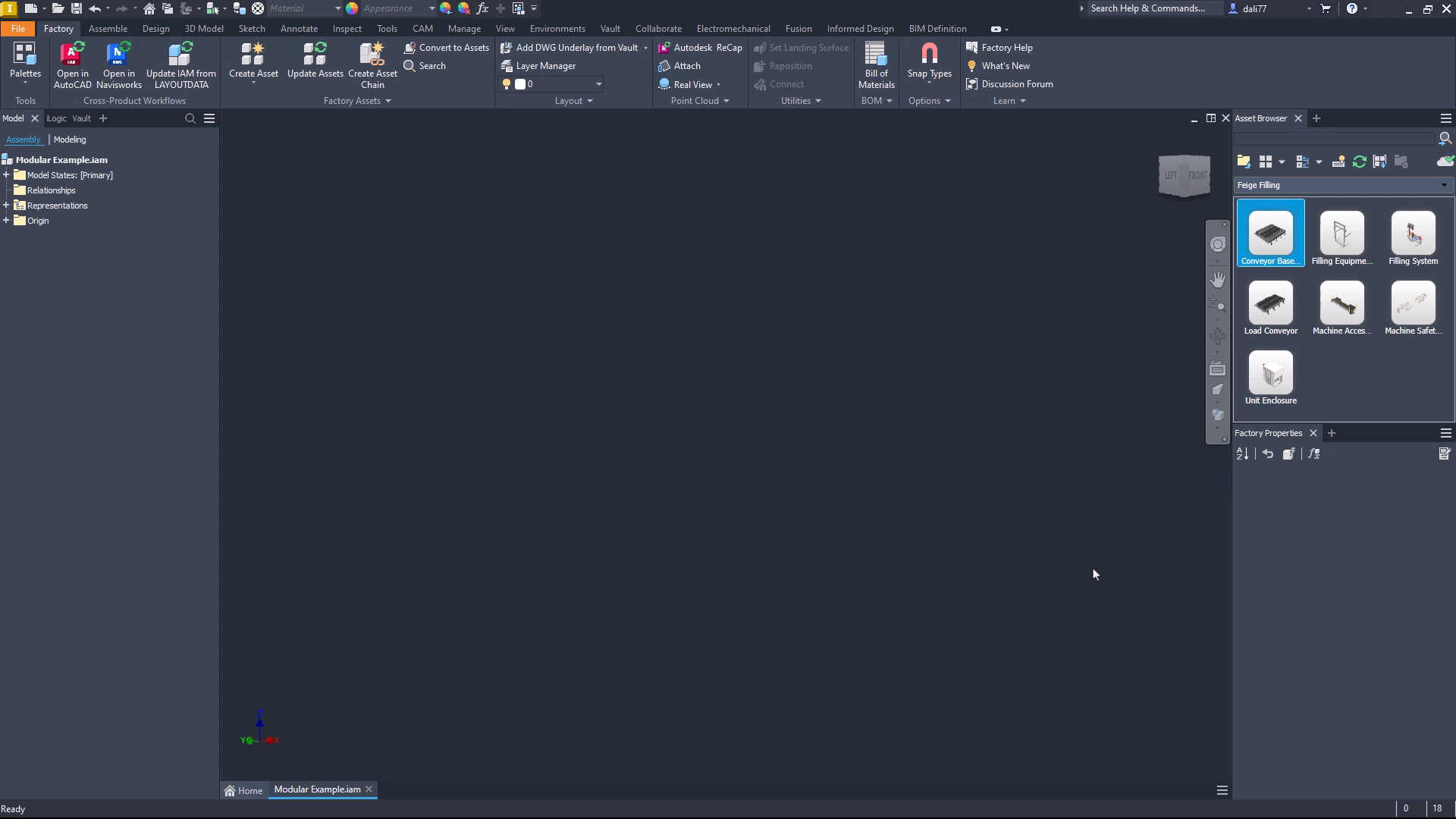
data available to enterprises is put to work

Product Configuration

Improve Sales Cycle Time

- **Capture engineering intent**, helping ensure knowledge is retained whilst delivering consistency and improving project delivery timelines
- **Enable designers** to spend more time working on innovative projects rather than low-value repetitive tasks.



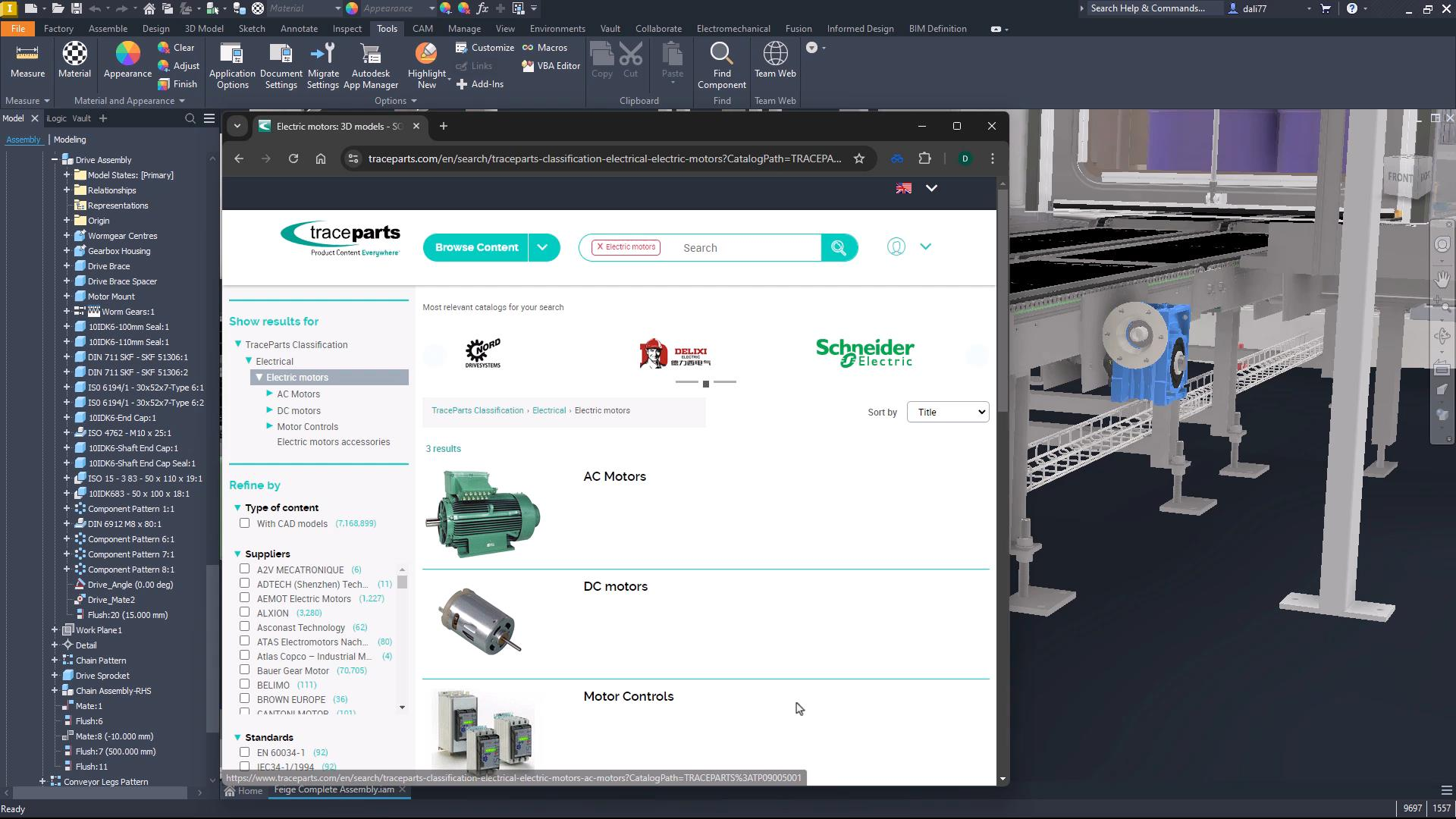


Data Management

Improve Time to Market

- **Reduce duplication of efforts** and information by utilising a common environment to manage and maintain all design-related information.
- **Increase stakeholder visibility** and insights into all associated data required to develop and deliver projects on time.

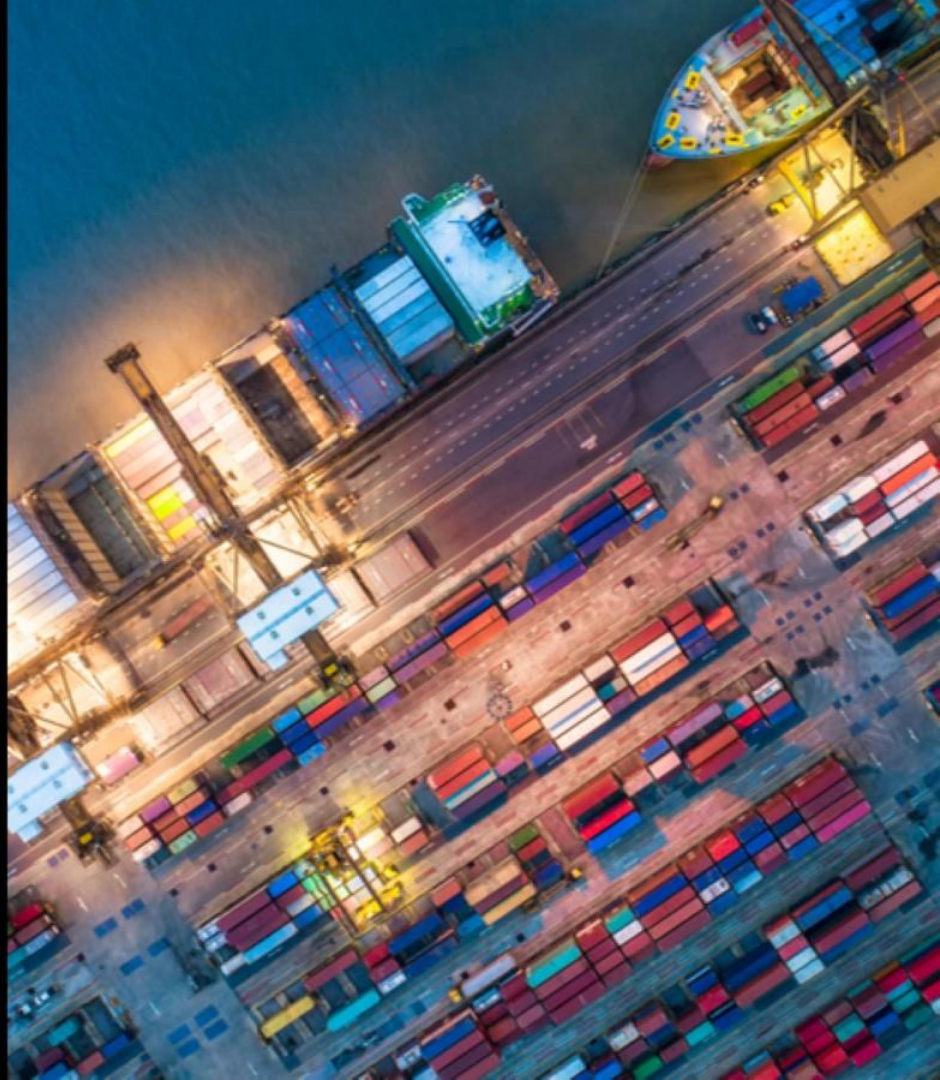




Supply Chain Collaboration

Improve Supply Chain Agility

- **Streamline external documentation** in a managed environment.
- **Enable suppliers** to participate in managed processes such as design review, requirements, quality assurance (QA) and request for quote (RFQ) processes.





9410-000 - Main GA REV:w

Comments

Files

BOM

Actions

Requirements

Issues

Concerns

Alternatives

Save



Powered by
AUTODESK

Product & Service Innovation





38%

increased demand for a digital experience

Design Communication

Increase Market Share

- **Increase revenue opportunities** by connecting product data and documentation to all downstream consumers.
- **Deliver information** in an easy to consume environment - providing extended customer engagements and support requirements.



Product Categories



Industrial Machinery

Single machines or full installations for organizations such as OEMs (Original equipment manufacturers) and engineering companies as well as production companies.



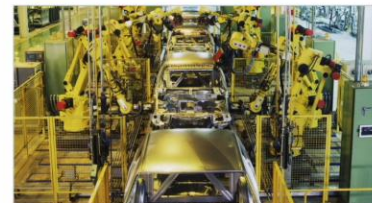
Building Products and Fabrication

Fabrication of sustainable building materials, supplies, and construction products and projects



High-technology products

Designing and developing products and key components for the high-tech and the consumer industry that are innovative and highly reliable.



Automotive parts and modules

Industry-leading automotive parts, modules and systems.



Model Coordination

Reduce Errors and Rework

- **Improve coordination** across multiple disciplines / subcontractors by automating model checks and tracking related issues.
- **Reduce time spent** on resolving problems, avoiding costly rework and undocumented onsite rectifications.



UKINOR - ACC Project - Autodesk

Autodesk Construction Cloud

Design Collaboration

UKINOR - ACC Project

Welcome to your 30-day trial - Autodesk Takeoff

View buying options

DEMIR Ali

Home

Issues

Project status

Changes

Meetings

Reports

Members

Settings

01-Mechanical

02-Equipment

00-Architecture

PRD-1234-XX-XX-M1-A-0001.rvt

PRD-1234-XX-XX-M1-E-0001.rvt

PRD-1234-XX-XX-M1-H-0002.rvt

Filter

06/03/2023

07/03/2023

08/03/2023

2

3

2

2

3

2

2

2

2 days

06/03/2023

08/03/2023

00-Architecture

Project Model

Search

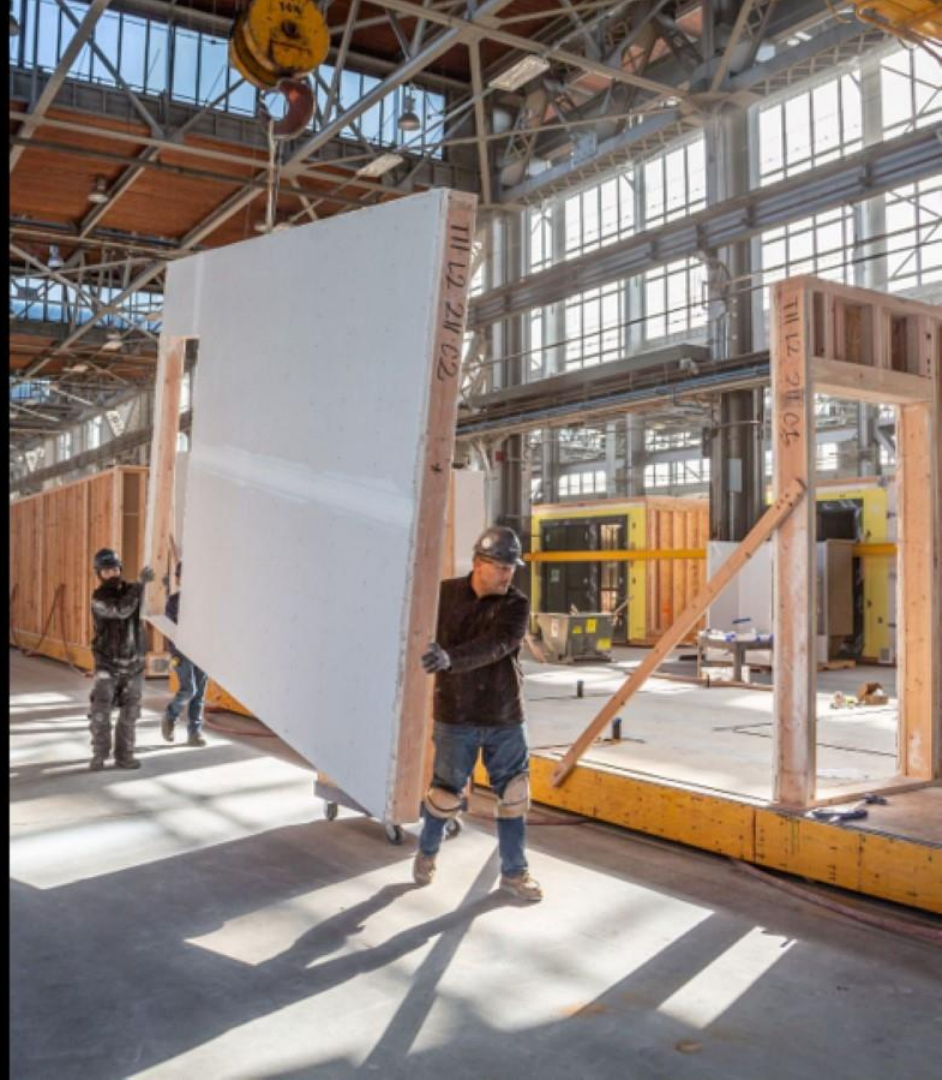
Schedule publish

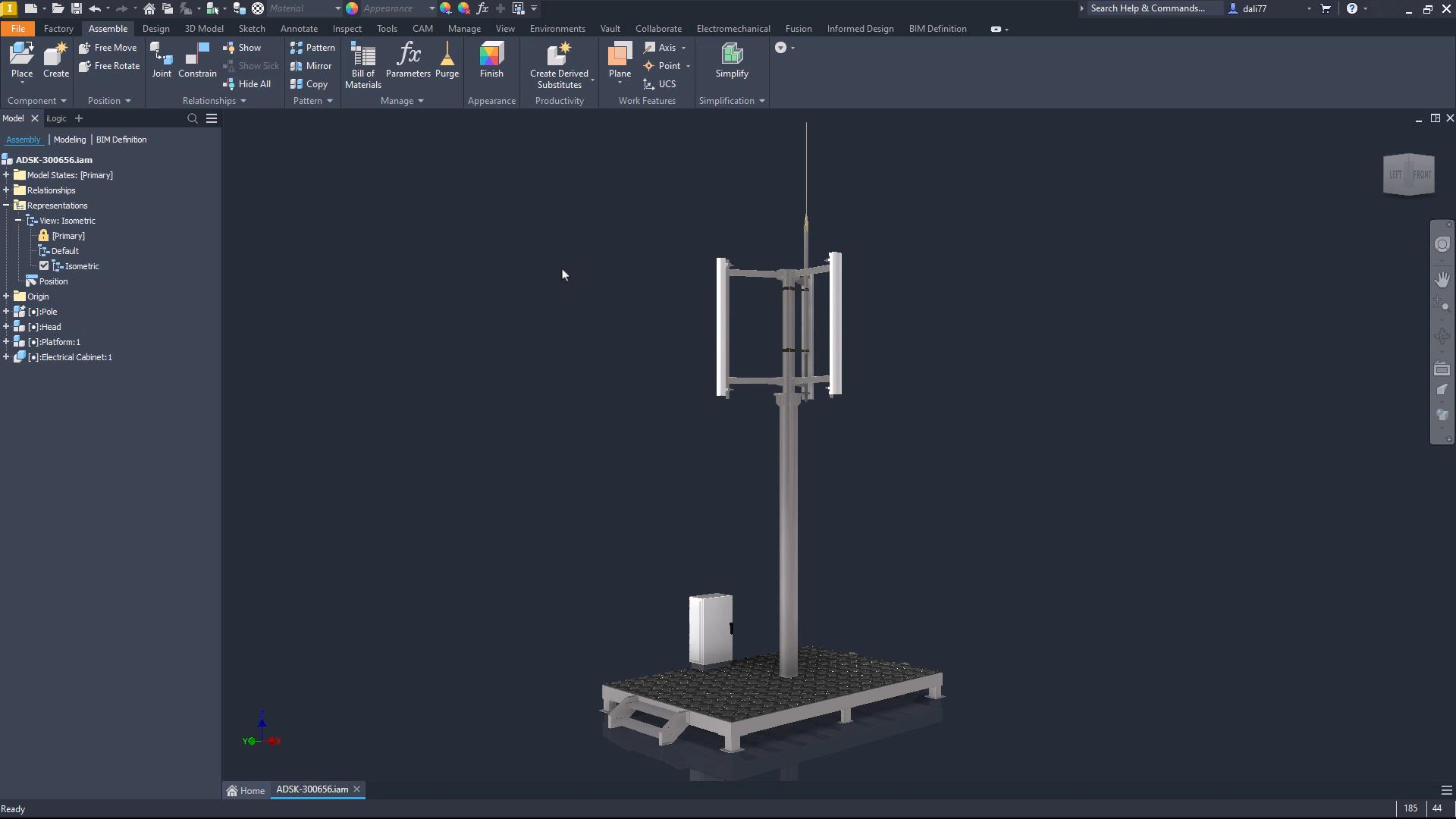
Models	Sheets	3D views	References	Update date
Production	1	5		8 Mar 2023 14:05

Design for Manufacture

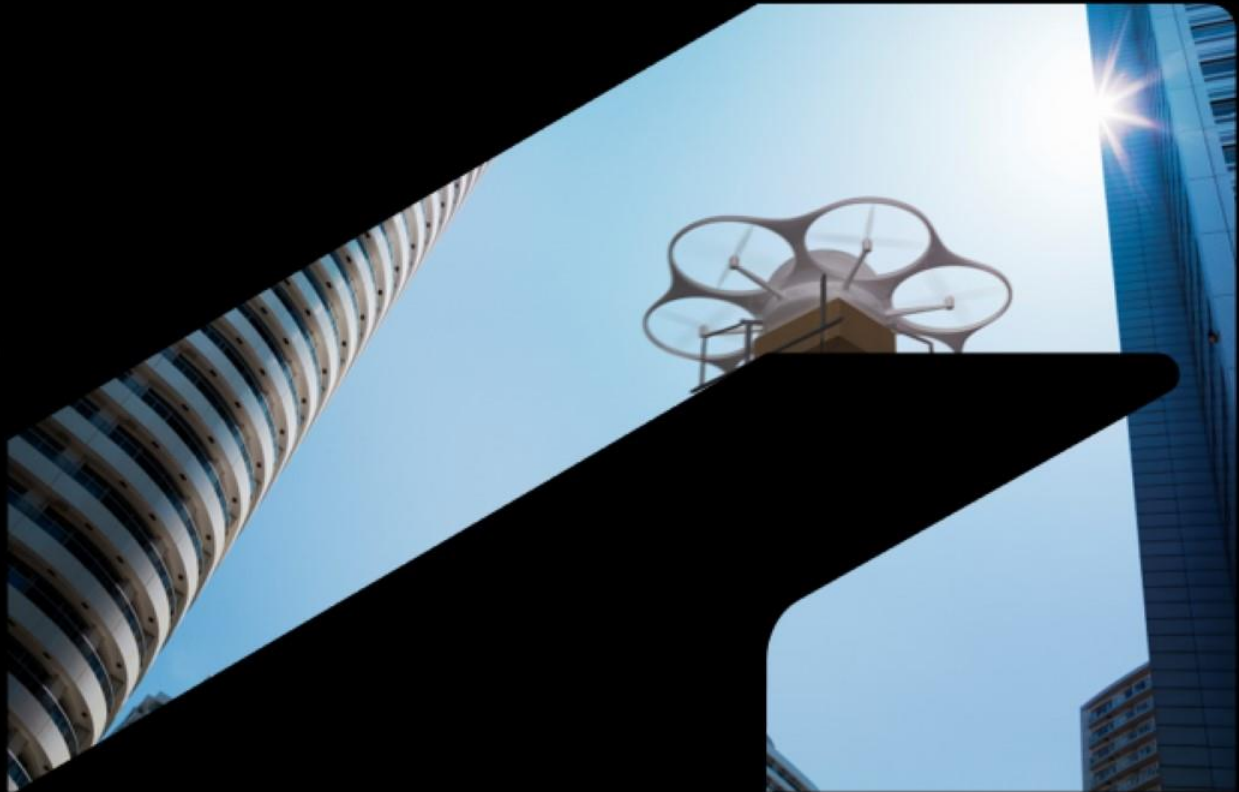
Increase Product Development Agility

- Leverage manufacturing models to help design building projects faster, whilst ensuring **products are feasible** within the selected constraints.
- Connect architectural projects with the manufacturing data enabling **greater collaboration and reduced rework** downstream.





Deliver Project Outcomes



An aerial photograph of a large container ship sailing on a deep blue ocean. The ship is filled with colorful shipping containers in shades of orange, red, and blue. The ship's wake is visible in the water.

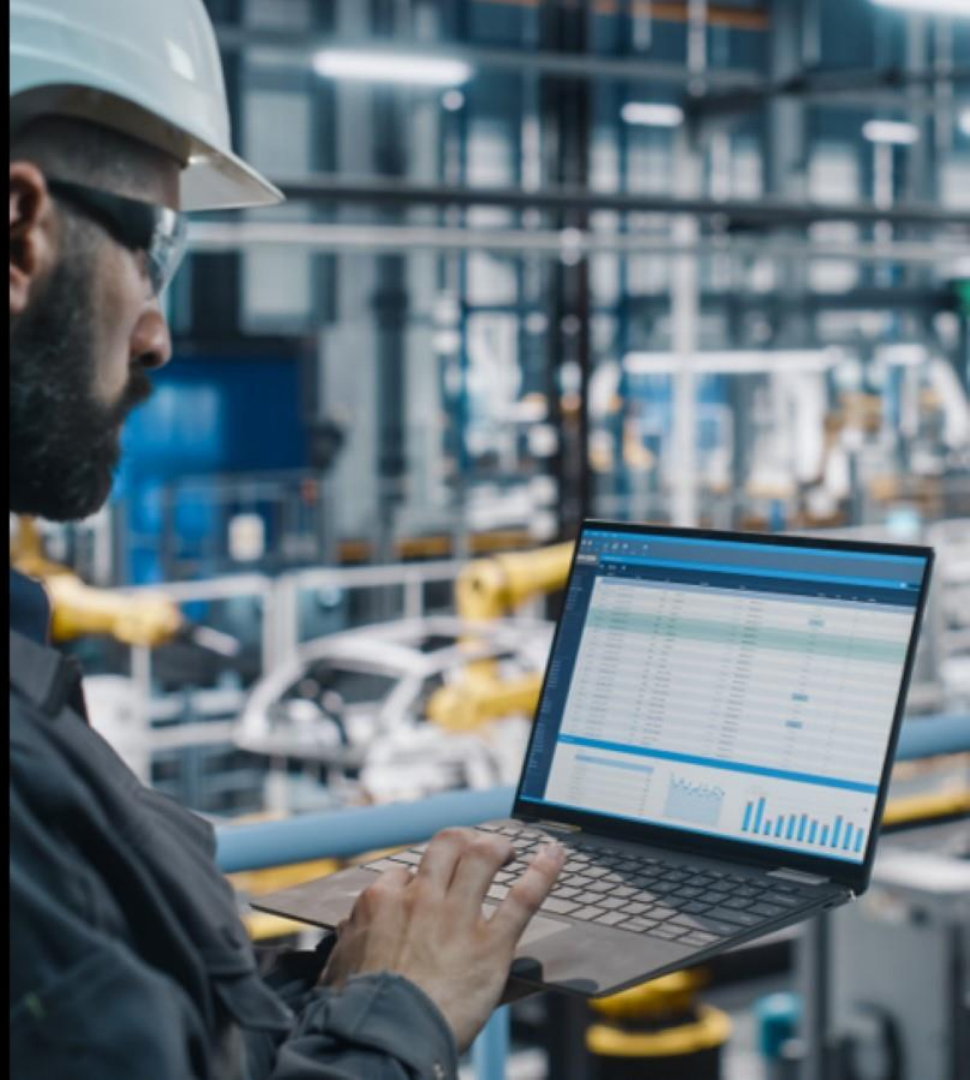
36%

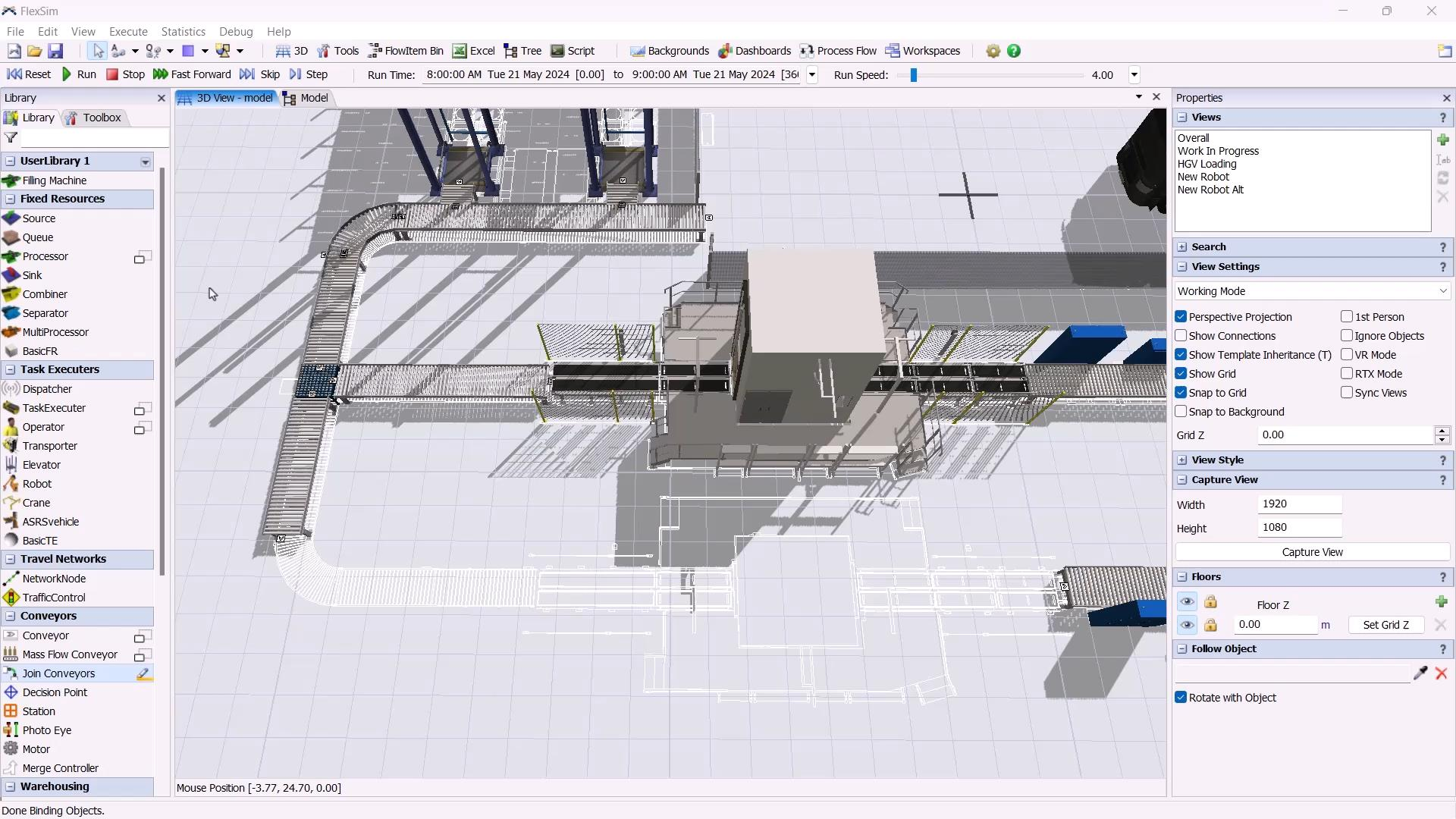
demand for greater delivery speed

Manufacturing Process Simulation

Increase Manufacturing Flexibility

- Combine insights to understand the overall factory performance and compare planned to reality.
- Simulate movements, material flows, process simulations and further production emulations.
- Understand process and asset effectiveness to enhance the facility throughput and resource allocation.





Production Management

Increase Manufacturing Throughput

- Monitor and manage manufacturing processes to help improve productivity, accuracy, repeatability, safety and quality.
- Access real-time factory floor information, enabling faster data driven decisions.



🔔 DASHBOARD

📊 ANALYTICS

📄 REPORTS

🏠 MANAGEMENT

Jobs

Scheduling

Production Records

Punch Clock

Sales Orders

Purchase Orders

Inventory

Quality

Products

Operations

Machines

Downtime

Workers

Users

Sections

Work Instructions

Safety & Health

Maintenance

🔔 Feeds

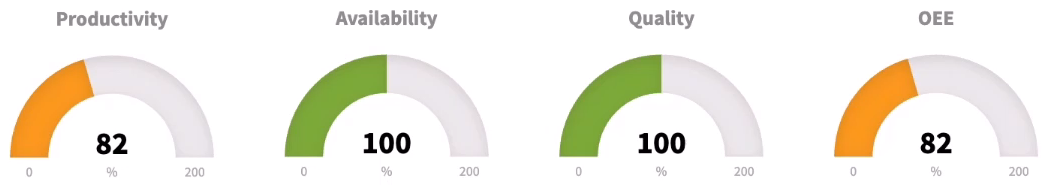
- 🔔 3 - James finished the downtime on machine CNC1 09/07 11:50 AM
- 🔔 1 - John started downtime on machine Hurco_1 09/07 11:50 AM
- 🔔 5 - Marc started downtime on machine CNC1 09:25 PM
- 🔔 7 - Peter started downtime 03:45 PM
- 🔔 5 - Marc started downtime on machine Oven 1 02:08 PM

🔔 Latest Job

🔔 Ongoing Jobs

- 2C.FAM-5
- 1A.FAM-1

🏠 Global OEE



2C.FAM-5

2C.FAM-5 (019) (0/1)

(0%)

🏠 0
Total Finished Products

👤 0
Working

🏠 0
Working

🏠 0
Produced waste

👤 1
Stopped

🏠 3
Stopped

🔔 Finished Jobs

TRANE TECHNOLOGIES

Accelerating time to market

“

By introducing a standardised approach, Trane has benefited from, **4,780 hours/year** of additional machine capacity, a **26% reduction** in part costs and a **reduction of 7 weeks** in the product development process.

”



Image courtesy of Trane Technologies

A person in a yellow shirt is standing in a modern office, looking at a whiteboard. The office has a large window, a hanging lamp, and a desk with a computer monitor and various items. The text is overlaid on the image.

**HOW CAN YOU
MAKE BETTER USE
OF EXISTING
CAPABILITIES?**

A large trophy is on a pedestal against a sunset sky. The trophy is a large cup with a handle, and the sky is a mix of orange, yellow, and blue. The text is overlaid on the image.

**WHAT CAN YOU DO
TO ENHANCE YOUR
COMPETITIVE
DIFFERENTIATION?**

What Next?

- Talk to us today whilst we're here
- Speak to your NTI representative
- Attend the breakout sessions
- Get in touch

Thank You

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