Read our Blog
Listen to our Podcast
Join the Academy

Bridging the IT/OT divide in Manufacturing: Can AI be the quantum leap we need?

David Ariens, Willem Van Lammeren - ITOTinsider.com


Welcome to our **Dev** vs **Ops** World...

We also do **IT**, but for **Factories**

David Ariens

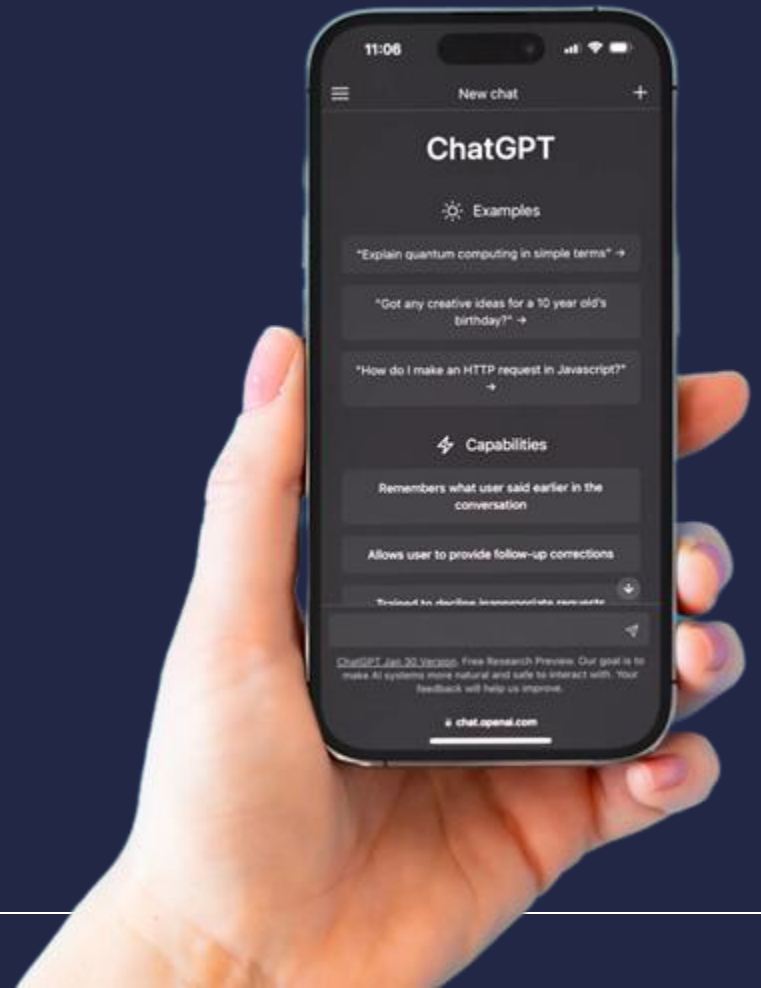
Willem van Lammeren

We talk about Operational Technology (OT)

Images are stock photos. Any resemblance to actual companies is entirely coincidental.

15 years into the Fourth Industrial Revolution

When I'm home



When I'm in production at my multi $B super important company


IT
OT
Operations
Engineering

3 reasons why digitalization is hard in operations

3 reasons why digitalization is hard in operations

Rule 1 : Innovation is important, but comes after ‘don’t explode’

3 reasons why digitalization is hard in operations

Rule 1 : Innovation is important, but comes after ‘don’t explode’

Rule 2 : Change is expensive

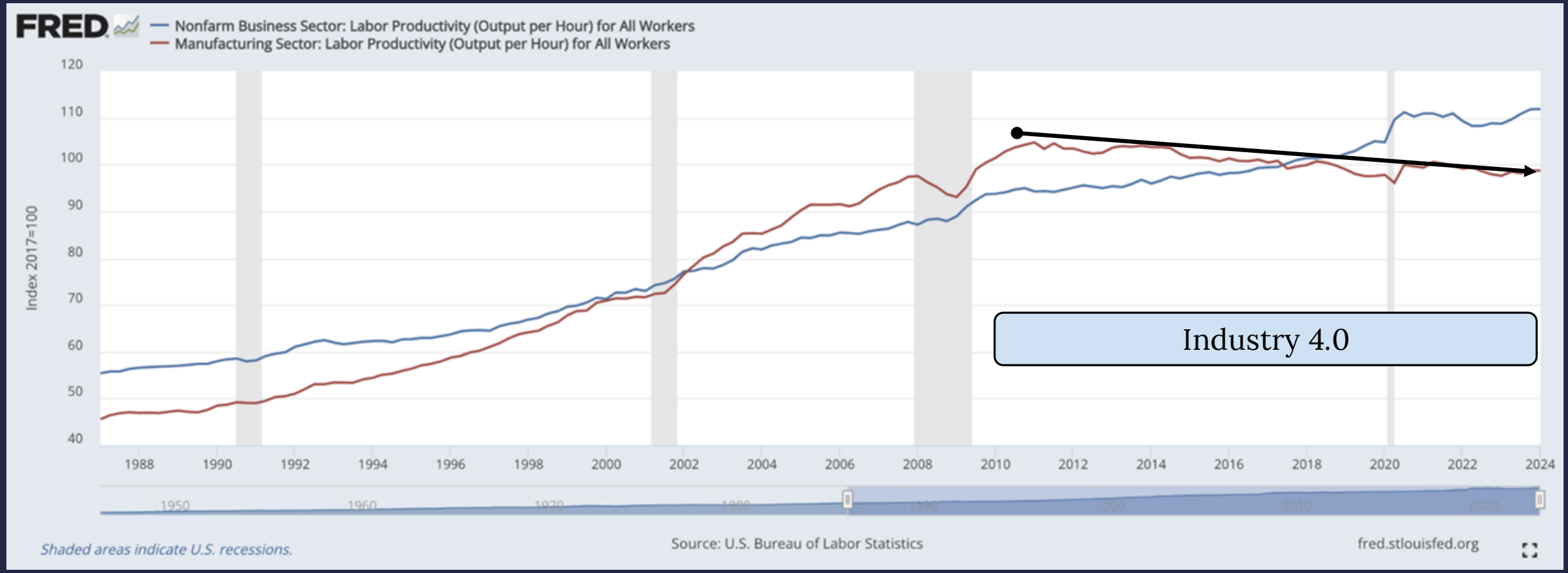
3 reasons why digitalization is hard in operations

Rule 1 : Innovation is important, but comes after ‘don’t explode’

Rule 2 : Change is expensive

Rule 3 : Scaling is linear

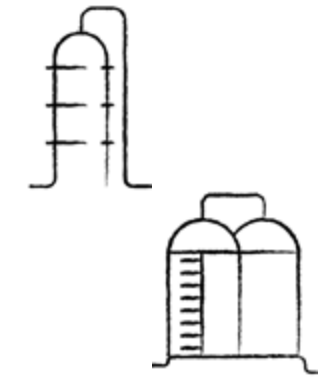
Why should we care



A different look at Industrial Digitalization

Digital Twin

Operators
Engineers



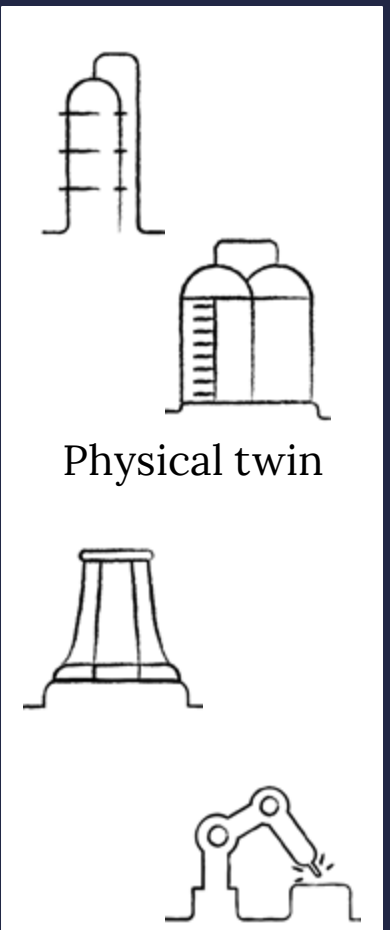
Physical twin

A different look at Industrial Digitalization

Digital twin

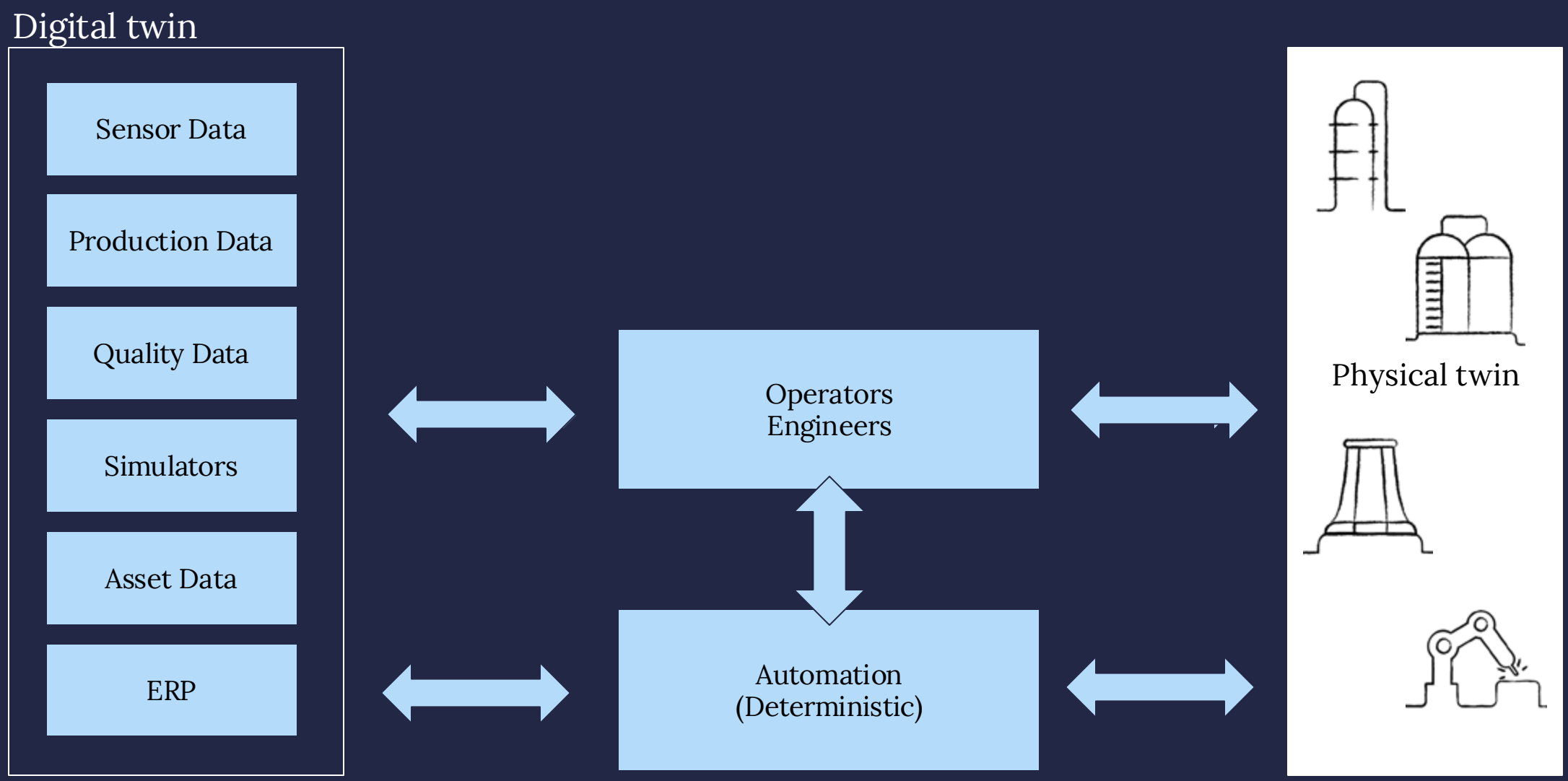
- Sensor Data
- Production Data
- Quality Data
- Simulators
- Asset Data
- ERP

Operators
Engineers

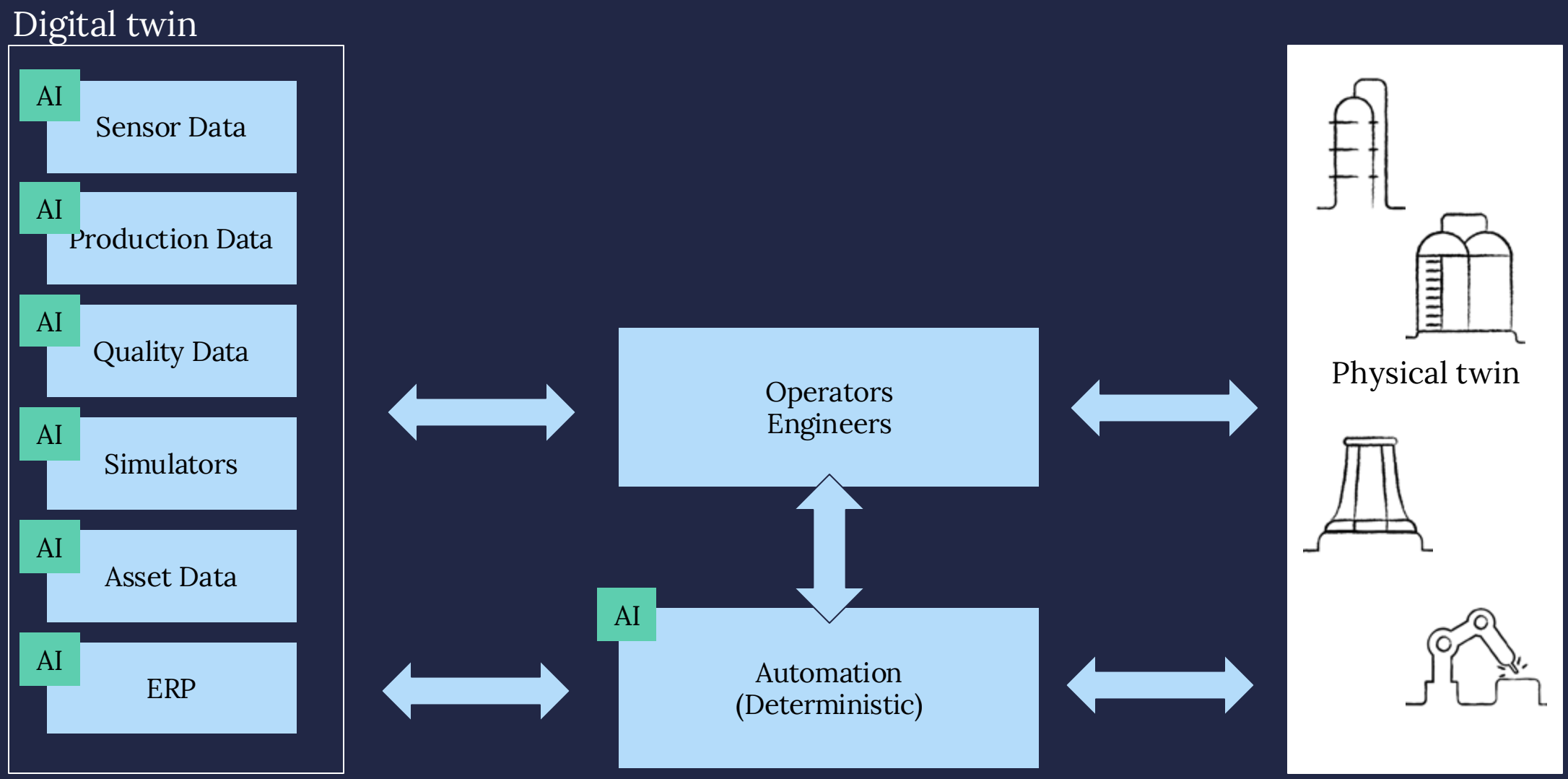


Physical twin

A different look at Industrial Digitalization



AI today: Bolted-on



Roadmap towards the Virtual Operator

Step 1

Assistance

(*Now* GA)

Digital Assistant

Goal: Work more efficiently

Easy for AI to do today

No change to Physical Twin

Needs: Data access

Roadmap towards the Virtual Operator

Step 1

Assistance

(Now GA)

Digital Assistant

Goal: Work more efficiently

Easy for AI to do today

No change to Physical Twin

Needs: Data access

Step 3

Autonomy

(In a galaxy far, far away)

Autonomous Operator

Goal: AI directly controls Plant

Needs: Complete rethink of plant control & safety philosophy

Roadmap towards the Virtual Operator

Step 1

Assistance

(Now GA)

Digital Assistant

Goal: Work more efficiently

Easy for AI to do today

No change to Physical Twin

Needs: Data access

Step 2

Collaboration

(Emerging)

Virtual Coworker

Goal: Recommend Actions

Still no direct control

AI can perform easy tasks

Needs: Context + LLM native interaction (MCP)

Step 3

Autonomy

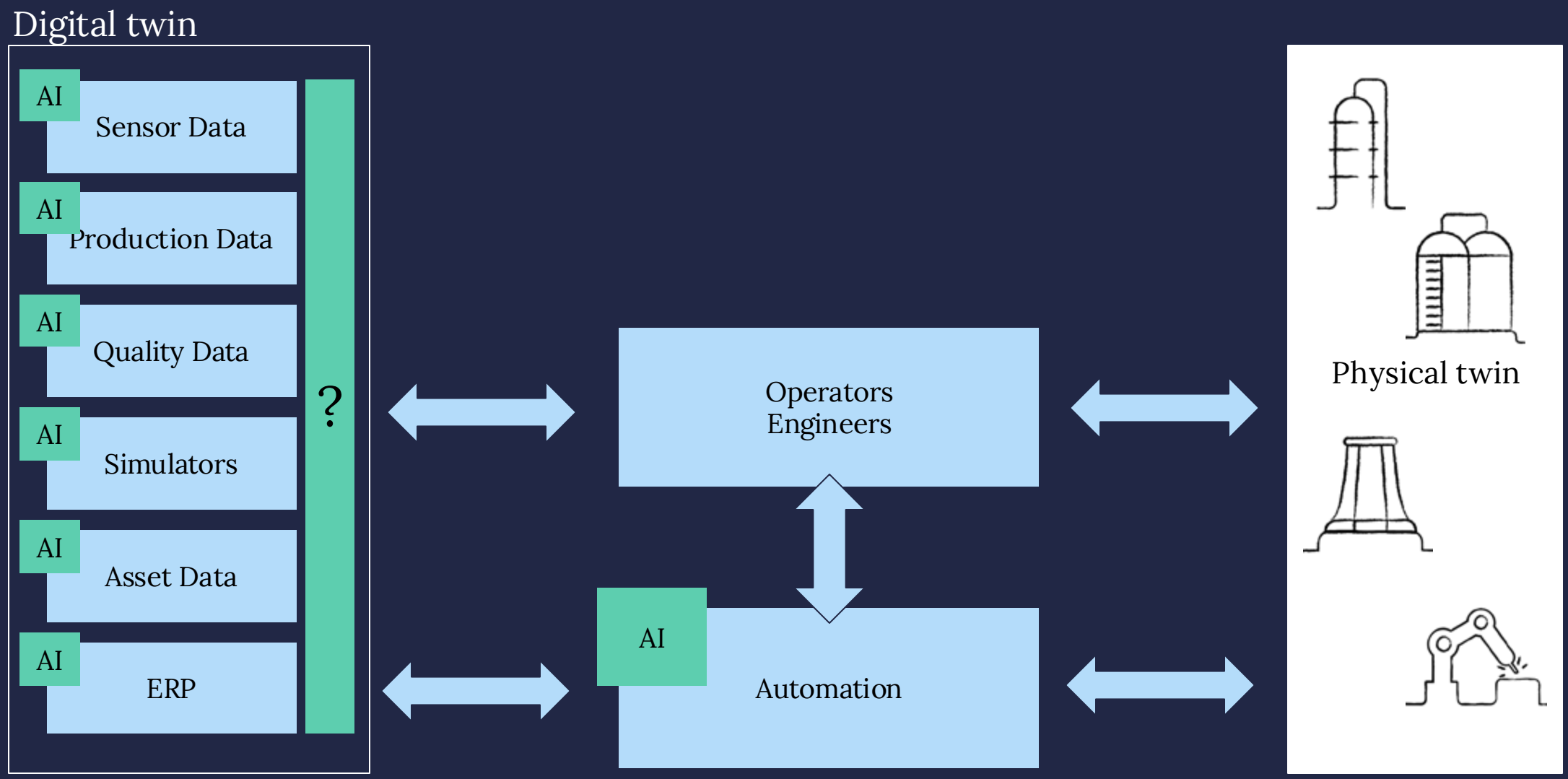
(In a galaxy far, far away)

Autonomous Operator

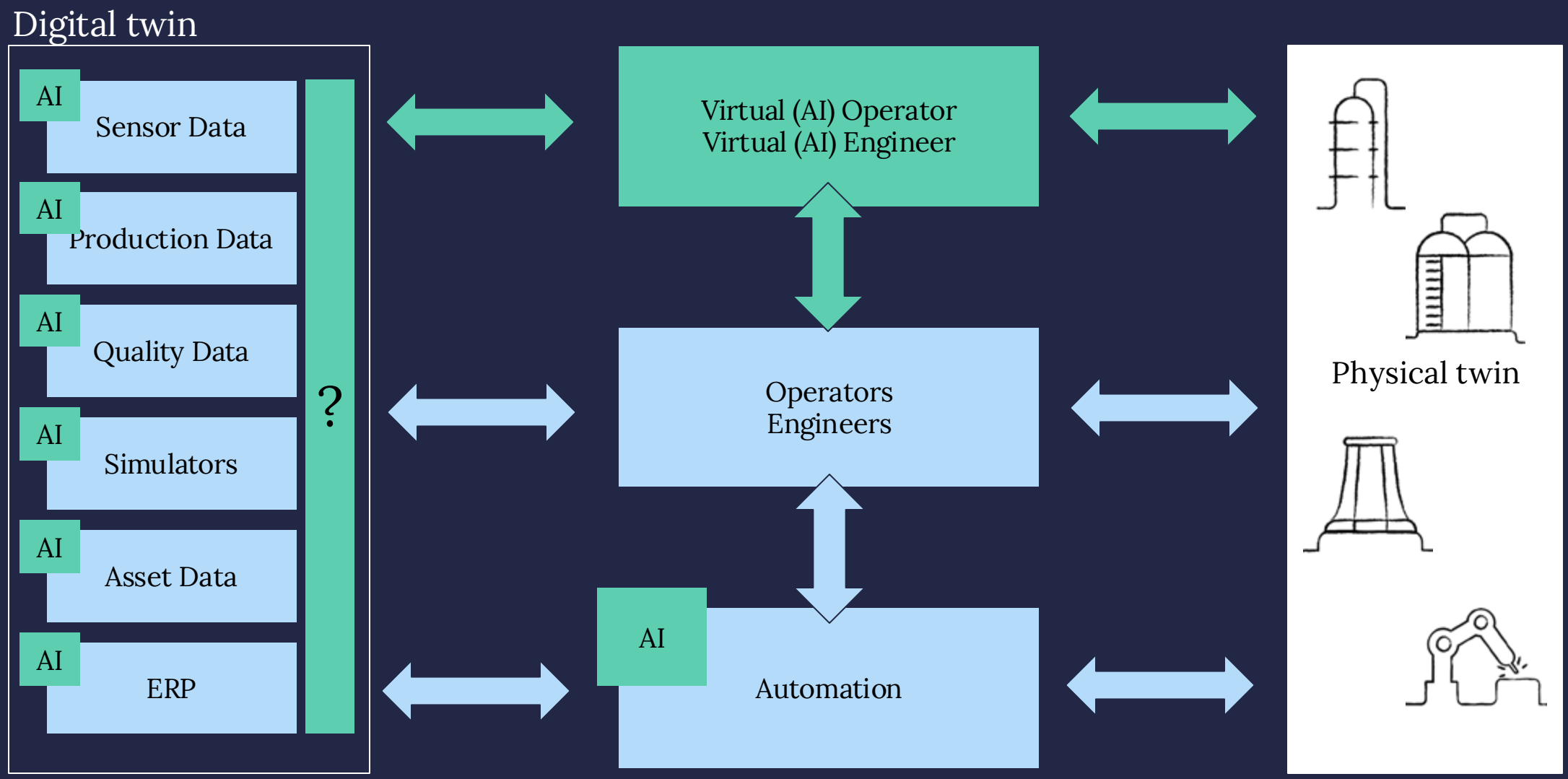
Goal: AI directly controls Plant

Needs: Complete rethink of plant control & safety philosophy

Roadmap towards the Virtual Operator



Roadmap towards the Virtual Operator



Use Case : Decision AI

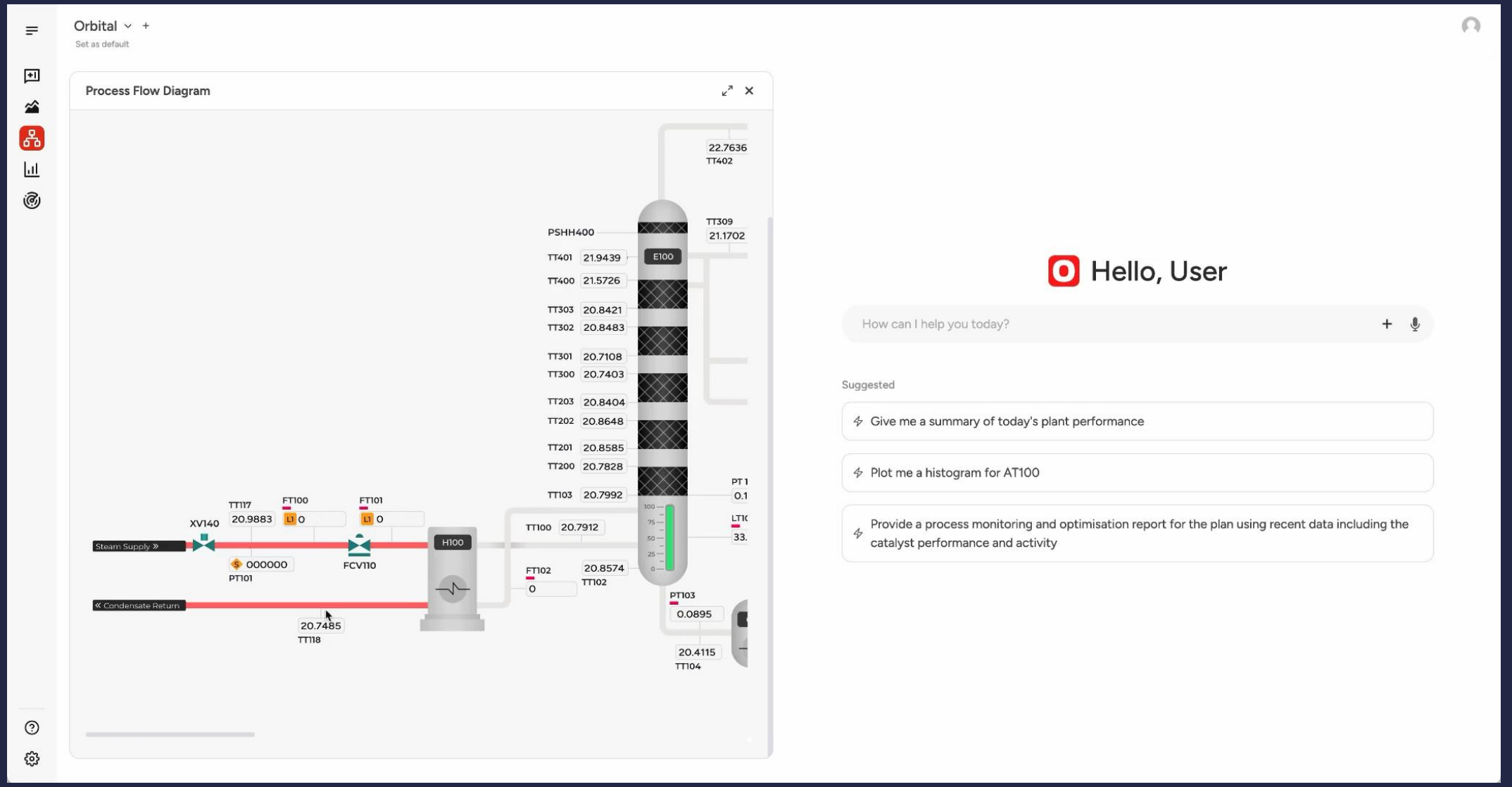
Via: TWINTHREAD

Use Case : Augmented Digital Twins

Via: polysense

Use Case : Virtual Operator

Via: APPLIED COMPUTING



Help we are looking for

Are you in Manufacturing IT
→ Help us define the Virtual Operator

Are you developing AI applications for Manufacturing
→ Show us where you are today

Are you struggling to align IT and OT in your digital initiatives
→ Let's talk

Thank you!

Subscribe Today!

Stay up to date on Manufacturing Digitalization

Subscribe to our blog: **ITOTinsider.com**

Or discover our trainings: **ITOT.Academy**