ptc

DIGITAL TRANSFORMS PHYSICAL

PROCESSI E TECNOLOGIE PER UNA VERA FABBRICA SMART: L'IMPORTANZA DI UN DIGITAL THREAD

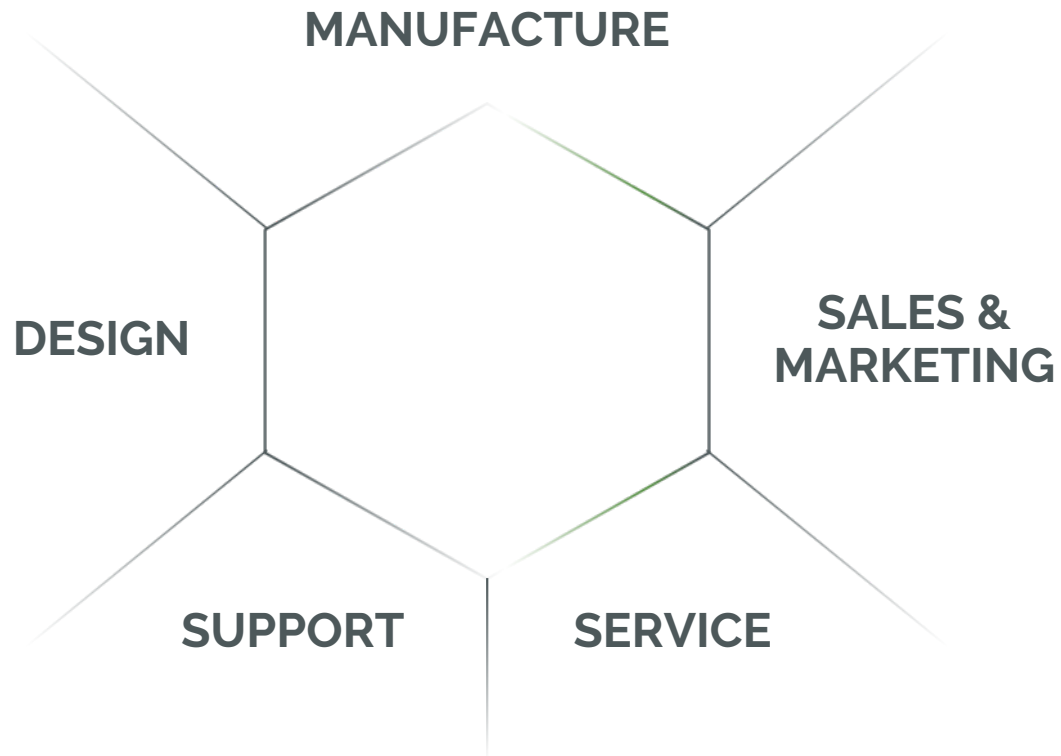**Davide De Cesaris**

Presales Director – Southern Europe, India & EGeos

December 2021

INVESTMENTS ARE BEING MADE IN OPTIMIZING INDIVIDUAL FUNCTIONS

MANUFACTURE

DESIGN
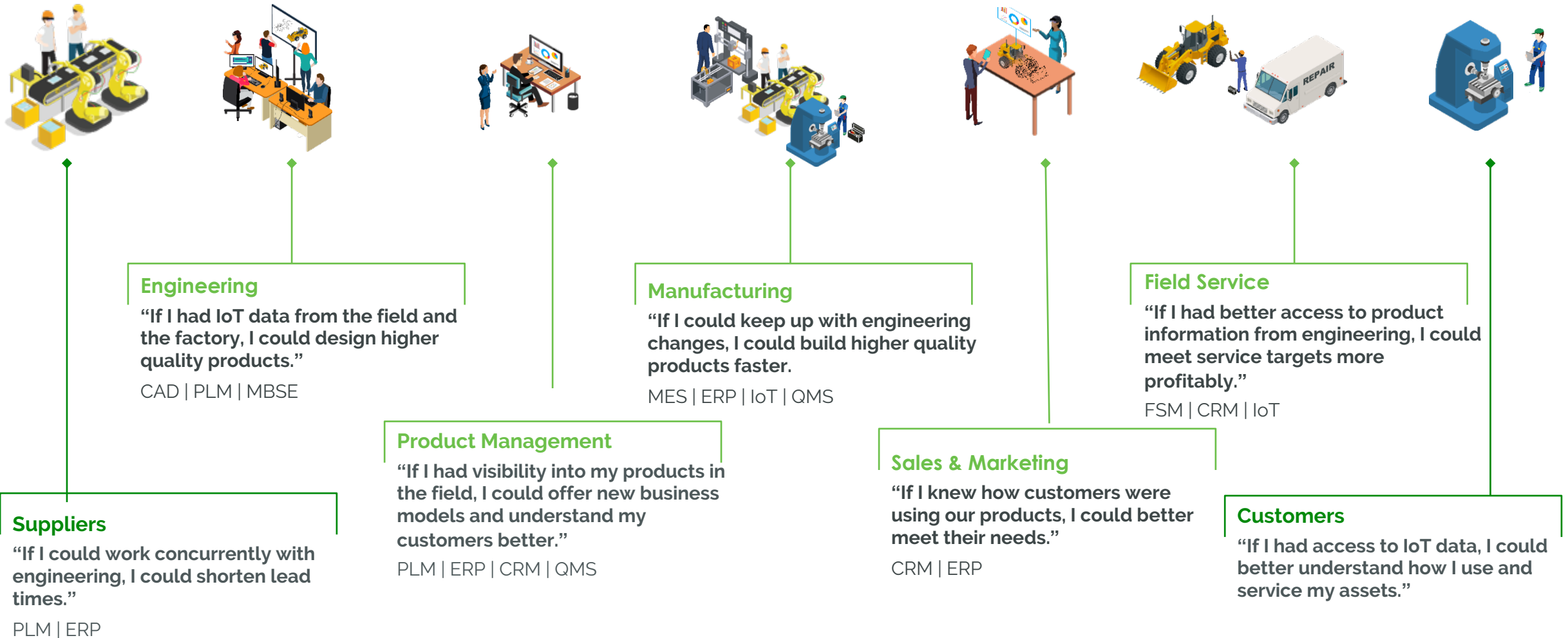
SALES & MARKETING

SUPPORT

SERVICE

2/3rds

of silo'd initiatives fail to show ROI*

- Value lost at intersections of silos where collaboration takes place

- Valuable data and insights lost

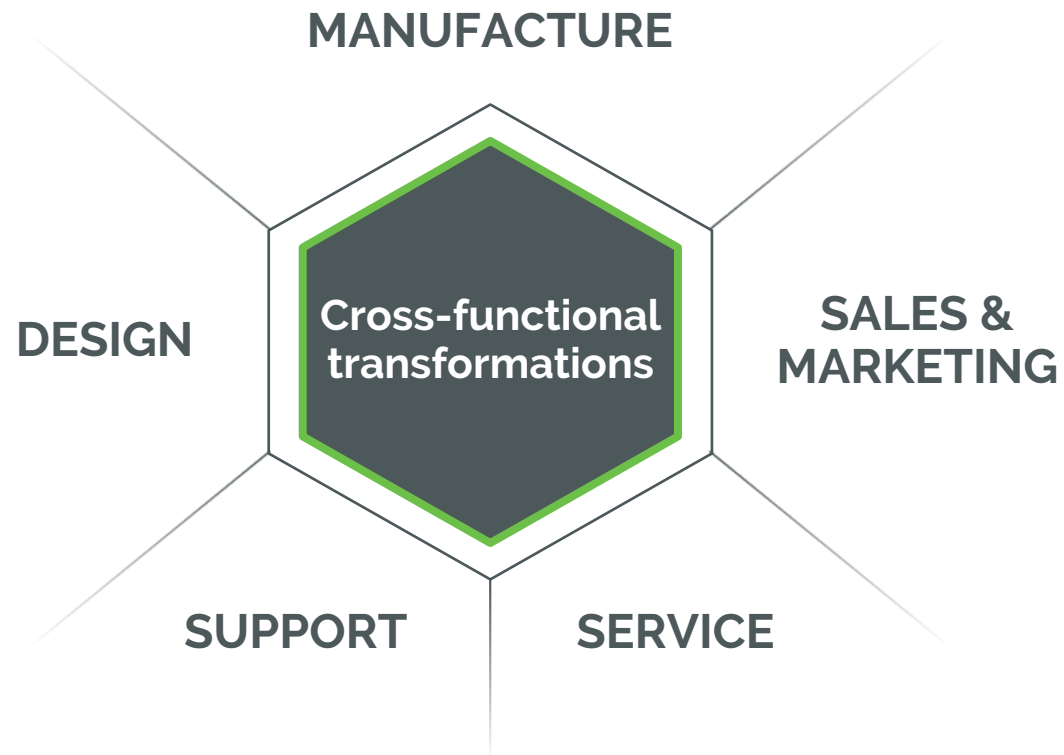*McKinsey, Transform the Whole Business, Not Just the Parts

SILOS LIMIT COLLABORATION & INNOVATION

Every domain creates valuable data

Engineering

"If I had IoT data from the field and the factory, I could design higher quality products."

CAD | PLM | MBSE

Manufacturing

"If I could keep up with engineering changes, I could build higher quality products faster.

MES | ERP | IoT | QMS

Field Service

"If I had better access to product information from engineering, I could meet service targets more profitably."

FSM | CRM | IoT

Product Management

"If I had visibility into my products in the field, I could offer new business models and understand my customers better."

PLM | ERP | CRM | QMS

Sales & Marketing

"If I knew how customers were using our products, I could better meet their needs."

CRM | ERP

Suppliers

"If I could work concurrently with engineering, I could shorten lead times."

PLM | ERP

Customers

"If I had access to IoT data, I could better understand how I use and service my assets."

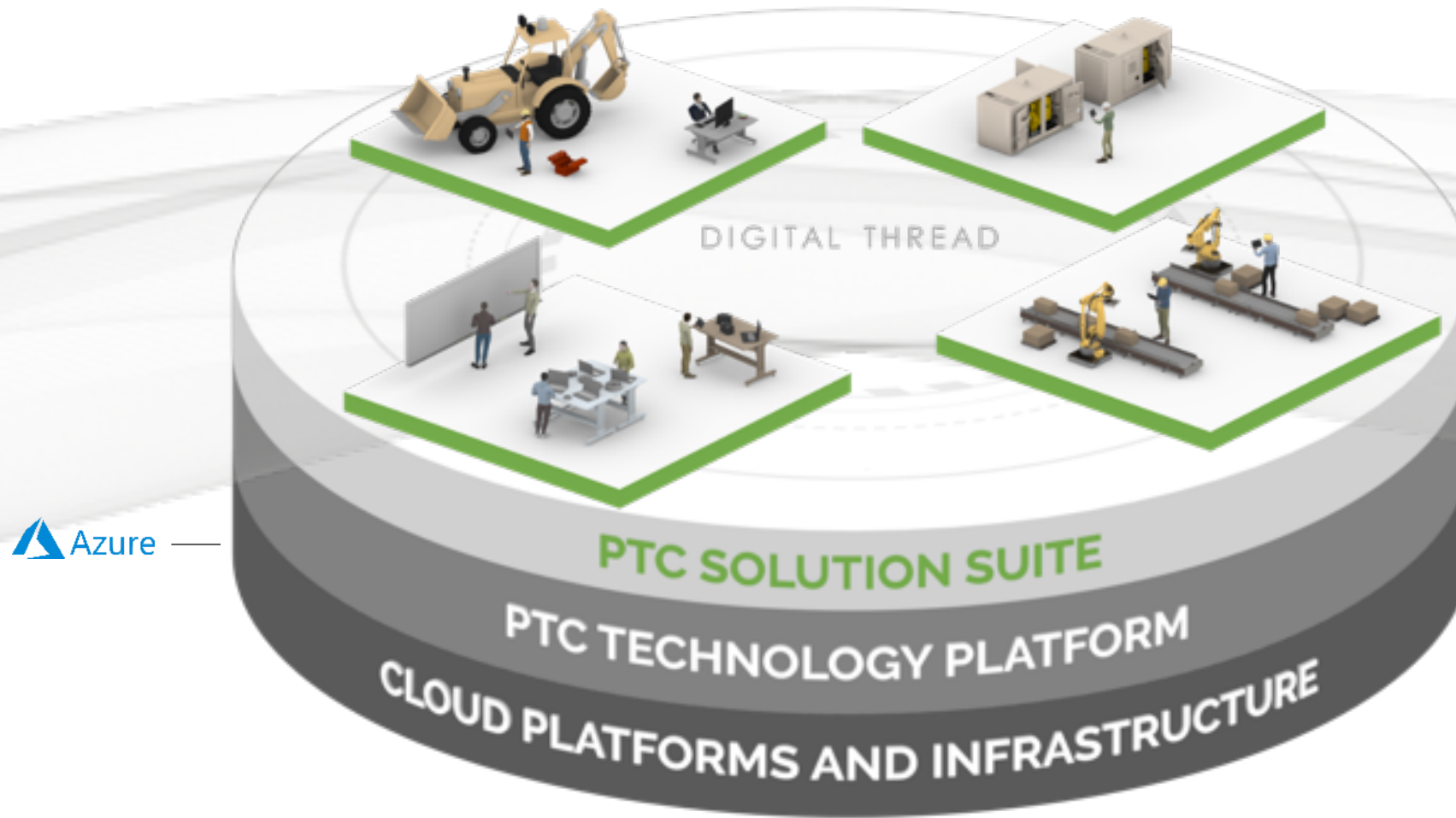**But users struggle to access data they need from other departments**

PLACES

A DIGITAL THREAD creates a closed-loop between the physical and digital worlds to optimize products, people, processes, and places

DIGITAL TRANSFORMS PHYSICAL ACROSS THE INDUSTRIAL ENTERPRISE

Service Optimization

Customer Operations

DIGITAL THREAD

Engineering Excellence

Manufacturing Efficiency
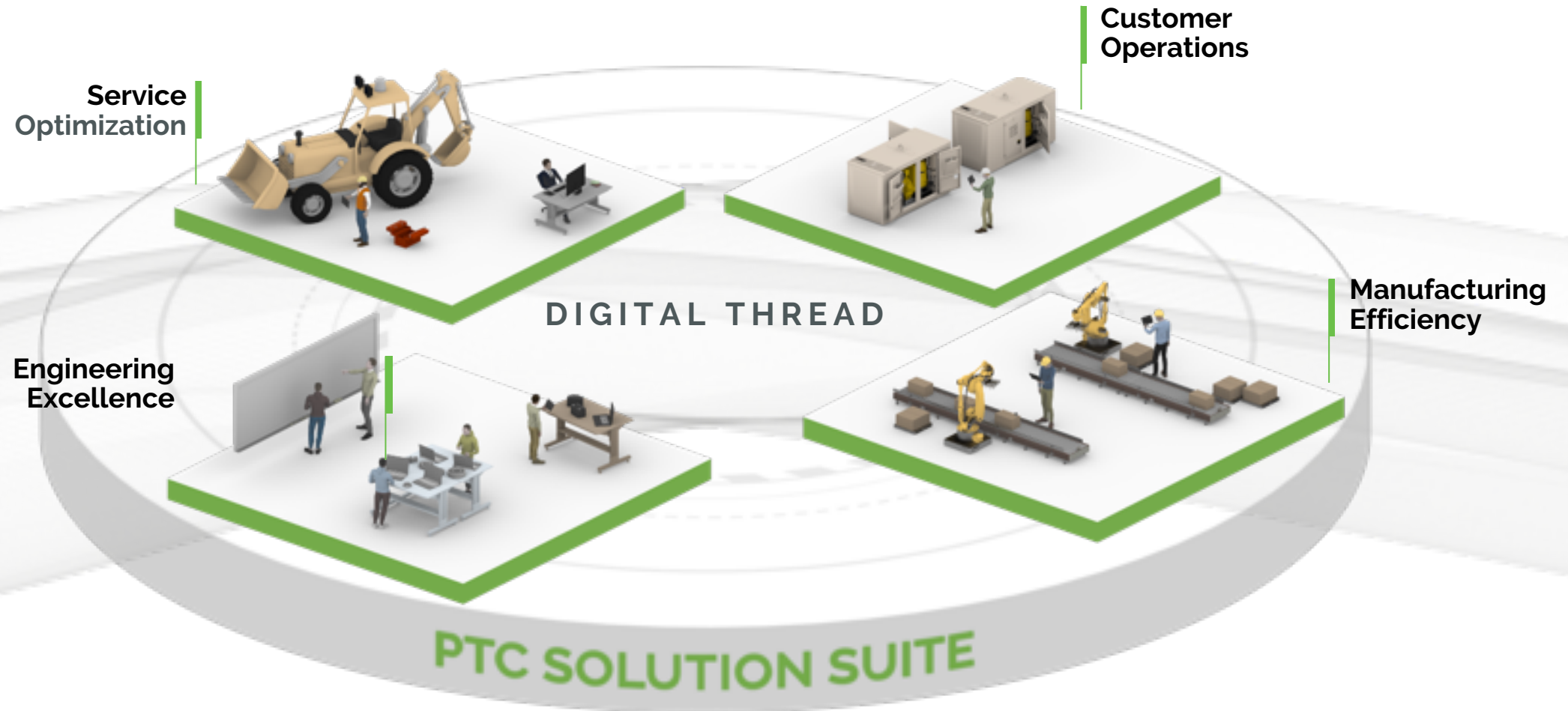
PTC SOLUTION SUITE

PTC'S DIGITAL TRANSFORMATION SOLUTION SUITE

HOW DIGITAL TRANSFORMS PHYSICAL

DIGITAL
Defines
PHYSICAL

DIGITAL
Manages
PHYSICAL

DIGITAL
Connects
PHYSICAL

DIGITAL
Augments
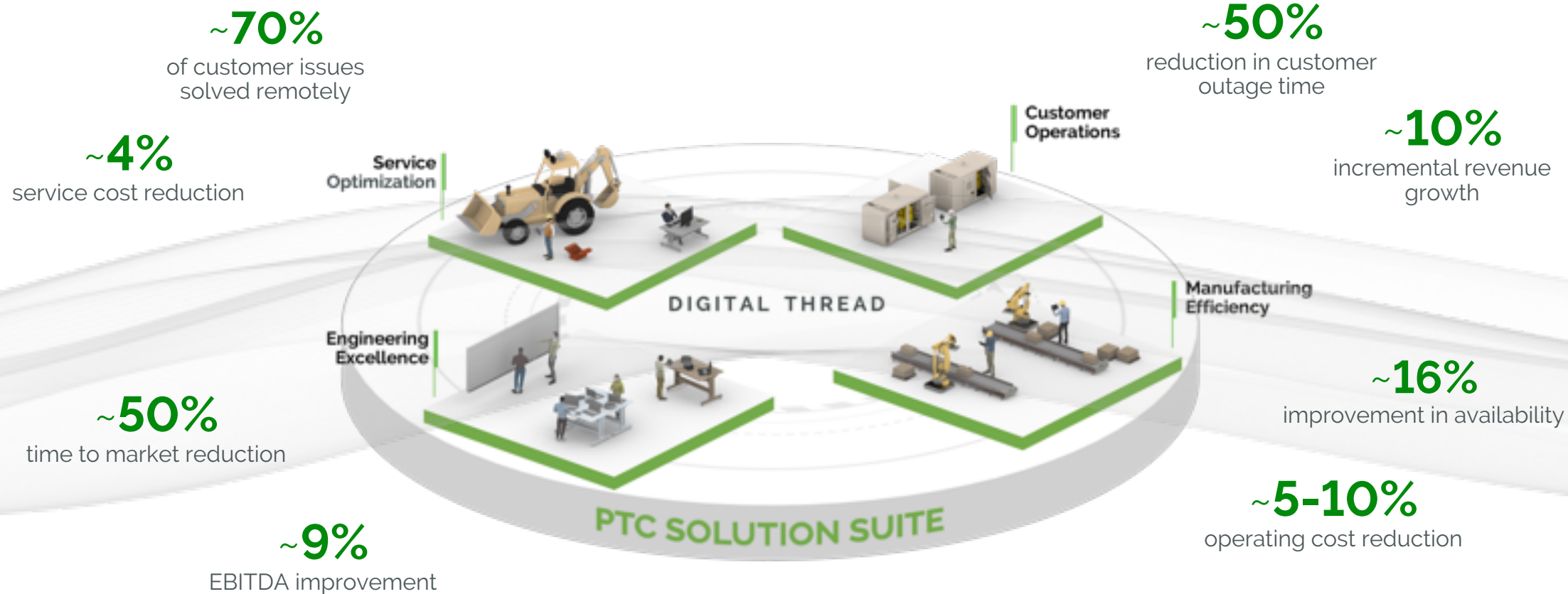PHYSICAL

DIGITAL THREAD

CAD

PLM

IIoT

AR

SaaS

DIGITAL
Disrupts
PHYSICAL

OPPORTUNITIES ENABLED BY THE DIGITAL THREAD

Concept & Portfolio Management | Design/ Systems Engineering | Supplier Collaboration | Simulation/ Virtual Prototyping | Manufacturing Engineering | Production & Quality | Sales & Marketing | In-use Telemetry | Maintain & Service | Retire

DIGITAL FOUNDATION

Digital Performance Management | Asset Monitoring & Utilization | Remote Monitoring | Model Based Definition | PLM Foundation

CONCURRENT MANUFACTURING

PAPERLESS SHOP FLOOR

Digital & Augmented Work Instructions | Connected Work Cell

ENTERPRISE CHANGE MANAGEMENT

CLOSED LOOP QUALITY

PRODUCT INNOVATION

Data-Driven Design | Connected Revenue Models | Products as a Service

SERVICE OPTIMIZATION

Customer Self-Service | Remote Service | Field Technician Efficiency

TO DELIVER FINANCIAL AND OPERATIONAL VALUE

~**70%**
of customer issues solved remotely

~**4%**
service cost reduction

~**50%**
time to market reduction

~**9%**
EBITDA improvement

~**50%**
reduction in customer outage time

~**10%**
incremental revenue growth

~**16%**
improvement in availability

~**5-10%**
operating cost reduction

Service Optimization

Customer Operations

DIGITAL THREAD

Engineering Excellence

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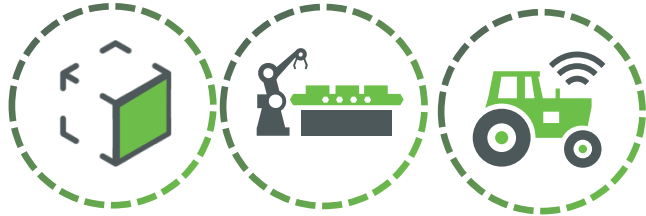
PTC SOLUTION SUITE

DIGITAL RELATES PHYSICAL

The digital thread enables data to be reused across the value chain with greater consistency between departments, from its origins in engineering through its practical application in manufacturing and service.
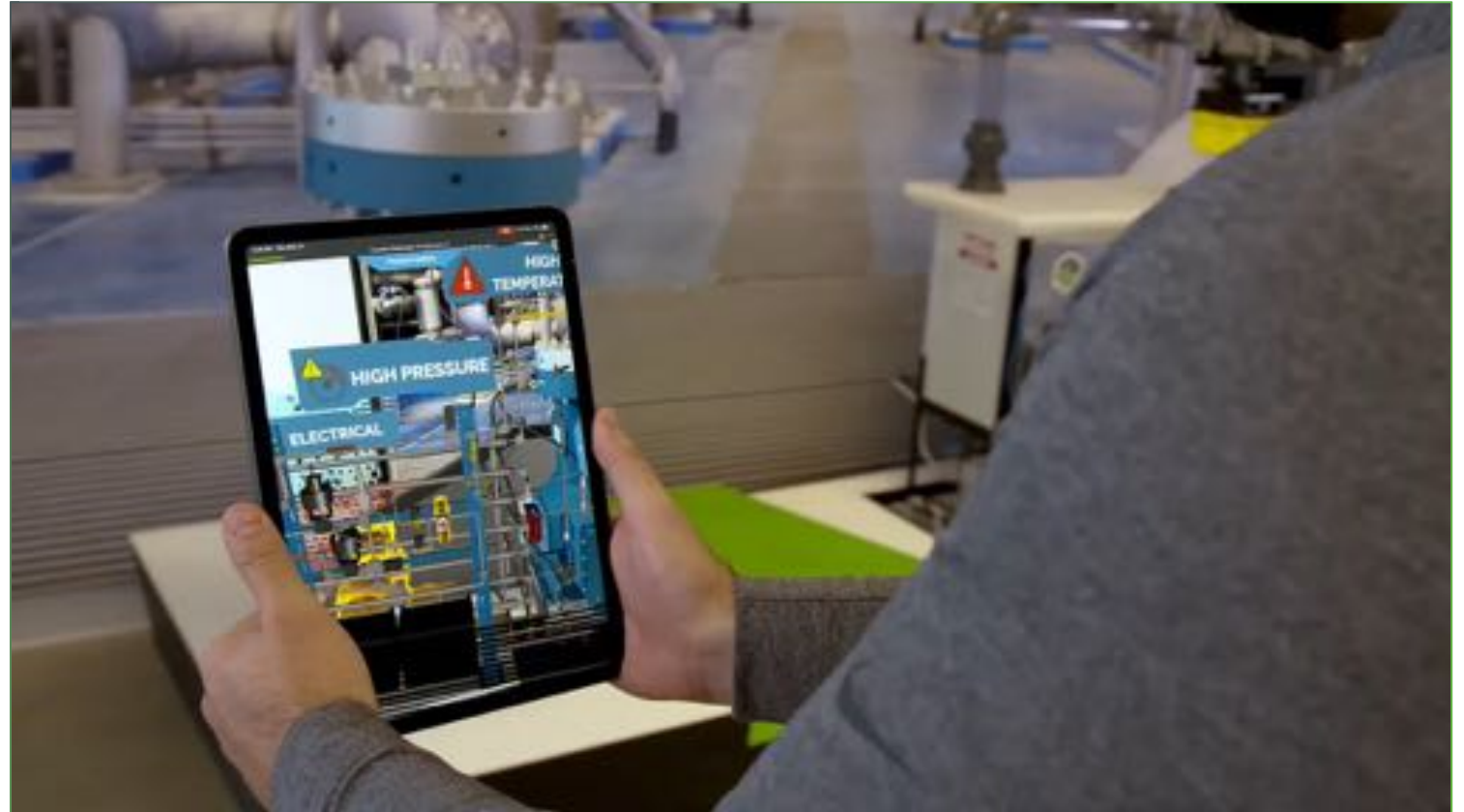
Digital Thread in Service Parts Catalog

JOURNEY TO UNIFIED FLOW OF PRODUCT & PROCESS DATA

1) Organize
Build a Digital Foundation

- **Organize data** in functional silos and enterprise systems to create visibility
- **Modernize product development processes**
- **Create governance** and traceability
- **Connect assets** in the factory & the field
- **Build edge & cloud infrastructure**

Opportunities:
- Digital Performance Management
- Asset Monitoring & Utilization
- Remote Monitoring
- Engineering Change Management
- Model Based Definition

2) Orchestrate
Unify & Share Information

- **Selective contextualizing** of product information for quick time to value
- **Sharing across systems**, functions creating connectivity in product information
- **Enabling collaboration** across disciplines, divisions, and with external partners

Opportunities:
- Collaborative Change Management
- Paperless Shop Floor
- Field Technician Efficiency
- Remote Service
- Customer Self-Service

3) Unlock Opportunities
Capitalize on Product Usage Data

- **Closed-loop feedback** to drive continuous improvement with contextualized data
- **Connected biz models** to build new revenue streams
- **Digital Twin** to help simulate, optimize products & processes

Opportunities:
- Closed Loop Quality
- Data Driven Design
- Connected Revenue Models
- Products as a Service
- Consumables