

# O in Action

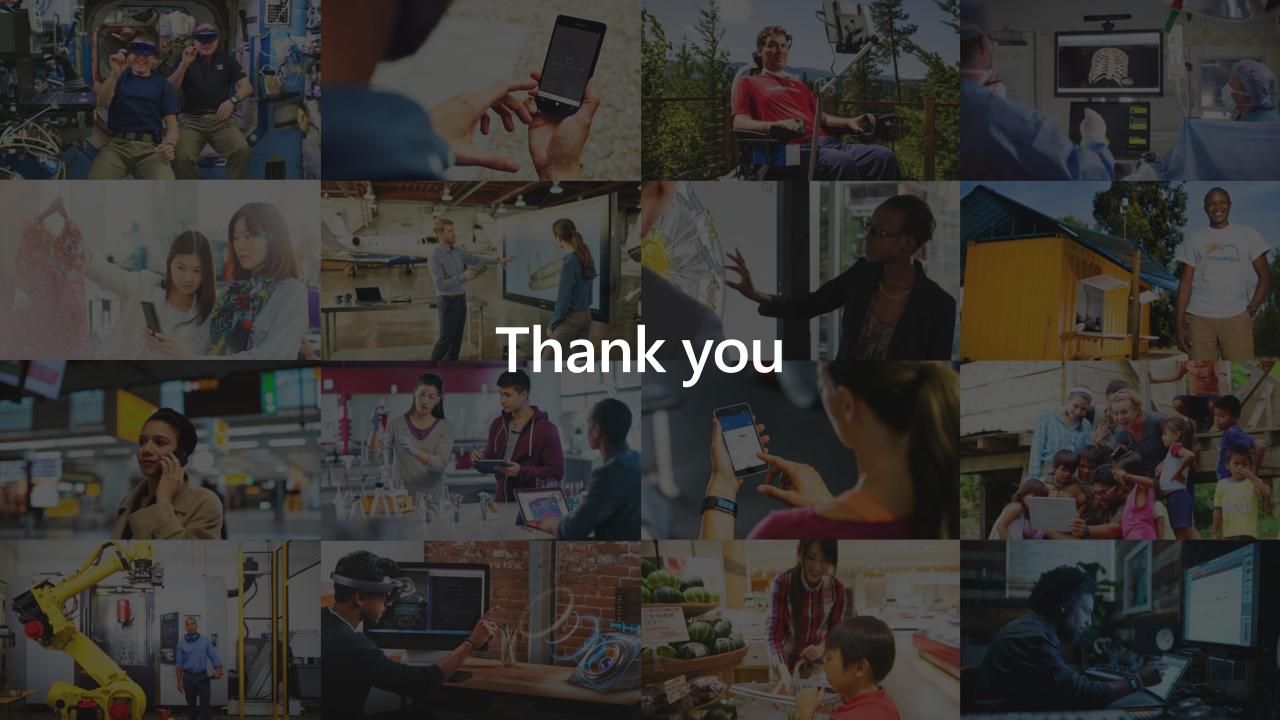
#IoTinActionMS



# IoT Continuum: Evolving Business

Michael Kuptz
GM America Device Experiences, IoT
Microsoft





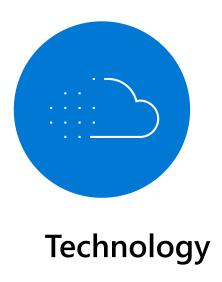
## IoT in Action, Santa Clara, October 10—Event Agenda

Partner-Customer Matchmaking & Sponsored Partner Solution Showcase	All day
Executive Keynote	9:45–10:30am
Unlocking IoT's Potential	10:30–11:30am
Business Transformation In Action	11:30pm–12:15am
Lunch Networking Break	12:15–1:15pm
Architecting the Intelligent Edge to Create Scalable Repeatable Solutions	1:15–2:00pm
Partner Case Study: Bosch	2:00–2:30pm
Afternoon Networking Break	2:30–3:00pm
Evolving IoT with AI, Mixed Realty and Automation	3:00–3:45pm
Developing an IoT Security Practice for Durable Innovation	3:45–4:15pm
Activating Microsoft Resources & Programs to Accelerate Time to Market and Co-sell	4:15–4:45pm

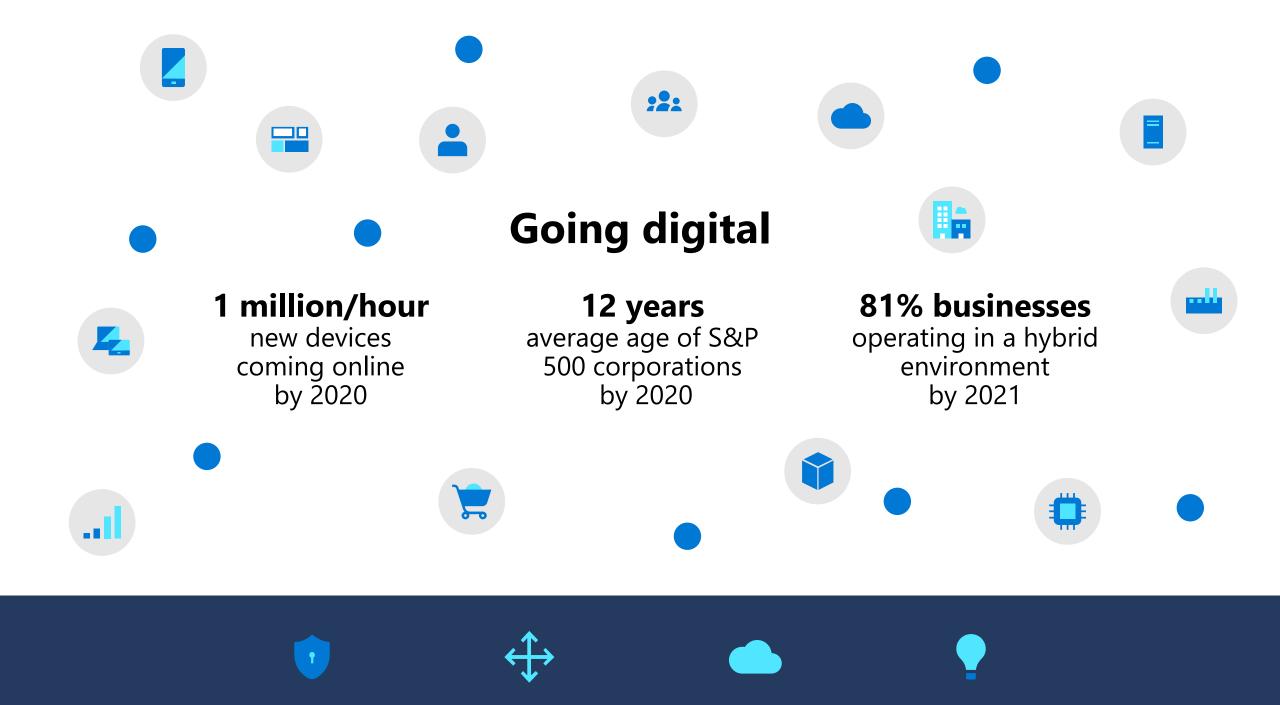
## Our Goal











## **Fueling opportunities**



\$267 billion

Predicted USD spend on IoT by manufacturers by 2020<sup>1</sup>

Boston Consulting Group, 2017



+\$100 million

Average increase operating income among the more digitally transformed enterprises<sup>2</sup>



94%

Percentage of businesses projected to be using IoT by the end of 2021<sup>3</sup>

Keystone Strategy, 2018

Hypothesis, 2019



80B

Connected "things" by 2025 generating 180ZB of data



\$130B

New monetization avenues due to IoT-related services



80%

Companies that increased revenue as a result of IoT implementation



\$100M

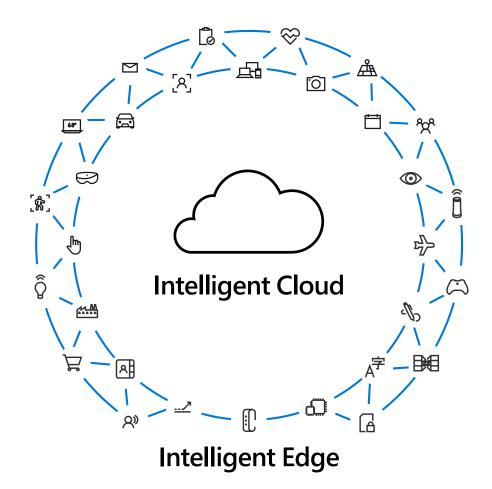
Average increase in operating income (average 8%) among the most digitally transformed enterprises

"By 2020, 30 percent of G2000 companies will have allocated capital budget equal to at least 10 percent of revenue to fuel their digital strategies.

This shift toward capital funding is an important one as business executives come to recognize digital transformation as a long-term investment.

This commitment to funding digital transformation will continue to drive spending well into the next decade."

—Shawn Fitzgerald: IDC, Research Director, Worldwide Digital Transformation Strategies



"Building applications for multi-device, multi-sense experiences is going to require a very different form of computing architecture.

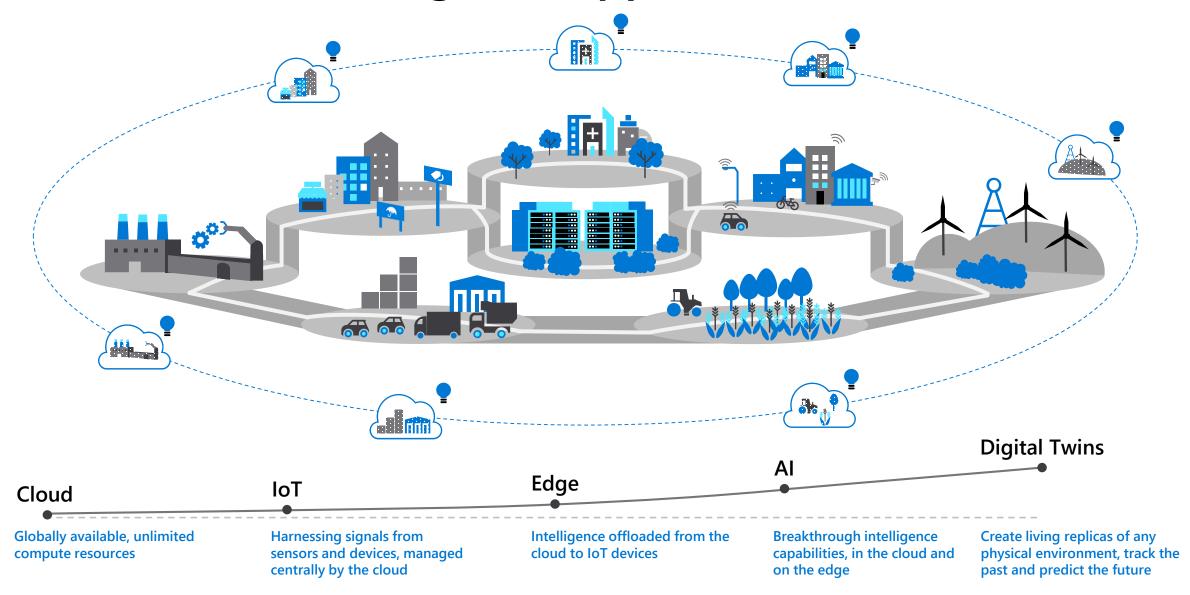
That's the motivation for bringing together all of our systems and people.

Silicon in the edge to the silicon in the cloud architected as one workload that is distributed—that's the challenge in front of us."

—Satya Nadella, Q&A Session, April 2018

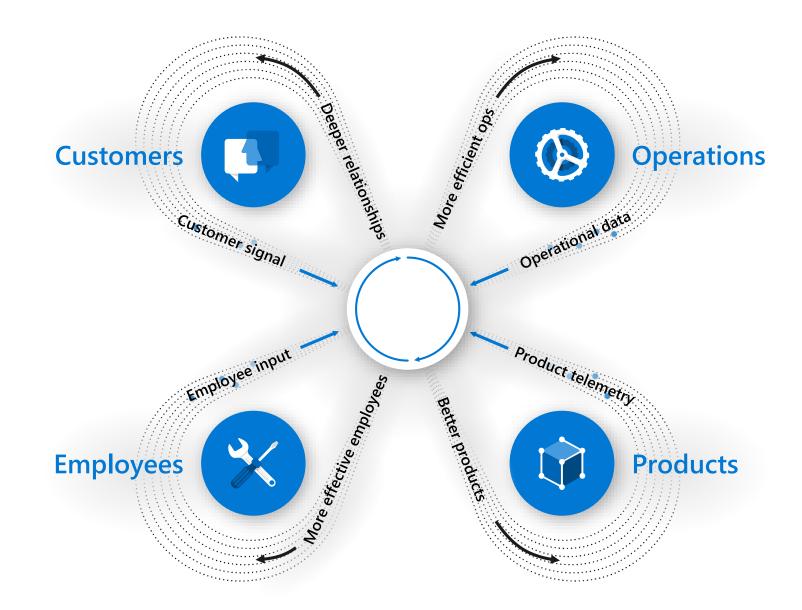


## Innovations enabling new opportunities



# Catalytic innovations enable a Digital Feedback Loop

- 1 Data: Capture digital signal across business
- 2 Insight: Connect and synthesize data
- 3 Action: Improve business outcomes



## Three emerging patterns of digital transformation



Build digital capabilities

Build digital businesses

#### **Modernization**

**Foundation** for Digital Transformation

#### Common initiatives:

- Digital workplaces
- Digital customer experiences
- Transforming the infrastructure
- Application modernization

#### **Industry & Horizontal**

Solution-centric opportunities

#### **Industry Solution** examples:

 Predictive Maintenance, Customer Insights, Citizen Services

#### **Horizontal Solution** examples:

 Digital Marketing, Employee Self-Service, Smart Buildings, Security & Surveillance

#### **Transformational**

Reimagine their businesses

**CXO** sponsorship

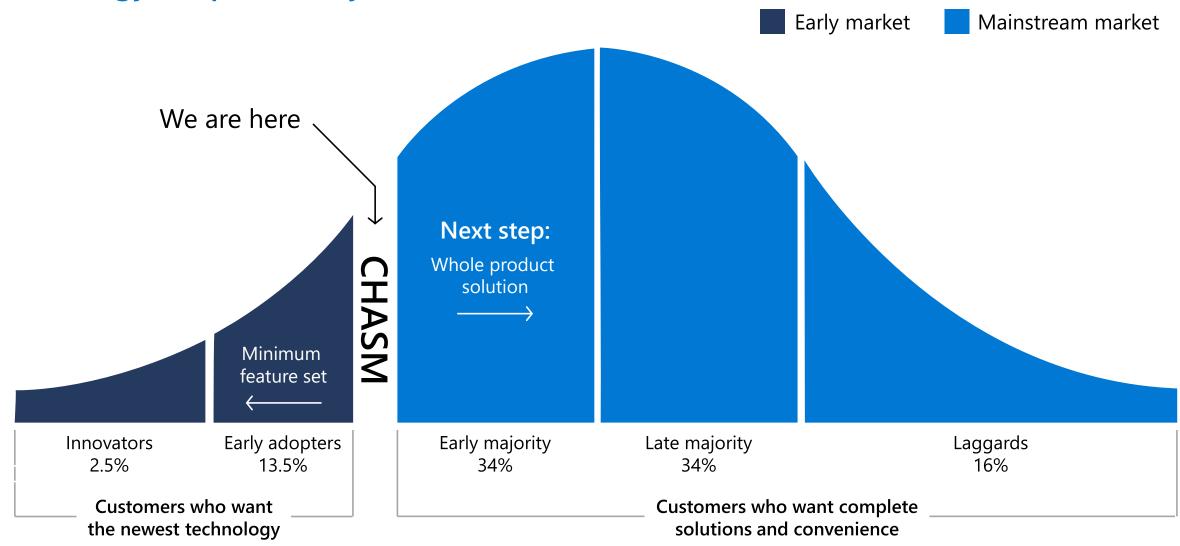
Digital Maturity Model assessment

Comprehensive program of change

Evolves into new commercial business models

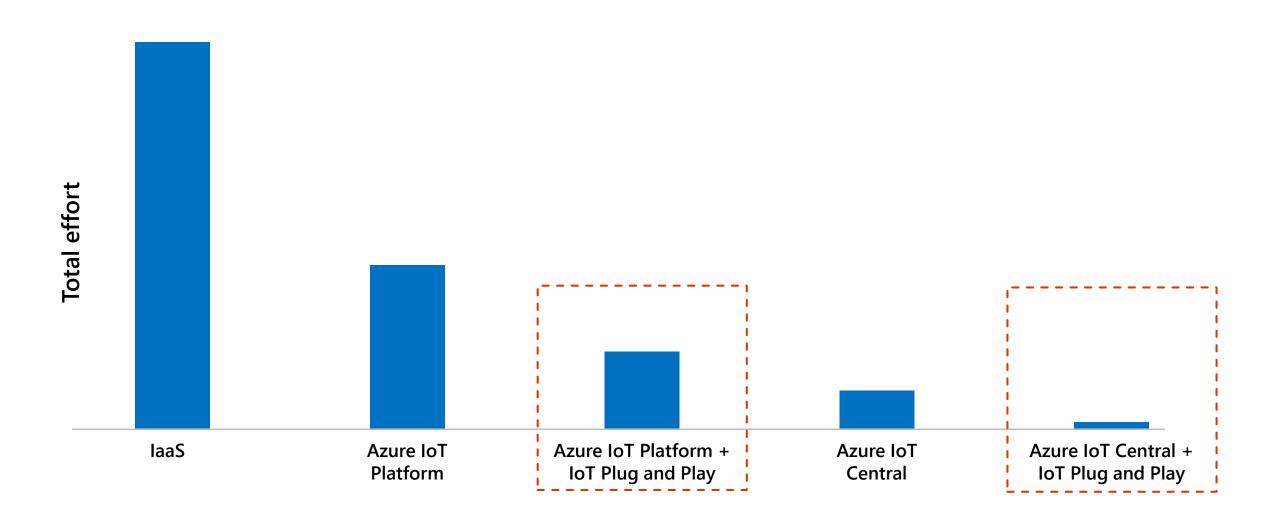
## Preparing for mainstream market customer needs in IoT

**Technology adoption lifecycle** 



## **Accelerating IoT**

The total effort to build and operate an IoT Solution is rapidly decreasing



## IoT partner value chain

IoT presents a unique opportunity to bring together multi-disciplinary partners



#### **End points**

Silicon/Chip Manufacturers

Gateway Manufacturers

M2M Modules

Device Manufacturers

**Traditional OEMs** 

**Device SIs** 



#### Security

Software

Hardware

Regulatory experts

Privacy



#### Connectivity

Mobile Network Operators

Mobile Virtual Network Operators

Channel Development Providers

Application Enablement Platform ISVs



#### Services

Solution Architecture

Solution Integrators

**Service Providers** 

Presentation

Dashboarding

Big Data



## **Business** consultants

Consultants

Advisors

Professional Services

Industry Influencers



#### **Distributors**

Aggregators

Scale through VARs



#### Developers

ISV

In-house



#### Regulators

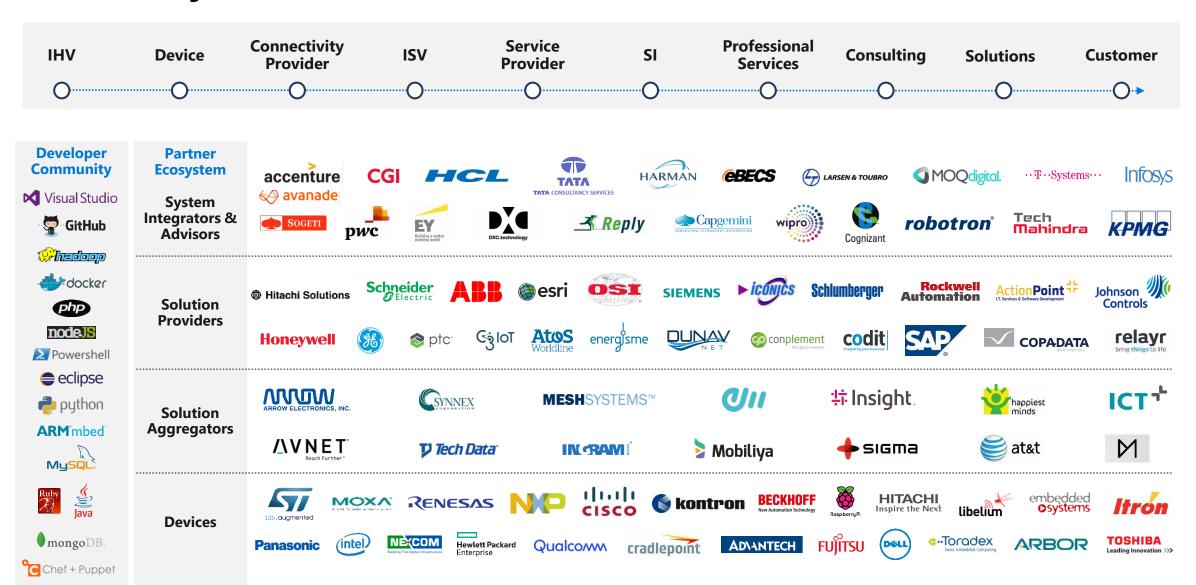
Standards organizations

**Industry Bodies** 

Accreditation organizations

**Auditors** 

## IoT ecosystem momentum





Microsoft IoT platform innovations last year

>100



Partner provided co-sell ready solutions

>1,200



Ecosystem partners

>10,000

## IoT vertical focus













#### Manufacturing

Field Service
Safety & Security
Process & Quality
Factory Automation

#### Retail

Space & Assortment
Inventory Mgmt.
Personalization

#### Healthcare

Patient Monitoring
Research
Supply Chain
Operation Efficiency

#### Energy

Oil & Gas
Utilities
Power Plants
Environment Sensors

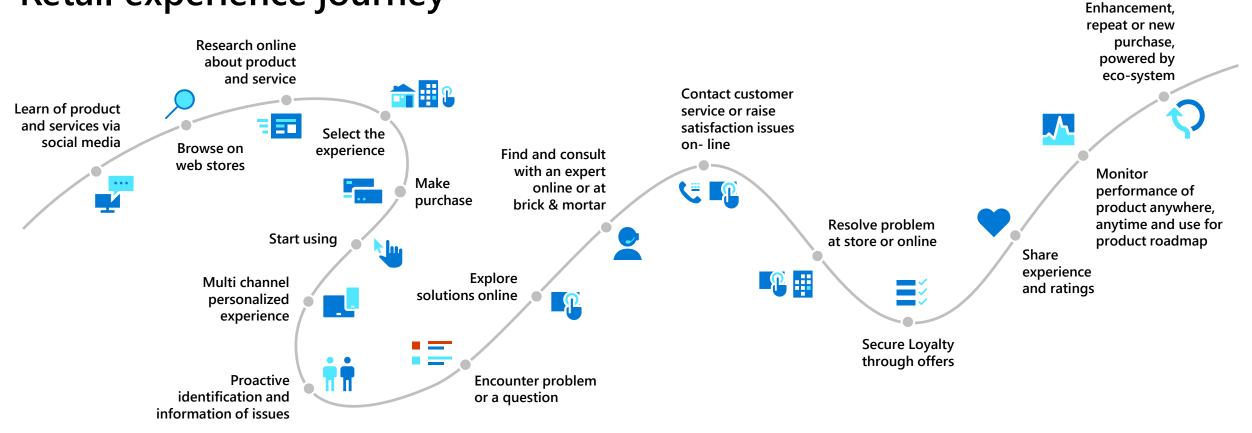
#### Smart City/ Buildings

Security & Surveillance Monitoring & Safety Energy Mgmt.

#### Agriculture

Soil Sensors
Livestock
Equipment
Supply Chain
Connectivity

## Retail experience journey



Digital hot spots

#### **Pre-purchase**

Digital presence for products and store awareness

Omni channel purchase

Multi channel distribution and interactivity

#### **Purchase**

Omni channel, multi device solution for purchase

Customer support

Arranging payment

Tracking shipment

#### Post-purchase

Social network presence and management Receiving customer service Resolving problems anywhere

Continued the experience

Developing eco-system

Product life cycle and organizations interlocks

### Patient experience journey



Digital hot spots

#### Prior to visit

Seeking healthcare information, remote triage

Choosing a physician or caregiving facility for treatment

Appointment scheduling and reminders

#### Diagnosis and treatment

Remote interactions with providers Accessing and sharing electronic health records (EHR)

Al-based provider support

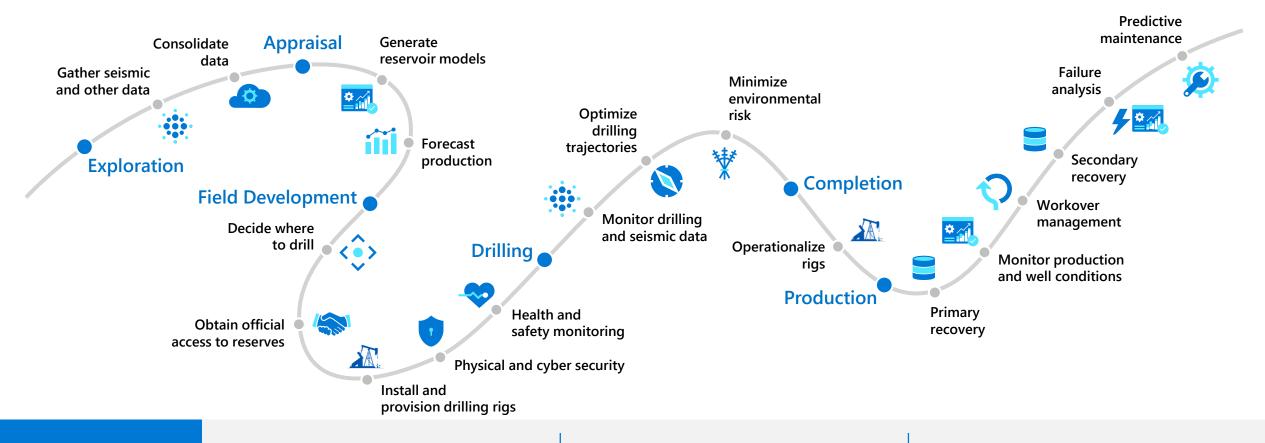
Care team collaboration

#### Follow-up care

Filling, refilling, and approving prescriptions
Remote health monitoring

Ongoing patient care and plan reminders

## Oil & Gas upstream journey



Digital hot spots

#### **Exploration**

Gather seismic and drilling data
Consolidate data in the cloud
Generate reservoir models
Identify where to drill and optimize trajectories

#### **Drilling**

Provision drilling rigs
Monitor drilling and production data
Monitor well conditions
Analyze for environmental impact
Failure analysis

#### **Production**

Predictive maintenance
Collaboration and decision making across the ecosystem
Knowledge management

























































































































































































































































































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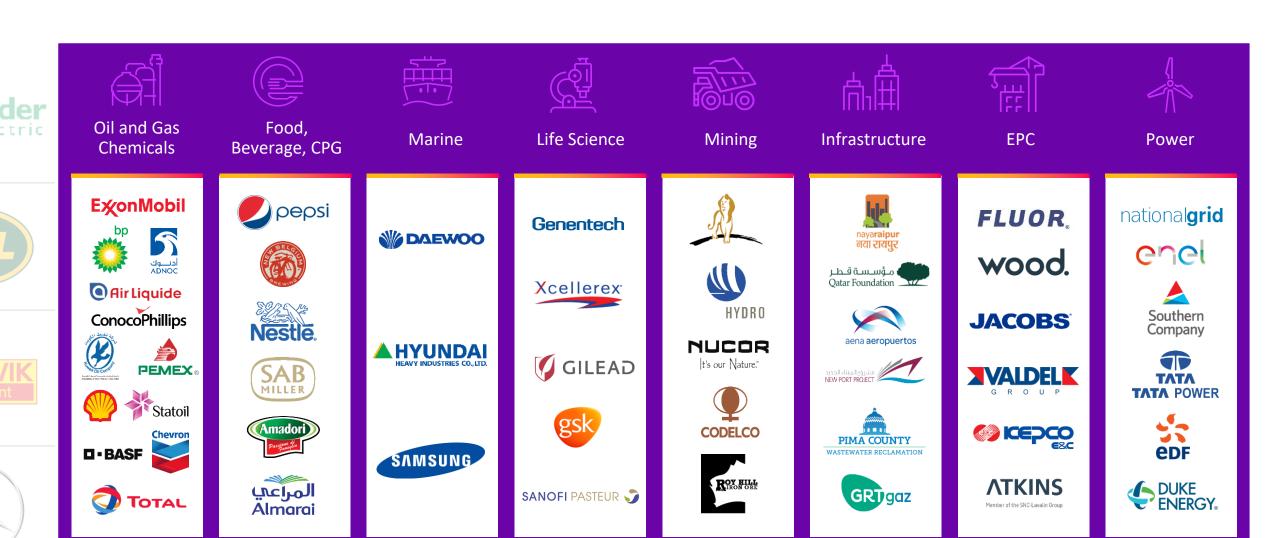








# AVEVA



SERVICES

Machachulkilaikum dar MMC

# Digital Transformation

Changing the Industry



# Digital Transformation

Changing the Industry

Challenging.













# Leading Companies Recognize

... and capitalize







↑ \$100M in Savings



**↓15%** in total installed cost



50% in Energy Savings

# Transformative Results



# ...but I'm getting ahead of myself



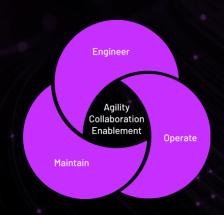
# Who is AVEVA?

**London Stock Exchange** 

4,600 Employees

Revenues >£760m

Market Cap. >£5bn



50 Years of Innovation

**Global Brands & Products** 



SimSci

AVEVA

InTouch
System Platform
PRO II
E3D

Monitor
20 billion+
industrial parameters

Deployed in 100,000+ sites

Storing and managing
12,000 TB
of information per year

Process

10 trillion+
industrial transactions per day



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AVEVA

InTouch, System Platform PRO II E<sub>3</sub>D





# Global Installed Base



### **OIL & GAS & CHEMICALS**

550+ refineries
900.000 miles of pipeline



## **FOOD, BEVERAGE & PHARMACEUTICAL**

2.600 food and beverage companies4.650 food and beverage sites



### **WATER WASTEWATER**

1.400+ water customers



### **ENGINEER, PROCURE, CONSTRUCT**

90% of the world's EPCs



### **INFRASTRUCTURE**

3.200+ customers globally



### **SHIPBUILDING**

9 of top 10 major shipyards



### **POWER & UTILITIES**

1.000 power plants
500.000+ MW of electricity monitored



### **METALS, MINING, MINERALS**

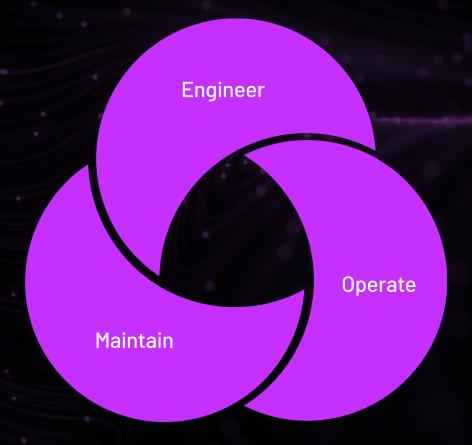
**50** mining sites



# Transforming the Industry

Capital perjects are extended by 40% risk didentified by its months engineering and execution on average

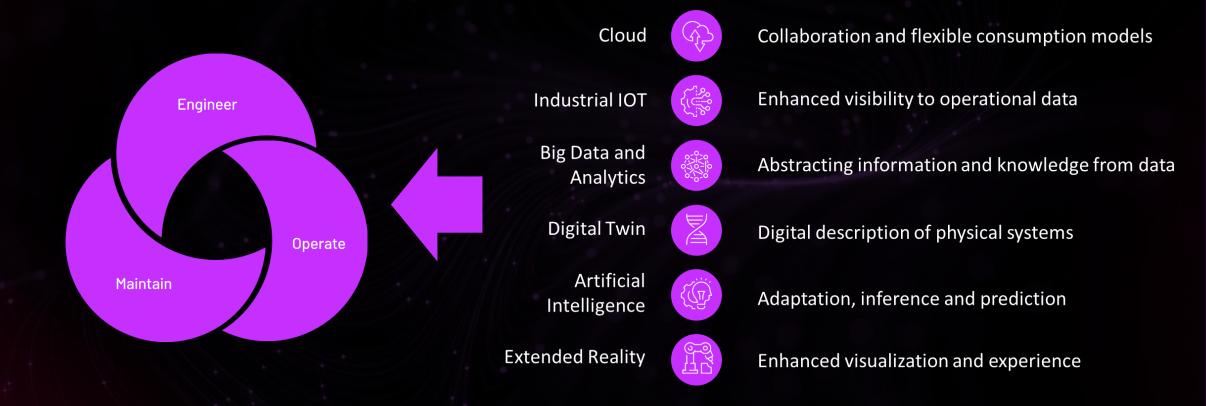
Unscheduled downtime results increase longevity and iperformance of assists while producing safes esliable environment for the workforce process industry



Peose of vargeteate the singire profitability within operating the supply chain is over constraints and regulatory \$50 binded per year



# Technology





# ...back to Digital Transformation





↑ \$100M in Savings



**↓15%** in total installed cost



50% in Energy Savings

# Transformative Results

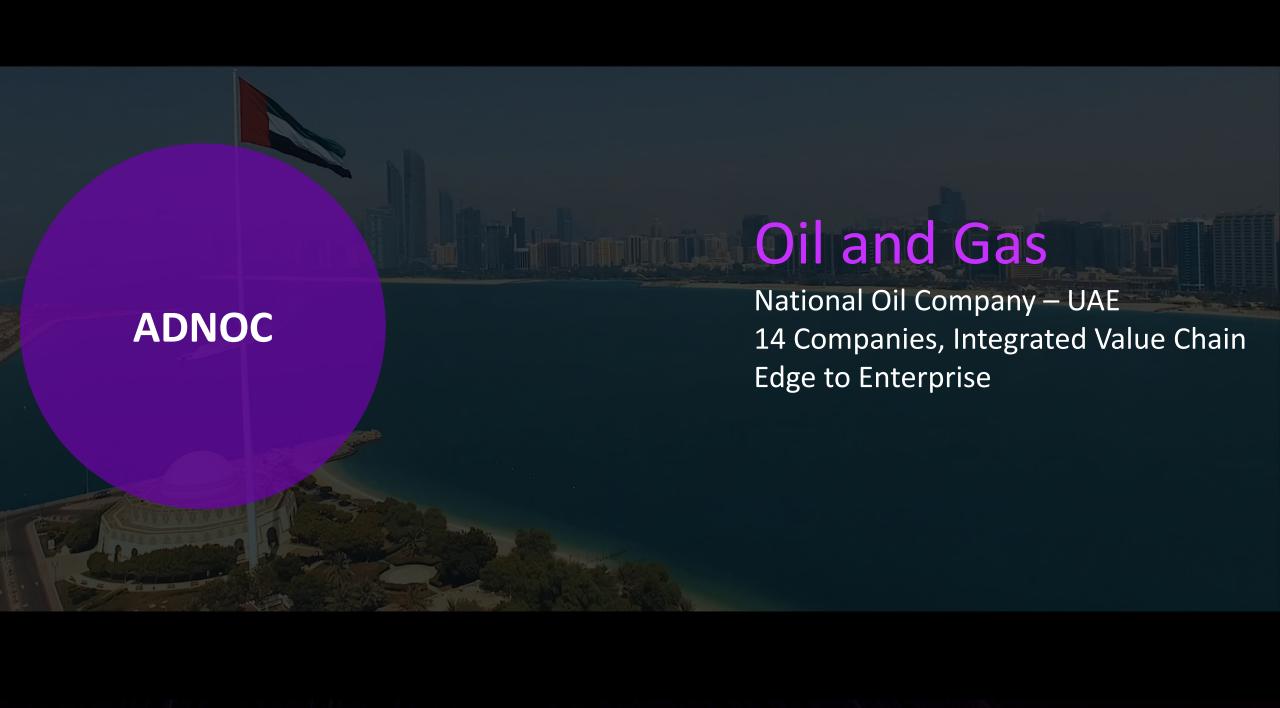






# **Energy Efficiency**

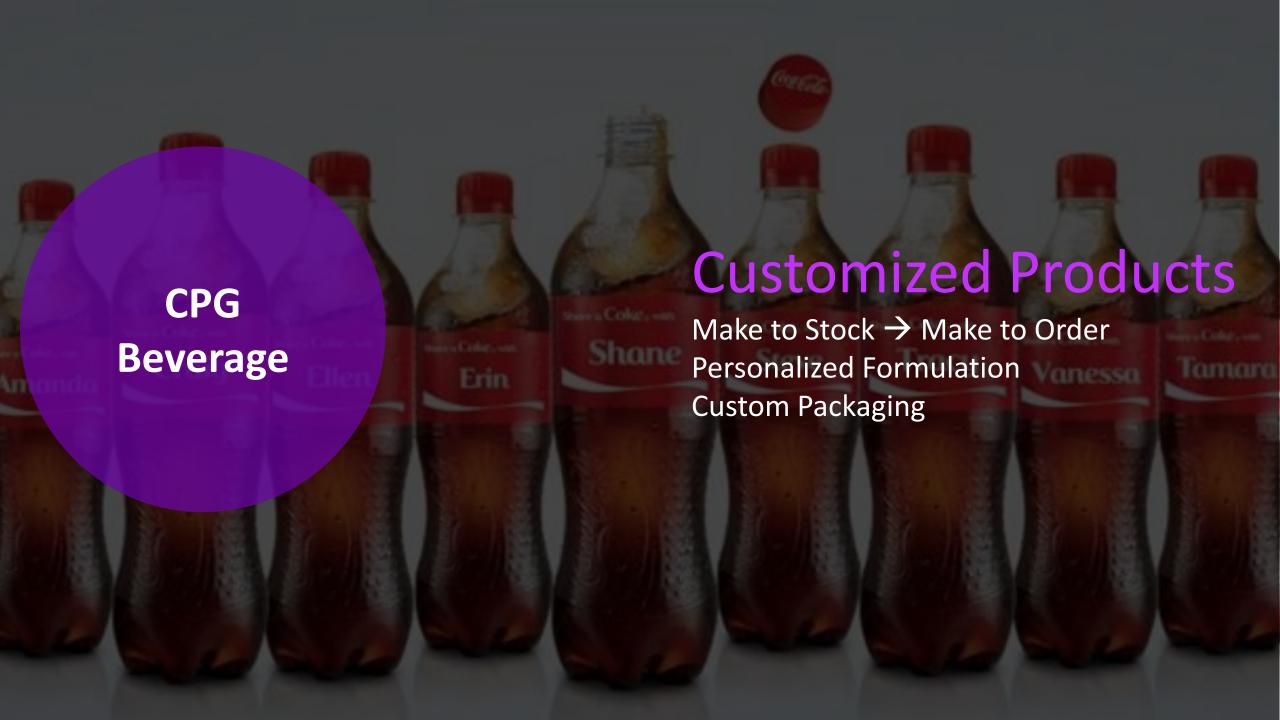
50% Less Water Reduced Electricity Improved Efficiency

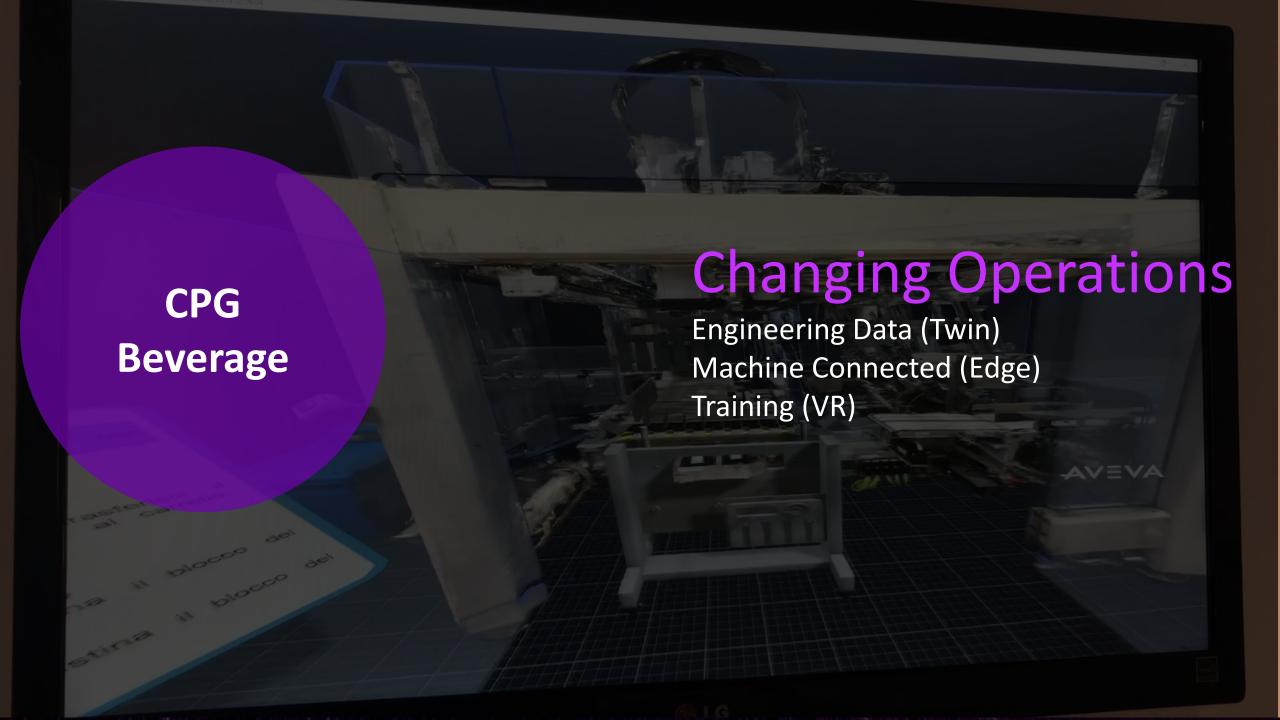


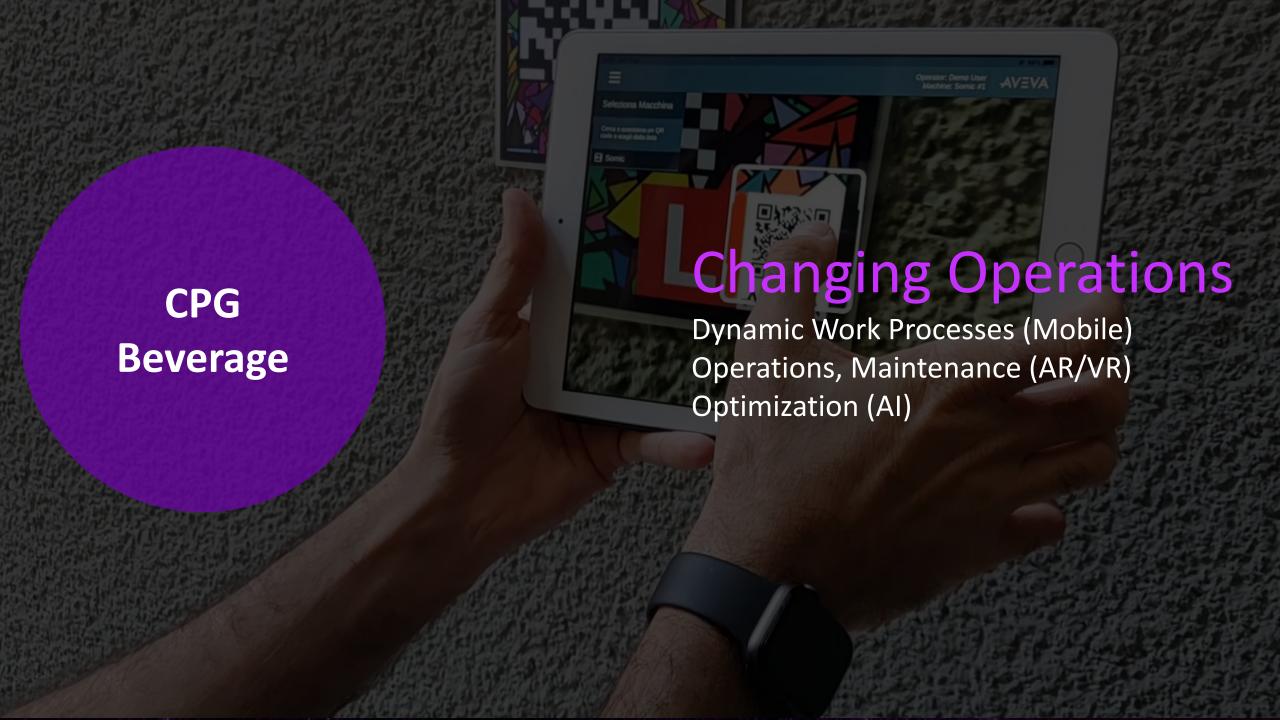
# ADNOC Results

# \$60-100M

Savings from a Single Run Integrated Production Planning







# Other Examples of Successful Transformation



Digital Twin & Value Chain Optimization



Cloud – Hyper Scale Optimization



AI - Predictive Asset Analytics



IoT – Enterprise Operations



# AVEVA

We'll take you there



So what's stopping you from making things happen?







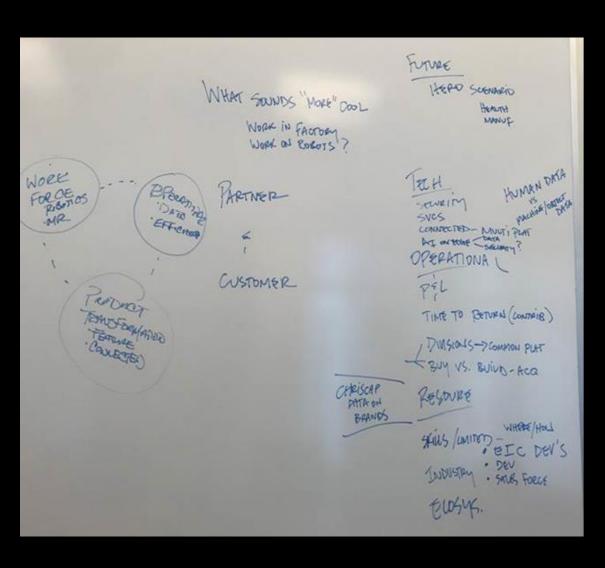












# **Pervasive Transformational Trends: Whiteboard Session**

### **Technology**

Edge to cloud—advancement across stack in industry—what's around the corner Mixed Reality

Security

Cognition and AI on edge—Data and security

Areas of investment across stack

### **Business model**

PnL (new revenue sources, cost savings, investment, pricing models)

Time to value—and the value equation

Buy vs build

Divisions—common platform (Multiple tech stacks coming together

Operations

### **Resource & culture**

Shortage of IoT dev specialist

Institutional knowledge—human knowledge to data model

Work force shifts: What sounds cooler?—work in factor or work with robots

Sales force transformation, including incentive, solution selling,

### Think/feel/do

Credibility—95% of fortune 500 betting on Azure... In IoT, SAP, PTC, betting their platforms on us Inspiration & relatability (through real examples)

Curiosity—by asking questions on above themes, get theme thinking in new way/angle not previously considered

Confidence to bet business on MSFT to accelerate

- We are a platform and partner company driving impact to partners and customer through IoT
- Stamp/mark that you can trust "Intel inside"
- Sky miles—you accrue points along the way

### **Digital feedback loop**

Layer:

- Operational efficiency is table stakes
- Workforce
- But product transformation is what accelerates you as a leader



# IoT: Continuum

Michael Kuptz

IoT Device Experiences Team Americas



