

# DIGITAL

A black and white photograph of two men in a factory setting. The man on the left is younger, with short dark hair, wearing a white shirt and a lanyard. The man on the right is older, with grey hair and glasses, wearing a dark suit jacket, a white shirt, and a tie. They are both looking down at a tablet computer held by the older man. In the background, there is industrial machinery and a conveyor belt with a large, perforated metal part. The word "DIGITAL" is overlaid in large, bright green, bold, sans-serif capital letters across the center of the image.

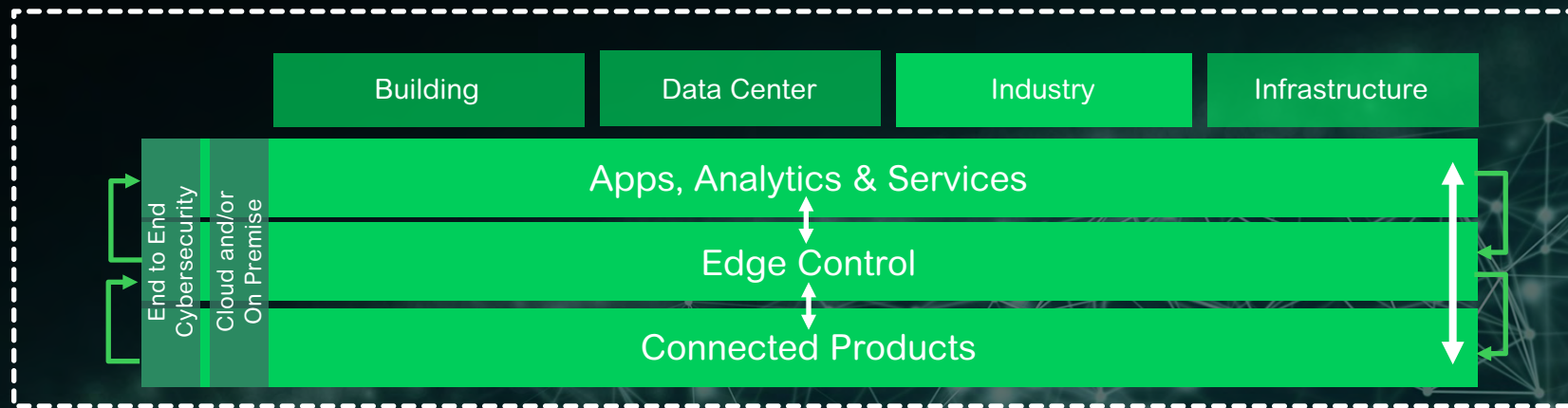
Intuitive Industries – Digitized!  
EcoStruxure for Industry

Peter Herweck: Executive Vice President, Industry

Life Is On

Schneider  
Electric

EcoStruxure's integrated architecture serves four end markets with its six domains of expertise



EcoStruxure  
Building

EcoStruxure  
Power

EcoStruxure  
IT

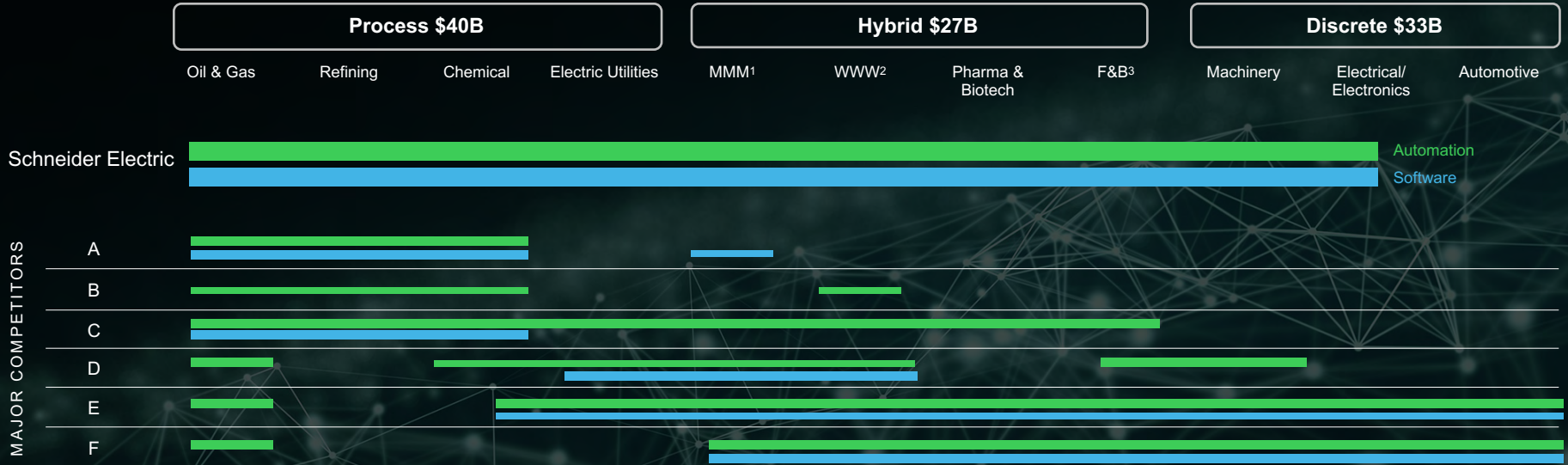
EcoStruxure  
Machine

EcoStruxure  
Plant

EcoStruxure  
Grid

# We are a full liner in automation

Leading in process, hybrid, and discrete



Source: ARC Advisory Group & Schneider Electric

- 1 Minerals, Metals & Mining
- 2 Water & Wastewater
- 3 Food & Beverage

Market size excludes Engineering Software and IIOT

# We are leading the digital transformation of today's growing industrial automation markets...

**\$100 billion**

**4% growth\***

Industrial automation

**\$1 billion**  
IIoT

**8%**

growth\*

**\$20 billion**  
Industrial  
Engineering  
Software

Traditional automation markets return to growth

IIoT services create new opportunities

End-to-end integration driving software expansion

Ecosystem adding value

\*3 year CAGR,  
2017-2020

Sources: ARC Advisory Group,  
Cambashi, IDC, IoT Analytics,  
Schneider Electric

# EcoStruxure for Industry:

Building upon our industrial product business leadership

We start with smart products that connect our customers

**25%**

of R&D on software for connected products

**>50%**

are connected offers

**#1 Control & Signaling**

**#1 LV motor control components including LV drives**



**Connected Products**

# EcoStruxure for Industry:

The most modern Edge Control portfolio

We lead at the edge in EcoStruxure Plant and Machine...

**~75%**

of R&D spent on software

**100%**

Of Edge Control fully renewed in the past 3 years

- #1 Safety System
- #1 Human Machine Interface
- #3 Internet-ready Edge Control

**Edge Control**

**Connected Products**

# EcoStruxure for Industry:

Transforming to cloud and subscription, driving IIoT services

We turn data into business actions

**100%**

of R&D on software

**100k**

Sites

**2M**

Licenses

**20B**

Industrial operating parameters managed

**4T**

Daily industrial transactions

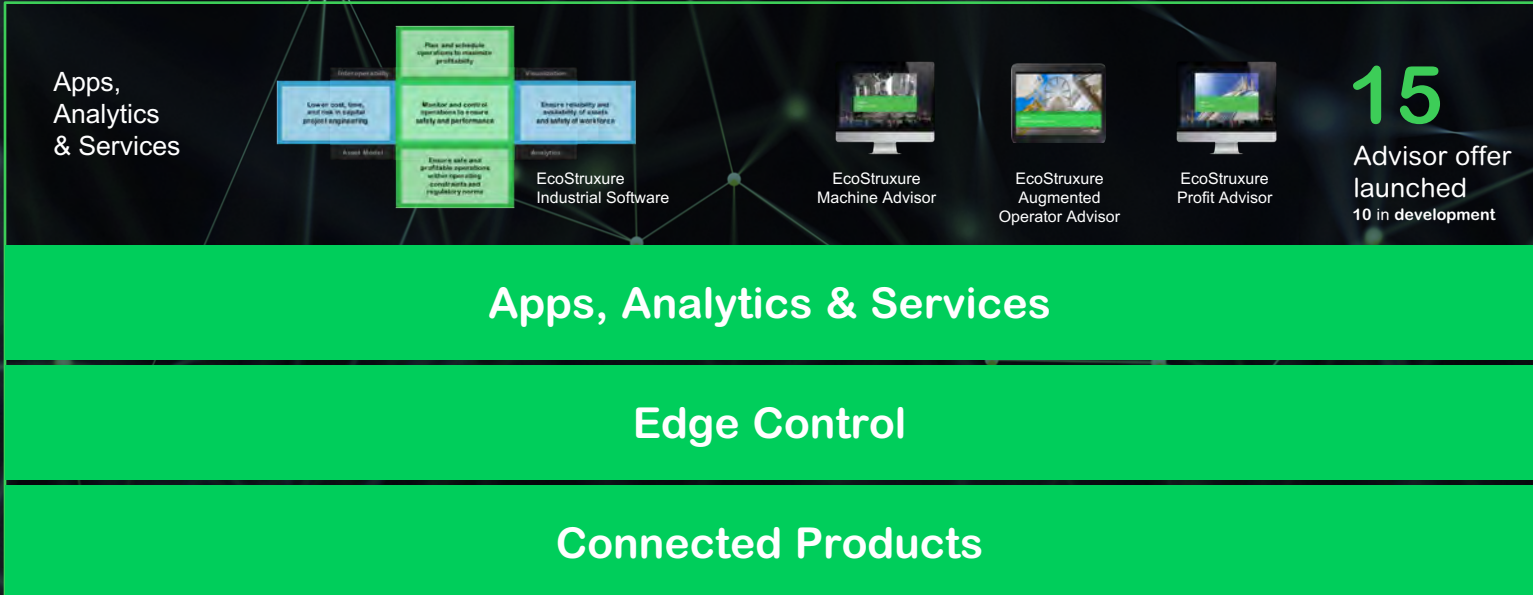
**Apps, Analytics & Services**

**Edge Control**

**Connected Products**

# Software transformation is here

Horizontal software integrates and becomes the foundation for vertical IIoT services



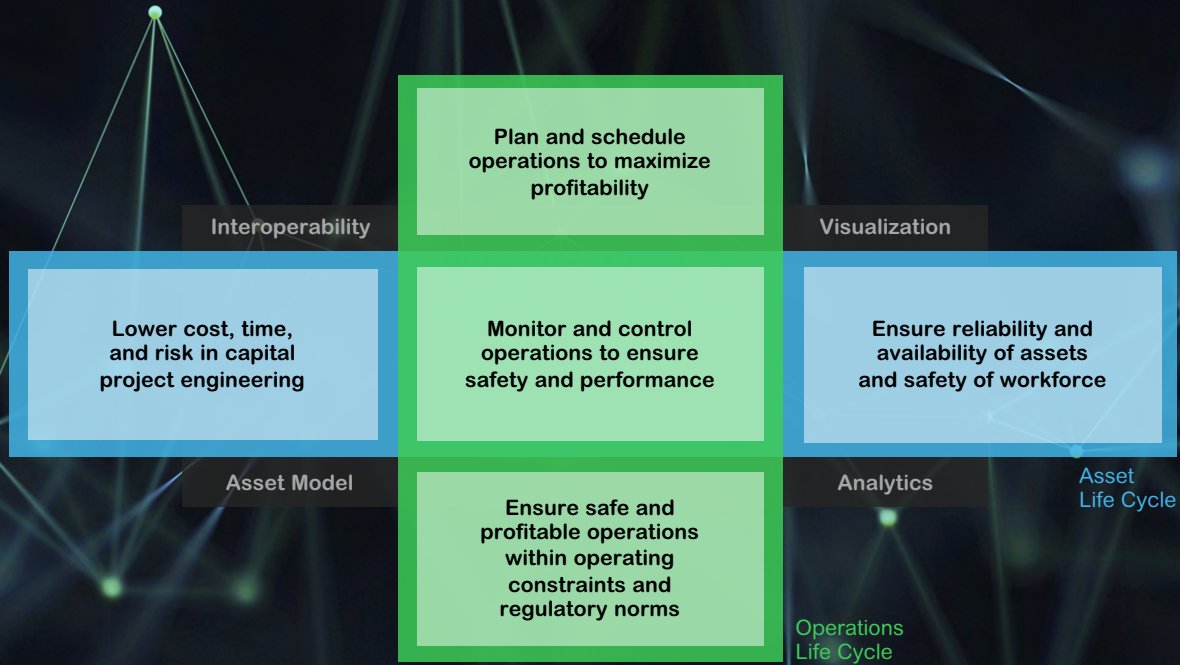
15

Advisor offer launched  
10 in development



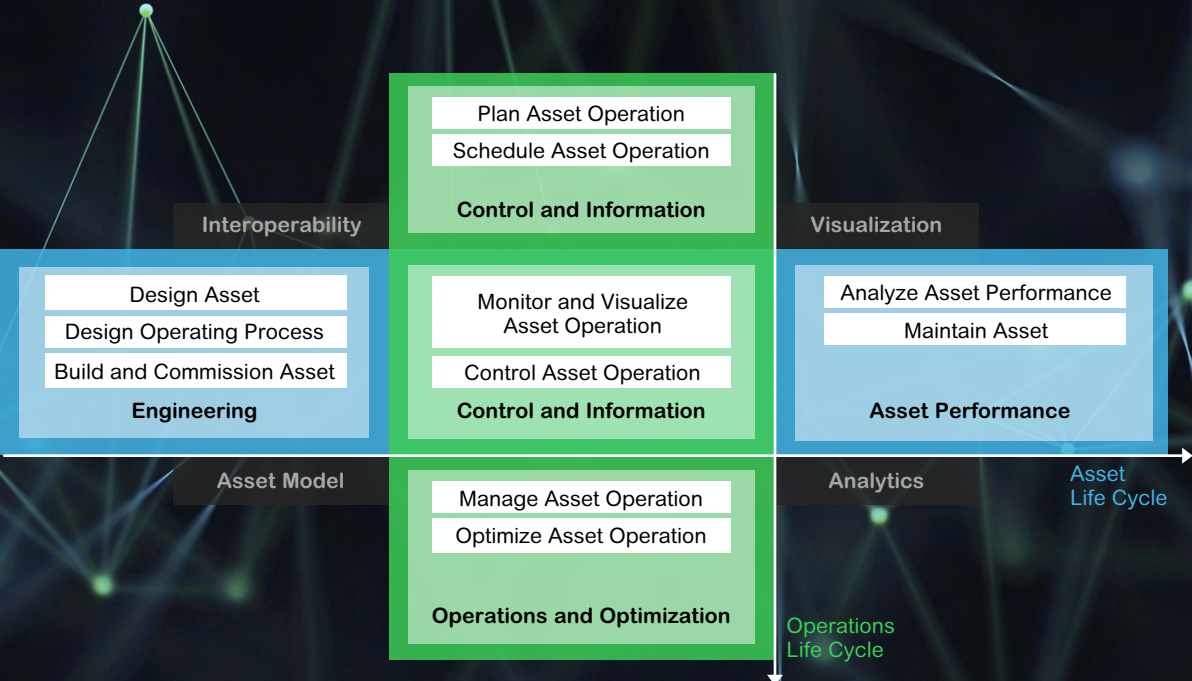
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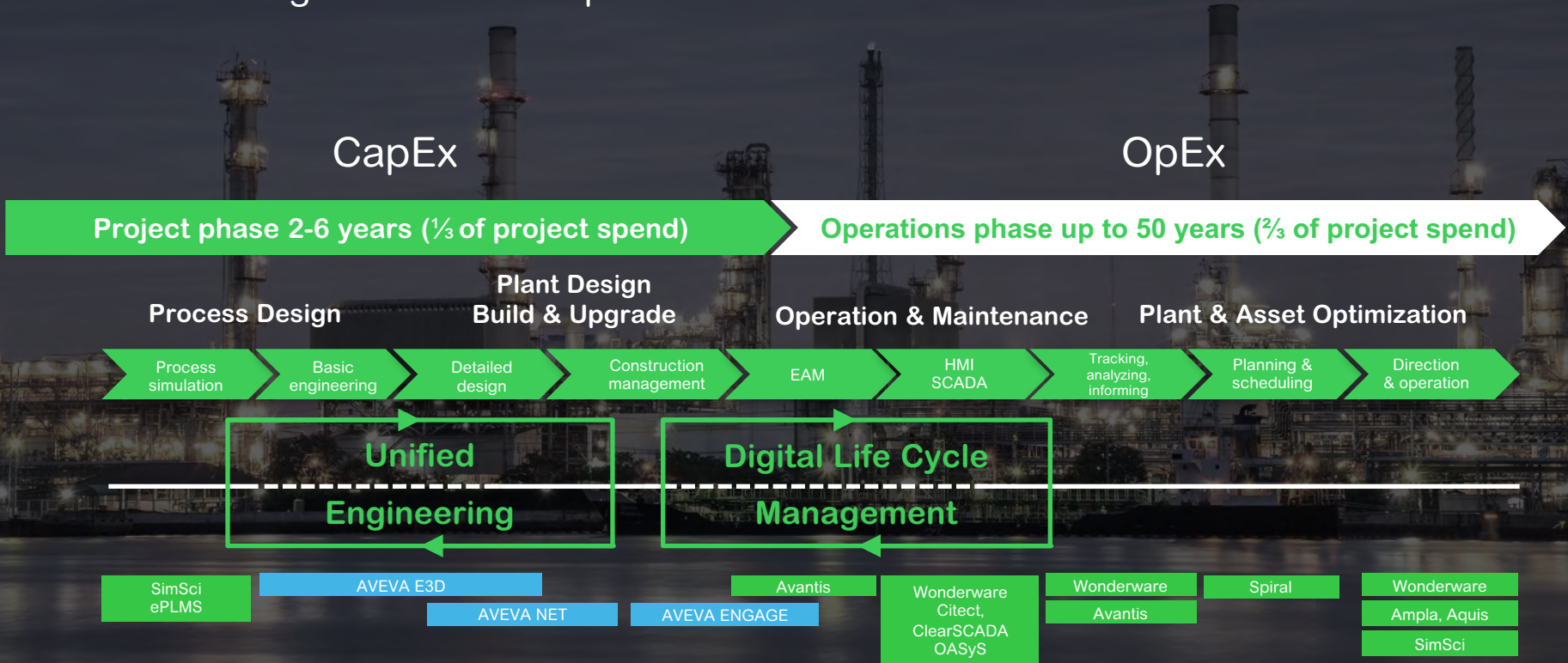
# End-to-end software brings efficiency in CapEx and OpEx cycles

This means a long-term relationship with the end user



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This means a long-term relationship with the end user



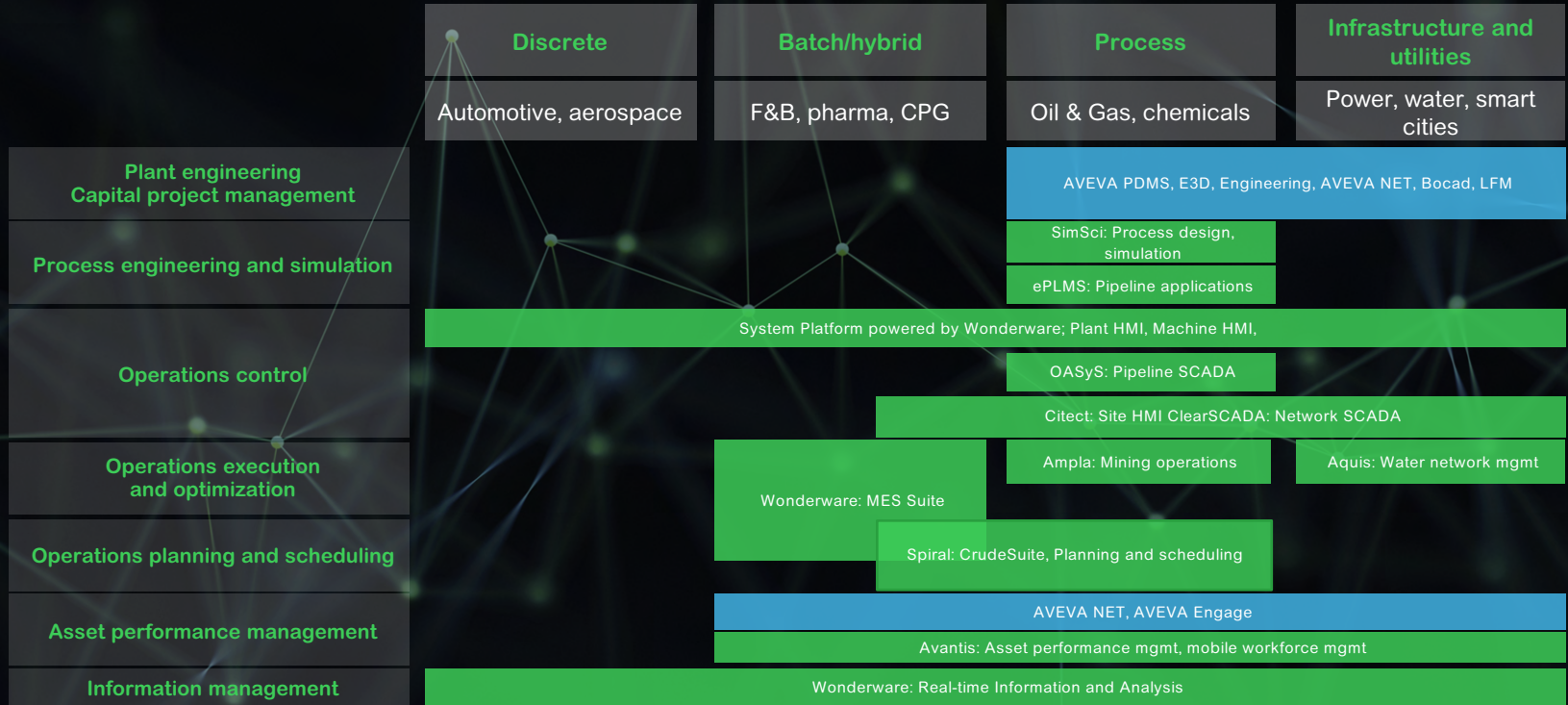
“

By having a consistent digital representation of the process asset during conceptual engineering and the detailed engineering phase of the value chain, **KBR is estimating a potential cost savings of up to \$4 million for a real live engineering problem**, where the exact replica of a plant design required minor changes in conceptual engineering which had a ripple effect later in the life cycle. There is the possibility of even larger benefits if the same digital twin could be reused later on for operations and maintenance purposes.”

John Derbyshire,  
President of Technology  
and Consulting,  
KBR

# An end-to-end product portfolio

with unmatched market and functional coverage



# Added customer value depends on an open architecture platform, a partner ecosystem, and connection to the cloud

4,200

system integrator partners

5,700

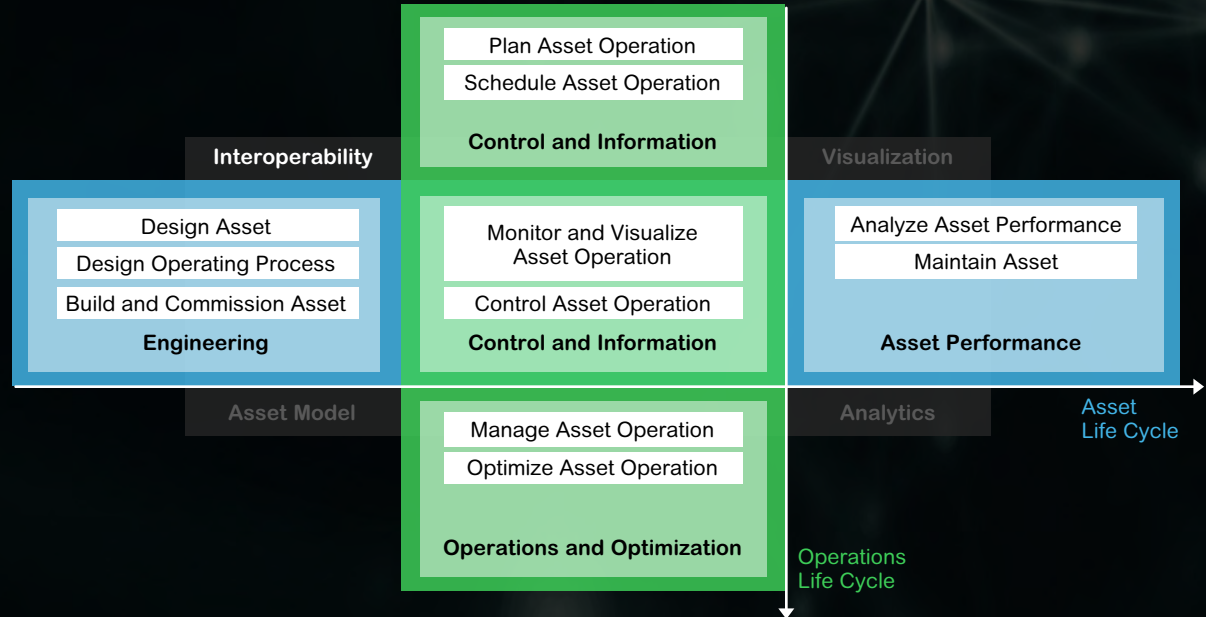
certified developers

160

technology partners

~10

apps developed per partner per year



# A tasteful combination for innovative dairy products

Eker Dairy Products, Turkey

**EcoFtruxure**  
Innovation At Every Level **for Food & Beverage**

## Challenges:

- Create a software solution that would enable Eker to standardize its operations and manufacturing
- Develop templates that would make it flexible to create scalable and modules across its manufacturing facilities
- Record historical information/data

## Solutions:

- System Platform 2017 powered by Wonderware
- Operations Management Interface for System Platform
- InTouch HMI (Remote Client) powered by Wonderware
- Process Historian powered by Wonderware



## Results:

- 15% improvement of line efficiency for all manufacturing translates to 600 tonnes of products per day
- 15% production growth thanks to implementing Industry 4.0 standards
- 15% savings in energy use



# Video EKER Success Story

<https://youtu.be/bkKC5TPLywk>

# IIoT services and new business models



**Expansion of system platform**  
beyond control and information to create common view across asset and operations life cycles



**Integration**  
of industrial and engineering software creates benefits for CapEx and OpEx cycles

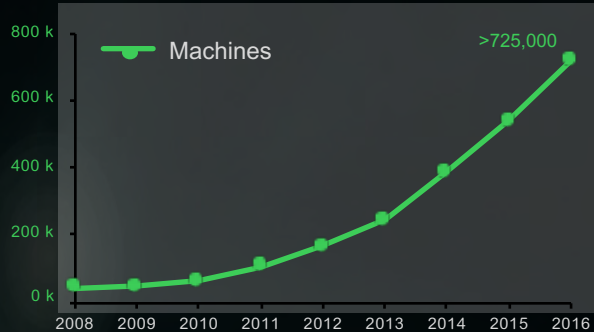


**System Platform ecosystem**  
of developers driving tens of thousands of new apps each year in hybrid and continuous

# Machinery continues to take market share and drive growth enhanced by IIoT services offers

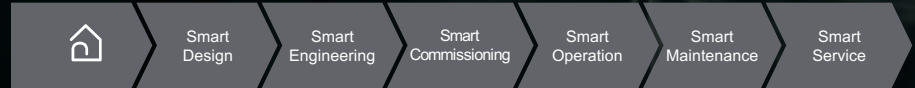
## Machines

EcoStruxure Machine is growing **4x** faster than the market\*



(\*) Machine CAGR = 4.1% (source IHS)

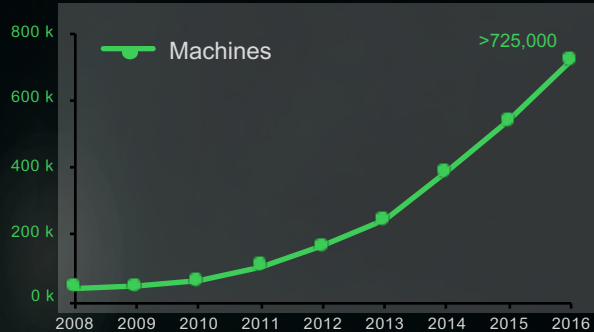
Application knowledge for greater conversion of machines from packaging to hoisting to HVAC



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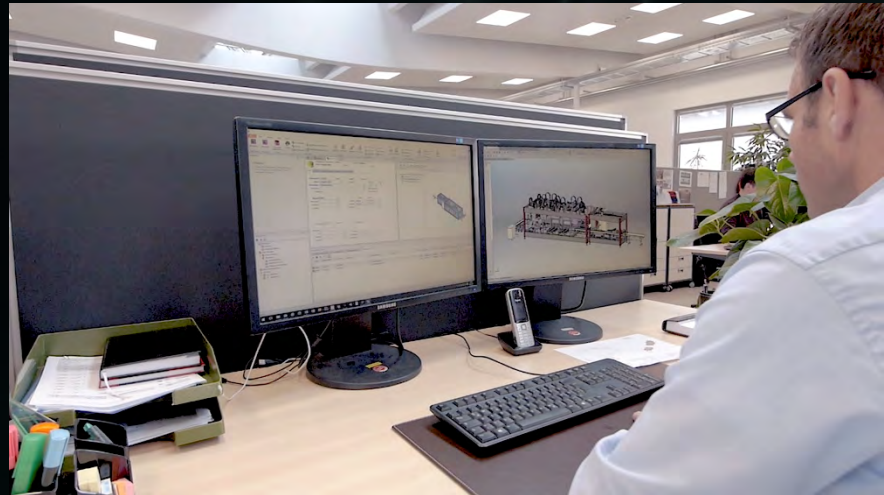
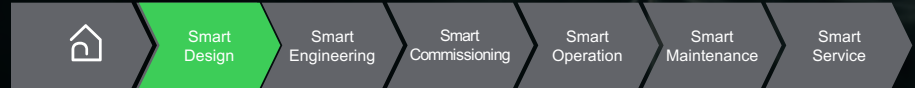
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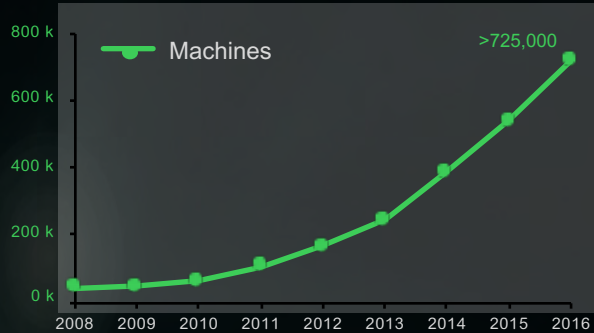
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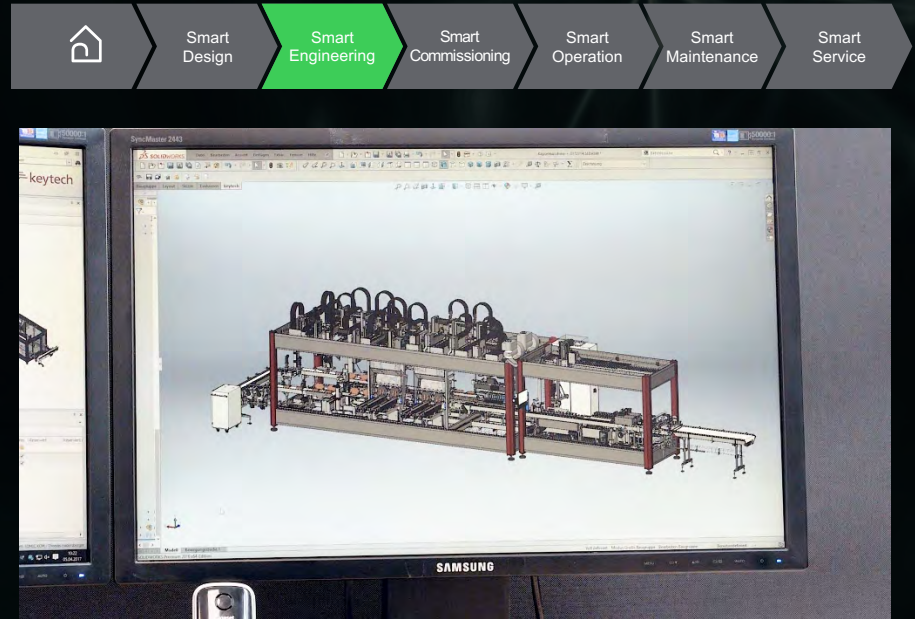
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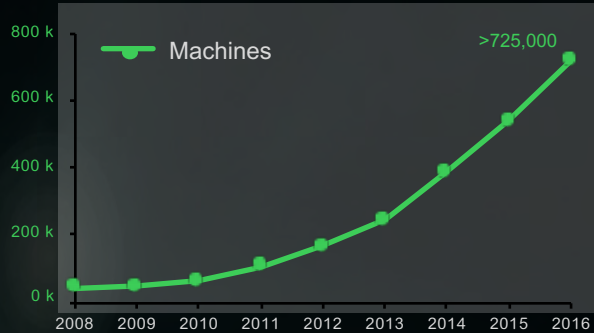
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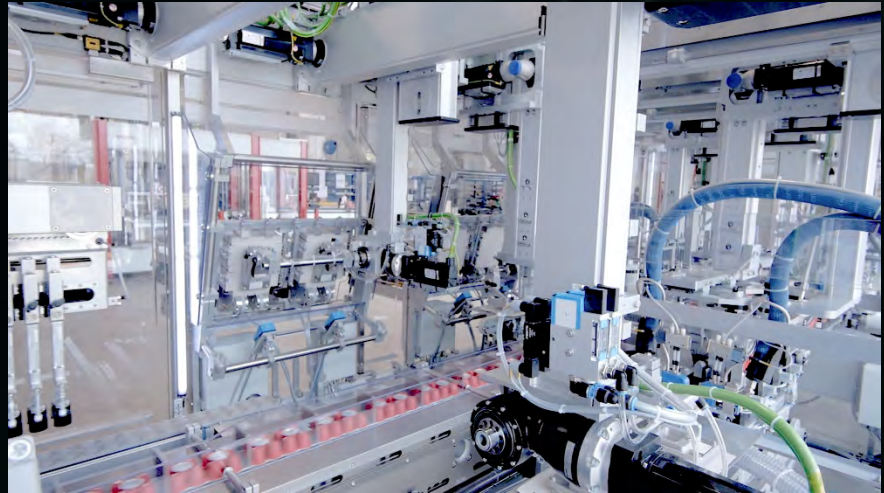
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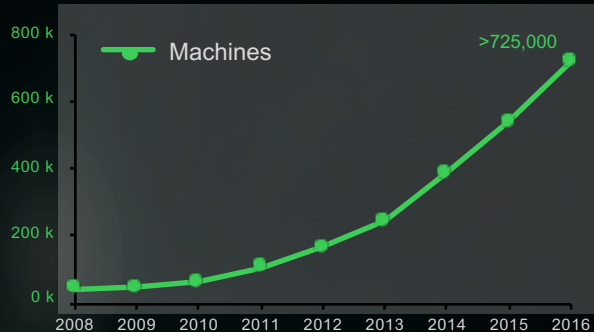
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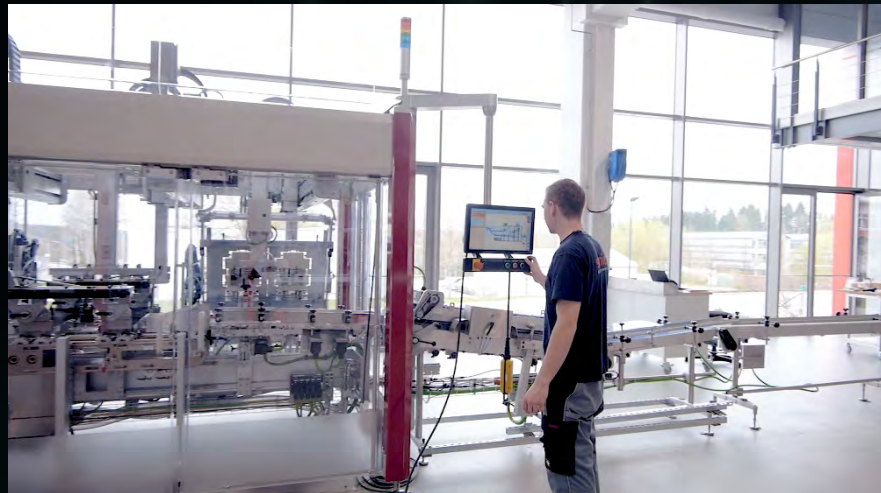
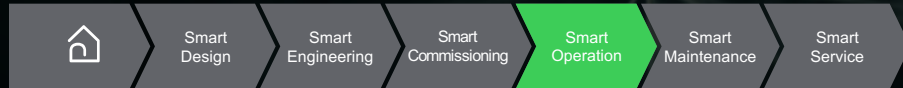
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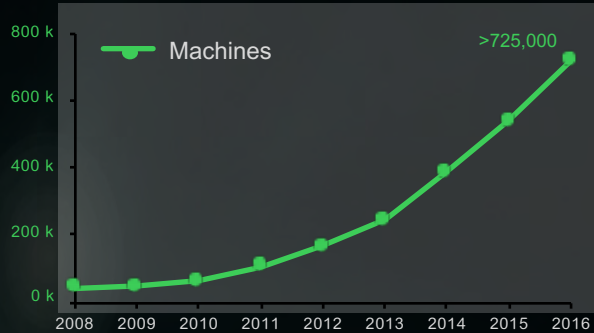
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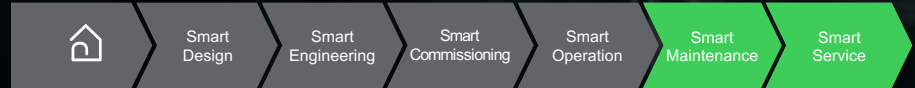
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# EcoStruxure™ Augmented Operator Advisor



<https://www.schneider-electric.com/b2b/en/services/field-services/industrial-automation/performance-optimization-services/ecostruxure-augmented-operator-advisor.jsp>

# Operational excellence as a service

Startup, Australia



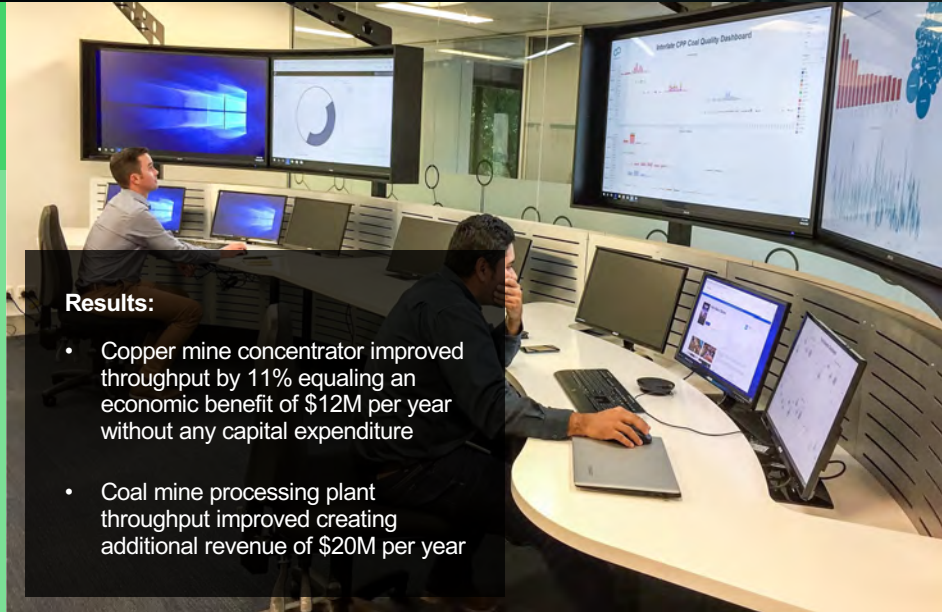
## for Mining, Minerals & Metals

### Challenge:

- Remote mine and mineral processing operations delivering process and business optimization

### Solutions:

- **Enterprise Historian (previously Wonderware eDNA):** Enterprise-wide real-time data management software platform for maintaining data segregation between each customer
- **Workflow Management (previously Wonderware Skelta BPM):** Business process management software that provides seamless integration with eDNA and is used to automate business processes/workflows

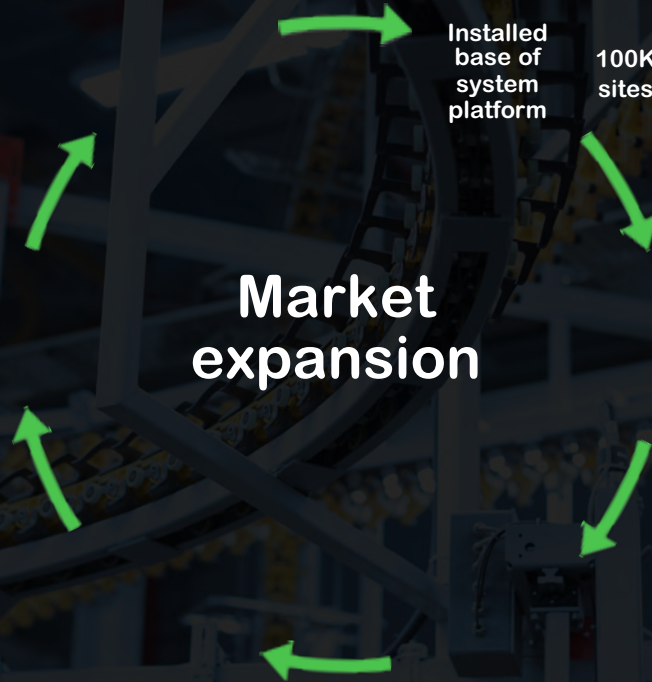


### Results:

- Copper mine concentrator improved throughput by 11% equaling an economic benefit of \$12M per year without any capital expenditure
- Coal mine processing plant throughput improved creating additional revenue of \$20M per year

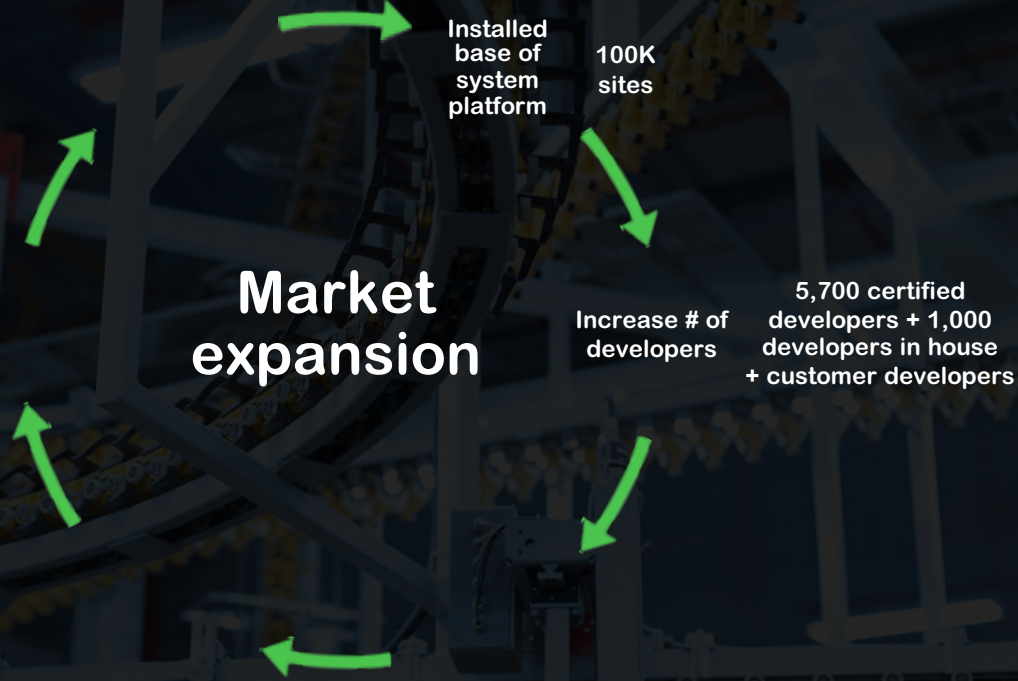
# EcoStruxure Industry: Driven by software

A powerful virtuous circle



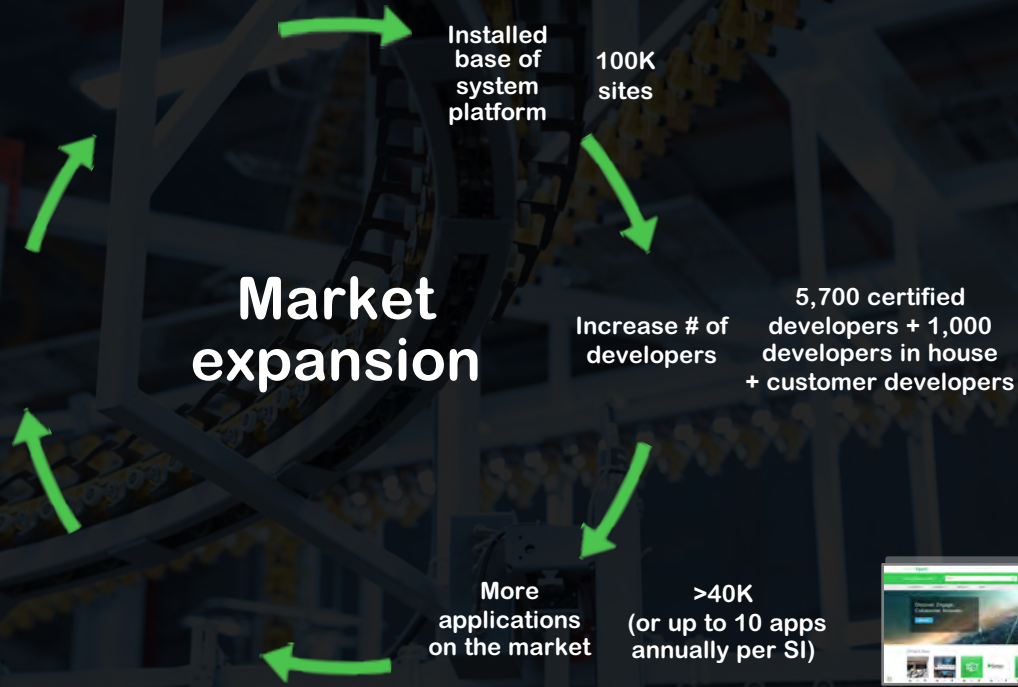
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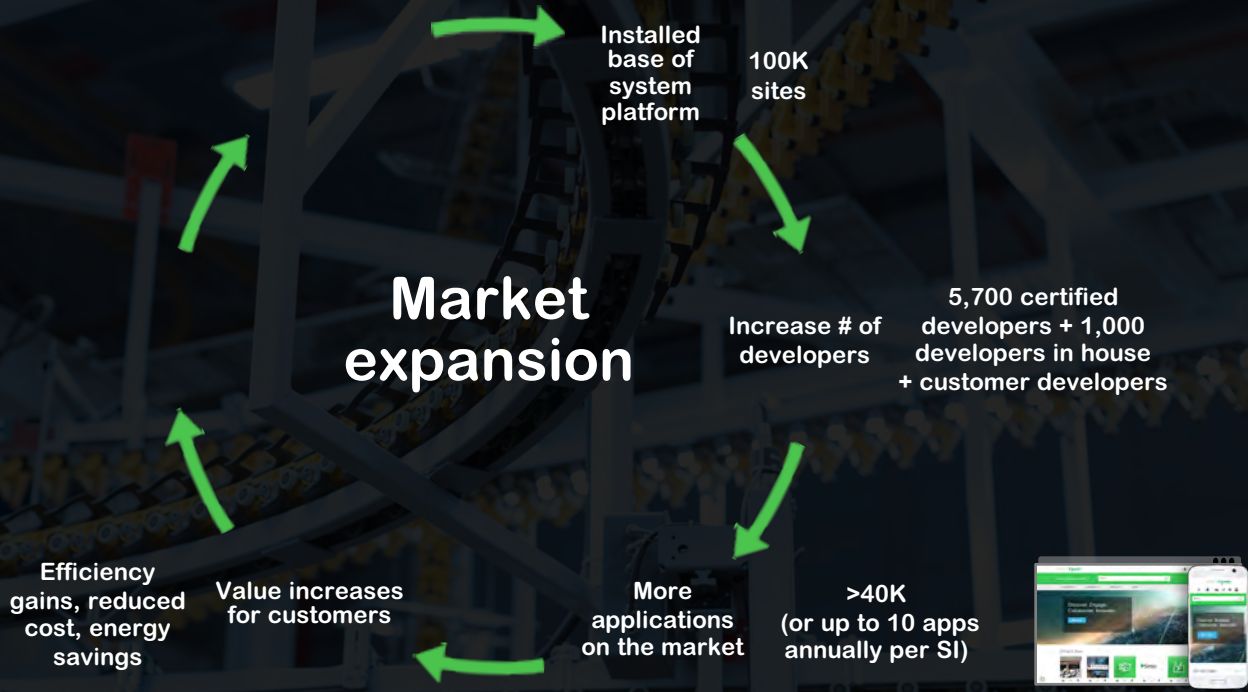
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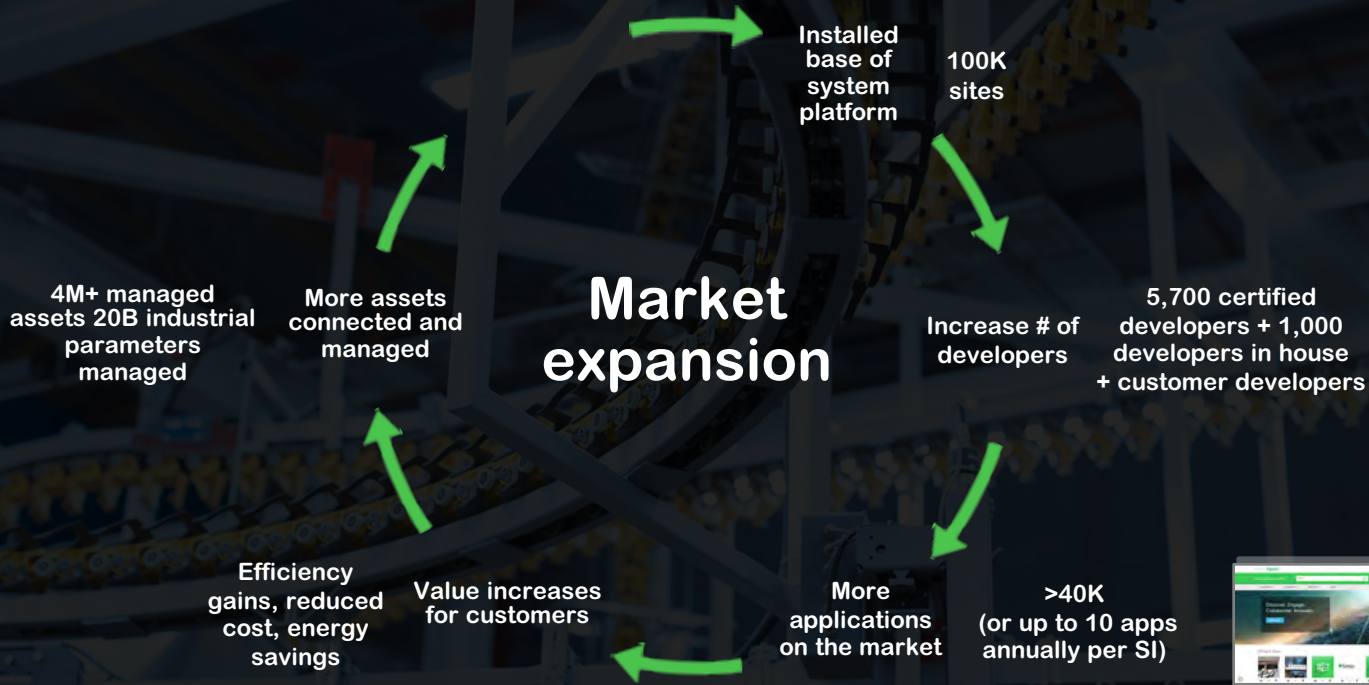
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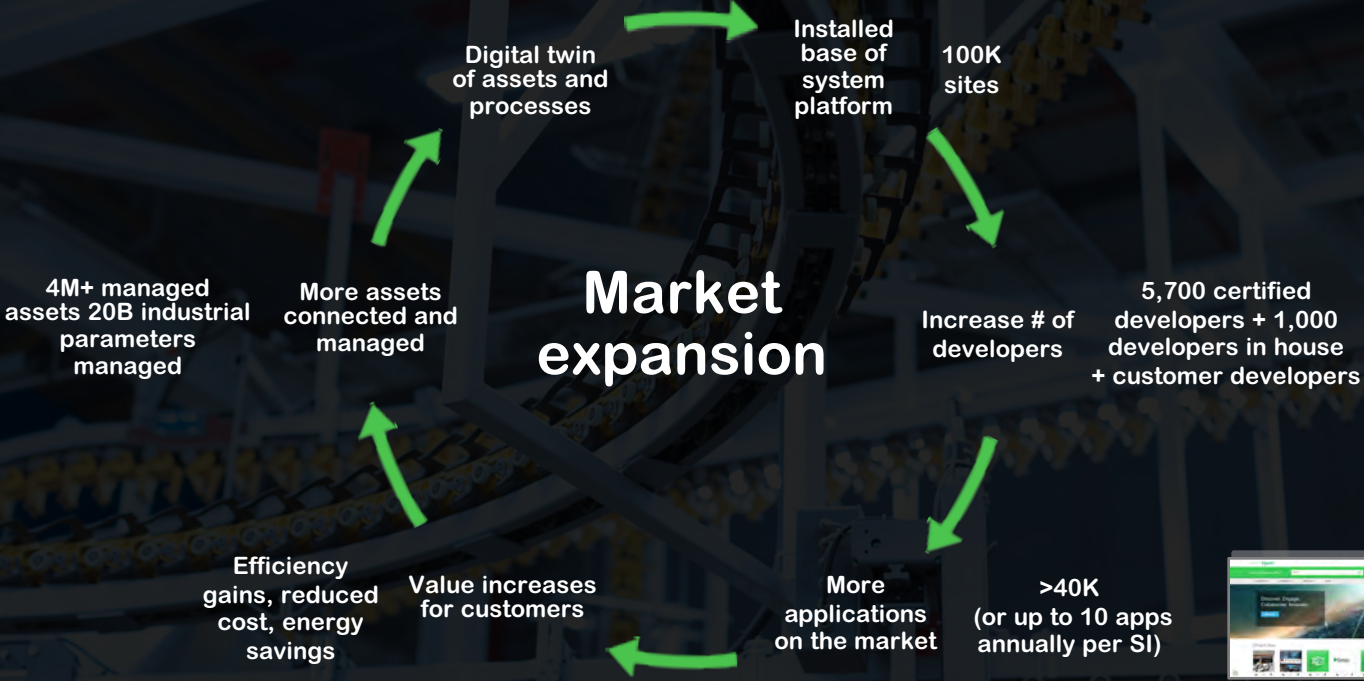
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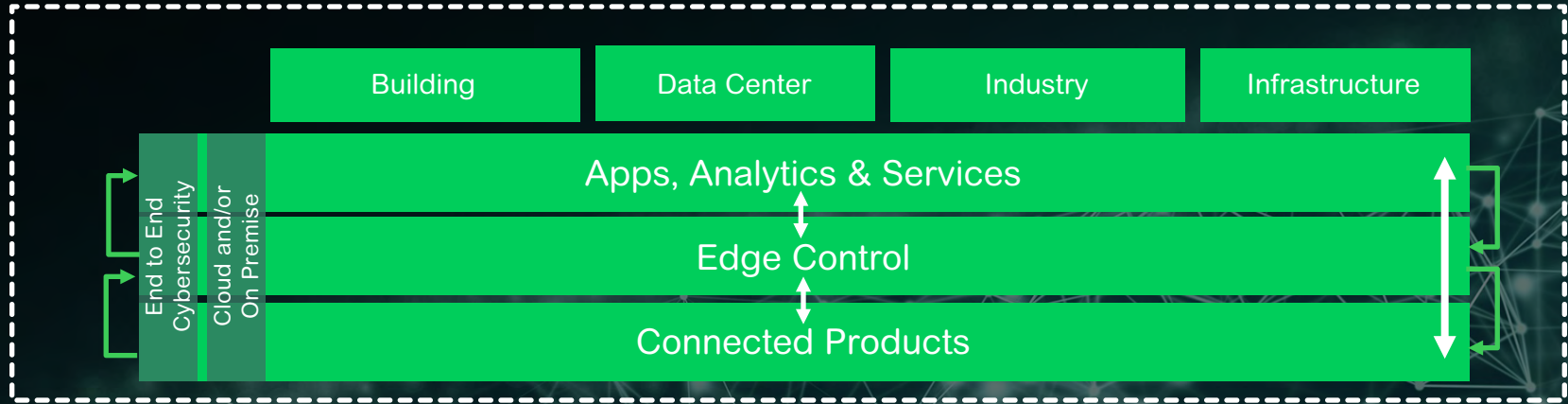


# EcoStruxure Industry: Driven by software

A powerful virtuous circle







EcoStruxure  
Building

EcoStruxure  
Power

EcoStruxure  
IT

EcoStruxure  
Machine

EcoStruxure  
Plant

EcoStruxure  
Grid

# A comprehensive approach to cybersecurity

Solution offering

Consulting, Design, Integration, Training, and Managed Security Services

Security Information & Event Management, Compliance, Change Management, Whitelisting, Big Data Security, Firewalls

Secure delivery of project and services during product or system deployment

Buildings

Data Centers

Industry

Infrastructure

Greater product security

Schneider Electric's core offering - Right security features

Secure Development Life cycle (SDL)

# Comprehensive defense with in-depth cybersecurity offering

## Securing the operational life cycle



# Risk assessment and cybersecurity control

Large oil company, Dubai, UAE

**EcoStruxure**  
Innovation At Every Level **for Industry**

## Challenges:

- Aging plant infrastructure
- Multiple industrial control system vendors
- Government mandating security compliance
- Lack of security expertise

## Solutions:

- Security services: Risk assessment and gap analysis, system hardening
- Virtual host security controls: Endpoint protection, performance monitoring, patch management, disaster recovery
- Network security controls: Dedicated plant information network, next-generation firewalls, secure corporate DMZ interface

## Results:

- Protection against malware and other security threats
- Unified security solution for all industrial vendors
- Compliance with national and security mandates
- 90% reduction in plant-wide risk profile

# Schneider Electric: Power and automation customers



# Schneider Electric: Power and automation customers

## Solution:

- Integrated Control and Safety Systems
- FARs (Automation houses by EHouse)
- Industrial Software

## Competitor:

- Major DCS supplier

## Benefits:

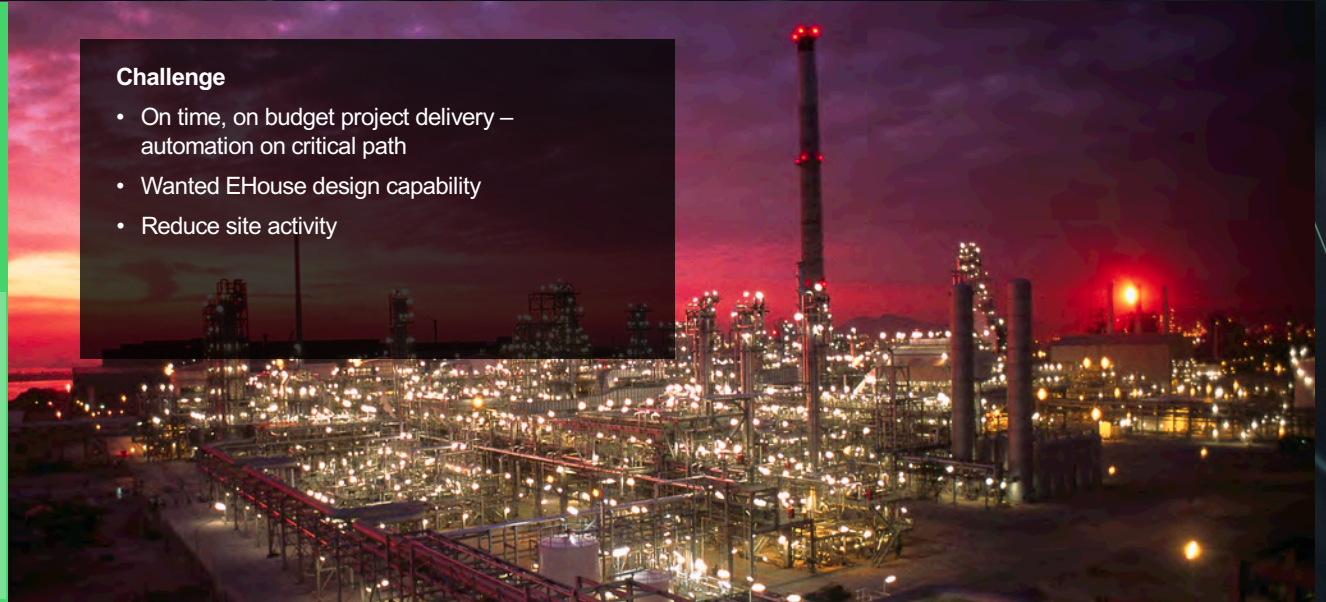
Project execution risk reduction

## Size of the project

- As sold: \$55M
- Now: \$110M

## Challenge

- On time, on budget project delivery – automation on critical path
- Wanted EHouse design capability
- Reduce site activity



# Schneider Electric: Power and automation customers

## Solution:

- Project Management (MAC style)
- LV/MV Boards and Transformers
- M580 PLC and Industrial Software
- VSD, Inst. & Field Devices
- Electrical Installation & Commissioning

## Competitor:

- Major PLC supplier
- Major DCS and power supplier

## Benefits:

- EcoStruxure architecture delivered the best Total Cost of Ownership in water
- Single vendor/proven integrated solution (TVDA) minimized schedule risk to the constructor

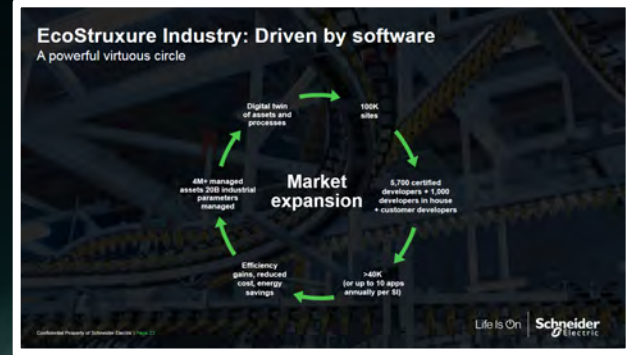
## Challenge

- Energy is the second highest cost to water utilities after labour costs needed to address two major operating cost drivers with automation (labour saving) and energy efficient solutions
- Regulated industry in the public domain so reliability and security are key to minimize public health risk



# 6 foundations

are driving our success in the digital space



1

One IoT-ready architecture and platform

2

One Edge

3

Digital life-cycle management

4

Domain and segment expertise

5

Large digital services portfolio

6

Open partner ecosystem



# IIoT paired with horizontal software transforms automation market

The digitalization of Industry – with Schneider Electric well positioned to lead



A full liner in automation for discrete, hybrid, and process



A leading process-centric horizontal software player driving end-to-end digitalization



Transforming leadership from HMI/SCADA platform to 'system of systems' IIoT platform powered by Wonderware



Ecosystem built on renowned Schneider Electric partner network – automation distributors, technology partners, system integrators, and developers



EcoStruxure architecture enables an easy way to get started and cost-effective scaling to achieve IIoT benefits

Life Is On



**Schneider**  
 Electric