

# Schneider Electric's EcoStruxure: welcome to the future !

A new level of optimization with IoT & Industry 4.0



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**South & Eastern Europe Vice President**

Foreign Investors Summit, Bucuresti

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Confidential Property of Schneider Electric

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# Megatrends are provoking a **rise** in Energy Demand



URBANIZATION

**+2.5B**

people in cities by 2050

Source: United Nations, DESA




DIGITIZATION

**50B**

connected things by 2020

Source: Cisco



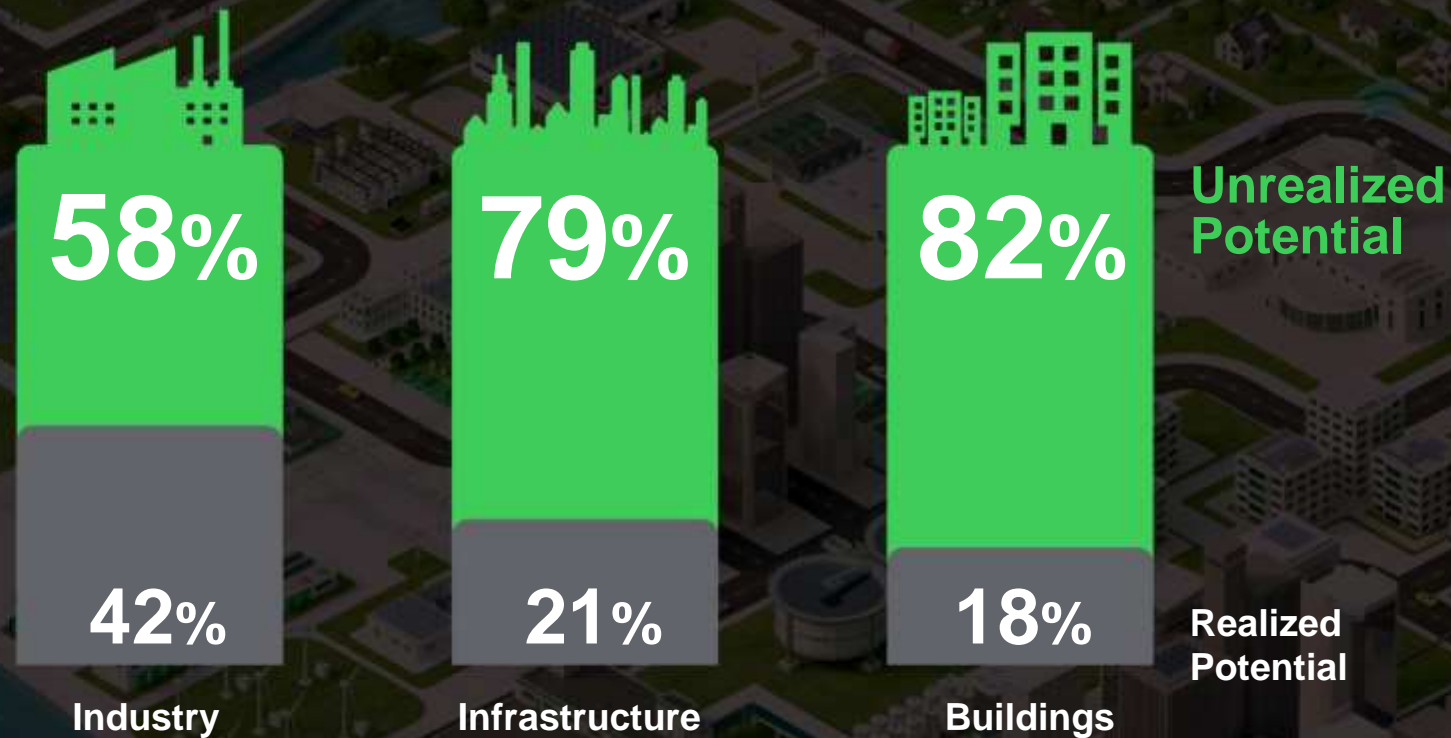
INDUSTRIALIZATION

**+50%**

Energy consumption by 2050

Source: IEA

# We have massive untapped efficiency potential



Source : World Energy Outlook 2012, OECD / IEA, Internal analysis





# Schneider Electric the Global Specialist in Energy Management and Automation

**€24.7Bn**

FY 2016 revenues

**~ 5%**

of revenues devoted to R&D

**~140K+**

people in 100+ countries

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The background image shows an industrial environment. In the foreground, two male workers wearing safety vests are looking down at a workbench. Behind them, there is a large piece of industrial machinery with a control panel featuring several buttons and indicator lights. The overall scene is dimly lit, with the text overlaid in white and green.

We see the Industrial Internet of Things / Industry 4.0  
as an “**evolution**” not a “revolution”

And we have the full **end to end**  
& **complete solutions** for  
Automation & Control Systems

**Adding together our architectures  
known in the past as:**

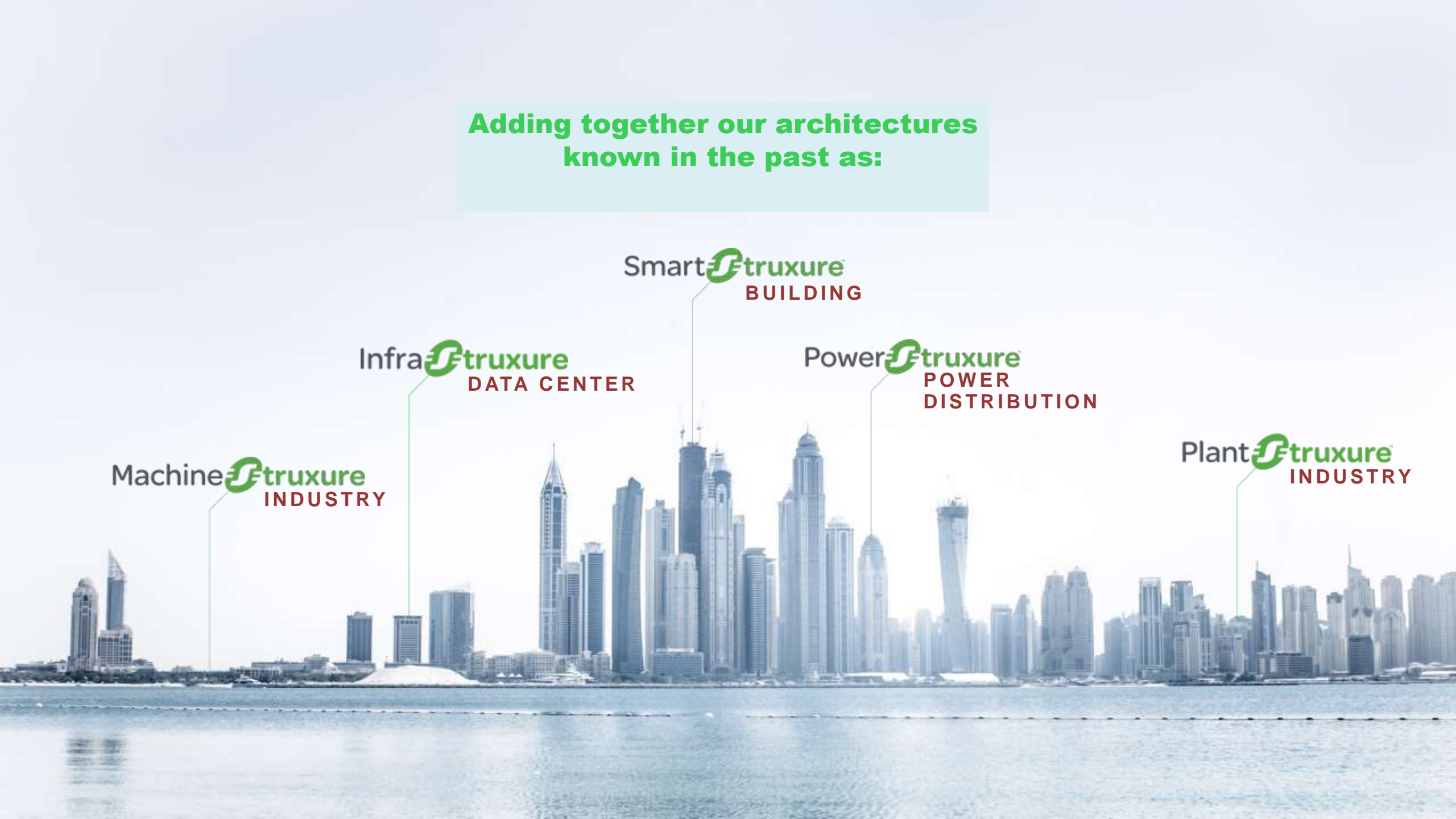
Smart  **BUILDING**

Infra  **DATA CENTER**

Power  **POWER  
DISTRIBUTION**

Machine  **INDUSTRY**

Plant  **INDUSTRY**





IN ONE ARCHITECTURE

# EcoStruxure™



# What has changed - Industry 4.0



## MOBILITY

Pervasive and Affordable Communication  
Rich UI  
Recognition of Operator



## CLOUD

Massive Aggregation of Data  
Stakeholder sharing  
Concentration of Specialist



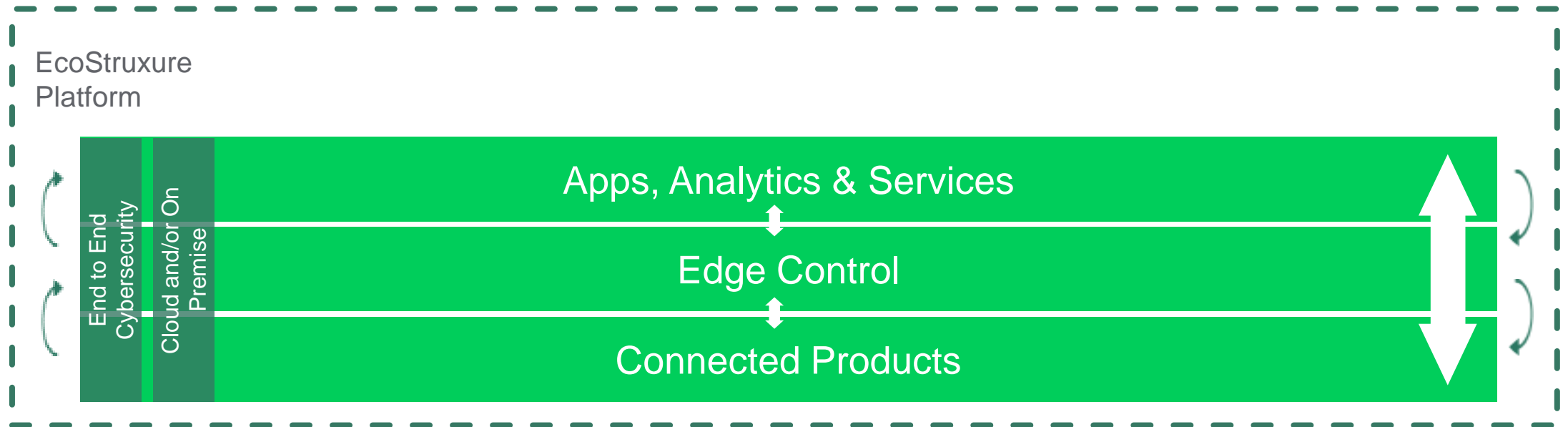
## ANALYTICS

New functionalities  
Artificial Intelligence optimizing  
performance at all levels



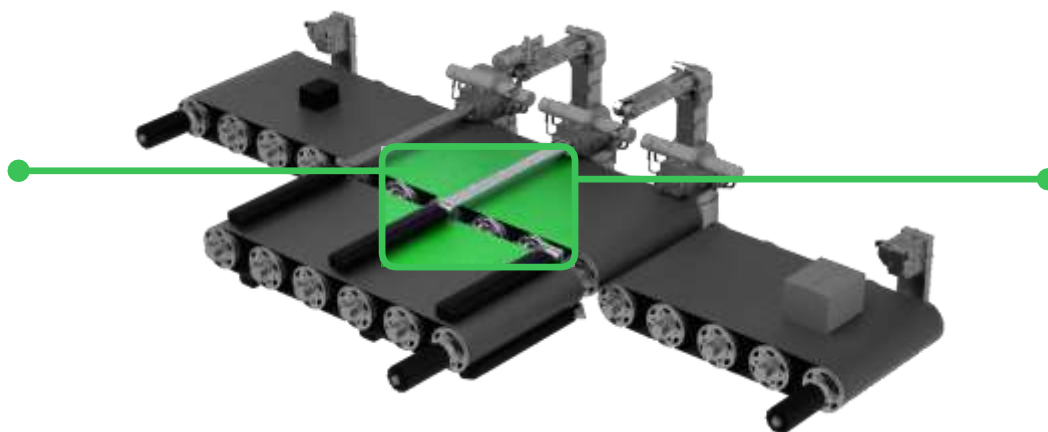
# EcoStruxure™

Innovation At Every Level



# Innovation at Every Level: Connected Products

## Improved Asset Performance With Altivar Process



The first range of services oriented drive

**A range of variable speed drives for smart machines**



Achieve Maximum Flexibility  
Extended Machine Availability  
Full Connectivity & Integration



Valves



OsiSense:  
Industrial Sensors



Tesys:  
Motor Starters



Altivar:  
Variable Speed Drives



Vijeo



MCC/PCC  
Electrical Panel



# Innovation at Every Level: Edge control

## Smart Machines that Optimize design and production with insights from End User Energy data

Machine Builders' Customers



Food & Beverage Retailers



Energy data of  
all installations



CAD Program

Energy data by type

Assembly plan

Update

Mangelberger Control Cabinet Production



- Analysis
- Optimization
- Material flow
- Manufacturing
- Documentation



MachineStruxure



PlantStruxure

Foxboro EVO



The new generation of DCS

Triconex



Safety & Critical Control Platform

### Connected Products

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# Innovation at Every Level: Apps and Analytics

Augmented Operators with increased efficiency, error free operations and greater autonomy



Wonderware  
SmartGlance



Augmented  
Operator

An intuitive User Interface for increased Efficiency,  
Error Free operations and Quicker Autonomy



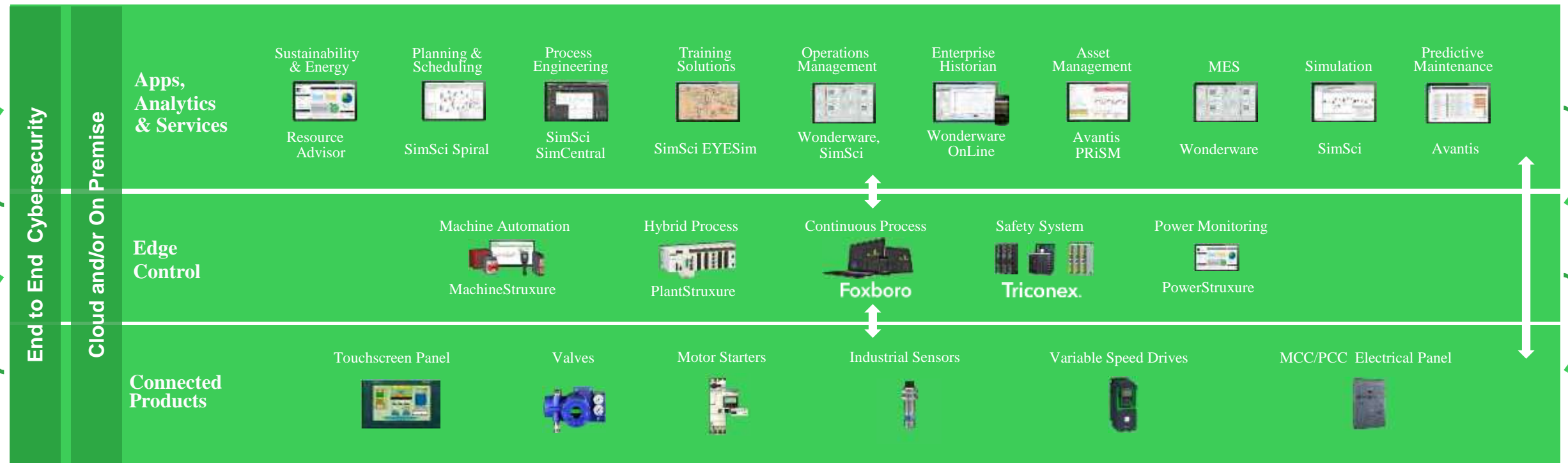
Edge Control

Connected Products



# Innovation at Every Level: EcoStruxure™

EcoStruxure.io



Cities need to leverage technology  
to be more attractive and competitive for employers and citizens



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# Cities face many challenges

Stress

Infrastructure

Cost

Environment

Competitiveness

Citizen Expectations





Mobility



Efficiency



Sustainability



Resiliency



Reliability

# The 5 major imperatives for smart cities

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A person with blonde hair, wearing a dark jacket, is holding a smartphone in their right hand and a black coffee cup with a white lid in their left hand. The smartphone screen displays a grid of icons, including a house, a car, a leaf, a lightbulb, a key, and a gear. The background is a blurred city street with cars and buildings, overlaid with a green tint.

# MOBILITY

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# IoT-enabled solutions drive Mobility & Situational Awareness



“The ability for our engineers and operators to use tablets and smart phones for controlling city services has greatly increased situational awareness and allowed us to become more efficient.”

Darren Schulz, Deputy Public Works Director Carson City, Nevada

WonderWare™ In Touch™,  
Historian, SmartGlance™

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# EFFICIENCY

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# IoT-enabled solutions drive Building efficiency



Moorfields Eye Hospital **NHS**  
NHS Foundation Trust

“We adopted new technologies to integrate legacy systems across the facility and provide one interface to the facility management team, allowing them to monitor and control the infrastructure throughout the hospital.”

Chris Harding, Director of Estates and Facilities, Moorfields Eye Hospital

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**SUSTAINABILITY**



# IoT-enabled solutions drive Water network optimization



**Wireless leak detection sensors feed an Integrated Leak Detection Management System**

“Telemetry is incredibly important to us. We’ve got a very large geographical area...and several thousands assets spread across that and we have to monitor them and to make sure they are working and working effectively”

Chris Boucher, Director of Information Services, Anglian Water

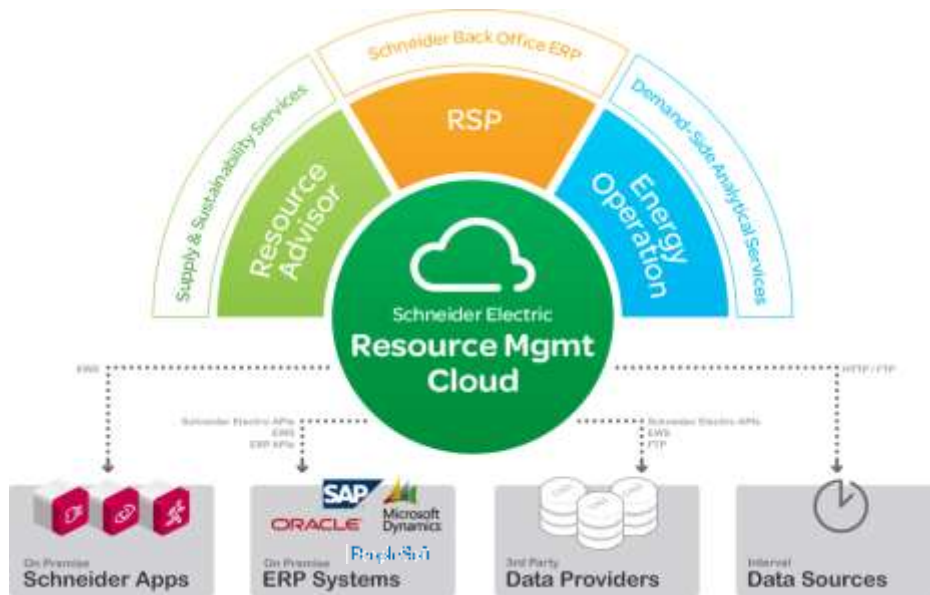


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# IoT-enabled solutions drive Sustainability strategy



“We looked for a way to effectively track our energy use, greenhouse gas emissions, and related conservation projects.”

Mayor Thomas M. Menino, Boston, Massachusetts, September 2013







# RESILIENCY

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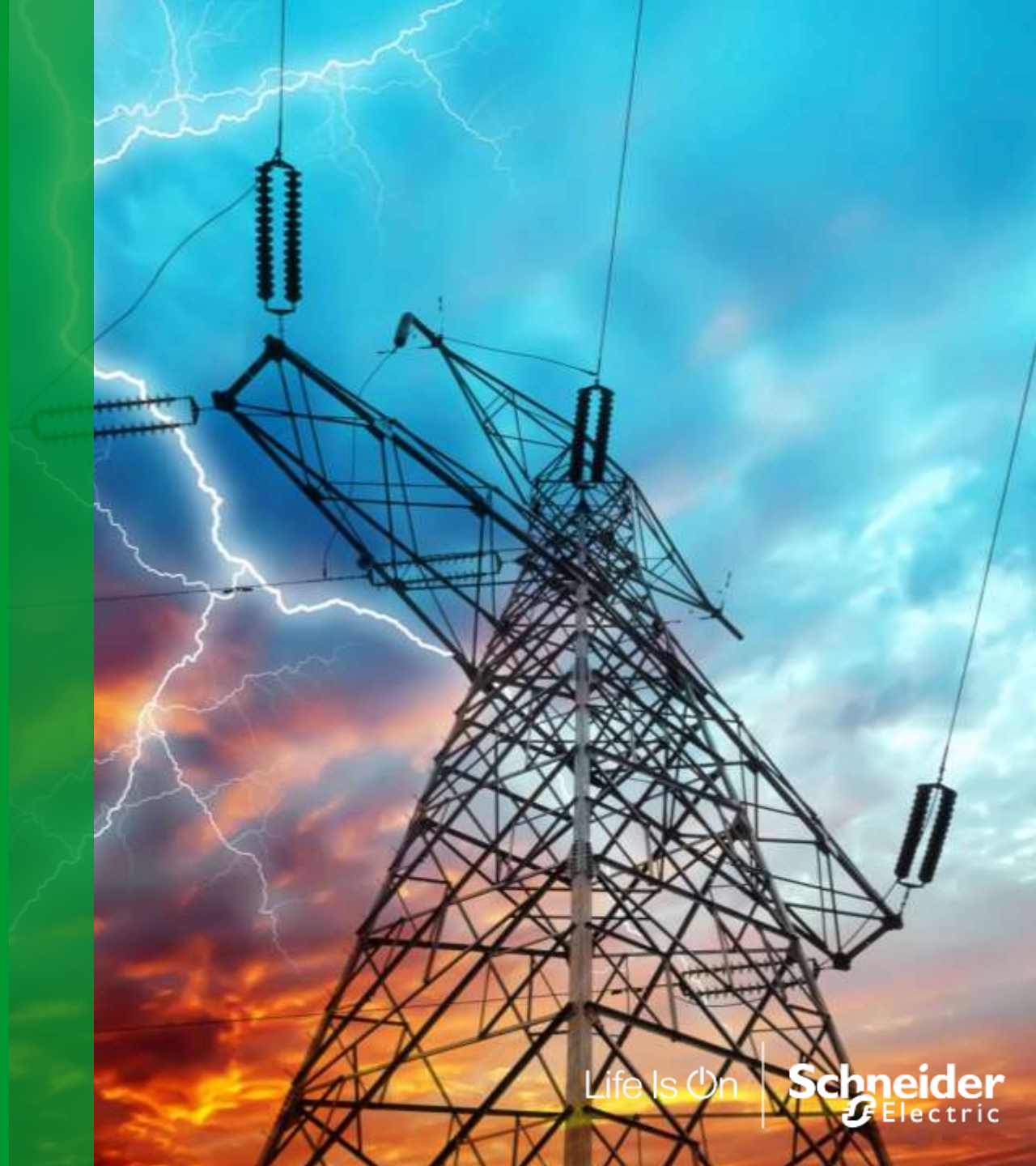


# IoT-enabled solutions speed recovery from natural disasters



“Fairfield’s microgrid project is an example of how a municipality can help protect public safety and minimize hardships to their residents and businesses during power outages.”

Katie Dykes, Deputy Commissioner  
Connecticut Department of Energy and Environmental Protection





A woman in a business suit is walking on a train platform. She is holding a suitcase in her right hand and a jacket in her left hand. She is looking down at her phone. The background shows other people on the platform and a train. The word "RELIABILITY" is written in large white letters across the center of the image.

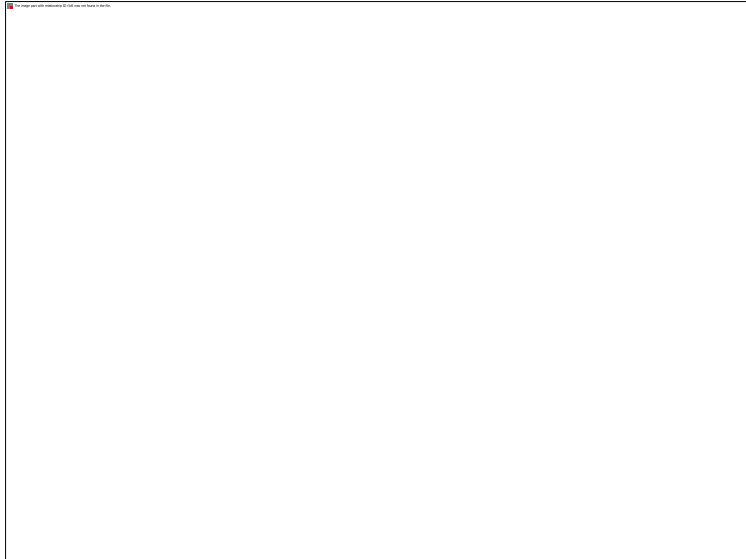
# RELIABILITY

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# IoT-enabled solutions drive safer and more reliable airport operations



“The centralization of operations that we get with Wonderware helps manage around 700,000 signals and is essential for a critical infrastructure like this. We can now quickly respond to incidents and also be proactive in optimizing management.”

Jordi Asensi, Head of Systems and Database Management  
AENA Barcelona Airport



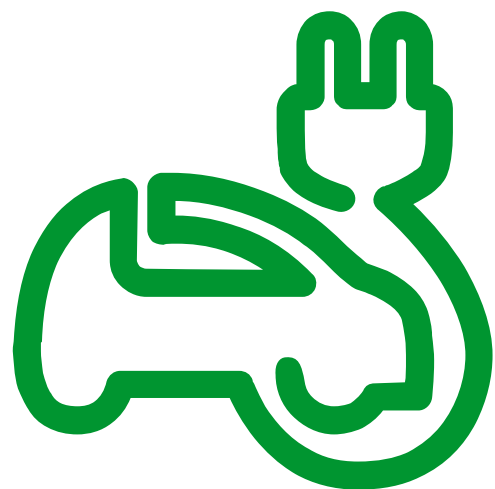
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# EVlink

by Schneider Electric







# EVlink product portfolio

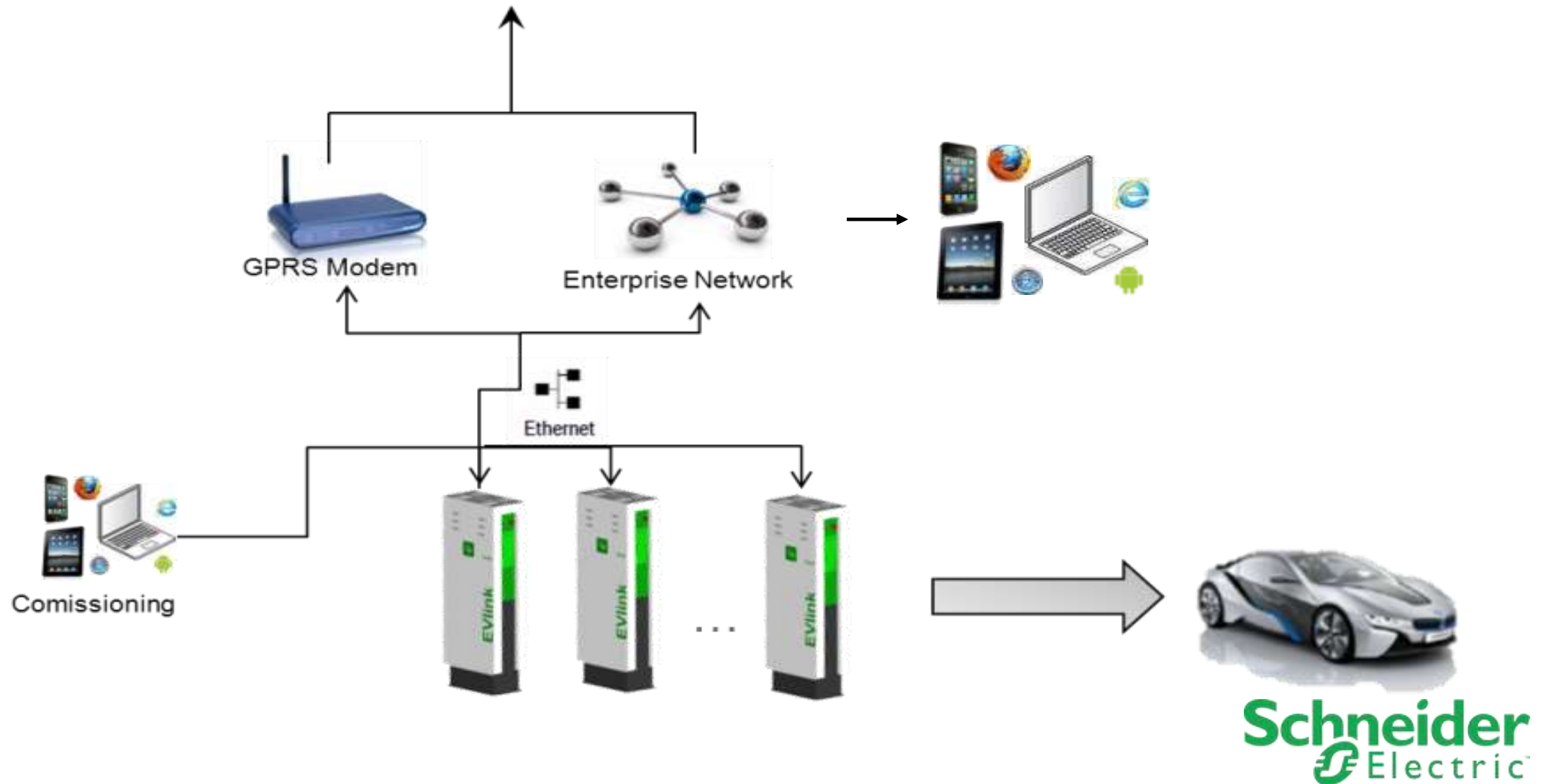
## Overview



\* Not a Schneider Electric product, partnership for Fast Chargers



# EVlink Energy Management





# SCHNEIDER INNOVATION AT EVERY LEVEL



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