

An aerial night view of a city, likely Beijing, showing a dense urban landscape with numerous skyscrapers and residential buildings. A prominent light trail from a highway or expressway runs diagonally across the right side of the image. The city lights are illuminated, creating a vibrant scene against the dark sky.

CIGRE 2021- Schneider Electric

Antonio Obratov, EU Sales Director CRO/SLO

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Schneider
Kremer

СТІКЕРЫ

Schneider Electric provides energy and automation digital solutions for efficiency and sustainability

Key figures for 2020

5% of revenues devoted to R&D

€25.2 billion

2020 revenues

41%

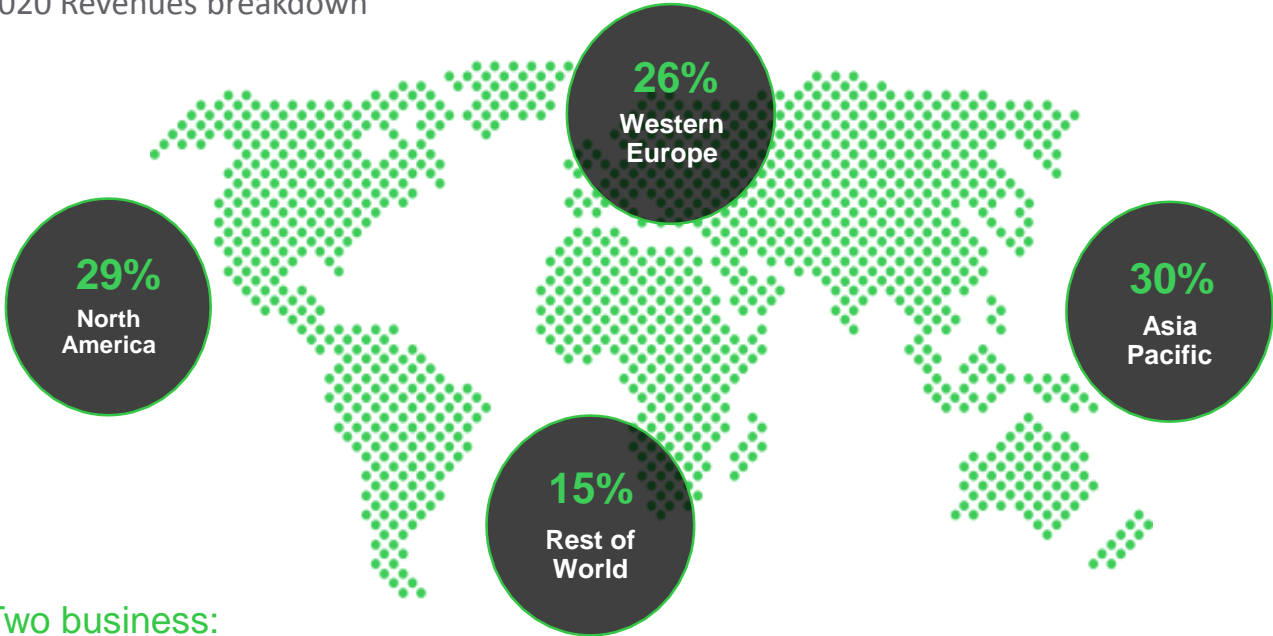
of revenues in new economies

128,500+

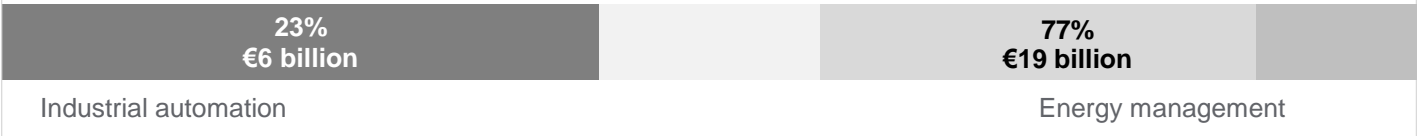
Employees in over 100 countries

A well-balanced global presence

2020 Revenues breakdown



Two business:



**We partner
in everything
we do**

650k service providers & partners

45k+ system integrators & developers

3k electricity companies

connected through

Schneider Electric Exchange

120M metric ton **CO₂** saved
on customers' end (2018-2020)

SF-6 Free
World First: Switchgear powered by air & digital

75%  Green Premium™

Carbon Neutral



**2021's most sustainable
corporation in the world**

Sustainability

**Our mission is to be
your digital partner for
Sustainability and Efficiency**

Digital disrupts Efficiency & Sustainability

3x IoT

IoT connections 2018-2025 (*GSMA)

>5x Big Data

generated data from 33 ZBs today to 175 ZBs by 2025 (*IDC, 2018)

6x AI

worldwide spending on cognitive and AI systems btw 2017 & 2022

(International data corporation)



How secure are you personally?





How secure is your company?



magnolia
pictures



What's happening in the world?

CROATIA

7 MOST-ATTACKED COUNTRY

| | |
|-----|-------|
| OAS | 821 |
| ODS | 359 |
| MAV | 1289 |
| WAV | 923 |
| IDS | 6020 |
| VUL | 11 |
| KAS | 10189 |
| BAD | 0 |
| SPY | 1 |

Detections discovered since 00:00 GMT

[More details](#)

Share data



Croatia is under cyber attack - only 6 other countries with more attacks



If someone takes over your control system infrastructure it could prove fatal



Causing power outages



Paralyzing transport systems



Triggering ecological catastrophes



Cyber-threats in Industry and infrastrucutre

- Over the last decade, there has been an exponential rise in cyber-attacks on critical infrastructure
- Strategic attacks are aimed at disrupting industrial activity for monetary, competitive, political or social gain, or even as a result of a personal grievance.



Power Grid

- World's first power outage caused by hackers (December 2015)
- Ukraine power grid cyber attack, 30 substations were switched off, ~230,000 people were left without electricity from 1-6 hours
- Prior compromise of corporate networks using spear-phishing emails
- Seized control of SCADA under control, remotely switching substations off
- In total up to 73MWh of electricity was not supplied



Network Information Security (NIS) Directive

EU 2016/1148

- The first European Union (EU) wide cybersecurity legislation
- As an EU directive, every EU member has to adopt national legislation

Part 1

National
capabilities

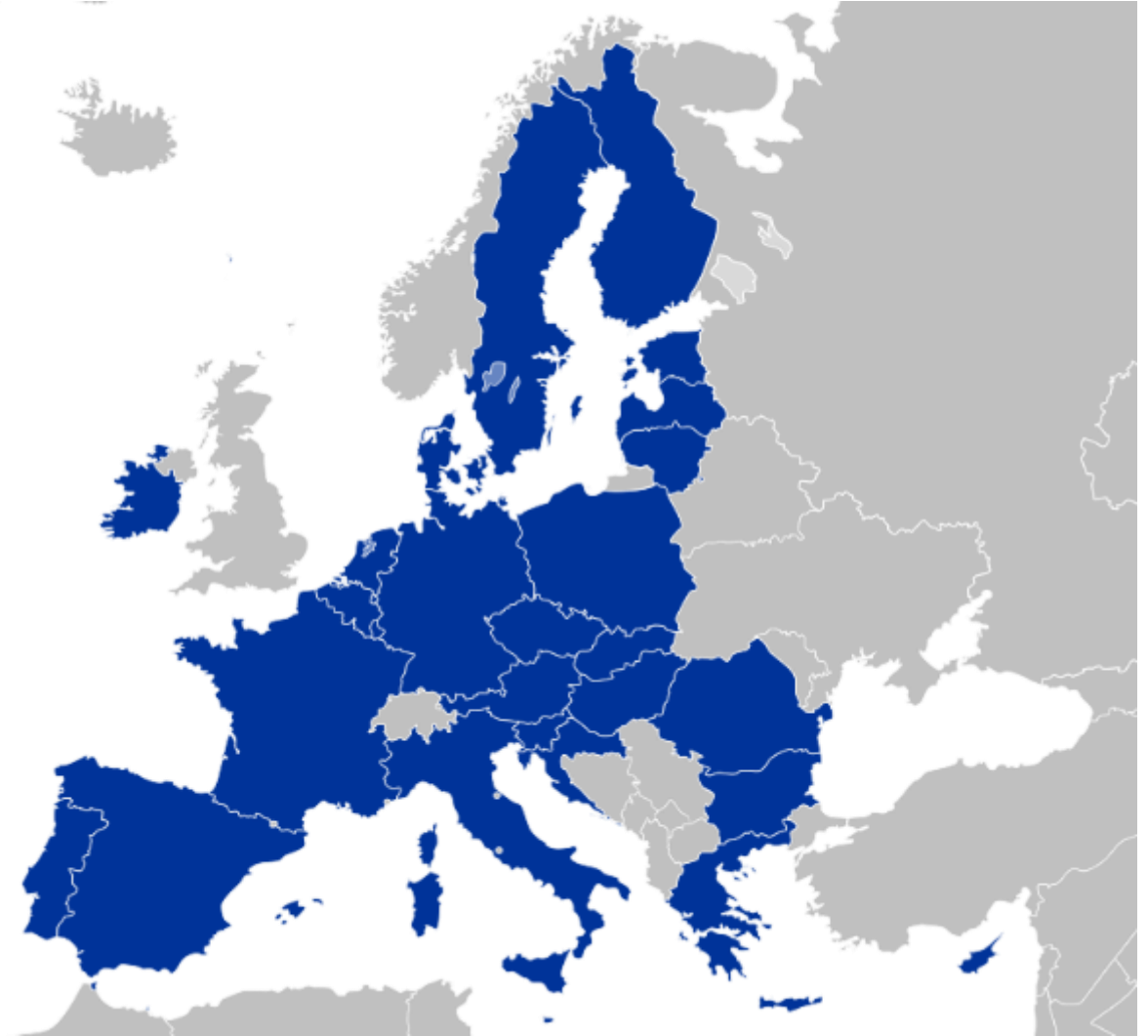
Part 2

Cross-border
capabilities

Part 3

National
supervision of
critical sectors

The deadline for EU member
states was: **9th May 2018**



Cybersecurity Solutions & Services Business

Our **Mission**

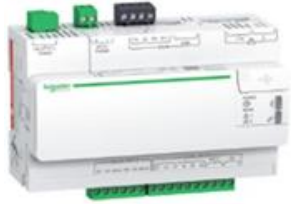
- 1 **Provide customers with operational technology (OT) cybersecurity services & solutions** to meet their security objectives, comply with standards, and assist in their digital transformation.
- 2 Provide these services & solutions **wherever OT network infrastructures converge with IT platforms.**
- 3 **Consistently innovate new OT cybersecurity solutions** and **integrate best in class technologies**, creating a foundation partner for operational stability and digitization.



EcoStruxure™ Architecture



Sample Certified Products



Energy Server
Com'X 200



Modicon TM3
Bus Coupler



ION9000



Easergy
P5



MiCOM
C264



MiCOM
Protection Relay



PacDrive LMC
Motion Controller



M241 PLC



M251/M261 PLC



Proface &
Magelis
HMI



SCADAPack
RTU



Foxboro DCS
Control Network
Interface



Eurotherm
EPC3000 Controller

Certification underpins cybersecurity technology

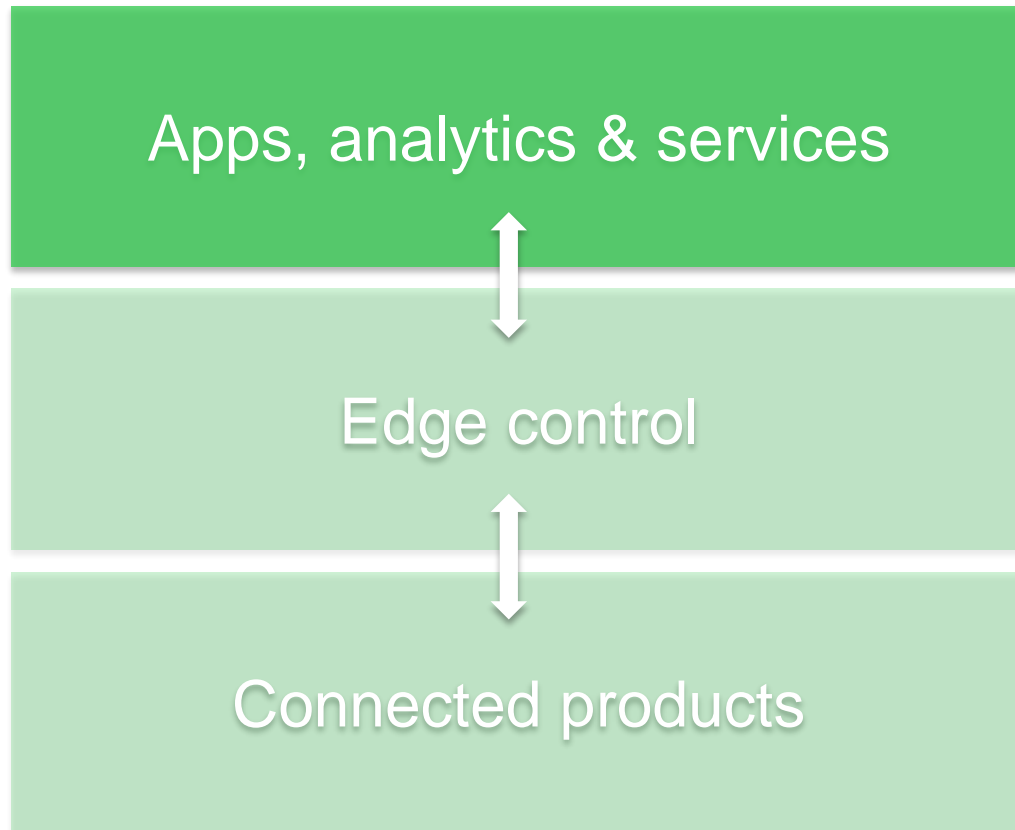
IT/Cloud solutions respecting IT Cybersecurity Standards

ISO/IEC 270xx

Information Security Management Systems



EcoStruxure layers



Schneider Electric selected the ISO/IEC 27001 and 27017 for its **Cloud offer** (Apps, analytics, infrastructure).

This includes people, process and IT systems

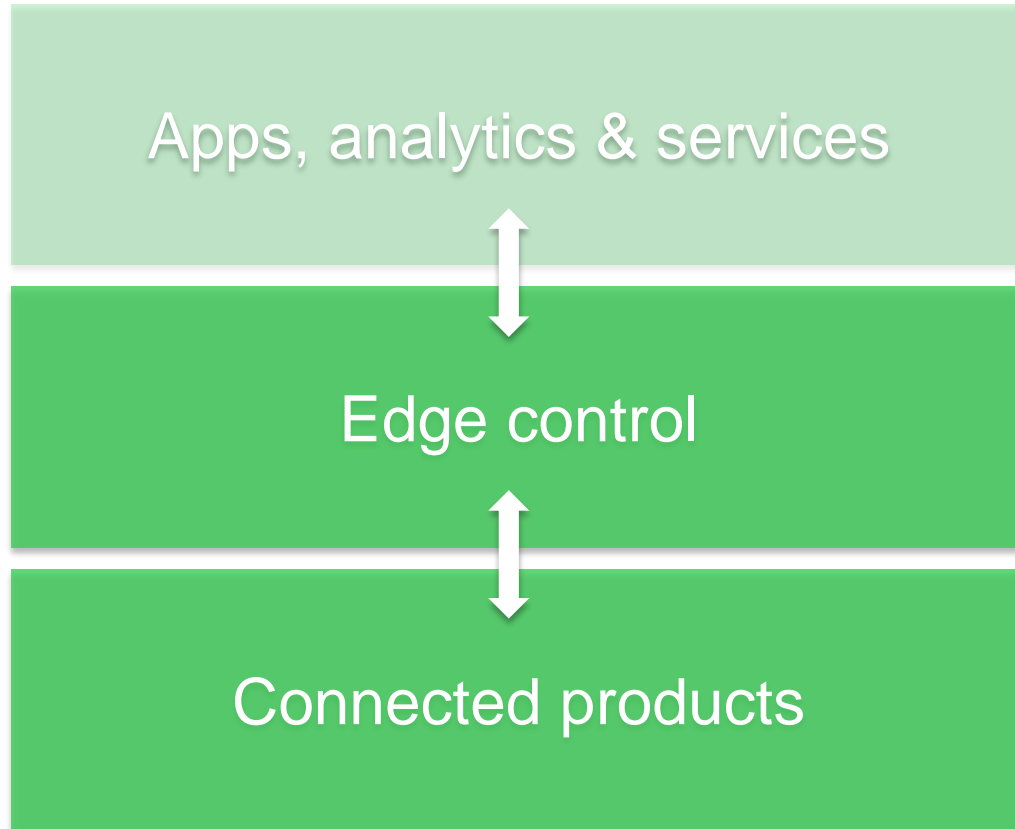
Products and Solutions respecting OT Cybersecurity Standards

IEC 62443 (formerly ISA99)

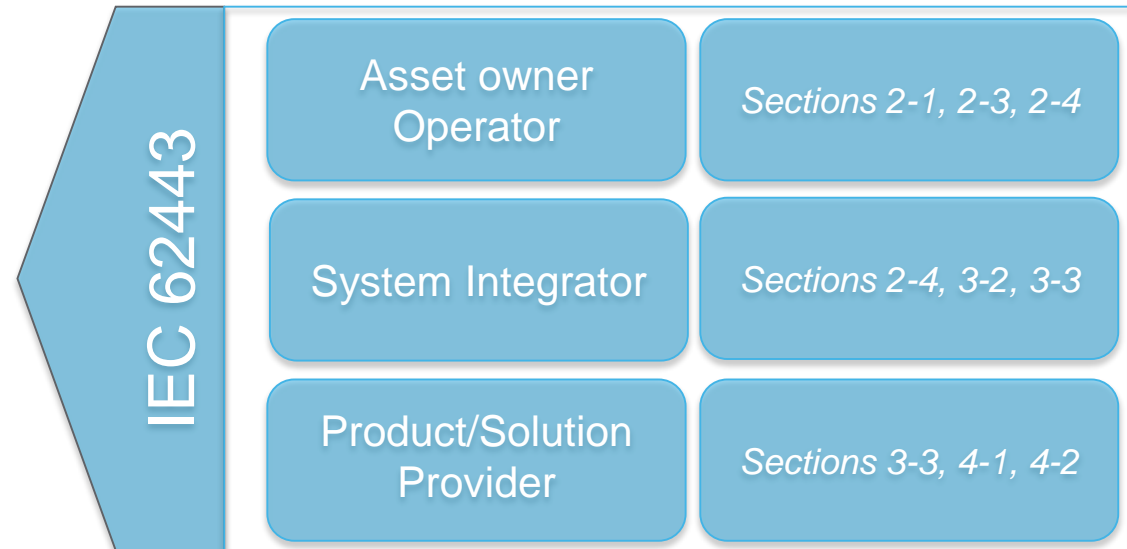
Security for industrial automation and control systems



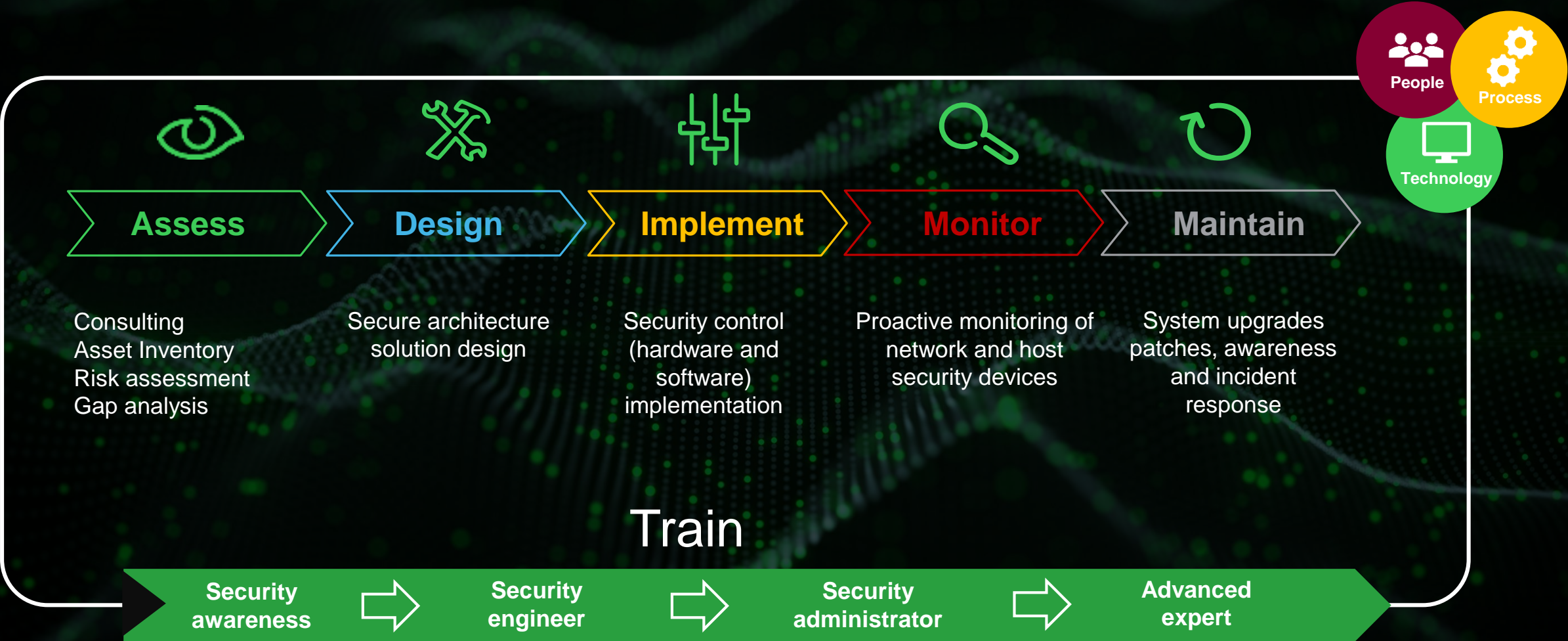
EcoStruxure layers



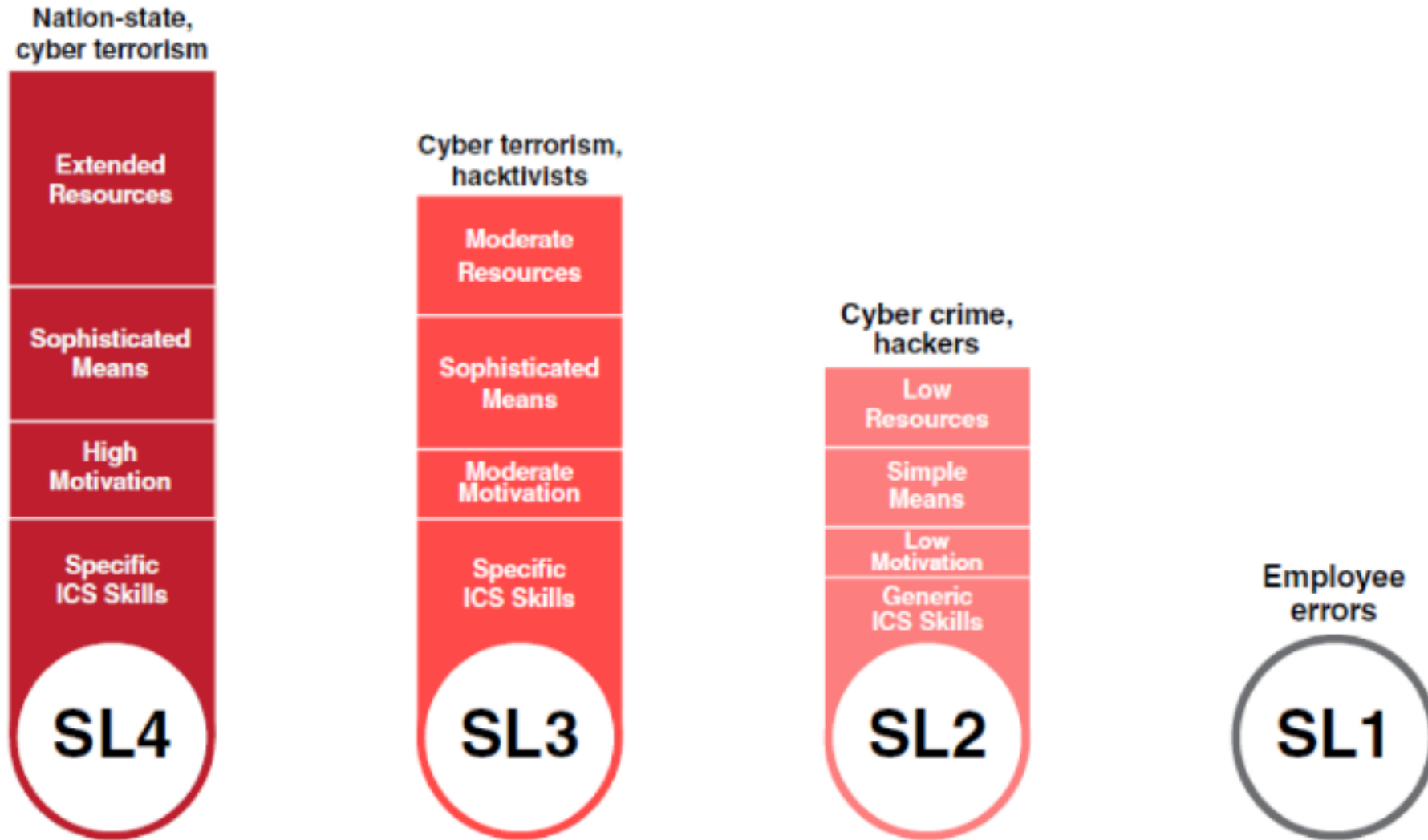
Schneider Electric selected the IEC 62443 as its core cybersecurity standard at **OT System and Product level**



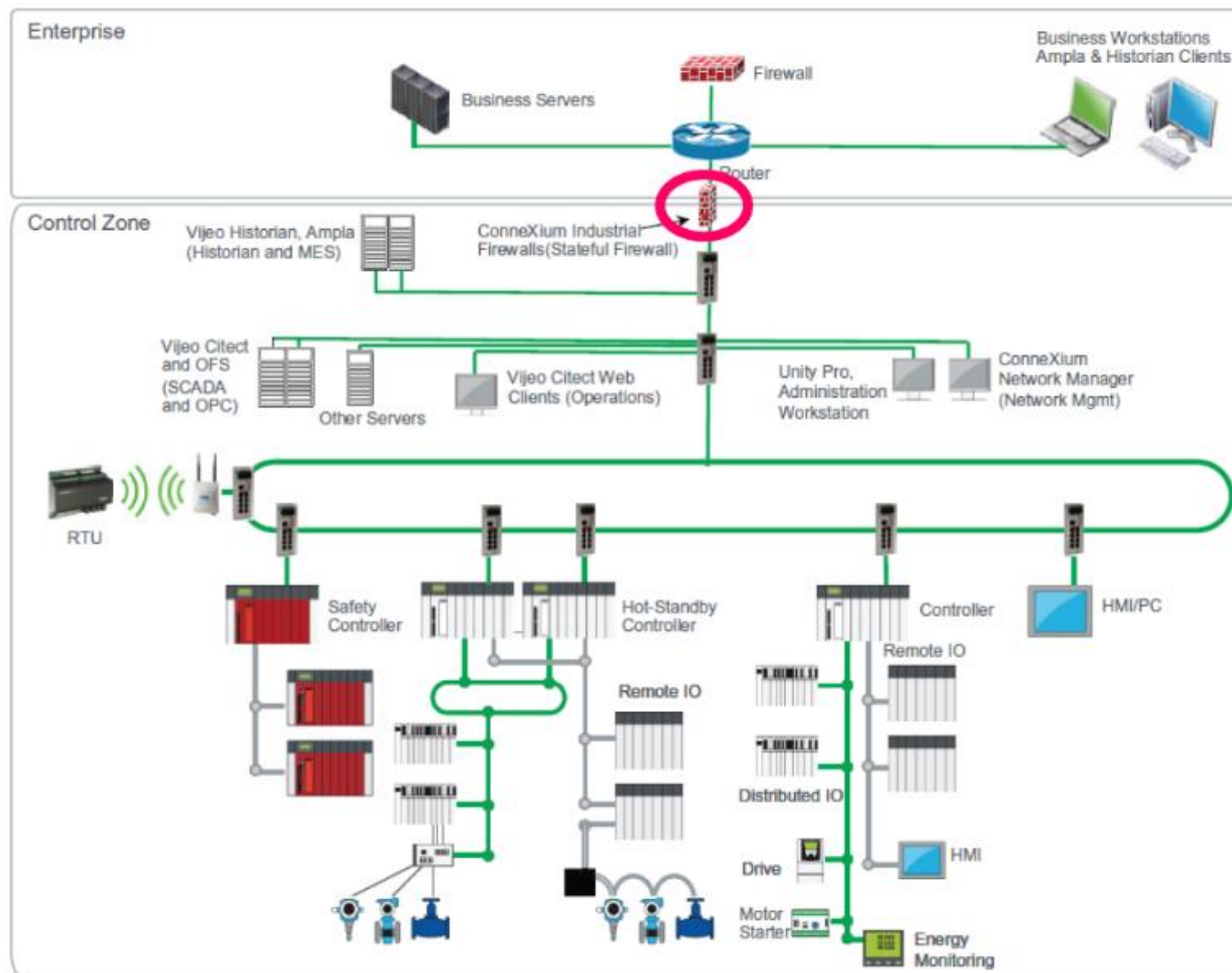
Cybersecurity services for the operational life cycle...



... targeting achievement of specific Security Levels, as per IEC62443



SL 0

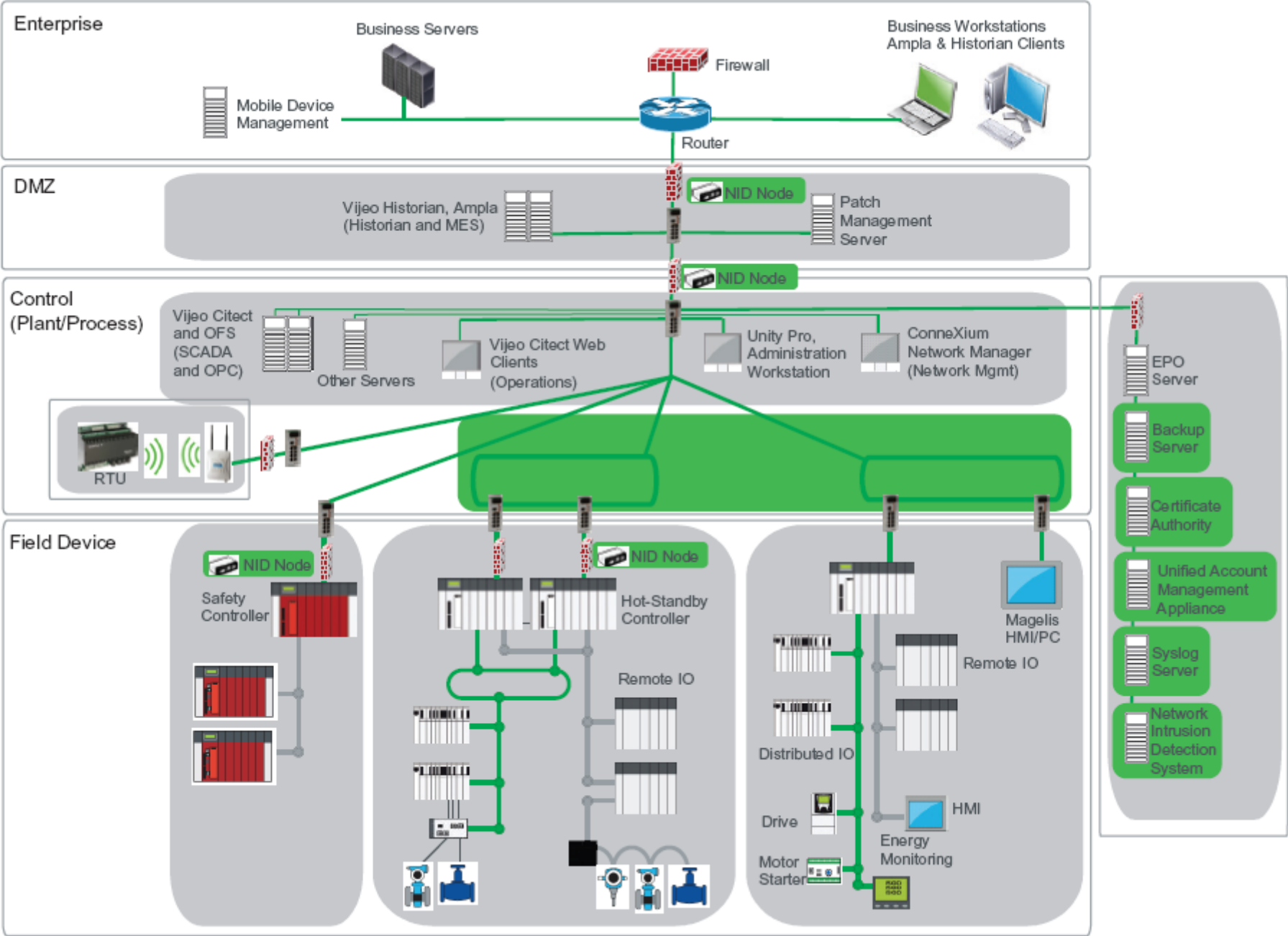


Confidential Proper

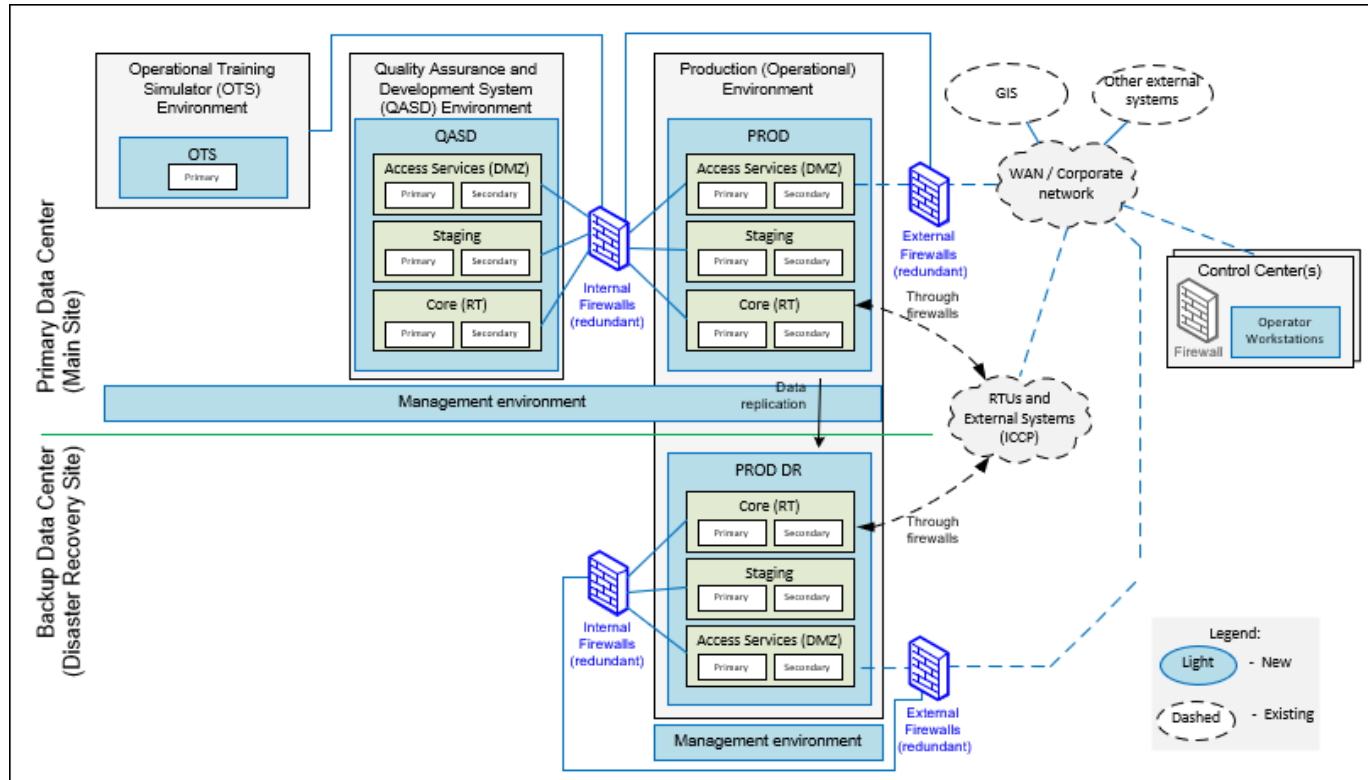
Life Is On



Sample SL 2



Ecostruxure for Power Utilities: sample integrated SL2 Cybersecurity features



- **Network Security**
 - Internal and External Firewalls Security configuration (including hardening, ACLs, User Management, Monitoring)
 - Implementation of a dedicated Zone for CS
 - Hardening of Network Components
- **Encrypted communications**
- **Centralized authentication and authorization system + Multifactor Authentication**
- **Centralized endpoint protection system**
 - Endpoint Security (ENS)
 - Application whitelisting
 - Removable Device Control
- **System Event Logs management, Integration with SIEM**
- **Windows Server Update Services (WSUS) Server**
- **Host System Configuration Hardening**
- **Asset Inventory + Network Security Monitor**
 - Anomaly Detection System, Inventory and Network Performance
- **Secure Remote Access**

Drawing on our ecosystem of partners (a few highlighted here)



Life Is On

Schneider
Electric

Life Is On

Schneider
Electric