



Industry Business

Helping you to produce more while using less of your energy

Speaker's name

Date

Place



Schneider Electric

The global specialist in energy management

22,4

billion € sales in 2011

39

% of sales in new economies

130,000+

people in 100+ countries

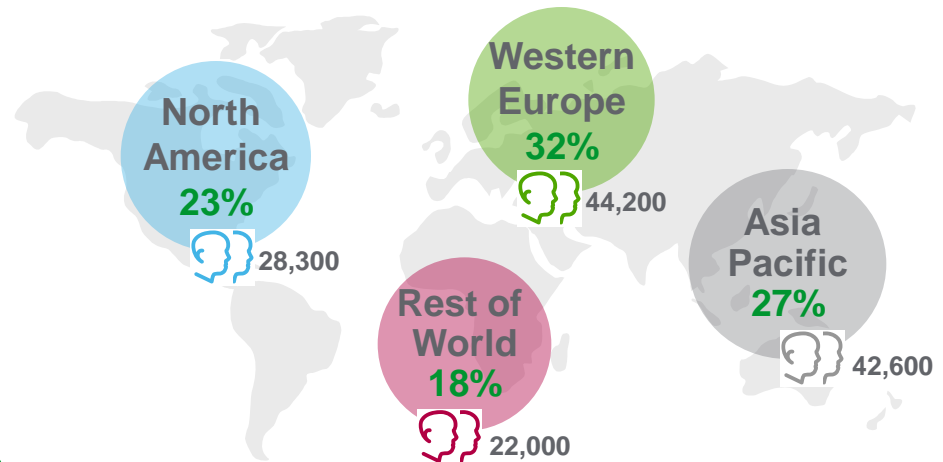
4-5%

of sales devoted to R&D

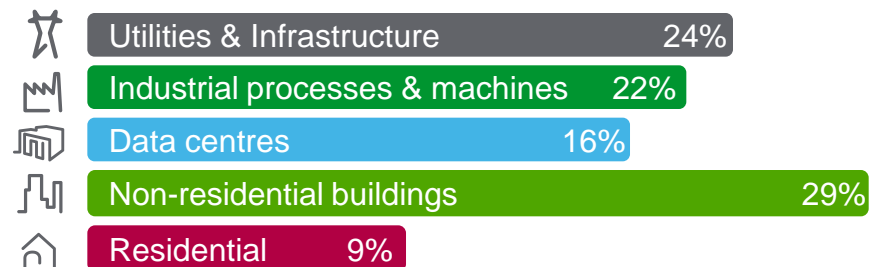
Listed on the Paris
Stock Market – CAC40

Balanced geographies – FY 2011 sales

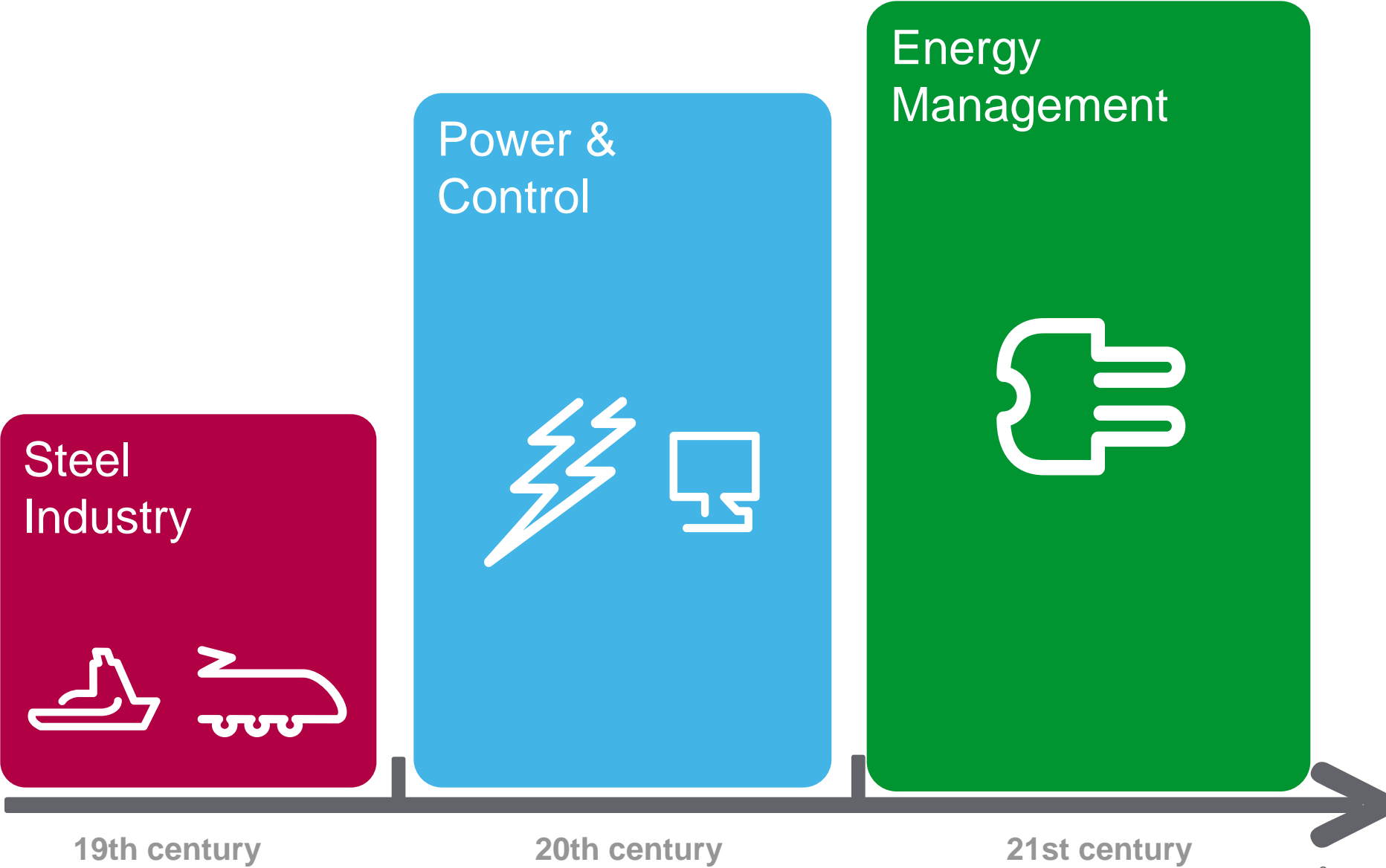
Year-end 2011 employees



Diversified end markets – FY 2011 sales



More than 175 years of history



A unique positioning

Global specialist in Energy Management

Energy production & transmission



Making energy:

- Safe
- Reliable
- Efficient
- Productive
- Green

Covering
72%
World Energy
consumption

up to
30%
energy saving

Energy usage



Industrial Processes and Machines

Business size

€4.4bn

#2

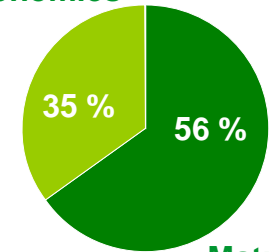
worldwide
Industrial automation

Strategic directions of the Business

- **Solutions and architectures** for Machines and Plants
- **Best in Class** products
- **Targeted Segments**
- Solutions for **Energy Management** and **Installed Based Services**

Geographies

New economies



Mature countries

Main levers of differentiation

- **Global Coverage**
- **Comprehensive solutions** for our customers
- **Energy Management** through EcoStruxure

Multiple delivery channels

to meet customer needs...

End Users / System Integrators

OEM Machine Builders

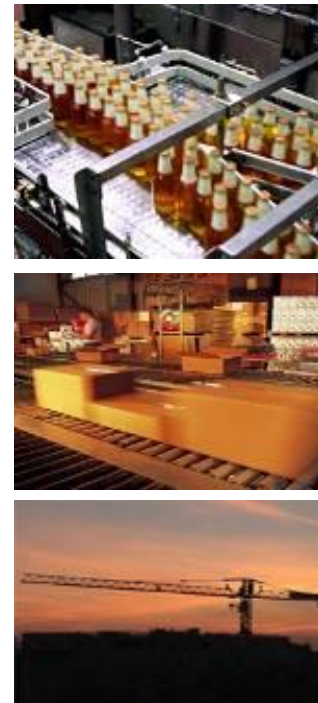
OEM Panel Builders

Distributors

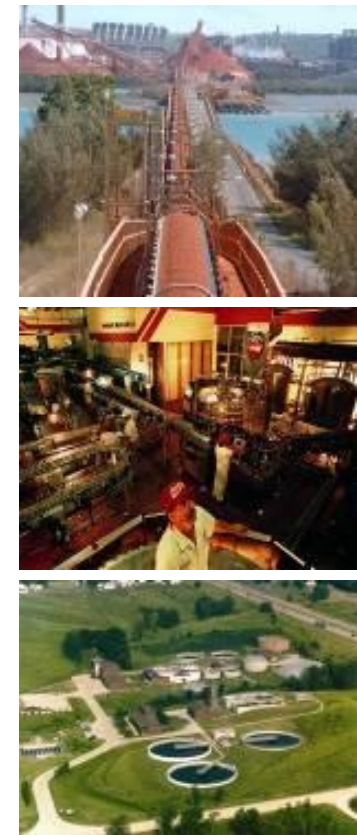


Automation
Components

Automation
Bundles



Machine
Solutions

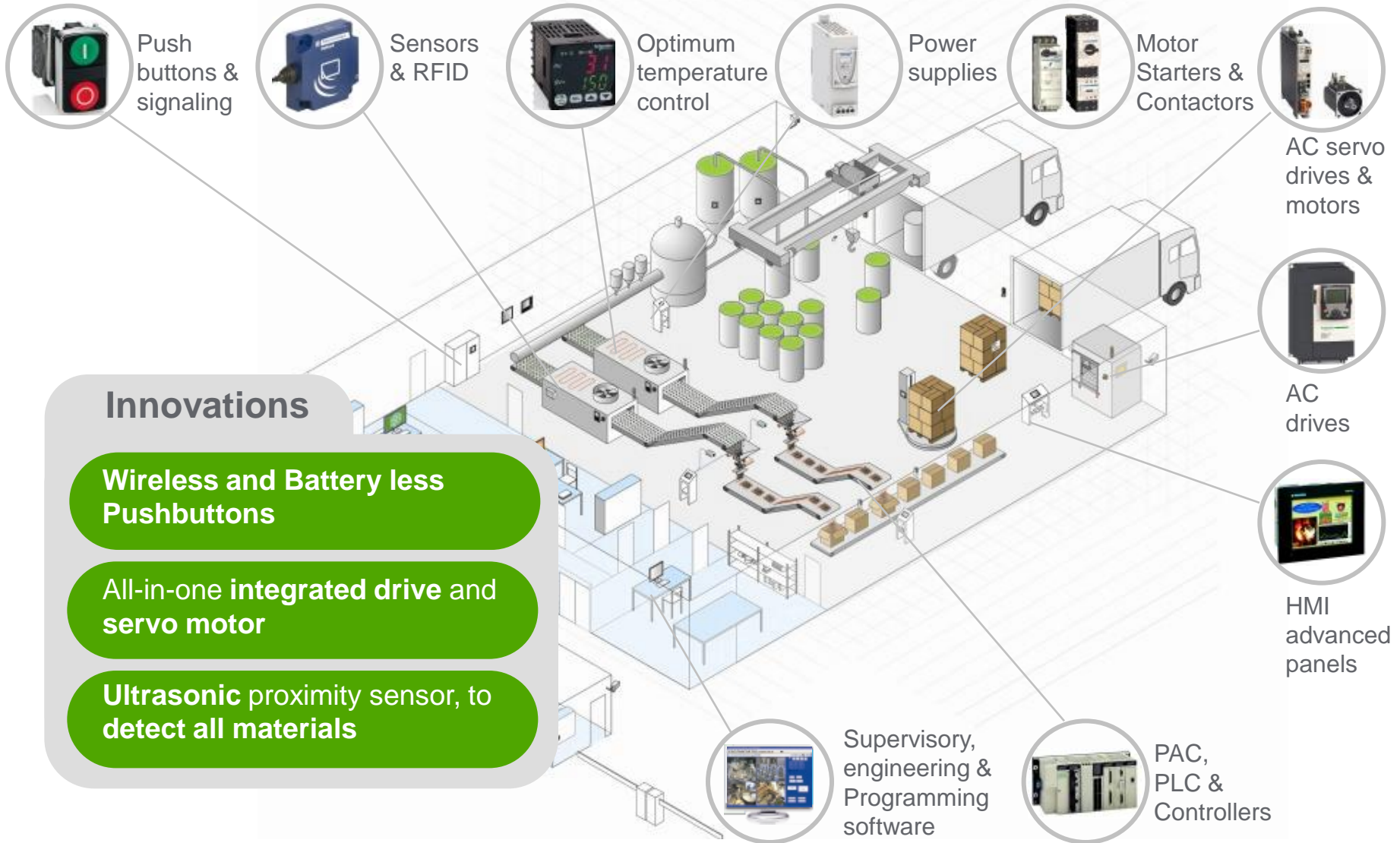


Plant
Solutions

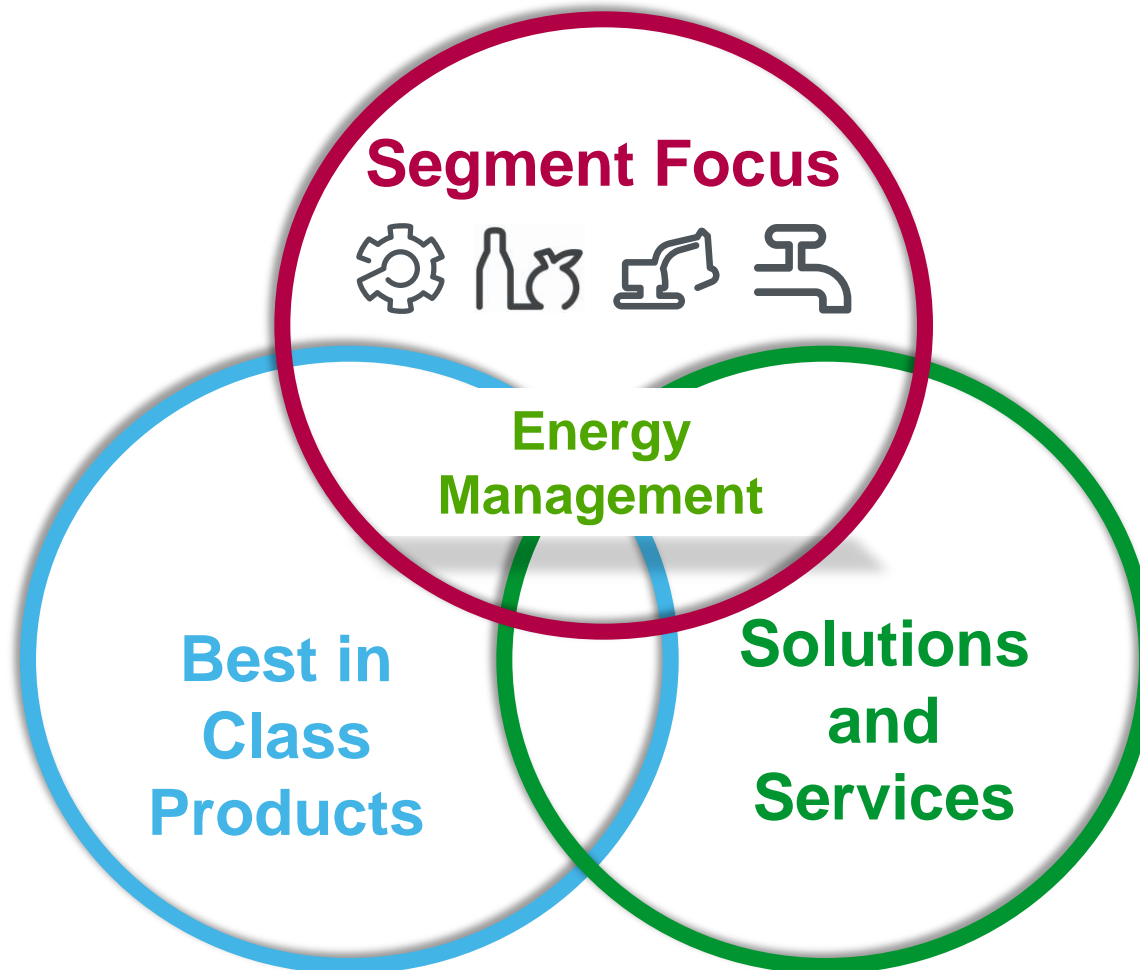
Product Business

Solution Business

Industry Products



Our Vision



We see a world where our industrial customers produce more while using less of their energy

How do we do it?



An iceberg floating in the ocean. The tip of the iceberg is visible above the water surface, while the much larger, jagged base is submerged below. The sky is blue with light clouds, and the water is a deep blue.

Schneider Electric can help beyond the easily identifiable energy efficiency opportunities

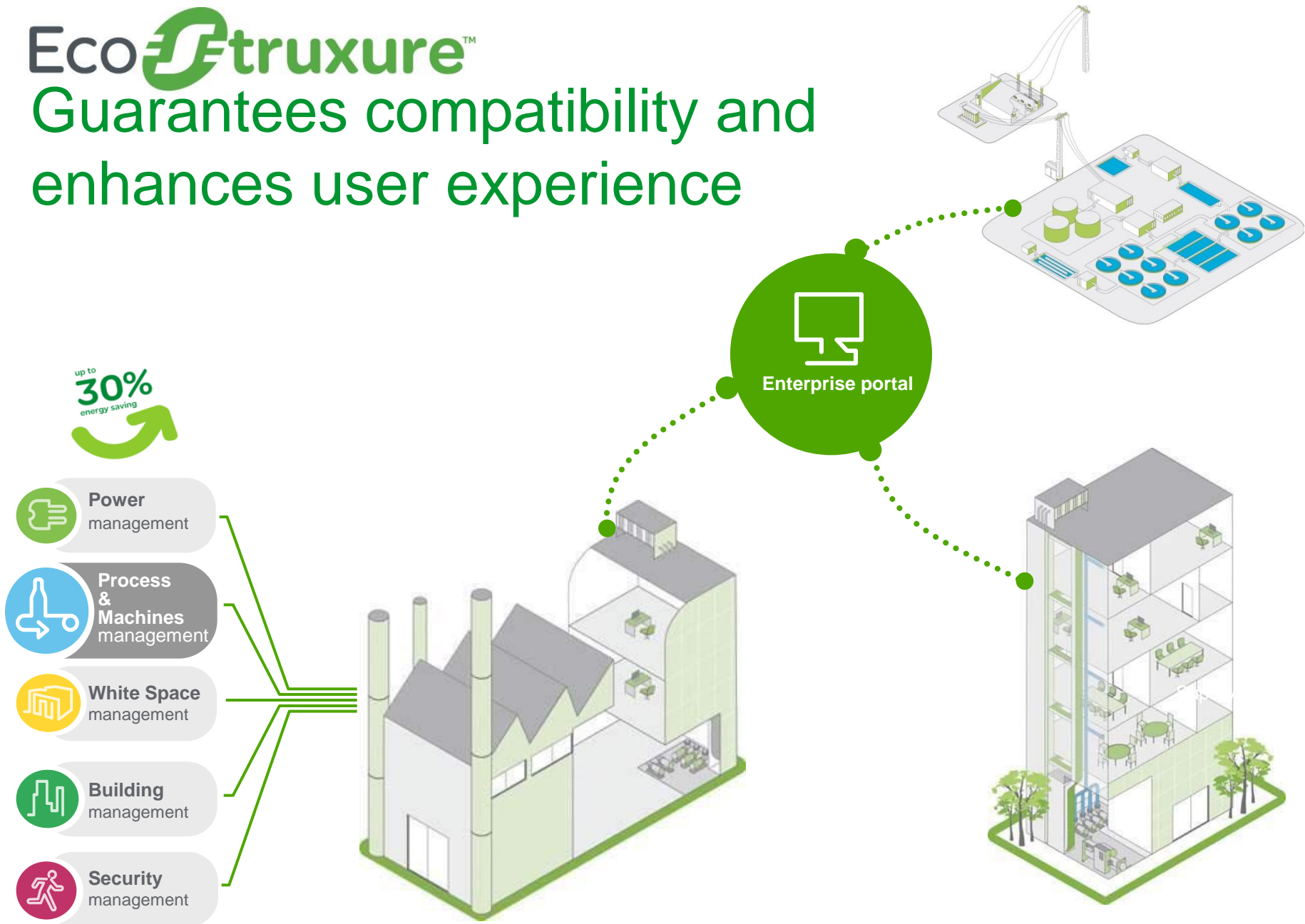
Less obvious, but with higher impact:

Energy Efficiency through process and machine efficiency...

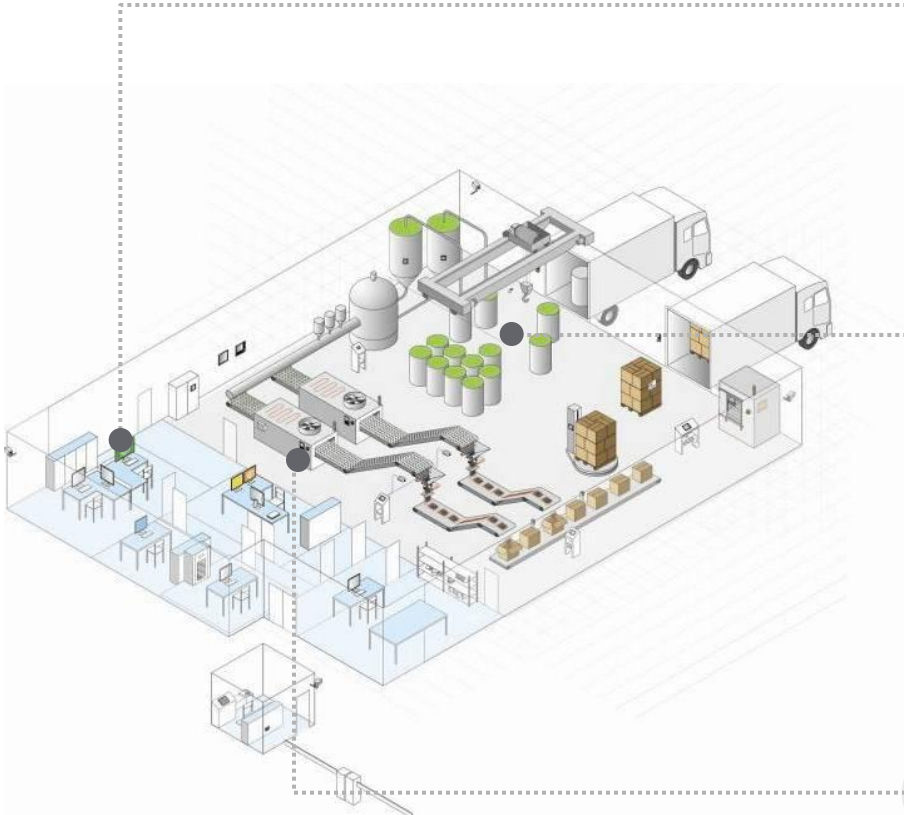
- Energy Procurement Services
- Process Optimization
- Asset Management
- Energy Audits
- Demand Response
- Renewable Integration

EcoStructure™

Guarantees compatibility and enhances user experience



Process & Machine Management



StruxureWare



Business Process
SoCo Project > **Process Expert**



Business Operations
Ampla > **Plant Operation**



Plant Struxure™

Allows industrial and infrastructure companies to meet their automation needs while delivering on growing energy management requirements. In a single environment, measured energy and process data can be analysed and used to yield a holistically optimized plant.



Machine Struxure™

Helps machine-building OEMs achieve faster, lower-risk, and more energy-efficient designs and installations through the use of tested, validated, and documented architectures and function blocks incorporating flexible machine control, a seamlessly integrated hardware platform, and a comprehensive and integrated software suite called SoMachine™.



Delivering Projects and Services Worldwide

Specialty Consulting

- Continuous improvement initiatives
- Energy audits
- Asset utilization and plant optimization
- Plant maintenance optimization

Project Management

- Proven engineering processes
- Strong partner network
- Project planning, control and certification
- Risk and issue management
- Cost and budget management

System Design

- Scope and requirements definition
- Application design best practice
- ExcoStruxure standards & design, proven architectures
- 3rd party product integration (ERP, Historian, OPC etc)
- Hardware architecture and interface design

Project Engineering

- Configuration and custom development
- System integration and implementation
- System and user optimization
- Hardware programming and configuration

Installation Lifecycle

- Migration services for legacy and 3rd party systems
- On site support and training
- Spares and repairs
- service and maintenance contracts

837 partners in 37 countries

Australia
Austria
Belgium
Brazil
Bulgaria
Canada
China
Colombia
Czech republic
Denmark
Estonia
Finland
France
Germany
Iceland
India
Indonesia
Ireland
Italy

PlantStruxure certified

Alliance integration partner
with

Schneider
Electric

or

Collaborative Automation
by

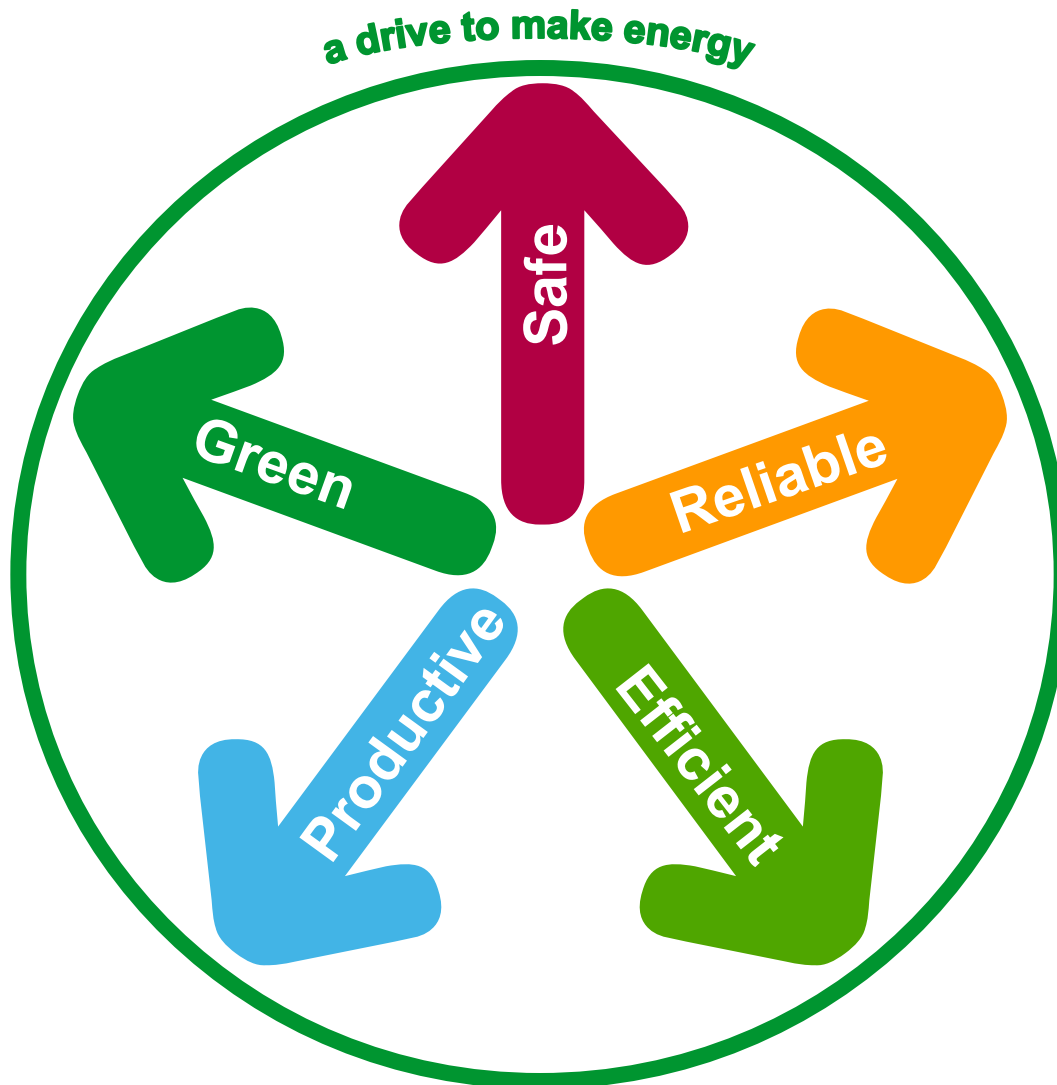
Schneider
Electric

Malaysia
Mexico
Namibia
Netherlands
New Zealand
Poland
Portugal
Russia
Saudi Arabia
Serbia
Singapore
South Africa
Spain
Sweden
Switzerland
Thailand
United Kingdom
USA

In detail



The energy equation: a system under tension and conflict



- Environmental impact
➤ People safety
➤ Asset integrity
- Energy availability
➤ Energy quality
➤ Offer quality
- Energy efficiency
➤ Reduced Opex
➤ Reduced Capex
- Deployment speed
➤ Ability to integrate
➤ Ability to scale
- Carbon free
➤ Easy installation
➤ Easy connection

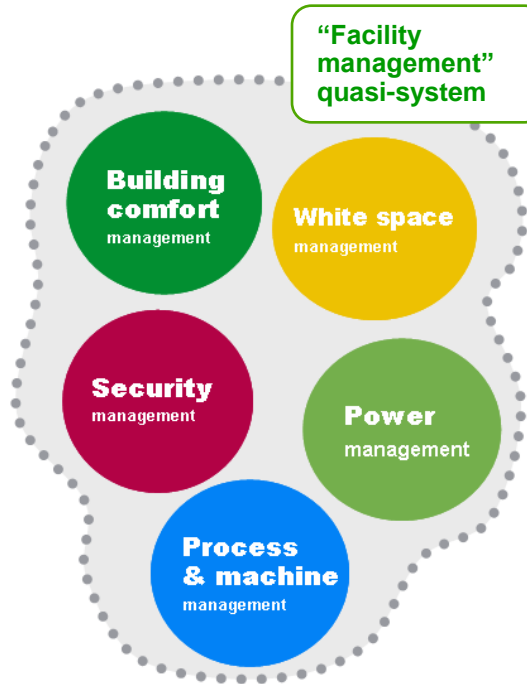
The evolution of management systems for facilities

1 Emerging ability to answer basic questions



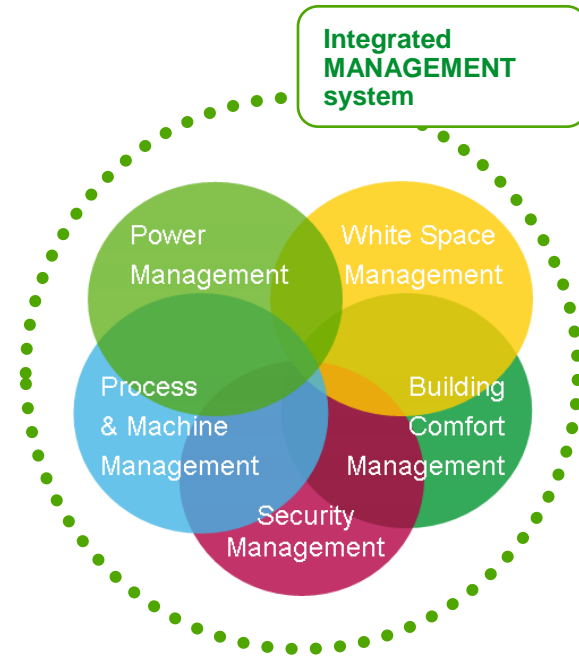
The five management “domains” take shape

2 Getting better – “separate but equal”



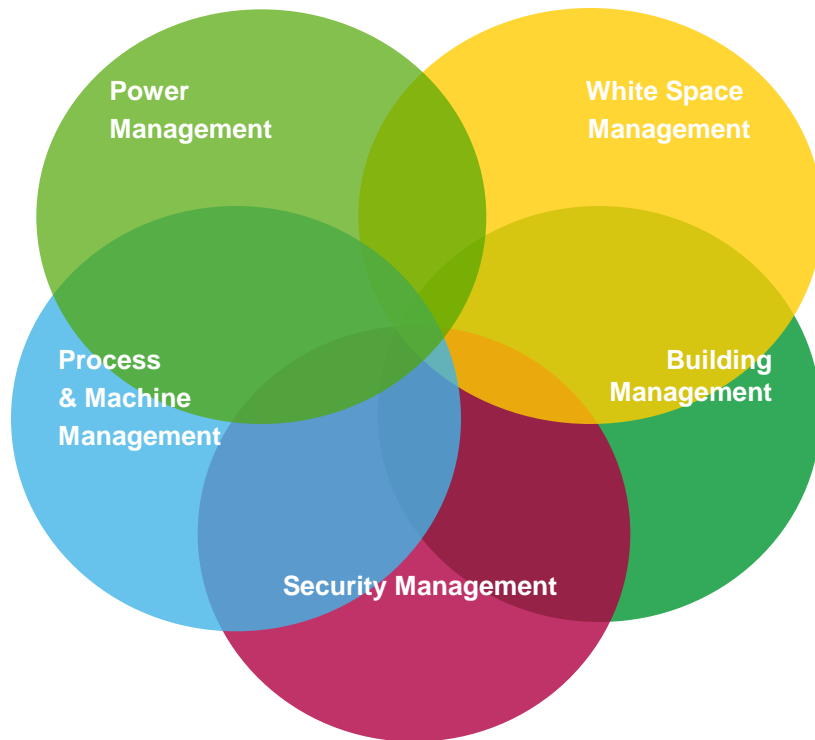
The reign of “domain excellence”

3 Moving toward “solution excellence”



Domain excellence + collaboration evolves towards “solution excellence”

EcoStruxure™: the right ecosystem to support the convergence of 5 key domains

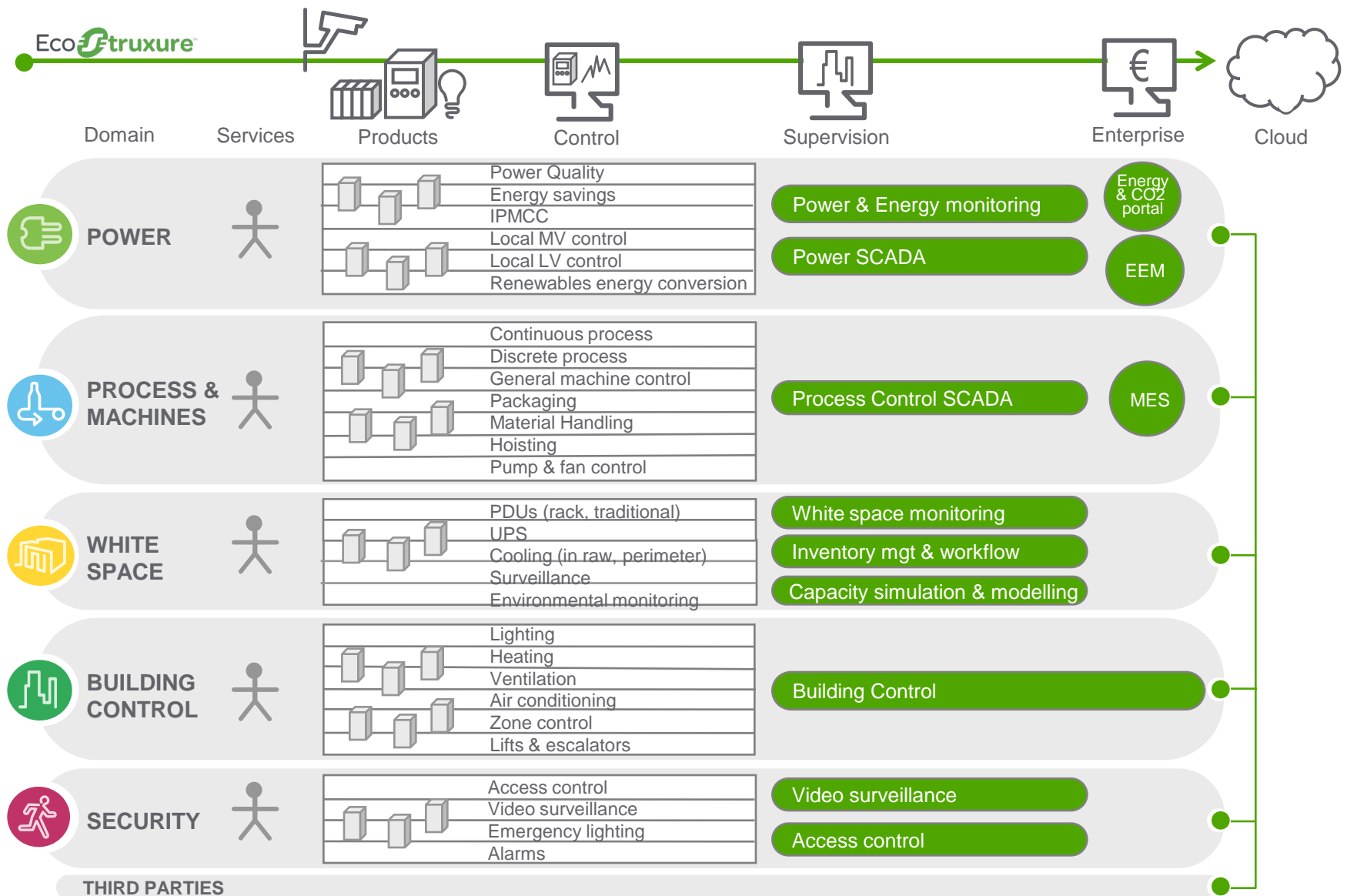


EcoStruxure™ promise:

- Guaranteed compatibility / synergy / capability between the 5 domains of expertise
- Energy monitoring everywhere, with up to 30% EE
- Enabled by the right connecting technologies:
 - IP as a common highway
 - Web services as a common language (SOA architectures)

Making energy safe, reliable, efficient, productive and green

A complete system approach



EcoStruxure™ optimizes energy

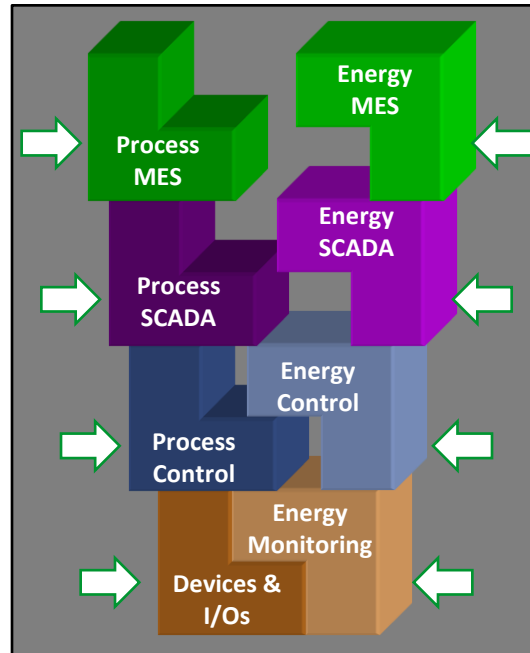
by connecting automation & control with energy monitoring

EcoStruxure™



Process Control & Automation

- Optimize Production
- Maximize availability & assets utilization.



Energy Control & Monitoring

- Optimize Consumption
- Maximize availability & energy utilization.

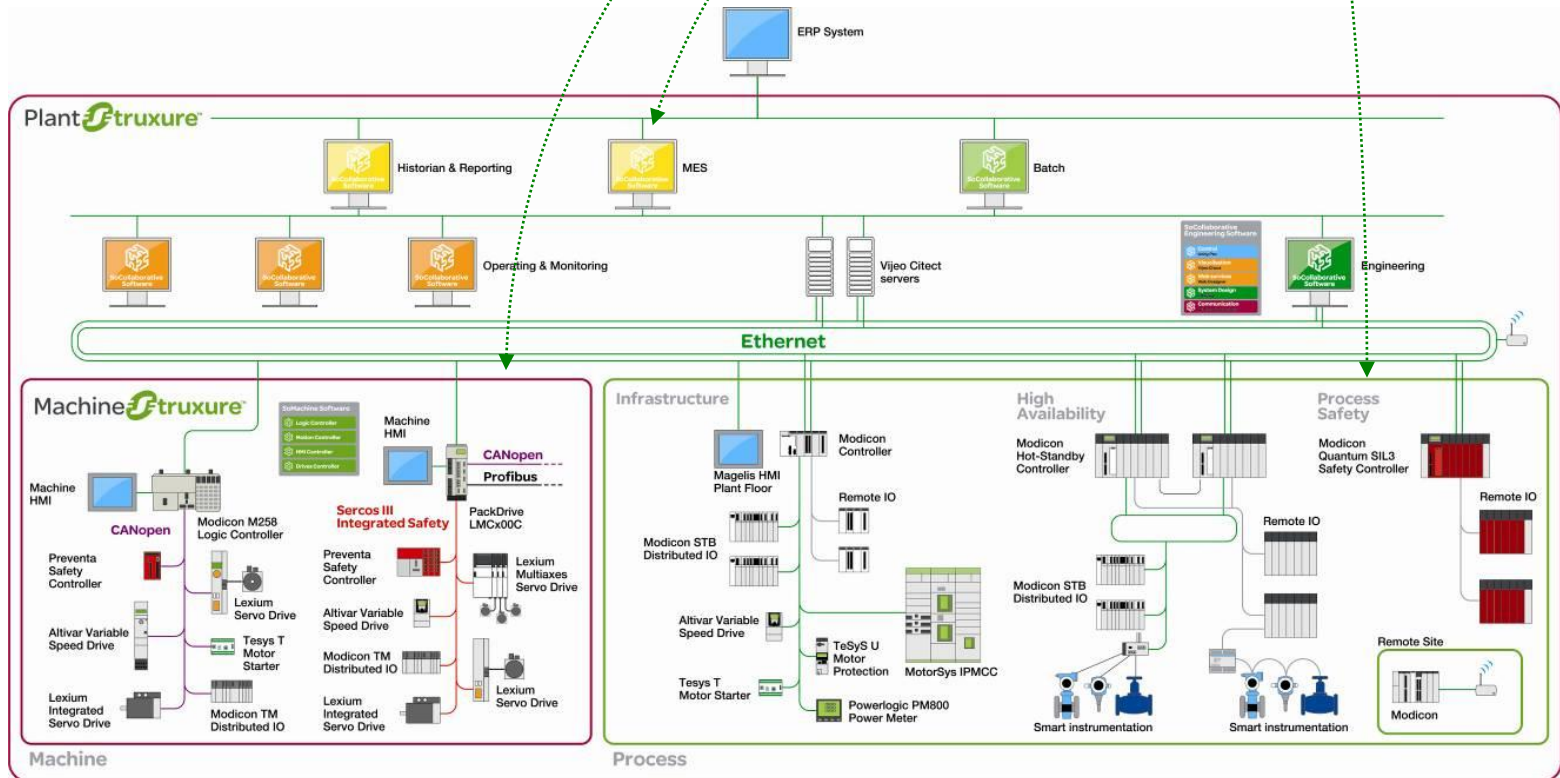
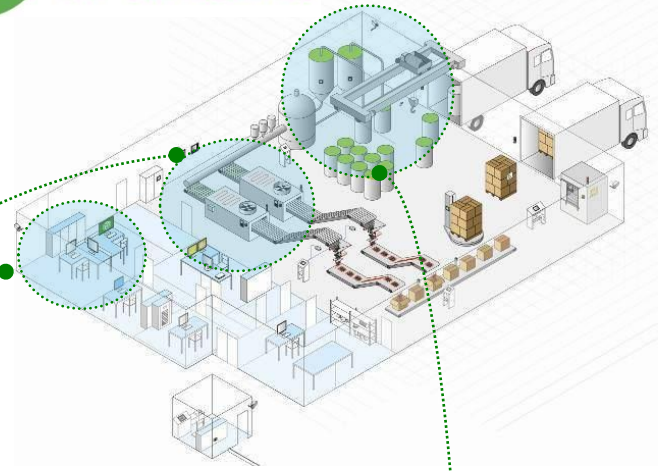
Collaborative architecture bridging silos to yield optimized plants & processes.

Production energy optimization: reduced energy consumption per unit of production & improved emissions reporting.

Better consumption forecasting, critical for engaging in demand-response programs.

Plant truxure™ + Machine

Help you manage your process more efficiently while using less energy



Reduce complexity for OEMs

One single software environment

Unique TVDA* value proposition

End-to-end service support

Simple and easy to use

> Integrated software SoMachine:

Simplify machine programming & commissioning



> 4 hardware control platforms

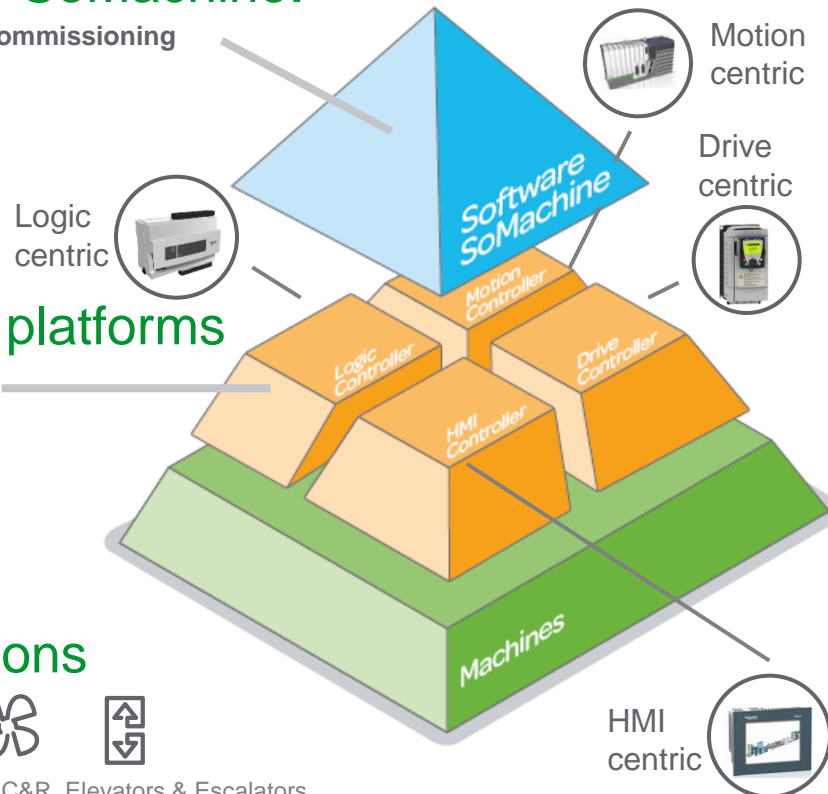
Embedded Intelligence where it is needed



> 6 targeted applications



Hoisting, Textile, Packaging, Conveying, HVAC&R, Elevators & Escalators



- > Speed up “concept to design”
- > Optimise machine production, flow and capacity
- > Optimise on-site intervention costs

TVD Architectures

- **Tested**

- Tested in laboratory by experts
- Ensuring the right functional performance in all possible configurations

- **Validated**

- Full functional compatibility of the devices

- **Documented**

- A complete user guide gives all the details required for installing and building your application with confidence
- Ready to use with e-plan: predefined CAD panel designs & wiring diagrams



- Up to 50 % control system design time savings
- Installation time reduction

Innovation for Simplicity

Simplified offers

Modicon M218 Controller for new economies



Getting closer and being more responsive to local needs
Adapting our offer to meet customer needs

Simplified maintenance

Altivar 32 and Lexium 32 drives

- MMS
- e-mail
- Wap
- Internet



Send-Receive Configuration everywhere & any time
Upload-Download Configuration with Drive
Monitor-Control Drive

Best
In
Class

Self powered wireless pushbutton and Magelis STU



Ø 22mm mounting system
Ethernet embedded
Powered by Vijeo Designer



Ensure permanent availability - battery less
Robustness for harsh environment
Mobile control

Simplified assembly

Altivar 212 – for HVAC applications



Communications with all BMS

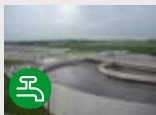
- Modbus
- Apogee FLN P1
- Metasys N2
- BacNet

Dedicated HVAC features/blocks

Simplified integration

Ecostruxure™ references

Wastewater Treatment Plant, Csepel (HUNGARY)



The new Europe's largest wastewater treatment plant

- **95%** of wastewater treated instead of 54%.
- **15%** design cost reduction
- Budapest City will comply with European Union regulation
- The new wastewater treatment plant will allow Energy efficiency



Global supervision
> Vijeo Citect SCADA



Power management

- Power quality mitigation
- Local LV/MV protection & control
- Intelligent power & motor control



Process and machines management

- Process automation
- Pump & fan control



Services

- Complete study and design of the architecture.
- Project management
- Standardization and objects library creation
- Full delivery and commissioning of motor control, process automation and energy efficiency from MV to LV.

Ecostruxure

Torre Vieja Alicante Desalination plant (SPAIN)



One of the leaders in reverse osmosis desalination

- **20%** energy savings
- Reduction of the electrical risks to guarantee the equipment operation and the people protection
- Ergonomic solution that offers easy maintenance, long life utility and easy future upgrades



Global supervision
> Vijeo Citect SCADA



Power management

- Metering
- Power quality mitigation
- Local LV/MV protection & control
- Intelligent power & motor control



Process and machines management

- Process automation
- Industrial applications control
- Pump & fan control



Services

- Commissioning
- Installation
- Tests
- Programming & configuration

Ecostruxure

Cementos Argos (COLOMBIA)



One of the most important cement manufacturer in Latin America, invested to build the largest plant in the region

- **10%** energy savings tracked and sustainable along the time



Global supervision
> ION E and Citect SCADA



Power management

- High density metering
- Power quality mitigation
- Local LV/MV protection & control
- Intelligent power & motor control



Process management

- Substation automation



Services

- Commissioning
- Installation
- Tests
- Programming & configuration

Ecostruxure

Make the most of
your energy™

