Technology ,
Energy Performance
& Behaviors

2015 November 13th

Jean-Jacques MARCHAIS - Schneider Electric

 IEA workshop influencing business behavior and
decision-making towards increased energy efficiency

Schneider Electric

Energy is the base of life.

Life Is On

when energy is on……

We ensure energy is on by making it

- Safe
- Reliable
- Efficient
- Connected
- Sustainable

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Schneider Electric,
the global specialist in energy management and automation

€25 billion
FY 2014 revenues

~5%
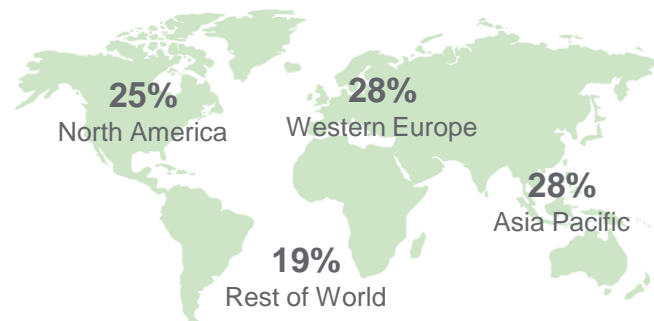of revenues devoted to R&D

~170,000
people in 100+ countries

Diversified end markets – FY 2014 revenues[1]

Non-residential & Residential Buildings	Data Centers & Networks	Industrial & Machines	Utilities & Infrastructure
33%	14%	27%	26%
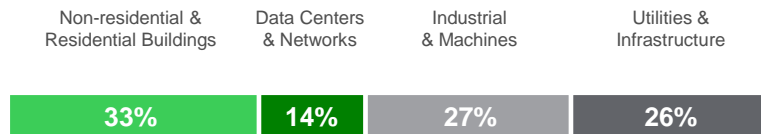
Balanced geographies – FY 2014 revenues[1]

25% North America

28% Western Europe

28% Asia Pacific

19% Rest of World

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Technology , Energy Performance   & Behaviors

- Measuring , metering is the initial step of energy management and can change behaviors

- Then comes Control - Automation & Management

- With Increasing level of system deliverables

- In a more and more holistic performance coverage

- Within the New World of Energy : Distributed & Connected

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Metering is the initial step of energy management and can change behaviors by :
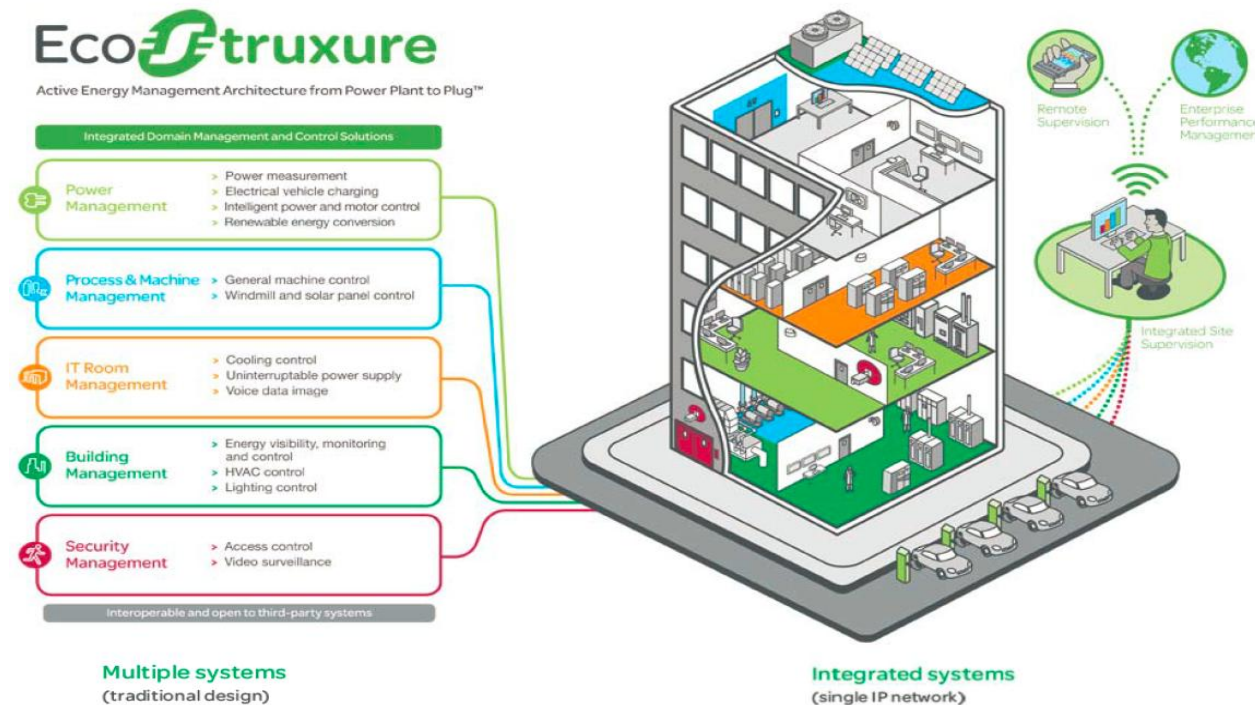
- Energy consumption & cost allocation

- Energy sub-billing

- Energy usage analysis

- Building energy performance benchmarking

- Electrical distribution asset management

- Energy consumption alarming

- Bill auditing (shadow metering) and energy procurement

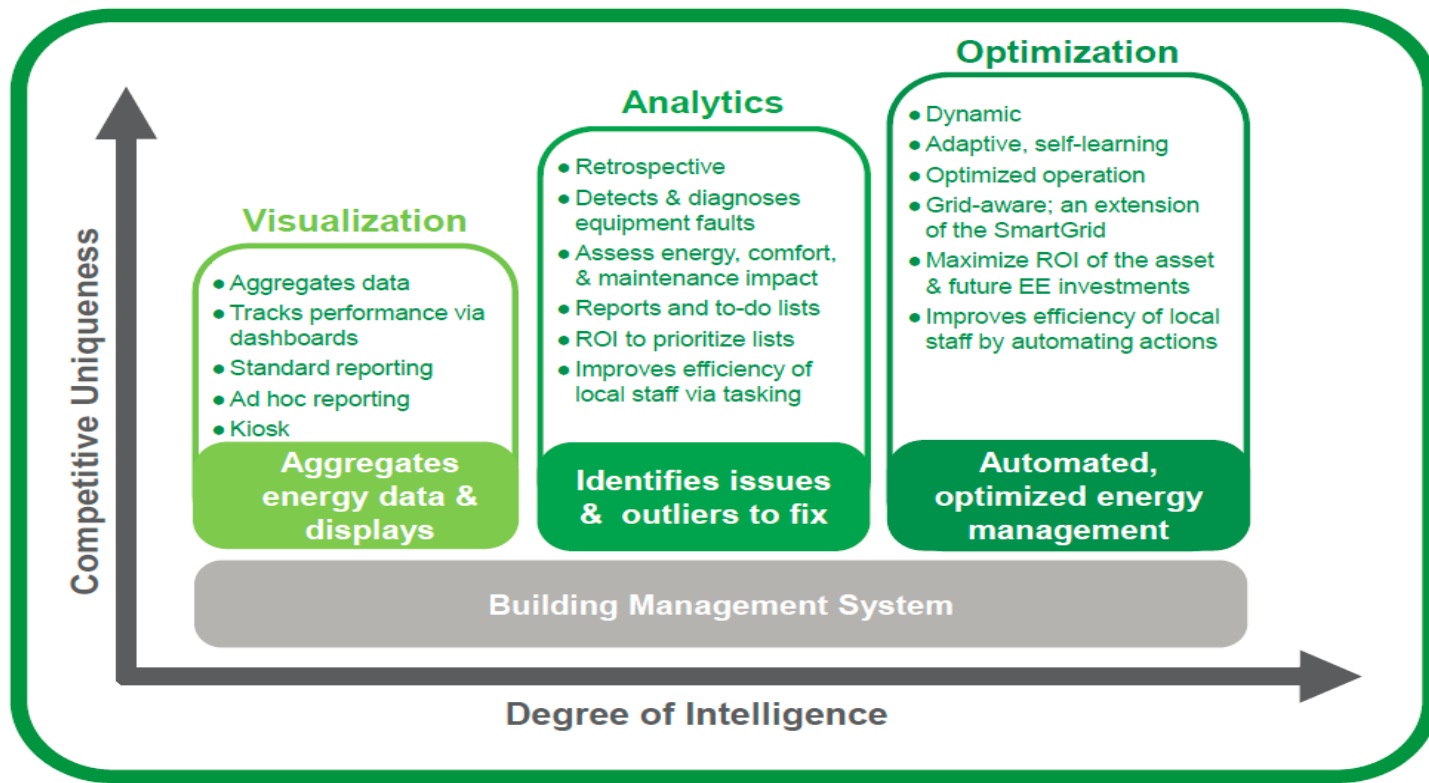- Regulatory or certification compliance

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Then Control - Automation & Management -

Key Challenges

- **Integration**
- **Convergence**
- **Openness**

EcoStruxure

Active Energy Management Architecture from Power Plant to Plug™

Integrated Domain Management and Control Solutions

Power Management	› Power measurement › Electrical vehicle charging › Intelligent power and motor control › Renewable energy conversion
Process & Machine Management	› General machine control › Windmill and solar panel control
IT Room Management	› Cooling control › Uninterruptable power supply › Voice data image
Building Management	› Energy visibility, monitoring and control › HVAC control › Lighting control
Security Management	› Access control › Video surveillance

Interoperable and open to third-party systems

Multiple systems
(traditional design)

Integrated systems
(single IP network)

Remote Supervision
Enterprise Performance Manager
Integrated Site Supervision

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With Increasing level of system deliverables

In a more and more holistic performance coverage

High-performance building

Economics	Eco-responsibility	Productivity	Operational efficiency
Optimization of rented m²	Low consumption / Positive energy	Comfort	Serving the occupant
Maximizing the value of property assets	Water and waste	Upgradability / flexibility	Operations management
Load savings	Health	IT	Safety/Security
Optimization of construction costs	Green mobility/CO_2	Single smart card	Certification

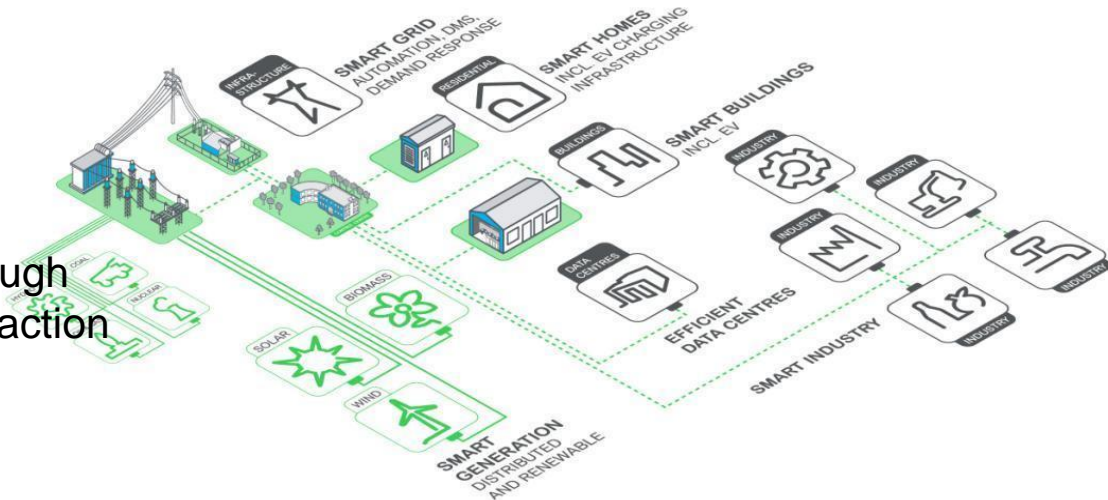# Within the New World of Energy : Distributed & Connected

Capacity to fit into
demand response scenarios

Integration of renewable energies
and local storage capacities

Integration of the electric vehicle through
Electrical Management System interaction

balancing out the charge for
each operator in the district

Etc…..

Smart Grid   **Distributed Generation**   **Efficient Demand**

CONNECTED FROM PLANT TO PLUG

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However to fully deliver , technology need be deployed in a behavior and cultural change , including in policies and regulations

THANK YOU.

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