

Make the most of your energy™ through Energy Efficiency

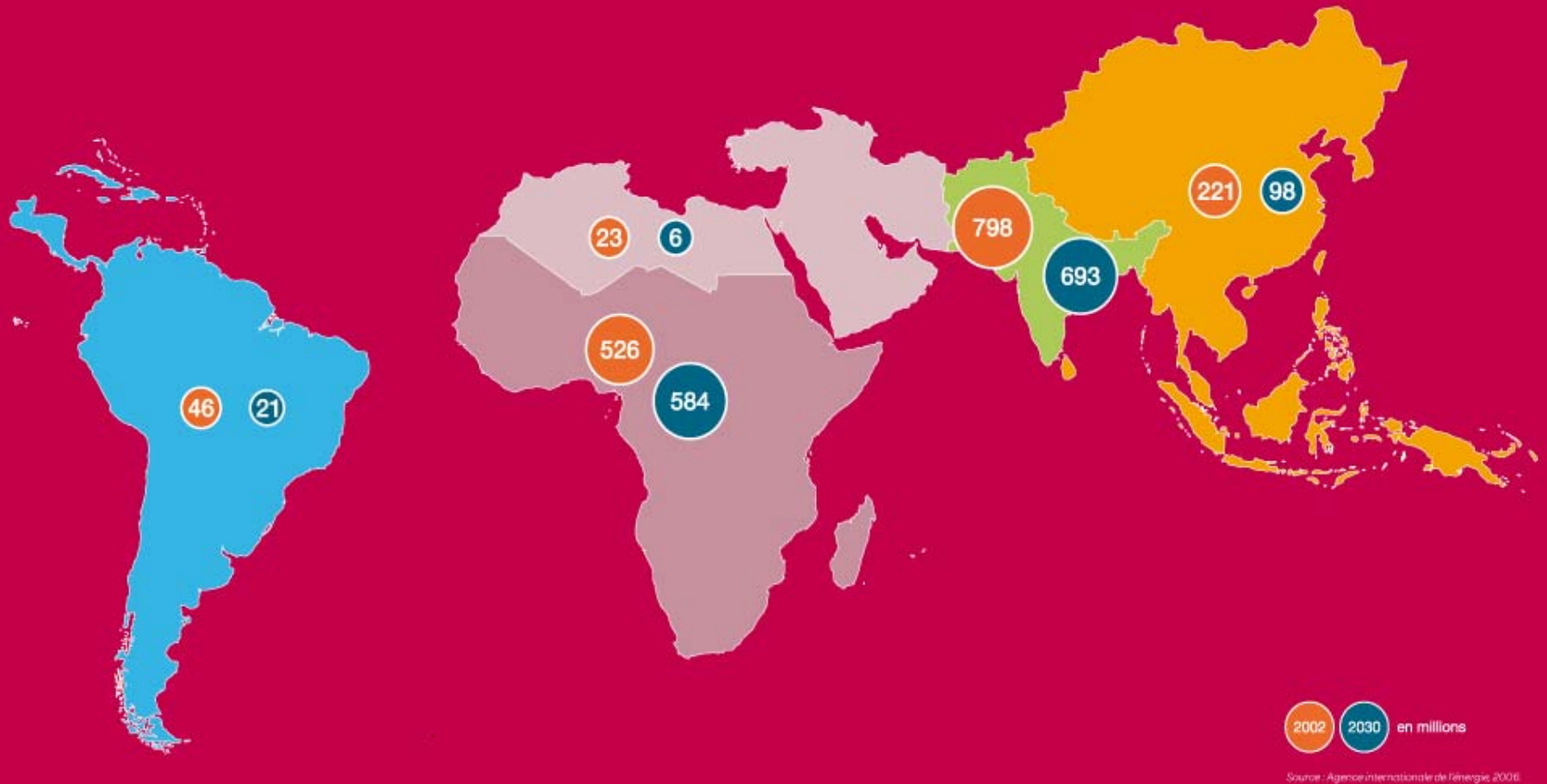
James Clark
Oct 22, 2010



The energy dilemma



1.6 Bn people still have no access to electricity



2008: **4 billion** people with electricity, **1.6 billion** people without

2030: **5.5 billion** people with electricity, **1.4 billion** people without

The Schneider Electric Story

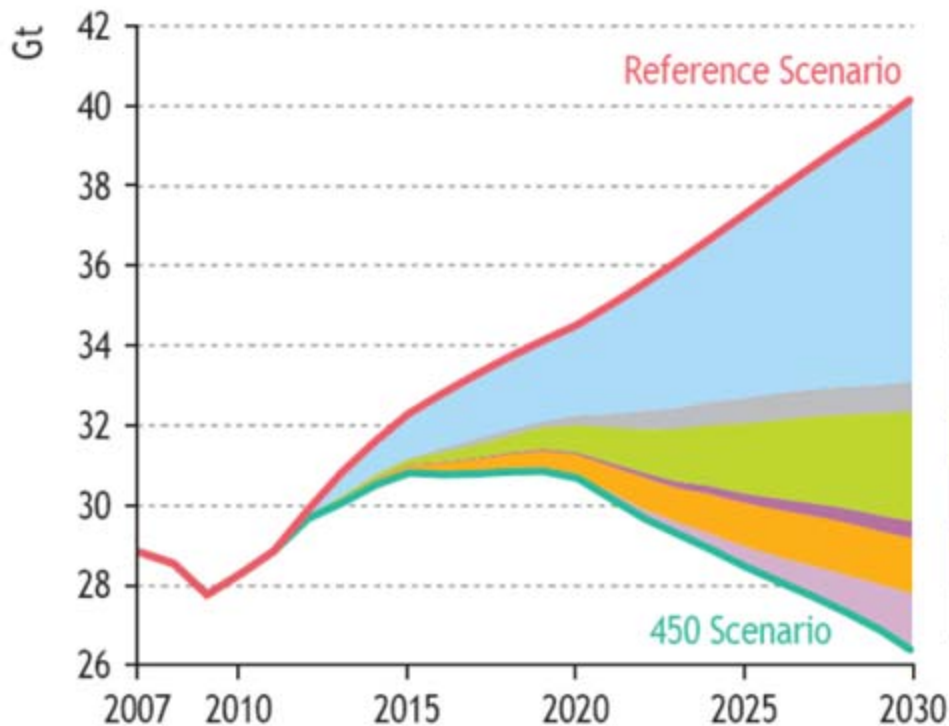
Committed to the energy dilemma... we are "Energy Optimists"



The solution is a combination of cleaner generation and efficiency

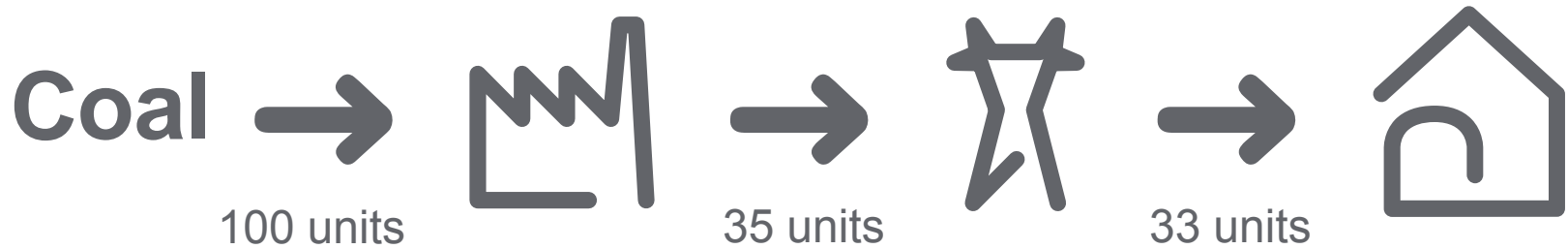
- Over 50% of CO₂ emission abatement will be from end use efficiency

World energy-related CO₂ emissions abatement



	Abatement (Mt CO ₂)		Investment (\$2008 billion)	
	2020	2030	2010-2020	2021-2030
Efficiency	2 517	7 880	1 999	5 586
End-use	2 284	7 145	1 933	5 551
Power plants	233	735	66	35
Renewables	680	2 741	527	2 260
Biofuels	57	429	27	378
Nuclear	493	1 380	125	491
CCS	102	1 410	56	646

...as efficiency counts triple



1 unit saved at
point of use

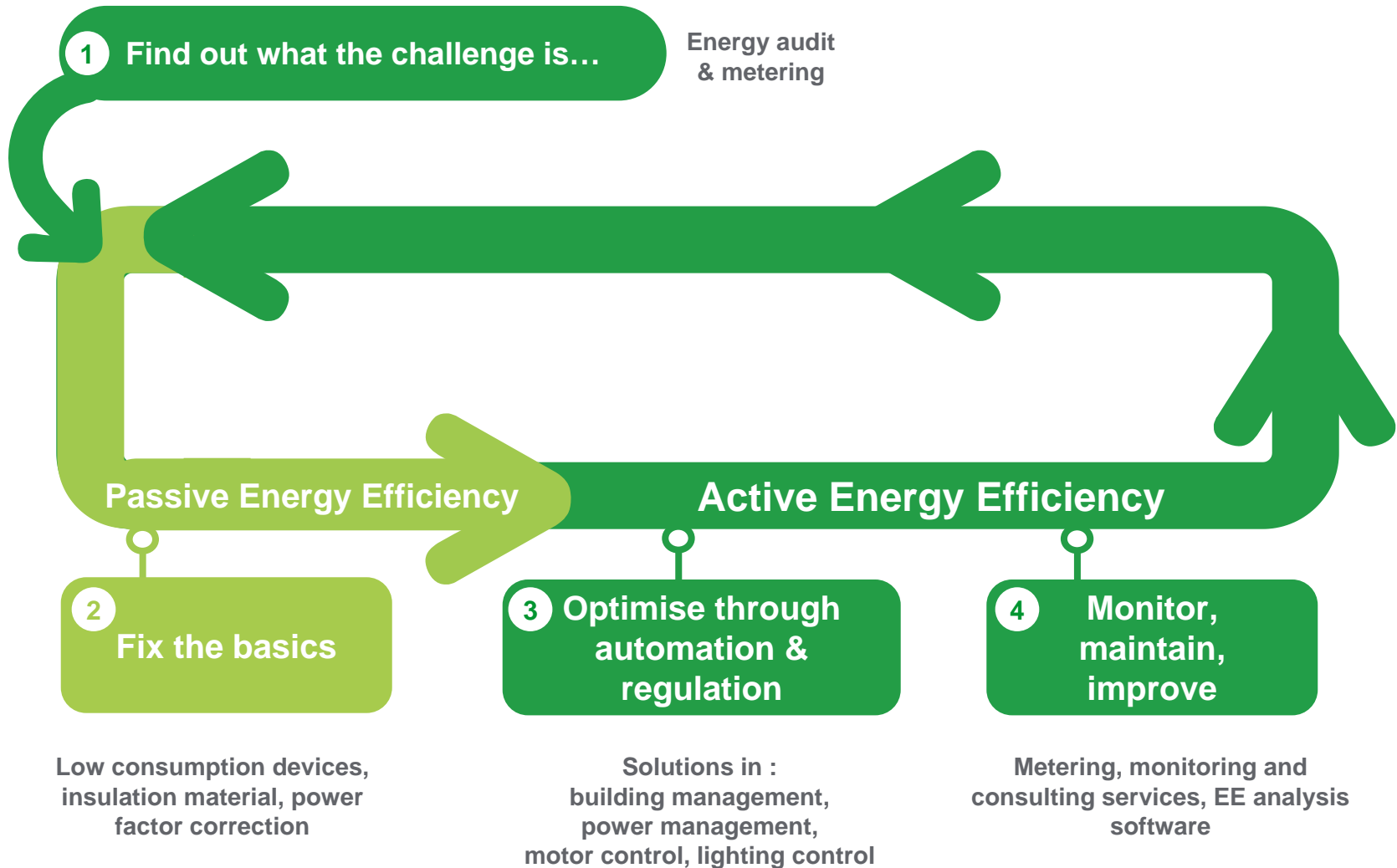


3 units of primary
energy not consumed

Our solution

Active energy efficiency:

The fastest way to save energy and curb CO₂ emissions



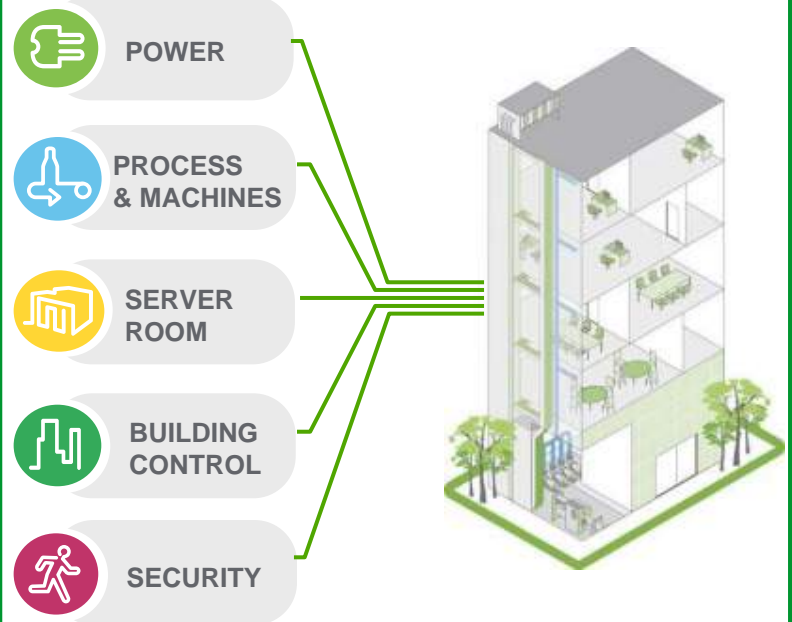
We have the solution for solving the energy equation

The **challenge**:
solve the energy equation



Our solution: an architecture
blending 5 dimensions

Eco**E**truxure™



The evolution of management systems for facilities

1

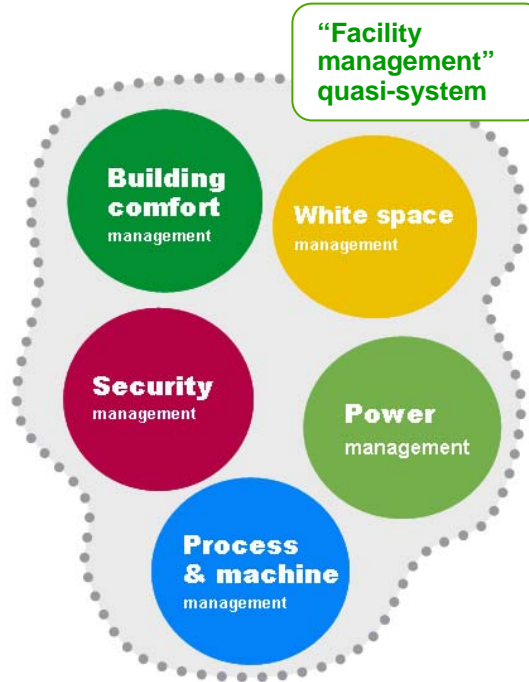
Emerging ability to answer basic questions



The five management “domains” take shape

2

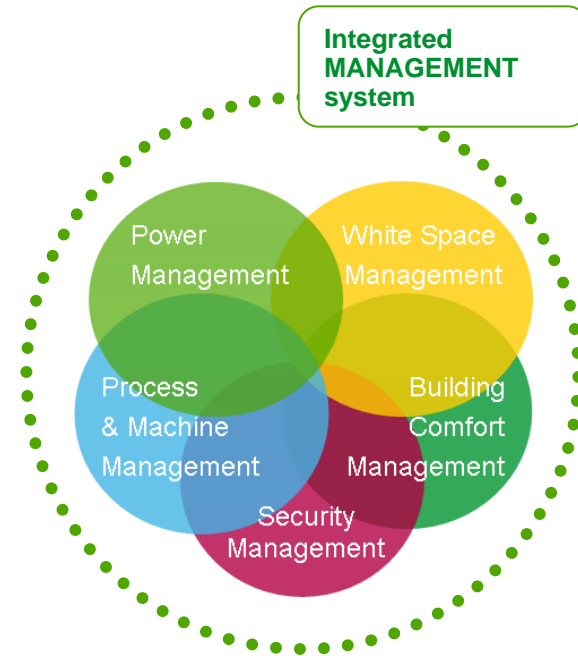
Getting better – “separate but equal”



The reign of “domain excellence”

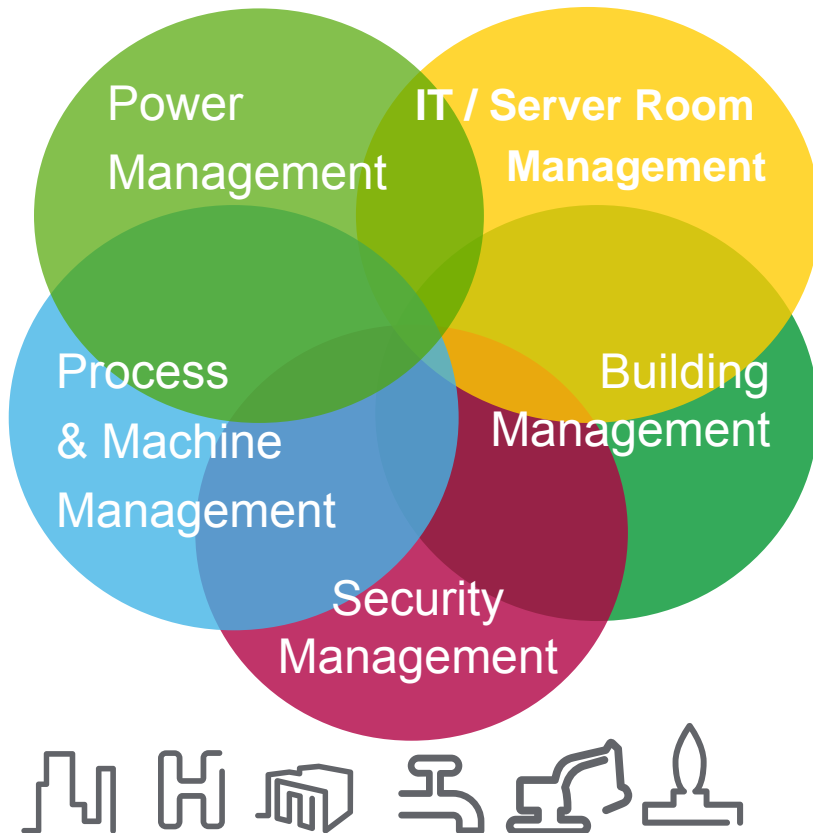
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Moving toward “solution excellence”



Domain excellence + collaboration evolves towards “solution excellence”

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

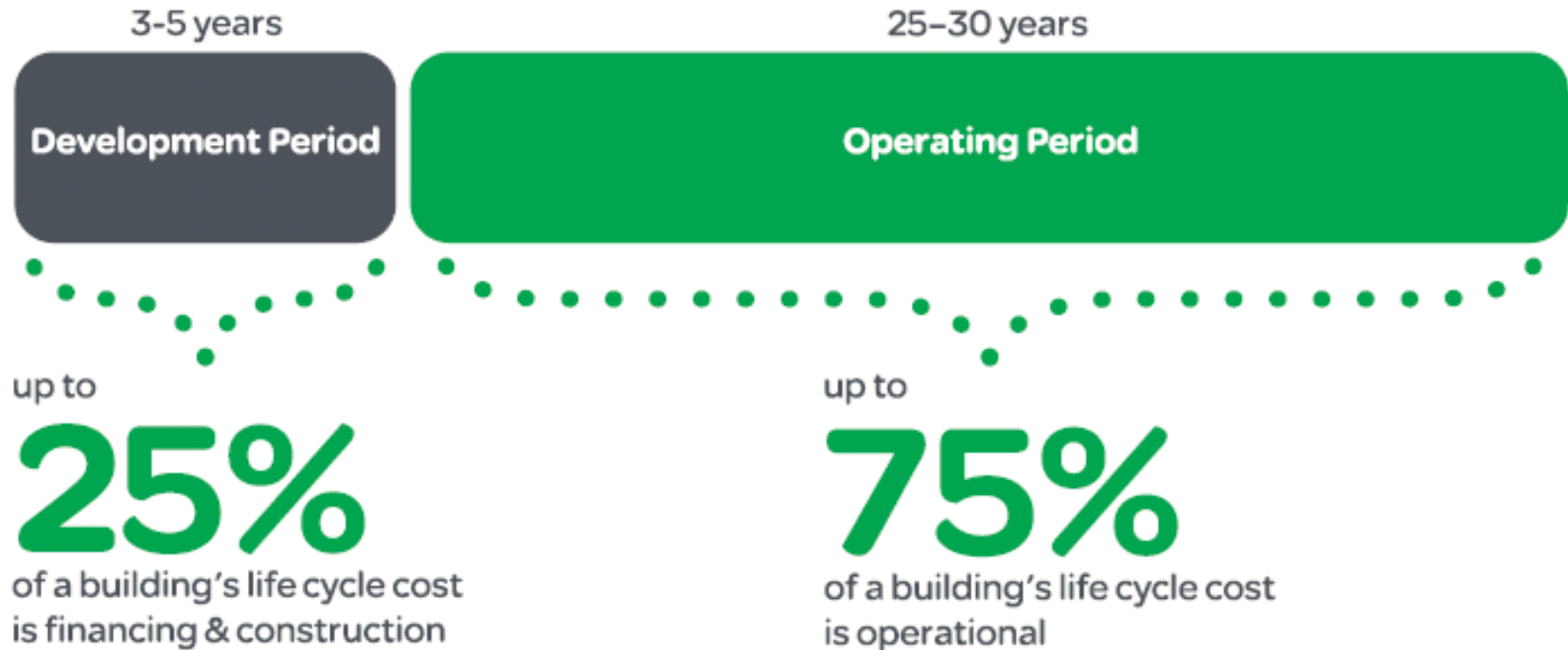


EcoStruxure promise :

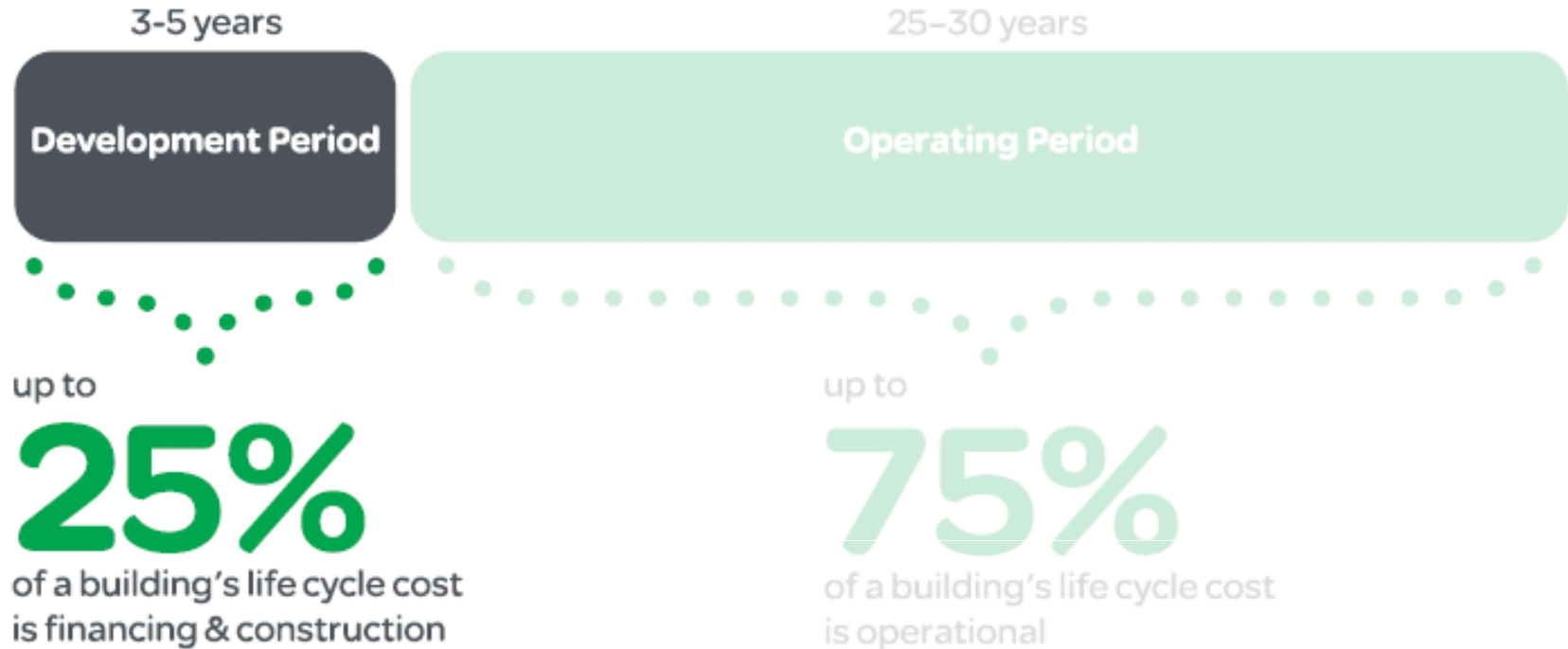
- Guaranteed compatibility / synergy / capability between the 5 domains of expertise
- Enhance the customer experience
- up to 30% saving in Capex and Opex
- Enabled by the right connecting technologies :
 - Ethernet/IP as a common highway
 - Web services as a common language (SOA architectures)

Helping our customer to solve their Energy Equation
Making the energy Safe, Reliable, Efficient, Productive and Green

The life cycle cost of a building



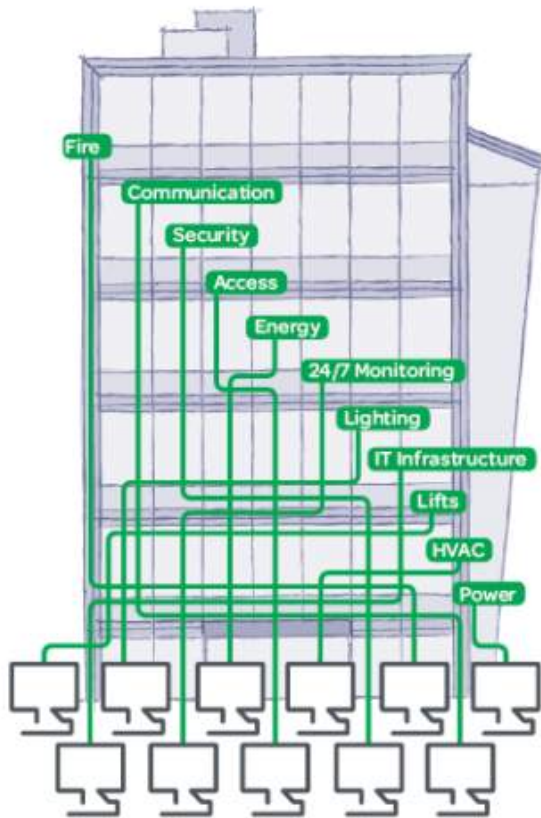
The life cycle cost of a building



From multi-silo to a single backbone

example: integrated systems in buildings

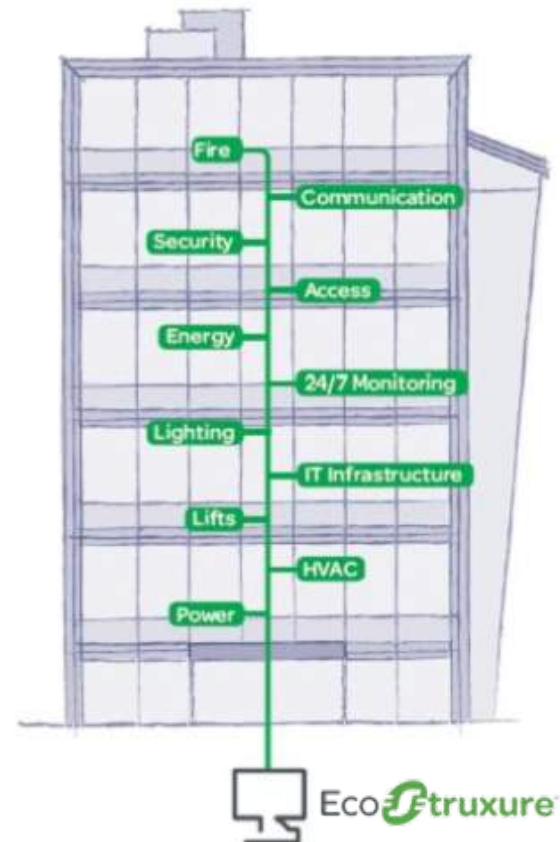
Multiple systems
(traditional design)



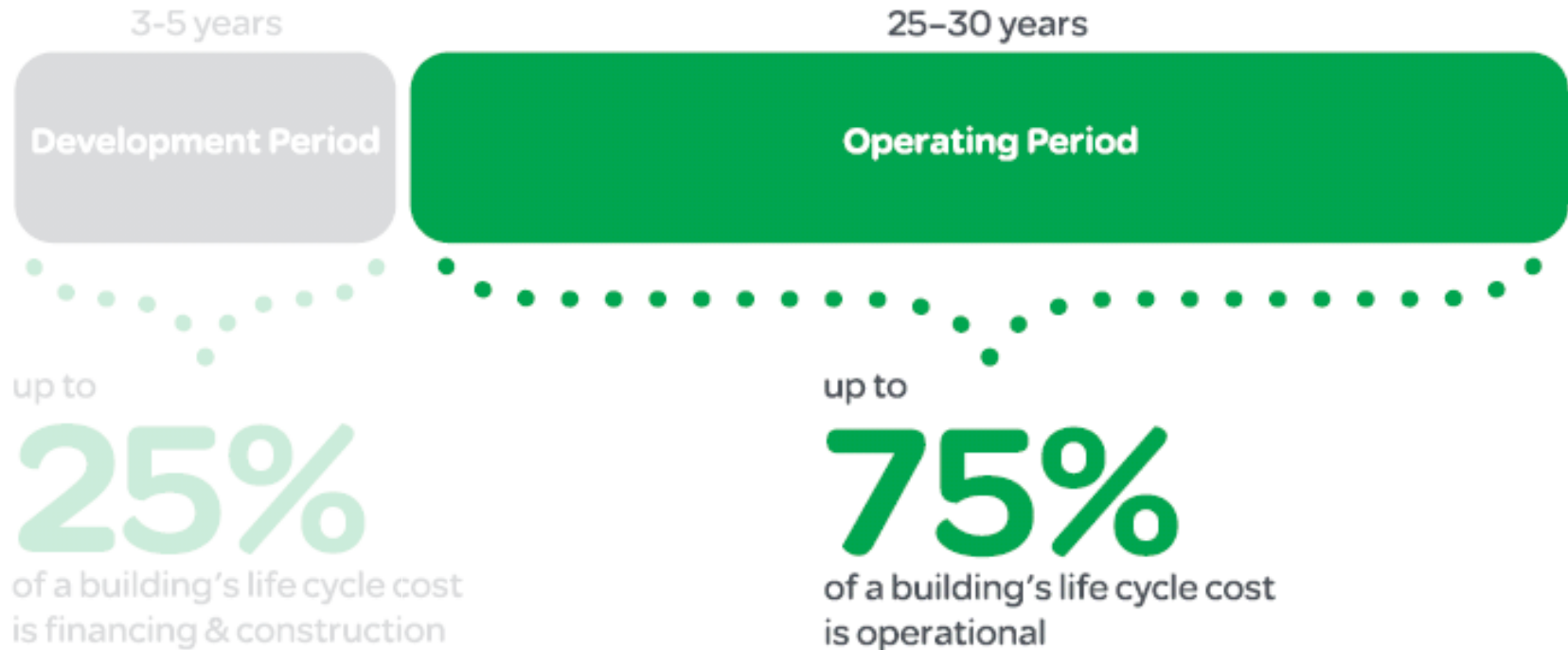
EcoStruxure



Integrated systems
(single IP network)

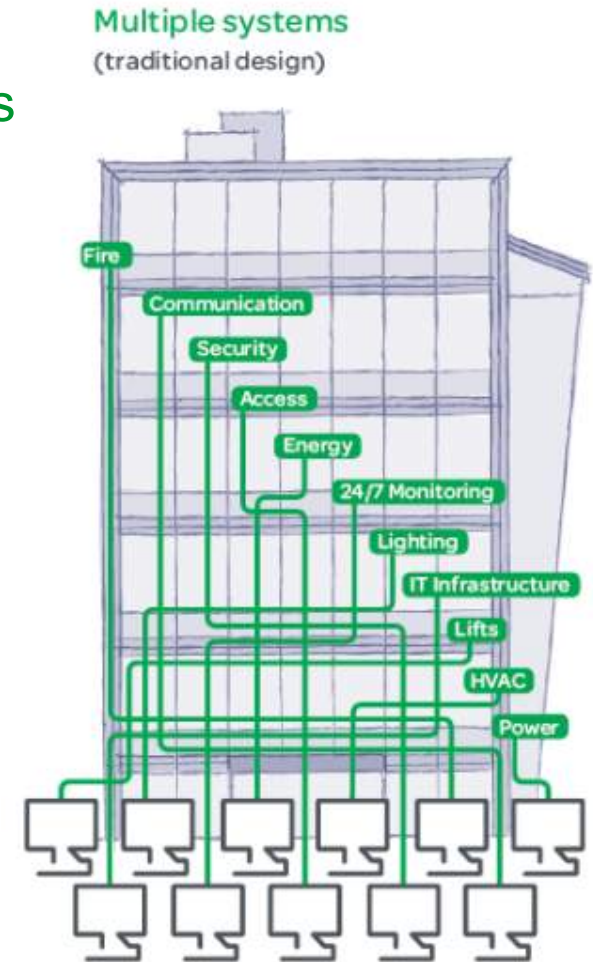


The life cycle cost of a building



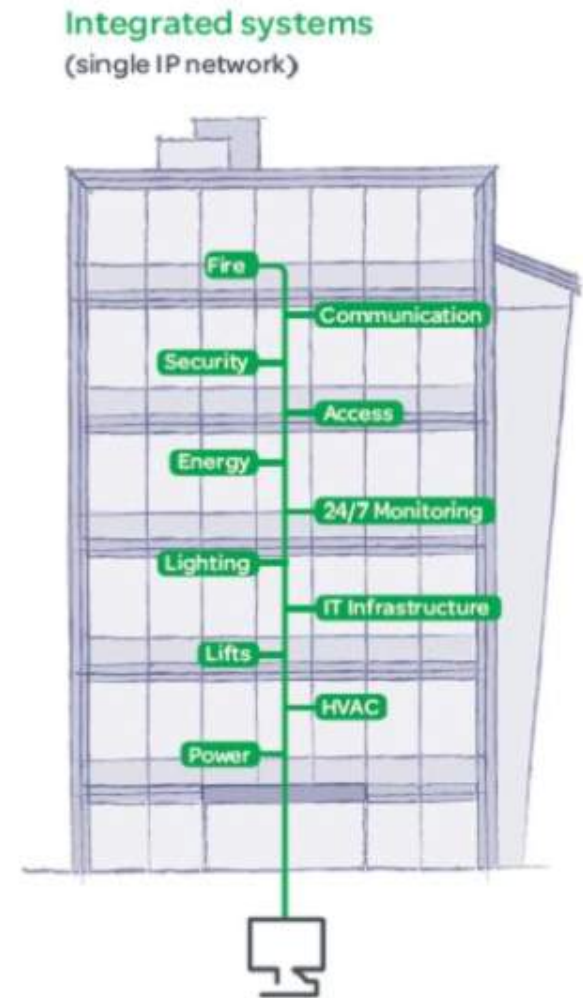
Multiple silo systems in the building

- **Multiple networks** from multiple vendors
- **Too many systems** to learn
- **Complex** troubleshooting
- Higher operational **expenditures**
- **Obstacles** to achieving energy efficiency



Enhanced value & performance with integrated building solutions

- **Reduce costs** of operational expenses
 - Energy (up to 30%)
 - Maintenance
- Create new **revenue opportunities**
- Increase **employee productivity**
- **Optimise** space usage
- Enhance building asset **value**



Reactions and results

Regulation efforts

pop-up everywhere in the world

USA

- 12% of their stimulus will go to green projects (112 B\$)
- 5 Million of « green collar jobs » to be created in the next 10 years

Europe

- The 3*20%: renewables/CO₂ emission reductions / energy savings
- *Grenelle de l'environnement* in France
- Russia: reduce energy intensity by 40% by 2020

China

- The 5 year plan with strong green commitment
- Ex :Reduce energy intensity by 20% in 2010 compared to 2005

General public is more aware of energy concerns than ever before



Hybrid cars sales
market shares x4
in the last 2 years



Oscar®
winning
documentary
makes
global
warming the
number one
topic of
conversation



More than 1bn
participants in
88 countries



Fluorescent light bulbs
to completely replace
incandescent lamps

Companies are taking steps, ...and not only for their image



30,000 tons CO₂ emission
reduction per year
100% of industrial sites
ISO14001

And many more worldwide

Nestlé 5% reduction per year
over 2005 – 2010 (annual
energy > 500M€)

Renault 2,5% reduction per year
(annual energy > 300M€)

Air Liquide commits to save 400
GWH over 5 years (est savings
16 M €)

ST Microelectronics 5%
reduction per year over 2005-
2010
(annual energy > 100M€)

**GlaxoSmithKline, Aventis, Dell,
etc.**



\$1bn yearly investment
to increase energy
efficiency and reduce
CO₂ emissions



Carbon
assessment of all
of their products



Schneider & Square D Foundations

- ▪ ▪ working together for a better earth

Project Overview

Schneider Electric Canada donated equipment to help achieve **LEED platinum** rating for existing facility and make it **carbon neutral**.

Schneider Electric / H&E Comfort Controls provided:

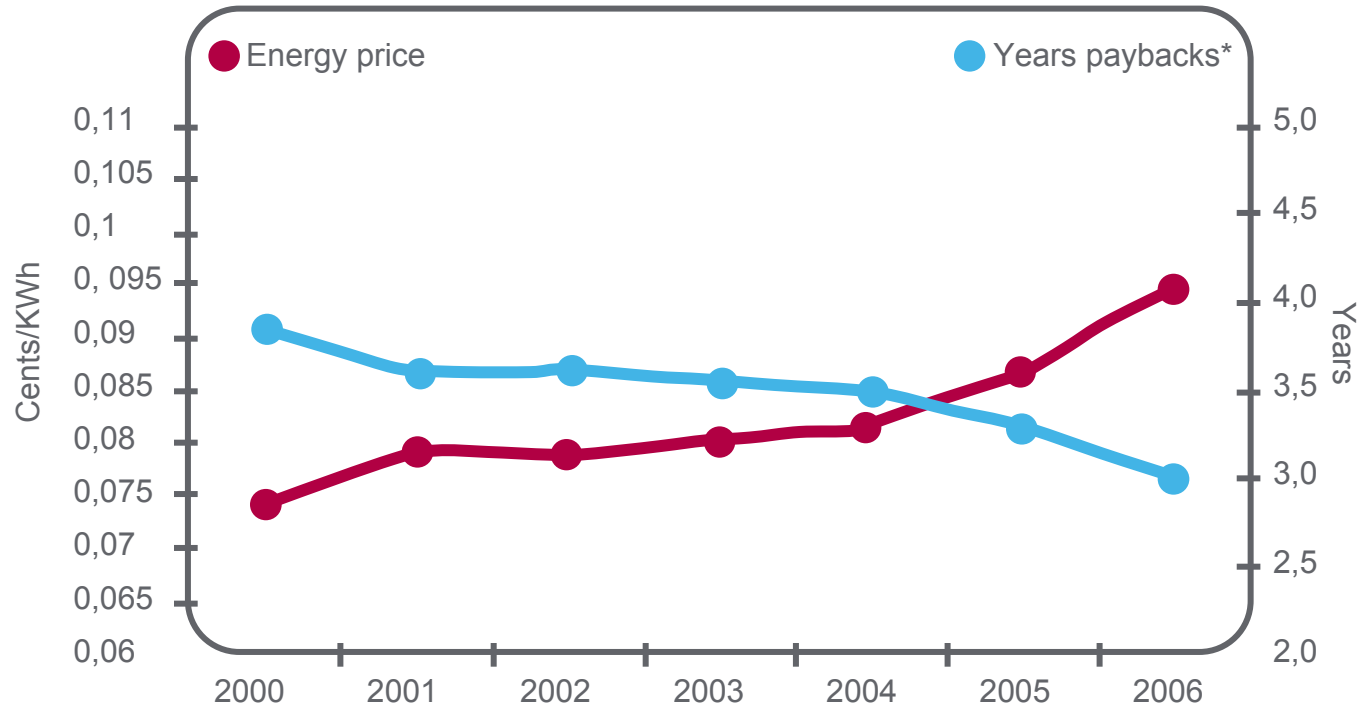
- Climate (HVAC) controls, security, and lighting are controlled through a single system (TAC).
- Lighting and lighting controls (Clipsal, PowerLink) to provide dimming, scheduling, occupancy sensors, and daylight harvesting.
- Lighting control system, HVAC system and security **systems all integrated** with the building management system which allows control and monitoring.
- Power monitoring system for all utilities (water, gas, etc) and reporting on **total greenhouse gas emission**.
- Schneider Electric is managing the project and is o (HVAC, lighting, power monitoring).
- Schneider Electric Canada will donate the total **product** (hardware/software) value for the project up to a maximum of **\$375,000 CAD**.



If you don't do it for the planet, do it for your bottom line...

Based on an actual commercial building.

- Project Cost \$1M,
- Electricity saving 3500MWh
- Project cost and energy savings fixed.



➔ Payback time has decreased **30% over 5 years**
due to increase in energy prices

Make the most of
your energy™

