

Food & Beverage business trends : A sharing session

Jag heter : Eric Bonsignour (Carola Puusteli)

Date: April 16 - 2012

Place: Tetra Pak Lund Sweden

M.T.F.
at





What are the biggest
Challenges we are
facing today?





October 31, 2011.

7 Billion.

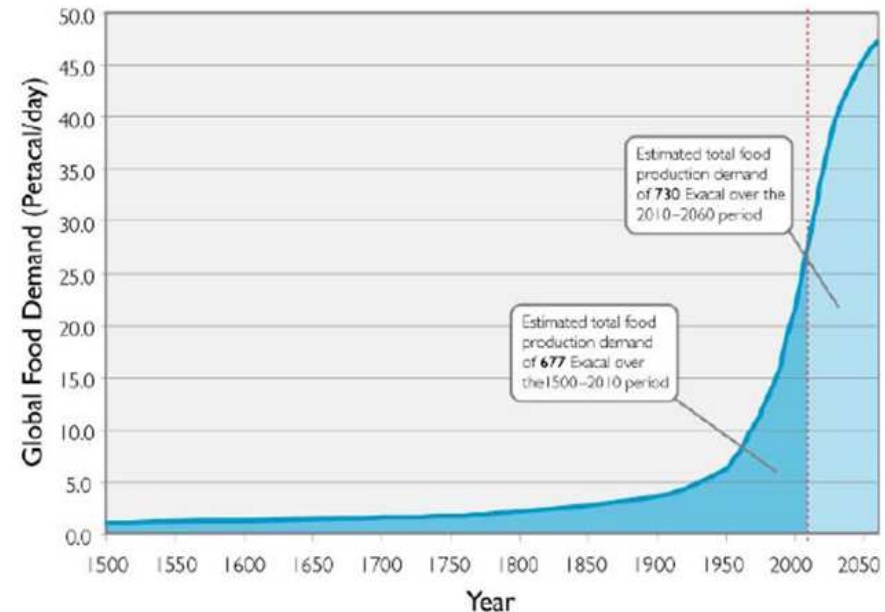
Source: Official United Nations population projections prepared by the [Population Division](#) of the Department of Economic and Social Affairs.

The F&B Market

A global food crisis is looming!

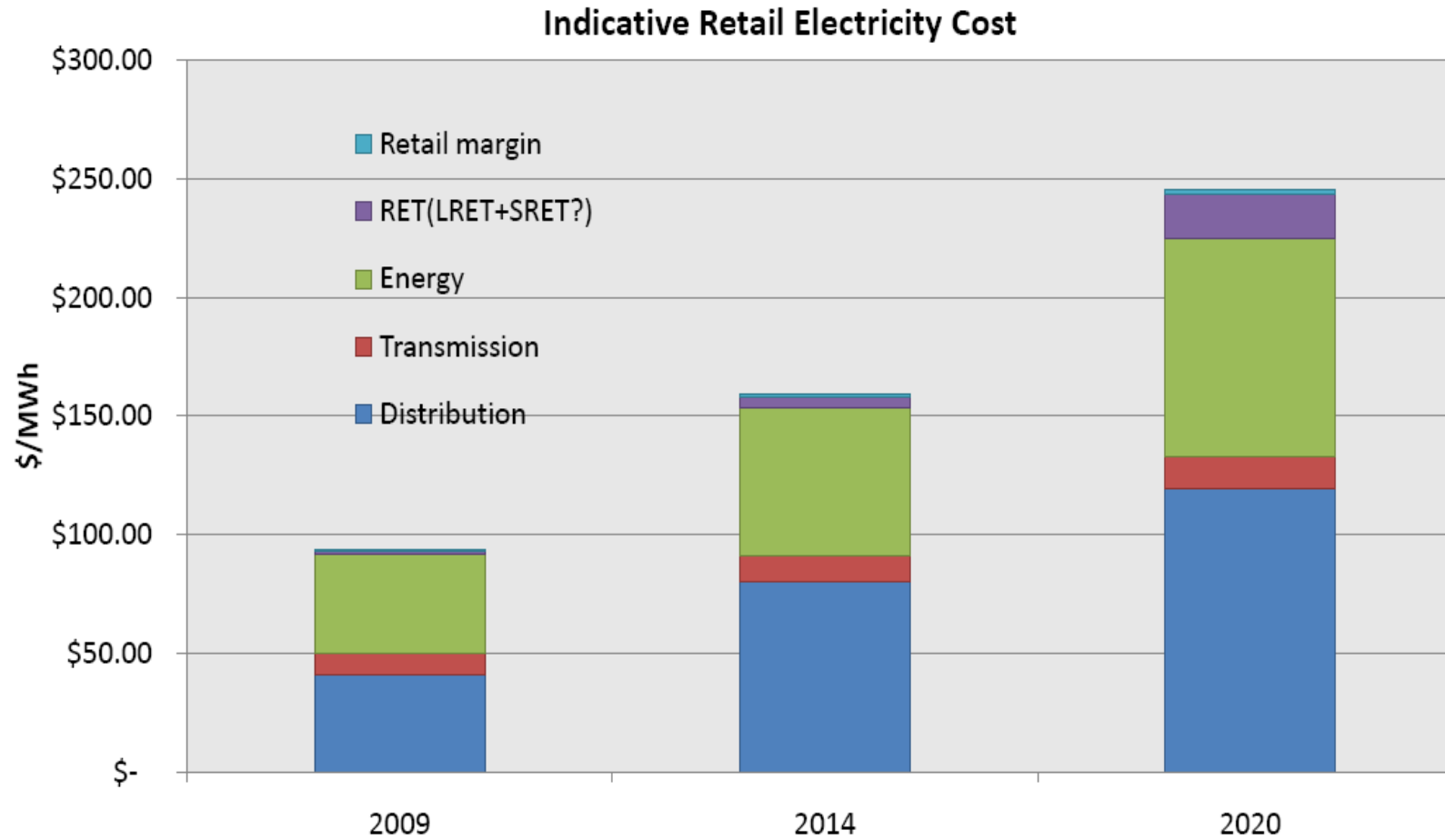
The challenge to produce enough food will be greater over the next 50 years than in all human history

- The global **population** is **increasing** (9 Billion by 2050).
- Increased global **affluence** = increased **consumption**.
- Rapid use of **global resources** (Energy, water, etc). Securing both is critical.
- Available agricultural land is **declining**.
- Climate change will have an **adverse effect** on food production (seasonal volatility...drought, floods, etc).



Source: CSIRO – Sustainable Food Manufacturing – Challenges and Opportunities, June 2010

Rising energy costs



Source: Australian Energy Market Commission - AEMC

Energy efficiency regulations and standards are popping up everywhere



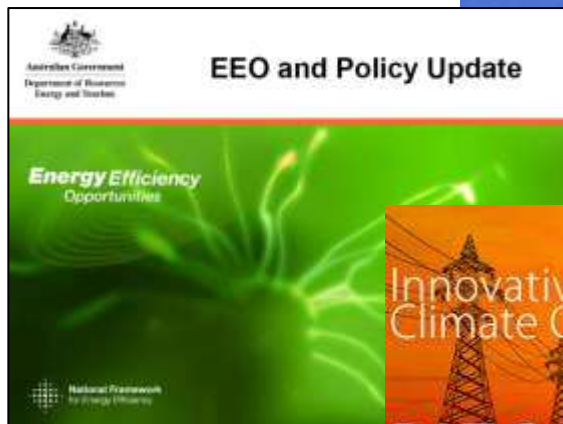
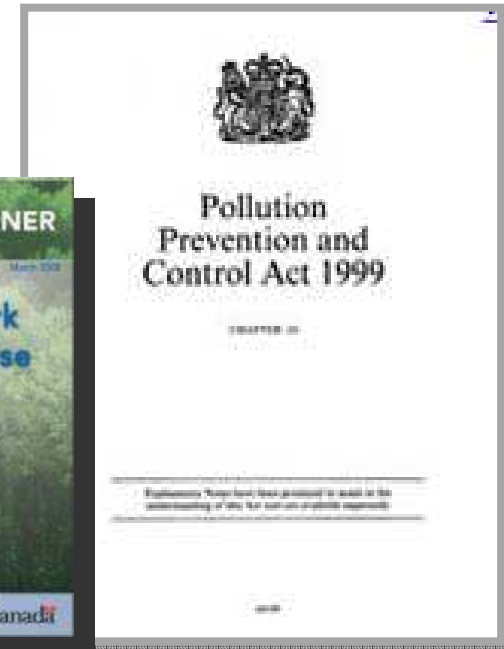
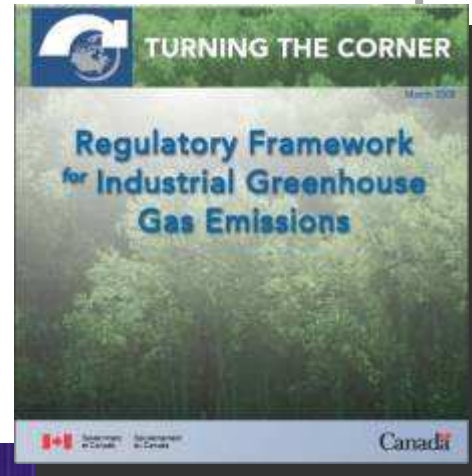
National Greenhouse and Energy Reporting Act 2007

Act No. 175 of 2007 as amended

This compilation was prepared on 16 October 2009 taking into account amendments up to Act No. 87 of 2009



Clean Air Act





The cost of non-compliance is significant with penalties of up to **\$220,000** plus **\$11,000 per day** accruing to over **\$4 million** within a year, and **criminal charges** for CEOs and executive officers found to be in breach.”

Source: http://www.carbonintel.com.au/index.php/site/services_products/



Sustainable development priority



- **Mozambique's food riots – The true face of global warming**

The violence in Maputo is just the latest manifestation of the crippling shortcomings of the global economy



Raj Patel
The Observer, Sunday 5 September 2010
[Article history](#)

The immediate causes of the protests in Mozambique's capital, Maputo, and Chimbaló about 500 miles north, are a 30% price increase for bread, compounding a recent double-digit increase for water and energy. When nearly three-quarters of the household budget is spent on food, that's a hike few Mozambicans can afford.

- **Paul Polman UNILEVER CEO** “We will decouple our growth from our environmental impact, achieving absolute reduction across the product lifecycle. Our goal is to halve the environmental footprint of the making and use of our products”



set a **3% carbon foot print**

mandatory target to stay in there vendor list

Sustainability & Supply Chain Pressure



Nutrition Facts

Peanut Butter
Serving Size: 2 tablespoons
Servings Per Container: about 14

Amount Per Serving	
Calories 200	Calories from fat 10
% Daily Value	
Total Fat 16 g	25%
Saturated Fat 2.5 g	12%
Trans Fat 0 g	0%
Cholesterol 0 mg	0%
Sodium 120 mg	5%
Total Carbohydrates 6 g	2%
Dietary Fiber 2 g	9%
Sugars 1 g	
Protein 8 g	

4 Carbon Footprint

Per Serving: **118g CO₂e**
Total Carbon: **1648g CO₂e**

Primary location of origin:
Orrville, Ohio

Method of transportation:
Train/Truck

V

1	2	3	4	5	6	7	8	9	10
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LOW CARBON RATING HIGH

Note: Carbon rating ranges from 1 to 10, with lower numbers being more climate friendly.
Carbon dioxide equivalent (CO₂e) accounts for carbon dioxide and other greenhouse gases.



Climate Friendly Food



Taiwan



Thailand



Korea



China



U.S.A.



Germany

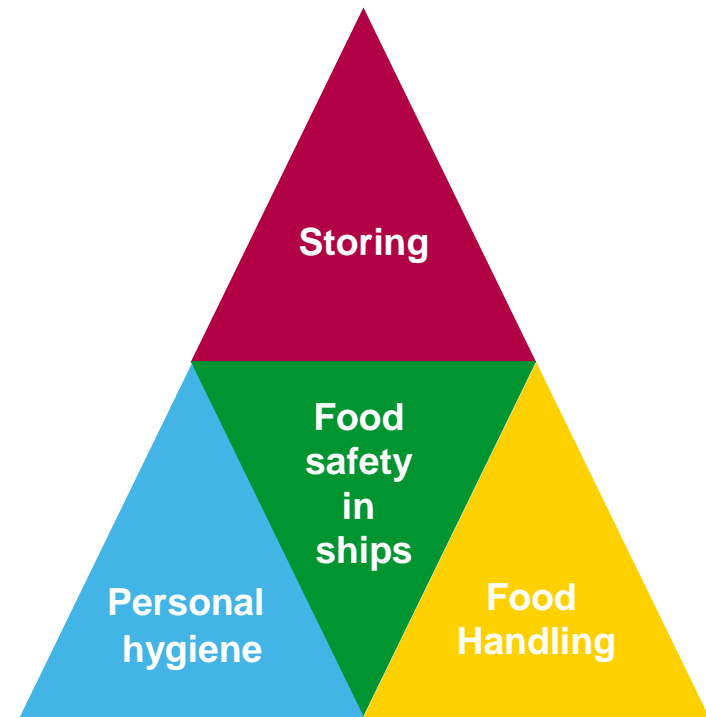


Global Ecolabeling Network

Food safety as a priority

- **2008:** Melamine-contaminated infant formula caused urinary problems to **290 000 children in China**
- **2010:** Paul Polman UNILEVER CEO “we will enhance the livelihoods of hundreds of thousands of people in our supply chain”

- **2011:** Food safety alert in Europe against Soya or cucumber ? Where has it been produce & distribute ?
- **2011:** Royal Canin “Today pets foods need the same level of safety as human food & drugs industries”

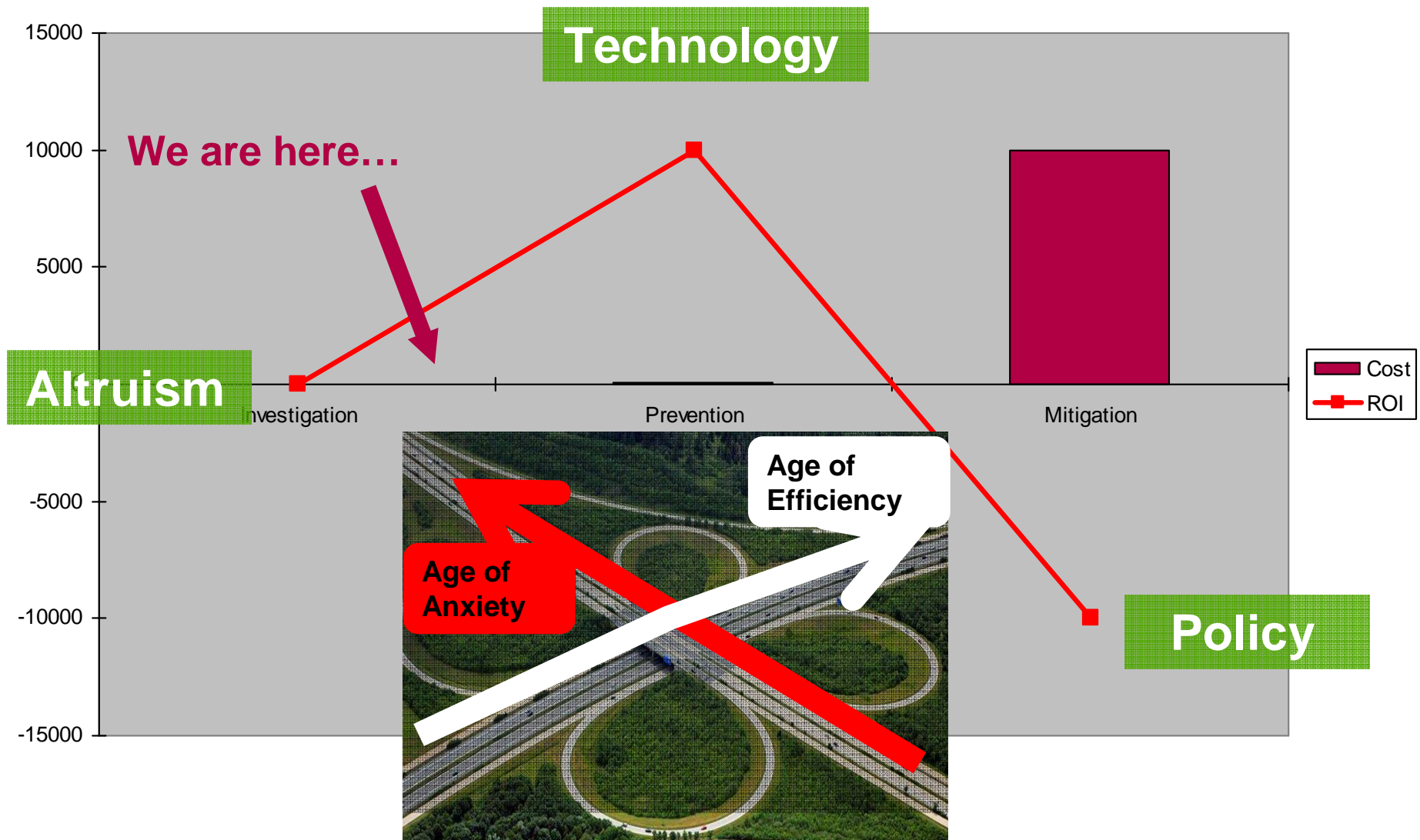



The good news



The 3 Phases of Society Response


Since 2010: Every business, government and individual must decide their course



Who uses the most energy?

Industry & infrastructure
Average facility can reduce consumption by 10 to 20%

31%



- 25% savings would save 7% of the world's electricity
- Motors, account for over 60% of electricity usage




>2%
Data centres & networks



18%
Buildings



21%
Residential



28%
Transportation

Our solutions make your
Energy more **Productive.**



Easily identifiable energy efficiency opportunities

It's a big challenge for Industrial companies to gain the appropriate knowledge about where to look for less obvious, higher impact Energy Efficiency Opportunities.

BUT: When energy monitoring is combined with automation and control infrastructures, energy efficiency can grow by as much as 30%.”



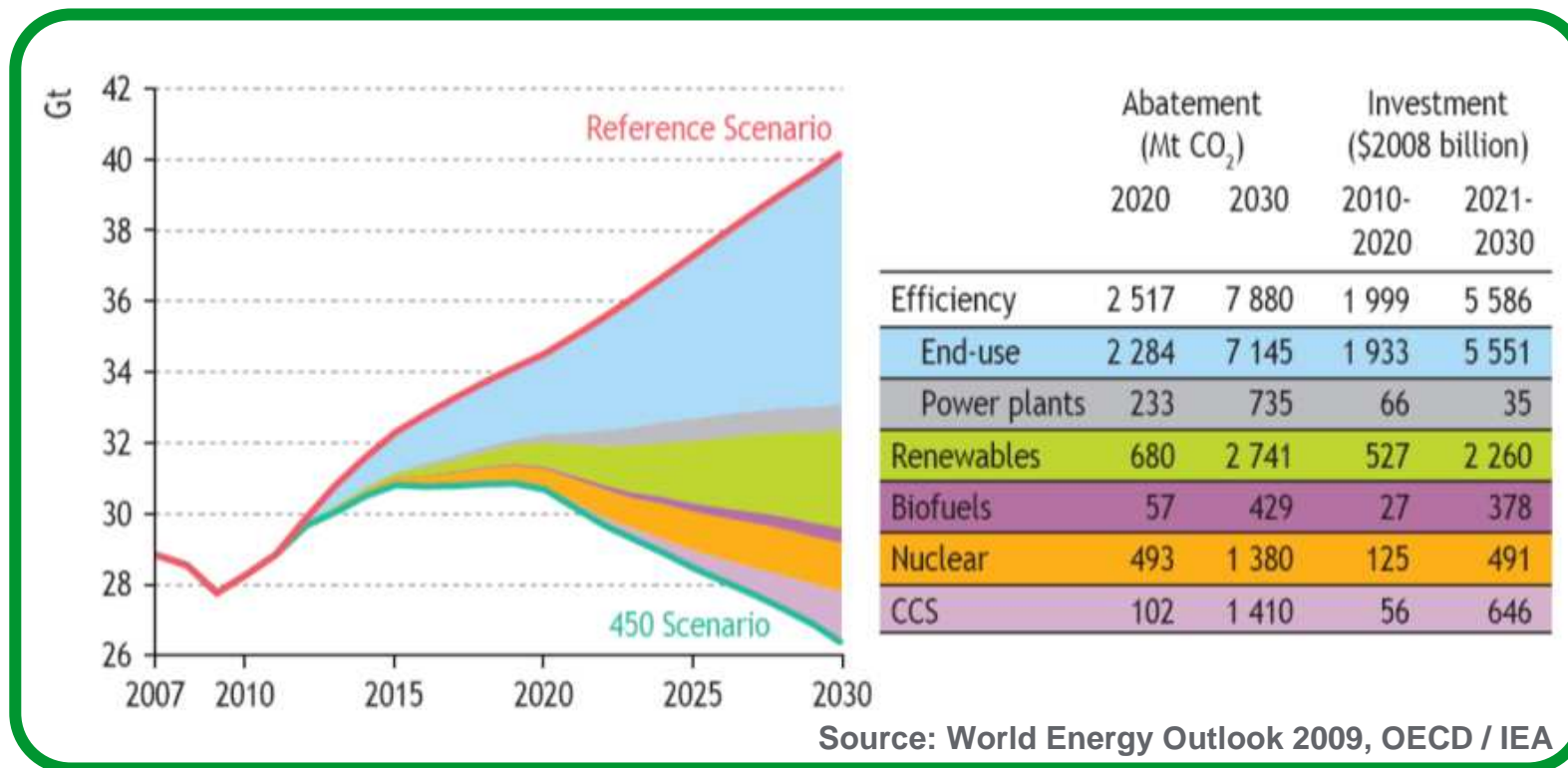
Less obvious, higher impact:

Energy Efficiency through **automated** process and machine efficiency.

Achieving a Low-Carbon 2050

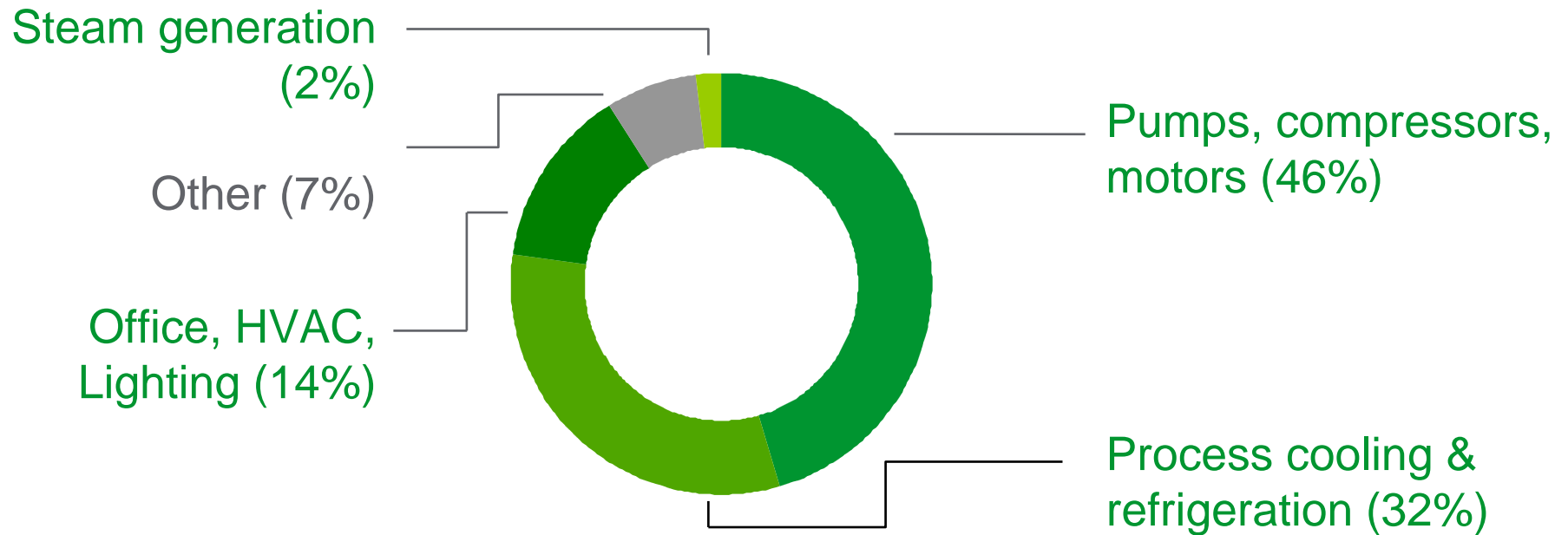
“Energy efficiency, both **end users measures** and fuel switching, will account for **38% of total reduction** to achieve the 2050 targets.”

- IEA Energy Technology Perspectives, 2010



Source: World Energy Outlook 2009, OECD / IEA

Energy: typical use in food processing



78% of electrical energy used by pumps, compressors & refrigeration

Source: ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY, 2008

We have 10 years... to fix 4 critical problems

The quickest wins: 50% of CO₂ cut must come from behaviour

Generation:
> 10 years to fix

Transmission:
> 10 years to fix

Buildings and Process:
1- 5 years to fix

Point of Use:
1-5 years to fix



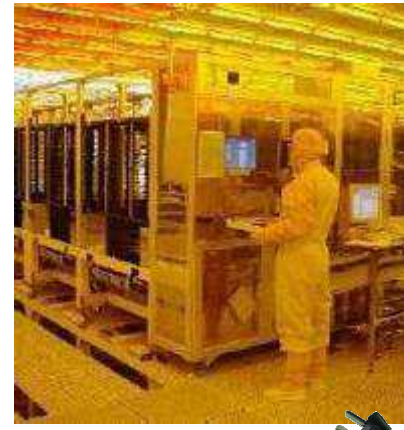
Problems:
CO2 Emissions
Transmission Efficiency
Capacity Constraints



Stranded Capacity
Capacity Constraints



Stranded Capacity
Service Entrance Capacity



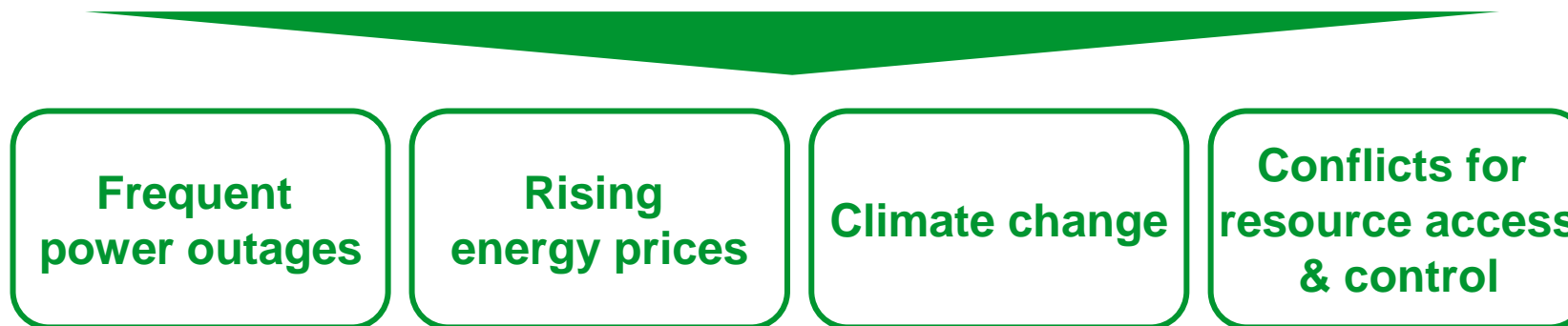
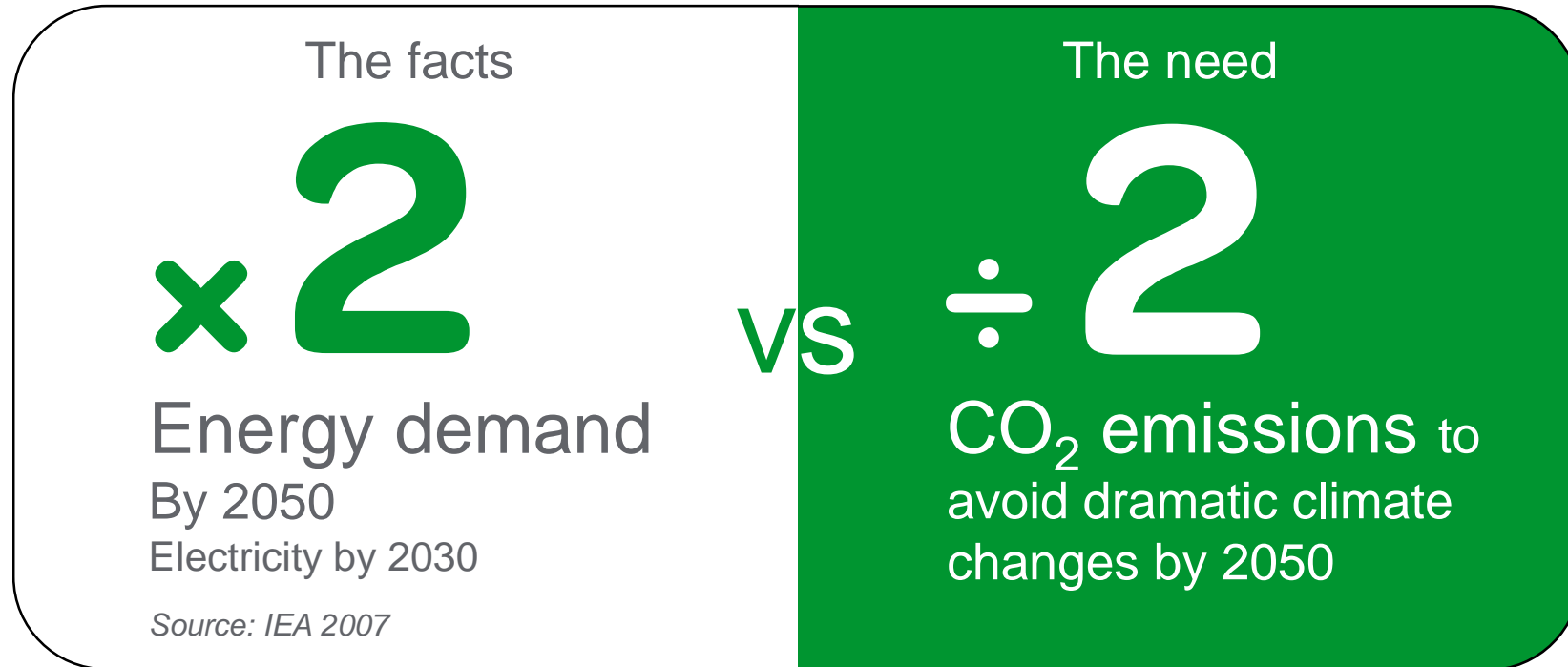
Efficiency
and Integration



Generation supply matters
but demand behavior matters most, first!

Focusing on **point of use architecture** provides **fastest impact** and frees upstream capacity through Power Plant to Plug Optimization

The energy dilemma is here to stay



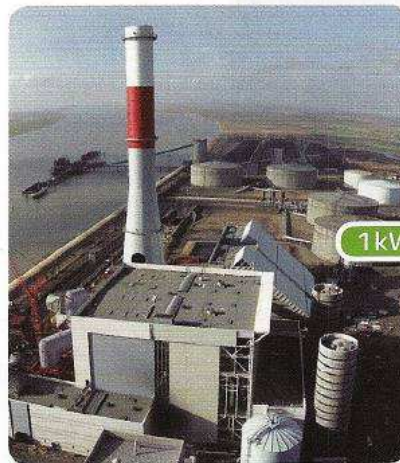
Schneider Electric Vision



A world where
we can all
achieve more
while using less
of our common
planet

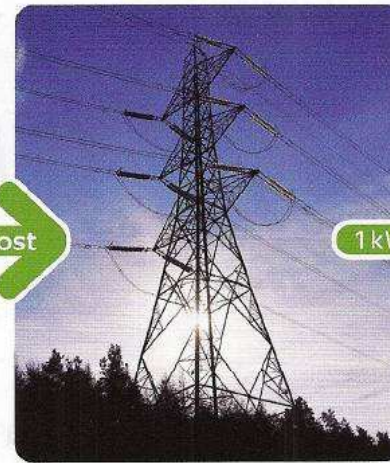
The only good watt is a **negawatt**

3 kWh generated



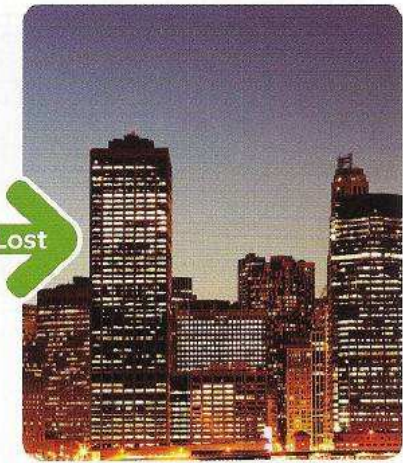
1 kWh Lost

2 kWh distributed



1 kWh Lost

Only 1 kWh left for use



Due to intrinsic inefficiencies 1 kWh consumed at the point of use requires 3 kWh of primary energy created at the power plant.

The energy equation: a system under tension and conflict

a drive to make energy

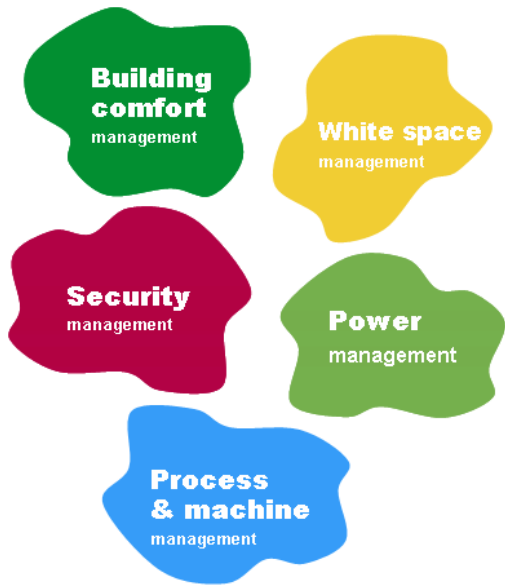


- > Environmental impact
> People safety
> Asset integrity
- > Energy availability
> Energy quality
> Offer quality
- > Energy efficiency
> Reduced Opex
> Reduced Capex
- > Deployment speed
> Ability to integrate
> Ability to scale
- > Carbon free
> Easy installation
> Easy connection

From primordial ooze to the modern age

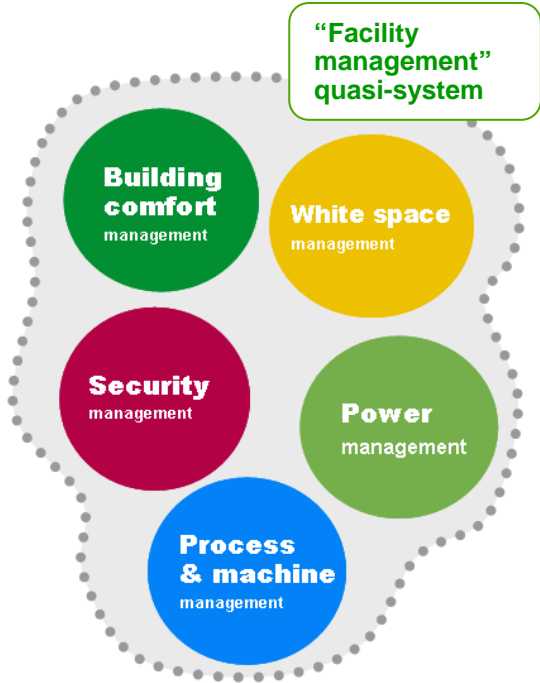
The evolution of management systems for facilities

1 Emerging ability to answer basic questions



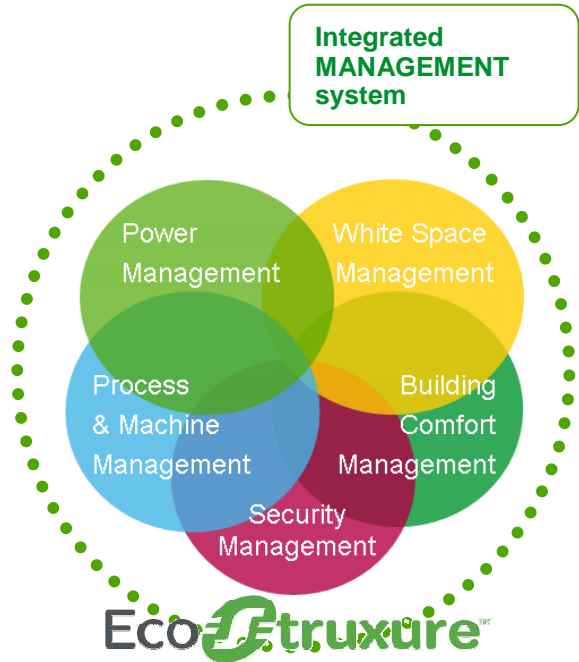
The five management “domains” take shape

2 Getting better – “separate but equal”



The reign of “domain excellence”

3 Moving toward “solution excellence”



Domain excellence + collaboration evolves towards “solution excellence”

Make the most of your energy™



Schneider
Electric

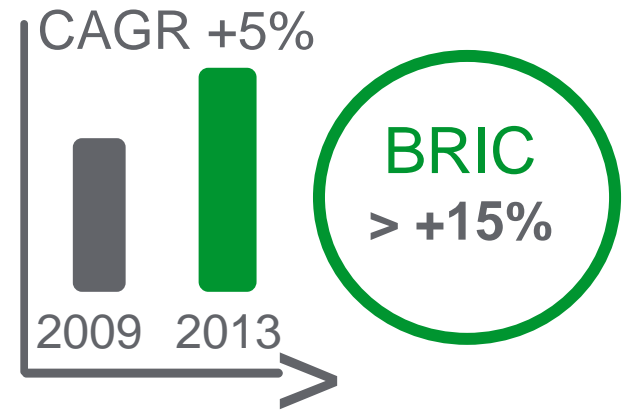
F & Bev Industries



Food & Beverage industry

- The **1st** Industrial Activity World-Wide

- **3400 B€** Revenues in 2010
- **13%** of Global Industry Turnover
- Slow growth in “Western Countries” (3%)



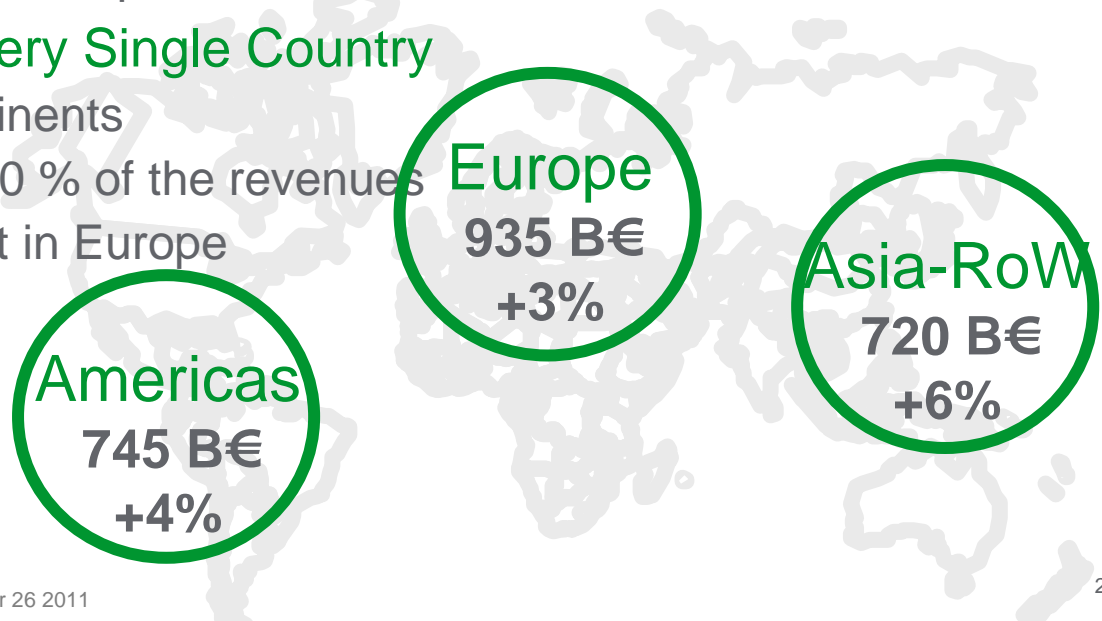
- Thin margins means **Productivity** overrides stratus quo

- **Huge opportunities** in “Emerging Countries”

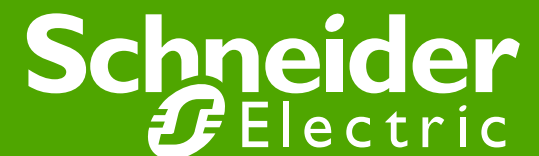
- **Energy + Green** impacts F&Bev **Business**

- A Diffuse presence in every Single Country

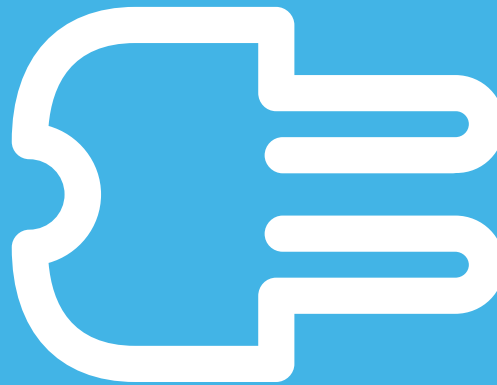
- Global Balance by Continents
- Top 50 represent only 30 % of the revenues
- 310 000 Companies just in Europe



Hungry For Green Efficiency ?

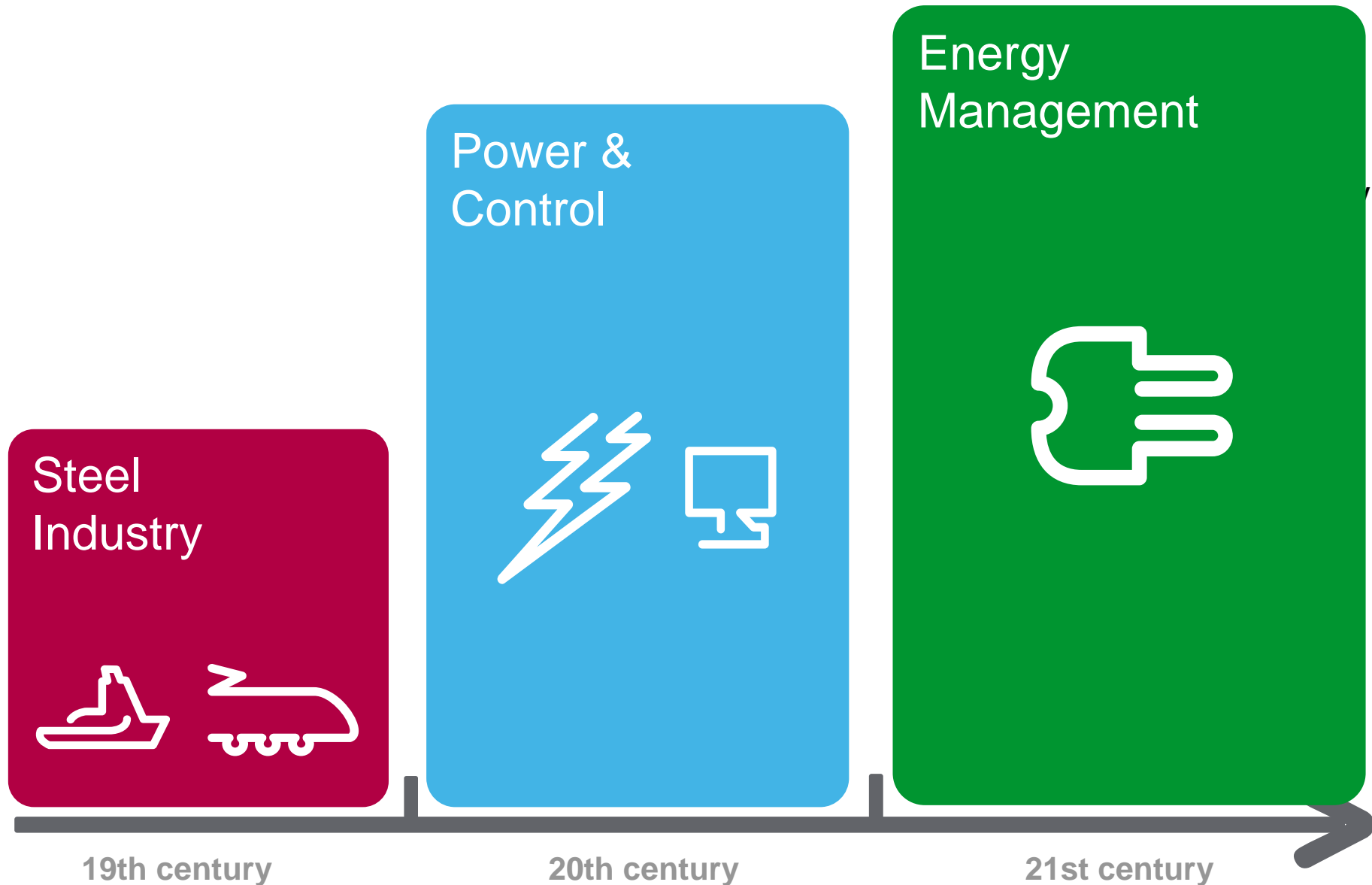


Who are we ?

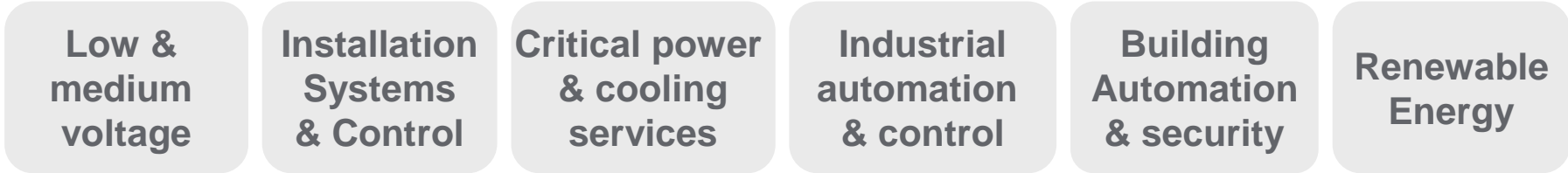


Schneider
Electric

More than 175 years of history



World market positions



1		Legrand		Siemens	Honeywell	SMA
2	ABB		Emerson	 Rockwell	Siemens	Fronius
3	Siemens	Panasonic	Eaton		JCI	
4				Mitsubishi		

Leader in Energy Efficiency

Market shares by main Industrial product lines



Leadership in Packaging Automation

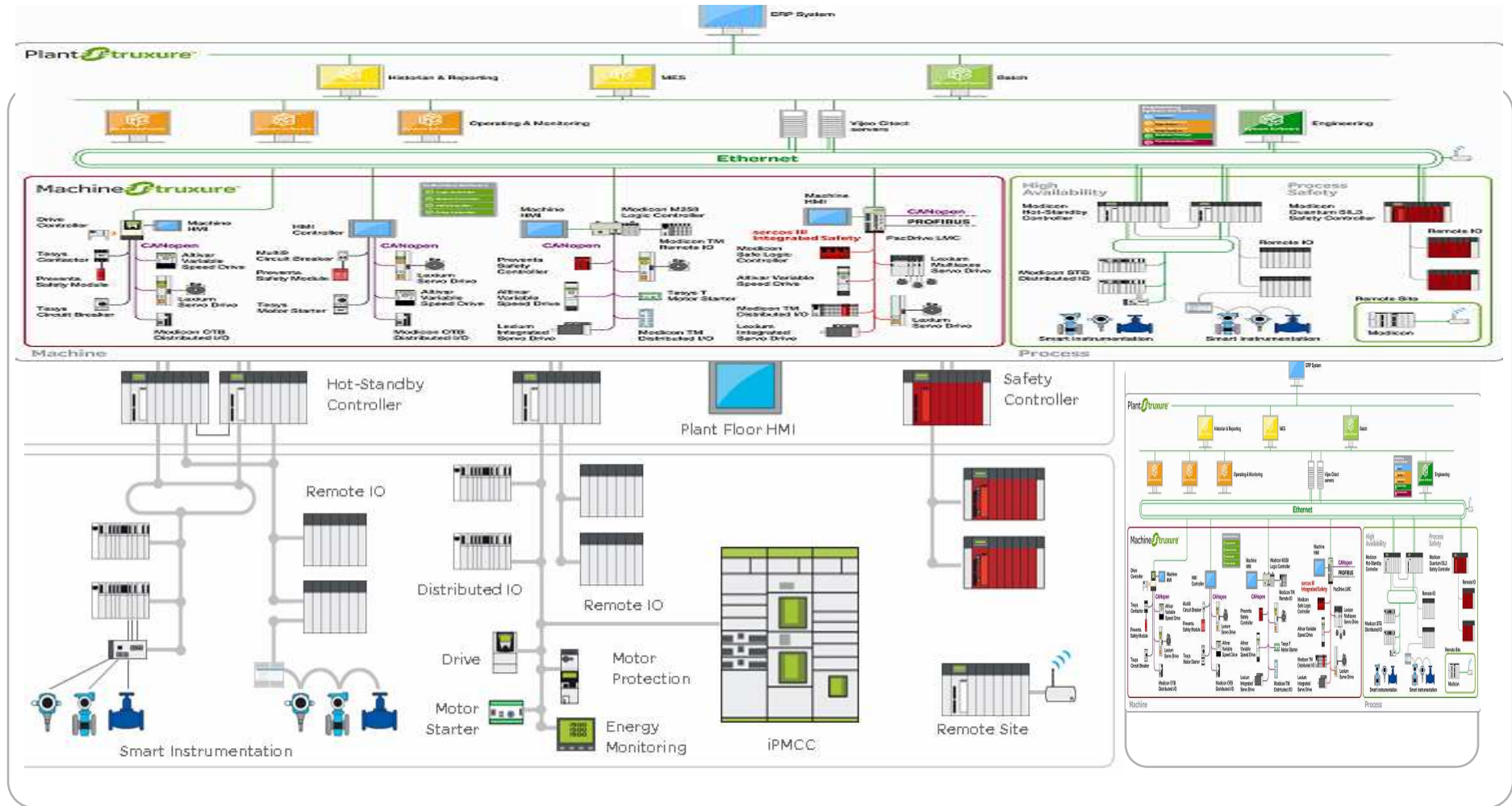


- ELAU, on the best Machines
 - 100% focus on the automation of machines in the consumer packaged goods industries
 - A key differentiation for Food & Beverage Industries
 - 260+ Packaging OEMs partners

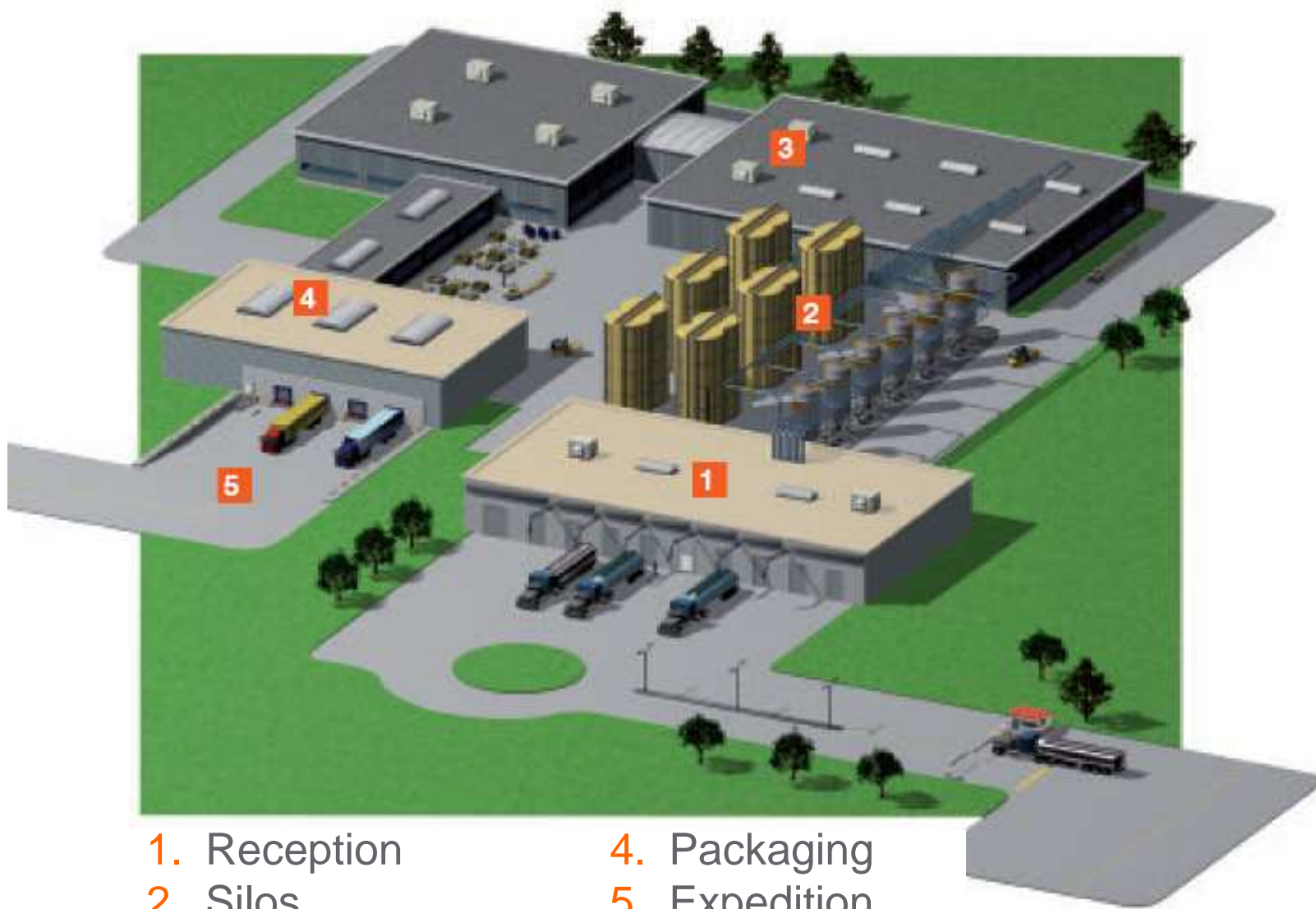




A Flexible Integrated automation architectures To meet your different process requirements



PlantStruxure™



- 1. Reception
- 2. Silos
- 3. Processing

- 4. Packaging
- 5. Expedition
- 6. CIP
- 7. Advance control & EE optimization everywhere

Build Simple Solutions for Safer & more Affordable Products

- Industry **Specific Field Devices**
- Comprehensive **Process Automation**
- Integrated **Manufacturing Execution System**
- Reliable Power & **Efficient Energy** Management
- **Building Management** Systems
- **A complete service approach**
- The **commitment** of a world-wide leader

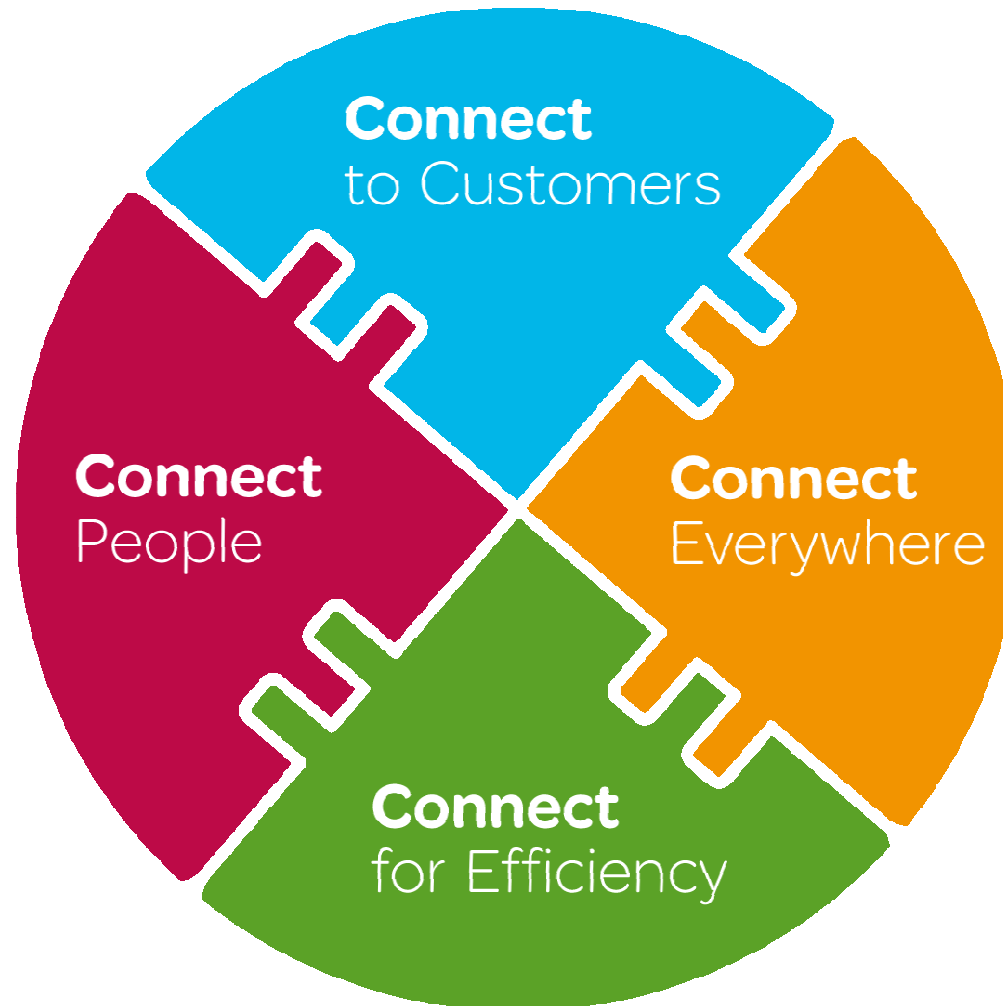


Schneider
Electric

Some of our Food & Beverage End Users references



Focused on 4 Transformations with our company programme **Connect**



Within an innovation eco-system for a simpler and greener future

We start today...

Partnering with 50+
best-in-class public and
private organisations



**Leading global
projects** for Intelligent
buildings, renewables,
nanotechnologies

Homes
Minalogic
Smart
Electricity

**Boosting
standardisation**
Zigbee, IEC, NEMA

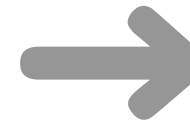


Funding start-ups
Schneider Electric
Venture capital fund

Demand
response,
software
breakthrough

**9,000
R&D engineers
70 sites in
22 countries**

So we can be...



Energy
efficient



Environmentally
friendly



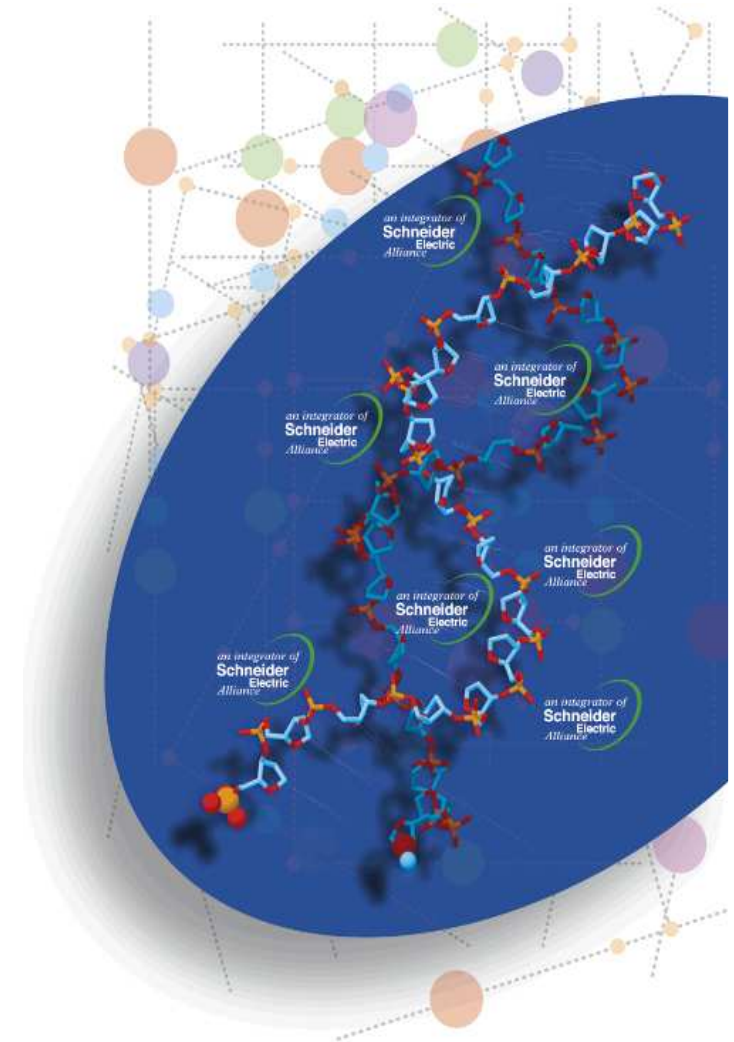
Open and
connected



Available 24/7,
on site and remote

Dedicated world wide support

- **Strategic EUs**
 - 71 Global Strategic accounts
- **Strategic Process OEM**
 - 15 Strategic Process OEMs
 - 24 Seedbeds
- **Strategic Machine OEMs**
 - 46 Global OEMs
- **Schneider Electric SI Alliance**
 - 432 Alliance Automation System Integrators
- **Installed base program**
- **Targeted Vertical Industry programs**
 - Supporting our F&Bev customers is part of our company Priorities







Tackling the stakes of today and tomorrow to support Schneider Electric's responsible growth

Green business

-  Energy efficiency
-  Renewables
-  Electric Vehicles
-  Demand response

Responsible company

-  Access to energy
-  Environment protection
-  People well being
-  Social commitment
-  Ethics & responsibility

Measured commitment

Planet & Society Barometer



Today **9.38/10**

Objective 2011: 8/10
January 2009 start: 3/10

- Communicate quarterly
- Audited annually
- Revised with each company programme

A recognised and awarded commitment

Reference Ethical Stock index and ratings



- Among the 300 selected companies in the DJSI world out of 3500



- Top 52/500 in transparency index
- Top 29 on the performance index



- In the best-in-class companies for Vigeo CSR rating agency



- In the Prime category of the Oekom research ranking



- Top 5 of the best French listed companies in CSR



- Top 100 most ethical companies By Ethisphere, EU - For our ethics commitment and governance

Prestigious awards

Gigaton award

by carbon war room, UK
for our commitment to smart grid and energy efficiency



Zayed Future Energy prize

By Masdar, UAE
For our contribution to renewables and sustainable development



Green cross

By national safety council, US
For our health & safety practices



Human Capital trophy

France
For our management internationalisation policy



Schneider Electric – the global specialist in energy management

22.4

billion € sales
(2011)

39%

of sales in new economies
(2011)

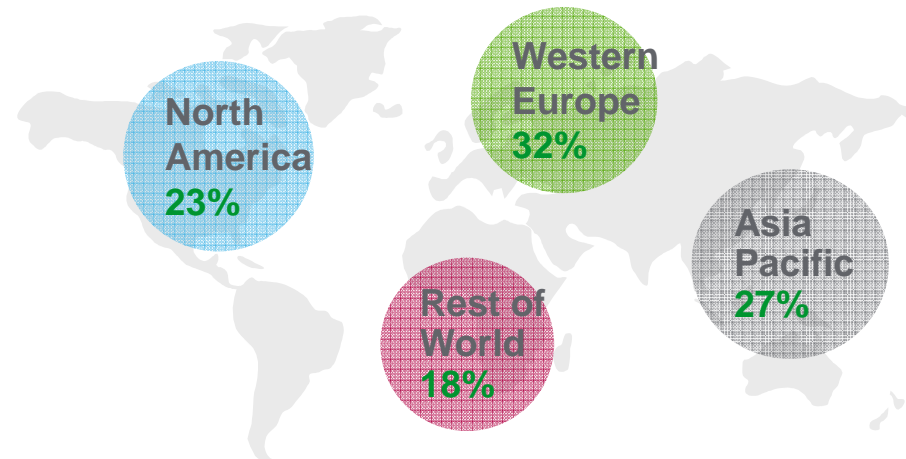
130 000+

people in 100+ countries

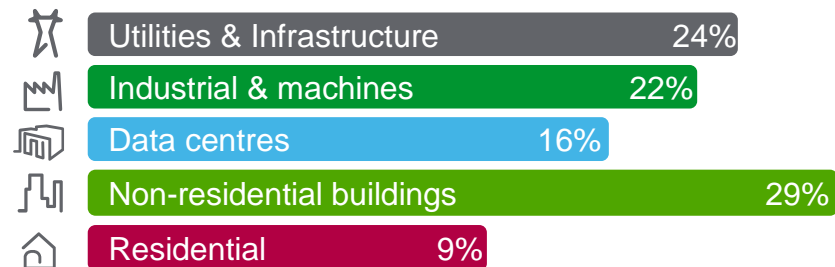
4–5%

of sales devoted to R&D

Balanced geographies – FY 2011 sales



Diversified end markets – FY 2011 sales



**Questions ?
/ Answers**



A close-up photograph of a young boy with dark hair and eyes, looking through a white cup. The cup is held up to his face, and he is looking directly at the camera. The background is blurred, showing what appears to be a chair and a wall. The text is overlaid on the image, following the curve of the cup's rim.

“Hungry for Green Efficiency” ?

Questions ?



Conclusion



Our greatest reward:
the satisfaction of our
F&Bev customers





Thank You!
Tack så mycket!

**“ Better Food and Hygiene for More
People Using Less Energy**