



Intelligent Sensing Anywhere

ISA Energy Energy Efficiency Everywhere

P3E - Seminário Políticas e Experiências
em Eficiência Energética – 09/09/2011



Oil&Gas



Energy



Environment



Health

ISA Energy



ISA Energy promotes energy efficiency, supplying companies and entities with the best solutions to drop down consumption and to manage the available resources.

This is a new business area of ISA – Intelligent Sensing Anywhere – adjusted to the energy market with new technological and innovative solutions.



Context and Challenge



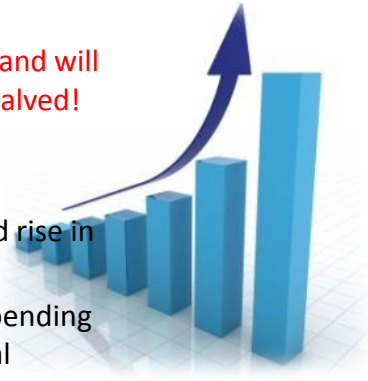
Today we notice a growing need for energy with more buildings, more equipment and growing demands.

In 2030, comparing to today: energy demand will double and carbon emissions should be halved!

How would it be possible?!

We also notice higher costs, shortage of resources and a consequent and expected rise in the prices we pay for energy.

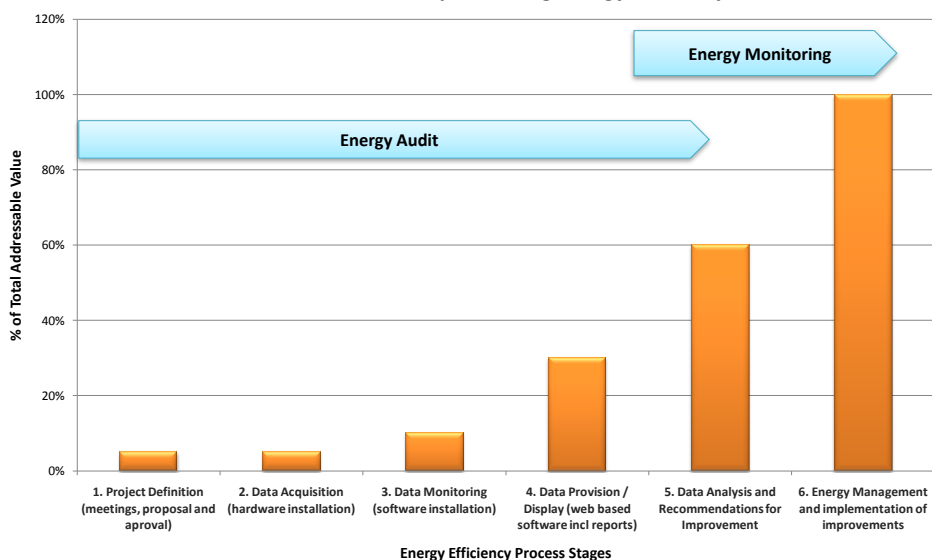
To perform better or at least the same, spending less energy, is an urgent and fundamental challenge for the economic activity of companies and for the planet itself.

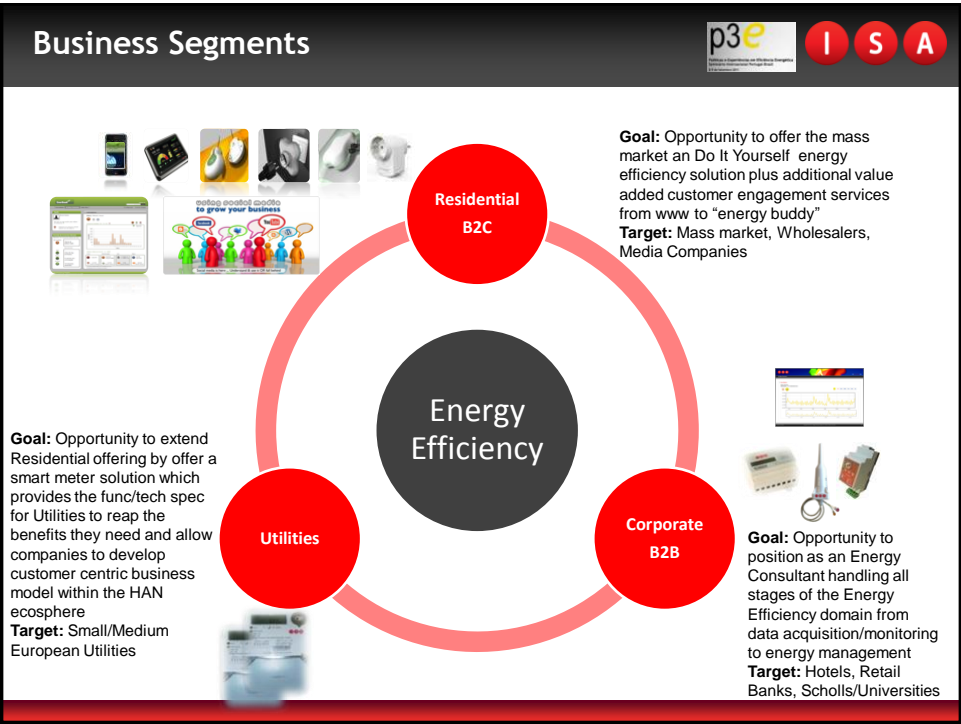


Our Approach



Value Realisation of implementing Energy Efficiency





Case Study - Residential Market (B2C)

p3e I S A

SMART LIVING

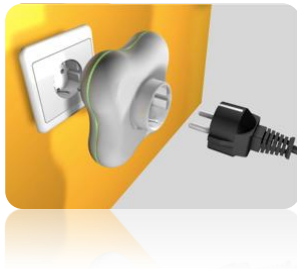
Cl gy®

meo

PT

One life.
Make it better.

But what is Cloogy?



Hardware



Software

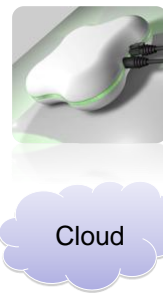


Service

How it works



Sensors



Data



Interface

Case Study - Residential Market (B2C)



Web Portal – Enerbook



Mobile Apps
iOS & Android

Case Study - Corporate Market (B2B)



Energy Efficiency



Undergoing project for energy monitorization of electricity consumption in more than 350 agencies and 20 buildings of a Banking Institution in Portugal.
Project Value > than 1M€

- The project execution contemplates the installation of 1.520 energy meters in several electric consumption points.
- Beyond gathering information from several energy meters, spread along Portugal in terms of geography, the project also aims the implementation of projects for energy efficiency with focus in terms of consumption reduction.

Case Study - Corporate Market (B2B)



-37%

Financial branch in Coimbra*

Annual Energy consumption	4.200 €
Estimated savings	1.554 €
Estimated savings**	-37%
Payback (years)	2
Investment (Audit + Equipments + Energy management services)	2.555€

- Focus on lightning and HVAC
- * Estimated with audit information

How to get 37% less in Energy Bills?

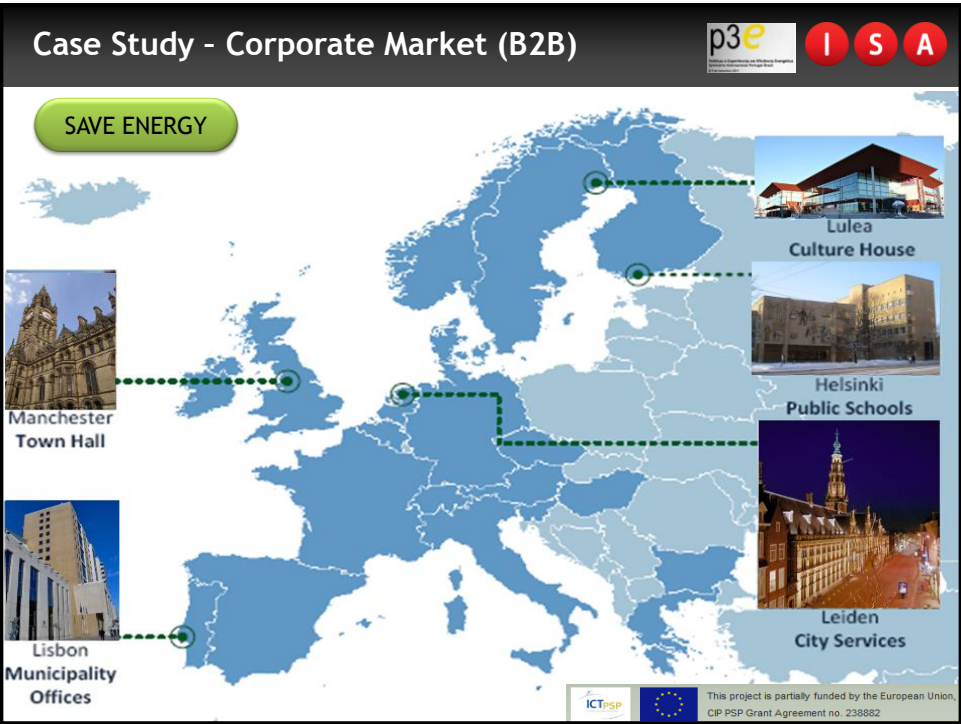
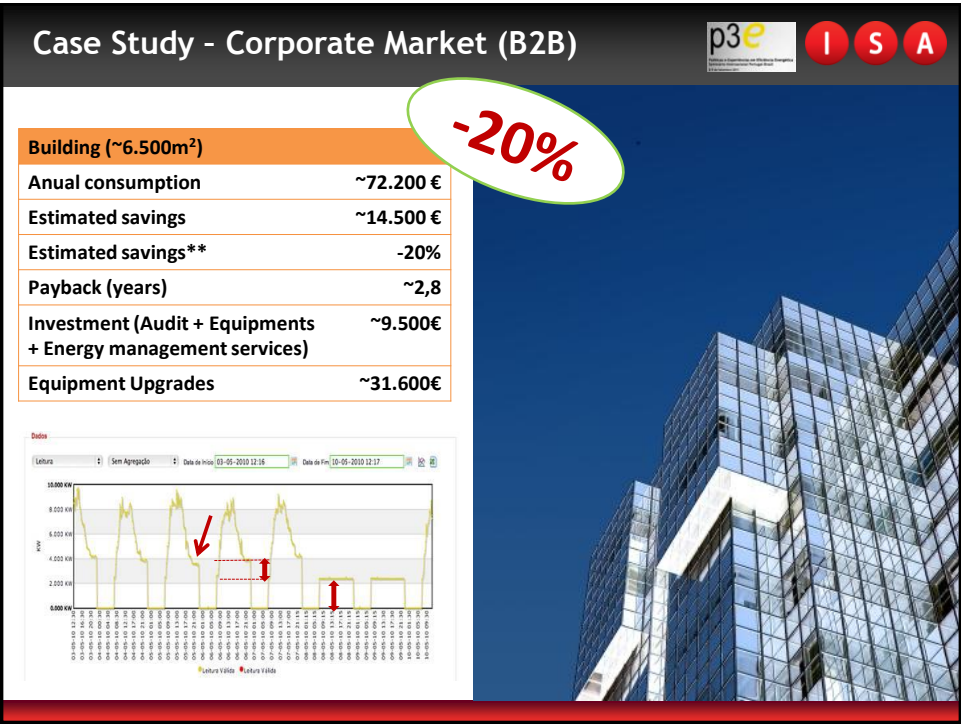


Case Study - Corporate Market (B2B)



Optimization Scenarios:

- Time of Use:
 - (37%) Outdoor lightning managed with daylight real information
 - (38%) HVAC (night)
- Equipment Upgrade:
 - (8%) LED Lightning, CFL light, T5 lamps, others
- Behaviour Changes:
 - Temperature setpoint, lightning usage, PCs usage
- Building Management Systems:
 - Temperature set-up;
 - Lighting schedules, outdoors
 - Fault monitoring (HVAC's, Outdoors, ...)
 - (8%) Algorithms to minimize energy usage in lightning
 - Remote Control
 - (9%) Others



Case Study - Smart Metering

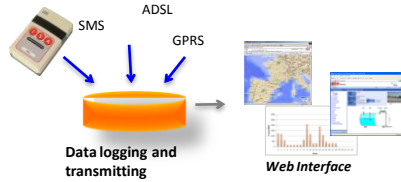


Electricity, Gas and Water Metering



Sensors & Actuators

Concentrator;
Web Interface



Software as a
Service

Configuration and Maintenance

Configuration Management
Assets Management
Field-force Management
Maintenance Management

Data Collecting and Operations

Data Collecting
Data Storage Management
Data Validation
Command & Control

Visualization

Reporting and CRM
Consumer Portal

Business Intelligence

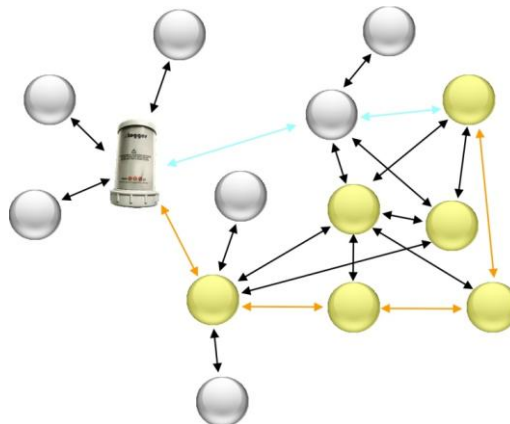
Stock Management
Forecasting
Billing data Management
Route Optimizing
Demand Management (ADR)
Balance Settlements
Distribution Planning

Case Study - Smart Metering



Multi-utility

All utilities share the same data infrastructure thus minimizing the structural costs for each.



Pathway for the Future



Buildings

Hospitals

Production Systems

Public Administration



Pathway for the Future



Electric Smart Grid

Power Generation

- Renewable production monitoring (Solar, Hidro, Wind, CHP)
- Power plant integration (Gas, Cool)
- Energy Natural resources monitoring (Wind monitoring devices, solar, rain and river flow evaluation)

Distribution Network

- SmartMeters on Substations and transformer stations

SmartMetering

- Solutions for domestic, industrial and services smartmetering (utility driven)
- Solutions for final costumers (Buildings, Domestic, services), Service offers to utilities

Public Lightning

- LED lightning technology (luminaires and management systems)

Water Smart Grid

Water Production

- River monitoring
- Water Treatment plant monitoring
- Data Integration

Distribution Networks

- Remote management systems for water networks
- Leaks monitoring systems

SmartMetering

- Solutions for domestic, industrial and services smartmetering (utility driven)
- Solutions for final costumers (Buildings, Domestic, services), Service offers to utilities

Waste Water collection and treatment

- WWTP monitoring
- Water quality assurance
- Data integration

Environmental Quality

Air Quality

- Pollutants monitoring (Nox, Sox, particles)
- Public advertising systems for air quality (Web interfaces, Digital signage)

CO2 Estimation

- Data gathering from fossile consuptions (Power plants, Industrial facilities, eg)
- CO2 emissions estimation

Metereologic Systems

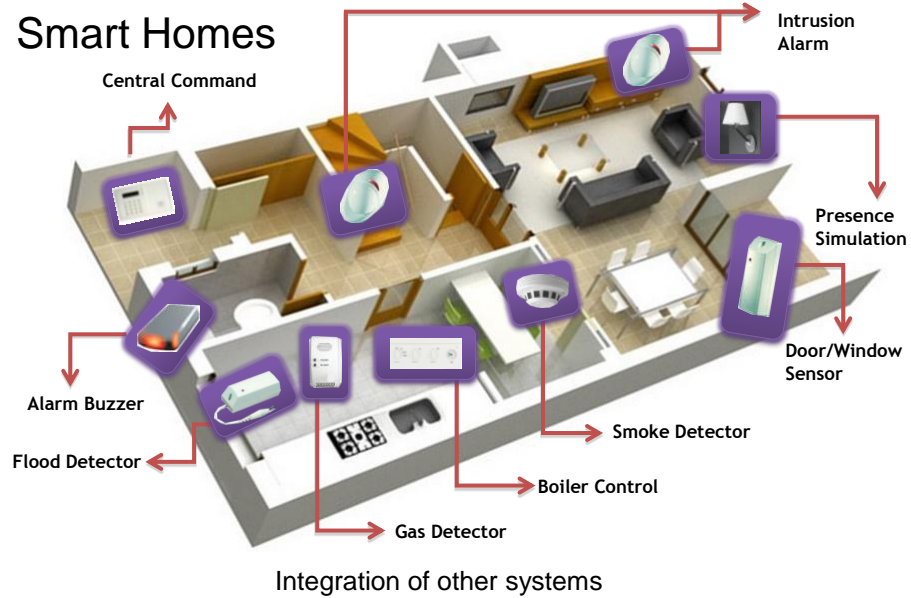
- Weather station

Sismic and Warning systems

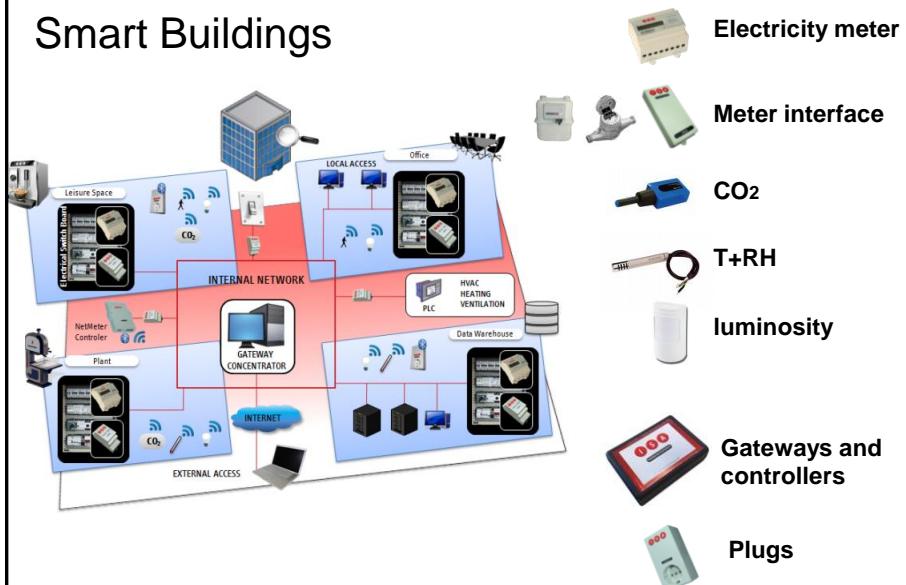
Sea monitoring

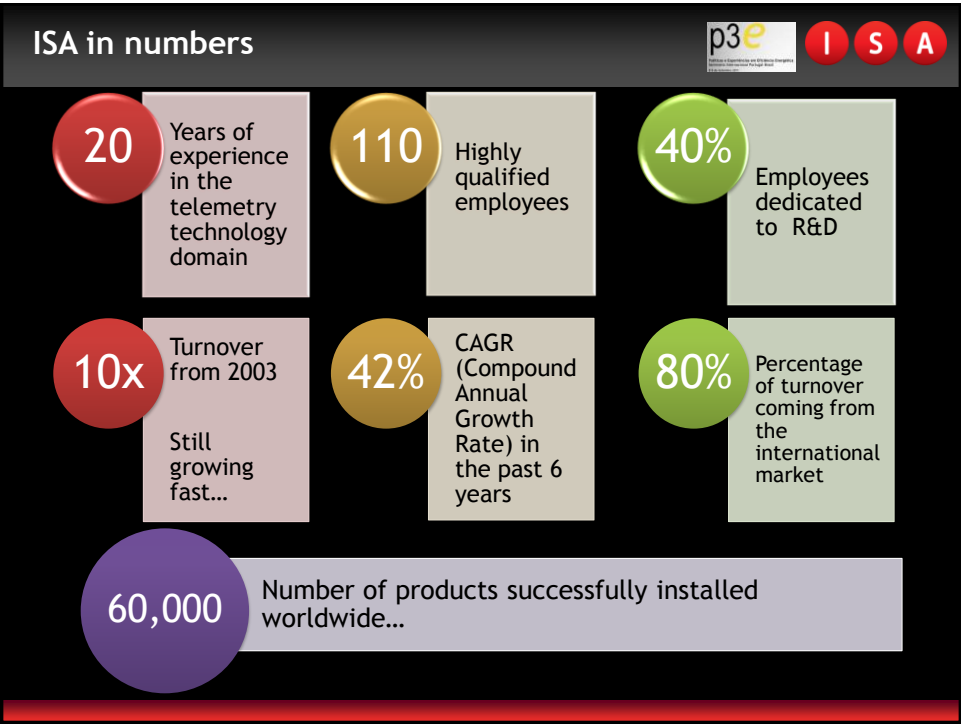
- Harbour Waves monitoring
- Metereologic Systems

Smart Homes



Smart Buildings





Earned the confidence of major customers



Over 60,000 reliable and cost effective systems successfully installed worldwide

Markets and Solutions



Energy

- Remote monitoring
- Energy efficiency
- Smart grids
- Renewable energies
- Aggregator Solutions



Oil&Gas

- Monitoring of LPG and piped gas networks
- Supply logistics (tanks and cylinders)
- Remote management of fuel stations
- Refineries monitoring



Environment

- Measurement of carbon footprint
- Meteorology and Seismology
- Hydropower Potential



Health

- Ambient Assisted Living
- Tracing people and assets
- Remote medicine

Some of our references



Oil&Gas



Healthcare



Energy



Environment



Energy Efficiency Everywhere



Thank You!

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