



Milan
May 14, 2013
XII edition



Machine-to-Machine Applications for Smart Cities




**An affordable building-
centric approach to boost
smartgrid acceptance in
2013's smart cities...**


www.vertical-m2m.com

Vertical M2M at a glance


The new deal for « smart cities » ??



More smart and connected objects



Key aspects:
Energy consumption,
Environmental issues &
HomeCare



€ ???

What we do at Vertical M2M

MARKETS

- Energy
- Environment
- Healthcare

SOLUTIONS

- Remote asset monitoring & telemetry
- Telemaintenance
- Automation & process control

Application Development

Telecom management

Cloud computing services

CommonSense



TECHNOLOGIES

Our application portfolio for Smart Cities

Energy & M2M

smartgrid

renewable
energy

intelligent
building



Environment & M2M

water processing

air pollution

waste treatment



Healthcare & M2M

**chronic diseases
follow-up**

homecare

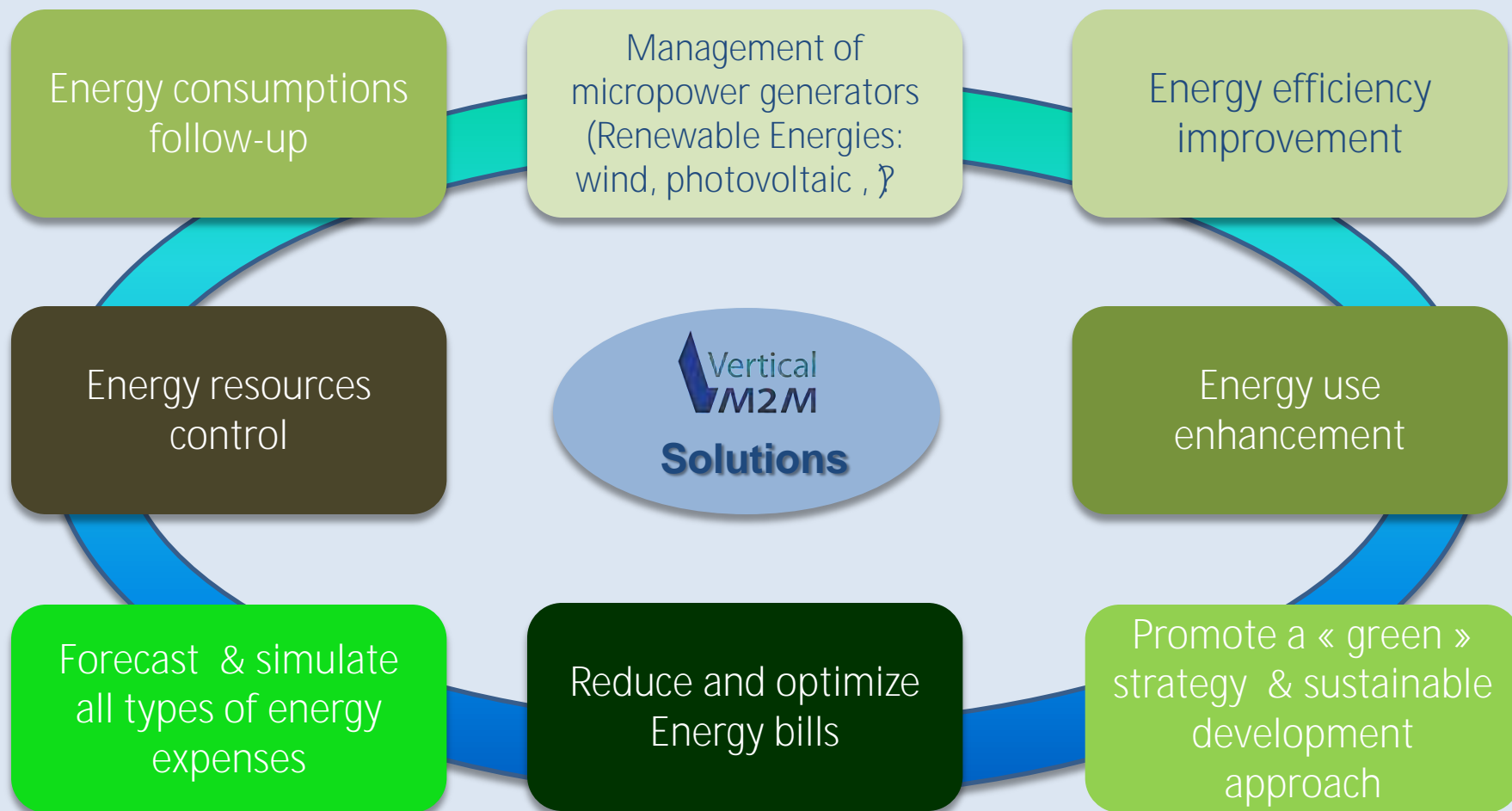
assisted
living



CommonSense framework for M2M applications

M2M, Energy & Buildings

Energy & M2M: B2B challenges for smartgrid and smartbuilding



Energy efficiency for buildings & M2M: 4 strategic areas

- Energy performance: construction / renovation, energy mix, green certificates?
- Smart homes : optimize energy usages (alarms, automation, smart energy devices?)
- Renewable Energy plants & installations : all kinds of renewable energies (geothermy, heat pumps, hydraulic and wind micropower generation, solar PV or thermal installations)
- Improvement of Energy use behaviours: display of Energy consumptions, analysis per use, follow-up of energy savings targets, education on best practices, etc.

Buildings & Energy: facts & figures

- Buildings represent 40% of the total Energy consumption in the E.U (according to the European Commission)
- The 2020 EU Plan for Energy means a total reduction of Energy consumptions in existing buildings of 38%
- Only 1% of the existing park are new buildings?

Energy challenges for commercial buildings

Commercial & office buildings



Typical needs

OFFICES

Temperature gradients
Multi-fluid metering
and sub-metering
Presence detection
and people counting?

COMMERCIAL BUILDINGS

CO2
Ambient
temperature?

Challenges

FOR BUSINESSES

Energy audits
Optimization of Energy
bills
Real-time consumptions
follow-up
Anomaly detection
Energy budget planning

FOR EMPLOYEES

Energy savings and
sustainable
development Education

Energy challenges for residential buildings

Residential buildings



Typical needs

COMMON PARTS

Metering (electricity, gas, water),
ventilation/CO2,
gradient ?

APARTMENTS

Humidity
Ambient and external
temperature
Electricity & gas
metering

Challenges

FOR BUILDING OWNERS

Remote Energy
metering reading
Boiler room control
Anomaly detection(water
leaks, over-
consumption)
Energy bills optimization

FOR END-USERS

Energy best practices
education
Reduction of Energy
bills

How to provide an affordable approach
to smartbuildings and smartgrid ?

1- Solutions for the whole value chain

Bring modular thus consistent applications for all players involved in Energy management?

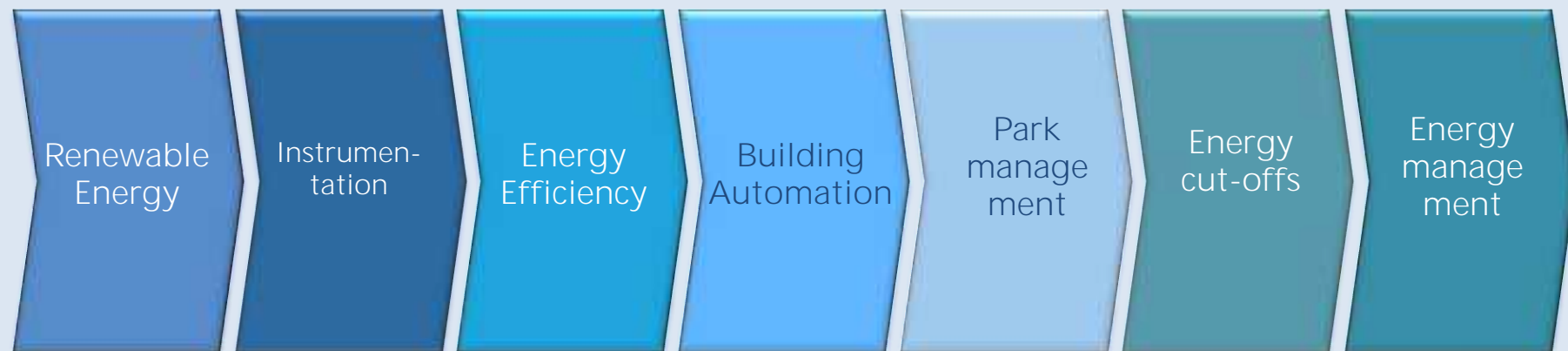


2 - Project methodology

- « step by step » approach to grant a better acceptance of Energy management solutions for Buildings / smartbuilding solutions
- added-value services with a quick ROI and a very low upfront investment
- « bottom-up » strategy with smartgrid : from a single building up to a building block, a district or even an entire city?

3 - Result-oriented applications

Energy savings and cost reductions can be brought at any step of the project?



Steps towards Energy management for Buildings

An example with

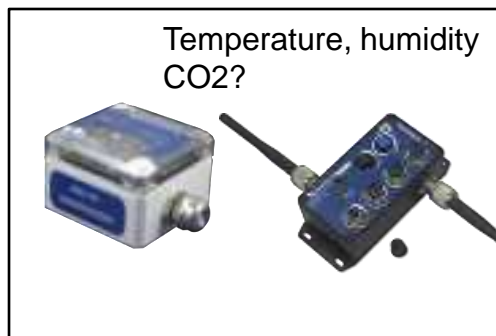


OneSense
ENERGY

www.onesen.se



REMOTE FOLLOW-UP OF ENERGY PERFORMANCES WITHIN BUILDINGS



- NON INTRUSIVE : no additional cabling requirements
- FLEXIBLE: full range of energy/environmental parameters
- COST-EFFECTIVE : low investment and quick ROI
- SMART: alarms, KPI, bills optimization
- GLOBAL SERVICE: hardware, software & telecoms?

Main features



Remote meter reading Energy bills optimization Environmental measures
 Anomaly detection On-line performance and consumptions follow-up
 Accessible for both facility managers and end-users?



THANK YOU FOR YOUR ATTENTION

www.vertical-m2m.com  