

The Smart Island

Future Internet Forum

23rd November 2009

Kista Science City

Stockholm

Emanuel Delia

Head of Secretariat

Ministry for Infrastructure, Transport and

6 sq km

tion: 400,000

Languages: Maltese, English

ed to the EU: May 2004

ed the Euro: January 2008

real GDP growth: 2.5%

(forecasted) (-0.9%)

ployment Rate 2008: 5.9%

conomic pillars:

sm

cial services



Smart Island Strategy

(2008 -2010)

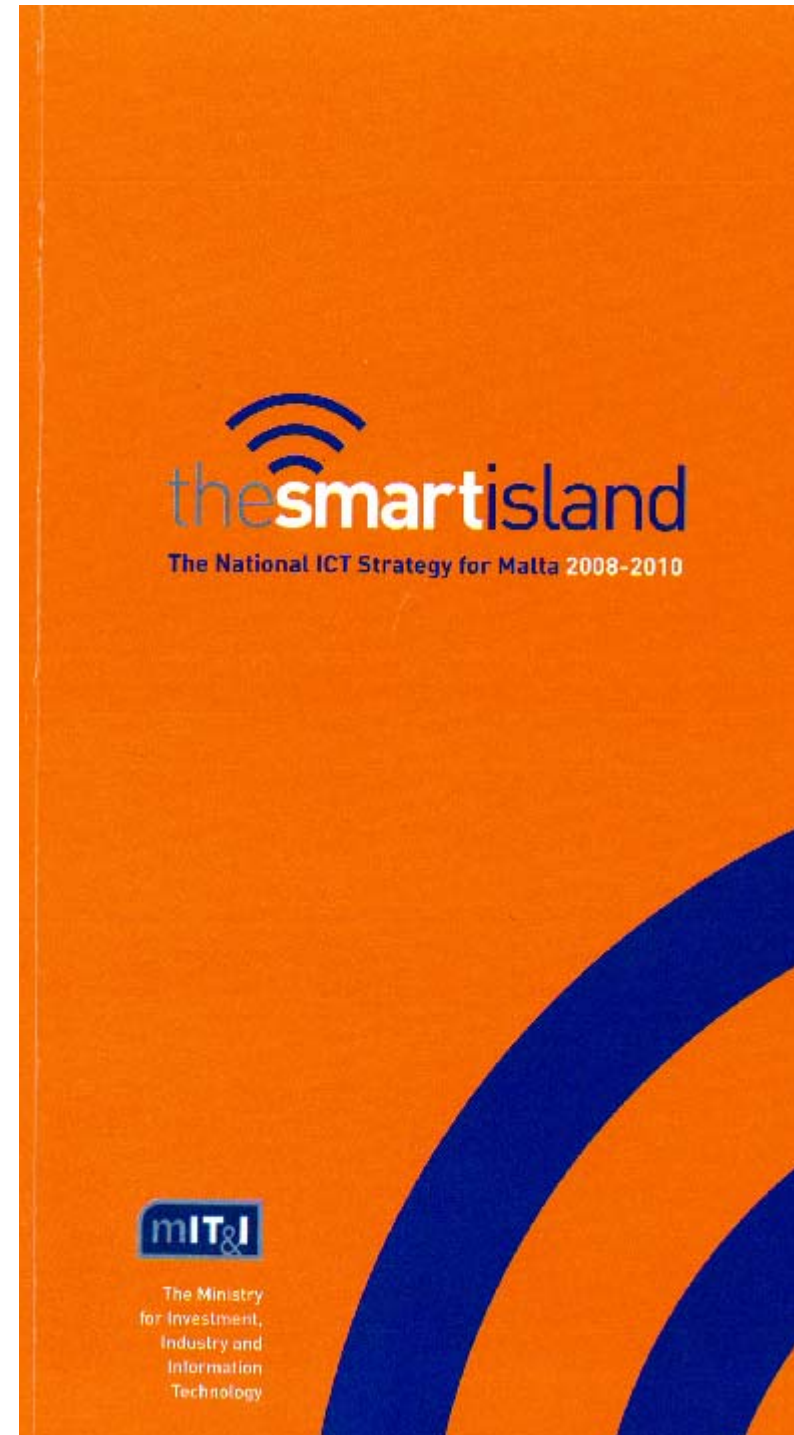
i2010 strategy

Vision 2015

SmartCity

3 Horizontal objectives

Ubiquity of ICT



Strategic Streams

Delivering a next-generation ICT environment

Building a connected society that bridges the last and new

Developing the potential for a smart workforce

Using ICT for a better quality of life

Re-inventing Government

Taking care of e-Business

Developing a world-leading ICT Industry

f households have broadband access (2008, EU)

f enterprises have broadband access (2008, EU)

e-Gov availability and sophistication (i2010, 2008)

the Networked Readiness Index (WEF, 2008-2010)

the e-readiness index (EIU / IBM, 2008)

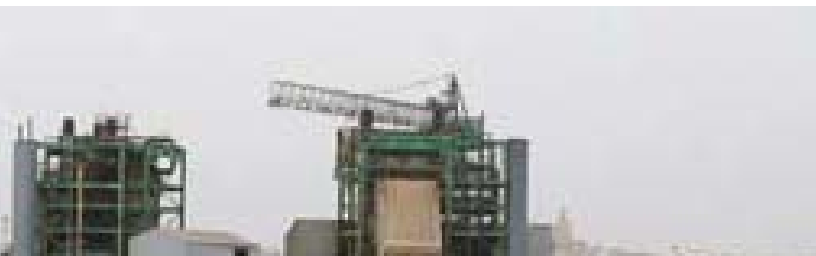
The Smart Grid Project

Water System

Challenge: In recent years, a complex series of challenges has required immediate attention to ensure that Malta is able to deliver affordable water using secure energy while protecting the environment.



Water Service Corporation provides water from underground fresh water aquifers. More than half of its water supply is produced by electrically powered desalination plants.



Enemalta Corporation generates electricity entirely by imported fossil fuel in an isolated system.

oints) that triggered the
tion:

y Commercial losses (circa

k Water Leakages 18%

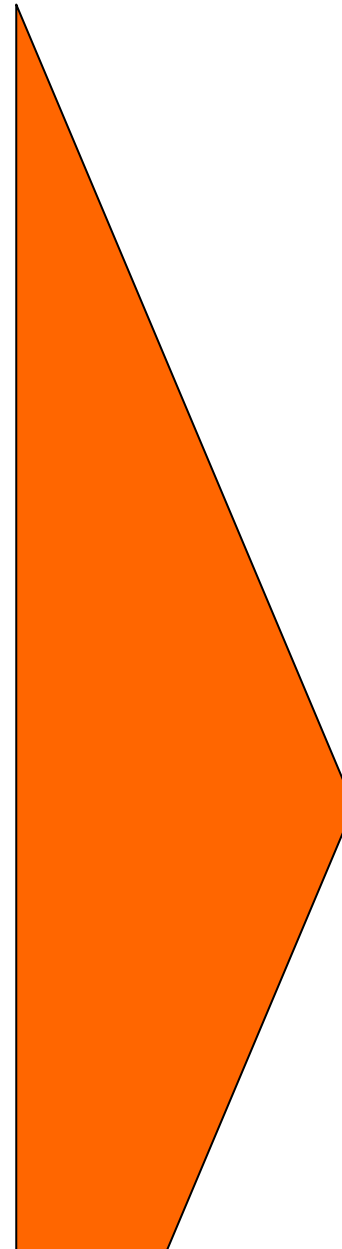
pparent Losses 22%

on time Information to make
nal and strategic decisions

nk between Water & Electricity
ions (75% of Desalination
s Electricity, 4% of National
y Consumption)

mental Commitments (WSC &
mitted with the reduction of

Internal Efficiencies / Internal

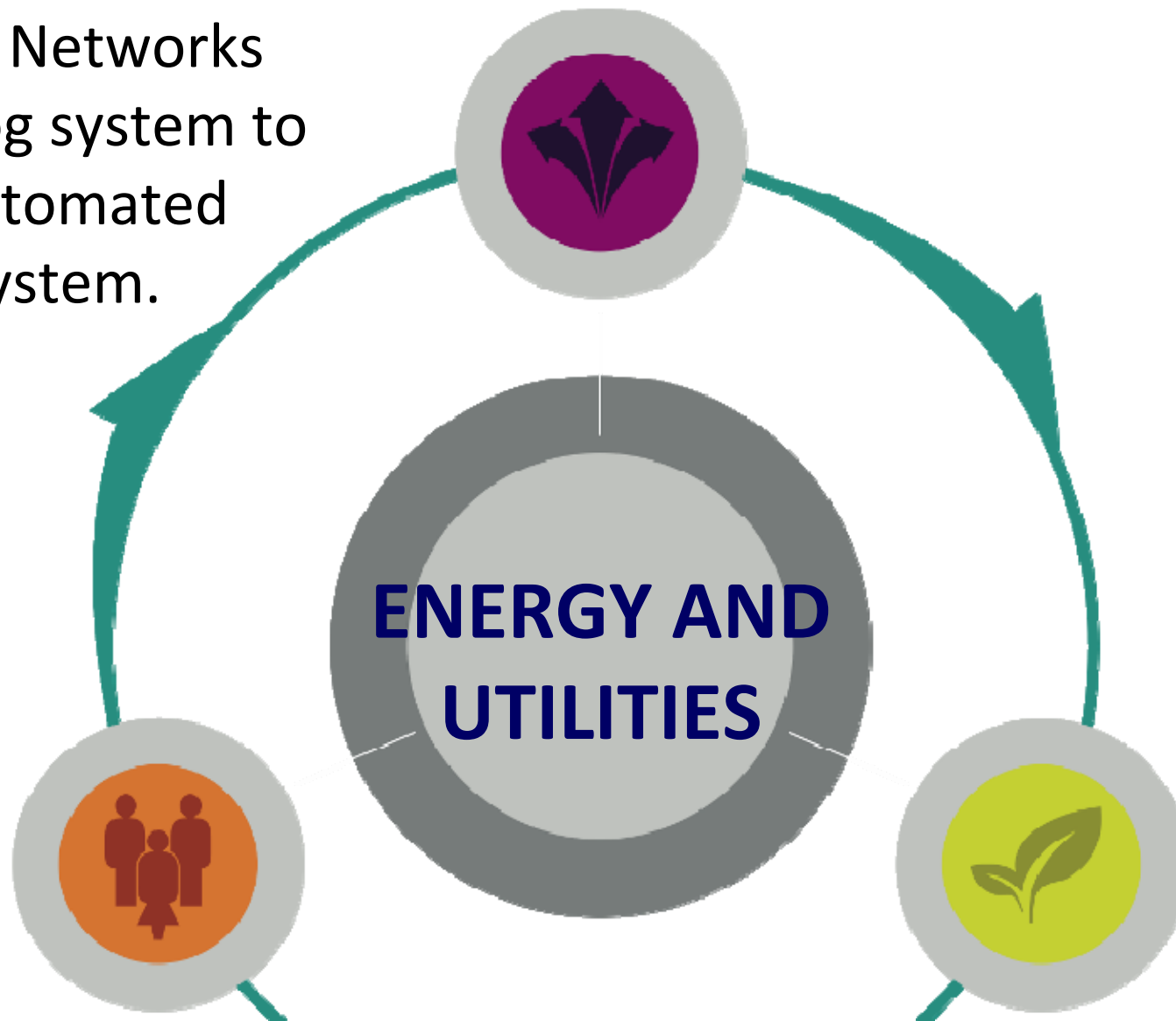


**The Strategic Goals pu
Corporations:**

- Financial Self-Sustain
the
Corporations
- Implement Efficient
- Better balance betw
and Demand
- Reduce Commercial
Losses
- Respectful with the

TRANSFORMATION OF THE NETWORKS

Transforming the Networks
from a rigid analog system to
dynamic and automated
energy delivery system.



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Meeting



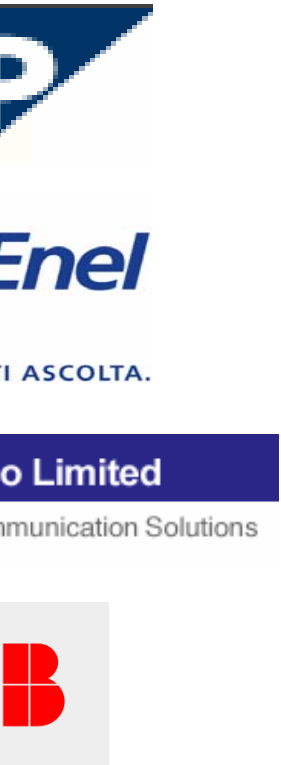
**Haifa
Research
Lab**

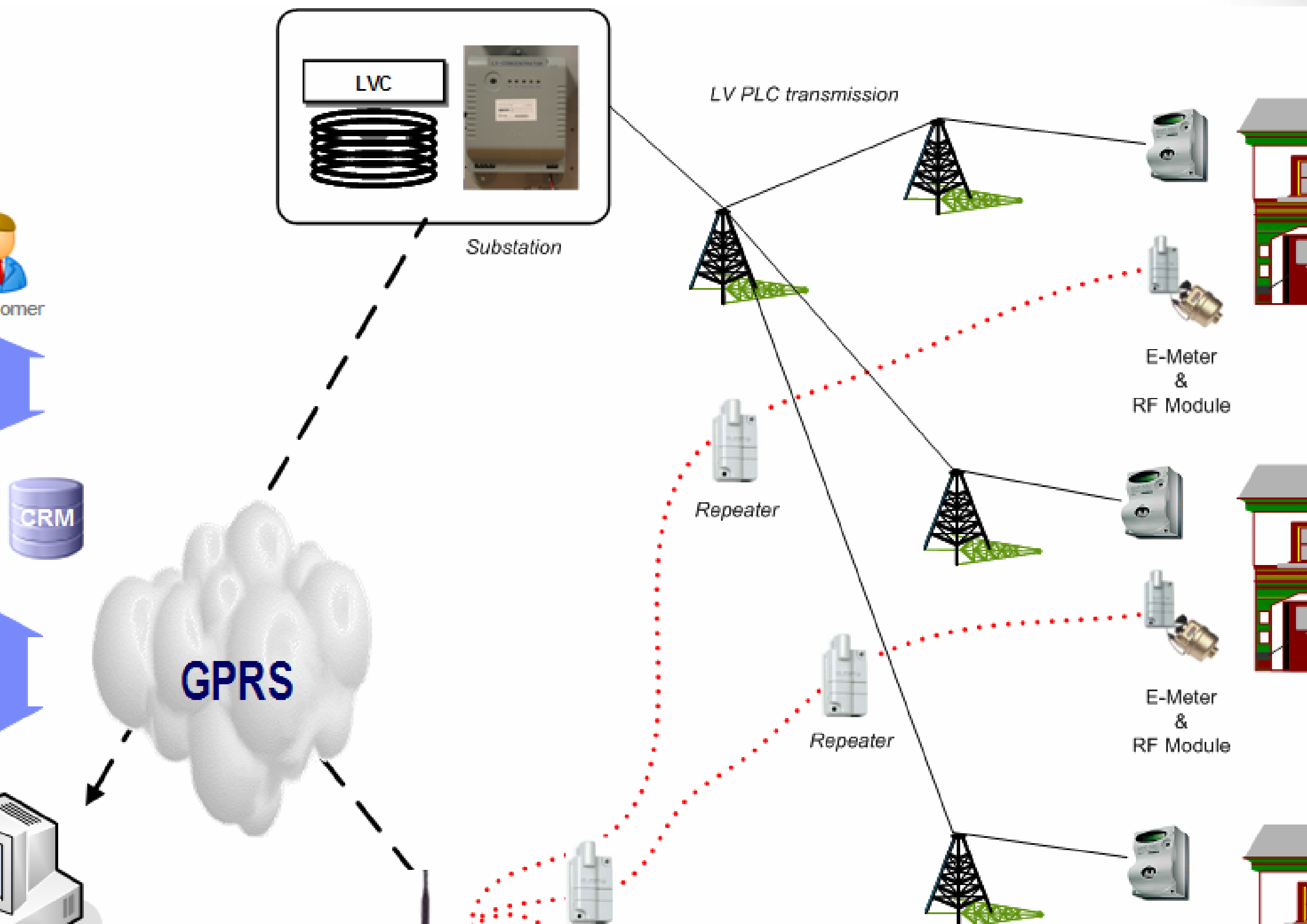


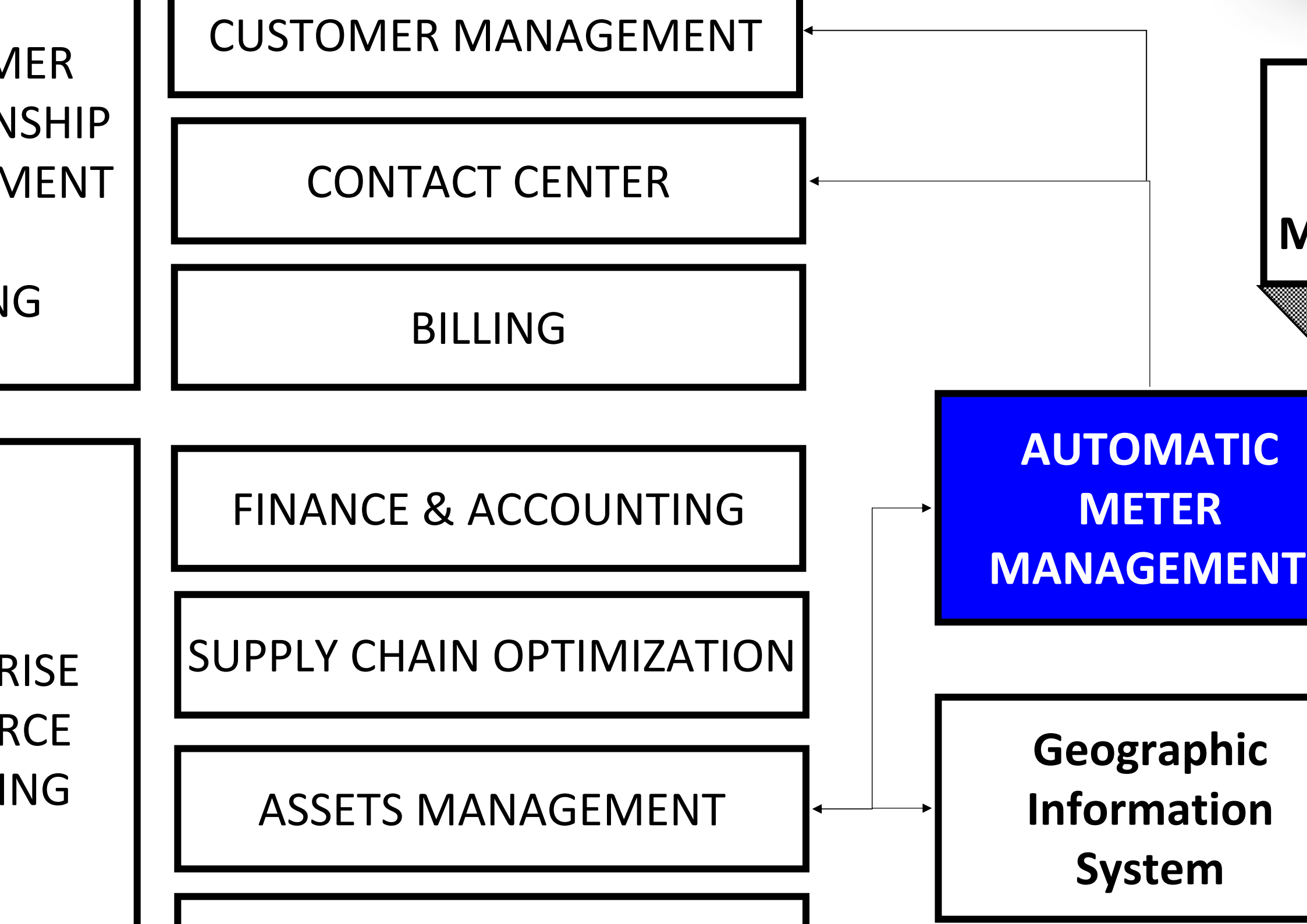
**Zurich
Research
Lab**



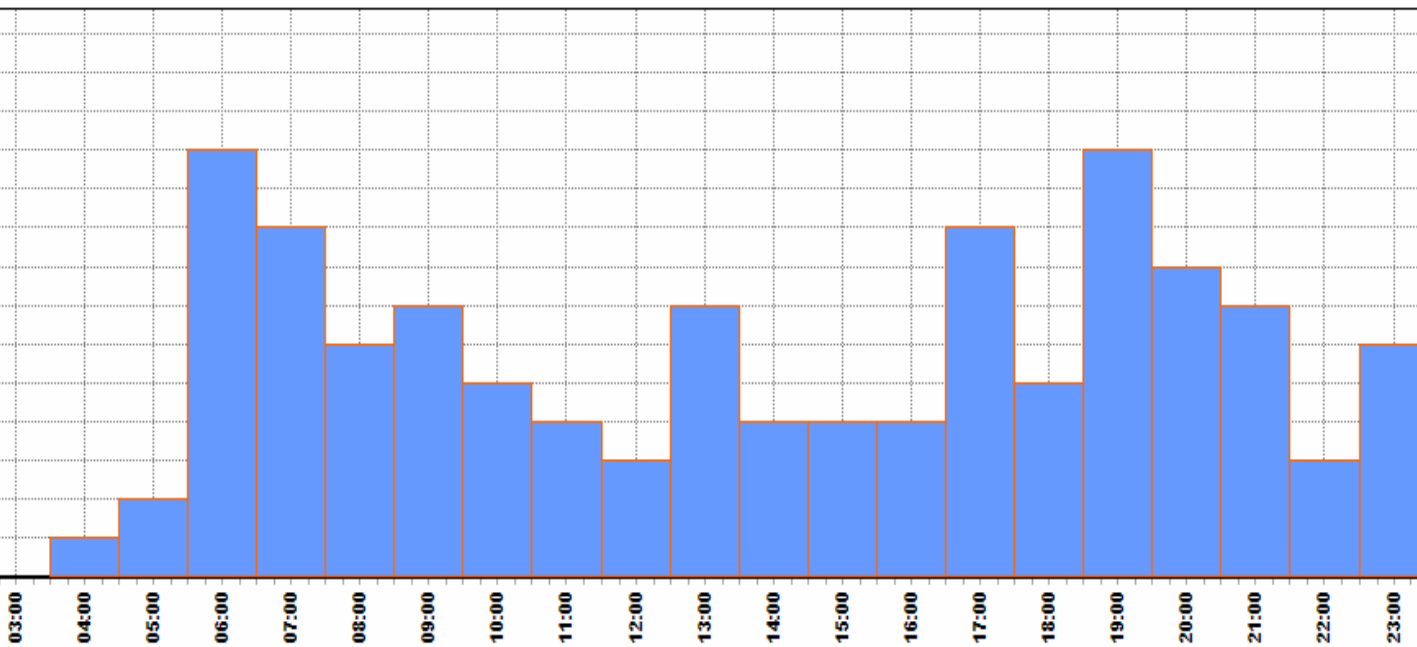
**Rome
Software
Lab**





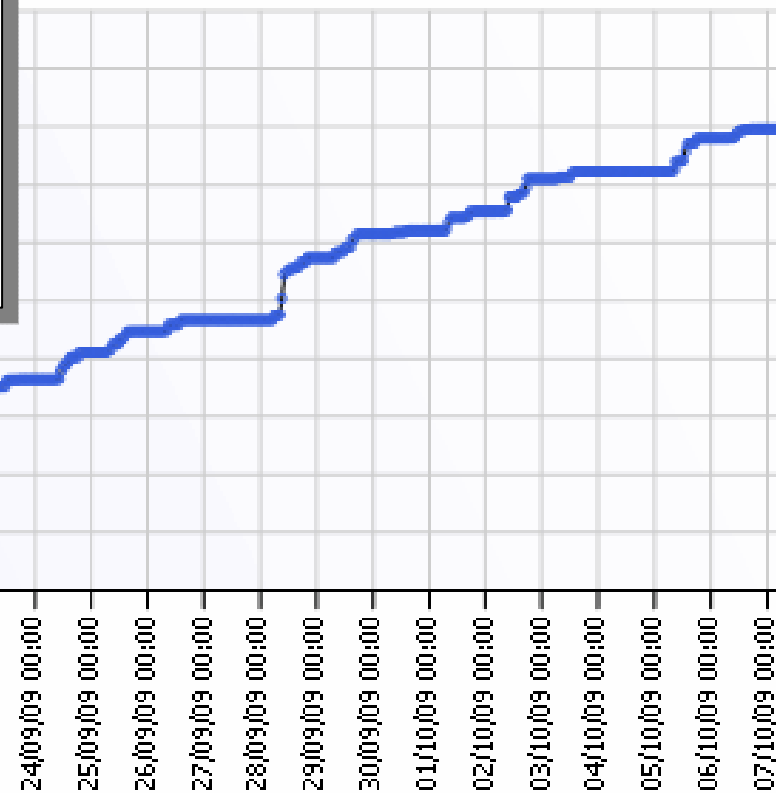


Consumption (m3) : Day 02/09/2009



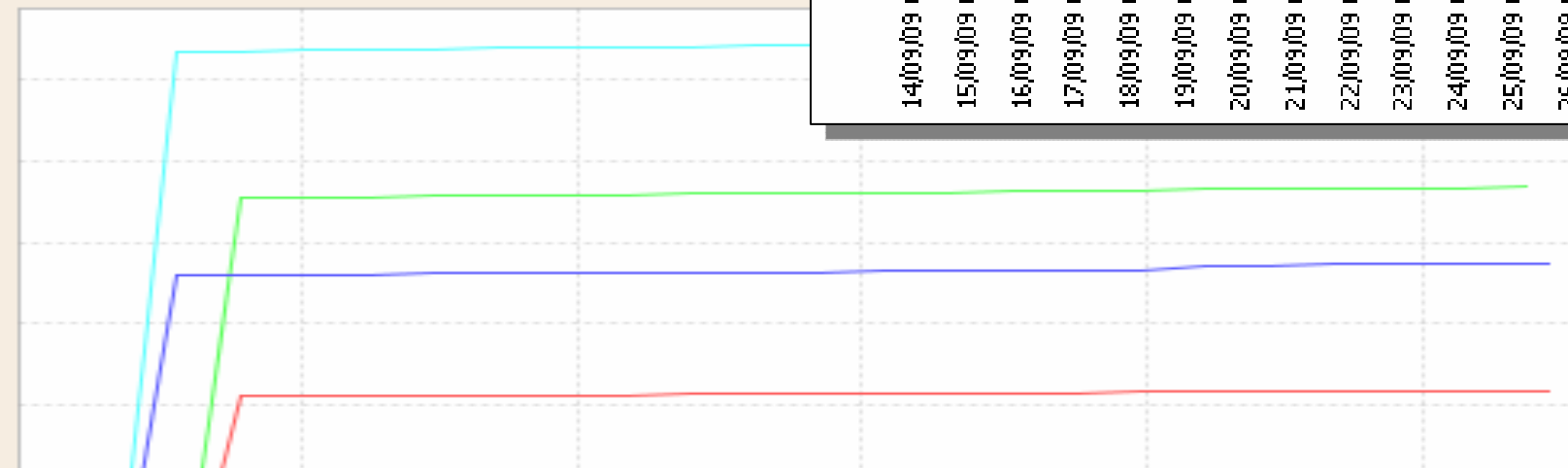
Hourly Water Consumption Graph

Index in m³



Daily Water Index Graph

Index Grap



Monthly Water Index



- Consumption trends detected at different levels

Empowering the consumer

**AUTOMATED
REVENUE
MANAGEMENT
SERVICES
LIMITED**

Bartolo | Log out

type your search

Position

Account management

Order management

Customer services

Meter services

User preferences

Account
Contract account
How:
Residential
Location
Usage detected |
Location is being
L. | more info
Tariff requested |
see all
Tools
Voices online
at online
Reading dates
Interrupts
t management
ption overview

Last bills

	Date	Bill Number	Billed Amount	Balance	Status	Days overdue	Interest
!	22nd March	231123	200.23€	+180.45€	Open	67	3.2
✓	25th April	123456	120.63€	+17.95€	Paid	0	0.0
✓	15th May	234543	232.16€	+37.95€	Paid	0	0.0
!	22nd June	1223667	122.56€	+77.89€	Open	23	0.0
✓	14th July	34354632	211.89€	+55.55€	Paid	0	0.0

see

Bills overview



Electricity Consumption (units) vs bill date

Bill Date	Consumption (units)
Nov	2
Jan	5
Mar	8
May	4
Jul	4
Sep	2



Water Consumption (units) vs bill date

Bill Date	Consumption (units)
Nov	5
Jan	6
Mar	3
May	7.4
Jul	4
Sep	7

Contract events

Here are your contract events summary for last period.

 You consume more water than the average household

 Your carbon footprint has been 20Kg of CO2

 You have two unpaid bills | n

Benefits for the customer

• Billing performed on actual consumption
• Billing not on estimated consumption
• Demand side management
• Knowledge of customer presence for:
• Billing
• Contract activation / de-activation
• Service level modification
• Flexible tariff structure
• Faster resolution of disputes - spot billing on request
• Flexibility of billing periods

Benefits for the utility company

- Decreased cost of managing meters
- Demand side management knowledge of load profiles
- Better control of fraud
- Improved time to cash – prepayment actual bills
- Encourage use of energy outside peak hours
- Possibility of controlling the energy/water balance of each transformer substation / substation
- Prioritisation of network investment

Sensitive Research

of Excellence is being set up to
t of contact for further research
vation in the energy and utilities
and to act upon new rising
es in the energy and
mental agenda



need for an
solution able
ge, in an
d and real-time

- 1 energy consumption in buildings (smart)
- 2 demand side management programs
- 3 carbon footprint monitoring on a regular
- 4 transport management and traffic congestion
- 5 electricity and water metering
- 6 smart grid to manage the connections

Thank you