



Energy Services for municipalities in Flanders by Eandis

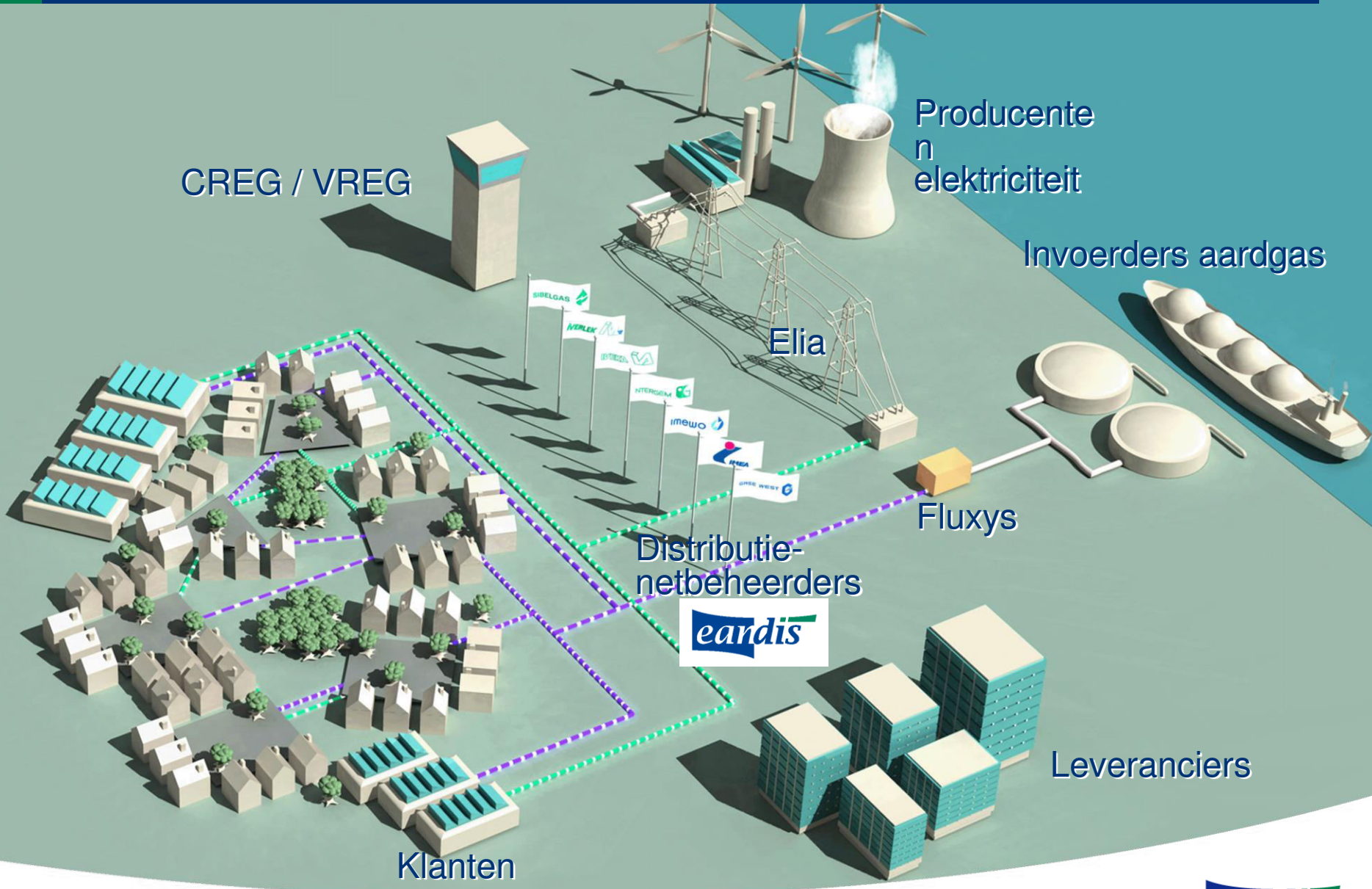
Step-Up-Conference - 19/06/2013



Structure

- Situating Eandis
- Energy Services for Municipalities
- Electrical Vehicles in action
- EMM
- Summary

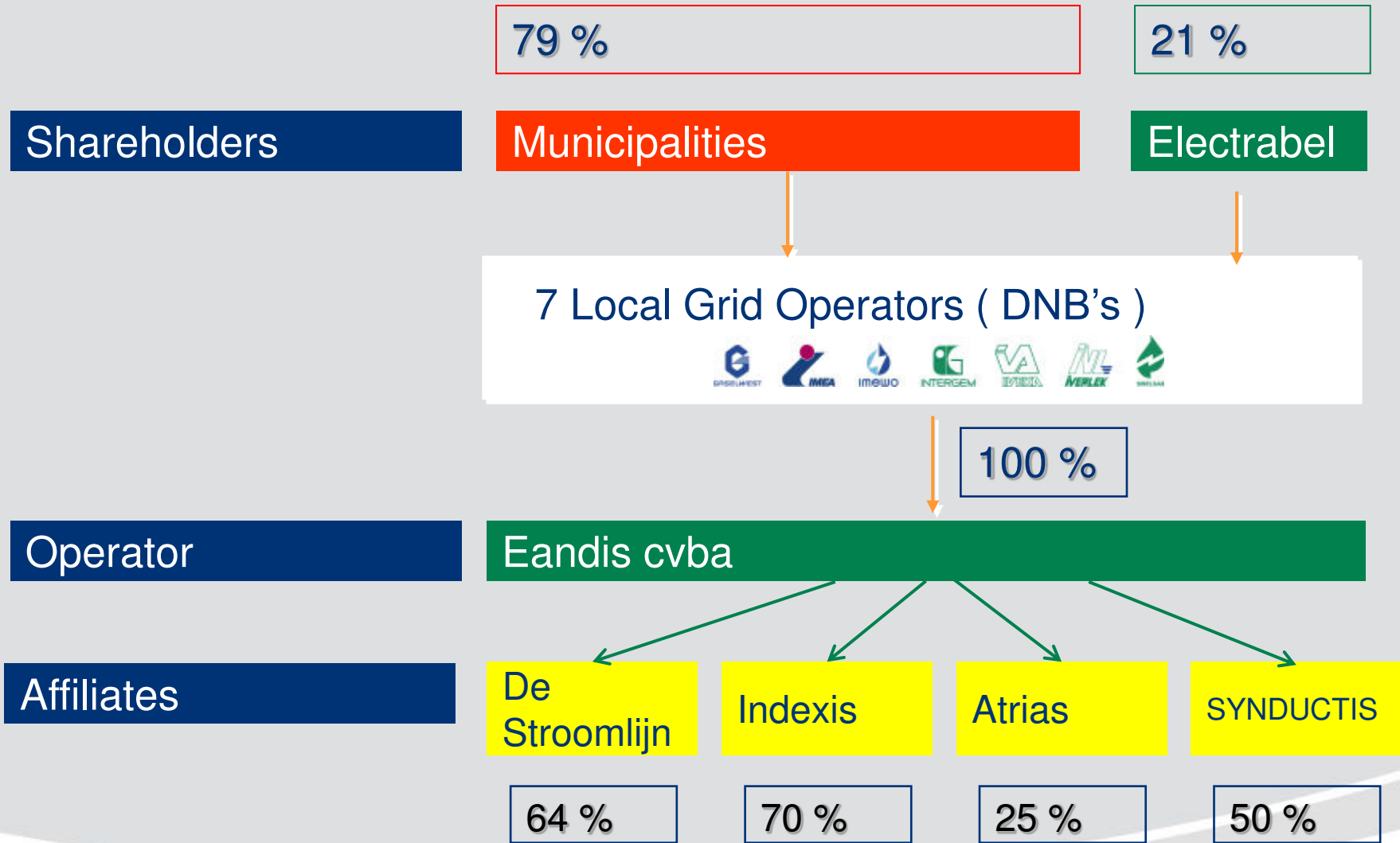
Eandis in Belgian Energy Market



Operating Area Eandis (+ 230 municipalities)



Structure Eandis - group



Public Service Obligations (ODV)

Obligations deligated by the Flemish Government to all distribution grid operators

Social ODV

- Energy supply to customers dropped by commercial supplier
- Installation of budget meters
- Minimum supply of 10A
- Procedures for malpayment
- Application of social tariffs

Ecological ODV

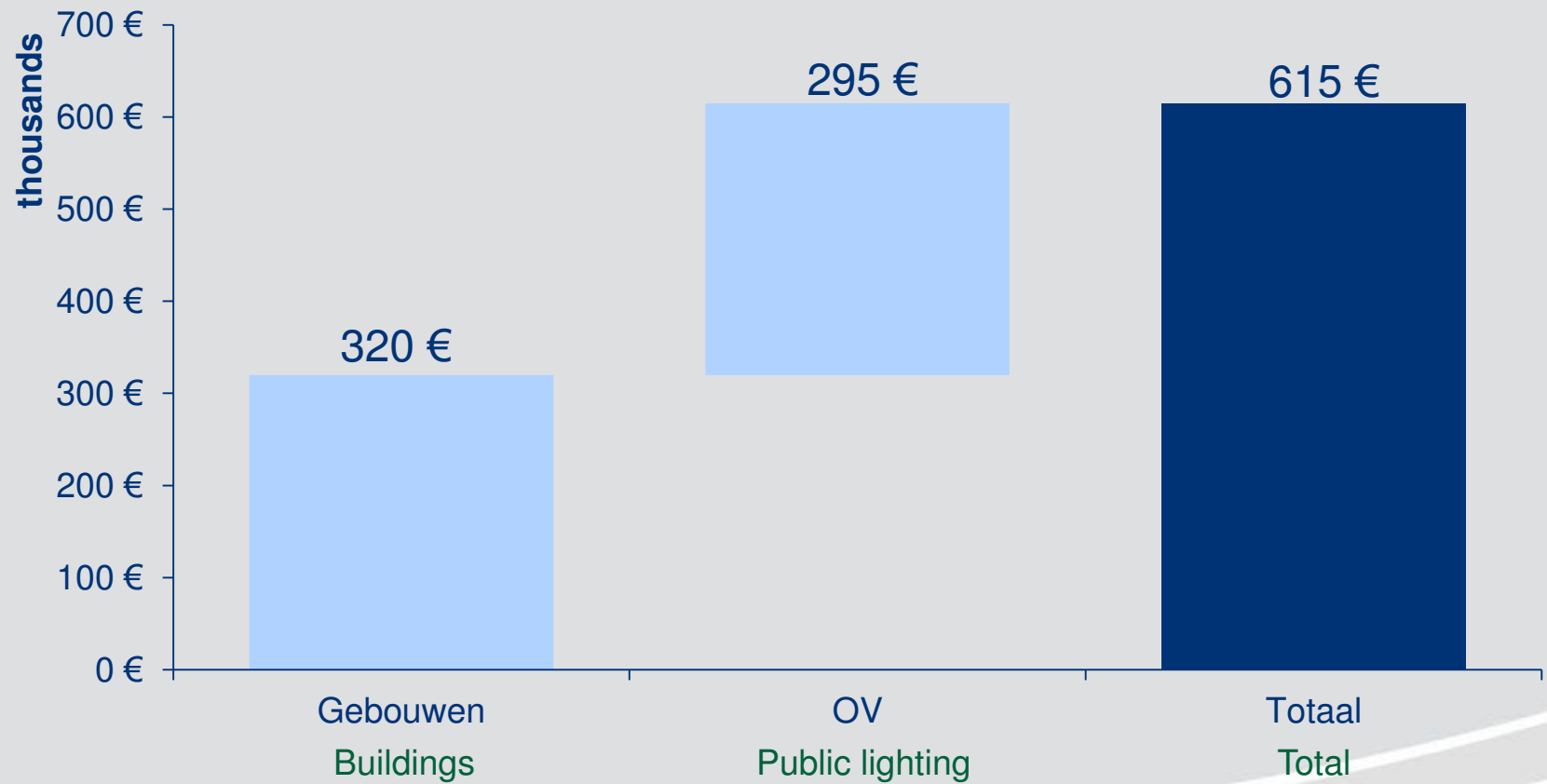
- REG
- Renewable energy certificates
- CHP certificates

Technical ODV

- Distribution grid investments (smart)
- 'Right to connect' for clients
- Safety, continuity and quality of energy supply

Public energy expenses

Average Annual Energy Bill of a Flemish Municipality = € 615.000 / yr





Energy Services for Municipalities

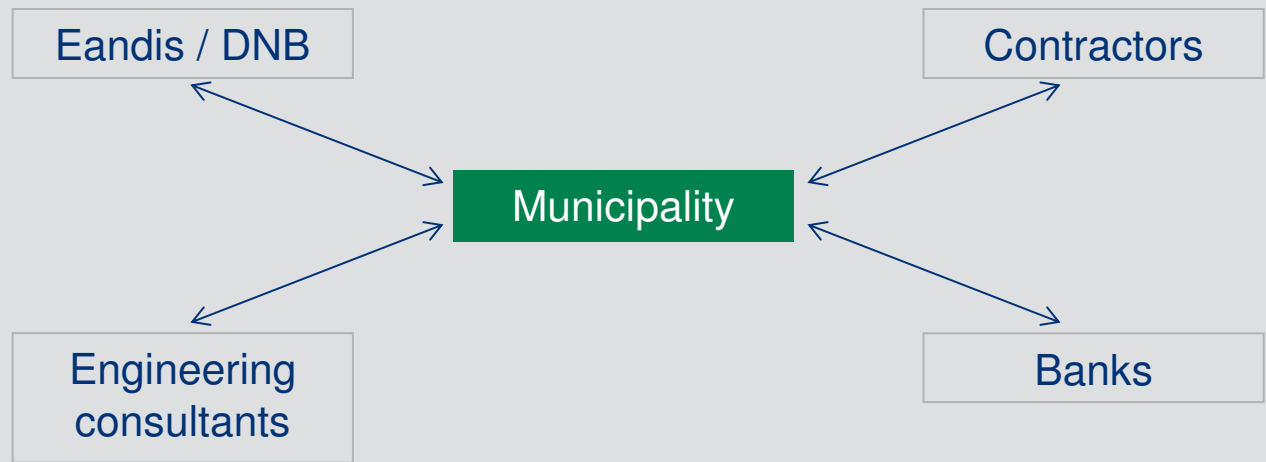
What does EDLB mean for Local Governments?

- **EDLB = Energy Services for Local Governments**
- **Public authorities face:**
 - **20-20-20 targets**
 - **Increasing energy costs**
 - **Exemplary role in sustainable development**
- **Fact: 80 % of the buildings we will use in 2050 are already existing**
- **EDLB reduces energy consumption of existing public dwellings & lighting infrastructure**

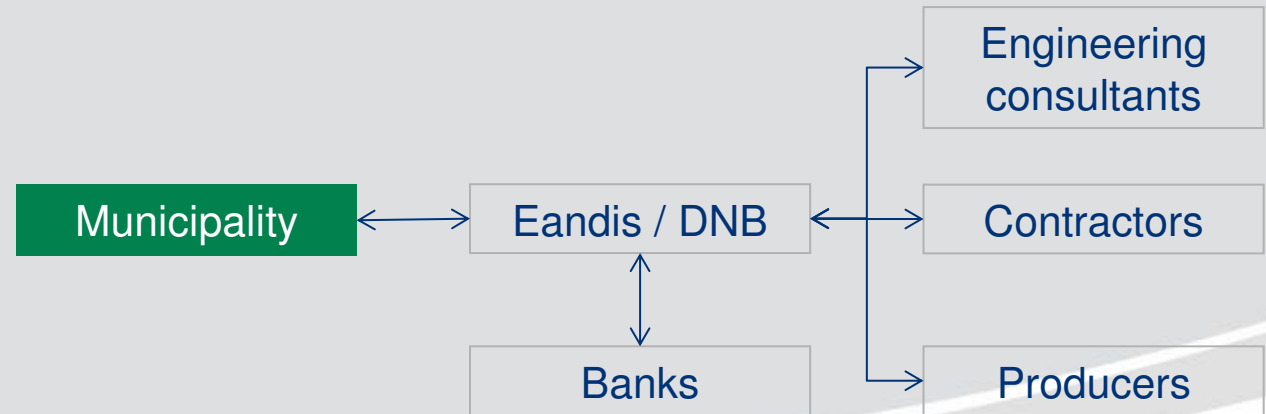


EDLB principle

Classic situation



EDLB-principle



Energy Related

Maintenance, EPC, Datalogging,...

HVAC

Heating, Ventilation, Cooling,
CHP, ...

Building Envelope Insulation

Relighting

Renewable Energy

Photovoltaic, Solar boiler,
Wind, ...

Flow EDLB: Seven steps

1.

2.

3.

4.

5.

6.

7.

Energy Accounting

Energy Audit

Design

Project Execution

Financing

Maintenance & After Sales

Monitoring

EDLB advantages for municipalities

**Focus on
'core tasks'**

- **Less administration w.r.t. public tender law**
- **Coordination of total project trajectory**

**Reduce
lead-time**

- **Faster project trajectory**

**Budgetary
impact**

- **Implementation of energy savings**
- **Financial advantage in group purchases**

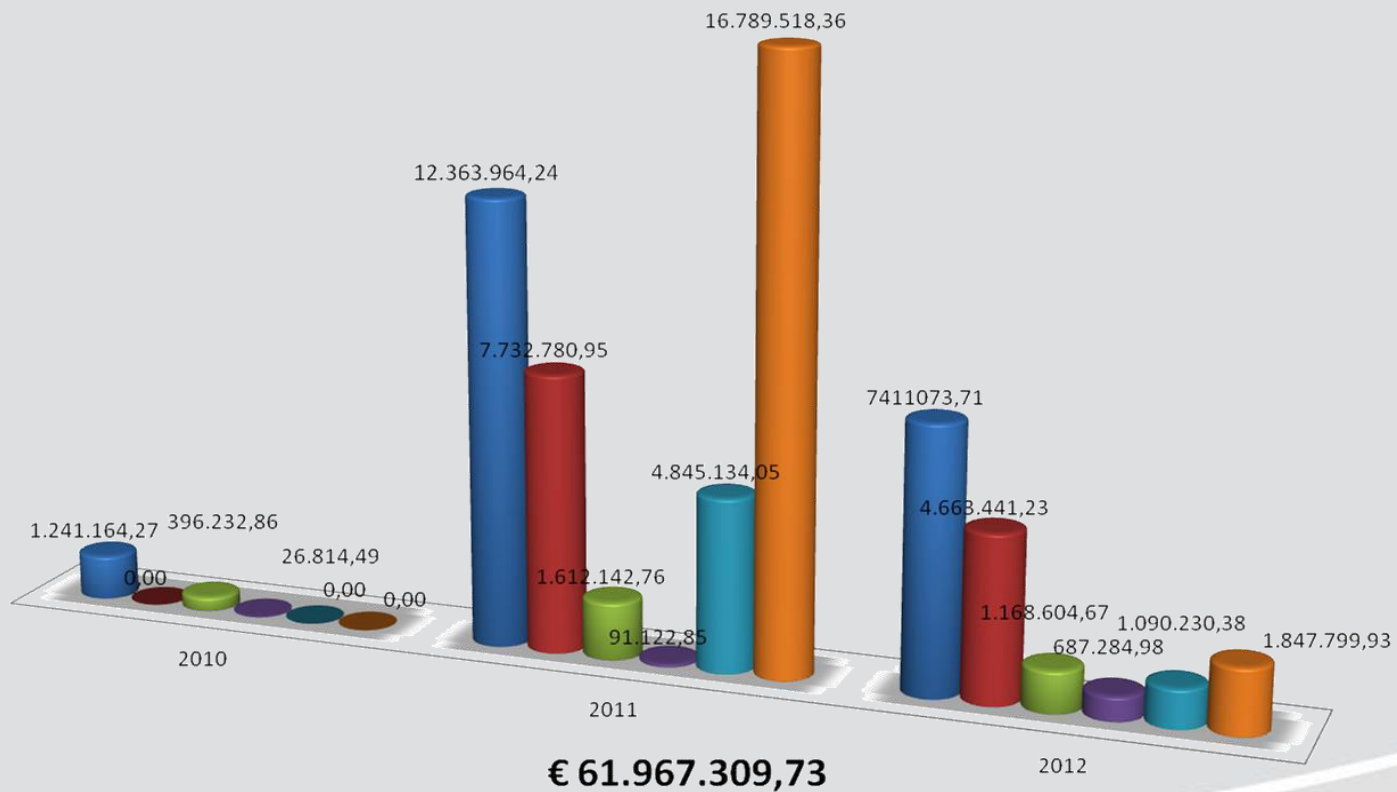
**Access to
knowhow &
expertise**

- **Technical knowhow and experience with over 100 projects per year**
- **Compliant with legal and normatory regulations**

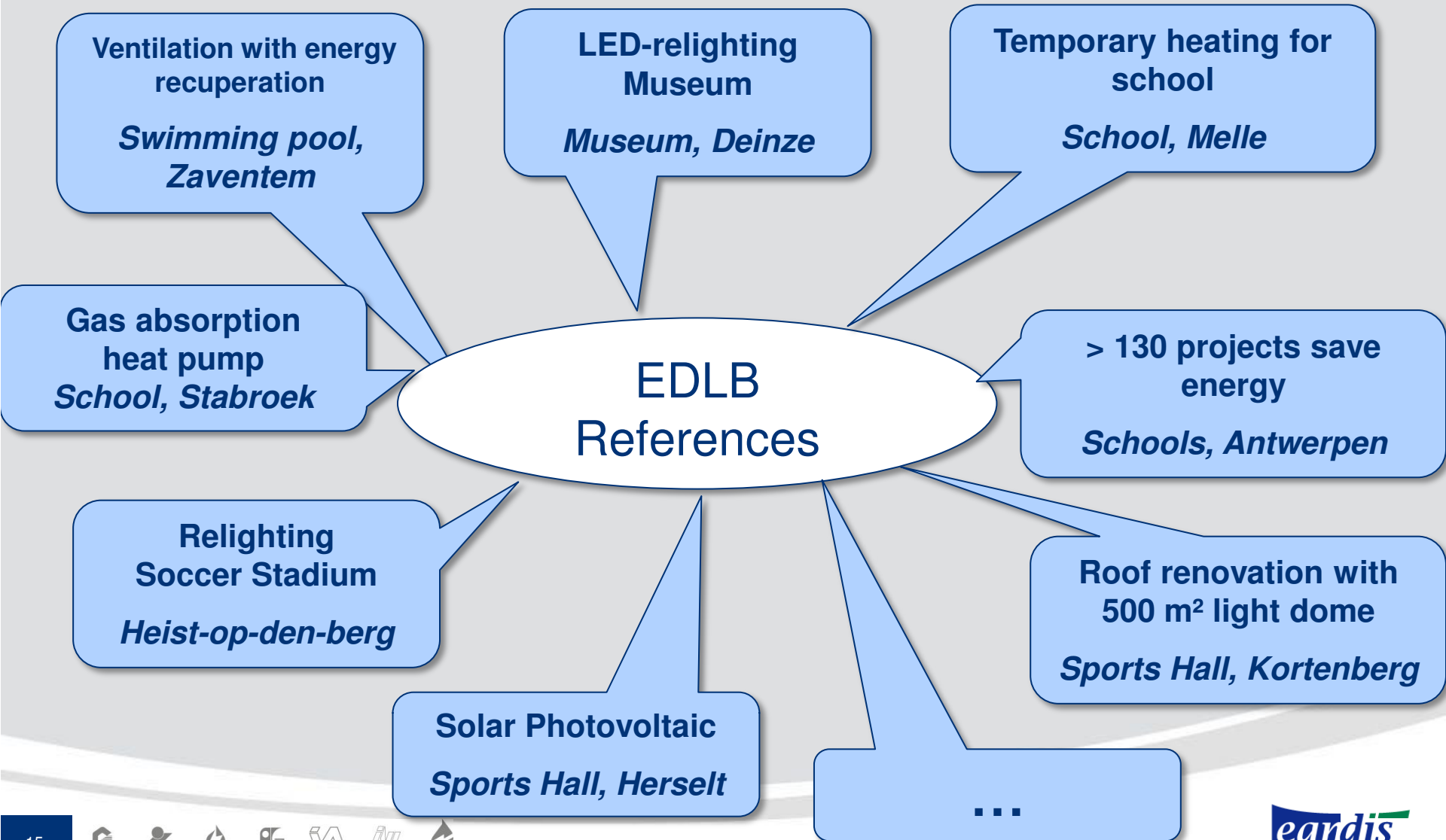
Contracted Project Volumes in 2010 - 2012

2010 tm 2012

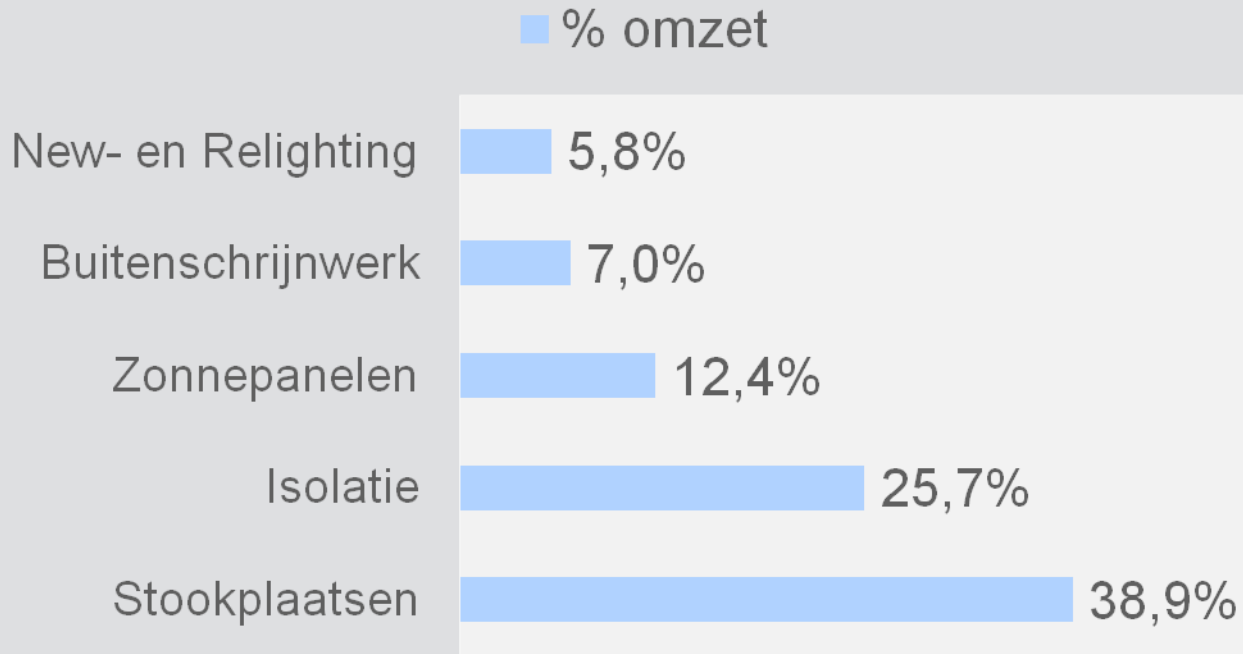
■ HVAC
 ■ Isolatie
 ■ New- en Relighting
 ■ Andere
 ■ Buitenschrijnwerk
 ■ PV



Project Examples



Conditions 2012 (situation 15/08/2012)

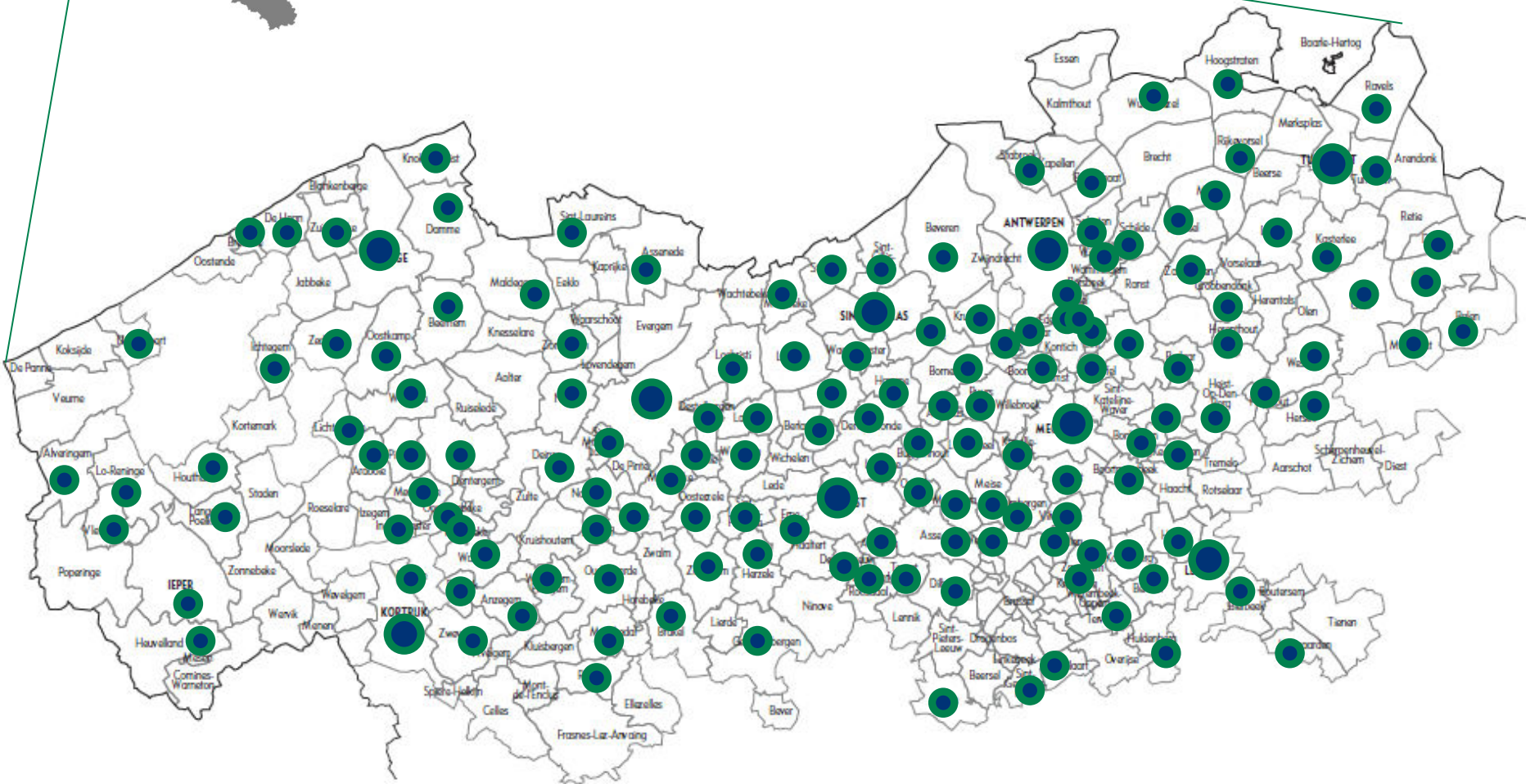
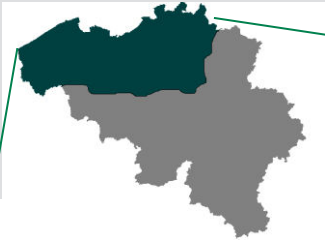


- PV
- City schools Antwerp (busy summer)

Results

2011 / 2012 (estimation)	Gas Savings MWh pa	Electricity Savings MWh pa	Financial Savings kEUR pa	CO2 reduction ton CO2eq pa
Building Envelope	2.874	0	144	517
HVAC	10.244	56	521	1.859
New- & Relighting	0	462	69	125
Renewable Energy (mainly PV)	0	4.564	685	1.232
Total	13.118	5.082	1.418	3.733

EDLB acts local





Developing & Participating in EVA

Electrical Vehicles in Action



Why choosing for electrical vehicles?

- In Flanders :
 - 3,7 million vehicles
 - 3,1 million passenger cars
 - 56,4 billion km
 - 16 million ton CO₂
- Replaced by electrical vehicles
 - Reduction fine dust
 - High performance
 - Using green energy



Partnership EVA

core partners



+ more than 20 other partners

With the support of



Research & Tests

Business models

Promotion

EVA Platform

Datacollectie

140 Recharging stations

> 100 vehicles

Smart-phones

Testpopulation

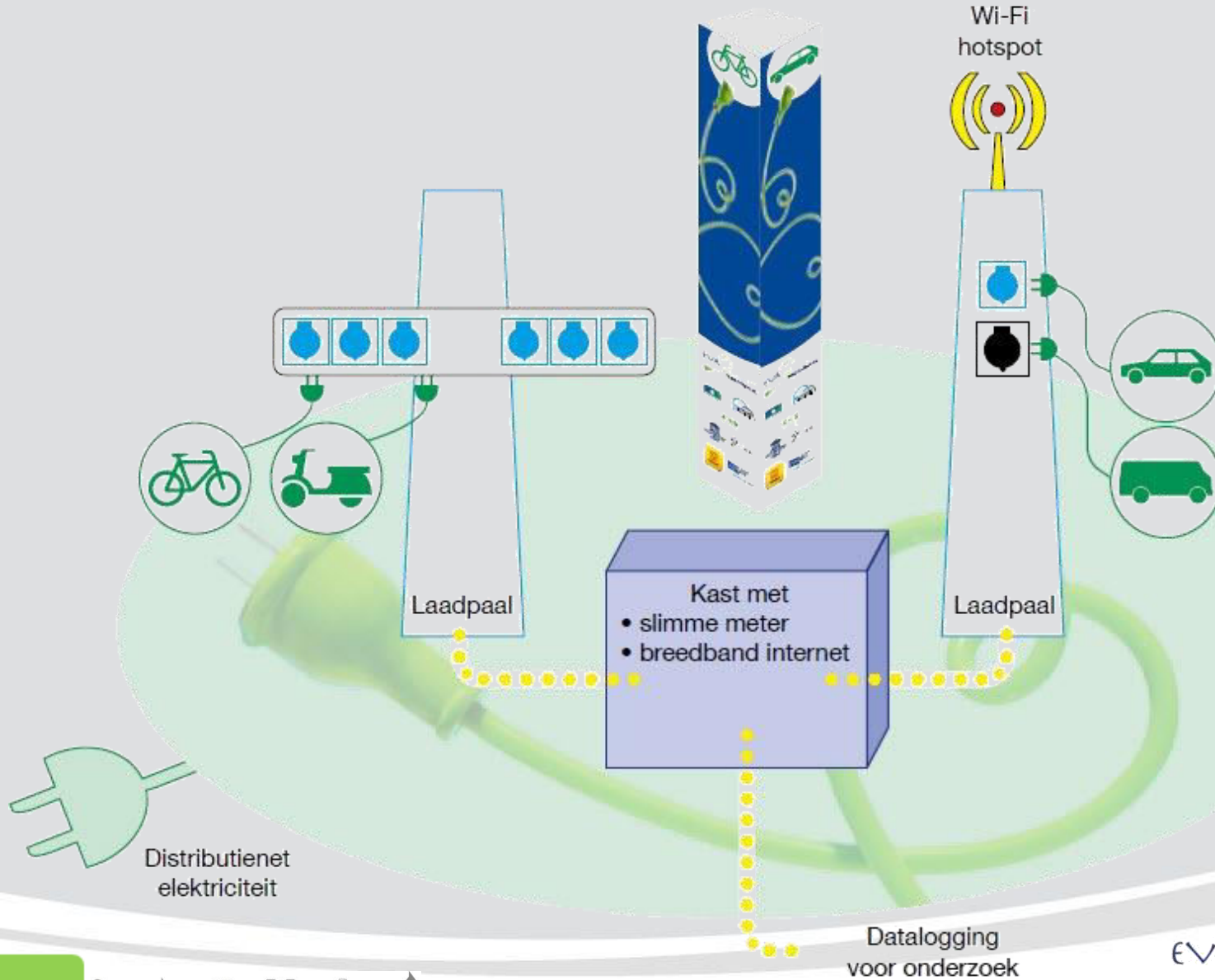
Electrical Vehicles in Action (EVA)

EVA : emphasis on **research** and stimulating **innovation**

- Cooperation public and private partners
- Open platform : emphasize interoperability in early stage
- Focus :
 - Charging infrastructure on public domain and interaction with the net
 - Electrical vehicles and mobility
 - Technology and use of data recording and processing
- Objectives:
 - Encourage and support innovation to drive electric
 - Mobility behaviour study: consequences for (smart) grids and management (f.e. payment systems)



EVA charging infrastructure: Charging Islands



71 charging islands: 140 recharging stations





EMM

■ As is: Energy Accounting

- Assets
- Energy-usage
- *Benchmarking*
- *Alarming*

■ To Be: Energy Management and Monitoring

- More benchmarking
- More alarming
- Follow-up of Energy Savings Measures
- Integration of IPMVP protocol (preparing Energy Performance Contracting)

Energy Management and Monitoring

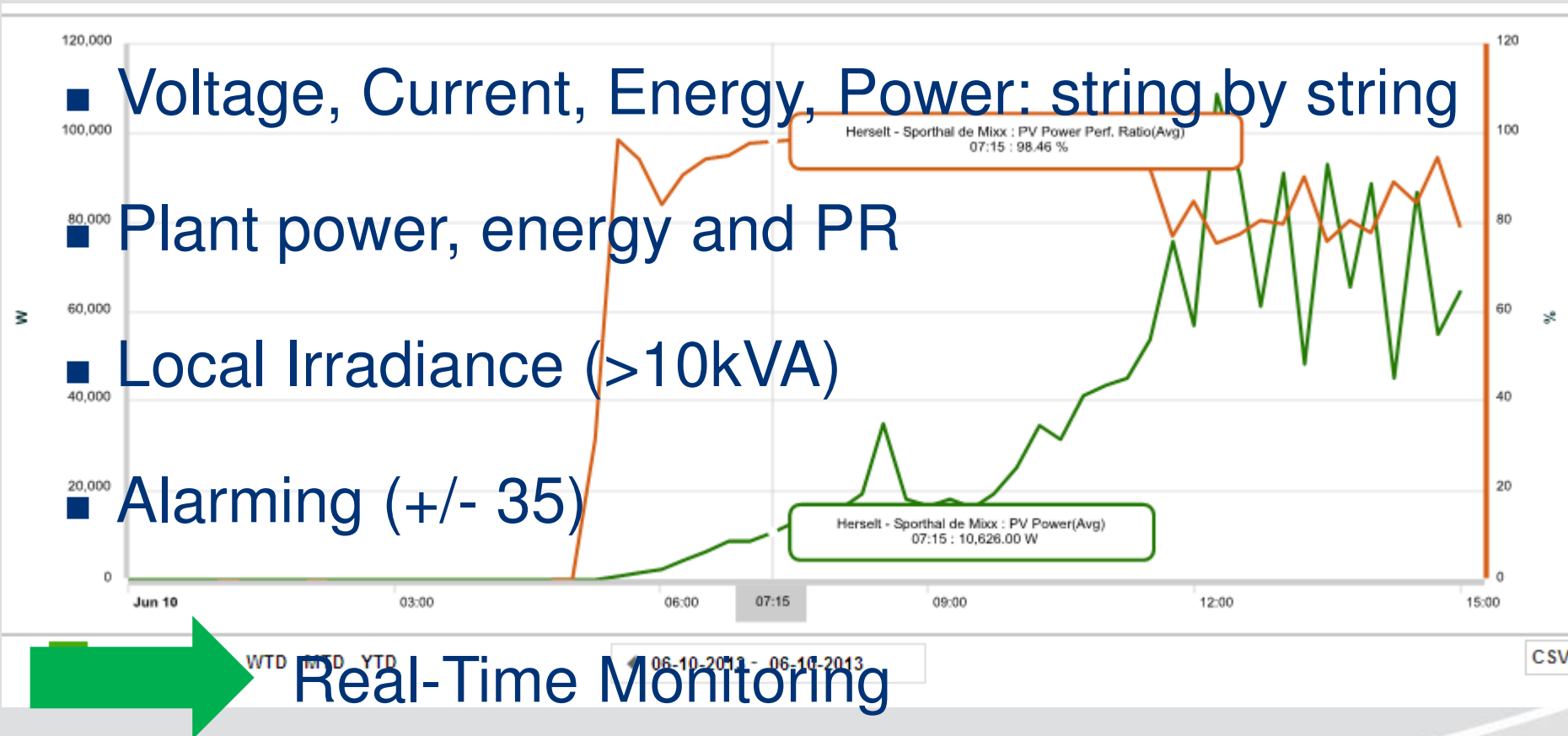
- More benchmarking needs up-to-date assets
- More alarming needs fast response
- Follow-up of Energy Savings Measures needs detailed reference baseline



- Important role for Local Government
- Focus on interaction with Local Government

EnergyManagement and Monitoring

Monitoring Photo Voltaic by Aurora Vision





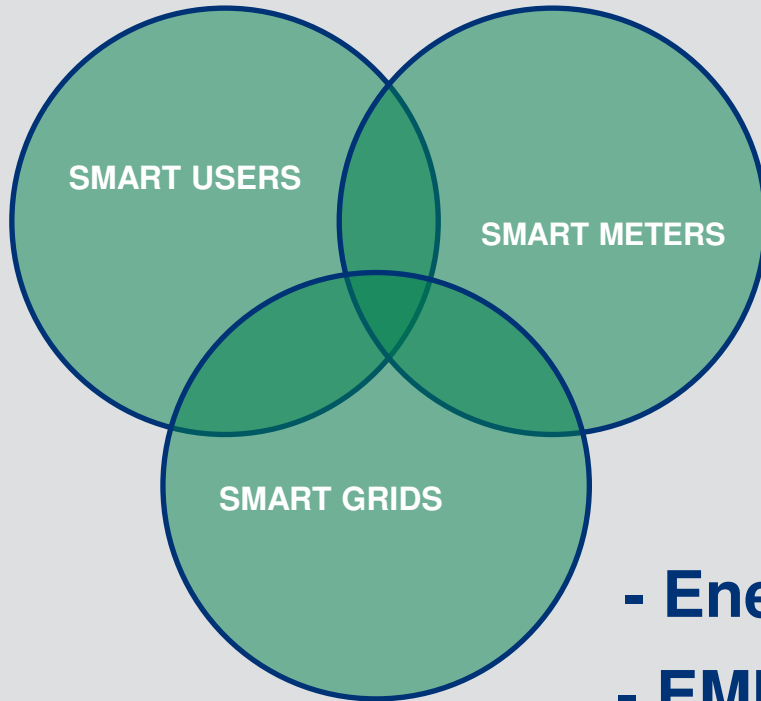
Summary

Why our services offering:

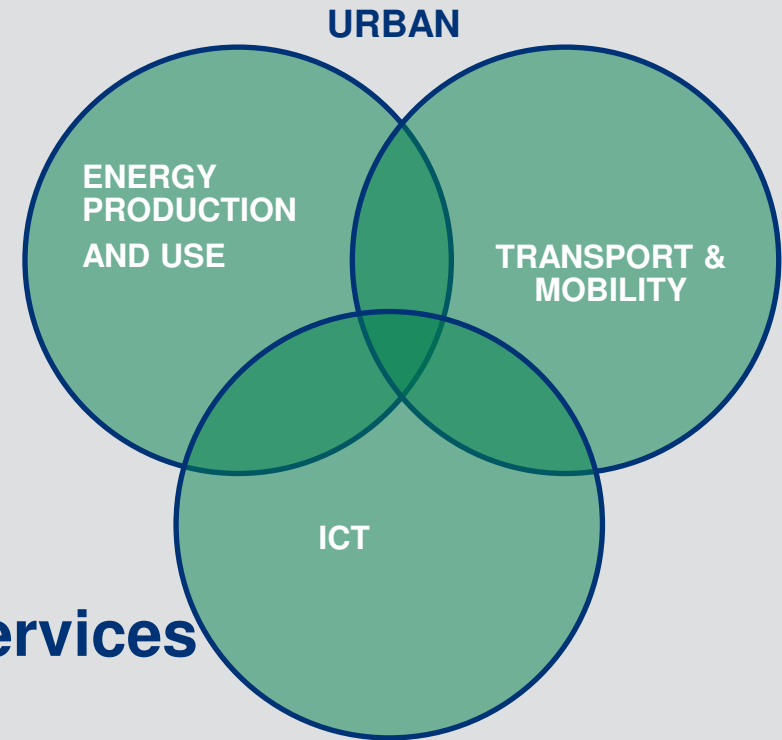
- Operating grids, public lighting and realising Flemish Energy Policy
- Municipality = main shareholder and partner
- Co-building the energy future of municipalities and being part of the evolution to SEAP's and the regional climate plans
- Economy of scale; price advantages, specialization; professionalism; innovation and strong focus on RUE
- Eandis advises, supports, coördinates, executes and provides the follow-up and monitoring
- Evolution to smart grids

Summary

EANDIS INNOVATION PROGRAMS



EUROPEAN FRAMEWORK FOR SMART CITIES & COMMUNITIES



- Energy Services
- EMM
- EVA

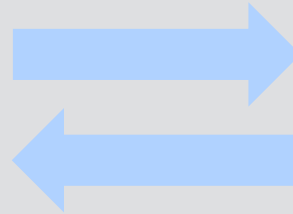
4th program Eandis : data quality !

Main challenges about our **FUTURE CLIMATE** are huge for all stakeholders

- ✓ **Budget / long payback times / financing (EPC ?)**
- ✓ **Managing complexity / network organisations**
- ✓ **Optimalising collective decision making in terms of collective well being / ecology / economy**

EANDIS / ENERGY SERVICES

- ✓ **Grid operator / focus on realising**
- ✓ **Quality, safety and operational excellence**
- ✓ **‘perfect enough’ / feasibility / price versus quality**



QUESTIONS ??

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■ Film Malle

