IBOR - Integral Management of Public Space

April 2012

Jan Cornelis den Ouden – Proposition Owner IBOR Logica

Peter Kommers – Manager Section Traffic Information Systems and Public Lighting
Municipality of Utrecht

logica BUSINESS CONSULTING

Agenda

- This is Logica
- The business need
- Our answer: the IBOR service
- IBOR in action
- IBOR (Cloud based) System
- Our credentials: clients, awards and partners
- Value for our clients

This is Logica

- Leading Business and technology service company, employing 41,000 people
- Revenues of £3.7 billion in 2010
- 41 countries from where we deliver business consulting, systems integration and outsourcing across all industries and business functions
- 47 years and counting creating value for clients by successfully integrating people, business and technology
- Committed to long term collaboration, applying insight to create innovative answers to clients' business needs
- Listed on both the London Stock Exchange and Euronext (Amsterdam)

The business need
Business issues / Drivers

Scope of IBOR is public infrastructure (Tele- and Asset Management)

- Public lighting
- Traffic lights
- Waterworks, bridges, bollards, etc.

Challenges

- Traditional infrastructure (only on/off switching in groups)
- Complexity of ICT landscape within local governments organizations brings inefficiency! (for every object an application)
- "Regulations" force thinking of reductions in CO2

IBOR Solution

- CO2 reduction, cost savings on energy (up to 40% and maintenance costs by up to 15%.)
- Need for one solution in Security, Mobility and Sustainability
- One system to solve ICT complexity and increase additional services in public space.

Our answer: the IBOR service
Short description of the service

Logica IBOR (Integral Management of Public Space) enables cities and large industries to control and monitor their infrastructure objects.

- Street lighting
- Traffic lights
- Bollards and barriers
- Water supply (i.e. hydrants)
- Disposal systems (i.e. compactors)

Ability to control a variety of objects.

OSI
Socio-Economic Impact of Open Service Innovation

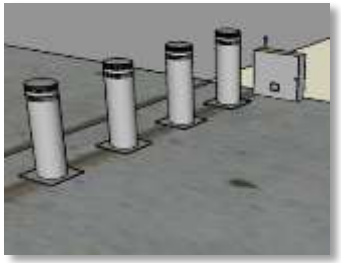
ICT-OFFICE
ICT Environment award, Netherlands

Enables totally new concepts.

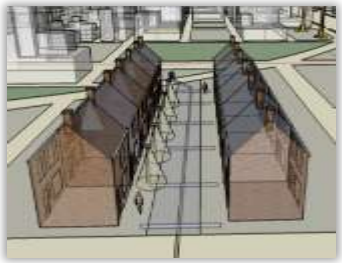
- Smart lighting (targeted switching off, dimming of street lighting)
- Centralized or local control through service personal (via smartphone)
- Scenarios for emergencies, rescue operations
- Scenarios for events

These concepts are offering a **high potential of energy savings** – especially in the case of street lighting – improved quality of life and increased safety.

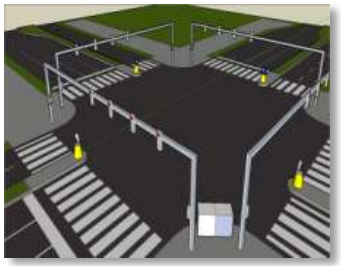
Our answer: the IBOR service
Ecosystem to enable control of objects



Pollars



Riool Systeem



VRI

Logica IBOR Ecosystem

Objects, i.e. luminaire: equipped with telemetry

Communication via: Powerline, GPRS, New E3C protocol

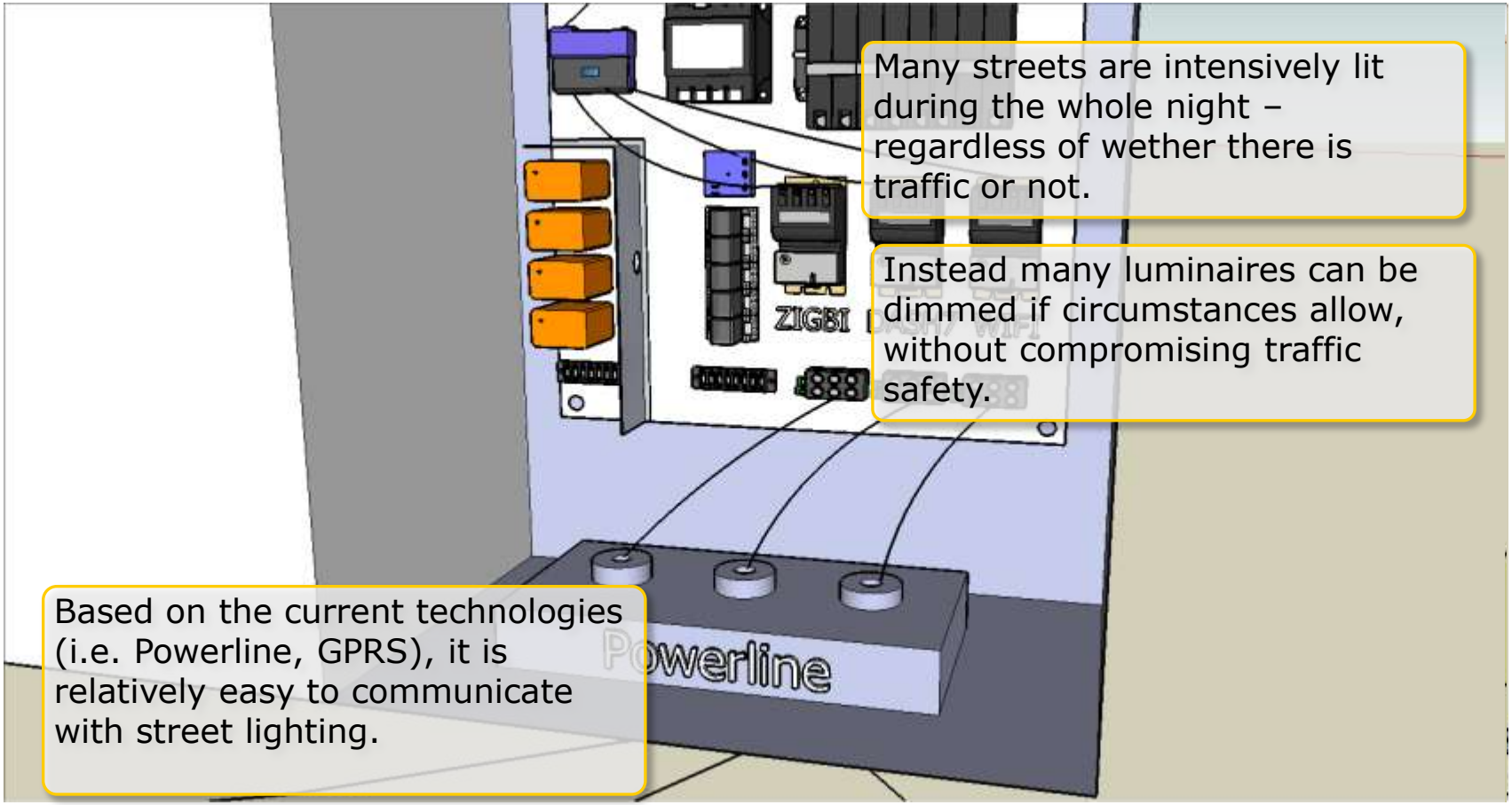
On site: Control via smartphone

Cloud-solution: scalable, open interfaces (Multi-Vendor,-Object)

Control Centre: Easy operation via touchscreen

Different actors: Operators, Police, Events….

Our answer: the IBOR service
Smart Lighting – the principle



Many streets are intensively lit during the whole night – regardless of wether there is traffic or not.

Instead many luminaires can be dimmed if circumstances allow, without compromising traffic safety.

Based on the current technologies (i.e. Powerline, GPRS), it is relatively easy to communicate with street lighting.

Our answer: the IBOR service

Public Space

"Assets"

Smart city development

Public safety and security

Traffic mobility and transport

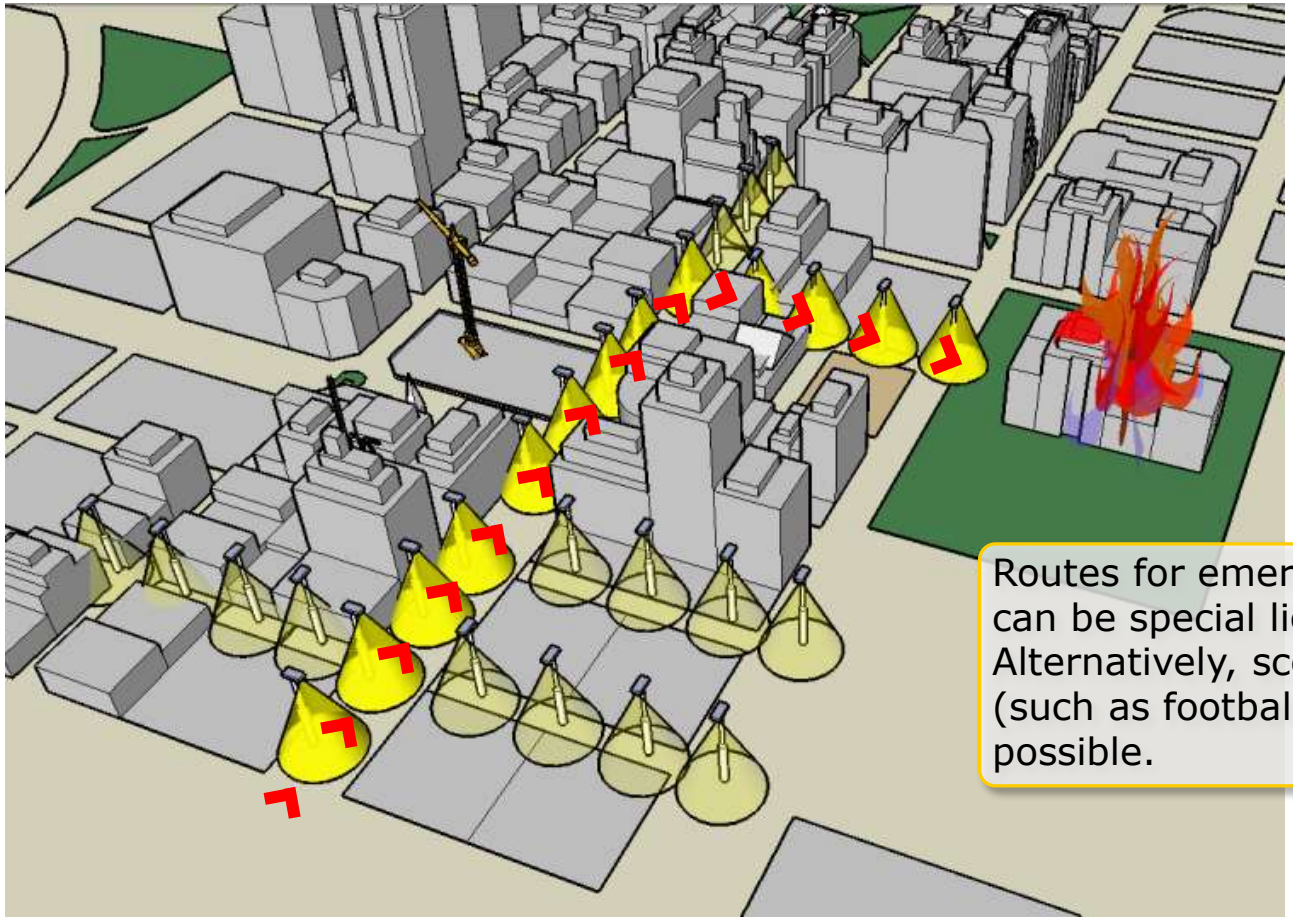
Infra-structure

IBOR in action
Smart Lighting – dimming

100%

Dimmed by 50%

IBOR in action
Smart Lighting – emergency scenario

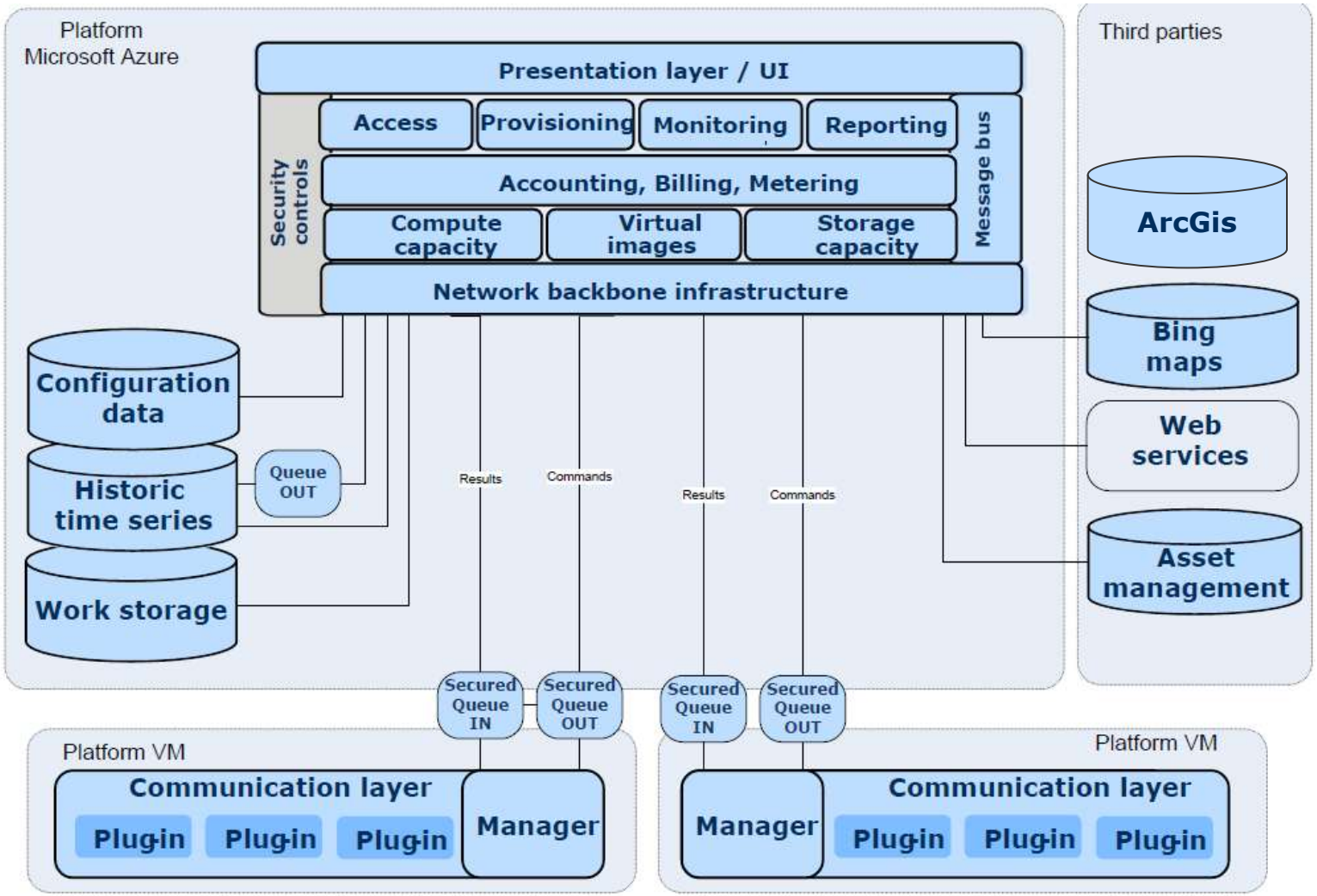


Routes for emergency services can be special lighted. Alternatively, scenarios for events (such as football matches) are possible.

IBOR (Cloud based) System

Commoditized Cloud

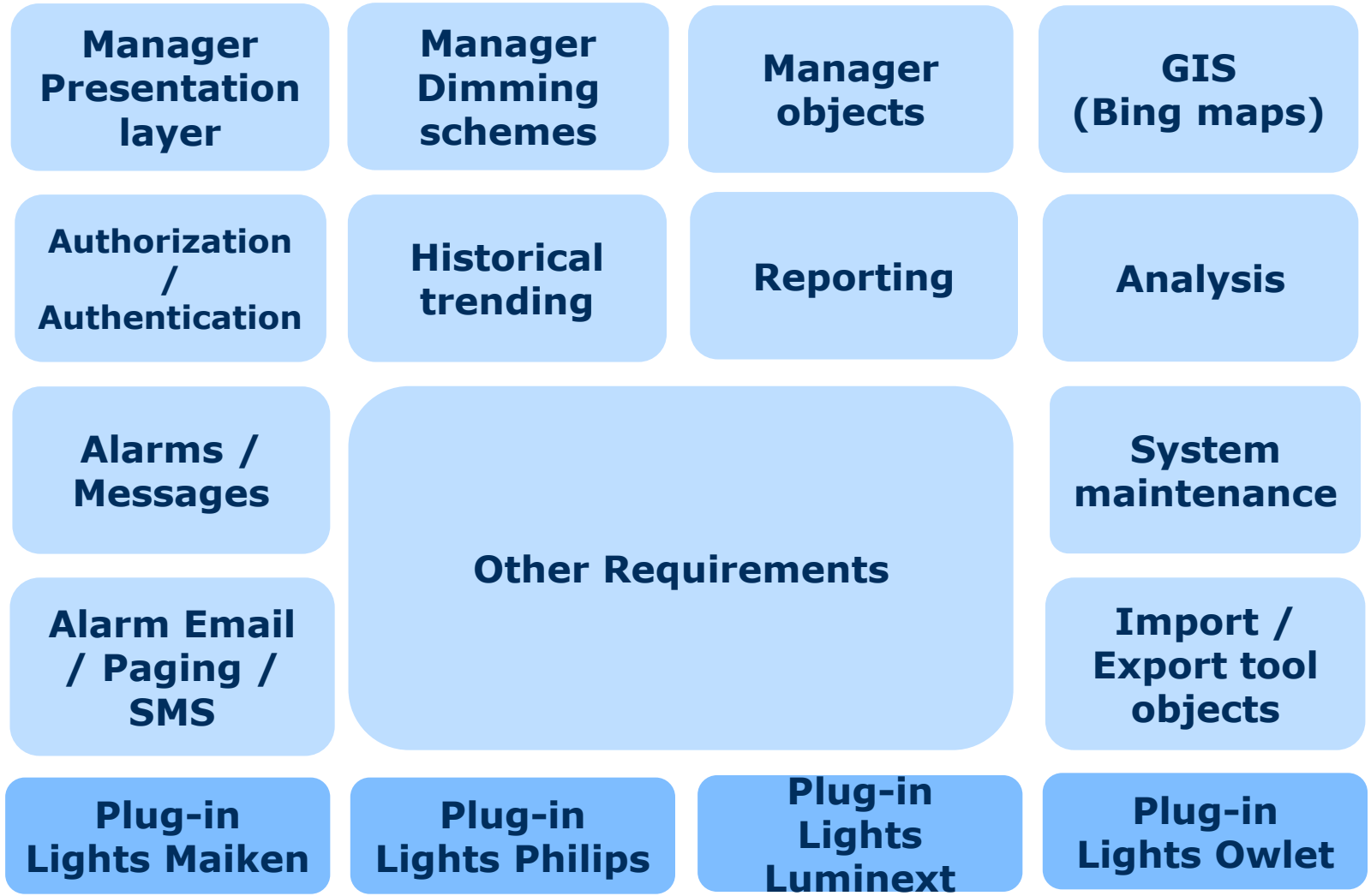
Modules (Base functionality)



IBOR (Cloud based) System

Modules IBOR

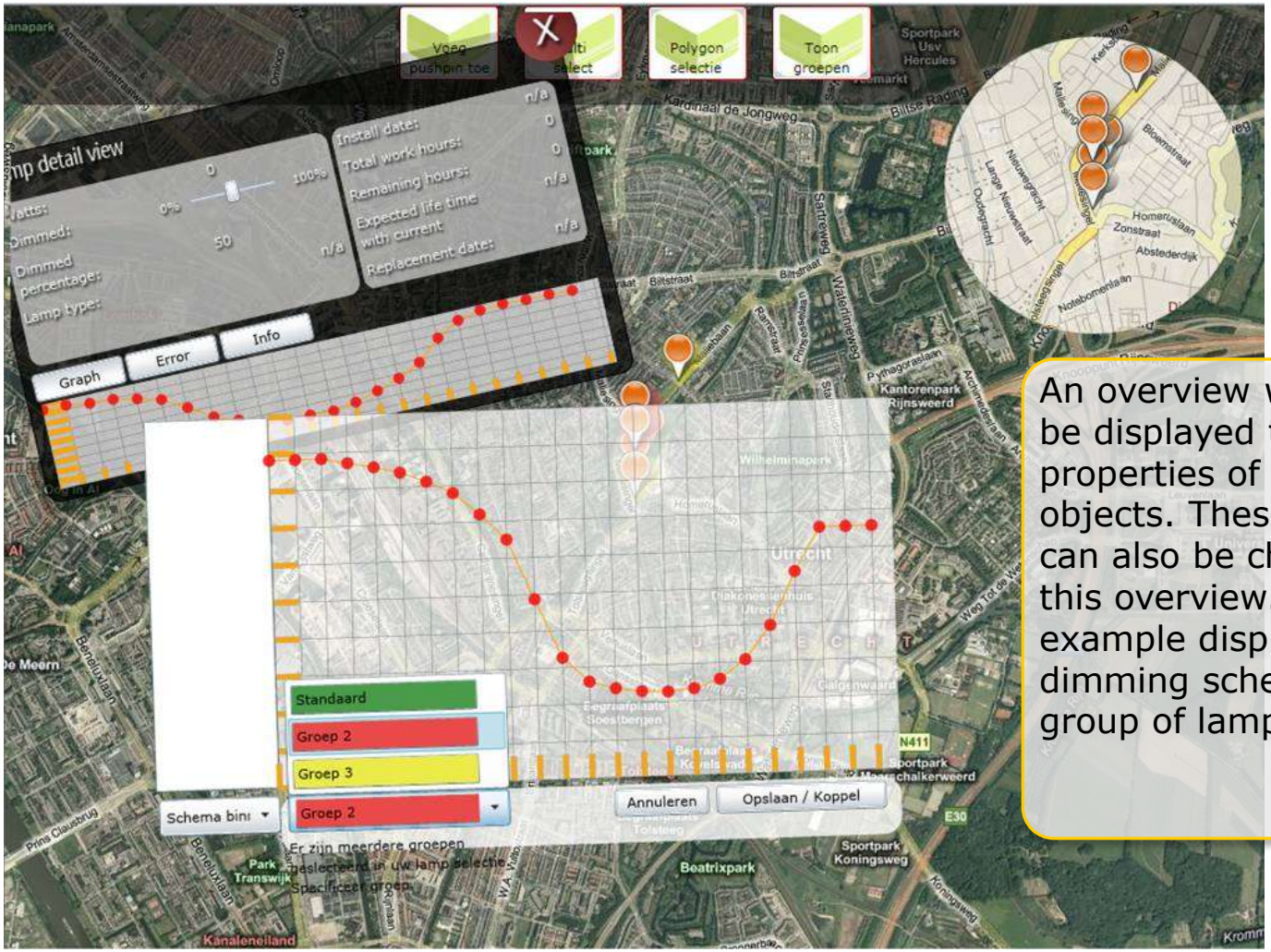
Modules (Base functionality)



IBOR (Cloud based) System
Single lamp details

Drains and lamp posts are indicated on the map by use of orange symbols. The map can enlarged, shrunk and moved. By clicking the objects themselves, their individual properties are displayed and can even be modified.

IBOR (Cloud based) System
Group details view

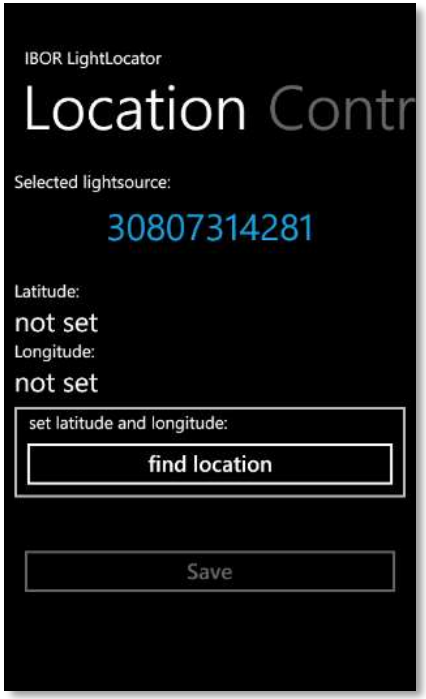


An overview window can be displayed that shows properties of a group of objects. These properties can also be changed in this overview. This example displays a dimming scheme for a group of lamp posts.

IBOR (Cloud based) System
Operation via smartphone

Control of luminaires by technical engineers via App of the Windows Phone.

Selection of the luminaire by number



… or through barcode scanning.

Swithcing the lights on and off as well as dimming directly on site and in real-time.

IBOR (Cloud based) System
Extensive Reporting

Power Curve Efficiency and Energy Usage

Downtime Report

Executive Report

Top 10 fault analysis

Our credentials
Smart Lighting – partnership

Luminairs with smart control technology

siteco
PHILIPS
owlet
Schréder
AIKEN systems
Luminext NEXT GENERATION ILLUMINATION
SOGEXI

Innovative software with open interfaces

logica

Messaging service based on service codes

vodafone

Operation based on Cloud with guaranteed availability

Microsoft

Utrecht Case and RWS Case

logica BUSINESS CONSULTING

Our credentials
Innovating and winning awards

- We are working with the city of Utrecht in the Netherlands to save energy and maintenance costs through a new approach to street lighting, traffic signals and sewerage systems
- Logica and Microsoft together won the prestigious ICT Office Environment Award for IBOR, a national award from the Dutch ICT Industry Board

"[Logica] presented a very attractive value proposition with IBOR, and demonstrated significant advantages in contributing to a greener world."

Peter Kommers, asset manager responsible for lighting and traffic systems in Utrecht

No. 19

Our credentials
Case Pilot at the municipality of Utrecht

Gemeente Utrecht

- Management on outdoor lighting systems
- On and off switching based on local lighting levels
- Dimming schemes based on local traffic intensity situations
- In case of calamities the light will be increased to 100%
- Energy reduction up to 30% without losing control on safety
- Individual lamp monitoring solution

Our credentials
Demonstration at Ministry Of Roadways

Rijkswaterstaat
Ministerie van Infrastructuur en Milieu

“A1” at the ministry of roadways – Connecting on segment controller

Our credentials
Customer Case at Ministry of Roadways

Rijkswaterstaat
Ministerie van Infrastructuur en Milieu

IBOR Pilot on the "A50"

- Management of the light points on road cabinet level. Different channels are used like tablets, smart phones and internet;
- Goal: To leverage down the electricity and maintenance cost as well as the CO2 levels.
  - Based on 10.000 lamps
  - 250W-400W (current 279W/LP, included ELG and cable capacity "loss")
  - Astronomical on till 21:00, off at 05:00, also off 05:00 on astronomical level. 8 hours off effectively.
  - 365 days per year * 8 ours is 2640 burning hours including calamities and work in progress.
- **Savings:**
  - ***12 Million Kg CO2 savings per year.***
  - ***Between 2 and 5 Million euro saving on energy costs per year.***
  - ***Converted per lamp between EUR 185,- and EUR 500,- savings per lamp per year.***
- Better view on electricity costs and CO2 reduction figures on street lamps;
- Improvement of "green image" of the ministry of roadways;
- Our solution contributes to safety on the roadways **"Switch <u>On</u> when it must and switch <u>off</u> when it can"**

The conclusion

logica BUSINESS CONSULTING

Value for our clients
Benefits

Direct Benefits

- **30% - 40%** savings on electricity cost for street lighting
- **15%** savings on maintenance cost (luminaire change!)
- Cloud based pay per use model reduces up front costs

Indirect Benefits

- **Increased security** through emergency scenarios
- **Less grid load –** potential for institutional strategies such as electric mobility
- **Environmental** through reducing CO_2

Technical benefits

- **Remote control** (switching on and off, dimming)
- **Remote monitoring** (cost, consumption, lifespan of a luminaire)
- „Technical **error**. Please investigate."

Thank you

Logica Business Consulting xxx Visitor address Street Postcode City Country www.logica.com/consulting
Contact: Name Function T: +XX (0) 000 00 000 000 F: +XX (0) 000 00 000 000 E: address@logica.com

Logica Business Consulting is the consulting division of the Logica group, a leading IT and business services company, employing 40,000 people. It provides business consulting, system integration, and IT and business process outsourcing services.

Logica Business Consulting has a network of 3,500 consultants located throughout Europe. Our consultants help drive the success of clients' transformation projects. They stand apart through their European culture, ability to work closely with clients, and unique blend of sector-based, functional and technological expertise.
More information is available at www.logica.com/consulting