



Smart outdoor lighting solutions



Intelligent management – Smart City



1. Intelligent management

Stand-alone

- . *Night switch : ST2*
- . *Integrated intelligence : 4 dimming modes*
- . *Motion sensors*

Communicating stand-alone

- . *Communicating motion sensors*
- . *Wireless or PLC communication*

Centralised management

- . *Tegis 'Intelligent cabinet'*
- . *Tegis telemanagement up to the light points*
- . *City smart alarms for abnormal consumptions*
- . *City smart alarms on defects, failures, and thresholds*
- . *City public buildings remote statements*



TEGIS Street Lighting Management





Tegis is a web solution for telemanagement, to start & stop, dimm, and monitor remotely street lighting installations.



Advanced management

- Specially developed for European Street Lighting network.
- Specially designed for the most difficult weather and environment conditions (ex: non-stable electrical networks)
- Communication via GPRS Modem, or via Ethernet interface (for fibre optic or bi-wire networks).



Street Lighting Management



A major concern for communities ...

- Over 1000 installations.
- In more than 15 countries, in Europe and abroad.
 - +100 towns in France / +50 towns abroad.
- 40% energy savings / year.
- 50% financial savings / year.
- Easy to install, use, reliable, and costless.
- Among the biggest StreetLighting economy savings project ever done in Europe : 200 cabinets, 16 000 light points.



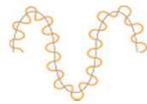


Architecture & Protocoles

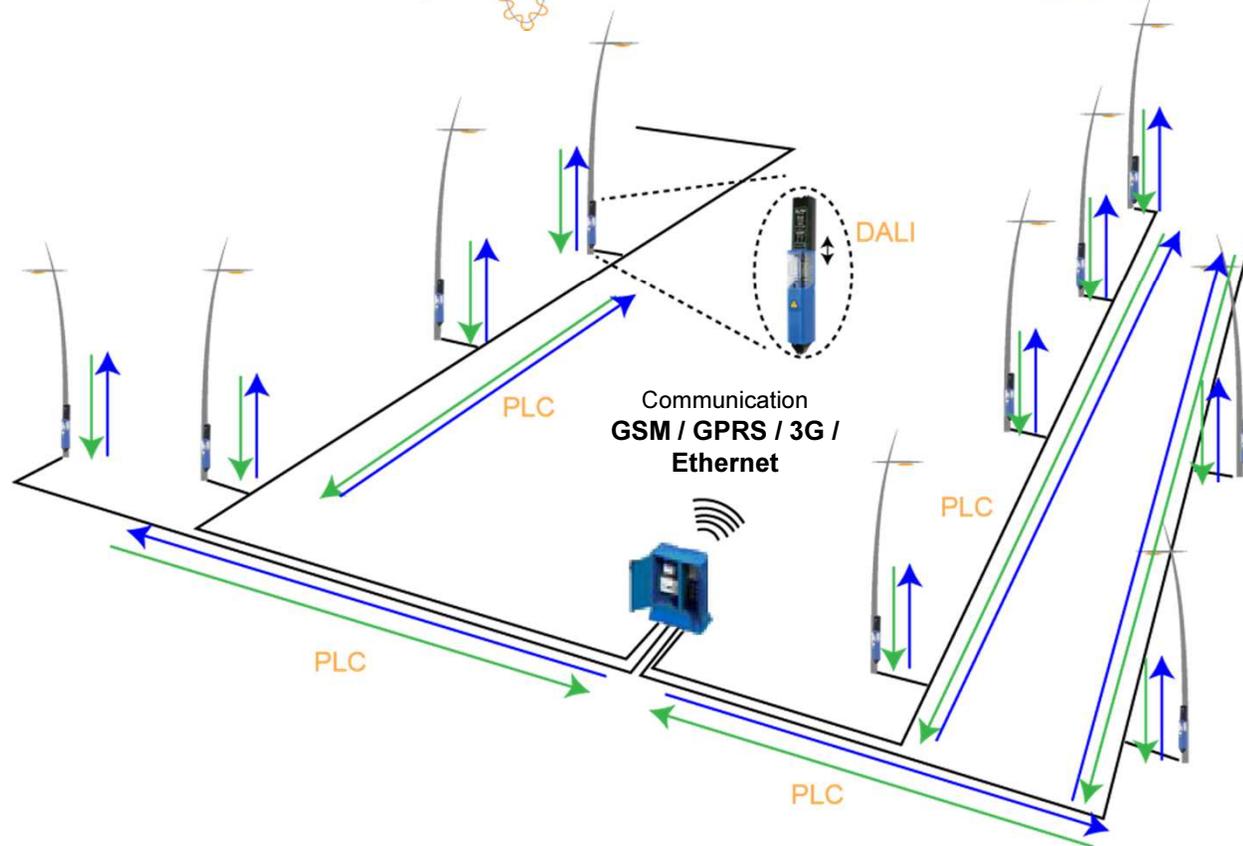
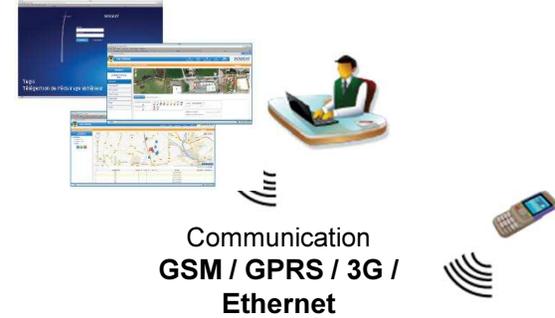
- GPRS / 3G / Ethernet / Wireless



- PLC (Power Line Communication)



- DALI





Street Lighting Management

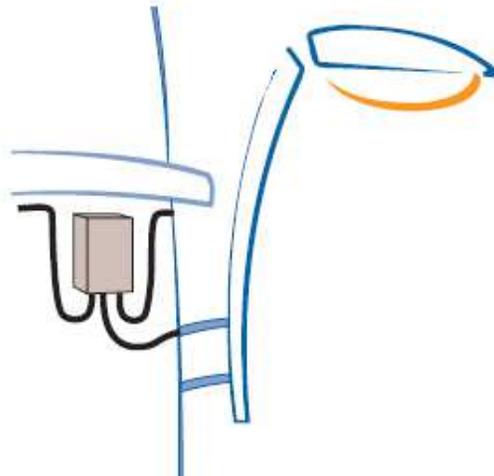


Equipment on each Light – 3 choices:

LIGHTING COLUMN BASE



WALL-MOUNTED

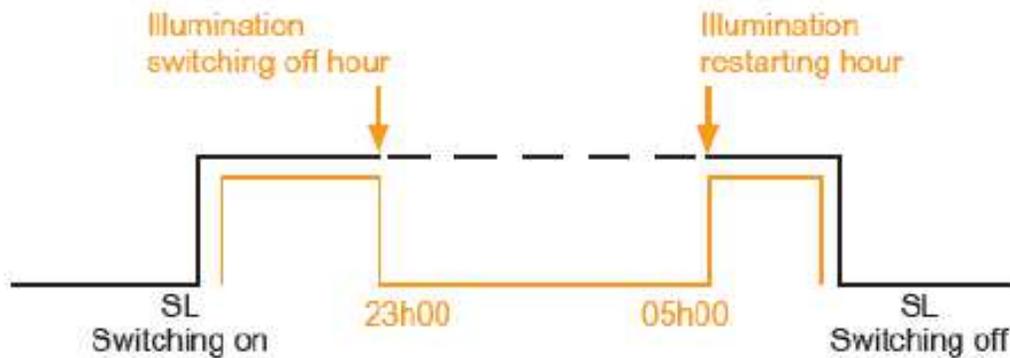


INSIDE LIGHT FIXTURE





Night Switch ST2



	ST2
Rated current	10 A
Rated voltage	230 VAc - 50/60Hz
Switch	Double-pole galvanic
Dimensions (HxLxD) mm	85 x 28 x 45
Input connection	pre-wired
Output connections	Two 4mm ² terminals



Ferromagnetic gear boxes New range PLN



Technical characteristics

- Plastification : $> 0,35\text{mm/face}$.
- Dielectric rigidity : 5kV / face (PV LCIE n° 295.173).
- IP44 – IK > 08.
- From -40°C to $+115^{\circ}\text{C}$.
- Bi-powered technology, for energy savings.





Electronic ballasts e-Pak

For HID lamps

- HPS & MH : 50W, 70W, 100W, 150W
- CPO : 45W, 60W, 90W, 140W

Can be installed far from the lamp

- At mast bottom, up to 15m from the hot lamp (HPS).
- To optimise the life duration.

Classe II per design

- No connection to earth, no link of equipotentiality.
- No earth leak currents.





Street Lighting Management



Drivers LED DL-Pak

**LED DRIVER WITH
CONSTANT CURRENT**

*Set-up from
100mA to 700mA*

**EASY
SETTINGS**

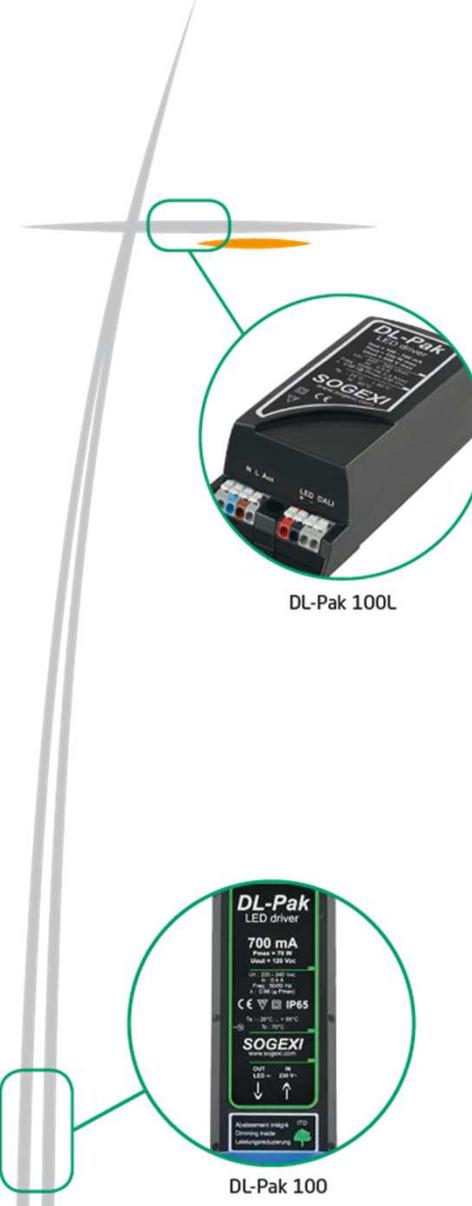
*Via Setbox DALI
Via Setbox Wireless*

**4 MODES
FOR DIMMING**

*ITD
PILOT
DIM/V
DALI*

**EXCELLENT
ENERGY
PERFORMANCES**

*Efficiency 96%
Very low peak current
PF ~ 0.98 @ Pn
PF ~ 0.90 @ 35%Pn*



DL-Pak 100L

DL-Pak 100

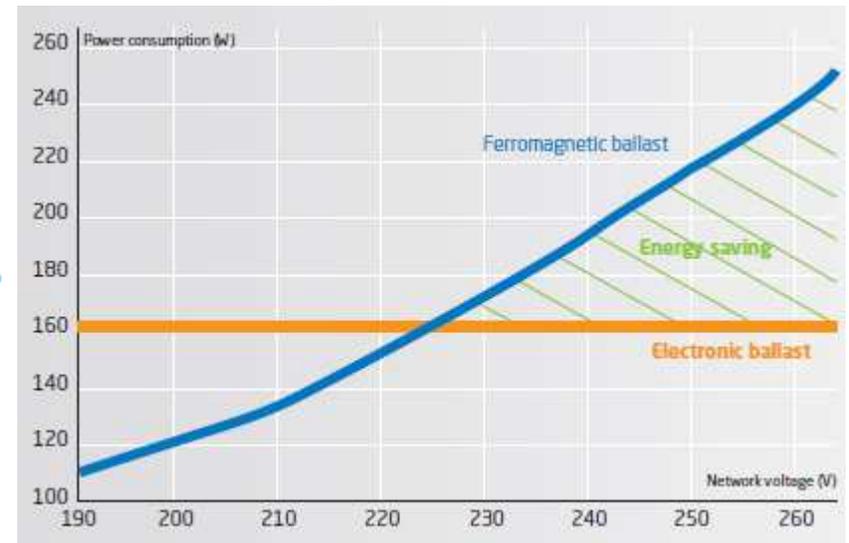
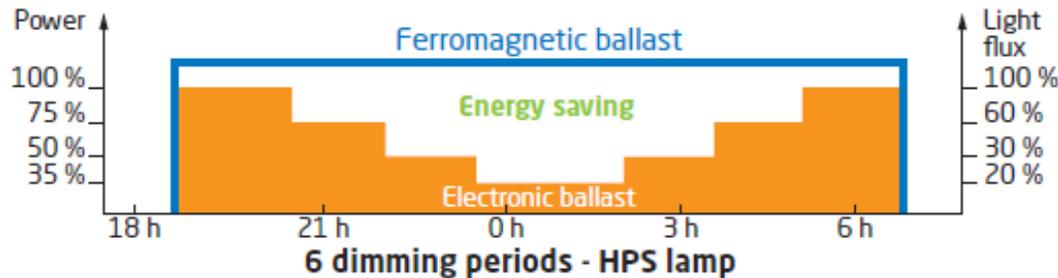
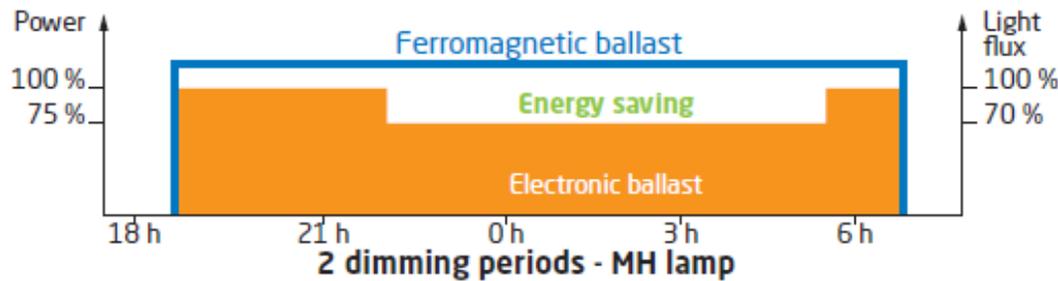
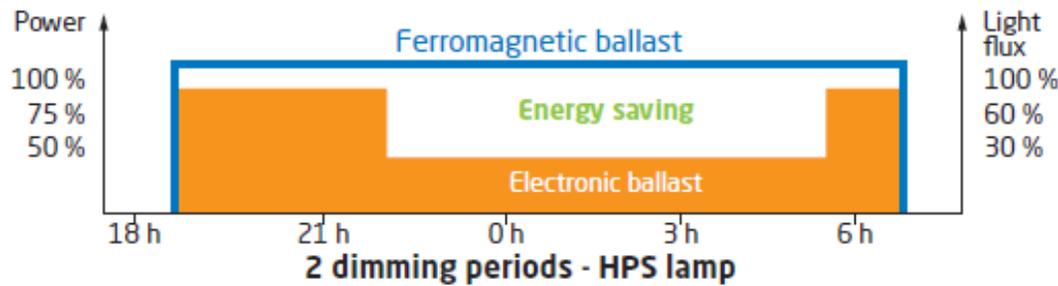


Street Lighting Management



Replaced Ferromagnetic ballasts by Electronic ballasts
= *saving Energy* = *saving Money*

SMART MANAGEMENT





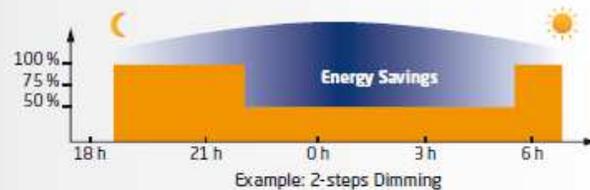
Street Lighting Management



4 Dimming options to be activated according to your applications

ITD STANDALONE DIMMING

- Factory Pre-programmed
- Integrated into the driver
- Dimming scenarios configurable on site
- Dimming activated without any external order



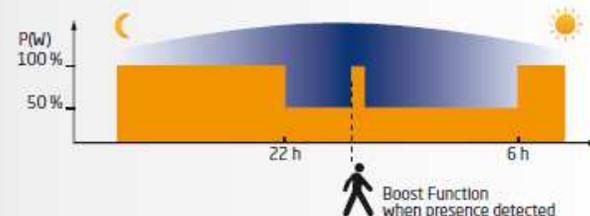
DALI DIMMING VIA DALI PROTOCOL

- DALI interface integrated
- Adapted to all centralized control systems using DALI Protocol



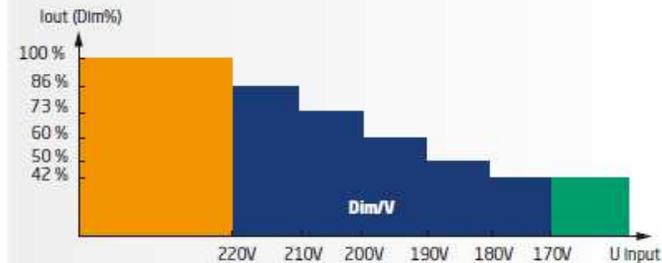
PILOT DIMMING / BOOST VIA PILOT FUNCTION

- Activated by motion sensor
- Controlled by a pilot wire
- Dimming or Boost according to application



DIM/V DIMMING VIA VOLTAGE VARIATION

- Adapted to lighting network equipped with Voltage Dimmer in distribution cabinet
- Dimming managed by voltage variation



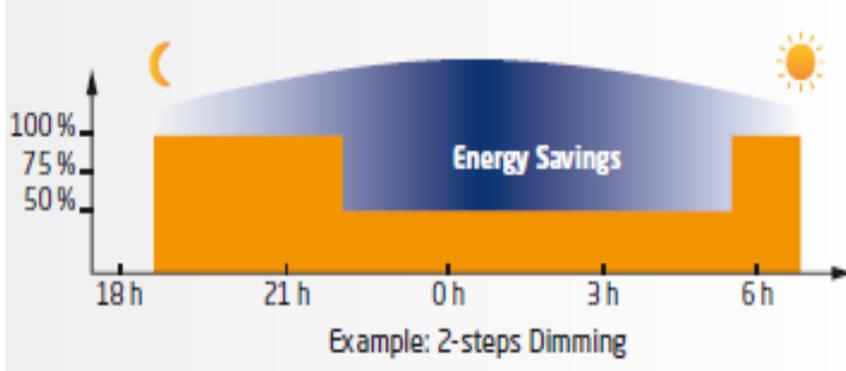


Street Lighting Management



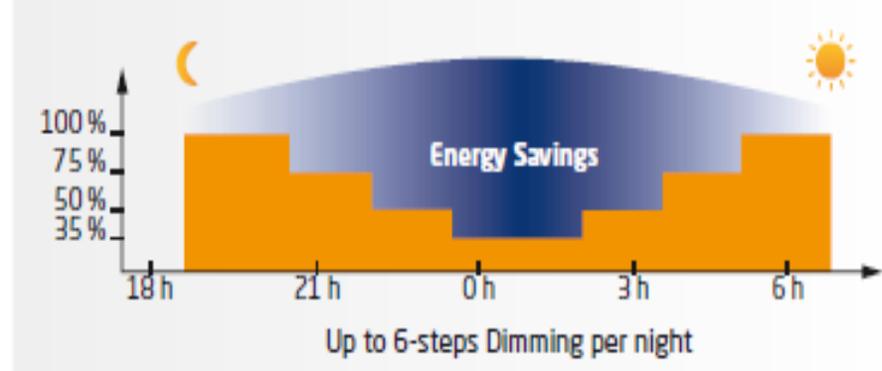
ITD

STANDALONE DIMMING



DALI

DIMMING via DALI protocol

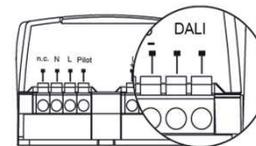


- Dimming activated without any external order
- Dimming scenarios configurable on site
- Integrated into the Ballast/Driver
- Factory Pre-programmed

- Interface DALI intégrated
- Adapted to all centralized control systems using DALI



Répétition des scenarios



Communication bidirectionnelle

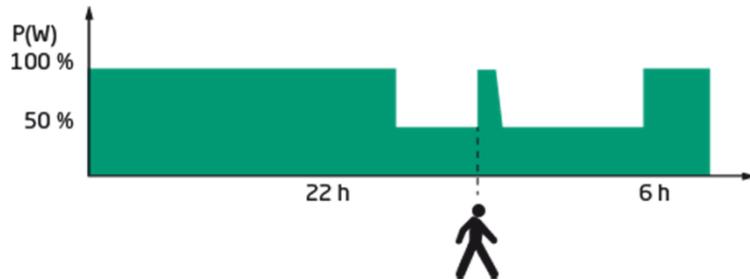


Street Lighting Management

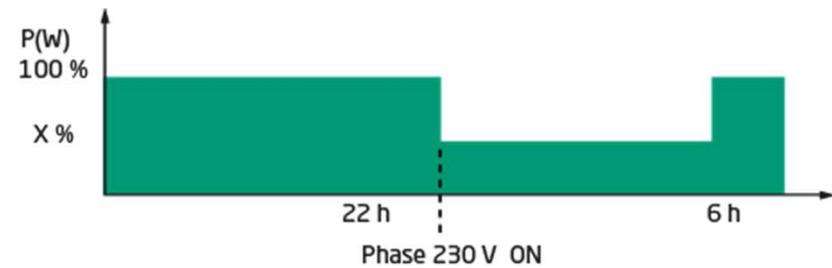


PILOT DIMMING / BOOST via PILOT FONCTION

Direct Input (0-230 V)
Without additional modul



Boost fonction when presence Detected



Dimming via PILOT fonction



Street Lighting Management

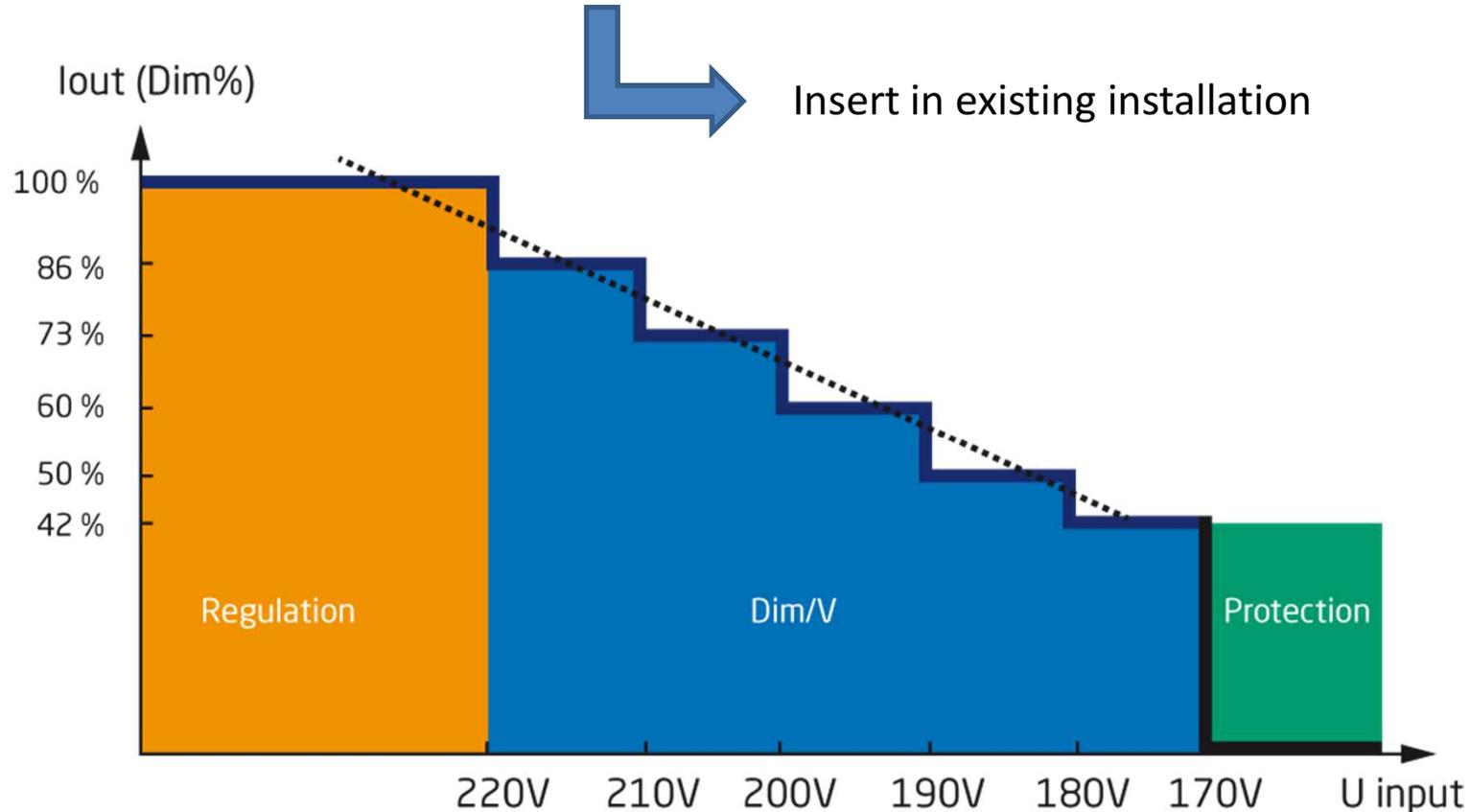


DIM/V

DIMMING via VOLTAGE VARIATION



Follow the component powering from electromagnetic ballasts





Street Lighting Management



**LED DRIVER WITH
CONSTANT CURRENT**

*Set-up from
100mA to 700mA*

**EASY
SETTINGS**

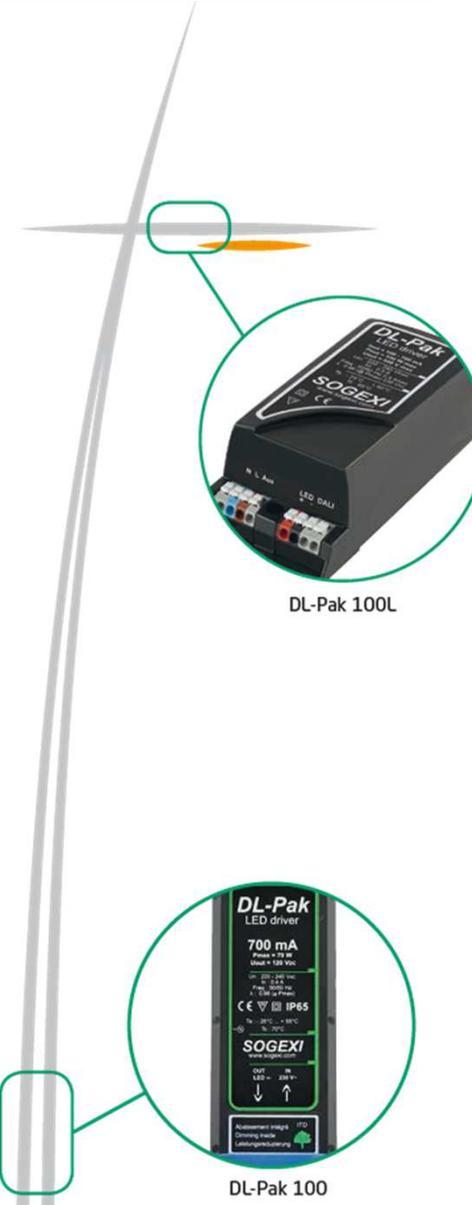
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**EXCELLENT
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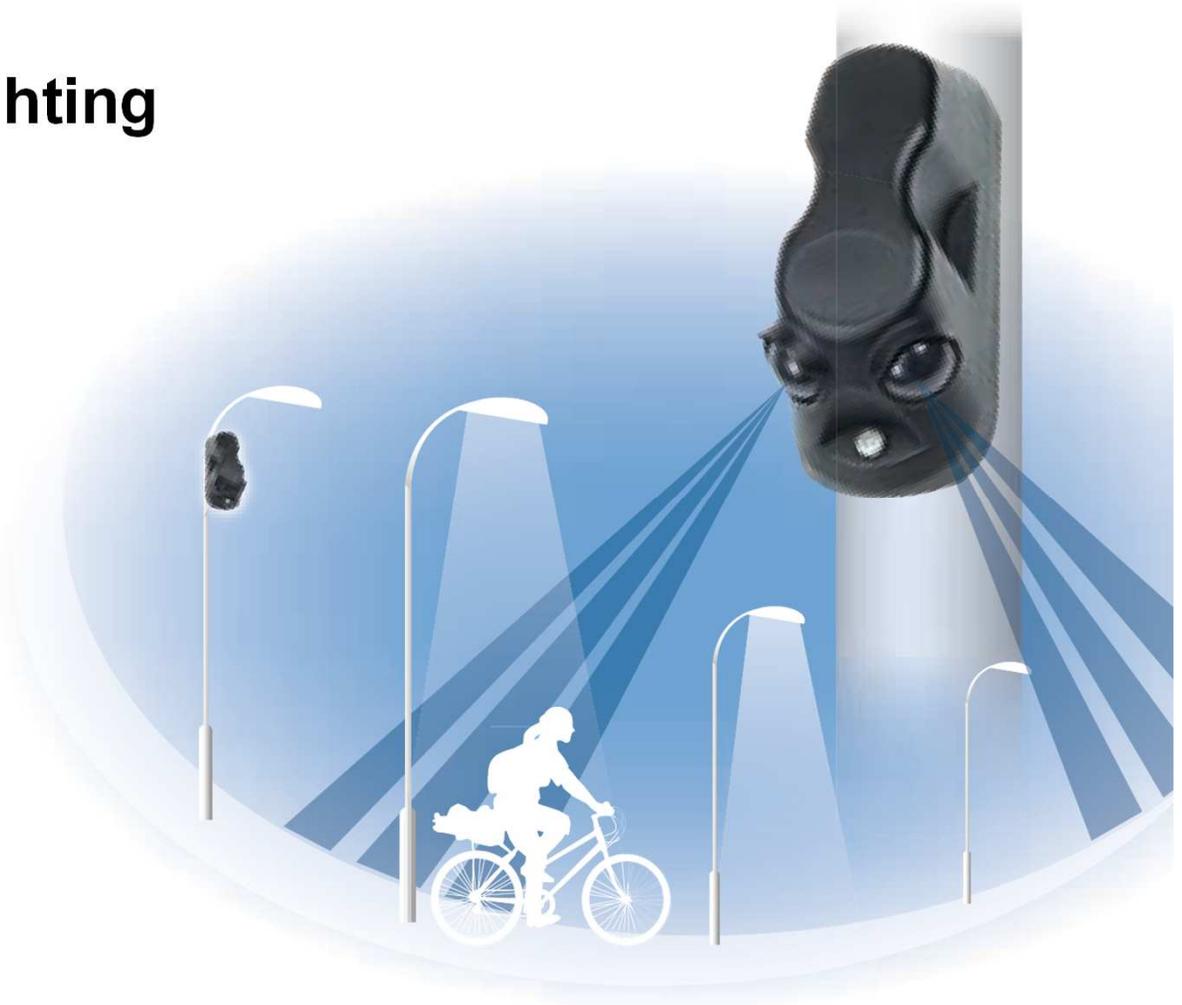
*Efficiency 96%
Very low peak current
PF ~ 0.98 @ Pn
PF ~ 0.90 @ 35%Pn*





Sensors for street lighting

Energy savings
Higher safety





Street Lighting Management



Large energy savings

Comfort and safety

Respect for the environment



Parking



Pedestrian areas



Short stop



Co-driving areas



Parks, city gardens

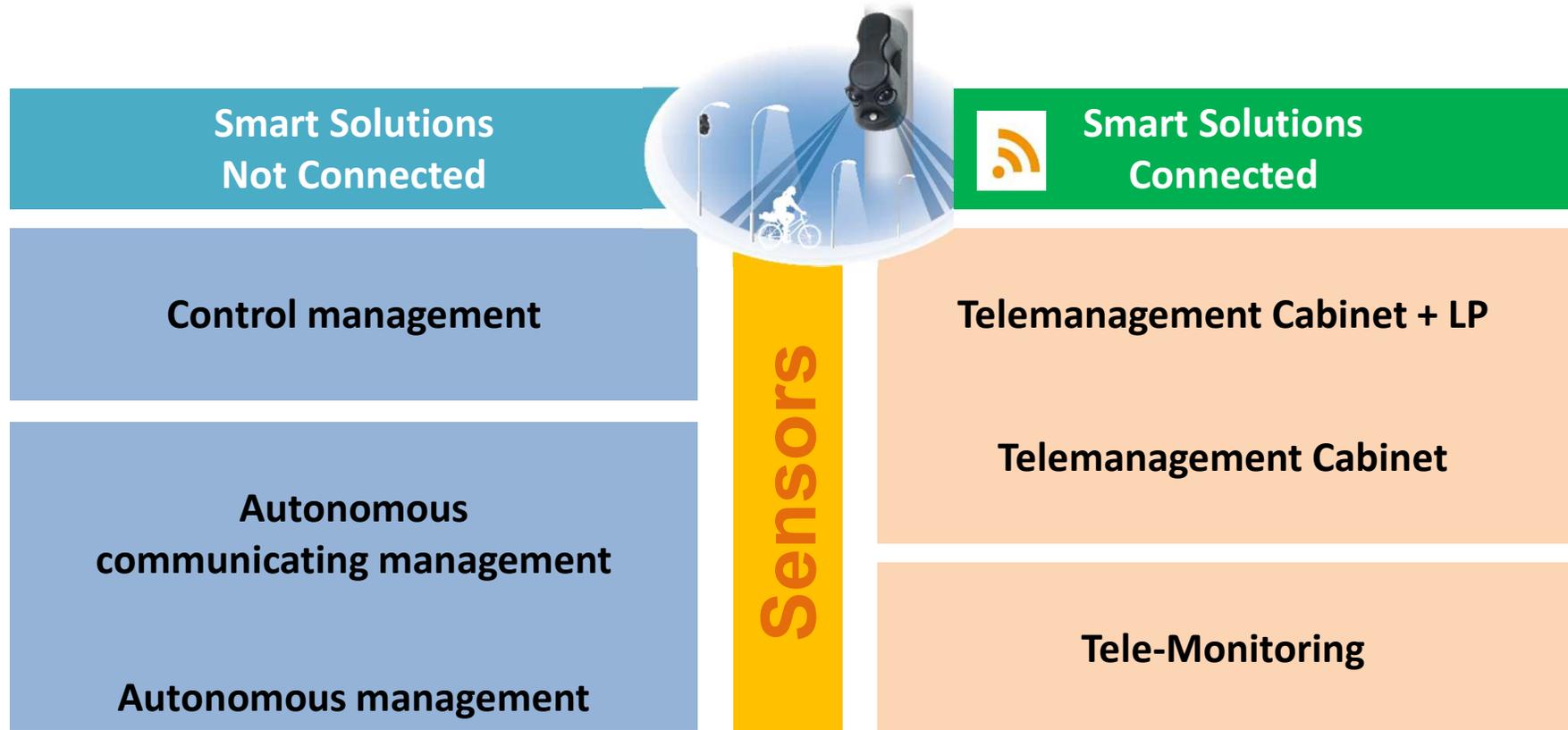


Cycling areas





Street Lighting Management



Interoperability !



Street Lighting Management



Maintenance officer



SMS Alert

Mobile phone Application

Web Interface Supervision

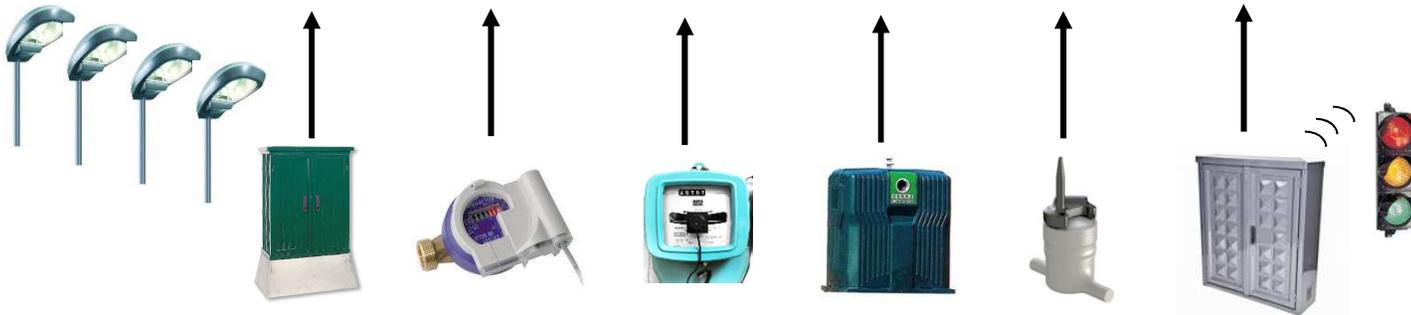
Emailing



TEGIS Web platform

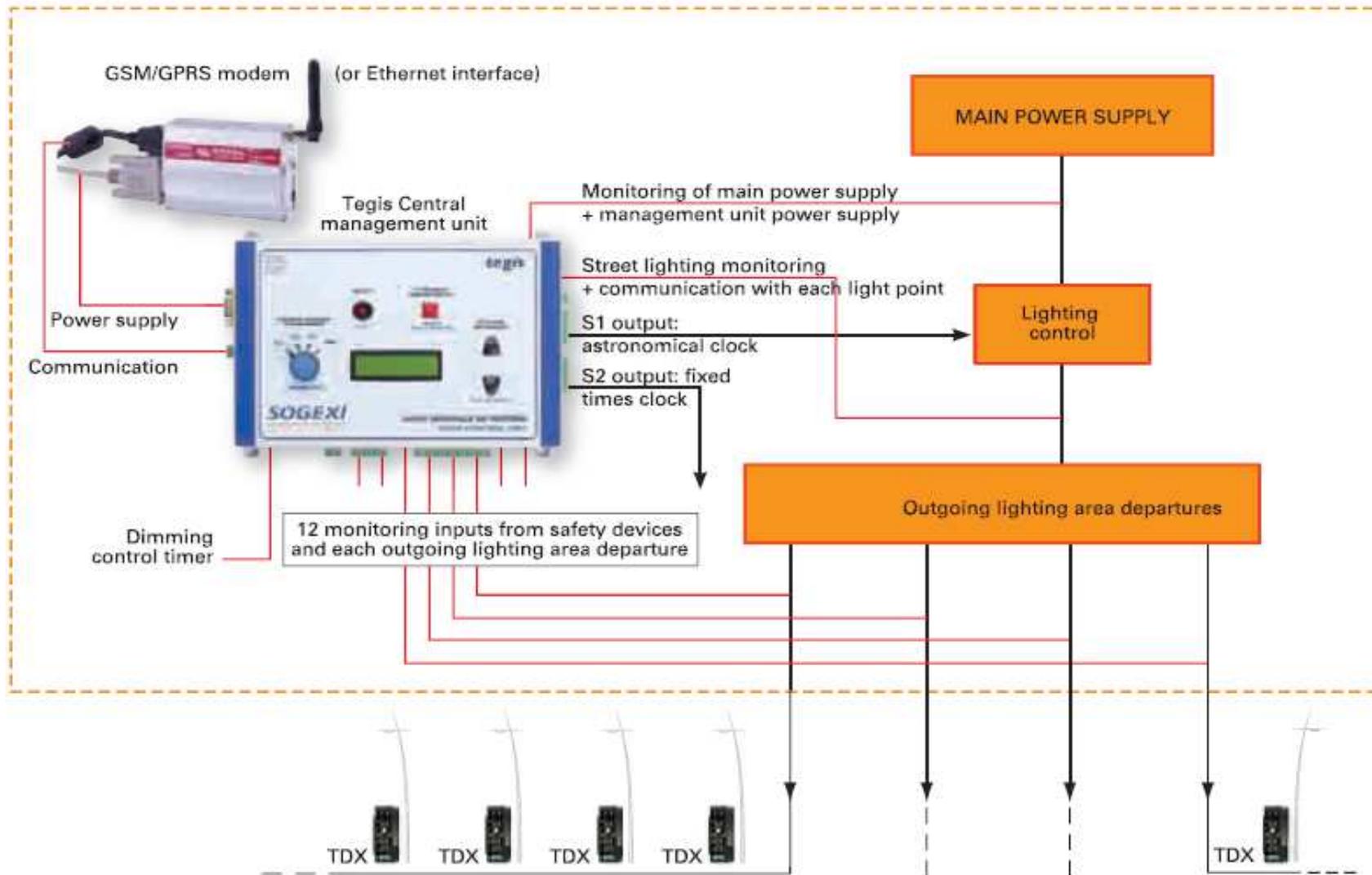
Web Services

Supervision via 3rd-part system (CAMS, AMS -Software ...)





Equipment on Electrical cabinet

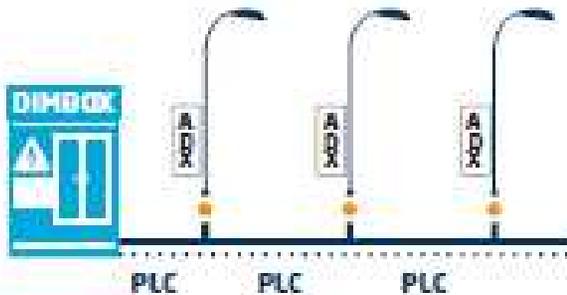




Not connected solutions



Lighting



Dimming of the light sources managed from the cabinet

DIMBOX / NCEUD ADX



Standalone dimming at the light sources

STD MODULES (DALI) / ST2 (ON/OFF)



Intelligence of the standalone dimming integrated in the electronic equipment

ITD FUNCTION



Street Lighting Management



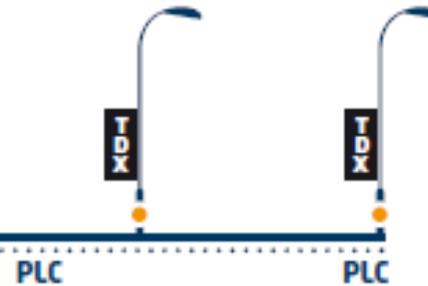
4 Connected solutions



Lighting



Intelligent street lighting management in the cabinet
TEGIS LIGHTING



Intelligent street lighting management up to the light sources
TEGIS LIGHTING PLUS



Trafik



Telemonitoring Alerts / counting
TEGIS TRAFIK



Utility



Telemonitoring Consumption alerts
TEGIS UTILITY



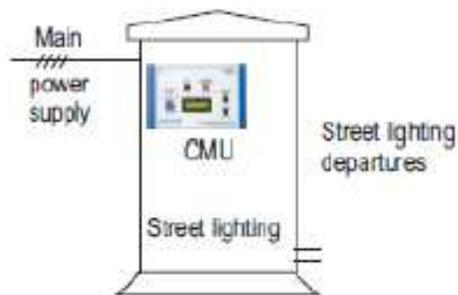
Lighting connected solutions

Tegis 'Cabinet'

Cabinet monitoring



Street lighting cabinet

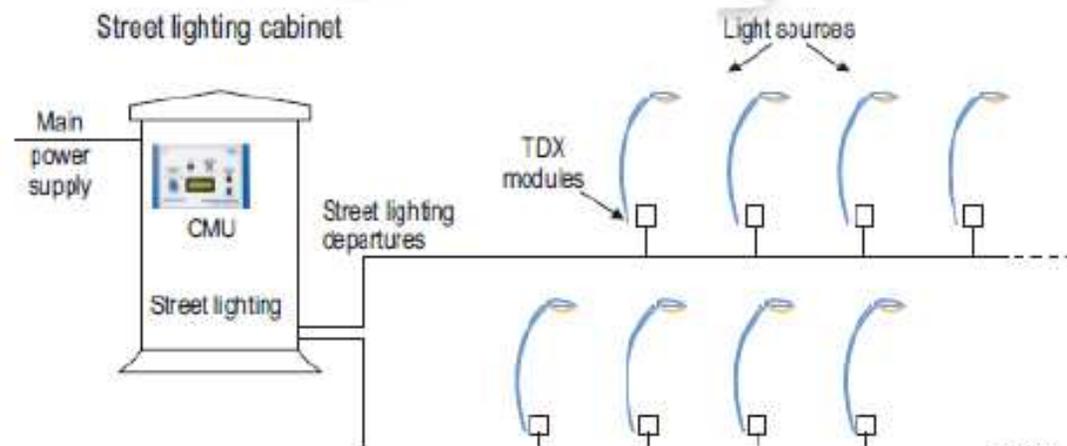


Tegis 'Lighting Point »

Remote monitoring of the cabinet and lighting points



Street lighting cabinet





Street Lighting Management



Trafik and Utility Connected solutions



Trafik



Utility



Telemonitoring
Alerts / counting
TEGIS TRAFIK



Telemonitoring
Consumption alerts
TEGIS UTILITY

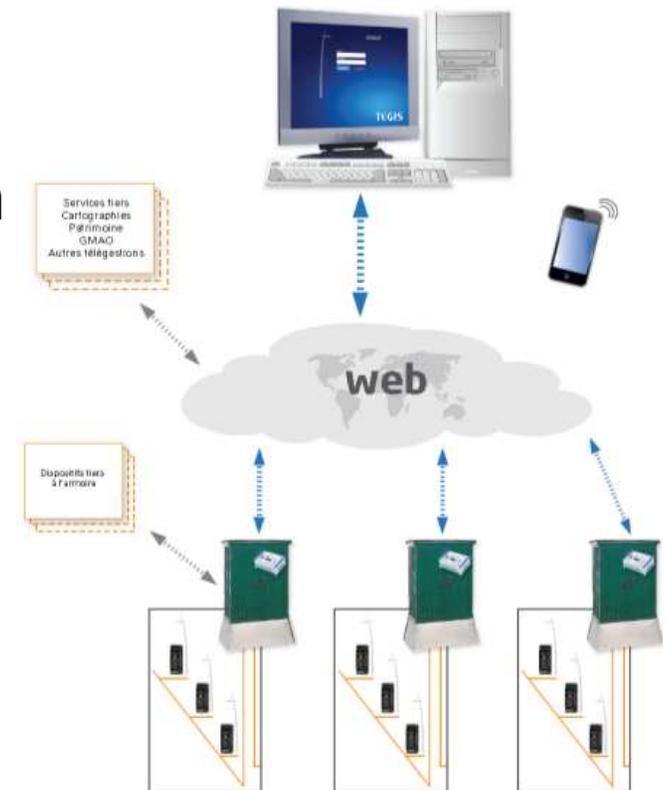




Public Lighting Management System

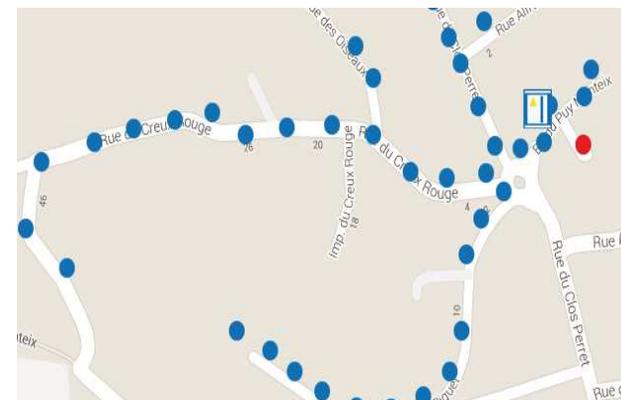
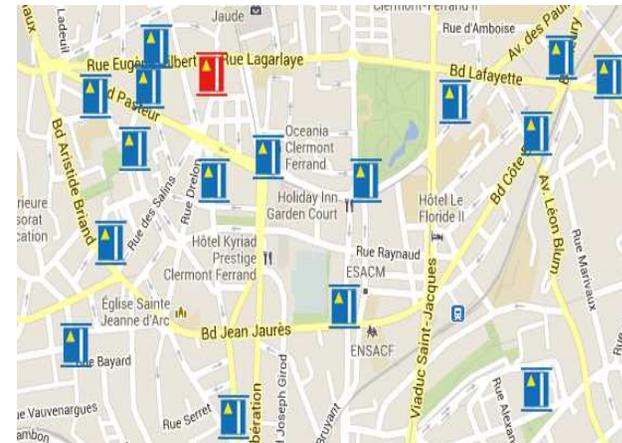
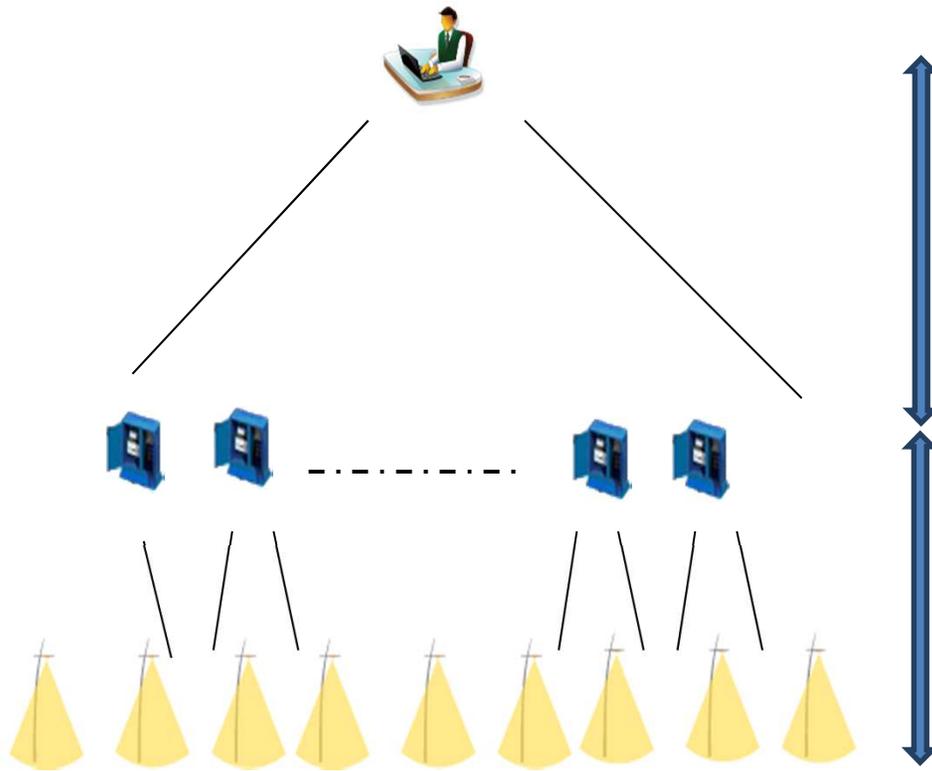
Web solution for outdoor lighting telemanagement

- Switching control.
- Electrical cabinet real time monitoring.
- Energy consumption feedback, analysis and alerts.
- Dimming scenarios on each light point, or through light point groups management.
- Real time monitoring and alerts of each light point.
- Illuminations management.





Web access





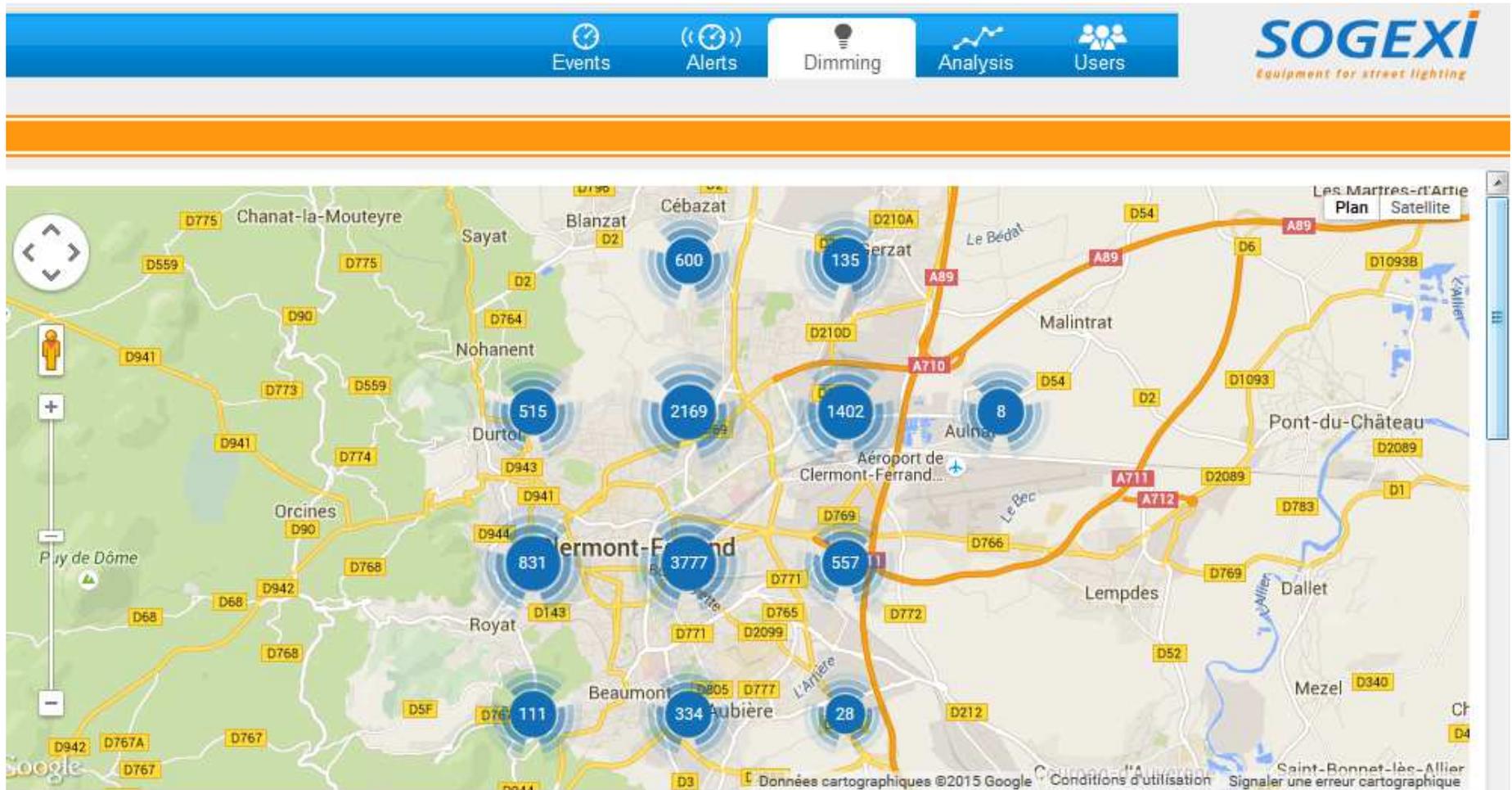
TEGIS street Lighting Telemanagement



View from Web monitoring system



City view on Google map:

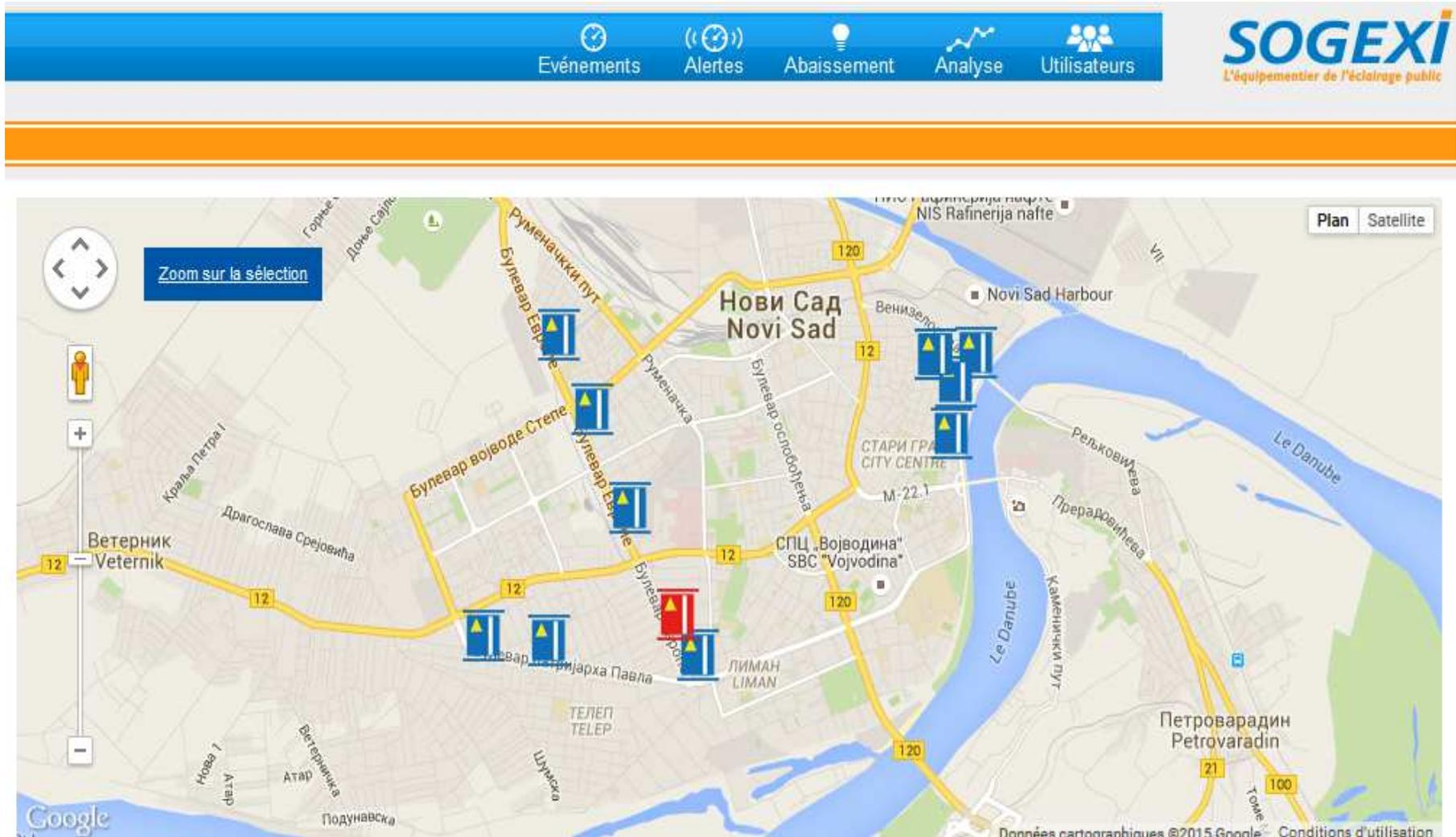




TEGIS street Lighting Telemanagement



Area City view on Google map:





TEGIS street Lighting Telemangement



Light points view on Google map:

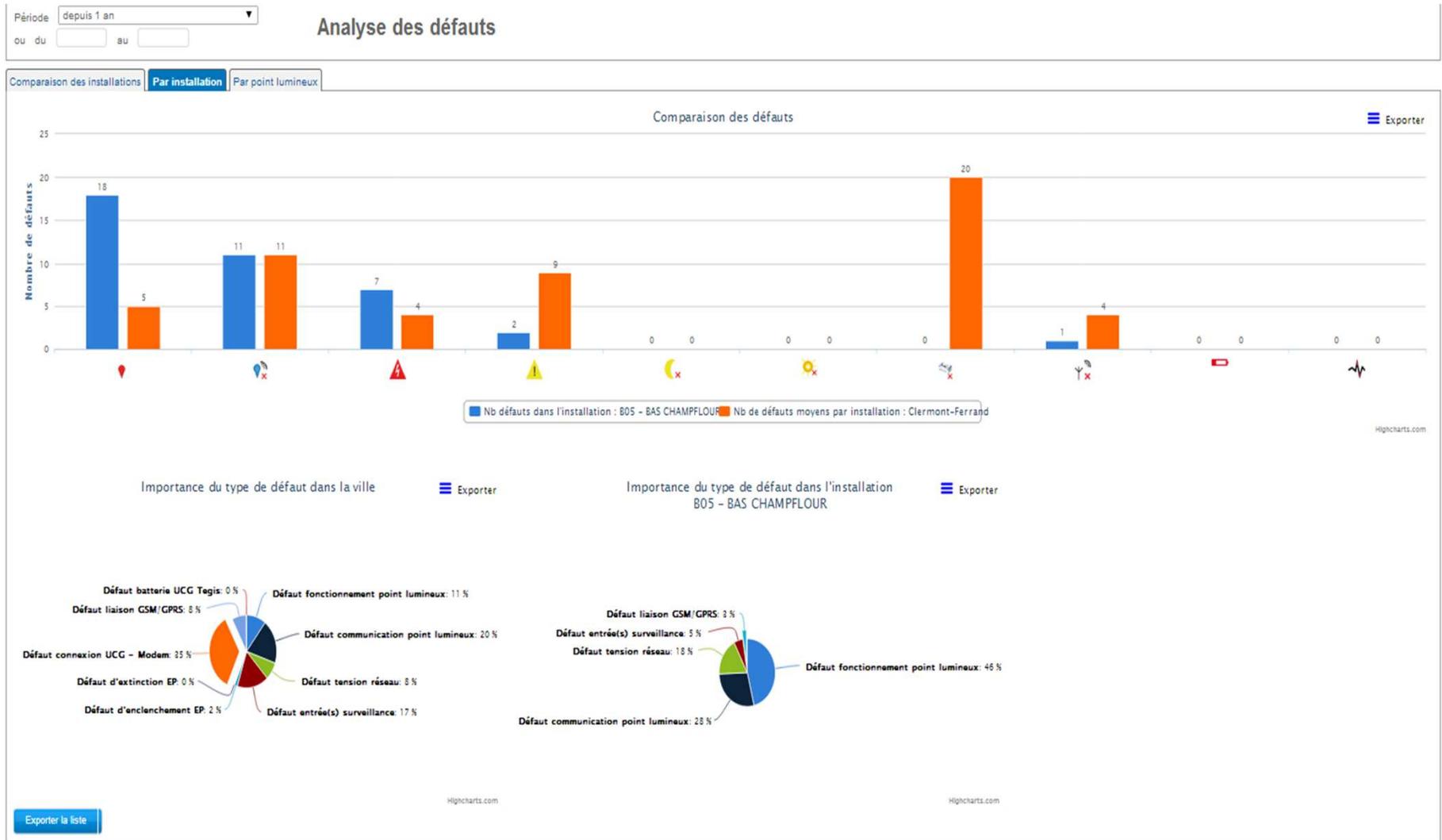




TEGIS street Lighting Telemanagement



Event analysis: By installation (by Electrical cabinet)

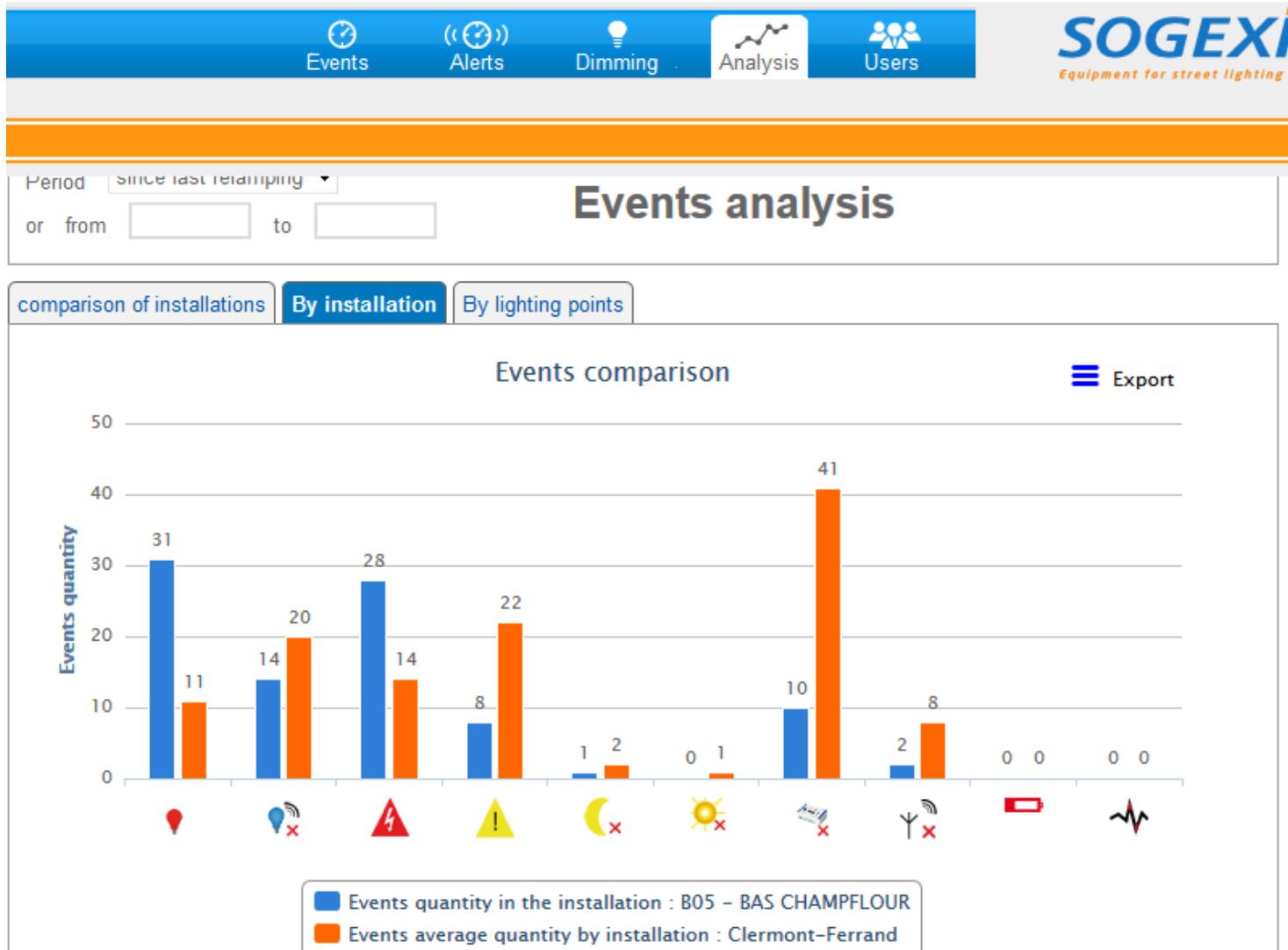




TEGIS street Lighting Telemanagement



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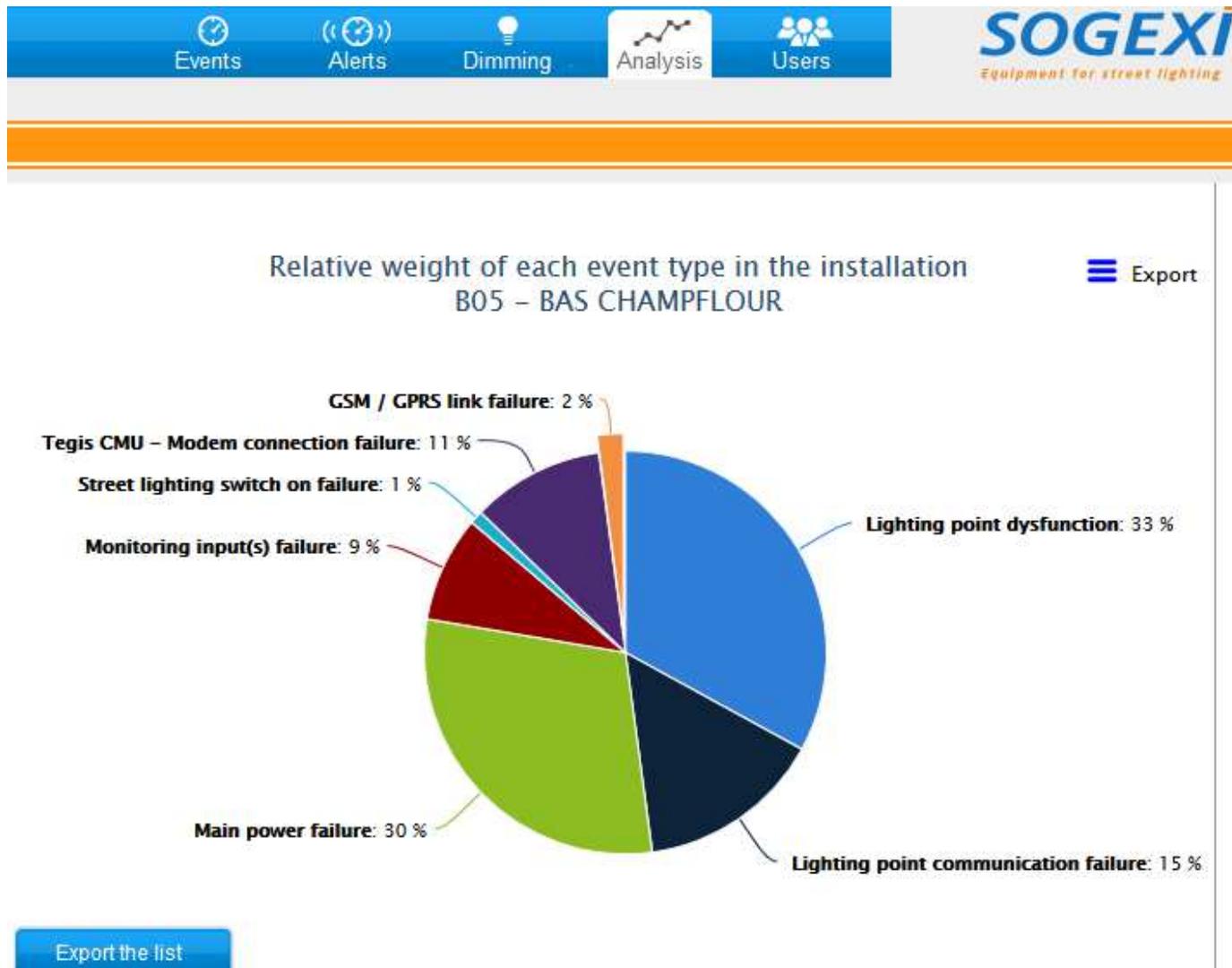




TEGIS street Lighting Telemanagement



Event analysis: By installation (by Electrical cabinet)





TEGIS street Lighting Telemanagement



Consumation (by Lights, Electrical cabinet, groups, global, ...)

Tegis Événements Alertes Abaissement Analyse Utilisateurs Compteurs **SOGEXI** L'équipementier de l'éclairage public

Toutes les villes > Compteurs > ... Administration

ID	1005346	Seuil d'alerte min	4
Nom	Compteur Elec 2	Seuil d'alerte max	475
Type de compteur	Electricité	Destinataire	Marc Papaioannou
Unité de mesure	Wh	<input type="checkbox"/> SMS	<input type="checkbox"/> E-mail
Latitude	45,78840		
Longitude	3,09923		

Enregistrer

Index

Time	Consumption (Wh)
Start	0
End	15,000

Consommation

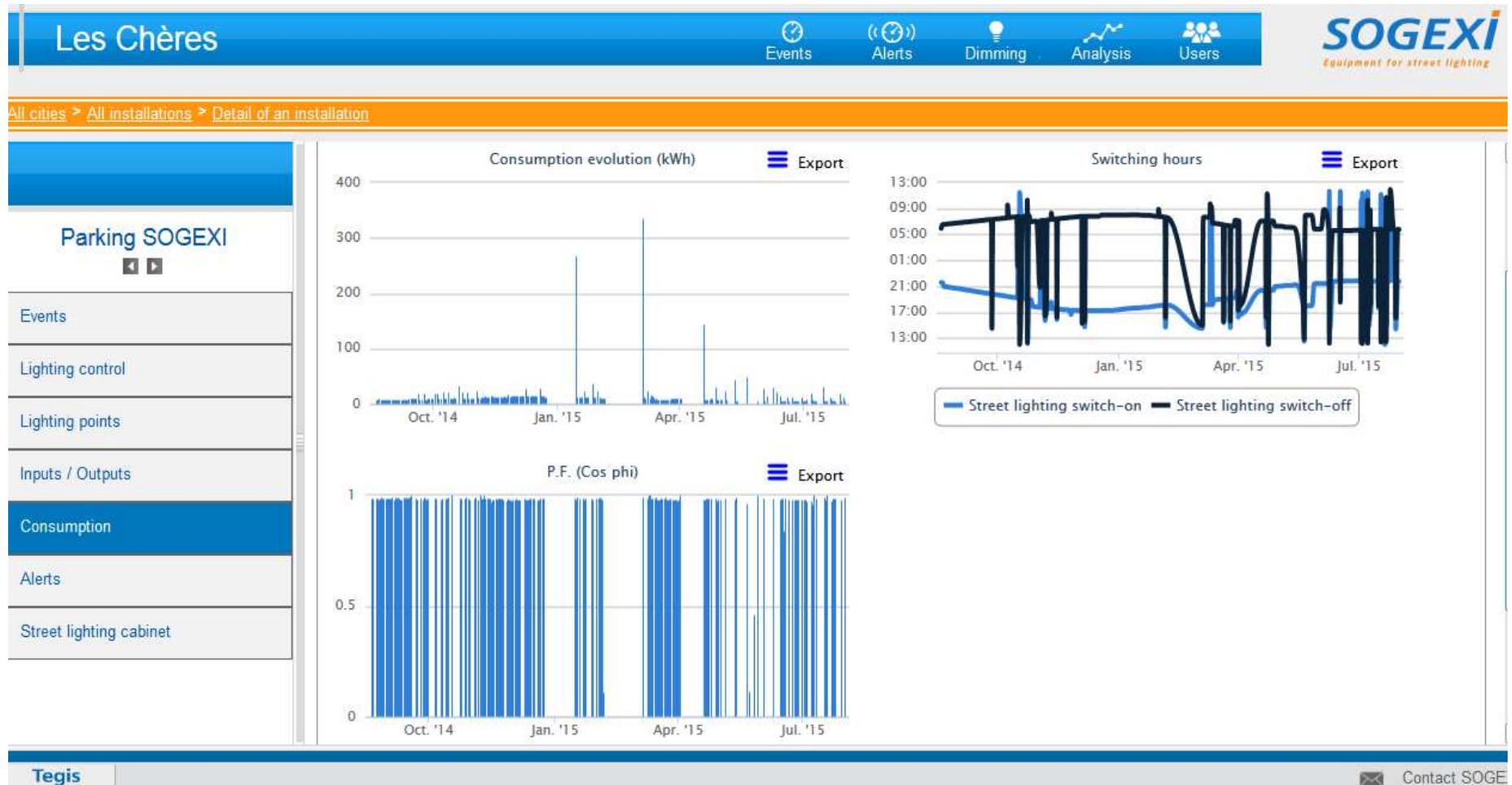
Time	Consumption (Wh)
Start	200
Peak	350
Trough	150
End	350



TEGIS street Lighting Telemanagement



Electrical network analysis (by Lights, Electrical cabinet, groups, global, ...)



Secure the City

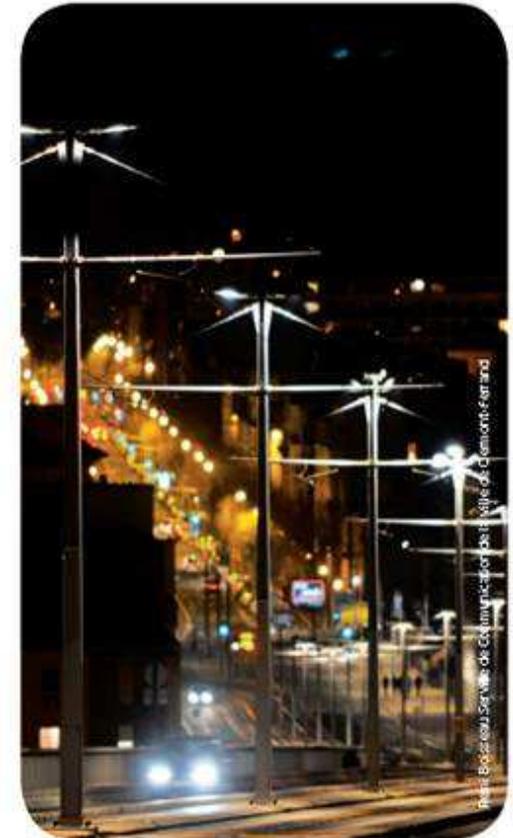
- The right lighting level
- In the right place
- At the right time

Reduce operating costs

- More than 35% energy savings at the initial use.
- Successive optimisation steps, for additional energy savings.
- Maintenance costs savings.

Be in line with sustainable development

- Significant carbon footprint and light pollution reduction.
- Eligibility to Energy Savings Certificates.



Street Lighting Management

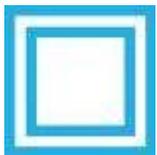
- A wide range on 4 segments, designed for outdoor Streetlighting
One of the largest range of the European market !



- ▶ **Manage – Smart Streetlighting management**
 - Tegis : Streetlighting control
 - SIR : Smart Motion Detector
 - ST2 : Night switch



- ▶ **Powering – Electronic control gear**
 - DL-Pak : Leds Driver
 - e-Pak & Induxi : electronic Ballast
 - V-Pak : Light point dimmer
 - Ferromagnetic control gears



- ▶ **Connect & Protect – Coffrets de raccordement**
 - Components for junction box
 - Lamppost junction box for urban furniture
 - Street furniture
 - Stainless steel cabinet



- ▶ **Installation – Installation and maintenance Equipements**
 - Accessories for lampposts and others ...



SOGEXI

*A major player in the smart
city control*

Thank you for your attention