

PowerAiD™

Til Smart Streetlights

DATA
DREVET
DYNAMISK
DÆMPNING
-som en service



Patentanmeldt PowerAiD™ revolutionerer gadebelysning ved dynamisk dæmpning baseret på live trafikdata, optimering af energibesparelser, samtidig med at trafikikkerheden sikres. Afhængigt af placering kan trafikdata fra én sensor repræsentere 50-200 gadelamper.

CityManager CMS

v11.01.2024



Who are we?

Specialist in Smart Outdoor Lighting

We enable cities to take full control
of their Lighting Infrastructure
based on Open Standards

Urban Streets



Industrial Zones



Residential Areas



Train Station / Railway Lines



Ports / Sea Terminals



University Campus



Bicycle Roads



Outdoor Parking



Public Parks

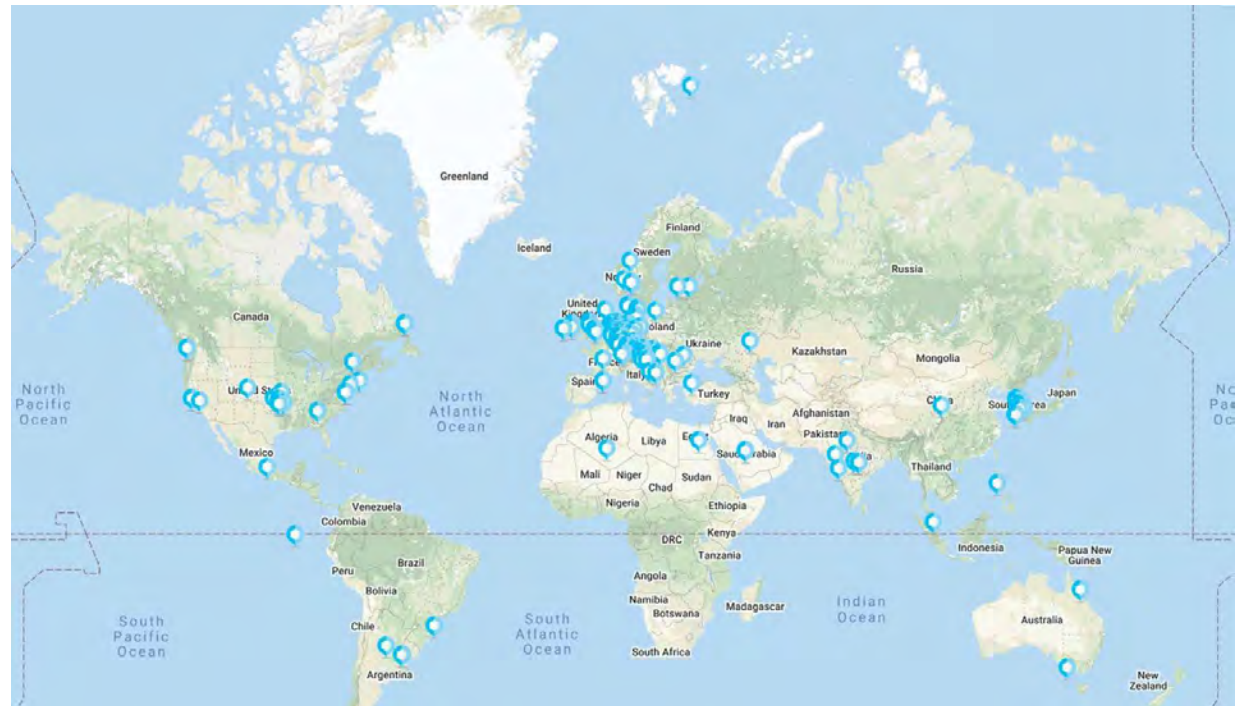


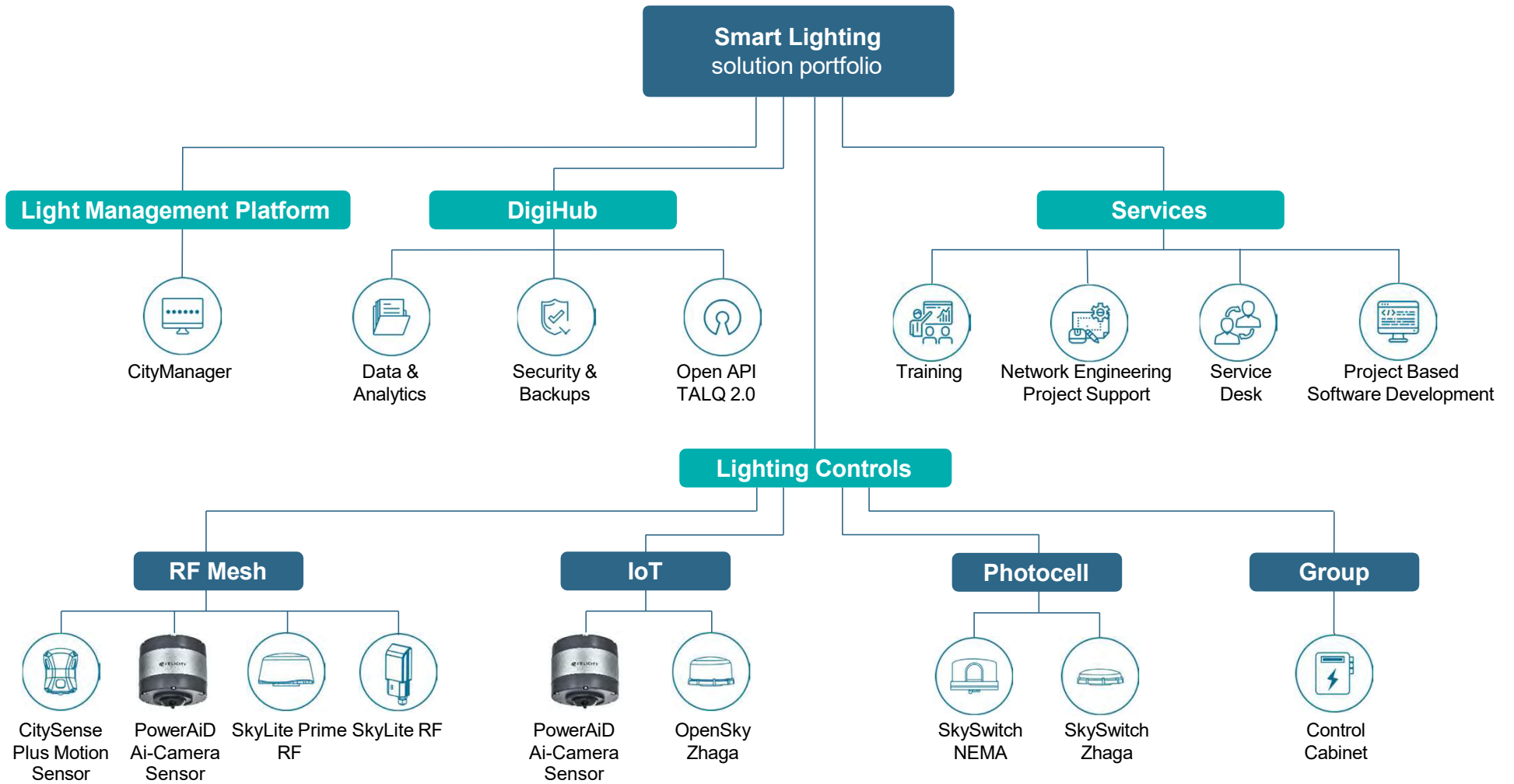
Global presence: Deployment in 800+ projects

Monitored by CityManager and supported by our Partner of Service Desk

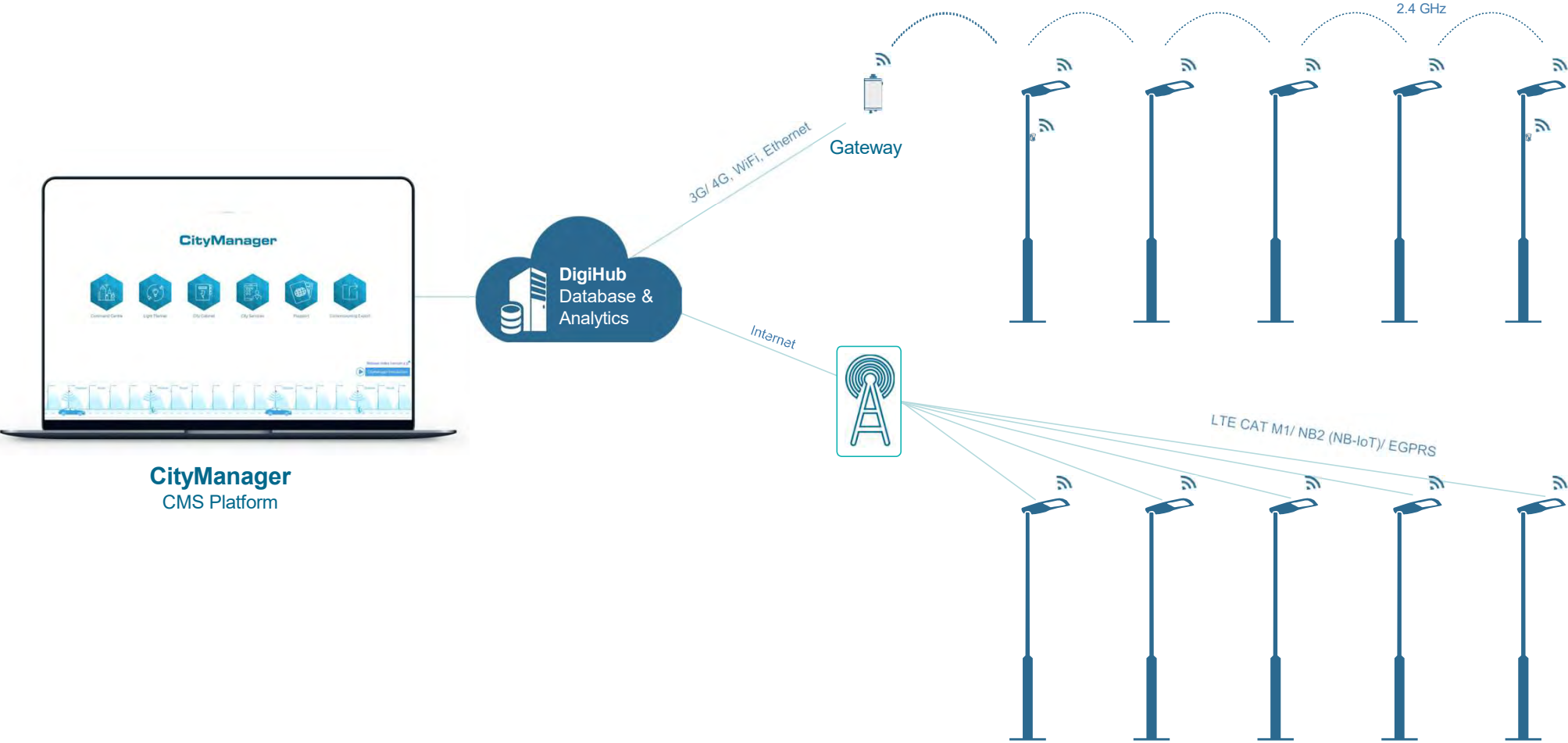
Selected Projects

- Dortmund (DE) 30.000 smart streetlights
- Düren (DE) 5.000 smart streetlights
- Dutch Railways (NL) 10.250 smart streetlights
- Island of Texel (NL) 3.420 smart streetlights
- Helmond (NL) 8.500 smart streetlights
- Seoul (KR) 2.500 smart streetlights
- Busan (KR) 1.500 smart streetlights
- Bangladesh 4.300 smart streetlights





Single Platform to Manage RF Mesh and IoT Networks



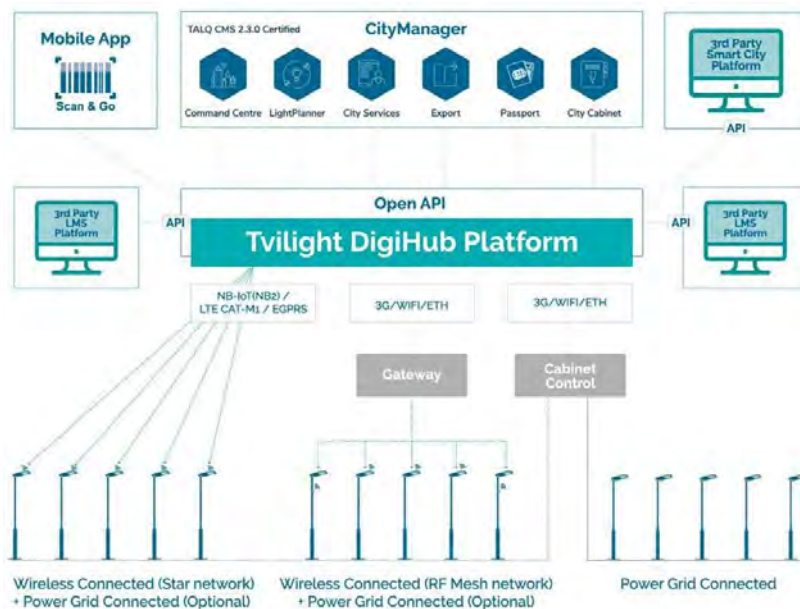
CityManager Central Management System



- **Secure platform**, accessible from anywhere, at any time
- **Monitor, manage and control** citywide streetlights with intuitive interface
- **Open API** and TALQ compliance ensure vendor-neutral interoperability



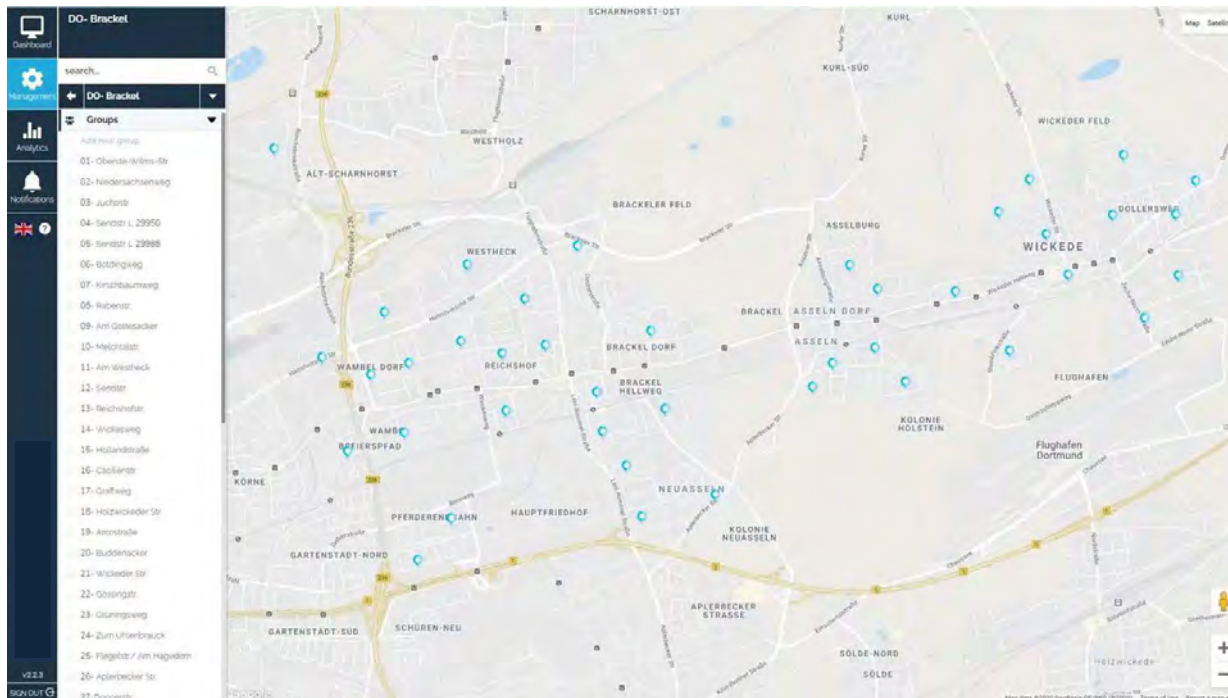
Open, Secure & Interoperable



Vendor neutral system

- Open API and TALQ compliance ensure easy integration with third-party applications
- Successful integration examples:
 - Cisco Kinetics
 - SixData luxData.light
 - Thorn UrbaSens
 - Montad Moon
 - VIMALUX CityManager
 - Osram LumIdent
 - Bee Smart City
 - Siemens / Atos

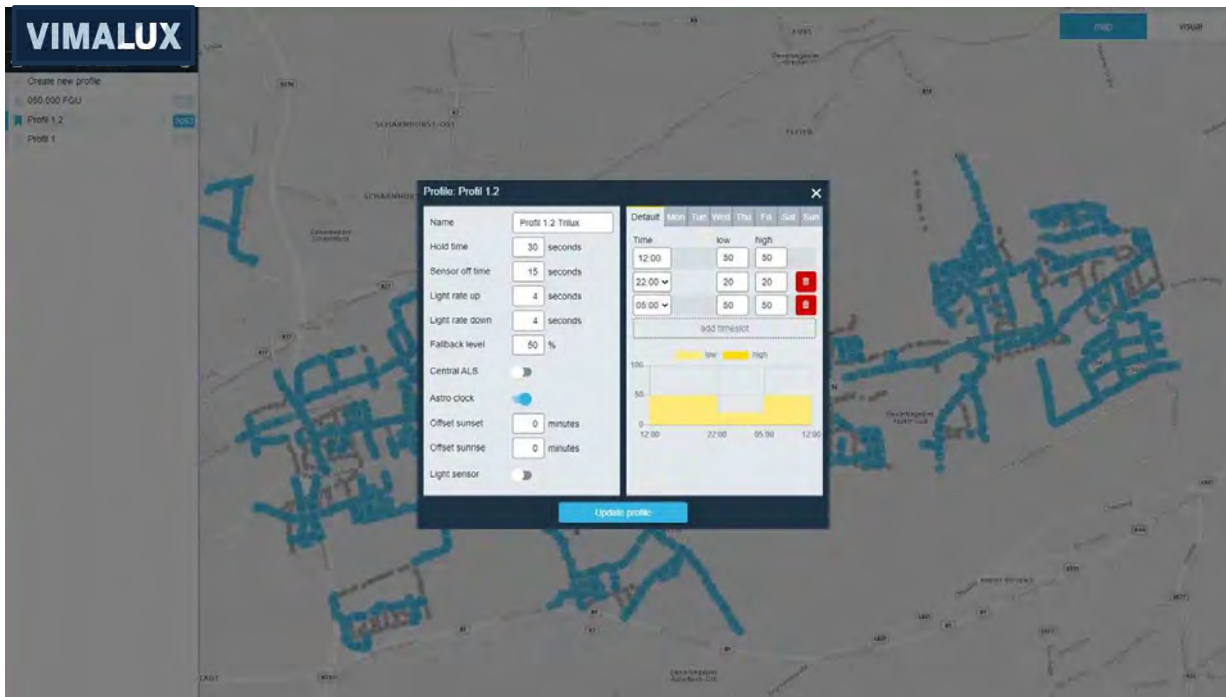
Manage Streetlights Remotely



Intuitive web interface renders total control

- Secure cloud hosted platform, accessible from any web browser, from anywhere, at any time
- Easy-to-understand and easy-to-use application interface help manage streetlights effortlessly
- ISO and NEN certified infrastructure

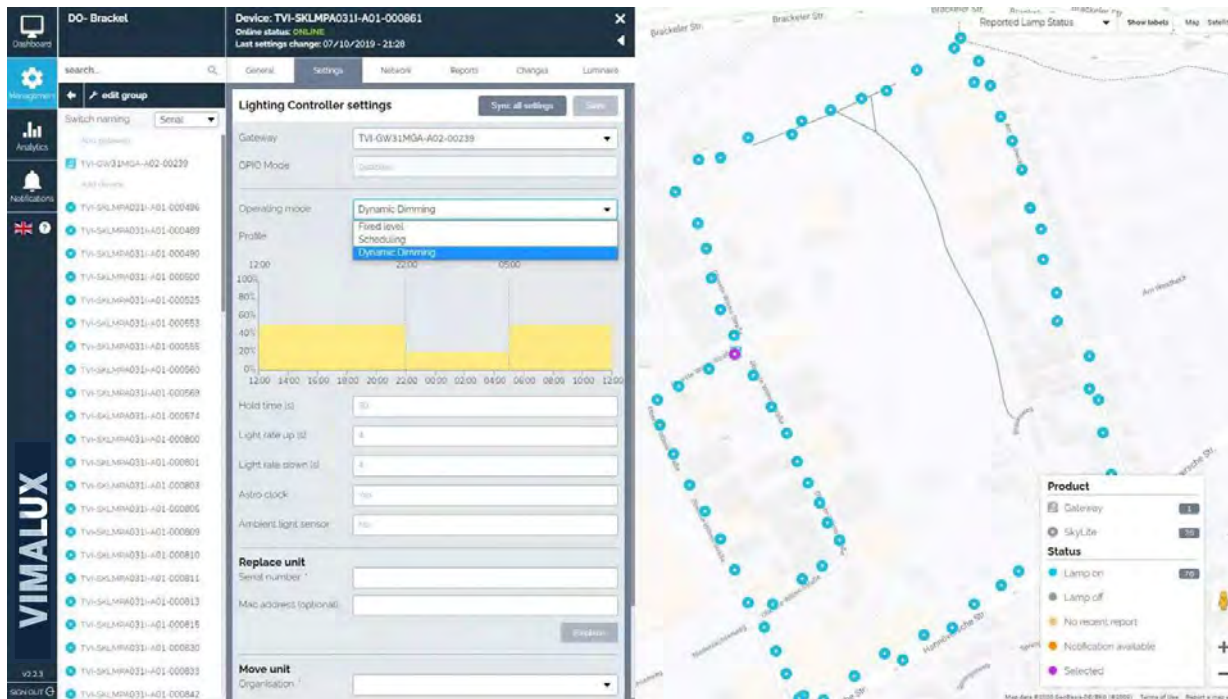
Control Citywide Lighting



Fine-tune lighting as per the demand

- Create custom groups or manage individual streetlights
- Adjust lighting requirements based on:
 - Profiles
 - Specific days
 - Certain events
 - AstroClock
 - Ambient light sensor
 - Human movement (motion sensing)

Fine-tune for Sustainability and Safety



High level of control over streetlights

- Reduce energy consumption and limit CO2 emissions and light pollution with dimming schedules and motion sensor parameters
- Adapt lighting with ease to balance sustainability and citizens' comfort and safety

Adjust Street Light Colours

The screenshot displays the VIMALUX management interface for the 'Monheim' location. The 'Edit profile' window is active, showing various settings for street lighting. The 'Color schedule' section is highlighted, featuring a table with columns for Time, Min %, and Max %. The table contains three rows: 12:00 (Min %: #0f93b2, Max %: #04688c), 22:00 (Min %: #00e5df, Max %: #00a1af), and 06:00 (Min %: #ffe4af, Max %: #fdbf2d). Below the table is a bar chart showing the color schedule. At the bottom, there are checkboxes for 'Central AL5', 'Astro clock', and 'Ambient light sensor'. To the right of the settings is a map of Europe with blue dots indicating street light locations.

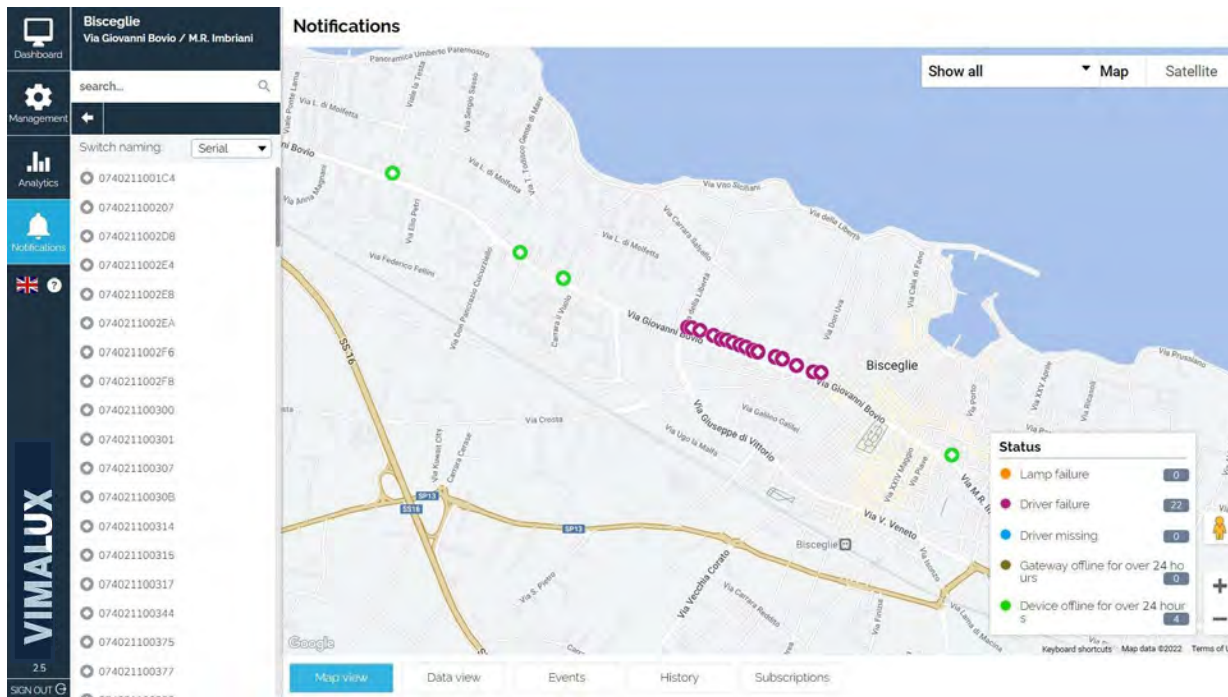
Time	Min %	Max %
12:00	#0f93b2	#04688c
22:00	#00e5df	#00a1af
06:00	#ffe4af	#fdbf2d

Create the right ambience

- Choose from a broad spectrum of colors or any shade of white to find the right tone (RGBW)
- Adjust colours based on:
 - Profiles
 - Specific days
 - Certain events
 - Human movement (motion sensing)

* Currently works with OpenSky Zhaga IoT Controllers only

Citywide Maintenance Overview



Identify alerts/alarms at a city-level

- Know the precise location where the maintenance operator should act.
- Reduce truck rolls and subsequent expenses.

Monitor Faults, React Quickly

The screenshot displays the VIMALUX management interface. On the left is a sidebar with navigation options: Dashboard, Management, Analytics, Notifications, and a list of 21 groups. The main area is titled 'Notification' and contains a table with the following data:

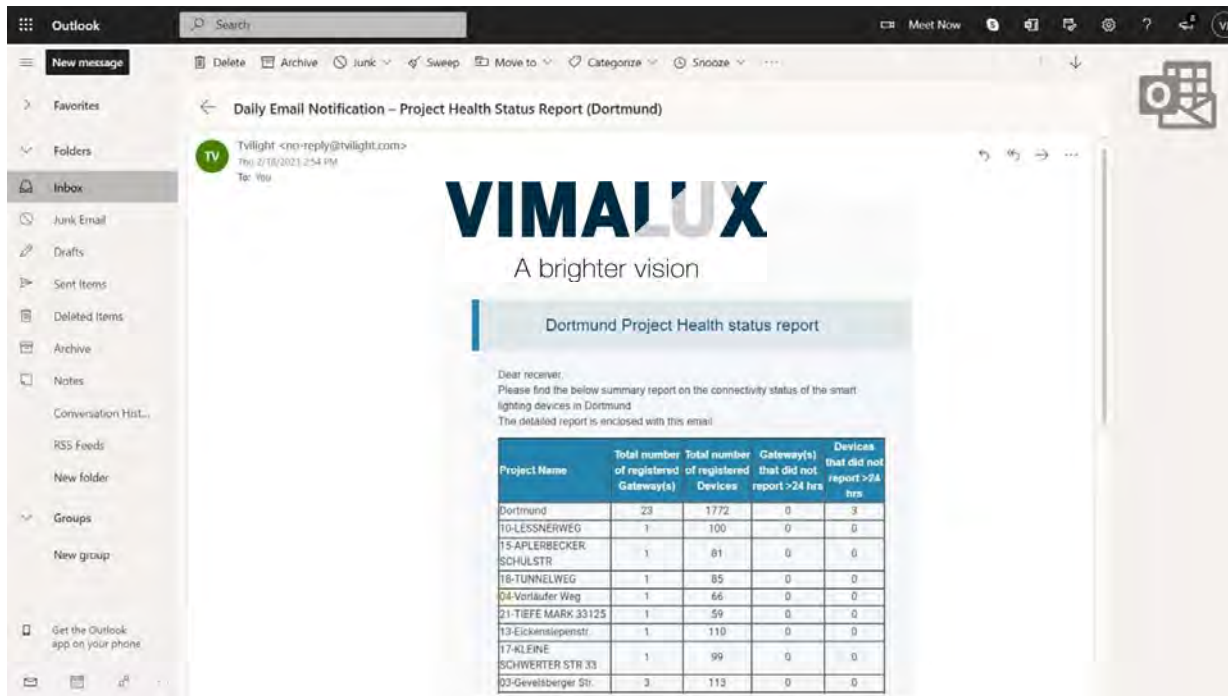
Name	Serial number	Organisation	Group	Type	Created At
TVI-SKLMFA0311-C03-003130	TVI-SKLMFA0311-C03-003130	DO- Innenstadt- West	15- Rheinsche Str	Device offline for over 24 hours	11-02-2021 16:41:34
TVI-SKLMFA0311-C03-003501	TVI-SKLMFA0311-C03-003501	DO- Innenstadt- West	15- Rheinsche Str	Device offline for over 24 hours	11-02-2021 16:41:34
TVI-SKLMFA0311-C04-000207	TVI-SKLMFA0311-C04-000207	DO- Innenstadt- West	15- Rheinsche Str	Device offline for over 24 hours	10-02-2021 12:41:36
TVI-SKLMFA0311-C04-000013	TVI-SKLMFA0311-C04-000013	DO- Innenstadt- West	15- Rheinsche Str	Device offline for over 24 hours	10-02-2021 12:41:36

At the bottom of the notification area, there are buttons for 'History' and 'Subscriptions', and a pagination control showing '25' items.

Achieve proactive maintenance

- Get near-real time information of luminaire
- Automatic alerts / notifications when faults / outages arise
- Reduce truck roll by knowing the exact reason of failure

Daily Reports on Lighting Infrastructure's Health



Keep citywide lighting up-to-date

- Receive automated emails containing vital information:
 - Fault light report
 - Daily savings report
 - Daily consumption report
- Helps plan maintenance

Smart Street Lighting Analytics

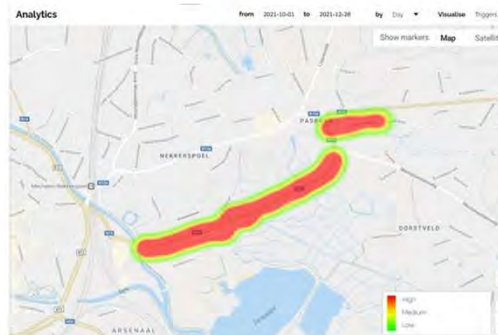
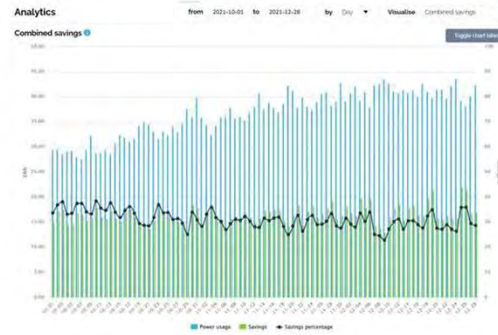
Mechelen
Nachttraven
132 Devices, 3 gateways

search...

Switch naming: Serial

ID	Device Name	Model	Triggers	414 triggers	342 triggers	208 triggers
3096	oude baan	TVI-CSP1-A03-010691	CitySensePlus	414 triggers	342 triggers	208 triggers
3097	oude baan	TVI-CSP1-A03-010689	CitySensePlus	380 triggers	281 triggers	173 triggers
3098	oude baan	TVI-CSP1-A03-008333	CitySensePlus	266 triggers	226 triggers	110 triggers
3099	oude baan	TVI-CSP1-A03-008335	CitySensePlus	83 triggers	321 triggers	353 triggers
3100	oude baan	TVI-CSP1-A03-008334	CitySensePlus	318 triggers	225 triggers	162 triggers
3101	oude baan	TVI-CSP1-A03-008330	CitySensePlus	316 triggers	213 triggers	180 triggers
3102	oude baan	TVI-CSP1-A03-008331	CitySensePlus	308 triggers	224 triggers	172 triggers
3183	Oude baan	TVI-CSP1-A03-010688	CitySensePlus	303 triggers	194 triggers	167 triggers
3184	oude baan	TVI-CSP1-A03-010692	CitySensePlus	257 triggers	175 triggers	135 triggers
3185	Oude baan	TVI-CSP1-A03-010690	CitySensePlus	254 triggers	183 triggers	133 triggers
3186	Oude baan	TVI-CSP1-A03-006104	CitySensePlus	260 triggers	158 triggers	128 triggers
3187	Oude baan	TVI-CSP1-A03-010693	CitySensePlus	449 triggers	289 triggers	198 triggers
4926	Fietweg	502M-A01-001441	SkyLitePrime	361 triggers	135 triggers	352 triggers

Chart Heatmap **Table**



Gain insights to optimize lighting

- Track lighting performance, status, energy consumption, savings of each luminaire
- Heatmap to identify busy areas / spots
- Insightful graphical data helps make actionable plan to meet sustainability goals

Mechelen
Nachtraven
132 Devices . 3 gateways

search...

Switch naming: Serial

- TVI-GW32MGA-A01-00049
- TVI-GW32MGA-A01-00046
- TVI-GW32MGA-A01-00060
- 50ZD-A01-000696
- 50ZD-A01-000688
- 50ZD-A01-001135
- TVI-CSP1-A03-010691
- TVI-CSP1-A03-010689
- TVI-CSP1-A03-008333
- TVI-CSP1-A03-008335
- TVI-CSP1-A03-008334
- TVI-CSP1-A03-008330
- TVI-CSP1-A03-008331
- TVI-CSP1-A03-010688
- TVI-CSP1-A03-010692
- TVI-CSP1-A03-010690
- TVI-CSP1-A03-006104
- TVI-CSP1-A03-010693
- 50ZM-A01-001441
- 50ZM-A01-001564
- 50ZM-A01-001443

VIMALUX

22°C

SIGN OUT

Analytics

from 2021-02-01 to 2021-11-23 by day Visualise Combined savings

Combined savings

Toggle chart labels

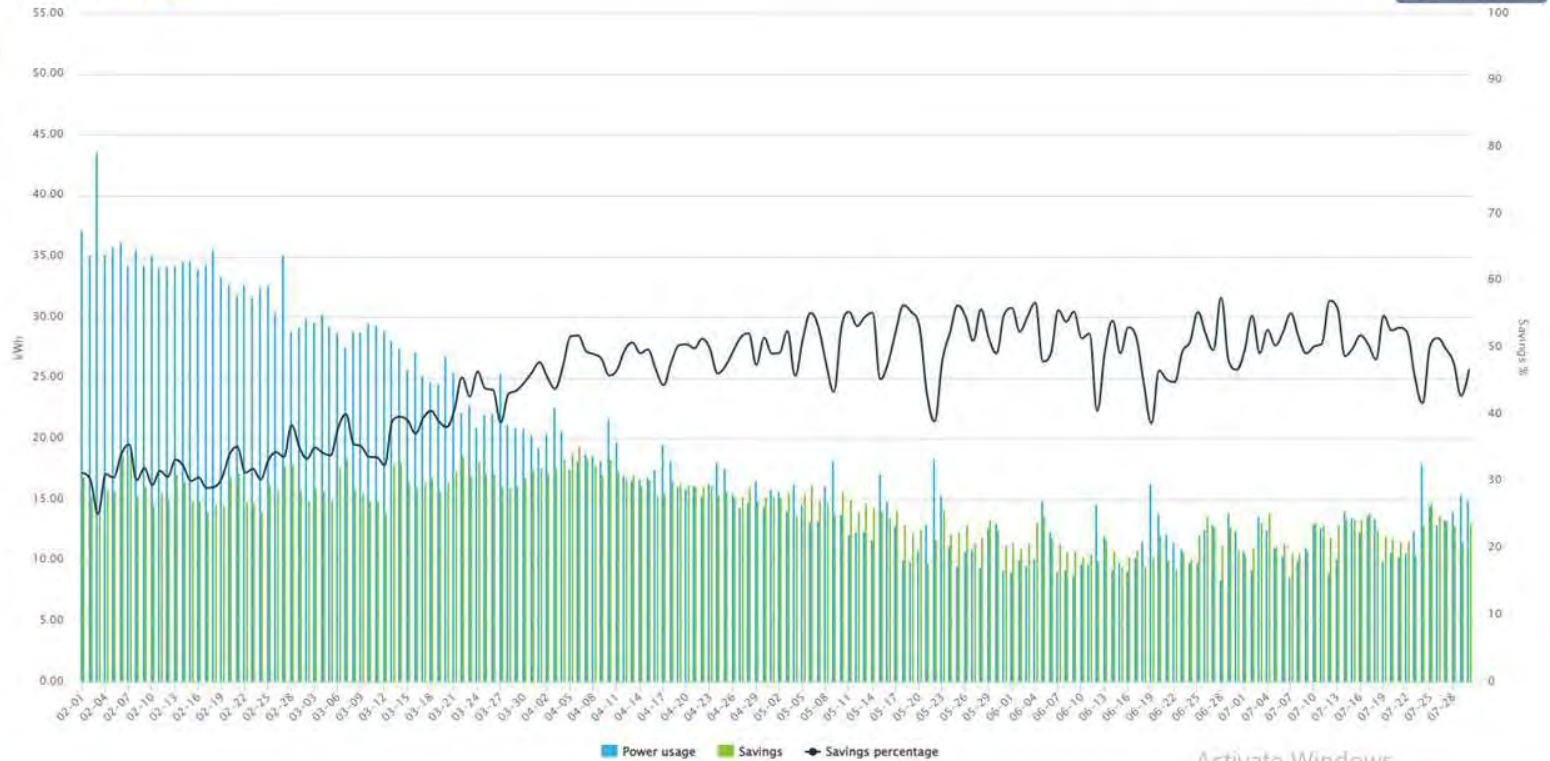


Chart Heatmap Table

Activate Windows
Go to Settings to activate Windows

Dashboard
 Textel
 26 groups

search_

Management
 ← Textel

Groups

- De Cocksdorp Ploosterstraat
- De Cocksdorp Postweg
- De Koog Epelaan
- De Koog Nikadel
- De Koog Nikadel 2
- De Koog Nikadel 3
- Den Burg Beatrixlaan
- Den Burg Haffelderweg
- Den Burg Hollerwal
- Den Burg Weesomlaan
- Den Burg Sluyscoog
- Den Burg Vogelenzang
- Den Burg Waalderstraat
- Den Burg Wilhelminalaan
- Den Hooi Hoge Achterom
- Den Hooi Naalrand
- De Waal Sommetjesweg
- Midden-Eierland Hoofdweg
- Oosterend Bijenkorfweg
- Oost Oost
- Oudeschild Haven
- Oudeschild Schilderweg
- Oudeschild Trompstraat

VIMALUX
 v22.3
 SIGN OUT

Analytics

from 2020-11-30 to 2021-10-28 by day Visualise Combined savings

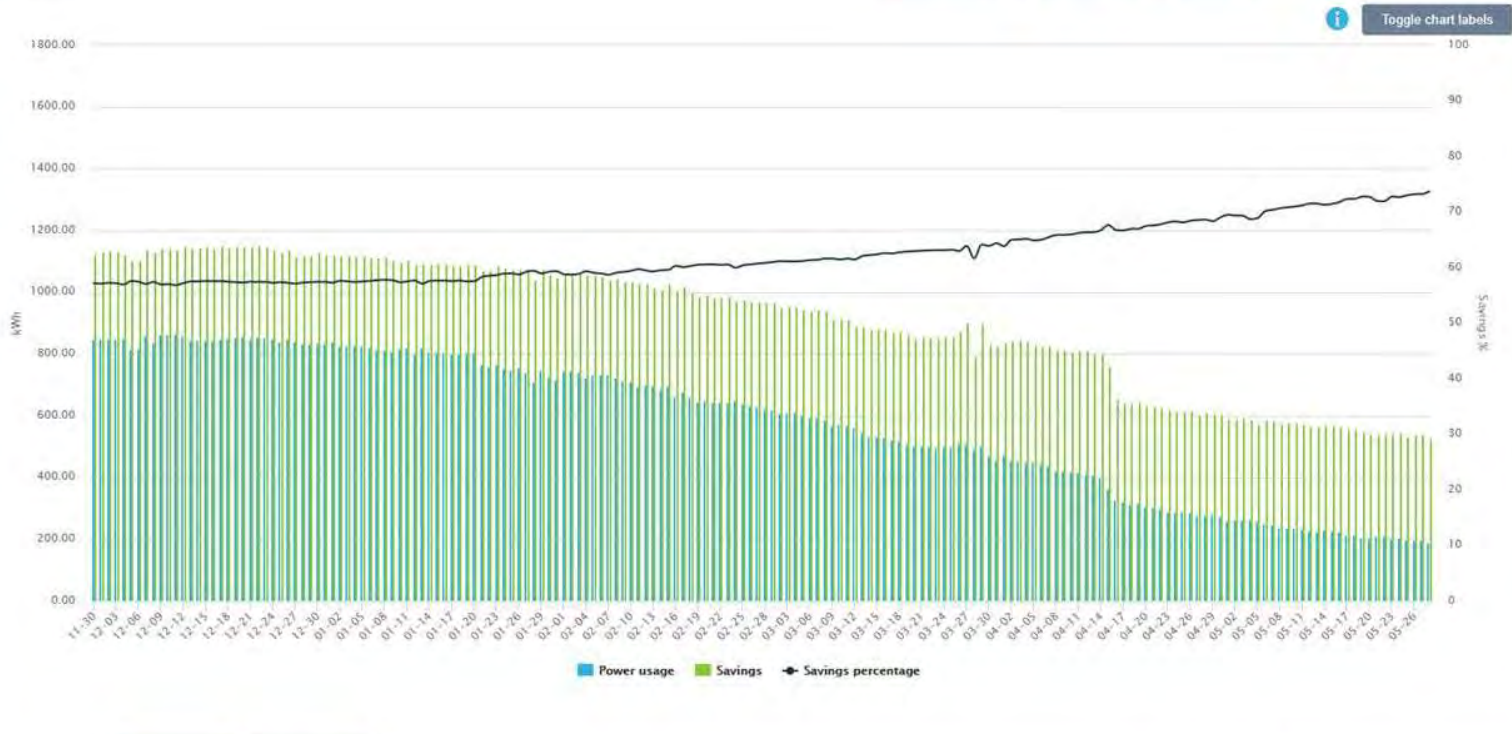
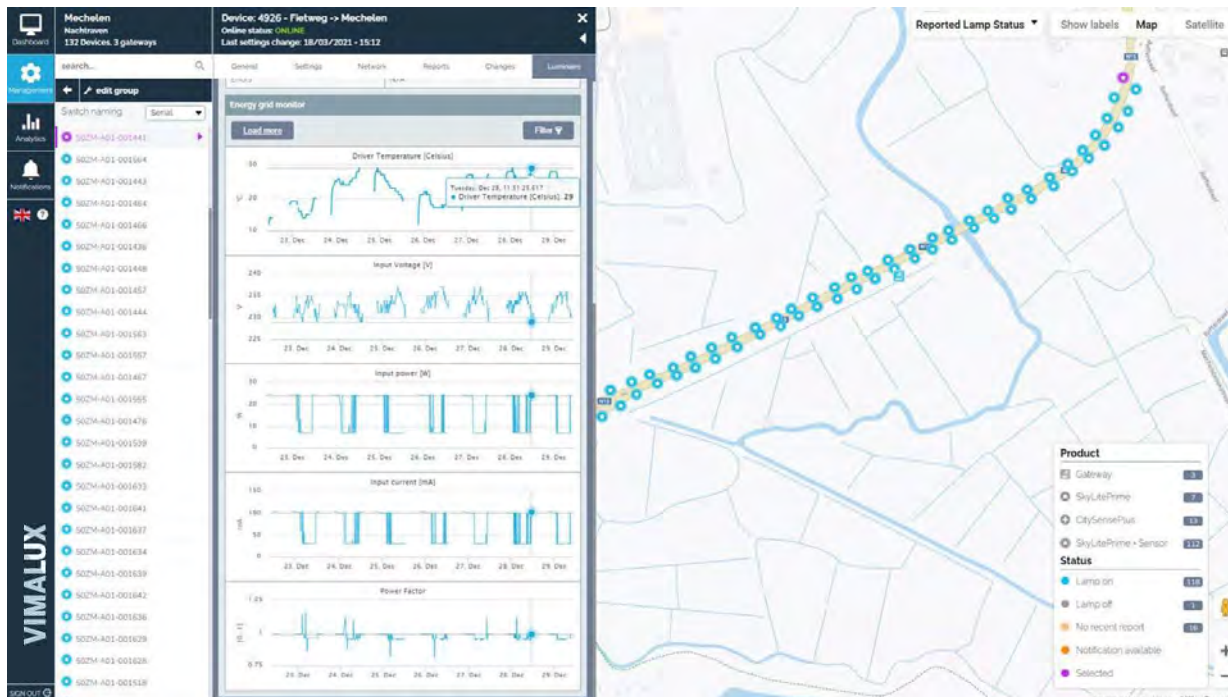


Chart Heatmap Table

Activate Windows
 Go to Settings to activate Windows.

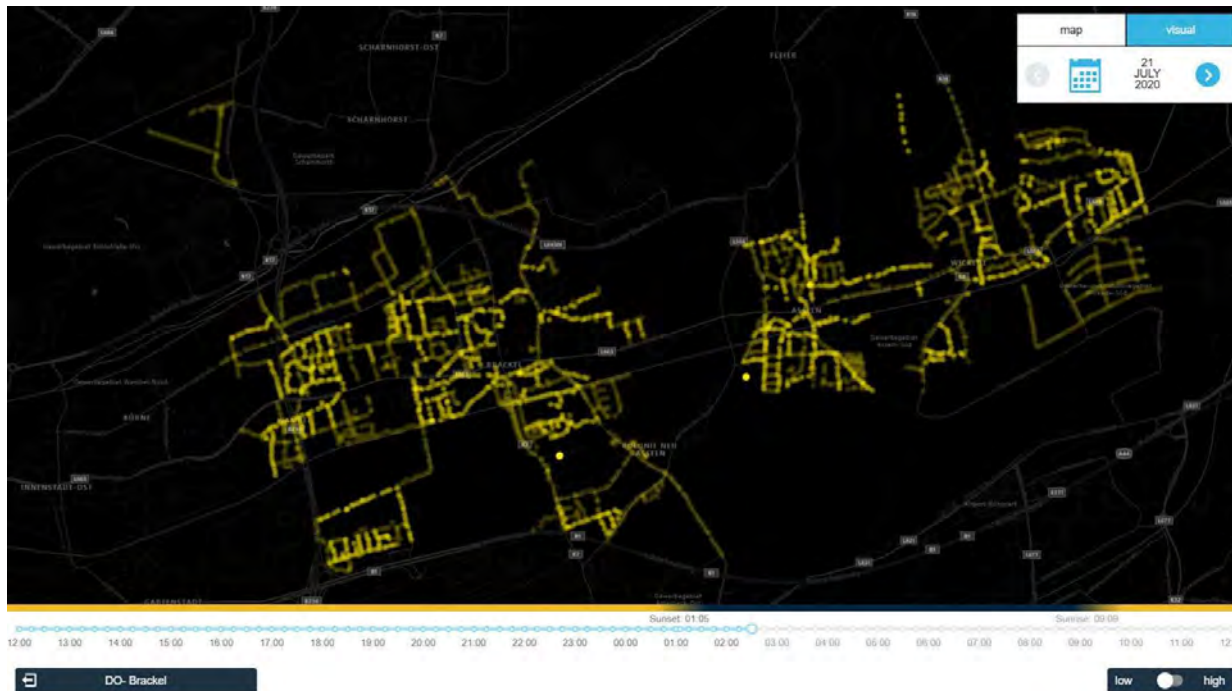
Advanced Energy Monitoring



Detailed information about luminaire health through D4i standard

- Luminaire / controller operating hours
- Power usage for specific day, week, month or year
- Driver temperature
- Input voltage
- Input power
- Input current
- Power factor

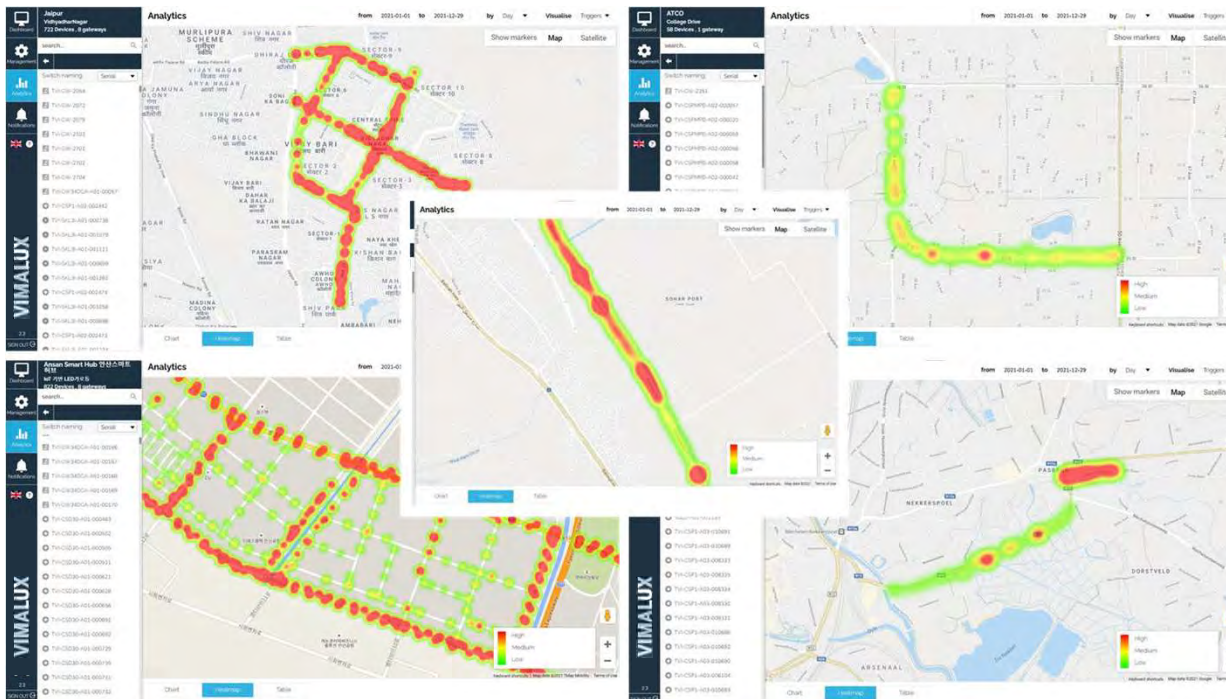
Visualise Entire City's Lighting



Beautiful visualization of Citywide Lighting

- See when precisely the citywide streetlights turn on, adjust brightness and turn off between sunrise and sunset
- Visualize lighting for the future days / events

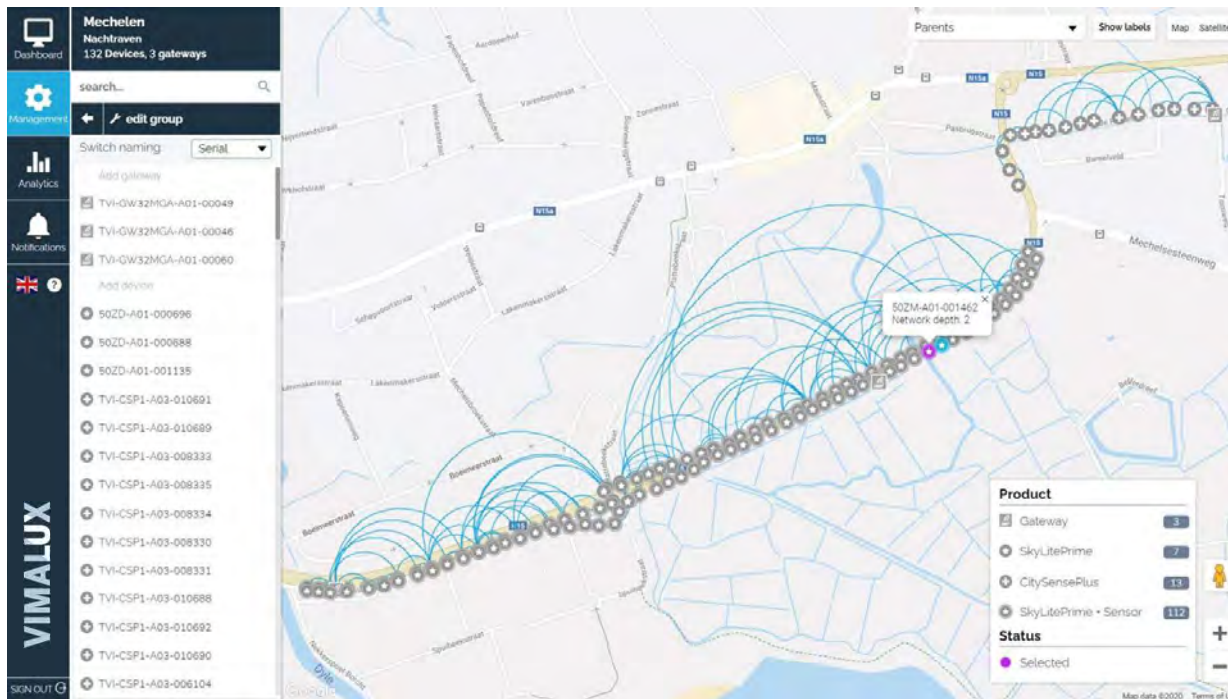
Listen to your City's Heartbeats



Valuable heatmap

- Measure people's movement during different hours at night
- Identify areas / spots that are more popular
- Spot trends and patterns to optimize street lighting levels

View Network Formation



See how devices are connected to each other

- Helps optimize or troubleshoot coverage issues

Historical Reports and Logs

The screenshot displays the VIMALUX CityManager interface. On the left is a navigation sidebar with icons for Dashboard, Management, Analytics, and Notifications. The main content area is titled 'Gateway TVI-GW31MGA-A02-00103' and shows 'Online status: ONLINE' and 'Last settings change: 11/03/2019 - 15:35'. Below this is a 'Device reports' table with columns for Device, Date, Time, Profile status, Brightness log, and Triggers. The table lists several devices with their respective logs. To the right of the table is a map showing the location of the devices in Dortmund-Märten, with a legend for Product and Status.

Device	Date	Time	Profile status	Brightness log	Triggers
TVI-SKLMFA0311-C04-001448	20-08-20	11:12	Dynamic Dimming Astroclock off: 06:29	0% for 00:30:22	0 0 0 0 0 0 /
TVI-SKLMFA0311-C03-003243	20-08-20	11:10	Dynamic Dimming Astroclock off: 06:29	0% for 00:30:00	0 0 0 0 0 0 /
50ZM-A01-000050	20-08-20	11:10	Dynamic Dimming Astroclock off: 06:29	0% for 00:30:01	0 0 0 0 0 0 /
TVI-SKLMFA0311-A01-004975	20-08-20	11:10	Dynamic Dimming Astroclock off: 06:29	0% for 00:30:00	0 0 0 0 0 0 /
TVI-SKLMFA0311-C04-000315	20-08-20	11:10	Dynamic Dimming Astroclock off: 06:29	0% for 00:30:01	0 0 0 0 0 0 /
TVI-SKLMFA0311-C04-001009	20-08-20	11:09	Dynamic Dimming Astroclock off: 06:29	0% for 00:30:06	0 0 0 0 0 0 /
TVI-SKLMFA0311-C04-001447	20-08-20	11:08	Dynamic Dimming Astroclock off: 06:29	0% for 00:30:40	0 0 0 0 0 0 /
TVI-SKLMFA0311-C03-002788	20-08-20	11:08	Dynamic Dimming Astroclock off: 06:29	0% for 00:30:07	0 0 0 0 0 0 /
TVI-SKLMFA0311-C03-002788	20-08-20	11:08	Dynamic Dimming Astroclock off: 06:29	0% for 00:30:07	0 0 0 0 0 0 /

Detailed historical data

- Address existing faults by tracking similar issues that had occurred in the past
- View detailed log on CityManager

Create a Safe Circle of Light for Citizens

ATCO College Drive

Device: 031
Online status: ONLINE
Last settings change: 13/12/2018 - 21:40

search...

edit group

Switch naming Serial

Add gateway

TVI-GW-2351

Add device

TVI-CSPMPB-A02-000057

TVI-CSPMPB-A02-000020

TVI-CSPMPB-A02-000059

TVI-CSPMPB-A02-000056

TVI-CSPMPB-A02-000058

TVI-CSPMPB-A02-000042

TVI-CSPMPB-A02-000037

TVI-CSPMPB-A02-000038

TVI-CSPMPB-A02-000041

TVI-CSPMPB-A02-000039

TVI-CSPMPB-A02-000040

TVI-CSPMPB-A02-000005

TVI-CSPMPB-A02-000028

TVI-CSPMPB-A02-000027

TVI-CSPMPB-A02-000025

TVI-CSPMPB-A02-000030

General Settings Network Reports Changes Luminaire

Network settings

Current neighbours settings

Serial	Name	Pole ID
TVI-CSPMPB-A02-000068	032	739796
TVI-CSPMPB-A02-000053	033	739795
TVI-CSPMPB-A02-000050	030	739797
TVI-CSPMPB-A02-000006	029	739799
TVI-CSPMPB-A02-000004	035	739794
TVI-CSPMPB-A02-000052	TVI-CSPMPB-A02-000052	739800

Change neighbours

Clear all neighbours

Network settings

Enable autoparenting Yes

Neighbours

Show labels Map Satellite

TVI-CSPMPB-A02-000051

Product

- Gateway
- CitySensePlus

Status

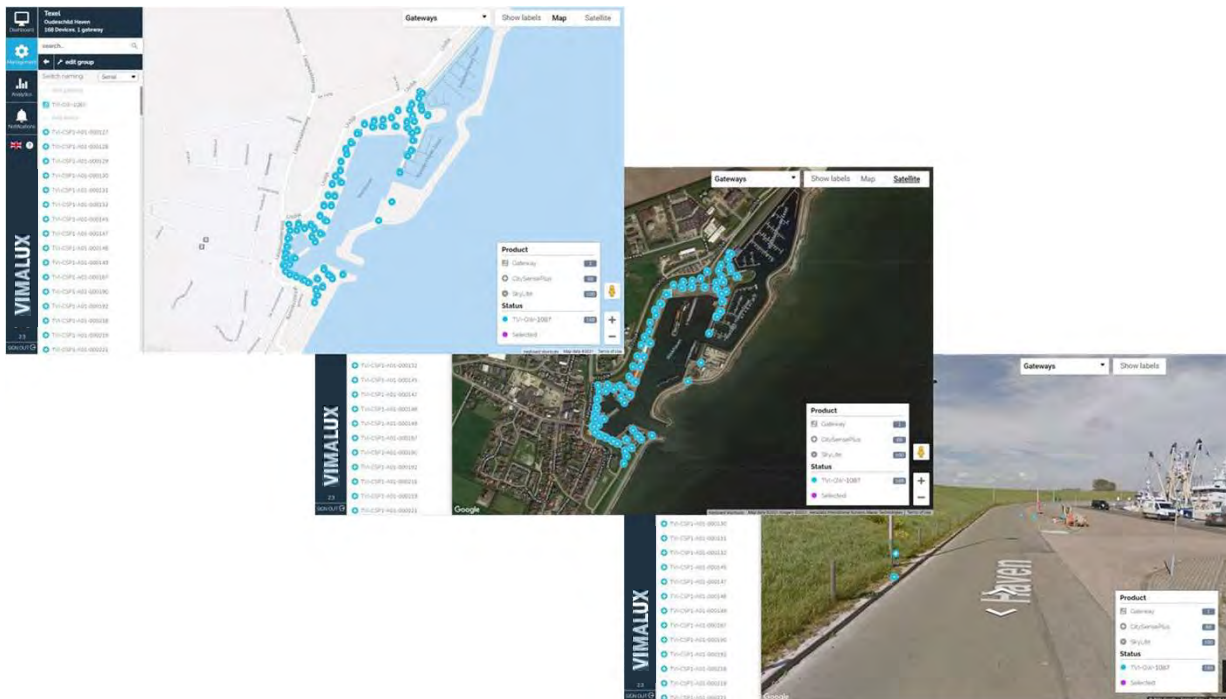
- Neighbour
- Selector

Map data ©2018 Google Terms of Use Report a map error

Set neighbour lighting triggers with ease

- On a map view, locate and set the corresponding streetlights that will trigger upon human detection
- Helps create a safe-circle-of-light, boosting road-users safety perception

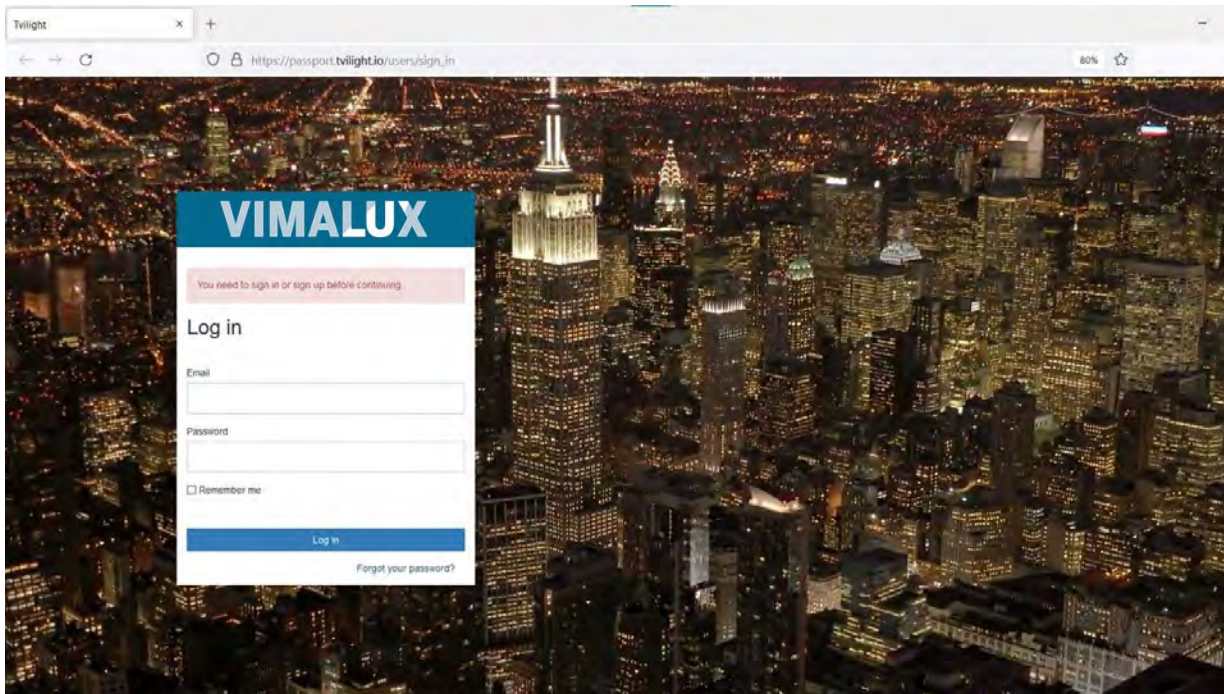
Different Map Views for Better Perception



Understand your lighting terrain

- Map view (with terrain option)
- Satellite view
 - Tile map
 - 360° Street view (if available)

Welcoming Login



Refreshing login screen that inspires

- Dynamic login screen
- Customization option available

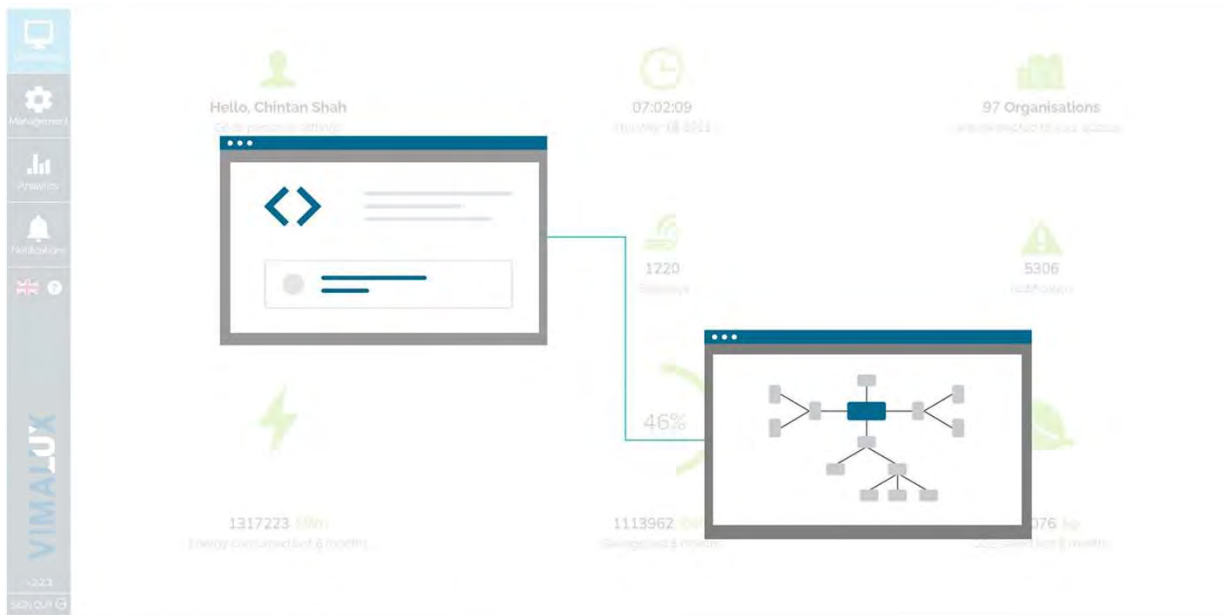
Right Control with the Right Person

	Advanced user	Admin	Read only	Admin	Admin
Meta	no	no	yes	no	no
Gateway	no	yes	yes	yes	yes
Device	no	yes	yes	yes	yes
Application	yes	no	yes	no	no
User	no	no	yes	no	no
Organisation	no	no	yes	no	no
Ability	no	no	yes	no	no
Report	no	no	yes	no	no
Profile	yes	yes	yes	yes	yes
Group	no	yes	yes	yes	yes
Monitor	no	yes	yes	yes	no

Simple user rights management

- Decide who can access CityManager
- Defined the level of permission:
 - Read only access
 - Admin access
 - Custom access:
 - Device management
 - Lighting profile creation
 - Analytics only

Rules Engine to Interoperate City Infrastructure



Customization on demand

- We will help you build customized logics, conditions and events to generate alerts, alarms or trigger actions
- Imagine streetlights turning bright when fog hits your town or when visibility drops significantly
- Inter-connect CCTV / Traffic Lights to Streetlights with API

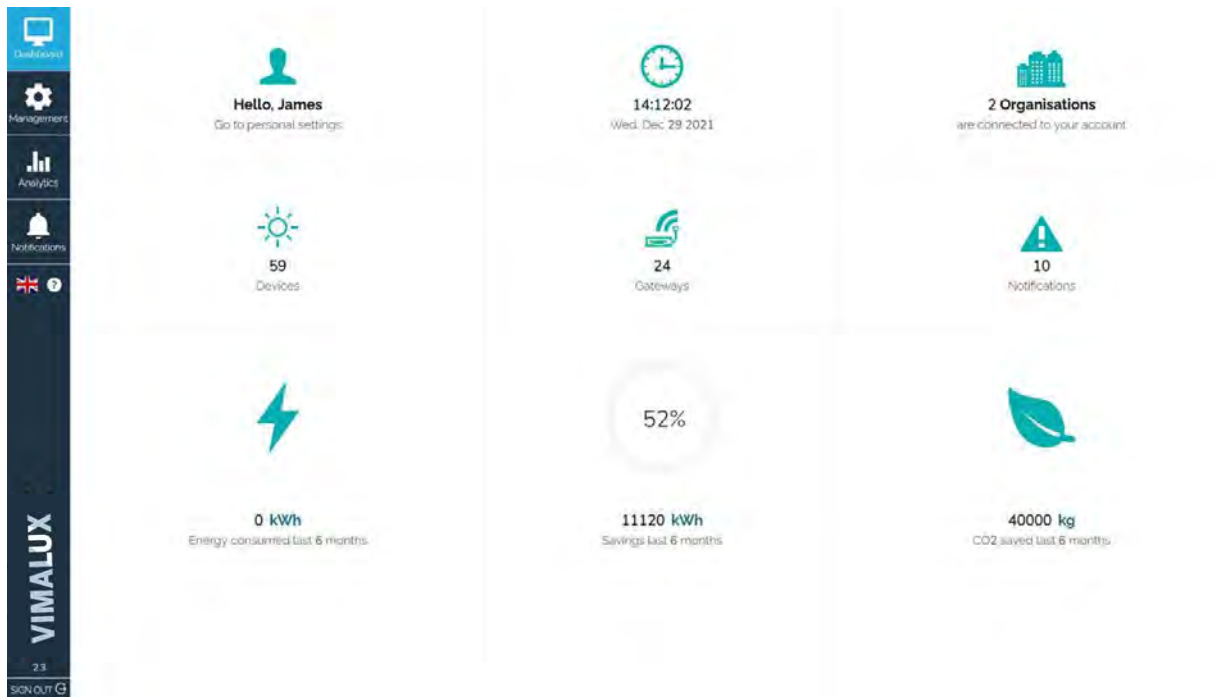
New Features with Regular Updates



Addressing your needs is our priority

- Features and functions are introduced regularly based on our customers feedback and request

CityManager with your own Branding



Version to reflect your own brand

- For premium partners and customers, we can customize and help with your own branding

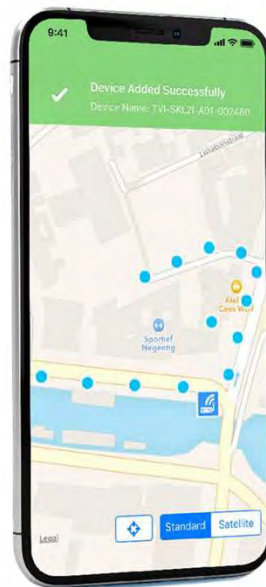
Manage Group Lighting

Partner application

Dedicated application for Group Control

- Manage citywide Feeder Pillars and Control Cabinets through our dedicated software application
- Advance switching control, real-time monitoring and alarm management

Mobile Apps to Support Commissioning & Maintenance



Scan & Go for easy commissioning

- Makes device commissioning easier / hassle-free for the crew on the field
- Available for both Android and iOS platforms
- Dedicated Apps (HiLight, Light Switch) for emergency and maintenance support

We are Here to Support You



24x7 Service Desk

- You have your own portal where you can avail:
 - Information request
 - Demo project request
 - Technical assistance
 - CMS feature request
 - Technical suggestion
 - Replacement / return request
 - Knowledge repository
- [Service Desk](#)

Features to improve day-to-day operations...



Intuitive User Interface

The entire system is carefully designed so that users can easily understand and use it. Multilingual option is also available



Perfect Controllability

Whether Mesh devices or IoT devices or both, the platform offers seamless controllability to the users



Map-based Visualisation

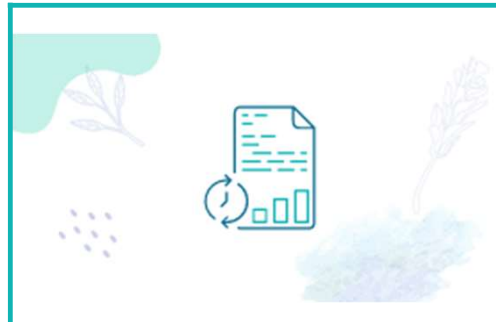
Each connected luminaire is represented on a graphical interface on Google Maps, coordinated with GPS

Features to improve day-to-day operations...



Secure & Reliable

Advanced VPN and data encryption ensure that the system meets international standards. ISO and NEN certifications for system servers.



Accurate & Real-Time Data

The platform provides automatic analysis and evaluation of lighting data including status reporting and failure alerts



Automatic Failure Reporting

The platform can identify several lighting-related faults and automatically send failure reports to the concerned personnel

Like it.

Why not give it a try?

Want to learn more?

Need a quick demo?

Contact us at: admin@vimalux.com

Thank You

**We look forward to working
with you!**



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