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OUR BUSINESS

Delivering services across local authorities in London

Independent
family-run business

£350m
turnover and 2,800-strong
workforce

50 years
of innovation and learning

Strong
cross-sector partnerships

Innovation
of smart solutions



In the last 50 years, 51% of Fortune 500 companies have disappeared.

R. Wang - Founder, Constellation Research.



Need to evolve with IoT

The need for innovation

- Cities today are facing enormous challenges, including the impacts of an ageing society, environmental stresses, an ageing infrastructure and a future of severe and increasing resource constraints
- Cities account for almost 70% of global energy use, and generate more than 70% of greenhouse-gas emissions
- By the end of this century, ten billion people will inhabit our planet, with 8.5 billion living in cities – this could be the stuff of nightmares

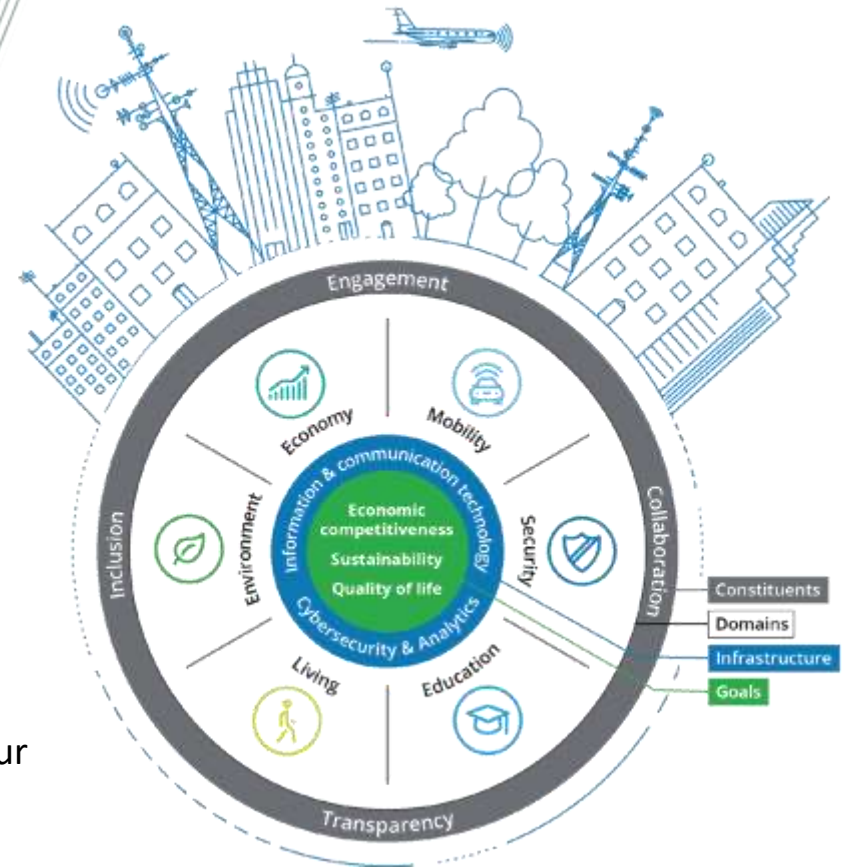
‘There is no better way to improve the lives of billions of people around the world than to improve the way cities work.’
Michael Bloomberg – former mayor of New York City

We are focused on solutions

As a trusted systems integrator to local government - delivering solutions:

- Optimising energy use and carbon abatement
- Creating safer cities
- Creating smart buildings
- Reducing maintenance and operational costs

Data acquisition, insights and analytics are at the heart of our solutions



Contextual data

Assets

Combined asset information allows users to visually see equipments health.

Geozones

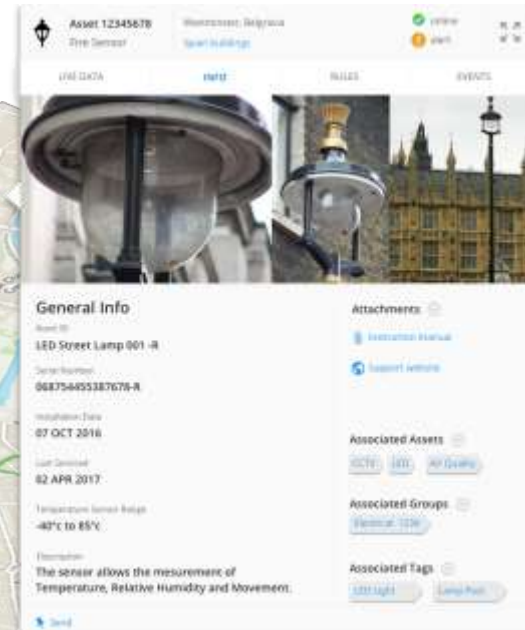
Used group Equipment

Floor plans

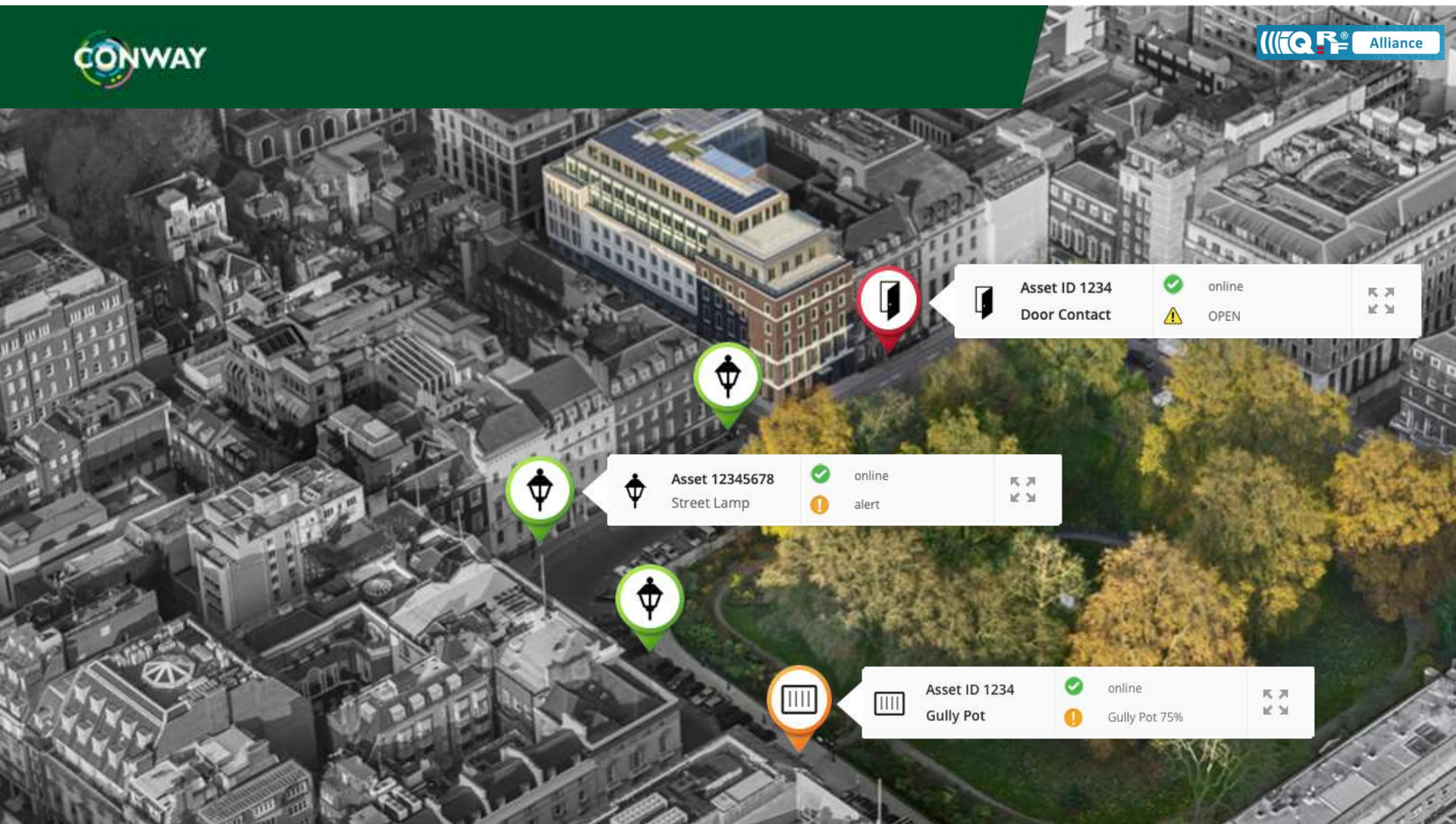
Shown on Google M.

Maps

Assets, including building & equipment shown in its real world location



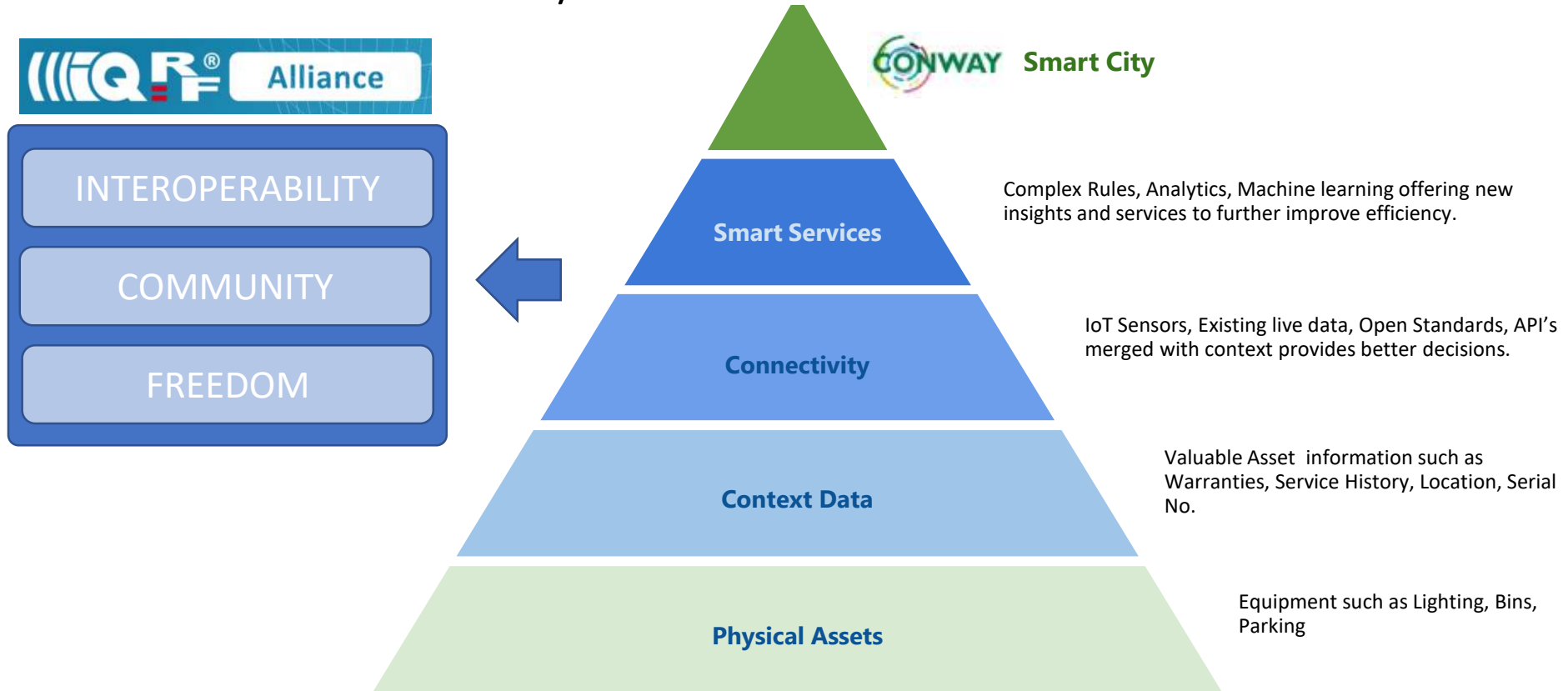
Asset Information
Information and live data from multiple systems shown in a single panel.

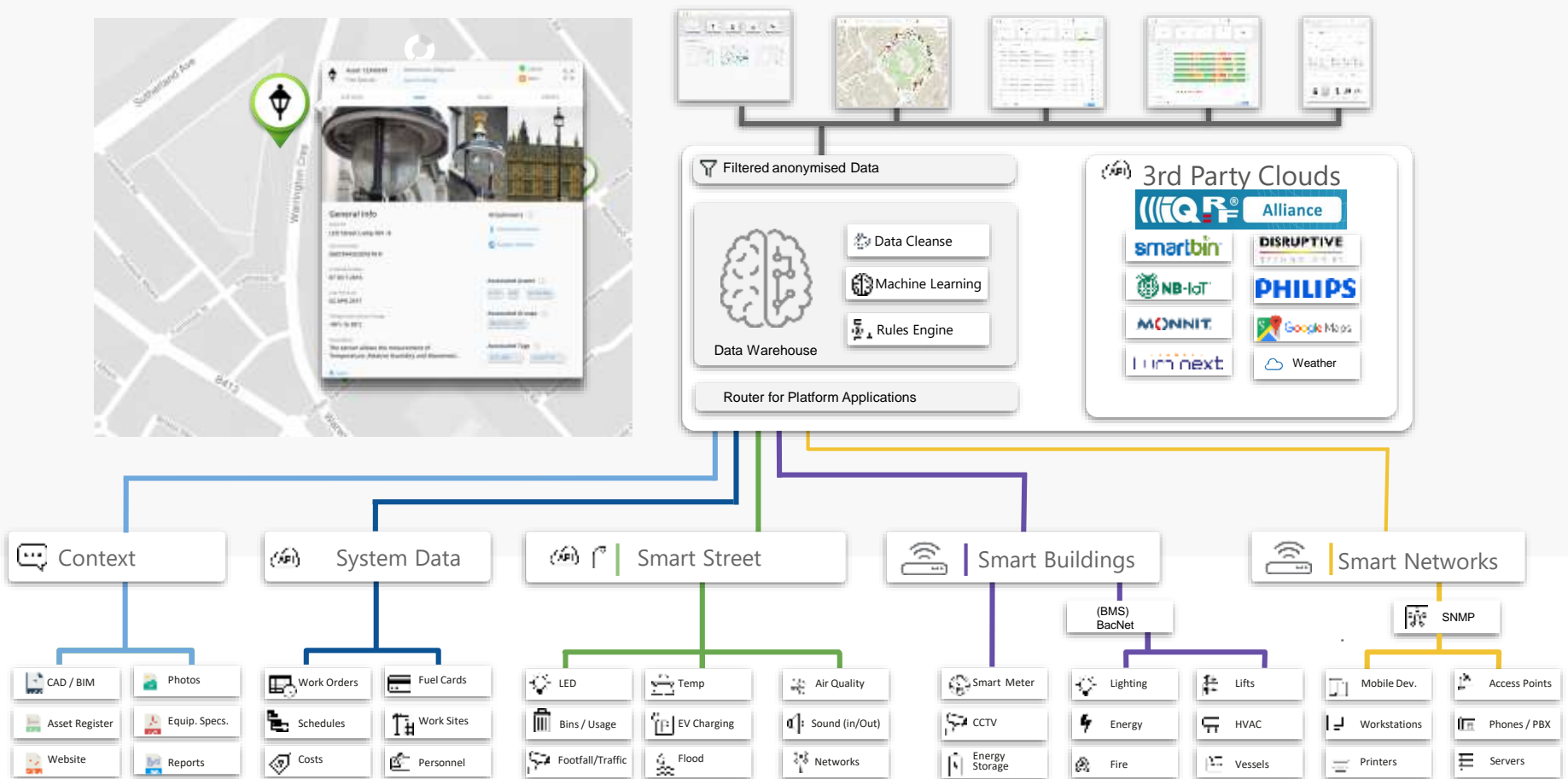




City Wide Holistic Overview

Smart Cities - Hierarchy of Needs





The opportunities for innovation



Smart Lighting

LED, Photocell Control, 0-100% Dimming, Variable lighting, On-demand Lighting – maintenance



Network

WiFi, Cellular, 5G, Mesh – IQRF



Environmental Sensing

Temperature, Pressure, Humidity, Noise, Air quality, Radiation, Precipitation, Wind



Smart Parking

Existing CCTV, Embedded Sensors



Smart Highways

Traffic flow, road temperature, flooding and maintenance based on its condition and usage



Asset Tracking

Equipment, tools, Vehicles, People, stores



Video Analytics

Proximity, Parking Monitory, Crowd Monitoring, Public Security.



Speakers

Public Address, Alerts, Music



Flooding & Road Condition

Gully Pots, Temperature.




Smart Waste

INTEROPERABILITY

COMMUNITY

FREEDOM



902.00
CO2

Description

Change description

API Label

co2-conc

ID

5c8643060ff4c31a6fbd50b0

Allowed range

From: Min to: Max

Unit

ppm

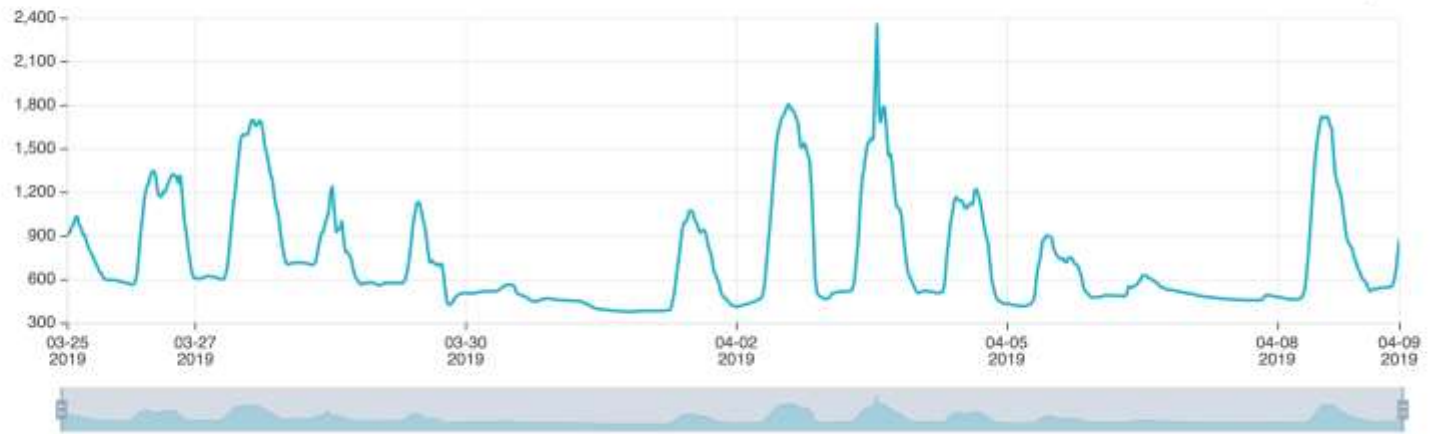
Tags

Mar 24 2019 - Apr 09 2019

Average

30 Minutes

This data has been resampled ⓘ



HARDWARIO Cooper

Use case:

Detection of impact on lighting column:

- Driven by 5G deployment across London
 1. Detect impact & notify
 2. Detect & Isolate power

Solution - In partnership with



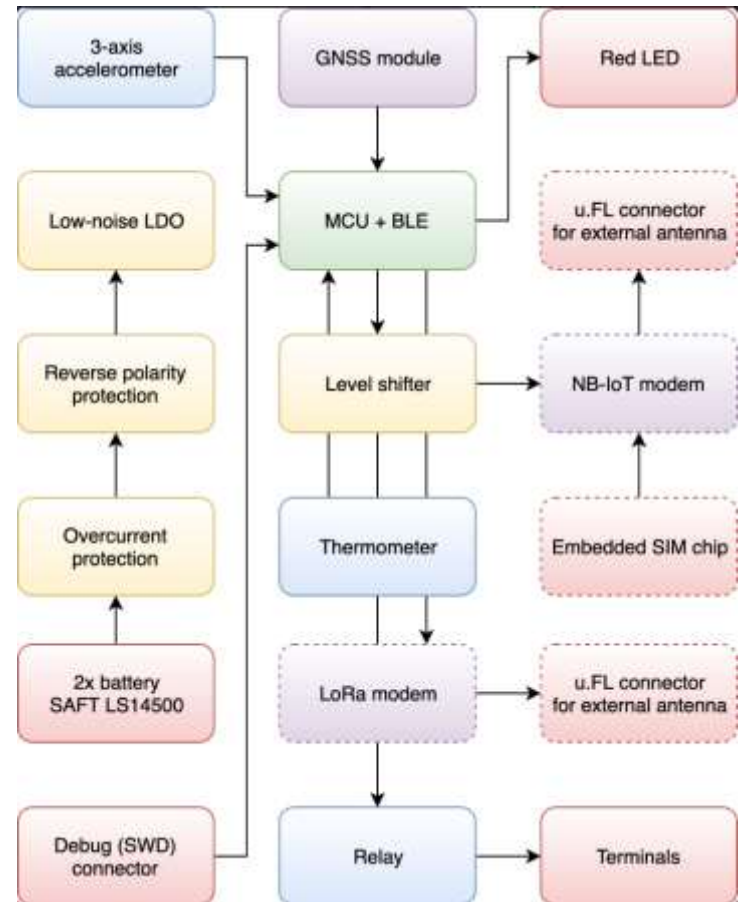
HARDWARIO

Problem to solve

Connect street columns to monitor and gather data

- The connection independent on column primary power
- Shock/tilt and possibly other environmental data
- Unauthorized opening / damage can be dangerous
- Decrease time between problem detection and technical fix

BLOCK DIAGRAM





IQRF potential

- Top column unit serves as gateway through NBloT to cloud
- Communicates between column`s top and street cabinet
- Cooperation with other IQRF alliance partners
- Integrate IQRF ready solutions and quick deployment
- Secure communication that enables quick control of breakers