



Smarter AIoT solutions for smarter towns and cities.

Integrated services designed to meet the demands of modern living.

Our consumption of energy is driven by an increasing population. The demands of increased consumption shapes the difficult decisions we all have to make. Now there are a number of ways to mitigate increasing costs, improve revenue collection opportunities and improve the quality of life of your citizens.

An integrated range of services designed to help local authorities save money, raise funds, improve social responsibility and energy consumption.

Dynamic end-to-end 'Smart' solutions:

From design and installation to monitoring and support across five key areas:

- **Street lighting**
- **Pedestrian crossing**
- **CCTV**
- **Waste management**
- **Soil quality monitoring**

**We don't just supply technology - we manufacture it too:
Ensuring maximum quality, performance, and value.**

Airis Energy clients include:

Councils, hospitals, schools, sports facilities, transport hubs and more.

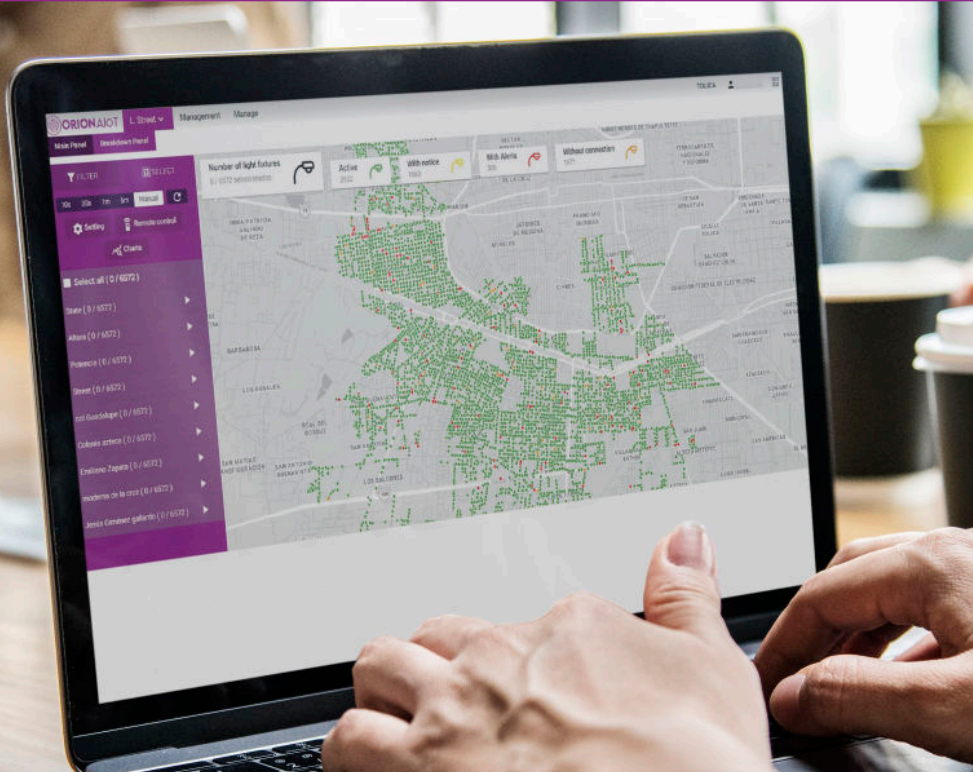


Basingstoke
and Deane



Mansfield
District Council

Airis Smart City technology explained...



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Airis Smart City PM Street Lighting.

A new method of conserving lighting energy consumption via an integrated 4G network. Independently powered lighting sensors allow detailed monitoring and reporting on a range of elements. Create 'scenes' and turn down lighting in residential areas, check consumption against non-metered energy bills.

Key Benefits:

- Shines a light on energy usage in non metered situations.
- Enables 'scene' creation to set lighting to the correct level.
- 3 Versions of the product: Retro fit even on sodium lighting.
- Supports ESG goals.
- Fast Return On Investment.

System benefits:

- 1: Create 'dynamic routes' for maintenance services, saving on journey cycles.
- 2: Adjust lighting output over set periods of time in areas designated by you.
- 3: Energy theft detection. If no current, a warning is sent to the dashboard.
- 4: Full warranty and ongoing support.

AIRIS SMART CITY PM STREET LIGHTING: Smarter street lighting.

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Smart City P1:
For Airis LED lighting

Smart City P2:
For any LED lighting

Smart City M:
For legacy lighting

Public lighting control panel

Monitor consumption, analogue voltages, switch circuits on or off. Fully compatible with meters and/or replace the current astronomical clock of your control panel. Tailor-made control based on specific needs

Cable theft and sabotage detection via real time reporting. Immediate notification of failures, breakdowns and other issues.

Monitor status 24/7. Receive notifications of possible breakdowns, sabotage and failures.

Export reports in any formats and models. Reporting data stored for 30 days.

How Airis Smart City PM Street Lighting works:

- Independent sensors fitted and connected to a 4G network.
- Advanced telematics monitors for viability and energy use.
- Create bespoke 'scenes' to control specific regions.
- Retro fits to any type of lighting: LED or Sodium.
- Fully programmable to suit every scenario.

A flexible system designed to work specifically for you:

- 1:** Free energy consumption / potential savings audit.
- 2:** Tailor-made network design.
- 3:** Safe, professional installation from our accredited staff (no subcontractors).
- 4:** Full siting solution and ongoing support; maintenance and upgrades.
- 5:** A unique user dashboard designed to identify and mobilise to your key areas.

AIRIS SMART CITY PM STREET LIGHTING: Smarter street lighting.

Powerful benefits:

The system can reduce accidents
by up to 70%, especially at night.

Reduced costs for emergency services call-outs.

Seamless integration with existing infrastructure.

Remote monitoring, data analysis and reporting
Automatically updates to add new features.



How Airis Smart City Cross works:

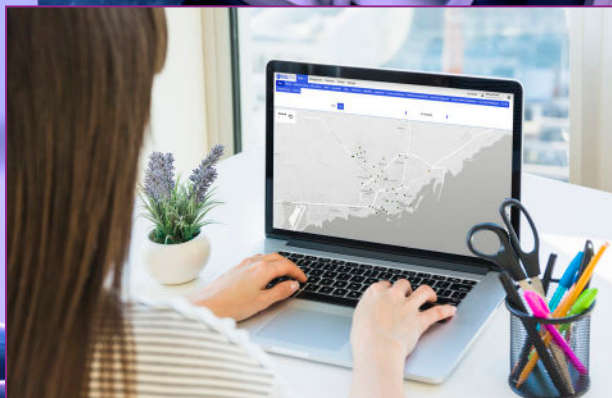
- An advanced road safety system combining advanced sensor technology, LED lighting, and automatic detection systems to create a safer environment for pedestrians.
- LED light lines integrated directly into the asphalt illuminate when pedestrians are detected. The system also analyses the approach speed of traffic.
- Low consumption LED lights use up to 80% less energy than traditional bulbs and have a lifespan of more than 50,000 hours. The system is only activated when necessary, further reducing energy consumption.

Enhanced public perceptions:

- Residents and tourists feel safer when crossing, especially at night. Drivers also show greater respect for crossings which are clearly visible.
- The system especially benefits the elderly, children, and the disabled.
- We are already preparing the system to link to autonomous vehicles.

AIRIS SMART CITY CROSS: Smarter road safety.





Airis Smart City CCTV Monitoring

Next-level monitoring to enable advanced control scenarios including public order, anti-social behaviour, fly-tipping and penalty detection. Independent manoeuvrability to reduce the need for high unit orders to achieve the desired outcomes. Detailed analysis of metadata and advanced programming capability.

Long term benefits:

- Identify patterns of traffic / public order offences by area.
- Inform long term planning criteria and create solutions.
- Optimize resources and improve emergency response times.
- Informed decision-making at specific times, e.g. special events.
- Generate ESG reports to demonstrate effectiveness.
- Respond to growing public demand for greater security in public spaces.

More than 500 local authorities in Europe have already placed their trust in Airis Smart City technology, with more than 5,000 cameras, installed in over 10 countries.

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- 5:** Full warranty and ongoing support.

"The system is an innovation that will give us deeper insight into what's happening in the city and will be a very useful tool for making Calahorra a safer city."

Chief Inspector Rubén González

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smart city



How Airis Smart City CCTV works:

- Multi-device video system with re-locatable cameras, equipped with cutting-edge AI technology.
- Create multiple zones as required to address different issues.
- High-resolution video viewing / downloading in real time via the 4G network linked to a cloud based server and our unique user dashboard. Reporting in any format / by any criteria.
- Encrypted VPN communication, advanced cybersecurity and GDPR protection. Data encryption in transmission and storage. Image stabilization: Vibration and movement compensation. Anti-vandalism system. Powerful optical zoom for close-up detailed identification.

A range of benefits, including...

- A unique dashboard allowing you to set a range of specific criteria.
- React quickly to issues such as theft, vandalism, violence, and drug misuse.
- 24 hour 2 way real time audio comm's via intercom with the control centre.
- Search vehicles by license plate, make, colour, and vehicle type.
- Search people by appearance, clothing, age and gender.
- Measure air quality using 21 different parameters in specified areas.
- Automate fixed penalties / share data with local police instantly.
- Set 'zones' for low emissions, special vehicle access only (Date / non-date specific).
- Make informed decisions about traffic management / infrastructure planning.
- Detect criminality patterns for effective planning / monitoring of key areas.

AIRIS SMART CITY CCTV MONITORING: Smarter CCTV.

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Airis Orion R Refuse collection monitoring and planning.

Airis Orion R monitors, measures and reports on refuse collection cycles, enabling dynamic planning of routes for refuse collection. Advanced telematics and onboard accelerometers give a hitherto impossible level of insight into the usage of your refuse receptacles.

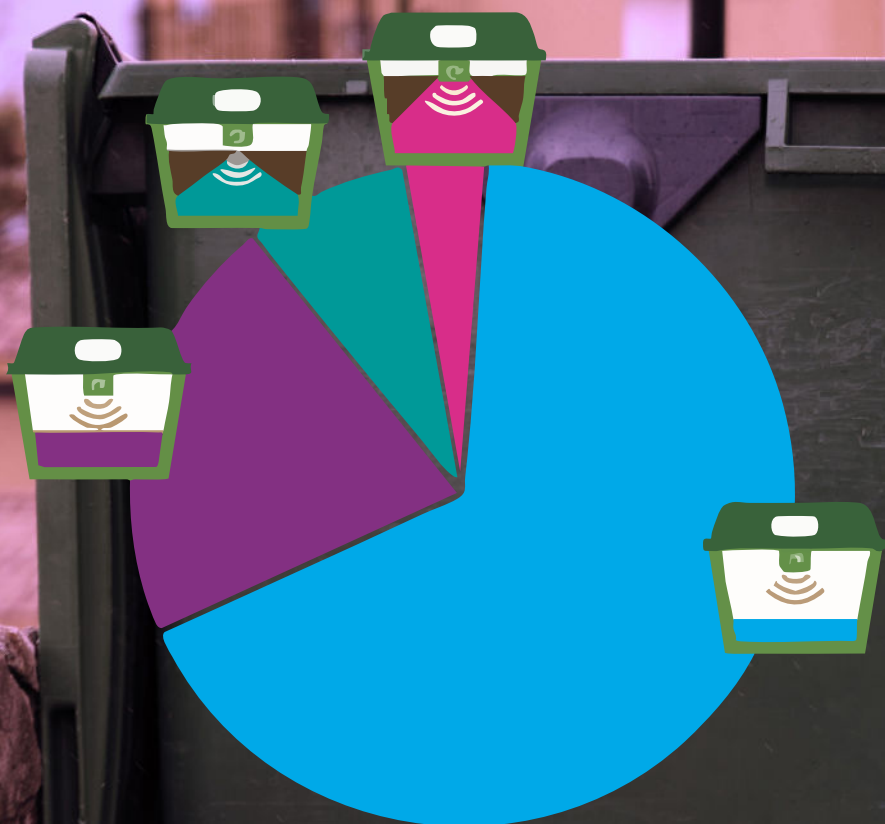
The solution employs AI, 4G bin sensors, telemetry and a unique cloud-based dashboard. This enables collections to be planned in the most efficient manner. From reactive 'fixed' collections based on historical values to a completely proactive, innovative, and efficient approach. As each containers fill level is known and they are collected optimally, preventing them from being emptied with little content or when they are already overflowing.

Key Benefits:

- Save on refuse collection costs.
- Reduces carbon footprint and meets Net Zero targets.
- Reduced CO2 emissions.
- Advanced telematics monitor various aspects.
- Increased operational planning and resilience.
- Reduced costs through optimisation of collection routes.

The system:

- 4G Sensors placed inside each waste receptacles interior lid, measuring fill levels.
- Cloud based real time reporting of fill levels for all waste receptacles.
- Accelerometers measure and report on emptying history.
- Cloud-based dashboard measures seasonal fluctuations, enabling precise route planning.
- Compatible with any size or type of waster receptacle.
- Reporting data informs refuse vehicle journey plans, significantly reducing costs.



CASE STUDY: Waste level monitoring: LIPSAM, Seville, Spain

Waste monitoring using Orion R revealed the following data over a 6 month period involving 268 containers. Prior to this data insight, all bins were emptied on a fixed collection cycle. Almost 90% of containers were being emptied far too early, resulting in a significant waste of resources on collection journey cycles.

- **15 - 25% Full** (67% of containers)
- **26 - 50% Full** (21% of containers)
- **51 - 60% Full** (8% of containers)
- **61 - 90% Full** (4% of containers)

How Orion R works:

- All bins are fitted with internal sensors.
- Sensors measure fill content, location, heat and when emptied.
- 4G Connectivity feeds back data in real time to your dashboard.
- This enables dynamic refuse vehicle routes to be planned.
- Real time monitoring of bin positions prevents loss.

A snapshot of the results:

**“We reduced the number of pick ups from 100 per year to 34:
Less traffic, less noise, less odours, less cost.”**

José Andres Ferrete, Head of street furniture, LIPASAM



Airis Smart City Agro

Airis Smart City Agro offers real time analysis of soil in green spaces. A UK based council spent over £1.5 million on replacement plants in just one year. Agro monitors soil content for nutrients, moisture and the detritus caused in urban areas which degrades soil content, causing costly damage to plants.

Measurement of up to 7 key soil parameters to measure soil health in real time. The dashboard will then propose 'dynamic routes' to parks and gardens teams and the solenoid valve output will be able to turn on or off the irrigation, saving costs.

Key Benefits:

- Sensors detect soil health and report in real time to an online dashboard.
- ROI in approximately 2 years.
- Enables enhanced planning of green spaces, supporting ESG initiatives.
- Reduces wastage and unnecessary costs associated with dead plants.
- Reduces carbon emissions.

The process:

- 1: Free energy consumption audit.
- 2: Tailor-made system design.
- 3: Professional installation from our accredited staff (no subcontractors).
- 4: Full warranty and ongoing support.

AIRIS SMART CITY AGRO: Smarter green spaces.



gives you detailed data reporting

- Parks.
- Sports fields.
- Green spaces.

- Monthly subscription.
- One-time set-up and ongoing support.
- Bundled packages.

AIRIS SMART CITY AGRO: Smarter green spaces.

Delivering sustainability

Let's build a, safer, more sustainable, more efficient future. Call us on 01253 283050



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