SIEMENS

Ingenuity for life

Improving Air Quality

siemens.com

Improving air quality through innovative technology

With cities and urban areas around the world experiencing ever-growing volumes of traffic and congestion, air quality levels have become a major concern, with national governments and local authorities increasingly taking measures to improve them. In the UK, air pollution is widely recognised as the most significant environmental risk to human health and the fourth biggest threat overall - after cancer, heart disease and obesity.

A number of initiatives are already in place to help tackle many of the sources of air pollution, and although London's new Ultra Low Emission Zone (ULEZ) is the most high-profile, our solutions will be at the heart of many of the new Clean Air Zone schemes that are being implemented around the UK.

These solutions are proving to be highly effective in targeted locations in influencing driver behaviour, using intelligent vehicle recognition and analysis software, so that high-polluting vehicles can be restricted, banned or charged for entering a particular zone. Ultimately, vehicle operators are challenged to make cleaner choices or look for alternative modes of transport.

Modular solutions

Our innovative and highly secure solutions for improving air quality are modular and future-proof, and are helping cities around the world to address a range of air quality issues.

Being scalable means that we can develop and install solutions that deliver a highly cost-effective low emission zone, which can be implemented on projects ranging in scale and complexity: from a single entry point in a small rural village, right up to a blanket zone covering an entire city.

- The systems require no IT infrastructure to be hosted or purchased, with Siemens Mobility able to host and operate the solution.
- Visually unobtrusive roadside equipment provides the vehicle and air quality monitoring data and communicates via highly secure and encrypted techniques to the hosted enforcement and back office system.
- We also provide easy-to-use customer web portals, which allows customers to access key performance data on the operation of the low emission zone.
- Cloud-based IT infrastructure also means the systems are quick and inexpensive to implement and even easier to maintain.
- With our proven equipment and service delivery, round the clock, national coverage is guaranteed - with dedicated support and full training.

"In the UK, air pollution is widely recognised as the most significant environmental risk to human health..."

Improving air quality through innovative technology

Proven in projects

London is a perfect example of the issues facing authorities and as part of a series of initiatives to clean up toxic air, from April 2019 Transport for London (TfL) will operate a ULEZ in central London. From that date, most vehicles, including cars and vans, will have to either meet new, tighter exhaust emission standards, or pay a daily charge to travel within the ULEZ area.

At the heart of the ULEZ will be a software solution developed and installed by Siemens Mobility. The software will be integrated with existing roadside sensors and automatic number plate recognition (ANPR) cameras which already form part of TfL's congestion charging scheme. Both systems will both use our advanced, multi-lane, free-flow tolling technology which extends throughout London; the system offers the highest level of performance - and operates at greater than 99% reliability.

Other examples include a new Clean Air Zone solution for Leeds, where we are to design, supply, install, operate and maintain a monitoring and enforcement system. At its heart, this will use Sicore II automatic number plate recognition (ANPR) cameras to enforce the CAZ and reduce air pollution in the city by encouraging businesses to transition to cleaner, less-polluting vehicles that would not be subject to charges for driving within the zone boundary. For this scheme, the charging only applies to the worst polluting heavy goods vehicles, coaches, buses, taxis and private hire vehicles - private cars, vans and motorcycles are exempt.

Proven enforcement solutions such as Clean Air Zones and Ultra Low Emission Zones are examples of approaches that authorities can introduce to help manage and bring under control the issue of emissions. In the longer term though, as emission levels are brought in line, a range of additional controls and tools are available to enable highway managers to better understand and manage traffic efficiently.

These include proactive urban traffic management and control, modal prioritization and journey reliability, increasing the accessibility and availability of electric vehicles and even upgrading traditional traffic signals to low-energy, long-life units. All of these contribute to a more efficient transport network and a cleaner, healthier and more attractive environment.

Siemens Mobility
Sopers Lane
Poole
Dorset
BH17 7ER

Tel: +44 (0) 1202 782000
Email: sales.stc@siemens.com
siemens.co.uk/traffic