

interact



Transportation

The highways of tomorrow

How connected lighting helps to create safer,
more reliable roads

Find out more about Interact
www.interact-lighting.com

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Gran Canaria

Fast lane to the future

By 2050, close to 70% of us are expected to live, work and play in cities. Naturally, this places a far greater emphasis on the safety, reliability and efficiency of the roads that connect these urban centers. Over the next decade, smarter technologies will be needed to maintain highways and help people get from A to B, and infrastructure must be developed in unison to continue to support the growth of our economy and industries.

So what will the highways of tomorrow look like?

They will prioritize safety by reducing the number of road incidents, and minimize congestion by keeping traffic moving. Highway authorities will use resources efficiently and better manage their assets to lessen environmental impact. Finally, they'll have improved infrastructure, encouraging economic growth and ensuring that drivers enjoy smoother journeys.

The goals for the future of highways are clear. But what part does lighting play, and why is Interact in the driver's seat?

Smart mobility

Interact is a portfolio of connected lighting software and systems designed for the Internet of Things. By using a network of connected luminaires and sensors to collect crucial data, road authorities are able to continuously monitor and manage their street or road lighting systems from a user-friendly dashboard. This data can then be used to make decisions that improve the lives of road users and help them feel safer — all while significantly reducing energy costs and freeing up funds for future projects.

Our system has been specifically optimized for use on road networks and highways, and can be integrated into your wider IoT ecosystem. The control of all of your highway's connected assets is now in your hands, and road users get the safe and reliable transportation links they deserve.

What can Interact do for you?

We understand that there are many factors to consider when making any decision about the future of your highway. Will it be safe? Will it be environmentally friendly? Can I save money? You have to manage numerous stakeholders, all with their own agenda and requirements. With Interact, you can:

- Make drivers feel safer by improving accident detection and response
- Keep traffic moving safely by monitoring and controlling individual or grouped luminaires
- Avoid journey delays by gathering data with the help of an expansive sensor network
- Set lighting schedules to reduce energy costs and save money for future projects
- Streamline maintenance by identifying lighting failures through real time fault notifications
- Integrate other software applications to improve journey quality for drivers

Who reaps the rewards?

Interact benefits both road users and authorities alike:

- Drivers enjoy safer and smoother journeys with less traffic
- Highway or toll road operators benefit from single-dashboard control, increased operational efficiency, and access to data-based insights to help them meet energy efficiency targets
- Maintenance teams are notified about faults in advance so they can schedule preventive maintenance, and also in real time to help speed up repairs
- City officials see the safety of the roads around their cities improve

Building for better

With Interact, the power is in your hands. Our software allows you to manage, monitor, and control your lighting across all your highways and roads. Just use the intuitive dashboard to pre-program the light settings, make instant adjustments, and gather the kind of high-quality data that allows you to optimize your operations.



Lighting asset management

With Lighting asset management, you can remotely manage and monitor your entire road lighting system in real time via one dashboard. It's also makes it easy to keep an eye on your energy consumption, identify any faults in real time and plan maintenance accordingly — saving time and money.



Scene management

Scene management enables you to control individual or grouped light points across your network. You can create multiple light scenes in an instant and set various dimming and lighting schedules. It's your main tool for making sure users get the right light at the right time.



Energy optimization

With the Energy optimization app, you can visualize periodic energy consumption per asset, region or group for total KWH and average KWH/day and generate estimated total energy cost and average energy costs. It also helps you ensure accurate billing from your utility provider as you can cross check your energy report against theirs. Energy metering is rated for ANSI C12.20, 0.5% accuracy (acceptable standard for utility billing).



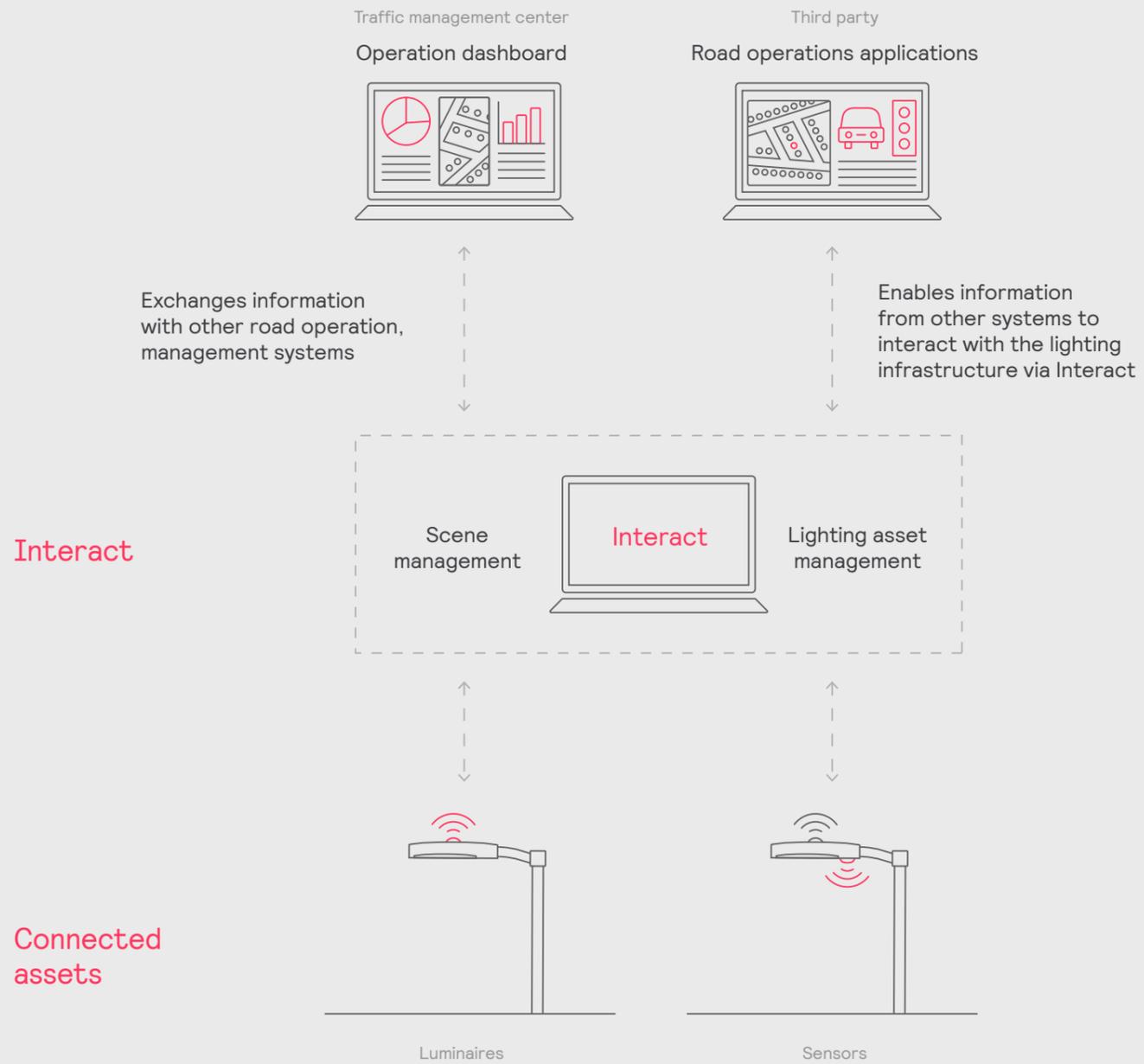
Helping you go the distance

Interact is designed to benefit you both now and long into the future. That's why we offer a number of lifecycle service packages to give you the system support and the peace of mind you need for the next decade.

How it works

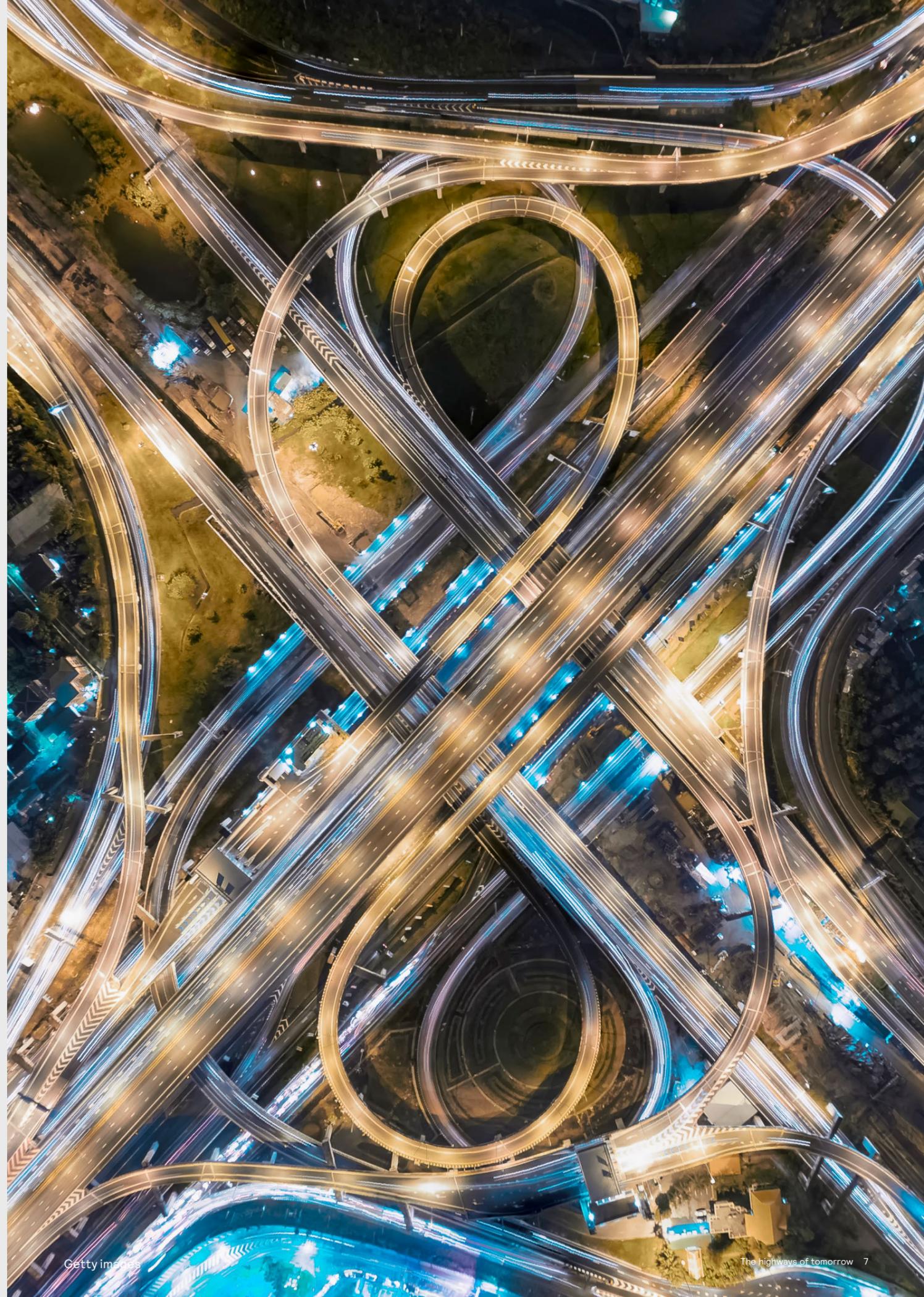
Data is collected by sensors in roadway luminaires. These sensors are either integrated into the luminaires themselves or added on by means of a standard socket or connector. That data is then extracted and processed via the Interact IoT platform

for use within your operational dashboards or third-party applications. That's when you can start to assess the data and use it to make key decisions about both the short-term and long-term future of your road network.



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Connected assets



Going further with APIs

Open, secure APIs enable the sharing of real-time and historical lighting data with other service management systems. APIs also allow you to share your lighting system data with third parties who can create additional software apps or services to further improve your highway.

Why share APIs?

Open and reliable APIs encourage collaboration, and collaboration is the key to improving the quality of life for people around the world.

What's on the horizon?

Lighting lays the foundation for interconnectivity. With ongoing innovations, you can continually extract more value from your connected lighting management system. We're already in the process of using Interact software to develop other applications that will further enhance the efficiency of road networks everywhere.



Environmental monitoring

Future-ready sensing capabilities for monitoring environmental conditions such as motion, tilt, vibration, and noise.

IT and network security

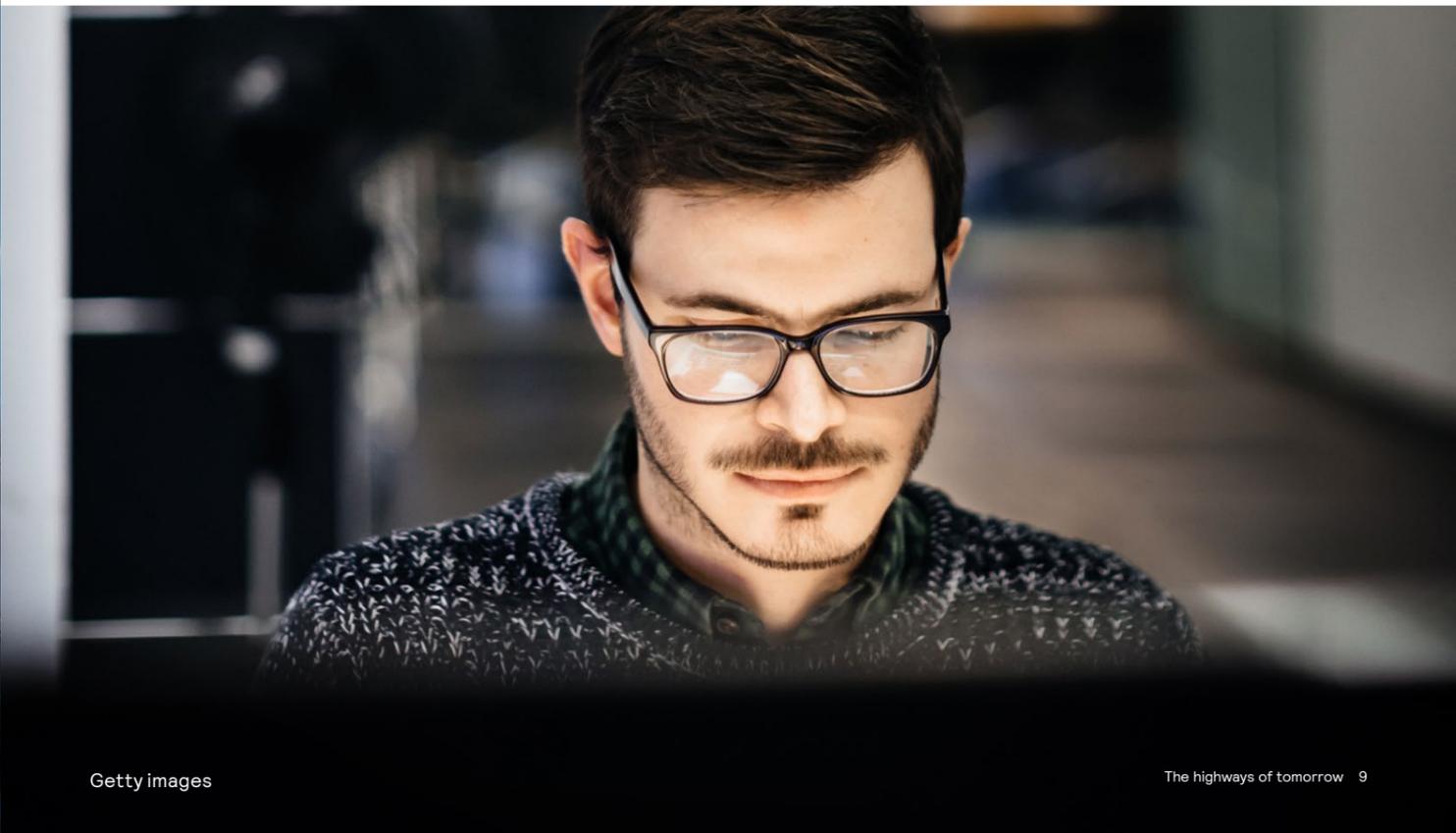
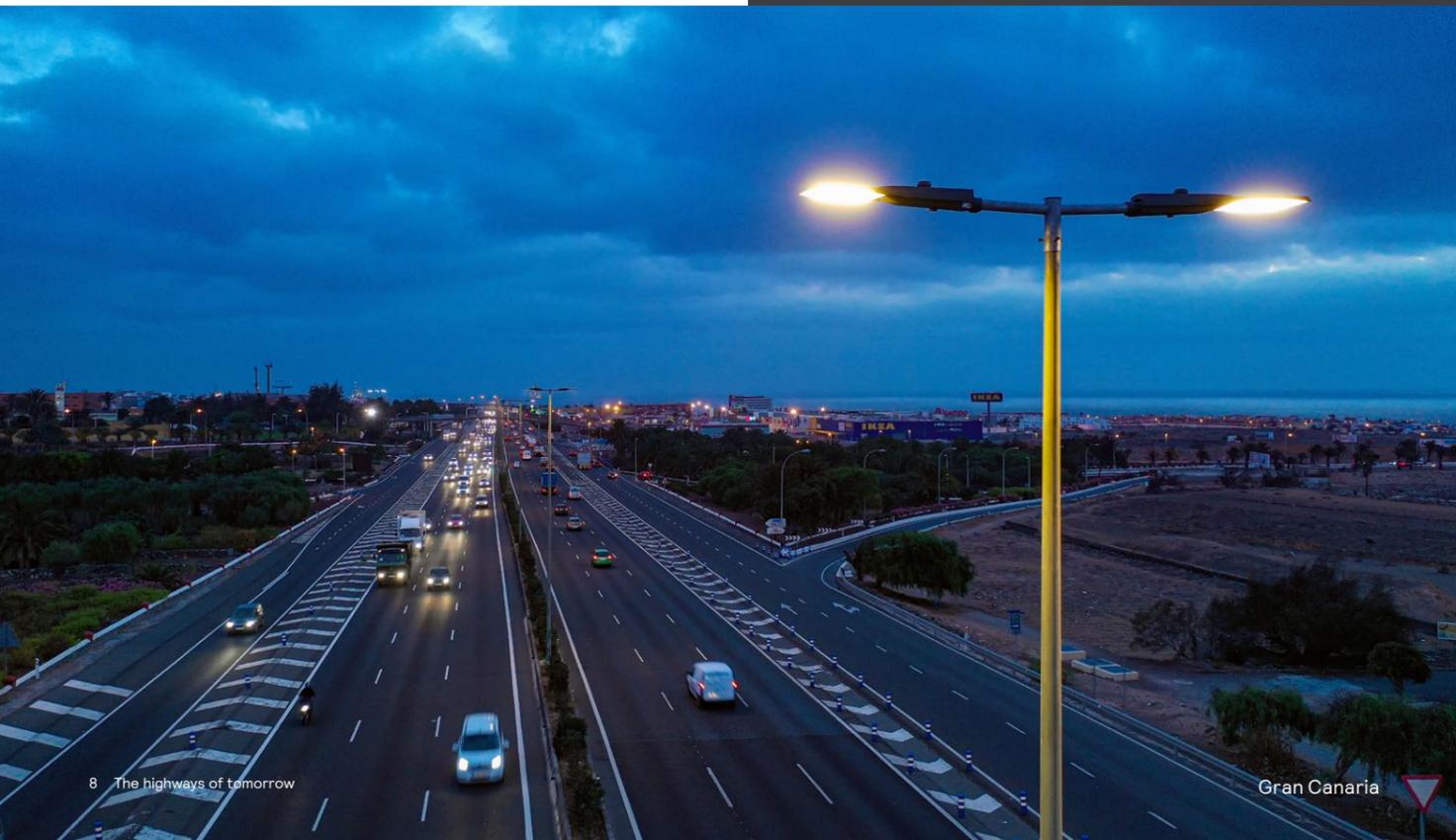
We take system security very seriously. Interact employs a number of measures to safeguard data integrity and network security. To ensure that scheduling and control commands are executed properly, all network communications are encrypted from end to end. Only registered devices can communicate with the system, and two-factor authentication prevents unauthorized third parties from gaining access to or tampering with data during transmission. All collected data is regularly backed up and encrypted.

Our policies and processes are aligned with global standards such as ISO/IEC 2700x—Information Security Management Systems (ISMS) and the ISA/IEC 62443 standards suite for product development. We are the first lighting company to be certified to IEC 62443-4-1. The IEC 62443-4-1 is the Security Certification for the product development process which ensures that all identified security requirements are implemented, verified, tested, and documented with traceability. Our business processes are internally and externally audited on a regular basis.

Developing applications

Interact uses standardized data interfaces and open APIs to enable integration with existing traffic management systems. We are continuously developing future applications that extend beyond the lighting ecosystem using a combination of sensor technology, data sharing, and platform-level integrations.

Each application is designed to be scalable and future-ready. Partners and third parties can also use open APIs to develop new traffic management applications using the data collected via the connected lighting system.



A safe, sustainable journey for Gran Canaria's highways

Gran Canaria, Spain

The vision

The original lighting system for the GC-1 highway, which carries more than 135,000 vehicles per day, involved complex maintenance tasks and high costs. Lamp substitutions, maintenance, or replacements would force the closure of one lane of the highway, so these were done only every four years to avoid major disruption. In addition, the lighting had to comply with requirements and recommendations from the Instituto Astrofísico de Canarias around environmental issues such as light pollution.

The solution

The installation of Philips DigiStreet Large LED lights, with an output of 32,000 lumens and standardized Zhaga connectors, and our lighting asset management system gives highway operators ultimate control. An innovative Interact lighting management system allows for simple maintenance and point-by-point management to comply with the island's environmental regulations.

Project details:



2700 K Philips DigiStreet lights comply with dark sky regulations



Philips DigiStreet luminaires and Interact provides energy savings of 80% compared to conventional alternatives

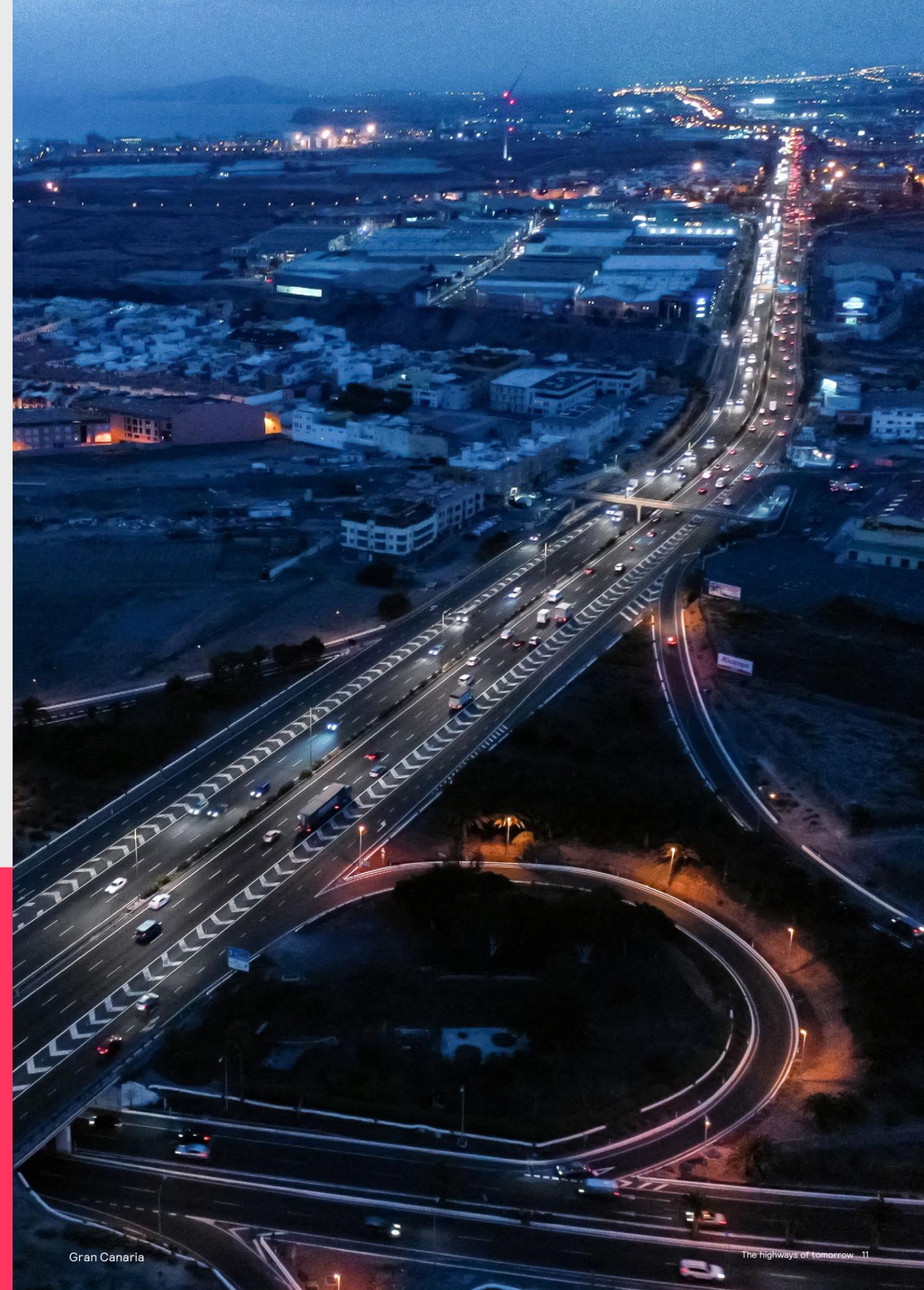


Safety improvement due to a luminance level of 2 cd/m² with 0.7 uniformity

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We have developed a clear and sustainable project for our lighting system. It's a major revolution in energy efficiency and cost savings."

Antonio Morales, President of the Cabildo of Gran Canaria



Learn more about Interact

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