Smart Cities: Connected Public Spaces

4th Edition

Smart Cities: Connected Public Spaces is the fourth strategy report from Berg Insight analysing the latest developments on the global smart street lighting, smart parking, smart waste collection, air quality monitoring and smart city surveillance markets. This strategic research report from Berg Insight provides you with 270 pages of unique business intelligence, including 5-year industry forecasts and expert commentary on which to base your business decisions.

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The smart cities market continues to evolve at a high pace

The public spaces of a city – such as streets, squares and transportation hubs – have become more and more crowded and congested by traffic. Meanwhile, safety concerns are also heightened as the risk for criminal activities, traffic accidents and even terrorist attacks grows larger. Improvements in the management of the public spaces of cities therefore become important to ensure that growing challenges of energy consumption, environmental degradation and public safety are addressed in the best possible way. The advancement of IoT technologies has opened up entirely new possibilities for cities to efficiently manage assets, resources and services across multiple city verticals, and effectively given rise to the concept of smart cities. Five smart city verticals have emerged as particularly important for the management of public spaces – smart street lighting, smart parking, smart waste management, urban air quality monitoring and smart city surveillance.

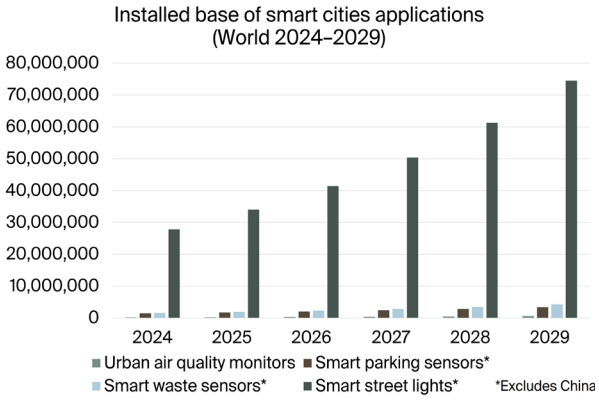
Smart street lighting solutions enable remote monitoring, control and management of street lighting networks. By the end of 2024, the global installed base (excluding China) of individually controlled smart street lights amounted to 27.9 million units. Growing at a CAGR of 21.8 percent, the number is expected to reach 74.5 million in 2029. Europe is the leading adopter, accounting for more than 42 percent of the installed base. North America was the second largest market while the Rest of World region currently constitutes the fastest growing market. At the end of 2024, the leading smart street lighting vendor was Dutch Signify with an installed base of 5.8 million lighting controls. Included in the top four are also US-based Itron, Belgian Schréder and Flashnet (Lucy Group) from Romania.

Smart parking solutions based on connected parking occupancy detection sensors offer the possibility to provide real-time visibility of parking availability anywhere in a city. The dominant sensor types for such applications are in-ground and surface-mount sensors, collectively referred to as ground parking sensors. In 2024, there were nearly 1.5 million smart ground parking sensors installed globally (excluding China). The number will grow to 3.4 million units by 2029. Europe accounted for around 49 percent of the installed sensors while the North American and Rest of World regions represented around 293,000 and 456,000 devices respectively. At the end of 2024, the leading vendors in the market were Frogparking, CivicSmart and Urbiotica.

The primary hardware needed for smart waste management applications is smart waste sensors that measure fill-levels in waste bins and containers throughout a city. These sensors may either be pre-integrated into bins and containers, for example as a smart bin offering, or retrofitted on existing collection points. The installed base of smart waste sensors reached around 1.6 million units globally in 2024 (excluding China). The market is expected to grow at a CAGR of 22.3 percent to reach 4.3 million units in 2029. Europe constitutes the leading market, accounting for around 45 percent of the global installed base. At the end of 2024, the five largest providers of smart waste sensor technology in terms of installed base were the US-based RoadRunner, Waste Harmonics and BigBelly as well as Belgian SmartEnds and Norwegian REEN from Europe.

Traditional air quality monitoring systems have been around for decades to enable regulatory monitoring operations and typically consist of highly advanced and expensive stations deployed only at one or a few locations in major cities. The last decade has however seen a growing adoption of increasingly affordable and small non-regulatory and networked air quality monitoring devices that can serve as useful complements to traditional regulatory monitoring networks. The global installed base of such devices amounted to 206,000 units in 2024 and the figure is expected to grow at a CAGR of 25.2 percent in the next five years. Europe, North America and China lead the adoption. Leading vendors include companies such as Aclima, Aeroqual, Airly, Breeze Technologies, Clarity Movement, Ecomesure, Envea, Environmental Instruments (AQMesh), Kunak Technologies, Libelium, Met One Instruments (Acoem) and Oizom.

Smart city surveillance refers to the use of networked security technology to improve safety levels in urban areas. The market is dominated by fixed network surveillance infrastructure, but applications such as body-worn cameras and gunshot detection sensors have also emerged as important complements for city surveillance operations. The smart city surveillance equipment market was in 2024 worth € 13.6 billion. Asia-Pacific and in particular China accounts for the majority. The market will grow at a CAGR of 15.6 percent to reach € 28.0 billion by 2029. Leading video surveillance vendors include the Chinese vendors Hikvision and Dahua Technology as well as Swedish Axis Communications, while the leading providers of urban gunshot detection and BWCs are SoundThinking and Axon respectively.



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Highlights from the report

Insights from 50 new executive interviews with market leading companies.

360-degree overview of the smart cities ecosystem.

In-depth analysis of smart street lighting, parking, waste collection, air quality monitoring and city surveillance.

New detailed profiles of 123 solution vendors.

Summary of industry trends in each market segment.

Market forecasts by region and technology lasting until 2029.

The report answers the following questions

- Who are the leading companies in the smart street lighting market?
- Which are the main types of parking space occupancy monitoring solutions?
- Who are the leading smart parking sensor vendors?
- Who are the leading providers of smart waste sensor technology?
- What are some of the key considerations when deploying air quality monitors?
- Which are the main providers of low-cost air quality monitors?
- How much is the smart city surveillance equipment market worth?

About Berg Insight's IoT market research

Our market reports offer comprehensive information and analysis on key IoT technologies and markets, addressing important concerns including total addressable market, market penetration, market shares, industry landscape, regulatory environment, market trends and forecasts. Our research portfolio today comprises more than 80 items, where each market report focuses on a specific vertical application area or cover horizontal themes. All market reports come with complementary data sets in Excel format that can be easily analysed and converted into tables and charts. We offer a range of different license options together with bundled packages and subscriptions to suit your specific needs.

SMART CITIES

Smart Cities: Connected Public Spaces

This study investigates major application areas for connected public spaces including smart street lighting, smart parking, smart waste collection, air quality monitoring and smart city surveillance. By the end of 2024, the global installed base of individually controlled smart street lights amounted to 27.9 million units (excluding China). There were at the same time 1.5 million smart ground parking sensors installed worldwide (excluding China). Get up to date with the latest information about vendors, products and markets.

PUBLISHED DATE	February 2026
EDITION	4th
PAGES	270
AUTHORS	William Ankréus & Felix Linderum

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Who should read this report?

Smart Cities: Connected Public Spaces is the foremost source of information about the smart street lighting, smart parking, smart waste, air quality monitoring and smart city surveillance markets. Whether you are a sensor vendor, device vendor, government agency, city manager, utility, public service operator, telecom operator, investor or consultant, you will gain valuable insights from our in-depth research.

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William is an IoT analyst covering mainly the smart cities, utilities and commercial vehicle sectors. He performs strategic analysis of emerging smart city verticals such as smart streetlighting, air quality monitoring and smart waste management. William holds a Master's degree in Innovation and Industrial Management from the School of Business, Economics and Law at the University of Gothenburg and joined Berg Insight in 2023.

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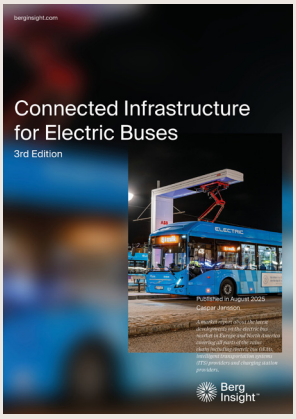

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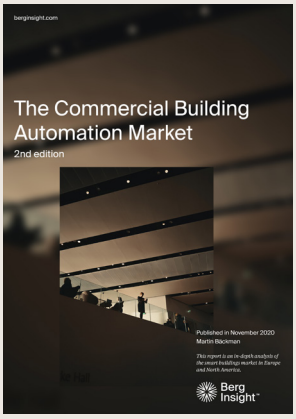

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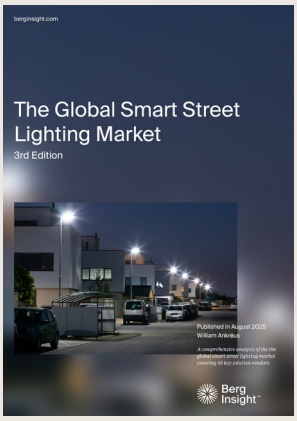

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