

AI in Smart Cities Market Forecasts to 2032 – Global Analysis By Component (Hardware, Software and Services), Deployment Mode, Technology, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global AI in Smart Cities Market is accounted for \$45.9 billion in 2025 and is expected to reach \$157.9 billion by 2032 growing at a CAGR of 19.3% during the forecast period. AI in Smart Cities refers to the integration of artificial intelligence technologies into urban infrastructure and services to optimize energy use, traffic flow, waste management, security, and citizen engagement. AI enables real-time data analysis from IoT devices and sensors, improving decision-making, automation, and sustainability. This transformation promotes efficient governance, enhances public safety, and reduces operational costs. AI applications in smart cities also support predictive maintenance, smart mobility, and personalized public services, aligning with long-term urban development goals.

According to 451 Research's Voice of the Enterprise: Internet of Things, the OT Perspective, Use Cases and Outcomes 2023, 50% of government respondents selected ensuring public safety as the main driver for their smart city initiatives, followed by improving overall quality of life (44%) and improving city services (42%).

Market Dynamics:

Driver:

Increased government focus on digital transformation

Governments worldwide are increasingly prioritizing digital transformation initiatives to

enhance urban living and operational efficiency. This strong governmental push includes significant investments in smart city projects that leverage artificial intelligence. These initiatives aim to improve public services, optimize resource management, and enhance citizen engagement. Policies supporting the integration of advanced technologies like AI are creating a fertile ground for market growth. This concentrated effort by public authorities is a key catalyst for the AI in smart cities market.

Restraint:

Data security and privacy concerns

Significant concerns surrounding data security and citizen privacy pose a notable restraint on the expansion of the AI in smart cities market. The extensive collection and analysis of personal data by AI systems raise ethical questions and public apprehension. Ensuring robust cybersecurity measures to protect sensitive urban data from breaches is a complex challenge. Citizens are increasingly wary about how their information is collected, stored, and utilized, leading to calls for stricter regulations. The potential for misuse of data and the risk of surveillance create hurdles for market growth.

Opportunity:

Growth of AI-powered traffic and waste management

The increasing demand for efficient urban infrastructure is presenting significant opportunities in AI-powered traffic and waste management solutions. AI algorithms can optimize traffic flow, reduce congestion, and improve public transit efficiency through real-time data analysis. Smart waste management systems utilizing AI can optimize collection routes, predict waste generation, and enhance recycling efforts. These applications offer tangible benefits to city administrations, including cost savings and environmental improvements. As urban populations continue to grow, the need for such optimized solutions will only intensify.

Threat:

Cybersecurity threats targeting smart grids

The interconnected nature of smart city infrastructure, particularly smart grids, makes them vulnerable to sophisticated cybersecurity threats, posing a significant threat to

market development. Malicious attacks on critical urban systems could lead to widespread disruptions, impacting power supply and essential services. The potential for data breaches and infrastructure sabotage creates a high-risk environment for smart city deployments. The increasing reliance on digital networks amplifies the potential impact of such security compromises. This inherent vulnerability necessitates robust defense mechanisms to ensure the resilience of smart city operations.

Covid-19 Impact:

The COVID-19 pandemic significantly accelerated the adoption of AI in smart cities, highlighting the need for resilient and adaptive urban management. Cities leveraged AI for real-time monitoring of public health, contact tracing, and resource allocation during the crisis. The demand for digital services and remote management solutions surged, pushing municipalities to fast-track their smart city initiatives. This unforeseen global event underscored the value of intelligent urban infrastructure for crisis response and future preparedness. Consequently, the pandemic acted as a catalyst for greater investment and integration of AI technologies in urban environments.

The hardware segment is expected to be the largest during the forecast period

The hardware segment is expected to account for the largest market share during the forecast period, owing to the foundational requirement for physical infrastructure in smart city deployments. This includes a vast array of sensors, cameras, IoT devices, and network equipment essential for data collection and connectivity. Furthermore, the increasing adoption of edge computing and 5G networks drives the demand for robust processing units and communication modules. Therefore, the continuous expansion of smart city projects globally directly translates into a dominant share for the hardware segment.

The machine learning segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the machine learning segment is predicted to witness the highest growth rate impelled by, its pivotal role in enabling intelligent decision-making and predictive capabilities within smart cities. Machine learning algorithms are crucial for processing complex data from various urban sources, allowing for real-time analysis and optimized responses. Applications such as predictive maintenance of infrastructure, intelligent traffic management, and adaptive public safety systems heavily rely on advanced machine learning models. This transformative potential drives the rapid

expansion of the machine learning segment.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, driven by rapid urbanization and the proliferation of mega-cities, leading to an urgent need for efficient urban management solutions. Significant government investments in smart city projects across countries like China, India, and South Korea are fueling market growth. The increasing adoption of advanced technologies like AI, IoT, and 5G is widespread in this region. This region is also a hub for technological innovation and manufacturing, providing a conducive environment for smart city development.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR attributed to, to its well-established technological infrastructure and early adoption of cutting-edge AI solutions. High levels of R&D investment by key market players are driving continuous innovation in smart city applications. Government support and initiatives aimed at enhancing urban resilience and sustainability also contribute to this growth. Additionally, a strong focus on data privacy and security, combined with advanced regulatory frameworks, encourages responsible AI deployment.

Key players in the market

Some of the key players in AI in Smart Cities Market include IBM Corp, Microsoft, Google LLC, Intel Corp, Cisco Systems, Siemens AG, Huawei Tech, NVIDIA Corp, Hitachi Vantas, NEC Corp, Oracle Corp, SAP SE, Schneider Electric, General Electric, Thales Group, and Bosch.

Key Developments:

In June 2025, IBM Corporation released the IBM Maximo for Smart Cities, an AI-driven asset management tool for urban utilities, improving predictive maintenance for water and power systems with a reported 10% reduction in downtime.

In May 2025, NVIDIA Corporation announced the Metropolis AI Framework update, enabling real-time video analytics for smart city applications like traffic management and public safety. The framework supports edge AI deployments for faster processing.

In April 2025, Cisco Systems, Inc. introduced the Cisco Smart City Connect, an AI-powered IoT solution for urban infrastructure monitoring. It enhances public safety and waste management through predictive analytics, deployed in select U.S. cities.

Components Covered:

Hardware

Software

Services

Deployment Modes Covered:

Cloud-Based

On-Premises

Technologies Covered:

Machine Learning

Natural Language Processing (NLP)

Computer Vision

IoT Integration

Big Data Analytics

Applications Covered:

Traffic Management

Public Safety & Security

Energy Management

Infrastructure Management

Environmental Monitoring

Smart Governance

End Users Covered:

Utilities

Transportation Companies

Healthcare Providers

Real Estate Developers

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical

presence, and strategic alliances

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