

# WHAT MAKES A SMART CITY?

Several technologies go into making a city smart. The development of these tech urban environments requires intelligent IoT solutions, sensors, and networks that feed data collecting applications. The data collected is used to regulate and optimize energy usage, traffic volume and patterns, pollution levels, and even waste management.

Many cities today have smart city applications in use. According to Statista, spending on smart city projects amounted to more than \$608 billion U.S. dollars in 2019, and the forecast for 2024 will reach more than a trillion U.S. dollars worldwide.

Let's explore some of the most common use cases of technology for a smart city.

## HEALTH CARE

## ENERGY

## MOBILITY

## WATER

## ENHANCED SAFETY & SECURITY MEASURES

## WASTE

Monitoring services will provide real-time health statistics on the city, including infectious disease surveillance and city sanitation and hygiene standards.

Several major cities are experiencing water shortages or poor water quality due to crumbling infrastructure. Smart cities can track water consumption and waste in an effort to increase quality across a city.

The regulation of energy use will enhance smart cities. Advanced sensing and controls will provide buildings with automation, consumption tracking, dynamic electricity pricing.

The upcoming 5G networks will connect all modes of transportation across the city. Vehicle to everything (V2X) communications will provide real-time public transit information, intelligent traffic signals, efficient E-hailing of rideshare services, and smart parking information.

Energy will also be generated via solar panels and wind generation throughout the city.

The smart city will power connected health care services. Telemedicine and remote patient monitoring through wearable technology will connect people to first-aid responders for faster assistance.

A smart city will provide the city with advanced alert warning features, which can be used to optimize response time for a variety of emergencies. For example, when a building catches fire, firefighters can be alerted instantly. And with the increase in natural disasters, smart cities can organize and respond quicker than ever before.

Smart cities look to curtail waste and how waste is managed. The digital tracking of materials used and an increase of composting will lower the amount of waste and pollution created by a city. Connected cities will also optimize waste collection and increase recycling efforts across the city.

The future of self-driving and electric vehicles are inherently linked to smart cities as they will need real-time data and accessible charging stations to operate.