Welcome to the Future: How to Make Cities Smart

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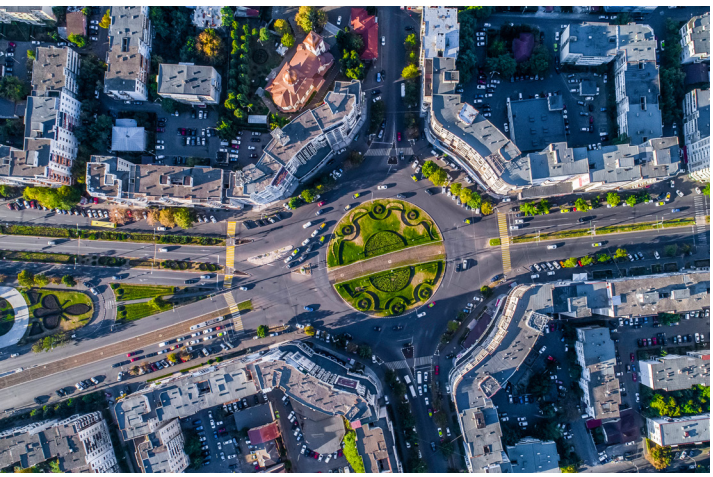


It's 2021. So where are our flying cars? Where are the soaring monorails that were supposed to connect the cities of the 21st century? Instead, the city of the future looks a lot like the city of the past: we are still driving gasoline powered cars on asphalt roads, and while there are more skyscrapers than there were 50 years ago, we are still pretty much living in a two-dimensional world. Most of the midcentury optimism about the gleaming urban future was pretty off the mark, and despite the major technology innovations of the last 70 years, it's safe to say that a time traveler from 1950 would not experience significant future shock in a modern metropolis.

But despite the lack of sci-fi amenities, today's cities are far more advanced than anyone could have predicted 50 years ago. One could write a book about all of the technological innovations that have transformed modern life, but when it comes to urban planning it all comes down to the concept of smart cities. The concept of a smart city was coined by IBM as part of its "Smarter Planet" initiative to improve how urban areas function by leveraging interconnected devices. Over the last few years, this concept has been fused with the Internet of Things (IoT) approach, and the two terms are frequently used interchangeably today. Further complicating the issue is that many advocates of smart cities are focused on using new technologies to reduce greenhouse gas emissions and improve energy efficiency.

According to the 2020 Smart City Index, a smart city is defined as "an urban setting that applies technology to enhance the benefits and diminish the shortcomings of urbanization for its citizens." Along with the citizens' perception of how "smart" their cities are, the report ranks cities on:

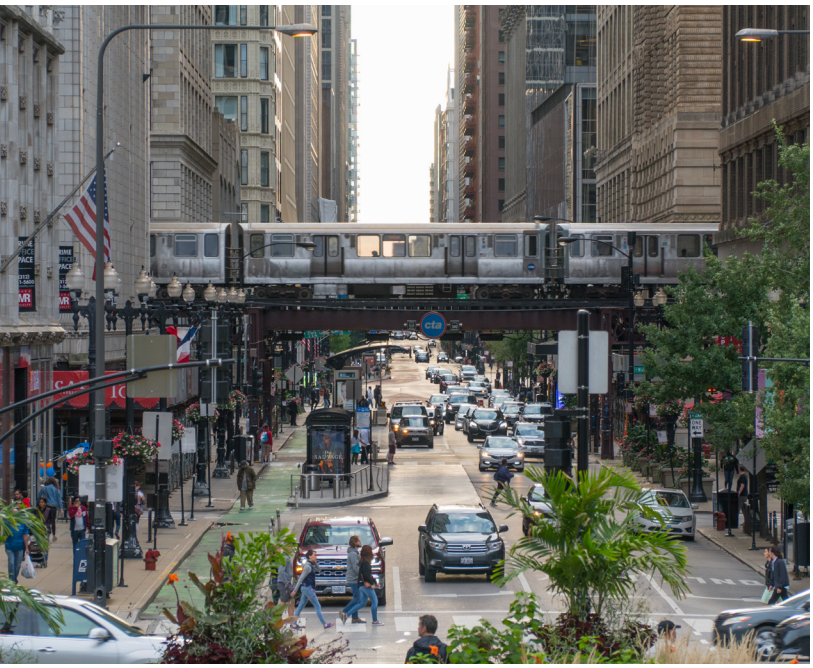
- Health and safety
- Mobility
- Activities
- Opportunities
- Governance

So what makes a city smart? It really depends on who you ask. The general consensus is that the benchmark for being a smart city is having a large number of interconnected devices communicating with each other to improve efficiency. Unsurprisingly, parking and traffic are often cited as examples of successful deployment of IoT strategies in the urban planning context. For example, instead of traffic lights working off of timers, many cities now use sensors and advanced analytics to maximize the flow of vehicles and prevent traffic jams. Parking meters, which have evolved from standalone mechanical devices to sophisticated machines that allow people to pay for parking from their smartphones, have become tangible examples of how cities can use interconnected technology to meet modern demands.

But the concept of the smart city, and the way that technology is leveraged to improve operations, goes far beyond traffic lights and parking spaces. In fact, one of the major evolutions is how personal mobile devices are being used to provide data for cities to use, as well as giving individuals the ability to directly interact with their local governments.

Some of the top priorities among decision-makers of smart cities include:

- **Transportation, including public transit, smart roads, and traffic management.**
- **Sustainable energy, including smart metering for water.**
- **Connected street lights and smart lighting control systems.**
- **Weather monitoring for air and water quality, floods, and fires.**



One of the most common examples in use today is public transit. Traditionally, buses, street cars, and trains ran on a set schedule, which was printed on a table. This was a low-technology approach that did not factor in heavy traffic, inclement weather, construction, and other events that could have a cascading effect on whether these systems were running on time or not. Thanks to the Internet of Things, passengers can check their mobile phones and figure out exactly when their next bus is coming, and how long it will take them to reach their destinations. This allows people to make better decisions and save time when they're planning their days. For example, if it's below freezing, people are not going to want to wait outside for 10 minutes to catch a train that is running late.

According to the "Improving Internet of Things (IoT) Security with Software-Defined Network (SDN)" study, there will be more than 75.44 billion connected IoT devices by 2025, over 7.33 billion mobile users by 2023, and more than 1,105 million connected wearable devices users by 2022. Primary forms of IoT technology include:

- **Smart homes**
- **Smart grids**
- **Wearables**
- **Connected health**
- **Smart retail**
- **Smart supply chains**

Another way that cities can make themselves smart is by improving the ability of residents to access services and directly interface with municipal employees who can help them. If you've ever gone to a Town Hall in a city, you will no doubt have seen large numbers of people wandering around with confused looks on their faces trying to figure out where they need to go and what forms they need to fill out. Most of this information is listed on websites, but it is often confusing for people to know what to look for. A smart cities strategy allows city governments to provide interactive tools and apps that allow people to figure out what they need to know and point them in the right direction. They also allow people to access the services without having to spend hours waiting in lines to get answers to questions that should be fairly straightforward to answer.

One of the reasons that the concept of smart cities is so complicated is that there is no set definition for the term. The British government spell this out, saying that, "The concept is not static, there is no absolute definition of a smart city, no end point, but rather a process, or series of steps, by which cities become more 'liveable' and resilient and, hence, able to respond more quickly to new challenges." That covers a lot of ground, but it doesn't narrow the use of the term very much. Instead, we are stuck with a term that is universally used but often misunderstood.

Semantics aside, however, the smart cities concept is an important one for the cities of today and for the future. Mobile technology is revolutionizing how all of us live, and if the pandemic has shown us anything, it's that remote access to services is critically important for individuals and institutions. Municipalities that rely on the Internet of things to create new ways of approaching old problems are already differentiating themselves on the world stage. That's why so many governments are making this a top priority. Forward thinking governments need to look at mobile technologies as an integral part of their approach, not as simply an adjunct to paper-based systems.

Governments looking to implement smart city technologies need to start with their service offerings, and Qless can help! **Contact us to find out more.**

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