



MARTELLO

Powering
Network
Performance

PAVING THE WAY TO SMART CITIES

Today in the media, we all hear the term ‘Smart Cities’ tossed around and we nod our heads and think “Yes, I know that is coming.” – but what does it really mean and how do the business decisions that you are making today impact the Smart City of the future?

WHAT IS A SMART CITY?

The Smart City concept has a broad scope, but at its core is the idea to build a community that leverages information and communication technologies to improve efficiency streamlined and quality of life.

There are three key elements that contribute to a Smart City:

- *Improved communications technology*
- *The Internet of Things (IoT)*
- *Increase in available data*

Imagine a city with public WiFi areas, integrative public transportation streaming, tap and pay parking spots, autonomous public transportation, live air quality monitoring – the possibilities are infinite as long as your network is ready to handle the demand.

A SMART CITY IS A CONNECTED CITY

As cities grow, new technologies are being integrated at a dizzying pace. As these innovations make life easier for citizens, these new services are often only as good as the quality of their link to the Internet. With more integration between a variety of systems, and with the rise of the Internet of Things (IoT), cities will need to adopt a flexible yet robust network infrastructure to keep up with the demand. Martello’s technology, chosen by BlackBerry QNX as part of its accelerator program, maximizes network uptime across all sites, while prioritizing the applications and types of traffic that matter most.

**FROST AND SULLIVAN HAS
PREDICTED THAT BY 2020 THE
SMART CITIES MARKET WILL BE
WORTH \$1.5 TRILLION.**

BUILDING A NETWORK THAT IS SMART CITY READY

So how do you keep a Smart City up and running? The most important step is to set up a business continuity plan and build a rock-solid network infrastructure that includes:

1. Failover and Availability

The key to network performance lies in bandwidth and technology diversification. By using multiple different links from various providers, municipal institutions can avoid being sent back to the Dark Ages. With devices such as Martello's Link Balancers, all connections can be used concurrently. If one of them goes down, the traffic is immediately redirected to other available paths, preserving active sessions. In the event where a municipal data center goes dark, it's possible to redirect the traffic to alternate resources such as mirrored servers, either physical, or in the Cloud.

2. Application Control: Security and Uptime

One of the key success factors for a Smart City is to provide dedicated applications and city-wide public WiFi to citizens and travelers. Distributing traffic across multiple sites improves performance, but there's a limit to what the entire network can handle. This is when controlling what's happening on the network becomes more important.



3. Safe Private Networks

Private municipal data and public WiFi sessions shouldn't share the same network. Find a solution that allows you to split the network into airtight compartments, preventing any leak from one to the other.

4. Promote City Applications

While cities can't guarantee the quality of cellular networks, they have more control over the quality of their public WiFi. Using a network performance solution like Martello's allows you to set priorities for internet traffic. Limiting unwanted traffic or giving priority to city sanctioned applications (e.g. live bus schedules or snow removal coordination) will give you more control over the quality of public WiFi in Smart Cities.

5. Emergency Dispatch Services

Martello's technologies can also prioritize real-time communications by relying on the company's extensive experience in unified communications (UC) performance management. This is critical for emergency response, where dispatch centers rely on uninterrupted and stellar communications.

As technology accelerates, expectations for network performance skyrocket. While autonomous vehicles driving around on city streets might still seem like the stuff that you see in movies, the reality is that this is coming much faster than most people realize. Taking the time now to establish a rock-solid network infrastructure will mean that as the demands of Smart Cities grow, your network will be ready to handle it.