Mobility Blog

Smart Cities and Smart Fleets Will Lead the Way

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Information and communication technology (ICT) and the internet of things (IOT) — the variety of devices connected to the network — are forging the way forward for 'smart' cities. Consider the value of a city that creates sustainable economic development and a high quality of life by excelling in the areas of economy, mobility, environment, people, living and government.

Here are a few key elements of a smart city: Applying a wide range of electronic and digital technologies to communities and cities. Using ICT to transform life and working environments within the region. Embedding such ICTs in government systems. Coordinating practices that bring ICTs and people together to enhance the innovation and knowledge that they offer.

1. Smart Cities in Action

Three major cities are becoming smarter in the following ways:

• Columbus, Ohio, United States: In 2017, Columbus, Ohio partnered with American Electric Power to create a group of new electric vehicle charging stations. They used this agreement to prepare for the ongoing changes in the climate, to deepen their electric infrastructure, to convert existing public vehicle fleets to electric cars, and to create incentives for people to share rides when commuting.

In so doing, the city received a $40 million grant from the U.S. Department of Transportation and $10 million from Vulcan, the company created by Microsoft co-founder Paul Allen.

• Amsterdam, Holland: Street lamps in Amsterdam have been upgraded to allow municipal councils to dim the lights based on pedestrian usage. Citizens can also use an app, Mobypark, which allows owners of parking spaces to rent them out to people for a fee. Data generated from this app is then used by the City to determine parking demand and traffic flows.

Smart energy meters have been installed, with incentives provided to those that actively reduce energy consumption. Smart traffic management monitors traffic flow in real time by the city. Information about current travel time on certain roads is broadcast to allow motorists to determine the best routes to take.

• Barcelona, Spain: Sensor technology has been implemented in the irrigation system in *Parc del Centre de Poblenou*, where real-time data is transmitted to gardening crews about the level of water required for the plants.

A new bus network has been established, based on data analysis of the most common traffic flows, utilizing primarily vertical, horizontal and diagonal routes with a number of interchanges. Smart traffic lights allow buses to run on routes designed to optimize the number of green lights.

In an emergency, the approximate route of the emergency vehicle is entered into Barcelona's traffic light system, setting all the lights to green as the vehicle approaches through a mix of GPS and traffic management software.

2. Smart Fleets in a Brave New World

Commuters spend an inordinate amount of time in their cars. According to the U.S. Census Bureau, it now takes the average worker more than 26 minutes to travel (one way) to work. That's the longest it's been since the Census started tracking American's commutes in 1980. That's around 12,500 minutes or 208 hours a year, which takes a toll on our health with long commutes associated with higher weight, higher blood pressure and lower fitness levels.

Innovations designed to reduce time on road for commuters and driver-employees are flooding the market. By 2025, Navigant Research forecasts that more than 1.2 billion vehicles globally are expected to be connected to their surroundings and each other through either built-in or brought-in communications technology, so helping to reduce congestion and pollution.

The rise of electric cars with smart technology continues the forward momentum. Electric vehicles now have navigation systems that alert drivers to proximate charging stations and provide battery charge status updates. City officials around the world working to control pollution are actively encouraging electric vehicles in car sharing services.

Take *Autolib'*, the electric carsharing service inaugurated in Paris. The *Autolib'* scheme maintains a fleet of all electric cars for public use on a paid subscription basis, employing a citywide network of parking and charging stations. Data from 2016 revealed that 3,980 Bluecars have been registered for the service, and that the scheme has more than 126,900 registered subscribers.

Autolib' offers 1,084 electric car stations in Paris agglomeration with 5,935 charging points. Innovative carsharing models work on one-way options with drivers no longer required to return the vehicles to the same place they picked them up, much as the urban bicycle-sharing models have worked. Carsharing will function to positively disrupt the status quo.

Fleets will provide the lead in driving forward this much anticipated move to smarter cities. Navigant Research predicts that the urban mobility model of the future will rely on both carsharing and ride-hailing. In the midst of this constructive shift will be opportunities for autonomous driving — technology that will engineer a major breakthrough in quality of life and low-carbon efficiency.

Fleet mobility and safety is and will continue to be a multifaceted pursuit.

Find out more about partnership agreement we've entered into with Microsoft to mutually develop a dedicated smart mobility platform for sustainable, digital and integrated mobility solutions.

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