Smart Cities: Is North Carolina in Play?

From Boston to Beijing, municipalities are investing millions to emerge as “Smart Cities,” places that are penetrated with connected devices that feed data to smart systems that in turn generate civil and consumer benefits. Smart Cities of the future will send real-time data on everything from traffic congestion, pollution levels, power and water availability, and parking spaces, for example, to powerful computers that crunch data, optimize operations, and alert authorities to problems. Although the details vary, the basic goal is to create efficient infrastructure, aid urban planning, and improve residents’ well-being.

As emerging technologies reshape our urban environments with low-power sensors, wireless networks, and web and mobile applications, the benefits are expected to be substantial. With the right tools, a networked fire alarm would not simply call out for a fire engine; it would also determine the best route and redirect traffic. Garbage trucks will be alerted to the location of solid waste that needs...
collecting, and sensors in our cars will direct us towards available parking spaces.

The U.S. has a few city success stories, with New York City and San Francisco at the top of this list. New York’s NYC OpenData offers the public more than 1,000 sets of data, from health inspection results to graffiti removal requests. San Francisco, another open-data pioneer, provides data and dozens of apps that locate everything from playgrounds to parking spaces. Recently, StateScoop identified eight other emerging U.S. “Smart Cities” that bear watching: Austin, Boston, Boulder, Burlington (VT), Charlotte, Chicago, Miami, and San Antonio. These communities, currently plotting distinct paths toward smarter operations based on available budgets and various public-private partnerships, share a common vision to be more connected, efficient, and productive.

Charlotte, which has partnered with Envision Charlotte to make the city more efficient, was one of eight cities inducted in the Global Smart City and Community Coalition at the National Institute of Standards and Technology’s Global City Teams Challenge Expo in June 2015. Charlotte’s efforts in energy alone have saved citizens more than $10 million since the program’s launch in 2011. In April 2015, Charlotte created a Smart City Cabinet to
proactively apply innovation, technology, and data to enhance, transform, and improve citizen services.

Building a smart city of the future requires focused effort and attention. Cities have not been successful doing one-time “datapaloozas” where analytic experts pore over data from diverse sources looking for new ways to combine them. Outside the area of public transit, this type of ad hoc investigation has rarely translated into game-changing success. Very few apps using open data have made the jump from interesting innovation to reliable consumer service.

The Obama Administration is encouraging the Smart Cities movement. A few weeks ago, the Administration announced a new “Smart Cities” initiative that will provide $160 million to support federal research and to leverage more than 25 new technology collaborations that help communities address traffic congestion, crime, economic growth, and the delivery of city services. The new initiative targets federal resources to meet local needs and to support community-led solutions.

Can North Carolina communities capture some of these federal dollars? The Research Triangle Cleantech Cluster will be hosting a meeting at IEI in early November to explore this opportunity.
As North Carolina continues to urbanize, our communities should seek to be on the leading edge of the Smart Cities movement. Two-thirds of North Carolinians live in urban areas, and future growth is expected to be strongest in the Triangle, Charlotte, and Wilmington metro areas, where populations may grow by 70 percent between 2010 and 2050. The “internet of things” – the emerging world of ubiquitous connected devices and sensors – will revolutionize these areas.

Can North Carolina’s urban centers lead the way toward smart city implementation? If that is to happen, senior leadership in each of North Carolina’s urban communities must seek to drive innovation and leverage technology wherever possible. As Smart Cities author Anthony Townsend points out, “It is not just a transformation of the physical, it is also about transforming the economy, transforming the way social interaction happens, both online and in the public space, it’s about transforming governance and its about transforming the process of city planning and city building as well.”

What interests you about the natural and built environments in our state? Let us know, and it could be a topic for a future IEI Environments newsletter.

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