

InfrastructureUSA

Guest on THE INFRA BLOG

Alison Taylor, Vice President, Sustainability-Americas, Siemens Corporation

Conversation with Steve Anderson, Managing Director, InfrastructureUSA

Mega Trends: Growth, Demographics, and Climate

From our point of view cities are a great incubator for innovation. Cities have a variety of different needs. It may be transportation needs, it may be energy infrastructure needs, water infrastructure needs, even healthcare and access to healthcare. And all of those areas are in our portfolio. We find cities to be a great test bed and demonstration lab for technologies, because they have so many needs and so many long-term needs as well. The growing population in cities is always going to be a challenge for cities, but there are a few other mega trends as well. There's also demographic change. People are moving into cities, but they're also living longer. That presents a new challenge to cities. How do they provide access to an aging population, to transportation, to healthcare, even to energy? And these populations move around cities and utilize city services in a different way. So they don't always commute from the suburbs into the cities, for instance, as some of the more traditional patterns may have been. So cities have to keep up with these changes, and also of course try to anticipate them. And then there's the mega trend of climate change. That mega trend is a challenge across the world. How will cities cope with whatever their particular area may be facing with respect to climate change? In some cities there may be patterns such as droughts; in other cities there may be flooding. In many cities there may be storm events or temperature events that are different from those they've seen in the past, and cities have to adapt to those changes and certainly plan for those changes as well.

Planning for the Long Term

We've worked with many cities for many years. I think one of the main things we have to do is listen. We may have a lot of experience with cities, but as I've just described, cities are facing new challenges every day, and it's really our job to listen to what those challenges are and to provide expertise that's in our core competence. For instance, a number of cities have sustainability plans. They're comprehensively looking to the future, trying to figure out how to address these mega trends, and they may realize that technology is a part of that, but they may not have the information about what technology is available, how fast that technology can help them to reach their goals, what the limitations of that technology might be, or how much it costs, or how many jobs it may create. So that's the kind of information—objective, credible information—that we can bring to a city to help them with their long-term planning. And of course we bring the technology as well. As the sustainability officer for Siemens for the Americas, we work with customers such as cities, but also commercial customers, on a variety of their sustainability challenges. Certainly for cities, infrastructure is one of the biggest needs. Aging infrastructure is a very common story globally, and how to replace that infrastructure, or upgrade it, while keeping in mind the sustainability goals that many cities have now, is a question that we're asked pretty often at Siemens. Rather than

fixing a short-term problem, or addressing a crisis, or repairing a problem that may have occurred, let's say, after a major storm or mother-nature event, sustainability is about a more long-term view. Will we be able to count on that infrastructure many years in the future? How will it serve the public? How will it serve the needs of the city? Also, in the long term, how will that infrastructure impact the environment, and the community in which that infrastructure is being used? So it's a much longer-term plan and vision than just addressing a short-term need.

Responding to Climate Change

The way cities have been tackling the climate-change challenges in their areas is admirable. And they've done so without being told to do so by a federal government in the United States. So obviously they're seeing this need to address this issue and prepare for this issue. It's very important to the health of their citizens, but not only that, certainly the economic viability of the city itself. Cities are a major contributor to economic growth globally, and shutting down a city because energy supply has been interrupted after a major storm event, for instance—and we've seen that in the United States—is a huge economic hit on the region, businesses and individuals as well. I think that Superstorm Sandy in the U.S. was certainly a wakeup call, not that anyone on the East Coast thought they were immune to major storm events, but that was one that had such a major economic impact, and such a major health impact, that we've seen a very clear reaction in that region. A lot of other cities are watching that as well. They're talking about resilience. Another way to look at that is climate adaptation. They're preparing and they're planning and they're rebuilding, and in the infrastructure choices they're making, to make choices that will help them to withstand a disruptive event like a major storm. But also to be responsible about their own climate contributions, so limiting emissions by using energy efficient technologies, for instance.

Cutting-Edge Technology Is Often Behind the Scenes

I think that there are many needs that can be met through technologies that are on the shelf today, but we surely do see a need to innovate and to find ways to be even more energy efficient with our technologies, to deploy technologies more widely, so more people can access technologies. And I think the cutting-edge trend is all around information. It's all around giving the consumer—as well as the planner, as well as the decision maker in a city—information to make decisions, to understand trends, and also to anticipate what the needs of their technology may be in the future. So actually a lot of the cutting-edge stuff, you can't even see. It's behind the scenes, or it's embedded in the technology, but it's pretty fascinating stuff. So a transportation system, for instance, is powered by electricity. But there's actual virtual capability to move that energy supply to other areas of the city when needed. Let's say in a time of a disaster or an evacuation, other areas of the city can take that energy supply from a transportation system and utilize it, and vice versa. You can't really see that technology, but if you're relying on that in a time of needing to get somewhere, it certainly is important.

Information Engages Citizens

I think one of the great things about information and the types of information that technology can generate now, is that we give consumers so much more information to

plug into that decision making process. So they know more about what a city is facing. They also know more about how a city is spending its money and planning to do what they're planning to do. There are many public engagement opportunities in cities—frankly, there always have been—but if we send information through technology to citizens to let them know there's a public meeting taking place, or you don't even need to come to a meeting, you can respond to this survey online, or you can participate in this telephone conversation, more people can be engaged because they know more about the issues, they know more about the opportunities they have to participate.

www.InfrastructureUSA.org

212.414.9220

info@infrastructureusa.org