

Cities, China and Big Data:
China's 2016 Urban Planning Conference

We know China faces enormous urbanization. An estimated 15 million people a year move from rural China to its growing cities. Recognizing this challenge over a decade ago, China's Ministry of Housing and Urban Rural Development (MOHURD) and its China Society for Urban Studies (CSUS) launched what has become the annual Conference on Urban Development and Planning (CUDP). They are typically held in "second tier" cities, which face growth but want to develop green and sustainably. The 11th CUDP convened in Changsha in Hunan Province on August 16-17, 2016.

Background of the Conference

This is all the vision of Dr. Qiu Baoxing, long-time former Vice-Minister of MOHURD and now President of CSUS, where he can apply his practical experience with his keen insights about advanced technologies and smart urban planning. Dr. Qiu was mayor of Hangzhou for two terms before joining the Ministry, so he knows the challenges firsthand. He has written several books and lectured at universities, including MIT. I first met Dr. Qiu when I was at the US Department of Energy and began to negotiate our relationship with China under high level agreements between our governments. We had the honor of helping design a model Zero Energy Building for the Ministry of Science and Technology. Then, with the help of NRDC and LBNL, helped design the 2008 Beijing Olympic Village. Rick Fedrizzi helped make it the first LEED-ND Gold project in China (and one of the first in the world). As part of that work, I attended one of the first International Green and Energy Efficient Building Conferences in Beijing and met Vice Minister Qiu Baoxing.

In a nice irony, former USGBC Ginsberg Fellow, Mara Baum, wrote an article about the 2004 Greenbuild Expo held in Portland. She wrote: "At the conference, Vice Minister Qiu Baoxing unveiled a dramatic green building program aimed at reducing China's energy consumption by 65 percent by 2020. To meet this ambitious goal, the program would essentially rebuild or reshape a sizable portion — 25 percent in large cities — of existing Chinese buildings, completely overhaul the way new buildings are built, and power 80 million square meters of space with photovoltaics and other renewable energy sources. Baoxing and other Chinese speakers at GreenBuild encouraged American and European green-building firms to work in China — though they suggested that Western companies should focus on understanding Chinese culture before jumping into the market. To get their initiative started, the Ministry of Construction is also planning a new National Green Building Innovation Award, and it is sponsoring a March 2005 "International Intelligent and Green Building Technologies and Products Conference & Expo."

<https://placesjournal.org/assets/legacy/pdfs/usgbc-greenbuild-2004.pdf>

Changsha as Ideal Host City

Now, twelve years later, China is still on its target of reduced energy consumption. MOHURD has added Eco-Cities. And Dr. Qiu Baoxing hosted the 11th CUDP, where 1600 experts convened in Changsha to learn the latest information on green urban planning.

Changsha is an ideal place to convene this conference. It has a 3000 year history and is known as the place where Mao Zedong discovered communism. It is one of many large cities in China that are considered “second tier.” However, at almost 8 million people, it would be the fourth largest metropolitan area in the US! It is a beautiful city with a river and mountains. It still has room to grow and the skyline is filled with construction cranes.

Local leaders welcomed us and proudly described the commitment they are making to become a more successful city. They received one of the first 50 million RMB grants from MOHURD to demonstrate Eco-City principles. They have two subway lines and plans for more and just opened the country’s first “low speed Maglev” train service. They have installed a sophisticated IT system that uses big data to monitor citizen actions. This allows them to, among other things, adjust traffic lights quickly to respond to traffic flow.

11th CUDP

The 11th CUDP theme was “Green Cyclicity, Inclusive Resilience, Harmonious Livability.” It included 19 concurrent sessions and over a hundred technical presentations. The Plenary included local leaders, who described their pride and activities and welcomed international cooperation. Richard Register, founder of Eco-city Builder, Inc. provided a vision of dense, integrated cities. Yu Kongjian, Architecture Dean at Peking University, provided an encouraging update on the MOHURD concept of Sponge Cities. Launched just a few years ago, the program has grown from early uncertainty of what the concept means to several very successful flood control and urban water planning projects. Dr. Qiu presented the Keynote and, this year, emphasized Principles for Resilient Transportation. He described a very Chinese concept for transit oriented development – balancing the Ying of Buildings with the Yang of Transportation. Integrated urban design, live near where you work, encourage bicycling and walking, etc.

Key Themes

There were two overriding themes this year: **transit oriented development** and **big data**. A number of presentations followed Dr. Qiu’s emphasis on TOD. There is a growing consensus that China needs to consider smaller block size to encourage more efficient public transit as well as walking and bicycling. In an interesting merger of TOD to big data, cities like Changsha are tracking people’s travel schedules in order to plan better transportation options. **Big data** was also the topic of other sessions. One interesting idea that came from Germany and a company in China includes a city-sponsored “card” that could be used to track preferences and patterns to help planners. The card would include an incentive of restaurant and museum discounts. Big data also came into play with a proposed drone mapping system that can

provide real-time feedback loops – from 2000 feet. (There was little or no discussion of privacy issues that might have been raised in a similar American setting.)

My presentations

I had the honor of making two presentations. The first was on a panel looking at how cities are addressing their green urban planning. In the second, I provided updates on San Francisco's ambitious plans to achieve 100% renewables, zero waste, etc., and the OneNYC plan that Mayor DeBlasio launched to make NY "the most sustainable big city in the world and a global leader in the fight against climate change."

Side Note

CSUS has established a new Eco-City Association as a private entity. They are developing a building in Tianjin that will feature green building and green urban design exhibits. They will be offering space to sponsors to display their technologies and service. When more information becomes available, I will quickly pass it along to USGBC members.

Mark Ginsberg
USGBC Senior Fellow
January 8, 2017