

# THE CITY OF THE FUTURE

THE URBAN LANDSCAPE IS CHANGING, BUT INTO WHAT?

VOLUME

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## Bye Bye, Jetsons: Engineers and Consultants Offer A Reality-Based Future

JUNE 13TH, 2012 BY MICHAEL KELLER 2 COMMENTS

By 2050, seven out of every ten people on Earth will live in cities. Compared to the beginning of the 20th century, when just 20 percent lived in urban settings, the increase is staggering.

This rapid urbanization coupled with the population explosion that will see 8.9 billion people living on the planet in 2050 presents the challenge of more total humans and a higher percentage of them flocking to cities to find a better life. So, what is the city of the future and what is the future of cities?

Txchnologist asked a few leading thinkers to give their impression of what future cities in 50-100 years will be like.

### A future much like the present, with upgrades

"Why do we currently use the same construction method in Phoenix, Wisconsin and Miami?" asks Dr. Chris Luebke, director for global foresight and innovation at design and engineering firm Arup. "Will we still be doing that in 100 years? I think we'll be moving to place-responsive design, but things do not change quickly. I mean, look how long we've had the Edison lightbulb."

Luebke says future cities will continue to struggle with the basic human need for community. He sees the deployment of new technologies as a possibility to enhance that community while freeing urban dwellers from contemporary problems.

"In 50 years, will we still be flushing our toilets with drinking water?" he asks. "It's crazy if you think about it. We need to look at how to become resource-effective. Buildings are energy hogs because they were designed when energy was basically free. But there are some great technologies of the new 2.0 generation —batteries, LEDs and other efficiencies; we'll also move to community-based water and energy resource

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systems.”

Clearly the largest obstacle to any urban upgrade is the very human resistance to new things and the momentum of the existing present.

“Most urban areas will emulate cities of the past rather than some space-age concept a futurist dreams up,” says Glen Hiemstra, a consultant who focuses on future trends and strategic planning. “There is a lot of inertia to build communities the way they’ve been built for a long time.”

### Speed of innovation, languor of change

Carlo Ratti, a civil engineer and director of MIT’s SENSEable City Laboratory, says the current speed of technological innovation makes it hard to predict what a city will look like in a century’s time.

“We can barely predict tomorrow’s weather—I would not dare predict how our cities will be in 100 years!” Ratti says. “Still, I am convinced that from the outside they will not be too different from the cities of today or those of yesterday.”

He believes, though, that smarter future cities will evolve with more silicon than concrete, saying “networks, sensors, etc...all of that smart dust that is blanketing our cities” will allow citizens and planners to make better use of existing infrastructure. “It is not about technology or infrastructure—they are just the means—it’s about putting citizens and quality of life at the center.”

Arup’s Luebkehan sees a future in remembering good ideas from the past. He says it only makes good sense for houses in areas with intermittent rainfall to be built with cisterns, a technology as old as civilization. He remembers the yearly ritual of climbing up the ladder to install window screens and awnings in the summer and double windows for insulation in the winter. “I’m not wishing to go backwards, but to remember what our grandparents knew,” he says. “It’s good to let buildings breathe and it’s okay to put on a sweater in your house when it’s cold instead of cranking up the heat.”

### Looking for a role model

None of the prognosticators offer any one city as a model for others as they develop, though many good ideas have come from around the world that will surely be reused by planners. Several voice a desire to see built the smaller self-contained, planned communities linked by mass transit that were first explored in the early 20th century’s garden city movement. Gone, though, are the utopian visions of The Jetsons-like cloud cities dreamed up by previous generations of futurists.

If given carte blanche to remake a city for the future, Hiemstra says his would include zero- or extremely low-carbon output systems with buildings designed to need little air conditioning or water. Communities would be “superwired” at the highest online connectivity speeds and would also incorporate living systems and rooftop gardens.

“I like organized living communities, so I’d want to see them built around walking distance from the place you get your groceries,” Hiemstra says. “Where there are roads, they need to be solar [electricity-generating] and constantly circulating autonomous electric vehicles. Walkways would have roofs made of solar cells. Walk and bike ways would be usable in all weather.”

MIT’s Ratti says several cities are leading the way. He cites the Singaporean government’s promotion of public transit and bicycles over personal vehicles as a model of transportation policy going forward. He also points to Copenhagen’s goal of achieving net zero carbon emissions by 2025 as a beacon for other cities in the fight against global warming.

Luebkehan hopes that urbanizing areas will opt to break population centers down from single megacities of more than 5-10 million people—the UN’s population office predicts there will be 133 of this size globally by 2025—into multiple population centers of 2 million or less, all connected by super-high-speed rail.

“There’s an optimum density for human occupation that allows citizens to develop a sense of space, place and identity. Think Paris or Barcelona,” he says. “Above that optimum, it overwhelms the population’s ability to get its head around a place.”

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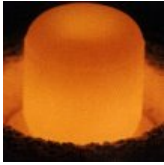
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Trean *yesterday*

Where does the statement that we will be increasingly city-dwellers come from? I see no reference to any authority on that issue. How does it make sense that we will be packed even more densely than we are now?

REPLY



michaelkeller *yesterday*

World urbanization data from 1950-2050 can be found at the UN's population division: <http://esa.un.org/unpd/wup/CD-ROM/Urban-Rural-Population.htm>. You can also find urban agglomeration data at that site, which shows the population and growth of major metropolitan areas from 1950-2025.

About density changes—that's relative. If you've lived in Tokyo's urban core you probably haven't seen an increase in population density in years. If you've been living in what used to be the rural outskirts of Dhaka, the increasing density has probably been quite apparent over the last few decades.

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