Street Talk

What innovation—technological or otherwise—would make any city a substantially more livable place? We put this question to urban leaders and our own readers. Here's what they said

Compiled by Michael Easter and Gary Stix

Cell-Phone Paradise

Communication is at the heart of the future. A future city would need to respond to people on a personal level. Our cell phones can become devices that are able to open the door to our home, pay for our bus and subway charges, make purchases at any store with a tap and a password, and give us unfettered access to the Internet.

—CRAIG BRAQUET, Long Beach, Calif.

Solar-Panel Windows

It would make cities across the globe more livable if the window-panes of city buildings were replaced with transparent and semi-transparent solar panels, which have been (at least crudely) in existence for a number of years. The energy generated from this could then be directed around the city, reducing energy costs and the need to burn coal and thus carbon dioxide emissions.

The power could also be used for public transport, making such transport and the expansion of transport networks much cheaper. Cheap, accessible and expansive public transport would greatly reduce the need for motor vehicle traffic, while also reducing CO_2 emissions.

—HOLLY UBER, political activist and historian, Melbourne, Australia

Wires of Light

It's time for cities to bring fast, reliable fiber-optic broadband to every home and business. When people gave up the old phone modem for the cable modem, that spurred a revolution in our economy and even in the way we interact with one another. The much greater speeds enabled by fiber will do even more. They will create a platform for new innovations and allow urban residents to invent things we can't even imagine today. Fiber-optic broadband is a missing piece in creating a more livable and prosperous city in the 21st century.

—MIKE McGINN, mayor of Seattle

Lockdown for Gridlock

You could collect data from different kinds of sensors—cell-phone signals, surveillance signals, car-mounted [radio-frequency identification] tags, and so on and then create some algorithms to change traffic-light timing to prevent gridlock, help buses move more efficiently and let people know where to park their cars.

—CHARLES D. LINN, writer, editor and architect

A Game Plan

Where we place our infrastructure—the housing, roads, water systems, parks and other components that make up a city—has a huge impact on livability. By being more strategic about these important investments, we can deliver a cleaner, healthier environment, more walkable neighborhoods and other important benefits—all for less cost to taxpayers.

—LISA P. JACKSON, U.S. Environmental Protection Agency administrator

iCities in the Desert

The city should be designed and built with a specific maximum number of people in mind, large enough to accept expected population growth for 100 years. It would be difficult to retrofit current cities, so this should be applied to the concept cities eventually built in the desert by Apple, Microsoft or another large company.

—MIKE KURILKO, Ocala, Fla.

Front-Yard Farming

All landscaping in the front yard of homes and apartments should be limited to either the growing of edible crops or the growing of native species to the area.

—BLAINE M. OSBORNE, Salt Lake City

More Toilets

In the developing world a billion people live in urban slums, with another billion expected in the coming decades. Their most urgent need is sanitation—water that is free of communicable diseases—and a clean, private place to urinate and defecate. Accordingly, the Bill & Melinda Gates Foundation invited 22 institutions (from Caltech to universities in Brazil and South Africa) to "reinvent the toilet."

—STEWART BRAND, founder of the *Whole Earth Catalog* and co-founder of the Long Now Foundation and Global Business Network

Water, Water Everywhere

The ancient metropolises like Persepolis [in what is now Iran], Athens and Mohenjo Daro [in what is now Pakistan] had superb water-distribution and sewage-removal systems. In my country, "urbanism" can be measured by the number of taps supplying clean water into the household, proper disposal of wastewater, and sewage treatment. So my vote goes to better water-distribution systems (both for drinking and sewage) as the one innovation that would make any city a substantially more livable place.

—PRADIPTO BANERJEE, graduate student, VIT University, India

A Place to Put Your Head

In Vancouver homelessness has eroded the city's "livability." I would like to see forms (emphasis on the plural) of housing that appeal to the homeless—forms that they will use. This undertaking will necessarily address the root causes of their issues. Those afflicted by mental health, poverty, substance abuse and joblessness and runaways make up this population, and we cannot subject them to a one-size-fits-all approach. A place to put your head in safety and comfort—if it isn't an inalienable right, it ought to be one. If our citizens are healthy and productive, the rest falls into place.

—JAY PELTON, Vancouver, B.C.

Smart Sensors

Sensors can serve many purposes, from making traffic patterns more efficient to measuring and reducing our emissions output to monitoring our health in our homes. The shrinking size and growing dispersal of sensor technologies in cities will make these improvements in urban life possible.

—PARAG KHANNA, senior research fellow at the New America Foundation and author of *How to Run the World: Charting a Course to the Next Renaissance* (Random House, 2011)

Urban Face-lifts

A total makeover. Cities are responsible for about 80 percent of carbon pollution. In Sydney we have decided to reduce our carbon emissions by 2030 by 70 percent from 2006 levels through decisive action taken now to retrofit our central business district using various technologies.

The innovation here is not the technology itself but its application at the scale of a city. A series of master plans will create low-carbon zones across the city, with co-located trigeneration energy systems (combining power, cooling and heating), recycled water treatment, and automated waste collection/utilization. And although individually these ideas and technologies are not new, bundling "green infrastructure" together in this way—and at city scale—is an Australian first.

In Sydney our energy comes from coal-fired power stations located more than 200 kilometers away. Our ultimate goal is to take the city off the national electricity network. We are looking at 70 percent of our electricity coming from local, decentralized energy and the remaining 30 percent from renewable-energy technologies. Interim reports suggest the trigeneration network alone could cut greenhouse gas emissions in city buildings by 40 to 60 percent, avoiding some of the high costs of transporting electricity from the country to the city, as well as reducing the need to upgrade the grid to cope with future demand.

—CLOVER MOORE, lord mayor of Sydney, Australia

Personalized Subways

Transportation innovation is one of the keys to creating a more livable city. And one innovation that has the potential to greatly impact life through transportation is personal rapid transit. Personal rapid transit is essentially a personalized subway system for a city. These systems use pods that can hold a handful of people, carrying them directly from point to point, with no stops and no waiting at stations. Creating an easier way to navigate a city promotes interactions among its inhabitants and, in turn, a more livable, and potentially more productive, city.

—SAMUEL ARBESMAN, senior scholar at the Ewing Marion Kauffman Foundation and creator of Mesofacts, an initiative designed to promote awareness of the slowly changing facts in our everyday life

Conga-Line Commuting

My solution is to totally integrate public and private transportation. Individuals would own or lease their own small electric vehicles. They would use them to commute to a station where they would join to form a "train" driven by the electricity network. This would travel at speed along the major arteries, charging batteries as it went. At their destination station the individual cars would decouple and be driven to their final point. Stations could be well spaced because commuters would have their own vehicle to travel the last few kilometers.

—LAURIE McGINNESS, New South Wales, Australia

Sustainability Lessons

Public transportation has to be a priority and include, for daily commuting, small, nonpolluting cars integrated into a "public transportation system," as Paris did with the Vélib' bicycle-sharing scheme. Second, people need to get involved with sustainability by using fewer cars, separating recyclable garbage at home, living close to work or working close to home, and teaching children about sustainability. Children are phenomenal agents of change.

—JAIME LERNER, former mayor of Curitiba, Brazil, which implemented, during Lerner's first tenure in the early 1970s, an innovative transportation system that has been imitated worldwide

Power, Power Anywhere

People in poor countries crowd the urban centers because of the lack of infrastructure in rural areas. Micro CHP generators, which can use fuels ranging from solar-thermal to biogas, make rural areas more livable by providing electrical infrastructure, affording the powerful potential to decrease overcrowding in urban areas and leading to long-term improvements in urban quality of life.

—IQBAL Z. QUADIR, director of the Legatum Center for Development and Entrepreneurship at the Massachusetts Institute of Technology and developer of the concept of providing universal access to phone service for the poor in Bangladesh

Scooping Up the Fallen Fruit

Long before I learned about the risks of climate change, I was fanatical about energy efficiency. Whenever my wife and I move into a new home, I check the attic for adequate insulation. I look for leaks around doors and windows and install a programmable thermostat if needed. When our hot-water heater needed replacement, we installed a tankless water heater that decreased our summertime gas use by 50 percent.

Taking these steps is called weatherization. I would rather call it "saving money by saving energy." For the next few decades energy efficiency will be one of the lowest-cost options for reducing carbon emissions while promoting economic growth. The quickest and easiest way to reduce our carbon emissions is to make our appliances, cars, homes and other buildings more efficient. In fact, energy efficiency is not just low-hanging fruit; it is fruit that is lying on the ground. Over the next several years I want to help millions of American families seize the same opportunity to cut their utility bills by making their homes and appliances more energy-efficient while increasing comfort.

—STEVEN CHU, U.S. secretary of energy

Better Information on the Internet, Please

Better urban planning, public policy and education could be solutions, but in the current Chinese system those changes could be costly and hard to actualize. Shanghai is not so "compact" compared with other world metropolitan areas, as we have about 20 million people in a very spread-out urban area. We already have some severe urban problems such as intense traffic congestion, overcrowding in public areas, housing supply shortage, environmental pollution, fast-increasing amounts of greenhouse gas emissions and the public overreacting to rumors.

When I turn to science for solutions, the Internet and other public media seem to have much more potential to readily spread helpful information to the public and enable them to make efficient and beneficial decisions, making things easier for everyone. That should be the main goal desperately sought after by the urban-management practitioners.

—PAN HAOZHI, student, Tongji University, Shanghai

Car-Free Zones

Abolish the private automobile from the urban core (or significantly built-up areas) and redirect the current investment in private capital that automobiles represent to investment in public transportation and redevelopment of former streets, parking lots, and the like into housing, parks and urban agriculture.

Completely rethink our definition of "the city" and begin to plan accordingly. We need to see cities as complete human ecosystems and recognize that the complementary (and arguably more important) productive component of the urban human ecosystem is its resource hinterland, an area typically hundreds of times larger than the city itself and increasingly scattered all over the planet. In short, the city's true "ecological footprint" dwarfs the tiny, consumptive urban center. The big footprint is essential for the survival of the urban core and yet is typically ignored or taken for granted.

—WILLIAM REES, professor at the University of British Columbia and originator of the "ecological footprint" concept, which measures human demand on ecosystems

Smart Growth

The policies and planning practices of "smart growth" would create and encourage sustainable places. This approach to combating sprawl is about encouraging new development of housing and jobs to locate in and around the urban core. For example, in Maryland former governor Parris Glendening spearheaded the state's landmark smart-growth legislation in 1997. The state law creates "priority-funding areas" that dictate where public funding of new infrastructure (that is, roads, sewers, social services) will be allocated. These areas are located near big cities, which encourages new development—and even redevelopment—near our urban centers and saves green fields and farms on the urban fringe from development.

—THOMAS VICINO, professor at Northeastern University and co-author of *Cities and Suburbs: New Metropolitan Realities in the US* (Routledge, 2010)

Intermetropolises

I envision an interconnecting grid of futuristic cities strategically placed around the continent. The main purpose and design of these cities is such that they utilize their natural surroundings, wind, hydro, solar, geothermal and bio, to power themselves and provide a neighboring city with excess power or necessary power.

—CHRISTIAN CARR, Kristiansand, Norway

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Cities need to stop burning fossils.

—BRUCE STERLING, science-fiction author who helped to establish the cyberpunk genre

Clusters

Cities should be built near the resources they need, such as agricultural and industrial land. Within cities there should be clusters of tall buildings, designed to leave most of the ground free to be renaturalized or left in its natural state and providing an urban park with easy access to the building dwellers. Each building or building cluster would have basic services such as commerce, administration, sports, and such. The high-density model would greatly simplify transportation and utility networks, while at the same time providing easy access to the natural world, which would be literally an elevator ride away.

—VÍTOR PEREIRA, Porto, Portugal

Social Cohesion

For as long as we have had cities, we have had inequity in access to social and environmental resources among urban citizens. Cities cannot be more livable nor support sustainability without policies that work on both unsustainable overconsumption in the city and unlivable social divides among groups. This is not an impossible innovation—just a difficult one and one we have never tried.

—CAROLYN STEPHENS, London School of Hygiene & Tropical Medicine and National University of Tucumán, Argentina

Populist Purse-Strings Control

"Participatory budgeting" changes the standard operating procedures of government by involving the citizens directly in municipal budgetary decisions. The process decentralizes decision making to the subcity level by breaking down the budget along neighborhood lines, involving residents in setting priorities for local government expenditures and electing a council of delegates that is held accountable. Experience shows that the results can be more efficient use of public funds, consensus building around investments in underserved neighborhoods and a dramatic drop in corruption. This changes the rules of the game, bringing heretofore disenfranchised individuals and groups to the bargaining table and provides an alternative incentive structure for collaboration.

Porto Alegre, a city in the south of Brazil, started experimenting with this process in 1989. Since then, it has been improved and adapted in various forms by more than 1,200 municipalities elsewhere in Brazil and Latin America, as well as in Africa, Asia, Europe and North America.

—JANICE PERLMAN, president of the Mega-Cities Project, a nonprofit organization that identifies and shares successful urban innovations across cities worldwide

The Internet of Things

We need more smarts. Cities, in their next generation, will become more highly embedded with intelligence via computing and thus with information, responsive capability and, ultimately, agency. Some of this transformation is already visible—"the Internet of things" will make it possible to query our surroundings the way we search the Web; citizen sensing through smartphones creates geo-coded, real-time, cheap and useful data. Beyond the near term, the possibility of a city that is significantly smarter could help us manage many aspects of daily life and could be customized to our preferences and routines. The key will be to design this new urban intelligence to create a better city and with enough transparency so that our privacy is protected and opting out is easy.

—DANA CUFF, director of cityLAB and professor of architecture and urban design at the University of California, Los Angeles, and author of *The Provisional City: Los Angeles Stories of Architecture and Urbanism* (MIT Press, 2002)

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