

SPECIAL

The Japan Times

Innovative City Forum

October 16-18, 2013 Roppongi Academyhills, Tokyo

7.2 billion

World population in 2012

8.4 billion

World population in 2030



52.5%

Percentage of urban population in 2012

60%

Percentage of urban population in 2030

Designing the future for global cities and lifestyles

This is what is expected. What will people's lives be like in cities? How will urban living change in the future?

We currently face various issues around the world, including economic crisis, political conflicts, cultural and religious differences and natural disasters.

Meanwhile, we currently enjoy innovations in areas such as energy, information technology, medicine, transportation, space engineering and materials technology. We live in a time with possibilities we have never had before.

In addition, creative industries including art and design now have a critical role in urban life, affecting our quality of life and giving us new insights in replacing the conventional systems.

The Innovative City Forum is being held in Tokyo to discuss the future of urban lifestyle from three perspectives: advanced technologies, creative industries and urban policy. Through the interdisciplinary discussions with the world's opinion leaders, we would like to explore what possibilities lie ahead.

INNOVATIVE CITY FORUM

Urban innovation, deregulation among keys to improving Tokyo

Global cities are competing with each other to be the most innovative by combining many kinds of intelligence, such as that of technology and of people with different talents.

"Urban innovation is a global agenda because everybody, from many different countries, tries to solve various urban problems together," said Heizo Takenaka, director of the Global Security Research Institute at Keio University, where he is also a professor in the Faculty of Policy Management

Urban innovation cannot be achieved without residents in many different professions and of various backgrounds, but problems arise in big cities: congestion, crime and pollution.

Therefore, cities have to evolve using the dynamism of the talents and abilities of the people to maintain order.

Takenaka hopes the Innovative City Forum, which will be held from Oct. 16 to 18 in Tokyo, will be a stimulating platform to declare "the era of globalization and innovation" and in which speakers and audience from all over the world will present various examples and share their awareness of urban challenges.

Alongside his other positions, Takenaka is a Program Committee member of the Innovative City Forum and the director of Academyhills, the space for intellectual exchange at Roppongi Hills in Minato Ward, Tokyo, where the forum will be held.

The forum is set to have three keynote speeches and about 10 sessions on

urban issues over the three days. Speakers and panelists include Takenaka, Hiroo Ichikawa, a professor of urban policy at Meiji University, MIT Media Lab Director Joichi Ito, Fumio Nanjo, director of the Mori Art Museum, and other experts from Japan and overseas, mainly from Asia.

Asian cities such as Singapore have some elements from which Tokyo can learn, Takenaka said.

For example, Singapore is located west of Jakarta but Singapore's time zone is an hour ahead. That way, financial markets in Singapore can be open an hour earlier, the same time as China, so it can be a competitive financial hub, Takenaka said, adding that he does not know exactly why Singapore's standard time is earlier than Jakarta's.

Also, he pointed out that Singapore's Changi Airport makes it possible for transiting passengers to exit the airport and visit the city.

"When I talked to Lee Hsien Loong, who is Singapore's prime minister, I said to him, 'Singapore is making lots of efforts.' He said to me, 'We have to. Japan is big, but we are small. Unless we keep running, we cannot stand,'" Takenaka said.

In the 2012 version of the annual Global Power City Index, Tokyo is No. 4 and Singapore is No. 5. Takenaka, the chairman of the GPCI committee, called Tokyo "lucky" because, as Lee pointed out, Tokyo has a larger domestic market.

The GPCI uses a method developed by the Institute for Urban Strategies at



Heizo Takenaka YOSHIKI MIURA

The Mori Memorial Foundation to rank the "comprehensive power" of major cities around the world. Each city is ranked in six areas — economy, research and development, cultural interaction, livability, environment and accessibility — with the additional factors of how these aspects are seen from the viewpoint of five "actors": manager, researcher, artist, visitor and resident.

For 2012, the top three in order are London, New York and Paris. Seoul, No. 6, and Hong Kong, No. 9, are the other Asian cities in the top 10.

The GCPI and urban innovation is discussed at the World Economic Forum, of which Takenaka is a member of the WEF's Foundation Board. The mission of the WEF is to improve the state of the world, Takenaka said.

Japan's government is aware of the importance of making Tokyo competitive and the Prime Minister's Office has set up a working group to discuss the National Strategic Special Zones, which will be designated as model areas with special benefits by way of extralegal measures.

Takenaka praises the move, saying the working group is discussing many ideas on the special zones.

In order to make Tokyo a more competitive city, deregulation in many fields will be necessary. Cities continuously need to offer new lifestyles and regulation needs to change accordingly, he said.

For example, supermarkets that are open 24 hours were nonexistent in Tokyo in the 1990s, but more and more people moved to Tokyo and new lifestyles emerged. As such, supermarkets open 24 hours appeared after laws regulating large-scale retailers were loosened.

Deregulation is necessary in choosing flight routes, he said. The so-called Open Skies policy, which allows airports to choose flight routes instead of governments, is only partially in practice in Japan. If the restrictions are lifted, airports can increase routes that are in high demand, improving their earnings and thus services to customers, Takenaka said.

Also, deregulation will be necessary in trying to attract foreign direct investment. For example, deregulation in education and medicine can eliminate problems that discourage foreign executives from coming to Tokyo as CEOs of foreign-capital companies.

"They don't want to come to Tokyo even if they get a promotion because it is difficult to find schools for their children and they are worried about language barriers in communicating with doctors," he said.

Deregulation in education will encourage schools to establish English-language courses. Also, there will be more English-speaking doctors if regulations are loosened to enable those with medical licenses from outside Japan to practice medicine in Japan, he said.

"These kinds of things, I am hoping, will be possible in the National Strategic Special Zones," Takenaka said.

Japan lags behind many countries in deregulation. Takenaka cited the World Bank's ranking on what countries or regions are the most business friendly thanks to deregulation. Singapore and Hong Kong always compete for the top spot, while Japan was 24th in 2012, according to Ease of Doing Business Index compiled by the World Bank. A high ranking means the regulatory environment is conducive to business operation, the World Bank says.

Takenaka warns that Japan may lose its competitive edge to other Asian countries if it is "too comfortable to change."

He also insists on the importance of economic growth.

He cited a comparison of the gross domestic product of Argentina and France in 1950 and today. France's GDP was lower than Argentina's in 1950 but is now 2.3 times as much as the South American country. Also, France's annual GDP growth is 1.5 percentage points higher than Argentina's.

"That to the power of 60 makes a huge difference," Takenaka said. "My point is that tiny growth makes a huge difference to our grandchildren's generation."



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Creating National Strategic Special Zones

Obsolete regulations in Japan have hindered the emergence of new businesses, critics charge. Because amending or creating new laws can be time-consuming, the government has set up an initiative called National Strategic Special Zones that it hopes will provide businesses with special benefits by way of extralegal measures.

The idea of the National Strategic Special Zones is to designate some areas to be model cities, free from opportunity-narrowing regulations. The prime minister's office set up a working group on the National Strategic Special Zones in May. This working group, whose members are from businesses, academia and the Cabinet Secretariat, has held five meetings so far.

Hundreds of similar special zones have

been established, but the National Strategic Special Zones are important as deregulation is considered a major point of Prime Minister Shinzo Abe's growth strategy.

"Abe has been saying the highlight of the growth strategy is to bring in private sector investment," said a Cabinet Office official working in a division in charge of the National Strategic Special Zones.

For the previous special zones, municipalities and other areas came up with ideas and applied for special zone status, thus the burden was on municipalities. For the National Strategic Special Zones, as the name suggests, the national government takes initiative and the working group collects ideas widely from economists, professors and businesspeople, the official said.

INNOVATIVE CITY FORUM

Can Tokyo move up to the top spot of the Global Power City Index?

The 21st century may be considered the era of cities, as opposed to the 20th century being the era of countries.

As the driving force of world economies shifted from manufacturing to services throughout the last century, New York, London and Tokyo became financial hubs and signified the concentration of economic power in these global cities.

"Thus, cities have become as powerful as countries," said Hiroo Ichikawa, a professor of urban policy at Meiji University's Graduate School of Political Science and Economics and dean of Meiji's Professional Graduate School of Governance Studies. "Cities cannot survive without solving global issues."

In a way to measure the power of cities, Ichikawa is deeply involved in the Global Power City Index, published yearly by The Mori Memorial Foundation.

The GPCI is the only comprehensive world city ranking that assesses global cities in as many as six aspects from five different viewpoints. The areas assessed are economy, research and development, cultural interaction, livability, environment and accessibility. The viewpoints take into account four global actors (manager, researcher, artist, visitor) and one local actor, the resident.

Since the first edition of the GPCI in 2008, Tokyo has almost always been in fourth place after New York, London and Paris. Ichikawa said Tokyo should not be happy with being No. 4.

Pointing out the fact that the Tokyo metropolitan area's population is the world's largest at 35 million, Tokyo being No. 4 is "clearly strange," Ichikawa said. The corresponding figures of New York and London are 22 million and 16 million.

According to the 2012 version of the GPCI, Tokyo had the best scores in economy and environment but was seventh and eighth in cultural interaction and accessibility.

Regarding cultural interaction, the number of inbound tourists to Tokyo is about half that of London and Paris, Ichikawa said. The number of foreign students is also low in Tokyo, he added.



Hiroo Ichikawa YOSHIKAZU MIURA

For accessibility, even though the train management system is excellent, low levels of air traffic to international airports and the long distance from Narita airport to central Tokyo dragged the ranking of Tokyo down, he said.

Another notable point is that the ranking of Tokyo from a manager's viewpoint was seventh, even though Tokyo was No. 1 in the economy sector.

"This means company presidents think Tokyo has problems in the liquidity of human resources and ease of economic activity," he said. From the first to sixth place are London, Singapore, Hong Kong, New York, Shanghai and Beijing.

There is a way for Tokyo to ascend to the top three spots, though it is unclear if everything will go well for Tokyo in the future to enhance urban innovation.

The Mori Memorial Foundation's Institute for Urban Strategies, of which Ichikawa is an executive member, came up with four scenarios for Tokyo's future in 2035 — the best-case, second best, third best and the worst.

"Five or 10 years from now may be easier to predict, but 25 years is too long," Ichikawa said. "That's why we created four different scenarios."

Three elements determining the four different scenarios are whether Tokyo succeeds in 1) deregulation, 2) promotion of free competition and 3) paradigm shift. The worst-case scenario

stems from unsuccessful deregulation, the second worst from successful deregulation but unsuccessful promotion of free competition. The second best scenario is based on successful promotion of free competition but unsuccessful paradigm shift and the best on successful paradigm shift.

When Ichikawa gave a lecture in Tokyo and asked the 250 audience members to predict the fate of Tokyo, the most frequent answer was the second best scenario, he said.

Tokyo's strength, he said, lies in software rather than hardware. Buildings and other structures are not much different between Tokyo and other cities because architectural technology is not very different.

"But the way the hardware is operated can be different, and Tokyo is excellent at that," he said.

For example, Tokyo has relatively few traffic jams because traffic lights have sensors to detect the number of cars on roads to control the pace of signal changes accordingly, he said.

In one of the seminars Ichikawa will participate in during the Innovative City Forum, to be organized by the Institute for Urban Strategies in Tokyo from Oct. 16 to 18, he will discuss a new assessment criterion, "Intangible Urban Value," a new terminology under this tentative English name.

Intangible Urban Value is the value that can be measured by human feelings.

For example, if people lose their

belongings in the subway, the likelihood of those found and coming back to the owners is very high in Tokyo, whereas people in other countries may have to give up, Ichikawa said.

Hospitality is also part of Intangible Urban Value. Ichikawa cited a survey conducted by the Japan National Tourism Organization that shows the percentage of tourists who have the impression upon arrival that the Japanese are kind is 29 percent, while this rises to 38 percent when they leave Japan. On the question whether services are good in Japan, the figure rises from 13 percent upon arrival to 18 percent upon departure.

Ichikawa also cited the preciseness and frequency of the train system and variety in high-quality food in Tokyo as examples of Intangible Urban Value.

Another development Ichikawa expects will make Tokyo more competitive is a large train depot near Shinjuku Station that reportedly may turn into a community filled with structures featuring cutting-edge technology. East Japan Railway Co. (JR East), declined comment on future development of the area.

According to Ichikawa, Shinjuku Station, south of Tokyo Station, is in the best location as a Tokyo hub because it has convenient access to Haneda airport. Central Japan Railway Co. (JR Tokai) is also planning for Shinjuku to be the terminal of the Linear-Express super-fast train that will connect with Nagoya in 2027.

Capital strikes gold with 2020 Olympics

Now that Tokyo has won the bid to host the 2020 Olympics, the capital may gain a top-three spot in the next Global Power City Index.

That is because London grabbed the No. 1 spot in the 2012 GPCI for the first time since the Mori Memorial Foundation began releasing the ranking in 2008, thanks to its preparations for the 2012 London Olympic Games.



125th IOC Session
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New York had always been the top city and London had always been second.

"It doesn't mean New York lost points. New York obtained roughly the same points, but London's growth was extraordinary," the foundation said in a report on the 2012 GPCI.

Concretely, the number of international conventions, hotels and visitors from overseas, all of which are in the cultural interaction category, had a remarkable increase in London.

London had many pre-Olympic events, meaning hotels and other infrastructure were renovated to draw more visitors.

Another notable point is that cultural interaction was the only category in which London was No. 1. It was second in accessibility, fourth in economy, fourth in research and development, 12th in environment and 20th in livability.

Thus, Tokyo, always at No. 4, may have a strong chance to ascend in the ranking.

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INNOVATIVE CITY FORUM

LIXIL × Toyo Ito

'Beyond the Residence – Imagining a House for the Nostalgic Future'

Designed by Pritzker Prize-winning architect Toyo Ito, this vision of a future house has, among its many features, wide wooden doors with vertical blinds that let light and wind enter, instead of concrete walls that shut them out.

Upon entering, an *irori* Japanese-style hearth and an *engawa* veranda warmly welcome guests to make them feel at home.

Built on the theme "Beyond the Residence — Imagining a House for the Nostalgic Future," this model house was produced by LIXIL Corp. and displayed at House Vision 2013 Tokyo Exhibition in March, a major exhibition on the future of housing in Japan.

"There will be the need for houses with no clear boundaries from inside to outside and from room to room," Ito said. "What can we offer then?"

Human connections became more valuable than privacy after the Great East Japan Earthquake and the design of houses should change accordingly, Ito said in a video on the website of LIXIL, which manufactures building materials and housing equipment and provides related services.

"Houses until now have been closed boxes, with air conditioners and windows that can seal window frames tightly," said Yasunobu Masu, a senior expert of the Multidisciplinary Research Institute of LIXIL. "From now on, human connections will be important. For example, the *engawa* allows for human connection with its openness."

Doma Earthen Room

The most noticeable feature of the House of the Nostalgic Future is the *doma* Earthen Room, which is "inside" the house but can be also considered "outside."

A *doma* is a room typically found in old-fashioned Japanese houses. It is behind a door, but outside an *engawa* porch and thus people wear shoes in a *doma*. The Earthen Room has the *irori* fireplace, a dining table surrounding it and chairs to help people make human connections.

Ito and LIXIL share the same philosophy that people crave these subtle human connections, especially after the Great East Japan Earthquake of March 11, 2011.

Proving this shared philosophy, the two parties collaborated in "Minna no Ie (Home-for-All)," which are houses for human connections among people who live in temporary housing structures after their homes were washed away by



tsunami after the quake. Some of them lost their loved ones, but the layout of temporary housing was not meant to encourage warm human interactions.

Thus Ito designed and built Home-for-All structures in several cities that were devastated by the tsunami. Home-for-All also uses many of LIXIL's housing products and typically has an *engawa* and a common space for people to gather, just like the House for the Nostalgic Future.

The discussion process of building Home-for-All in Rikuzentakata, Iwate Prefecture, helped the Japan Pavilion earn the Golden Lion for Best National Participation at the Venice Biennale, one of the most prestigious awards in architecture, in August 2012.

Nature in cities

To apply the Home-for-All concept to areas other than tsunami-hit Tohoku in a more complete form, Ito and LIXIL displayed the model room House for the Nostalgic Future at the 2013 exhibition. This house is made to be feasible in big cities or rural villages, as a standalone house or in a condominium.

The most external element of the House for the Nostalgic Future is the Passive Cooling Wall.

The wall is made of material that can absorb water well, so pouring water on it in the summer has the same effect as the Japanese tradition of *uchimizu*, or watering hot asphalt or concrete to lower the air temperature through evaporation.

Beyond the Passive Cooling Wall are the so-called Moveable Sliding Lever, or a collection of wooden doors that span the width of the house. These have the blinds that allow light and wind to enter while protecting from direct light.

The amount of light and wind can be adjusted by altering the angles of the



LIXIL's model of the future house has cutting-edge technology mixed with classic touches to make people feel as if in the good old days of Japan. ©HOUSE VISION PHOTOS BY NACASA & PARTNERS, INC



blinds. They are vertical so that privacy protection is easily possible. Homeowners can build their relations with neighbors and protect their privacy at the same time.

Within is the Earthen Room. The mixture of modern and traditional means the Japanese hearth is paired with a dining table for people to have a meal seated together. There is also a garden for growing vegetables, an outdoor bench, the *engawa* veranda and a bath with cream-like bubbles, known as the Foam Spa.

Having a garden on the grounds is made possible with the concept of Earthen Room being partly an outdoor space. Taking a nap on the bench, one can benefit from the feel of fresh air.

A bath is normally in a private place of a house, but by bringing it to the half-outdoor open place, it gives the feeling of openness like an outdoor onsen hot spring. The creamy bubbles help conceal the body to make people feel comfortable taking a bath in the open space, and these bubbles also retain warmth better and release less steam than regular bubbles.

Further within is a living room with a compact kitchen, a bed and other furniture. Separating the living room from the rest of the space is SAMOS II, which are large glass windows that can tightly seal off the living room and optimize the room temperature.

Another "inside" room is a secluded alcove, surrounded by walls of tiles made of Ecocarot, a material that can maintain warmth through moisture absorption and release, rendering air-conditioning unnecessary. The secluded alcove also has advanced soundproofing technology.

Increasing demand

LIXIL believes there is potential demand in both urban and rural areas for houses featuring the concept of the House for the Nostalgic Future.

For example, LIXIL sometimes renovates

houses in which a typical four-person family used to live and turns it into housing for one or two people. Such customers prefer to place a kitchen in the center for convenience of human interaction.

Also, customers increasingly prefer the idea of bringing nature into their lives, he said, so the House for the Nostalgic Future has easy access to the outdoors.

The House for the Nostalgic Future can be in a condominium as well as a standalone house on land.

"Demand is potentially everywhere, from anyone," Masu said. "Customers can be elderly or young, they can live in urban or rural areas. The important thing is that we can provide housing products and a living environment in line with their lifestyle. That's what we as a product maker can do."

Ito also agrees it is possible to enjoy life with nature in the center of a city or in a condominium. It is made possible with LIXIL's innovative product lineup.

"LIXIL makes various elements for the living environment but does not sell a fixed form," Ito said. "Thus LIXIL products can be freely incorporated and provide for free combinations of products."

House Vision

House Vision is a platform in which architects, designers and other related people and companies propose new ways Japanese will live beyond their current living environment. House Vision was initiated by designer Kenya Hara in 2010 and the March exhibition was the first one ever held. LIXIL and Ito's "Beyond the Residence — Imagining a House for the Nostalgic Future" was one of the seven exhibits.

The exhibition was held in Tokyo from March 2 to 24 and had some seminars, including a talk session between Hara, LIXIL President Yoshiaki Fujimori and Sadao Tsuchiya, an advisor to House Vision.



Yoshiaki Fujimori, the CEO of LIXIL, speaks at a talk session during the House Vision 2013 Tokyo Exhibition in March. ©HOUSE VISION PHOTOS BY NACASA & PARTNERS, INC, LIXIL



INNOVATIVE CITY FORUM

Nissan paints picture of future lifestyle with electric vehicles

As urbanization of the planet increases, more people will be living in cities, thus automobile makers will have to tackle issues such as traffic jams and accidents in these dense living conditions.

Also, people's lifestyles will continue to evolve and become diverse, and thus cars will also need to bring more convenience to drivers, such as by incorporating the latest technology.

Electric vehicles that give off no emissions while able to avoid traffic jams and accidents through autonomous driving capabilities will offer solutions to urban issues in the future, as the percentage of the world's people living in urban areas is estimated to increase to 60 percent in 2030.

"Sixty percent, that is the size of the problem here," said Francois Bancon, division general manager of Nissan Motor Co.'s Product Strategy and Product Planning Division of the Product Strategy Department. "We have a problem in the urban environment and mobility. We cannot keep the same way."

As the world has many cities with differing problems, solutions to each city's issues will vary. But in general, Bancon said, Nissan is working to offer three vehicular solutions for future cities: 1) smaller size, 2) zero emissions and 3) autonomy and freedom for drivers.

What Bancon calls autonomy and freedom is everything from avoiding traffic jams and collisions with other vehicles, to being able to use computers while driving or finding a parking spot and fetching a vehicle from the spot with a single tap on a smartphone.

Small size, zero emission, autonomy

Smaller cars will add to the variety of vehicle use as urban lifestyles vary, Bancon said. While there is a limit to the smallness of gasoline engine cars because a standard engine has to be a certain size to work, electric cars can be as small as 1 meter in width.

"Until now, people used the same car to go to the supermarket or to the mountains. This will have to change," Bancon said. "Most of the time, you don't need a big car in a big city."

Bancon pointed out that Nissan introduced the Land Glider concept electric vehicle, whose width is 1.1 meters, at the Tokyo Motor Show in 2009.

Narrower cars mean less space is needed for parking, thus cities in developed countries, such as Tokyo, can benefit from them, Bancon said.

On zero emissions, Nissan has introduced several types of EVs including the commercially available Leaf.

"Zero-emission leadership is our commitment, and we are taking all the initiatives and making all the necessary investments to make it happen," Nissan said in its Vision statement on its Zero Emission website. "Zero-emission mobility is our passion, a true breakthrough and a key to our future."

Nissan has sold 71,000 units of the fully-electric Leaf as of July, accounting for more than half of fully-electric vehicles sold worldwide.

Nissan introduces the future of zero-emission mobility supported by a zero-emission infrastructure.

Future picture

In the future picture that Nissan paints, houses will have solar panels and EVs that can be used as rechargeable batteries. At night or on a cloudy day, an EV can supply electricity it has stored during sunny days, and thus zero (or at least near-zero) emissions life. There will be parking lots with charging stations for EVs, where people who drive gasoline cars or take trains or buses can change to EVs, in order to share with people in communities the costs of maintaining the zero-emission infrastructure. Parking lots at convenience stores and diners will have charging functions that will automatically charge parked cars without the need for cords.

Currently at Nissan headquarters in Yokohama, there are solar panels, rechargeable batteries to store electricity and charging stations for EVs. The whole system has the capacity to charge 1,800 Leaf vehicles a year.

In another example of EV use, Nissan has donated six Leaf vehicles to the New York City Taxi and Limousine Commission for trials, while New York Mayor Michael Bloomberg aims to have EVs make up a third of the taxis in the city. There are fast EV chargers in the city; additionally, drivers who volunteer to use the Leaf are provided with two chargers.

To realize a zero-emission society, municipalities and industries other than carmakers will need to cooperate, Bancon



Top, Youichi Kishimoto and Francois Bancon shake hands in front of Smart House of the Future. Above, Nissan's Autonomous Drive. YOSHIKI MIURA, NISSAN

said. The availability of charging stations is one of the key elements to spreading the use of EVs by the general public.

On autonomy and freedom, among various technologies Nissan is developing is an autonomous driving system to prevent traffic accidents.

"Our slogan is to make cars electric and intelligent. Autonomous driving will eradicate traffic accidents because 93 percent of traffic accidents are caused by human error," said Youichi Kishimoto, general manager of Nissan's Planning and Advanced Engineering Development Division of the Technology Planning Department.

In combination with satellite communications and car-to-car communications, EVs will be able to avoid traffic jams on their own, Kishimoto said.

Autonomous driving

Autonomous driving will free up drivers' hands and attention, and thus drivers can do many things, such as use computers, watch TVs or read books.

"I call it freedom and autonomy because it gives people time to enjoy themselves," Bancon said. "You need to be connected 24/7. When you are in a car, it should be no different from when you are at home."

On connectivity to the Internet, Bancon said, "It's not a discussion. It's a given. We will have everything in the cloud and we can access it from a car."

"Yes, Nissan is a very ambitious company," he said.

There is no order in priority of the three points: smaller size, zero emissions and autonomy and freedom, Bancon said. "You need it all, so Nissan will have it all."

However, priority may vary by locale because each country has different issues.

For example, India has one of the most difficult urban development problems. The population shift to cities is rapid and the problem of traffic jams and accidents is grave, Bancon said.

Also in India, the demand for small cars is low because large luxury cars are considered status symbols, he said.

In Tokyo, smaller cars are in high demand partly because of a shortage of parking spaces.

"But the biggest question in Tokyo is why do you need to own a car? About 60 percent of people use only public transportation in Tokyo," he said. "The solution would be 'available only when I need it.'"

China is mixed bag. People who were born in the '80s or later grew up under the "One Child Policy" and are very advanced, while the older generations are more traditional, he said.

Conservative Chinese consider large luxury cars as status symbols just as Indians do, while younger generations seek autonomy and freedom, Bancon said.

Meanwhile, Europeans are very demanding about autonomy and freedom and a lot more demanding than Tokyoites on zero emissions, he said.

Bancon also stressed the point that Nissan is collaborating with many municipalities across the world on their "smart community" projects. A smart community is one with residential and commercial infrastructures that can generate and consume electricity efficiently.

One of the primary examples of such collaborations is with the City of Yokohama. According to the master plan of the Yokohama Smart City Project compiled in August 2010, Nissan provides EVs, fuel cells and rechargeable battery electricity to be incorporated into the community energy management system, or CEMS.

Autonomous driving is also an ongoing process.

"It doesn't make sense to say the time frame as to when automatic driving will be achieved. It will be a gradual process," Bancon said. "But by 2020, we will have some degree of autonomous driving."



The Nissan Leaf Autonomous Drive prototype. NISSAN

INNOVATIVE CITY FORUM

Creating healthier ecosystems in future cities by rethinking urban areas from scratch

The mass production of affordable automobiles is perhaps one of the most significant technological achievements of the 20th century.

And due to that, many modern cities have been designed under the assumption that cars are a necessity and almost require residents to own vehicles to get around.

Joichi Ito, director of the MIT Media Lab, believes that such "zoned" cities are unsustainable. With more technological development — including shared, compact electric vehicles and affordable, "transformable" apartments — future cities will have a higher density of people while creating healthier ecosystems, he said.

"I think technology is what caused the cities to be formed in the first place," Ito said during a recent interview in Tokyo. "I think that as different technologies become common and become part of the infrastructure, the nature of cities changes."

But when it comes to technology and urban planning or city development, many of the latest technological changes have not been reflected.

"The big change that's happened recently is information technology. I don't think that the urban planning and city design has reflected very well yet the changes in the technological landscape," said Ito, 47, who along with working at the Massachusetts Institute of Technology is also on the boards of companies including Sony Corp. and The New York Times.

Indeed, information technology has seen some drastic changes in recent years, such as the rapidly spreading use of smartphones and tablet computers, the rise of social media and the use of big data.

Ito said those changes are to some extent used in the cities, including big data for optimizing traffic, but they are being used to merely make the existing systems run more efficiently rather than changing the systems of the cities.

"What we would like to do is rethink the city completely from scratch based on new information technology," he said, adding that MIT is developing city-related technologies with visions for future cities.

One example he brought up is that of compact electric vehicles, which are developed by focusing on the mobility of people as their behavior in cities changes.

Ito said the use of small, shared electric vehicles will be a part of future cities, and people can use their mobile devices to check where they can drop them off.

"We are developing an ecosystem of lightweight, shared electric vehicles and related networks, charging infrastructure, rebalancing algorithms and interfaces to encourage a more sustainable mobility mode shift," he said.

Another technology being developed at MIT is called Transformable CityHomes, which is a micro-apartment whose rooms can transform from, for instance, a living room to a bedroom and



Joichi Ito SATOKO KAWASAKI

to an office through moving walls.

Ito said that by making this apartment affordable for young people and building it in the central district of cities, it will contribute to increasing the density of people.

A general concept of the future cities, Ito said, is "how do you increase the density but still increase the quality of life?"

According to Ito, cities with higher density are more energy-efficient and see an increase in jobs, wealth and cultural facilities.

In fact, some cities designed before the invention of cars, such as Paris, are made up of many small, compact districts. People can find things within walking distance in this kind of city, and it is more natural and healthier than zoned, automobile-centric cities, Ito said.

Ito pointed out that one reason why the technological changes do not get integrated in a timely manner in city development is that urban planning and architecture are quite established fields with fixed career paths.

He said the academic process of becoming an urban planner or an architect has not changed very much over the last 50 years, so it needs to bring other disciplines into the process.

The other disciplines Ito especially stressed are art, design, science and engineering, as many interesting and creative work tend to combine these four elements.

"I think for a city to be livable, it has to have all four," Ito said. "It has to have very good engineering. It has to have very good design. It has to have art. It has to have science."

In that sense, Ito said he is looking forward to the Innovative City Forum that will be held in Tokyo in October because the event features experts familiar with those fields so the event participants can think about the city in an interdisciplinary way.

Neri Oxman, one of the keynote speakers at the event, is one of Ito's colleagues at the MIT Media Lab. She is an award-winning artist as well as a scientist, designer and engineer.

Elizabeth Diller, who will be participating with Ito in a session called "Cutting-edge technology and future city," is an architect who Ito said does "amazing work in public spaces, crossing between the social and artistic and the design and urban planning."

Ito will also be taking part in a session called "How can museums contribute to the future city?" in which he said he wants to rethink the role of the museum

in the city.

As the title of the event is Innovative City Forum, Ito said one key for cities to be innovative is to have good universities integrated in the fabric of the cities.

For instance, Cambridge, Massachusetts, has MIT, Harvard University and many other schools, making for a large number of students and researchers and a tremendous amount of innovation in the city, Ito said.

In terms of being innovative, Ito said the Roppongi Hills complex in Minato Ward, Tokyo, seems to be on the right track, as it has residential areas, stores, educational and art facilities all within walking distance, along with high density. Roppongi Hills also has a good relationship with the local government and has gotten Keio University involved in its development.

Overall, Tokyo itself is doing pretty well, but it still has missing some pieces, especially in the area of art, Ito said.

"There isn't very much consistent architecture across Tokyo," he said, "and there are a lot of decisions made without design or an artistic input."

Ito said that in the not too distant future, if the Media Lab City Science project vision is realized, an ecosystem of driverless vehicles, including single-person three-wheelers and two-person CityCars, will pick up and drop off passengers anywhere in the city.

These lightweight, hyper-efficient electric vehicles can be folded to



CityCar study in Singapore MIT MEDIA LAB

occupy very little valuable real estate when parked. These vehicles will robotically charge themselves and be allocated through powerful algorithms using real-time human behavior data and demand prediction, he said. Traffic signals, parking lots, and road design standards will become obsolete, accidents will essentially be eliminated and few city dwellers would choose the inconvenience of owning a car, Ito added.

Concurrently, fixed bus and tram routes would be replaced by an agile, on-demand, free-roaming mass transit system.

Ito recalled that the late former Mori Building Co. Chairman Minoru Mori often complained that while Tokyo has well-designed high-density nodes, the city as a whole was far too low-density and sprawling.

"The disadvantages of a decentralized, spread out urban area are tremendous and the environmental damage of urban sprawl cannot be ignored," Mori had said. "As a large city, Tokyo must be used more efficiently and the population density increased." This concern informed the design of Mori Building Co.'s Roppongi Hills Mori Tower and the Roppongi Hills complex.

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INNOVATIVE CITY FORUM

Art may hold the key to solving the problems of the future

What contribution can artists make to the future of cities? According to Mori Art Museum director Fumio Nanjo, the potential is limitless.

Ahead of the upcoming Innovative City Forum, at which he will participate in a range of discussions on art, urbanism and the future, Nanjo said that he believes the key to artists' contribution lies in their focus on creativity.

"At the core of any discussion of creativity or innovation is art," he explained. "It is the one field of human endeavor in

which there really are no restrictions. When one does art, there are no frameworks, no rules to which one must adhere."

At the mention of art, the Japanese public is likely to first think of Picasso's oddly deformed portraits, or the giant polka-dot installations of their own Yayoi Kusama. According to Nanjo, the very existence of such artwork encourages freedom of thought and expression in its viewers.

"Think about the impact that one of Kusama's installations has on children. Children think, 'This is possible, it's OK to

make something like this,'" he said.

The same would go for Picasso. In art, there is no "correct" answer to how a person should be portrayed; there is only a question: What would you do?

"The more we can create a society in which people seek their own answers, in which people address problems without allowing existing practices to restrict them, then the sooner we can create a truly innovative society," Nanjo said.

But art's contribution is not limited to the long-term nurturing of creative thinkers. Art also has an impact that is immediate.

"Look at the way that developers these days try to incorporate large sculptural pieces in their properties. Why would a company pay Yayoi Kusama, for example, to provide a giant sculpture to be installed in its building?" he said. "It's because art has the power to attract people."

Whether permanent or temporary, works of art in public spaces have been shown to alter the way the public experiences an environment. Roppongi Art Night, a celebration of art in public spaces in Roppongi for which Mori Art Museum is one of the organizers, brings crowds to the Tokyo district each March. Similar events have had a comparable impact in Paris and elsewhere.

Another example in Japan is the Aichi Triennale, the second edition of which is being held through Oct. 27. In that event, thousands of people are drawn to an area of Nagoya they had likely only ever passed through, Chojamachi, as well as the city of Okazaki, Aichi Prefecture, 30 minutes from Nagoya by train. The Echigo-Tsumari Art



Fumio Nanjo YOSHIKI MIURA

Triennale and Setouchi Triennale have also been successful in attracting thousands of visitors from around Japan and the world to two very isolated regions: the mountains of Niigata Prefecture and the islands of the Seto Inland Sea.

Art's impact on cities can be even more direct. "Artists can make concrete proposals regarding shapes, colors – the formal elements of a city, too," Nanjo said.

Nanjo widens this to encompass practitioners of the applied arts — designers and architects. "With new technologies, architects can now propose building shapes that were unthinkable before," he said. "Why should a building be rectangular? Why should a city be

CONTINUED ON PAGE B8

Making it happen through creative thinking

Mori Art Museum director Fumio Nanjo believes that art and creative thinking hold the key to solving the problems of the future. But how to create a city that is open and accepting of art?

One of the answers, according to Nanjo, is to facilitate ways for art to be shown to the public. That means establishing museums that are accessible and in tune with the latest artistic developments.

"Establishing an art museum is complicated," he said, "because it must be designed and configured so that it actually suits the local society."

Asked whether Tokyo requires any more museums, he shared his idea for a "Cool Japan" museum.

"This could be a place that is not limited to visual art per se, but simply to whatever is the most exciting element of Japanese culture at a particular time," he said. "The approach would be like a magazine, where once every six or 12 months the exhibit

would change completely — maybe an anime show one time and an architecture show the next."

Elsewhere, though, different approaches would be necessary. Nanjo has observed closely as cities and private collectors throughout Asia — in particular in China — have rushed to build museums over the last few years. Several hundred new museums are opening annually in China alone.

"You need to be careful that you are building the museum so that it is suited to the kind of art you will be able to show," Nanjo said.

This is an area in which he thinks Japan, which has almost a century of museum-building experience, might be able to offer advice to its neighbors.

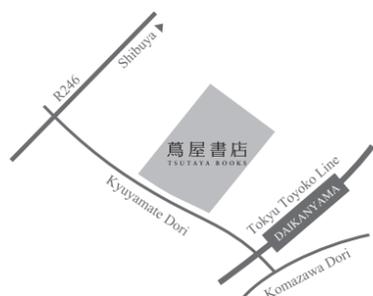
"Japan has a long history of establishing and managing museums to exacting international standards," he said. "This could be an area in which Japan can help foster creativity throughout the region."



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INNOVATIVE CITY FORUM

Creative solutions

CONTINUED FROM PAGE B7
designed on a grid?"

Nanjo makes note of one recent example of the Dutch artist-designer Daan Roosegaarde, who this year will be experimenting with the use of photoluminescent paint to make roadway markings — a project that, if successful, could render streetlights unnecessary. "If the road markings can be made to glow for up to 10 hours at a time then drivers won't need the roads themselves to be illuminated," Nanjo said.

The key for Nanjo is that Roosegaarde is neither a city planner nor an infrastructure specialist. He is an artist whose work in the past has included such diverse elements as clothing and bed frames.

"Precisely because artists such as Roosegaarde don't have specialist knowledge, they can approach a problem without any preconceived notions. Where a specialist will be working from a position of understanding logistical or technical limitations, an artist will think only of ideals — what is the best solution?" Nanjo said. "That is why real innovation can occur."

Nanjo believes that Japan currently faces problems that artists and creators could help solve. "The world is changing so quickly that the past is no longer much of a guide for the future," he said.

What are required are the kinds of innovative approaches that artists — or artistic styles of thinking — can provide.

"How is it possible to nurture creativity in a society? How to utilize that creativity? How to prepare society for looking at things creatively? Only art has the answers."

Innovative City Forum

designing life for future

October 16–18, 2013

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<http://icf.academyhills.com/>

PROGRAM OVERVIEW

Oct. 16

- Opening Session
- Leading-edge Technologies Session
- Urban Management, Policy and Strategy Session

Oct. 17

- Culture and Creative Session
- GPCI (Global Power City Index) Session (by Mori Memorial Foundation)
- Urban Land Institute Session
- The Asahi Shimbun GLOBE Session

Oct. 18

- Mori Art Museum Session
- Closing Session

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