

Dialogue:

Future Cities

AND

The Future of Cities



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By Victoria Kiechel and Erran Carmel



What images of futures come to mind when you think of a city of the future? Sleek, modern, glass towers? Flying cars and buses? Urban farms? Completely sustainable communities? Imagine building a new city from scratch? Who would live there? Would some people not be encouraged to live in your future city? And what can we learn from the cities we call home now? What works; what doesn't?

In the following dialogue, futurist Erran Carmel and architect Victoria Kiechel, both residents of Washington D.C., a planned city, explore these and other questions about the future of cities.

Erran: Vicky, you study and teach about two of the most important dynamics on the planet: urbanization, and climate change. I'm particularly interested in your views on cities as experiments in designing our sustainable future.

Vicky: One of my early-life brushes with future cities occurred when I was a young child. My family and I went to Expo '67 in Montreal, Canada, and I saw two, now iconic, city planning structures purpose-built for that exposition. One was Buckminster Fuller's [geodesic dome](#) -- which I subsequently learned that in an early iteration he had proposed to use to cover [midtown Manhattan, New York City, to limit atmospheric pollution](#).



Image Title: AI generated image of Buckminster Fuller's geodesic dome over Manhattan city
Image created using Gemini



Image Title: The Biosphere, Environment Museum, Montreal
Photo by [Dana Andreea Gheorghe](#) on [Unsplash](#)



Image Title: Habitat 67

Image credits: Canva

Vicky: The other was Moshe Safdie's [Habitat 67](#), Safdie's demonstration project and future vision for dense, pre-fabricated, socially sustainable urban housing.

After almost 60 years, many now judge the experimental, futuristic Safdie complex both for its successes – co-operative ownership, incorporation of green spaces amidst density, and openness to resident adaptation of existing housing units – and its failures, which included its failure to become a model of affordable housing integration.

Like many futurists who walk the talk, Safdie pondered the trends and took risks, implementing his futurist vision in built form. It's a great illustration of how future, audacious city visions can succeed and fail at the same time.

As for futurist Bucky Fuller, I feel connected to him still: when I arrived at American University here in Washington, D.C., I was delighted to discover that I would work in a building by sustainable design guru William McDonough that features, on its exterior façades, reproductions of Bucky's [Dymaxion maps](#) of the world. This was Fuller's attempt to eliminate the distortion of size and shape in traditional maps

Erran: To return to the present and future, I'm fascinated by current proposals for new, experimental, planned, futuristic cities.

Vicky: So many examples. Egypt's [New Administrative Capital](#), Indonesia's [Nusantara](#), and newer African cities such as [Konza Technopolis](#) in Kenya are examples of smart cities that aspire to use real-time data and technology to interconnect human needs and efficiently regulate urban, energy, transit, water, and waste flows. Where do you want to begin?



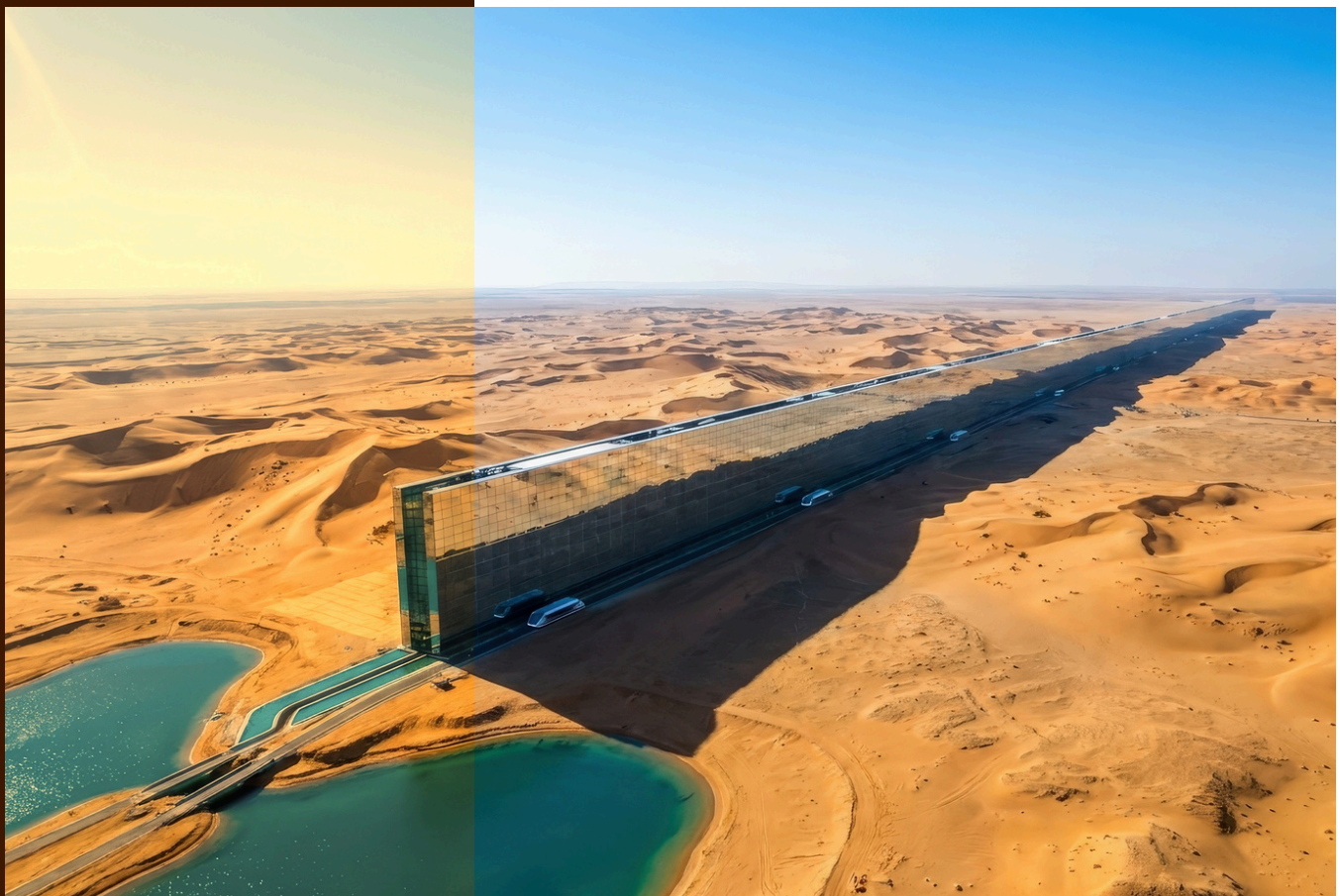
Image Title: The new indonesia presidential palace in East Kalimantan

Image credits: [nunawwoofy](#) on AdobeStock

Erran: Perhaps with a controversial one: [Neom, in Saudi Arabia](#), is perhaps today's most ambitious prototype, but it seems to be just the latest wave in a global experiment to "design the future" rather than inherit it. *Neom* aims to be an urban lab: *Neom's* "The Line" is a 170-kilometer-long narrow, 100-story deep, and vertically dense city co-locating housing with work, services like shops and schools, and a high-speed rail line linking the entire line. Not just a fifteen-minute city, where everything one needs is within a fifteen-minute walk, but a five-minute city.

Image Title: AI generated Aerial view of the line, a futuristic linear city project in saudi arabia

Image credits: AdobeStock



Vicky: Stop right there. Yes, the planners of [Neom's Line](#) are advertising its walkability, its design opposition to suburban sprawl, and its projected low carbon emissions in operations, but consider the less-visible impacts of this “evocative vignette” and future city. Impacts that are already being experienced. Remember that the classic definition of sustainable design requires a focus not only on ecological sustainability but also on social and economic sustainability. Meaningful construction began in 2021, and already there is [documentation](#) and [much criticism](#) of its environmental and social harms. Its construction has displaced human settlements and there have been deaths among its South and East Asian immigrant labor force – some of whom are essentially indentured. If the design is constructed as intended, its long, mirrored exterior will be disastrous for some animal species and strike-prone for migrating birds. Potable water will be supplied by desalination, an energy-intensive process that transforms sea ecology.



red sands and spectacular sandstone rock formations, Hisma Desert – NEOM, Saudi Arabia

Image credits: [NEOM](#) on [Unsplash](#)
Illustration generated using Gemini

And then aspects of [social hierarchy and exclusivity loom](#). Who will be allowed to settle there? Will wealthier people live near the vertical top of the line with poorer people at the bottom? The linear nature of the design and its reliance on a single rail transit line make it simultaneously vulnerable to disruption and to intentional closure for social control.

Have you studied the renderings? The linear design is in part akin to what some urban planners call a “green ribbon.” There appear to be pocket parks and green bridges along its length, but what is telling for me about its social engineering is that there are no public squares or gathering spaces to accommodate large outdoor events and gatherings, including spontaneous ones and demonstrations. Its vision for future human inhabitation is that people will go from work to indoor amenity spaces to home in this climate-controlled (see Bucky Fuller’s midtown Manhattan vision!), narrow, and deep space that purports to be “outdoors,” yet is the direct opposite of the desert ecology which surrounds it. It seems asocial, or even anti-social. This is not a good scenario for a socially connected human future. Even though the storyboards for this future construction are indeed evocative, they look more evocative of an urban dystopian future such as you see in notable movie stagings, beginning with 1927’s *Metropolis* and carrying on through *Blade Runner* and *The Matrix*.

Interestingly, as of this spring (2026) Neom’s construction has been halted in the face of funding and feasibility challenges. The intent is to scale it back. We’ll see what that means in terms of the proposed design.

Erran: Leaving aside Neom’s significant humanitarian and ecological issues, the key question I have for you is: how do these new city innovations influence design and planning back in the existing legacy urban areas?

Have a look at this list I compiled of new cities – high-concept experiments from the global urban laboratory. They highlight the political, technological, and economic opportunism behind their designs.

**FROM-SCRATCH CITIES PLANNED AND/OR CONSTRUCTED
SINCE 1995 WITH IDENTITIES/PRINCIPAL PLANNING
GOALS NOTED**

- Naypyidaw, Myanmar (new capital)
- Sejong, South Korea (administrative capital)
- Songdo, South Korea (“smart” city and tech hub)
- Putrajaya, Malaysia (administrative capital)
- Nusantara, Indonesia (administrative capital)
- Tianjin Eco-City, China (sustainability)
- Nava Raipur, India (regional capital)
- Masdar City, UAE (sustainable, zero-carbon city)
- King Abdullah Economic City, Saudi Arabia (“smart” city and economic hub)
- Neom, Saudi Arabia (sustainable city)
- Konza Technopolis, Kenya (economic hub)



**Panorama view of Central park in
Songdo International Business District,
Incheon, South Korea.**

Image credits: AdobeStock

And I want to underscore that the share of the world’s population living in such purpose-built 21st century cities is miniscule, estimated at 0.05%, and reaching perhaps 0.5% by 2050, even under the most ambitious growth scenarios. So one thing these new cities tell us about the future of human settlement and its design for sustainability is that existing, established, legacy cities will remain our settlement hubs.

Existing cities are the future.

All these fancy new cities don’t have much of an impact on the global urban population problems, but perhaps new cities have an impact as *sustainable design labs* – that influence trends in design and planning in legacy cities? Are their innovations replicable?

Vicky: For me, your list of new cities raises a deeper question: What actually counts as helpful innovation in urban design?

I have always defined urban innovation as that which is both replicable and scalable. By this standard, much of what is celebrated as “innovation” in new cities isn’t usefully innovative at all, because it cannot be transferred to existing urban contexts. Some interventions are highly site-specific — such as Neom’s desert-based linear megastructure, while others depend on infrastructure systems that are nearly impossible to retrofit into legacy cities, such as Songdo’s automated waste collection network.

Of the practices emerging from new cities, perhaps the most transferable innovations lie in smart city technologies: sensor networks, data integration, and increasingly AI-driven systems for managing energy, transportation, and public services. Yet even these raise critical questions, as I see them, since tools designed for efficiency can just as easily be used either to favor or oppress certain groups. They could be used for surveillance, exclusion, or unequal resource allocation when deployed in the socially complex realities of established cities.

Remember that unlike nascent, newly planned cities, existing cities are ecologically, socially, and economically messy and complex, and their identities are ever changing in reaction to who inhabits them, and how.

In seeking to apply the innovations of new cities to existing cities, I believe we should begin by asking some probing questions. Here are four of them:

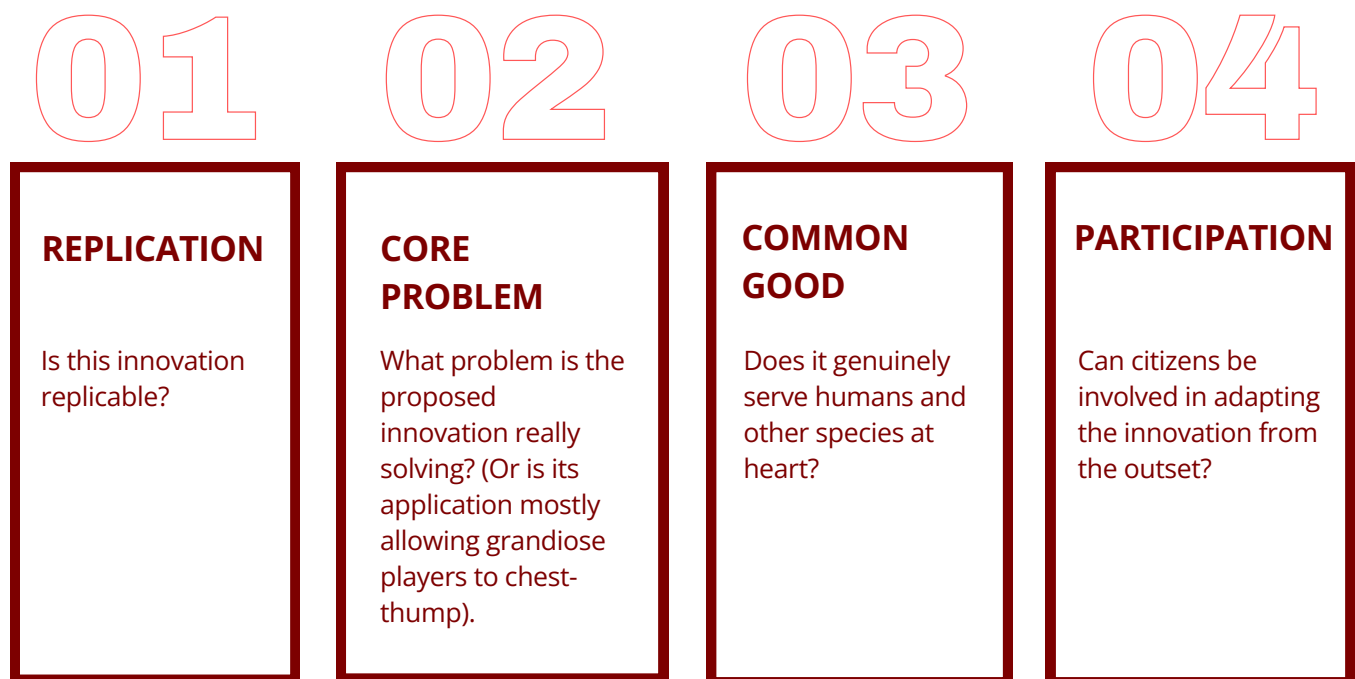




Image title: Masdar city

Image credits: Canva

With new cities and the innovations within them, we also have the problem presented by time scale. It takes a while to test new concepts, especially in a new city with a small population. And there are the “grey rhinos,” which you futurists are pretty good at spotting, the impacts of climate intensification, sudden weather and natural disasters, and leapfrogging technology that quickly bypasses even recent innovations, and economic downturns, just to name a few.

[Masdar City](#), a new city in the Abu Dhabi Emirate in the United Arab Emirates, was designed to be a new green city, a “city of tomorrow” with a population of 50,000. Yet now, about 20 years on, after one global financial crisis and the city’s inability to attract people willing to live in, rather than commute to, the city, its permanent population is just one-tenth of that population goal – about 5,000. Its innovations were meant to make Masdar City self-sufficient and sustainable in some respects: part of the vision was that it would be entirely energy independent and carbon neutral, relying on renewable solar power. But this failed, in practice, and the city ended up connecting to the utility grid. They tested out a personal rapid transit system with autonomous pods on an underground track, and in light of its extraordinary expense and inflexibility, ended up mostly going back to cars (electric vehicles) for personal transport.

Erran: So, then, how can we apply the lessons from future cities such as Masdar City and Brasilia to existing cities?

Vicky: With caution, I don’t think there are any big lessons. Rather, what works for the rest of the 99% of urban areas is imaginative planning based on *human observation*. One of my favorite case studies is now fifty years old. The mayor of the not-rich, decidedly middle-income Brazilian city of Curitiba, was Jaime Lerner – and an architect like me. The fast-growing city needed a new transit model. A subway was too expensive and time-consuming to build. Lerner, like any thoughtful architect, went out to observe and document how his city’s bus system worked, and to understand why it was so inefficient. He saw folks lining up to mount the stairs to the bus and pay their fares and had the epiphany that one of the reasons that bus service was so slow was that the boarding process was agonizingly long as people fumbled with entry and fare payment.

His team's design response was to make inexpensive, [but futuristic looking, raised and enclosed platforms, called "tube stations," at bus stops](#). You would step up, pay your fare at the entrance to the platform, and wait for bus arrival in sheltered comfort, just as you would in a subway. The bus approaches, the doors open, you board, the doors close, and you are on your way quickly and efficiently.

Lerner is now considered to be the father of bus rapid transit, or BRT, a model now replicated globally. And today, that futurist capital city Brasilia, "[... is viewed as a white elephant city, \[while\] Curitiba has become the gold standard in sustainable urban planning.](#)"

Another transit innovation comes from another Latin American city, Colombia's second largest city: Medellin.

Medellin is an urban area surrounded by large informal settlements (slums) on the steep mountains that surround it. The city's innovation was to apply a luxury transit mode from ski resorts, the gondola or funicular, newly named the Metrocable, to a dense, existing mountainside urban area. As in Curitiba, this choice was brilliant in its understanding of local conditions and limitations.

Image Title: Curitiba, PR, Brasil

Image Credits: Photo by ABNER LOBO from [Pexels](#)



The Metrocable's structural foundations required minimal excavation and little disruption to existing neighborhoods. As a transit mode, it reduced the commute time from poor neighborhoods into the central city and even attracted curious riders from richer neighborhoods, thus promoting greater urban social contact and cohesion.

Beyond transit, there are creative – dare I say futuristic – innovations to existing cities that come from creative thinkers and not from planned new cities. Examples include urban farming ([Tokyo](#), [New York City](#) and now in scores of cities), community-sponsored and shared energy sources ([Framingham](#), [Massachusetts](#)), wastewater conversion to potable water ([Singapore](#)), and waste-to-energy power plants doubling as recreational areas ([Copenhagen](#)).

Erran: I accept your argument that the most useful future innovation comes the feedback loop of innovations in legacy cities being implemented in other legacy cities. But, as a futurist I cannot help my fascination with new, futuristic cities. After all, the lure of creating a new city from scratch remains a perennial itch for both big thinkers and ego-maniacs.

I'm intrigued by utopian urban planning, and one of its recent embodiments here in the United States is [Telosa](#). It is envisioned for a yet-to-be determined large site. This experiment in designing the social and political future is the vision of billionaire, Mark Lore, as an expression of his social values. Unlike the examples we have discussed so far, in addition to green planning strategies, Telosa's design is intended to be grounded in communitarian principles.

For example, all land would be “owned” as a community endowment: as the land value appreciates, the value from increasing land prices would be put back into community development. Building on this ethical-philosophical foundation, Lore's new city has all the sustainability – energy, food, and water independence – of the most visionary new cities, with diverse work and housing opportunities.

Vicky: I did not know about Telosa until you told me about it and I'm glad to be acquainted with it. The ideals sound right to me.

In closing, I'd like to remind you that you and I live in a once-new, planned city: Washington, D.C. The person who first insisted that the United States should have a *purpose-built, planned capital city* was none other than George Washington himself. And the design was commissioned to a young French engineer named Pierre Charles L'Enfant.

In 1791 his design was of a symbolic, socio-spatial embodiment of the principles of our nation, where centers of political power balance one another spatially, linked by major avenues. In the 200+ years since L'Enfant, our planned classical, republican city grew and evolved – gradually achieving more human density and diversity. Like many new cities, Washington was perpetually on the brink of failure. Our city was once known as the “City of Magnificent Intentions,” as British novelist Charles Dickens coined it in 1842. Perhaps like all cities we are still... a work in progress.

Erran Carmel is a Professor at American University's Kogod School of Business. He is a former dean and former department chair. He is best known for his multi-decade research on the globalization of technology work. His expertise in technology management led him into foresight. As a futurist, he regularly teaches futures courses and writes on foresight topics in both scholarly and public venues. He has visited half of the world's 80 largest metropolitan areas and 67 countries.



A practicing architect and urbanist, Victoria Kiechel is Hurst Senior Professorial Lecturer in the Department of Environment, Development, and Health in American University's School of International Service, where she leads the Earth Scholars program and teaches such courses as Climate Resilient Cities, Global Cities, Tactical Urbanism, and the Climate and Conflict Migration practicum. Through consulting work with the Cadmus Group LLC, Vicky supports the creation of climate-resilient buildings, infrastructure, and policy for diverse local, national, and global public- and not-for-profit sector clients.