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Reshaping affordability: interventions for inclusive and livable cities

COLLECTION OF INSIGHTS

JANUARY 2024



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Executive summary

Reshaping affordability: interventions for inclusive and livable cities.

In the World Economic Forum's [Global Risks Report 2023](#), the cost of living crisis was the #1 risk for world leaders over a 2-year period.

The urban affordability crisis is widespread and multifaceted, highlighting systemic injustice and deepening inequities for the [56% of the global population](#) that calls cities home today. It refers both to the increasing [difficulty that many people face](#) in finding affordable housing in urban areas and the rising cost of living, especially for [basic services](#), including water, sanitation, energy, transportation, and healthcare.

The urban affordability crisis exacerbates urban inequities by pushing vulnerable populations, including low-income households, migrants, youth, elderly, and minorities, into precarious, overcrowded, or unsafe living situations. Unsurprisingly, these areas have inadequate access to employment and education opportunities, healthcare, and green spaces.

With more than 1.8 billion people worldwide lacking adequate housing, and [over 70 percent](#) of the urban population in developing countries underserved by municipal services, it is urgent that we advance scalable interventions backed by concrete insights for city leaders to address the urban affordability crisis.

This year, the World Economic Forum's [Global Future Council on the Future of Cities](#) has decided to put urban affordability front and center. This collection of articles provides an overview of powerful ideas on land use, sustainable communities, and inclusive design to make cities affordable.

Access to adequate housing and basic services is fundamental to affordable and accessible cities. This starts with investing in formalising informal housing for the [one in eight people who live in slums worldwide](#). Jonathan Reckford and Mayor Yvonne Aki-Sawyerr outline this challenge in *Informal settlements are growing worldwide – here's what we need to do*.

This is a story of multiple A: Housing must be more than affordable but also accessible, adequate, adaptable, and available.

Principally, we must increase the supply. Mayor Carlos Moedas shows how Lisbon aims to re-establish affordable housing supply and living conditions with a multi-dimension approach of short-term solutions and long-term investments, backed

by an 800-million-euro public investment plan, and offers insights for fellow city leaders in *How Lisbon and other world cities are tackling the affordable housing crisis*. In *Public land and commercial investment can drive affordable housing and workspace*, Places for London's Emma Hatch and Opportune Simon demonstrate another approach to boost affordable housing supply taken by Transport for London: the development of a property company to leverage underutilised public land for affordable housing development, small business space, and low carbon transport infrastructure.

Housing cannot be planned in isolation. Mobility and economic opportunity – access to jobs – is critical when planning affordable and accessible cities, requiring the integration of land use, transportation, infrastructure, economic, and housing planning. Sameh Wahba and Shin-pei Tsay discuss planning and sequencing of housing and mobility investments, leveraging innovative financing mechanisms, and utilising technology to bridge gaps in service delivery in *The way to sustainable cities is through transport and housing – this is how we get there*. Mayor Daniella Levine Cava and Steven Lewis use case examples from London and Miami-Dade to show how transit-oriented communities can mobilize public and private resources to improve affordability and support social, economic, and climate resilience goals in diverse urban contexts in *London to Miami-Dade: an integrated approach to developing equitable and thriving communities*.

Sustainable urban development necessitates the consideration of social, economic, and environmental well-being. In *Greening cities as a pathway to affordability*, Aziza Akhmouch and Lord Mayor Sally Capp demonstrate concrete strategies for fostering resilient and affordable urban living amidst climate challenges. Maimunah Mohd Sharif and Abeer Al Akel discuss the importance of centering local culture, historic preservation, managing economic pressures, and mitigating environmental impacts in locales that rely on tourism in their essay *Turning tourism into development: mitigating risks and leveraging heritage assets*.

Affordable and accessible cities must be inclusive. Diana Rodríguez Franco and Ann Aerts show how diverse stakeholders have leveraged data and urban planning and design to target interventions to vulnerable populations to improve health outcomes in *Data and density: two advantages cities have in boosting health equity*. Mayor Soichiro Takashima

and Nona Yehia's discussion in *Why designing an accessible and inclusive city goes beyond affordability* is further evidence of design's impact, showing us two more examples: a program to reach dementia patients and an employment model for individuals with disabilities.

We conclude with Mayor Marvin Rees and Carlo Ratti's powerful discussion of liminal ghettos in *How big data and local politics can make our cities more inclusive* and how city leaders can leverage data to develop programs and policies to bring people together.

This collection of articles co-authored by members and guests of the [Global Future Council on the Future of Cities](#) offers more than a set of

interventions to address the urban affordability crisis. It offers insights for leaders in urban transformation to act now. Because when it comes to a crisis as pervasive as urban affordability, inaction isn't an option, and we can all start somewhere.

In 1968, the French philosopher Henri Lefebvre posited that every person should enjoy a "right to the city" – that urbanity is a fundamental gift to all humanity. In today's urban century, we do know that cannot be fully achieved if people can't afford to live with dignity in cities. As the diversity and reach of the contributions to this report can attest, affordability should ultimately become a matter of accessibility - that is, for every individual, being able to enjoy the rights, liberties, and joys that can make cities the most hopeful places on the planet.

Key Highlights

56%

of the global population resides in cities

1.8bn

people worldwide are lacking adequate housing

70%+

of the urban population in developing countries are underserved by municipal services

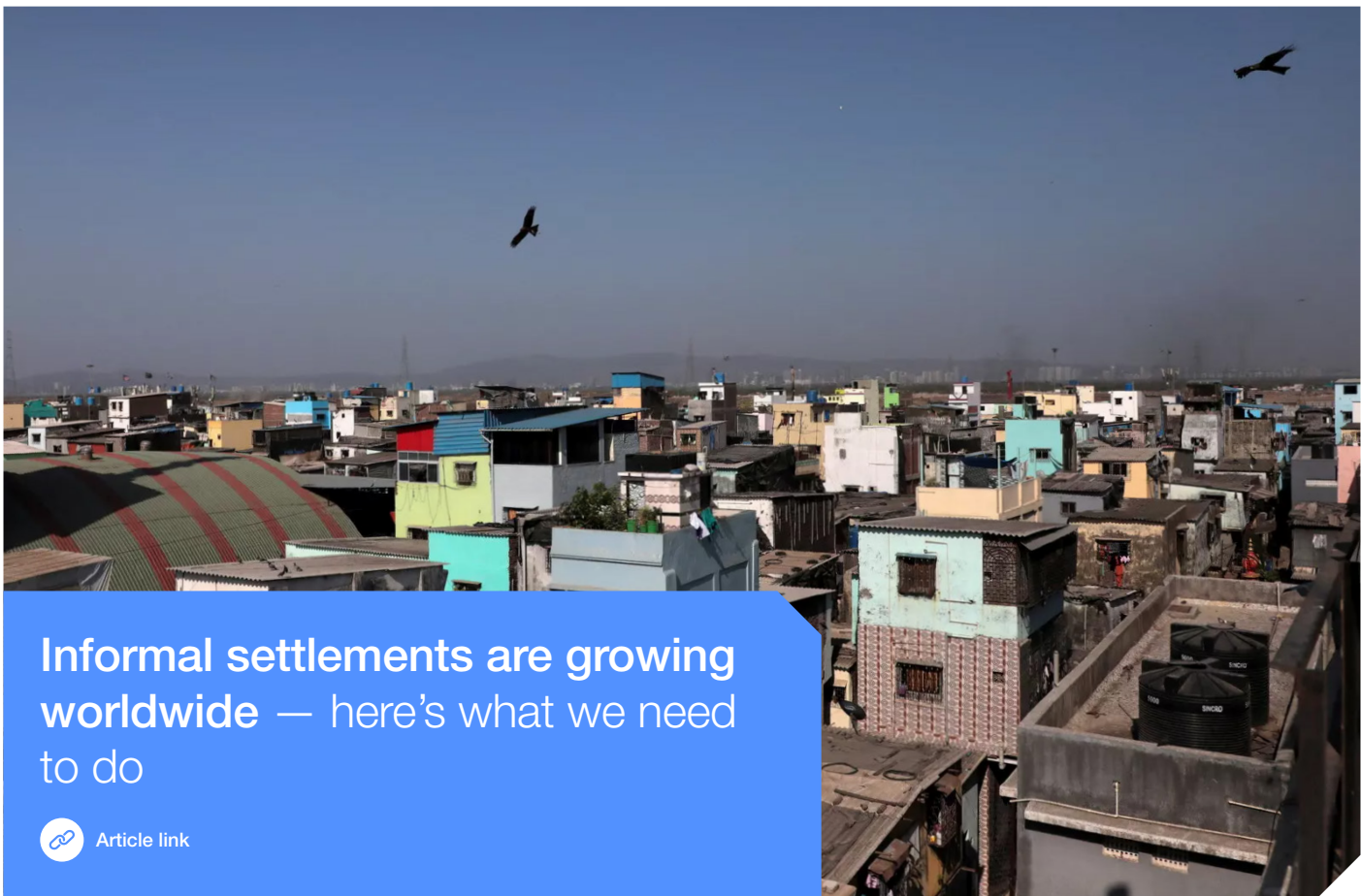


1

Land use

Creating affordable and inclusive cities requires planning for housing, transport, and economic opportunity.



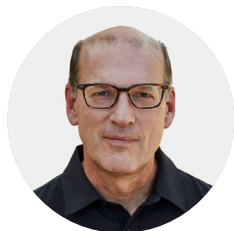


Informal settlements are growing worldwide — here's what we need to do

 [Article link](#)

↑ Improving informal settlements is essential to make progress on the SDGs.

Credit: REUTERS/
Niharika Kulkarni



Jonathan T.M. Reckford
Chief Executive Officer,
Habitat for Humanity
International



Yvonne Aki-Sawyer
Mayor, City of Freetown

- Nearly 1.1 billion people live in slums and other informal settlements around the world.
- A new report models the impact of improving informal settlements, and found it would enable millions of children to attend school and increase some countries GDP by more than 10%.
- Solutions include providing land tenure, expanding microloans and supporting low-cost housing start-ups.

More people than ever before are living in slums or other informal settlements. This isn't just a global scale problem, though — it's also a global scale opportunity.

The number of people living in slums or other informal settlements [has grown by 165 million](#) in the past 20 years, bringing the total to nearly 1.1 billion.

Unable to access affordable housing, families have no alternative to living in substandard homes, with little access to sanitation services, electricity and safe drinking water. Residents of informal settlements often lack security of tenure or land rights, living under the constant threat of eviction.

The opportunity of solving the housing crisis

Take Freetown, Sierra Leone, one of the [most crowded cities](#) in the world. Up to 60% of the more than 1.2 million residents live in a patchwork of informal settlements constructed on precarious land prone to flooding, fires and landslides. This level of unplanned development led to tragedy in 2017, when more than 1,000 people lost their lives in a devastating landslide. Due to a lack of urban planning, the absence of governmental oversight and a chronic lack of affordable housing, it's estimated that nearly 40% of housing developments in Freetown have been built in medium- or high-risk areas.

“ Improving informal settlements globally could save over 730,000 lives yearly and increase some countries’ GDP by up to 10.5%.

↓ Informal settlements are more than homes for the world’s poorest communities.

Credit: Unsplash/
Shashi Yadav

But if treated as an opportunity rather than a burden, housing can actually strengthen community health, education and economic outcomes, according to a [landmark report](#) by the International Institute for Environmental and Development (IIED).

If housing in informal settlements was improved on a global scale, life span would jump an average of 2.4 years. More than 730,000 lives would be saved each year around the world, preventing more deaths than if malaria were eliminated. Up to 41.6 million more children would be enrolled in school worldwide.

A global push to improve informal settlements would have a transformative economic impact. Some countries’ GDP would increase as much as 10.5%. Sierra Leone fits into that category: GDP would jump from about US \$4 billion to nearly US \$4.5 billion. The economic and human development gains from the improved housing would exceed the costs in many cases. A [2019 World Bank study](#) estimated that ensuring residents have access to water, sanitation and other key infrastructure would require low- and middle-income countries spend between 2% and 8% of their GDP.

Three steps to meet the SDG on housing

These insights underscore the importance of Sustainable Development Goal (SDG) 11, the so-called cities and human settlements goal, which outlines the goal of decent housing for all by 2030. Unfortunately, a 2021 [report](#) from Habitat for Humanity International found that [SDG 11.1](#) was actually regressing. We are seeing stagnation instead of progress toward the goal.

Governments must prioritize adequate housing, especially for those struggling to survive in today’s overcrowded settlements. That means increasing financial commitments by an order of magnitude and making [meaningful policy changes](#).

Here are three steps that governments — and leaders in both the public and private sectors — can take to alleviate this growing housing crisis:





↑ Informal settlements are highly vulnerable to climate change.

Credit: Unsplash / Random Institute



\$6-7.5Bn

is the estimated cost to provide more than 800,000 housing-deprived households in the country with adequate shelter.

Prioritize land tenure security

Ensure residents of informal settlements have secure rights to the land they inhabit.

This has already happened on a large scale in countries such as Honduras, where civil society organizations and municipal governments came together to form diverse commissions that developed policy recommendations around housing and land, negotiating approval of the recommendations and then monitoring their implementation. Through their advocacy and technical assistance, more than 1 million people have improved access to their land rights.

In Freetown, addressing tenure security in informal settlements is a challenge, as local land use planning is under the authority and control of the national government. It is imperative that the national authorities empower municipal officials to govern land titling and housing standards. This collaborative approach would tenure security and access to basic services in informal settlements, such as clean water and sanitation systems.

Freetown City Council has convened a consortium of NGOs under the Transforming Lives programme to address the affordable housing crisis in the city. The consortium, led by Catholic Relief Services, are focusing their combined effort in two of the most vulnerable communities prone to flooding events. This work aims to improve infrastructure services in these settlements, addressing land tenure for existing residents and the provision of higher density housing on sites at lower risk to flooding.

Expand finance for housing

For residents of Freetown's informal settlements and countless other cities, traditional avenues of housing finance are simply not accessible. Microloans offer hope by providing individuals

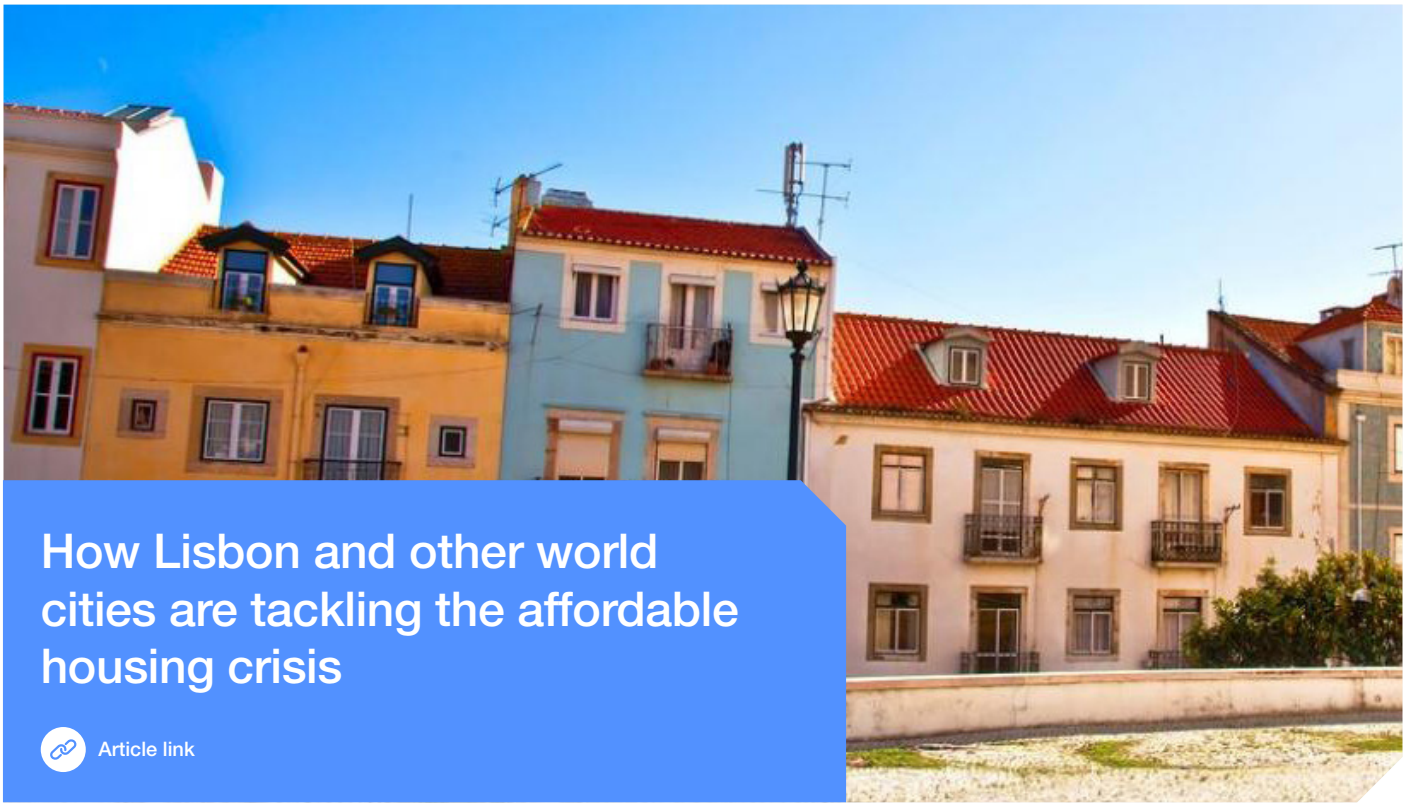
with the means to access capital for housing improvements and upgrades. They exhibit similar characteristics to traditional mortgage loans, but their smaller size helps make them more accessible to families with lower incomes.

But microloans aren't enough in countries such as Sierra Leone, where the estimated cost of turning the country's more than 800,000 housing-deprived households into adequate shelter is USD \$6-7.5 billion. The interest rates for mortgages from commercial and state-owned banks is high, limiting opportunities to finance for affordable housing. To finance affordable housing, the City Council and other agencies will need to work with private developers in identifying more economically sustainable solutions such as part-ownership or rent-to-buy schemes, giving tenants more affordable payment terms of 10-15-year periods.

Strengthen climate-resilient housing

Informal settlements are [highly vulnerable](#) to the impacts of climate change. The public and private sectors can work together to support and invest in community start-ups specializing in low-cost, climate-resilient homes and locally sourced building materials. For example, an NGO based in Sierra Leone, Home Leone, has over the past 5 years been developing affordable housing utilizing low-cost construction techniques, and providing facilities to meet the basic needs of communities and an integrated approach to housing development for low-income communities.

We must act now to pave a stronger foundation for the more than [10 billion](#) people expected to inhabit our cities by 2050. This starts with the urgent improvement of housing in rapidly expanding informal settlements worldwide. This long-overdue investment will more than pay for itself by building more resilient, prosperous and equitable communities for generations to come.



How Lisbon and other world cities are tackling the affordable housing crisis

 [Article link](#)

↑ Lisbon is taking a multi-dimensional approach to expand affordable living conditions.

Credit: Depositphotos



Carlos Moedas
Mayor of Lisbon

- Housing prices between 2012 and 2022 have increased by 120% in Lisbon, Portugal.
- The Portuguese capital has adopted a multi-dimensional approach of short-term solutions and long-term investments backed by a six-year, multi-million-euro investment plan to help develop affordable housing in the city.
- The city has seen early success with its strategy to revamp affordable living for locals and has adopted key principles to channel real estate investment into tackling the housing crisis.

As a result of low public investment levels and the absence of strong public policies in the last decade, housing prices between 2012 and 2022 have increased by 120% in the Portuguese capital. Rental prices have also increased significantly, reaching more than 30% in the past five years. At the same time, income levels have remained relatively steady, thus hurting the purchasing power of the local population.

Since 2021, Lisbon has adopted an innovative multi-dimensional approach, putting short-term solutions and long-term investments in place. An €800-million public investment plan backs the strategy for 2022-2028, the largest in 30 years. In less than two years, this new vision has already shown results:

- City Hall has built and renovated over 1,500 homes for medium- and low-income people, compared with only 17 apartments per year in the past 14 years.
- A new programme has been set to renovate [2,000 vacant flats in 11 boroughs](#).
- Local government is purchasing real estate properties at market value to be renovated and rented out at lower prices.
- Low-income families who pay over [30% of their income](#) in rent are eligible for a subsidy from the city to maintain their payment below 30%.
- Licensing procedures for construction have been significantly improved and streamlined by digitization and reducing deadline times, with fast-tracking for smaller projects delivering licensing within two months or less compared with nine months in the past.
- The [Urban Planning Academy](#) was created to prevent real estate developers from submitting incomplete or non-compliant processes, which previously occurred in 70% of submissions.
- Lisbon City Hall is initiating five housing [co-operatives](#) that provide citizens with the land to develop housing projects at a lower cost.

- The municipality delivers apartments to people with key roles in the city ([police](#), healthcare professionals, teachers etc).
- A [Housing Hackathon](#) mobilizes Lisbon's strong tech sector, asking entrepreneurs to help design disruptive solutions.
- A new public-private programme will be launched where the municipality leases land for 90 years for private companies to develop affordable housing projects.

This multi-pronged, holistic strategy is re-establishing affordable living conditions in Lisbon for locals, allowing younger generations to stay in the city centre.

Global examples of best practice

As the global housing crisis presents significant social and economic challenges, cities must develop collaborative approaches to tackle current and future housing shortages. Local conditions must be considered; however, key principles can provide some guidelines.

1. Shared goals and vision

The public, private and civil society sectors must develop a common vision for addressing the housing shortage. Establishing shared goals will provide a foundation for cooperation and help align critical efforts.

For example, in the United Kingdom, the not-for-profit [National Housing Federation](#) is working with the government to address barriers to building new homes for sale, rent and affordable home ownership.

2. Policy frameworks

By creating supportive policy frameworks, national and local governments can incentivize private sector participation in affordable housing projects. Tax incentives, streamlined permitting processes and zoning changes are particularly effective in encouraging the development of affordable housing.

The [YIMBY](#) (“[Yes In My Backyard](#)”) movement in the United States advocates for increasing housing supply through changes in zoning regulations and development policies. In California, YIMBY has contributed to ending exclusionary and single-unit zoning, [enabling 2.2 million homes to be built](#) in the state.

3. Public-private cooperation

As a joint effort between governments and private companies to develop and manage housing projects, these partnerships can leverage the strengths of both sectors – combining public resources and planning capacity with private innovation and efficiency.

In Toronto, the [Daniels Corporation](#) partnered with the housing authority to redevelop neglected social housing into a mixed-use, mixed-income community that guarantees all residents the right to return.

4. Community building

Working with citizens to design inclusive and sustainable urban solutions has become a key piece of the puzzle. Mobilizing collective intelligence helps make more conscious decisions, adapt projects to the population's needs and promote a “community spirit” among locals.

Cities such as [Paris](#), [Lisbon](#) or [Brussels](#) now have permanent citizen assemblies to support decision-makers in solving not just the housing shortage but also other challenges, such as mobility, healthcare or education.

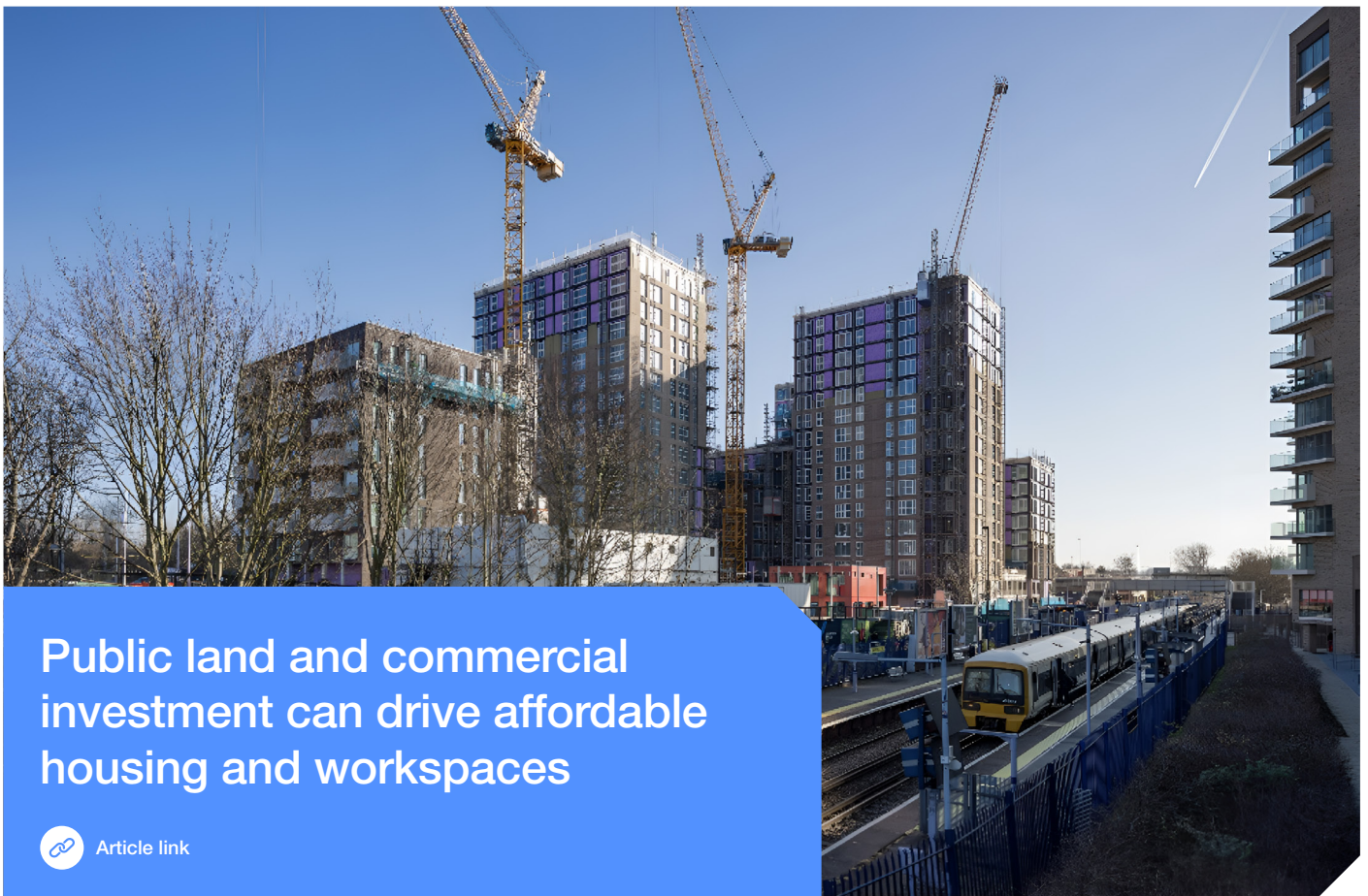
5. Innovation and technology

The private sector is keen on providing innovative techniques, materials and technologies to increase the efficiency, affordability and sustainability of housing construction. Governments can support these efforts by fostering a regulatory environment that encourages the adoption of new solutions.

For instance, Estonian engineering firm Kodasema is working with the government to develop modular KODA houses that can be set up in a day.

When it comes to solving the global housing crisis, one size does not fit all. Looking at different approaches worldwide, it becomes clear that there is neither a miraculous solution nor a definitive answer.

Solving the housing shortage demands a consistent, diversified, customized approach with different policies for different cases. Having [recently been awarded](#) by the European Commission with the European Capital of Innovation prize, Lisbon is set to demonstrate the success of its innovative multi-solution approach and is determined to inspire other cities around the globe.



Public land and commercial investment can drive affordable housing and workspaces

 [Article link](#)

↑ Kidbrooke, a development with partner Notting Hill Genesis, February 2023.

Credit: Transport for London



Emma Hatch
Head of ESG,
Places for London



Opportune Simon
Property Development
Manager, Places for London

- Rapid population growth combined with expanded profit-maximizing property investment has outstripped cities' ability to build affordably.
- Lack of investment capital means the private sector and public authorities can't develop on public land leaving many such land portfolios under-utilized.
- Through its property company, Transport for London co-develops public land for new affordable housing, small business space and other key infrastructure that will make London a sustainable city.

Around the world, the urban affordability crisis has been steadily deepening. In cities with open market economies, homes and small business premises are becoming increasingly unaffordable. Rapid population growth combined with expanded profit-maximizing property investment has outstripped the ability of many public authorities to plan for balanced growth and build sufficient affordable housing or workspace.

London's population has boomed over the past 40 years from [6.9 million in 1980](#) to [9.6 million](#) today and London's small business base has doubled from around [500,000](#) to [1 million](#). London [hosts](#) 6 million jobs, £1.5 trillion housing assets and a £4 trillion property asset base. Like many other global cities, this growth has put enormous pressure on housing prices and the costs of small business space.

Optimizing public land at transport interchanges

Transport for London (TfL), the body responsible for most of the transport network in the United Kingdom's capital, created Places for London – previously TTL Properties – a £2bn property company wholly owned but financially independent of TfL, as a response to the affordable housing crisis. With one of the largest property asset bases in London, the company seeks to provide affordable spaces for people to live and work, investing in



\$2Bn

was invested by Transport for London (TfL) in creating Places for London, a property company that is wholly owned yet financially independent of TfL.

transport amenities and other infrastructures, including the shift to low-carbon buildings, electric vehicle charging and sustainable transport, supporting major town centre regeneration and world-class placemaking.

Fundamentally, Places for London facilitates the development of sites next to the transport network to foster a new generation of public transport users through well-planned mixed-use densification, large-scale decarbonization of the built environment and high-affordability requirements. It has identified a capacity for 20,000 homes with the ambition to start on these sites by 2031.

This formula builds upon three established traditions in successful public-interest property development:

- **Transport-oriented development.** There is a precedent of public transport and infrastructure authorities in other global cities having densified public land uses by developing transport-connected homes, offices and districts. The Port Authority of New York & New Jersey, Mass Transit Railway in Hong Kong and JTC Corporation in Singapore have all adopted this approach.
- **Cathedral-thinking in a metropolis.** London has a strong tradition of the “Great Estates.” These are large-scale property portfolios with a single owner who can take a long-term

perspective and shape great places within the city. It reaches back to the lessons we can glean from the Crown Estate, Grosvenor, the Peabody Trust and others.

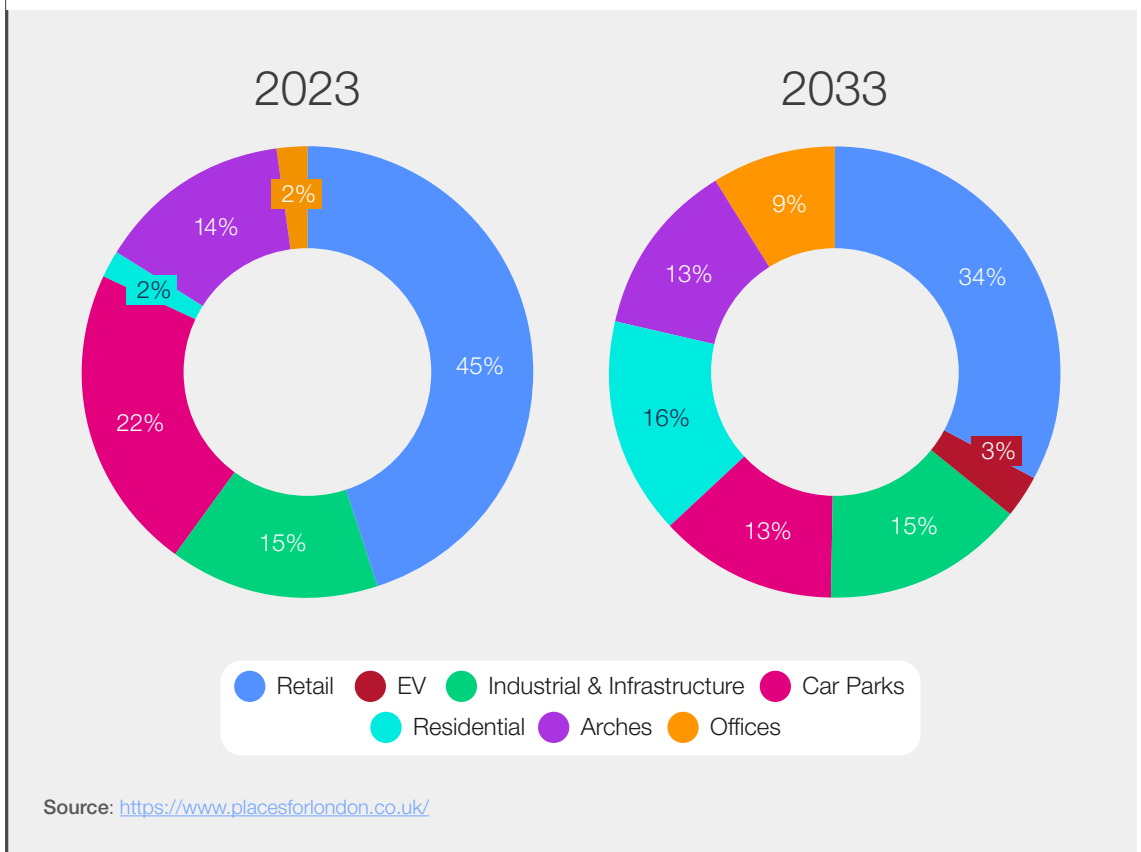
- **Value capture for transport investment.** TfL has previously linked new property development to transport network expansion so that the development can help pay for the transport. The Piccadilly and Metropolitan lines were financed initially in such a way, as were the more recent Dockland Light Railway, Jubilee Line Extension, the Northern Line Extension and the Elizabeth Line.

Publicly owned property for urban affordability

Many public authorities own real estate in cities. However, deliberately switching the portfolio towards affordable homes and small business space near transport hubs creates a more affordable and inclusive city with greater use of sustainable public transport.

To achieve accessibility and affordability, Places for London will rebalance its portfolio over the next 10 years with significant increases in the proportion of income coming from residential and commercial office space, with commensurate falls in the proportion coming from car parking and retail.

FIGURE 1 Place for London portfolio





800

homes have already been completed by Places for London, showcasing the delivery of its ambition.

Operating through cycles

Maintaining public ownership of land through joint ventures, rather than selling public land to the market, enables a greater impact on affordability challenges.

The business model deliberately leverages large-scale and diverse portfolio dynamics to provide a rich mix of types and tenures, benefitting from cross-subsidies, reinvestment of profits and retention of long-term public interest in the equity of the assets.

The public land and property are not sold off; they are vested in joint ventures with commercial partners. The public purpose and profit reinvestment approach allows Places for London to operate through cycles rather than to follow cycles with their stop-start dynamics that intensify affordability pressures.

Spreading the benefits across the city

Places for London is already delivering on its ambition, with 800 or more homes completed and a further 3,350 on the way.

Half of its project at Blackhorse View in North London will be classed as “affordable,” intended for those with an income at or below median levels, with similar projects planned for other parts of the capital. Places for London also initiated a medium-density scheme for the rental market in several suburban town centres.

These projects hold insights for other cities:

- Places for London evolved its approach to a joint venture framework as having an ongoing financial interest in a development ensures alignment of interests and encourages TfL operational managers and engineers to work in partnership to resolve complex issues throughout a scheme.
- The company is increasingly forming multi-site joint ventures, allowing delivery for London

at scale and pace. Revenues can help fund a safe, green and reliable public transport network and contribute to a more balanced and resilient range of income sources.

Continuing commercial investment

To rebalance and future-proof the portfolio, Places for London will continue to invest in existing commercial spaces to support over 1,500 small business tenants, mainly in retail units and railway arches – the inlets found along many train tracks in the Greater London area have typically attracted businesses. This investment aims to help revitalize town centres in a post-pandemic world.

For instance, new planning permission secured in Kilburn, north-west London, will be used to enhance the arches and create new facilities for the local small business community. Another approved project will be to transform a row of arches in west London to provide incubator space for start-ups in the food sector.

Using public land connected to transport interchanges intensifies activity around these hubs, enabling affordable homes and workspaces to be spread throughout the city, not just in less valuable locations.

Connected places

Places for London is delivering high levels of affordable housing – targeting an average of 50% across its developments – and is delivering support for small businesses, prioritizing affordable workspace and incubator space. While doing so, it invests in transport infrastructure, which includes enabling step-free access for London Underground stations and providing electric vehicle charging facilities.

Places for London will lead more new development than any other company in London over the following decades with incoming affordable homes, designs driven by sustainability and improvements for the local community.

↓ The affordable housing crisis is deepening globally.

Credit: Transport for London





The way to sustainable cities is through transport and housing – this is how we get there

 Article link

↑ Integrating land use, housing and transport planning facilitated by innovation and technology is critical to making inclusive and sustainable cities.

Credit: Unsplash/Ibrahim Rifath



Shin-pei Tsay
Head of Global Policy
for Cities and Transportation



Sameh Wahba
Regional Director for Sustainable
Development, Europe and
Central Asia, World Bank

- **Integration of transit and housing plans is key to addressing the affordability crisis and is vital for inclusive and sustainable cities.**
- **Innovative financing, such as value capture – allowing the financier to retain a percentage of the transaction’s value – can offset needed infrastructure investments.**
- **Technology can bridge service delivery and information gaps while infrastructure is in development.**

Where to live and how to get around are the [two most important decisions for any household](#). When considering their options, access to jobs and economic opportunities weigh heavily but there’s usually a trade-off between quality and cost.

Remote locations can add transportation costs in the form of increased expenses for road infrastructure operation and maintenance, increased commute time and lost productivity. Housing and transportation costs are thus critical determinants of affordability; policymakers and planners increasingly look at the combined housing and transportation

cost as a more accurate metric for affordability within the city.

Location is an equally important variable, especially for low-income households facing a problematic trade-off between living near job opportunities or at the periphery of cities. Near areas with many jobs, there is marginal land in at-risk areas, such as the slopes on which favelas grew near Rio de Janeiro’s centre. At the periphery of cities, there is more affordable land and housing but more significant transportation costs, such as the large-scale housing programmes on the peri-urban fringe of Johannesburg and Mexico City. Such choices are incredibly challenging, especially for people who migrate to cities to improve their economic situation.

Thus, cities that seek to be sustainable and inclusive should not impose such a difficult choice on their residents, requiring them to choose between a high-quality daily life: one with affordable, secure housing, more time with friends and family and access to economic opportunities. Instead, they should offer viable mobility and housing options created through integrated land use, transport planning and performance-driven policies to enhance affordability for poorer residents.

Principles for city leaders

Lessons learned from decades of project experience working with governments point to several principles that allow cities to be more inclusive, connected and sustainable through housing and transportation investment choices.

Planning for future financing

First, it is critical to plan, sequence and integrate the implementation of housing and mobility investments even if the infrastructure cannot be financed at that time. As cities grow in population and income levels, their public transit systems evolve from informal (e.g. minibuses) to formal (bus rapid transit and metro) and from fragmented and unregulated services to integrated and regulated services.

“ No technological solution can solve problems for cities that don’t approach inclusion, livability, connectivity and sustainability holistically when making planning, infrastructure and service delivery decisions.

At higher income levels, cities also devote more attention to sustainability and livability considerations, leading them to [invest in upgrading urban spaces](#) that include [walkability and bicycle lane networks](#) to accompany mixed-use development and urban regeneration. Because retrofitting such quality spaces and infrastructure has higher costs when it occurs at a later stage, early recognition of their utility is essential so that space and rights-of-way are identified and set aside for later investments.

Deploy innovative tools to address financing gaps

Cities often delay investment in public transportation, given their lumpy nature – sizeable investments like a metro line cannot be built in increments. By the time they pursue these investments, it is costly to retrofit dedicated bus lanes or invest in underground mass transit infrastructure. By then, roads are congested, land acquisition costs are high, rights-of-way must be reclaimed, and the neighbourhoods are already densified, as cities like Sao Paulo discovered when introducing later metro lines.

Land value capture – a financing tool that allows local governments to charge fees and taxes to developers and property owners and raise revenue to reinvest into community and city services – offers an effective tool to mobilize financing for large infrastructure programmes before construction starts or even recoup costs after completion. One example of land value capture in practice is the sale of additional development rights resulting from the increase in land values due to the impact of infrastructure ([as the cities of Sao Paulo and Rio de Janeiro did](#)).

Betterment levies can recoup a share of infrastructure costs commensurate with the benefit that neighbouring landowners receive from providing infrastructure ([as Colombian cities, including Bogota, did to finance much of their recent road network expansion](#)). Cross-subsidy for funding capital expenditures is another under-utilized tool with much potential. Such is the case of the rail and property model used by transport authorities in Singapore and Hong Kong, which leverages commercial property development to cover capital expenditure costs of rail systems.

Similarly, investing in low-cost, evergreen infrastructure such as wide sidewalks and protected bicycle lanes provides significant benefits long into the future, especially in rapidly growing cities.

Bridge service delivery gaps and share information via technology

Technology and mobility platforms fill gaps in infrastructure and service networks while cities

implement new transit modes. In large cities in India, many people rely on the two-wheel moto service to reach the last station in the transit system while the transit agency finishes developing the transit line. Uber Moto and Uber Auto in Hyderabad, respectively, [link riders to moto and three-wheeled rickshaw rides](#) that take them to the new metro blue line that serves 200,000 passengers per day. Similarly, moto-taxis in Brazilian cities such as Rio de Janeiro and rickshaws in Egyptian, Bangladeshi and Indian cities connect people to main transit routes.

Technology can also facilitate collecting and distributing information about transportation and housing options in cities so that commuters and urban residents can identify viable, affordable options. The [mapping of informal transport systems](#) in cities, such as the Digital Matatus Project in Nairobi, has made the routes visible and accessible to the 30% of the city’s population that relies on such transport. The use of technology to make driver, passenger and destinations legible before and during the ride makes transportation more accessible and safer, especially for women, which is critical to remove one of the key obstacles suppressing female labour force participation in many parts of the world.

Mapping housing availability and prices could facilitate people’s search for adequate housing options. Streamlining property registration, the development of e-conveyancing and publicly accessible property cadasters expand transparency and property right security, which is critical to greatly reduce uncertainty in property transactions. Similarly, mapping transport and municipal infrastructure and creating updated asset registries is beneficial for operations and maintenance.

Sustainable cities

Integrating land use, housing and transport planning facilitated by innovation and technology is critical to making cities more inclusive, connected and sustainable. Early planning and sequencing of implementation is key to success by preserving infrastructure rights-of-way, even if major infrastructure networks are not readily available from the onset due to high cost.

Innovative financing, such as land value capture, can recover part of the capital cost. Lastly, technology offers a unique opportunity to bridge infrastructure and service delivery gaps and to reduce uncertainty and costs facing urban residents in their search for housing and mobility plans.

However, no technological solution can solve problems for cities that don’t approach inclusion, livability, connectivity and sustainability holistically when making planning, infrastructure and service delivery decisions.

2

Sustainable communities

Prioritising environmental, social, and economic sustainability enhances urban affordability and quality of life.





London to Miami-Dade: an integrated approach to developing thriving and equitable communities

 [Article link](#)

↑ Miami-Dade and London offer case studies for how diverse communities can leverage TOCs.

Credit: Miami-Dade County



Steven Lewis
Global Head of Insight, JLL



Daniella Levine Cava
Mayor, Miami-Dade County

- **Transit-oriented communities can combat the affordability crisis by delivering much-needed housing and transportation.**
- **Successful TOCs mobilize public and private resources, while supporting economic, social and climate resilience goals of the locale.**
- **Miami-Dade and London offer case studies for how diverse communities can leverage TOCs to achieve local sustainability and equity goals.**

Miami-Dade County, where one of us is Mayor, has developed with a pattern of urban sprawl flanked by protected environmental areas. The county is facing an affordability crisis; it boasts a limited public transit network and lacks sufficient affordable housing to accommodate its burgeoning population and growing economy. So too does

London, but London is a dense urban environment with seemingly nowhere left to build and a complex transportation network.

Both locales have found success with innovative and context-dependent transit-oriented communities (TOCs) to deliver much-needed housing and transportation. These efforts have sought to address local sustainability and equity goals.

While TOCs are not new, they need to be scaled up dramatically to meet the new density, resilience and affordability demands of today. TOCs must now be considered holistically through innovative funding mechanisms, integrated land-use and transport planning, public private partnerships, and streamlined planning processes that reduce completion times.

A burgeoning Miami-Dade

Miami-Dade County consists of 34 individual cities. As a county, it operates within the complex US federal and state system that has at times slowed its ability to advance affordable transportation and housing infrastructure.

To combat the economic impacts of traffic congestion and the existential threat of climate change, Miami-Dade County is working to direct growth into mixed-use urban centres that are walkable, connected by premium transit corridors, less vulnerable to the impacts of storms and sea level rise, and include land use patterns that reduce emissions and promote energy efficiency.

The recently implemented Strategic Miami Area Rapid Transit (SMART) program identifies corridors



245.7k

average weekday riders have been reached by Miami-Dade Transit, marking a 101% recovery from pre-COVID levels across all four transit modes.

for public transport expansion while reducing planning-to-implementation time. The county benefits by containing costs on a project-by-project basis, and communities benefit by seeing infrastructure sooner.

The county recently enacted new policies to encourage more TOCs across the 34 municipalities and unincorporated area, bringing with them affordable and workforce-oriented units. Miami-Dade is also advancing the Better Bus Network (BBN), a reimagined bus service that prioritizes improved transit services with greater frequency for more people, and was co-created with both public and private community stakeholders such as Transit Alliance Miami.

Together, these new initiatives and policy changes have helped to increase Miami-Dade Transit ridership to 245,700 averages weekday riders, which is a 101% recovery from pre-COVID levels on all four transit modes.

Earlier this year, Miami-Dade County also unveiled a new flagship TOC, called the Link at Douglas. This 7-acre master-planned development has transformed Miami-Dade County's Douglas Road Metrorail Station into a mixed-use transit hub. The project's first phase includes two residential towers with a total of 733 apartment units anchored by a locally owned supermarket. This new public-private sector partnership also includes more than \$17 million in public infrastructure improvements, including a fully renovated Metrorail station, and the development of a public plaza that connects with a section of a countywide linear park.



↑ Battersea Power Station pre- and post-regeneration, Southwest London.

Credit: JLL

Transit as a tool for urban regeneration

For over 30 years, the iconic Battersea Power Station sat unused in Southwest London. Along with it, the greater Battersea area was left behind and lacked core infrastructure to support community regeneration. This was one of the last remaining areas readily available for large-scale

development near Central London, providing a location adjacent to rapid population and employment growth.

Confronting high land costs and the need to connect an area without rapid transit to existing infrastructure, the Greater London Authority created an Enterprise Zone which allowed them to borrow nearly £1 billion to finance the extension of the London Underground's Northern line to two new





[↑ Link at Douglas.](#)

Credit: Miami-Dade County

stations in the Battersea neighbourhoods. This use of a tax increment financing scheme with master-planned development provided capital and connectivity to regenerate a “heritage at risk” site.

In 2022, the Battersea Power Station reopened following a £9-billion regeneration of the 42-acre former industrial site with shops, bars, restaurants, housing and office space, and now connection to the London Underground. When complete, the area will have over 18,000 new homes (4,000 affordable) and sustain up to 25,000 new jobs. The resulting increase in local tax revenues will be used to pay off the initial cost of borrowing for the extension.

Leveraging innovative financing tools enabled an accelerated timetable for the redevelopment of underutilised land, creating significantly more housing development than could be accomplished through more incremental methods. Financial constraints at both the national and local government levels would mean a much longer wait for any expansion of rapid transit to Battersea, pushing demand onto an already heavily burdened smaller set of existing housing stock.

3 essential components for successful TOCs

Public authorities have a strong role to play in guiding the planning process to ensure that it

is context-dependent and is fit-for-purpose. Additionally, investments in infrastructure (and the type of mechanism to finance it) will need to be tailored to the needs of both the region and regeneration area in question.

Building regulations need to be clear and easy to interpret, and prioritize the creation of community hubs (near transit, protected from immediate impacts of climate change, and with increased density that keeps costs affordable), rather than a rigid division of land uses. Design-based codes can ensure that outcomes for the built environment (greenery, street activation, setbacks) are met, but with greater flexibility to create a mix of uses.

Phasing can be used to reduce financing challenges and improve flexibility in both logistics and uses as market demands shift, limiting risk and responding to the needs of the region more broadly. Tax increment financing and master planning that incorporates resident input will create longer-term stability and ensure that the step-change in density and development can be handled.

While there is no singular ‘best’ method for delivering needed development that also addresses sustainability, active transportation and building infrastructure, design specifications should be clear from the outset, just as regeneration visions should try to mirror longer-term infrastructure planning where possible.



Greening cities as a pathway to affordability: fostering resilient and affordable urban living amidst climate challenges

 Article link

↑ Urban greening initiatives, like Melbourne's Skyfarm, support affordability goals.

Credit: City of Melbourne



Aziza Akhmouch
Head of Cities, Urban Policies and Sustainable Development, OECD



Sally Capp
Lord Mayor of Melbourne, Australia

- Urban agglomerations are responsible for **about 70 percent** of greenhouse gas emissions, half of solid waste production, and two-thirds of energy consumption.
- More than 200 cities within the OECD - an international organisation of 38 countries committed to build better policies for better lives - have set **ambitious pledges** to reduce greenhouse gas emissions and achieve net-zero in the coming decade.
- One such city is Melbourne, which is investing in greening buildings, food, and public space in order to decarbonize but also ease the urban affordability crisis.

Covid-19 and the subsequent shocks – including the energy, food and cost-of-living crises spurred by Russia's war on Ukraine – have exacerbated longstanding structural challenges in cities, such as inequalities, housing quality and affordability, traffic congestion and climate-damaging practices.

Cities are deeply affected by climate change and are an essential part of the solution. Cities and regions implement mitigation and adaptation strategies, accounting for 63% of climate-significant public expenditure (1.1% of GDP) and **69% of climate-significant public investment** within the OECD member countries. Cities typically oversee critical policy domains that influence climate outcomes, such as land use planning, water, housing, transport and environmental protection.

For this reason, more than 200 cities from across OECD countries, including Melbourne, have already set ambitious pledges to reduce greenhouse gas emissions (GHGs) to achieve **net-zero carbon emissions** in the coming decades. As the OECD works with mayors who are taking a stand against rising urban inequality, such climate action is prioritised for its co-benefits and high cost of inaction.

Melbourne's work to invest in greening buildings, food and public spaces has yielded promising results in addressing affordability.

Greening buildings to reduce energy costs

Buildings account for approximately **28% of total final global energy consumption**, three-quarters of which could be easily conserved through better insulation, ventilation and delivery systems. Acting on energy-efficiency renovation is therefore expected to both reduce energy poverty and increase energy affordability. In addition, it is estimated that **€190 billion have been saved** on public health expenditures in Europe by improving indoor air quality through building decarbonisation.

More than 60% of emissions in Melbourne comes from commercial buildings. To reach net-zero emissions by 2040, Melbourne needs to retrofit over



80

buildings retrofitted annually in Melbourne will boost the economy by AUD 2.7 billion, create 12,000 jobs, and cut energy costs by AUD 184 million per year.

80 buildings per year. This rate will contribute AUD 2.7 billion to the Victorian economy, provide 12,000 jobs and reduce energy costs by around AUD 184 million per year.

Melbourne's [1,200 Buildings programme](#) (2010-15) supported building owners with energy and water efficiency improvements in 540 existing office buildings in central Melbourne. The [CitySwitch](#) programme supports tenants in 19% of all Australian office spaces. In 2021, it saved over AUD 62 million in energy costs and 760,000 tonnes of CO₂ through energy efficiency, carbon offsets and renewables.

Finally, the city has proposed new energy efficiency, heat resilience and greening standards for new developments and major refurbishment approvals. These will result in less energy usage, reduced carbon emissions, less waste going to landfill, more efficient water usage and more sustainable transport options, which will benefit owners and occupiers by creating energy-efficient, [climate-resilient](#), comfortable buildings that cost less to run.

The City's experience highlights that older buildings pass on high energy costs to tenants and that long-term planning and iterative improvements will be needed to ensure that low-cost, healthy spaces are available to all.

OECD [analysis](#) confirms that cities and regions have a key role to play to decarbonise buildings through leveraging prerogatives in regulation, public procurement and [stakeholder engagement](#), while addressing multiple governance, capacity and funding gaps. But to accelerate and scale up local action, national governments need to set the right incentives and enabling policy frameworks.

Localising food systems to build resilience

80% of the world's food is consumed in cities. Localising food resilience programmes into urban development strategies can build sustainability, reduce GHG emissions, address land degradation, improve nutrition and promote affordability.

In 2021, one in three residents of Melbourne experienced [food insecurity](#). To support access to low-cost, fresh, healthy food, unused spaces are being repurposed for food production, as was the case with Melbourne [Skyfarm](#). Through a public-private collaboration and matched-funding grant via the Urban Forest Fund, the City developed a 2,000 m² rooftop farm in the city's Docklands precinct. Skyfarm harvested AUD 62,000 of fresh

fruit and vegetables for the community in its first 15 months of operation. The project uses low-cost modular wicking beds now available for others to quickly construct functional food gardens on hard surfaces. A study of rooftop potential for similar green roofs across the city showed that this project could be replicated over 1,000 times the square meterage with no constraints.

[OECD's work](#) shows that while keeping food on the table, cities can help tackle global hunger, provide decent jobs and reduce carbon emissions, thereby showing a win-win outcome between greening and affordability.

Growing urban tree cover to cool the city

Extreme heat is the [deadliest climate-related cause of death](#) in the US. It is [estimated](#) that the consequences of extreme heat in cities will cost \$2.4 billion to global GDP by 2030. Temperature increases are projected to reduce working hours by 2.2% and global GDP by \$2.4 trillion by 2030, due to the dangerous working conditions caused by extreme heat. The effects of extreme heat are frequently more severe in cities due to the '[urban heat island](#)' effect. The poorest neighbourhoods are often the most affected.

In 2010, the City of Melbourne determined that rising temperatures could cause the city to lose 30% of its tree stock over the next ten years and 48% over the next 20 years if no serious actions were taken. To counter these conditions, the City adopted an Urban Forest Strategy that embraces native plants and landscaping. More than 30,000 trees have been planted with an emphasis on low-income areas. More than 80 hectares of asphalt and other underperforming infrastructure have been incrementally converted to wider footpaths, bike lanes and open space.

OECD's [evidence](#) shows that well-planned, implemented and maintained green amenities and [nature-based solutions](#) yield co-benefits for people and the planet, such as increasing carbon storage and contributing to climate adaptation, while also minimising large-scale, costly infrastructure investment needs.

Climate change requires city leaders to prioritise investments that build resilience. These investments also address the affordability crisis facing our cities, and ultimately, our leaders' climate action will build more equitable and resilient communities – now and in the future.

“ In 2021, one in three residents of Melbourne experienced food insecurity.



How the private sector can lead on sustainable development in the Middle East and North Africa

 [Article link](#)

↑ MENA is warming at least twice as fast as the rest of the world since 1980.

Credit: Majid Al Futtaim



Hawazen Esber
Former Chief Executive Officer, Development at Majid Al Futtaim

- More than a third (37%) of energy-related emissions in the Middle East and North Africa come from urban development and buildings.
- MENA governments have pledged to cut 60% of emissions and real estate developers must convert these pledges into real-world solutions.
- Here are five strategies for governments, private partners and other stakeholders to follow for sustainable urban development.

With urban development and buildings accounting for [37% of energy-related emissions](#) in the Middle East and North Africa (MENA), many governments in the region have established solid, long-term strategies for the built environment.

Indeed, [PwC estimates there's a \\$2 trillion opportunity](#) for MENA to become a global leader in the built environment space.

In the past 24 months, MENA governments have [pledged to cut 60% of emissions](#) across the region, putting the focus on real estate developers to convert these pledges into real-world solutions.

But [just 12%](#) of MENA's top 200 companies have committed to net-zero targets, and only 6%, [including Majid Al Futtaim](#), have outlined a clear roadmap to meet those targets.

It is now in our hands to transform these strategies and implement them into our projects, collaborate across the private sector, and lead the way on sustainable urban development – together.

Strategies for sustainable urban development

Here are five ways that developers, designers, contractors, owners, occupants and regulators can work collaboratively to incorporate sustainability across our projects.

1. Put collaboration at the heart

By cooperating inclusively from the start, we can strengthen communities and embed sustainability from the ground up. At Majid Al Futtaim, we seek to incorporate different stakeholder views into our destinations and developments. One approach is through partnerships with local universities that capture students' insights, creativity and passion.

Many existing buildings also require redevelopment and regeneration, giving rise to an opportunity to make them more sustainable and revive their appeal.

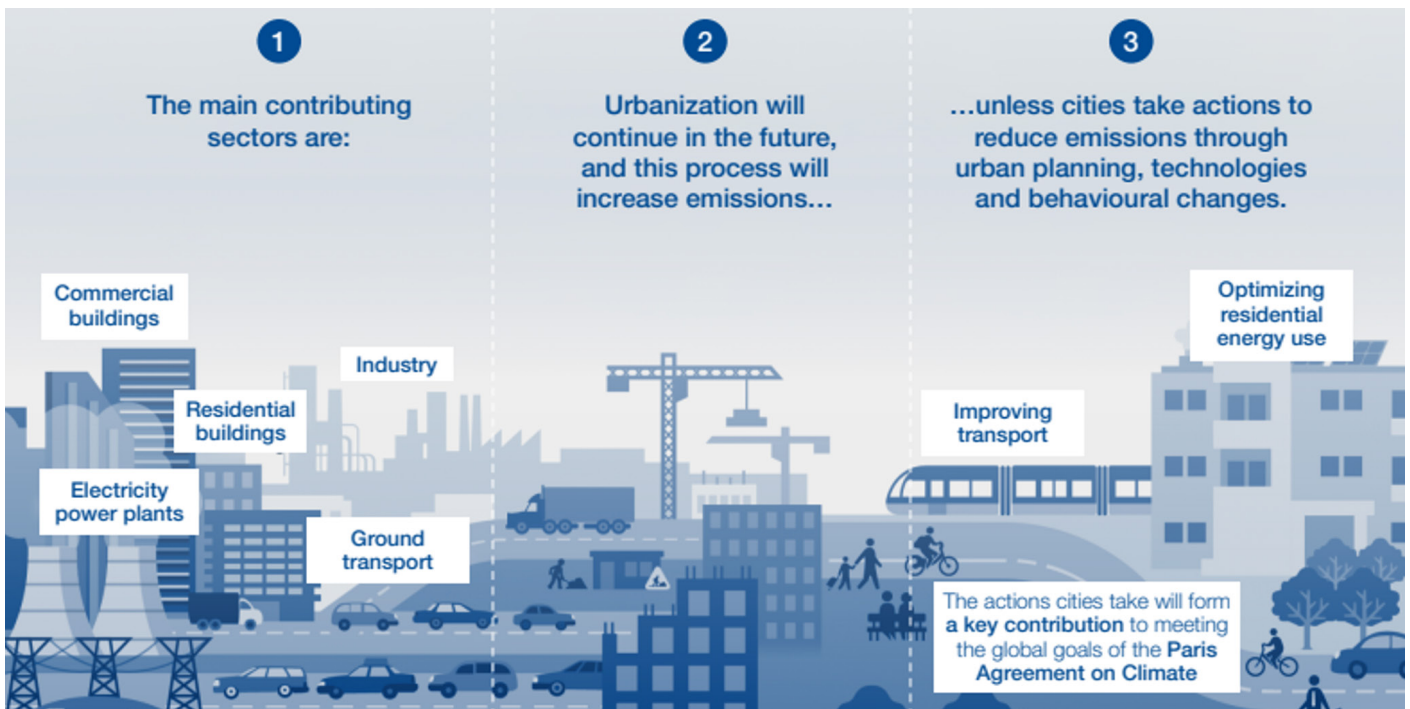
2. Prioritize sustainable and connected living

MENA's fast-expanding cities can and must prioritize sustainable and connected living, weaving green spaces, walkways and cycle routes into designs for more climate-resilient communities.

[Tilal Al Ghaf](#), Majid Al Futtaim's flagship community in Dubai, is a prime example – as restaurants, retailers and a world-renowned school are all within a short distance. This aligns with the UAE's 2040 Vision for interconnected "[five-minute cities](#)" that reduce car dependency.

Our strategy is centred on the concept of 'net positive' buildings, where the annualized balance between energy load and generation goes beyond achieving a 'zero' balance. The emphasis is on over-delivering; buildings not only meet energy needs but contribute excess energy back to the grid.

These buildings act as a hedge against future energy price fluctuations and regulatory changes – ultimately reducing risks for developers and building operators. Our current design stage projects are 35% more efficient than our best-performing assets, which is particularly notable given most of our portfolio is BREEAM Excellent or LEED Platinum or Gold certified.



↑ Urban planning can build in sustainability.

Source: [Delivering Climate Resilient Cities Using a Systems Approach](#), the World Economic Forum

3. Apply a systems approach

While the need for more sustainable environments is clear, the challenge is bringing them to fruition for as many people as possible. Integrating complex and interdependent projects into planning [with a systems approach](#) may be part of the solution. Treating sectors as parts of a whole system [leads to better outcomes](#).

This puts the emphasis clearly on developers to [collaborate across sectors](#) and plan thoughtfully for sustainable and inclusive growth. The most productive outcomes occur when this starts at the design stage, with developers working to ensure interconnectivity between their sites.

When designing Serenity Mansions, our latest launch at Tilal Al Ghaf, we worked closely with our architects who were just as committed to promoting sustainable living, reducing our impact on the

natural environment, and connecting the design to its natural environment.

4. Share common platforms

As shared platforms pool resources, they're more likely to be efficient and sustainable. For example, centralizing solar power production across plots allows communities to share excess renewable energy via connected grids.

Global examples of this can be found in [Singapore](#), where solar panels are seen on the sides of buildings across the city, and in [Smart Seoul](#) – a project that embeds ICT infrastructure across the city.

Other cities showcase sustainable infrastructure sharing – like [Fukuoka](#) in Japan, where sewage is used for hydrogen production, and Dubai, where a green corridor cycling track, the [Loop](#) aims to make the city the most connected on earth by foot or bike.

5. Win over investors

Promoting sustainability and responsible investing has become a [priority in MENA](#). Initiatives include green bonds, environmental, social and governance funds, and sustainability frameworks.

Majid Al Futtaim demonstrated its green financing commitment with [its debut green sukuk](#) – Shariah-compliant investments in renewable energy and other environmental assets – in 2019, followed by sustainability-linked loans.

Sovereign wealth funds and central banks are also [leading green investments](#), leveraging their capital, for example, by backing Shanghai's One Museum Place sustainable office.

The market for net positive developments is not only viable but thriving due to a combination of

environmental awareness, government support (in the UAE, initiatives like the [Green Building Regulations and Specifications](#) by Dubai Municipality set guidelines for sustainable construction) and economic incentives. Some 80% of UAE real estate investors [prioritize sustainability](#) and 70% globally will pay a premium.

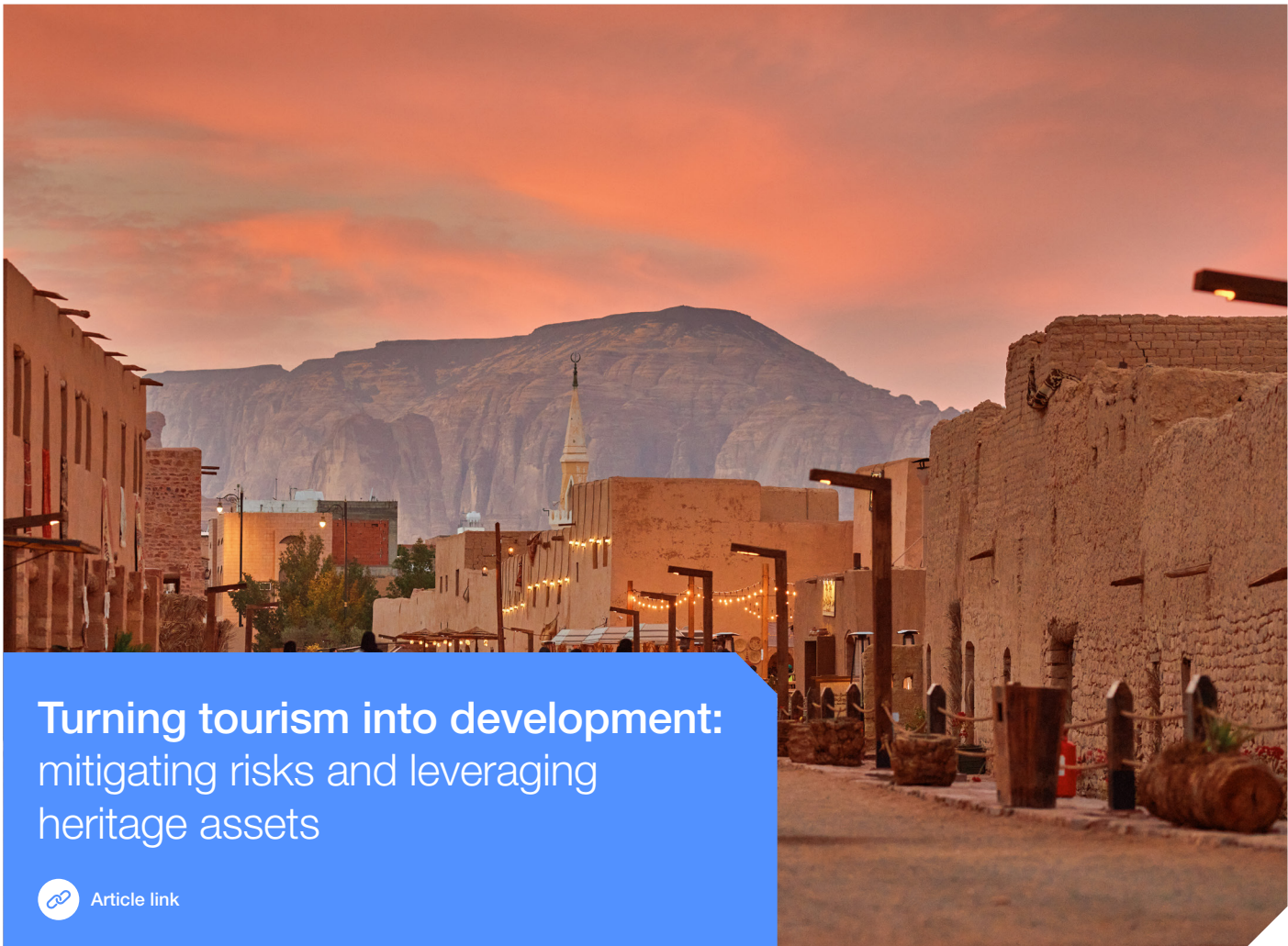
Customers today understand the long-term benefits and are eager to embrace and invest in homes that contribute positively to the environment and their quality of life.

While MENA is making strides, as developers we need to focus on integrated projects that are sustainable in both construction and operation. Most importantly, they need to bring residents and local stakeholders into the process, gaining buy-in to foster communities that are environmentally and socially sustainable.

↓ Sustainability should be a priority across diverse development typologies in the region.

Credit: Majid Al Futtaim





Turning tourism into development: mitigating risks and leveraging heritage assets

 Article link

↑ Culture and heritage tourism can support sustainable development.

Credit: Royal Commission for AlUla



Maimunah Mohd Sharif
Former Executive Director of UN-Habitat



Abeer Al Akel
Acting CEO of Royal Commission for AlUla

- Cultural and historical travel accounts for [40% of all tourism](#) globally.
- [73% of millennials](#) report being interested in cultural and historic places.
- Protecting local culture and heritage requires a robust plan to mitigate negative impacts and policies to ensure prosperity is shared.

Culture and heritage tourism has the potential to create significant employment opportunities and stimulate economic transformation.

However, communities worldwide often grapple with the challenges posed by the magnetic appeal of heritage sites and the promise of economic prosperity. Property values can increase, displacing local residents and permanently altering the character of their neighbourhoods.

But capitalizing on tourism's potential while preserving and enhancing history and culture is possible — and it is already being done in sites around the world. From Malaysia to Saudi Arabia, many are already demonstrating the ability to balance economic development with socially and environmentally sustainable transformations.

Below are five common features that those sustainable approaches embrace.

Translating a vision into an area-based plan

Urban planning and regeneration require a holistic approach, coordinating interventions across various sectors and providing guidance for investments. A holistic plan would include spatial and policy measures that are supported by regulatory measures, particularly those focusing



↑ AIUla Oasis.

Credit: Royal Commission for AIUla

on affordability and social cohesion. UN-Habitat prioritizes measures which promote mixed-use and social-economically diverse development to mitigate gentrification.

In [George Town, Malaysia, the Special Area Plan and its Comprehensive Management Plan](#) function as the key reference for inclusive strategic policies, regulations and guidelines for conservation, economic activities and intangible heritage. The plan, which balances economic development and conservation, included affordability measures such as supporting local owners restoring their houses, enabling adaptive reuse for small businesses, and supporting renters, thus protecting a share of historic buildings from tourism-induced redevelopment.

In Saudi Arabia's AIUla, home to 40,000 residents and leading cultural assets including [Hegra](#) and [Jabal Ikma](#) — which was recently added to UNESCO's [Memory of the World International Register](#) — a similar vision is unfolding. The [Path to Prosperity masterplan](#) makes provisions for new housing, creates new economic opportunities and establishes new schools, mosques and healthcare facilities for the community with affordability as the guiding principle. An expanded public realm will create district and neighbourhood parks with green spaces, playgrounds, outdoor gyms and bicycle trails. A network of scenic routes, low-impact public transportation and non-vehicular options will facilitate mobility.

A diversified economic base

To avoid over-reliance on a single economic driver, planners must make space for a range of alternative livelihoods. In AIUla, The Royal Commission for AIUla (RCU), which is responsible for the city's development into a tourism hub, is drawing on its rich local heritage to create a global destination

while diversifying the local economy. Investment in native industries such as agriculture has resulted in a revived high-yielding and higher-value farming sector, while new sectors such as the creation of film and logistics industries are creating new jobs and providing increased revenue for residents.

The [UN-Habitat Parya Sampada](#) project in the Kathmandu Valley undertook earthquake reconstruction of the heritage settlements in urban areas using a holistic approach of physical reconstruction and economic recovery. It focused on the reconstruction of public heritage infrastructure supported by tourism enterprises run by women and youth.

Nurturing living heritage and local knowledge

Maintaining the character of a place is critical to its future and creates valuable economic assets. Maintenance and preservation animate the built environment, while the recovery of building techniques and crafts of traditional cultural activities creates jobs and maintains skills.

UN-Habitat's work in Beirut demonstrates this approach, supporting several hundred jobs. Through the [Beirut Housing Rehabilitation and Cultural and Creative Industries](#) project, led by UN-Habitat, UNESCO supervises the allocation of small grants to local artisans. The regeneration of the historical [train station in Mar Mikhael](#) and adjacent areas will focus on traditional building techniques to reactivate cultural markets and businesses.

In AIUla, the [Hammayah training programme](#) is empowering thousands to work as guardians of natural heritage and culture. In Myanmar the nationwide Community-Based Tourism initiative is operated and managed by local vulnerable communities to provide genuine experiences to world travelers.

Share the value created by tourism

Addressing the negative externalities of tourism requires the assessment and compensation of its real impacts, which can be done through sustainable tourism planning and community participation. The pressure on services, increased congestion and the cost of living need to be addressed through specific investments, funded through the taxation of tourism-related revenues redirected towards the local community, especially for the most vulnerable groups.

Examples include the Balearic Island of Mallorca, which has introduced a sustainable tourism tax to support conservation of the island. Meanwhile Kyoto, Japan has implemented [several measures](#) to control the number of tourists at popular sites and establish visitor codes of conduct.

Human-centered local development

Empowering the local community to actively engage with its rich culture while minimizing conflict with the natural environment can increase the resilience of residents and reduce the pressures of gentrification. Participation in decision-making is critical to shape visions and plans that achieve these goals.

The UN-Habitat Participatory Strategy in [Mexico's San Nicolas de los Garza](#) showcases how collaboration with the local community throughout the design and implementation process can ensure solutions capture the culture, skills and needs of the neighborhoods. The [2030 City Vision](#) provides a participatory action plan for the integration of culture, heritage and tourism within the currently prevalent urban economic sectors.

In Saudi Arabia such approaches are embedded in [Vision 2030](#), a blueprint for economic diversification. RCU deploys short- and long-term support to the community through scholarship, upskilling and support for SMEs to enhance access to jobs and entrepreneurship in hospitality and tourism.

While development always introduces complex dynamics and transformations, mitigating gentrification in tourist areas is crucial to achieving sustainable local development for the benefit of all and preserving the unique character of these places.

These measures advocate a proactive approach to ensure that economic growth remains inclusive for the entire community, and that tourism is promoted for the benefit of local residents as well as visitors.

↓ George Town.
Credit: Think City



3

Inclusive design

Fostering inclusive places draws upon tools of planning, design, policy, and community engagement.





Data and density: two advantages cities have in boosting health equity

 [Article link](#)

↑ Cities can leverage proximity and density to tackle health inequities.
Credit: City of Bogotá



Diana Rodríguez Franco
 Former Secretary of Women's Affairs, City of Bogotá



Ann Aerts
 M.D., Head, Novartis Foundation

- Improving health and health equity for vulnerable populations requires addressing the [social determinants of health](#).
- [Research](#) and practice increasingly point to the role of cities in [promoting health equity](#) or reversing health inequities.
- Place-based strategies to address health inequities can lead to meaningful improvements for vulnerable populations.

Improving health and health equity for vulnerable populations requires addressing the [social determinants of health](#). In the US, it is estimated that medical care only [accounts for 10-20%](#) of health outcomes while social determinants like

education and income account for the remaining 80-90%.

Place-based interventions, however, are [showing promise for improving health outcomes](#) despite persistent inequalities. Research and practice increasingly point to the [role of cities in promoting health equity](#) — or reversing health inequities — as [56% of the global population](#) lives in cities, and several social determinants of health are directly tied to urban factors like opportunity, environmental health, neighbourhoods and physical environments, access to food and more.

Thus, it is critical to identify both true drivers of good health and poor health outcomes so that underserved populations can be better served.

Place-based strategies can address health inequities and lead to meaningful improvements for vulnerable populations.

Why place-based strategies are key

In New York City, [life expectancy for city residents since 2019 has dropped from 82.6 years to 78 years](#). Health inequities mean life expectancy can be 10 years worse between populations living in neighbouring zip codes.

Initial data analysis revealed a strong correlation between cardiovascular disease risk in city residents and social determinants such as higher education, commuting time, access to Medicaid, rental costs and internet access.

Understanding which data points are correlated with health risks is key to effectively tailoring interventions.

Determined to reverse this trend, city authorities have launched a “[HealthyNYC](#)” campaign and are working with the Novartis Foundation to uncover the behavioural and social determinants behind non-communicable diseases (NCDs) (e.g. diabetes and cardiovascular disease), which cause [87% of all deaths](#) in New York City.

Harnessing data at a city level

A data-driven approach to understand the non-clinical factors that influence health outcomes is key. This data can then be used in partnership with cities to create decision support tools for urban policy, planning and partnerships.

The Novartis Foundation’s [AI4HealthyCities](#) initiative combines data from health systems and health-influencing sectors and applies advanced analytics and AI to provide decision-makers with insights into the drivers of chronic health risks and inequities. Working with Microsoft AI for Health, the Novartis Foundation is trialling the approach across six cities in Europe, Asia and North America.

Importantly, the models, like the one being trialled in New York City, can predict the impacts and cost savings of specific interventions, for example, public health campaigns to promote physical exercise or tackle obesity, to enhance internet access to low-income households, or to improve public access to green spaces. Until now, no comprehensive evidence-based data existed to suggest which combination of factors should be addressed to maximize health impacts for a given context or population.

There’s no shortage of challenges. The greatest is accessing the right datasets, often scattered across countries, sectors and databases. Data privacy is an important priority. The best insights are

gained by linking data on social determinants with health outcomes at individual level. This requires governments to link that data, anonymize it, then make it available while protecting privacy.

The Novartis Foundation aims to validate the data insights by testing innovative interventions that address the main drivers of health outcomes and then to codesign new population health roadmaps with equity at the centre. Each of the AI4HealthyCities participating cities has agreed to translate the data insights into action and scale those interventions that are successfully validated.

Harnessing proximity and density

One third of the Colombian capital Bogotá’s women — [1.2 million women](#) — carry out full-time unpaid care work. These caregivers are trapped in “[time poverty](#)”, often unable to leave the house because those they care for are entirely dependent on them.

They are among the city’s most vulnerable: 90% are low-income, 70% do not pursue secondary education, 33% are deprived of free time for self-care and none has economic autonomy.

Yet if paid, these unrecognized women would account for [13% of the city’s GDP](#), and 20% of Colombia’s GDP. Meanwhile, over 250,000 of them suffer from diagnosed illnesses — largely for reasons beyond their control.

When Claudia Lopez was elected Bogotá’s first female mayor, her ambition was to transform the capital of Colombia into a “caring city”. She realized that if the burden of caring for others prevented 1.2 million women from leaving home to access vital services, the authorities would have to bring the city and its services to them instead.

Mayor Lopez initiated “Care Blocks” — areas within the city that centralize several types of services and activities for women, including vocational and

↓ Data from across the city can inform urban interventions.

Credit: Novartis Foundation



educational training to improve their marketable skills, psychological and legal aid, exercise and dance classes, bike and swimming lessons and free laundry service.

The Care Blocks service offers professional care for their care-receivers, removing barriers to access imposed by care responsibilities. All services within the Care Block can be reached easily within a 15-20 min walk and are close to women's homes.

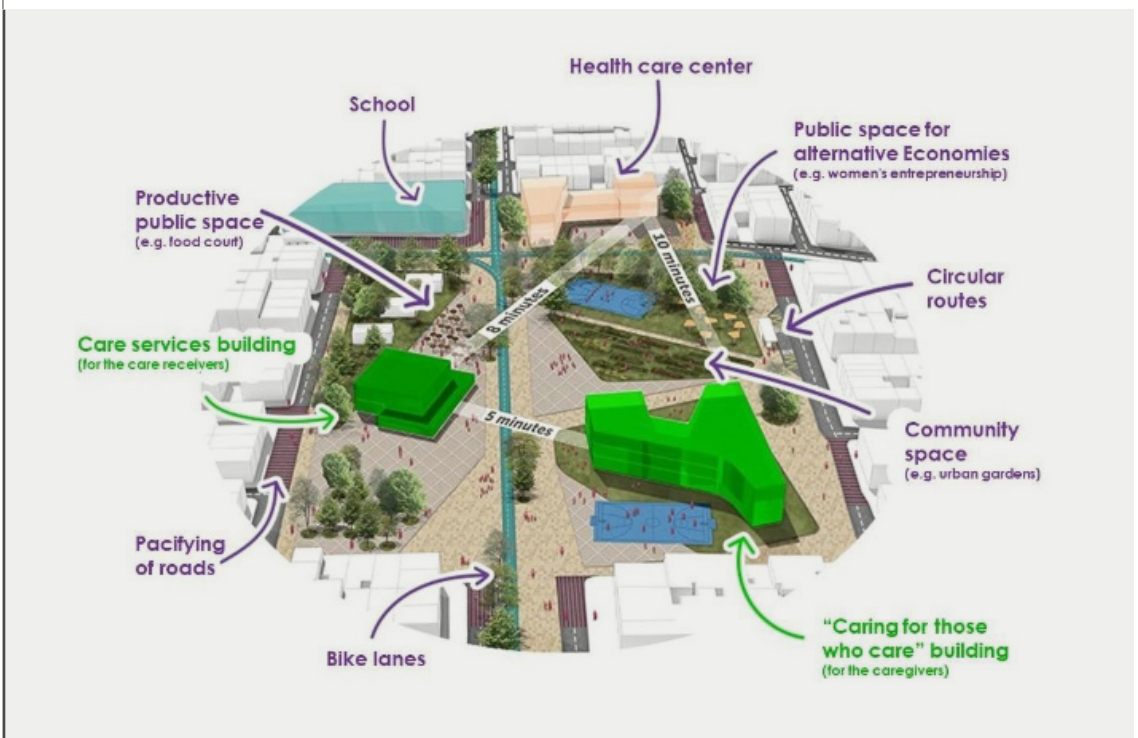
Bogotá Care Blocks play to the strengths of a dense urban setting by pioneering a cluster approach to reaching people in need, all with a gender focus. The city has already opened 21

Care Blocks, with a target of 45 Care Blocks by 2035. It has also invested in 2 Care Buses to reach caregivers and care-receivers living in rural and peripheral areas.

Care Blocks targeted outcomes are based on 3R's:

- **Recognize** caregivers' contribution to society.
- **Redistribute** care work more equitably between women and men.
- **Reduce** caregivers' burden so they no longer have to put their lives and health on hold to care for others.

FIGURE 2 The ideal CARE Block



Beyond improving the health of caregivers and providing them with access to opportunities previously beyond their reach, Mayor Lopez has a loftier goal: to transform entrenched gender inequalities — so that Bogotá's women have more time for themselves and more autonomy over their lives. To this end, there are also cultural workshops on caregiving with men and women called, We Can All Learn to Care.

While cities are often seen as a source of health equity challenges, using urban proximity and density as an opportunity to tackle health inequities can help the most vulnerable populations.

Through spatial interventions and harnessing data, public, private and civil society leaders can work at the city scale to improve health outcomes for the most vulnerable.



Why designing an accessible and inclusive city goes beyond affordability

 [Article link](#)

↑ Accessible cities afford individual and community benefits.

Credit: Vertical Harvest



Soichiro Takashima
Mayor of Fukuoka City, Japan



Nona Yehia
Co-Founder and CEO, Vertical Harvest Farms

- Accessible cities involve designing and building more intentionally inclusive infrastructure for the vulnerable of the community, especially the elderly and the disabled.
- Both the public and private sectors can enable real progress towards creating urban places and spaces for all citizens, as diverse examples from Fukuoka, Japan and the United States show.
- Prioritizing accessibility provides individual and wider community benefits and upfront investment in accessibility can save more costly care interventions.

How ‘accessible’ a city is to its citizens is often viewed through the cost of living or a similar economic lens. While affordability is a critical factor, accessibility within an urban context goes beyond this. It includes a myriad of ways both public and private sectors can make cities more inclusive.

Accessible cities must design and build more intentionally inclusive infrastructure for their

vulnerable people – those of us, like the elderly who account for over [12%](#) of the global population, and the disabled, who account for [one in six](#) people globally.

Both the public and private sectors can enable real progress towards creating a place and a space for *all citizens*. Our diverse stories, from redesigning Fukuoka city in Japan to better support the elderly, and innovating with social entrepreneurship in the United States to offer gainful employment to those with disabilities, show how taking action for more accessible and inclusive cities is within all our grasps, no matter which geography or sector we work in.

How the public sector designed a dementia-friendly city

Japan has one of the world’s [oldest populations](#) and a [low birth rate](#). By 2025, [one in five of those 65 years or older](#) are expected to suffer from dementia. Fukuoka, Japan is pioneering efforts to become a dementia-friendly city so that residents may live with peace of mind in their communities, even if they suffer from cognitive decline.

The [Fukuoka Dementia-Friendly City Project](#) brings together government, healthcare, private enterprises, universities and citizens to design a dementia-friendly city. The project includes strategies, programmes and infrastructure to ensure patients continue to live vibrantly in their community. Classes teach residents how to communicate with and care for patients with the French method [Humanitude](#); 180 seminars have already been taken by 8,375 people. The city signed a charter named *Humanitude sans Frontieres* to share the method across borders.

Fukuoka’s dementia-friendly design guidelines have been adopted in over 50 facilities and city signage helps patients safely navigate the city. The city-established Orange Talent Bank has introduced 138 people with dementia to 14 partner companies so that those with light symptoms find



↑ Classes on dementia care.

Credit: Fukuoka

appropriate work and can live actively for longer. Finally, a dedicated centre designed for learning and working with dementia recently opened and has been recognized with a gold accreditation from the [Dementia Services Development Centre](#) at Scotland's University of Stirling.

How a private sector indoor farming company employs the excluded

[Vertical Harvest](#) is trying to build the future we all want from the food we all need. It has designed its business model around customized employment for under-employed populations, such as the disabled community, while also prioritizing accessibility and affordability within its urban farm food systems.

The company's [Grow Well Model](#) makes green jobs in the fast-growing sector of controlled environment agriculture accessible to people with disabilities by recruiting, training and retaining people historically excluded from meaningful employment. Roles are customized to each employee and the organization invests in wrap-around services, including financial literacy, coordination of health care, transportation/mobility opportunities and securing accessible housing to make stable economic employment more accessible for the 40% of their staff who have a disability.

Its *Community-as-Customer* approach positively impacts accessibility and affordability in urban food systems by flowing high volumes of fresh, farm-to-fridge produce, not only into the retail and culinary sectors, but also into stalwart community institutions, such as school systems, hospitals, nursing homes, correctional facilities and college campuses. Via indoor growing, the company provides consistently high volumes, year-round – with low-income/low-access channels supported through both donation and grant partnerships.

This commitment to inclusivity on both the food and jobs front has helped build a brand that matters to the community and benefits from strong loyalty and love (NPS of +94). In this way, the company and its community stakeholders deliver:

- **Global change, built locally** – as they scale to a national network of local farms.

- **People fed and fulfilled** – because the cultivation of healthy food and meaningful jobs transforms lives, especially in economically underserved communities.
- **Fuel for a healthier future** – because real, whole food can help create a seat at the table for everyone.
- **Both the public and private sectors are critical to creating inclusivity and accessibility in cities**

These stories show that prioritizing accessibility creates and holds space in our cities for the vulnerable – and in that space is a path to social and economic inclusivity and affordability. When accessibility is intentional, citizens can continue to engage and stay connected. This is good for the individual's quality of life, independence and pride of place. It's also critical for the wider community, where upfront investment in accessibility can save more costly care interventions and offer peace of mind that we're all welcome in our homes and neighbourhoods, even if our circumstances change.

Solutions can come from both the public and private spheres – and achieve amplified impact when leveraged in tandem. Our stories offer key insights for furthering accessibility:

- **Work across sectors** – Consider for whom, why and how each major system (economic, transportation, healthcare, education, wayfinding, etc.) in your city can be improved so that it is more inclusive.
- **Find ways to pair different sources of capital** – Source, connect and align incentives of public and private sources of capital to achieve more inclusive and accessible outcomes.
- **Work with and not just for the community** – Conduct community engagement and 'listening and learning' efforts to develop a deep understanding of the unique accessibility opportunities in your city and what to prioritize.



How big data and local politics can make our cities more inclusive

 Article link

↑ Food stalls at Bristol Harbour Festival 2023.

Credit: Paul Box



Carlo Ratti
Director, MIT - Department of Urban Studies and Planning



Marvin Rees
Mayor, Bristol, UK

- Cities draw their power from pulling people together on a massive scale, but such collisions inevitably consolidate inequalities and divisions.
- Big data can highlight how cities are divided by tracking the subtlest forms of segregation with large, anonymous datasets of mobile phone activity.
- Equipped with detailed knowledge of such divisions, local governments can improve social services and bring different socioeconomic groups together.

The UK port city of Bristol, where one of us is mayor, is characterized by incredible concentrations of both wealth and poverty.

Some neighbourhoods offer the highest quality of life in the UK, but others are among the poorest in the country. In one area, Clifton, nearly [every young person goes on to higher education](#); in Hartcliffe in the south, fewer than one in 12 do.

People from around the country flock to Bristol to work in a thriving economy, but the city has been identified as one of the worst in the UK for racial inequality in education and employment.

When local government seeks to make Bristol better, it is not working at the level of a single city, but a complex patchwork of poverty and prosperity. Just keeping track of this ever-changing landscape is a huge challenge – one that a current revolution in big data promises to address.

Since their emergence about 10,000 years ago, cities have been subject to two fundamental forces: agglomeration and segregation. They draw their power from pulling people together on a massive scale, but such collisions inevitably consolidate inequalities and divisions.

Entire groups end up on the margins, unable to fully participate in a city's economic, social and civic life. For advocates of a more inclusive city, one of the great challenges is fighting segregation in all its forms. But to effectively bring a city back together,

we must have an accurate map of the fault lines that push its residents apart.

Some segregation is obvious to the naked eye — some streets have sports cars and others have cracked pavements — but the visible disparities between neighbourhoods are only one link in a long chain of social difference.

We are segregated in the places we visit, the work we do and the people we see. These subtler fault lines are hard to track, but they have huge implications for policy-makers. How can we distribute city services if key beneficiaries never travel to certain spots? How can we form united communities when entire swaths of the population never encounter each other?

Big data can help make cities more inclusive

This is where big data can be revolutionary. [Research](#) from the Massachusetts Institute of Technology (MIT) has been able to track the subtlest forms of segregation with large, anonymous datasets of mobile phone activity.

In a series of analyses in different cities, it measured how often people from different backgrounds bump into each other on the street or talk to each other on the phone. These findings allow us to define the amorphous borders of what, together with sociologist Richard Sennett, we have started calling “liminal ghettos”.

The term liminal ghetto is used in contrast to the more rigid, official ghettos of history — such as the Jewish quarters of medieval Europe and the redlined inner cities of the post-war United States — and it takes new, technologically augmented eyes to see them.

What does it mean to live in a liminal ghetto? In Stockholm, Sweden, we found that people do not only live in segregated areas, but they are also more likely to visit neighbourhoods that have the same socioeconomic profile as their own.

In Singapore, we found that a stratified “rich club” are the most segregated group in terms of phone calls: they are more likely than anyone else to only call one another. Liminal ghettos do not only divide social groups; they also trap individuals into corners of loneliness.

In the Portuguese city of Porto, we found that the COVID-19 pandemic caused a 35% drop in the overall diversity of social interactions, with the most pronounced and lasting damage to the social ties of women and the elderly.

Liminal ghettos are not a new discovery: they have always been obvious to those living inside them. As one of us grew up in 1980s Bristol as a mixed-race

boy from a low-income household, he knew there were places he should not go. Some places were safe and welcoming to people of his skin colour; others were subtly or overtly hostile.

These fractures were worsened by poor and expensive public transport, inequalities in house ownership, and separated schooling. While none of the insights one can gain through big data are surprising per se, the ability to quantify them precisely could be revolutionary.

Detailed data key to targeting social services

Equipped with a detailed knowledge of how our cities are divided, governments can improve the targeting of social services and new developments. We can pierce through the walls of liminal ghettos, reaching groups who might otherwise be cut off.

Our research into liminal ghettos can also highlight their weak points, places that tend to bring people together despite the forces that divide them.

A study in [New York City](#) found that when parks are shut down for construction, encounters between Black and white residents fall. The study shows that certain kinds of spaces are integrators, capable of bringing people together. One simple way to make a better city could be to build more of them, as it is currently the focus in Bristol.

What does bridging liminal ghettos look like in practice? It means creating integrated spaces that are both accessible and desirable: venues where people from all walks of life want to go and feel welcome. Parks, plazas and schools fit this category. But it can also happen in unexpected venues.

Last winter in Bristol, rising fuel prices and falling temperatures were threatening the physical and financial well-being of the most vulnerable residents. To combat the crisis, we opened more than 100 free, warm spaces across the city.

We knew that these rooms needed to be both warm and welcoming; otherwise, they would be segregated and stigmatizing. To this end, we called the initiative [Welcoming Spaces](#) and focused on making each one a hub of social services and community.

When winter came these rooms — in churches, mosques, and community centers — did not only keep people safe from the cold, but they also thawed the frosty edges of our city’s liminal ghettos.

In a survey, 93% of Welcoming Spaces users said the biggest impact of the programme was not keeping them warm, but providing a place for people to socialize. This finding underscores just how divided our cities have become —



93%

of Welcoming Spaces users in Bristol said the biggest impact of the programme was providing a place for people to socialize.

communities and individuals have been cut off from each other — but also how hungry we are to reconnect.

Power of big data to promote social cohesion

Together, our studies at MIT and our experience in Bristol demonstrate the power of a data-driven, locally led approach to promote inclusion.

Big data can give us unprecedented quantifications of the problems we face, but the decision power needs to be in the right hands. National

governments typically have the resources to lead large urban programmes, but only local governments possess an intimate knowledge of their surroundings.

By combining big data with “rich data” – the nuanced individual stories that make up the fabric of a city – we can merge local wisdom technical tools.

Cities have always been caught between segregation and agglomeration, but in this very moment we could shift the balance between them. If we can truly understand how urban citizens get pushed apart, we have a chance to finally pull them back together.

↓ Public spaces have the potential to bring people together.

Credit: Unsplash





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