

Impact of Tourism in Smart Cities

STRATEGIC INTELLIGENCE BRIEFING

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Executive summary



Explore the interactive version online

The integration of smart cities, innovation labs, urban planning, mobility solutions, and tourism destinations within a metropolitan area is driving significant changes and advancements in urban development. This trend has led to the emergence of innovative technologies and solutions aimed at enhancing sustainability, promoting social well-being, and boosting economic competitiveness. Cities are actively pursuing innovative approaches, such as regulatory sandboxes, participatory design, innovation systems, and public-private partnerships, to manage potential risks and maximize the benefits of smart urban development. Moreover, international collaboration and initiatives like the ASEAN Smart Cities Network and C40 Cities Climate Change Leadership Group are facilitating knowledge exchange and joint efforts to address global urban challenges, particularly in areas related to transportation, social innovation, and emerging technologies. As cities continue to evolve and innovate, they are poised to play a crucial role in shaping the future of urban living and addressing pressing societal and environmental concerns.

The key issues shaping and influencing Impact of Tourism in Smart Cities are as follows:

Technology Innovation

The promise of emerging technologies is matched by a need to manage related uncertainty

Urban Infrastructure and Services

Many cities faced serious obstacles to providing basic services even before the advent of COVID-19

Urban Economies

The global economy is urbanizing, as economic influence shifts to the East

Urban Innovation

Innovation that is in everyone's best interest must account for local values

Social Innovation

Profit is not the only source of inspiration for innovators

Energy Efficiency and Mobility

Policy-makers can do more to limit energy use by bolstering public transportation

Shifts in Travel Demographics

The expanding global middle class means international travel has surged

The Travel and Tourism Workforce

The industry has long struggled to attract top talent

Urban Diplomacy

Greater global networking can help cities ensure a better urban future

Smart Buildings

They can provide the fundamental building blocks of more sustainable cities

Compact Cities

COVID-19 has pointed to a future where more urban residents may appreciate compact, mixed-use neighbourhoods

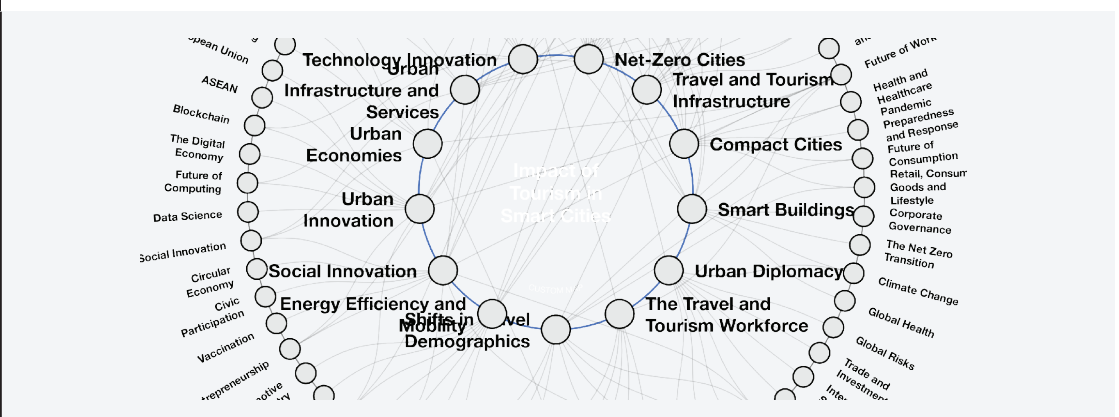
Travel and Tourism Infrastructure

Investments in necessary infrastructure lag behind industry growth

Net-Zero Cities

Cities must foster cooperation in order to tackle the ecological, environmental, and social factors hindering the transition to net zero

Below is an excerpt from the transformation map for Impact of Tourism in Smart Cities, with key issues shown at the centre and related topics around the perimeter. You can find the full map later in this briefing.



1

Latest insights

A synthesis of the most recent expert analysis.

Below are your latest updates on the topic of Impact of Tourism in Smart Cities spanning 18 different sources.

1.1 Current perspectives



DIW Berlin

DIW Berlin: Ampel-Monitor Energiewende #8: Aktuelle Zahlen zu Elektroautos

27 October 2023

Sonstige DIW-Publikationen 2023

Wolf-Peter Schill, Alexander Roth

Ampel-Monitor Energiewende

(24.10.2023), Online-Artikel

Wissenschaftlicher Mitarbeiter & Doktorand in der Abteilung Energie, Verkehr, Umwelt

[Try translating with Google](#)



Wired

In the Dreams Favela, Wi-Fi and Ecommerce Promise a Better Future

18 August 2023

It's a far cry from her last job as a cleaner earning 600 Brazilian reais (\$124) a month—half the national minimum wage—for a 12-hour day, leaving the house before dawn and walking the unpaved streets by an open sewer. The work was often dehumanizing. “In roles like cleaning, you are assigned a post, and then you are forgotten,” she says. “I've always wanted better things for myself but didn't know how to get there. Now, I learn new things daily and finally feel like I am a part of something.”



Niskanen Center

Sprawl can be good, actually: Expand the metropolitan commute zone to grow housing supply - Niskanen Center

12 July 2023

Key takeaways

- Most YIMBYs know we can boost housing supply by building densely, fewer contemplate how to do so by growing the regional commuting zone.
- Historically, many regions were well-connected by regional and commuter rail services that linked small towns to core city jobs and amenities.
- Sustainably growing commutable land benefits can help meet housing demand without compromising fiscal or environmental concerns.

Building more infill housing (homes built within the existing developed area) must be a component of growing housing supply in any region.



The Guardian

How to reduce the damage done by gentrification

29 June 2023

Cities are now home to more than half of the global population, a share that will rise to two-thirds by 2050. That means the forces shaping life in cities now also shape our world as a whole. Cities throughout history have been the great incubators of human progress, through their power to bring us closer together – something we need now more than ever. Many of the answers to our greatest challenges are to be found in reforming our cities, but if we fail to take action, cities will magnify the

perils that lie ahead.

The populist politics of recent years has been tinged with resentment against global metropolises such as London and New York.



Inside Climate News

Illinois Advances Access to Chargers to Meet EV Goals - Inside Climate News

10 June 2023

As of May, Illinois has met 7 percent of its goal to get 1 million EVs on the road by 2030. While the state has made significant efforts in recent years to facilitate the transition away from gas-powered to all-electric vehicles, further actions are necessary to meet its goal and reduce tailpipe emissions. Officials hope [...]



London Business School Review

Measuring the unmeasurable

16 May 2023

Analysing the risk of global cyberattacks

Another key area of research is the risk around cybersecurity. The World Economic Forum identifies systemic cyber risk as one of the most likely and impactful risks for firms: in the decade from 2011 to 2020, research shows that major institutions lost nearly \$500 billion from operational risk events that were predominantly due to cyberattacks.

This explains why cyber-security ranks as the most challenging risk for firms, second only to political risk, in surveys of financial-market participants, and cyber-attacks pose particularly serious threats to trading and banking systems, as attacks on individual firms can develop into systemic crises if unchecked.

Co-authored with LBS's Hélène Rey and Rustam Jamilov of the University of Oxford, 'The anatomy of cyber risk' uses data from more than 12,000 firms in 85 countries over the past 20 years to construct measures of firm-level cyber risk.



Harvard Kennedy School – Journalist's Resource

Preventing housing displacement: What works and where more research is needed

02 May 2023

A recent literature review examines short- and long-term policies that cities and states have used to try to prevent people from losing their homes for various financial reasons.

The post Preventing housing displacement: What works and where more research is needed appeared first on The Journalist's Resource .



Kellogg School of Management

Community Revitalization Is Hard to Get Right. Here's How It Can Succeed.

02 January 2024

Efforts to revitalize communities face challenges in achieving their goals without displacing residents or compromising a neighborhood's identity. Three key pieces of advice for successful community revitalization include: listening to the community's desires before the planning process begins, translating those desires into development and policy language, and respecting the ecosystem of the community by addressing multiple aspects of improvement instead of focusing on one aspect in isolation. These approaches promote collaboration and empower the community in the revitalization process.



Cities Today

Paris wants to triple SUV parking charges

11 December 2023

Photo: alex-harmuth-unsplash

Paris wants to triple SUV parking charges

11 December 2023

by Christopher Carey

Non-residential parking charges for sports utility vehicles (SUVs) in Paris could triple to €18 (US\$19.37) an hour in the centre and €12 an hour in the rest of the city, officials have revealed.



International Telecommunication Union

VHF communications with aircraft via aeronautical mobile satellite

27 September 2023

Manuel García Martín, Chief, Spanish Air Navigation (ENAIRES) Communications Division Space-based very high frequency (VHF) communications would enable aircraft to communicate with air traffic control (ATC) via satellite radio links operated in the aeronautical mobile-satellite (route) service (AMS(R)S). The concept is expected to support flight operations in many areas of the world, particularly in oceanic and [...]

The post VHF communications with aircraft via aeronautical mobile satellite appeared first on ITU Hub .



Nautilus

Why Electric Cars Are Taking Off

06 July 2023

Where I live, in Berkeley, CA, it can seem like every other car is either a Tesla Model 3 or Y. A Hyundai Ioniq 5 SUV. Some other brand of EV. That's not

including the hybrids, the Toyota Priuses and others, that appear ubiquitous along the bay. Recently my wife and I were keen on getting a 2023 Prius, which is much more sleek and futuristic-looking than previous models, until our local dealer told us the interest is so high, we'd have to wait months to maybe get a chance to snag one.



World Economic Forum
**US parking in the spotlight
and other city-focused stories
you need to read now**

24 May 2023

US parking in the spotlight and other city-focused stories you need to read now

- This monthly round-up brings you some of the latest news on cities and urbanization.

- Top stories: US cities rethink parking requirements; Paris creates first net-zero neighbourhood; Germany launches public transit ticket.

- For more on the World Economic Forum's city-focused work, visit the Urban Transformation Hub.

US cities rethinking parking requirements



The Conversation
**How cars and road
infrastructure became part of
the UK's culture wars**

26 January 2024

The UK's car and road infrastructure have become a part of the country's culture wars, as government decisions to defund cycling and walking infrastructure have been influenced by conspiracy theories. Initiatives to promote active travel and reduce traffic congestion and pollution have been misconstrued as restrictions on freedoms. These conspiracy theories arise from a context of failing public transport provision and low public confidence in the government. Political rhetoric and appeals to anti-car sentiments are driven by crude political strategies. This ideological connection between cars and deregulation dates back to Margaret Thatcher's era, and successive Conservative governments have embraced this ideology.



Science Daily
**Electric vehicles are driven
less than gas cars**

06 November 2023

Mass adoption of electric vehicles (EV) is a key part of plans to decarbonize the United States' energy system. As EV ownership in the U.S. increases, understanding how much EV owners are driving their cars informs everything from climate and energy models to U.S. policy and energy planning. Thus far, the assumption among modelers and

regulatory bodies like the Environmental Protection Agency (EPA) has been that EV owners drive their cars about the same number of miles as owners of gas vehicles. New research published in Joule, however, challenges that assumption and suggests we may be overestimating emissions savings from EVs.

In one of the largest studies on EV mileage to date, researchers at the George Washington University and the National Renewable Energy Laboratory examined odometer data from 12.9 million used cars and 11.9 million used SUVs between 2016 and 2022.



Pembina Institute
**A Guide to Installing EV
Infrastructure in Alberta's
Multi-Unit Residential
Buildings**

25 July 2023

Since 2017, sales of electric vehicles (EVs) in the province of Alberta have increased almost ninefold and are predicted to continue to grow in the coming years. The number and location of EV chargers will need to keep pace with demand. With the rapid transition from gas-fueled to hybrids and all-electric cars, this guide offers resources and advice for property owners/managers and condo boards on how to prepare their buildings for an EV future.



ESCP Business School
**How to avoid getting trapped
by a disruption strategy**

12 May 2023

Frédéric Fréry reflects on the theory of 'disruptive innovation', which some have called the most influential business idea of the early 21st century.

The post How to avoid getting trapped by a disruption strategy appeared first on The Choice by ESCP .



The Conversation (French)
**Tourisme : qu' est-ce qui
décourage les voyageurs
seniors ?**

15 June 2023

Un travail de recherche a identifié une série de contraintes qui incitent les personnes âgées à renoncer aux voyages.

[Try translating with Google](#)



YiCai Global
**Nearly 90,000 Singaporeans
Applied for Chinese Visa in
First Half**

13 July 2023

China has become a popular tourist and business destination for Singaporeans since Covid-19 restrictions were lifted earlier this year, as nearly

90,000 of them applied for Chinese visas in the first half of the year.

The figure was recently disclosed by Sun Haiyan, the Chinese Ambassador to Singapore, on Facebook.

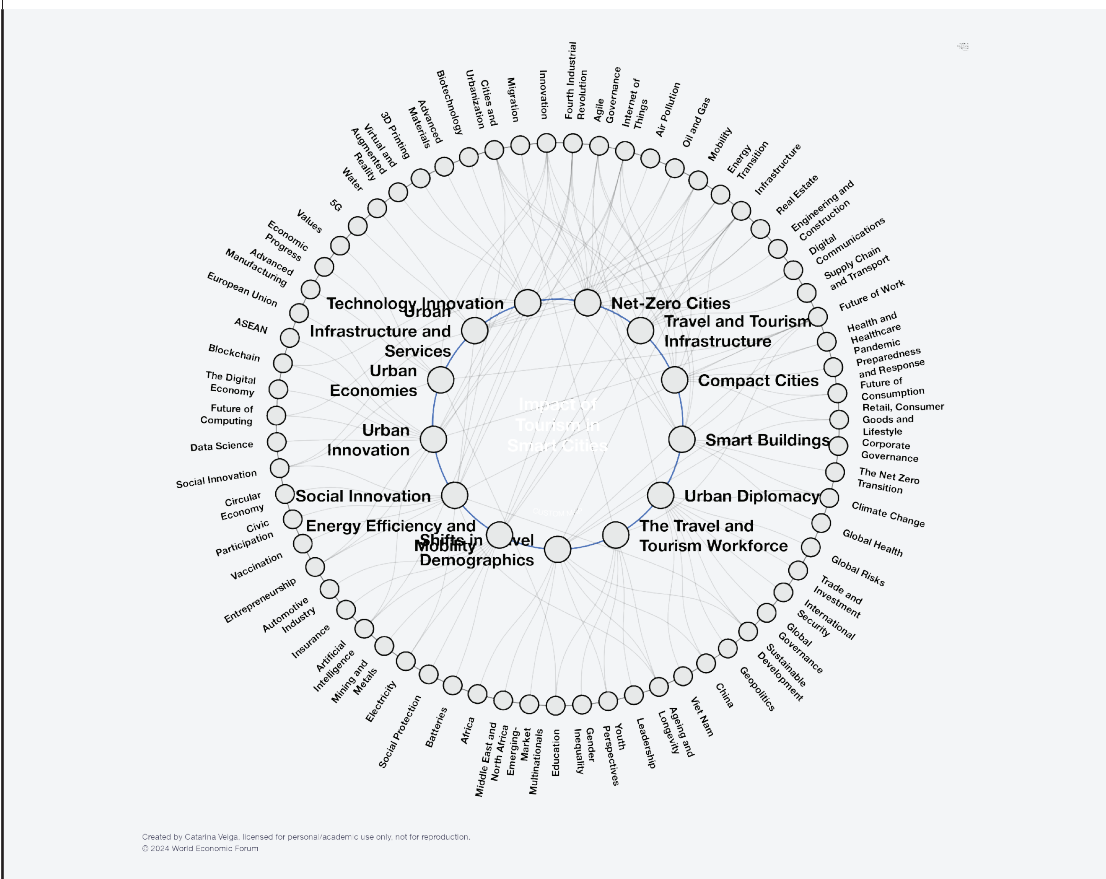
2

Strategic context

The key issues shaping Impact of Tourism in Smart Cities.

The following key issues represent the most strategic trends shaping the topic of Impact of Tourism in Smart Cities. These key issues are also influenced by the other topics depicted on the outer ring of the transformation map.

FIGURE 1 Transformation map for Impact of Tourism in Smart Cities



2.1 Technology Innovation

The promise of emerging technologies is matched by a need to manage related uncertainty

Emerging technologies like quantum computing, augmented reality, and gene editing tools present many opportunities. At the same time, they are the cause of immense uncertainty. Some particular sources of that uncertainty include the market applications a new technology will serve, the users who will adopt it, the related activities that will support its expansion; and the business models that will be deployed to

commercialize it. A holistic approach can help managers unbundle specific sources of uncertainty and the potential interaction among them, according to an article published in *Strategy Science* in 2021. For example, quantum computing has made several exciting technological advances, yet it can still be difficult to predict how it will evolve and create genuine value. Several questions remain regarding the technology, including at what point it can consistently and reliably outperform existing high-performance computing solutions. While some early-stage approaches have utilized “quantum annealing” technology - which is an alternative method of quantum computing that is already becoming commercially available - the next generation of the technology, dubbed universal gate-based quantum computing, is not expected to become widely-scaled-up for several years.

In terms of specific applications, quantum computing can serve many industries. Possible use cases include finance (for trading and risk management) and logistics (scheduling and planning), and eventually pharmaceuticals (drug development), security (encryption), and more. Still, there may be uncertainty about how various actors will contribute to the technology’s value proposition; quantum computing does not necessarily hold utility when used simply to solve current problems faster than existing solutions, so to realize its full potential reformulating old questions or raising new ones is needed (companies such as 1Qbit, which specializes in “recasting” questions and problems related to quantum computing, have grown in value). Cloud-based ventures, including those focused on data storage, will also be important for bringing quantum technology to commercial fruition. Ultimately, it will require a business model - though that is difficult to design when the technology is still rapidly evolving, and use cases are still not fully defined. It will likely be several years before its true potential becomes clear. Meanwhile governments via initiatives like the Barcelona Supercomputing Center (and its spin-off Qilimanjaro) and companies like IBM have been shouldering substantial related upfront investments.

Related topics: [Virtual and Augmented Reality](#), [Entrepreneurship](#), [3D Printing](#), [Future of Computing](#), [Artificial Intelligence](#), [Digital Communications](#), [Advanced Materials](#), [Fourth Industrial Revolution](#), [Blockchain](#), [Internet of Things](#), [Biotechnology](#)

2.2 Urban Infrastructure and Services

Many cities faced serious obstacles to providing basic services even before the advent of COVID-19

More than 700 million urban residents have no access to piped water, and more than one quarter of the world’s urban population lives in informal, haphazard settlements lacking the most basic infrastructure and services. Asia alone is projected to require \$1.7 trillion per year in investment until 2030 to address infrastructure needs. Cities require a range of basic infrastructure and services in order to be viable: sanitation systems, power grids, roads, public transportation, housing, hospitals, and schools. Particularly in developing countries, cities face considerable challenges in providing this infrastructure, and accelerating development is essential to alleviate poverty and improve liveability. Establishing robust infrastructure and services is also necessary to boost resilience in the face of challenges like climate change and rising sea levels. The capacity of urban infrastructure is often overwhelmed by the cascading effects of rapid urbanization, sprawl, and demographic shifts - and the COVID-19 pandemic has only more clearly exposed gaps in many urban healthcare systems for both the rich and the poor. While no healthcare system could realistically cope with a pandemic of such magnitude comfortably, managing hospitals on the premise of full efficiency but with no excess capacity has worsened the pandemic in some cities.

Weak urban governance and capital constraints can exacerbate these issues. As a result, cities from Australia to China, and from Europe to North America, have begun to rethink what is possible. New conceptions of sustainable urban forms include so-called compact cities, where high residential density and efficient public transportation are emphasized, and eco-cities specifically designed to curb carbon emissions. Some places have been able to harness technology and the non-governmental sector to address their issues. The Australian social enterprise Pollinate Energy, for example, has offered solar-powered products including water filters and clean cookstoves in Indian slums; six years after its founding, Pollinate Energy had provided tens of thousands of products to more than 20,000 families. Meanwhile the Asian Infrastructure Investment Bank has financed dozens of infrastructure projects collectively worth about \$4 billion in developing countries since it was established in 2016 - including a public train line in Bangalore, and slum upgrades in Indonesia. China is meanwhile pushing its Belt and Road initiative, which is funding large infrastructure projects throughout cities on a massive scale including highways, ports, and IT systems, in a bid to strengthen ties with other countries in Asia and further afield.

Related topics: [Infrastructure](#), [5G](#), [Innovation](#), [Electricity](#), [Mobility](#), [Water](#), [Energy Transition](#), [Social Innovation](#), [Real Estate](#)

2.3 Urban Economies

The global economy is urbanizing, as economic influence shifts to the East

Currently, 600 cities generate close to 60% of the world's economic output - numbers that are expected to remain roughly constant over the coming decade, though the geographical mix of these core urban areas will change significantly. Only a decade ago, roughly half of all global economic output was generated by fewer than 400 cities, all of them in advanced economies, and many in North America. This is projected to change dramatically, as economic power shifts towards Asia and other emerging market regions. Over half of today's two dozen "mega cities," or those with more than 10 million inhabitants, are in Asia, and more than half of these are in China. An urban economy is a city's economic base, or the mix of economic functions that create value and employment. These functions are continually being transformed; though the pace can vary, depending on demographic or migration factors, local and regional fiscal policy, business cycles, and regional development efforts.

In Asia, where the legacy of the developmental state (where economic development is centralized and directed by the government) still looms large, big cities like Seoul have made efforts to transform their economic base by moving large-scale manufacturing to outer regions as they develop more service-oriented economies. Such efforts have been made for years in Hong Kong, and are now gradually being made in Beijing. While policies can transform the trajectory of cities in order to better support growth industries, urban areas also experience restructuring that is brought on by disinvestment, and an exodus of highly-skilled workers; a significant number are trending in this direction. In North America and Europe, for example, there are many examples of cities that are shrinking as their physical and social infrastructures decay. Whether in decline or ascent, cities need to balance their desire for a vibrant culture with a recognition of ways that they can become home to widening disparity. As cities work to embrace the same digital and innovative processes that are transforming business models, and creating economic value, this must be pursued in tandem with stronger social protection and inclusion measures that both help less-skilled and displaced workers find opportunities in expanding sectors, and increase access to the services that matter for households that subsist on stagnating wages.

Related topics: [Innovation](#), [Advanced Manufacturing](#), [Economic Progress](#), [Education](#), [Values](#), [Social Innovation](#), [Future of Work](#)

2.4 Urban Innovation

Innovation that is in everyone's best interest must account for local values

The European Commission has launched a Digital Cities Challenge, and China's Xiongan New Area aspires to transform a barren landscape into a digital city powered by blockchain and artificial intelligence. Meanwhile Global Digital Seoul 2020 is focused on developing e-government in South Korea's capital, and India boasts a Smart City Mission. Cities must seek to innovate in order to become more sustainable, advance social well-being, and boost economic competitiveness. The technologies fuelling the Fourth Industrial Revolution can multiply innovation, though potential perils have also proliferated. Technologies can be misused to disrupt economies and splinter societies; jobs can be eliminated; and socio-economic differences can be amplified. To help manage this risk, cities are experimenting with regulatory sandboxes, participatory design, innovation systems, and public-private partnerships. Ultimately, cities must reckon with a potential clash between economic value and social values. With ride-sharing, for example, supply and demand can be better predicted and matched, but regulatory dust-ups and protests - from Montreal to Montevideo and Melbourne - demonstrate how social values can be at odds with simple economic value. Cities, and companies, are increasingly sensitive to this potential clash.

Cities innovate in order to compete with one other, though they innovate better when they connect and cooperate in an organized way. Taiwan, China, for example, has designated different cities for different specific test-beds in order to maximize experimentation and learning. The European Union's Sharing Cities program is testing smart lampposts in several cities, and aims to eventually scatter them across the continent. The ASEAN Smart Cities Network has 26 Southeast Asian cities partnering with companies in order to improve sustainability and competitiveness, and to learn from each other. The most successful cities will not be those that solely focus on innovation at the expense of other needs; they will be those that manage to recognize and adapt to specific local challenges while pushing innovation forward. COVID-19 has shown that fast-track novel urban innovation can prove to be helpful. This innovation has included the use of robots to disinfect hospitals in China and mitigate the spread of the virus, and apps that harness big data to

facilitate contact tracing in South Korea and Singapore. In Spain, the use of virtual doctors has meanwhile increased dramatically.

Related topics: [Data Science](#), [Future of Computing](#), [Fourth Industrial Revolution](#), [The Digital Economy](#), [Innovation](#), [Blockchain](#), [Artificial Intelligence](#), [ASEAN](#), [Future of Work](#), [Entrepreneurship](#), [Internet of Things](#), [European Union](#)

2.5 Social Innovation

Profit is not the only source of inspiration for innovators

Examples of social innovation are all around us; they include everything from kindergartens and hospices to Wikipedia, Kahn Academy, and microfinance (small loans made to entrepreneurs in the developing world who do not have access to traditional financing). Social innovation is often defined as innovation that aims to tackle both social problems and the means used to address those problems. This can take the form of new products, services, initiatives, business models, or simply novel approaches to accessing public goods - often achieved by creatively re-combining already-existing elements. The field has developed rapidly in recent years, according to a 2022 report published by the Academy of Management, as new sources of funding, public policies, academic research, and networks emerge. The everyday work of social innovation typically happens within social enterprises (organizations working to solve social problems using market-based approaches), charities, non-governmental organizations, social movements, or patient groups. Universities, large companies, and governments also play roles, particularly in terms of validating ideas; results have included the construction of public playgrounds and the commercialization of community-developed, open-source software.

One notable development in the realm of social innovation is the deployment of pay-as-you-go (PAYG) technology. This enables companies to cater to people living in relative poverty, by accepting small individual payments for key services. As with prepaid phone services, customers can buy small and therefore more affordable amounts of credit. Solar energy companies like Angaza and affordable water organizations like eWater Services use PAYG technology to reach customers that might otherwise be denied such services. However, a lack of immediate commercial incentives can make it difficult to raise the capital needed to support such social innovation. As a result, organizations continue to experiment with frugal innovation - to make potentially scarce resources stretch further. One example of this is the M-Pesa mobile phone-based payment and micro-financing service, which has been deployed in countries in Africa, Asia, and Europe to facilitate banking services without requiring access to an actual bank. Due to their limited funding, social enterprises often adopt hybrid for-profit and non-profit legal structures - enabling organizations like Sanergy in Africa to supplement revenue with philanthropic donations.

Related topics: [Entrepreneurship](#), [Fourth Industrial Revolution](#), [Vaccination](#), [Future of Work](#), [Cities and Urbanization](#), [Sustainable Development](#), [Ageing and Longevity](#), [Agile Governance](#), [Civic Participation](#), [Circular Economy](#), [Social Innovation](#)

2.6 Energy Efficiency and Mobility

Policy-makers can do more to limit energy use by bolstering public transportation

Transportation accounts for 23% of global carbon dioxide emissions, a figure that is expected to nearly double by 2050 if policy-makers continue to prioritize speed over accessible, compact and connected development, according to a paper published by the LSE Cities centre at the London School of Economics in 2019. In response, transportation systems are rapidly changing - thanks to the application of energy-efficient technologies to engines and fuels, and the general adoption of more sustainable behaviour and less-energy-intensive modes of transportation (such as ride sharing). Many governments have meanwhile succeeded in shifting spending away from road-building and maintenance to public transportation. In Colombia, for example, Bogota has developed a Bus Rapid Transit (BRT) system that has won plaudits, while also paving hundreds of kilometres of new bicycle paths and closing many roads to cars on Sundays. Meanwhile legacy private transportation is frequently being optimized by technology; in 2018, DHL announced it was deploying an Internet of Things-based system in India to optimize trucking routes and potentially cut transit times by 50%.

New rules and regulations can help maintain positive momentum, by mandating the further reduction of carbon footprints and limiting more energy use where possible. Mandatory energy efficiency regulation had

already been applied to as much as 30% of global consumption by 2015, according to the International Energy Agency's World Energy Outlook report. Those legal safeguards are necessary, as global energy use is expected to grow by 48% between 2012 and 2040, according to the US Energy Information Administration (one positive aspect of this growth is that the amount of energy spent on the transportation of people and goods is expected to remain constant over the period, accounting for about 19% of total demand). Particularly in non-Organisation for Economic Co-operation and Development countries, which are home to 80% of the world's population and 61% of global transportation consumption, there is tremendous potential to implement smarter and more efficient means of mobility - through emerging technology, new business models, increased consumer literacy, and informed regulation.

Related topics: [Energy Transition](#), [Batteries](#), [Infrastructure](#), [Social Protection](#), [Electricity](#), [Internet of Things](#), [Mining and Metals](#), [Oil and Gas](#), [Artificial Intelligence](#), [Insurance](#), [Automotive Industry](#)

2.7 Shifts in Travel Demographics

The expanding global middle class means international travel has surged

Historically, leisure travel was generally a luxury available only to a wealthy elite who could afford it. But declining costs and an expanding global middle class have fuelled a surge in tourism in recent decades. International tourist arrivals rose to 1.5 billion by 2019, on the eve of the COVID-19 pandemic, from just 25 million in 1950, according to the World Tourism Organization. Roughly 140 million people have been joining the middle class every year, according to a Brookings Institution estimate, and about 88% of the next 1 billion people to join will be living in Asia. That means that most near-term growth in international travel will come from outside of traditional markets in North America and Europe - and will instead come not just from Asia, but also Africa and the Middle East. As emerging economies provide more tourists they will also become more attractive destinations. The World Travel & Tourism Council has projected that between 2016 and 2026, the top 10 fastest-growing destinations for leisure travel spending would include Angola, Brunei, Myanmar, Oman, Mozambique and Viet Nam.

Young people have made a unique contribution to the travel boom. According to a report published by travel news and data service Skift in 2016, travellers between the age of 18 and 34 were tending to splurge selectively - by doing things like taking cheap flights but then going all out on experiences and restaurants. Younger people are relatively more willing to share their personal data to tailor their travel experiences, according to the 2016/2017 ITB World Travel Trends Report. Baby boomers also have a desire to discover new experiences, and have more disposable income to spend on them; they have been spending more than \$6,600 on travel annually on an individual basis, according to the 2019 Boomer Travel Trends report published by the AARP, a US-based organization focused on the elderly. A growing number of boomers are pursuing medical travel. According to the publication Patients Beyond Borders, the total market for medical travel is between \$45.5 billion and \$72 billion, with as many as 16 million cross-border patients spending an average or as much as \$6,000 per visit.

Related topics: [Health and Healthcare](#), [Youth Perspectives](#), [Infrastructure](#), [China](#), [Sustainable Development](#), [Emerging-Market Multinationals](#), [Middle East and North Africa](#), [Future of Consumption](#), [Retail](#), [Consumer Goods and Lifestyle](#), [Africa](#), [Ageing and Longevity](#)

2.8 The Travel and Tourism Workforce

The industry has long struggled to attract top talent

The travel and tourism industry directly and indirectly supported 330 million jobs, or one in ten worldwide on the eve of the COVID-19 pandemic, according to the World Travel & Tourism Council. During the five years prior to 2019, the industry accounted for one in every four new jobs created (for every 30 new tourists traveling to a destination, it is estimated that one new job is created). In addition, the travel and tourism industry normally employs a relatively greater proportion of women than other sectors, and offers employment opportunities for many people entering the labour market for the first time, according to a report published by the World Tourism Organization and the International Labour Organization. COVID-19 has resulted in a situation where as many as 120 million tourism-related jobs could disappear, according to the UNWTO - as the industry is not expected to rebound until 2022. The impact of these job losses is falling disproportionately on the women who make up the bulk of the mainly low-skilled tourism workforce on small island developing states, according to a report published by the United Nations Conference on Trade and Development.

Historically, the travel and tourism industry has had difficulty attracting top talent for technical and managerial positions. The World Travel & Tourism Council estimated in its 2015 Global Talent Trends and Issues report that talent gaps and deficiencies in the industry could cost the global economy nearly 14 million jobs and \$610 billion in GDP between 2014 and 2024, focused primarily on China, France, Italy, Russia, and the US. A 2019 report published by Deloitte described the travel industry's talent shortage as "incredible"; it pointed to a total number of open positions in hospitality that had risen from roughly 353,000 in the midst of the Great Recession to more than 1.1 million by 2018. The report noted that in the airline industry, specifically, crew shortages had restricted route expansion, and some small, regional carriers were ceasing operations due to pilot shortages. In order to best address this challenge as the global economy rebuilds post-pandemic, the private sector needs to collaborate more closely with the public sector, work on updating relevant university and training programmes, and better keep up with market needs and technological advancements.

Related topics: [Ageing and Longevity](#), [Leadership](#), [Youth Perspectives](#), [Gender Inequality](#), [Future of Work](#), [Education](#), [Migration](#)

2.9 Urban Diplomacy

Greater global networking can help cities ensure a better urban future

The C40 Cities Climate Change Leadership Group connects 90 cities and more than 650 million people, to facilitate collaboration on addressing climate change. In 2014, Ho Chi Minh City received technical assistance and investment from Rotterdam to better deal with rising sea levels and increasingly severe storms via the C40's Connecting Delta Cities Network. Cities have increasingly made their presence felt in the global community, in the interest of their specific local needs and as a means to better find solutions to vexing urban challenges. At the 2014 UN Secretary General's Climate Summit, the so-called Compact of Mayors, an ambitious agreement to commit to deep greenhouse gas emission reductions, was formed. In total, 447 cities, with a collective population of 391 million, committed to the compact. City mayors also played an important role in shaping the Paris Agreement on climate change. In 2016, the Compact of Mayors formally merged with the European Union's Covenant of Mayors, a climate change initiative launched in 2008, in order to create a more powerful platform to demonstrate the global impact that cities can have.

It was inevitable that cities would form closer international connections based on concerns about trade, infrastructure, culture, and migration. Increasingly, municipal leaders are asking why they are not part of discussions related to, for example, the UN Global Compact on Refugees - even as many refugees and internally displaced people end up in urban areas. In 2018, the ASEAN Smart Cities Network was launched, in order to bring together 26 Southeast Asian cities to learn from each other about how to become digital-ready. The twinning of cities is a longstanding practice; according to a UK Government Office for Science study on city diplomacy published in 2016, twinning has evolved to become more strategic, and has spawned multi-city coalitions as localities create joint projects and platforms where businesses can interact. Beijing alone has 47 "sister" cities, according to the report, and launched 114 "concrete cooperations" with 37 of these cities between 2009 and 2014, including shared efforts by the Bank of Beijing and the International Netherlands Group, and between Beiqi Foton Motor Co. and the City of Moscow.

Related topics: [Global Risks](#), [Trade and Investment](#), [International Security](#), [Global Governance](#), [Sustainable Development](#), [Agile Governance](#), [Geopolitics](#), [Climate Change](#), [China](#), [Viet Nam](#)

2.10 Smart Buildings

They can provide the fundamental building blocks of more sustainable cities

The technology-based platforms at the heart of smart buildings facilitate the operation of real estate assets - from single property units to entire cities. These platforms may simply provide information about a building's performance or its immediate surroundings, or they might directly facilitate or control building services. Smart buildings can therefore become the building blocks of smart cities, as the means to drive not only greater environmental stability but also greater social stability in the form of wellness, productivity and satisfaction. Amid both a global climate emergency and a global housing shortage, any increase in efficiency should be welcomed. While smart building development has been driven by green initiatives, a distinction should be made between "green" buildings designed to drive environmental sustainability and smart buildings that can now enhance the quality of life (and work) - while at the same time helping to bolster the utilization of otherwise-wasted space. The technology used in the construction industry is increasingly important in this

regard; advances in construction technology (“ConTech”) will have big impacts on the ways we finance, sell, and occupy real estate.

ConTech has therefore increasingly become an attractive investment opportunity for venture capital firms. Some of the more prominent aspects of the sector have focussed on greater data-driven efficiency during the construction process - by more accurately recording and benchmarking productivity, facilitating the exchange of information between contractors and subcontractors, helping to share planning activity, and by simply replacing traditional, paper-based reporting. Regardless of the distinction between “green” and smart buildings, environmental factors such as poor air quality in many cities, in addition to related social factors (not least wellness, in a pandemic era), have increasingly meshed the two concepts. Ultimately, a smart building can help drive faster rates of decarbonization in energy systems by building up energy storage capabilities for more flexible use, empower owners and occupants by lending them more direct control over energy use, and better recognize and react to occupants’ needs in terms of comfort, indoor air quality, and safety - as well as their operational requirements. The most fundamental requirements of any smart building are high energy efficiency and the provision of a healthy living and working environment.

Related topics: [Future of Work](#), [Corporate Governance](#), [Fourth Industrial Revolution](#), [Innovation](#), [The Net Zero Transition](#), [Cities and Urbanization](#), [Climate Change](#), [Global Health](#), [Internet of Things](#), [Agile Governance](#)

2.11 Compact Cities

COVID-19 has pointed to a future where more urban residents may appreciate compact, mixed-use neighbourhoods

The “compact city” concept of making the places where urban residents live, work, and relax relatively dense has been a prominent principle of sustainable urban development since the 1990s. It has been touted as a means to make transportation more sustainable, to make more efficient use of resources, to boost personal health, to elevate cultural life, and to bring people together. Mixing residential, leisure, and commercial spaces reduces commute times and dependence on cars, maximizes the benefits of urban design, and provides opportunities for foster a greater sense of community by keeping people closer to their homes and workplaces. Cities with relatively dispersed, segregated population centres, many of which were planned around cars (as is particularly the case with many American cities) can be problematic for people living relatively far from employment opportunities - and from places where they can buy nutritious food. This can limit prospects for people who are forced to spend large portions of their day and their incomes on commuting. As compact cities solve these issues, they also reduce reliance fossil fuels - making cities both more liveable and sustainable.

According to the Organisation for Economic Co-operation and Development, there is no single model for a compact city applicable everywhere; each urban area must take local circumstances into account. The OECD has said most national governments have aspects of compact city policies in place, though related urban planning must proceed carefully. It can be challenging for cities to reconfigure themselves into denser, mixed-use neighbourhoods - though COVID-19 has pointed to a future where residents potentially working more from home may see added benefit in a compactness that enables them to more readily access services locally without having to obtain them during a commute. In fact, greater access to local services in proximity to one’s home, and to green space, have been found to have significant positive impacts on well-being during the pandemic - a period when many people have struggled with stress and mental health issues. As the worst of the pandemic has receded in many places, several large cities have pursued compact city models in some fashion, for example by adding bicycle paths for easier (and healthier) short trips.

Related topics: [Agile Governance](#), [Future of Work](#), [Infrastructure](#), [Health and Healthcare](#), [Mobility](#), [Innovation](#), [Pandemic Preparedness and Response](#), [Future of Consumption](#), [Retail](#), [Consumer Goods and Lifestyle](#), [Cities and Urbanization](#)

2.12 Travel and Tourism Infrastructure

Investments in necessary infrastructure lag behind industry growth

Despite the significant contributions of the travel and tourism industry to the global economy - including the creation of hundreds of millions of jobs - levels of private and public infrastructure investment in airport development, accommodation, roads, railways, and communication technologies lag behind rates of industry growth. This has led to significant bottlenecks and limited potential opportunities. According to a report

published by Deloitte in 2019, travel growth to that point had US travel infrastructure bursting at the seams, and facing problems in terms of capacity and modernization (problems that will have to be addressed as global travel rebounds post-pandemic). The report cited a need for an additional \$4.5 trillion in related infrastructure investment in facilities including airports, railways, ports, and roads by 2025, before the problem potentially impacts the country's overall GDP and employment growth. It is not just the US that is faced with shortcomings - around the world, airports and border controls need to become smarter, and travel infrastructure must become leaner, in order to meet the needs of people who want to move around securely and seamlessly.

According to the 2019 edition of the World Economic Forum's Travel and Tourism Competitiveness Report, the quality of infrastructure in Europe and Eurasia had helped to make that region the most competitive in the world - particularly in terms of air transport infrastructure (which includes available seat kilometres, number of departures, and number of operating airlines) and ICT readiness (including online services and mobile network coverage). Meanwhile the Asia-Pacific region boasts the world's most impressive air transport infrastructure, according to the report, and its investment in ground, port, and tourist service infrastructure (which includes the availability of sufficient-quality accommodation, resorts, and entertainment facilities) are apparent. According to the report, 92 out of the 140 countries included had registered improvements in terms of related infrastructure since 2017, helping 88 of these countries improve in terms of their overall travel and tourism competitiveness. In general, however, there is a need for greater dialogue between the public and private sectors in every country in order to ensure a more integrated travel and tourism infrastructure strategy.

Related topics: [Cities and Urbanization](#), [Real Estate](#), [Infrastructure](#), [Engineering and Construction](#), [Internet of Things](#), [Mobility](#), [Digital Communications](#), [Supply Chain and Transport](#)

2.13 Net-Zero Cities

Cities must foster cooperation in order to tackle the ecological, environmental, and social factors hindering the transition to net zero

Cities are well positioned to serve as innovation hubs helping to lead the charge on experimental green initiatives. Urban areas consume more than an estimated 65% of the world's energy, and account for 70% of emissions. Carbon dioxide emissions from cities can be comprehensively reduced, however, by switching from fossil-fuel-derived power to clean electricity (sourced from solar, wind, geothermal, and other renewables), by providing more decisive support for the implementation of green construction and land use, and by working to create a more circular economy that emphasizes reuse in order to eliminate waste. National governments should endeavour to encourage greater cooperation among local authorities, businesses, and the public by providing the attractive financial incentives necessary to nudge consumers to start making energy-saving improvements to their houses. Cities can also dramatically cut their carbon emissions by actively promoting and enhancing low-carbon alternatives for transportation (not least public transport systems), reducing waste generation, improving waste management, and making needle-moving investments in emerging industries that are focused on developing both low-carbon and carbon-removing technologies.













Carbon neutrality and sustainable urban planning can work in tandem with social and economic development. Social equity, in the form of affordable housing, access to universal basic services (water, sanitation, education), and affordable public transportation are vital urban priorities. Policy approaches must therefore consider the impact of climate change from a social justice perspective, and reduce both carbon emissions and social inequality. The International Energy Agency estimates that the net-zero transition may create 30 million jobs by 2030. However, to avoid worsening inequality, policy support should be provided to the estimated five million fossil-fuel production workers as part of this transition. Additionally, introducing urban agriculture and fostering rural-urban interdependence can bolster food security while also enabling rural areas to benefit from improving economic, educational, health, and social opportunities. Overall, it is vital that net-zero pledges are not only science-backed, but also incorporate policy measures and targeted initiatives encouraging constructive cooperation among governments, the public, and businesses. Regular reporting and tracking of emissions must be commonplace, and the priority should be direct decarbonization rather than buying offset credits for avoided emissions.

Related topics: [Cities and Urbanization](#), [Migration](#), [Innovation](#), [Fourth Industrial Revolution](#), [Agile Governance](#), [Internet of Things](#), [Air Pollution](#), [Oil and Gas](#), [Mobility](#), [Energy Transition](#), [Infrastructure](#)

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