**Global urban trends will impact sustainability business practice (September 2017)**

In 2016 cities have become home to 54 percent of the world's population[1], and by the middle of this century that figure will rise to 66 per cent[2]. Almost all global population growth from 2017 to 2030 will be absorbed by cities, which is expected to result in about 1.1 billion new urban dwellers over these next 13 years[3]. While cities face major problems, from poverty to pollution, they are also powerhouses of economic growth and catalysts for inclusion and innovation. With vision, planning and financing, cities can help provide solutions for the world. Understanding the key global urban trends over the coming years is, therefore, crucial.

**The Sustainable Development Goals: The role of cities**

On 25 September 2015, the member states of the United Nations agreed the 17 Sustainable Development Goals (SDGs) of the Post-2015 Development Agenda. The SDGs provide a roadmap, offering a set of integrated objectives that can bring a more sustainable vision for urban development.

For local and regional governments across the world the creation of the SDGs should be celebrated. All the SDGs have targets that either directly or indirectly relate to the work of local and regional governments. It is estimated that 65 percent of the 169 targets associated with the 17 SDGs will not be achieved without the proper engagement of cities and regions[4]. As such, local governments are agents of change and are best-placed to link the global goals back to local communities.
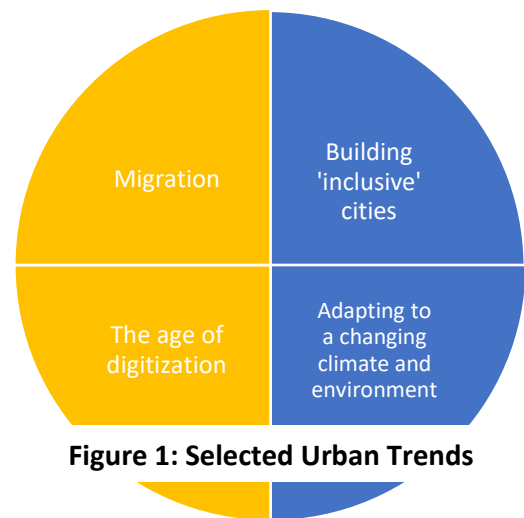


**Figure 1: Selected Urban Trends**

**Improving competitiveness and sustainable living**

With 5 billion people, or 60 percent of the world's population, expected to be living in cities by 2030[5], city leaders are faced with tough challenges. Developing countries need to cope with urbanization on an unprecedented scale. 90 percent of urban growth is taking place in developing countries and by 2030 towns and cities in Asia, Africa, and Latin America will hold 80 percent of the global urban population[6]. Conversely, developed countries wrestle with aging infrastructure and stretched budgets. The common goal is to secure, or maintain, competitiveness without compromising the livelihood of citizens.

Today, cities are becoming more important to businesses, and more interdependent with businesses. Traditionally, however, businesses and cities have worked in silos.

Working with cities can provide businesses with new growth strategies while creating a world that is both sustainable and inclusive. In total, this is estimated as a $3.7 trillion opportunity[7].

Against this backdrop, WBCSD has undertaken an analysis of global urban trends to better understand the context of the business sustainability agenda for cities. This will help to engage businesses in a strategic way and support cities to move from ambition to implementation.

We first conducted an analysis of the most relevant urban trend reports (see Annex 1), identifying themes that cut across all of them. We then explored each of these themes through a sustainability lens and selected the most pressing trends within them.

We compared these trends with WBCSD's current work program, and identified gaps or areas where efforts should be strengthened.

**Trend 1: Coping with migration**

Migration continues to dominate news headlines and political discourse. For cities, the case for addressing migration has never been clearer or more relevant. In 2015, for example, it had been estimated that around 3 million people are moving to cities every week[8]. Today there are 29 megacities with populations of over 10 million, up from 2 in 1950[9] and this number is projected to grow to between 41 to 53 by 2030[10]. Migration is driving much of the increase in urbanization. This questions how prepared cities are to cope with this persistent trend.

Migration, in general, is driven by people moving in search for better jobs, better incomes, and, more broadly, a better quality of life. While most migrants move voluntarily, some are forced to move due to conflict. "Environmental migrants" or "climate refugees" are also emerging, as climate change is impacting urban geographies. As this is a new category, there is no formal reckoning of how many have left their homes because of climate change[11]. The prediction, however, is that climate change could displace around 1.4 billion people by 2060[12]. In Syria, for example, water scarcity, crop failures and livestock deaths drove an estimated 1.5 million people to the cities from rural areas. Moreover, since 2013, nearly 15 million people have been displaced by typhoons and storms in the Philippines.

The year 2016 broke the world record for the numbers of displaced persons around the globe. Now one in every 113 people[13] on the planet are refugees. Globally, someone is displaced every three seconds, forced from their homes by violence, war, and persecution[14]. By the end of 2016 the number of displaced people had risen to 65.6 million[15], more than the entire population of the United Kingdom[16]. Meanwhile, the global number of refugees stands at 22.5 million[17]. More than half (55 percent) of the refugees come from just three countries: Syria, Afghanistan, and South Sudan[18]. Syria, now in its seventh year of conflict, is generating the highest number of refugees. Five and a half million fled the country last year[19].

With western nations debating their level of immigration, it is the world's poorest countries who carry the largest burden of the global refugee crisis. They host 84 percent of the world's refugees[20], only stunting the growth of these struggling economies. As an example, countries in the Middle East, such as Lebanon and Jordan, hold 1.1 million and 629,000 Syrian refugees respectively[21]. The influx is so profound in Lebanon that its 4.4 million population has now increased by 25 percent[22].

Given that more than half the world's refugees live in urban areas[23], cities are now the primary reception for new arrivals. They are essential in ensuring the protection, care and eventually the integration of refugees.

**Immigrants have been shaping economies for millennia.** In 2015, alone, migrants contributed to 9.4 percent of global GDP ($6.7 trillion)[24]. North America captured up to $2.5 trillion of this output, while western Europe captured $2.4 trillion[25]. In some top migrant destinations (US, Germany, Saudi Arabia, the UK, Canada, France, and Australia), immigrants contributed to 40-80 percent of the labor force growth from 2000 to 2014[26].

Immigrants have sometimes been characterized as taking jobs away from native workers. In fact, immigrants often create jobs too – the UK, for example, saw 15.4 percent of its immigrants launch their own businesses in 2015, compared to just 5.3 percent of lifelong UK residents[27].

In the US, by 2020, researchers estimate that Latinos will fuel nearly a quarter of GDP growth, and represent 12.7 percent of the country's total GDP[28]. By 2060, one in three consumers and one in three workers will be of Latino origin, making it a sizeable market. Latinos, currently, represent a consumer market of more than $1.7 trillion[29].

Migrants and refugees bring important business opportunities. By investing €1 in welcoming refugees, businesses are predicted to yield nearly €2 in economic benefits within five years[30]. Additionally, refugees are often skilled, capable and resilient, holding qualifications and a diverse range of practical experience[31]. Research published on the UK by Nuffield Foundation[32] shows that nearly half of the refugees surveyed (45 percent) already held a qualification, and the majority (65 percent) were either employed, self-employed or studying[33].

Hiring refugees can also introduce innovative ideas and perspectives that enrich any workplace. The advantages of diversity span from generating innovation, to increasing motivation, through to attracting highly talented job applicants. In fact, ethnically diverse companies in the UK are 35 percent more likely to financially outperform the national industry median[34].

**Trend 2: Creating inclusive cities**

Cities currently account for approximately 80 percent of GDP generated worldwide[35]. While urbanization is steering the global economy forward, rising inequality and exclusion within cities can derail development progress. The international community has acknowledged the need to create more inclusive cities, allowing people to fully benefit from urbanization.

Over the last decade, addressing inequality has become a central reference in policy making, and is now surfacing as a priority for cities just like economic growth and alleviating poverty. Likewise, Sustainable Development Goal 11 calls for "inclusive, safe, resilient and sustainable" cities. Building inclusive cities, however, remains a challenge. As of 2015, one in three urban residents in the developing world still lives in slums with inadequate services[36]. By 2030, the number of slum dwellers is estimated to reach 1.6 billion people globally[37]. Asia and Africa are home to some of the poorest countries in world, but are regions where much of this future urbanization is expected to take place[38]. More than 95 percent of those living without electricity are in countries in sub-Saharan African and Asia[39].

A recent piece of research measured the relationship between city size, income and wealth creation. The relationship is "superlinear", meaning that if a city's size grows by, for example, 10 percent, income and wealth generation would grow by more than 10 percent[40]. As large cities may be where growth and wealth are concentrated, through inference, average quality of life is improved. What remains of concern is the uneven distribution of wealth among a city's citizens.

When cities get larger, the increased income growth is concentrated among top earners[41]. Inequality within cities typically is recognized when the incomes of top earners grows faster than city size, especially if low income earners do not increase simultaneously. Russia, for example, is the world's most unequal country with a staggering 74.5 percent of the nation's wealth controlled by the richest 1 per cent of people[42].

While it is not easy to measure a city's inclusivity, many rankings exist, such as the world's most "liveable" cities. This index explores which cities provide the best or worst living conditions, including 30 factors related to safety, health care, educational resources, infrastructure and the environment. Results are shown below (see Table 1).

| City | Score (out of 100) | Rank |
| --- | --- | --- |
| Melbourne, Australia | 97.5 | 1 |
| Vienna, Austria | 97.4 | 2 |
| Vancouver, Canada | 97.3 | 3 |

**Table 1: Top three world's most 'liveable' cities**

Another way to assess a city's progress is through 'quality of life' rankings. Mercer's annual Quality of Living Index evaluates 230 cities across 39 factors including political, economic, environmental, personal safety, health, education, transportation and other public service factors. The results are shown below (see Table 2). Vienna, in Austria, the most recent rankings for the 7th consecutive time, followed by Zurich and Auckland.

| City | Rank |
| --- | --- |
| Vienna, Austria | 1 |
| Zurich, Switzerland | 2 |
| Auckland, New Zealand | 3 |

**Table 2: Top three cities with the highest Quality of Living Index**

**Inclusive cities provide important business opportunities** that can have a positive impact in the world. The Coca-Cola Company, for example, have a '5x20' program. Their aim is to bring 5 million women in the developing world into their business by 2020, as local bottlers and distributors of Coca-Cola products[43]. The benefits from such an initiative are two-fold. Firstly, investing in women gives rise to increased revenues and more workers for Coca-Cola's business. Secondly, such women become better educated, raise healthier families, and by extension, be part of a more prosperous community[44].

Visa managed to build partnerships with local governments and non-profits, with a focus on financial inclusion. These alliances allowed for financially underserved people to pay, get paid and save money[45]. As a result, it enabled poor people to better withstand blows to their personal finances, build assets and connect into the wider economy[46].

Cemex launched its Patrimonio Hoy (Spanish for "Personal Property Today") initiative in 2000, initially in Mexico. It has provided affordable home improvement solutions to one million low-income people and encouraged over 350,000 to build their own homes[47]. It created jobs for local craftsmen and through its sales force, 95% of which are women, and half of whom had no prior work experience[48]. In 2015 99.2 percent of the $42 million in materials and loans provided by Cemex had been paid for on time[49]; the company estimates that, since inception, Patrimonio Hoy has extended over $135 million microcredits to customers[50].

Similar inclusive business opportunities arise across all sectors, from extending access to energy, health services or water and sanitation in underserved areas of a city, to providing solutions for

affordable housing or financial services. The business case can, for example, raise competitive advantage and opportunities to innovate. Businesses, subsequently, secure an improved social footprint and a license to grow.

**Trend 3: Adapting to a changing climate and environment**

As the world becomes increasingly urban, decisions taken today in cities across the world will shape the future of humankind. The urban environment is fundamental to ensure a decent quality of life for all citizens. People live in urban areas to access a better life. Poor management of today's urban areas can lead to irreversible consequences. Cities, globally, represent 75% of global energy consumption and account for 80% of the world's greenhouse gas emissions[51]. It has been reported that 70 percent of cities are already dealing with the effects of climate change, and nearly all are at risk[52].

Air pollution is the world's biggest environmental health risk for cities across the world, costing the lives of 7 million people each year[53]. Approximately 80 percent of people living in cities are exposed to air quality levels that exceed World Health Organization (WHO) limits[54]. Across Africa, air pollution kills three times more people than malnutrition or dirty water[55]. In China and India alone, the health impacts of pollution costs both countries $3.5 trillion a year[56].

For this reason, there is a push for the world's largest cities to reduce their greenhouse gas emissions by up to 1.4 billion tons of carbon dioxide annually by 2030 through better, more efficient transport systems[57]. Stockholm, for example, has experienced success on this front. The city reduced its emissions by 35 percent from 1993 to 2010, but grew its economy by 41 percent[58]. In London car ownership decreased by 6 percent from 1995 to 2011, yet the city's economy grew by 40 percent[59].

Zooming in on the future of mobility, there is a revenue opportunity of $7 trillion while addressing potentially devastating environmental consequences. Transportation today accounts for 20 percent of global final energy consumption, and 18 percent of the global $CO_2$ emissions. By 2050, both passenger and freight transport could contribute to a 60 percent increase of emissions[60].

The transport sector, therefore, could improve the lives and livelihoods of billions of people — their quality of life, their health, their environment — and stabilize climate change. Numerous opportunities are available to develop sustainable solutions to decouple mobility from negative environmental and social impacts. This will help meet commitments set by the Paris agreement, as well as helping business capitalize in a transforming landscape.

Storms are also an outcome of increased climate change. Warming can lead to higher sea levels, supplying enough energy to fuel coastal storms. The recent Hurricanes Irma and Harvey had a combined cost of between $150-200 billion in damages.[61] Hurricane Irma, alone, wiped out power for 64 percent of the state[62] of Florida.

Another major climate-related risk that have heavy economic costs to cities are floods. Overall 90 percent of all urban areas are coastal, putting cities on Earth at risk of flooding from rising sea levels and powerful storms[63]. By 2050, flood damage in the world's coastal cities is expected to reach $1 trillion a year[64] as sea levels rise and global warming triggers new extremes of heat, windstorm and rain. More than 40% of these costs could fall upon just four cities - New Orleans, Miami and New York in the US and Guangzhou in China[65].

The flooding cost in Amsterdam for example could be up to $83 billion[66]. More recently, Houston experienced the worst US flood storm ever, deeply hurting the city's economy. The Texas floods, triggered by the former Hurricane Harvey, could cost $100 billion[67]. Texas Governor Greg Abbott said the state could need more than $125 billion from the federal government to help it recover[68].

An increase in the propensity of floods and poor air quality highlight what cities will need to cope against, unless cities look for sustainable solutions that will better protect their urban areas from climate change and air pollution.

**Globally, businesses are increasingly realizing the importance of being compliant with Paris agreement and reducing emissions,** as well as the associated business opportunities in cities. Business' success now hinges on its management against climate-related risks. Unilever, for example, said natural disasters linked to climate change cost the company $330 million a year[69]. Similarly, in 2016, the insurance giant Swiss Re estimated that financial losses from disasters globally amounted to over $158 billion and cost 10,000 lives[70].

Many of these opportunities are in the building and transport sectors, with an estimated 166 million potential new jobs[71] in building and vehicle efficiency, affordable housing, and other urban opportunities. Moreover, by retrofitting buildings with updated lighting, heating, cooling, and appliances the profits generated would amount to $800 billion[72].

While there are many opportunities for businesses to capitalize on, the fight against climate change will not be cheap. Developing countries, like India, will need about $100 billion of new investments per year over the next 40 years to build resilience to the effects of climate change[73]. This will also require significant finance and investment from the private sector.

Keeping India as the focus, Tata Consulting Engineers (TCE) are looking to strengthen the storm management system across several Indian cities. Moreover, there is an opportunity to leverage the storm water to improve water supply. As it stands, many part of urban India are plagued with local flooding, predominantly during the rainy season. These areas also exposed to problems of severe water supply crises. If the storm water can be managed well, TCE believes this will not only result into mitigation of local flooding issues but it could also reduce water shortages in certain cities in sustainable way[74].

TCE are also experienced in delivering sustainable solutions when it comes to waste management. The challenges created regarding waste management have stemmed from a combination of increased urbanization, consumerism, and changing living standards. Municipal solid waste is one of the most critical waste products that need effective management. TCE are willing to spearhead a research exercise and, if successful, health and environmental impacts will be minimized while resource conservation and efficiency will be maximized.

Lastly, the effect of heat on people's daily lives, specifically their work, has not been given enough attention. Global warming will cost the world economy more than £1.5 trillion a year in lost productivity by 2030 as it becomes too hot to work in many jobs[75].

What seems clear is that the economic costs for not adjusting to today's environment and climate challenges could cripple the public and private sectors alike. Emphasizing, however, greater investment in more sustainable infrastructure could potentially yield very large economic benefits.

**Trend 4: The age of digitization**

A city's capacity to leverage technology and innovation determines its ability to compete in the world. Such cities are called "smart cities".

Smart cities are a relatively new concept, built on smart and intelligent solutions and technology that lead to at least five of the following smart objectives: smart energy, smart building, smart mobility, smart healthcare, smart infrastructure, smart technology, smart governance, smart education, smart citizen[76]

By 2025 there will be around 26 global Smart Cities. Beijing, Tokyo, Singapore, Sydney and Amsterdam will be among them[77]. Last year, the Singapore government called for a record $2.82 billion worth of technology tenders[78] as part of its Smart Nation plans.

Singapore is not alone. A Bank of America report suggested that cities like London, New York, Paris and Tokyo can achieve 30 percent reductions in crime and energy use and 20 percent reduction in water loss and traffic delays by deepening investments in technology[79].

Another example is the Finnish city Tampere, which is investing up to €10bn until 2030 to put digital technology at the core of everything it does[80]. Public and private contributions will create the right environment for the city, government and private businesses to take advantage of digital technology. The Finnish government feels that through tapping into digitization, there is an opportunity to secure further economic growth and enhance the quality of life for its inhabitants[81].

It seems that there is value for cities to transition towards being 'smart'. Globally, cities are predicted to experience an economic impact of $930 billion to $1.6 trillion per year by 2050 from digitization[82]. Moreover, with cities consuming 75 percent of the energy produced globally, 40 percent driven by buildings alone, an opportunity to push for energy efficiency seems sensible. Markets experts estimate that by 2019, cities could cut approximately $11 billion in energy costs[83].

What is important to note is that when cities connect with current technological innovations, the impacts for society and the economy will be heavy but potentially beneficial. Furthermore, digitization enables governments to operate with greater transparency and efficiency[84]. The 'smart city' concept, therefore, continues to resonate well with city governments around the world. The hope that smart cities have an ability to tackle social and environmental issues remains appreciated, but should not be blurred by the realities associated with such a transition.

In fact, as a recent article in the Scientific American highlighted, many of the alleged 'smart cities' are actually just cities with a few or several standout smart projects. In Pittsburgh, for example, the Pennsylvania Department of Transportation is piloting a $30 million smart-signal system that utilizes adaptive traffic signals to read traffic conditions, adjusting accordingly to keep traffic flowing[85]. Similarly, Kansas City invested nearly $15 million in a smart lighting project that will install 200 lights along its new streetcar line[86]. The lights have built-in sensors and cameras that detect the presence of people, which turn off when no one is around to save 20–30 percent in electricity costs[87].

With smart cities acting as a model to show how the digital world blends with the non-digital world, a primary reason for the disconnect between a smart city's potential and the reality is because both worlds can also collide[88]. This suggests that a single smart city project is not enough, instead a "smart city" initiative needs to address a few questions, such as "how will a smart city affect social justice"

and "who decides what the city really needs", or also "what it really costs"[89]. For any smart cities approach to be effective, issues around governance, legacy, social fabric, and politics need to always remain front and center[90].

**Most businesses are either thinking about or pressing ahead with digital transformation initiatives.** The Corporate Executive Board[91] carried out research showing that 87% of senior business leaders now cite digitization as a priority for their company – and 66% fear failure to digitize will jeopardize their competitive position[92].

In becoming more technologically acute, businesses that are positioned in smart cities have a higher chance of benefiting from the technology. Frost & Sullivan's research estimates a combined market potential of $1.5 trillion globally for the smart city market in areas of energy, transportation, healthcare, building, infrastructure and governance[93]. Research also suggests that, if policy makers and businesses can successfully collaborate, by linking the physical and digital worlds, IoT could generate up to US$11.1 trillion per annum in economic value by 2025[94].

Take transportation as an example. The IoT can create an ecosystem where connected public transport and private cars can operate seamlessly. It has been forecasted that connected cars will generate $8.1 trillion between 2015 and 2020[95]. In the freight arena, there will be more than 50 billion objects connected to the Internet by 2020, presenting an immense $1.9 trillion opportunity in logistics[96].

Moving forward, businesses can channel today's technology to create leaner model to remain competitive at a global level. Simultaneously, businesses have the financial capacity to help cities become 'smarter', unlocking the benefits price tagged at trillions of dollars. Remember, the digitization era is only at its initial stages and, therefore, there are enormous opportunities still at stake for cities and businesses alike.

**Why these urban trends matter to WBCSD companies?**

The identified urban trends are imperatives for business and cities to tackle going forward. Cities will struggle to build the future needed without meaningful action by business. Businesses have the expertise, the strategic interest, the innovation and financial capacity to provide sound sustainable solutions.

The transition, therefore, towards a sustainable future deeply depends on the dynamism and the funding of the private sector working in close partnership with governments and cities. Paul Polman, CEO of Unilever, noted that "it is not possible to have a strong, functioning business in a world of increasing inequality, poverty and climate change"[97]. Businesses, therefore, have an inherent self-interest in supporting cities across these trends.

WBCSD offers businesses a platform to work together with other businesses and cities to respond to these trends and shape a sustainable urban future.

Its Sustainable Cities Program lets companies engage with cities in a strategic way, through dialogue, best practice sharing and action. As such, the program provides a platform where value is created for cities and businesses. Businesses can influence implementation while positioning themselves as a solution provider, and cities get access to business knowledge through pre-commercial, strategic dialogue.

Our analysis shows that WBCSD's current work program cuts across a part of the urban trends identified in this report, most importantly in the areas of adapting to a changing climate and environment and creating inclusive cities, offering an opportunity to expand on this work. The analysis also reveals that there are opportunities for WBCSD, and its members, to tackle additional urban challenges. Some interesting developments could be further explored at WBCSD:

- A better understanding of how to create inclusive and prosperous cities through the power of sustainable business practices, thereby tapping into a large market of potential business opportunities related to attaining the SDGs in cities.
- A deeper focus on how digital solutions can make cities more sustainable.
- A continued emphasis on promoting sustainable business practices that lead to cleaner and healthier cities, through the reduction of emissions, the closing of material use cycles, the use of nature-based solutions, and healthier diets.

To sum up, this report has highlighted four trends that clearly convey that today's urban revolution is arguably the 21st century's greatest challenge. As such, cooperation between cities and businesses remains fundamental to accelerate the transition towards improved approaches to city building.

**Annex 1 – Urban Trends Identification Matrix**

Out of the many reports that have been published at the end of 2016 and beginning of 2017, 7 global reports had been selected, identifying cross-cutting themes. More specialized reports have been used to get further economic and sustainability perspectives.

| World Cities Report 2016 | Lloyd's Future Cities: Building infrastructure resilience Report 2017 | Cities Outlook 2017 | ICLEI Resilient Cities 2016 | Knight Frank Global Cities 2017 Report | The 2016 New Climate Economy Report | PriceWaterhouse Coopers: Cities of the future Report 2016 |
|---|---|---|---|---|---|---|
| Continuous growth of slums | Improving transportation infrastructure | Prioritizing innovation (4) | Government planning on climate change (3) | Immigration on the rise (1) | A push to meet people's desires (2) | Globalization stemmed migration (1) |
| Rising inequality and exclusion (2) | Building for Climate change (2) | Closing the inequality gap (2) | | The need for an equal society (2) | Leaders to defend against climate change (3) | Accelerating technology driven movement (4) |
| Upsurge in involuntary migration (1) | Stewardship and protection of key ecosystems (3) | Providing affordable housing | | Embracing innovation (4) | | New living standards for people (2) |
| Environmental management remains critical (3) | Secure strong technology networks (4) | Caring for the environment (3) | | People want better lives (2) | | Developing stronger democratic capital for a sustainable future (3) |
| Living in a technological world (5) | | | | | | Protecting the built environment (3) |

- Trend 1: Migration and its effects
- Trend 2: Building 'inclusive' cities
- Trend 3: Adapting to climate change
- Trend 4: The age of digitization

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[2] United Nations: The World's Cities in 2016
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[96] Cisco 2014
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