



The Hague



GLOBAL PARLIAMENT OF MAYORS
Sessions on Migration
10 September 2016

‘Cities of Arrival’

Migrants and Refugees

The Global Parliament of Mayors involves contributions from many experienced organizations. This Paper brings together a broad knowledge base, meant to inspire reflection during the Inaugural Convening and upon aspirations. What do Cities mean today when it comes to the global challenge of migration? What can they achieve together with their experience, whether it be with economic migrants or refugees of war? What has already been done? The answer to these three questions could be simple: many things. This Paper is intended as input for discussion, and dives deeper into the theme of Cities as harbors of humanity in a context that brings together various levels of decision-making. After exploring some of the ins and outs of cities welcoming migration flows, we investigate some of the ways in which Cities could support nation-states in taking concrete action to tackle this key global challenge. The Paper ends with a number of suggestions for actions and policies, which may be discussed and amended by Mayors during their Inaugural Convening.

This Working Paper has been compiled by The Hague Centre for Strategic Studies (HCSS) on behalf of the Global Parliament of Mayors and The Hague Municipality

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Many significant urban challenges are global. Those related to crime, pollution, natural-resource shortages, and economic turmoil move fluidly across borders. Consider migration: the Office of the United Nations High Commissioner for Refugees estimates that nearly 60 million people have been displaced from their homes and about a third are officially categorized as refugees. Cities cope with the day-to-day realities of accommodating those who arrive, often in desperate straits and without legal status.

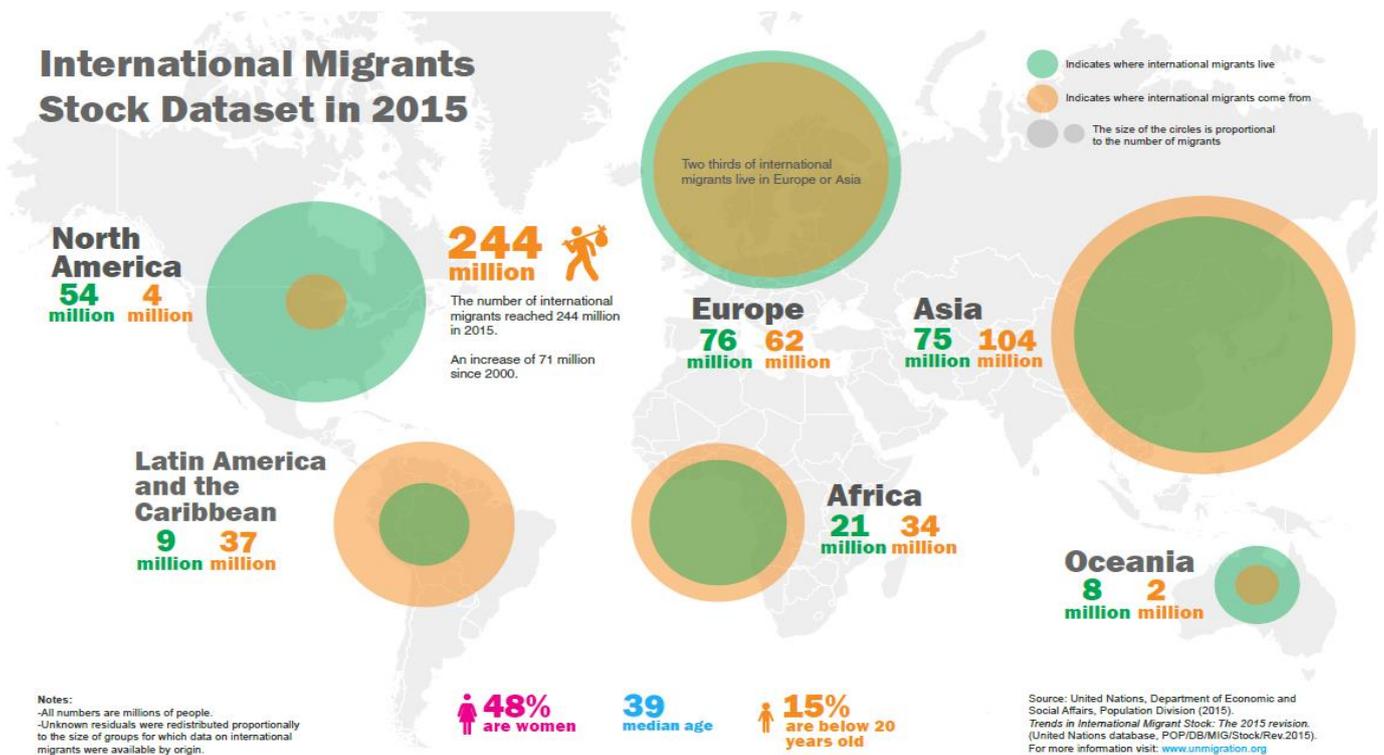
*Extract, “The power of collective action: Forging a global role for mayors”
Benjamin Barber and John Means, June 2016*

**Cities have a rightful place in dealing with the global challenge of migration.
They are best positioned to act as the focal point that brings together the voices, needs and
expertise of all local actors.**

Cities are home to more than half of the world’s population, a number which is projected to rise steadily in the coming decades. Estimates suggest that by 2050, 66% of the world’s population will be urban.ⁱ Needless to say, the phenomenon of rapid urbanization, apart from the high birth rates that lead to a natural increase in mainly developing countries, is also driven by the dynamics of our current era. Migration – be it inter- or intra-continental – stemming from socio-political instability, climate change or mere economic opportunity-seeking, is generally and ineluctably directed to cities.

Urban hubs are and will remain attractive to human flows.

The context of an increasingly borderless world, combined with developments in transportation technology, has accelerated and facilitated the movement of people. In 2015, the total number of migrants amounted to 243.7 million, a 41% increase compared to the beginning of the 2000s.ⁱⁱ



Source: UN, Department of Economic and Social Affairs, Population Divisionⁱⁱⁱ

Rapid urbanization and migration inevitably result in the diversification of social and cultural patterns. As the flow of people directed to cities increases, the diffusion of different cultural and religious traits becomes more intense, modifying the cultural landscape and the social fabric of urban areas. Societies may go through such transformations smoothly, but more often than not these do not happen quietly, and even bring about new tensions between communities. This arguably constitutes a global issue which, many believe, ought to be addressed at the local level, thereby providing solutions and achieving impact on a ‘glocal’ scale.

How do cities come into the picture?
Migrants across most of the top destination countries tend to live in urban environments.

99% of cross border migrants in Australia, 92% in the US and 84% in Germany live in urban areas. The rationale behind a stronger role for local governance stems from the notions of “efficiency, accountability, manageability and autonomy”.^{iv} Due to their greater proximity, local governments are more effective in identifying and solving local challenges – accelerating social cohesion is one these. The local dimension of integration has been acknowledged at the European level as well: in 2011, the European Commission proposed the ‘European Agenda for Integration’ calling upon the necessity for more local action. “Integration policies should be formulated and implemented with the active involvement of local authorities” states the Agenda.^v

Deconstructing the myth: Migration as a nuisance vs. the untapped potential of newcomers

In light of the current increased influx of asylum seekers coming to Europe from war-torn regions of the world, social integration as such has come to the forefront of the agenda of policy-makers, politicians, and media outlets, where the terms ‘refugee’ and ‘migrant’ are used interchangeably in public and media discourses. Nonetheless, there is indeed a significant difference between the two. Realizing the distinction and the essence of both concepts is crucial for delineating effective asylum and integration policies in general. People who fled their countries, escaping from violence and hardship, are not only legally entitled to receive protection, but it is also our moral obligation. Similarly, economic migrants who arrive, respecting the preceding legal procedures, have every right to pursue a better life.

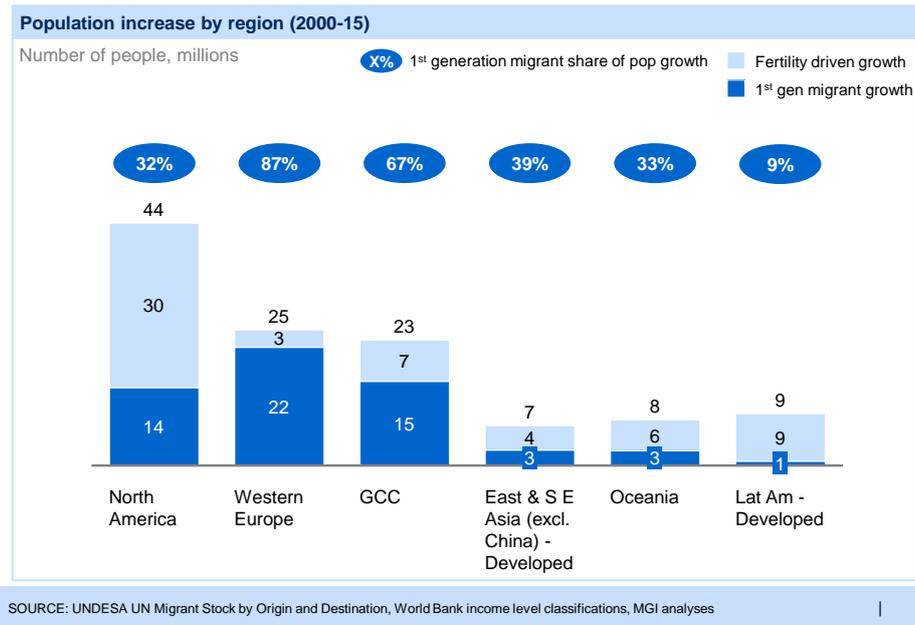
Both in the short and long-term, migrants, as well as refugees, present socio-economic opportunities for host countries. Migration, as such, was incorporated in the UN 2030 Agenda for Sustainable Development, “recognizing its contribution to inclusive growth [...] and global sustainable development”.^{vi}

Migrants significantly contribute to overall global productivity. The total GDP generated by migrants in 2015 was about “\$7.1 trillion or 10% of global GDP, which was about \$~3.1 trillion more than if they had stayed in their origin countries”.^{vii} In addition, migrants lower pension burdens in destination countries and foster remittance-led growth in origin countries.^{viii} Migration flows broaden the consumer base, thereby creating more market opportunities. A recent report from Standard & Poor’s Financial Services, for example, found that Turkey’s economy has benefited from the influx of 2.7 million Syrians; the new arrivals, the report said, have provided a ‘positive shock’.¹

Fertility has been replaced by migration as the key driver of population growth “with first and second generation migrants forming a significant share of the population and labor force”.^{ix} As Western Europe faces aging as a demographic challenge, this presents favorable conditions for increased economic productivity in the near future.

¹ Extract: “The power of collective action: Forging a global role for mayors”, Benjamin Barber and John Means, June 2016

Migration has contributed significantly to population growth in most developed regions



In the short term, asylum seekers and refugees tend to impose a fiscal ‘burden’ on host countries due to the need for basic assistance (e.g., accommodation, food and healthcare). However, in the longer term, migrants generally contribute to the labor market and GDP of the destination countries. To realize the longer-term economic impact, a plethora of examples show that a prerequisite is for migrants – both refugees and economic immigrants – to be holistically integrated in the labor market, local communities, and the broader society. A *rapid* process provides a good chance to minimize crime levels and social isolation, and to maximize economic, fiscal and social benefits at the societal level.

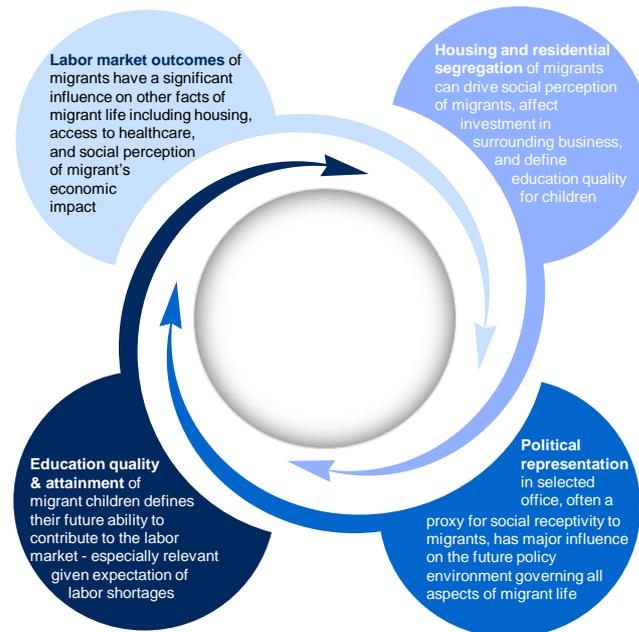
The ‘age of migration’ implies both great opportunities and great challenges.

Examples abound of how cities can harness the benefits of migration and successfully integrate all communities, upholding the rights of all – the right to work, cultural rights, freedom of speech, etc. Cities can be this space where newcomers voice their opinions, where trust can be enhanced with locals and associations, where opportunities are given to develop projects and build enterprises. By promoting integration, cities have the capacity to let migrants become efficient development actors.

Policy dimensions of integrating newcomers: a holistic approach

Translating it into practical terms, the most essential policy dimensions through which effective integration can be achieved are employment, education, housing, and political representation coupled with civic social assistance.^x In line with the analysis on the perspectives of migration published by the McKinsey Global Institute, there is indeed an increasing need to approach integration in a holistic manner, as all the aforementioned facets are “closely interrelated and jointly influence” one another.^{xi}

Various facets of migrant life are closely interrelated and jointly influences other facets, making it highly relevant to examine holistically



SOURCE: MGI analysis

Source: McKinsey Global Institute: Perspective on Migration, July 2016^{xii}

Nonetheless, there are many issues that need to be considered in order to achieve the full potential of a holistic social inclusion policy.

First, there are legal restrictions on entering the labor market for asylum seekers when the process of getting the necessary documents has not been completed. This, in turn, prevents asylum seekers from taking up work. How could such obstacles be dealt with?^{xiii}

Second, local governments often have less legislative and executive powers attributed to them and immigration and integration policy is devised on a national level, by national governments. How could this be dealt with?

“European and national legislation often unwittingly hinder integration. During the long asylum procedures, migrants are not allowed to work. Diplomas obtained abroad are often not recognized in the host countries or are valued lower. Therefore it often takes far too long to find employment.”

“Make it easier for young entrepreneurs to start up their own business. Give people the opportunity to work from the first day after their arrival.”

“Migrants must learn the language of their new homeland as quickly as possible. Perhaps, in this regard, we could learn from countries who can boast many years’ experience of successful integration programs and intensive language courses.”

Mayor Jozias van Aartsen
at the Conference on Migrants and Cities, 26 October 2015

Urban policies that could accelerate the process of either obtaining a working permit are often put forward as examples. Some cities have created voluntary identification cards for all residents; such official IDs helps them enter the social and economic mainstream, for example, by allowing them to open bank accounts and access city services.^{xiv}

These policies could be combined with efforts to connect newcomers with local employers, to provide them with jobs. Potential and new immigrant entrepreneurs could meet other entrepreneurs, local suppliers or customers, and potential business partners. Providing an attractive environment for start-ups, to attract potential entrepreneurs from abroad but also encourage the initiatives of all newcomers. As shown in some examples provided in this Paper, cities have maneuvered to provide practical programs supporting entrepreneurship.

Mentoring and counselling can range from matching entrepreneurs to students, from ethnicity to linguistic backgrounds. Interactions between mentors and mentees could facilitate the exchange of information, feedback on business ideas and plans, training, but also a feeling of integration. Mayors can engage in dialogues to facilitate connections and actions with respect to migration as an opportunity. In addition, along migratory corridors, cities could connect the various communities they host with those of peer cities. Newcomers also have expertise to share indeed – on labor market conditions, actors to get in touch with, etc.

In Senegal, such development opportunity has been seized: the cities of Dakar and Venice are cooperating with the Senegalese Confederation for the Promotion of Small and Medium Enterprises and Entrepreneurship among Migrants. Senegalese diaspora businesses are supported with investment opportunities in Dakar. This provides support for Senegalese diaspora businessmen and women with business investment opportunities in Dakar.

To achieve this, subsidies are not enough. Cities must also develop ways to reach out to their populations, gather knowledge about their profiles and resources, and understand their potential, vulnerabilities and specificities. Providing and ensuring access to information to newcomers (for instance through websites, events, apps and hotlines) is essential to help them identify local channels of opportunities. Gathering information about newcomers is also key on this pathway.

ICT and the City: Inform your population

Cities could partner up to assemble existing yet scattered resources, data, indexes, tools and studies.

- Smarter residency city services such as one-stop apps. Residents can access all city services through a single portal, tailored for all, in particular those with limited English proficiency and who lack institutional knowledge about the right interlocutor they could contact. Residents can send detailed location information. This reduces the red tape in reporting concerns and the barriers for those who prefer to avoid interaction with officials given language limitations.

- Tailored apps for new arrivals reflect how smartphones can be used creatively to engage immigrant populations. Such apps have mainly emerged at city-levels, and they provide an opportunity to reach disadvantaged groups and address social problems. For example, they include personalized language learning tools, information on immigrant rights and naturalization, training for citizenship tests, and educational online games to navigate the city's housing market.
- Even apps for civic engagement that are not targeted at newcomers specifically could support inclusion and involvement. For instance – by helping people volunteer, register, provide feedback, etc.
- It should be noted that urban security can also be reinforced through smartphone apps. These may reduce pressure on emergency call centers and reduce bureaucracy. On-the-ground reporting apps use GPS to report the location of problems.

Community-driven solutions based on the use of ICT tools are likely to be effective and many are relatively inexpensive. They are worth a closer look – but they are not an easy fix to migration and integration challenges. They do require a good level of digital literacy and their potential to bridge social divides is still unclear. The importance of face-to-face interaction still remains and cannot be replaced through tools.^{xv}

Cities and data analytics : Know your population

Urban growth in general, and through migration in particular, brings in more complexity in city-making and its interplay with the population. Migration has significant effects on multiple sectors - such as transport, education, firm location, housing (prices), crime and the environment, to name a few. For example, basic city infrastructure and basic service provision become subjected to higher levels of demand (healthcare, education, parks, water, sewer, police, housing...).

Given the global economic context, tax revenues have decreased in some regions of the world, meaning city leadership must now do more with less. Informatics-driven approaches such as the collection and analysis of large data sets, utilizing sensors, etc., can build better understanding of cities. For example, information on the age structure of migrants supports the identification of areas for economic growth, financial and healthcare needs, and makes policies better targeted - hence more effective.^{xvi}

Yet the lack of empirical data is a constraint. There is no common method for analyzing the interplay among mobility patterns, demographic transition, and urban growth.

Migration may attract interest and research, yet many cities under-report their migrant populations. Instead, records are collected at country-level through census, snapshots which come with a time lag and require extraction without providing the means to capture the complexity of migration dynamics, from the origins of foreign-born populations to their settlements.^{xvii}

Better and more precise knowledge is needed. More precisely, more standardized, empirical, systematically collected and comparable data on migration and migrants must be gathered at city-level, and shared. Big Data is a tool that is increasingly recommended to address these challenges and support the understanding of the city. It can lead to better outcomes out of current systems and processes.

Migrant-inclusive urban governance at city-level can help improve existing efforts for data on urbanization and development. To this purpose, cities could gather knowledge on where migrants reside and how they are organized. Benchmarks can be developed for basic service provision, and to measure the extent to which migrants are integrated. Data collection could aim at identifying what attracts migrant communities, and what causes them to remain concentrated and others to disperse or leave.^{xviii}

Satellite imagery and geo-spatial mapping of a region's urbanization can help in tracking expansion, and in linking it with key trends (including economic ones). The World Bank has gathered comparable data by tracking 869 cities in East Asia. This provides local governments, urban planners and researchers with a comprehensive snapshot of their demographic and socio-economic evolution, and hence with the means to improve lives of citizens, social justice and security by addressing the urban system and making urbanization more inclusive (e.g., in terms of economic opportunities).^{xix}

In turn, providing information to newcomers and securing knowledge about the local population could help formulate effective urban policies from numerous programs and practices on the ground. These could be promoted by the GPM at the national level for each Member City.

Beyond words and teaming up, concrete action must be taken along the roads of newcomers coming to cities.

Active cities: Inspiring initiatives

GPM Members and other cities have initiated exemplary, local initiatives addressing aspects of social inclusion, political representation, and access to social services or housing for newcomers with a mix of good practices. Strong in this experience, cities can lend impetus to these existing projects.

The host of the GPM Inaugural Convening, [The Hague](#), is committed to accommodating status holders, refugees who hold official residence status in the context of new flows of refugees coming to Europe.^{xx} Besides providing a roof over the heads of asylum seekers, the provision of schooling, day care for children and help to welfare-related issues, is also ensured. The Municipality does this by working together with school boards, authorities responsible for welfare provision, and certain NGOs in order to ensure the provision of necessary information to the newly arriving refugees.

An integration policy has been formulated in The Hague and ratified by the City Council. At the core of the policy is the recognition of a multicultural society: each population group (including the locals) faces a challenge. This perspective provides a better basis for the refugees and migrants to integrate. The Municipality encourages the start of language education as early as possible in the integration process.

The policy assumes that everyone can maintain their own identity, while everyone upholds the law, participates and makes a positive contribution to society. The various communities should feel at home in the city by being able to enjoy and live their own culture, and show others the features that they are proud of.

A city's approach and discourse can make newcomers feel welcome by involving all stakeholders, carefully listen to their ideas and concerns, communicating regularly, supporting a diversity of cultural initiatives.

In the context of new migration flows coming to Europe, it should finally be noted that The Hague also is involved in country-level support in 'the region'. The city is providing municipal support to local governments in Lebanon, to help these cities cope with the Syrian refugee influx. Support is being delivered to local governments in terms of municipal services (waste, water, sewage), local economic development, strategic planning and inter-municipal cooperation. The project is commissioned by the Association of Dutch Municipalities (Vereniging van Nederlandse Gemeenten) with the financial support of the Dutch Ministry of Foreign Affairs.

This shows the growing influence of a city within its own country, and how it can directly get politically involved with a country as an interlocutor.

At the border of Europe, Sicily has experience to share as well. Initiated by the City Council of [Palermo](#) in 2015, the *Carta di Palermo* takes a strong stance on migration affairs. The Charter "aims to abolish the migrant residence permit and radically change the human mobility law to reflect the right to mobility as a human right".^{xxi} As emphasized by experts, there is no time to lose – Palermo agrees that the acceleration and simplification of procedures can help guarantee this right.^{xxii} Solutions include breaking the "residence permit-employment contract link", or establishing a simplified enrollment for public health care. This requires modified citizenship law – but the EU has shown support: "it is a clear cut sign that local and regional authorities are stepping up and flourishing this role as migration and development actors".

As we continue our tour in the South of Europe, which is exposed to a growing flow of economic migrants and refugees, [Athens](#) is a shining example of how national and local stakeholders contribute to tackling the challenge. 'Welcommon' is a social cooperative which includes several founding partners: Wind of Renewal, the Greek Forum of Refugees, the Greek Forum of Migrants, ANASA Cultural Centre and the Municipality of Athens. Their aim is to ensure social inclusion, empowerment and integration by providing quality housing to approximately at least 120-150 refugees for half a year. Both migrants/refugees and Greek nationals are hired as part of a Hostel's personnel, thereby creating job opportunities. Welcommon puts newcomers in touch with the local initiatives looking for

workers such as technicians, nurses or doctors, artists and social entrepreneurs. Food and clothing are distributed and health care is provided to cover basic needs. In addition to general information and several learning opportunities, training courses, such as language instruction, are provided to develop their abilities and skills.^{xxiii}

This commitment to invest in the human factor and social integration is reflected by the ‘SAIER Municipal Centre’ of [Barcelona](#), Spain.^{xxiv} This center supports immigrants and refugees alike. It is funded by the municipality and includes major NGOs, associations of lawyers, and labor unions. It provides language courses, legal advice, knowledge of the environment, occupational training workshops, empowerment of women, youth work, etc. The ‘Welcome Network’ of Barcelona was also created – coordinated by the city and including 100 organizations, it forms a forum for collaboration and sharing know-how.

[Learning programs on the basis of connecting locals and newcomers strengthens the social fabric and accelerates the integration process.](#)

[Lisbon](#)’s initiative ‘Casa Comunitaria da Mouraria’^{xxv} is directly supported by the Municipal Government, and serves as a mediator between the community of the district and the Municipality. Among other services, the Casa offers Portuguese language courses for immigrants. The Community House also acts as a nexus, bridging locals and newcomers through the initiation of cultural activities.

[Mixed-use urban planning and development increases the connectedness of communities, thereby promoting social cohesion and inclusiveness.](#)

Today, [Mexico City](#)’s longest street, Avenida Insurgentes is home to a wide range of services, residences, and businesses, but has been much too exposed to traffic congestion. The Avenue was too difficult to access, keeping parts of the city’s population isolated... until local decision-makers chose it as the site for the city’s first bus rapid transit (BRT) system, Metrobús”.^{xxvi} The urban planning project was coupled with the introduction of sustainable public transportation. As a result, GHG emissions decreased, while social cohesion increased as previously segregated communities living on urban edges could make their way to the most vibrant area of their city.

A similar rationale was behind the creation of [Quito](#)’s Metro.^{xxvii} Since the outset of the civil war in the neighboring Colombia, Ecuador had been hosting more than 55 000 refugees, whose majority has settled in bigger cities, including its capital Quito. Even though the Colombian population is characterized by the relative dispersion across the capital, there is still a tendency to settle in the outer, working-class neighborhoods of the city, a bit further from the center of the city where the majority of service-providers and employment-opportunities are typically located. In 2013,

the construction of the Quito Metro line began with the aim of not only improving urban transportation and the rates of pollutant emission, but also to foster social integration and cohesion “since it provides the most vulnerable sectors of the population with increased access to employment, education and social services”.^{xxviii} The project was financed by the International Bank for Reconstruction and Development, the Inter-American Development Bank (IDB), the European Investment Bank (EIB) and the Development Bank of Latin America (CAF), as well as local and government resources.

Formal processes are known to be rather slow at country-level generally, while the integration of newcomers depend on these. A more rapid integration would significantly accelerate integration – which itself is the best means to preserve urban peace and foster social and economic development. In [São Paulo](#), a partnership by the Municipal Coordination Office for Migration Policies and the Caixa Economica Federal was set up to ease and accelerate newcomers’ access to banking services, such as opening a new bank account – even before the immigrants’ and refugees’ regularization process ends.^{xxix} Equal rights are ensured to immigrants, too, since having a legal bank account provides increased financial safety and more job opportunities – one of the requirements of formal employment is indeed to have a bank account.

[With greater authority, cities could show how they could have a positive effect on the integration process, setting up efficient initiatives and leading by example.](#)

Back in the Netherlands, the Municipality of [Rotterdam](#)’s ExPat Desk reflects the choice to accelerate the entry of migrants into the labor market. The city works directly with migrants (mainly highly skilled) and human resource departments of bigger international companies, providing assistance to immigrants in regards to “legal procedures, housing, education, health care assistance, banking, and insurance”.^{xxx} Even though highly skilled immigrants are less vulnerable when it comes to integration, the ExPat Desk can still serve as an exemplary practice in terms of economic development by cities and could be applied to ‘blue collar’ immigrants as well as refugees later on.

Economic inclusion is also experimented with in [Berlin](#), by and for newcomers as well. MigrantHire is a start-up initiated by a Syrian refugee, residing in Berlin who himself experienced difficulties in finding a job upon his arrival, despite having had university education and valuable professional experience in IT.^{xxxi} The idea of the initiative is simple, yet powerful: MigrantHire helps those newcomers having relevant working experience to find a job in the German tech industry. It also provides help in arranging legal issues, helping to get a work permit and in preparing candidates for job interviews.

By encouraging entrepreneurial initiatives from its citizens but also newcomers, and supporting programs connecting learning and working, cities of arrival could see many such small-scale projects blossom and multiply as the building blocks of successful integration.

One more look into Germany makes the example of [Frankfurt am Main](#) worth mentioning. The city aims at making housing affordable and inclusive with a ‘City Contract’.^{xxxii} Safe and affordable housing, indeed, is one of the aspects of successful integration. A quarter of Frankfurt’s population consists of foreign nationals representing around 170 countries. Due to Frankfurt’s relatively long immigration history and its consequent multicultural population, the importance of integration was recognized early on, in the 1990s. The city has long established a Department of Integration which also includes an Office for Multicultural Affairs.^{xxxiii} Institutional recognition of a phenomenon is one thing, taking action in the face of its challenges is another. For many years, the price of and the shortage in housing constituted a problem for locals, but mostly for migrants with a lower socio-economic background. As a result, immigrants moved and concentrated in certain parts of the city. This would soon result in increased isolation, threatening social cohesion within the city. In response to this, the Frankfurt Contract was launched by the City Council and housing enterprises, with the aim of establishing “ethnically diverse population structures within the individual city districts”. In essence, this entailed setting quotas of foreigners and German nationals when assigning housing.^{xxxiv}

Taking concrete action: GPM Cities as Human Harbors

Drawing upon The Hague Declaration (2016) and the insights presented by our partners and expert organizations at the Global Parliament of Mayors (GPM), a number of concrete action points or policies were identified and are suggested below.

These suggested actions can be used by Mayors as a basis for discussion on the occasion of their Parliament’s Inaugural Convening. Mayors could amend and reflect upon these – and while the choice of some cities will not be for everyone, the point is that it is doing something new that others can evaluate and learn from. During and after the Inaugural Convening of the GPM in The Hague, Member Cities could decide to support these policies, based on their specific needs and circumstances.

Cities plan, share, take leadership and integrate

- The GPM and its Members support the UN Sustainable Development Agenda, which states: “We will cooperate internationally to ensure safe, orderly and regular migration involving full respect for human rights and humane treatment of migrants regardless of migration status of refugees and of displaced persons”. GPM Members recognize the importance of starting integration intervention planning early and to consider integration-related matters when it comes to urban planning in order to avoid spatial segregation.
- SDG 4 – “Ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all” – and 8 – “Promote sustained, inclusive and sustainable

economic growth, full and productive employment and decent work for all”. Members may decide to support to the targets relevant to their policies and prerogatives, such as:

- ❖ 4.3 and 8.6 – By 2030, ensure equal access for all, may they be the city’s locals or newcomers, to affordable and quality educational programs.
 - ❖ 4.4 – By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.
 - ❖ 4.5 – By 2030, ensure equal access to all levels of education and vocational training for the vulnerable, including refugees of war
 - ❖ 4.a – Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all, including newcomers.
 - ❖ 8.6 – By 2020, substantially reduce the proportion of newcomers not in employment, education or training.
 - ❖ 8.8 – Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.
- There is no ‘one-size-fits-all’ solution. The GPM stands for establishing a platform for experience-sharing between cities in order to enhance the conceptual ability to deal with similar challenges different cities are facing.
 - In practice, GPM Members recognize the importance to ensure the provision of adequate language education and employment to newcomers at the time of arrival – as it is also stated in the Addis Ababa Action Agenda, a document comprising migration-related sustainable development goals/targets and which is also part of the 2030 Agenda for Sustainable Development. In regards to asylum seekers their skills could be mapped already in an early stage, accelerating the process of their future job-seeking/entry into labor market.
 - Member Cities that assess their efforts and programs as successful can report to the GPM yearly with a Mayor Brief.

ⁱ “World Urbanization Prospects.” United Nations, 2014.

<https://esa.un.org/unpd/wup/Publications/Files/WUP2014-Highlights.pdf>.

ⁱⁱ “Populations Facts.” United Nations Department of Economic and Social Affairs, December 2015. <http://www.un.org/en/development/desa/population/migration/publications/populationfacts/docs/MigrationPopFacts20154.pdf>.

ⁱⁱⁱ *Approval for the infographic’s usage is still pending.*

^{iv} Shah, Anwar, and Sana Shah. “The New Vision of Local Governance and the Evolving Roles of Local Governments.” In *Local Governance in Developing Countries*, 1–46. Washington DC: The World Bank, 2006.

<http://siteresources.worldbank.org/INTWBIGOVANTCOR/Resources/NewVisionofLocalGovernance.pdf>.

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^{vi} “Integrating Migration into the 2030 Agenda for Sustainable Development.” United Nations Department of Economic and Social Affairs, December 2015. <http://www.un.org/en/development/desa/population/migration/publications/populationfacts/docs/MigrationPopFacts20155.pdf>.

^{vii} “Perspective on Migration.” McKinsey Global Institute, July 2016.

^{viii} “Perspective on Migration.” McKinsey Global Institute, July 2016.

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- ix “Perspective on Migration.” McKinsey Global Institute, July 2016.
- x Juzwiak, Teresa, Elaine McGregor, and Melissa Siegel. “Migrant and Refugee Integration in Global Cities - The Role of Cities and Businesses.” The Hague: The Hague Process on Refugees and Migration, 2014.; “Perspective on Migration.” McKinsey Global Institute, July 2016. <http://thehagueprocess.org/wordpress/wp-content/uploads/2014/04/MigrantRefugeeIntegrationGlobalCities.pdf>; Rudiger, Anja, and Sarah Spencer. “The Economic and Social Aspects of Migration - Social Integration of Migrants and Ethnic Minorities - Policies to Combat Discrimination.” Brussels: OECD, January 2003. <http://www.oecd.org/migration/mig/15516956.pdf>.
- xi “Perspective on Migration.” McKinsey Global Institute, July 2016.; “Migrant and Refugee Integration in Global Cities: The Role of Cities and Businesses.” United Nations University; The Hague Process of Refugees and Migration, 2014.; “A New Beginning - Refugee Integration in Europe.” The UN Refugee Agency, September 2013. http://www.unhcr.nl/fileadmin/user_upload/pdf/A_NEW_BEGINNING.pdf
- xii *Approval for the infographic’s usage is still pending.*
- xiii Aiyar, Shekhar, Bergljot Barkbu, Nicoletta Batini, Helge Berger, Enrica Detragiache, Allan Dizioli, Christian Ebeke, et al. “The Refugee Surge in Europe: Economic Challenges.” International Monetary Fund, January 2016. <https://www.imf.org/external/pubs/cat/longres.aspx?sk=43609>.
- xiv Extract: “The power of collective action: Forging a global role for mayors”, Benjamin Barber and John Means, June 2016
- xv Meghan Benton, “Smart Inclusive Cities: How New Apps, Big Data, and Collaborative Technologies Are Transforming Immigrant Integration”, September 2014, <http://www.migrationpolicy.org/research/smart-inclusive-cities-new-apps-big-data-and-collaborative-technologies>.
- xvi *World Migration Report 2015*, International Organization for Migration (IOM), 2015, http://publications.iom.int/system/files/wmr2015_en.pdf.
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The Hague



GLOBAL PARLIAMENT OF MAYORS
Migration: 'Cities of Arrival'
Strategy Session 1: Integrating Economic Migrants
10 September 2016

Cecile Riallant (UNDP Brussels/JMDI)
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Migrants' integration as a pre-requisite for development: the role of cities

Introduction

Global tendencies of decentralization and urbanization mean that there is growing attention towards cities' and other local and regional authorities' de facto or de jure competencies in welcoming newcomers and providing policy as well as services for their integration. The extent to which their action is successful is directly linked to the ability of migrants and refugees to contribute to the socio-economic local development both in their territories of origin and destination. Migrants are important players for cities as actors of territories' development as they indeed have a transformative impact on the social and economic fabric of their host communities and home territories. Through their transnational presence, which has an impact on the local environment of territories of departure and destination, migrants and diasporas are building development links between territories. International remittances, investment, skills, and labor from diaspora communities directly contribute to the social as well as economic development of the territories of origin and destination. Migrants' ability to maintain links and connect with several locations has tangible development outcomes. For example, it can accelerate urban growth by transforming towns in migrant sending regions through investment in real estate. In territories of destination, the diversity brought by migration has a positive impact on local productivity and innovation, among others.

The present Policy Brief will therefore argue that there is a need to ensure that cities go beyond traditional integration efforts to be encompassed in an integral local governance approach to migration, whereby successful integration is the prerequisite to ensure a sustainable urban development where there is truly 'no-one left behind'. This argument will be illustrated by the experience of certain cities and regional as well as

local authorities which are supported by the Joint Migration and Development Initiative¹ (JMDI) and other city-led initiatives.

Context

Migration and displacement is predominantly tied to the phenomenon of urbanization. Some 60% of the total 14.4 million refugees and 80% of the 38 million internally displaced are thought to live in urban areas. Moreover, the majority of migrants and refugees living in urban areas out of the total number of refugees has increased by 8% in the last three years.

It is within this context that cities and other local and regional authorities are finding themselves at the forefront of managing the positive and negative effects of migration. Cities are fast becoming important learning and implementation laboratories for experts and practitioners on migration, which allow to draw timely observations, develop practical solutions and apply innovative partnerships with non-state actors upon which new pragmatic practices to integration and migration management can be developed.

Indeed, some cities are increasingly applying innovative and inclusive approaches not only to integrate migrants in economic, social and cultural terms, but also in order to tap into the potential of diversity they bring. Newcomers transform cities into prosperous, attractive and dynamic international hubs. This approach and the positive contribution of migration to development is well-reflected in the 2030 Sustainable Development Agenda as well; Target 7 of Sustainable Development Goal 10 calls for the facilitation of “orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies”. Confidently, that the Habitat III Conference carving the New Urban Agenda taking place in October this year will also fully capture this dimension.

It is still rather recent that the international community has started to recognize cities as important actors in this respect, not only within countries, but also on a global scale. The Joint Migration and Development Initiative (JMDI) is a pioneer in this field. The JMDI, which started operations in 2008, has shown that Migration and Development initiatives that have a strong anchorage with local authorities and local development priorities have a more far-reaching and sustainable development impact. Since 2013 the JMDI has been working closely with local authorities and local civil society actors to support their initiatives, reinforce their capacities and connect them globally so that their experience and specific voices can be known and heard on an international level too. As demonstrated by the initiatives supported by the JMDI, the wider view of migration as a local development tool is being increasingly supported as there is growing evidence that it can sustain local development and enhance the dynamism of territories receiving and sending migrants.

¹ The Joint Migration and Development Initiative is an EC and Swiss-funded global program led by UNDP and implemented in partnership with IOM, ILO, UNHCR, UN Women, UNITAR and UNFPA. It operates on a global scale with field activities with cities and local and regional authorities located in Ecuador, Costa Rica, El Salvador, Senegal, Morocco, Tunisia, the Philippines and Nepal.

An inclusive approach to the integration of people experiencing human mobility in Pichincha, Ecuador

This initiative, also supported by the JMDI and led by the Provincial Government of Pichincha (where capital city Quito is located), aims to promote strategies for integration, development and sustainable strengthening of local actors' capacities to foster the social, economic and cultural integration of migrants within a mixed migration context (including refugees, return migrants, transit and economic migrants). The Provincial Government of Pichincha has a highly successful integration model through its Human Mobility Unit which, inter alia, has seen an awareness raising campaign to mitigate xenophobia and promote mutual understanding among migrants and locals for enhanced social cohesion. Moreover, through participation of migrants and their associations within the activities and planning of the Human Mobility Unit, they are able to further promote social inclusion, integration and access to services and support. Finally, through good coordination and support from the national government and the consortium of Provincial Governments (CONGOPE), the Human Mobility Unit model is now being replicated in other provinces with the endorsement of the state.

Enhancing migration management at local and national level through enhanced multi-level coordination in the region of Bicol, Philippines

The work of the Municipality of Naga City, capital of the region of Bicol and also supported by the JMDI, is another example of holistic efforts to mainstream migration into local development planning across the municipalities of Bicol. To achieve this, a well-managed coordination mechanism between the national, regional and local levels was set up. At the local level, local centers and councils on migration and development were established with corresponding budget and personnel to lead the main activities in each municipality. Technical working groups were also established at the local level to bring in the expertise and support of various key actors to oversee the mainstreaming of migration into their local developing planning. Naga City acts as coordinating and support role at the regional level (Bicol) through a Migration and Development Council to provide capacity building and technical support at the local level. At the national level, Naga City has partnered with the state through the Commission for Filipinos Overseas and fosters coordination, dialogue and mutual knowledge sharing and support between the local and national levels. All of which has allowed the migration management process to be localized whilst remaining aligned and supported at the national level and thus, enhanced its effectiveness and outreach to support migrants and families of migrants, as well as the communities overall.

Inclusion of migrants, diaspora and their associations for enhanced local development in Sedhiou, Senegal

This initiative, led by the Regional Development Agency of Sedhiou in Senegal and supported by the JMDI, aims to develop a policy framework for mainstreaming and managing migration for development at the local level with the financial support and know-how of the diaspora. To achieve this, the Agency created Immigration Policy Commissions at the municipal level and supported them to ensure the mainstreaming of migration into local development planning. By promoting the participation of all relevant stakeholders, particularly the diaspora abroad, immigrants and generally the

other key actors of the community, these development plans have resulted in concrete and effective outputs that truly respond to the needs of migrants and the community at the local level, supported through the set-up of Help Offices for Migrants. The participation of migrants and diaspora was ensured through specific coordination and dialogue mechanisms set up across the various related sectors at local and regional levels.

Conclusion

The extent to which cities and other local and regional authorities can truly harness the development potential of migration depends on how successful integration efforts are. Yet lack of competencies, capacities, fiscal resources, data and understanding of the migratory phenomenon and support at the national and international levels can severely hinder their ability to act. There is therefore a need to build on and learn from the innovative and successful cities in this regard, as well as ensure that the key role of cities and other local and regional authorities in managing migration and displacement for development is duly recognized and supported at national and international levels. Based on the lessons learnt and good practices identified by the JMDI, one can observe the following key success factors:

1. There is a need to **mainstream migration** and displacement issues within all phases of urban and development planning, implementation, monitoring and evaluation. Such processes can be in the form of migration-related provisions being included in existing local development plans; the creation of specific migration and development management mechanisms, working groups, policies and plans; building or strengthening local migration institutions or structures and expanding local programs and services to include migrants. These are strengthened when specific economic and human resources are allocated and when these are consolidated into local development plans, statutes and laws.
2. Such an approach necessitates a **multi-stakeholder approach** where both migration and displacement are considered across all sectors and actors including authorities, migrants and refugees and their associations, civil society, academia, private sector, financial institutions, trade unions and international organizations etc.
3. Within this multi-stakeholder approach, it is crucial to ensure **full participation** whereby migrants, refugees and their groups and associations participate and feed into planning and implementation. Migrants' activities tend to be limited to marginal associative fields and rely on autonomous and direct personal relationships, with few interactions with local institutional stakeholders. It is therefore essential that LRAs create a conducive and inclusive environment by providing migrants with a space for their opinions to be heard, establishing transparent frameworks that enhance trust between local stakeholders and migrant associations.
4. Articulated strategies to harness the benefits of migration for local development need also to strongly look into upholding migrants' political, economic, social and cultural rights. Cities' initiatives to promote integration should therefore be highly linked to **preserving and enhancing migrants' capacities as development actors** (Riallant, World Migration Report 2015, IOM).

4. Given that migrants from the same town or region in countries of origin tend to concentrate in the same geographical area in the country of destination, working across migratory corridors in both territories of origin and destination within the dynamics of [decentralized cooperation](#) can also enhance migration management. This allows for service provision and support throughout the migratory cycle from the decision to migrate through to migrating and final settlement in the territory of destination or possible return to the territory of origin.

Recommendations for cities and other local and regional authorities:

- To mainstream migration into local and regional development, urban and migration management planning for an integral approach to migration management that can foster development by:
 - setting up institutional bodies in charge of coordinating mainstreaming processes and migration management;
 - allocate adequate financial and human resources for the good running of these bodies, while providing capacity building where necessary to all staff and governmental bodies;
 - ensuring these bodies can adequately map and consolidate data on migration to feed into planning and policy-making;
 - ensuring participation of migrant, refugees and their associations in migration management processes.

- Ensure a [multi-stakeholder and multi-level approach](#) for vertical and horizontal policy coherence and enhanced effectiveness in migration management by:
 - setting up multi-stakeholder coordination mechanisms such as inter-ministerial working groups and coordination committees at all levels of governance;
 - allocating adequate financial and human resources to ensure the smooth running of these coordination mechanisms, while providing capacity building where necessary to staff.

- To ensure migrants, refugees and their associations are empowered, their capacities strengthened and given a voice to feed into and participate in the implementation, monitoring and evaluation of migration management by:
 - providing financial and technical support to strengthen their associative capacities;
 - providing physical space and legal legitimacy to meet and run activities;
 - ensuring their participation in local and national development planning and policy making from development to implementation through presence of a representative or delegation in all working groups, councils and pertinent meetings.

Essential supporting documentation

- JMDI-IOM White Paper on Mainstreaming Migration into Local Development Planning and Beyond, 2015
- My JMDI Toolbox set of Training Materials on Migration and Local Development, 2015
- IOM World Migration Report 2015. Migrants and Cities: New Partnerships to Manage Mobility
- MPI-IOM handbook on Developing a Roadmap for Engaging Diasporas in Development, 2012
- JMDI dedicated platform: www.Migration4development.org



GLOBAL PARLIAMENT OF MAYORS
Migration: ‘Cities of Arrival’
Strategy Session 2: Integrating Refugees of War
10 September 2016

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Migration and War

This paper gives an overview of the links between migration and armed conflict, and describes three particular areas of humanitarian expertise with which the International Committee of the Red Cross (ICRC) responds to the needs of migrants, including refugees¹ and their families. It also has three key recommendations for Mayors. We suggest that **mayors** – with their leadership role and proximity to communities - **are in a unique position to ensure that humanitarian considerations are given priority in the development and implementation of reception and integration policies for migrants.**

Introduction

War displaces people. Armed conflict can threaten people’s safety and destroy their houses. It can damage essential public infrastructure and deprive people of education and health services. It can ruin people’s businesses, destroy their crops and take away their livelihood.

These are some of the key factors that drive individuals away from conflict-affected areas. Their decision to leave may be made fast, in the face of life-threatening danger; or it may be taken more gradually as people’s coping mechanisms become weaker and weaker.

Conflict not only affects migrants whose countries of origin are at war. Many people who have left a peaceful country can find themselves the victims of war as they *transit* through conflict zones and sometimes become trapped within a conflict on their migration trail.

Key facts and figures

Every minute in 2015, 24 people fled war or persecution around the world. Ten years earlier, the number was four times smaller. 65 million people – about a quarter of the total migrant population worldwide -- are currently forcibly displaced. Around 25 million of them crossed borders and are refugees or asylum seekers. Most people have left Afghanistan, Syria, Iraq

¹ The ICRC uses the term “migrant” to describe all persons who leave or flee their habitual residence to go to new places – usually abroad – to seek opportunities or safer and better prospects. This description includes all types of migrants regardless of their legal status, while recognizing the special protection of refugees and asylum seekers.

and Somalia and are hosted in neighboring countries like Turkey, Pakistan, Lebanon, Iran, Jordan, Ethiopia.

2015 also saw a dramatic increase in migrant arrivals in Europe, mainly from Syria, Iraq and Afghanistan, with over 1 million arrivals, four times more than 2014. A much less mediatized but sharp increase in forced displacement occurred in Central America. Because of increasing violence in El Salvador, Honduras and Guatemala, the number of refugees and asylum seekers in Mexico and the United States has quintupled since 2012, from around 20,000 to over 100,000.²

The current number of forcibly displaced people around the world is the largest figure since the end of the Second World War. In protracted conflicts, people's prospect of returning home grows ever distant, and millions of people are displaced for many years.

The majority of migrants live in urban areas. Cities are not only the main final destinations for migrants, they are also convergence zones throughout global migratory routes. Most migrants experience a long journey along various migrant trails. The Red Cross and Red Crescent Movement is present and active at all stages of this journey.

The ICRC's Role with Migrants

The ICRC is an impartial, neutral and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of armed conflict and other situations of violence and to provide them with assistance. Working together with National Red Cross and Red Crescent Societies and their International Federation, as part of the Red Cross and Red Crescent Movement³, we focus on providing humanitarian assistance to the most vulnerable migrants, while also seeking to ensure that they receive the protection they are entitled to under international and domestic law, including the special protection afforded to certain categories of people, such as refugees and asylum seekers.

In all our work we focus on the humanity and vulnerability of migrants, and on the humanitarian consequences of certain migration policies. In particular, we are concerned about risks associated with "fast track" determination of refugee status and certain policies of deportation. States must respect the principle of "non-refoulement". They must not transfer migrants to countries where they can be in danger or where some of their fundamental rights may be violated.

The ICRC's work in migration is often carried out together with National Red Cross and Red Crescent Societies (National Societies). Through their base of community volunteers, National Societies are providing essential services and supporting social inclusion and integration of migrants in countries of reception/destination worldwide. Based on its long-standing experience in conflict areas, the ICRC brings its specific expertise in three key areas: detention, restoring family links and missing persons, and forensics. The ICRC has a direct or advisory role in humanitarian action for migrants in 60 countries, spanning

² UNHCR, "Global Trends, Forced Displacement", 2015.

³ The Red Cross and Red Crescent Movement is formed of 190 National Red Cross/Red Crescent Societies, the International Federation of the Red Cross and Red Crescent Societies (IFRC) and the ICRC.

countries of origin, transit and reception.

The detained, Separated Families and the Missing

Detention

The ICRC has been working on behalf of persons deprived of liberty since 1870. The ICRC's role is to ensure that detainees' dignity and physical integrity are respected, that they are treated in accordance with international humanitarian law and other applicable laws and standards and, whenever necessary, to help detaining authorities fulfil their obligations. The ICRC works to address humanitarian problems in detention through a variety of activities, ranging from encouraging the authorities to assume their responsibilities to providing services directly to detainees.

Many States try to control and contain irregular migration by adopting restrictive migration policies. This may result in the use of coercive measures against migrants, including a systematic resort to detention, either administrative or criminal. An increasing number of migrants – regardless of their personal circumstances – end up in detention because they entered or remained in a country illegally.

Detention can be particularly harmful for migrants' mental health because it may compound the trauma they have already suffered in their home country or along the migration route. Uncertainty surrounding the administrative process and fears for the future are also extremely stressful and can lead migrants to pursue drastic alternatives, like dangerous onwards journeys and family separation. If not properly mitigated, this can create a new set of humanitarian needs.

As with all vulnerable detainees, the ICRC focuses on migrants' conditions of detention and treatment and works to ensure they receive due process of law and have contact with the outside world. The ICRC also encourages States to treat irregular migration as an administrative infraction rather than as a crime and to use detention as a measure of last resort. In this dialogue, we also encourage States to avoid detaining migrants who are particularly vulnerable, such as elderly persons or children.

Restoring family links and missing persons

One tragic consequence of migration, armed conflict and other situations of violence is that families are split up and people go missing. This happens in countries of origin, throughout migratory trails and on arrival.

The ICRC and National Red Cross and Red Crescent Societies work together around the world as the Family Links Network to prevent separation, restore and maintain contact between family members, clarify what has happened to persons reported missing and provide support for their families. This work, called Restoring Family Links (RFL) may include putting people in contact via telephone, internet, and hand-written messages. It frequently entails tracing persons who are unaccounted for and registering particularly vulnerable persons such as children who have been separated from their families and people being held in detention. In October 2012, the ICRC launched a new website –

familylinks.icrc.org – in collaboration with National Societies. This website guides potential beneficiaries of RFL services to the right service provider within the Family Links Network worldwide. In large-scale emergencies, online tracing services may also be activated.

In many cases, RFL work involves collecting information that may help clarify the fate and whereabouts of missing persons in the medium or long term. When tracing is successful, the ICRC will inform families of the whereabouts of their loved ones and when possible will help to reunite the families. When tracing remains inconclusive over time, the ICRC diversifies its response to address the many different needs of the families. Through an “accompaniment” approach, we seek to strengthen the abilities of individuals and families to deal with difficulties related to the disappearance of their relatives by helping to create a supportive network in particular within the community.

Forensic Service

When migrants die, their bodies are often not dealt with properly and steps are not always taken to ensure they can be identified. Forensic work on migration requires coordination and exchange of information between a variety of countries and organizations, as well as relatives and communities, throughout migratory routes. The ICRC offer forensic support and encourages communication and cooperation among forensic services and other agencies and organizations for humanitarian purposes, to help prevent and resolve the tragedy of people unaccounted for as a result of armed conflicts and other situations of armed violence and of migration.

Recommendations to Mayors

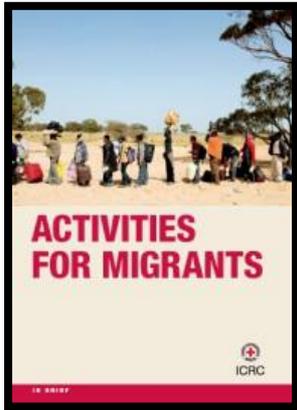
As urbanization increases around the world, Mayors are becoming increasingly important players in the governance and management of basic services. Their policies and their leadership can be highly strategic in the way migrants are treated by law enforcement agencies and by health, education and housing services.

The ICRC asks mayors to play the following three roles to ensure a humanitarian response to migrants:

- **Be the voice of humanity and stand up for international law** – As leaders in their community and State representatives, mayors are in a unique position to help foster an enabling and supportive environment for the assistance, protection and positive integration of migrants that is in line with international law. This means consistently putting humanity first and assisting and protecting those most vulnerable, regardless of their legal status. Mayors can play this humanitarian role in migration policy discussions at governmental level and in their contact with host communities and public services, so that high standards of protection and assistance are maintained and safeguarded. Mayors can also lead a dialogue with host and refugee communities and actively encourage and support initiatives that promote respect for diversity, non-violence and social inclusion of all migrants; and enhance cultural awareness and social cohesion between migrant and local communities.

- **Be the hub of accurate, timely and clear information** - In urban areas - apart from situations of mass arrival - migrants are often harder to find because they are not in obvious camps. Mayors have a critical role to play, throughout migratory routes, to ensure that all relevant humanitarian actors have access to vulnerable persons and in helping disseminate information about available services and rights in a clear and coordinated manner. Accurate information is particularly important to prevent the adoption by migrants of risky strategies and coping mechanisms because of lack of trust or lack of information about administrative procedures and rights.
- **Join together across migratory routes** – Migration is an intricate global phenomenon. Mayors have important roles to play in cities of arrival and also in cities of origin and transit. In cities of origin, mayors can help strengthen the accompaniment of families waiting to receive news of their loved ones who have gone missing by helping to create a supportive network within the community. In conflict-affected areas, mayors have a role to play in speaking up for an increased protection of civilian populations and respect for international humanitarian law. This can prevent the fear and destruction that drives forced displacement. Between cities of origin, transit and arrival mayors can play a key part in the enormous effort that goes into triangulating information about missing persons.

More information:



<https://www.icrc.org/en/publication/4246-activities-migrants>

ICRC's Migration webpage: <https://www.icrc.org/en/migrants>

IFRC's Migration webpage: <http://www.ifrc.org/en/what-we-do/migration/>

“Deceased Migrants: Giving them Back their Identities”

Video: <https://www.youtube.com/watch?v=XjUVUrj2Hio>

“In Greece: Keeping Families Together”

Video: <https://www.youtube.com/watch?v=EZl4-CGWfRQ>

“Mexico and Central America: Practical Advice for Migrants”

<https://www.icrc.org/en/document/mexico-and-central-america-migrants-advice>

“Senegal: New Hope for Families of Missing Migrants”

Blog: <https://www.icrc.org/en/document/senegal-new-hope-families-missing-migrants>

“Much More Resources Needed to Properly Take Care of Dead Migrants”

Blog: <https://www.icrc.org/en/document/resources-commitment-needed-care-for-migrants>



The Hague



GLOBAL PARLIAMENT OF MAYORS
Migration: 'Cities of Arrival'
Strategy Session 3: Migration & Security
10 September 2016

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NETHERLANDS SCIENTIFIC COUNCIL FOR GOVERNMENT POLICY

No time to lose: from reception to integration of asylum migrants

By focusing simultaneously on housing, language acquisition, training and work, public authorities will minimise the amount of valuable time lost in integrating asylum migrants.

Introduction

In 2015, the public debate in the Netherlands was dominated by moving images of migrants making their way to Europe and by the concerned reactions of citizens to the asylum issue. Attention is currently focused mainly on the problems relating to the local reception of new groups of asylum seekers. At the same time, however, policymakers face a second fundamental challenge, which is the question of how to facilitate the integration of asylum seekers who have been granted a residence permit into Dutch society.

This policy brief focuses on this category, who are referred to as permit holders.¹ The key question is how we can accelerate the process of integration of permit holders. Just one in three permit holders between the ages of 15 and 64 living in the Netherlands have a paid job and many are permanently dependent on social assistance benefits. This represents a waste of human capital and places an unnecessary strain on the country's welfare system.

¹ See: http://www.wrr.nl/fileadmin/en/publicaties/PDF-WRR-Policy_Briefs/WRR_Policy_Brief_-_No_time_to_lose.pdf

It is therefore important to make integration a key objective from the start of the asylum procedure, which, in turn, implies two things:

1. The need for an accurate and rapid asylum procedure in which greater attention is devoted to the labour potential of permit holders and their opportunities in the labour market in the Netherlands.
2. The need for an approach in which language acquisition, schooling, securing housing and finding work occur simultaneously rather than sequentially. With such an approach, permit holders will be able to support themselves and make a contribution to the receiving society sooner, which will in turn fortify public support for the asylum policy.

Policy recommendations

The Netherlands faces the challenge of guiding the growing group of permit holders to a place in society as quickly as possible. The analysis of the recent past reveals two important reasons for that: (1) The low participation rate of permit holders in the labour market; and (2) the fact that many of them will remain in the Netherlands for a lengthy period. The analysis of the recent past further shows that the labour participation rate is particularly low during the initial period of their stay in the Netherlands. There is room for improvement in that regard.

At the end of November, the Minister of Social Affairs and Employment sent a letter to parliament setting out proposals for measures designed to promote the rapid integration and active participation of asylum seekers.² The recommendations in this policy brief follow the same line. They advocate a greater role for municipalities, improvements in the implementation of existing measures and the adoption of additional measures.

Some of the measures outlined below are already being implemented in practice. They mainly concern housing and facilitation of integration into the labour market. There is no need for a new approach towards combating crime among permit holders. It has to be recognised that – given the relatively large proportion of young men among them – the crime rate among permit holders is higher than among the average inhabitants of the Netherlands, but it is not necessary to adopt specific policies to address the crime rate among permit holders. The regular policing policy is sufficient.

Role of cities and municipalities: more control

With the new policy on civic integration (since 1 January 2013), the role of the cities and municipalities in directing the process of integration disappeared. Municipalities have transformed their integration policies into general policies and budgets for the integration of

² Letter of 27 November 2015 from the Minister of Social Affairs and Employment to the President of the House of Representatives of the States-General. Integration and participation of permit holders. Reference: 2015-0000298184. See also the letter from the Minister of Housing and the Central Government Sector of 27 November 2015. Housing of permit holders. House of Representatives, reference: 2015-0000708166.

specific groups have disappeared. Municipalities observe that permit holders are late in starting the process of civic integration and that there is now scarcely any investment in dual or combined programmes of learning and working.

- Firstly, the role of the municipalities should be strengthened in order to enhance the effectiveness and efficiency of integration programmes. Their role should be expanded in a number of ways. An important first step is for municipalities to gain an insight into the characteristics and aspirations of permit holders, which they can then use to provide specific advice to permit holders about integration and the language course they should follow. The municipality would then periodically monitor their progress.
- Secondly, the 'participation declaration' is going to be made a mandatory element of the civic integration exam under the Civic Integration Act. This will create opportunities for establishing contact with permit holders who have moved into the municipality. The evaluation of the pilot project with the participation declaration showed that participating municipalities can use this policy to improve the integration of permit holders.
- Thirdly, in the coming years additional funds will be made available to municipalities to provide social counselling for permit holders, which could also help to strengthen the role of the municipalities.
- Fourthly, municipalities can play a role in designing dual programmes of learning and working by securing the involvement of local employers.
- Finally, municipalities can play a more active role in helping particularly disadvantaged groups to gain access to the labour market.

A more active role for cities and municipalities reflects the trend towards decentralisation and constitutes acknowledgement of the fact that it is the municipalities that are feeling the effects of the current asylum problems most severely. It is therefore logical that they should assume greater control.

[No time to lose \(1\): make use of the period spent in the asylum centres](#)

Asylum seekers could already engage in activities that will help in their future participation in society during the period they are awaiting a decision on whether they qualify for a residence permit. Adults who are awaiting their residence permit are already allowed to start learning Dutch with the help of volunteers. Policymakers are currently (end of 2015) reviewing whether the possibilities for learning Dutch during the asylum procedure can be expanded. In view of the importance of proficiency in Dutch for schooling and work, this is an important objective. The asylum applications of a large proportion of the current asylum seekers will be granted, which justifies early investment in learning the Dutch language. There are a great many volunteers who are willing to help permit holders to learn the language. They could perform a great service by teaching asylum seekers the basic principles of the Dutch language during the asylum procedure.

It is also worth considering amending the conditions under which refugees without residence

status are allowed to work and expanding the possibilities or the room for municipalities to experiment in that regard. What is proposed is both shortening the period of six months before a work permit will be issued and increasing the current maximum period of 24 weeks that a refugee without asylum status is allowed to work.

Asylum seekers are allowed to perform voluntary work during the asylum procedure. Organisations that wish to employ their services can apply to the UWV for a permit to perform voluntary work. This possibility could be more widely publicised. The period that permit holders, i.e., asylum seekers with a residence permit, have to remain in the central asylum centres could also be employed more effectively. Early identification of their level of education, mental health, work experience and their likely route to participation (see section 3.2) could be conducive to their rapid integration.

No time to lose (2): accelerate the process of housing permit holders

Integration begins with housing. Permit holders with their own home are better able to concentrate on schooling, work and integration. The task, therefore, is to expand the housing stock as quickly as possible. This will call for innovative solutions. In addition to forms of independent housing, various types of temporary and shared accommodation will be required. The experience gained with the construction of dwellings for temporary labour migrants will be useful in that respect.

Housing on a small scale, dispersal of permit holders and a good mix of residents are important principles for effective integration in a neighbourhood. Municipalities should also engage residents with the plans for their neighbourhood by keeping them informed from an early stage and assigning them a role in the plans. It is also important to prevent displacement of residents by permit holders in the social housing sector. This is important for generating public support, especially with growing numbers of permit holders in the near future.

No time to lose (3): choose a parallel approach

Another way of sustaining the pace of the integration process is to formulate approaches in which learning the language, receiving schooling and searching for work occur simultaneously rather than after each other. A parallel approach is clearly preferable to a sequential approach. The municipality of Amersfoort combines civic integration and assistance in finding work. The city of Amsterdam allows permit holders to study and follow the civic integration programme at the same time. This is a double-edged sword: the language is learned more quickly and the process of integration is accelerated.

No time to lose (4): regularly screen the data on social assistance benefits

Every effort should be made to prevent the number of permit holders receiving social assistance benefits from rising too far. Nevertheless, given the weak labour market position of some of the

permit holders, the number of new claimants of social assistance will rise substantially. Permit holders are entitled to social assistance benefits. They have the same rights and obligations as native Dutch citizens, and are thus also subject to the assessments and obligations arising from the Participation Act, such as the requirement to apply for jobs or training and the assessment of their personal assets and the partner's income.

Because many permit holders will be dependent on social assistance benefits, it is worth considering conducting periodic analyses of the database of recipients of social assistance benefits in order to establish how many permit holders are finding work and whether there are any discrepancies between that group and other groups of migrants and native Dutch claimants. If fewer permit holders are leaving the welfare rolls, it could be a reason to formulate specific policies for permit holders.

No time to lose (5): encourage the earning of a Dutch diploma

The recognition of diplomas is not without its problems. Educational institutions do not always accept recommendations and permit holders often have to enter a programme at a lower level. The first step, therefore, is a rapid procedure for the recognition of diplomas. Some educational institutions are also taking initiatives to improve the fit between the teaching and the background of permit holders by offering a year-long preparatory course during which the students improve their knowledge of the Dutch language and prepare for the course they will start in the following year. Some municipalities also allow permit holders who are not entitled to a study grant to continue receiving social assistance benefits while they are studying, which means that permit holders over the age of 30 receive financial support while they are following a course. The activities developed by the municipality of Amsterdam in this context (see box 5) could serve as a model for other municipalities.

No time to lose (6): take into account the availability of work

The current policy of dispersing permit holders leads to an imperfect matching of demand and supply in the labour market. In principle, permit holders are dispersed throughout the Netherlands without regard to whether there is any work available for them locally. It is worth considering improving the match between permit holders and regional labour markets. Swedish research have shown for Sweden that asylum migrants have a greater chance of finding paid work if they are living in areas with low unemployment and relatively strong demand for unskilled workers.

No time to lose (7): bring relevant parties together

The present challenge is to develop functional networks that consolidate the expertise required to help permit holders find work or equip them for the labour market in an efficient manner. The policy measures that are needed should fall within the framework of general policy: not policies for specific target groups, but 'targeting within universalism'.

Persons from a permit holder's own ethnic group and (emerging) refugee organisations can also assist in the implementation of integration policy and in creating support in the local population. However, that will probably require some investment, since those organisations will require some financial assistance if they are to be able to play a role in the successful integration of the group. In Rotterdam refugees are employed as 'buddies' to help other refugees in the civic integration process.

The *community* - churches and civil-society organisations, for instance – also has an important role to play in the reception of asylum migrants. These organisations can make a significant contribution in the integration process, for example by providing assistance in the civic integration programme. Various projects have been launched around the country with volunteers teaching Dutch to permit holders. Business organisations (such as the Chamber of Commerce and regional and local branches of the Confederation of Netherlands Industry and Employers (VNO-NCW)) and employment agencies could also conceivably be involved in labour market projects. In short, there are numerous parties that could play a role in creating effective and practical networks.

None of these recommendations can be implemented from one day to the next. There is, however, no time to lose. Many citizens are concerned about the large influx of asylum seekers. And many citizens are willing to help in efforts to accelerate the pace of integration of permit holders. It is crucial to take full advantage of this positive sentiment, since public support for the asylum policy will depend heavily on the extent to which permit holders are able to support themselves and make a contribution to Dutch society.



GLOBAL PARLIAMENT OF MAYORS
Sessions on the Environment and Climate Change
10 September 2016

‘Nature & The City’

The Global Parliament of Mayors involves contributions from many experienced organizations. This Working Paper brings together a broad knowledge base, meant to inspire reflection during the Inaugural Convening and upon aspirations. What do Cities mean today in the context of climate change? What can they achieve together? . This Paper is intended as input for discussion, and dives deeper into the theme of Cities and climate change challenges. After exploring some of the ins and outs of environmental issues in urban areas, we investigate some of the ways in which Cities could support nation-states in taking concrete action to tackle this key global challenge. The Paper ends with a number of suggestions for actions and policies, which may be discussed and amended by Mayors during their Inaugural Convening.

This Working Paper has been compiled by The Hague Centre for Strategic Studies (HCSS) on behalf of the Global Parliament of Mayors and The Hague Municipality

With acknowledgements and thanks for the contributions of: Eline Chivot, Mercedes Abdalla (HCSS), Anna Beech, Mark Watts (C40 Cities), John Means, Jennifer Sternberg (McKinsey & Company)

Cities account for around 70% of global energy consumption and energy-related greenhouse gas emissions,¹ and are the venue of major emissions reductions opportunities. Cities depend on their environment – for food, for water, for resources – yet a healthy environment also depends on cities. Extreme weather has already ravaged them around the world. Projections of the future effects of a changing climate on cities, ranging from physical devastation to loss of life to resource depletion, as well as the capacity of cities to directly address these risks at the city level, have made the relationship between the city and the environment a key area of action.

In other words, in order to successfully tackle climate change, the involvement of cities is crucial.

The COP21 negotiations and the resulting Paris Agreement on Climate Change have created momentum, which if properly seized, offers the realistic prospect that runaway climate change can be prevented. The period 2017-2020 will be crucial in determining whether the

¹ The Intergovernmental Panel on Climate Change (IPCC) estimates that in 2010, urban areas accounted for 67–76% of global energy use and 71–76% of global CO₂ emissions from final energy use. See: Seto and Dhakal, 2014. Chapter 12: Human Settlements, Infrastructure, and Spatial Planning.

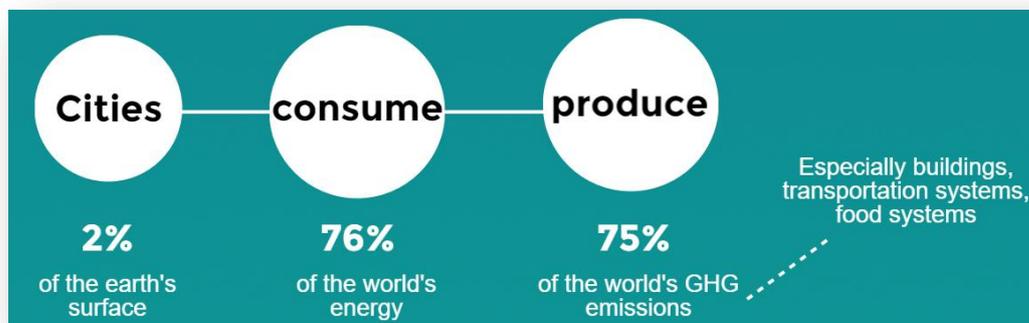
ambitious goal identified in Paris, of limiting global temperature rise to 1.5 degrees Celsius above the pre-industrial average, can be realized. The world needs to reduce emissions by 2020 in order to retain global temperature increase under this threshold by the end of the century. Cities are already collaborating and delivering meaningful action to reduce their carbon emissions, adapt to meet the worst effects of a warming planet and create sustainable, liveable and equitable urban environments.

However, there is no time to waste, and much more needs to be done. The Agreement itself is not nearly enough. There is still a gap in leadership and action, and cities can and are bridging this.

Just like nations, cities need to develop their economies and infrastructure in line with what is needed to prevent global temperatures rising beyond 1.5 degrees, and to adapt to the inevitable consequences of the global warming that is now already happening – the aspiration of the Paris Agreement.

Cities contribute significantly to climate change.

Air pollution levels are so severe in Paris that the Mayor has been granted powers from the government to implement emergency traffic bans. Nations should not wait for their biggest cities to reach such critical levels of pollution before affording them broader authority.



Cities are particularly vulnerable to the effects of climate change and therefore have a significant stake in addressing these issues. Mayors are already dealing with the consequences of climate change in their cities – heat waves, water shortages, air pollution. Cities are often located along coasts, and many major metropolises are located in deltas and low-lying coastal regions, making them vulnerable to flooding. Beyond water and weather, air quality within cities is impacted by the high concentration of industrial, commercial, transport, electricity-generating, and residential activities. Urban heat islands are a third concern for cities; the loss of vegetation and permeable surfaces, as well as the absorption of heat by concrete and other building materials, means that cities tend to be warmer than surrounding suburban and rural areas.¹ Furthermore, the interconnected nature of city systems, such as food and transport, means that disruptions within one aspect of the city due to extreme weather events can cause cascading disruptions elsewhere.

Cities are uniquely positioned to address climate change – or inadvertently lock in systems that exacerbate it.

The United Nations estimates that by 2050, approximately 70% of people will live in cities.ⁱⁱ How cities develop in the coming years will set the pattern for the whole of humanity. If mayors get it wrong, we can't prevent runaway climate change. The shift to a fully low carbon economy will require decisive policy, regulation, civic engagement, and consumer action on a global scale. From keeping \$22 trillion of fossil fuel assets in the ground, to phasing out all internal combustion engine vehicles from roads within 14 years, tackling climate change will reshape our world and our cities like never before.

C40 Cities Climate Leadership Group and the Stockholm Environment Institute published research at the end of 2015 showing that bad urban policy decisions in the next 5 years alone could lock-in almost a third of the remaining global safe carbon budget.

We know that cities are also a key part of the climate solution. From the rollout of fleets of electric buses in Chinese cities, the moves by European, South American and Indian cities to ban the most polluting cars from city centres, to dedicated low-carbon districts in cities worldwide, we are taking bold actions to cut emissions and prepare for the worst effects of a warming planet.

Mayors have also seen first-hand that climate action brings significant benefits to our communities, such as improved public health, cleaner air, faster economic growth, and more equity. The most successful cities of the future will be those that are first to transition to low carbon development. Foresighted Mayors are creating compact, dense cities, with high mobility based on mass transit, cycling and walking. Unplanned urban sprawl or resource-intensive urban development can lock in inefficiencies or high resource usage and costs for decades to come.ⁱⁱⁱ

There is no trade-off between climate action and development: delivering on the Paris Agreement will help us all implement the 2030 Sustainable Development Agenda, and vice-versa.

If cities plan well and avoid sprawl, sustainability, equity and a good quality of life for all urban citizens can be achieved. If the right policies are introduced, urbanization represents a great opportunity for creating sustainable, livable, and dynamic cities.^{iv}

The framework: Mitigation, adaptation, and resilience

Current policies and initiatives regarding the city and the environment tend to fall roughly into three categories: those aimed at *mitigating* risks related to climate change; those aimed at *adapting* to climate change; and those (most recently) aimed at bolstering the *resilience* of the city as a whole. By one definition, "Urban Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience".^v A study by the Rockefeller Foundation and Arup found that seven dimensions broadly unite conceptions of resilience: reflectiveness, resourcefulness, robustness, redundancy, flexibility, inclusiveness, and integration.^{vi} Resilient cities, for example, have infrastructure that encourages social inclusivity and integration, is robust enough to fail safely rather than catastrophically, and has multiple (redundant) back-up systems.

Although mitigation and adaptation are more directly linked to climate change and the city, the concept of resilience begins with the premise that environmental policy is one cornerstone of a full package of interrelated initiatives that can bring multiple benefits. In a resilient city, environmental policy aims to not only reduce a city's GHG emissions, but also improve overall quality of life and health, and to develop infrastructure that is not only energy efficient and robust, but also socially inclusive.

The GPM and its Members recognize this concept as a key foundation of their city's environmental policies.



Based on the Resilient Cities Framework developed by the Rockefeller Foundation and Arup for the 100 Resilient Cities Initiative (www.100resilientcities.org)

Trends and developments on the topic of the city and the environment range from policy proposals and toolkits, to coalitions of cities cooperatively addressing climate change and the environment, to a plethora of green initiatives already underway in individual cities.

Coordinated efforts can significantly benefit cities.

A major reason that mayors were able to be influential in Paris is because they have been working together for over a decade. They now have a well-organized, passionate, collective voice. Mayors have demonstrated a propensity to work together, in healthy competition, leveraging each other's ideas and testing them in their own cities in order to accelerate action on climate change.

A number of global networks of cities have been recently established to tackle specific issues such as climate change (ICLEI, C40), security (European Forum for Urban Security, Mayors

for Peace, Strong Cities Network), and resilience (100 Resilient Cities). Supported by these networks, Member Cities have taken significant, concrete actions to reduce greenhouse gas emissions, laying out comprehensive programs and integrated approaches to achieve their targets.

The GPM recognizes that to deal with the global challenge of climate change, such cooperation and transnational networks are required.

The GPM is not acting in competition with existing city networks, but rather aims to unite their members, promote their efforts, share practices, support their objectives, accelerate success on the road maps, and strengthen the voice of cities on the international scene.

The GPM positions its work as an opportunity for cities to share best practices, facilitate new forms of finance, or set joint procurement standards that foster economies of scale.^{vii}

The experience of city networks supporting the GPM in engaging Mayors is key. For instance, C40's activities range from showcasing lead city mayors, providing direct communications support, setting up city diplomacy initiatives such as the Clean Bus Declaration, and helping mayors 'make the case' for climate action. In 11 years, C40 cities have delivered more than 10,000 climate actions, and 30% of those actions have been delivered through city-to-city collaboration. C40 has grown to be a noted voice on the international climate stage.

The climate summit for local leaders, held in Paris on 4 December 2015, brought together city leaders from the world to discuss how they could jointly contribute to reaching the COP21 goals. The Declaration was presented at the COP21, showing how cities work well together, and can bind themselves to targets that are more concrete than the targets of national governments.

On the regional level, clustering with other regional cities can allow smaller cities that lack the economic power to support environmental or social development, to leverage the combined power of the cluster.^{viii} Networking with cities that face similar problems regardless of geographic location, i.e., C40's Connecting Delta Cities Network, pools knowledge and resources.^{ix}

The GPM and its Members stand behind concrete actions.

Several actions and policies have been put forward and taken up by cities members of networks such as C40, which itself supports the GPM.

The GPM and its Members support these roadmaps and getting cities on pathways in order to comply with the goal of limiting global temperature rise to 1.5 degrees Celsius above the pre-industrial average. In line with C40 objectives, technical assistance and direct support must be provided, in order to:

- close the emissions gap (i.e. between what is needed for a 1.5C world and current national commitments);
- demonstrate the feasibility of low-carbon development; and

- help implement national commitments and raise their ambition ahead of the next two key UNFCCC moments of 2018 (when countries will review their collective effort against the global goals of the Paris Agreement) and 2020 (when it takes effect).

This can be delivered through a combination of support including - city advisers; peer to peer knowledge sharing; city outplacements; technical assistance; access to project finance; GPC emissions data; data sharing; best practice sharing; and city exchanges. Some ideas are introduced below, further showcased through a number of examples set by cities.

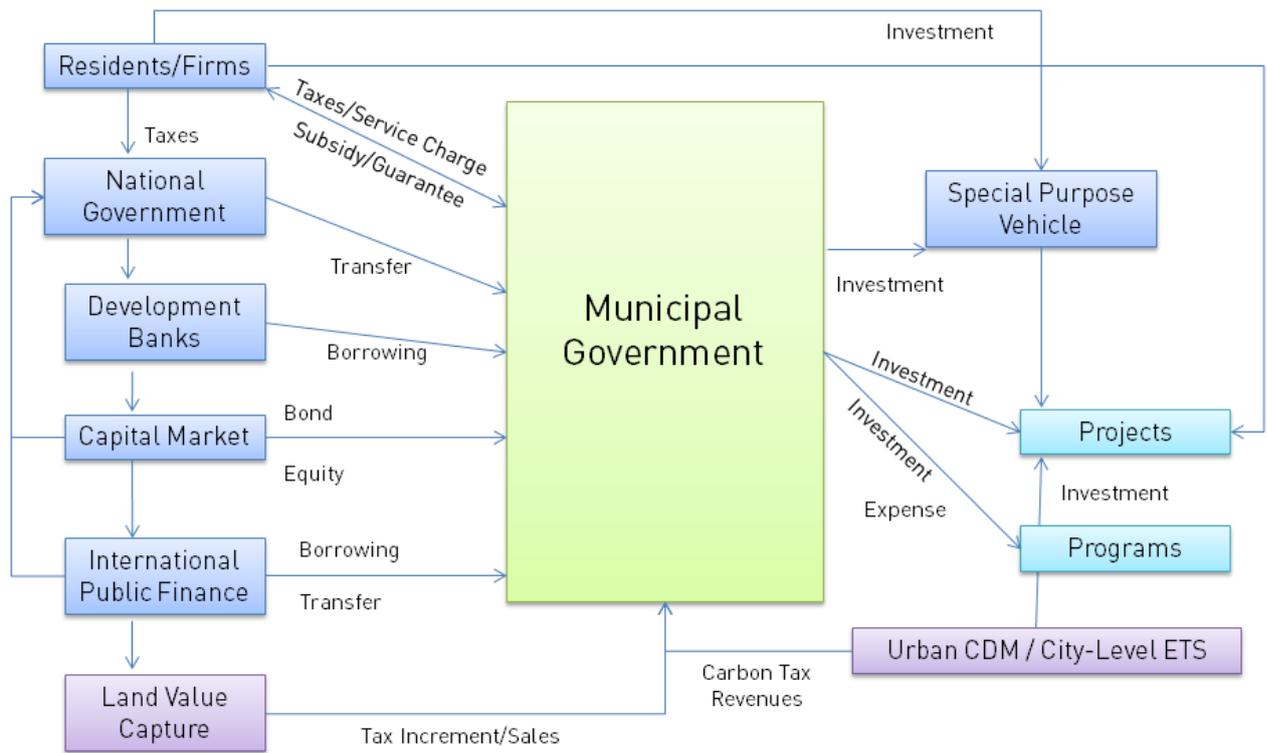
Using research and peer-to-peer sharing model

Networks help cities replicate, improve and accelerate action –catalysing delivery by facilitating peer-to-peer knowledge exchange, benchmarking, and competition between mayors. The areas in which emission reduction is greatest could be identified – may it be in buildings and energy supply, urban planning and development, transportation and waste...

Financing the change and climate action

One of the most important questions for cities is how to finance these changes – it is a major barrier. Without access to finance, cities cannot deliver their infrastructure visions or achieve the 1.5 degree goal. All the angles of finance barriers should be addressed by entities like the GPM, including city capacity and knowledge, technical assistance, governmental barriers, and city enabling environments. Finance is becoming a cross-cutting aspect of city networks' action, city diplomacy, measurement & planning, and regions. It should be noted that not all levers come at similar implementation costs, and some cities may have greater access to finance than others. There may be value in going after 'quick wins' in the short term.

Knowledge and networks gathered from its Members could enable the GPM to develop the influence of cities within their national governments, by reporting or searching out funding opportunities from national governments.



Funding opportunities for cities (Urban Climate Change Research Network, 2015)^x

Assessing the national and local context

Every city is unique. First, it is relevant to keep in mind that differences between developed and developing world cities translate into different types of programs or actions. For example, developing a net zero building program for a city like New York (which has extensive pre-existing building stock) would look dramatically different from a greenfield city in China. Second, developing a sustainable relationship with the surrounding environment and effectively preparing for climate extremes entails developing a detailed assessment of each city’s local conditions. Third, local actions take place in the broader (inter)national context that can either empower or slow down city-level action. Most cities implementing climate plans find themselves constrained by fiscal and policymaking limitations (e.g., jurisdictional conflicts)..^{xi}

Engaging local stakeholders

Part of knowing your local context is knowing the local stakeholders who can help bring about the success or failure of goals. Collaboration and stakeholder engagement, from the earliest planning stages to implementation and long-term usage, are critical to accelerate action and for successful policy. Pooling local knowledge and instigating local change regarding climate risk adaptation and mitigation, as well as overall city resilience, is a two-way street: input from civil society and industry is critical at the planning stages, while output, i.e. changes to transportation systems, affect inhabitants and industry’s experiences and behaviors.

Several actions that have proven useful and efficient can be put forward by the GPM. Examples abound on how local stakeholder engagement can improve support and education, for example by backing bottom-up initiatives to start community gardens or raising awareness about behaviors regarding food waste.^{xiii} Integrated planning that reaches across levels of government and as well as local stakeholders can help ensure success by engaging key groups.^{xiii} Consulting experts from local industry, for example, brings local stakeholders into the planning phases.^{xiv} Consulting across levels of government should consider local government bodies located in regions adjacent to the city in addition to national governments.^{xv}

We know how the physical shape of cities itself can encourage or discourage the behavior of citizens and industry; for example, bicycle lanes beget cycling and plug-in points for electric cars encourage consumers to buy them.^{xvi}

Urban design and planning

Urban design and planning are a key means through which policy-makers can set the basis for long-term development and infrastructure, with infrastructure investments and resulting development patterns potentially impacting the city for 50 years or longer.^{xvii} Forward-thinking regarding the city and environment requires integrating climate mitigation and/or adaptation strategies into urban design and planning.

Dense cities with mixed-use development tend to have lower emissions than sprawling cities where city systems such as water and transport must cover a relatively large area.^{xviii} Decisions regarding land use and zoning are two key means of encouraging dense, mixed-use development. In addition, integrating land use decisions into planning transportation and water infrastructure can have multiple long-term benefits, for example: protecting these systems (i.e., by placing them in areas less likely to be affected by flooding); reducing energy costs (i.e., by encouraging density which increases walkability); and fostering a more inclusive city (i.e., by reducing limited transportation access in poor areas). Finally, cities can also re-examine policies that inadvertently encourage sprawl, such as tax incentives for single-family or single-use buildings that encourage spread-out development.^{xix} It is also important to highlight the need for removing archaic zoning or building laws that are currently on the books. For instance, some zoning laws actually prohibit the development of greener, more sustainable cities.

These ideas can be gathered by the GPM and openly shared and matched with its Members.

Leading by example and creating incentives

Beyond decisions and words, change can also occur through direct intervention by the city, which ought to lead by example in advocacy and knowledge dissemination, and in action, such as in retrofitting government buildings to increase energy efficiency or through fossil fuel divestment.^{xx}

Urban infrastructure

As the world becomes urban, infrastructural investments are inevitable for many cities, and decisions made now will set patterns not only for local development within cities but also for

global GHG emissions and energy consumption that will mark the success or failure of reigning in climate change.^{xxi}

Critical urban systems that are both vulnerable to climate change and serve as possible points of intervention in reducing a city's GHG emissions include water, food, waste, transportation, and energy systems.

Approaching planning of all city systems from the perspective of energy efficiency is critical to reducing overall greenhouse gas emissions. While energy efficient options are available in all of a city's systems, the focus of energy efficiency often revolves around three of the highest contributors to a city's emissions: buildings, transportation, and industry.^{xxii}

Increasing knowledge, involving stakeholders, and engaging the community are key to making urban infrastructure and systems robust and resilient.

GPM Member Cities have a lot to share and learn from each other on the road to a 1.5 degree world.

With respect to transportation, we know how green transport can improve air quality, reduce congestion, increase social inclusivity, improve safety, and encourage dense development, all the while saving money in emissions and operating costs.^{xxiii} Several policies or strategies can be envisaged by city governments. For example: integrating climate risk reduction, transport planning, and land use decisions are some of the methods cities can use to reduce greenhouse gas emissions and increase resilience.^{xxiv} Next, transport planning can foster dense development – which in turn incentivizes walking and biking – and can increase social mobility in the city by ensuring denizens are well-connected to green transport options. Two examples of green transportation strategies are bus rapid transport (BRT) systems or high parking charges in combination with low bus fares.^{xxv}

The GPM and its members are a source of knowledge when it comes to the variety of policies that can encourage building retrofits, key to energy efficiency. For example, property tax deductions for low-carbon buildings^{xxvi} or considering building efficiency in property assessments^{xxvii} are two incentives to encourage private action. Here again, stakeholder and public engagement can increase success: bringing the knowledge of local construction companies into the policymaking process or engaging owners and tenants can foster knowledge and action.^{xxviii}

An adequate supply of food and potable water is fundamental for the city, yet water and food systems will be strained by burgeoning urban populations even as they are increasingly threatened by climate change. Food and water systems are vulnerable to extreme weather events, either through direct impact (i.e., damage of water treatment facilities) or through cascading problems caused by a breakdown in a city's infrastructure such as transport or electricity that impacts the delivery of food and water.^{xxix} Urban policies can push for stricter building requirements – for instance through green building certifications (Green Globes, BREEAM, LEED, etc.). In Boston, for example, any new construction or retrofits over 10,000 square feet must be LEED certified.

A plethora of ideas is available and could be made accessible through connections between City Members – among which:

- At the planning stage, creating committees that cross policy silos by bringing together climate, food, water, and urban planning on one committee to help integrate food and water resilience into urban planning.^{xxx}
- Documenting the supply chains and transportation routes of food entering the city, assessing points of vulnerability in urban infrastructure, creating stores of emergency food supplies, or encouraging community gardens are examples of actions that can prepare urban food systems for climate stresses.^{xxxi}
- Supporting peri-urban agriculture^{xxxii} and creating policies that encourage infield rather than greenfield development (building in areas that have already been built up rather than expanding over green areas).^{xxxiii}
- Increasing energy efficiency and health of water systems through investments in anaerobic reactors, eliminating high-energy water supply and treatment systems, and recovering biogas from wastewater.^{xxxiv}

Model of systems and resources where action can be taken (McKinsey)

~35 district-level green technologies and design elements to model¹

Systems Resources	Buildings	Transport	Open space	Utility infrastructure
 Energy	<ul style="list-style-type: none"> ▪ Energy efficient HVAC ▪ Solar water heating ▪ Building envelope² ▪ Efficient windows ▪ Building orientation ▪ Rooftop PV ▪ Energy-efficient lighting ▪ Sub-metering 	<ul style="list-style-type: none"> ▪ Dedicated bus/ car-pool lanes ▪ Bike infrastructure ▪ Pedestrian-only streets 	<ul style="list-style-type: none"> ▪ Energy-efficient street lighting ▪ Trees/urban forestry ▪ Smart waste bins (e.g. solar powered compactors) 	<ul style="list-style-type: none"> ▪ Pneumatic waste transport system ▪ Combined Heat and Power (CHP) ▪ Ground source heat pump ▪ Micro-grid ▪ Solar water heating ▪ AC – liquid desiccant
 Waste	<ul style="list-style-type: none"> ▪ N/A 	<ul style="list-style-type: none"> ▪ N/A 	<ul style="list-style-type: none"> ▪ N/A 	<ul style="list-style-type: none"> ▪ Composting new waste ▪ Anaerobic digestion ▪ Shared waste disposal/sorting
 Water	<ul style="list-style-type: none"> ▪ Green roofs ▪ Disconnect downspouts ▪ Sub-metering ▪ Water-efficient faucets and appliances ▪ Rainwater collection 	<ul style="list-style-type: none"> ▪ Permeable pavement and green alleys 	<ul style="list-style-type: none"> ▪ Rain gardens, infiltration trenches, bio swales 	<ul style="list-style-type: none"> ▪ Grey water system ▪ System optimization (e.g., pressure management and leakage detection)

1 Other technologies and design elements will be documented for deeper investigation in later phases
 2 Combination of best practices for insulation, roofing, wall materials, etc.



Beyond words and teaming up, concrete action must be taken as part of our roadmaps to a 1.5 degree world. Ideas can be translated into concrete policies and actions behind which the GPM and its Members will stand.

GPM Mayors could decide to stand behind concrete objectives and action points lined up by city networks, such as C40. Not all can apply to all cities, and some may be divided into short-term levers such as developing a green building policy, and long-term levers such as all buildings being net zero.

Some of C40's objectives

- All are to have a significant shift to public transit, walking and cycling, moving away from private vehicles by 2020
- All new buses entering city fleets to be hybrid or electric by 2020
- All municipal vehicle fleets aim to be 100% electric by 2020
- All new taxis entering city fleets to be hybrid or electric by 2020
- All new buildings net zero
- All are to have a Transit-Oriented-Development (TOD) approach by 2020
- All new district scale development is Climate Positive (net-carbon negative and expanding the impact into the surrounding community) by 2030
- Achieve universal residential segregated collection for food waste and recyclables
- Every waste disposal site operates as a Sanitary Landfill that collects leachate and landfill gas.

Inspiring initiatives by cities

GPM Members and other cities have initiated exemplary, local initiatives addressing the environmental aspects with a mix of good practices. Strong in this experience, cities can lend impetus to these existing projects.

Our first highlight goes to the City of [The Hague](#), host of the GPM Inaugural Convening in 2016, which has been taking efficient and logical steps in each area. A special budget, an energy fund, has been created and is allocated to energy saving projects. A climate fund was set up to compensate the city's CO₂ emissions, and invests to develop climate projects in The Hague. Worth mentioning is also a revolving fund dedicated to the sustainable renovation of residential buildings. With the New Boulevard Scheveningen project, the Municipality has combined a major climate change mitigation project (protecting the city from flooding) with a makeover of the resort, supporting economic vitality.

[Rotterdam and Ho Chi Minh](#) certainly agree that 'twin cities' systems or city-to-city networking are an excellent way to pool resources and to show how cities can foster and export their country's knowledge and other assets.^{xxxv} Ho Chi Minh created an institutional body to develop a plan for administering climate resilience work following discussions with other cities in C40's Connecting Delta Cities Network. Rotterdam assisted Ho Chi Minh City in securing funding from the Dutch government as well as technical know-how from Dutch organizations for Ho Chi Minh's Climate Adaptation Strategy. Due to assistance from the city of Rotterdam, Ho Chi Minh city has moved from planning to

implementation: the city has now established pilot districts for applying its Strategy and is designing flood control measures.

Also in China, [Nanjing](#) has deployed in no time the world's second largest electric vehicle fleet as a means of public transportation. The city has built up the largest and most centralized charging station for the EV fleet serving the Games, in an extremely short time period.

[Dar es Salaam](#) knows how informal settlements and water management are at a crossroads.^{xxxvi} Rainfall has been decreasing annually and the timing of the rainy season has changed in Tanzania's largest city, which experienced a drought in 2006 that affected food and water supply. This resulted in malnutrition and disease. And as a coastal city, its vulnerabilities to flooding and extreme weather remained – especially compounded by 70% of the population living in unplanned or informal settlements without access to basic services. Water supply, drainage, and maintenance of water infrastructure are therefore an area of concern in Dar es Salaam. In spite of the challenge to procure funding for further initiatives, concrete steps have been taken focused on installing infrastructure in informal settlements, especially for water management, while developing local engagement in the planning and maintenance of this infrastructure.^{xxxvii} The provision of land or property licenses were part of this effort, next to tree planting to protect exposed coastal areas. Finally, land and water conservation efforts resulted in the city banning sand excavation in critical areas.

On the same continent, [Cape Town](#) shows us knowledge gathering and community engagement in action.^{xxxviii} The residential sector uses 37% of the city's electricity, mostly for water heating. A program designed to encourage the use of solar rather than electric water heaters found that the most common barrier to change was consumers' lack of trust in suppliers. Cape Town responded by establishing standards for competence and customer service, vetting suppliers, and accrediting those that met the requirements. Direct marketing, social media, advertising, and an informational website spread further awareness of solar heaters and listed accredited providers. Increasing electricity tariffs created a further incentive to switch to solar heaters. Following the initiative, 5,729 solar water heaters were installed within 21 months. Energy use was reduced by approximately 15.0 GWh, saving residents around \$2.2 million in utility bills and reducing the amount of coal burned. Solar water heater installation is estimated to have created 158 jobs and contributed \$7.7 million to the local economy.

Let us stay in South Africa, where [Johannesburg](#) has embarked on a journey to becoming a ‘people-centered city’. Its ‘Corridors of Freedom’ involve transport-orientated development and equity. The shape of the future city will consist of well-planned transport arteries – the Corridors of Freedom – linked to interchanges where the focus will be on mixed-use development. Joburgers will then not have to use private motorized transport but can opt for the alternative means, which include cycling, bus lanes and pedestrian walkways.

On the other side of the planet, [Melbourne](#) is showing us one way to set up a renewable energy project at city-level with various stakeholders. Thirteen major institutions (including neighboring city councils, banks, the University) have formed a consortium that will sign an agreement to purchase a large chunk of their electricity from a new large-scale renewable energy project – they would not be able to afford it on their own indeed, and city stakeholders have otherwise no control over electricity generations.

[Copenhagen’s](#) climate adaptation planning included the adoption of the Cloudburst Management Plan (2011), one of the world’s most ambitious Climate Adaptation Strategies. In 20 years, all areas of Copenhagen should be secured against extreme rain. Elected as the Copenhagen Climate Resilient Neighborhood, St. Kjeld’s District in Outer Østerbro will have its streets, main squares and buildings transformed based on climate change mitigation objectives.

[Paris](#), being too big to fail at reaching climate adaptation targets, has made steps to tackle air pollution – such as by closing the Champs Elysées to cars once per month, stepping up its drive against diesel cars by banning them all by 2020, or piloting three smart ‘trees’ that monitor air pollution and reduce fine dust and nitrous oxides almost 300 times more efficiently than normal trees. Paris’ dynamic Green City Solutions team is now on speaking terms with the French government. Furthermore, 20 EU Mayors including Paris, Copenhagen, and Madrid have started a coalition, building their political influence at a higher level by calling for stricter regulations tackling air pollution.

Our world tour ends in Central and South America. First stop in [Mexico City](#) – the world’s most polluted city (UN, 1992) has taken steps to shake this title. Thanks to ‘ProAire’, a series of comprehensive programs deployed over the last two decades, the city has recorded impressive reductions in local air pollution as well as CO₂ emissions. Mexico City’s results show how nothing is impossible: a 7.7m tonnes reduction in carbon emissions was recorded in just four years (2008 to 2012), beating a 7.0m tonnes target. To make further progress, the city recognizes it needs to get the public on board, and has dedicated more resources to education programs and public awareness campaigns.

[Rio de Janeiro](#) has recently taken stock of risks and challenges – from extreme weather and traffic congestion, to the World Cup and the Olympics. But since 2010, this C40 city has been building resilience. In particular, in order to respond to climate hazards and manage services in a more connected and responsive way, Rio created a control room – the Center of Operations. For example, it includes the coordination of garbage trucks through GPS, so that these can be re-purposed in case of an emergency. The Centre was built in record time and through a partnership with IBM and Oracle. It is at the service of Rio’s citizens who have seats reserved inside, and remains one of the world’s most cutting-edge centers of its kind.

Taking concrete action: GPM Cities as Green Crusaders

Drawing upon The Hague Declaration (2016) and the insights presented by our partners and expert organizations at the Global Parliament of Mayors (GPM), a number of concrete action points or policies were identified and are suggested below.

These suggested actions can be used by Mayors as a basis for discussion on the occasion of their Parliament’s Inaugural Convening. Mayors could amend and reflect upon these – and while the choice of some cities will not be for everyone, the point is that it is doing something new that others can evaluate and learn from. During and after the Inaugural Convening of the GPM in The Hague, Member Cities could decide to support these policies, based on their specific needs and circumstances.

Cities assess, incentivize, reshape, lead change by example

- Members of the GPM will recognize the importance to meet the UN Sustainable Development Goal 11b: “By 2020, [to] substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels”.
- GPM Members could support **SDG 11** – “Making cities inclusive, safe, resilient and sustainable”, **13** – “Take urgent action to combat climate change and its impacts”, **12** – “Ensure sustainable consumption and production patterns”, **6** – “Ensure availability and sustainable management of water and sanitation for all”, **7** – “Ensure access to affordable, reliable, sustainable and modern energy for all”, and **9** – “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”. Members may decide to support to the targets relevant to their policies and prerogatives, such as:
 - ❖ 11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities, older persons, newcomers in isolated neighborhoods.
 - ❖ 11.6 – By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.
 - ❖ 11.a – Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening local, national and regional development planning.
 - ❖ 11.b – By 2020, implement integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and

develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.

- ❖ 12.5 – By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.
 - ❖ 13.2 – Integrate climate change measures into urban policies, strategies and planning.
- GPM Member Cities may support each or some of these goals’ underlying targets as part of an action plan to reduce/avoid greenhouse gas emissions. This is also in line with the Paris Agreement target to prevent global temperatures rising by more than 1.5 degrees above the pre-industrial average.
 - Mayors may call upon national and regional governments to provide additional resources to city governments to enable them to achieve this aim.
 - GPM Members can choose to send a yearly progress report on sustainability progress to the Secretariat, .
 - The GPM is an opportunity for cities to share best practices and greening initiatives, identify ideas to change behaviors, facilitate new forms of finance, or set joint procurement standards that foster economies of scale.
 - GPM Members can commit to sharing solutions they have identified to be efficient in making progress of the environmental road map, in line with the Paris Agreement and the SDGs. In particular, solutions to gain support and increase education, with the aim to foster community engagement – for example by backing bottom-up initiatives to start community gardens or raising awareness about behaviors regarding food waste. But also adaptation strategies into urban design and planning that encourage or incentivize green behaviors (e.g., bicycle schemes, plug-in points, taxes), densification of the city with smart zoning and land use decisions for transportation and water infrastructure, etc.
 - To become lower energy cities, Member Cities can choose to opt for strategies that will include objectives at lower levels of specificities, such as: Achieve a 20% reduction in CO2 emissions per capita from a 2005 base by 2030.
 - Member Cities that assess their efforts and programs as successful can report to the GPM yearly with a Mayor Brief.

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ⁱⁱ United Nations, *World Urbanization Prospects*, 2014, <http://www.un.org/en/development/desa/news/population/world-urbanization-prospects-2014.html>

ⁱⁱⁱ “Cities and Climate Change: National Governments Enabling Local Action.” Policy Perspectives. OECD and Bloomberg Philanthropies, November 2014. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.486.8188&rep=rep1&type=pdf>; Zenghelis, Dimitri, and Nicholas Stern. “Climate Change and Cities: A Prime Source of Problems, yet Key to a Solution.” *The Guardian*, November 19, 2015, sec. Cities. <https://www.theguardian.com/cities/2015/nov/17/cities-climate-change-problems-solution>; Rosenzweig, C., W. Solecki, P. Romero-Lankao, S. Mehrotra, S. Dhakal, T.

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The Hague



GLOBAL PARLIAMENT OF MAYORS
Environment and Climate Change: The City & Nature
Strategy Session 2: Urban Resilience
10 September 2016

Henk Ovink (Special Envoy for International Water Affairs)

Cities at the vanguard of climate change resilience

Introduction: It is the city, stupid!

The WEF's Global Risks Perception Surveys show time and again that future risks - climate change, water crises, biodiversity loss and ecosystem collapse, extreme weather events, natural catastrophes, man made environmental catastrophes - are increasing in frequency and impact. At the same time these risks show a clear and strong interdependency, both in their origin and their impact, on the regional often metropolitan and urban scale. Although these interdependencies, their impact and the occurrence in our cities increase the complexity of these risks and their impacts, it is the city where we can mitigate and adapt to these risks! This is where we can and must act.

Challenging the future in our deltas

We live in a world that is increasingly becoming urbanized, with 70% of the world's population living in cities in 2050, and with a majority of economic activity taking place in urban areas. Global urbanization brings us growth, prosperity, emancipation and development opportunities. Yet climate change, rising sea levels and the increasing impact of these risks put a lot of pressure on our cities, societies and citizens, on our economy and ecology.

Urbanizing deltas belong to the most promising regions of the world, considering their large concentrations of population, their role in the world's ecosystems and their significance to the world's economy. At the same time, these regions are dealing with extreme vulnerability and face multiple threats. The combination of intensification of urban and economic land use, the related disappearance of the deltas' capacity to resist natural hazards and climate change, are resulting in an increase of deadly diseases, poverty and substantial economic losses.

The Netherlands is a product of our delta, and it is here that our cities have developed into metropolises at the junction of roads, water and nature. Water is our connection between economy and ecology; it is where we pursued (and continue to pursue) trade, through which we discovered the world. It was around water that we built our cities and that our culture

developed. We are a nation of water and by balancing on the verge of risks and uncertainties we made the Netherlands great.

Our Dutch urban areas generally face multiple and diverse water-related challenges, such as water-scarcity, flooding, pollution and water quality issues. And we are not alone, all over the world our urban areas are faced with watercrises. Most cities started as settlements near the river or the sea, or at its interface (deltas). The conjunction of a high concentration of assets and people and their location near watersheds makes them vulnerable to natural hazards such as sea level rise, storm surges, river floods, extreme rainfall, prolonged droughts and heat waves, all of which are expected to be worsened by climate change and a combination of social, geo-political and environmental uncertainties, as well as a general lack of financial and governance capacities to manage these risks and uncertainties. It is for these reasons that the World Economic Forum put water crises as the number one risk for the next decade in this year's Risk Report.

The resiliency agenda

To manage future risks, impacts, uncertainties, their interdependencies and seize opportunities worldwide to mitigate and adapt towards these risk, we better learn from our best practices and their failures, successes and insights. Based on the experience of the last decades in water management across the world, strengthened by the assessment of the Room for the River program in The Netherlands and the Rebuild by Design approach in New York and inspired by the Dutch Delta Commission, the following list of key ingredients emerges to serve vulnerable cities, regions and nations in their effort for global sustainable development. These are not only connected and interdependent - one without the other will cause a failing approach - the assessment of regions along these lines will also clarify their specific needs:

It is the region, the network, the system

It is all about the region. But politics is bound by borders defined by jurisdiction and not by the best response. The well-being of the people that elect the Mayor, the Governor or even the President is not defined by political borders: it is the issues at stake and the ecological and economic interdependencies that cut across nations, states and cities. Understanding this complexity, perceiving and acting on the issues on this larger scale, is where good politics starts. Cities are not alone. And cities don't end at the municipal's border. The economic, environmental and social systems and its network are bigger and smaller and are not dependent on the way our political boundaries are drafted. The region is not only defined by humans, by their use of the land; it is also defined by the climate, the water, by its ecology, and therefore by the many ways in which its nature and its culture connect and have impact on each other. Understanding this complexity is key for any path forward.

Prevention pays!

Prevention pays, for the economy, our society and the environment. Prevention to really prevent disasters and to mitigate their impacts. We need to invest more - and for that matter better - in prevention measures as the frequency and impact of extreme events are continuously increasing. To save lives, secure economic assets and attract investments. It is

the resilience business case where each dollar, euro or yen invested now helps protect future assets and increases future revenues.

Aligning interests comprehensively

Resilience is only achieved if the interdependencies of all risks are accounted for, both in mitigating and adapting for these risks. On the city scale we develop and implement real resilient solutions. This demands a comprehensive approach integrating risks and opportunities across scales, time and interests. An inclusive and collaborative approach where all actors take part, within government aligning agencies and across governments and society with businesses, academia, NGO's, entrepreneurs, activists and more.

Long-term planning coupled with short-term innovative projects

An urban and regional comprehensive research is a necessity to understand the complexity of the issues at stake, their interdependencies and the risks-on-the-ground. Long-term comprehensive planning is vital for defining the right response and the ways forward to deal with this complexity. But long-term strategies need to be coupled with short-term innovative interventions that will withstand next year's elections. These projects will inspire and have a ripple effect in responses and follow-ups. It is through replication and scaling up that their values and impact are spread across the world. The connection between planning and projects is critical. One without the other fails; plans are left alone on the shelves and projects become incidents. Connecting the comprehensive long term strategy with implementation and innovation of today builds a strong and resilient approach.

Rebuild by Design's inclusive approach

Rebuild by Design was grounded in the understanding that real change is cultural change and thus must start in the hearts and minds of the people of the region. Because of that understanding and that ambition Rebuild by Design started the outreach and research by matching up global talent with local talent: partners of all backgrounds and with both the best professional skills as well as specific regional ties and personal convictions. This resulted in a cross cutting collaborative process engaging over 500 organizations across the region and thousands of people from governments, academia, businesses, investors, communities, activists and more. The process was open and built on trust, inclusiveness and participation, aimed at innovation and inclusive cultural change.

Public-private funding

Public private partnerships, built on trust and mutual gains, need to be embedded in a process of transparency and accountability. The needed comprehensive long-term approaches must be addressed in evaluations and analyses to increase transparency and attract donors, public and private. Key for both public and private stakeholders, benefit-cost analyses now lack the capacity to capture comprehensive long-term integrated resilience approaches. Monitoring ensures that all partners can guide the process and their own contributions and step in or up when needed. Evaluations - if rightly done and (politically) positioned - enable the loop back into existing structures to fix institutional mismatches and

increase capacity, perform change and thus improve for truly better delivery towards next steps for resilience.

Design

Lastly, adding ambition, quality and the needed complexity to this approach, stands design. Design has the strength to identify opportunities and transform these into innovative examples. Design can connect the regional interdependencies with local needs. Design is essential for bridging gaps between quality and safety, between local needs and political capacity, between regional interdependencies and community assets, between economy, society and the environment.

No time to waste

The perceived slowness of climate change has led to a slow response, not preparedness. But we have a choice to make! When a disaster strikes, we tend to look back and restore what was lost. When rebuilding becomes a “copy and paste” of what was, or at best a re-imagining of what was destroyed, we fail to exploit our disasters. We need to choose to leapfrog and be transformative in our approach, collective actions, and collaborations. All the more since we know that tomorrow will be different. Embracing change as a way towards greater resilience opens up an inspiring range of opportunities.

We should aim for innovation and implementation to go hand in hand with inclusive collaborations across all sectors, from government to activists and vulnerable communities as well as private and public institutions.



The Hague



GLOBAL PARLIAMENT OF MAYORS
Environment and Climate Change: 'The City & Nature'
Strategy Session 1: Urban Energy and Resource Management
10 September 2016

*Dr. Thomas Hoppe, Prof.dr.ir. Paulien Herder
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Governing the challenges of climate change in cities

Introduction

Cities form the key context within which social, economic and environmental challenges for sustainable development will be manifested in the years to come. As they face the grand societal challenges of climate change and the greening of energy systems, city governments are confronted with the difficult task of designing and implementing workable policy strategies. A key question is how to delineate and apply effective policies in order to regulate the repercussions of climate change in cities, particularly in relation to the various roles cities play in governing climate change challenges. In this short contribution, which is rooted in scientific literature, we summarize **roles** and key enabling **conditions** for workable climate change policy and action.

Cities as key actors in the climate change challenge

In most countries, climate change policies have been drafted and implemented^{1, 2}. Attention to climate change in terms of policy and governance includes both **adaptation** (making cities more resilient to climate change) and **mitigation** (actions to avoid climate change from happening; for example by lowering greenhouse gas emissions)².

It is local governments that have a key role due to their proximity to citizens, and it is at the local level where climate change related problems are felt the most, and climate change action is organized⁴⁻⁷. Moreover, there is an increased greenhouse gas (GHG) emission in cities, therefore, cities are particularly vulnerable to climate change. Examples concern heat waves, the urban heat island effect, declining air quality, hurricanes, greater precipitation, and flooding². With predictions on further growth of cities in terms of inhabitants, economic activities and related consumption of energy and other resources, cities are of great importance in strategies to mitigate and adapt to climate change^{8,9}, because it is also at the local level where many of the solutions could be developed and applied and where local acceptability, access and affordability of technology and other solutions are best assessed

(e.g. smart grids, smart homes, system integration with smart mobility or other local public utilities, heat grids, local energy communities). **Cities can take up various roles**, and often this is a modest role among many incumbent stakeholders with vested interests. Cities can be

- ‘Champions’⁸;
- Initiators of actions;
- ‘First-movers’ to adopt clean tech innovations⁸;
- Seedbeds for innovation¹⁰;
- Policy-implementing organizations¹¹;
- Regulators;
- Facilitators;
- Network managers;
- Process—or project managers¹².

Conditions that enable local climate action

Local governments need to design and implement workable climate policies that result in local climate actions (e.g., projects, infrastructure) that lower carbon emissions and make cities more resilient. Given the degree of urban and institutional complexity involved, this is more than just another governance challenge. It requires attention to both the nature of climate change related problems that might vary across jurisdictions, the politics of the policy making process, and the commitment and compliance by local parties who are involved in local climate policy implementation⁹.

In a key publication, Betsill and Bulkeley¹⁶ listed five local conditions that are necessary to trigger substantial local climate action, viz. (i) the presence of a **committed individual** in a local-level government that (ii) manifests a solid **climate-protection policy** (preventing GHG emissions); (iii) has **funding available**; (iv) has **power over related domains**; and (v) perhaps most crucially, has the **political will to act**. If present, these factors contribute to local climate capacity building, policy making and -implementation.

Following the signing of the Kyoto protocol, many countries have embedded local capacity building in their national strategies. However, support by central government (via inter-governmental capacity building schemes) was of great importance in this process¹¹. The latter ^{11,17,18} factors are addressed under the so-called ‘localist’ approach (focusing predominantly on local factors that contribute to local climate policy and related actions). It adds a ‘multi-level’ dimension in that it acknowledges **the interplay of cities in climate actions with higher level governments**—e.g., the EU, central government, regional government—but also to lower level in which relevant decision-making takes place—e.g., regarding district level infrastructural or housing projects.

The academic literature lists a comprehensive set of factors that influence local climate action, and can be seen as **enabling conditions** (See Table 1²⁸). It is argued that cities that meet these conditions are more than others capable of formulating effective climate change strategies that have a significant impact (either in lowering greenhouse gas emissions, in making the city more resilient to extreme weather events related to climate change, or in creating more ‘climate co-benefits’ such as better energy supply or improved air quality).

One of the most important conditions mentioned in Table 1 is (local) climate change policy. It can have many forms, and may deploy multiple policy instruments, which could be subsidies, levies, building regulations, awareness raising campaigns or even a multilateral agreement with other local actors. Closely related to climate change policy is the governing or governance style the local government uses. Kern and Bulkeley²⁰ discerned four **governing styles** used by local governments:

- governing by authority (using regulations and economic incentives to control other local actors);
- self-governing (enacting climate actions themselves; e.g., installing solar panels on the rooftop of the town hall);
- governing by provision (e.g., providing low carbon services to local citizens);
- governing by enabling (actions to empower local citizens and other local actors to undertake climate action themselves or build capacities to do so).

Table 1. Presentations of five key clusters on enabling conditions relative to local climate action

Cluster I: Municipal Organization	Cluster II: Characteristics of the Local Environment	Cluster III: The Local Action Arena	Cluster IV: External Issue Networks	Cluster V: Influence Exercised by Government Levels
<p>Input</p> <ul style="list-style-type: none"> - Financial resources - Fiscal health - Legal authority - Staff (expertise) - Technology - Size - Council type <p>Throughput</p> <ul style="list-style-type: none"> - Political support (by council) - Solid policy plan (clear goals and sound strategy) - Commitment (by staff) - Public leadership/presence of a local catalyst - Inter-department coordination - Knowledge management - Monitoring and evaluation <p>Output</p> <ul style="list-style-type: none"> - Policy instruments - Municipal governing mode (authority, self-governing, provision, enabling) 	<ul style="list-style-type: none"> - Demographic characteristics (SES, income, education) - Environmental group activity - Vulnerability to climate change - Environmental stress - Presence of carbon intensive industry - Presence of energy infrastructure - Available space for deployment of RES 	<ul style="list-style-type: none"> - Presence of process manager - Support by local leaders - Partnerships with private organizations 	<ul style="list-style-type: none"> - Collaborative ties with other local governments - Involvement in/membership of climate change issue network(s) 	<ul style="list-style-type: none"> -Alignment with agendas of higher levels -Presence of inter-governmental support

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What is Resilience?

100 Resilient Cities defines resilience as the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow, no matter what kinds of chronic stresses and acute shocks they experience. Shocks are typically considered single event disasters, such as fires, earthquakes, and floods. Stresses are factors that pressure a city on a daily or reoccurring basis, such as chronic food and water shortages, an overtaxed transportation system, endemic violence or high unemployment. City resilience is about making a city better, in both good times and bad, for the benefit of all its citizens, particularly the poor and vulnerable.

By recognizing the connections between shocks and stresses, the city can make integrated decisions that result in cost-savings, cost-avoidance and the creation of multiple benefits across multiple systems. Instead of investing to reduce impacts and/or improving resilience in only specific areas, a city can apply a resilience lens to ensure multiple positive resilience outcomes while mitigating any negative consequences in the short and long term.

How is Resilience different from Sustainability?

Resilience provides a holistic and proactive way to address shocks and stresses and thereby incorporates key components of sustainability. Resilience looks for ways to make systems endure and even thrive in an imbalanced world. In essence, a resilience strategy goes beyond coping and adaptive strategies by prioritizing transformative actions that make cities better, in both the short and long term.

How is Resilience practiced? Are there any methodologies or tools that can be employed in my City?

1. Cities can facilitate their resilience building by hiring a Chief Resilience Officer (CRO). The CRO is an innovative position in city government that ideally reports directly to the city's chief executive, and acts as the city's point person for resilience building, helping to coordinate all of the city's resilience efforts.
To be effective in this instrumental role, a CRO:
 - a. Works across government departments to facilitate communication that reaches across sometimes-significant internal divisions, promoting new collaboration and synergy between the various agency projects and plans.
 - b. Brings together a wide array of stakeholders to learn about the city's challenges and help build buy-in for initiatives.
 - c. Ensures that the city applies a resilience lens so that resources are leveraged holistically and projects are planned to achieve multiple benefits.
 - d. Helps the city manage complexities to make resilience efforts more impactful, and collaborates externally to identify and integrate lessons from other cities.
2. City Leaders, together with a diverse set of stakeholders, can work to better understand the resilience challenges their City faces by utilizing existing tools such as the [City Resilience Framework](#), the [Resilience Qualities](#), and the [World Bank City Strength Diagnostic](#).
3. City Leaders can promote and integrate resilience thinking into existing citywide or national planning efforts by producing holistic resilience strategies that break down silos of government and involve all sectors of society. Examples of leading strategies can be found [here](#).
4. City Leaders can dedicate a portion of the City's budget to fund actionable resilience building projects and initiatives.

What are examples of Resilience in practice?

Rotterdam

As a delta city primarily situated below sea level, Rotterdam has long been on the vanguard of innovation in water management, with a history of designing solutions that not only aim to reduce flooding in the city, but also connect water issues to economic opportunity, recreation, and beautification. As a city in need of greater social cohesion, Rotterdam applied a resilience lens to address connected shocks and stresses to achieve multiple benefits for its residents.

De Urbanisten's Watersquare Bentemplein is the world's first public water park fed by collected rainwater. The Watersquare offers an outdoor sports venue, green space, and a theatre to be enjoyed by locals and visitors. The water is collected and proudly stored in basins that are visible to the public.

Running alongside the length of each side of the square are large basins, which recess in the ground like wading pools. Whenever it rains the basins collect water, including overflow. The rain is diverted through steel gutters that run along the square in patterns.



De Urbanisten's Watersquare Bentemplein

Rotterdam's strategic leadership in adopting holistic, resilient urban planning with a community-centered approach, resulted in infrastructure with multi-purpose functionality that pays dividends.

Before the water park, the area was underutilized, unsafe, unattractive, and disconnected from the thriving area of City Center. The water plaza improves access to health and wellbeing, and serves as a tangible place to foster social cohesion.

Amman

A city growing at an unprecedented rate, Amman is building resilience by managing geographies of inequality and integrating culture, infrastructure need, and limited resources in the midst of significant shocks and stresses. This strategic and holistic approach to building resilience is crucial not only for Amman, but for the entire region's stability.

The City's rapid growth is due in large part to the successive influx of refugees from surrounding countries over a sustained period of time and since Amman was declared capital of Jordan in 1921. The unstable political situation in the region and the large number of refugees that arrived in Amman within the last five years, primarily from Syria, are causing higher levels of unemployment, housing costs and are exacerbating poverty. Amman's growth is expected to continue in the future with a total population projected to reach 6.4 million by 2025.

As a part of its Resilience Strategy development process in partnership with 100 Resilient Cities, the City of Amman produced a *Preliminary Resilience Assessment (PRA)*, which built on extensive diverse stakeholder engagement and research on the City's shocks, stresses, assets and existing actions. According to the *PRA*, Amman currently faces the following chronic stresses and acute shocks in addition to those referenced above: water shortage, economic crisis, major infrastructure failure, and low quality health and education services.

To inform the City's first Resilience Strategy, Fawzi Masad, Amman's Chief Resilience Officer, is partnering closely with Mayor Akel Biltaji and other city leaders and stakeholders to address the following areas together in greater depth: fostering a positive investment environment that supports the City's diverse economy and creates new jobs; enhancing the capacity of the municipality to spur urban development that brings balance between modernity and authenticity; approaching the cultural and social diversity as an opportunity to support social cohesion; and modernizing the legislation and regulations that govern municipal work in a way that accounts for the current and future expansion of the City.

What is on the minds of City Leaders in the 100RC Network?

In October 2015, two dozen city leaders representing 17 countries joined together for a 3-day summit on urban resilience. Through plenaries, roundtables, expert presentations, and small group discussions, attendees grappled with the seismic issues facing cities today—from refugees and migration to good governance to crime and violence.

The City Leaders focused on the following issues that transcend geographic boundaries and pose multi-dimensional challenges:

- a. There was broad consensus that threats from the natural environment, notably **climate change**, pose an existential threat to the fabric of cities.
- b. Many mayors spoke with passion and conviction about the need to break the cycle of **crime and violence**. Particular focus was paid to how crime interacts with, and is a consequence of, other challenges, like economic inequality and racial tensions.
- c. Responding to the Syrian **refugee crisis**, mayors were very focused on migration and integration. Cities continue to draw refugees seeking sanctuary, stability, and economic opportunity, and the mayors concentrated on how to treat the new “age of movement” as an opportunity. City leaders were also interested in understanding the particular vulnerabilities of the refugee population and the capacity of cities to provide support services.
- d. As Mayor Kaminis of Athens observed, cities are the backbone of nations, and are being called on to do more and more, but often lack the statutory and budgetary authority commiserate with their responsibilities and citizen expectations. Mayors were focused on how to **reform governance structures** to close this authority gap and empower cities to do good.



Concept Note for 100RC Network Exchange Program in Athens:

Cities and the Global Migration Crisis

The Municipality of Athens called for action to convene a collective of Chief Resilience Officers from the 100RC Network to collaborate and incorporate new ideas from the private, public and non-profit sectors around emerging solutions to existing challenges related to global migration. The goal of this convening in early September of 2016 is to produce a widely distributed and publicized selection of solutions and tools that can be leveraged by cities across the entire 100RC Network and beyond.

Learning Need

Based on feedback and needs collectively shared by participating 100RC member cities, the focus will be on surfacing a range of solutions related to how cities are handling the influx of new arrivals in the immediate, near, and long-term:

Immediate migrant management tactics: how to manage a large influx of arrivals and provide the basic protection and services that newcomers urgently need, such as temporary reception and medical centers?

Near-term stabilization tactics: how to provide temporary housing, ensure subsistence, and offer language and job trainings?

Longer-term social integration strategies: how to substantively support economic and social integration of recognized asylum seekers and provide essential services to undocumented migrants?

To avoid replicating traditional emergency management work and operating in silos, participants will look at challenges and solutions through a number of cross-cutting lenses, in alignment with 100RC's holistic approach:

Interdependencies: What interdependencies exist between migration-related shocks and stresses and seemingly distinct resilience challenges, such as economic crises, natural disasters, or terrorist attacks?

Resilience dividends: What interventions allow us to address migration-related shocks and stresses while helping solve other city challenges?

Implementation considerations: In the face of governance limitations and shrinking city budgets, what practical solutions and innovative financing can be leveraged by local leaders?

The goal is to build on the work that 100RC cities have done, not recreate it. We will align and leverage existing best practices, while filling in the gaps with the help of additional resources, such as 100RC Platform Partners and participating subject matter experts.

Exchange Outputs

Learnings and insights will be disseminated through:

A practitioner-focused selection of emerging practices, replicable and transferable solutions, platform tools, and lessons learned organized along three temporal spheres: short-, medium- and long-term needs.

A register of city needs to inform the marketplace, signaling what kind of tools and services need to be created or scaled to sustain our agenda moving forward.

A multimedia product to raise awareness among non-practitioner audiences.

These connections and outputs aim to raise awareness, catalyze concrete action in other cities, and influence the marketplace and key institutional and financial players as new resilience tools are developed - furthering the 100RC Network's collective goal of creating a global practice of urban resilience.





GLOBAL PARLIAMENT OF MAYORS
Environment and Climate Change: The City & Nature
Strategy Session 2: Urban Resilience
10 September 2016

Ellen van Bueren, Frank van Oort, Arnold Tukker (Delft University of Technology, Erasmus University, Leiden University Institute of Environmental Sciences, TNO)¹

How can big data contribute to urban resilience?

Introduction

This short paper aims to give a concise analysis how a monitoring system can be organized, that can help to make cities more resilient from an economic, sustainability and governance point of view. The Rockefeller Foundation defines urban resilience as ‘the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience’.² Obviously, traditional data such as regional economic statistics, information on the urban metabolism (the in- and outgoing flows of materials, water and energy of a city), etc. plays a role here. Yet, with the advent of ‘big data’, totally new forms of data acquisition and data analyses can be organized.

Big data is one of the buzz words of our time. For this reason, the definition of where ‘big data’ start and traditional data end is not clear. Various conceptualizations and classifications of the big data concept have been developed. In a categorization of big data as developed by the United Nations Economic Commission for Europe (UNECE), three main categories are discerned³:

- a) Big data derived from social networks accessible via the internet: Facebook, Twitter, blogs, YouTube videos, email, data from smartphones.
- b) Big data derived from traditional business systems: information on commercial transactions, banking and stock records, information from credit cards and bank accounts, information from medical records, etc.
- c) Big data derived from ‘smart assets’ or the ‘internet of things’: derived from sensors and machines that record events in the physical world, such as fixed sensors (smart

¹ The authors cooperate within the Leiden-Delft-Erasmus interuniversity collaboratives: Centre for Sustainability, Centre for Bold Cities, Centre for Metropolis and Mainport

² The Rockefeller Foundation, 100 Resilient Cities, <http://www.100resilientcities.org>

³ <http://www1.unece.org/stat/platform/display/bigdata/Classification+of+Types+of+Big+Data>

energy meters in homes; other home sensors, traffic sensors, security videos, weather and pollution sensors) and mobile sensors (mobile phones, cars, satellite images).

In contrast, Figure 1 and 2 give a different conceptualization, discerning about 7 ‘big data’ domains and classifying them according to the question to what extent data are real time or not, and structured or not.

Are big data ‘fit for purpose’?

While ‘big data’ may give a lot of new opportunities, we feel a word of caution may be useful. Big data are not for free. Their acquisition and analysis can be costly, just as the linking of big data. Traditional public statistics provided by National Statistical Institutes (NSIs) or similar organizations (e.g. environmental agencies) may be able to provide already important policy-relevant information, while having the advantage of usually having undergone rigorous quality control. **A sound analysis of ‘fit for purpose’, in terms of cost of acquisition, ease of use, robustness, timeliness and added value of big data versus more traditional data is important.** With this in mind, we now will analyze how (big) data can support urban resilience from an economic, sustainability and governance point of view.

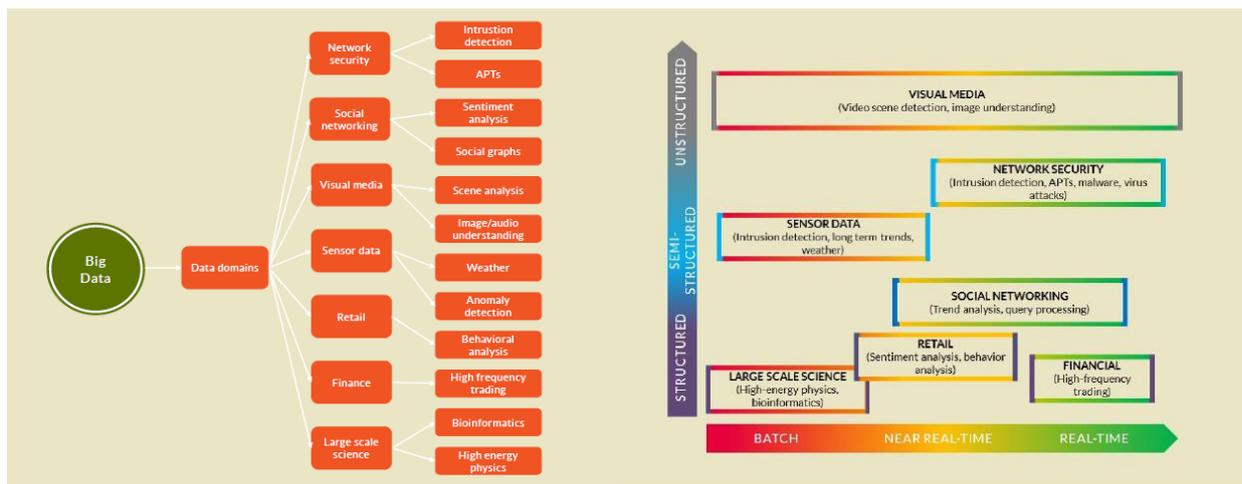


Figure 1: Sources of big data

Figure 2: Typology of big data

(Source: Big data working group (2014): Big data taxonomy. Cloud Security Alliance)

(Big) data, urban economics and geography

The Microfoundations of Agglomeration Economies

Urban economists want to know what makes the economic triumph⁴ and selective failure⁵ (for certain groups of people or entrepreneurs) of cities, and what explains the economic resilience of cities. Innovative and resilient economic developments take place in urban areas

⁴ Edward Glaeser (2011), *Triumph of the city. How our greatest invention makes us richer, smarter, greener, healthier and happier*. London: Macmillan

⁵ PBL (2015), *De verdeelde triomf. Verkenning van stedelijk-economische ongelijkheid en opties voor beleid*. Den Haag: Planbureau voor de Leefomgeving.

and industrial clusters. Urban and regional planners, geographers and economists are interested in the forces that create, shape and maintain these concentrations of economic activities.

Since the early 1990s, a large empirical literature has emerged in the field of regional science and urban economics. It examines whether spatial circumstances give rise to [agglomeration economies](#) – external economies from which firms, entrepreneurs and people (workers) can benefit through co-location – that endogenously induce localized economic growth. These benefits are related to better matching (on the labor market), sharing (of subcontractors, markets and urban facilities like education and infrastructure) and learning (from other firms and clients). Many of the empirical studies under this heading show that agglomeration economies may be one source of the uneven distribution of economic activities and growth across cities and regions. In their survey of empirical literature on the benefits of agglomeration, Rosenthal and Strange (2004) point out that the elasticity of productivity, growth and resilience to city and industry size typically ranges between 3% and 8% ([larger cities perform better economically](#)). [However, the effects of agglomeration economies on localized economic growth generally differ across sectors, space, and time.](#)⁶

At the same time, relatively little is known about the importance of agglomeration economies for the performance of firms.⁷ Many empirical studies on agglomeration use aggregated data with cities or city-industries as the basic reference unit. These studies provide only limited insights and weak support for the effects of agglomeration economies on firm performance. Regional-level relationships are not necessarily reproduced at the firm-level because information on the variance between firms is lost when using aggregated regional-level data. Hence, even if regions endowed with a greater number of agglomeration economies grow faster, this conclusion cannot be generalized to firms. In the social sciences, this problem is referred to as the “ecological fallacy” or the “cross-level fallacy”. In addition, agglomeration effects found in area-based studies can be purely compositional. For example, articles in the economic and industrial organization literature often argue that large firms are more likely to grow compared to small firms due to internal economies of scale. Hence, a location may be fast-growing due to the concentration of large firms rather than the localization of externalities or the external economies of scale present. A similar issue is addressed in recent literature on spatial sorting.⁸ In addition, research shows⁹ that the agglomeration of productive firms may simply be a result of a spatial selection process in which more productive firms are drawn to dense economic areas. For this reason, it remains unclear whether geographical differences are an artifact of location characteristics (e.g., agglomeration economies) or simply caused by differences in business and economic composition. This endogeneity problem makes it even more difficult to draw inferences about firms when using cities or regions as the lowest unit of analysis.

⁶ Van Oort FG (2007) Spatial and sectoral composition effects of agglomeration economies. *Papers in Regional Science* 86: 5-30.

⁷ Frank van Oort, Martijn Burger, Joris Knobens & Otto Raspe (2012), “Multilevel approaches and the firm agglomeration ambiguity in economic growth studies”. *Journal of Economic Surveys* 26: 468-491.

⁸ Combes PP, Duranton G, Gobillon L (2008) Spatial wage disparities: sorting matters. *Journal of Urban Economics* 63: 723-742.

Identification Issues and Multilevel Policy

Identifying agglomeration effects is the most crucial theoretical and empirical issue in urban economics. For this, micro-data and advanced econometric and statistical methods are needed – and increasingly becoming available and used. Localised urban redevelopment policies of governments are examples of place-based development strategies. Many governments spend considerable amounts of money to stimulate employment growth, gentrify population, fight unemployment, and stimulate productivity. These investments are often not space-neutral, but differ between regions, cities and even between neighbourhoods within cities. In developed countries, place-based policies tend to focus on distressed regions or neighbourhoods. In the European Union, for example, the Regional Development Fund explicitly targets regions with high unemployment and a (nominal) income below 75 percent of the EU average. Similarly, in the US, programmes like the federal urban Empowerment Zones (EZs) and Enterprise Communities are designed to use grants and hiring credits to benefit lagging neighbourhoods. However, the focus on lagging regions may come at a welfare cost: the inefficiencies caused by place based policies could be substantial. Edward Glaeser¹⁰ provides several arguments against place-based policies. Firstly, place-based policies that target deprived areas bring economic activity to the least productive places, lowering overall productivity. Secondly, productivity also falls if poor regional performance can be traced back to negative spillovers from local people or firms. Thirdly, the distributional effects of place-based policies are unclear. For example, beneficiaries of the aid may be the richer people in the impacted area, thereby increasing inequalities within the region. Related to that point, the spatial scope of place-based investments may be unpredictable, so choosing a scale for a place-based policy can be problematic¹¹. Recent literature¹² therefore stresses that [people-based consequences of place-based policies should have prime attention – and policies may even be simultaneously people-based besides place-based in character](#).

It is for this reason that large-scale datasets of employees, entrepreneurs, firms and even their (social) networks become increasingly used for identification of people-level and city-level effects. It matters hugely for designing a spatial policy (like the Dutch social neighbourhood policy used until 2014, or policies for science parks and campuses) compared to, or complementary to, individual based policies (like educating and reintegrating skilled labour). The difference is that individuals are mobile, and may export their (re)gained new skills to somewhere else. [Therefore even people-based information may at present be too aggregate](#). The newest strands of spatial-economic and geographical research focus on the measurement, diversification and cross-over potentials at the level of skills¹³, transactions made by firms and individuals¹⁴, networked distributions of relational trust¹⁵, and the

¹⁰ Glaeser, E. L. (2008). *Cities, Agglomeration, and Spatial Equilibrium*. Oxford: Oxford University Press.

¹¹ Cheshire, P. C., Nathan, M., and Overman, H. G. (2014). *Urban Economics and Urban Policy: Challenging Conventional Policy Wisdom*. Cheltenham: Edward Elgar Publishing.

¹² Neumark, D., and Simpson, H. (2015). Place-based Policies. In G. Duranton and J. V. Henderson (Eds.), *Handbook of Regional and Urban Economics 5*. Amsterdam: Elsevier.

¹³ Neffke, F., Hartog, M., Boschma, R. and Henning, M. (2015). Agents of structural change. The role of skills, firms and entrepreneurs in regional diversification, *Papers in Evolutionary Economic Geography*, Utrecht University.

¹⁴ Frits van de Oevering & Frank van Oort (2016), Using bank transaction data of consumers in The Netherlands for identifying functional economic areas. Utrecht: Rabobank.

breakdown of activities of individuals over day- or life-spans¹⁶. Some parts of these data were known already longer, but they become more (and more accessibly) available. Other parts of these data evolve from the ever-lasting urban-economic quest for identification and ruling out of unobserved heterogeneity: much more heterogeneity becomes actually observed by using large micro-datasets, and can be controlled for in modelling or actually focused on in simultaneous modelling. [Long-standing policy-sensitive causality-issues can actually be solved adequately using longitudinal micro-data, like the questions: “do people follow jobs or do jobs follow people”¹⁷ and “do creative people cause economic growth in cities or do large cities attract more creative people”¹⁸](#) Longitudinal datasets of trade relations between European regions by sector and products (250 million observations) used to ex-ante evaluate regional impacts from shocks like Brexit and TTIP, skill-relatedness among 1 million job-movers in The Netherlands, daily expenditure and activity panel data of all inhabitants of Hong-Kong and Shenzhen – big data helps to inform economic and social policy at ever larger scale – when policy asks the right questions related to these data.

Lessons Learned

- Economic, social and geographical theories are always needed to formulate and test hypotheses.
- Identification of people, firm and city-level determinants of economic, social and ecological resilience is a crucial task for science and serves policy.
- Applications evolve fast from traditional statistics into more innovative and detailed, fractured elements of mobility and settlement behavior – focusing on skills, cultures, transactions, social networks and activities as observed units – but in all traditional and innovative applications there is an enormous untapped learning capacity.
- This comes at the cost of an increased (known) complexity – aggregate stocks of determinants and variables link together in a systematic way for which rules are well known, while for the micro-elements the interrelations and causalities are far more complex and impacting on many other micro-elements – more complex detail does not always serve policy in making easy or robust choices.
- Governments should facilitate data collection and interpretation, but always from a well-defined focus and objective.
- Besides the integration of place-based and people-based policies, governments should focus on network-based policies. As governments are also important parts of these networks themselves (facilitating them, or being actors in them), they should be equipped to act on these network relations pro-actively and knowledgeable. This is often not the case yet, and may need (new forms of) governance.
- (Social) networks will by definition not be inclusive for all – and here is possible a task for governments when politically relevant.

¹⁵ Nicola Cortinovis, Jing Xiao, Ron Boschma & Frank van Oort (2016), Quality of Governance and social capital as drivers of regional diversification and resilience in Europe. *Journal of Economic Geography* (forthcoming).

¹⁶ 2015. *Space-Time Integration in Geography and GIScience: Research Frontiers in the U.S. and China*. Mei-Po Kwan, Douglas Richardson, Donggen Wang and Chenghu Zhou (Eds), Dordrecht: Springer.

¹⁷ Thomas de Graaff, Frank van Oort & Raymond Florax (2012), “Modeling regional population-employment dynamics across different sectors of the economy“. *Journal of Regional Science* 52: 60-84.

(Big) data and an urban circular, resource efficient economy

The need to reduce the environmental pressure generated per capita on Earth, particularly of rich countries, is obvious. The amount of carbon emitted for our consumption has to be reduced to some 2 ton per capita globally in 2050, and close to zero by the end of the century. Currently, Europeans emit six times more. For water, land use and materials use, similar limits are in sight¹⁹. ‘Earth overshoot day’ as calculated by the Global footprint network, is now in August – after that moment, the human population lives on resource endowments that cannot be produced sustainably anymore and in essence lead to depletion of natural capital.

The policy answer to this problem is to decouple the use of natural resources such as water, land, biomass, abiotic resources, and the emissions of e.g. carbon, from economic growth. One of the most interesting approaches towards decoupling is the development of a ‘circular economy’. In such an economy, products are developed for long life, repaired, and products designed in such a way that components and materials can be easily refurbished or re-used. But at a regional level, processes of production and consumption are organized in such a way, that the residuals of one production or consumption process can be input to another production process. Such an ‘urban’ or ‘industrial’ metabolism hence closes the loops of the use of energy, biotic materials, abiotic materials and water on a local scale (see e.g. figure 3).

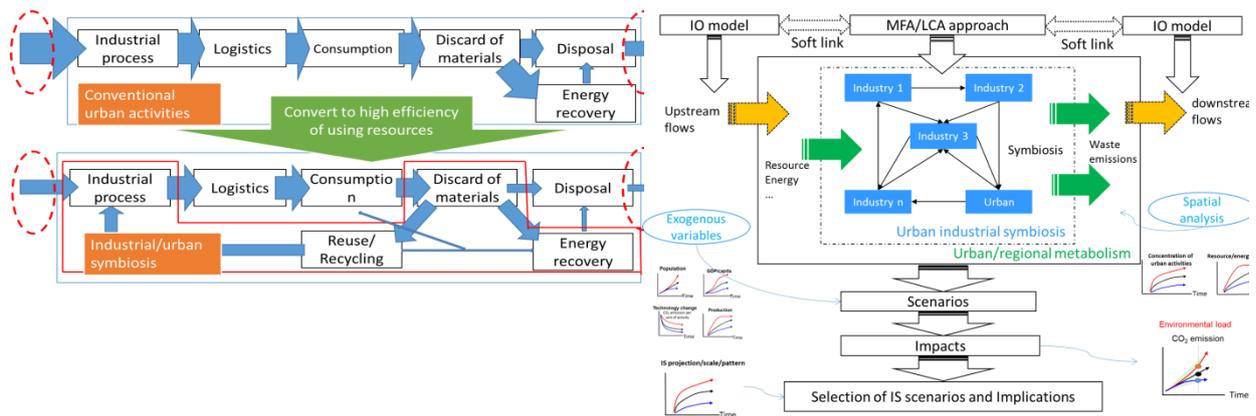


Figure 3: Linear versus circular urban metabolism (left) and scenario analysis for urban metabolism combining Material Flow Analysis, Life cycle assessment and Input Output analysis. Figure courtesy of Dong Liang, CML, produced in the context of the Smart Industrial Park project for NWO and the Chinese Science Foundation.

Various tools have been developed to analyse the urban metabolism. Most tools base themselves on an in-depth inventory of inputs and outputs of production and consumption processes in a region. This, obviously, is a time consuming affair. However, the science community in this field, practitioners in the area of Industrial Ecology, have come up with a number of smart approaches that can reduce the inventory burden. One approach is to make

¹⁹ Steffen, Will, Katherine Richardson, Johan Rockström, Sarah E. Cornell, Ingo Fetzer, Elena M. Bennett, Reinette Biggs, Stephen R. Carpenter, Wim de Vries, Cynthia A. de Wit, Carl Folke, Dieter Gerten, Jens Heinke, Georgina M. Mace, Linn M. Persson, Veerabhadran Ramanathan, Belinda Reyers, Sverker Sörlin (2015). Planetary boundaries: Guiding human development on a changing planet. Science, 13 February 2015: Vol. 347 no. 6223, DOI: 10.1126/science.1259855; Tukker, A., T. Bulavskaya, S. Giljum, A. d. Koning, S. Lutter, M. Simas, K. Stadler and R. Wood (2016). Europe’s Environmental Footprints in a Global Context: A Structural Deficit in Resource Endowments. Global Environmental Change, accepted;

use of the usually detailed business statistics at regional level published by NSIs. These give insight in the turnover, employment, and often also purchases and sales of an industry at regional level. By combining such information with price data physical input-output data of industries can be estimated²⁰. Furthermore, so-called Life cycle inventory databases are available, that contain standardized information on physical inputs and outputs of a large number of production processes²¹. While these may not always reflect local or firm specific realities, as a first order estimate this often is good enough. Furthermore, most EU countries also have well-developed waste reporting systems, giving information on waste amounts per industry per region. *When combined with basic information about energy use, water use and some other major material flows in a region, it is often possible to generate a 'broad picture' of the urban metabolism, that is at least sufficient to identify the opportunities for closing loops, the use of waste as resources, etc.*

Where could 'big data' help?

It obviously would be ideal if for instance energy companies and water supply firms could provide detailed information about energy and water deliveries. The use of information generated by 'smart energy meters', obviously can help to identify where households have a high difference in energy or water consumption, under the same circumstances – which identified prevention opportunities. Bank transaction records, or records provided to the tax office to determine Tax on value added, in theory can give a detailed picture of transactions related to resources, products and services. All this information in principle can make the picture of the urban metabolism more precise. But particularly for detailed monetary transaction data, and data on individual energy and water use may entail a high sensitivity when it comes down to privacy. At this point, the use of 'traditional' data such as regional economic statistics, LCA databases and other general information is not even optimized, and it seems that policy may be best served by starting there.

²⁰ Rosado, L., Niza, S., and P. Ferrão (2014). A Material Flow Accounting Case Study of the Lisbon Metropolitan Area using the Urban Metabolism Analyst Model. *Journal of Industrial Ecology* 18(1): 84-101.

²¹ See for instance: www.ecoinvent.org

Big, open and linked (BOLD) data and urban governance

How can 'BOLD data' help mayors to govern the city and contribute to urban resilience?

Expectations of big data with regards to urban governance are high. The miniaturization, affordability and wide application of sensing technology provide a continuing source of automatically and routinely produced information for urban management and planning, generating 'big' data. When it concerns urban governance, big data expectations are often related to open data and linked data: Big Open and Linked Data (BOLD)²². Here is how BOLD data can support cities to become resilient:

- *Big data* help city administrations to get a better picture of the functioning of the city: how are urban infrastructures, urban services and urban places used? How can they be used more efficiently? How can they be improved? More and more cities are developing big data centers, helping city administrations to manage the city, to detect problems and to quickly respond.
- Especially the *linking of data* sets from the three categories mentioned in the introduction (page 1), e.g. social media data with traffic sensors and 'normal' asset management information, offers opportunities to improve the management of urban systems, in real time and in planning for improvements.
- *Open data* (non-privacy restricted and non-confidential data, openly available and accessible, to be used and distributed for any usage or purpose) further aims to contribute to the empowerment of citizens, by contributing to transparency of government and providing access to data that can help citizens to take (more) control²³.

Trends and challenges

Expectations of BOLD data are high, but *experiences are still limited*. For example, in his article Michael Batty describes that the informative value of the huge datasets generated by the UK public transport smart card on check-ins and checkouts is very low²⁴. To derive information relevant to decision-makers and planners, for example on traveller choice and behavior, routes and use of the infrastructure and trains, requires the linking of many datasets with many assumptions, data incompatibility and therefore possible errors.

Cities are building *city dashboards* for monitoring and accountability, often openly accessible. London's city dashboard shows especially real-time (sensor) data on weather, traffic and public transport, air quality, energy demand, stock exchange value, etc.²⁵ Springville (Utah, US) has developed a more detailed 'dashboard', consisting of a number of categories of key indicators covering socio-economic indicators in addition to environmental resources indicators and showing the 5-year progress²⁶. Such city dashboards often require data analytical skills, combined with software development.

Governments often rely for these projects on cooperation with research institutes, supporting the identification of relevant key indicators, and *technology companies*,

²² For the sake of readability, we speak of 'BOLD data' instead of just 'BOLD'.

²³ Janssen, M., Charalabidis, Y., & Zuiderwijk, A. (2012). Benefits, adoption barriers and myths of open data and open government. *Information Systems Management*, 29(4), 258-268.

²⁴ Batty, M. (2013). Big data, smart cities and city planning. *Dialogues in Human Geography*, 3(3), 274-279.

²⁵ <http://citydashboard.org/london/>

²⁶ <http://www.springville.org/wp-content/uploads/2012/03/springville-city-dashboard-2016.pdf>

delivering the software, capacity and skills to link different sets of open data in support of urban governance. These companies often also produce the ‘smart city’ hardware. For example, within the 100Resilient Cities project, a private technology company analyzed the factors contributing to waste piling up in the streets of Bangalore, handing an action perspective to local government to address this waste management problem²⁷.

Especially in the field of *mobility, traffic management and crowd control* combining individual geospatial information, generated by smart phones, social media and sensor information of the infrastructure providers and service operating companies, many initiatives take place to improve service delivery by making better use of existing capacity and adapt planning to actual use. Privacy issues and user rights of data are still important issues to be solved.

The promise that open data will empower citizens and support civic engagement is still to be tested. To what extent citizens are willing or able to use data once opened up, and to what purpose, remains to be seen, just as how these open data influence issues of equity and democracy. Investments in evaluations of such open data projects, also over a longer period of time to take learning processes into account, are highly needed. Some citizens are better able to use such data and to look after their interest. In the city of The Hague, there will be two neighbourhoods in which the city intends to experiment with bottom-up, data-driven urban development starting in 2016. Projects as these are highly valuable to understand how such processes evolve, how data is used and with what result: do they lead to more resilient cities?

Disaster management is much supported by BOLD data. It may enhance the preparedness, reponse and recovery activities. Crowd sourcing – collecting data from citizens through an app or social media as twitter – allows for very localized and highly meaningful information, for example on whether a street is flooded.

Big data offers decision-support

Big data can help mayors and city administrations in all phases of the lifecycle of urban environments and infrastructures to improve resiliency: during the phase of planning and design, of construction, and during operation: management, maintenance, monitoring, repairs, and my help prepare for renovation and upgrading. Also at the end-of-life stage big data can be of help to reduce waste by identifying opportunities for reuse and recycling.

Especially in support of decision-making for urban change, such as the energy transition, water management and waste management, simulation and modeling techniques using linked data help decision-makers to make sense of the decision-making options and their – joined- consequences. The energy atlas of the City of Amsterdam is an example of an open map giving quite specific information on energy use, energy source used and demand and supply of energy, almost on the level of a household. With this information, the city supports stakeholders – ranging from private home-owners to energy suppliers and contractors – to invest in energy saving and renewables. The map, amongst others, shows the use of gas or electricity and related emissions per building block or square meter, making targeted interventions possible.

²⁷ <https://www.greenbiz.com/article/how-data-helps-indias-cities-adapt-rapid-urbanization>



Source: http://maps.amsterdam.nl/energie_gaselektra/

Applying the framework software to other cities turned out to be challenging. Many cities do not have such data sets that can fairly easy be linked, have no appropriate data sets at such a fine-grained level.

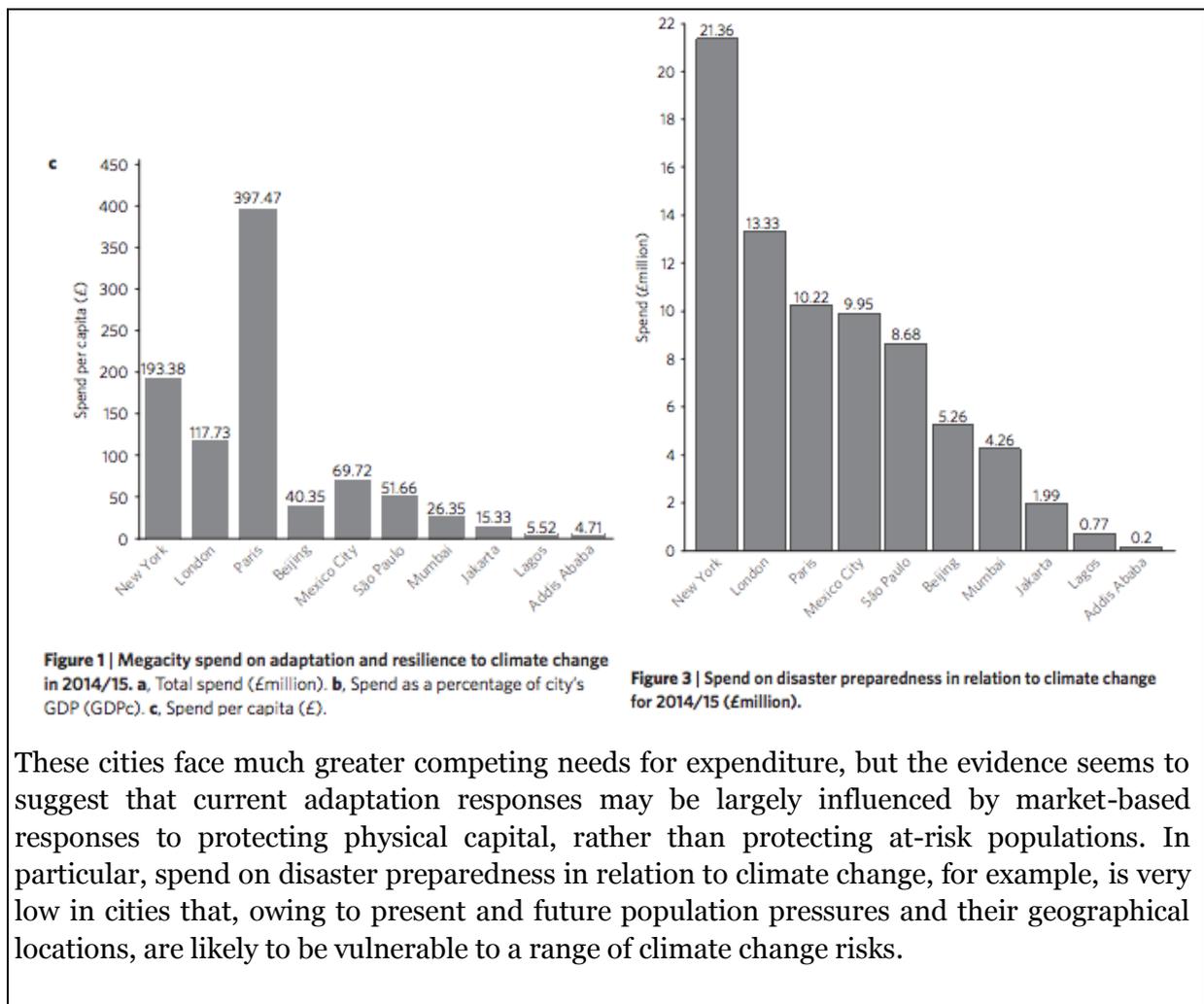
Big data in support of comparison and benchmarking

Big data may help to compare how cities address climate change, in terms of adaptation to the consequences of climate change and in terms of mitigation, to reduce the problems that cause climate change. Such a comparative macro perspective on policies of different cities is a welcome addition to the currently popular, but often small-scale, project based urban experiments in which different policies are tried and tested.

Example: Big data on expenditures on megacities' climate change adaptation (Georgeson et al., 2016)

Analysis of publicly available big data on government spending in megacities has shown that there is a vast difference between the investments per capita in adaptation to climate change, ranging from £4.71 per capita for Addis Ababa to £193.38 per capita for New York, suggesting that adaptation spend is driven by wealth rather than the number of vulnerable people²⁸. These figures seem to suggest that current responses to climate change adaptation are driven by protecting physical capital, rather than at risk populations.

²⁸ Georgeson, L., Maslin, M., Poessinouw, M., & Howard, S. (2016). Adaptation responses to climate change differ between global megacities. *Nature Climate Change*, 6(6), 584-588.



These cities face much greater competing needs for expenditure, but the evidence seems to suggest that current adaptation responses may be largely influenced by market-based responses to protecting physical capital, rather than protecting at-risk populations. In particular, spend on disaster preparedness in relation to climate change, for example, is very low in cities that, owing to present and future population pressures and their geographical locations, are likely to be vulnerable to a range of climate change risks.

Words of caution

Big data is not neutral, contrary to what the term ‘data’ suggests. Much of the big data is not informative. It requires the intervention of data analysts to produce big data that make some sense. In this analysis, in which selections are made, data sets are aggregated and linked, algorithms are used etc., many choices are made. These choices are often made by technical analysts and are not transparent or accountable.

Big data is not purposefully generated. It is out there; to make sense of it requires causal assumptions. To test these assumptions, analysts have to work with the data sets that are available and accessible, which can influence and bias the result.

Big data contributes to a technical understanding of the city; the city as technical urban systems, focusing especially on the technological and physical properties and functions, and often reducing the citizen to a user, traveller, customer, visitor, etc.

Big data tends to focus attention on the short-term operational level. Perhaps in the longer term it will become clearer how big data can support strategic planning²⁹.

Making use of the full potential of big, open and linked data, requires city administrations to open up and change as well. Even though government assets and activities generate much of

²⁹ Batty, M. (2013). Big data, smart cities and city planning. *Dialogues in Human Geography*, 3(3), 274-279.

the big data, it is now up to citizens, firms and governments to develop a joined understanding of the data and the opportunities for action offered by the data.

Conclusions and recommendations – how can mayors support use of big data for economics, sustainability and governance?

Big data, in closed, linked and open form, are potentially a blessing to modern city administrations. They generate all sorts of (geo-spatial) data that were previously unknown, allowing them to improve responsiveness and service delivery in the short and medium term, especially when used in addition to ‘normal’ data. How cities manage their resources, how people move around cities (their mobility), how bottlenecks in traffic and public transport nodes can be identified, where concentrations of CO₂ become unhealthy, which routes for walking and bicycling are more pleasant, safe and healthy, how homes become suitable for life-long living influencing migration patterns – these issues become more known using censored (fixed and mobile) data.

These issues have economic value in themselves, as being able to become more efficient, sustainable and inclusive as a city gives a competitive advantage³⁰. As such, **the use of such big data does not directly offset or trade-off with future economic growth and resilience, but actually is an integral part of it, contributing to people’s happiness and well-being**³¹. Besides, these issues increasingly shape and determine agglomeration economies important for firms to capture the 3-8% rent in cities: congestion, pollution, unsafe contexts and an uncomfortable living environment are among the most important issues in urban attraction for high-skilled workers nowadays.

Big open data in this respect is a decision support tool for monitoring and influencing behavior of people’s mobility and planning for safety, health and sustainability. Recent applications in Urbanism, morphology studies and cellular automata experiments help in finding rules and regularities in this³². Increasingly, these modeling exercises can be fed with a burgeoning amount of real-life statistical data³³. Although these models bring order in complexity that has always existed, **theoretical assumptions on causality and the ability to interpret the outcomes according to adjoining hypotheses are still very much needed** (contrary to some scientists suggesting that theory is not needed once complexity is captured more).

A big challenge is to use big (open) data for integration of economic, social and ecological policy goals simultaneously (or identify offsetting and trade-off situations) in times of transitions, climate change, incredibly fast lifecycles of products and industries, innovation and sudden peaks of economic austerity. **It is to be seen whether open data serves urban resilience in an economic, social and ecological sense, or actually amplifies it in the long run. Decision-support on mobility, interaction, planning for safety, health, and sustainability should indeed be interpreted as support – the policies have to be designed and nurtured, in first instance by mayors.**

³⁰ Anthony Townsend (2013), *Smart Cities. Big data, civic hackers and the quest for a new Utopia*. New York: Norton Publishers.

³¹ Charles Montgomery (2013), *Happy city. Transforming our lives by urban design*. London: Farrar Publishing.

³² Michael Batty (2005), *Cities and complexity. Understanding cities with cellular automata, agent-based models, and fractals*. Cambridge: MIT-Press.

³³ Michael Batty (2013), *The new science of cities*. Cambridge: MIT-Press.



The Hague



GLOBAL PARLIAMENT OF MAYORS
Environment and Climate Change: ‘The City & Nature’
Strategy Session 2: Urban Resilience
10 September 2016

Prof.dr. Hans de Bruijn
(Leiden-Delft-Erasmus Centre for Sustainability / Centre for BOLD Cities)

Support from civil society & industry for formulating and achieving climate goals

Mobilize and organize public support

Meeting climate goals demands cooperation between governments – on a local and central level --, businesses and societal institutions. Climate problems are challenges of collective action – they are too complex to be addressed by a single actor.

From a governance perspective, at least two questions are particularly significant:

- o How can we **mobilize** public support?
- o How can we **organize** public support?

How to frame climate policy? The do’s and don’ts

For the most part, **mobilizing support of citizens, civic organizations and the private sector** has to do with how climate policy is framed; framing is about the structure of a message, aimed at reinforcing the discourse which constitutes activating a specific interpretation of the world. Good framing can foster public support, while bad framing can undermine it. The way in which a policy is communicated can strengthen it, but may also weaken its support.

Don’ts

- o Communication is crucial. Don’t place too much emphasis on the seriousness of the climate problem, e.g. ‘worse than anticipated’, ‘faster than anticipated’, ‘leading to a food crisis’, ‘leading to an immigration crisis’ - etc. **Hell doesn’t sell**. The more is made of the problem, the less citizens and societal players feel that they can have any from of control or influence over it. **Don’t deny the**

problem, but emphasize how policy, and the different public and private stakeholders, including citizens and civic society, can make a positive contribution.

- Don't place too much emphasis on how climate change demands drastic changes in lifestyle, e.g. less travel. These kinds of messages may quickly impinge on important social values (e.g. travelling is equated with individuality and personal development). **If climate policy is perceived to be attacking such important values, it can lose public support.**
- Don't place too much emphasis on how the present generation is ruining things for future generations. That makes the present generation the villains – and their children become victims. **This division of roles is not always conducive to public support.**

Do's

- Do couple climate goals to values that could potentially create a cynical stance regarding climate policy, e.g. entrepreneurship, innovation, the economy.
- **Do frame climate policy positively:** as something that contributes to strengthening economic structures, as a trendy lifestyle, as an opportunity to be able to continue certain aspects of our lifestyle (such as travelling).
- And – paradoxically – **do find other ways of framing climate policy by using different language:** a series of opportunities to make society better, cleaner, healthier, etc. This helps to identify indicators to which everyone is glad to contribute, that are difficult to contest.

How to organize public support: some essentials

Organizing support from stakeholders is essential for the implementation and achievement of climate goals. Their interests are at stake and there are often no means or instruments to enforce actors to change behavior that negatively affects our climate. Achieving climate goals relies on the support and voluntary collaboration of stakeholders such as industry and consumers.

Climate policy is a process of trial and error.

When **organizing public support**, a number of aspects should be taken into account.

- It is frequently the case that we do not know beforehand what innovations are available, which are suitable for use on a larger scale, who will champion the innovations, which innovations have the potential for improvement and which do not. Therefore, **climate policy will often be a question of trial and error.** This means that a government that is too closely involved in climate policy will often produce many 'errors', and this can seriously erode the legitimacy of climate policy.
- Trial and error processes thrive better in the domains of market and in society than in the governmental one.

Governments are ought to assume more indirect intervention.

All of this has consequences for Governments' role in shaping collaboration – essentially, placing too strong focus on specific climate projects is fraught with risks. **Less direct intervention and more indirect intervention is needed.**

How could it be achieved?

- Wherever possible, reduce the risk of errors by making climate change as an aspect of other forms of collaboration (e.g. building new roads, building schools, volunteer activities).
- Create a fertile ground for projects – e.g. using communication or the threat of legal measures – by setting standards for the quality of life in the city, e.g. with regard to health, noise nuisance, recycling. Creating such a context for projects might be more effective than focusing on supporting specific projects.
- Encourage and organize variety and competition for sustainable solutions. Don't be too quick to go along with a specific solution. **Always ask the question of how much potential a given innovation still has in terms of further improvement.**
- Foster collaboration between businesses and governmental institutions and reward these once they have proved to be successful, e.g. with regulations in favor of the chosen solution. Such 'rewards' can act as an important carrot for businesses and social organizations.
- Where government does become involved in projects, ensure that it always plays a minor role – the smaller the role of the government, the greater the commitment of the other parties.



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Lucas Meijs, Lotte van Vliet (Erasmus University, RMO)¹

Forms of diversity

Dutch Council for Social Development

The last 6 years the Dutch Council for Social Development, the official advisory body on social development of the Dutch government, has published several linked policy advices and studies. The general direction of these documents is the growing need to revitalize Dutch (civil) society by allowing and accepting more diversity of services in the public domain. Central is the understanding that the whole society is responsible for the public domain and not the government alone. This short article presents an overview of these publications and as such builds the conceptual background of current Dutch developments.

Many western welfare states are struggling with the same challenge. How does a society facing growing diversity in request for services resolve common issues? What roles are there to play for market, society and government, and what is the relationship between these actors? And what solutions are feasible at a time when government funding is under pressure but accessibility, availability, affordability and quality of services remain as important as ever?

For the Dutch social domain, embracing areas ranging from care, welfare services and social housing to international development cooperation, energy supply and social security, these are all very topical questions. As has been documented in several places the Dutch welfare state is developed based upon a system of governmental funding for a diverse set of non-profit service providers in so-called pillars, based upon religion and political orientation. In the last decades of the previous century this system has started to erode, meaning that the governmental funding remained intact but that the diversity of service providers has been diminished by governmental enforced mergers and by attaching strings to subsidies.

Currently, the government is increasingly stepping back and transferring responsibility to its citizens and their civil society organizations due to a combination of budget cuts and a more liberal perspective on society. However, recreating a kind of society which resolves social issues itself does just not happen automatically. In addition, this ‘new’ society will not

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function unless a number of conditions are met. In recent publications, the Dutch Council for Social Development distinguishes six guiding principles.

Diversity as the standard for society

The decision by the government to step back stems from three problems that manifest themselves within the welfare state: financial unsustainability, declining civic involvement in large services as a result of 'big' government, and growing uniformity of public services. Currently the Netherlands is moving back from a homogenising public sector towards a recreation of the heterogenizing civil society, towards a situation in which people privately and directly have a greater say in the organisation of society. This also means that people and their civil society organizations are enabled to strive to achieve their personal goals, to raise their voice for themselves and others and to protect their own interests. And more civil society leads automatically to more differences in outcomes – differences that have long been prevented and masked by a financing and regulating government. New social initiatives and enterprises will seek to determine their own organisation, direction and funding independently and in their own way. The value of more civil society does stem from the fact that we are on the cusp of a period of 'less government'. Citizen initiatives are preferred because they do something different from what the government can achieve. They tap into, build upon and cater to the plurality and diversity in society and the preferences of (groups of) citizens. Civil society generates diversity based on private plurality, not equality based on public universality.

Organising solidarity in communities

Without solidarity, no society can exist. Helping loved ones and family members, the care system, the pension system, volunteering, donations, development aid –are all examples of a willingness to give time, money or other resources to others, based on a sense of solidarity. The development of the Dutch welfare state was based upon indirect solidarity, organized by the government as a resource base for civil society organizations. But *indirect* solidarity, leads to virtually invisible and unemotional relationships between givers and receivers. The expectation and hope is that the answers to these challenges of alienation will in the near future (once again) lie in *direct* forms of solidarity: solidarity that is privately and voluntarily generated by people themselves. This does not imply that direct solidarity consists only of small-scale 'amateur' one-to-one relationships, it also involves the larger-scale solidarity of collective ties and civil-society organizations which do something for a particular target group. Direct solidarity is the solidarity that arises within *communities*. And within those communities, people also *experience* that solidarity - the challenge being to recombine the efficient taxation-fundraising of indirect solidarity with the legitimacy of direct solidarity.

Translating ideals into action

Civil-society organizations are in an excellent position to translate people's ideals directly into action and all manner of services. This potential can offer a counterweight to the general discontent that exists in The Netherlands (and many other European countries), as a result of the economic crisis, immigration, security issues, and unemployment. We should keep in

mind that this discontent is a multifaceted phenomenon: it is different for everyone and everyone feels it differently. This diversity is however masked by the overarching feeling that ‘things are going in the wrong direction’. But discontent can also be seen as something constructive, as an untapped reservoir of energy in society. The trick is to look beneath the discontent, to distil ideals and future ambitions from it and thus to make use of the energy in society. Social discontent is not an endpoint, but a starting point for a discussion. However, this implies a need to give people a greater say in solving social problems. And that is precisely what social initiatives can bring about.

Care Cooperative Hoogeloon

A particular social service that illustrates how the principles can be incorporated into service provision is for example Care Cooperative Hoogeloon in the Netherlands. The cooperative provides services to the elderly within Hoogeloon, a small Dutch village with 2.100 residents, so they can continue to live in their own village and community as long as possible. Care Cooperative Hoogeloon is a citizen’s initiative and an independent organization. Elderly residents of Hoogeloon raised their voice and stated their wishes and the cooperative meets the needs of the specific community itself. Furthermore, the cooperative organizes solidarity in the community, as the power of the cooperative rests in solidarity, since the members of the cooperative decide what the cooperative does. In addition, the cooperative was constructed from discontent with the present welfare state, and by translating ideals into action citizens are able to decide how they want to shape their care system.

Guarding against homogeneity

This brings us to a fourth guiding principle: guard against homogeneity. Government sometimes has an excessive focus on ignoring the need to let in variety, even though new entrants or new working methods are highly suited as vehicles for challenging existing systems and patterns. Or, frequently used systems and behavioral patterns show the tendency to become dominant and to suppress diversity. For example, the pressure to use protocols and bureaucratic forms in the healthcare domain sometimes tends to overshadow the interaction between professional and patient or reduces the latter to a ‘case’ to handle. By striving for efficiency and effectiveness, multiple interests and the value of diversity are denied. This in turn demands an avoidance of rigid frameworks for societal sectors which almost by definition forces innovative initiatives – from both new and existing organizations – into the same straitjacket and produces nothing but homogeneity.

Letting go means letting in

‘Letting go’, ‘leaving to others’, ‘creating space’ and ‘transferring to citizens’ are the terms policy makers often use to describe the new position adopted by the Dutch Government. That discourse harbors a trap that impedes rather than fosters the development towards a more civil society based society. This trap lies in the idea that the organizational structures and delivery of services by government, market and society are mutually interchangeable where government can just financially retreat but services will not change. In reality, each domain has its own ‘identity’, and these domains are not simply replacements or extensions of each other. Civil society will not organize things in the same way as the government used to do, nor will the market. But the current discourse does not simply create space for citizens and civil society to do things differently. Letting go without allowing new organizations to develop

and find their own niches and needs to cater will be dysfunctional. It is therefore unwise to see civil society as the ideal candidate to take over governmental tasks. Instead, it is important to clear the way for the autonomous and diverse contribution that civil society has to offer.

More constitutional democracy, less welfare state

The foregoing shows what can happen when society produces shared, uniform solutions to shared but diverse problems. Yet it is not simple to value societal diversity and the pressure to deliver uniformity through the government is considerable. Moreover, societal diversity will sometimes be uncomfortable because it also means inequality. Creating space for societal initiative implies both new rules for 'inclusion' and 'exclusion'. It is therefore essential that the government devotes particular attention to three conditions. First, societal initiatives must have a substantive say in what they create to prevent that the diversity is a token instead of truly based upon private values. As stated earlier, the diversity and uniqueness of communities is of key importance. Second, more space must be created for the investment of private financial resources; this could for example be done through a reduction in tax and social insurance contributions. The third condition lies in the constitutional tasks of the government. The constitutional democracy has an important function in providing protection and setting limits. It can protect the diversity of societal initiative, as well as offering a guarantee against undesirable forms of societal initiative or unwanted forms of social exclusion (e.g., vulnerable members of society being left behind). The constitutional democracy also offers a framework for addressing issues or conflicts in relation to societal difference. Less government and more society thus implies more constitutional democracy.

Conclusion

The relationship between market, state and society will remain the subject of debate in the years ahead. The necessary spending cuts, combined with an aging society leading to increasing health care expenses, add an extra dimension to that debate. At the same time, the prospect of 'more society' extends beyond this short term view. A society marked by diversity will require a form of service delivery in the social domain which reflects that diversity. It is then reasonable to assume that solving shared problems via bureaucratic means will be less successfully achieved than through the deployment of private forces, both profit-based (businesses) and not-for-profit (civil society). This requires that governments let go of the expectation that civil society will produce the same things as the government. They will have to shift their focus from 'providing' to 'facilitating'. At the same time, it will require that people in society translate their ideals into actions for the private-public cause, the classical nonprofit challenge. Civil-society organizations, large and small, will have to act from the basis of their self-determined mission and so secure legitimacy from their target groups. Alliances with other private actors will then be more logical than a focus on the government alone.

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The Hague



GLOBAL PARLIAMENT OF MAYORS
Environment & Climate Change: 'The City & Nature'
Strategy Session 3: Urban Mobility
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The Challenge for Sustainable Cities – Shifting Finance, Advancing Institutions and Harnessing Technology

Introduction

There have been many advances in sustainable mobility worldwide: there are more transit, bicycling and walking facilities than before¹; some cities are adopting travel demand management strategies²; the industry is evolving cleaner propulsion technologies³; and new forms of mobility are growing, like transport network companies⁴ and shared services⁵ and autonomous vehicles⁶. These positive trends are overwhelmed by motorization and its negative impacts, though.

Individual motorization still prevails as the preferred approach for advancing personal access in most cities, particularly in emerging countries. This seems a result of institutional and financial lock-ins⁷. Public funding is predominantly allocated to expanding roads, while urban codes force the provision of parking and incentivize urban sprawl.⁸

Urbanization trends are coupled with ascent of the middle class, and greater access of consumers to private cars and motorcycles. Most of the growth of individual motor vehicles has happened in non-OECD countries: from 127 million light duty vehicles in 2000 (20% of the global stock) to 271 million in 2010 (32%), that is 113% growth.⁹ There are about 313 million motorcycles in the world, 77% in Asia, 5% in Latin America.¹⁰ In countries like Vietnam, Indonesia and Cambodia, motorcycles comprise more than 75% of the motor vehicle fleet.¹¹

While industrialized countries have reached what has been called “peak travel”¹²; emerging countries are still at an initial phase of motorization. Their saturation levels will heavily depend on the policies adopted on the urban form, provision of sustainable modes and adoption of transport demand management strategies.

Fast motorization and lack of sustainable mobility alternatives results in social exclusions, losses in economic prosperity in the form of traffic congestion and waste of energy; negative environmental impacts like air pollution and noise; surge in traffic deaths and increase of greenhouse gas emissions.¹³ Negative impacts of transport disproportionately affect the poor.¹⁴ Transport is the fastest growing source of GHG emissions. In the absence of aggressive mitigation policies, transport emissions could reach about 12 Gt CO₂e annually by 2050; however, to meet a 2-degree scenario, CO₂ emissions from transport must decline at least 2.0-5.7 Gt by 2050.

Urgent and radical change is required to avoid unnecessary motorized travel, shift to the most sustainable modes and improve technology and operations. These elements have been framed under the Avoid-Shift-Improve (or ASI) framework¹⁵, which has become a referent for multiple policy documents, and is embedded in recommendations by several organizations within the development community (see, for example, the UN Habitat Global Report on Human Settlements 2013¹⁶, and the New Climate Economy Report¹⁷). But change has not happened, while the adverse impacts of unsustainable policies keep pressing the planetary boundaries, undermining city efficiency, health and prosperity, and affecting the poor.

The current problem in urban mobility policy in developing country cities seems not to be lack of understanding of what is needed, but a lock-in prevailing practices that favor motorization. We suggest moving away from lock-in, by re-allocating finance and strengthening institutions. In addition, a lot of effort¹⁸ is being placed on information technology based disruptive innovations (new mobility services) –including networked services, autonomous and electric vehicles, which do not clearly mark a more sustainable future, and may need regulation and control to assure they do not exacerbate negative urban issues.¹⁹

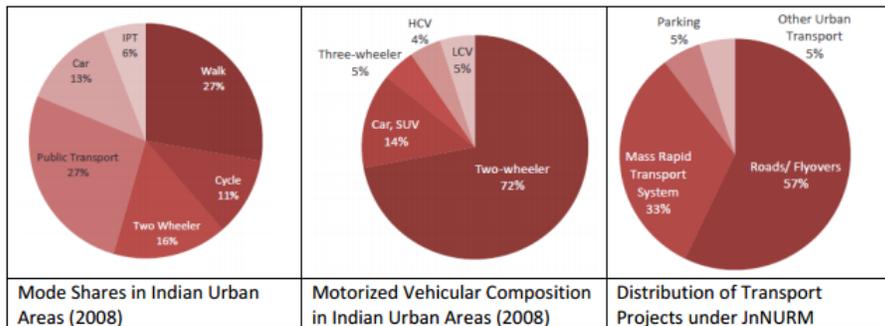
Funding

The prevailing paradigm favoring less sustainable transport investments is worrisome. Current financial flows for the transport sector investment are between USD 1.4 trillion and USD 2.1 trillion between 2010 and 2030.²⁰ A “business-as-usual” scenario (in which the global temperature would raise 4 degrees) would mean expenditures estimated at USD 2.3 trillion.²¹ A more sustainable future, one in which the global temperature raise is kept below 2 degrees, would mean expenditures estimated at USD 2.0 trillion.²² With the right incentives and policies, the 2 degree scenario seems possible within the range of current financial flows; while the 4 degree scenario may be outside of the range.

Funding for sustainable mobility is a challenge in cities. For cities still at an early stage of their network development, the large expenses for capital investments combined with already large and growing costs for maintenance and operation can create an “underfunding trap” in terms of

transport financing. (Ardila & Ortegon-Sanchez 2016). In addition, financing is disproportionately directed at road building to move cars, rather than safer and more dedicated infrastructure for pedestrians and bicyclists, and high-quality public transport. See for example the application of the National Urban Mission in India (graph).

Figure 13. Mode Shares, Motorized Vehicles, and Transport Investment in Indian Cities



Source: IIHS (2011)

Source: <http://www.wrirosscities.org/sites/default/files/Financing-Needs-for-Sustainable-Transport-Systems-21st-Century.pdf>

Institutional Capacity and Coordination

Urban transport sector in emerging countries is characterized by poor coordination between the numerous institutions.²³ This has resulted in difficulties in developing unified and integrated urban mobility policies. According to UN-Habitat, “institutional infrastructure is often lacking at the local level, combined with poor understanding of urban economics and the complex interplay between infrastructure investment, land-use planning and the value that the ‘public good’ of efficient mobility can provide, these challenges together can pose ‘wicked problems’.”²⁴

Information Technology and New Mobility Services

Information technologies are starting to change the way people travel in cities and have created opportunities for new business. The new offer of transportation services and real time information, are changing consumer attitudes by developing new forms of ownership, and by facilitating transport services use and payment.²⁵ According to McKensey, global venture-capital investments into new mobility services raised more than USD 5 billion in 2014, up from less than \$10 million in 2009. China’s Didi Chuxing had more than 100 million users in 300 cities, and raised more than USD 800 million. Ola Cab in India raised USD 677 million by September 2015.²⁶

Even with their exponential growth, the current impact of new mobility services is still in the margin. As they are relatively recent, the sustainability of the new mobility services is not clear.²⁷ While there is evidence in developed car-oriented countries that car-sharing and ride-sourcing services have reduced or delayed vehicle ownership and vehicle-km traveled, this is not clear in developing countries.²⁸ As a new player in the urban mobility space the challenge is finding ways to regulate them to encourage a more sustainable transport system.²⁹

The new agenda

As never before the international community is advancing large global development, climate, road safety and urban agendas. The United Nations agreed on advancing target 11.2 *“By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.”*³⁰. SDGs also included target 3.6: *“By 2020 halve the number of road fatalities”*. National NDCs under the Paris Agreement include transport.³¹ Draft Zero of the UN-Habitat New Urban Agenda (Habitat III) has also clear language prioritizing sustainable mobility as means to achieve several social, economic and environmental goals.³²

But the global agenda seems too large and ambitious and may need clarity in metrics, means of implementation and coordination. For instance, the National Determined Contributions to the Paris Climate Agreement are far from achieving the 1.5 degrees Celsius ambition, more effort is needed. Draft Zero of Habitat III comprehensively integrates many of the key issues. However, it can be improved to create an actionable and ambitious agenda for the next generation of urban development.³³

The main importance of the global agendas resides in how they translate to national and local policy. At the national level it seems crucial to have adequate programs to support sustainable mobility in cities, and not just leave urban mobility to the local governments without any support. Countries like Brazil Mexico, Colombia, India and China have created lines of funding for public transport that helped the cities increase mass transit, in recognition of the national goals achieved through more efficient, healthy and clean transportation in cities. While useful, all these programs are short of the need, or are very small as compared with support to urban highways.

In addition, it is not just a matter of providing funding; it is also the opportunity to leverage local funding from land development and transport demand management mechanisms. Some examples include, joint mass transit and real estate development in Hong Kong; vehicle quotas in China; congestion charging in Singapore, London, Valetta and Stockholm; parking management in San Francisco and Moscow; and fuel surcharges in Colombia (dedicated to urban transport). More replication of this type of mechanisms is needed.

Finally, it seems appropriate to seize the opportunities of new technologies, without thinking they will solve all of our problems. The rise of technology based new mobility services shows the power of entrepreneurship; but also the difficulties of fitting them under existing regulations. Ignoring Uber, Lyft, Ola, and other networked services, seems a wrong option; as it may be thinking that they will solve all mobility needs. Some examples of sensible regulations are starting to appear, like the higher quality-IT based taxi services in Sao Paulo and Mexico City. In these cities they do not only allowed new services to operate, but required them to share revenue and data with the local governments. There are also emerging bus aggregators in India, which

are starting to cover the wide gap in public transport provision in many growing communities, matching demand and supply, and displacing the use of motorcycles and cars.

Big questions remain on the speed of introduction of technologies like electric and autonomous vehicles and their impact on mobility. But we do not have to wait for them to solve the complex mobility problems, as we already know that walking, bicycling and good quality public transport will continue to be the core of vibrant, safe, efficient, socially inclusive, and environmentally sustainable cities.

Five Things Mayors Could do Better Together to Enable Change

Exchanging good practices on sustainable mobility

Traditional transport practice focuses on providing capacity to car travel and there is less world wide experience on how to design safe pedestrian and bicycling facilities and supporting services. Some cities in Europe have been very successful in providing such facilities, after several years of continued experimentation. Their experience is being used for downtown areas in US, Canada, Australia and New Zealand, as well as Latin America. Design guidelines, success stories and learning could be shared and mainstreamed, and could be very useful for rapidly growing urban areas in Asia and Africa.

Common procurement for cleaner better transit

Urban transport agencies tend to develop their own specifications for the procurement of buses, which results in higher costs and slower implementation of new propulsion technologies. Creating standards and aligning good experiences in service procurement may result in a more dynamic market, better services, lower costs and faster introduction of cleaner public transportation vehicles. Joining efforts could help the industry evolve faster.

Common rules for new mobility services

All cities are facing disruption thanks to aggregators using information technology, which do not fit under current regulations. Some cities have been progressive in setting new rules, while others have banned services under pressure of incumbents. Joining efforts to create some common rules that welcome new services, but keep basic safety and consumer protection standards, are required. Examples of pioneer cities may be shared to help create this common platform.

Push for national government for better and fairer funding

Better urban mobility helps national goals of development, health, energy security and climate change. Funding from national sources speed up the implementation of sustainable mobility, especially higher cost mass transit services. In addition to grants, national governments can also provide the legal frameworks for cities leveraging funding from land value capture, and economic based transport demand management -such as congestion charging, parking management, vehicle quotas.

Push for international commitment to enable cities to act

Cities are crucial for addressing global challenges of climate change, air pollution, road safety, and poverty eradication. But cities do not have a direct voice in international agreements. International agenda may place a burden on cities; but they should also benefit of the new instruments that are being created to foster the required change.

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The Hague



GLOBAL PARLIAMENT OF MAYORS
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10 September 2016

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Urban Public Transportation in Greater Kuala Lumpur – How Focused Implementation can Catalyze Adoption of Public Transportation for Urban Mobility

About the Performance Management and Delivery Unit (“PEMANDU”)

PEMANDU is a unit in the Government of Malaysia responsible for the design, monitoring and implementation of the National Transformation Programme (“NTP”), a 10-year program for improving public services and revitalizing the Malaysian economy, with the goal of making Malaysia a developed and high-income nation by the year 2020 (see *Appendix I*).

About Greater Kuala Lumpur (“Greater KL”)

The Greater KL metropolitan area consists of Kuala Lumpur, the capital city and commercial center for Malaysia; Putrajaya, the administrative center for the Malaysian government; and eight other local authorities within the neighboring state of Selangor. Greater KL currently has a total population of 7 million, residing within an area of 2,900 square kilometers (see *Appendix II*).

Urban Mobility in Greater KL

The population of Greater KL is expected to reach the 10 million mark in 2020, adding additional pressure on its roads which are already near capacity. While roads in Greater KL are generally of high quality and adequate capacity, they are sensitive to any short-term disruptions that may have a blowback effect through the entire system. Greater KL is home to roughly 25% of the country's entire population and contributes nearly half of Malaysia's gross national income, being the economic engine of Malaysia, and supports a significant percentage of its population.

With so many people conducting so much business, getting from Point A to Point B is a crucial consideration, and transportation in Greater KL has long been a consistent sore spot for locals and resident expats alike. A sometimes-baffling network of roads and highways and a public transportation system that has struggled to keep pace with the demands of a growing population have contributed mightily to a high degree of frustration in moving around the city, particularly at peak times.

Urban Public Transport National Key Result Area (“NKRA”)

A number of ambitious initiatives are currently underway to address and even alleviate some of these issues. Improving urban public transport (UPT) is one of the critical National Key Results Areas (NKRA) under the Government Transformation Programme (GTP), launched in 2010 to improve the quality of public service delivery. Under the UPT NKRA, building an efficient, effective public transportation system has been set as a national priority, and is being carried out through a number of highly visible initiatives to enhance connectivity and accessibility for people in Greater KL.

In 2008, the urban public transport modal share dropped to between 10% and 12%, from a high of 34% in 1985. This is in spite the Government having invested heavily on public transport infrastructure with three major rail systems completed in the Klang Valley i.e. the Kelana Jaya Line, the Ampang Line and the Monorail system and the restructuring of the Klang Valley transport industry by consolidating the majority of rail and bus systems under a single company, namely Syarikat Prasarana Negara Berhad (“Prasarana”). However, since the advent of GTP, UPT initiatives have become more focused and more strategic with regards to their implementation. Dedicated units in the ministry and agencies with clear functions were set up to monitor and execute these initiatives with a high degree of collaboration and coordination.

Today, public transport demand has improved greatly compared to 2008. On the supply side, major infrastructural improvements have been achieved towards boosting the carrying capacity especially during peak times via the delivery of 38 new six-car sets for the KTM Komuter service, 35 four-car sets for the LRT Kelana Jaya Line and an additional 14 new car sets to support the LRT Line Extension Project. The free GoKL bus service has also been introduced for four routes within the Central Business District (CBD) to support last mile connectivity.

As a result, commuters now enjoy increased frequency from 30-45 minutes (before 2012) to every 15 minutes (as of 2015) on the KTM Komuter, with a 95% morning peak on-time performance, and reliable service for the LRT with a three-minute frequency during peak

hours. Station interchange facilities have been built to provide seamless transfers between separate rail lines. Several Park 'n' Ride facilities in various locations provide up to 10,000 parking bays and fulfil the objective to facilitate first-mile connectivity. The improved efficiency of rail services has strongly contributed to the rapid rise in the urban public transport Customer Satisfaction Survey index from 48 percent (2010) to 74 percent (2015).

Some challenges remain: our public transport regulator, the Land Public Transport Commission ("SPAD") does not have jurisdiction over land use planning, particularly over road and highway development. This complicates the overall planning as private transport is a direct competitor to public transport. Conflicting national policies, for instance the National Automotive Policy, is a direct threat to public transport adoption. Although ridership has increased over the past few years, the number of private vehicles on the road has also increased at an even faster rate.

Nonetheless, several large public transport infrastructure projects e.g. MRT Line 1, BRT KL-Klang, LRT3 are expected to come on-stream in the next few years. Together with complementary feeder bus services, these shall boost up the numbers over the next few years. Overall, the modal share of urban public transport in Greater KL has risen from 10% in 2009 to 20% by the end of 2015, despite facing various implementation challenges.

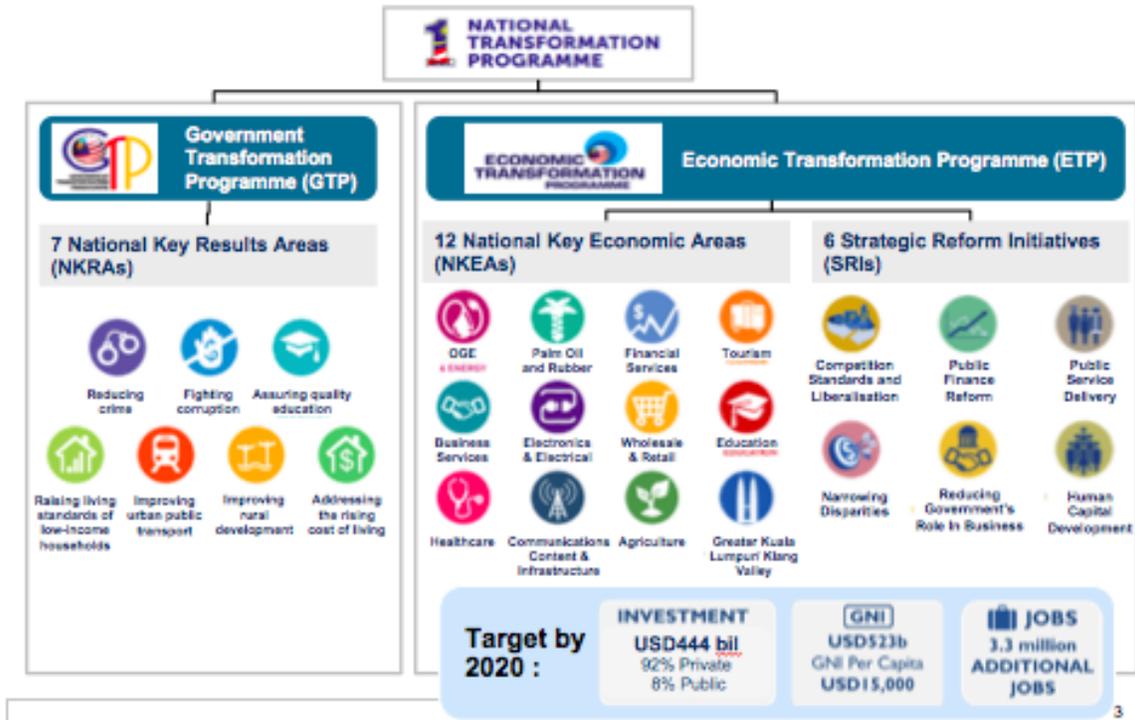
Conclusion

Our public transport modal share, though encouraging, has stagnated since 2012. This necessitates the need to implement push measures to encourage commuters to start using public transport, in line with other developed cities. As of now, initiatives such as making parking in CBD more in line with the rise in land values, reducing the number of on-street car parking, and introducing congestion charging are currently being planned for implementation. In addition, since the overall rail infrastructure is almost up and ready to form as the backbone of the urban public transport system in Greater KL, efforts to improve the feeder network will also be strengthened to enhance adoption.

There are also continuous efforts on improving the status of public transport from its current perception as a less-attractive transport option, especially for buses, amongst the general public and policy makers. Sustainability of public transport services is another key consideration, in order to reduce the ongoing subsidies for public transport operations by the Government. The ongoing revitalization of the city center can also be expected to enhance the attractiveness of Greater KL and help encourage the public to spend more time out of their cars and in the city.

Overall, we are confident that the recent emphasis on urban public transport in Greater KL since 2010 will reap huge dividends, not only in terms of reducing congestion within the city center, but also in terms of its impact on mitigating the effects of climate change, so that metropolitan areas such as Greater KL can lead the way towards improving the sustainability of our planet.

Appendix I – the National Transformation Programme



Appendix II – About Greater KL

NKEA Greater Kuala Lumpur / Klang Valley



The rationale for Greater KL/KV as NKEA

- Contribute to 30% of nation GDP
- Commercial and financial capital
- Big potential in culture and tourism
- Has scored many successes in international rankings
- Urbanisation is one of the most important drivers of economic growth and of income levels in a country

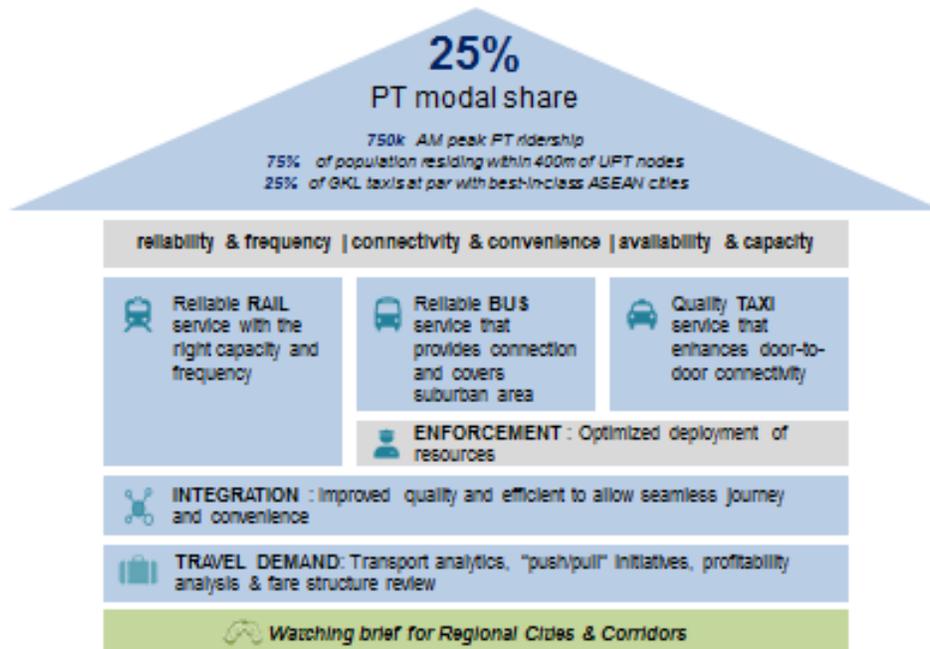


Source: Data from Department of Statistics, Nov 2014

Appendix III – About Urban Public Transport



Introducing the UPT 2.0 framework



Appendix IV – List of UPT Achievements (2010-2015)

Bus
<ul style="list-style-type: none">• 470 new RapidKL buses• 9 Bus Expressway Transit (BET) corridors• 1,549 new / refurbished bus stops• 4 GO-KL bus routes• 5 city bus terminus (HAB) begin operations• 58 Passenger Information System (PIS) has been installed at major bus stops• Sunway Bus Rapid Transit in operation• Bus Network Revamp for 8 corridors
Rail
<ul style="list-style-type: none">• 35 four car-sets injected into LRT Kelana Jaya line. AM Peak headway is less than 2 minutes• 38 six car-sets injected into KTM Komuter service. AM Peak headway is reduced from 30 to 15 minutes• 35km –long of LRT extension is under construction. First phase Ampang Line (Awan Besar – Kinrara has opened Oct 2015)• 5 of the 12 four-car sets injected into the KL Monorail service
Integration
<ul style="list-style-type: none">• ITT Bandar Tasik Selatan and IUTT Pudu Sentral begins operation• 9,346 additional parking bays completed within KL rail network• Single ticket journey made available between LRT Kelana Jaya / Ampang lines• Pedestrian linkages connecting to rail stations improves the connectivity
Taxi
<ul style="list-style-type: none">• Nearly 9,000 taxis have attained ASEAN best-in-class standards• About 1,000 new taxis (Proton Exora) have been launched under the Teksi 1 Malaysia scheme. (TEKS1M)



CITY-LEVEL DECOUPLING

Urban resource flows and the governance of infrastructure transitions

Global economic production is now concentrated in cities. Some 80% of global GDP is produced in cities on just 2% of the land surface, though cities depend on the flow of resources from near and far. Cities have been growing steadily over the past 150 years, and by 2007 over half of the world's 7 billion people lived in urban settlements. By 2050, more than 6 billion people (about 70% of the world's population at that time) are expected to be living in cities, with most growth in developing countries. The key resource flows that support cities are finite, so sustainable economic development will depend on decoupling growth from escalating resource use and ensuring equitable distribution of the resulting benefits. UNEP's International Resource Panel (IRP) has reported that innovation in infrastructure is already improving resource management in many cities, with ample opportunities for wider application.

Treat infrastructure networks as socio-technical systems, adding human dimensions to the physical construction of networks that provide transport, water, food, energy, waste disposal, and other essentials for human wellbeing.

Cities are complex networks of interlocked infrastructures that bring resources in, use the resources to provide services, generate wealth, and dispose of the wastes that are generated by consumption. This flow can be seen as a city's "metabolism". More circular urban metabolism that treats outputs from one use as inputs to another would help cities decouple resource use from the provision of better services and economic opportunities and adapt to a future of resource limitations and climate uncertainty.

The natural environment (such as rivers, watersheds, forests, and coral reefs) can often replace human infrastructure, providing significant savings and other benefits. These benefits are known as "ecosystem services", and systems of payments for such services are ensuring that the benefits can continue to flow. By including ecosystem services into future visions of cities and their infrastructural layout, planners can increase the options for resource decoupling and promote social equity.

The vision for a city should be based on national sustainable urban development policies that support urban infrastructures that reduce environmental impacts (impact decoupling) and improve resource efficiency and productivity (resource decoupling). Urban development should align spatial planning guidelines, infrastructure investment strategies, financial capability, social equity, and long-term sustainability goals.

The social dimension is critical to the health and function of cities and should start with a clear vision of ultimate objectives. A vision to guide the transition to sustainable cities must create equal opportunity for all residents and emerge from interactions among city stakeholders, with each city having its own unique characteristics.

Improve the flow of urban resources through better infrastructures.

Decoupling can be achieved by retrofitting urban infrastructures or building new ones that are more resource-efficient. Increasing investments in urban infrastructures create new opportunities for reconfiguring these infrastructures through better understanding of urban metabolism, for example with the support of methodology called "material flow analysis" (MFA).

The key issue is helping policy makers build urban infrastructures that take into account the long-term flows of strategic resources. This will require linking urban systems to the wider regional flow of ecosystem services and natural resource extraction. It will depend on linking urban systems to their bioregions, based on the principle that sustainable urban systems will restore their bioregions and the ecosystem services they provide.

To assess how initiatives from around the world are contributing to the reconfiguration of cities, infrastructure systems and resource flows, the IRP report grouped innovations according to whether they focus on new construction and new networked infrastructure or on the "retrofitting" of existing infrastructures; and whether they aim at integrated (systemic) change or at a particular category of infrastructure network (such as water or transport).

Four models emerged: "Integrated eco-urbanism" is new development (e.g. an eco-island, new town, cluster development, or eco-village); "urban networked technologies" also include new construction, but the focus is on one particular technology such as water or energy rather than an integrated approach; "systemic urban transitions" are retrofits of existing urban infrastructures using an integrated network approach where new investments in low value environments drive the application of new technologies; and "urban networked infrastructures" are retrofits that focus on a particular technology, such as bus rapid transit systems, rapid urban rail, or major new water efficiency infrastructures.

Each of these four ideal models has variations developed predominantly by environmental or community groups. Examples include the "transition towns" movement, the "global eco-village" movement, and some of the more grassroots-oriented local government initiatives that focus on equity issues.

Make urban infrastructures more sustainable to help drive a "green economy."

An estimated US\$41 trillion is required to refurbish the old and build new urban infrastructures over the period 2005–2030: \$22.6 trillion for water systems, \$9 trillion for energy, \$7.8 trillion for road and rail infrastructure, and \$1.6 trillion for air- and sea-ports. These investments will ensure the welfare of urban populations and build the foundation for the next generation of great cities.

Sustainability-oriented infrastructures are driven by the economic demand for more viable urban infrastructures and the ecological demand for more sustainable use of natural resources. Retooling the infrastructures of the world's cities for the next long-term development cycle is emerging as a key strategic opportunity for many investors.

While some spontaneous decoupling is already happening, the decoupling needed to achieve sustainability will require deliberate intervention to stimulate systemic changes. A combination of resource productivity improvements, increased use of local renewable resources and ecosystem services, and re-use of waste products can promote decoupling of the resources flowing through cities, and within them. Such material flows are the basis of a green economy.

Design infrastructure to achieve the same level of wellbeing with less resource consumption and environmental impact (resource and impact decoupling, respectively).

Progress toward decoupling can be stimulated by:

Assessing existing research on decoupling in cities, and areas requiring more attention. Studies of urban resource flows using Material Flow Analysis are poorly linked to studies on the social organisation and urban political dynamics of resource flows, but need to be brought together in a more comparative and systematic manner.

Defining the scale of the city and its boundaries. Cities have multiple infrastructures and resource flows that have national and international reach. Better understanding of these flows can inform policies on how they can be managed at the city scale. The diversity of initiatives provides an opportunity to compare different scales and the related impacts of decoupling.

Determining total material requirements and identifying rebound effects. Studies of urban metabolism show that cities depend on material resources imported from within and beyond national boundaries, indicating the environmental impact of cities on other localities. Rebound effects are the unintended outcomes of investments that result in more efficient use of resources but the savings encourage people to buy more goods and services, and thereby defeat decoupling. A key mechanism to counteract rebound effects is to link improvements in efficiency to increased taxes on activities that harm the environment.

Determining how decoupling in cities can be assessed and accelerated in the future. Linking material flows to the institutions, producers, users and intermediaries involved in managing resource flows through infrastructure networks can help city leaders overcome obsolete approaches that may hamper decoupling, or build totally new innovative and sustainable infrastructures.

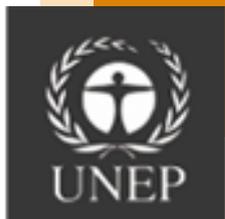
Establishing targets for desired metabolic flows per capita based on the economic and ecological context of any given city will provide a clear-cut and understandable framework for assessing progress towards more sustainable resource use. Targets for water, energy consumption, and carbon emissions are examples that are being used in some cities already.

Cities in many developing countries can benefit from large-scale investments in new urban infrastructures aimed at poverty alleviation. Investors should promote sustainability-oriented innovations that avoid the obsolete technologies that many developed country cities are seeking to replace, often at great cost.

Cities will be fundamentally restructured over the coming decades in response to many of the macro-dynamics discussed in this report, as well as to the micro-dynamics of changes in consumption, equity, cultural behaviours and technologies. The focus of a practical programme should be on direct and indirect material flows and how urban infrastructures can be reconfigured to improve resource productivity by a factor of at least five.

A summary and the full report as well as a PowerPoint presentation with the main findings can be downloaded at: www.unep.org. For further information, please contact UNEP at: resourcepanel@unep.org

Delivering Sustainable Production and Consumption through City-Level Action



Cities are where much of the consumption and production happens today, and with growing levels of urbanisation, the importance of city-level action will only be reinforced. Innovation hubs, economic power-houses and compact urban design that provides for economies of scale make cities primary players to deliver sustainable solutions in the production of goods and enable responsible consumer choices.

It has been increasingly recognised that in an urbanised world, cities are both the source and solution of many, including global, problems. Furthermore, the level of ambition demonstrated by cities and sub-national authorities has often paved the way for or reinforced national commitments and actions. Last year's major multilateral frameworks reflect this, from the Sendai Framework to the Paris Agreement on Climate Change to the Sustainable Development Goals (SDGs).

Leaving nobody behind, achieving greater and inclusive prospects within the planetary life support systems, and investing in resilience and secure livelihoods are the paradigms of the SDGs. Ensuring Sustainable Consumption and Production Patterns – SDG 12 - is a key prism through which we will be able to achieve this.

Closely interlinked with the targets of Goal 12 are the 10 city-level targets under Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable. Some of these targets are a direct concretisation of Goal 12 targets, for action at the city-level. For example, 11.6 which calls for reduction of adverse per capita environmental impacts of cities, including air quality and municipal and other waste management, directly relates to Targets 12.4 and 12.5 on the sound management of chemicals and waste and the reduction of generation of waste respectively. To achieve a circular economy where waste is avoided through product design and resource efficient production processes across the value chain, and then reduced, recycled and reused, cities have a critical role to play as they at present generate some 70% of global waste.

Cities, today are home to

54%

of the world's population.

occupy only about 2% of the total land, but have footprints that extend far beyond the city limits:

2%

70% of global energy and natural resource consumption;

60% of global GHG emissions, and of global waste.

At the same time, cities generate over 70% of GDP.

70%

But the urban dimension of the SDGs is broader than Goal 11, as cities are a microcosm where virtually all goals matter.

For example, the same target 11.6 interlinks with Goal 3, particularly target 9, the reduction of the number of deaths and illness from hazardous chemicals and air, water and soil pollution and contamination. Urban areas are set to grow – through natural population growth in cities, continuous migration from rural areas but also migration due to vulnerability. Hence much of the infrastructure that needs to be built to provide housing, transport, energy, water and waste, will be built in urban areas. To make good on SDG 9 – Build resilient infrastructure, but also goals 7 – Energy for all, 6 – Water and Sanitation for all, action on the city-level will be critical. Given the long lifetimes of most urban infrastructure, this presents a unique opportunity to get things right, and to avoid technology lock-in by foresightful and integrated city design and planning.

Consumer choices of half of the world’s population living in cities today, be it in the way they move around, in which buildings they live, what appliances they use, what spare time activities they do such as tourism, and how they feed themselves, are part of the equation. Consumer Information and Education have been highlighted in Goals 4 and 12 as critical to inform lifestyle choices.

In consequence, to harness the opportunities of local, often more manageable action to implement globally agreed targets, urban issues need to be integrated into all relevant SDGs.

The graphic below shows, the many linking points between Goals 11 and 12 and with other Goals. Gender, inclusive and sustainable economic growth and all aspects of the Means of Implementation are relevant to the achievement of Goal 11, across board without specific text reference to any one of the targets.

Energy and resource efficient housing

Low-carbon, resource efficient and resilient

infrastructure

Urban

agriculture

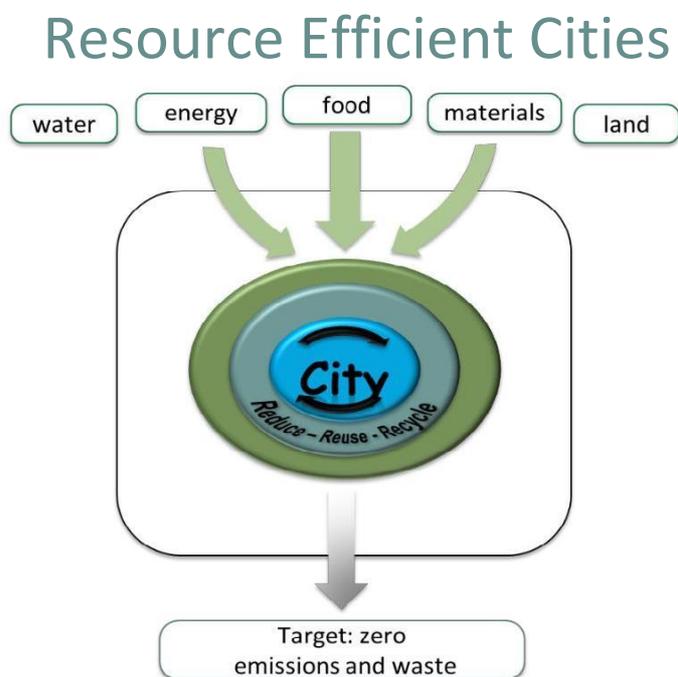
Green

open space



Formidable opportunities for synergies can be harnessed at the city level, looking actively for solutions that deliver against several of the goals, and thereby improves cities' resilience to shocks and stresses.

For example, Target 11.1 – Ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums – can directly contribute to achieving Goal 1 – End poverty in all its forms everywhere, and particularly Target 1.4 – Access to basic services, and Target 1.5 reducing exposure and vulnerability. Here, two aspects are critical – one the building sector is a key contributor to climate change, responsible for about 1/3rd of GHG emissions across the value chain, with embedded GHG emissions in building materials, and with 40% of energy being consumed in buildings for heating, cooling and use of electric appliances. At the same time, buildings, if designed and built well improve the adaptive capacity of inhabitants, providing shelter also from more extreme weather events. Building design and construction can hence contribute to Goal 7, from access to modern energy in buildings to increased share of renewables if renewable energy technologies are built in or retrofitted, as well as improved energy efficiency. In case of social housing, but also hospitals, schools and other public buildings, cities have direct control of sustainable features of such buildings via sustainable public procurement. Collectively the building sector is responsible for about 40% of global resource use, including 12% of all fresh-water use and it produces up to 40% of our solid waste, with opportunities to deliver against Targets 11.6 and 12.5, and ultimately Goal 15. Furthermore, the sector employs, on average, more than 10% of our workforce; and hence provides a possibility to deliver against Goal 8.



Another example is Target 11.2 - Provide access to safe, affordable, accessible and sustainable transport for all. It can – if designed, planned and managed well, help to achieve Goal 10 – Reduce inequalities by allowing poor and vulnerable groups access to mobility, Goal 9 – Build resilient infrastructure, Goal 8 – Promote economic growth, full and productive employment by facilitating movement of goods and workers, Goal 13 – Take action to combat climate change if alternative transport modes, alternative fuels and fuel efficiency are considered. This directly

SDG 11

Make cities and human settlements inclusive, safe, resilient and sustainable

SDG 12

Ensure sustainable consumption and production patterns

Paris Agreement

Also recognizing that sustainable lifestyles and sustainable patterns of consumption and production, with developed country Parties taking the lead, play an important role in addressing climate change,

V. Non-Party Stakeholders

134. *Welcomes* the efforts of all non-Party stakeholders to address and respond to climate change, including those of [...], cities and other subnational authorities;

135. *Invites* the non-Party stakeholders [...] to scale up their efforts and support actions to reduce emissions and/or to build resilience and decrease vulnerability to the adverse effects of climate change and demonstrate these efforts via the Non-State Actor Zone for Climate Action platform [... paragraph 118 above];

136. *Recognizes* the need to strengthen knowledge, technologies, practices and efforts of local communities and indigenous peoples related to addressing and responding to climate change, [...];

137. *Also recognizes* the important role of providing incentives for emission reduction activities, including tools such as domestic policies and carbon pricing.

Sendai Framework

Para 19 f

[...], it is necessary to empower local authorities and local communities to reduce disaster risk, including through resources, incentives and decision-making responsibilities, as appropriate.

Para 19 i

While the drivers of disaster risk may be local, national, regional or global in scope, disaster risks have local and specific characteristics that must be understood for the determination of measures to reduce disaster risk.

correlates with Target 7.2 – improve Energy Efficiency. This contributes to achieving Targets 11.5 and 1.5 related to disasters. Also, contributions to achieving Goal 3, particularly Targets 3.6 (road accidents) and 3.9 (air quality), as well as Target 11.6 (air quality) can be made, by filter-forcing vehicle standards, fuel quality standards and alternative transport modes. Furthermore, compact cities allow for reduced demand for transport in the first place, and effective public transport which further limits land consumption, contributing to Targets 11.4 (Natural Heritage) and 12.2 (Sustainable management of natural resources), further working towards Goal 15.

While incremental cost may be higher many of the solutions provide good return on investment, help reduce the need for infrastructure provision such as energy supply, allow for lower operating cost, and come with additional benefits.

It is recognised that some of the options that allow going beyond offering access to affordable transport or adequate housing for all come with cost implications. Yet, reduced externalities, particularly for health and climate related risks come also with benefits at the macro-economic level. An integrated cost-benefit analysis that considers longer-time effects needs to be considered in the prioritisation of options. For example, in the waste sector, collection and management systems come at a cost. At the same time, health impacts can be greatly reduced, and more decent employment can be created by involving waste pickers in waste management. And finally, energetic value of waste and landfill gas can be captured to produce energy using a local resource.

Innovative finance schemes are needed to overcome initial cost barriers.

Multi-level partnership is critical.

While cities can take action, the overarching framework needs to be set at the national level, not least to allow for scale up. Using again the transport example, cities can decide on a Bus Rapid Transit system to improve public transport, and procure last generation buses, or decide on low emission zones, but they are also dependent on vehicle efficiency and fuel quality standards, which are a matter of national authority. Similarly, building codes are within national authority. These examples illustrate the need for integrated, mutually reinforcing policies - vertically between different levels of government, and horizontally between sectors.

Assessments enable prioritisation of actions.

Analysis of material flows and assessment of solutions over their lifecycle will allow informed prioritisation of actions. The same indicators measured over time will allow measuring progress and monitoring of effectiveness of actions.

Conclusion

In summary, in applying Sustainable Consumption and Production, cities can be catalysts of sustainable development. Man-made and nature-based infrastructure is key for reducing vulnerability and increasing the adaptive capacity of cities. Multi-level partnership, finance for city level action and assessment and monitoring are essential to harness this potential. The New Urban Agenda, prepared through the ongoing Habitat III process provides an opportunity to focus on vertical and horizontal integration and the implementation of the SDGs at the city level.

Finance

Alignment of responsibilities with tax and finance systems

Support to cities to access financial markets, with credit guarantees and other dedicated finance mechanisms

Multi-level partnerships

National urban policies, as part of national development strategies

Vertical policy integration

Decentralisation (subsidiary principle)

Assessment

Systems thinking to prioritise actions

Collecting and analysing data from key indicators to measuring progress



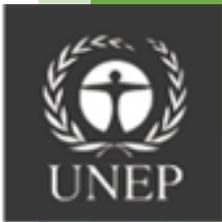
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Sustainable Housing – a MUST, not a LUXURY



Adequate, safe and affordable housing needs to be sustainable to deliver against multiple sustainable development goals. It is recognised that ‘adequate’ housing means more than four walls and a roof, and that it encompasses access to basic services. Yet, to date, adequacy only insufficiently factors in environmental considerations. At times of climate change and resource scarcity, housing must also be low-carbon, resource efficient and resilient to be considered truly adequate. Furthermore, the assessment of affordability needs to go beyond simple assessment of initial investments and consider also operating cost and cost of infrastructure demand. Curbing the present housing deficit presents an opportunity to build for the future.

Population growth, urbanisation as well as increasing numbers of urban poor will drive up the existing housing deficit while about a quarter of the world’s population still lives in slums and informal settlements today. In Latin America and Caribbean, the housing deficit is estimated at 42 to 52 million units, with 45% a quantitative deficit and 55% qualitative. Africa, faces severe housing challenges with an expected tripling of urban housing by 2050, and similarly in Asia when in the coming years an expected 120,000 residents will move to cities every day, requiring at least 20,000 units. Buildings are already responsible for 40% of natural resource use, consume 32% of final energy use, and generate 19% of greenhouse gas emissions, and approximately 30% of black carbon emissions.

Housing is more than four walls and a roof. Adequate housing is a fundamental right and enshrined as part of the right to an adequate standard of living in the 1948 Universal Declaration of Human Rights. Several conditions have to be united for housing to be considered adequate, amongst which availability of services such as drinking water and sanitation, energy for cooking, lighting and thermal comfort; affordability; and habitability (for the full list, please see Habitat III Issue Paper 20 on Housing). Yet, in light of more frequent and extreme weather events due to climate change, habitability needs to factor in resilience. Given the building and construction sector’s large carbon footprint, energy efficiency of building design and material choices, as well as decentralised renewable energy and district energy at a neighbourhood scale are key for staying well below 2° C warming. As climate change is

About **25%** of the world’s population continues to live in slums and informal settlements.

300 million households are financially stretched by housing costs, and this number could grow to 440 million by 2025.

Buildings are responsible for **some 40%** of natural resource, generate an almost equal amount of solid waste, and consume

32% of final energy use.

likely to impact provision of water and energy, related infrastructure needs to be resilient too, to enable access to basic services. Finally, how the new buildings required are designed and constructed will have major long term impacts on resource use and availability.

Affordability also needs to be reconsidered: rather than looking only at cost of initial investments, life-cycle operating cost needs to be part of the equation. Using current technologies can result in significant energy savings. For example, passive design (positioning of a building in relation to the sun; use of thick walls, or roof design to provide additional shading) of commercial buildings in the UK was found to use 55 to 60 per cent less energy than business as usual. Using active technologies (energy efficient lighting; low-carbon technologies), commercial buildings in the US reduced their energy consumption by 65%. In cases where investors and users are not the same, we face the barrier of split incentives. There are a number of tax and incentive tools available for matching the costs to those who benefit to overcome this. Methods like structuring of procurement, linking energy efficiency investment cost to property taxes, or providing developers with zoning and permitting easements can all help offset costs.

On the macro level, the relationship between buildings and infrastructure holds unequivocal opportunities for environmental and economic benefits, particularly in developing countries where most infrastructure is yet to be built. Smart design and construction of environmentally responsible residential and commercial buildings allow cities and national governments to reduce the scale of needed infrastructure. For example, when buildings are designed and constructed with investments in water efficiency, cities can reduce the size and therefore cost of waste water treatment systems. Similarly for energy provision. Buildings will stand for decades, so promoting the use of environmentally advanced building techniques helps to counter technology lock-in.

Low-carbon, resource efficient and resilient housing is key to achieving several Sustainable Development Goals.

Target 11.1 calls for affordable and adequate housing. Buildings are where people connect with infrastructure that provides basic services, reflected in targets 11.1 and 1.4. Furthermore, target 1.5 refers to reducing vulnerability and exposure of people to climate risk and other disasters, requiring shelter to be built in a resilient manner. But the connections go well beyond these two SDGs, and the graphic below shows the multiple benefits of sustainable housing.

Promoting sustainability of the building sector can shape industry by driving new products and services, and create new jobs. Building design can stimulate new ways of approaching the treatment of waste, water, transport and public space. The Buildings' sector CO₂ emissions can be cut by nearly 85% by 2050 and 2/3 of this potential are untapped (IEA). Near-Zero energy buildings can and must become the norm and can help achieve Goal 7 on sustainable energy for all. Green spaces in neighbourhoods not only make them more attractive and liveable, but also allow to harness ecosystem-based climate change adaptation, and other ecosystem services such as air pollution reduction that come with health benefits. Through integrated action and planning, low-carbon, resource efficient and resilient buildings can improve the social, environmental and economic performance of a city, region and nation, and thereby deliver against multiple SDGs.

Longer-term view on affordability

“ Data from 170 green buildings in the U.S. showed that green building construction costs on average only 1.5 per cent more than conventional buildings. These premium costs are quickly recouped as sustainability actions result in lower energy bills and increased employee productivity. ”

UNEP Report *Building Design and Construction* 2012

Job Benefits

“ Every US\$1 million invested in building energy efficiency retrofits would create 10-14 direct jobs and 3-4 indirect jobs. ”

(UNEP, 2011)

SDG 1—end poverty

1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.

11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.



Focus on Sustainable Social Housing

Sustainability improvements in social housing units are no luxury, but lead to measurable environmental, economic and social benefits. Significant financial savings can be achieved through sustainability actions – even simple improvements in building design, or in water and energy features, which have a short investment payback period, lead to repeated, long-term savings (assuming proper maintenance). The barrier of split incentives can be more easily overcome as social housing is often managed by public authorities who can then control and redistribute savings between developers and occupants. At the social level, besides the benefits of sustainable buildings (healthier indoor and outdoor environments, increased quality of life), these financial savings will have a significant impact on the quality of life of residents. Reductions in the cost of tenant-paid utilities provide a boost to social housing residents, who otherwise spend a disproportionate share of their limited resources on utilities. As the construction industry employs workers across all skill levels, targeted action creates and maintains jobs in the communities where the housing is being built, providing life opportunities for residents through improved urban integration. Facing the current challenges of urban segregation it is crucial to truly contribute to poverty eradication and enhance the quality of life of the most vulnerable populations. Furthermore, concentrated action in social housing helps advancing the practices and technologies needed to support the mainstreaming of sustainable buildings in the broader residential sector, thereby supporting markets for sustainable buildings and encouraging the broader economy.

Traditional knowledge and local materials increase local benefits and acceptance.

Designing homes that are well-adapted to their local environmental conditions and climates is not a new approach. Over thousands of years designs were tried and tested and traditional knowledge and experience was generated and passed along. Much of this traditional knowledge is just as relevant today and many of these old approaches can be used and modernised to meet our current housing needs. The use of local materials

“ Affordable housing is an overlooked opportunity for developers, investors, and financial institutions. Building units for 106 million more poor urban households by 2025 could require more than \$200 billion a year and account for 7 percent of mortgage originations. ”

McKinsey Global Institute

SUSHI

The Sustainable Social Housing Initiative (SUSHI), launched by UNEP with support from the Government of Norway and then the United Nations Development Account, aims at identifying and promoting solutions that respond to environmental imperatives and can be achieved in low-income units as effectively as in high standard buildings.

The SUSHI project and subsequent efforts by SBCI have produced several guidance documents for greening of social housing. These reports are available under:

<http://www.unep.org/sustainablesocialhousing/>

SBCI

The UNEP-Sustainable Buildings and Climate Initiative (SBCI) is a partnership of public and private sector stakeholders in the building sector, working to promote sustainable building policies and practices worldwide.

Learn more at: www.unep.org/sbci

in a sustainable way can provide benefits across the full spectrum of sustainability - social, environmental, and economic - with job creation, reduced environmental impacts related to transport, and keeping economic investment in the local community which provides additional economic spill-over effects. The use of local materials carries some risk, such as quality control, consistent supply, but with planning, training, and skills development these are outweighed by extensive benefits.

Leading the way with Public Action

Many of our public buildings are landmarks and embody a nation's or city's values and commitment to its citizenry. By greening public buildings, governments not only reap the rewards of energy and resource savings but also drive home the importance of these key values and their commitment to improving the sustainability and citizen's quality of life.

Public procurement provides another powerful lever to create the necessary certainty of demand for innovative solutions and thereby spur market transformation. This is particularly relevant in the context of social housing, where governments directly influence and drive transformation in how architects, engineers, and contractors design and build our homes. Sustainability criteria in procurement methods and evaluation criteria that take a longer term perspective, factoring into the value-for-money an assessment that spans across the entire asset lifecycle and incorporate operational cost, maintenance, and dismantling or disposal, can promote sustainability features. But public procurement can also take the form of public private partnerships where the risks and responsibilities for housing development are distributed among the public and private partners.

Finally, building codes need to be progressive and flexible enough to continuously trigger technology improvements, and be implemented effectively.

Multi-level partnership is essential in lifting the challenge of providing sustainable housing for all.

Transformative change and scale up of energy and resource efficiency in the housing sector requires action at multiple levels and among multiple actors. Innovative finance mechanisms and partnerships among national, sub-national, local governments and private sector actors along the building and construction value chain are needed to leverage innovation and investment power of these actors and thereby help overcome lacking investment capacity at the national and local levels.

Further, partnership across all levels of government is critical to help bring the necessary, coherence of policies across national, regional and local governance levels with regard to both policy and implementation.

Conclusion

At times of increasing shocks and stresses, not least due to climate change and natural resource constraints, it is imperative for housing to be low-carbon, resource efficient. Significant financial savings both at the individual and the macro levels can be achieved, and social and economic benefits harnessed while reducing resource use, greenhouse gas and pollutant emissions and improving resilience. Leadership and long-term commitment to sustainability in housing from governments at all levels will unleash the creative potential of the private sector. The opportunity presented to global and local communities to operationalise and institutionalise sustainable living for a better environment and quality of life has never been greater, given the scale of the global housing deficit.

Global ABC

The Global Alliance for Buildings and Construction (Global ABC), launched by 20 countries and 60 organisations and private sector partners at the COP21 as part of the Lima Paris Action Agenda, aims at helping to realise the sector's potential to reduce greenhouse gas emissions while harnessing multiple benefits including clean air and health. It follows three principles: Communication, Collaboration and Solutions; and has four priority areas: Education and Awareness Raising; Public Policies; Finance; and Market Transformation.

For more information:
<http://web.unep.org/climatechange/buildingsday>

For more information:



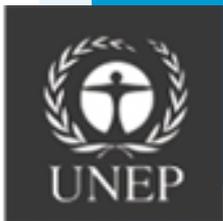
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Sustainable Infrastructure to Deliver Basic Services at the City-Level



11 SUSTAINABLE CITIES AND COMMUNITIES



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Infrastructure such as roads, water supply and sewers, electrical grids and telecommunications is the backbone of our economies and enables human well-being. Long lifespans make today's infrastructure investments decisive for our ability to reach the SDGs: infrastructure must be reliable, of good quality and future-proof, meaning low-carbon, resource efficient, socially viable and resilient. Innovation capacity and agglomeration economies of cities allow for transformative solutions. To provide citizens with viable choices, partnership across all levels of government and with the private sector will be key.

Infrastructure plays a critical role in the development of modern equitable societies, providing basic services such as energy, transportation, water and sanitation, as well as information and communication. Depending on the choice of infrastructure and how it is planned, constructed, operated and maintained, infrastructure can come at immense environmental and social cost. For example, fossil fuel based energy generation and transportation come with emissions that contribute to local air pollution and global warming, and thereby impact human health and well-being. At the same time, infrastructure is vulnerable to shocks and stresses. For example, extreme weather events due to climate change pose a risk to weaken infrastructure and even threaten its very functioning and service provision. Hence, both unintended consequences of infrastructure on environment and human health, as well as the resilience of infrastructure to natural hazards and man-made changes need to be factored in at the outset of any infrastructure development.

The global demand for new infrastructure till 2030 amounts to 93 trillion USD and is almost double the volume of the world's existing infrastructure value. This represents a unique opportunity to get our infrastructure investments right. Given the long lifespans, often across several decades, investment in low-carbon, resource efficient and climate-resilient as well as nature-based infrastructure solutions becomes an imperative to avoid technology lock-in into out-dated technologies that would threaten both the very value of these investments, as well as our ability to achieve the SDGs and the aim of the Paris Agreement to keep the global temperature rise this century well below 2 degrees Celsius.

Much of this infrastructure can be found or will be built in cities to cater for the estimated 75% of global population that will live in cities by 2050.

About **2.6 billion** people in developing countries face difficulties in accessing electricity full time.

2.5 billion people lack access to basic sanitation and 800 million lack access to water.

93 trillion USD global infrastructure demand

Globally, an infrastructure investment gap of around

15-20 trillion USD is predicted over the next 15 years.

Creating 80% of global economic output, accounting for 70% of greenhouse gas emissions and running networks of intertwined infrastructure, cities are uniquely placed to innovate integrated infrastructure solutions.

Sustainable Infrastructure is critical to delivering multiple Sustainable Development Goals.

Infrastructure is explicitly mentioned in SDG 9 - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation, and will pave the way for several other SDGs including: SDG 1 - end poverty in all its forms everywhere with targets on access to basic services, building resilience and reducing vulnerability to climate-related extreme events, and other economic, social and environmental shocks, and SDG 11 - make cities and human settlements inclusive, safe, resilient and sustainable with targets relating to infrastructure planning, waste management and transportation, all requiring a sound sustainable infrastructure development. Along the same vein, SDG 2 refers to an increase in investment for rural infrastructure, SDG 3 to access to quality essential health-care services, SDG 4 to the construction and upgrading of education facilities, SDG 6 to availability and sustainable management of water and sanitation for all, and SDG 7 to access to affordable, reliable, sustainable and modern energy for all. Finally, to deliver against SDG 13 – climate change, infrastructure development needs to contribute to climate mitigation and adaptation; and to deliver against SDG12 – sustainable consumption and production, infrastructure development needs to be resource efficient.

Infrastructure also means nature-based solutions.

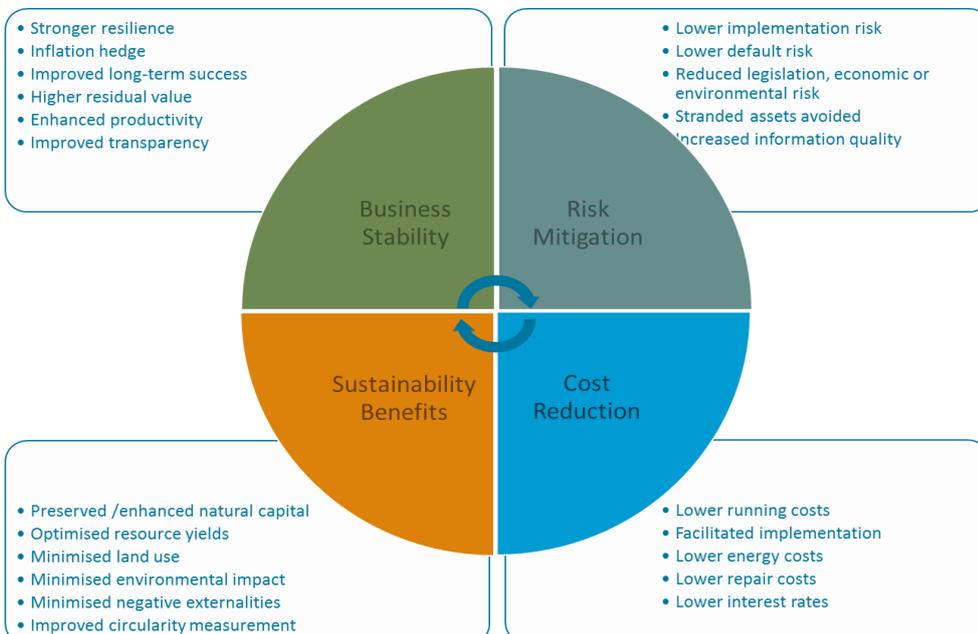
The natural environment, such as rivers, watersheds, forests and coral reefs provide important benefits known as ‘ecosystem services’, which can often replace human infrastructure services. Nature-based solutions that are inspired or supported by nature are cost-effective, and simultaneously provide environmental, social and economic benefits while improving infrastructure resilience. For example, green open space in cities can help with flood control, reduce heat islands or contribute to cleaning the air. By including ecosystem services into future visions of cities and their infrastructural layout, planners can increase the options for resource decoupling and promote social equity.

“ The way investments will be made, in transport, energy, water, buildings and land, will determine whether we can hold global warming to well below 2° degrees, or whether we are doomed to cities where people can neither move nor breathe, and to ecosystems that will collapse. [...] If we do get it right, making all future infrastructure investment sustainable, we will boost growth in the shorter term, launch a dynamic wave of innovation and growth in the medium term, and embark on the only long-term growth path which can be sustained. The consequences of getting it wrong are unthinkable.”

Lord Nicholas Stern

Chair of the Grantham Research Institute on Climate Change and the Environment and the ESRC Centre for Climate Change Economics and Policy, Professor of Economics and Government, at London School of Economics & Political Science.

Potential benefits of Sustainable Infrastructure



Source:
Global Infrastructure Basel Foundation,
SuRe Standard

Long-term policies, based on material flow analysis and lifecycle impact and cost.

Policies conducive of low-carbon, resource efficient and resilient infrastructure development are needed to trigger innovation and investment in sustainable infrastructure. These policies need to be long-term, taking into account life-cycle impact and cost, and built based upon material flow analysis.

Cities are complex networks of interlocked infrastructures that bring resources in, use the resources to provide services, generate wealth, and dispose of the waste that is generated by consumption. This flow can be seen as a city's "metabolism" (International Resource Panel, Decoupling at city-level). More circular urban metabolism that treats outputs from one as inputs to another would help cities decouple resource use from the provision of better services and economic opportunities and adapt to a future of resource limitations and climate uncertainty. Analysis of material flows can help set priorities and inform policies and measures. Measured over time, this can also contribute to monitoring of effectiveness of policies and measures. Establishing targets for desired resource flows per capita based on the economic and ecological context of any given city can provide a clear-cut and understandable framework for assessing progress towards more sustainable resource use. Targets for water, energy consumption, and carbon emissions are being used in some cities already.

While up-front cost may be higher at the outset, many of the sustainable solutions lead to cost savings due to lower operating cost and sound economic returns, while generating important additional benefits including reduced risks and negative externalities and increased health and quality of life. For example, infrastructure energy efficiency improvements will help lower the need for additional energy supply infrastructure, and hence generate important savings in the longer run.

Incentives for sustainable infrastructure projects can help overcome initial cost barriers. These need to be complemented by pricing and market mechanisms that help reduce excessive demand for infrastructure services, and encourage shifts to conservation while ensuring provision of basic services. This involves redirecting subsidies that encourage wasting of resources or hinder uptake of more environmentally friendly solutions. For example, cutting water subsidies will reduce unnecessary depletion of water. Instead of kerosene subsidies for lighting or cooking, support mechanisms for solar lighting or alternative cooking solutions fulfil the same socio-economic objects with lower environmental footprint.

Multi-level partnership is essential in lifting the challenge of providing sustainable infrastructure for all.

Public-private partnerships (PPP) and innovative finance schemes help leverage the innovation and investment power of the private sector and thereby overcome initial cost barriers as well as the investment capacity at the national and local levels.

Partnership across all levels of government is critical to overcome the present fragmentation of policies. Energy ministries are in charge of energy infrastructure, transport ministries of transport infrastructure, etc. which leads to fragmented approaches rather than integrated solutions. National environmental strategies informed by strategic environmental assessments will help bring the necessary cohesion, avoid negative impacts and improve service provision within the planetary boundaries. This will require a strengthening of the national environmental management. Besides this horizontal integration, coherence of policies across national, regional and local governance levels with regard to both policy and implementation, is needed.

green infrastructure

smart cities

efficient, low-carbon and resilient
energy systems

non-motorised and public
transport

efficient and clean
water and sanitation

SDG 17—the means of implementation of the SDGs and post-2015 agenda—the targets refer among others to multi-stakeholder partnerships. Public-private partnerships (PPPs) will become increasingly important as a way of delivering infrastructure.

Leading the way with Public Procurement

Public procurement represents on average 20 per cent of a country's GDP and hence provides a powerful lever to create the necessary certainty of demand for innovative and sustainable infrastructure solutions.

Sustainability criteria in public procurement methods help raise the bar of environmental credentials. Beyond the sensu stricto environmental criteria, evaluation criteria need to take a longer term perspective, factoring into the value-for-money an assessment that spans across the entire asset lifecycle. This would allow to move away from an assessment of only the initial capital investment to incorporate also operational cost, maintenance, and end of life (dismantling or disposal) of the asset. But public procurement could also take the form of public private partnerships where the different risks and responsibilities for infrastructure development are distributed among the public and private partners.

Tools for sustainable, resilient infrastructure development

Developed by Global Infrastructure Basel Foundation (GIB) in a multi-stakeholder process, SuRe[®] – The Standard for Sustainable and Resilient Infrastructure is an example of existing tools. A global voluntary standard, it helps to integrate state-of-the-art sustainability and resilience aspects into infrastructure development and upgrade, through:

- establishing a common language and understanding of sustainable and resilient infrastructure projects between project developers, financiers, local authorities and end-users;
- providing guidance on how to manage sustainability and resilience aspects, from a risk management and a benefit creation perspective, and starting from as early as possible in the projects' life cycles.

SuRe[®] consists of 66 criteria divided into 14 themes spanning environmental, social and governance (ESG) aspects and relies on the independent verification and certification of infrastructure projects.

Conclusion

At times of increasing shocks and stresses, not least due to climate change and natural resource constraints, it is imperative for infrastructure investments to be low-carbon, resource efficient and resilient to reduce economic, social and environmental risk for these assets. Urban infrastructures must take into account the long-term flows of strategic resources, which requires linking urban systems to the wider regional flow of ecosystem services and natural resource extraction.

Cities in many developing countries can benefit from large-scale investments in new urban infrastructures aimed at poverty alleviation. To facilitate this, national sustainable urban development policies need to promote sustainable urban infrastructures, and urban development must align spatial planning guidelines, infrastructure investment strategies, financial capability, social equity, and long-term sustainability goals. The social dimension is critical to the health and function of cities. Investors should promote sustainability-oriented innovations that avoid the obsolete technologies that many developed country cities are seeking to replace, often at great cost.

SDG 12—sustainable consumption and production patterns target 12.7 refers to the implementation of sustainable procurement practices and policies.

UNEP - Sustainable Public Procurement Guidelines

www.unep.org/resourceefficiency/Consumption/SustainableProcurement

SuRe[®] ESG themes

Environment

- Climate
- Biodiversity and Ecosystems
- Environmental Protection
- Natural Resources
- Land use and Landscape

Society

- Human Rights
- Labour Rights and Working Conditions
- Customer Focus and Inclusiveness
- Community Impacts
- Socioeconomic Development

Governance

- Management and Oversight
- Sustainability and Resilience Management
- Stakeholder Engagement
- Anti-corruption and Transparency

For more information:



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Sustainable, resource efficient cities – Making it happen!



EXECUTIVE SUMMARY

Context

The cities of the 21st century are the largest sites of human settlement today and are increasingly acting as critical nexus points of social, economic, ecological and technological change. This is especially evident in the developing world city context where growth is most rapid and where future sustainability challenges will be most severe – all this in the light of growing inequalities, poverty and the pervasiveness of slums and informality. In the face of these challenges, there are genuine opportunities for national and city leaders to contribute to sustainability by focusing on cities' sustainability and resource efficiency.

There is a strong link between quality of life in cities and how cities draw on and manage the natural resources available to them. Resource efficient cities combine greater productivity and innovation with lower costs and reduced environmental impacts while providing increased opportunities for consumer choices and sustainable lifestyles. As such, the transition to resource efficiency rests on a range of factors such as redefining how urban systems are understood at the global level, developing a shared language for evaluating city sustainability and reviewing indices that account for the sustainability of cities.

Resource efficiency also needs to be situated within the context of human development. This publication presents a rationale for socially inclusive urban transitions to sustainable growth and draws on a range of case studies and theoretical and analytical considerations to establish the basis of the argument. It identifies some of the elements that are required to develop a shared language on city transitions to sustainability.

The report is divided into three sections:

- **Section 1** presents the challenges, trends and pressures facing cities today.
- **Section 2** outlines the sustainability challenges and choices, specifically exploring infrastructure options available for realising sustainable, resource efficient cities in the building, transport, waste and water sectors.
- **Section 3** examines a number of approaches describing how cities can transition to sustainable, resource efficient growth.

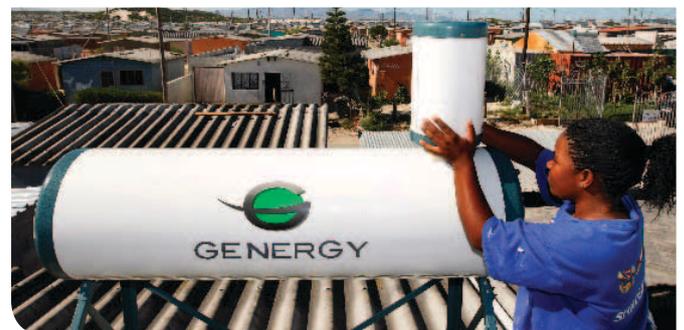
Key findings

From an overview of recent literature and case study reports, it was found that in order to transition to sustainability, a city needs to harness cooperation, political vision and leadership through thematic and/or iconic programmes and projects that drive specific sustainability agendas around which integration can be achieved.

Second, cities also need to establish sector and institutional strategic intermediaries. These are institutes for education, higher learning, research, policymaking and innovation, funding mechanisms, monitoring and evaluation government agencies, non-governmental organizations (NGOs), community organisations and other civil society organs that can play a role in ensuring bottom-up participatory governance in sustainability programmes and projects and bring about cross-sector and inter-institutional coordination.

Third, establishing monitoring and evaluation mechanisms, programmes and projects that focus on intra and inter-sector sustainability were found to be critical to sustainability. Common tools and measures make it possible to assess and benchmark multiple dimensions of urban sustainability.

Finally, cities should make infrastructure choices with the intention of fostering future urban societies that have local resilience and global linkages. It is important for cities to have the capacity to reproduce new and diverse responses to existing, emerging and new challenges and to implement these responses at multiple scales and across the urban divide.



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The full report "Sustainable, Resource Efficient Cities – Making it Happen!" is available to download at http://www.unep.org/urban_environment/Publications/index.asp



The Hague



GLOBAL PARLIAMENT OF MAYORS
Sessions on Governance
11 September 2016

‘Cities as Governance Partners in an Interdependent World’

The Global Parliament of Mayors involves contributions from many experienced organizations. This Paper brings together a broad knowledge base, meant to inspire reflection during the Inaugural Convening and upon aspirations. What do Cities mean today as actors of Global Governance? What can they achieve together in an interdependent world? What have they already started? The answer to these three questions could be simple: many things. This Paper is intended as input for discussion, and dives deeper into the theme of Cities as Governance Partner in a context that brings together various levels of decision-making. After exploring some of the ins and outs of city diplomacy from local to regional to international, we investigate some of the ways in which Cities could support nation-states in taking concrete action to tackle key global challenges. The Paper ends with a number of suggestions for actions, which may be discussed and amended by Mayors during their Inaugural Convening.

This Working Paper has been compiled by The Hague Centre for Strategic Studies (HCSS) on behalf of the Global Parliament of Mayors and The Hague Municipality

Principal authors: Eline Chivot, Mercedes Abdalla, Clarissa Skinner (HCSS)

‘The city and governance’ – a vision that dates back to ancient Greek city-states, but was similarly appraised by one of the greatest political thinkers, Jean-Jacques Rousseau. And today, few would disagree that when it comes to governance indeed, cities still are and remain the most direct social and political contract between societies and the notion of authority. It does not come as disbelief that with the complex challenges we are facing today – be it climate change, changing demographics, growing crime rates, disruptive technology and growing pressures on resources, services, infrastructure, housing and energy – the idea of urban governance has entered the political discourse anew. Local authorities are well-positioned to address these challenges. They have more room for innovative policy-manoeuvring. And this is how local problem-solving can lead to global solutions.

Cities have a unique power and the potential to build increased state-citizen relations, deliver services and ensure equitable access to citizenship. Cities are important drivers of economic growth: they contribute 70% of the global GDP. ⁱ

Cities can be strong partners in the work undertaken by nation-states

Cities know how essential it is to provide citizens with the opportunity to participate in local decision-making processes and to give them a feeling of self-ownership. They recognize the importance of civic engagement to promote greater social justice and inclusion. Local governments have an important role in bringing local actors together for this purpose: the civil society, citizen organizations and associations, private sector actors – such stakeholders are central to the concept of local governance and play a catalyst role for local developments.

They are the city.

Moreover, cities not only have a unique potential in ensuring responsive solutions to (g)local challenges, they also have the capacity to build increased state-citizen relations and deliver the full potential of the newly emerged partnerships between the public and the private sector.

Cities are “the most networked and interconnected of our political associations, defined above all by collaboration and pragmatism, by creativity and multi-culture”.

Benjamin Barber, *If Mayors Ruled the World* (2013)

Cities can be great supporters of nations’ work.

Global flows and interactions are no longer predominantly constricted to nations acting in an inter-state system.ⁱⁱ Cities – the local hubs of globalization – are now more than ever primary nodes and actors in an interconnected and interdependent global web. Yet, as the homes and workplaces of more than half of the world’s population, cities also act locally, from building state-citizen relations to delivering services. Being nexus of global and local action, cities can ensure responsive solutions to complex and interconnected (g)local challenges.

Cities could be seen as just ‘policy takers’, spaces where one-size-fits-all national or international policies can be implemented. But the public opinion often qualifies the results as “implementation deficits and limited effectiveness”.ⁱⁱⁱ With cities leading the way, bottom-up change – growing from local to global through city networks – can succeed where top-down initiatives have been inadequate.

The process must begin with good governance at the local level, from promoting social justice to providing citizens and local actors with the opportunity to participate in local decision-making processes. But the benefits of good governance need not end at the city limits. When cities bond together to collaboratively address issues, they increase their access to expertise, knowledge of best practices, and capacity to influence decisions at the national and international levels. Cities are not only making a difference in our rapidly changing world, but they also act as connectors, becoming an integral part of the global *corps diplomatique*. From changing demographics and global poverty to climate change and growing pressures on resources, services, and infrastructure – problem-solving at the local level leads to solutions at the global level.

There are a number of new developments in relation to cities and governance, in the international and the national context.

The GPM as a governing body will reflect the right of cities to take action across borders

Cities have the potential to solve global challenges as they play out at the local level in ways that other levels of governance do not – yet by the nature of being global, these interconnected challenges do not end at the city limits. Cities have the right, as The Hague Declaration states, “to take action together, across borders, in domains where the global agenda has been stalled”.

A platform for facilitating cooperation and coordination among cities and for becoming stronger partners to nations – this is the role that the Global Parliament of Mayors will play. As stated in the charter of the organization, the GPM will: “share best practices, offer a common global voice for cities, and act as a permanent action oriented platform” and “will also function as a permanent advisory platform for international organizations”.

Institutionalizing a city network provides not only a conduit for cities facing similar challenges and a platform for sharing knowledge and resources, but also a chance to address and mitigate the challenges that city networks face.^{iv}

This is the role that the Secretariat of the GPM will play.

The Secretariat of the GPM will be established in the international city of peace and justice, The Hague. Its mission will be to bring together cities from all parts of the world annually in order to better solve global challenges through practical local solutions by facilitating cooperation between mayors. At the inaugural convening of the GPM, a proposal for the role and the organization of the Secretariat will be discussed by the Mayors.

City diplomacy

National governments and ministries of foreign affairs are not the only actors in today’s multilayered diplomacy – alongside NGOs, associations of states, and multinational corporations, the city plays a crucial role in international relations. Globalization, which has resulted in the nationalization of international issues and the diffusion of power into the hands of non-state and sub-state actors, demands cities to complement national governments.

The harmony between states’ and cities’ diplomatic activities can be achieved only if there is no divergence between the interests and general policy objectives of national and local governments.

City diplomacy revolves around several key domains:

- **Security:** Conflicts have direct repercussions on a local level. Consequently, cities have traditionally engaged in various stages of the conflict cycle: prevention, resolution, and post-conflict diplomacy. Generally, good local governance leads to economic development, which in turn increases security.
- **Development:** Due to their physical proximity, local governments can best understand and anticipate local needs; this advantage enables cities to play a greater role in

development assistance. Given the size of their economies, it is worth noting that some cities have a growing impact on the country they belong to.

- **Economy:** There are two predominant vectors along which cities can ensure economic gain – firstly, attracting capital (tourists, foreign companies, international events) and secondly, exporting their know-how and services by partnering with other cities or the private sector.
- **Culture:** Cultural diplomacy between cities facilitates the accumulation of social capital not only in, but also among cities, shaping knowledge of societies in this way.
- **Representation:** Cities participate in and influence decision-making on a supra-national level either through political representation in (inter)national organizations or by lobbying. Cities could represent themselves but also bring in benefits for non-city dwellers, hence dividing up these benefits more equitably at the national level.

The growing recognition of cities by international organizations

At the same time, the position of cities in relation to intergovernmental organizations has changed considerably, most notably in regards to the United Nations and the European Union. The UN Habitat Agenda – the UN’s program promoting socially and environmentally sustainable cities – clearly demonstrates the increasing influence local governments have acquired on a global scale. The city has transformed from being an ‘addressee’ to a ‘partner’ within the confines of the Agenda: “when UN Habitat started, cities were merely sites of problems of a global concern. But after a more passive role during the first decade [...] cities and their associations are now recognized as the closest partners in its implementation”.^v

This growing importance of cities has also been institutionalized in the form of a steady dialogue between the UN and the United Nations Advisory Committee of Local Authorities, representing local governments and their associations. Partnerships between the UN, the World Bank, and associations of cities, such as the United Cities and Local Governments (UCLG), have further demonstrated how local governments have come to be seen as prerequisite partners in the implementation of global policy objectives.

In Europe, several steps have been taken in order to emphasize the role of local governance. The Lisbon Treaty, for instance, strengthened the “involvement [of the Committee of Regions] throughout [all stages] of the EU legislative [...] and decision-making process”.^{vi}

The growing influence of City Networks and partnerships

Bottom-up initiatives – moving from local to global through city networks – can succeed where top-down initiatives have not. Because global challenges play out on a local level and must involve local stakeholders, city governments are best positioned to address them. But these *global* challenges are not unique, which calls for actions joining forces.

City networks help cities solve common problems in a more efficient and effective way by facilitating knowledge exchange, solution and resource sharing, building capacity for implementation, providing a body for advocacy and lobbying, and through monitoring progress towards reaching collectively agreed upon goals. In this way, city networks facilitate cities doing what they do best – solving practical problems in a pragmatic way.

“As the ‘Powering Climate Action’ and ‘Climate Action in Megacities 3.0’ reports demonstrate, cities that collaborate are more likely to take effective and transformative action. Since 2005, [we have] convened [our] member cities – now numbering more than 80 – to exchange ideas, solutions and experiences through 16 thematic networks and six overarching initiative areas for climate mitigation and adaptation”.

The C40 Cities Climate Leadership Group

The benefits of city networks can be summarized as:

- **Information:** Knowledge exchange in city networks disseminates lessons learned and best practices while preventing the duplication of mistakes.^{vii}
- **Implementation:** City networks also give individual cities access to tools that are necessary for moving from conceptualization to implementation, such as financing options, technology, or expertise.^{viii}
- **Advocacy:** When cities band together, they can advocate for themselves more effectively at the national and international level.^{ix}
- **Monitoring:** City networks can set guidelines on objectives as well as help with monitoring individual city performance.^x

Moreover, city networks are effective at delivering these benefits:

- C40’s internal assessment of climate actions taken by partner cities found that collaboration increased the number of actions taken: “In 2015, 30% of climate actions were delivered as a result of collaboration with other cities”.^{xi}
- These actions, moreover, were beneficial: “Cities report that they are planning to expand 95% of all actions they identify as having delivered through working with other cities”.^{xii}
- Finally, nearly half of all collaboration-based actions were funded through grants or subsidies rather than traditional sources such as central budgets. Knowledge of alternative funding or best practices in innovative finance solutions, such as green bonds for climate initiatives, also disseminate through city networks.^{xiii}

The GPM recognizes the crucial role of City networks. It aims to build on and bring together their existing power, fostering their efforts and strengthening the role of cities as actors making a difference in the face of global challenges.

It is essential to keep in mind the challenges city networks encounter, to better support them. City networks must actively address and account for asymmetrical capacities, particularly in terms of technology and implementation capabilities within cities, which may hinder communication or learning within the network and can also serve as a barrier to joining the network.^{xiv} While coordinating with a city that is geographically nearby or shares the same language is easy, networking based on the type of challenge, such as C40’s Delta Cities Network, is relatively rare. Actively encouraging networking based on shared challenge type rather than only shared language or region could greatly facilitate the exchange of information.^{xv}

“Our social network analysis of information seeking suggests that learning ties are likely formed when cities create an internal committee of multiple stakeholders, have higher levels of experience and knowledge, and share a similar regional context and language. However, regional homophily was only observed among North American and European cities”.

Lee and Van de Meene, 2012

The GPM stands for expanding the practice of integrating city networks to cities beyond the West.

Within the city, international and national contexts constrain or enable local action

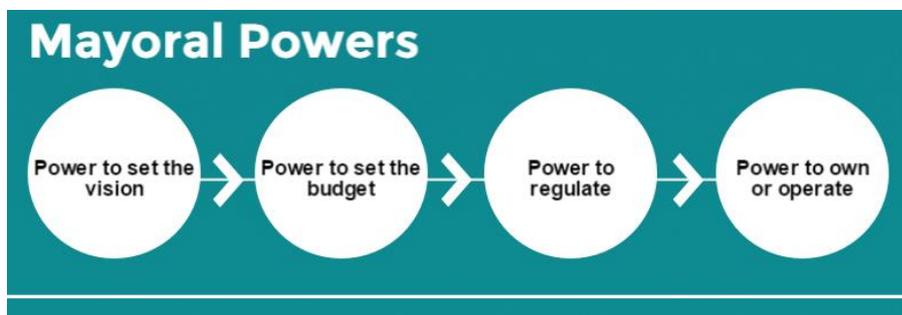
Despite the increasing presence and role of cities on an international level and in IGOs, cities are still embedded in vertical and hierarchical national and international governance structures that can prevent cities from efficiently or effectively addressing local challenges. International and national policies or regulations can either enable or constrain city actions. However, this trend is beginning to change; for many cities, decentralization within the nation-state has resulted in the transfer of powers and resources from the central government to the local level, enabling greater local control.

Decentralization (administrative, political, or fiscal) brings decision-making closer to the citizens and enables participation regarding local needs. Decentralization may therefore improve governance by promoting greater accountability and transparency.^{xvi}

Mayoral power and city governance typologies

Understanding a city's capacity for action within the city is necessary for assessing both what is possible for a given city at the local level, as well as for understanding the limits of and possibilities for individual cities to act in city partnerships.^{xvii}

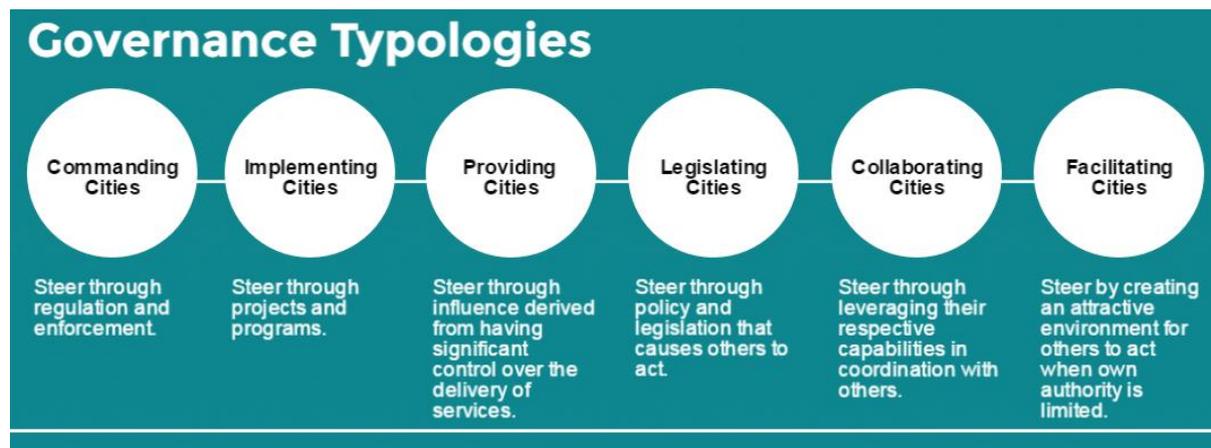
Both national or international regulations and financial conditions can constrain or enable the city's ability to steer.^{xviii} On top of hierarchical or vertical regulatory constraints, cities are often also confronted with financial constraints. Some local governments are heavily dependent on central governments and their funds. They may not always have control over the allocation of these funds or the power to retain some of the revenues earned. The visual below shows C40's categorizations of mayoral powers over city assets and functions depending on how enabled or constrained the city government is:



Mayoral powers over city assets and functions as described by C40 (2015)^{xix}

In addition, C40, Arup, and UCLG developed a taxonomy of governance typologies adopted by cities within specific sectors, noting that the governance type often derives from the amount of power the city government has within a given sector. The governance typologies include: commanding cities, implementing cities, providing cities, legislating cities, collaborating cities, and facilitating cities (see graphic below).^{xx} Although these typologies

were developed specifically with climate action in mind, they are nonetheless helpful for describing the means through which cities can steer.



Governance typologies as described by C40 and Arup (2015)^{xxi}

City trends affecting governance

Trends within the city have affected the way that cities govern. This include changing relationships between the private sector and the city, new possibilities from ICT for engaging citizens or governing, and a focus on increasing the overall resilience of cities, including regarding social inclusiveness. Channeling these dynamics is key to support the action of cities.

Public-Private Partnerships: to learn, and to finance change

The role of the private sector has increased in the last two decades as a result of economic globalization, resulting in the privatization of state functions.^{xxii} This has also occurred in cities, which are often challenged to do more with less in the face of competing budgetary demands. Public Private Partnerships (PPPs) have become popular as a means of both financing projects and collecting input from the private sector during strategic planning processes.^{xxiii} According to The World Bank, connecting cities with investors is crucial not only for smart-cities' development but also for revitalizing a city and making it more competitive.^{xxiv}

In terms of development, businesses are expected to play a key role in delivering urban infrastructure and addressing service-delivery capabilities, such as in waste and water management, mobility and energy, etc. This trend is increasingly relevant to emerging and developing economies, where accelerated growth often outpaces needed infrastructure.^{xxv}

In terms of city revitalization and competitiveness, a 'competitive city' "successfully facilitates its firms and industries to grow, create new employment opportunities, raise productivity, and increase incomes of citizens".^{xxvi} The World Bank predicts that cities will – with or without economic full-scale structural transformation – tap into the potential of supporting their own niche markets and products, be it in deliverable goods or services, by assisting existing firms and attracting new markets. Doing so requires consulting with business management "about their needs and constraints they encountered with during their operations"; infrastructure investment needs to be made in "collaboration with the firms and industries they are aimed to serve"; and industries should be supported jointly with the private sector rather than through the public sector alone.^{xxvii}

ICT and the City: to increase transparency, to improve accountability

The digital era has also made it easier for cities to open up their data to the public and increase their transparency. Some trends in this regard include urban analytics and e-government.

Urban Analytics bring together Big Data and urban governance. Urban data and the derived trends or foresights help decision-makers make informed choices regarding urban planning.

Cities are embracing new technologies and innovation, giving rise to smart cities and e-government. Smart cities use ICT to make the critical infrastructure and services of a city more intelligent, interconnected, and efficient.^{xxviii} E-communication is used to simplify interact with citizens, improve access to information, and promote transparency. Citizen participation can be enhanced by adopting new tools such as online polls, e-learning, and e-voting. The annual market value of smart cities is expected to reach \$1.56 trillion in 2020.^{xxix}

Cities are using a variety of digital tools to bring citizen-sourced information into the service delivery and decision making processes in cities. Cities like Rio are also opening up existing city control rooms to the public and media who are able to gain insight into how the city is managed and the challenges it faces. These tools help to extract information held by citizens about the operational and functional requirements of the city. This might include for example, ‘tagging’ graffiti, abandoned vehicles and other maintenance requirements as well as collecting data about congestion hotspots. As a result, quality of life and security can be improved as risks are better monitored and anticipated. Such tools also tend to improve citizen-council relationship through providing a transparent, easily accessible and responsive service built around citizen needs and provide a mechanism to hold city authorities accountable.

C4o cornered this trend as ‘Polisdigitocracy’, an approach to governance whose many aspects have already materialized. It is reflected in the vast number of digital civic engagement projects and programs currently underway in cities. Many of these are directly focused on climate action, but all of them offer lessons when developing good practice for project implementation. They also promote good governance by cities and reinforce the accountability of city governments.

The GPM recognizes the need to embed such efforts across cities’ government sectors and actors, as well as within existing energy, waste, transport, adaptation and other networks. These digital tools and activities should not be isolated initiatives. More impact could be produced if ICT officials are to support their integration throughout city government.

City resilience and governance

The trending concept of city resilience, which emphasizes addressing city issues holistically rather than individually in order to bolster the city's ability to weather both acute and chronic stresses, also has implications for governance. Some characteristics of governance that drive resilience include:

- Leadership and management that fosters cross-sector communication and evidence-based decision-making.^{xxx}
- Using strategic, integrated approaches to address problems (i.e., considering social inclusivity and reducing greenhouse gas emissions in planning infrastructure).^{xxxi}
- Ensuring openness and transparency.^{xxxii}
- Fostering economic prosperity through focusing on skills training, education, and creating a favorable business environment.^{xxxiii}
- Improving social inclusivity through better access to basic services (housing, transport), tackling inequality, reducing racial or religious segregation, and addressing gaps between the periphery and the center.^{xxxiv}

Inspiring initiatives by cities

Beyond words and teaming up, concrete action must be taken as part of our roadmaps to exist as global governance and diplomacy actors. The following ideas reflect how cities can be critical actors in improving governance efficiently and seizing opportunities in connecting stakeholders at local, regional, national and international levels.

ICT does magic in cities. Street Bump is a reporting platform launched by [Boston](#)'s Mayor's Office of New Urban Mechanics, in collaboration with IDEO. It aims at helping residents improve their neighborhoods, particularly road condition. Volunteers use Street Bump's mobile app (now freely available) to collect data while driving, and this is aggregated across users as real-time information. The city uses it to work on solving short-term problems and plan long-term investments. Of course, Boston isn't the only active US city in terms of digital programs. Open 311 is a system used in [New York](#), [Chicago](#) and many other cities across the country. It records non-emergency needs, connecting citizens with the local government. In Europe, cities have also been active in setting up comprehensive smart frameworks – [Barcelona](#) is often put forward as an example in terms of its efficient management of services and resources, the way the city is using new integrated communication technologies, and has increased the interaction between public institutions, citizens and businesses.

[Melbourne](#)'s Data Portal offers access to all the different types of datasets curated by the city, from fees and charge schedules to a register of public artwork or a census of land use. It is based on several Open Data Principles, including the free, timely availability and easy accessibility of data under open licenses, allowing for reuse by the public, including businesses, researchers and individuals. Data is released within limits that avoid privacy

breach, and ensure public safety, security, commercial confidentiality or legislative requirements. Users are informed of the gaps and limitations, and may request datasets or provide feedback to help refine the project. A tailored service is provided to different user profiles— such as entrepreneurs or interested citizens.

India is booming, so are its cities. **Hyderabad** came up with an innovative digital project to improve its governance processes and service delivery by soliciting citizen feedback. Several complaints were being filed by citizens to the Greater Hyderabad Municipal cooperation over matters, such as inappropriate road maintenance, city lighting and garbage delivery, but the Municipality experienced problems in promptly answering and solving these challenges. As a solution, an online platform was set up by the Municipality for raising and reviewing complaints. The new online system includes thousands of citizen service centers and a 48-hour response deadline. There are also 12 vehicles designated for monitoring the 2,000 kms of Hyderabad in order to easily identify local problems by gathering video and photographic evidence for the municipality. The initiative has already achieved impact, as the online platform is indeed used and 30% of complaints are made through this channel.^{xxxv}

A joint initiative by the Municipality of **Rotterdam**, the Erasmus University of Rotterdam and the *Hogeschool* Rotterdam has been materialized in what is known as *Kenniswerkplaats* Urban Big Data.^{xxxvi} It collects knowledge of national and international urban applications of Big Data and identifies potential usage of data for metropolitan applications (using input from Rotterdam Open Data Store <http://rotterdamopendata.nl/dataset>), before testing these observations in pilots.

Let us stay in the Netherlands to mention **Eindhoven's** BrainPort, where the knowledge industry meets the manufacturing industry.^{xxxvii} This type of model is commonly referred to as a 'Triple helix cooperation' between businesses, knowledge institutes and governmental (local) actors. "The focus in this region lies in the development of 'value chains which have economic potential: high tech systems and new materials, the creative industry, the food industry and life sciences". BrainPort is characterized by the flow of ideas and the principle of network economy, overstretching regional boundaries. Besides being based on human capital and entrepreneurship, business, and technology, BrainPort is the source of and facilitates collaboration among local governmental actors: municipalities cooperate and finance the economic development in the region. The incumbent mayor of Eindhoven assumes an important role in bridging the public-private collaboration. Through these commitments, BrainPort has not only become one of the leading innovative toptechnology regions in the world, but it has also created 55,000 jobs in the past 10 years and has become one of the motors of the Dutch economy.

Innovative ideas for better governance and urban life based on multi-stakeholder processes led by a city are coming from many other parts of the world. For instance, the City Park project of **San Salvador** reflects the constructive power of the synergy between the public and the private sector.^{xxxviii} The City Park is located in Mejicanos, a troubled neighborhood

of the city characterized by high unemployment, lack of proper housing, basic services and common green areas. Poor living conditions have contributed to the rise of youth gangs, which in turn has led to the stigmatization of the neighborhood itself, hampering the employment prospects of those who live in that part of the city. The project is set up to improve quality of life in the district, in cooperation with the Municipality, the residents, NGOs such as Cordaid, and local as well as international enterprises. After completion, the City Park will have its own governance structure. The project includes a soccer field, a community house, a playground and an urban farm among others, with the objective to foster social cohesion and improve the lives of slum dwellers. The provision of job opportunities for the youth and the rehabilitation of ex-gang members are also among the long-term prospects.^{xxxix}

Back in Asia, citizen-led planning has helped achieving progress in the improvement of neighborhoods. With the rapid increase in urban population since the beginning of 2000s, many residents living on the outskirts of [Bangkok](#) experienced deteriorating living conditions; inefficiencies in housing and basic infrastructure were matters of serious concern.

Central and the local government initiated the Baan Mankong project, calling upon the residents of the informal settlements along the Bang Bua canal in Bangkok to get “directly involved in shaping their whole community and encouraged people to see informal settlements as part of the wider city”. Due to its success, the project became bigger and eventually, more than “1,000 communities innovated and implemented projects in 226 towns and cities, improving 54,000 households”.^{xl}

It is worth mentioning here the concrete difference made by [international city networks](#) such as C40, ICLEI or 100 Resilient Cities in endorsing cities as crucial and efficient partners in solving global challenges. By setting up good governance practices, City networks are now a voice as interlocutors that matter in global dialogues. For example, C40’s executive arm, the Clinton Climate Initiative (CCI), facilitates a rather vast implementation of projects. Private actors and NGOs are of importance for the realizations of meetings and for the implementation of projects. The first Climate Summit, for example, was supported by BP, EDF Energy and Thames Water RWE Group. ICLEI, The Climate Group and BT (a communications company) were the associated partners. In the framework of the Energy Efficiency Building Retrofit Program (EEBRP), four of the world’s largest energy service companies and five of the world’s largest banks are partners (Website EEBRP). Companies provide products and services at a favorable price, so that cities are capable of making existing buildings more energy efficient. In exchange, companies get a market of (at least) 40 large cities. The banks provide the necessary loans, which will be paid back with the energy savings (Bouteligier 2009:23).

The *Metropoolregio* [Rotterdam-The Hague](#) (MRDH) sets a strong example of inter-municipal co-operation.^{xli} The network includes 23 municipalities with the mission of further developing the metropolitan region’s open and stable financial climate not only for attracting foreign investments, but also for the general well-being of local residents and where knowledge institutes, industries and local authorities come together. Apart from economic

matters, there have also been several joint projects initiated on infrastructural and urban development-matters like Randstad Rail and Rotterdam-The Hague international airport. One of the principles of the network is the sharing of knowledge and exemplary practices between cities.

Consultations between the Dutch central government and the Association of Dutch Municipalities (*Vereniging van Nederlandse Gemeenten* or VNG), representing the interests of Dutch cities, have become institutionalized. Representatives from the Ministry of Interior and Kingdom Relations meet every month “to discuss various international political issues”.^{xliii} The VNG also participated in the facilitation of post-genocide reconciliation in Rwanda. The International Cooperation Agency of the VNG contributed to the encouragement of setting up the Rwandese Association of Local Governments; decentralization and effective local governance were seen as prerequisites in achieving stability in the East African country.

The host of the GPM’s Inaugural Convening, [The Hague](#), offers a plethora of initiatives related to city diplomacy. This showcases how a city can truly become recognized as a key actor of global governance. Over time, The Hague has been making steps towards earning its stripes and gaining this recognition amongst countries and other cities.

[The Netherlands](#) has long reflected city diplomacy on national and cross-national levels.

The first-ever world congress on City Diplomacy was held in 2008 in The Hague’s Peace Palace organized by the Clingendael Institute, UCLG, the city of The Hague, and the Association of Netherlands Municipalities (VNG), in close collaboration with the province and city of Barcelona and the Italian Coordination of Local Authorities for Peace and Human Rights. The conference “focused on the role local governments play in promoting dialogue, building mutual trust and delivering services, in cooperation with national governments, international organizations and civil society”, bringing together 400 participants from all the 4 corners of the world.^{xliii, xliv}

The Hague is home to The Hague Security Delta (HSD), “an innovation-focused partnership between government, knowledge institutes and industry” which has become Europe’s largest security cluster over the years.^{xliv} The Municipality is actively investing in the sector of security, which, as Mayor van Aartsen described “is developing more and more into an important pillar of The Hague’s economy”. HSD indeed serves as a nexus for security businesses and organizations to work together on innovations and provide additional employment opportunities in this way. . Within the confines of HSD, the Mayor and the Deputy Mayor also strive for creating ‘cyber security hubs’ with other cities through visits and organizing conferences. One example is the cyber-security mission to New Delhi and Hyderabad, initiated by the Municipality of The Hague to exchange knowledge and create partnerships in the public as well as private sectors.

Taking concrete action: Cities as Norm-Makers in an Interdependent World

Drawing upon The Hague Declaration (2016) and the insights presented by our partners and expert organizations at the Global Parliament of Mayors (GPM), a number of concrete action points or policies are suggested below.

These suggested actions can be used by Mayors as a basis for discussion on the occasion of their Parliament's Inaugural Convening. Mayors could amend and reflect upon these – and while the choice of some cities will not be for everyone, the point is that it is doing something new that others can evaluate and learn from. During and after the Inaugural Convening of the GPM in The Hague, Member Cities can opt in to, or out of these policies, based on their specific needs and circumstances.

Cities practice city diplomacy

- The GPM will share best practices, offer where possible a common global voice for cities, and act as a permanent action-oriented platform.
- It will also function as an advisory platform for international organizations and institutes such as the United Nations, the OECD, Eurocities, Cop 22, C40, 100 Resilient Cities, the U.S. Conference of Mayors and the World Bank.
- The GPM should let the voice of cities be heard. It will engage more Mayors to speak up for cities and strengthen their role. During international conferences and summits, the GPM can send representatives who get the space to promote and explain the role of cities and their challenges. The communication to and from the GPM is ensured by its Secretariat, based in The Hague, The Netherlands. The inaugural convening will decide on these processes.
- GPM Members stand for connecting “people to people, people to city systems, and city systems to city systems”, for the city to become a better place to work, live and play in. In this, GPM Members recognize the role of new technologies and data sharing.
- Connect with and use the local expertise of your country's embassies abroad – located in cities – to get advice for your own city. Tighten relationships between cities, regions, national governments and regional organizations in your area (EU, ASEAN, MERCOSUR, etc.).
- Make your city a lab, experimenting with solutions solving global challenges at the local level – including environmental issues, pandemic diseases, societal tensions, cross-border problems such as the refugee crisis and terrorism.
- GPM Members stand for promoting the role of all relevant stakeholders in strengthening the voice and example of cities. Efforts will be made in involving locals and newcomers in organizing events of all kinds to bridge communities – for instance those connecting internationals, expats and local residents.
- Stimulate city pride and good business climate by investing in sectors that are generators of vitality, for example starting with schools and universities. Contact, invite and meet start-ups, large corporations, NGOs, cultural organizations, knowledge institutions, global summit organizing committees, etc. Tell them why your city is where they should be.

- Member Cities that assess their efforts and programs as successful can report to the GPM yearly with a Mayor Brief.

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The Hague



GLOBAL PARLIAMENT OF MAYORS

Governance: ‘The City & The Interdependent World’

Strategy Session 2: Citizens, City Hall, and Civic Engagement

11 September 2016

Ziad Hafiz Razak

Director, Greater Kuala Lumpur and Urban Public Transport

Performance Management and Delivery Unit (PEMANDU)

Prime Minister’s Department, Government of MALAYSIA.

Building Networks for Big Fast Results – Using Labs for Problem Solving and Implementation within a Metropolitan Context

About the Performance Management and Delivery Unit (“PEMANDU”)

PEMANDU is a unit in the Government of Malaysia responsible for the design, monitoring and implementation of the National Transformation Programme (“NTP”), a 10-year program for improving public services and revitalizing the Malaysian economy, with the goal of making Malaysia a developed and high-income nation by the year 2020 (see *Appendix I*).

About Greater Kuala Lumpur (“Greater KL”)

The Greater KL metropolitan area consists of Kuala Lumpur, the capital city and commercial center for Malaysia; Putrajaya, the administrative center for the Malaysian government; and eight other local authorities within the neighboring state of Selangor. Greater KL currently has a total population of 7 million, residing within an area of 2,900 square kilometers (see *Appendix II*).

The Big Fast Results (“BFR”) Methodology

In 2009, Idris Jala, a former CEO of Malaysia Airlines and an experienced executive with extensive working experience in Royal Dutch/Shell Group was recruited to join the

Government of Malaysia and help accelerate the transformation of public services and the economy in Malaysia. PEMANDU was established as the institutional custodian for this transformation effort.

Utilizing a comprehensive Eight Step methodology (see *Appendix III*) for Big Fast Results, PEMANDU led efforts to design and implement the NTP: (1) the Strategic Direction for transformation was clarified via public surveys as well as intensive consultations amongst members of the Malaysian Cabinet; (2) Labs were conducted, where members of the civil service, the private sector, civil society and other key stakeholders were invited for intense problem solving sessions over a period of six to eight weeks; during these Labs, key challenges were identified, solutions were developed and syndicated with key stakeholders, implementation steps were detailed out, and the necessary resources were secured in consultation with the Malaysian Treasury as well as private sector investors; (3) Open Days were organized to present the findings from the Labs, to seek public feedback and build public consensus for change; and (4) a Detailed Road Map was developed following the public feedback from the Open Days, and Lead Ministers were appointed from amongst the Cabinet Members to own the implementation and delivery of the solutions detailed out in the Road Map.

Subsequently, (5) Key Performance Indicators and Targets were identified to assist the monitoring and tracking of implementation efforts; (6) Implementation was followed up closely, where focused teams within PEMANDU were established to monitor the delivery of initiatives; (7) an International Panel Review was introduced to audit the results of the implementation and challenge the Government to raise the standard of delivery based on international benchmarks; and finally (8) an Annual Report would be published at the end of each year to document the results of implementation efforts and identify further areas for improvement in future years.

Greater KL National Key Economic Area (“NKEA”)

As part of the NTP, 12 Labs were conducted in parallel to identify challenges and develop solutions to help transform the Malaysian economy. The Greater KL NKEA Lab was the only geographical Lab, with the other 11 Labs focusing on specific sectors such as Oil & Gas, Healthcare and Palm Oil.

The Greater KL NKEA Lab involved comprehensive representation from across government (both at the Federal and State levels), the private sector, as well as civil society, involving 40 full time Lab members and others who were consulted as external experts during the course of the Lab (see *Appendix IV*). Over eight weeks, Lab members identified key challenges facing the Greater Kuala Lumpur metropolis, and identified a True North aspiration for Greater Kuala Lumpur: to become a Top 20 city globally in terms of economic vibrancy as well as livability. To make this aspiration a reality, nine Entry Point Projects and three Business Opportunities were identified for Greater Kuala Lumpur, which are expected to catalyze the economic growth and quality of life for the city and its citizens (see *Appendix V*). Once solutions were identified, Lab members

syndicated these solution ideas amongst themselves and with various external stakeholders, and once these solutions gained consensus, Lab members then proceeded to detail out the implementation steps and identified project owners, and conducted high-level estimates of the resources required from both the private sector as well as the Government to ensure the success of the Greater KL initiatives.

The Lab did not only help to accelerate problem solving for the city, but also helped to catalyze implementation. Participation of full time Lab members from all the relevant agencies and private sector players, as well as consensus building from amongst the national political and civil service leadership, ensured that the solutions identified were accepted across the institutions of the city. In particular, a dedicated team within PEMANDU was established to monitor and facilitate the implementation of the initiatives. The Minister of Federal Territories was appointed as the Lead Minister to own the overall implementation, and the PEMANDU team manages a KPI Scorecard process through which the Ministry and the relevant agencies are accorded clear ownership of initiatives.

We are proud to note that a number of major achievements have been recorded since the start of the Greater KL NKEA implementation (see *Appendix VI*), and look forward to many more achievements in the near future.

Appendix I – the National Transformation Programme



Appendix II – About Greater KL

NKEA Greater Kuala Lumpur / Klang Valley



The rationale for Greater KL/KV as NKEA

- Contribute to 30% of nation GDP
- Commercial and financial capital
- Big potential in culture and tourism
- Has scored many successes in international rankings
- Urbanisation is one of the most important drivers of economic growth and of income levels in a country



Source: Data from Department of Statistics, Nov 2014

Appendix III – Eight-Step BFR Methodology



Appendix IV – List of Greater KL NKEA Lab Members and Syndication Parties

Federal Government / Statutory Bodies	State Government	NGOs	Private sector / Government-Linked Companies (GLCs)
<ol style="list-style-type: none"> 1. Federal Territories Ministry 2. Ministry of Transport 3. Attorney General Chambers 4. Economic Planning Unit (EPU) 5. Treasury 6. Dept. of Railways 7. Land Public Transport Commission 8. Solid Waste Mgmt. Corporation 9. National Solid Waste Mgmt. Dept. 10. Kuala Lumpur City Hall 11. National Property Information Centre (NAPIC) 12. National Water Services Commission (SPAN) 13. Ministry of Agriculture 14. Immigration Dept. 15. Malaysian Digital Economic Corp (MDEC) 16. Malaysian Investment Development Authority 17. Tenaga National Berhad (national power company) 18. Pengurusan Asset 	<ol style="list-style-type: none"> 1. LPHS (Selangor Housing and Property Board) 2. JPBD (Town and City Development Dept.) Selangor 3. MPAJ (Ampang Jaya Municipal Council) 4. SSIC (Selangor State Investment Corporation) 	<ol style="list-style-type: none"> 1. Badan Warisan Malaysia (Malaysian Heritage Board) 2. Yayasan Anak Warisan Alam (YAWA) (National Heritage Foundation) 	<ol style="list-style-type: none"> 1. Gamuda Berhad 2. YTL Corporation 3. Scomi International 4. Airasia 5. MAS 6. Malaysian Airports Holdings Bhd 7. KTMB 8. See Hoy Chan 9. KL Pavilion 10. Low Yat Group 11. Halcrow 12. Hartasuma ARA Group 13. Econsave 14. Putrajaya Holdings 15. Khazanah 16. Minconsult 17. Kowloon-Canton Railway Corp 18. AP Land 19. Persatuan Pengurusan Kompleks (PPK) Malaysia 20. Sime Property 21. Urban Maglev Pte Ltd 22. Mott MacDonald 23. Scott Wilson 24. Culture Matters 25. Alam Flora 26. Core competencies 27. Stream 28. IWK 29. Jurutera Perunding SMHB 30. IOI Properties

<p>Air Berhad (national water asset management company)</p> <p>19. JPS (Dept. of Irrigation and Drainage)</p> <p>20. JPP (Dept. of Sewerage Services)</p> <p>21. Department of Energy</p> <p>22. Ministry of Human Resources</p> <p>23. Bank Negara Malaysia (central bank)</p> <p>24. Securities Commission</p> <p>25. EPF (Employees Provident Fund)</p> <p>26. Putrajaya Corporation</p>			
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Appendix V – Greater KL Entry Point Projects and Business Opportunities

Entry Point Project	
EPP 1: MNC Attraction by Invest KL	Project to attract MNCs all over the world to invest in GKL/KV managed by Invest KL.
EPP 2: Talent Attraction	Project to attract Malaysians and non-Malaysians to reside in Malaysia and contribute to the nation, managed by Talent Corporation.
EPP 3: High Speed Rail	A project to connect Malaysia to Singapore through high speed rail with the intention to spur economic growth in both countries, managed by MyHSR Corporation Sdn Bhd.
EPP 4: Mass Rapid Transit	A project to connect towns and critical points for commuters in the GKL/KV areas, managed by MRT Corporation.
EPP 5: River of Life	A project to revive rivers within the area of GKL/KV managed by local government and authorities.
EPP 6: Greener Kuala Lumpur	A project to achieve sustainability in the city to enhance livability through greening projects such as adopt-a-park, managed by local government and authorities.
EPP 7: Iconic Places	A project to relive Kuala Lumpur history through establishment of heritage trails and amplification of historical destinations within the GKL/KV areas, managed by local government and authorities.
EPP 8: Pedestrian Network	A project to upgrade pedestrian walkways throughout the city to be safe, seamless, disabled-friendly and pleasing-for-the-eye, managed by local government and authorities.
EPP9: Solid Waste Management	A project to manage solid waste coming from GKL/KV, managed by local government and authorities.
Business Opportunities (BO)	
BO #1: Revitalizing Putrajaya	Improvement of its perception, connectivity and vibrancy to become a world class capital city, managed by local government and authorities.
BO #3: Sewerage Non-River	Management and improvement of the sewerage system in the GKL/KV area, managed by local government and authorities.

Appendix VI – List of Greater KL Achievements (2011-2015)

<p>City</p> <ul style="list-style-type: none"> • 73th place out of 140 cities in the Global Livability Ranking by Economist Intelligence Unit (EIU) 2015. Ranked 68th place in 2010. • Ranked the 18th place in 2015 for ease of doing business by the World Bank. • 2nd place in SEA for competitiveness, reported by EIU in Hot Spots 2025: Benchmarking the Future Competitiveness of Cities. • 2nd place for emerging market and 4th for business-friendly as reported by Financial Times (UK).
<p>Transportation (MRT and HSR)</p> <ul style="list-style-type: none"> • 24 rolling stocks at Sungai Buloh Depot are ready to be used, instead of 15 targeted earlier. • Route 1 of the rail track construction (Sg. Buloh – Semantan) has been completed as scheduled and will be open for public use in December 2016. • Route 1 track covers 51 km with 31 stations and can carry as much as 400,000 passengers on a daily basis. • Route 2 (Sg. Buloh – Serdang – Putrajaya) is still under construction, which began in January 2016. • Malaysia and Singapore signed a bilateral MOU this year (2016) to commemorate a high speed rail infrastructure connecting KL and Singapore.
<p>River rejuvenation (ROL) and waste management</p> <ul style="list-style-type: none"> • Over a thousand projects are currently in various stages of developments under river cleaning and river beautification initiatives. • All eight rivers are currently in class III and IV and are targeted to achieve class IIb by 2020. • Up to 2015, 2 out of 5 sewage treatment plants are completed while 43 others are successfully rationalized.
<p>Greening KL</p> <ul style="list-style-type: none"> • As of 31 December 2015, 171,097 trees have been planted in the city. • Since 2014, 84,938 trees have been tagged with GPS for maintenance purpose by DBKL to ensure the trees to grow healthily well beyond 2020. • 26th place out of 50 cities in Sustainable City Index 2015 by Arcadis. • Adopt-a-park program and tress sponsorship with benefits i.e. tax exemption have been receiving positive responses from MNCs in Kuala Lumpur.
<p>Pedestrian walkways</p> <ul style="list-style-type: none"> • 80% satisfaction reported from pedestrians using the improved walkway. • Upgraded 48.9 km of total length of walkways since 2010.
<p>Investments</p> <ul style="list-style-type: none"> • InvestKL successfully attracted 10 MNCs in 2015, achieving its target. • 53 MNCs are secured as of August 2016, on track to deliver 100 MNCs by 2020. • 7, 454 committed employments as of August 2016.

- RM 6.18b total approved and committed investment as of August 2016.

Talent attraction

- 17,967 graduates have undergone training at companies registered under TalentCorp.
- 3,456 sponsored students have been retained in the country to contribute to nation building in the private sector through TalentCorp's STAR program.
- 5,033 non-Malaysian talents were given employment passes to enter and work in Malaysia.
- 256 women are happily back on their career path through the Career Comeback program launched by TalentCorp.