

Innovation in Europe's Cities

A report by LSE Cities on Bloomberg Philanthropies' 2014 Mayors Challenge



LSE Cities report team

Ricky Burdett, Editor

Peter Griffiths, Writer and Researcher

Catarina Heeckt, Coordinator

Francis Moss, Information Designer

Shan Vahidy, Copy Editor

LSE Cities evaluation team

Ricky Burdett, Director, LSE Cities

Peter Griffiths, Researcher, LSE Cities

Catarina Heeckt, Researcher, LSE Cities

Philipp Rode, Executive Director, LSE Cities

Tony Travers, Professor, Department of Government, LSE

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Greg Clark, City and Regional Development
Advisor

LSE Cities

London School of Economics
and Political Science
Houghton Street
London WC2A 2AE
United Kingdom

+44 (0)20 7955 7706

lse.cities@lse.ac.uk

www.lsecities.net

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Press contact information

For more information on the Mayors Challenge
or for requests for interviews or to republish parts
of this report, please contact:
mayorschallenge@bloomberg.org

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With its dense urban fabric, iconic monuments and continually evolving cityscape, Barcelona epitomises the European city.



About this report

Innovation in European Cities sets out the context for Bloomberg Philanthropies' European Mayors Challenge. It gives an overview of the key themes facing European cities today and provides an independent analysis of the 155 submissions to the award and a detailed review of the five winning proposals. It has been carried out by LSE Cities, a research centre based at the London School of Economics and Political Science, which specialises in understanding the dynamics between the urban form and urban society.

Throughout 2014, researchers from LSE Cities provided input to Bloomberg Philanthropies on the political and demographic make-up of selected European cities, and carried out an objective assessment of the level of innovation shown by the shortlisted proposals. In writing this report, we also interviewed representatives from the winning cities. The report draws on this work as well as research on the social, economic and political dynamics of cities at a global and European level, a wider lens through which to better view and understand the themes uncovered by the European Mayors Challenge.

The report is organised into four parts. The first offers an overview of global dynamics in an urban age, the second identifies the key themes addressed by the submissions for the award and the third focuses on the five winning proposals. The report concludes by offering a series of reflections on what the European Mayors Challenge tells us about some of the key issues facing city governments across Europe today, and what lessons might be drawn from the Challenge, worldwide.

Foreword **James Anderson**

Government Innovation Programme Lead,
Bloomberg Philanthropies

One of the many things that comes across powerfully in this LSE Cities report is the near universal need for local governments to adapt.

Whether a result of the continued fall-out of the economic crisis, changing demographics or the widening trust gap between citizens and their leaders, Europe's cities are today being asked to change what they do, change what they fund and change how they work.

It is against this backdrop that Bloomberg Philanthropies launched the European Mayors Challenge, a competition for bold ideas that solve major challenges and improve city life and have the potential to spread to other cities. The programme is a celebration of the tremendous creativity that exists within local governments, as well as a call to arms for cities to push further and faster to anticipate the changing needs and expectations of their citizens.

And push they did. In generating new approaches, cities utilised open innovation strategies that broadly engaged organisations, industry and individual citizens to define problems and co-create solutions. They thought strategically about building support for their innovations, developed robust metric and measurement plans, and took advantage of Europe's strong intra-city networks by leveraging the experience of other people in other places when considering new approaches. One of the notable (and inspiring) themes observed is that practically every solution was concerned with connecting people to each other, either through the institutions of local government or through the better use of public spaces.

We are grateful to have partnered with LSE Cities on the competition and this report. We benefited greatly from the rigorous analysis provided by LSE Cities' researchers and from the strategic guidance of its leadership.

The final pages of this report conclude that the Mayors Challenge "confirms that at a time of general disillusionment with systems of governance, local government has the capacity to be resilient and pro-active in ways that national governments and international institutions find difficult."

We couldn't agree more. In times of great change, that's a capacity we want to continue to elevate, celebrate and support.

An Urban Age

Cities are growing larger at an unprecedented rate, but the pattern of growth is unequally distributed across the surface of the globe. Europe and North America had their major growth spurt in the 19th century; Latin American and Japanese cities grew exponentially at the end of the 20th century. Over the next 15 years, Asia will see a dramatic expansion in urban populations, followed by sub-Saharan Africa (where income levels are still very low). At the same time, European and North American cities are adapting to different challenges caused by deindustrialisation, globalisation and – in some cases – shrinking urban populations.

Cities have always been based around the flow of people, goods and capital. The information age has accelerated the process of urbanisation, rather than reducing its pace. We know that over 50% of the world's people are urban dwellers. But together they punch well above their weight, generating about 80% of global Gross Domestic Product (GDP). Cities are the engines of the global economy and contribute significantly to poverty alleviation, but risk becoming seething cauldrons of social inequality. At the environmental level, cities are responsible for around 60% of global energy consumption and over 70% of global greenhouse gas emissions.

Whether they are growing or shrinking, cities and their governments have always shown resilience in finding new solutions, adapting quickly to a

50% of population is urban
80% of GDP is produced by cities
70% of energy is consumed by cities

fast-changing world. Some Asian cities are models of sustainable growth. Some North American cities are leading the field in environmental planning and economic regeneration. Certain Latin American cities in particular have demonstrated innovation by pioneering new transport and governance systems. European cities are responding to a variety of political, social and economic conditions that reflect a period of uneven growth and varying stability.

Across the globe, cities are reinventing models of urban governance and civic engagement that reflect the major environmental, social and economic challenges of our time. Bloomberg Philanthropies' Mayors Challenge has been designed to capture and encourage innovation in cities, starting with cities in the United States in 2012-2013 and moving to European cities in 2013-2014.

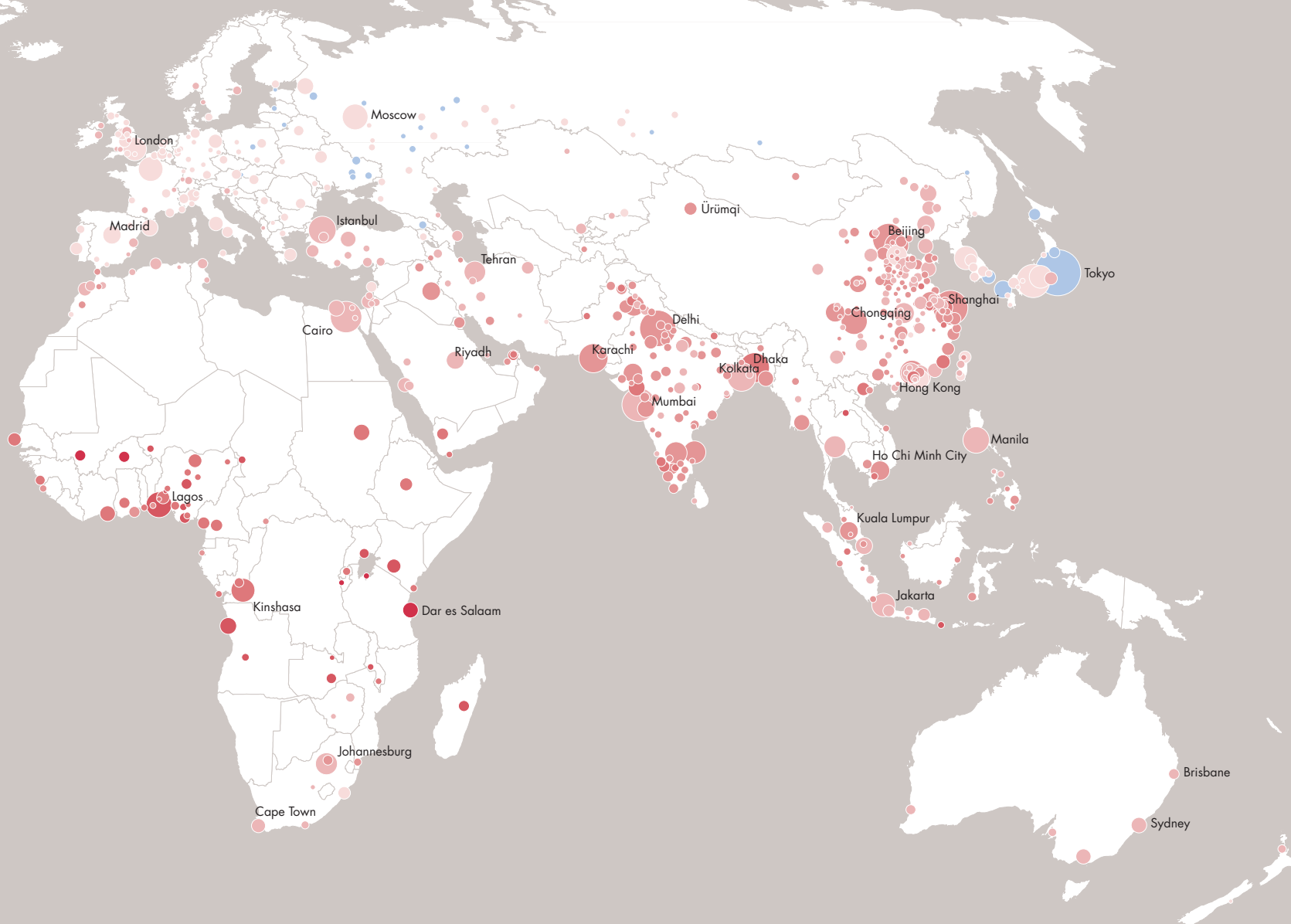


Patterns of global change

Population (2012)



Average annual population growth forecast 2012-2030 (%)



Europe An urban continent

A unique urban tradition

Bloomberg Philanthropies has focused its lens on a region of the world where the majority of cities have long and established histories. At different periods over the last 2,500 years, Athens, Rome, Venice, Istanbul, Vienna, Madrid and London were all centres of vast empires that stretched across the Continent and beyond. Europe also witnessed the consolidation of the city-state which for many centuries dominated the political and economic dynamics of the Continent – especially in Italy, Germany and the Netherlands – leaving a distinct imprint on the structure and identity of urban regions today.

Though united by tradition and geography, the recent past of European cities is a very chequered one. Two World Wars, the creation and gradual expansion of the European Union (EU) to cultivate unity, the collapse of the Berlin Wall only 25 years ago and the re-construction of post-Soviet economies in eastern Europe have all left their mark on the Continent in different ways. The 2008 global recession hit many European nations hard, and the ongoing Euro-Crisis can still be felt in many different regions.

Fragmented scenarios

While it is difficult to generalise, northern and western European countries – like Sweden, Denmark, the Netherlands, Britain and Germany – have stabilised and grown in confidence, while some southern and eastern European countries are dealing with weakening economies, high unemployment and shrinking populations. The entire Eurozone has been affected by globalisation and increased competition from Asia, requiring a process of political, economic and social restructuring which is currently in full swing. At the heart of this transformation is a debate on the importance of cities as economic engines, the autonomy of urban governance, the need for increased citizen participation in problem-solving and a growing awareness that European cities must

innovate and work together if they are not to be left behind.

The towns and cities of Europe reflect and often concentrate these national, regional and global trends. Many are still undergoing a process of deindustrialisation, leading to structural unemployment and increasing the need to invest in research and development to improve on low productivity levels, and also the need to grow new industries. This is the case across Europe. However, southern and eastern European nations tend to perform poorly in terms of regional entrepreneurship and competitiveness.

Economic performance

Cities, especially globally connected ones, frequently out-perform their national contexts for productivity, competitiveness, innovation and economic growth. Evidence from the EU suggests that cities with high R&D spend have reaped the benefits of such investment, in the form of sustained growth and higher levels of job creation. However, R&D spending is not the only driver: a flexible workforce matters too. Cities in states with consistently higher proficiency in mathematics, science and reading generally showed greater resilience against the economic crisis.

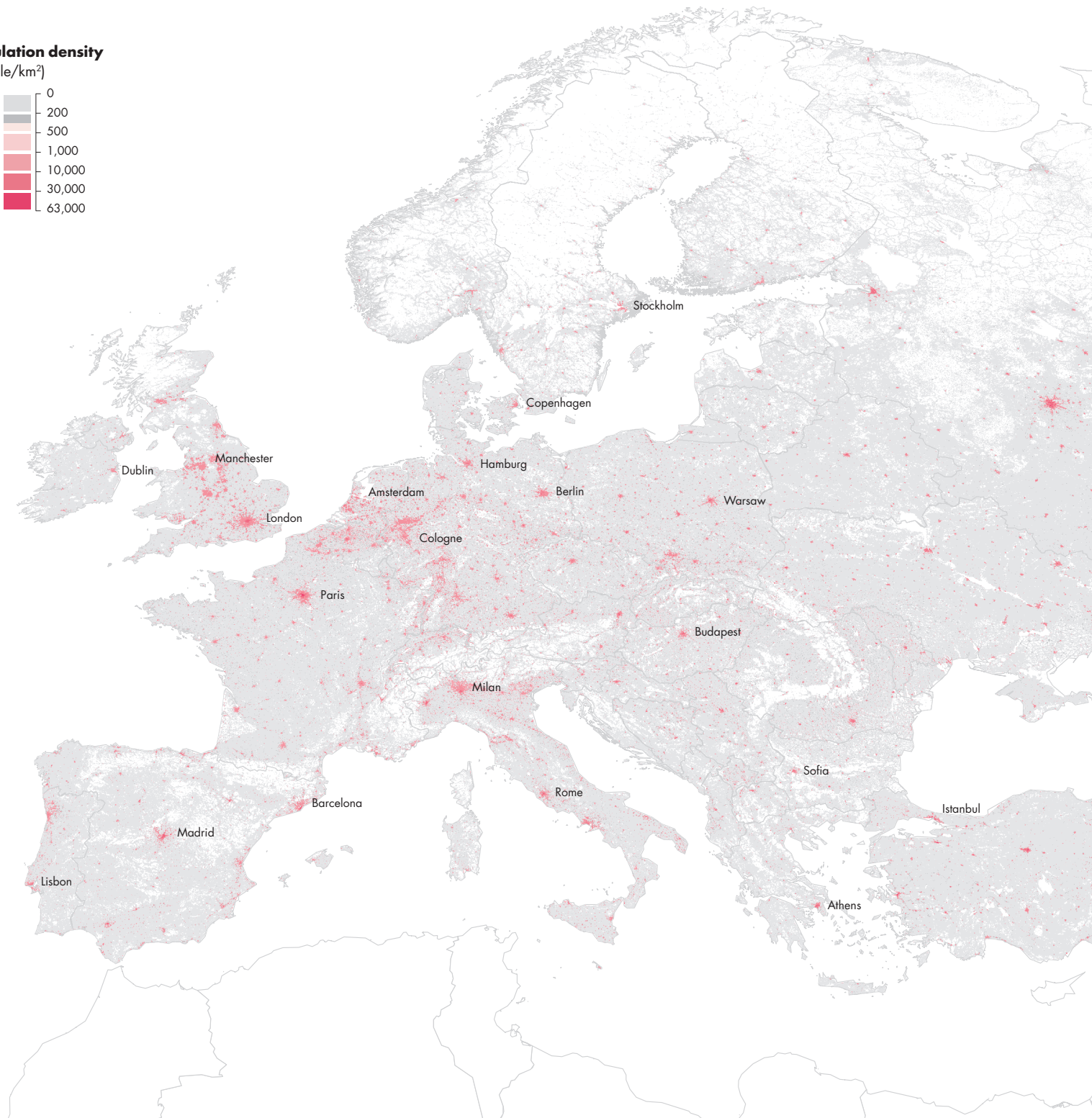
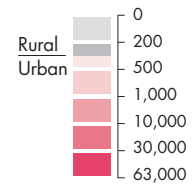
The 2008 global recession wiped out many of the gains made in previous decades and reversed a long trend of converging GDP. Unemployment rates within the EU, affecting in particular regions in southern Europe. Between 2008 and 2011, regional disparities widened and unemployment figures are now worse than in 2000; youth unemployment is particularly high, exceeding 60% in some southern European cities. This slow recovery also means that unemployment remains persistent in some areas, further aggravating the associated negative social impacts of the economic crisis.

Where Europe lives

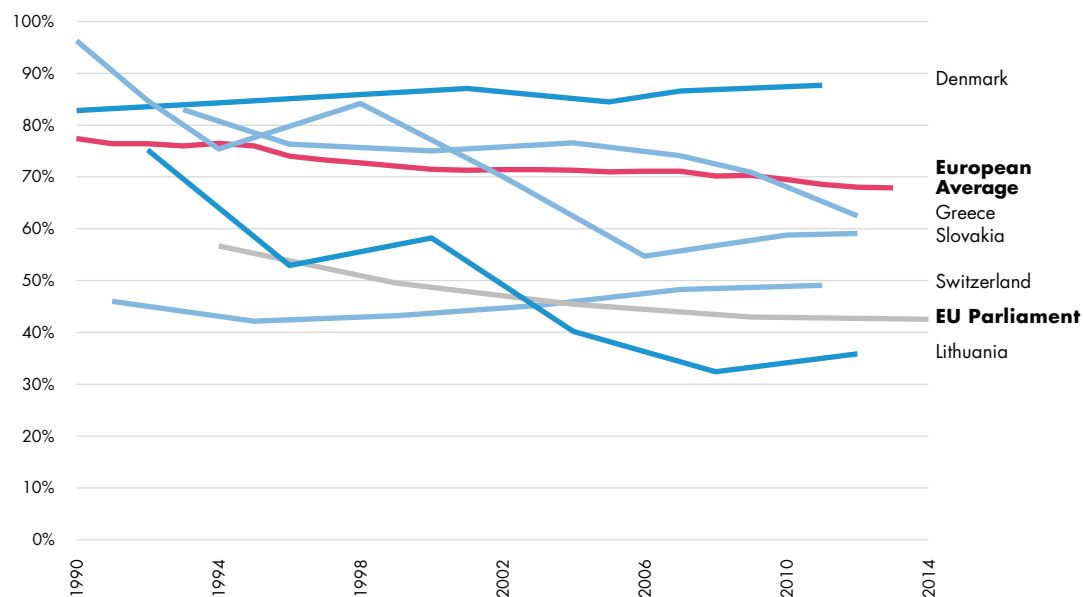
North and South America are the most urbanised continents on the globe, with more than 80% of people living in towns and cities. Europe also has a very high urbanisation level with nearly 73% of people living in towns and cities. The patterns of urbanisation within Europe vary significantly – with a large number of highly connected smaller cities and towns across parts of northern Italy, Germany and the Benelux countries reflecting the strong tradition of the city-state. Other areas, including Spain, France and Scandinavia are still dominated by large expanses of rural or unpopulated land. England and the Randstad region in Holland stand out as some of the densest urban areas in the world.

Population density

(people/km²)



Growing EU voter apathy: voter turnout in national elections 1990-2014



Lack of trust

Austerity measures have led to further job losses but have also forced citizens to take on more responsibility within their communities. This shift in dependency and loss of certainty has had a deep effect on many European urban dwellers who have had to learn to rely less on government and more on their own resources to survive the tough economic circumstances.

This has in turn led to an increased sense of mistrust in government institutions – at all levels across the EU – leading to low voter turn-outs, wide-spread disillusionment with conventional political parties and the growth of extremist groups that are effective in vocalising feelings of anger and vulnerability. However, local governments able to bridge this trust gap may be able to partner with citizens to solve many of the local challenges affecting European cities.

Ageing and welfare

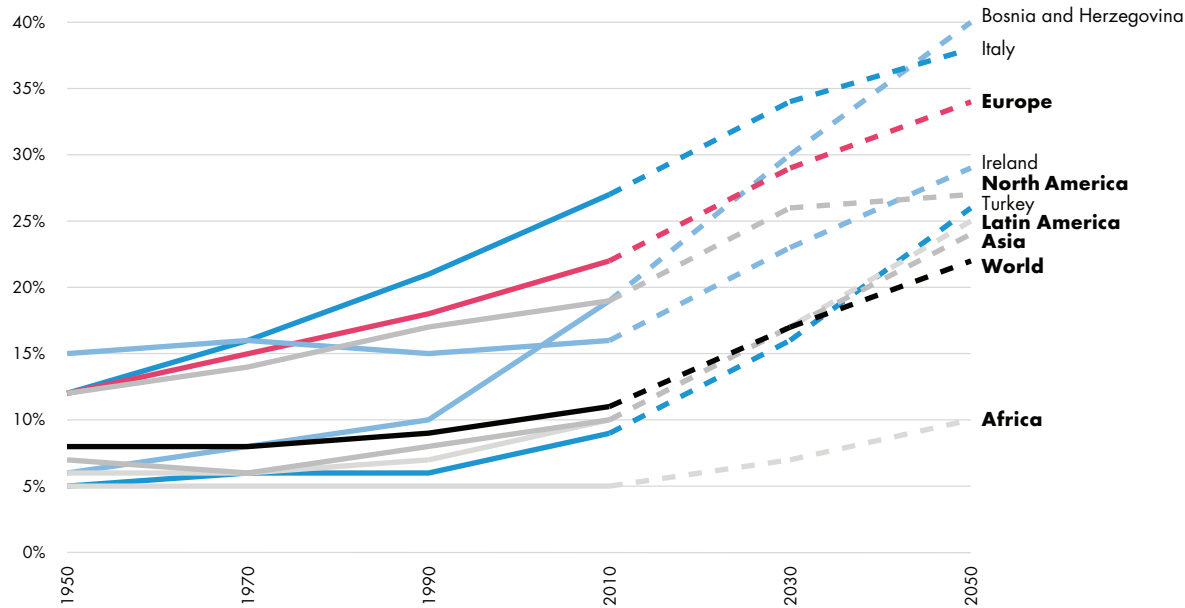
Most noticeably, Europeans are ageing. By 2030, a third of the population will be over 60 – a situation that is mirrored in Asian countries like Japan and South Korea. London and Istanbul, perhaps the most global of European cities, stand out for the high numbers of young people who make up the local population. Fertility rates are generally below the replacement rate, and an insufficient supply of migrant labour means the dependency ratio across Europe is on the rise. This places enormous strain on funding benefits, especially in countries that have established and expensive national health and welfare systems, including state pensions and free health care. Reduced tax revenues and longer life expectancies contribute to a highly volatile situation across European cities. As low fertility results in population shrinkage in many European countries, migration becomes the main source of population growth.

Health

Loneliness and social disconnection, traditionally associated only with old age, are on the rise. High unemployment has particularly affected youth, negatively impacting mental and physical health and increasing the burden on welfare budgets and the provision of health services. Another by-product of inactivity and reduced income – and poor levels of medical prevention – is the increase in obesity and diabetes amongst European urban citizens, fuelled by poor diet and a lack of exercise. While obesity increases the risk of diseases of the circulatory system, (the most common cause of death in the EU), diabetes has become the fourth most devastating killer disease. Roughly one in ten Europeans lives with diabetes and the Continent has the highest prevalence in the world of Type-1 diabetes in children, suggesting that already-burdened healthcare budgets will be further stretched in the future.

An ageing world: the projected percentage of citizens over 60 by 2050

Portugal and Bosnia and Herzegovina are projected to have the highest percentage of seniors in Europe. Several other countries in the European region have comparable projections.



Environment

The connection between environmental sustainability and quality of life is intrinsic to the DNA of many European cities. At one end of the scale, the compact, well-connected European city model – epitomised by Copenhagen, Stockholm, Vienna, Barcelona and, to a degree, London and Berlin – provides positive exemplars of how to manage the environment and promote economic growth. In these cities, public transport takes precedence over the car, urban sprawl is contained and a mix of uses is promoted as a way of reducing the environmental footprint and optimising urban vitality. At the other end of the scale, many post-industrial cities like Liverpool, Turin, Gdańsk and Bilbao have had to reinvent themselves to cope with the vicious cycle of job losses, shrinking populations and urban decay.

While levels of pollution in Europe are well below Asian, African and American standards, there has been a concerted effort – promoted by the EU at the policy level and championed by a number of green city leaders – to change the behavioural patterns of European urban citizens. Reducing car dependency and the need to find affordable, environmentally friendly techniques to retrofit old buildings remain significant challenges. Zero-carbon growth, collaborative consumption, renewable energy generation, district heating systems, congestion charging, bike-sharing and priority bus lanes are transforming the metabolism of some European cities, leading to a ‘decoupling’ of the trajectory of economic growth and energy consumption.

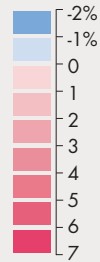
An unequal continent

The range of GDP per capita in Europe is so broad that cities in eastern Europe are far closer to many developing African and Asian cities than to those situated in western and northern Europe. Groningen in the Netherlands (€53,810); London in the UK (€54,600); Dublin in Ireland (€55,330); and Copenhagen in Denmark (€56,100) are significantly wealthier in per capita terms than Romania's Botoşani (€2,260) and Cluj-Napoca (€5,840), or Bulgaria's Burgas (€3,100), Stara Zagora (€3,500) and Varna (€3,610). Cities with GDP per capita over €50,000 are concentrated in northern and western Europe. Regionally, the relationship between city and country-level GDP growth varies. In the east, cities are growing slower than the comparatively high growth seen at national level, while in the south this trend is largely reversed. However, the general pattern for Europe overall is that cities either match or exceed national growth, with the clear outlier being Italy, where several individual cities are contracting more rapidly than the level shown by the state.

Eastern Europe continues to grow more quickly than the rest of the Continent despite the rate of growth having slowed since 2009. However, the relatively low base of these economies and the poor performance of many Mediterranean states mean Europe will continue to have significant regional disparities.

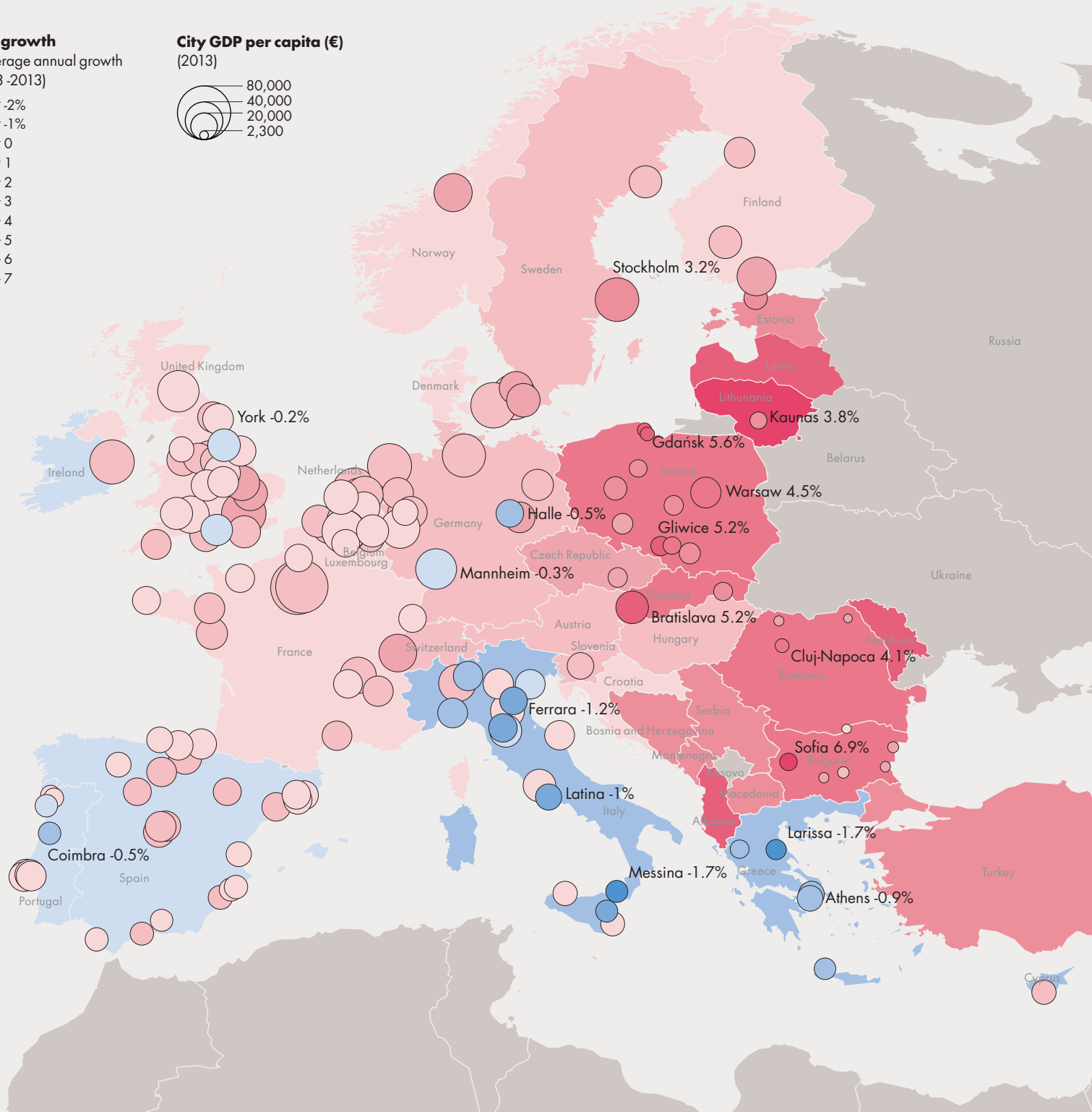
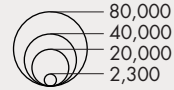
GDP growth

% average annual growth (2003-2013)



City GDP per capita (€)

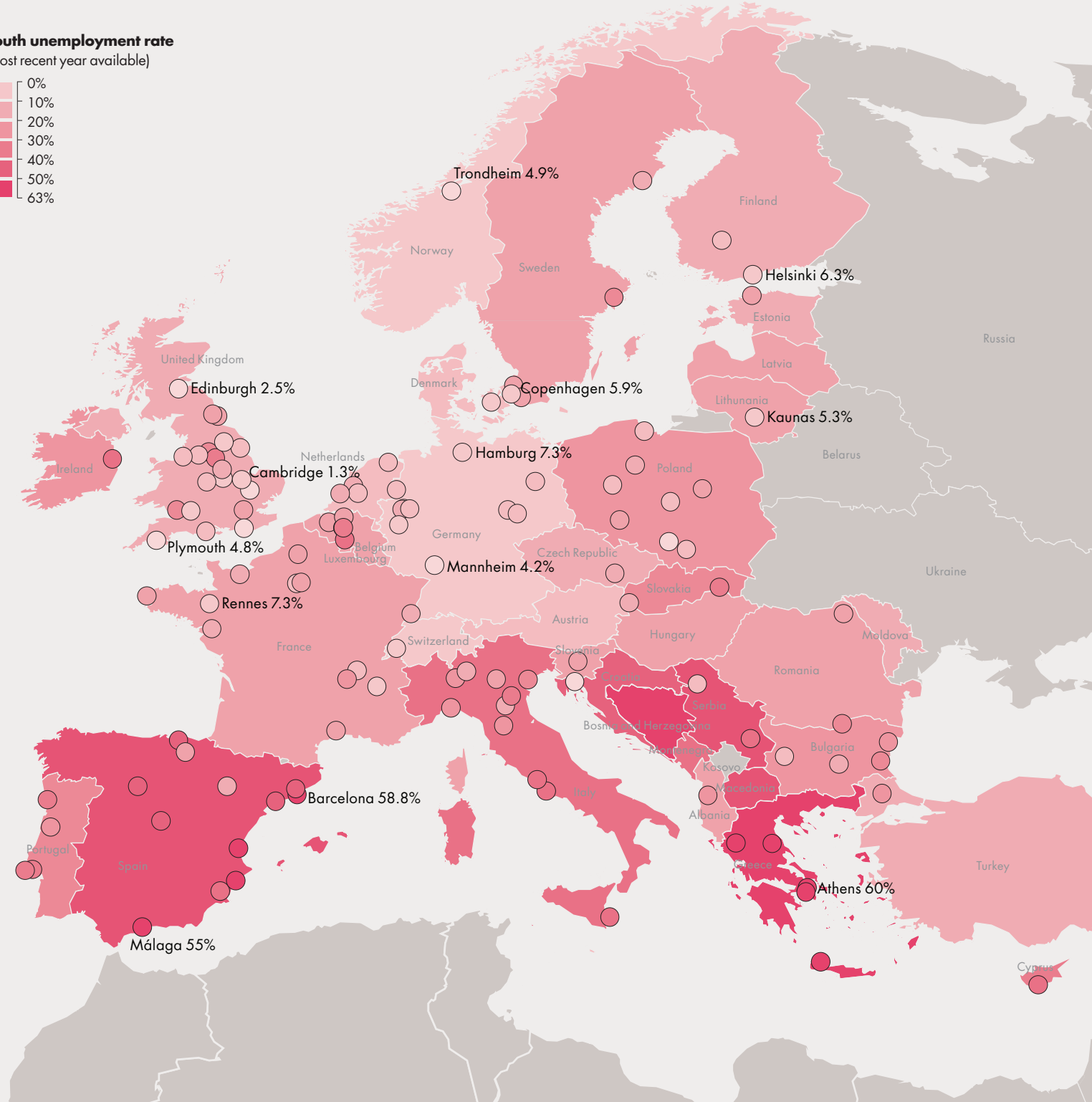
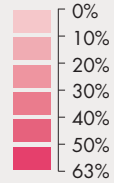
(2013)



Europe's lost labour potential

Nine in ten cities face higher youth unemployment than general unemployment, although overall youth unemployment varies significantly, even within individual countries. Southern states generally have the greatest difficulty integrating young adults into the labour market, although there are several examples where more advanced economies have consistently high figures. These include, Charleroi, Belgium (44%); Dublin, Ireland (43%); Schaerbeek, Belgium (38%); the UK cities of Sheffield (35%), Cardiff (33%) and Kirklees (30%); and Stockholm, Sweden (30%). None of these are as high as Athens, Greece (60%) and Barcelona, Spain (58%), and they also compare favourably to Rome, Italy; Limassol, Cyprus; Niš, Serbia; Lisbon, Portugal and Košice, Slovakia, which hover around 40%. As the region emerges from the financial crisis (and faces the challenge of sustaining welfare for Europe's ageing and shrinking working populations), absorbing young people into the workforce – many of whom have tertiary qualifications – becomes a key issue, with a pressing need for innovation at the local level. Nevertheless, some towns and cities with established university populations or highly developed apprenticeship schemes go against the trend of having higher youth unemployment.

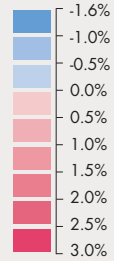
Youth unemployment rate
(most recent year available)



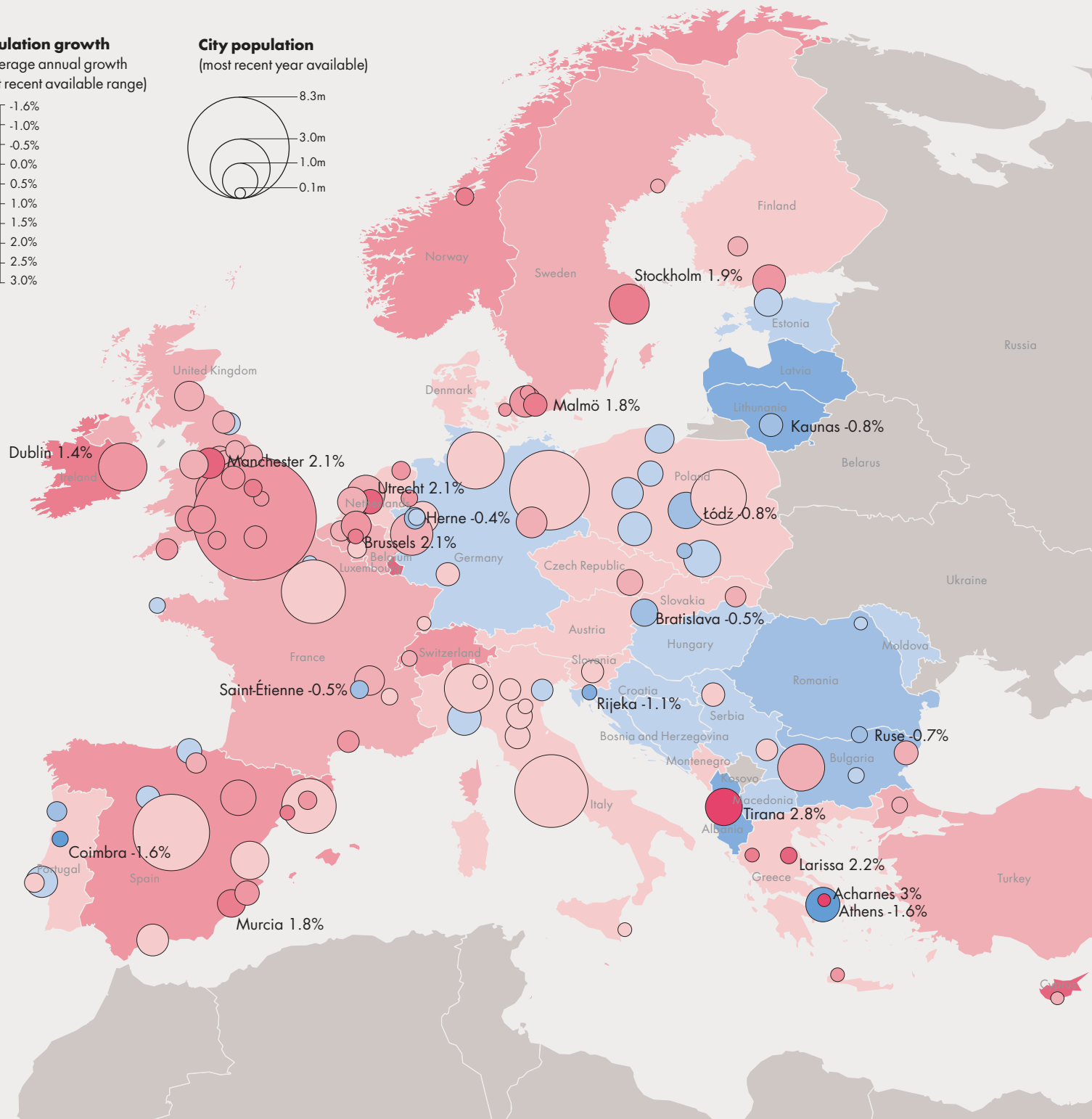
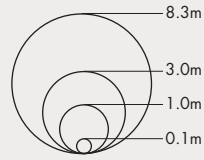
Growing on a borrowed population

On the whole, eastern European countries are experiencing markedly lower population growth than the rest of Europe even though their fertility rates are comparable. The outlier is Poland, which – despite relative economic success in the region and marginal population growth at the national level – is still experiencing decline in many of its bigger cities as residents migrate to opportunities in richer countries. However, citizens are not only being 'lost' to foreign states. In most countries, only smaller cities are shrinking – for example Brest, France; Sunderland, United Kingdom or Bilbao, Spain – suggesting that residents also leave for larger cities *within* their country. Athens, Greece – where recent economic shocks have led to reduced opportunities – is one of the few examples of a shrinking capital city. In contrast, Tirana, the neighbouring capital city of post-communist Albania, is growing rapidly despite general depopulation at country level. Acharnes, a suburban town adjoining Athens, is growing, highlighting how growth and decline can differ even at a local level. The European Union's overall fertility rate has been below the replacement rate of 2.1 live births per woman for several decades, and almost 2.4 million fewer babies were born in 2011 than in 1961. Since 2000, none of the countries highlighted above have achieved a replacement birth rate, swelling the proportion of older people and increasing the need for migration to support growth.

Population growth
% average annual growth
(most recent available range)



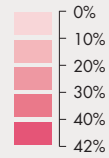
City population
(most recent year available)



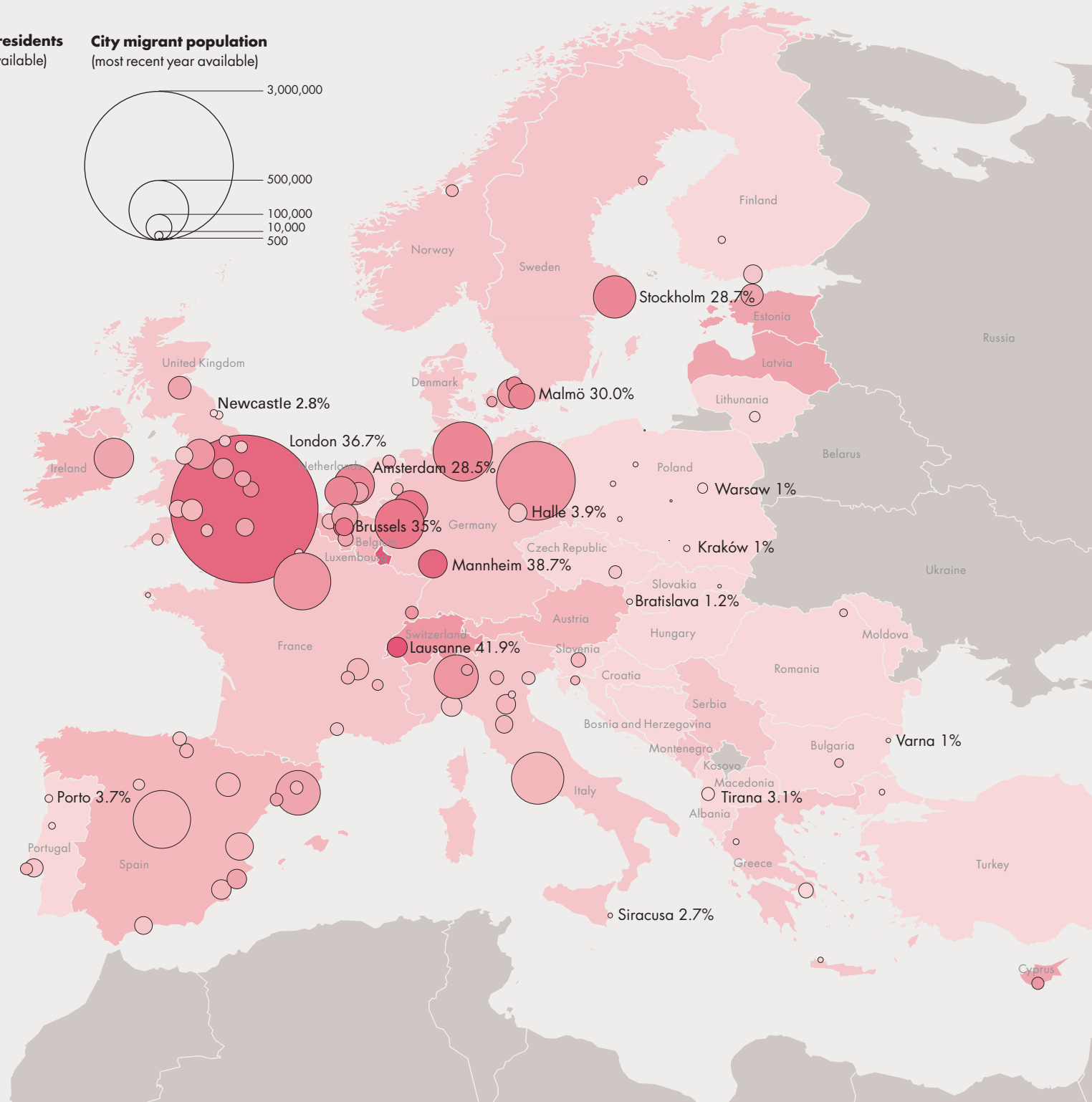
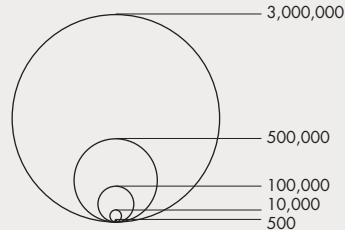
Migrating north-west

Migration is largely to the wealthier parts of the Continent, suggesting emigration is partly responsible for shrinking populations in the comparatively poorer cities of the east. Recession-induced increases in unemployment and youth unemployment rates in this region, particularly in the south-east of Europe, have further contributed to the trend. Germany's growing cities (within a shrinking country) are sustained partly by migration. The same impact is felt in several other western European cities. In London, United Kingdom; Lausanne, Switzerland and Mannheim, Germany foreign-born residents make up more than 40% of the population, providing increased opportunities for these cities to link to global markets. In eastern cities, the foreign born percentage of the population number does not exceed 5%. This means there is a more acute need to retain local talent, and perhaps even attract migrant talent to become more globally competitive. The percentage and scale of the foreign-born populations in western cities, and even as far north as Stockholm, Sweden also highlight how these cities have managed to better integrate into global population flows. London, Europe's most global city, has residents from almost every country on the planet.

% foreign-born residents
(most recent year available)



City migrant population
(most recent year available)



2014 European Mayors Challenge

It is into this multifaceted European context that Bloomberg Philanthropies' 2013-2014 European Mayors Challenge enters. It was designed to encourage cities to develop bold ideas that solve major problems and improve city life – and that could be shared with other cities. European cities are some of the most innovative in the world, routinely looked to by other global cities for inspiration. Yet with tighter budgets, higher citizen expectations and national gridlock, many city leaders must become more agile and resourceful in responding to local challenges. The Mayors Challenge encourages city leaders to do just that. Submissions for the award require a degree of backing and promotion from municipal leaders in order to qualify, ensuring political buy-in and deliverability.

The programme was especially timely for Europe; the 2008 crisis prompted an extensive process of rethinking urban governance throughout the region. The diverse range of proposals discussed

“The 2008 crisis prompted an extensive process of rethinking urban governance.”

in these pages demonstrate not only how local governments across Europe are developing new solutions to innovate out of the financial crisis – addressing large problems with less money – but also how they are responding to many social, environmental and economic concerns relevant to the region today.

Following the inaugural competition in the United States, the European Mayors Challenge was launched in September 2013 and was open to cities across Europe (not just the EU) with populations of at least 100,000 residents.* 155 cities from 28 countries responded to the call for submissions. From Amiens to Zaragoza, they collectively represent over 71 million Europeans, roughly 10% of the total population. 49% of the

submissions came from cities with populations of between 100,000 and 250,000 residents, 28% had populations between 250,000 and 500,000 residents, and 23% came from cities with more than 500,000 residents. The participation rate exceeded that of the Mayors Challenge in the US, with 26% of eligible cities submitting applications in Europe versus 24% in the US. Participating cities spanned the continent: 35% from southern Europe, 25% from western Europe, 19% from eastern Europe, 15% from the British Isles and 6% from northern Europe. 19 European capital cities submitted ideas to the competition, from Stockholm to Athens, Paris to Warsaw.

21 cities from 11 countries were shortlisted in April 2014, and five winners, including the winner of the grand prize of €5 million, were announced in September 2014. An independent jury of 13 international experts evaluated the proposals against the four key criteria: vision, potential for impact, quality of implementation plan and potential for transferring the scheme to other cities.

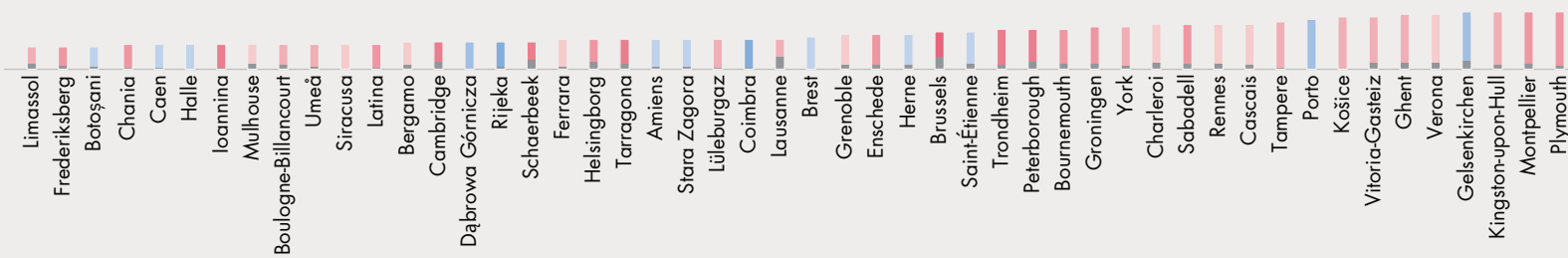
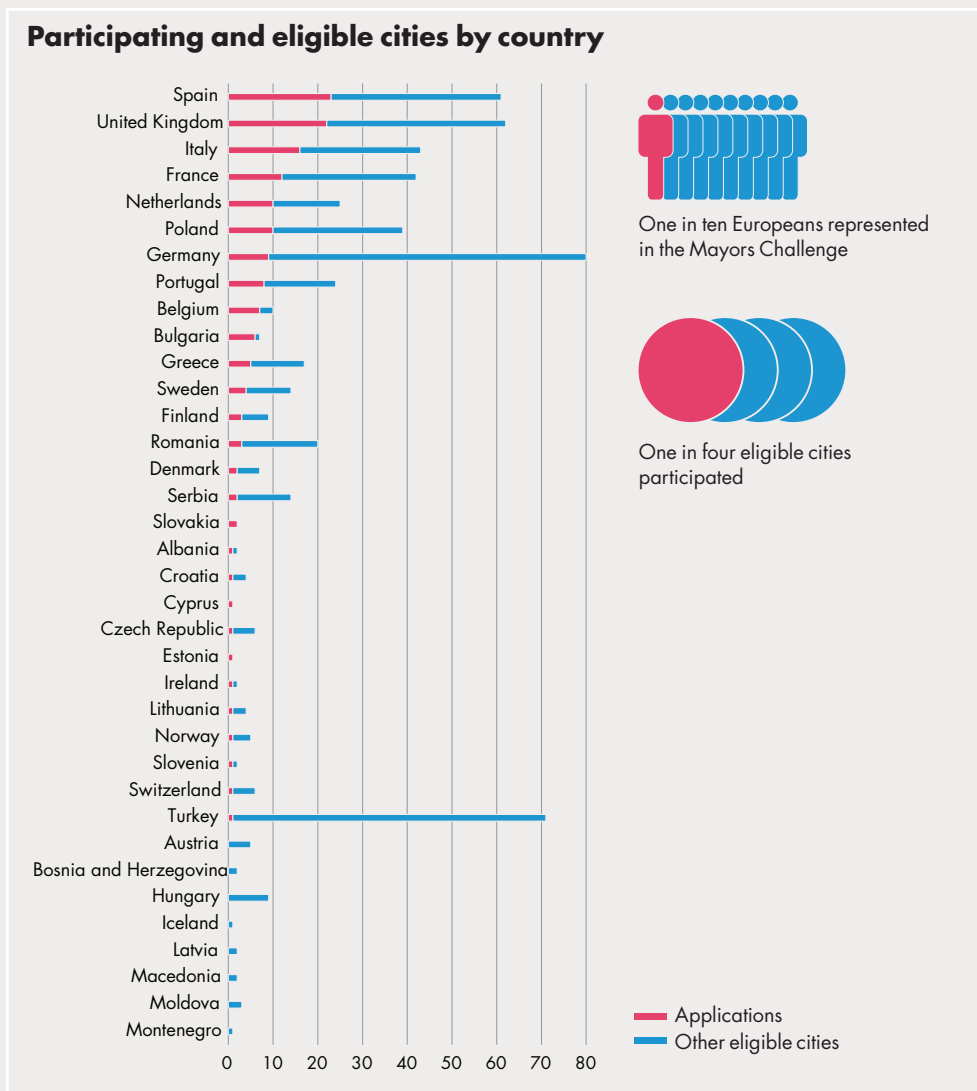
When considering the full range of submissions to the European Mayors Challenge, a number of key themes, identified in this report, begin to emerge. This report also focuses on the 21 cities that were invited to develop their initial ideas further. These shortlisted cities, highlighted on pages 22-31, took part in an Ideas Camp organised by Bloomberg Philanthropies in Berlin in July 2014, in an effort to refine their ideas. The proposals of the five winning cities are described on pages 34-43.

*Five of the countries represented by the applicants are not part of the European Union (EU): Norway and Switzerland are both closely associated with the EU; Serbia, Albania and Turkey are candidate countries to join the EU. For more details on the Mayors Challenge, please refer to page 47.

Participating cities

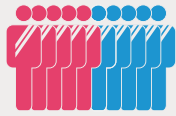
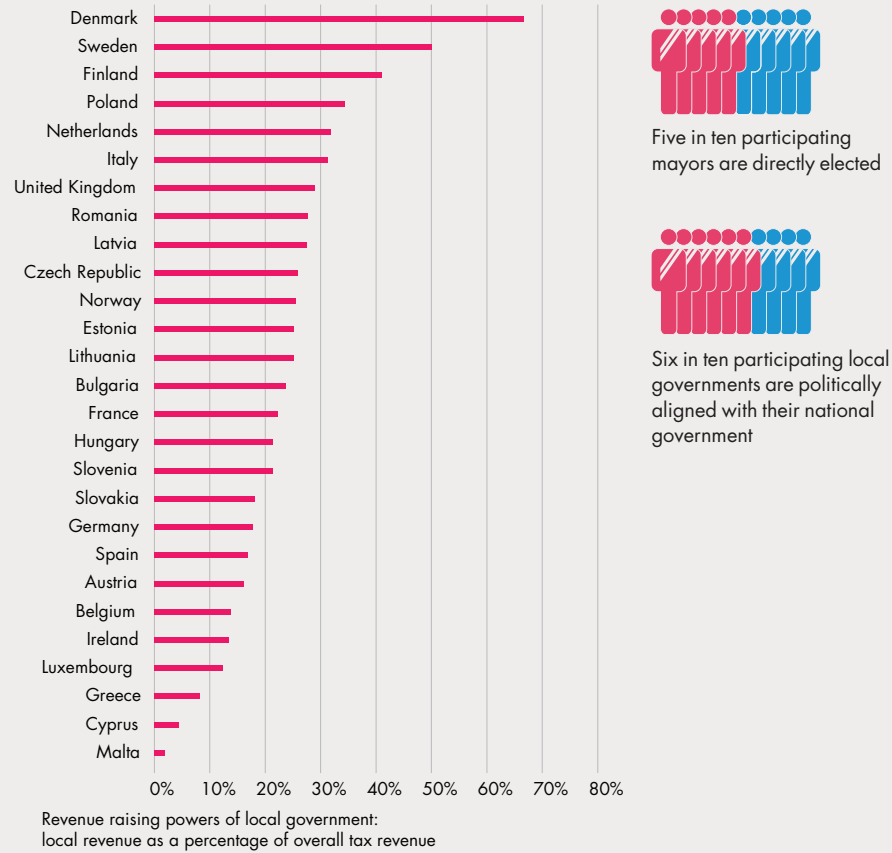


Participation in the Mayors Challenge

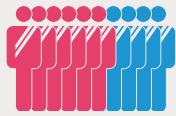


Devolution

Pressure to shift fiscal and political power from state to lower tiers of government, in order to strengthen local democracy, is increasing. Cities in turn are under pressure to provide citizens with increased opportunities for participation in local governance. These trends can result in conflicting policies that reflect divergent local, regional and state aspirations. Directly elected mayors, especially in large cities, may have a significant political mandate, providing greater legitimacy to their decisions.



Five in ten participating mayors are directly elected

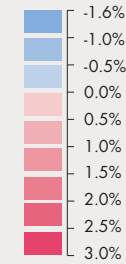


Six in ten participating local governments are politically aligned with their national government

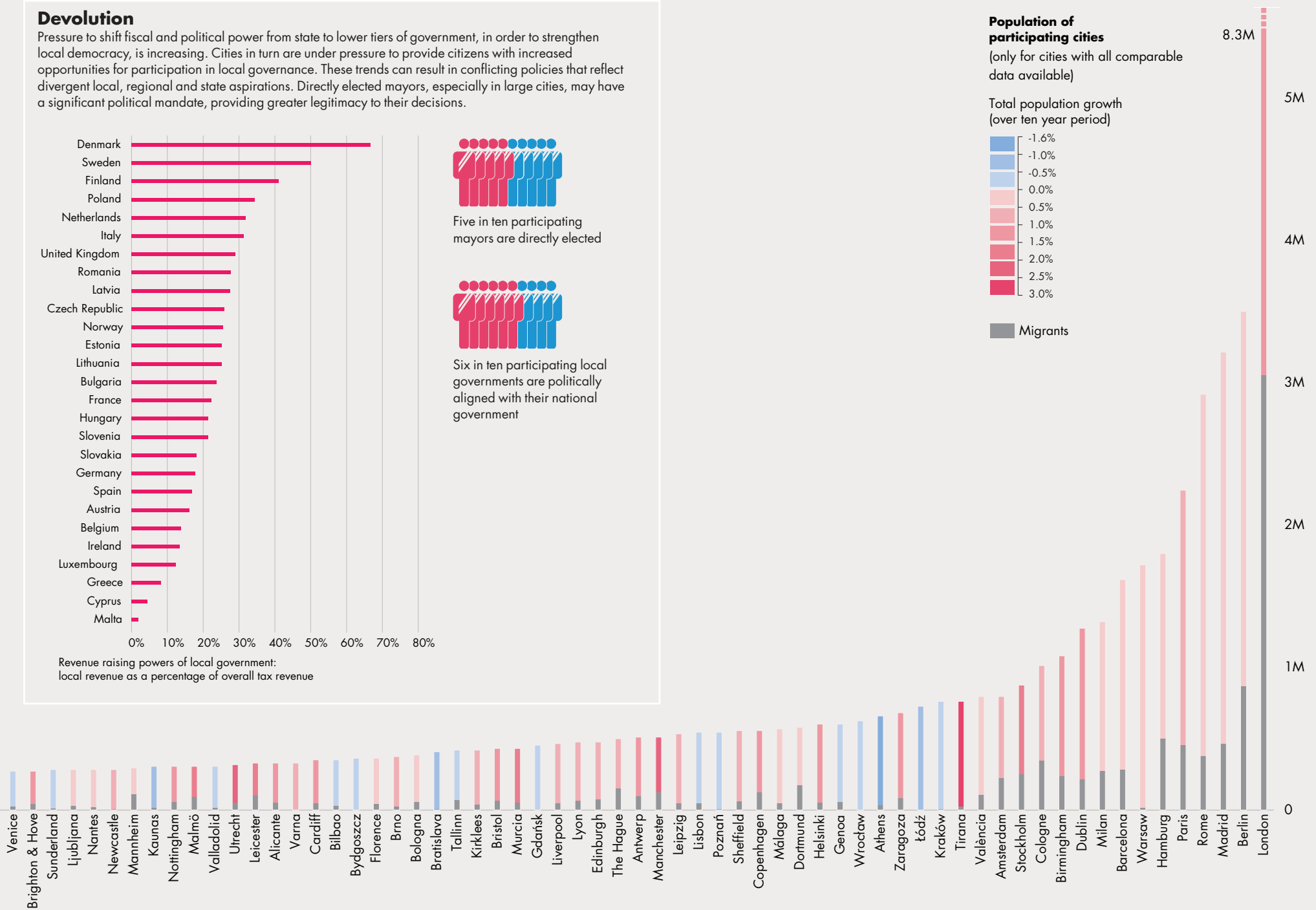
Population of participating cities

(only for cities with all comparable data available)

Total population growth (over ten year period)



Migrants



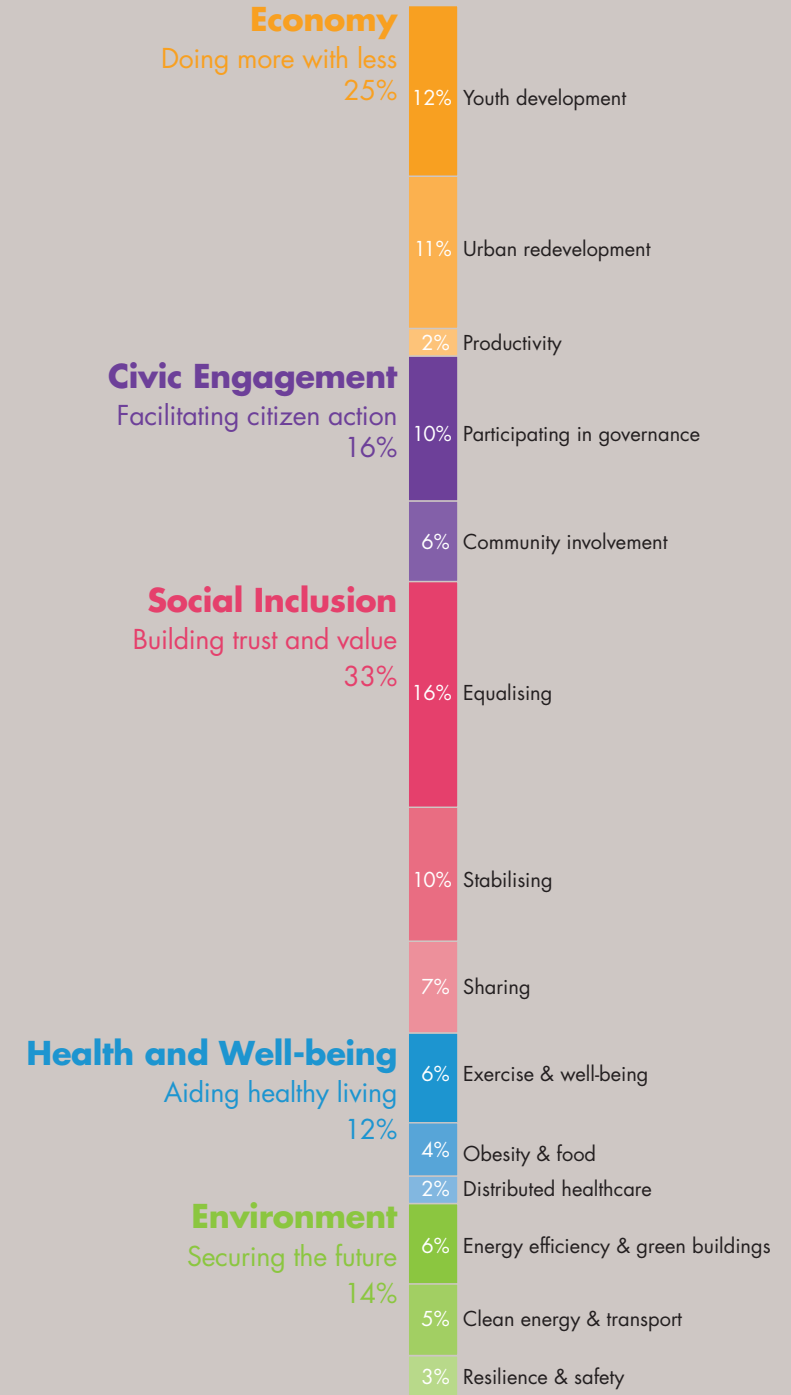
Five Core Themes

The submissions from 155 cities demonstrated a predictably wide spectrum of responses to the call for innovation in urban governance aimed at solving local challenges and improving quality of life. In order to better understand the key issues addressed by each city and to support the process of evaluation, LSE Cities identified five core themes that captured the concerns of European citizens and local governments in this self-selected group of cities. These themes are: the economy; civic engagement; social inclusion; health and well-being; and the environment. The themes provide important insights into the perspectives of the leaders who participated in the European

“Practically every solution was concerned with connecting people to each other.”

Mayors Challenge, but it is important to remember that they do not represent the full range of urban themes prioritised across Europe’s towns and cities.

Across the broad range of submissions, what stands out is that practically every solution was concerned with connecting people to each other – either through the institutions of local government or by the (better) use of urban spaces. The issue of connection becomes particularly acute when the individuals who are at the heart of the significant processes of urban change and growth feel left behind or isolated. This applies equally to young or older citizens who lack jobs or a sense of purpose, and to new migrant communities who have not yet settled in their host environments. The quest for improved communication, the simplification of obtuse bureaucratic language, and greater openness and transparency of municipal institutions cut across many of the initiatives, with the potential of new technology, apps and gamification techniques playing a key role in forming new alliances and connections across many layers of European urban society.



Participating cities

- Economy
- Civic Engagement
- Social Inclusion
- Health and Well-being
- Environment



Economy

Doing more with less

One in five proposals to the European Mayors Challenge identified youth or youth unemployment as key areas of concern for the city administration. A significant number of cities suggested school-level training to prepare students for employment and connect them to the future job market (including Dąbrowa Górnicza, Poland and Rijeka, Croatia). Other cities, including Newcastle, United Kingdom and Herne, Germany proposed training opportunities in deprived or migrant areas. Košice, Slovakia wanted to promote access to the local job market in an effort to reverse the brain drain to western Europe. The challenges of deindustrialisation led the famous port city of Plymouth, United Kingdom to propose an app to help youths from families who had worked in the (now redundant) docks for generations access the broader labour market, while Kaunas, Lithuania planned to include young people in generating solutions.

In general, these proposals aimed to provide support where national government and EU policies and programmes have not sufficiently tackled youth unemployment in cities. These innovative approaches largely focused on providing city-specific skills that are not supplied by the national curriculum. Many suggested reducing the structural skills deficit (retaining and growing talent) by providing training, entrepreneurship advice, and language and local-market specific coaching. There was a strong focus on the need to intervene early in the education process, before it's too late. Rather than seeing this as a post-schooling issue, many cities proposed creative add-ons to traditional education by drawing on local resources to support young people throughout their formative years. A perceived 'generation gap' was also defined as a key concern by many cities; programmes to link the young and old looked to provide potential solutions to this, as did approaches using new technologies to 'speak the language' of young people.

A number of submissions provided evidence that the economic crisis may not have left Europe yet,

given the emphasis on re-using vacant lots of empty urban land – a classic indicator of pervasive urban dereliction. Adapting space for social and economic benefit featured regularly across the proposals, demonstrating a growing recognition by European cities that smart and sustainable urban planning can help to solve a range of structural issues simultaneously. Prato, Italy proposed developing an urban park to integrate an immigrant enclave. Amiens, France suggested giving new life to abandoned public spaces by introducing shared, self-navigated river transport; Zaragoza, Spain proposed to negotiate bulk supplier contracts to regenerate entire neighbourhoods, while participatory design was seen as a tool to involve unemployed youth in redeveloping a deprived suburb of Tampere, Finland.

Proposals to temporarily use abandoned buildings or vacant lots, or programmes to re-invigorate post-industrial or post-Soviet neighbourhoods with new activities all demonstrate

“The proposals indicate a growing recognition amongst municipal governments that more needs to be done locally to foster economic prosperity through the efficient management of resources, people and time.”

a growing appetite among city administrations to invest in sustainable initiatives that bolster the economy, improve connectivity and keep the city healthy.

While some cities put forward projects that prioritised the need to participate meaningfully in a globally competitive world, others specifically targeted productivity within the city. Liège, Belgium and Maastricht, the Netherlands both

identified the negative impact of the lack of foreign language skills on their economies, and proposed teaching native populations foreign languages to increase global competitiveness. Gliwice, Poland proposed using mathematical modelling to reorganise public and private transport resources to efficiently manage capacity and routes on demand.

Across the board, the proposals indicate a growing recognition amongst municipal governments that more needs to be done locally to foster economic prosperity through the efficient management of resources, people and time. In this regard, cities in Europe are taking matters into their own hands in areas that were traditionally the responsibility of regional and national government. In an era of reduced budgets and increased responsibility, innovative responses are enabling cities to do more with less.

Finalist proposals

Bologna, Italy

With a youth unemployment rate of 17.5%, Bologna identified the rise in the number of NEETs (Young People Not in Education, Employment or Training) as one of the core challenges to its economic revitalisation. #Angels4Bologna is a mentorship scheme designed to increase the capacity of school-going students (aged 8-16) to enter the job market or become entrepreneurs. Around 3,500 students would receive extra-curricular training from a broad range of private and public experts to target a structural skills mismatch, but also to grow relationships with people in industry. The initiative shows how local authorities can respond to the need to develop specific local skills, supplementing knowledge and skills acquired through the national education curriculum.



Amsterdam, the Netherlands

Amsterdam has a growing population of educated youths who are unable to find work despite their skills being in demand. Play2Work Europe aims to positively disrupt traditional digital recruitment by providing a platform that measures important qualities outside of work experience and knowledge – including character, talent and ambition – through gaming. A further innovation is the use of more sophisticated gaming to develop skills. Job seekers would then be linked to opportunities that match their qualifications and character, reducing the potential for job seeker fatigue and helping the city reduce its 15.3% youth unemployment rate. The city hopes to expand the platform into a Europe-wide network to tap into a larger job market and encourage greater employment mobility for young job entrants.

Stara Zagora, Bulgaria

Like other eastern European cities, Stara Zagora has the challenge of retaining talented youth in a global market. Over 90% of Bulgarian graduates who emigrate never return home due to a lack of local employment opportunities and high youth unemployment (nearly 19%). I Succeeded in My Town! falls into the broad category of nurturing creative cities to retain, attract and grow local talent. The city plans to provide financial support, directly and via a crowd-sourced platform, to local start-ups to not only reverse the youth brain drain, but also to incentivise young entrepreneurs to locate businesses in Stara Zagora. The idea envisages a network that would link younger people to local employment opportunities. For an eastern European nation, this proposal is novel in bringing together the municipality, private sector and research centres to support a city-wide entrepreneurship competition and provide funding and start-up support at this scale.

Florence, Italy

Despite its unique heritage and touristic appeal, Florence has high vacancy rates in historic areas around its city centre, and a shrinking artisanal industry. The Third Millennium Urban Workshop is an idea to map vacant spaces across the city in order to connect artisans to landlords. The city government plans to modify local planning and employment regulations to facilitate and encourage new business activity. 200 aspiring entrepreneurs would receive small business support services and €15,000 start-up vouchers to improve work-spaces and repair buildings. Florence's proposal builds on similar initiatives elsewhere, but its scale is ambitious, and it stands out for being municipality-driven rather than led by an NGO or private organisation.

Cardiff, United Kingdom

The Welsh capital's performance across a range of economic measures tends to be below average for the UK. Push Our Productivity aims to increase the city's productive capacity by 10%, and constitutes a major effort to improve the skills of residents by training community connectors and their networks to identify small improvements, and then implement them. Most programmes to increase productivity are led by the private sector or focus only on a very specific demographic; the innovation of Cardiff's proposal is to improve productivity in the entire population through a comprehensive city-wide approach based on citizens' voluntary participation. It is expected to add €1.3 billion to the local economy, while increasing educational and health outcomes based on the concept of 'aggregation of marginal gains'.

Civic Engagement Facilitating citizen action

As the layer of government closest to citizens, city authorities are best positioned to build partnerships and encourage greater involvement in improving the quality of life in cities. Cities are investing in this opportunity. At the same time, civil society has played an increasingly important role in co-creating and implementing solutions that form part of a growing movement of citizen engagement across Europe. Many proposals reflect this wider movement, with novel ideas to give citizens and residents the tools to collaborate more effectively with each other and with government to strengthen local democracy, and also to unlock latent citizen capacity as a resource for solving city problems. Despite very different socio-economic contexts, Ruse, Bulgaria; Gdańsk, Poland and Oulu, Finland proposed using smartphone applications to enable citizens to vote on projects or propose solutions that could then be voted on, while Athens, Greece aimed to encourage a volunteer culture to reform local government from the bottom up. The Hague, the Netherlands suggested ways of allowing citizens to allocate taxes by direct voting, while Berlin, Germany and Wrocław, Poland considered using gamification to encourage citizens to invest in democratic opportunities. Milan, Italy looked at incorporating public input to improve public services, while Ghent, Belgium focused on co-creation projects between citizens and local government. Sponsoring start-ups to solve city problems in València, Spain and Messina, Italy were suggested as ways of bringing organisations and citizens closer to local government. Umeå, Sweden proposed using open data to increase the potential of citizens and NGOs to participate in areas of government, while Dublin, Ireland and Peterborough, United Kingdom sought to provide infrastructure to enable participation. An approach that went across municipal borders in Catania, Italy imagined effectively linking to neighbouring towns to share solutions and resources.

A significant proportion of cities required some form of resident participation to successfully

complete city projects. Several ideas focused specifically on how to galvanise citizens to take responsibility for projects normally in the domain of local government. These tended to be localised efforts to beautify the area, improve community safety or support local voices. Genoa, Italy developed proposals to use community brainpower to find new functions for the former port and heavy industrial areas with the aim of retaining young residents in the city, while Montpellier, France

“Resident participation is necessary to successfully deliver ambitious city projects, involving residents to reduce costs, improving user experience and creating an increased sense of public ownership.”

planned to use public garden improvements as a way of integrating more young people into the city’s social life. Collaboration projects like the municipal WebTV proposed by Botoşani, Romania were designed to increase citizen input in local politics, and Novi Sad, Serbia investigated the self-digitising of historical materials to promote resident awareness and the preservation of local culture.

These examples confirm the growing recognition that resident participation is necessary to successfully deliver ambitious city projects, at the same time as capitalising on local resources, involving residents to reduce costs, improving user experience and creating an increased sense of public ownership of spaces and projects.

Finalist proposals

Gdańsk, Poland

Gdańsk is trying to improve public trust and involvement in local government and community projects. Democracy Accelerator is a website that will allow citizens to submit ideas for enhancing the city. It envisages training assistance, which may include offers of financial support or volunteered time, to increase the strength of proposals before allowing the public to further develop projects and ultimately to vote on their inclusion in the city budget. As an example of co-governance, this project would require the city council to vote on the projects proposed by citizens and subsequently work with them to implement the most popular ideas. City employees would also receive training to better engage with citizens to help successfully implement promising solutions.

The Hague, the Netherlands

The Hague is keen to reverse growing apathy towards government and has suggested Citizens in Action – Democracy 3.0 as a tool to give citizens power over the allocation of 2-3% of local taxes by allowing citizen proposals to be subject to vote. Unlike an individual tax break, this idea would encourage citizens to engage with each other to influence how their city develops. Additional revenue could be generated through crowd-funding or crowd-sourcing, further encouraging ownership and collaboration. The capacity to implement this project is supported by DIGID (Digital Identity), which helps identify Dutch citizens on the Internet and is mandatory for electronic tax returns, highlighting how local governance innovation may require national support and infrastructure.



York, United Kingdom

York believes a lack of involvement and mistrust of local government stems from residents' perceptions that they are not empowered to partake in addressing the issues faced by the city. GeniUS! Right to Solve proposes to address this by enabling citizens to play a pro-active role in identifying and solving city problems. Procurement would also be opened up, allowing citizens to co-create solutions. Training would further increase the potential for citizens to engage with the platform and the government. Austerity measures have significantly reduced the council's budget, increasing the challenge of financing city projects. Apart from facilitating a more direct council-citizen relationship to reverse dependency, this scheme aims to speed up and reduce the cost of procurement.

Sofia, Bulgaria

The city government of Sofia is keen to bring colour and beauty to the large-scale post-World War II residential blocks that define its poor quality public spaces. DIY Sofia would encourage residents to take ownership of these efforts by mobilising them to identify need and then to improve areas. Use of a van equipped with tools for the community to use to implement civic beautification projects would be supported by access to artists and experts. The innovation aims to affect how people relate to their spaces and to each other, reducing urban isolation, increasing communication and trust between residents and the municipality, and improving the urban environment for the community. This would be achieved partly by collaborating with existing local initiatives, like neighbourhood associations and community centres, and by using events to redefine public space.

Brno, Czech Republic

Brno wants to increase real and perceived safety levels in its large-scale housing estates by transforming their role to promote social cohesion and inclusivity of neighbourhoods across the city. This bottom-up crime prevention approach is designed to train local residents living on at-risk estates, extending community policing initiatives found elsewhere. Systematically training concierges who are already embedded in local communities to more capably respond to and manage risks sets up the opportunity for this Safe Address programme to rebrand the community in a way that could result in a decrease in insurance premiums while increasing the desirability of the area. Concierges who are familiar with the neighbourhood are more likely to properly interpret risk, increasing their effectiveness.

Social Inclusion

Building trust and value

Amongst all 155 submissions, the most pervasive ambition was to increase the capacity of individuals or communities that are socially excluded to participate in society at the same level as everyone else. These innovations generally target ‘at-risk’ groups – for example, elderly citizens, individuals suffering from mental health disorders, high accessibility needs or loneliness – to encourage them to remain an active part of society. Projects range from balancing resources like housing, energy or dental care, to re-habilitating former drug users, integrating migrants or staging able-bodied and disabled sports events. These initiatives suggest that local governments in Europe have recognised the need to reduce the negative social and economic impact of inequality and exclusion in order to create strong and resilient communities. National governments are not well-equipped to respond to these, often complex, local challenges. City governments, however, are trying to turn areas of weakness into strengths by building connections to alienated groups and isolated individuals.

Utrecht, the Netherlands recognised that foreign language speakers from migrant communities face a range of prejudices, and proposed measures to promote language diversity as a valuable resource, while Varna, Bulgaria suggested introducing life-long learning opportunities. Valladolid, Spain suggested that greater inclusivity might be promoted by crowd-sourcing interpreters to make public texts more accessible, while Braga, Portugal aimed to reduce isolation and increase employability for residents with dental conditions by providing free dental care. To reduce the disadvantages to children from deprived homes with minimal adult supervision, Mannheim, Germany proposed ‘smart bags’ containing everything required to meaningfully participate at school. Cluj-Napoca, Romania proposed to make public spaces feel safer for children to increase accessibility. Beyond school, Malmö, Sweden planned to target inequalities in health – life expectancy can differ by up to 6.5 years across the city. Warsaw, Poland wanted to

make cities more accessible to blind residents, while Barcelona, Spain sought to strengthen connections both within and to their ageing population.

Reflecting the general trend of an ageing Europe, the European Mayors Challenge has provided concrete evidence that municipal governments have deep concerns for the well-being of large elderly populations. Łódź, Poland and Sintra, Portugal came up with fresh ideas on how to use retired residents’ skills to train younger people. Sunderland, United Kingdom co-created new products that enable seniors to retain an independent lifestyle, and Helsingborg, Sweden developed ways of keeping its elders active and

“Local governments have recognised the need to reduce inequality and exclusion in order to create strong and resilient communities.”

involved in the community. Gelsenkirchen, Germany imagined neighbourhood-level connectors, residents who would actively provide links between the young and the old, and to immigrant communities. Amersfoort, the Netherlands and Liverpool, United Kingdom suggested using technology to connect people struggling with loneliness, while Cascais, Portugal proposed that previously employed people could be easily re-integrated into the job market by using an app that would keep them socially active with daily tasks.

Several cities proposed ideas based on the emerging concept of the collaborative or sharing economy, where the city provides a platform or network for a range of services or resources that can be shared. This marks a societal shift away from individual ownership and towards a shared model of consumption. These developments have been facilitated by the rise of the Internet and mobile

technologies, which make it easier for people to buy, trade, rent, share or simply give away goods and services. While numerous initiatives are associated with transport-share schemes, many others focus on the sharing of social capital to encourage collaboration, or even on making city assets available to the public when not in use. For example, Latina, Italy; Sabadell, Spain and Paris, France developed schemes to share electric bicycles and electric vehicles, while Venice, Italy focused on sharing electric boats. Kirklees, United Kingdom conceived a platform to broadly share municipal and private resources, while Copenhagen, Denmark and Antwerp, Belgium suggested investing in open data systems that would provide access to information that could improve the development of city services.



Health and Well-being Aiding healthy living

Cities across Europe are increasingly concerned that the health and well-being of their residents does not live up to what might fairly be expected of one of the most economically advanced regions of the world. A number of proposals focused on promoting improvements in physical and mental health to enable a better quality of life and – at the same time – reduce healthcare costs and increase productivity.

Cities like Saint-Étienne, France wanted to stimulate demand for exercise by installing infrastructure to support more active lifestyles. Sheffield, United Kingdom proposed distributing free activity-monitoring devices and running mass events with prizes to encourage walking and social cohesion. Lyon, France planned to provide personalised walking routes via a website, while Larissa, Greece proposed using NFC (near-field

“Improvements in physical and mental health enable a better quality of life, reduce healthcare costs and increase productivity.”

communication) technology to track and develop better walking routes. Brighton & Hove, United Kingdom even suggested a smartphone application that could be used to avoid mental health problems by encouraging positive behavioural changes in at-risk people. A slightly different approach to improving happiness was Limassol, Cyprus’s Ministry of Laughter, a dedicated department that would increase well-being by helping people to laugh more.

Prevailing concerns about obesity, increasing levels of diabetes and a lack of access to healthy food is reflected in a series of proposals for grow-your-own schemes and partnerships with local farms to increase access to affordable and healthy food. Programmes often featured an educational component that would increase the uptake of

healthy menus or improved eating habits. Coimbra, Portugal planned to teach children how to eat well in social, family-style environments, while Gdynia, Poland wanted to use experimental gardens to help children develop a taste for fresh produce. Other ideas to promote the benefits of a healthy diet were put forward by San Sebastián, Spain and Leicester, United Kingdom, which suggested ways of tackling food security through local growing which – as the plans put forward by Alicante, Spain confirmed – could help grow the local economy.

Several cities proposed measures that would focus on the requirements of individuals with special needs. This would save lives while also saving money by reducing the cost burden on welfare services. Elche, Spain presented an idea of training 50% of the population in cardio-pulmonary resuscitation to reduce the risk of dying from cardiac arrest outside hospitals. Bruges, Belgium and Edinburgh, United Kingdom made plans to use technology and citizen support to make their cities dementia-friendly by helping patients navigate the city. Helsinki, Finland sought to allow psychiatric patients to fill in their own ‘transfer ticket’ when transferring to out-based care. This would give patients more control over an often difficult process.

Finalist proposals

Bristol, United Kingdom

Bristol identified a lack of access to quality food as a major source of inequality, and is concerned about the consequences of increased obesity in poorer areas. The Learn, Grow, Eat Revolution proposes encouraging local food production and the establishment of healthy food shops at existing community project sites, and also new food outlets and pop-up shops in deprived areas. Local growing decreases ‘food miles’, reducing carbon emissions and also increasing the number of people who eat food

grown by themselves or by people they know. This feeds into plans to partner with local chefs and school growing projects to teach residents how to cook healthier meals. While some elements of the idea are fairly established in other cities, the scale and complexity proposed in Bristol would increase the innovativeness of this comprehensive farm-to-fork programme.

London, United Kingdom

Half of Londoners are clinically obese and the next generation is showing signs that the trend will worsen. This will likely increase the risk of Type-2 diabetes, and place additional strain on an already stretched healthcare system. London Lives is a home-based care programme that proposes using technology already available in people’s homes to develop a hyper-local understanding of chronic and at-risk patients, including children. This will reduce the cost of treating patients and reduce the likelihood that the technology implemented will become obsolete. It will also target prevention and use data collection to improve the quality of treatment. An open source platform is expected to make it easier to expand the programme to include other at-risk groups in future. While many cities have established diabetes prevention programmes that work with the families of diabetes sufferers, few have started to comprehensively integrate these new technologies into municipal healthcare strategies at the scale that London proposes.



Jomo
Bicycle Parking

BRAC

Environment

Securing the future

Some European cities have pioneered sustainable solutions to planning, transport and energy, often doing more than their respective nation-states to achieve a greener future. Despite the fact that cities consume a major percentage of world energy and contribute heavily to pollution, it is at the metropolitan level that more direct action can be taken to have an immediate impact on the environment, reduce risks and combat climate change. Consequently, it is city governments – many of them across Europe – that have led the way in introducing programmes to encourage reduced consumer energy consumption, investment in smart grids to enforce efficiencies, the implementation of green forms of transport and the retrofitting of buildings with sustainable materials and technologies. While it is politically difficult for national governments to introduce measures required to combat climate change, many cities have managed to aggressively implement local programmes.

In this vein, Groningen, the Netherlands proposed changing consumer behaviour through smart grids, Boulogne-Billancourt, France promoted smart metering and community voting on energy policies, while Brest, France planned to co-design an interface with citizens to track individual carbon emissions and to incentivise behavioural change. Bilbao, Spain even suggested that energy ‘savings’ may be helpful in dealing with fuel poverty. Torrejón de Ardoz and Mataró, Spain looked at new low-energy lighting technologies but also targeted inefficient housing typologies, much like Hamburg, Germany’s plans to deal with single tenement houses, or the proposal to restore heritage buildings in Siracusa, Italy using sustainable materials.

Other cities focused less on reducing energy use and more on generating and consuming it in more sustainable ways. Cities concentrated on various renewable energy sources, with ideas that mostly focused on collecting or recycling energy that would otherwise be wasted. Birmingham, United Kingdom and Palma de Mallorca, Spain planned to reuse waste to generate electricity, while

“Despite the fact that cities contribute heavily to pollution, it is at the metropolitan scale that more direct action can be taken to have an immediate impact on the environment.”

Stockholm, Sweden sought to use resident biowaste to produce biochar for carbon sequestration. Niš, Serbia developed plans to use concentrated solar power to generate municipal savings that could be reallocated toward social investment. Málaga, Spain promoted greening its existing public transport system, while Kraków, Poland considered personalised incentives and a unified payment system to entice more people to use public transport. All these initiatives have clear environmental benefits and would also improve residents’ health and promote economic productivity.

Tallinn, Estonia’s proposed extension to its existing free public transport for residents is an attempt to get residents to abandon cars, not just to improve air quality but also to reinvigorate the city centre, while Ljubljana, Slovenia’s proposed effort to use park-and-ride facilities to keep motor vehicles away would not only reduce congestion and pollution, but also to free up public space. Burgos, Spain addressed the question of sustainable living by parking private cars under a green park with non-motorised transport paths, while Guimarães, Portugal proposed a green, non-motorised transport path to link nine villages together, strengthening economic ties and social cohesion to neighbours beyond municipal borders.

Ancona, Italy and Frederiksberg, Denmark proposed increasing livability in their cities by creating new green recreation spaces as buffers against environmental shocks; a false coastal island to reduce landslide risk and city-wide deployment of ground level reservoirs to protect against floods. Expanding non-motorised transport is central to most cities’ sustainability plans too: Bournemouth, United Kingdom and Burgas, Bulgaria sought to use radio-frequency identification (RFID) technology to alert motorists to the presence of cyclists, disabled pedestrians and children.



Finalist proposals

Schaerbeek, Belgium

Greenovate plans to make it easier for owners to recognise how heat-inefficient their buildings are by using drones and cars equipped with thermal cameras to map the energy efficiency of buildings. Other cities have also started using thermal mapping as a way to identify heat losses and ensure more targeted retrofitting interventions. What makes Schaerbeek's idea innovative is this combination of comprehensive 3D thermal mapping with a free online service that provides detailed data and personalised consultations to homeowners which will accelerate the process of energy retrofitting in the city. Tax incentives will support the installation of otherwise expensive energy reduction measures.

Madrid, Spain

E+ Subterra is an idea that would turn the Spanish capital into a specialist in the area of harvesting energy from underground resources, effectively turning the need for sustainability into a business case. This includes tapping into natural geothermal resources, but also investigating the potential to exploit the underground built environment. The Mediterranean city cites the possibility of recycling hot air from subways or generating hydroelectricity from water supply and sewage flows. Many cities have similar programmes focused on one particular type of underground energy. Madrid's innovation aims to break down barriers related to the exploration of this form of renewable energy by investigating its broader potential.

Lisbon, Portugal

Lisbon has developed plans to harvest unexploited energy, while reducing its citizens' reliance on motorised private transport and the associated congestion. Movement by Energy is envisaged to capture kinetic energy from car road ramps to power assisted walkways and electric bikes, making the hilly city more accessible to cyclists and pedestrians. Lisbon's innovation combines various mobility solutions at a currently untested scale with a unique financing scheme sustained by the energy savings generated from 'recycling'. The idea highlights how cities are seeking to pro-actively reconfigure the built environment to not only encourage environmental savings, but to also reduce journey times.

Kraków, Poland

The city is keen to encourage sustainable mobility by making public transport the mode of choice. Smart Urban Mobility Services is an integrated application that would allow registered users to not only plot public transport routes, but to also estimate the savings, as well as health and fitness gains from walking or cycling part of the journey, and the contribution toward cleaner city air created by the resultant reduction in carbon emissions. This plan is expected to improve the commuting experience while generating greater city revenues from public transport. The city is innovating on top of existing transport planning applications and contactless smartcard systems to incentivise public transport by incorporating payment options with loyalty points generated through green savings.

Winners

Five cities – Barcelona, Athens, Kirklees, Stockholm, Warsaw – were rewarded for putting forward innovative ideas and visions that, according to the jury members, could be implemented, would have a significant impact and could potentially be transferred to other cities in Europe or across the world. The judges were impressed by how relatively simple initiatives could have transformative effects on the way governments and people connect, with measurable impacts on the daily lives of urban dwellers who share common problems. The relatively small Metropolitan Borough of Kirklees, United Kingdom aimed to harness the potential capacity of the shared economy to build social cohesion, while the historic yet fragile city of Athens, Greece wanted to use collaborative engagement to address the negative social consequences of reduced budgets and government inefficiency. Stockholm, Sweden targeted the challenges of climate change, suggesting new techniques for generating green energy. Both Barcelona, Spain, the winner of the Grand Prize, and Warsaw, Poland focused on at-risk groups, proposing innovative approaches to improving quality of life for, respectively, the elderly and the blind.

Participating cities

- Winner
- Finalist
- Participant



Barcelona

Grand Prize Winner

1,620,243

Population (2012)

0.27%

Population growth per annum
(2009-2012)

€22,720

GDP per capita (2013)

0.49%

Annual GDP growth (2003-2013)

Spanish and Catalan

Official languages

Indirectly elected mayor (four-year term)

Metropolitan governance

Winning proposal

Vincles BCN: building a social media network to support senior citizens

Barcelona, Spain estimates that one in four of its citizens will be over 65 by 2040. The city believes that dependence on fragile informal networks results in an increasingly isolated ageing population. This not only reduces quality of life, but also creates a healthcare burden: lonely individuals are more likely to develop health complications. Vincles BCN: Collaborative Care Networks for Better Ageing aims to use a customised social media application on web-enabled tablet computers to more tightly connect the senior population. Vincles means 'social ties' in Catalan – ties to family, caregivers, neighbours. While many existing initiatives across Europe focus on tapping into local support networks in order to reduce the isolation of the elderly, Vincles adds to this by providing a dedicated city-wide platform that facilitates the activation of these existing networks in a way that significantly increases the well-being of – and support for – both the person being cared for and their carers. By connecting older citizens to informal and formal caregivers at scale, the project has the potential to support other vulnerable individuals, and also to be exported to other cities.

The capital of Catalonia and Spain's second city, Barcelona is internationally recognised for its dynamic and forward-looking governance, which has pioneered innovation since the mid-1980s. Despite being hit by the recent economic crisis, the city has, over the last three decades, transformed its economy into one of Europe's most productive, capable of attracting foreign direct investment. It has also actively promoted entrepreneurship and tourism. In 2014, it became the first European Capital of Innovation.

Vision

According to Josep Mari, Barcelona's Director of Social Innovation Projects, when Bloomberg Philanthropies launched the European Mayors Challenge, the city was already exploring the potential use of Vincles to build a stronger care network for its ageing population. Barcelona believes isolation is a fertile breeding ground for poor health, and plans to use Vincles to distribute healthcare across the city's population, thus reducing some of the associated costs of caring for the aged. With its human-centred approach, the social initiative stood out as a project that "puts people at the centre of technology-based innovation," by creating care networks made up of informal and formal caregivers for the elderly. It was also recognised that Vincles had the potential to encourage synergies between public health and social service units, effectively networking local government departments that frequently operate in isolation.

Impact

Currently, 20% of Barcelona's population is over 65 years old. As people age, their social connections weaken, as peers pass away and as mobility decreases. Vincles aims to make social networks more robust by connecting elderly people to individuals who are physically close to them, like family members and neighbourhood volunteers. It also uses the same tablet-based platform (which

also supports video calling) for professional care, thus reducing the burden on walk-in facilities and providing more regular monitoring. Evidence shows that loneliness, often related to isolation, increases the likelihood of developing health complications, including depression, dementia and obesity. Sharing care of the elderly across family members and community members increases the potential for contact.

Implementation

Barcelona's project is designed to keep costs down by negotiating bulk discounts with tablet providers and encouraging neighbours to share Wi-Fi. The city also plans to identify individuals who find adopting technology difficult and link them to formal and community-based systems of support, which might include 'second-degree access' (e.g. going online with a relative). The Vincles app will be available to anyone who requires it but the programme targets citizens over 65 who live alone. It will take three years of usability testing and piloting before Vincles scales up to support 20,000 citizens with tablets and free connectivity.

Transferability

The challenges associated with an ageing population extend far beyond Barcelona. Many European countries are 'getting older' as birth rates decline and people live longer. In Europe, fertility rates are generally below the replacement rate, and there is an insufficient supply of migrant workers – meaning that the dependency ratio across Europe is on the rise. In Spain, it is projected that by 2050 every 10 taxpayers will support nine economically inactive seniors. This places enormous strain on funding welfare benefits, particularly pensions and health care, threatening their very viability. To encourage other cities to engage with these problems, Barcelona will license Vincles and offer its services to national and international municipal governments.

Ageing population in numbers

Over 300,000 residents are 65+ (20%);
88,000 live alone.

Over 100,000 residents are 80+.

One in four of Barcelona's citizens will be over
65 by 2040.

By 2050, Spain will have the fourth highest
percentage (38%) of seniors globally.

Interview with Josep Mari, Director of Social Innovation Projects, City of Barcelona

Q Why did you enter the Mayors Challenge?

A We were looking for opportunities to launch social innovation projects already under development in the city.

Q Were there any other ideas?

A Yes, a project aimed at ensuring local citizens maintain their identity, local customs and habits despite the growth of mass tourism in the city.

Q Most beneficial aspect of the challenge?

A Being encouraged to not only stretch our idea, but also to explain it clearly and concisely with qualitative data.

Q If you hadn't won?

A We planned to go ahead regardless. The prize allows us to go bigger and faster, while the international recognition is a significant encouragement.

Q Impact on your city after five years?

A We're building infrastructure in the hope that it'll pave the way to a more connected citizenry. The challenge is to innovate together as one city government by thinking about proposals that go across departmental structures.



Athens

664,046

Population (2012)

-1.58%

Population growth per annum
(2002-2012)

€18,770

GDP per capita (2013)

-0.92%

Annual GDP growth (2003-2013)

Greek

Official language

**Directly
elected mayor
(five-year term)**

Metropolitan governance

Winning proposal

synAthina: changing government from the bottom up by encouraging a volunteer culture

synAthina is an initiative aimed at the entire city. Austerity measures hit Greece harder than any other European nation, significantly reducing the operational capacity of Athens. SynAthina is supported by a central municipal platform and a new department that will promote social innovation. The initiative supports and encourages community and business-sponsored projects, while aiming to reduce the distance between citizens and government through citizen participation in problem-solving. Open data is expected to facilitate transparency and provide tangible measurements of the project's success, increasing residents' levels of trust. As is the case with many applicant cities, discussions are already being developed to export the technology to other European cities, highlighting a desire to not only participate in city innovation, but profit from it too.

Six years of GDP contraction has seen Greece's economy shrink by almost a quarter, but a record tourist season in 2014 helped push the country back into the black. During this time, Greece has undertaken the biggest government debt restructuring in history, with bailouts far larger than annual GDP. With a high debt-to-GDP ratio and unemployment rate, especially amongst the youth who represent significant lost potential, Greece is unable to fund many projects at a national or local level. Health care budgets, for example, have been reduced by 40% as part of austerity measures. In this environment, regular protests have shown a growing mistrust between citizens and government; Greeks are the most likely in Europe to believe their government is corrupt.

Vision

In this environment, synAthina is an attempt to rebuild Europe's oldest capital city from the bottom up by employing citizen engagement as a lever for promoting government transparency and reform. The project is supported by a website, which allows citizens to list (on a map) projects aimed at improving the quality of city life in categories ranging from urban improvements to education, culture and children. A matchmaking service links volunteers and funders, which can be made up of citizens, NGOs or private businesses. However, this masks the big steps Athens has had to take politically. Many of the informal activities, like gardening abandoned plots or street exchange bazaars, are technically illegal, and Athens is using the suggestions as feedback to rewrite a "complex system of administrative obstacles that repeatedly inhibits citizens". By providing official recognition to community efforts, no matter how small, the municipality wants to build a relationship of trust between local government and citizens while fostering volunteerism.

Impact

Athens hopes the project will give visibility and coordination to volunteer efforts as the capital positions itself to benefit from the potential of co-created solutions. Amalia Zepou, an activist-turned-civil-servant, has been championing the project for more than a year. Her inclusion in the city's government already signals a desire to experiment with new forms of governance and an openness to partner with citizens.

Implementation

Athens has already worked to create a network of activists operating within the city, and the municipality plans to increase the sustainability of the project by hiring external experts to train city staff and by involving city officials more broadly. A pilot phase has shown some positive results and, in the future, open data will be used to increase transparency by allowing citizens to measure the success of specific projects. The creation of a department for civil society further highlights the municipality's desire to have citizens drive government innovation. In doing so, local government wants to connect with citizens, but Zepou believes that Athens also benefited from "being part of, and seeing itself as equal to, a group of other cities from other European countries."

Transferability

synAthina contributes to resolving the challenge of inadequate operational capacity at the municipal level, particularly when it comes to responding to the smaller scale day-to-day needs of its citizens in an open and transparent way. The perceived distance between citizens and government is a problem affecting many European cities, as is the need to find alternative methods to fund local projects and services. However, the feedback loop of using citizen proposals to impact by-laws, regulation and policy is relatively rare and suggests opportunities to involve citizens in local governance in ways that go beyond initiatives to expand voting.

Volunteering in numbers

Only 13% of Greek citizens trust public institutions while 98% consider corruption a major problem and take government inefficiency as a given.

Transparency International ranks Greece lowest in the EU on its Corruption Barometer; only Ukraine is ranked lower in Europe.

Greece (along with Bulgaria, Italy and Lithuania) has the EU's lowest volunteering rate.

Volunteering contributes less than 0.1% to GDP in Greece.

The Athens 2004 Olympics attracted 45,000 volunteers.

Interview with Amalia Zepou, Athens Deputy Mayor for Civil Society

Q Why did you enter the Mayors Challenge?

A The competition coincided with a strategy to use Cities of Service to encourage volunteerism because it is easier for Athenians to accept something that has already been done abroad and is recognised.

Q Were there any other ideas?

A We asked members of our team for ideas, the most interesting of which were incorporated into synAthina.

Q Most beneficial aspect of the challenge?

A It gave us the tools to develop a clearly thought-out and robust application, and also to see Athens as equal to so many other European cities and part of providing a solution.

Q If you hadn't won?

A The idea would continue to focus on small scale sponsorships; the prize money allows for increasing the impact by expanding the team. The application gave us the tools... we knew that even if we didn't win, this would work.

Q Impact on your city after five years?

A Contributing and sharing makes citizens feel closer to other Europeans... Not closer to the government maybe, but closer to the other citizens from other countries. That is very important to reinforce their European identity.



Kirklees

425,517

Population (2012)

0.95%

Population growth per annum
(2001-2012)

€23,160

GDP per capita (2013)

1.26%

Annual GDP growth (2003-2013)

English

Official language

Indirectly elected mayor (one-year term)

Metropolitan governance

Winning proposal

Comoodle: a municipal platform to collaboratively share public and private resources

Comoodle is a comprehensive platform designed to disrupt the traditional economy in Kirklees, United Kingdom by allowing private, municipal and NGO assets and skills to be shared. The scheme is an extension of a wider shared economy movement. It includes various private sector and community-based initiatives, and repositions the local authority as a facilitator rather than simply as a provider of services. Collaborative consumption is imagined as a way of making better use of municipal resources, and encouraging citizens and businesses to solve local problems, reducing demand on increasingly limited tax resources.

The UK government wants to become a leader in the sharing economy and has recently launched a review to better understand how to be part of a booming market. The annual global sharing economy is expected to grow from €12 billion in 2014 to €300 billion by 2025. Initiatives like Airbnb, Uber and Hailo have caused controversy because of their disruptive impact on traditional operating systems. Governments have tried to update policy to either legalise or ban sharing services while several countries have left it to the courts to decide. Unlike French and German cities, UK local governments have generally chosen not to oppose ride and house-sharing services, allowing opportunities for the sharing economy to grow.

Vision

Kirklees is a metropolitan borough in the north of England made up of three towns and several villages. The city council intends to be one of the first urban areas in the UK to build a comprehensive public sharing platform. According to Kirklees' Innovation Hub Project Officer Duggs Carre, "We are, as an authority, quite ambitious." Being a winner alongside major European cities confirms that smaller towns have an innovation role to play, too. Kirklees believes that a single municipal platform will not only help to share surplus public and private resources, but will also build a sense of community. For the platform to succeed, it "needs to be everybody sharing and putting some equity in," says Cath Bottomley, Head of Area Working and Safety, Kirklees Council.

Impact

For Kirklees, Comoodle will encourage citizens to use public assets like tools or buildings to look after and improve public spaces or provide community support services that are increasingly outside budget capacity. Carre says, "We knew we were trying to do something quite brave and different. It's quite difficult to know what impact it's ultimately going to have." A collaborative consumption platform at a municipal level may

help citizens and businesses to tap into the benefits of agglomeration more easily, whilst simultaneously testing an economic model that may limit the need to accumulate. Carre believes that the disruptive qualities of Comoodle will ultimately benefit traditional businesses by increasing demand for their services.

Implementation

It will take three years to have full city coverage for Comoodle. Kirklees will provide a critical mass of physical resources, while citizens, NGOs and businesses will also need to contribute these, plus their time and/or skills. A time-bank allows opportunities for trade through virtual payment in instances where services or assets cannot be procured or provided for free. While user trust and reputation will limit abuse, Kirklees is also engaging with new partners to overcome insurance and regulatory issues. However, the team struggled most with a non-technical aspect of implementation: branding. Kirklees outsourced the branding to an agency that came up with the name and helped speed up the process. Carre says the name the council came up with, 'Kirklees Shares' "wasn't a strong enough brand to sell to the public or ultimately internationally which is where we want this to go."

Transferability

The Mayor of Kirklees has already spoken to organisations like Airbnb, who are keen to understand how a public sharing platform might influence the collaborative economy. Kirklees has developed a non-UK prototype, aimed at demonstrating its global potential, and plans to engage with several European cities in the near future to investigate how to effectively export Comoodle. There is potential to scale up Comoodle for neighbouring cities, creating a significant opportunity for collaborative consumption in the region and beyond. If successful this would not only disrupt traditional business models but also positively impact how cities work.

Sharing economy in numbers

UK sharing economy: €0.7 billion (2014).

Global sharing economy: €12 billion (2014), but could reach €300 billion by 2025.

The UK sharing economy is expected to reach 50% market share in holiday accommodation and car rental by 2025.

In the UK, the average car sits unused for 23 hours a day and a power drill is used for an estimated 12 to 13 minutes over its entire lifetime.

Interview with Duggs Carre, Innovation Hub Project Officer, Kirklees Council and Cath Bottomley, Head of Area Working and Safety, Kirklees Council

Q Most beneficial aspect of the challenge?

A Our coach encouraged us to focus more on the problem and less on the [technological] solution, which helped us respond to what people want and how we connect people.

Q If you hadn't won?

A We included the project in our budget before we knew we'd won; we'd put the time and effort into developing the Comoodle brand and knew we wanted to use it.

Q Impact on your city after five years?

A We'll be more of a facilitator than a provider. The residents of Kirklees – supported by shared stuff, spaces and skills – will have more direction about what happens on their streets and housing estates. The Borough Council will be less distant: I'd like to think in five years time if somebody has an idea they'll say, "I should go and speak to the council; I'm sure they'll be able to help."



Stockholm

881,235

Population (2012)

1.92%

Population growth per annum
(2004-2013)

€51,560

GDP per capita (2013)

3.2%

Annual GDP growth (2003-2013)

Swedish

Official language

**Indirectly
elected mayor
(four-year term)**

Metropolitan governance

Winning proposal

Grow Stockholm: converting citizen bio-waste into biochar to remove CO₂

The Biochar Project developed by Stockholm, Sweden aims to reduce carbon emissions by enabling citizens to be part of carbon sequestration (CO₂ 'removal'). Residents can provide plant waste for the city to produce biochar – a stable, solid charcoal product, rich in carbon which can endure in soil for thousands of years – which encourages plant growth by enhancing the soil's capacity to retain water and nutrients. An e-service allows citizens to calculate how much biochar they need to use in their soil to 'offset' their carbon footprint – impacting positively on behaviour. A municipal biochar facility will add to the Swedish capital's expanding waste and recycling capacity. While there are many examples of biochar use across Europe, Stockholm's proposed use of biochar for its urban storm water purification and management system appears to be unique, as does its large-scale collaboration between local authorities and citizens in the generation of the product.

Sweden has already reached its EU 2020 target for renewable energy and is also on track to achieve the greenhouse gas 2020 reduction target. Stockholm's *Vision 2030* is directed at becoming entirely fossil fuel-free, and being the green capital of the world by 2050. During the 1950s, the city was heavily dependent on fossil fuels and air pollution was high. Since then, strategic planning has been put in place to simultaneously improve the city's environmental performance and help the city transition into a low-carbon economy. This plan has been supported by stringent new building codes and retrofitting standards. The availability of new technology, coupled with the willingness of the business and residential communities to become early adopters, increases opportunities for green innovation in the city.

Vision

Stockholm's local government wants to change the city's ecological footprint by revitalising an ancient but effective technology. The city plans to collect bio-waste from residents to produce biochar, which can then be used in public and private gardens. Biochar is an organic substance produced from plant waste, which can be used to increase plant growth, sequester carbon and purify storm water run-off. The process will have positive side effects: a by-product of the biochar production process is synthesis gas, which will be used to generate energy for the city's district heating system.

Impact

Assuming that the waste collection and distribution systems remain carbon neutral, Stockholm believes that every tonne of biochar will sequester 3.6 tonnes of CO₂. The local government will weigh output to build a very public and visible evidence base for how such innovations can promote greener living. Malin Parmander, the city's International Affairs Officer, believes the project will further increase citizens' awareness of climate change issues, and also increase happiness. City surveys show that

eight in 10 residents desire to be more active in the fight against climate change, and this project plans to expand e-services, allowing citizens to calculate how much biochar needs to be produced to 'offset' personal emissions, such as going on holiday or choosing to drive to work. This helps increase the sense of tangibility for individual citizen action.

Implementation

Stockholm already has significant green infrastructure in place and is in the process of developing a municipal eco-plant for recycling and waste; a biochar facility will be added to this. The facility will be partly funded by selling biochar (for use in soil production) and excess gas (to produce bio-fuel). To promote urban farming, the city will provide professional advice and start-up gardening kits to citizens who provide bio-waste.

Transferability

Many cities may not have the infrastructure to support a city-wide biochar project; however, it is fairly easy to develop small-scale projects. This may help to overcome the trend of richer cities investing more in being green than poorer ones. Recognising the difficulty of measuring the local benefits of green projects, Stockholm is eager to export the biochar scheme to other cities to raise global awareness of the need for every city to contribute to reducing the risks associated with climate change.

Green economy in numbers

Global market for green goods and services currently estimated at €5 trillion.

The city expects using biochar in plant beds will increase plant growth by up to 30% in the Swedish climate and up to 200% in more favourable conditions.

One tonne of biochar is expected to sequester 3.6 tonnes of carbon dioxide.

Interview with Malin Parmander, International Affairs Officer, City of Stockholm

Q Why did you enter the Mayors Challenge?

A It's part of the City Visibility Strategy to apply to good, strategic competitions or awards – and hopefully win – gaining profile as a green leader.

Q Were there any other ideas?

A Yes, there were four other projects to choose from, three of which have now been or are in the process of being implemented.

Q Most beneficial aspect of the challenge?

A Hearing other cities' ideas and winning an international award helps persuade local politicians of the importance of thinking globally.

Q If you hadn't won?

A We would have funded the project as a city, however, on a smaller scale.

Q Impact on your city after five years?

A Stockholm will be greener and healthier; a city where more citizens are engaged with climate change issues.



Warsaw

1,715,500

Population (2012)

0.08%

Population growth per annum
(2003-2012)

€26,100

GDP per capita (2013)

4.54%

Annual GDP growth (2003-2013)

Polish

Official language

**Directly
elected mayor
(four-year term)**

Metropolitan governance

Winning proposal

Virtual Warsaw: giving the visually impaired greater access to the city

Virtual Warsaw aims to give the visually impaired greater freedom of movement across the city, particularly in the use of public transport and public facilities. Thousands of Bluetooth Low Energy (BLE) beacons will be installed around the Polish capital to provide indoor and outdoor micro-navigation by communicating location data to smartphones. Using technology to improve universal access at an *individual* level highlights the city's capacity to make uniform public transport more specific to the needs of its users. This freedom of movement is designed to reduce unemployment amongst the city's blind population, currently at 81%. Warsaw will provide an application program interface (APIs make it easier for technologies to 'talk' to each other) to increase the potential for further innovation by residents and businesses around the infrastructure. The project borrows technology generally used by the private sector at a significantly smaller scale, scaling it up to cover an entire city.

Since joining the EU in 2004, Poland has moved towards policy and economic convergence with the rest of Europe. While real GDP per capita is still catching up with western European countries, it more than doubled between 1989 and 2013, following the revolutions that toppled communism in central and eastern Europe. In 2012, Poland's R&D investment budget was 0.9% of GDP, while the EU average was 2%, with only Finland and Sweden above 3%, the European 2020 target. Poland is the only EU member to have escaped recession following the 2008 financial crisis and has identified innovation as critical to further closing the wage gap with richer nations and reaching sustainable income growth for the bottom 40% of its population. To achieve this, Poland plans to increase its research spend to 1.7% of GDP as part of its Europe 2020 target, but also recognises the need to use government funds to strategically ignite its lagging private sector. Poland plans to use €10 billion in EU structural funds, upgraded research infrastructure and international partnerships to stimulate commercially oriented innovation. As wages rise, Poland's low-cost manufacturing model needs to be replaced with more skilled and productive jobs to remain competitive.

Vision

Virtual Warsaw is an ambitious plan to use Bluetooth technology to make the Polish capital more accessible to the visually impaired. Micro-navigation beacons will communicate changes in the urban environment to increase safety and improve access to public transport, leisure facilities like parks and theatres, and public buildings. Career training and employer awareness programmes will further improve the independence and employability of people with visual impairments; currently 81% of the blind population is without work. The innovation fits with the adopted Europe 2020 Strategy for smart, sustainable and inclusive growth by reducing the degree of social exclusion while fostering new skills.

Impact

The city hopes more than half of visually impaired residents will make use of Virtual Warsaw. Reduced dependency will not only liberate citizens to more freely access Warsaw, it is likely to reduce the burden of care, enabling family helpers or volunteers to access employment opportunities that otherwise wouldn't be available to them. Importantly, the project also plans to improve the quality of e-government services by adopting WCAG 2.0, which aims to increase the robustness of assistive technologies, and create a central support line for the visually impaired. For Tomasz Pactwa, Director of Welfare and Social Projects, it is about teaching employers to "trust the element of self-sufficiency for blind people," allowing visually impaired individuals to move, enjoy and operate more freely in Warsaw "in a more holistic way".

Implementation

A successful indoor pilot with blind users in an administrative building has already demonstrated the feasibility of the scheme. The city will install the technology in public transport, public buildings, leisure and cultural sites across the city, each of which will be preceded by a smaller scale pilot and extensive testing with users. The technology will then be tailored to suit the significantly different operating environments, which include indoor and outdoor, churches and theatres.

Transferability

Warsaw then hopes to use what it has learnt to help other cities ensure accessibility for people with visual disabilities. This includes combining technology with employment and skills training to develop best practice. The city will also provide an open API to enable local organisations to create other uses for the BLE infrastructure. Witnessing the government spending more on innovation is an open invitation to encourage the tertiary and private sectors to invest their own time and effort. In the future, Pactwa believes that "anybody who

enters the city will get information in their own language,” echoing a strong desire to make Warsaw more accessible not only to citizens, but also to visitors.

Visual impairment in numbers

Globally, 285 million people are visually impaired; 39 million are blind.

About 90% of the world’s visually impaired people live in low-income environments.

Visual impairment is on the decrease despite the ageing world population.

40,000 people with visual impairment live in Warsaw.

81% unemployment in Warsaw’s blind population – 20% above Europe’s highest youth unemployment statistic.

Interview with Tomasz Pactwa, Director of Welfare and Social Projects, City of Warsaw

Q Why did you enter the Mayors Challenge?

A We wanted an external institution to judge our idea to find out whether or not it was innovative at an international level.

Q Were there any other ideas?

A Yes, there were several other innovations in planning and implementation: looking at increasing citizen participation; a greener transport by cycling to work initiative; and telemedicine to increase the quality of healthcare, while reducing its cost.

Q Most beneficial aspect of the challenge?

A Realising that other cities face similar challenges, but respond with different solutions: the methodology, including thinking the problem through with research and a pre-launch pilot, will make future projects quicker to implement.

Q If you hadn’t won?

A It would have been less easy to finance, but we would have proceeded. Winning makes it much easier to access other grants and donations.

Q Impact on your city after five years?

A We will use Virtual Warsaw to improve the quality of life for not only the visually impaired, but for other groups too.



Tools and approaches

Despite targeting a range of different urban social, structural and economic problems, the tools and approaches proposed by the 155 cities demonstrated a number of commonalities. Innovation was seldom about pure invention and more about considering how existing systems or technologies might be repurposed to improve the quality of urban life. As with most sectors of society, local governments have responded to the promise of the digital revolution. 63% of all cities intended to *directly* exploit new information technology to support their innovations. Democratising and evolving data was found in 15% of applications in the form of open data (transparently opening up data for re-use in any way) and big data (which aims to find relationships between large amounts of seemingly unrelated data). Gamification, which uses gaming techniques in the ‘real’ world to encourage citizens to solve problems and increase awareness to change behaviour, also featured regularly.

All the winning proposals make use of smartphones and information technology, recognising that the world is more digitally connected than ever before. Co-design, a tool that involves people in highlighting and solving specific problems, played a key role in 20% of the applications. A significant number of cities planned to use crowd-sourcing and crowd-funding, highlighting their desire to benefit from the unconventional approaches to supporting innovation and democracy that the Internet potentially facilitates.

Yet, even with a strong focus on finding ways to use citizens as a resource (43% of applications included citizens as implementation partners or as volunteers), traditional partnerships dominated. This included private sector funding and expertise (75%), expert knowledge and support from universities (73%) and non-profit partnerships (50%). In addition, the European Union was often referred to as a potential source for funding or implementation support.

Innovation and collaboration

Innovation is a process – every city’s need for innovation and capacity to innovate is based on unique circumstances. Despite this, every local government was able to suggest new approaches to improve the quality of life in their cities. The shortlisted and winning cities felt that the Mayors Challenge gave them the time and focus to develop the potential of their innovations in a more mature way. In particular, the stimulus to engage with private sector tools and find partners to facilitate delivery was appreciated and absorbed by many of the finalist cities. More importantly, the process helped cities to more clearly and concisely articulate their concepts, encouraging citizens to trust and support brave ideas.

Collaboration and partnership matter to local governments, and as they try to build stronger networks with residents, (and other local and non-local partners, including other cities), the potential to share ideas grows. However, the value lies not only in sharing innovations and know-how, but also in helping cities to identify problems that they may not have been aware of and in encouraging cities to believe that these problems can be solved. Strategically using the media to extend this dialogue increases awareness of the challenges faced and provides more opportunity for transferring ideas. It also gives citizens the chance to provide feedback. One of the greatest benefits of more open local government innovation is the potential for greater input from citizens in solving city-level problems, and possibly even in affecting how government works.

A common – and welcome – trend within the submissions is the way in which several projects re-framed vulnerable individuals as valuable resources for the city rather than as burdens on society, while others ensured resources were available to facilitate ‘normal’ living. In the face of continued cuts to pensions and other welfare benefits, and the rise in the dependency ratio across Europe, applicant cities proposed creative responses to the issues of loneliness and isolation. The strong emphasis on community as a way to deal with these issues underscore the benefits of urban density and proximity of individuals as an asset in combating isolation and solving complex social issues.

Conclusion

The Mayors Challenge is itself an innovation. By considering bottom-up initiatives at the city level, it confirms that at a time of general disillusionment with systems of governance, local government has the capacity to be resilient and pro-active in ways that national governments and international institutions find difficult. The Mayors Challenge provides an opportunity for cities to recognise the need to think through potential innovations clearly without immediately closing down the conversation by considering only the budget implications. Time is another scarce commodity in budget-strapped local councils, and many of the finalist cities felt the competition freed up the time and space needed to think through ideas. The encouragement to work across government departments that, by their own admission, seldom interacted further enriched these ideas. The whole application process – including the feedback, coaching sessions and Ideas Camp – is a carefully constructed practice that helps cities embrace new innovation techniques. Examples from the private sector provided important and helpful design models for some.

The process itself yields an in-depth understanding that, despite the extent to which existing political systems place limitations on local government, cities still have significant potential to be innovative. When trying to do more with less, having a good idea of what has already been shown to be possible certainly helps, and the media exposure and sharing of information through the network of finalists works to support this. All scales of government can benefit from exploring new approaches to solving problems, and competitions like the Mayors Challenge can play a significant role in encouraging new types of relationships between local governments and their citizens.

However, widely sharing best practices through a competition like the Mayors Challenge requires time to produce results. Many of the projects from the American and European challenges may only produce tangible outcomes in a number of years.

As the Mayors Challenge plans a third round of the competition, the choice of geography will provide valuable insight into the capacity to transfer innovations not only between cities within a given region, but also between cities in significantly different political, social, economic and environmental contexts. It will undoubtedly continue to provide an invaluable platform for local governments to influence how regional and national governments engage partnerships to improve the quality of life for their citizens.

About

Bloomberg Philanthropies

Bloomberg Philanthropies' mission is to ensure better, longer lives for the greatest number of people. The organisation focuses on five key areas for creating lasting change: Public Health, the Environment, Education, Government Innovation and the Arts. Bloomberg Philanthropies encompasses all of Michael R. Bloomberg's charitable activities, including his foundation and his personal giving. In 2014, Bloomberg Philanthropies distributed \$462 million (€409m).

The Government Innovation programme promotes public sector innovation capacity and spreads proven and promising solutions among cities worldwide. Through diverse initiatives, Government Innovation tests and refines urban innovations, equipping mayors and local leaders with practical tools and approaches to tackle tough issues and enable civic innovation.

LSE Cities

LSE Cities is an international centre at the London School of Economics and Political Science that carries out research, education and outreach activities in London and abroad. Its mission is to study how people and cities interact in a rapidly urbanising world, focusing on how the design of cities impacts on society, culture and the environment. Through research, conferences, teaching and projects, the centre aims to shape new thinking and practice on how to make cities fairer and more sustainable for the next generation of urban dwellers, who will make up 70% of the global population by 2050.

LSE Cities is one of a small number of research centres that contribute to the LSE's reputation as one of the foremost social science universities in the world. With the support of Deutsche Bank's Alfred Herrhausen Society, the centre builds on the interdisciplinary work of the Urban Age Programme, an international investigation of cities around the world that since 2005 has studied the social and spatial dynamics of metropolitan areas such as Istanbul, São Paulo, Mumbai, Johannesburg, New York City and London.

The Mayors Challenge

After an inaugural competition in the United States in 2012, Bloomberg Philanthropies replicated the Mayors Challenge in Europe in 2013-2014. The potential for a third round is being investigated, but the location has yet to be confirmed. The competition is designed to strengthen local governance innovation. Bloomberg Philanthropies sees innovation to tackle the pressing social and economic issues at a city-level as strategic. The intention is to use the competition to encourage cities to actively solve problems and also to increase public awareness of the potential for local governments to seek new ways to improve city life for residents.

The competition uses a range of incentives to encourage participation, including cash prizes, publicity for short-listed and winning cities and opportunities to engage with peers in other cities. While only five cities receive funding, 16 other cities received input from experts and private sector coaches, and the application process, which includes strong technical assistance from the Mayors Challenge team, is intended to help local governments consider innovation in a structured manner, increasing the potential for every city to benefit from participating. This includes asking how the idea is a new approach to solving a problem in a city, clarifying how it will have a meaningful impact, demonstrating how it can be implemented and contextualising how the idea might be transferred to other cities. A significant portion of this task involves teaching cities to pitch and explain ideas clearly so that the best ideas can be shared as broadly as possible.

City governments identify challenges and solutions as part of their application and are required to research whether a similar innovation exists in other cities. Local partners – in this instance Nesta, EuroCities and LSE Cities – provided further input on this. Behind the scenes, the challenge is supported by a selection committee made up of urban, technology and governance

experts, leveraging Bloomberg Philanthropies' extensive network. The committee is responsible for selecting the 21 finalists and picking the overall winners.

Strategy consultants from Monitor Deloitte were tasked with helping finalist cities to think through their theory of change, discussing their implementation options and challenging their assumptions to increase the quality of the final concept. Before submitting an updated application, finalists took part in an Ideas Camp, a two-day workshop during which cities received input from each other and from experts to expand and strengthen their ideas. This was designed to produce more focused, stronger applications. The five winning cities receive implementation grants, as well as intensive assistance to accelerate implementation. Bloomberg Philanthropies also provides the group of 16 finalists with training and other support to encourage their progress. Across all of these efforts is a commitment to capturing lessons learnt and sharing that information with other cities.

International Jury

Christian Bason, Director of MindLab (Denmark)

Till Behnke, Founder of betterplace.org and Head of The Millicom Foundation (Germany)

Ricky Burdett, Professor of Urban Studies at the London School of Economics and Political Science and Director of LSE Cities (United Kingdom)

Ron Daniel, Board Member, Bloomberg Philanthropies and Former Managing Partner, McKinsey & Company (United States)

Bruno Giussani, European Director of TED (Switzerland)

Lamia Kamal-Chaoui, Advisor to the Secretary-General and Former Head of the Urban Programme at the OECD (Organisation for Economic Co-operation and Development) (France)

Maria Manuel Leitão Marques, Full Professor at the Faculty of Economics of the University of Coimbra and Former Secretary of State for Administrative Modernisation (Portugal)

Christine Leitner, Senior Policy Advisor at the Austrian Federal Ministry for Science, Research and Economy (Austria)

Geoff Mulgan, Chief Executive of Nesta (United Kingdom)

Bertin Nahum, President and CEO of Medtech SA (France)

Carlo Ratti, Director of MIT Senseable City Lab and Founder of Carlo Ratti Associati (Italy)

Silvija Seres, Independent Investor and Board Member and Managing Director of TechnoRocks (Norway)

Iván Tosics, Managing Director of Metropolitan Research Institute (Hungary)

Finalist Proposals

Amsterdam, the Netherlands - Play2Work Europe is a platform seeking to disrupt traditional recruitment by matching skilled but inexperienced youth with job opportunities.

Athens, Greece - synAthina is a platform to encourage community volunteering and business-sponsored projects to increase the municipality's operational capacity.

Barcelona, Spain - Vincles BCN: Collaborative Care Networks for Better Ageing uses social media to more tightly network the senior population to family, caregivers and neighbours.

Bologna, Italy - #Angels4Bologna is a mentorship training programme designed to increase the capacity of school students (aged 8-16) to enter the job market or become entrepreneurs.

Bristol, United Kingdom - The Learn, Grow, Eat Revolution targets obesity by encouraging local food production and establishing healthy food shops. Chefs will help residents cook healthier food.

Brno, Czech Republic - Toward a Safer and Engaged Community wants to increase real and perceived safety levels in Brno's large housing estates by employing a trained concierge in each building.

Cardiff, United Kingdom - Push Our Productivity plans to train 10% of the population to identify small improvements, and then implement them in order to improve the entire population's productivity.

Florence, Italy - The Third Millennium Urban Workshop is an urban regeneration project to connect artisans to vacant properties in the historic city centre.

Gdańsk, Poland - Democracy Accelerator increases public involvement in city improvement by allowing citizens to propose, develop and vote on projects. Training assistance is given to strengthen the quality of their proposals.

The Hague, the Netherlands - Citizens in Action – Democracy 3.0 is a tool to give citizens the power to decide on how 2-3% of their local taxes are spent.

Kirklees, United Kingdom - Comoodle is a comprehensive platform designed to disrupt the traditional economy by allowing private, municipal and NGO assets and skills to be shared.

Kraków, Poland - Smart Urban Mobility Services estimates savings, health and fitness gains from walking or cycling part of a public transport journey, and the contribution made towards cleaner city air.

London, United Kingdom - London Lives uses existing technology to facilitate at-home monitoring of at-risk and diabetes patients. Integrating this into healthcare is expected to reduce costs.

Lisbon, Portugal - Movement by Energy will capture kinetic energy harvested from car road ramps to power assisted walkways and electric bikes to reduce reliance on motorised private transport.

Madrid, Spain - E+ Subterra will broadly explore the potential of harvesting energy from underground resources. This includes natural geothermal resources, but also the built environment.

Schaerbeek, Belgium - Greenovate will use 3D mapping to show owners how thermally inefficient their buildings are. An online service and personalised consultations will help accelerate retrofitting.

Stara Zagora, Bulgaria - I Succeeded in My Town! is a financial incentive to reverse the youth brain drain and to encourage talented entrepreneurs to locate their businesses in the city.

Stockholm, Sweden - Grow Stockholm reduces carbon emissions by using residents' plant waste to produce biochar, which both sequesters carbon and encourages plant growth.

Sofia, Bulgaria - DIY Sofia is project to bring colour and beauty to poor quality public spaces. Use of a van equipped with tools for the community to use will be supported by artists and experts.

Warsaw, Poland - Virtual Warsaw will enable greater freedom of movement for visually impaired residents, particularly in the use of public transport and public facilities.

York, United Kingdom - GeniUS! Right to Solve empowers citizens to play a pro-active role in identifying and solving city problems. Procurement is opened up, allowing citizens to co-create solutions.

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Maps and Graphs

p.6-7 Patterns of global change

Total population (2012)

Average annual population growth forecast (2012-2030)

LSE Cities analysis based on UN DESA World Urbanisation Prospects, 2014 Revision <http://esa.un.org/unpd/wup/default.aspx>

p.9 Where Europe lives

Population Density (people/km²)

LSE Cities analysis based on LandScan 2010TM High Resolution Global Population Data Set

p.10 Growing EU voter apathy

Voter Turn-out (1990-2014)

Eurostat (2013). IDEA Voter turn-out database (IDEA International Institute for Democracy and Electoral Assistance) <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdgo310>

p.11 An ageing world

Projected percentage of citizens over 60 by 2050

World Economic Forum (2012). Global Population Ageing: Peril or Promise? Geneva, Switzerland

http://www3.weforum.org/docs/WEF_GAC_GlobalPopulationAgeing_Report_2012.pdf

p.12 An unequal continent

GDP growth (percentage average annual growth at country and city level, 2003-2013)

City GDP per capita (€, 2013)

Map based on LSE Cities analysis of Oxford Economics and Eurostat data, using NUTS3 regions as a proxy for each city.

p.13 Europe's lost labour potential

Youth unemployment rate (most recent years available)

Map based on LSE Cities analysis of Eurostat unemployment statistics and multiple other official sources.

p.14 Growing on a borrowed population

Population growth (percentage average annual growth, 2004-2013)

City population (most recent years available)

Map based on LSE Cities analysis of Eurostat population statistics at country and city level.

p.15 Migrating north-west

Percentage of foreign-born population at country and city level (most recent years available)

City migrant population (most recent years available)

Map based on LSE Cities analysis of Eurostat migration statistics and multiple other official sources.

p.19 Devolution

Local revenue as a percentage of overall revenue

OECD Revenue Statistics Database (2014)

<http://stats.oecd.org/index.aspx?DataSetCode=REV>

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