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THE FUTURE OF CITIES

OPPORTUNITIES, CHALLENGES AND THE WAY FORWARD

EXECUTIVE SUMMARY



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This report identifies challenges influencing the future of cities in Europe and beyond. It also presents several perspectives from which to look at resolving these issues. It is an initiative of the **Joint Research Centre (JRC)**¹, the science and knowledge service of the European Commission (EC), supported by the Commission's **Directorate-General for Regional and Urban Policy (DG REGIO)**. The main aim is **to raise open questions** and steer discussions on what the future of cities can, and should be, both within the scientific and policymaker communities. The report benefits greatly from



the collective intelligence put forward by the Members of the **EC Community of Practice on Cities** and is linked to an **interactive online platform**.

As yet there is no global agreement on the definition of a city. According to the UN, based on national definitions, which vary greatly, 56% of the world population currently lives in urban areas. The EC (along with the OECD, World Bank, FAO, ILO and UN-HABITAT) proposes a more comparable global definition of cities². Based on this definition, 75% of the world population lived in urban areas in 2015, while for the European Union this figure was 72%³.

Future trends

While population is expected to continue growing exponentially across most of the globe, this is less so in Europe. While many challenges still faced are related to population pressure, Europe also has to cope with new challenges related to a declining and ageing population in many cities. **Over half of European cities will see their population decline in the future. This means that most of the change in Europe will have to take place in an integrated, affordable and sustainable fashion within pre-existing urban fabric.**

Most European cities are expected to cover greater areas than in the past, and cities will have to increasingly recognise the importance of **optimising how their public space is both designed and used**. An ageing EU population will require the further adaptation of infrastructure and services.

Cities will increasingly apply new technologies and innovation across a wide range of sectors, from transport and mobility to citizen engagement. This technology will need to be interoperable and integrated, and its implementation done in an inclusive way to benefit the overall functioning of cities.

¹ In the framework of the Knowledge Centre for Territorial Policies, https://ec.europa.eu/knowledge4policy/territorial_en

² Dijkstra and Poelman, 2014

³ <https://ghsl.jrc.ec.europa.eu>, Pesaresi et al., 2013



The dominance of personal cars should be **drastically reduced** in favour of more efficient public transport, shared and active mobility, and new working patterns.

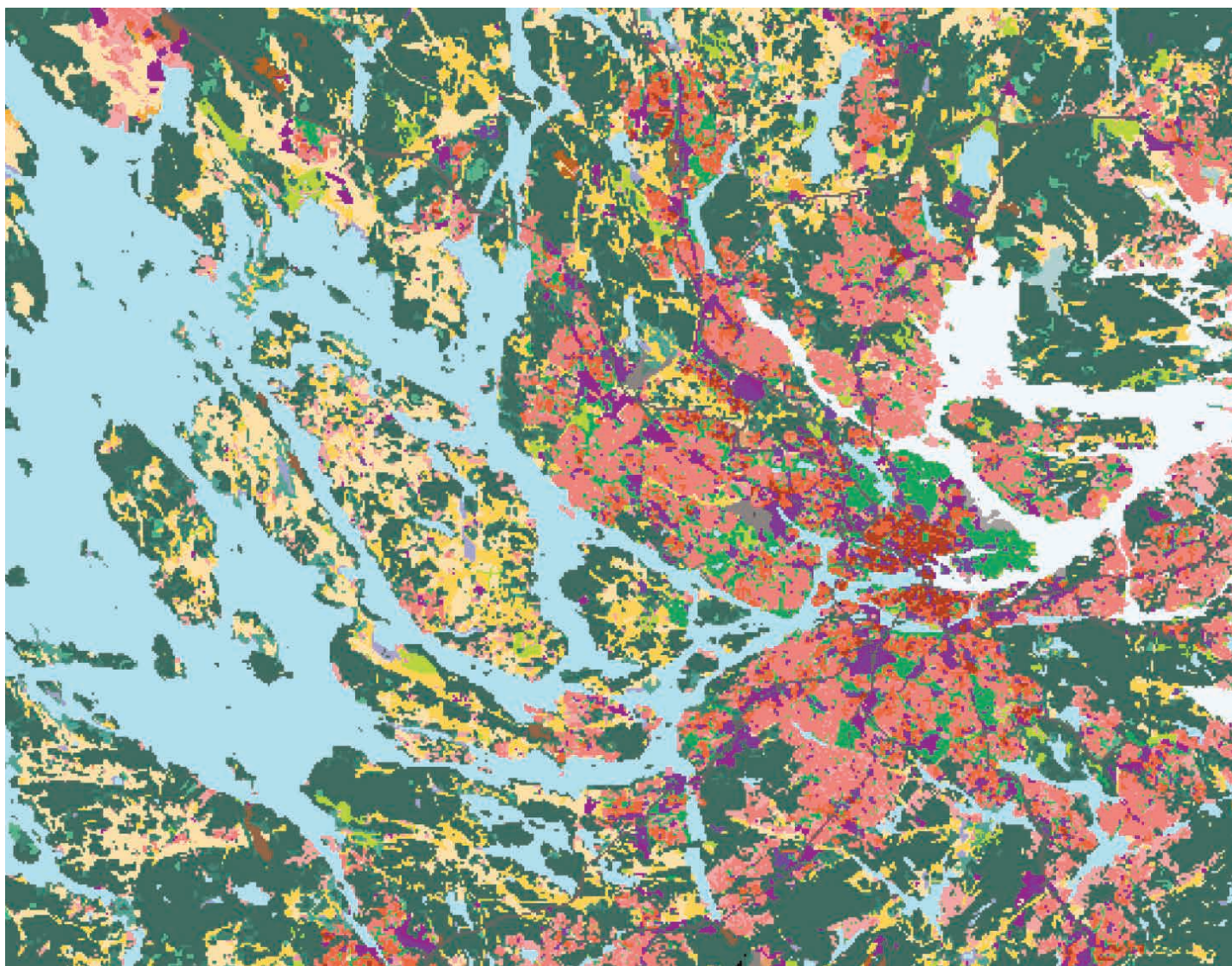
Cities will still need to cope with existing major issues such as providing sufficient affordable housing to an increasingly varied population, ensuring inclusiveness and integration among its communities, and reducing environmental impacts. While cities are front runners in fighting climate change, they are also where the effects of energy poverty and water scarcity, to mention but a few, will be particularly evident.

Citizen engagement in policy processes is growing and should become more prevalent in the future. New forms of urban governance are already being stimulated in many cities, and the importance of city networks is expected to further increase.

A role for Europe and its cities

Cities have an important role to play in pushing forward societal change. Cities are increasingly embracing innovation and novel technologies and, thanks to the concentration of people, ideas and resources, they are leading the way towards solutions to global challenges beyond their own boundaries. City networks and associations play an increasingly crucial and recognised role in shaping global agreements. The importance of cities in contributing towards a sustainable way of living for all is recognised in the Urban Agenda for the EU and in global agendas such as the New Urban Agenda.

Europe can further enhance its role as a key player in worldwide city development discussions both through its extensive policy experience and with regard to science and knowledge production. The fruitful interaction between EU institutions and European cities has great potential to make Europe a world reference point in identifying,



JRC | LUISA Refined land use map of Stockholm, Sweden (Rosina et al., 2018)

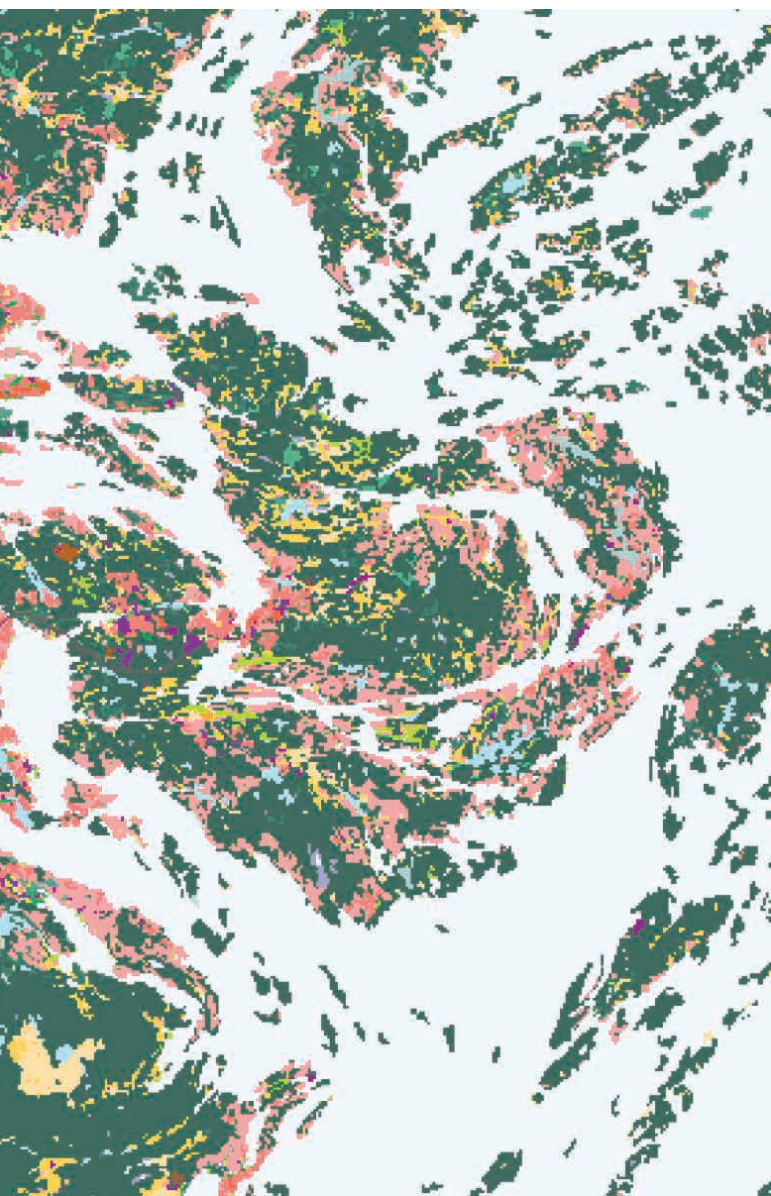
experimenting and applying solutions to the future challenges that cities will face.

Main challenges identified

AFFORDABLE HOUSING - Europe's most in-demand cities have seen sharp increases in housing prices over the past years, affecting their capacity to provide adequate and affordable housing. The recent scale-up of foreign and corporate investments in residential urban property has transformed patterns of ownership. Prices are recovering faster than earnings, and the availability of housing is low. Short-term rental platforms may also cause property prices to spiral and negatively affect local liveability.

MOBILITY - Environmental pollution, congestion, and long commuting times are just some of the issues related to mobility in cities. A decrease in ownership of private vehicles in favour of efficient and connected public transport and active mobility modes could greatly ease these problems. Legislation and appropriate governance measures will be needed to ensure new transport modes, such as autonomous electric vehicles, complement rather than compete with public transport.

PROVISION OF SERVICES - Public and commercial urban services should be sustainable, efficient, reusable, co-usable, modular, personalised and data-driven in the future. The provision



of services could be improved by promoting compact urban development and the mixed use of land; developing integrated land use and mobility plans, and embracing new service-easing technologies.

AGEING - By 2070, life expectancy in the EU will rise to 88.2 years, while the old-age dependency ratio is expected to almost double. This will be an especially great challenge in cities where the overall population is in decline. Additional strain will be put on the welfare system, as growing costs for health care, pensions and social benefits will need to be covered by a shrinking labour force. Cities will have to adjust their services in areas

such as health care and mobility, as well as public infrastructure, housing, and social policy.

URBAN HEALTH - While high population densities in cities may facilitate the spread of infectious diseases, they ensure economy of scale in the provision of healthcare. Well-being can be affected by where you live in a city, and can be improved by urban planning. Emerging trends, such as ageing, and the prevalence of obesity and mental health in cities have to be tackled with a long-term effort.

SOCIAL SEGREGATION - In European cities there is a growing polarisation, which can be addressed by inclusive and equitable place-based policies. These should take into account the multiple factors in play in deprived neighbourhoods (e.g. health, housing conditions, and ethnic background), and look at the causes of and solutions to segregation that go beyond the boundaries of the segregated area.

ENVIRONMENTAL FOOTPRINT - Providing water, energy and food security for urban populations results in significant environmental pressure beyond city boundaries. Four of nine planetary boundaries have already been exceeded due to human activities. Several lifestyle and behavioural changes can help city inhabitants significantly reduce their environmental footprint, such as shifting to a healthy diet, reducing waste, using active or public mobility modes or choosing sustainable energy sources.

CLIMATE ACTION - Cities generate about 70% of global GHG emissions, and, at the same time, are particularly vulnerable to the impacts of climate change. In the last two decades, city ambition has risen remarkably to go beyond the nationally determined contributions towards climate-change targets. However, cities need support from their partners in national and regional governments, the private sector, academia, and civil society to meet these ambitious targets.

Perspectives, towards solutions

Cities are uniquely equipped to tackle challenges – the abundance of available physical space, a large and diverse population, a certain level of autonomy, and openness to technological advancements and innovation, to name but a few, may offer ways to relieve the pressures cities face.

SPACE AND THE CITY – Public spaces make up between 2 and 15% of land in city centres in Europe. The greenness of European cities has increased by 38% over the last 25 years, with 44% of Europe's urban population currently living within 300 metres of a public park. Well-designed public and green spaces can have a multitude of benefits: improving air quality, providing microclimate regulation, and enhancing safety, social integration and public health.

TECH AND THE CITY – New and emerging technologies could help cities improve public services, better interact with citizens, increase productivity, and address environmental and sustainability challenges. However, they also raise several issues, including data privacy and ownership, appropriate and consistent legislation, data sharing and standards, and cybersecurity.

CITIES AS INNOVATION HUBS – Cities play a central role in innovation dynamics: geographical proximity of stakeholders and multidisciplinary interaction enable innovation. The variety of approaches to innovation enhances the identity of cities, their traditions and their cultural heritage. Although capital cities and metropolitan areas remain major drivers of creativity and innovation, favourable conditions can also be found in smaller cities.

THE CITIZEN'S CITY – The co-creation of strategies to tackle urban challenges is vital for their success – citizens can play a crucial role, often providing new perspectives and solutions. Novel technologies can significantly improve citizen participation, but there is a need to better understand and systematise current and emerging practices.

URBAN GOVERNANCE – Urban governance has gained a central role in global development efforts. At least 65% of the new urban agenda's goals can only be achieved at the local level, particularly in urban areas. There is a trend towards strengthening urban governance in the EU, leading to the recent establishment of a wide range of new governance bodies and arrangements across EU cities. This includes large networks which are significantly empowering cities and accelerating the evolution of urban governance towards more horizontal cooperation and knowledge exchange.

THE RESILIENT CITY – A resilient city assesses, plans and acts to prepare for and respond to all hazards



– sudden and slow onset, expected and unexpected. These include uncontrolled urbanisation, climate change and political instability, among others. Understanding social and economic vulnerabilities is essential to formulate actions for resilience adapted to local needs, with local communities playing a central role.

Main messages

Effectively seizing the opportunities and addressing the challenges cities face would substantially improve their future outlook.

Several focal points for upcoming reflections on relevant research and policy exercises are identified below. When managed well, cities can

harness powerful tools provided specifically within an urban context by technology and innovation, citizen engagement, good governance and the intrinsic resilience of communities.

1. Cities are key sites where innovation and technological advancement happens.

While this is a major opportunity for cities, both social and technological innovation should be further stimulated and progress should be made alongside new forms of social engagement, urban governance and cultural creativity.

2. The appropriate management of new technologies and data is crucial. New tools



and methods for better knowledge management are particularly important for enhancing the capacity to translate data into meaningful and relevant support to inform policy decisions. The use of real-time, **consistent and reliable data** (including big data and non-conventional sources) is essential and requires greater transparency towards citizens.

3. Housing availability and affordability remains under threat due to changing acquisition and rental patterns, including new forms of financial investment that see strategic opportunities for the conversion of volatile assets into physical ones in cities. This challenges obsolete social housing measures which have to be re-thought to reduce social polarisation and conflicts.

4. Cities are essential hubs for both the implementation of global agendas and for citizens' engagement in policy decisions. While committed to providing a good life for their citizens, cities can push forwards behavioural and institutional changes that will benefit all, taking an active role in global governance. Several European cities are at the forefront of issues such as **governance and citizen engagement, innovation and creativity.**

5. The fight for sustainability will be greatly influenced by what happens in cities. While cities usually place greater pressure on natural resources, they perform better in the use of resources and have a greater potential for energy efficiency. Actions on environmental sustainability, including climate change, are already being taken by many cities.

6. Cities and city networks have a large collective power to act and to scale up solutions quickly and efficiently. Their influence can be significant, from supporting global commitments to providing efficient local solutions. The EU has successfully created an environment of sharing of good practices between cities, both within

and outside Europe. In this sense, cities also have a certain responsibility to act towards societal change.

7. There is a risk of polarisation both within and between cities. On the one hand, being unable to take stock of the issues highlighted will lead to even more inequalities within a city. On the other hand, a diverging path between cities falling behind and cities capitalising on emerging trends may cause additional social and economic imbalance between different urban areas.

8. The close linkage between space/service/people is at the core of cities' capacities to respond to people's needs and to manage new challenges in a wider context, beyond administrative boundaries and sectorial domains. A truly holistic approach is needed to optimise the provision of services and create an intelligent interaction between the city and its inhabitants while maintaining or enhancing quality of life.

In all of the above, city communities will play a substantial role in reshaping their own futures. Greater efforts will be required to fully anticipate the impacts that these trends will have, and to determine how to help communities become more resilient in the face of these changes. Strengthening local administrations and empowering citizens will contribute to building urban resilience to new challenges and better protecting human, economic and natural assets in cities and their surroundings.

The future of cities is not set in stone and is not easy to predict, but the choices they make now will shape the lives of generations to come. By taking stock of current knowledge and understanding of city systems, this report highlights potential pitfalls cities should avoid and defines broad principles they should lean towards. It aims to foster discussion and help policymakers, individual cities and their citizens choose the best way forward.



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