

# CITY SCIENCE FOR

# URBAN CHALLENGES

City Science Initiative  
2020



Pilot assessment and  
future potential of  
the City Science Initiative

2019–2020





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future potential of  
the City Science Initiative**

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The pilot of the City Science Initiative is developed with the support of Charlina Vitcheva, Deputy Director General JRC, and Patrick Child, Deputy Director General R&I.

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**European Commission:**

DG CLIMA, DG CNECT, DG ENER, DG ENV, DG GROW, DG MOVE, DG Research & Innovation, DG REGIO, EASME, JRC

**Networks:**

100 Resilient Cities, Global Covenant of Mayors, European Network of Living Labs (ENoLL), European Regions Research and Innovation Network (ERRIN), European Union Knowledge Network (EUKN), EUROCITIES, UN Global Sustainability Index Institute Foundation (UNGSII), ICLEI, International Urban Cooperation, JPI Urban Europe, Thinknature, Network of Universities from Capitals of Europe (UNICA), URBACT, Fab Lab Cities Association (Alumni of H2020 icapital award of innovation), ECTP (European Construction Technology Platform), EIB (European Investment bank)

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Between January 2019 and July 2020, over 35 European cities formed the City Science Initiative (CSI) to explore how the science-policy interface operates in light of the emergent urban challenges and crises. It seems that the impact of current national and EU funded research funded programs needs to be enhanced for tackling cities urban challenges. This report aims to inspire people in municipalities, universities, networks, different layers of government and the European Commission to develop a variety of science-policy interfaces for handling of urban challenges in the near future.

The CSI pilot collaboration has brought together European small, medium and large sized cities, different services of the European Commission, different networks of cities and funding programmes. The gathered City Science Officers reflected on what they need and exchanged current practice and insight. To bridge the existing gap between science and policy, new methodologies need to be developed in all phases of the research process. The report argues that design as a discipline can help to build bridges, solutions and communication strategies for such science-policy interfaces.

The CSI concludes that the science-policy interface needs to improve significantly and soon. Cities are not rich and need to be efficient in how they develop policy for making people's living environment healthy and safe. Collaboration between cities, facilitated by European institutions and networks, is crucial for handling urban challenges and unanticipated crises as also the COVID 19 pandemic indicates.

# EXECUTIVE SUMMARY

## **EXECUTIVE SUMMARY**

Today 75% of the nearly 450 million Europeans live in cities. Cities have developed into dynamic and complex social, physical, technological and ecological communities. This has happened to such an extent that it is becoming increasingly demanding for scientists to research modern urban challenges. Cities are pioneering in responding to these challenges by designing and implementing evidence-based policies and by participating in ground breaking research for identifying new solutions. In the context of increased urbanisation, cities are essential hubs for the implementation of global and European innovations and for citizens' engagement in policy decisions and citizen science.

Cities are the home of complex, interlinked challenges related to climate change, pollution, energy efficiency, urban mobility, water, waste, food and resource efficiency, health and well-being and societal innovation. The battle for a better future can be won in our cities by working together through all sectors and layers of society, to accelerate the transition to inclusive, resilient, safe, climate-proof and resource-efficient ecosystems. It requires research, innovation and investment to harness and to inspire as well as for young people to participate. This is at the core of the proposed European Green Deal, the digital transition and the Recovery and Resilience Plan. This is also in line with the Urban Agenda for the EU and the Habitat III Global Agenda. Innovating institutional capacities to solve common problems, find solutions and ensure a strong knowledge and research function within local governments is necessary to make Europe the first climate-neutral continent. The time has come to orchestrate and harness our collective intelligence.

Between January 2019 and July 2020 the City of Amsterdam took the initiative to execute a substantial pilot collaboration framework that brought together 35 European cities, different services of the European Commission and other key stakeholders including networks and funding programmes. Over the course three plenary meetings and five online thematic workshops, participants explored how the science-policy interface at the urban level currently operates and could be improved. This marked the beginning of the City Science Initiative (CSI). This self-organizing, informal network showed that collaboration and seeking coherence is possible, identified some of the key obstacles and challenges to creating engagement between cities, universities and European institutions, and proved the need for orchestrating critical reflection on current policies and research outcomes.

The experience of the CSI indicates that cities are in direct need for more research and innovation to face upcoming challenges and take necessary steps towards sustainability. 'Just-in-time' research can make a significant difference. Yet it also shows that the interaction between research and policy



is not a given success. Science and policy communities speak different languages and many cities experience fragmented research. While the 20 years of European Research funding has generated many collaborations, professionals and decision-makers often do not get the research they need, while academics operate too much in isolation and do not align their research with the cities' needs.\*

To improve the interaction between research and policy, results of research and potential tools and guidelines need to be made available in accessible ways for citizens and city officials. It is the research community, with the help of the European Commission, that can make results available for cities in such a way that they can be used and benefitted from. This requires a collective effort with significant investment and with central guidance and support. A design and cross-sectorial approach is essential for making such collaborations relevant to all involved.

A more direct interface between European cities and the European Commission services is necessary for being able to deal with the challenges that cities face. The CSI initiative shows there is a shared need and willingness from both professionals in EU institutions and networks and from city and regional experts to interact closely on research and urban challenges. It also demonstrates that the European Commission is ready and able to play its role as a partner in working on multi-level governance issues such as city science. The CSI can play a significant role in the decade to come in which planetary boundaries will cause a cascade of crises which will affect life in cities and of European citizens significantly. Building capacity in today's and next generation of students to be able to handle this stacking of crises and to be capable to apply scientific knowledge and methodologies to the crises, will make a significant difference.

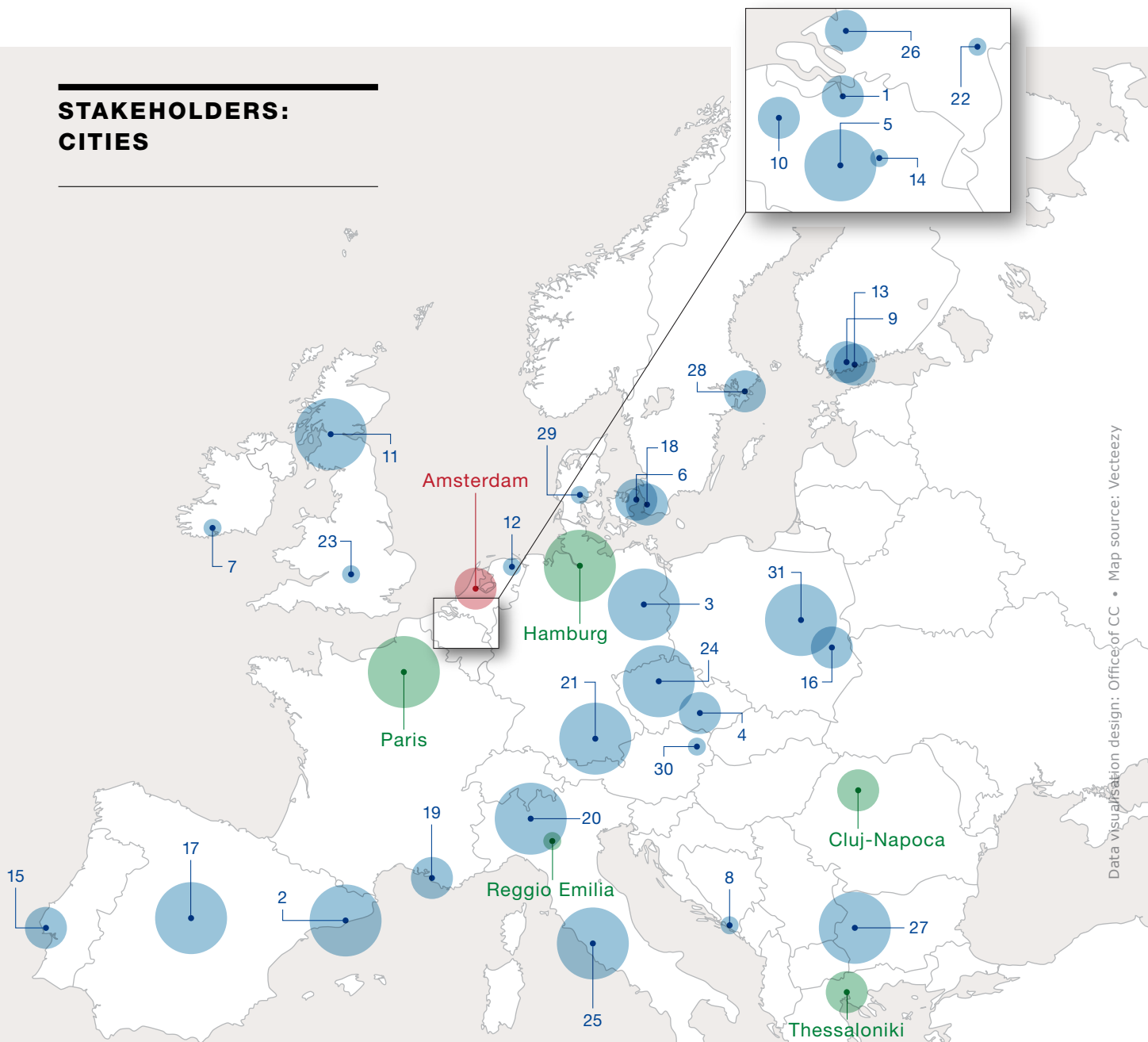
With its unique and necessary focus on science and policy, the CSI wants to continue as a networking point and forum where City Science Officers from different European cities meet. They are the key players that can help cities deal with the research-policy gap. A direct interface between them and the European Commission, and with the support of the different networks, is needed to make sure that European research can substantially contribute to the practical challenges of today in the EU. This does not only help cities to face the challenges ahead, but also offers a possibility for the Commission and the networks to demonstrate in a concrete manner how the European dimension can help citizens to improve their daily realities and living conditions.

NOTE

\* Also embedded and direct relationships between major institutions such as the European Commission and cities need to be further enhanced to support the already created and existing network of almost

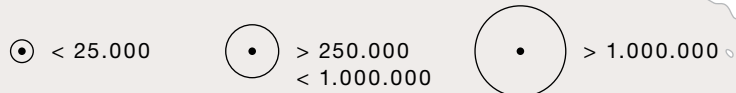
300 cities in the EU and globally, participating in ongoing Horizon 2020 demonstration projects, not just as end-users but as co-designers and co-implementers of innovative urban planning solutions.

## STAKEHOLDERS: CITIES



Data visualisation design: Office of CC • Map source: Vecteezy

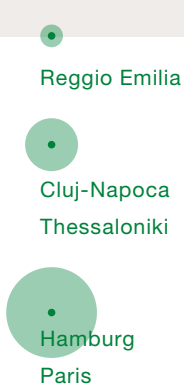
### CITY SIZE BY POPULATION



### INITIATING CITY



### LEADING CITIES



### PARTICIPATING CITIES



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## STAKEHOLDERS: NETWORK

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### **100 Resilient Cities**

Helping cities around the world become more resilient to physical, social, and economic shocks and stresses.

### **Covenant of Mayors**

The Covenant of Mayors is the world's largest movement for local climate and energy actions.

### **European Network of Living Labs (ENoLL)**

The European Network of Living Labs (ENoLL) is the international federation of benchmarked Living Labs in Europe and worldwide.

### **European Regions Research and Innovation Network (ERRIN)**

Brussels-based network supporting regional and local stakeholders to develop their innovation ecosystems and to enhance research and innovation capacities.

### **European Union Knowledge Network (EUKN)**

The European Urban Knowledge Network (EUKN) is the only independent EU Member State driven network in the field of urban policy, research and practice.

### **EUROCITIES**

EUROCITIES is the network of major European cities; its members are the elected local and municipal governments of major European cities.

### **UN Global Sustainability Index Institute Foundation (UNGSII)**

The UNGSII FOUNDATION was created to assist and accelerate the implementation process of the UN Sustainable Development Goals (SDGs).

### **ICLEI**

ICLEI – Local Governments for Sustainability is a global network of more than 1,750 local and regional governments committed to sustainable urban development.

### **International Urban Cooperation**

The International Urban Cooperation (IUC) programme, funded by EU, supports the achievement of bilateral policy objectives, as well as major international agreements on urban development and climate change.

### **JPI Urban Europe**

JPI Urban Europe was created to address the global urban challenges of today with the ambition to develop a European research and innovation hub on urban matters and create European solutions by means of coordinated research.

### **ThinkNature**

ThinkNature project, part of Horizon 2020, aims to develop a platform that supports the understanding and the promotion of Nature-Based Solutions.

### **UNICA: Network of Universities from Capitals of Europe**

UNICA is an institutional network of 53 universities from 37 capital cities of Europe.

### **URBACT**

URBACT is a European exchange and learning programme promoting sustainable urban development, helping cities to develop pragmatic solutions that are new and sustainable and that integrate economic, social and environmental urban topics.

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## STAKEHOLDERS: EUROPEAN COMMISSION

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### **DG CLIMA**

Leads the European Commission's efforts to fight climate change at EU and international level.

### **DG CNECT**

Responsible to develop a digital single market to generate smart, sustainable and inclusive growth in Europe.

### **DG ENER**

Responsible for the EU's energy policy: secure, sustainable, and competitively priced energy for Europe.

### **DG ENV**

Responsible for EU policy on the environment.

### **DG GROW**

Responsible for EU policy on the single market, industry, entrepreneurship and small businesses.

### **DG MOVE**

Responsible for EU policy on mobility and transport.

### **DG Research & Innovation**

Responsible for EU policy on research, science and innovation, with a view to help create growth and jobs and tackle our biggest societal challenges.

### **DG REGIO**

Responsible for EU policy on regions and cities.

### **EASME**

Manages several EU programmes in the fields of SME support & innovation, environment, climate action, energy and maritime affairs.

### **JRC**

The European Commission's science and knowledge service which employs scientists to carry out research in order to provide independent scientific advice and support to EU policy.

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## TESTIMONIALS

### Marseille

#### ***From transmission of scientific knowledge to participatory and interdisciplinary governance supported by science***

*CSI has proved that science can inform local policy decisions in many areas, even if there are still obstacles to overcome to improve science-policy interface. Moreover, the problems of our cities are increasingly global and require a systemic approach, necessarily interdisciplinary, inviting researchers to engage in 'action research' approaches, involving them in the writing of local policies and their implementation, or experimenting the new sustainable socio-economic models that can also lead to questioning laws and regulations.*

*The City of Marseille has largely experienced this approach, particularly for the management of its natural land and marine areas, by inventing methods of dialogue between researchers and citizens in which elected officials adopt new positions. Marseilles therefore proposes CSI to launch exchanges between cities on the many methodological and political issues that arise: setting up multidisciplinary teams, barriers of scientific languages, co-construction of shared knowledge, interdisciplinary methodologies, IT and territorial creativity, impact on regulations, evaluation methods, reluctance to overcome on the part of certain elected officials and researchers, perpetuation, capitalization, training and reproducibility of experiences, methods and tools...*

**Jean-Charles Lardic**  
Director of Foresight  
City of Marseille

### Eurocities

#### ***Developing Urban Lab methodologies & Science Policy dialogues***

*Eurocities shares the same vision and level of ambition of CSI. Urban challenges are complex and interconnected and nobody can solve them by working alone. We need to leverage the potential of the research community to direct innovation and scientific knowledge towards solution-oriented approaches. We also believe citizens, civil society and the business sector should be part of the dialogue to close the science-policy gaps and to drive the urban transition towards greener, digital and inclusive cities. At Eurocities we are already experimenting with urban lab methodologies and testing models to facilitate science-policy dialogues. We are creating the space for city policy makers to present the urban challenges they face to the research community and all the other stakeholders to co-create solutions. We support the CSI and look forward to increased synergies and cooperation.*

**Eurocities**, the network of 140 European cities, share CSI's ambition and is working in the same direction of connecting urban knowledge and expertise with the view to find solutions to complex urban issues.

## Global Covenant of Mayors

### **Innovation on the ground**

*The findings of the CSI report strongly resonate the challenges that were put forward by GCOMs Innovate4Cities initiative. A better sharing of data, tools, best practices and the adoption of a joint narrative will be key. As cities are at the forefront of tackling climate change we strive to further invest in assessing city climate mitigation and adaptation strategy knowledge gaps; identifying emergent urban policy and development priorities, needs, and innovations 'on the ground' while accounting for the impacts of COVID-19; and validating and refining regional priorities into actionable knowledge via stakeholder participation. Moving towards resilient, sustainable and liveable cities Implementation of a Research& Innovation agenda will involve cross-sectoral partnerships and the development of global and regional research and innovation priorities that respond to the needs of cities.*

#### **Jorn Verbeeck**

Head of Research & Innovation  
Global Covenant of Mayors for Climate and Energy

## Vienna

### **To do the homework of building bridges**

*We are very happy with this initiative, all the energy, to go on this way, it is worth it. The last year we have been trying to do the homework. To deal with the universities and the municipality and to find solutions. There is a big gap. The gap is also that there is a group researchers, who have a lot of answers, but these answers often do not fit the questions of the city. This has to do with the logic of the EU projects, which are living in a bubble, often far away from the issues in the cities. We have to develop different instruments and be more precise and concrete what we need. This demands money and organization.*

#### **Christian Wurm**

Head of Section Research, Technology and Innovation  
Department for Economic Affairs, Labour and Statistics  
City of Vienna

## UNICA

### **Research, teaching and service to society on urban challenges**

*Creating synergies between cities and universities are of utmost importance for many reasons. Today's students are tomorrow's scientists and citizens, thus it is our interest to make them conscious and sensitive to urban challenges [...] Urban universities are institutions of higher learning that are socially involved and serve as resources for educating the citizens and improving the health of the cities or regions in which they are located. In this sense, we support our members so that they can be 'of' the city as well as act 'in' and 'for' the city. Universities, especially in capitals, have a unique position in focussing their activities related to research, teaching and service to society on urban challenges, and, at the end of the day, can foster knowledge sharing in their entire region and country [...] UNICA is delighted to support the City Science Initiative and calls for strengthening collaboration between our Member Universities and their cities.*

**UNICA** is an institutional network of 53 urban universities of mostly capital cities of Europe, combining over 175,000 staff and 1,950,000 students.



1

# RESEARCH FOR THE FUTURE OF CITIES

## RESEARCH FOR THE FUTURE OF CITIES

Today 75% of the nearly 450 million Europeans live in cities. There are 18 EU cities with over a million inhabitants, 43 cities have over 500.000 inhabitants, 85 have between 250.000 – 500.000 inhabitants and 700 cities have between 50.000 and 250.000 inhabitants.<sup>1</sup> Thus cities are essential hubs for both the implementation of global and European agendas and for citizens' engagement in policy decisions. The fight for sustainability will be greatly determined by what happens in cities.

In 2019 the Joint Research Centre (JRC) of the European Commission published the Future of Cities report<sup>2</sup> in which the main challenges for cities in the near future are identified: the provision of affordable housing, sustainable mobility, the provision of services, an aging population, urban health, social segregation, environmental footprint and climate action. The report indicates that cities are key sites where innovation and technological advancement happens. Cities and city networks have a large collective power to act and they are key-stakeholders in actions on environmental sustainability, including climate change, while at the same time having to deal with growing tensions amongst their citizens. In order to ensure the (co-)design and implementation of policies at the urban level, new forms of governance and finance need urgently to be developed, ensuring the engagement of citizens, also in an effort to respond to basic needs, including the offer of affordable and sustainable housing. Appropriate management of technology and data is crucial.

### NOTES

1 The human-centered city, opportunities for citizens through research and innovation. 2020

European Commission  
Directorate-General for Research and  
Innovation

2 Vandecasteele I., Baranzelli C., Siragusa A., Aurambout J.P. (Eds.), Alberti V., Alonso Raposo, M., Attardo C., Auteri D., Barranco R., Batista F., Benczur P., Bertoldi P., Bono F., Bussolari I., Caldeira S., Carlsson J., Christidis P., Christodoulou A., Ciuffo B., Corrado S., Fioretti C., Galassi M. C., Galbusera L., Gawlik B., Giusti F., Gomez, J., Grosso M., Guimarães Pereira Â., Jacobs-Crisioni C., Kavalov B., Kompil M., Kucas A., Kona A., Lavallo C., Leip A., Lyons L., Manca A.R., Melchiorri M., Monforti-Ferrario F., Montalto V., Mortara B., Natale F., Panella F., Pasi G., Perpiña C., Pertoldi M., Pisoni E., Polvora A., Rainoldi A., Rembges D., Rissola G., Sala S., Schade S., Serra N., Spirito L., Tsakalidis A., Schiavina M., Tintori G., Vaccari L., Vandyck T., Van Ham D., Van Heerden S., Van Noordt C., Vespe M., Veters N., Vilahur Chiaraviglio N., Vizcaino P., Von Estorff U., Zulian G., *The Future of Cities – Opportunities, challenges and the way forward. Executive Summary*, EUR 29752 EN, Publications Office, Luxembourg, 2019, ISBN 978-92-76-05443-6, doi:10.2760/089751, JRC116711.



At the same time, and in relation with the Future of Cities report, DG Research and Innovation (R&I) asked a High-Level Expert Group to ‘think out of the box’ and explore the necessary research agenda for the future of cities from a citizen’s perspective. This report, ‘The Human centred City’, opportunities for citizens through research and innovation, is published in 2019 as well.<sup>3</sup> This report identifies three forces that define the European landscape of cities in the near future: the risk nexus, the vortex effect and the digitising world.<sup>4</sup> It suggests four big themes around which to structure future research: people, place, prosperity and resilience in which in each theme governance and measurement are cross-cutting dimensions.<sup>5</sup> The report states that “the world faces an urgent need to transition dramatically. To manage the transition is a ‘system challenge’. It cannot be tackled in a piece by piece manner. It can only be addressed in an integrated way”.

Cities have developed into dynamic and complex social, physical, technological and ecological communities. They have become ‘communities of (complex) systems and people’. This has happened to such an extent that it is becoming increasingly demanding for scientists to research modern urban challenges. Cities require an integral and cross-sectoral approach, as on the local level the connections between different fields of science are intrinsically linked in the challenges cities face. Cities, as well as regional authorities, are pioneering in responding to these challenges by designing and implementing evidence-based policies and by participating in ground breaking research for identifying new solutions.

#### NOTES

3 See note 1

4 The risk nexus refers to the accumulation of crises that emerge due to the disciplinary and subject based institutional organization that does not know how to handle crises that affect different interwoven domains and require integral and multidisciplinary approaches. The R&I challenge is to understand these complex and interdependent forces and develop policy driven pathways for being able to deal with this complexity and counteract the deep uncertainty that emerges as result of the risk nexus.

The second force that affects cities futures that is identified is the so called ‘vortex effect’, which refers to the fact that the larger cities attract abundant resources, talent and opportunities while other smaller cities get more and more isolated. The R&I challenge is to capture the notion of centrality and understand the drawing power of places offering smaller cities new avenues of positioning themselves as places of good quality of life, in contrast with increasingly dysfunctional urban areas, and with digitization making it easy to connect

and participate in larger urban contexts as well. The third force that deeply affects the functioning of cities is the digitization of nearly all aspects of life. It offers great potential for liberation and great potential for invasiveness as well. R&I actions require to understand the social, economic, cultural and political impact of public policies in the rise and decline of cities of the future. They require the development of alternative business models to the current and put people at the heart of further development involving citizens decision making and fostering behavioural change to address sustainability goals.

5 The ‘people’ dimension seeks to devise new ways to make the most of diversity; build community and social bonding; and create an inclusive city for all to avert inequalities and spatial segregation and to establish a sense of safety. The ‘place’ dimension focuses on planning within planetary boundaries with renewables and energy efficiency at its core. It includes decarbonising all our systems; rethinking food cycles; adaptive reuse; shared and smart mobility services; fostering the circular economy and embedding ‘cradle-to-cradle’ business models; and creating an aesthetically literate built environment that works for people. The ‘prosperity’ dimension adopts an integrated framework to identify and develop innovative forms of value creation; redesign and optimise urban innovation systems; and reconsider the benefits of agglomeration economies and the position of cities as nodes of global value chains in order to foster new economic opportunities, jobs and prosperity in both developed and less-developed regions of Europe through new models to finance public services and urban policies. The ‘resilience’ dimension establishes how foundations for building resilience can be created based on vulnerability profiles with mechanisms to avert shocks and risks including building institutional capacity.

In order to continue to respond flexibly to developments in society and to find adequate solutions to many of these challenges, a strategic knowledge and research function within local governments is essential. Anticipating the plethora of crises that are expected, the urgency to develop frameworks for 'just-in-time' research for handling specific issues that at first hand seem to concern particular and diverse communities, yet soon appear to affect many others as well. COVID-19 is the perfect first example of how 'just-in-time' research and policymaking go hand in hand. Collaboration is necessary between different departments in the city, between cities and regional public agencies, and between cities and nation states and European policymakers, so they can work hand in hand to handle the crisis. These collaborations are of vital importance. Cities benefit from strengthening the knowledge infrastructures in and around them.

It appears that in more and more cities and regions, a function for orchestrating these collaborations, is being put in place. One of these cities is Amsterdam. The city was host for the EU Capital Conference in 2016, during the Dutch EU presidency, which resulted in the Pact of Amsterdam. The pact set out the Urban Agenda and was an important milestone to include the urban dimension in EU policies.

Also having won the European iCapital award in 2016, and being very aware of the need to connect to research and innovation to face the challenges that are ahead of us, the City of Amsterdam initiated the function of Chief Science Officer (CSO) in 2017 with the task to orchestrate collaboration between the universities and the city. It appears that in the last few years many cities have introduced a similar function. Amsterdam's first CSO prof dr. Caroline Nevejan, met with JRC's then Deputy Director General Charlina Vitcheva, who was working on the Future of Cities report, and RTD Deputy Director General Patrick Child, who initiated the Human Centred cities report. This encounter marked the beginning of the City Science Initiative.

2

# SCIENCE IN THE CITY

## SCIENCE IN THE CITY

### 2.1 City Science Officers come together

In February 2019 the first informal roundtable of, what is now called, the CSI is organized to discuss the challenges of cities and the role of science in addressing them. The City of Amsterdam, DG RTD and DG JRC invited the CSO's, and people in a similar function, of about 20 cities in the EU to come to Brussels and explore, together with city networks, universities and other organizations, the possibilities to reinforce the interface between science and urban policies. The roundtable aimed to create connections between those local officials, the European Commission services and European network organizations working on urban territorial development and scientific issues.

The European Commission's traditional counterparts are Member States and their ministries. However, realizing that the many emerging challenges in the near future will be played out on the city level, most attendants acknowledged that on research related policies and dilemmas, a more direct interface between European cities and the European Commission services can benefit all involved. By bringing this expertise together, the CSI also aims to contribute to policy developments at a European level, such as the proposals of the European Commission for Horizon Europe and the European Urban Initiative. It is agreed in the first meeting to embark on a pilot of one and a half year to explore the potential of what is now called the City Science Initiative.

Several potential functions for the initiative are formulated:

- Promote and facilitate a European Network of City Science Officers. Bring together professionals from different EU cities working on the interface between city-policies and research ('City Science Officers', CSOs), encouraging the participation of practitioners (architects, engineers, construction sector, design firms etc.) to implement on the ground successful tools, solutions and technologies.
- Explore how research, science and technology can help cities to address the challenges at the local level. Explore the needs and priorities of cities in terms of evidence-based policy making and promote discussion on ways through which science could help in addressing challenges faced by cities.
- Connector and information hub, between EU research and cities. Share research outcomes, best practices, EU projects and funding opportunities for cities. Facilitate linkages with other related initiatives.
- Establish permanent dialogue between cities and Commission services and make available tools and instruments, adapt these where necessary.
- Develop effective instruments to allow SMEs to benefit from the CSI initiative and allow urban living labs to develop solutions in close collaboration with scientists, citizens and city officials.
- Managing tacit and explicit knowledge available in cities and the Commission for the optimisation of the whole urban policy cycle.
- Function as a sounding board and informally discuss EU plans, policies and priorities (e.g. Horizon Europe) with cities, Discuss the 'research challenges' of cities and convene workshops to address these.

The strong engagement of the participating City Science Officers made it clear that there is a shared need to develop this CSI further. As a conclusion of this meeting, there was strong consensus that in a second phase, the CSI could play a stronger role in providing policy support for cities (through a strategic mutual learning environment, initiating research) and in advocating for the importance of city science and developing the methodologies City Science needs. Also the advisory role ('sounding board') to the services of the European Commission on policies and programmes related to research and urban challenges can be strengthened.

## 2.2 Reflecting on cities research practices

Since the network informally started in 2019, three plenary meetings have shaped the City Science Initiative in the last year and a half. The Science for the City roundtable was its first step. The next two meetings, held in Amsterdam in June 2019 and in Brussels in September 2019, helped to define the scope, objectives and a sort of methodology for the CSI.

In the 2nd conference held in Amsterdam in June 2019, stakeholders decided to focus the CSI on five specific urban challenges, led by different cities: air quality (Paris), circular economy (Hamburg), mental health (Thessaloniki), sustainable urban mobility (Cluj-Napoca) and tech and the city (Reggio Emilia). The European Commission, through the lead of the Joint Research Centre, took the initiative to elaborate five knowledge dossiers on urban research and innovation for the selected topics.<sup>6</sup> It also launched the website, giving online support to the initiative. The Brussels meeting in September 2019 defined a methodology for the CSI work. Leading cities would develop a scoping paper for each challenge. They would frame the needs of cities in terms of science and policy to address these challenges. Then, cities would organise working sessions to understand how research fits into their messy reality. Those working sessions would allow cities and scientists to interact with each other and to understand their needs.

The work after the Brussels conference in September has been partially affected by the Covid-19 outbreak. No more physical meetings took place. Instead, the CSI meetings and events went online. In this transition, the website gained more importance as the common platform to share information and keep all involved actors updated.

### NOTE

<sup>6</sup> <https://ec.europa.eu/jrc/communities/en/community/city-science-initiative>

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## FIRST CONFERENCE

21-22 February 2019,  
Brussels JRC building

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- a Governance and finance between science and policy.

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  - b Learning and communication between science and policy.

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  - c Agency of the city.

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  - d New paradigm of city science, different process between science and policy: new methodologies: interdisciplinary and with citizens and policymakers.

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## SECOND CONFERENCE

11-12 June 2019,  
Advanced Metropolitan Institute,  
Amsterdam

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- e Deepen a-d.  
(see next textbox for results)

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  - f Identify how the cities work: it appears that in every city a small group between 3 – 6 people are catalyst for collaboration between universities and municipalities, business and citizen NGO's. All cities present agree that it is of vital importance that this group is well positioned with access to the boards of universities and directors of research institutes, as well as having access to (local) politicians, and other governing officials. Some city science officers are positioned in the municipality, others in the university and other research institutions. When orchestrating research to meet urban challenges, the cities emphasize the need to also work together with regional organizations that are responsible for essential services such as water or transport, small and medium enterprises, international business and citizen organizations.

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  - g The decision is made to shape the collaboration between cities on research and policy on the basis of concrete challenges: air quality, civic tech, mental health, smart mobility and circular economy.

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## THIRD CONFERENCE

24 September 2019,  
Brussels (during R&I days)

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- h Define the way of working in the coming months: define how EU research helps cities already and if so, what is the gap that is not being covered and is needed for cities in the coming years.

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  - i On the one hand identify the need for 'knowledge dossiers' from JRC and DG RTD, on the other hand cities formulate what they need better.

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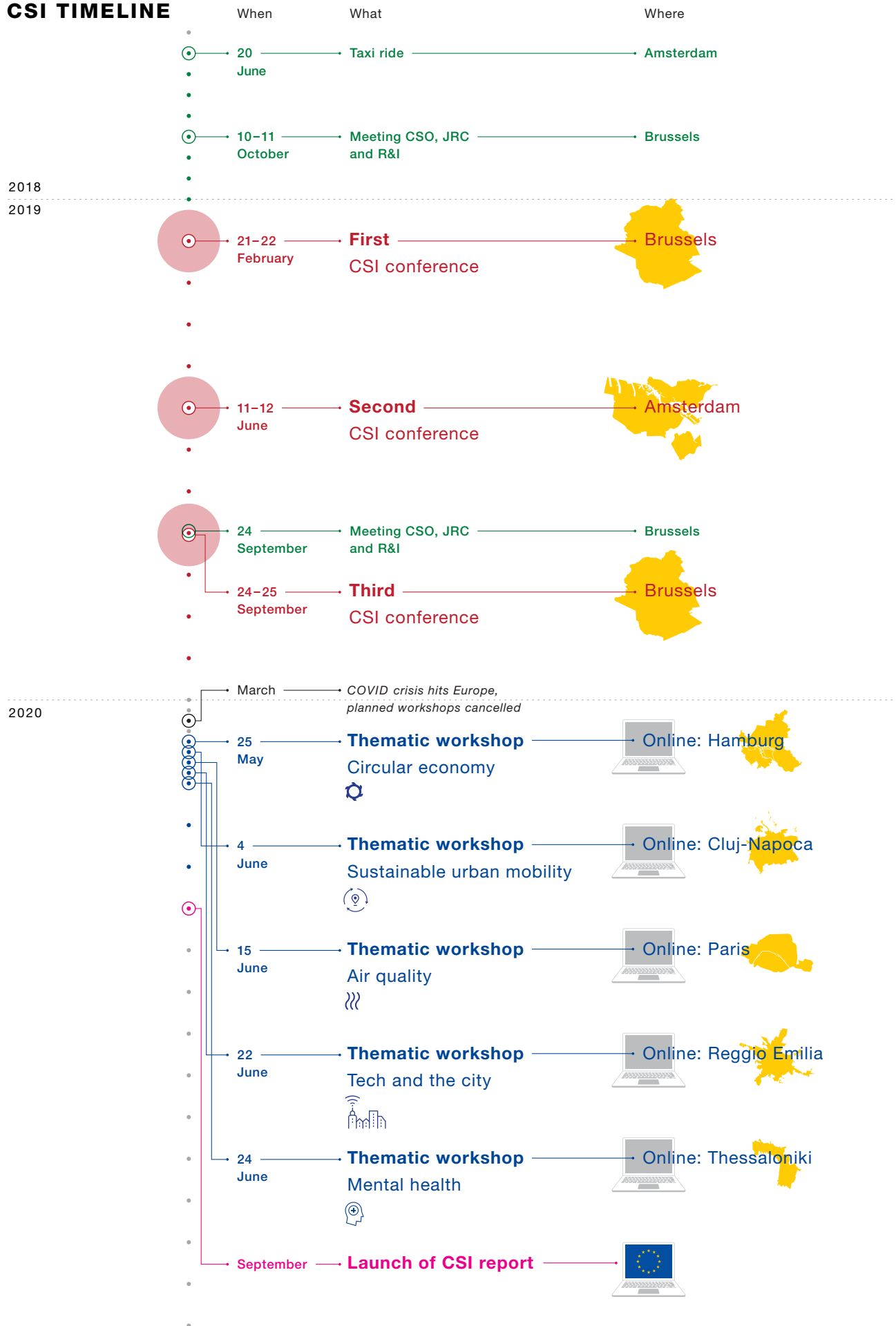
  - j Exchange how cities are going to organize the thematic meetings: first one with a small group of specialists from science and policy to make a scoping paper, a second meeting with many other cities involved, including cities from the different EU networks. In doing so, the CSI would open up based on content and engagement.

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  - k Identification of Lead cities for each of the 5 themes: air quality (Paris), circular economy (Hamburg), mental health (Thessaloniki), sustainable urban mobility (Cluj-Napoca) and tech and the city (Reggio Emilia).

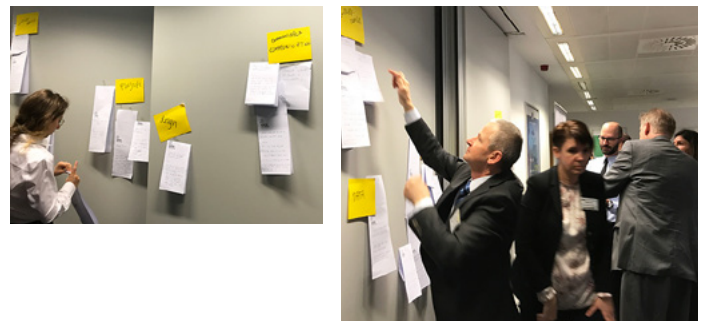
This online transition was possible because of the strong engagement of its participants and the flexible nature of the CSI. Not having a fixed agenda, defined in detail, can make it hard to stay connected. CSI showed however a different pattern. People from different cities and other participants remained strongly engaged in the process despite the fact that some of the working sessions were very long to attend online. This engagement has allowed the initiative to evolve according to what was possible at the time in the COVID-19 spring of 2020.

## CSI TIMELINE



Besides shaping the CSI, the first three meetings served as a reflection exercise about the science-policy landscape at the city level. Attendees shared their ideas and opinions about how science and policy currently connect in cities, how this could be improved and which are the challenges ahead. In addition, cities carried out a mapping exercise of their local science-policy interface. Altogether, this information may be interpreted as a diagnosis of how science and policy currently interrelate at the city level.

Different priorities to develop the science-policy interface were identified. They refer to the governance and finance between the municipality and the universities, the science and policy learning and communication, the alignment of priorities between these two worlds and the development of a research paradigm for city science. Needs and methodologies of City Science Officers were also discussed. There was also room for addressing the connection between European cities and European Institutions.



### **First CSI Conference**

JRC Brussels

Cities and representatives of different departments of the EU Commission and a variety of networks, analyse the policy-research interface and collaboration.



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## **GOVERNANCE AND FINANCE OF CITY SCIENCE**

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Cities are not only in need of more research on the urban challenges they are facing, they are also in need of a better connection with science and a better understanding of available research. To bridge the gap between research institutions and local government one has to take into account their different needs: where universities insist on independence, local governments prioritize political responsibilities and specific solutions. This also means that definitions of 'academic excellence' in universities provide targets which are not directly commensurable with the targets of local government, where academic research is judged by its societal impact, which is difficult to measure. Governance also implies financing. Even though both local government and universities are funded by public money, financing happens through differing channels. It is therefore often difficult to find a common ground. Financial instruments should allow more space for research that is relevant to local challenges. Also, having a single point of contact for research cooperation in local governments can contribute to finding a common ground.

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## **LEARNING AND COMMUNICATION BETWEEN SCIENCE AND POLICY**

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Universities and local government make use of differing languages, processes and quality assessments. In addition to this, there are communication-issues between different departments that are involved, in both governments and universities. Therefore it is difficult to come to better cooperation and effective communication is a given bottleneck issue. Also, it requires substantial orchestration and investments of human capital to design effective and in-practice collaboration between policy and research. How to deal with the vast supply of research and how to disclose it effectively? It is also not always considered a priority to work together, both in government as in academics. One of the ways to come to better cooperation between science and policy, is to better understand existing best practices. One of the aims of the City Science Initiative is to collect these best practices and to promote the importance of city science, amongst others on the political level.

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## **A NEED FOR A NEW RESEARCH PARADIGM ON CITY SCIENCE**

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The City Science Initiative could develop into a Community of Practice of City Science Officers: a community of people sharing experiences from their work practice and developing new knowledge from this cooperation, similar to the way in which scientists form communities of practice. The community of practice can develop a shared language and shared concepts to establish a new research paradigm for city science: fundamental research across the board, including both alpha beta and gamma sciences. This scientific angle can also contribute to the elaboration of qualitative analysis, identification of knowledge gaps, elaboration and improvement of human-centred co-creation processes aiming at situating citizens at the centre of urban policy-making. Furthermore, what is the relation between the university and the city and how can knowledge and data be shared? At this point, only few researchers are trained to answer these types of questions. This new form of research should be transdisciplinary and aim at urban societal impact. City science is distinct in its methodologies, standardization, assessment valorisation and focus on agenda setting and impact.



Paris



Hamburg

**Second CSI Conference**

Institute for Advanced  
Metropolitan Solutions,  
Amsterdam

Cities map and reflect on  
how they locally organize  
collaboration between muni-  
cipalities, universities and other  
stakeholders in the region.  
policy-research interface and  
collaboration.



Warsaw



Cluj-Napoca



Lublin



Reggio Emilia



Amsterdam

## 2.3 Developing thematic workshops

During the pilot the participating cities, network organizations and several involved Commission services have developed a functional cooperation through the City Science Initiative. Eleven meetings have been organised, also digitally after the Covid-19 outbreak. These meetings have been a forum for reflection on the activities, purpose and roadmap of the CSI. Because of its flexible nature, the CSI has been able to adapt its activity to the cities' needs. In addition, the core group served to engage cities with other European actors and initiatives of interest. Several experts and stakeholders were invited to present their work to the cities.

To oversee the workflow and the continuity of actions, a 'CSI core group' has been formed: a working group formed by the City of Amsterdam, the JRC, the lead cities of each thematic challenge (Cluj-Napoca, Hamburg, Reggio Emilia, Paris, Thessaloniki) and other involved services of the European Commission (DG RTD, DG REGIO, EASME).

Through other activities, mainly the virtual workshops organized in May – June 2020, the CSI has fostered the contact and collaboration among a larger circle of cities and additional stakeholders, initiatives and interested actors, including the European Commission (DG MOVE, DG GROW, DG ENV, DG CONNECT) and the European Environmental Agency.

The feedback received from many that were involved in these CSI-session, was that there was a need for continued cooperation. Services of the European Commission and a variety of city networks underlined their interest to interact with cities to understand and take into account their needs when designing their policies. Science and research communities expressed their interest to showcase their results and exchange knowledge with cities. City-representatives expressed appreciation for participating in a horizontal process in which they were listened to and where their views were taken into account. In other words, the CSI made evident that there is a shared need and willingness of both EU institutional professionals and city experts to interact closely on issues related to science and urban challenges.

Several aspects are worth noting to describe the particular dynamic of the CSI-initiative. The CSI started as a self-organizing, informal network (no subsidies or grants were involved). Participating institutions and parties all contributed in kind by fully covering their own costs, thus demonstrating their high commitment. Because of this and because the CSI puts the language and challenges of cities at centre stage, the CSI functions as a useful

engagement tool with cities on research for the European institutions.<sup>7</sup> It is noticeable that the language of city science and the approach of self-organizing is relatively new in the European arena. There is a tendency to emphasize best practices, both amongst city and research representatives, instead of presenting open-ended research questions and challenges. The CSI engages with the European Commission as equal partners in working for the future of Europe, unlike in many other points of context where the European Commission is mostly considered as a potential funder. The CSI aims to cooperate as equal partners in multi-level governance discussions in an effort to design and enrich policies. These aspects of the CSI-meetings reflect the need to encourage equal engagement between cities, universities, networks and European institutions to orchestrate critical reflection on current policies, research outcomes and provide recommendations to develop European city science further.

## 2.4 Formulating shared research questions is not easy

Since September 2019, the leading cities have started to work on their respective challenges. For each challenge, leading cities came up with specific policy-research questions of interest for their local environments. The idea behind this step was to enable scientists and policy-makers to work together. This established a dialogue to understand what are the cities' needs and priorities and how science can contribute to addressing them. Leading cities defined their policy-research questions together with other actors and stakeholders, also from the scientific community.

It turned out to be difficult to formulate exact research questions based on local practical challenges. The difficulty that cities experience in formulating research questions, reveals the challenge of city science. Science and policy communities speak different languages and the EU institutions speak yet another. They are not always accustomed to talk to each other and reflect on local needs together. More attention to this practice in cities, in universities and in the EU policy environment, would contribute to stronger cooperation. To do so requires effort to learn each other's language, process, deliverables and validation methods. It also shows that a serious investment is needed in the capacities of cities to work on city science.

It was rewarding to see how the CSI established engagement between participants and understanding between each other's discourses. It made clear the European Commission is ready and able to play its role as a partner in working on multi-level governance issues such as city science. Cities have to learn how to formulate their own questions and team up with other layers

### NOTE

<sup>7</sup> We highlight the fruitful insights from Anna Lisa Boni (EUROCITIES), Hellen Mccarthy (DG ENV), Angela Guimaraes and Davide Auteri (JRC).

of government to put forward clear and understandable requests in order for the Commission to be able to cater to cities' needs. Local challenges often have a regional character, the role of CSO can also play a mediating role here, working together with regional authorities like water agencies or energy suppliers that have a regional mandate. To learn and train City Science Officers and others in local, regional, national and European government as well as researches in the sciences and academia, will benefit research to which urban challenges are core.



3

# EXPLORING FIVE CHALLENGES

## EXPLORING FIVE CHALLENGES

A virtual thematic workshop on each challenge was organised by the respective leading city based on the policy-research questions previously formulated.<sup>8</sup> The initial overarching question for these workshops was the relevancy of European research for cities' challenges and what recommendations could be put forward. Whereas the formulation of the policy-research questions focused on the science-policy interface at the local level, these thematic workshops also aimed to widen the community involved, including relevant European stakeholders.

To feed the debate, the European Commission produced five knowledge dossiers summarizing the state of the art of the research and innovation for each challenge at the European level. These dossiers give an overview of what is going on from both the policy and the scientific side, allowing cities to reflect on what is lacking and where more efforts should be put. The knowledge dossiers are extremely rich documents and the fruit of a collaborative effort. They were coordinated by the Joint Research Centre, with contributions from other European Commission services, leading cities and initiatives like JPI Urban Europe.

### SCIENCE-POLICY QUESTIONS



#### CIRCULAR ECONOMY

Hamburg

[Full programme on page 60](#)

- Circular value chains and waste flows optimisation.
- Administrative burden reduction and inter-territorial cooperation for circular economy.
- Digital transformation to improve the effectiveness of circular economy action.

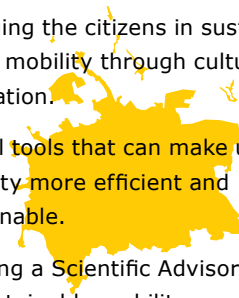


#### SUSTAINABLE URBAN MOBILITY

Cluj-Napoca

[Full programme on page 61](#)

- The most effective methods and tools to foster the shift of people to more sustainable transport modes in urban contexts.
- Engaging the citizens in sustainable urban mobility through culture and innovation.
- Digital tools that can make urban mobility more efficient and sustainable.
- Forming a Scientific Advisory Board on sustainable mobility, creating a process of knowledge exchange using data-based evidences.

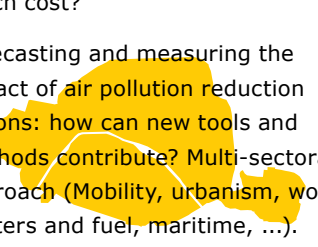


#### AIR QUALITY

Paris

[Full programme on page 62](#)

- How to integrate emerging questions into regulatory air quality monitoring? Emerging pollutants/ impacts on human health or environment/which tools and at which cost?
- Forecasting and measuring the impact of air pollution reduction actions: how can new tools and methods contribute? Multi-sectoral approach (Mobility, urbanism, wood heaters and fuel, maritime, ...).
- How to involve citizens through engagement, education and communication.



#### NOTE

<sup>8</sup> More information of workshops, <https://ec.europa.eu/jrc/communities/en/community/3393/events>



## SCIENCE-POLICY QUESTIONS



### TECH AND THE CITY

Reggio Emilia

[Full programme on page 63](#)

- Provision of digital infrastructures in underserved neighbourhoods.
- Rethinking of housing units as a social infrastructure that combine personal life with work, education and healthcare for households.
- Districts as meta-neighbourhoods (i.e. agglomeration of two or more neighbourhoods) and thus as social and economic collective urban business units where local ingenuity is leveraged to define a strategic plan sanctioned in public-private-community partnerships for the use of science and technology for urban sustainable development.
- Use of science and technology to preserve or leverage local industrial and commercial units and transform them into lynchpins for urban sustainable development (e.g. social innovation centres and innovation hubs for new demand responsive, tailor made and flexible urban services and infrastructure).

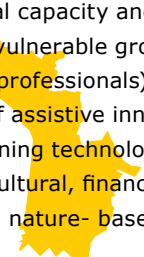


### MENTAL HEALTH

Thessaloniki

[Full programme on page 64](#)

- How can we optimise access to mental health and well-being infrastructures in big and small Cities (insufficient access, shortage of staff, shortage of residency slots, ways and levels of financing).
- Methods, tools and data to properly coordinate the provision of mental health and well-being and psychiatric/social care services in Cities (including social isolation in case of pandemics).
- Engagement to maximise resilience of cities (including resilience and preparedness in case of pandemics)? Is there a role for co-creation and co-design approaches? What is a human-centred city in terms of mental health and well-being?
- Mental health and diversity needs in Cities confronting COVID19 or other pandemic and recovery measures for people and economy. City-wide social campaigns?
- Effects of social distancing and isolation due to quarantine in cognitive and physical capacity and brain functioning (in vulnerable groups, general public, professionals) and the likely role of assistive innovative solutions combining technological, digital, social, cultural, financial, governance and nature-based innovations.



Cities led the organization of the workshops. The JRC worked closely with leading cities to support the organization. Cities were provided with technical assistance, but also with scientific support to define the scope and structure of the workshop. In addition, the JRC engaged cities with many other European Commission services, other units of the own JRC, as well as other international or European organizations and initiatives.

An average of 60-80 people attended each virtual workshop, with the participation of 32 cities, 8 European Commission services and about 120 academics. Speakers shared their work and reflections on the topic discussed. Because of the vast amount of relevant research, activities and involved organizations the workshops strongly focussed on establishing an overview on this available knowledge.

The workshops served as a forum to exchange practices and results among cities, scientists and relevant stakeholders. Having to do these workshops online, because of the COVID-19 pandemic, made the interaction between different discourses harder. When being together physically there are more avenues for understanding a discourse one is not familiar with. As a consequence, the workshops allowed for little room to further articulate the cities' needs and reflect on how the European scientific community and research policies can help to address these needs.

To allow cities to orchestrate international exchanges to connect available European research to their local challenges – which differ in every city – a substantial investment is needed in the capacity of cities. In cities day to day business is dominant and long-term investments in international cooperation are not always prioritized. European one-size-fits-all solutions cannot replace the need in cities to orchestrate exchange on their specific local challenges, as they differ so strongly in every city. The orchestration and design of international cooperation between scientists and policymakers requires a high level of customization and support, if they are to meet the concrete needs of cities.

For every track a background document will be established, collecting new insights from the attendees and other relevant stakeholders. These documents aim to serve as a starting reflection point, complementary to what was discussed in the online workshops. Based on these documents, next steps can be made to answer the question what cities need from research and European research frameworks to tackle their challenges.

Workshop results show a heterogeneous and diverse landscape of different activities and perspectives on each challenge. They show how cities struggle with their challenges. Despite the fact there are numerous websites, platforms and databases, cities do not manage to access the right data. The workshops showed that cities are often not familiar with available research. The results of available research are often not communicated in such a way that cities can make direct use of them.

The CSI outreach workshops contributed to sharing the specific urban challenge and local solutions as put in place in the 35 cities participating in the CSI and which could be replicated in other EU cities and help to apply them from a local context to other cities sharing the same problems and typologies.

The CSI created a multi-stakeholder and multi-disciplinary community, reaching out to all institutional levels and promoting a truly innovative human-centred form of governance of research. It is noted that the participants from EC were General Directors exchanging with policy officers, city officials and NGO representatives in an open, transparent and creative way. They exchanged innovative ideas, lessons learnt and suggestions for the way forward for sustainable urban development and towards the European goals for Climate Neutral and Smart Cities of 2030 and beyond.<sup>9</sup>

In every domain the quest for proper data surfaced. One of the advantages of a science policy context is the fact that cities have good data and that universities develop good methodologies.<sup>10</sup> This still is a bare landscape where significant progress can be made in the near future.<sup>11</sup> In the first CSI meeting this was agreed upon and the issue of data requires further attention in future CSI cooperation. Cities are often not aware of the potential that research offers for them to deal with the challenges they face, universities are often not aware of the richness in data and experience cities offer. European cooperation can contribute to improving availability of data and access to data, in and by cities. Existing city networks could play an important role in distributing this data, once the specific needs for such a data infrastructure are formulated in cooperation between cities, Member States and the European Commission.

#### NOTES

<sup>9</sup> The engagement with a wider group of cities and with the EC is ensured, amongst others, by the cities participating in the H2020 'Smart and Sustainable Cities' demonstration projects. Some of them have joined the CSI and shared H2020 acquired knowledge and solutions with the CSI network.

<sup>10</sup> Link to Nevejan C. 2020. City Science. In *Values for Survival* Cahier 1, katern 4, Publisher: Het Nieuwe Instituut

<sup>11</sup> DG Connect is deeply involved in this quest and also connects to cities in a variety of ways.

## MAIN OUTCOMES FROM WORKSHOPS



### CIRCULAR ECONOMY WORKSHOP

[Full programme on page 60](#)

Representatives from the cities of Hamburg, Amsterdam and Milano, several departments of the European Commission, universities and international organizations joined the circular economy workshop and agreed on the important role of the sciences for developing circular economies.

Different presentations emphasized the role of H2020 projects to deliver innovative circular economy solutions in cities. Most of them focus on material flows, the reuse of construction material and food value chains.<sup>12</sup>

The city of Hamburg, in cooperation with raw material suppliers, a producer, a retailer and a university closed the loop for plastic bottles of shampoos and detergents and developed the 'Hamburg Bottle' This is a good example of how different actors can realign processes to become circular.

Several speakers argue that the role of science is also to gather and analyse data about circular economy, but cities experience a lack of data and monitor frameworks to understand their progresses in the transition.<sup>13</sup> In addition, some speakers reviewed the different tools and strategies cities have to foster in this transition: regulation, public procurement, financing, information and capacity building.

Following the workshop a survey with 33 H2020 projects on circular economy was launched to understand priorities, needs and potentialities in urban circular economies.



### SUSTAINABLE URBAN MOBILITY WORKSHOP

[Full programme on page 61](#)

Representatives from the city of Cluj-Napoca and its university ecosystem shared their work on sustainable urban mobility with other European colleagues. European Commission services, the cities of London, Ljubljana and Paris and other networks and projects, such as KIC and URBASOFIA, were some of the stakeholders that took part in the event.

Attendees reflected on the changes that the COVID-19 crisis has introduced in the mobility landscape of cities and the challenge of making these changes permanent in time. They also agreed on the need of science-policy connection to gather and understand data about urban mobility. It can provide cities with scientific evidence to base policy-making upon.

Different presentations of the workshop showed how science can help cities to implement innovative mobility solutions. An electric system of buses in Cluj-Napoca and a system to make the traffic of the city of Tampere more efficient are some of the successful science-policy collaborations presented in the workshop. Exploring the possibilities of hydrogen buses was also one of the discussed subjects. In the spirit of CSI work we think this could be a theme for a next research project.

Change is expensive (in many ways) and difficult for those who pave the way. That is why it is important that the results of the studies and experiments are shared between cities, contributing to finding easier replicable solutions, setting standards, developing skills. We need to share the results, the information

and the models of good practices, but also the errors. We would like to build a network for the exchange of information, software, results and models of good practice, to create a common platform based on trust, the ability to co-create and the generosity to share ideas. Collaboration networks can be, for cities of different sizes, a way to find solutions to relatively similar problems, in particular for a sustainable urban mobility.

We aim to systematically investigate the elements of the public transport network that ensure accessibility and efficient connectivity to public services in the city in order to develop and substantiate public policies that provide us with sustainable urban mobility.<sup>14</sup> Sustainable urban mobility is also based on participatory local governance. To ensure that the solutions are sustainable, they must be generated in such ways to involve all interested parties and to ensure the cooperation between all social partners.<sup>15</sup>

## MAIN OUTCOMES FROM WORKSHOPS



### AIR QUALITY WORKSHOP

[Full programme on page 62](#)

The virtual workshop on air quality joined the cities of Berlin, Brussels and Paris, together with experts from different European and international organizations, to discuss about three research questions proposed by the city of Paris. They refer to regulation approaches, tools and methods to measure air pollution and citizen engagement.

Presentations from different stakeholders revealed how there have been important progresses in the monitoring and control of urban air pollution in the last years. It is increasing the number of cities with proper data and tools to monitor air pollution. However, according to the speakers, better tools and comprehensive knowledge are still required. Science can help cities to develop better tools and methods, to understand which the sectors that emit pollutants are and to analyse the impact of air quality measures on citizen's health.

Finally, the city of Paris, through the agency of AirParif, and the partnership on air quality of the Urban Agenda for the EU, presented their experiences of citizen engagement on air quality polices.

The working group demonstrated the need to stimulate exchanges between cities, European structures and experts. The European scale seems to be a particularly interesting level for these exchanges. This would allow partners to have direct exchanges, between metropolitan areas facing the same challenges on the one hand, but also and above all between partners facing to the same regulations. This cooperation can take several forms.<sup>16</sup>

#### NOTES

- 12 In the frame of the H2020 project CIRCuiT, Hamburg works together with several partners from different European cities on a consistent and comprehensive approach to data collection, analysis and management at a city scale. These data and information will be key to supporting acceptance and implementation of circular construction projects.
  - 13 Hakon Kentoft, from the Urban Agenda Partnership for Circular Economy, stressed the need of more knowledge and research on the framework that cities need, to foster the transition into circular economy.
  - 14 Until this moment, the main tools for building sustainable urban mobility include: improving pedestrian transport infrastructure (pedestrian corridors), cycling infrastructure, increasing the accessibility of public transport and optimizing routes, while discouraging personal car transport, the development of ecological public transport on multiple levels (including by testing technologies that are still experimental like autonomous buses, connected vehicles systems and hydrogen buses), the use of digital transformation tools to collect and analyze data related to urban mobility.
  - 15 In Cluj-Napoca, we often deal with public problems through consultation networks and we make decisions with the help of experts, NGOs, professional organizations, employers' associations and the citizens' input, and we have developed the Civic Imagination and Innovation Center (CIIC). We aim to develop participatory governance tools, in order to be able to talk about the co-design and the co-creation of sustainable urban mobility solutions, in order to ensure a sustainable behavioural change in our cities.
  - 16 To develop a single point of contact for cities on these themes. It could collect and redistribute information to all cities partner, through dedicated media. This information could take the form of a newsletter, for example.
    - To initiate physical or virtual meetings. These meetings and highlights allow exchanges of experts, concrete contacts and allow a real dynamism of collaborations.
    - The European cities network 'Eurocities', more especially the working group 'Air quality, climate change and energy efficiency' could constitute an interesting basis for discussion for these cooperative cycles.
- Regarding specifically the pollutants to be subject to regulatory oversight, the experience of European cities seems to point towards the selection of air pollution indicators to allow to easily evaluate and in the most direct possible way, the impacts of emission reduction policies; that may be related to health or environmental impacts. And to develop a cost effective and accessible measurement to large and small cities across Europe.
  - In addition to the development of tools to assess the impact of public policies on air quality, the collaboration of European cities led by the EU Commission could be oriented towards the development of a common tool that would translate in an educational way the trajectory for reducing emissions of different types of pollutants applicable to all cities in Europe, according to their emission sectors, and which would make it possible to reach the recommended levels by the WHO by 2030.
  - In the field of regulation, it seems important to adapt the regulatory thresholds to advances in knowledge in terms of health impact, in order to give them credibility with the populations. New pollutants could be gradually added to the list of regulated pollutants, either because they appear with new technologies (ultrafine particles), or because their health impact is better known (black carbon) or allow new counting techniques to be better taking into account. The approach could also integrate the health sector in cases which the health impacts are still poorly assessed (example of the measurement of particles by counting in addition to the mass measurement). These developments must be accompanied by a costs study of the related to the measure in order to be able to extend it to the greatest number of European cities.

## MAIN OUTCOMES FROM WORKSHOPS



### TECH AND THE CITY WORKSHOP

[Full programme on page 63](#)

The city of Reggio Emilia shared this workshop with a wide range of representatives from different services of the European Commission, European initiatives (JPI Urban Europe, UIA, URBACT) and the cities of Amsterdam, Brno, Madrid and Naples. They all reflected on the importance of citizen engagement to make public policies and the role that digital tools can play to this end. In recent times the universities and in general the scientists have started to liaise with their surroundings. In the beginning, it was just the businesses and industry sectors. Now, starting from the work of the Nobel Prize Elinor Ostrom on rural and environmental commons, the work of Christian Iaione has underlined the need to develop at the urban and local level forms of collaborative and polycentric governance of the urban/local commons.<sup>17</sup>

Different projects and initiatives have showed the advantages that digital tools provide to engage with citizens. A few presentations focused on the important role of living labs to successfully deploy innovation in cities, engaging with their citizens. The Reggio-Emilia approach, based on a bottom-up process of urban innovation through neighbourhood labs, can be considered an example to follow.<sup>18</sup> It also became clear that the quintuple helix governance model provides an important model in supporting innovation.<sup>19</sup> Digitalization is a real cross-cutting issue, affecting all policy domains and should therefore be addressed also in the other working groups moving forward.

Several interventions focused on the need to democratically control city data and make it accessible to citizens. Cities need of proper infrastructure to manage this data and to carry out the digital transition of their administration.

#### NOTES

- 17 C.Iaione, S. Foster, 2018, *Ostrom in the City: Design Principles and Tools for the Urban Commons*, chapter in B. Hudson, J. Rosenbloom, and D. Cole *Routledge Handbook of the Study of the Commons*. New York: Routledge.
- 18 The city of Reggio Emilia (Italy) put in place a policy strategy aimed at developing an inclusive, collaborative, creative city by relying on the enabling features of digital tools and infrastructures. The Tech and the city approach adopted and experimented by the city government in Reggio Emilia builds on the most advanced theories on urban co-governance, the city as a commons or “co-cities” theory. The “Neighbourhood as a commons” program was the first policy tool forged to implement this approach and initiated in 2015. The aim is to close at the end of the co-design process citizenships pacts that sets terms, conditions, investments to device the sustainable innovation projects. Within the neighbourhood as a commons program, Reggio Emilia has used a scientific methodology to put in place a wide variety of community-based urban innovation and experimentation projects, and amongst these the “Coviolo Wireless Initiative”, which has successfully developed a broadband infrastructures in an underserved neighbourhood, extending broadband access to city inhabitants, and providing social and economic development opportunities by turning the neighbourhood community centres into hotspots and managers of the digital infrastructure. The City has then decided to scale the approach and methodology to the City level and therefore codesigned with different urban stakeholders, in cooperation with LabGov.City through the “Collaboratorio Reggio Emilia” process, a city-wide innovation hub. At the basis of this involvement there was the strong belief that the research and innovation approach of the University was necessary to strengthen public policies and initiatives.
- 19 A model of governance for urban innovations based on a quintuple helix entails resource pooling and cooperation between five possible categories of actors—social innovators or the unorganized public, public authorities, businesses, civil society organizations, and knowledge institutions—the so-called “quintuple helix governance” approach. The quintuple helix model is a concrete expression of the idea of public-private-commons partnership (or public-private-people/community partnership) and is designed to overcome the more narrow public-private partnership and give relevance to the proactive role of knowledge institutions—universities, cultural organization, foundations, schools—as the neutral driver of the governance system.

In 2019 the project evolved. The City realized that the body of knowledge and methodology of the University should be incorporated as an organizational innovation into the City and carry out the empirical analysis and innovations’ experimentation needed to scale up the Coviolo Wireless experimentation to the City level. Therefore, Reggio Emilia entrusted Luiss Guido Carli University with the role of Chief Science Office (CSO) of the City. The Reggio Emilia CSO will act both as the Collaboratory manager and serve as knowledge engine of a missions-oriented public innovation unit that will change policies on the basis of the innovations on human rights-based city tech justice experimented in the Collaboratory.

## MAIN OUTCOMES FROM WORKSHOPS



### MENTAL HEALTH WORKSHOP

[Full programme on page 64](#)

The virtual workshop on mental health focused on the impact of the recent Covid-19 crisis and lockdown on citizen's mental health. Representatives from cities, universities, European initiatives and European and international organizations shared their views on the topic.

Science and research play an important role to study and understand the mental health of people living in cities. Results from different scientific studies presented in the workshop revealed the impact of the Covid-19 crisis on citizen's mental-health. Some studies proposed potential risk factors and a model of mental health development in the context of the pandemic.

Several presentations focused on the role of living labs to study mental health in cities and to provide municipal governments with scientific evidence. Their main advantage comes from their work with real environments. Other speakers showed the role of science and research to explore new approaches to make citizens aware of mental health issues. Some good practices regarding urban planning and its effects on mental health were also presented.

Thessaloniki, the organizer of this workshop, presented an original best practice to bridge the gap between policy research and citizens.

With respect to its principles for a human-centered & resilient city, the Municipality of Thessaloniki has promoted the close collaboration of the local authorities, the University and citizens to foster initiatives and develop a structured approach to documenting policies and good

practices for Mental Health & Well-Being. In the same framework, the Aristotle University of Thessaloniki (AUTH), opens its doors to Thessaloniki's citizens empowering and hosting joined initiatives and applying human-centered research, co-designing solutions for everyday living challenges "with the City" and "for the City", which aim to promote common policies in Research & Innovation fields and improve citizens' Quality of Life, Mental & Social Health.<sup>20</sup>

The idea is to create an alternative "older adult" citizens' science team, applying research & co-creation methodology to address societal challenges and promote policies & innovation to their city. The "Partners of Experience" is a life-long learning programme for early-stage researchers over 65 years old to enhance active citizenship and tackle the risk of ageism. The high involvement of older adults in co-creation research and decision-making results in the democratization of research; older adults' enhancement of their well-being and tackling of ageism; acquirement of new skills and knowledge, also leading to high impact solutions for the society. Intergeneration, educational visits in the city, experiential field research, sharing of personal experiences and ideas are some of the methods exploited in the programme.<sup>21</sup>

#### NOTES

- <sup>20</sup> Starting from the most vulnerable population, older adults and chronic patients, the City of Thessaloniki has embraced the "Partners of Experience" initiative, launched by the AUTH Medical Physics Laboratory and the Thessaloniki Active & Healthy Ageing Living Lab (Thess-AHALL), as a life-long learning programme for early-stage researchers over 65 years old to enhance active citizenship and tackle the risk of ageism.
- <sup>21</sup> In September 2020, the "Partners of Experience" initiative won the first place at the Living Lab Project Award 2019 by the European Network of Living Labs.





4

# RESEARCH, POLICY AND DESIGN

## RESEARCH, POLICY AND DESIGN

Both the Futures of Cities report (DG JRC) and the Human Centred Cities report (DG RTD) indicate that cities will benefit from research in handling the challenges and crises they are facing. The experience of the CSI indicates that cities indeed are in dire need for more research, yet from the CSI we also learn that the interaction between research and policy is not a given success. Discourses are different, processes in time are distinct and often do not match. The capacity to formulate research questions that serve both policy needs and research targets, at the same time, is hard to find. Knowledge of each other's processes is minimal in most places. And conceptually, it is not easy to make a blueprint for a messy city.

Future efforts should therefore focus on the need to address the science-policy interface and to create positive and wide spaces for dialogue, exchange and networking between cities, EU officials, scientists and other organizations and initiatives working in similar topics. The different professional networks, like Eurocities for example, that all work in the same direction of connecting urban knowledge and expertise with the view to find solutions to complex urban issues, can contribute to developing the science-policy interface in efficient manners, which really helps the cities to deal with the issue at hand. City science is a multi-actor process, where stakeholders (citizens, businesses, organizations), experts (scientific, academic, professional, craft) and engaged people (politicians, civil servants, activists) all play different roles in the specific phases of both the research and the policy process. In city policymaking the triple helix necessarily develops into a quintuple helix including (1) education system, (2) economic system, (3) natural environment, (4) media-based and culture-based public (also 'civil society'), (5) and the political system.<sup>22</sup>

Despite its simple appearance, this is a complex process that requires proper methodologies, an open mindset, compromise, creativity and continuous active involvement of all relevant actors.

### 4.1 Aligning processes: add design

In this section a conceptual framework is presented based on the policy-, research-, and design practice in Amsterdam, but is expected to be of a similar nature in other cities with universities.<sup>23</sup> Science and academia by nature cannot give the clear and non-ambiguous policy advice that politicians seek. Science and academia give very valuable input in so far as they indicate what we know and as long as we work on their methodological basis. They can also study particular policy questions and will answer in such a way that people can also disagree. The sciences not only validate, they also falsify,

#### NOTES

<sup>22</sup> Iaione, S. Foster, *The Co-City*, MIT Press, (forthcoming 2021).

<sup>23</sup> Nevejan c., 2018. *Urban Reflection, On diverse engagement in the networking city of Amsterdam*. Inaugural speech, University of Amsterdam

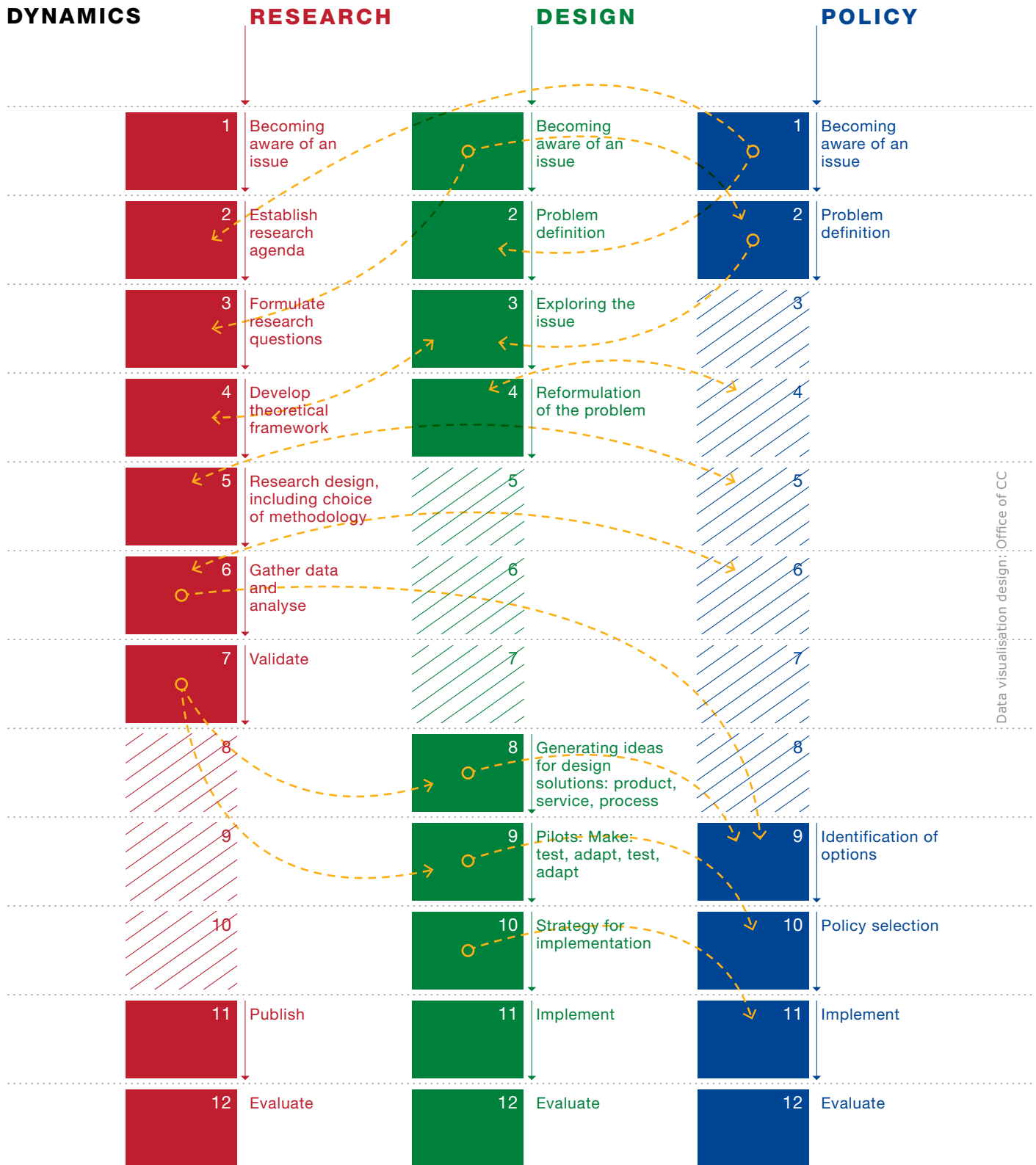
which means that results are created with which one can disagree. Science does not want to create a belief system. Politicians on the other hand, need to position a firm belief in what they want to do. Executors of policy, civil servants for example, like to be sure that what they do is correct, but scientists do not give recipes for action.

Here the design discipline can help. This tradition bridges ideas to products, services, processes and strategies that are applied in people's day to day lives. In the design tradition users are central to the research, be it in a business context or a societal context. One can notice that most scientific disciplines have fields of application in which design plays a major role. In design, different fields of expertise come together. Starting from the specialist field at hand, it adds to this a user dimension which includes cultural, aesthetic, ergonomic, psychological and socio-economic and political elements in a specific design trajectory. It is sensitive and includes the arts, cultural expressions, lifestyles and trends. It is capable to design for diversity and has methodologies for pushing imagination. In a commercial context, methodologies of design put the consumer or client centre stage. In a societal context, methodologies of design put citizens centre stage. The discipline of 'design thinking' as is developed in the last decade, also puts policymakers and other decision makers centre stage. Design does formulate recipes and has the capacity to develop a variety of scenarios for solving problems at hand. Design can contribute to bringing research and policy closer together, as it orchestrates inputs at the right place at the right time, with close attention to the specific needs in a specific situation.

The design discipline benefits from working with results of scientific studies on the one hand, and benefits from being part of policy processes for implementation on the other hand. It enhances the rigour in design. Whether we look at the design of a mobile phone, an airport, a classroom, or a market, design affects how people behave and interact. Each of these designs is based on scientific research and is subject to policy making. Design can bridge the sciences to policy in effective ways.

In the graph below the different steps in the research, design and policy process are shown in relation to one another. It shows the steps neatly one after another, which in reality hardly ever happens. Time constraints often make it necessary to execute different steps at the same time. In such trajectories, scientists and designers and policymakers align in every step they take and give feedback to each other all the way so they stay tuned with each other's work through the whole process. This requires solid orchestration, editorial and visualization skills of the research team involved as will be described in the next paragraph.

## CITY SCIENCE DYNAMICS



GRAPH

This graph offers an impression of the different steps that characterize classical trajectories the fields of research, policy and design. However, in city science trajectories where research, policy and design collaborate and integrate, a

variety of trajectories through these steps is possible. The yellow lines suggest such possibilities. Good communication between all stakeholders and participants about the different steps in relation to one another, is vital for success in any specific trajectory (Nevejan 2020).

REFERENCE

Nevejan C. 2020. City Science. In *Values for Survival*, Katern 4, Cahier 1. Complimentary research program to Dutch contribution to 17th Architecture Biennale in Venice. Het Nieuwe Instituut, Rotterdam.

Nevejan C. 2020. Exploring City Science. In *Seeing the City*, Amsterdam University Press.

Different collaborations between science, policy and design happen. The first policy step, becoming aware, can be the result of a scientific study (step 1 – 12), in the building of a new school for example. Sometimes the design interaction (step 8 and 9) happens before the scientific research and inspire it (step 3 – 7), as happens in the development of mobile phones for example. Policy usually has no time to wait for the science or design experts to contribute their solutions. They like to skip step 3 – 9 and decide as soon as possible how to solve an issue. For scientists it is hard to respect this haste, while designers are used to work for clients.

## 4.2 Orchestrate collaboration

Locally different formats have been developed for collaboration between science and policymaking. In projects, in workshops, in special institutes, in structural collaborations cities and universities find ways to collaborate and tune their efforts. It is a trial and error process which is often dependent on the particular people who participate, and the very specific and concrete questions at hand, which makes certain collaborations fragile to change. Connecting science, policy and people happens in Living Labs, in pilots and experiments and in many research-through-design projects.

Embracing the transdisciplinary nature of the science-policy interface as it is played out in cities, is a 'sine qua non' for the City Science Initiative. The urgency to solve local issues, and the somewhat closed municipal cultures that have emerged as result of this, make it hard for local civil servants to find support within their hierarchy for participating in international networks. Unless these networks bring concrete and visible added value vis-à-vis local urgencies, city-professionals will have difficulties in getting the support to participate. Scientists on the other hand, are used to working internationally. But their limitation in policy-science collaboration lies in the fact that they need to publish and often have difficulties to account for the time spent on municipal collaborations.

For national and international professionals, as for scientists, the local agenda is easily considered as a context to which abstract concepts can be applied. However, local professionals are regularly confronted with the fact that 'the devil is in the details' and that the sometimes generic insights of science do not create insight into these details. Research in cities requires granularity. These 'devilish details' emerge when problems require transdisciplinary approaches while both municipalities, regional authorities and the sciences are organized in disciplinary ways. Even when the policy brief is transdisciplinary, the planning and control cycles do not allow for this. Hence,

the plea for creative bureaucracies open to the need to allow and foster possibilities for transdisciplinary cooperation cannot be echoed enough.<sup>24</sup>

In the case of the CSI the challenge is to not only bridge science and policy, but also to bridge a diverse and fragmented groups of local policy officials, speaking in different specific discourses, with EU officials, who are engaged in a variety of power relations with each other and are part of the European discourse. The design of meetings, the design of documentation and the visualization of what happened before and will happen next is of vital importance to the further success of the CSI. This needs professional editorial support and event design. Reports, video's and other interactions need to be documented and made available via an accessible platform.

### 4.3 Editorial design for knowledge sharing

Activities of the CSI need to be well documented so that newcomers can join and so that participants can skip meetings when necessary and still be able to contribute next time. To this end a special editorial team needs to be put in place.

Most important is to make sure that the experts in the cities back home can benefit from the added value of CSI activities. Such an added value consists of elements that these local officials can use in their own practice in the different cities in Europe. A variety of initiatives has been designed with this purpose in mind and can be tailored to and integrated with a potential city interface to the European Commission:

- Booklet: Investing in European Success, innovating Cities in Europe and Worldwide. This offers an overview of 23 successful EU projects on urban innovation in clear language including the mentioning of potential application areas of the research. For a CSO it takes limited time to learn about the projects and immediately understand how and where in one's own specific city this can be applied. One would like to see all relevant research for cities disclosed like this.
- The Smart Specialization Strategies platform<sup>25</sup> exists for nearly a decade and offers a plethora of information on European Research. However, its interface is complex, is mostly methodological and is not theme based which makes it harder for local officials to enter. It does not have a 'city' entrance. Also projects do not offer laymen summaries, which makes it harder to navigate.

#### NOTES

<sup>24</sup> Landry, C., & Caust, M. (2017). *The creative bureaucracy & its radical common sense*. Gloucestershire, UK: Comedia.

<sup>25</sup> <https://s3platform.jrc.ec.europa.eu/home>

- This is The EU Repository for Nature Based Solutions<sup>26</sup> has a simple interface, offers location-based information on research and best practices, with simple summaries and offers communication between practitioners and local officials. Its purpose is to simplify how we share, obtain and create knowledge to better manage our environment. Oppla is an open platform that is designed for people with diverse needs and interests – from science, policy and practice; public, private and voluntary sectors; organizations large and small, as well as individuals. All are welcome and have a part to play in our community.
- The Urban Electric Mobility Initiative (UEMI)<sup>27</sup> is initiated by UN-Habitat to exchange tools and guidelines for cities on how they can change their mobility landscape into a more sustainable one. It is accessible for many, yet offers specific knowledge for specialists on urban level as well.

One can imagine that all research projects of JRC and EU funded research will or should undergo a special editorial process to make their end-results available and more accessible for cities. This process also requires urgency and the right timing.<sup>28</sup> In the Human Centred City report it is argued that one of the three major dynamics in the coming era is the Risk Nexus, the extreme uncertainty that emerges as result of the stacking up of crises.<sup>29</sup> Especially in cities this will have dramatic effects. 'Just-in-time' research can make a significant difference. To make this possible, results of research and the potential tools and guidelines that are developed, need to be made available in accessible ways for citizens and city officials. In such an editorial effort, also the Vortex effect needs to be taken into account. This addresses the difference in dynamics between larger central cities and smaller and more peripheral ones.<sup>30</sup> Smaller cities have different possibilities in times of crisis and relations between cities and regions can change rapidly as a consequence of cascading effects of crisis.

City professionals are often not in a good position to explore possible interesting research in the large European research-ocean. Often they do not have the education nor the context to do so and easily, daily urgent matters take over. It is the research community, with the help of the EU Commission, which can make results available for cities in such a way that results can be used and benefitted from. This requires a collective effort with significant investment, with central guidance and support, to be able to make the much-needed difference.

#### NOTES

<sup>26</sup> <https://oppla.eu/about>

<sup>27</sup> <http://www.uemi.net>

<sup>28</sup> In many cities, heritage is fading away because of decay. In Amsterdam for example, even the quays and bridges are deconstructing. In the booklet 'Innovating European Success' a special project on repairing heritage with the use of nano-technology is described. While the City of Amsterdam works with the best engineering bureaus to solve this, no one knew about this research which is potentially very

interesting and promises good results, even in the near future.

<sup>29</sup> See note 4

<sup>30</sup> See note 4

## 4.4 Facilitating data exchange

In cities lots of data are produced that are interesting for research. Vice versa, methodologies are developed in research that are interesting to cities. Both cities and researchers struggle with finding the right data at the right aggregation level while at the same time respecting GDPR and intellectual property rights. In addition, lots of data are not available to citizens or municipalities and are property of specific companies and organizations that are often reluctant to share.

Digitization is one of the three large dynamics that the Human Centred City report identifies. There are several DG's in the European Commission that have policy or regulatory responsibilities in this area, including considerable research budgets. However, it is striking to see that the needs and potential of cities in this research field is hardly focus of attention. The COVID-19 crisis is just one example when even during a global pandemic local data cannot be easily matched on European level, while this may help combating the pandemic. While municipal digital architectures are key to the functioning of democracy and highly define the urban experience of citizens in cities, many municipalities are subject to untrustworthy market dynamics that cost lots of money and do not offer the necessary transparency. CSI, through its particular interdisciplinary city-centred approach, can play a role in putting the urban digital architecture on the agenda and make sure that cities can benefit from each other's experiences.

The impact and consequences of digitization are so deep that it may be good to start a special Digi-CSI, which can advocate for an urban ICT research agenda that is defined by cities reality of very limited budget, no expert expertise, profound responsibility for residents personal data, accountability for democratic and legal processes and the need for long term solutions. Lots of research and plans with good intentions have been made, yet till today there is no transparent digital democratic reliable and affordable architecture that small, medium and large cities can use. Together with the many CTOs (Chief Technology Officers) in European cities, an integral digital urban research agenda can be established to which the 'making of blueprints for messy cities' is core. Secondly such a Digi-CSI, in collaboration with the CTOs, should address the need for a data exchange platform within Europe. This can help cities to understand where data is available, how to generate relevant data, how to get access to it and how to exchange data. In the three CSI meetings there were frequent references to these digitization challenges and several ideas to create an urban agenda for digitization were mentioned.<sup>31</sup>



## 4.5 Integrating CSI in other networks

The learning methods involving design and interdisciplinary approaches particular to the City Science Initiative can be of benefit to other stakeholders and institutions. The CSI can help actors in different policy frameworks to formulate urban research agendas in their field or topic. It can help to develop city science methodology in which the integral and transdisciplinary nature of the urban challenge is accounted for. The CSI can play a mediating role with regional authorities that also can benefit from scientific support, as local challenges also have a regional character. Also for the understanding of legal implications of innovation, and potential need for adapting legislation, cities can benefit from each other's experience. Connecting with universities and university networks is crucial to expanding the CSI and by doing so also affect the development of city science methodologies. The CSI can offer a sounding board to different entities in the European Commission to reflect on research outcomes and to offer input for new research agendas. Pivotal here is that these reflections are well orchestrated through design methods.

Also it would be helpful in standard Research and Innovation practices to acknowledge cities as full research partners and not only as societal validation instrument. Depending on the kind of city, or the kind of urban region, cities should be partner. Budget wise, cities can compete, as well as with the data they generate and the experience of complexity they have. The Vortex dynamic that is sketched in the Human Centred City report, which refers to the dynamic through which central cities become more and more successful and smaller cities do not, can be of influence here as well.

### NOTE

31 Ideas that were mentioned are:

- bring together and facilitate exchange with networks such as smart cities, lighthouse, i-Capital, use existing networks. Also networking actions that build on experiences from smart specialisation strategies (also how JRC facilitates S3 partnerships). Consider the wider innovation agenda and governance.
- Set up a shared PhD program on urban data to learn from and share data models and communicate the importance of data driven policy to citizens and politicians.
- Bring together data scientists that do urban research on specific themes and apply for organizational funding with JPI.
- Science-policy ecosystems: to create a multi-stakeholder ecosystem to strengthen science-policy interface in order to accommodate the transition to data-driven public policy; support open public policy making; support a metropolitan institute.



5

# POTENTIAL OF THE CITY SCIENCE INITIATIVE

## **POTENTIAL OF THE CITY SCIENCE INITIATIVE**

After the successful pilot experience, the need for a reinforced interface between science and urban challenges and the benefits that a CSI can bring, have been clearly demonstrated. We are convinced that taking forward the CSI will be beneficial to obtaining many of the goals the EU has set in areas like the Green Deal, the digital transition and the Recovery and Resilience Plan. The contribution of cities to the development of European regulatory policies is currently possible but must be further strengthened, in order to co-construct applicable and effective regulations to achieve the objectives of protecting human health and the environment. Local authorities are able to identify concrete needs in the field, which are sometimes more difficult to perceive by European or even national authorities. They are also able to experiment, on a small scale, in an agile way. The evaluation and sharing of these experiments are likely to help future administrative and political decisions, regarding the implementation of regulatory actions on a larger scale. In addition, the diversity of economic, social, geographic and climatic situations within Europe must be taken into account. The contribution of many European cities to regulatory processes is an asset for this. Taking forward CSI must be backed by a clear roadmap, with specific working methods and objectives. These must build on the lessons learnt during the pilot phase. Cities emphasize again and again that the added value of the CSI can only be achieved when local impact is assured and participation is efficient and inspirational for colleagues in municipalities and universities as well.

### **5.1 Bridge the science-policy gap**

To bridge the science-policy gap at the urban level, cities need tools, information and training. The CSI experience has revealed how scientists and policy-makers in cities usually speak different languages and do not work closely together. To foster this connection, we need to make research and innovation results available for cities. Urban policy makers must be trained to understand the potential that science can bring to their cities and design practices can play a role in this. In addition, scientists must be approachable and easy to contact by cities.

Cities need to understand the value and utility that science can bring to their policies. The CSI offers a good platform for cities to learn from each other through design methods. Whereas in some cases the science-policy interface is already well developed, in other cases there is little progress. A twinning programme allowing front-runner cities to share their officials and expertise with cities that have just started the process would be very beneficial. It would promote the cooperation among cities, address common science-policy challenges and increase the importance of science in the European urban policy-making landscape.

Establishing a European City Science Academy to train local officials on the policy-science connection could also help to break the existing gap. Officials would learn to identify local challenges and how science helps to address them.

What makes the CSI unique for a city-oriented network, and necessary, is its focus on science and research on the local level. Whereas there are many networks that connect cities across the world around common interests with other relevant stakeholders, there is no network focusing on the science-policy interface. Bridging the research-policy gap must continue to be the leitmotiv of the initiative.

It is a challenging objective that may not be easy to accomplish. Experience teaches us the high risk of evolving towards a common network where cities interact and share their experience, without being engaged with the scientific community. Vice versa, universities engage with many different international networks yet find it hard to contribute to local challenges at hand. To this end, the CSI must ensure that cities and universities value the science-policy interface and give it relevance as part of their policy-making process.

With that purpose, the CSI must continue as a networking point and forum where City Science Officers from different European cities meet. They are the key players to make understand cities the research-policy gap. Through the CSI, the CSO role can gain visibility, making other cities to understand its utility and impact.

## 5.2 An open and strong structure

The progress and consolidation of the CSI must mean the involvement of more cities. During the pilot phase, most of the work has been accomplished by engaging with front-runners cities that already give value to science in the policy-making process. The next step is to go further and make other cities part of the initiative. Special emphasis should be put on engaging with cities that have made less progress on the challenge.

One of the successes of the initiative is its open nature. Every interested actor that showed interest in the CSI was welcomed. This openness should remain in the future, fostering the connection of the CSI with different stakeholders, networks, initiatives and institutions. European Institutions such as the European Parliament, the Committee of the Regions, The European Investment Bank and the Economic and Social Committee can explore the potential of cooperation with the initiative, which the European

Commission has already started with. European institutions need to integrate feedback from local governments and their needs, also regarding research and innovation and scientific evidence for policy-making. Seeking cooperation with additional universities should be an important part of the CSI's next step. There is a need to explore how to integrate the concept of city science in these organizations as well as in European networks of universities.

The CSI has also a role to play in delivering international agreements and agendas, like the implementation of the Sustainable Development Goals or the Paris Agreement on the local level. No meaningful transition will happen without involving cities and science. At the national level, ministries working on science and urban and territorial affairs can also engage to strength the science-policy interface at the city level.

The science-policy gap does not only involve public institutions and scientific partners. Private companies play a key role in the local science ecosystems and bring innovation and knowledge to cities. If the science-policy landscape is to be approached holistically at the urban level, the private sector should also be made. Breaking the science-policy gap will only be possible if all actors involved are part of the process. Notwithstanding, in order to accommodate that the diversity of actors can work together efficiently, new methods and spaces must be created.

### **5.3 A direct interface to the European Commission**

During its pilot phase, the CSI has been a bottom-up initiative where cities have led the process with the support of the European Commission. The aim is to retain this approach in the future. The CSI is a platform for cities to exchange ideas and practices and to discuss common needs. It is also a direct interface of communication between cities and the European Commission. DG JRC, DG RTD and DG REGIO have supported the CSI creation and progress. More DGs and agencies may join, giving full potential to this interface and making cities feel heard by the European institutions.

The pilot experience proves the common interest from cities and European Commission services to learn from and listen to each other. This dialogue might benefit from a more formal format. A sounding board of European cities could help the European Commission to design and implement R&I policies.

The future R&I activities are now being programmed with a specific mission on climate-neutral and smart cities as part of the Horizon Europe initiative.

Such programming could greatly profit from the insights and views of cities and a new research policy could usefully be co-designed with citizens, stakeholders and relevant institutions. It is therefore the best moment for cities to have their say through a platform like the CSI. Other European initiatives like JPI Urban Europe could also take advantage of a sounding board like the one mentioned. A first step would be to disclose a roadmap for the upcoming research programmes relevant for cities and organize a discussion on what the priorities of cities are.

## 5.4 Necessary steps to make a difference

The City Science Initiative can play a significant role in the decade to come in which planetary boundaries will cause a cascade of crises which will affect life in cities and of European citizens significantly. Just in time research, the exchange of tools and guidelines, the interaction with best practices and easy access to all these resources and interaction, will make a great difference for citizens in EU cities and beyond.

### 5.4.1 Establish a core group of cities

A core group will be essential to keep momentum and to organize the cooperation within the CSI. A core group needs to have present both research, policy and design expertise. This core group should do the following:

- Within the current CSI network, including all its cities, networks and different European Commission representatives, agree upon the mission, values and activities.
- Create a roadmap 2020 – 2030 with the CSI for the CSI, including concrete challenges that have to be met.
- Establish an interface with different EU networks and DGs to see where urban research agendas can be added; this should also explicitly include the vertical DGs such as DG MOVE and DG Environment to connect on specific urban challenges.
- CSI could serve as a space for discussion in between EC colleagues from different urban Commission Services, city officials, citizens, urban stakeholders: a so called 'third space'. It could function as an enabling environment to get together, exchange and share knowledge, lessons learnt, best practices that worked for a number of cities and translate R&I results into policy R&I actions.
- Make sure that a city science perspective is added to European networks and several institutional communication platforms and advocate easy access and understandable summaries in these platforms.
- Promote the development of City Science and identify and develop methodologies for cities to benefit from research in the challenges they face.

- Promote organizing workshops on disseminating CSI outcomes for key city-level policy-makers, using in this the experiences of the JRC-CoR Science-Meets-Regions collaboration.
- Sustain easy communication channels as a website and newsletter and convene minimally one plenary session per year and several thematic ones.
- Position CSI as the interface between the research that the EU Commission facilitates and the challenges cities face.

#### **5.4.2 Facilitate a European network of City Science Officers**

Several larger cities and some regions have a science officer, or a person with a similar job description, who helps in improving the science-policy interface. It can be argued that every small, medium or large size city should be engaged with the science policy interface to translate outcomes of research to challenges these cities or regions face and vice versa to inspire future research as well. Smaller cities can unite in regional offices, medium size cities can collaborate, and larger cities with universities can play a role for the region they are part of. These City Science Offices can help to translate the local challenges to a broader European research agenda in which different cities and regions cooperate. In this way, the Research and Innovation resources allocated by the European Commission will be more tailored to these urban and regional challenges, including the use of research outcomes into applications that improve life of EU citizens in all diversity. Governance development and technological innovation serve and facilitate these developments to also affect economic prosperity significantly. By working closer with cities not only the EU commission but also Europe as a shared identity and realm of life, acquires more presence in the life of many urban Europeans. From such a perspective the CSI research program is a direct manifestation of the European life style and identity that also in times of crisis keeps its respect for human rights and accelerates in connecting social and ecological agendas to the benefit of all.

#### **5.4.3 Provide human and financial resources**

During the pilot phase, all participants have contributed in kind and have shown their determination to contribute to the excellent results obtained. However, to scale up the CSI to a level that it will have a serious European wide impact, the European Commission will need to allocate human and financial resources to the initiative. This needs to be complimented with local investment in a well-positioned city science office. Harmonization of budgetary rules and simplification of administrative and financial management is needed.<sup>32</sup>



In this way the CSI is based a mix of local and European funding to increase its impact both on the European and the local level. The specific budget allocations provided by the 20 July European Council Conclusions already provide the heading that can be used for this purpose. With a relatively modest investment, a tremendous difference can be made. It will help cities to face the challenges ahead. It will offer a possibility for the Commission to demonstrate in a concrete manner how the European dimension helps citizens in improving the daily realities and living conditions. The moment to do so is now.

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NOTE

32 The participation conditions for cities in European innovation and experimentation projects differ according to the funding programs requested. The financing needs of territorial collectivity for experimental projects are often (but not exclusively) related to investment and infrastructure spending, not always innovative, but necessary for the implementation of these experiments. Likewise for the support of personnel costs, where the rules differ between programs.

• Participation in a European project requires the setting up of administrative and financial monitoring procedures in addition to those already in force in local authorities, in order to comply with the funding requirements in terms of reporting. The expenditure justification rules are sometimes difficult to understand and to assimilate for project coordinator, both novices and experienced, because they differ depending on the funding programs. Thus, not all communities have the resources (human and financial) to take on this additional burden, which can discourage their participation in projects, especially smaller ones.

• In addition to the simplification and harmonization of the financial management rules that we recommend, a specific support for the funder and / or the coordinator and his partners on administrative and financial reporting requirements at the start and throughout the project, such as external monitoring proposed by the LIFE program or ex-ante and 1st level controls carried out by UIA, would facilitate the administrative and financial monitoring work, and could limit the risks of financial correction during subsequent controls and secure the project leaders on the procedures to be put in place.

**Epilogue**

**THE CITY  
SCIENCE  
LANDSCAPE  
IN 2030**

A new narrative about science has emerged. For over a 100 years, dynamics of separation and specialization have defined the development of the sciences. Acceleration in the specialization has resulted in amazing technologies which have changed the planet. However, in the many crises that have hit the world in the last decade, the need for integration of different kinds of knowledge is very strong. Most people now realize we are one world in which your local dynamics define my local dynamics and more.

New formats and interfaces for how research and cities work together, have emerged. This has affected funding structures, career paths and institutional dynamics. Top down and bottom up research and development now easily go hand in hand since interactive policymaking in government and in academic context has been embraced. These days the local is on top of the hierarchy and networks and institutions serve the people in cities and regions alike. Local resilience to climate crises is nurtured, building upon insight from many other places. Results of scientific research are formulated in such a way that lay people in cities can use the insight for their own life and neighbourhood.

The sciences have adapted and developed a plethora of new methodologies for working with people in cities and regions. Co-creating scenario's, developing tools and research for just in time solutions, bridging disciplines and crafts, knowledge production has become a process all are involved with. Not only policymaking is very much evidence based now, also most personal strategies for well-being and survival are rooted in scientific evidence today.

In this transition from a consumer society where most people expect others to be responsible for their well-being, to a knowledge society in which most individuals are capable to take care and accept responsibility for what happens next, specific bridges of communication have been constructed. One of these networks was the network of City Science Officers, who became very good at identifying the next future challenge and accelerated in sharing new research and best practices at the right time with the right people.

Every city and every region, as a conglomerate of smaller cities, has invested in creating a City Science Office. Here citizens, policymakers, SME's, designers and researchers work together to make solutions for local challenges at hand. The many City Science Offices are connected with each other and they are supported by larger specialized networks, European and other international institutions who now carefully listen to their needs. Working from a strong knowledge base, and guided by urgent day-to-day needs in cities, the cities have orchestrated their collaborations in such a way that basic exchange of knowledge on solutions for making things work, is available at all times for all.



# APPENDIX

## Thematic workshop programmes



## CIRCULAR ECONOMY

To achieve climate-neutrality by 2050, to preserve our natural environment, and to strengthen our economic competitiveness, requires a fully circular economy. In line with the New Green Deal objectives, the European Commission has recently launched the Circular Economy Action Plan. It aims to achieve a cleaner and more competitive Europe in co-creation with economic actors, consumers, citizens and civil society organizations. This workshop, led by the city of Hamburg, aims to contribute to the EU Circular Economy Action Plan. It will also reflect on the role that science and EU research can play in identifying key challenges emerging at the time of addressing circular economy in cities.

### Agenda

#### Opening

14:30 – 14:40

Welcoming

*Alessandro Rainoldi, Head of Unit, territorial development policies at the Joint Research Centre*

14:40 – 14:45

Introduction into the challenge

*Stefanie Wodrig, City of Hamburg – Senate Chancellery*

14:45 – 14:55

How research could contribute to the Hamburg challenge

*Prof Kerstin Kuchta, Hamburg University of Technology*

#### Mainstreaming findings and challenges with Key stakeholders

*Co-Moderation: Javier Gomez, Joint Research Centre & Ana Kuschmierz, City of Hamburg*

15:00 – 15:10

INTRO: Circular Economy Action Plan

*Federico Porrà, DG Environment – European Commission*

15:10 – 15:25

The circular economy in cities & regions

*Oriana Romano, OECD – Centre for Entrepreneurship, SMEs, Regions and Cities*

15:25 – 15:40

Barriers for circular economy in cities – Need for science-based knowledge

*Håkon Jentoft, Coordinator of the Urban Agenda Partnership for Circular Economy*

15:40 – 15:55

H2020 project FORCE – Cities cooperating for circular economy

*Donald Alimi, Hafen City University Hamburg*

15:55 – 16:00

Q&A

Coffee Pause

16:00 – 16:15

EU Research on Circular Economy  
*Andrea Accorigi, DG RTD European Commission*

*Maria Yeroyanni, DG RTD European Commission*

*Emanuela De Menna, EASME European Commission*

#### Discussion with cities

*Co-Moderation: Pierre Gaudillat, Joint Research Centre & Stefanie Wodrig, City of Hamburg*

16:15 – 16:35

Amsterdam

From Doughnut to monitor.

Making the doughnut economy framework function for cities

*Juan-Carlos Goilo, CTO Innovation Team – City of Amsterdam*

H2020 CLIC project

*Thomas van de Sandt,*

*Pakhuis de Zwijger / H2020 CLIC project*

16:35 – 16:55

Circular Economy in Valladolid

*Jesús Gómez, Agency of Innovation and Economic Development - Valladolid City Council*

16:55 – 17:15

H2020 Reflow Project: Milan Pilot City

*Rossana Torri, Direzione Economia Urbana e Lavoro – Commune di Milano*

*Cristina Parisi, Copenhagen Business School*

17:15 – 17:45

Wrap-Up: Learnings and Common Questions

## Thematic workshop programmes



### SUSTAINABLE URBAN MOBILITY

The European Green Deal aims to reduce 90% of transport emissions by 2050. This reduction must also happen in cities, which should transition to a sustainable urban mobility model. The European Commission supports this transition through the promotion of Sustainable Urban Mobility Plans (SUMP).

The City Science Initiative working group on sustainable mobility, led by the city of Cluj-Napoca, works on these issues and challenges with the final aim to create a sustainable transport system that meets the following strategic objectives: it is accessible and safe, helps to mitigate climate change, it is economically efficient and helps to create a high-quality urban environment. This workshop will reflect on these challenges and issues with the final aim to strength the link between science and policy-making to formulate responses to urban challenges.

#### Agenda

##### Opening

13:30 – 13:50

Welcoming

*Alessandro Rainoldi, HoU Territorial development – Joint Research Centre – European Commission*

Policies and initiatives for the development of sustainable urban mobility

*Luana Maria Bidasca, Policy Officer, DG MOVE, European Commission*

*Ovidiu Cimpean, Director of local development division – Cluj Napoca City Hall*

13:50 – 14:10

Introduction into the challenge

Towards a fast post Covid-19 economic recovery: sustainable urban mobility in metropolitan areas

*Marius Cristea, Senior urban development specialist – World Bank*

Electric Public Transport in Cluj-Napoca – a successful partnership between Cluj-Napoca municipality and Technical University of Cluj-Napoca

*Bogdan Varga, Automotive Engineering and Transport Department – Technical University of Cluj-Napoca*

Sustainable mobility in Cluj Metropolitan Area

*Titus Cristian Man, Research Director – Interdisciplinary Center for Data Sciences – Babes-Bolyai University*

##### Discussion with cities

*Moderation: Biagio Ciuffo, Joint Research Centre*

14:10 – 14:25

Example of actions by the City of Paris to promote sustainable mobility

*Cecile Honore, Responsible for air quality studies and incentives for eco-mobility – City of Paris*

14:25 – 14:40

Sustainable Mobility in Tampere

*Toni Lusikka, Research Scientist – VTT Technical Research Center*

14:40 – 14:55

City of Ljubljana. Innovative sustainable mobility

*Klemen Gostič, Regional Development Agency – Ljubljana region*

14:55 – 15:10

Mayor of London's Transport Strategy

*Ian Catlow, Head – London's European Office*

15:10 – 15:25

Perspectives on sustainable mobility, an evidence base approach from the UK  
*Simona Dobrescu, Economist and urban specialist – Infrastructure and Projects Authority – United Kingdom*

15:25 – 15:30

Q&A

##### Coffee Pause

15.30 – 15:40

##### Mainstreaming findings and challenges with Key stakeholders

*Co-Moderation: Javier Gomez, Joint Research Centre & Ovidiu Cimpean, Cluj-Napoca Municipality*

15:40 – 15:50

EIT KIC work on Sustainable Urban Mobility  
*Florinda Boschetti – Head of City Club – EIT KIC Urban Mobility*

15:50 – 16:00

Reloading mobility in post-COVID public space

*Pietro Elisei, Director – URBASOFIA*

16:00 – 16:05

Research on Sustainable Mobility

*Dan Doru Micu, Head – Numerical Methods Research Laboratory – Scientific Research Council of UTCN*

*Andrei Ceclan, Department of Electro-technics and Measurements – Technical University of Cluj-Napoca*

16:05 – 16:15

Understanding sustainable mobility choices- lessons learned from a behavioural change approach

*Anamaria Vrabie, Director – Cluj-Napoca Urban Innovation Unit*

16:15 – 16:25

Data analytics for urban mobility

*Norbert Petrovici, Director – Interdisciplinary Center for Data Sciences – Babes-Bolyai University*

16:25 – 16:40

Q&A

## Thematic workshop programmes



### AIR QUALITY

Air quality, as a major public health issue, is of particular concern in city policy-making. Many premature deaths are associated with air pollution in cities, which has an estimated economic cost of around 100 billion euros a year in France. Most cities, either European or from other developed countries, are currently implementing measures to improve the quality of the air that their citizens breathe. This workshop, led by the city of Paris, aims to contribute to this debate. The workshop will focus on the challenges that cities face regarding air quality and the role that science and, in specific, EU research may play in addressing them.

#### Agenda

##### Opening

14:30 – 14:40

Welcoming

*Alessandro Rainoldi, Head of Unit Territorial Development Policies – Joint Research Centre of the European Commission*  
*Enrico Pisoni, Scientific Officer – Joint Research Centre of the European Commission*

14:40 – 14:55

Workshop introduction: elaborating the challenge of Paris concerning Air Quality and how research could contribute to this challenge.

Moderator: Olivier Chrétien

*Carine Saloff-Coste, Director of Economic Development and Employment – City of Paris*  
*Carlos Dora, Former Coordinator Public Health and the Environment Department – World Health Organization*  
*Karine Leger, Executive Director – AirParif*

##### Research Questions

14:55 – 15:15

How to integrate emerging questions into regulatory air quality monitoring?

Interviewer: Agnes Lefranc /

Rapporteur: Juliette Larbre

*Michaël Klinkenberg, DG ENV – European Commission*

*Martin Lutz, Head of Sector Air Quality Management – City of Berlin*

15:15 – 15:25

Discussion

15:25 – 15:45

Forecasting and measuring the impact of air pollution reduction actions: how can new tools and methods contribute?

Interviewer: Cécile Honoré / Rapporteur:

Deborah Le Mener

*Evrin Doğan Öztürk, Expert on Air Quality – European Environmental Agency*

*Louise Duprez, Mobility Department – City of Bruxelles*

15:45 – 15:55

Discussion

15:55 – 16:15

How to involve citizens through engagement, education and communication

Interviewer: Charlotte Benoit / Rapporteur:

Deborah Le Mener

*Rene Korenromp, Urban Agenda Partnerships – Working Group on Air Quality*

*Marion Guet, Chargée de mission Ville intelligente – Ville de Paris*

16:15 – 16:25

Discussion

##### Conclusions

16:25 – 16:40

Wrap-Up: Learnings and Common Questions



## Thematic workshop programmes



### TECH AND THE CITY

Technological and digital tools are widely understood as key assets for sustainable and inclusive urban development. The role of these tools is essential to facilitate processes of neighborhood-based socio-economic empowerment and to inject innovation in policy areas that are under an increasing pressure to find solutions collaboratively: urban transportation/mobility and energy communities. Digital tools managed in partnership with the community play a key role as enablers of co-operation and co-creation of urban commons. In the unusual context of the COVID19 crisis, digital tools and infrastructure assume even greater importance for the co-governance of the city. This workshop, led by the city of Reggio Emilia, will reflect on the role that science and EU research may play in addressing the challenges that cities face regarding the adoption and governance of technological and digital tools, including the new challenges that emerged as a consequence of the Covid-19 crisis.

#### Agenda

##### Opening

14:30 – 14:35

Welcoming

*Javier Gómez, Joint Research Centre – European Commission*

14:35 – 14:45

The Reggio Emilia approach fostering social inclusion in scientific, technological, digital urban innovation processes and how knowledge institutions are involved

*LanFranco De Franco, Councilor – City of Reggio Emilia*

14:45 – 14:50

Urban Sustainable Science and Innovation Partnerships as a policy/legal tool enabling inclusive urban innovation and science

*Christian Iaione, CSO Reggio Emilia – UIA/URBACT/Urban Partnership on Procurement*

##### Science based evidence from cities

*Moderation: Javier Gómez, Joint Research Centre*

14:50 – 15:00

Amsterdam

Blue Prints for messy cities

*Caroline Nevejan, Chief Scientific Officer – City of Amsterdam*

15:00 – 15:10

Madrid

Public Social Cooperation

*Eloy Cuéllar, Professor of Public Management – Carlos III University*

15:10 – 15:20

Naples

*Gregorio Turolla, URBACT*

15:20 – 15:30

Brno

We are creating a city for future generations

*Romana Jaluvkova, Academia and R&D Cooperation Specialist – Brno Municipality*  
*Jakub Rybar, Head of Cooperation and Development Departament – Brno Municipality*

##### Evidence from EU level urban initiatives

*Moderation: Elena De Nictolis, LabGov City*

15:30 – 15:40

Evidence from C3Places, Urb @ Exp, CODALoop projects

*Margit Noll, Joint Programming Initiative Urban Europe*

15:40 – 15:50

Evidence from UIA projects

*Raffaele Barbato, Project Coordinator – Urban Innovative Actions (UIA)*

15:50 – 16:00

Evidence from URBACT projects

*Simone d'Antonio, Expert and National Point Italy – URBACT*

16:00 – 16:10

Q&A session

##### Digital Coffee Break

16.10 – 16:20

##### Digital roundtable with Key stakeholders

*Moderation: Christian Iaione, CSO Reggio Emilia*

16:20 – 17:10

Roundtable: Is there space for a policy uptake on EU citizens' role in promoting science, research and innovation in Cities?

*Maria Yeroyanni, DG RTD –*

*European Commission*

*Andrea Halmos, DG CONNECT –*

*European Commission*

*Ivo Locatelli, DG GROW –*

*European Commission*

*Pia Laurila, DG REGIO –*

*European Commission*

*Ugo Guarnacci, EASME –*

*European Commission*

17:10 – 17:20

Wrap-up and Q&A session

##### Concluding remarks

*Elly Schlein, Vice-President and Regional Councillor for the fight against inequality and the ecological transition*

## Thematic workshop programmes



### MENTAL HEALTH

Mental health is an integral and essential component of health which is defined by the World Health Organization not merely as the absence of disease or infirmity, but as a human state of complete physical, mental, and social well-being (including social distances adaptation of citizens due to Covid19 pandemic), in which every individual realises his or her potential, participates in social life, and works productively. It is the foundation of a person's well-being and effective functioning at individual or societal levels.

Cities are the home of complex, interlinked challenges related to, among other things, (mental) health and well-being, but also the living R&I laboratories of open innovation solving health and well-being problems. A human-centred city should create opportunities for citizens to promote mental well-being, prevent mental disorders, protect human rights and care for people affected by mental disorders. Research and innovation, as well as, social innovation, technology and digitisation are key factors for achieving this, but require "measurement tools to consider cities as integrated ecosystems, with people, place, prosperity and resilience at their core", all human-centred and not technology driven (with technologies that work for the citizens and not the other way around). This essentially highlights the role of science to support policy-making, but also calls for active citizen involvement and empowerment in shaping policies and engaging with activities to explore problems and find solutions.

Accordingly, the City Science Initiative (CSI) working group on Mental Health led by the city of Thessaloniki in collaboration with colleagues of the Aristotle University of Thessaloniki and local experts has been working on the identification of emerging and timely challenges addressing mental health and well-being in cities. This virtual workshop is proposed as a key step to discuss these challenges and how EU research can be developed and driven at a city (co-operation) level to establish cities as emotionally sustaining, physically and aesthetically attractive places, which are built on strong cultural identities and overall health, resilience and well-being.

### Agenda

#### Opening

14:30 – 14:40

Welcoming

*Panos Bamidis, CSI Mental Health – Lead City co-ordinator*

*Javier Gómez, Joint Research Centre – European Commission*

*Nikos Papaioannou, Rector – Aristotle University of Thessaloniki*

*Konstantinos Zervas, Mayor – City of Thessaloniki*

*Christos Mittas, Vice-governor of Public Health – Region of Central Macedonia*

14:40 – 14:45

Welcome Interactive Session: what are the challenges you are facing, regarding mental health and well-being in cities?

14:45 – 15:05

The challenge of Thessaloniki concerning mental health and how research could contribute to this challenge – CSI Mental Health innovations and activities in the City of Thessaloniki and the Region  
*Panos Bamidis, Professor AUTH School of Medicine – ThessAHALL Founder*

Mental health actions during the COVID19 lockdown in the City of Thessaloniki and the Region

*Georgios Papazisis, Psychiatrist and Assoc. Professor of Clinical Pharmacology – AUTH School of Medicine*

Mental health in the COVID era

*Kostas Fountoulakis, Professor of Psychiatry – AUTH School of Medicine – Chair of Mental Health section Research Institute – Panhellenic Medical Association*

#### Mainstreaming findings and challenges with Key stakeholders

15:05 – 15:20

COVID-19 response efforts in European cities: towards the new normal

*Monika Kosinska, Programme Manager – Governance for Health – Division of Policy and Governance for Health and Well-being – World Health Organization – United Nations*

15:20 – 15:30

Innovating Cities: Ongoing and future R&I activities and opportunities for citizens

*Maria Yeroyanni, Senior Expert Innovating Cities – DG RTD – European Commission*

## Thematic workshop programmes

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15:30 – 15:40

Horizon 2020: Research & Innovation for and with cities

*Ugo Guarnacci, Project Advisor – EASME – European Commission*

15:40 – 15:50

Focus on Co-creation approaches:  
Action-Oriented Task Force on Health and Well-Being Living Labs

*Evdokimos Konstantinidis, Council member & Task Force Leader – European Network of Living Labs (EnoLL)*

15:50 – 15:55

Interactive Session

1. How can we optimise access to mental health and well-being infrastructures in big and small Cities?
2. How can we utilize methods, tools and data for the provision of mental health & well-being services in cities?

[Discussion with cities](#)

15:55 – 16:10

Thrive Amsterdam: challenges for policy and research

*Arnoud Verhoeff, GGD Amsterdam – Sarphati Amsterdam – Research for healthy living*

16:10 – 16:20

The French situation and the role of local mental health councils during Covid-19 pandemic lock-down

*Jean-Luc Roelandt, Directeur du Centre Collaborateur de l'OMSEPSM – Lille Métropole*

16:20 – 16:30

Experience, practices, exchange of knowledge and thoughts on the connection between science and action and COVID-19 effects on mental health in the city of Udine

*Giovanni Barillari, City of Udine  
Stefania Pascut, Udine Healthy City Project Coordinator – Member of the Advisory Committee of WHO Healthy Cities Network*

16:30 – 16:40

Green infrastructure interventions promoted by Health&Greenspace that can improve mental health

*Tamás Kállay, Lead Expert of the URBACT Health & Greenspace network*

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16:40 – 16:50

Tackling mental health and well-being management in young people using co-creation

*Grace D'Arcy, Co-Creation Coordinator – Science Gallery Dublin*

16:50 – 17:00

100 Resilient Cities developments with emphasis on the City of Thessaloniki

*Stella Psarropoulou, Resilient Thessaloniki Officer*

17:00 – 17:10

Interactive Session

1. Who you would engage in co-creation and co-design approaches, in order to create a human-centred city in terms of mental health & well-being?
2. How can we create city-wide social campaigns for mental health and diversity needs for confronting COVID19 or other recovery measures for people and economy?
3. What are the effects of social distancing and isolation due to quarantine in your city?

17:10 – 17:30

Questions and answers, De-briefing and plan for next steps





**Amsterdam  
Antwerp  
Barcelona  
Berlin  
Brno  
Brussels  
Cluj-Napoca  
Copenhagen  
Cork**

**Dubrovnik  
Espoo  
Gent  
Glasgow  
Groningen  
Hamburg  
Helsinki  
Leuven  
Lisbon**

**Lublin  
Madrid  
Malmö  
Marseille  
Milan  
Munich  
Nijmegen  
Oxford  
Paris**

**Prague  
Reggio Emilia  
Rome  
Rotterdam  
Sofia  
Stockholm  
Thessaloniki  
Vejle  
Vienna  
Warsaw**