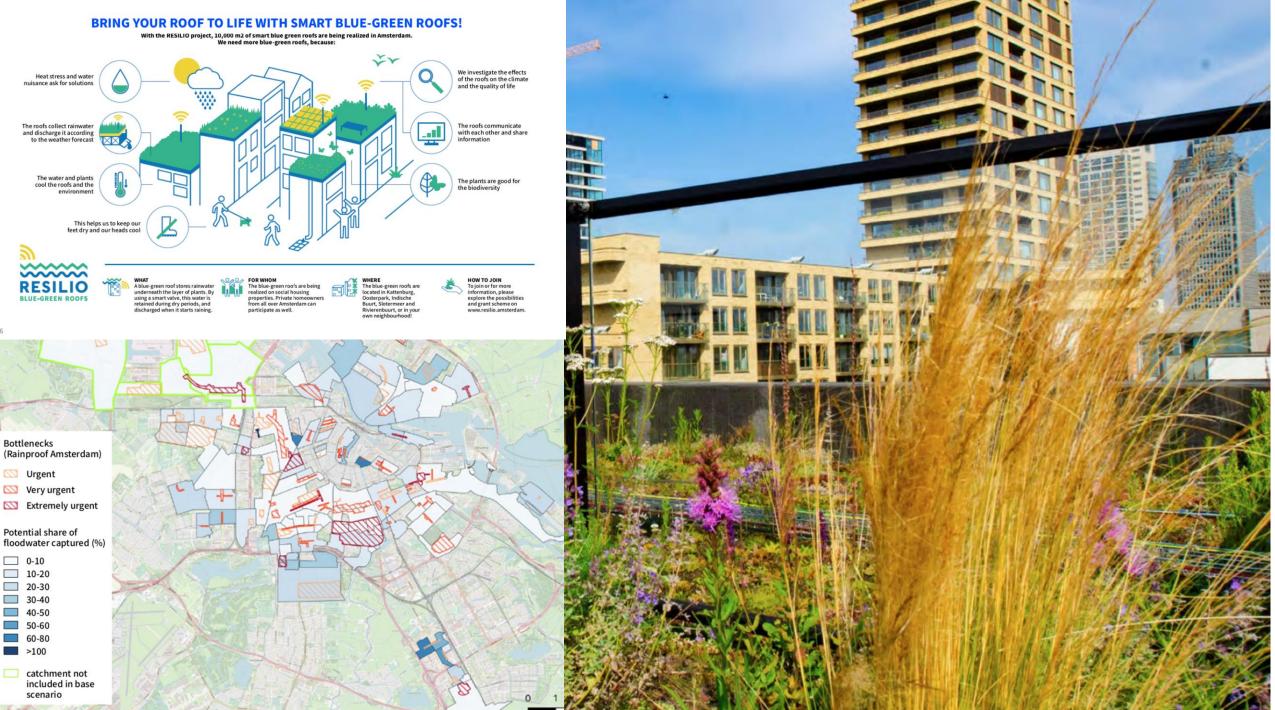


Urban Regional Research Ecology

JRC COP cities plenary meeting
28 april
Prof.dr. Caroline Nevejan
University & City of Amsterdam









Smart Flow Control Substrate Filter layer Water retention Water- and root-proof layer Root-resistant bitumen Waterproof bitumen Cement Existing bitumen

Roof system

INFORMATION ON MACRO LEVEL

INFORMATION ON MICRO LEVEL

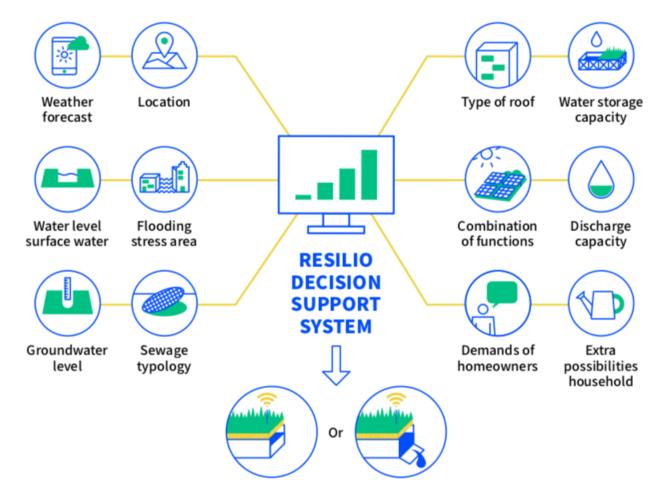
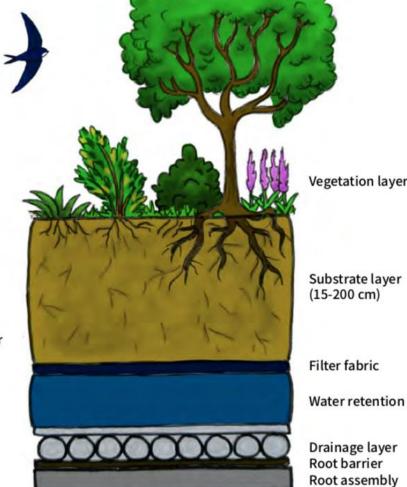
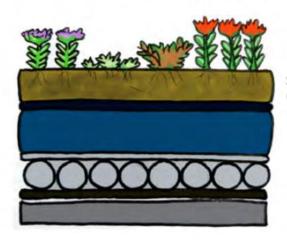


Figure 14: RESILIO Decision Support System (DSS): How does it work?







Substrate layer (5-7 cm)



Substrate layer (7-15 cm)

c. Roof Garden

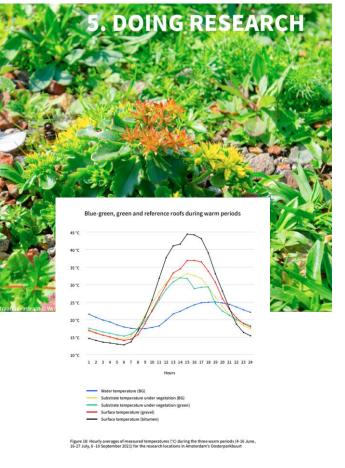
a. Sedum Roof

b. Herbaceous Roof

Figure 19: Example cross sections showing the different layers of three types of green roofs:

- a. Sedum roofs have a vegetation layer with the succulent plant sedum and mosses. These roofs require only a shallow substrate as sedum can withstand long periods of drought and exposure to sun.
 b. Herbaceous roofs usually have a combination of mosses, sedum, and many species of herbs which require a more constant amount of water and a deeper substrate.
 c. Roof gardens have a deep substrate depth, starting at 15 cm. They can host shrubs and even small trees. They are often multifunctional, meaning that they can also be used for recreational purposes and to locate solar panels.









Resilio is an example of City Science adressing an Urban Challenge

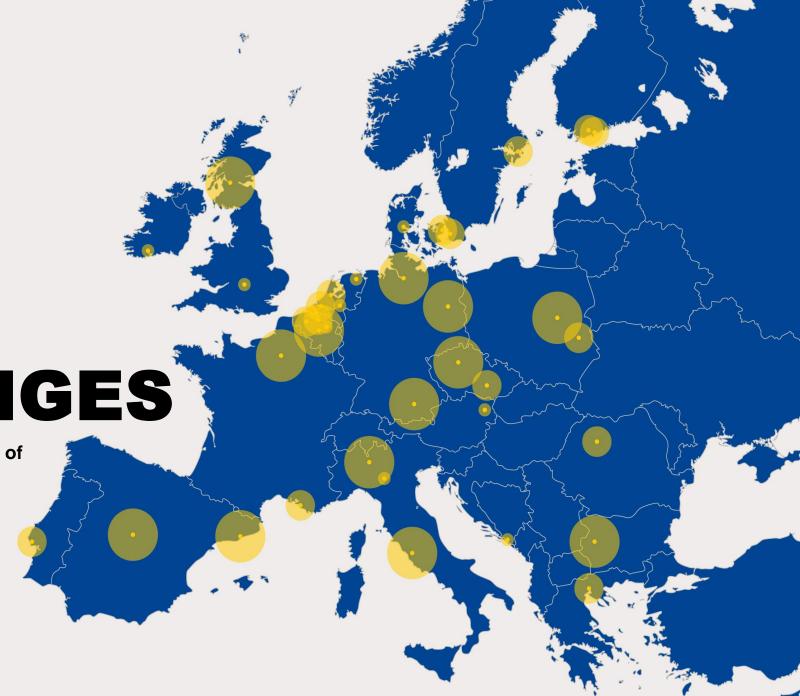






CITY SCIENCE FOR URBAN CHALLENGES

Pilot assessment and future potential of the City Science Initiative 2019 – 2020





European Commission DG's

JRC

DG Research & Innovation

DG REGIO

DG CLIMA

DG CNECT

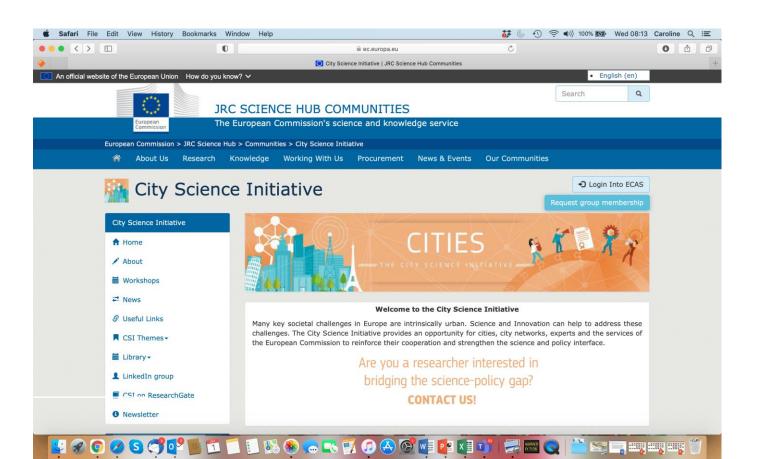
DG ENER

DG ENV

DG GROW

DG MOVE

EASME



Stakeholders:

EUROCITIES

100 Resilient Cities

Covenant of Mayors

European Network of Living Labs (ENoLL)

European Regions Research and Innovation Network (ERRIN)

European Union Knowledge Network (EUKN)

UN Global Sustainability Index Institute Foundation (UNGSII)

ICLEI

International Urban Cooperation

JPI Urban Europe

ThinkNature

UNICA: Network of Universities from Capitals of Europe

URBACT



Which challenges for city science do you recognize in your own city or organization?

Challenges:

- Facilitate governance and finance of City Science
- Design learning and communication between science and policy
- Develop the research paradigm for City Science
- Improve data exchange
- Enhance agency of city

Which recommendations would you like to see implemented and why?

Recommendations:

- Improve relevancy of EU research for city challenges
- Translate findings of EU research into applicable solutions; improve integration on local level
- Solve the lack of access to data for fact-based policies
- Improve cooperation between cities, universities and commission



Letter from Mayors

Given the societal urgency to find innovative approaches and solutions to the challenges European citizens will face in the coming years, we believe that there is a need to continue the City Science Initiative as a learning platform for urban research.

We can assure you that our cities stand ready to support the next phase of the CSI.

Marie-Christine Lemardeley

Deputy Mayor of Paris

Emil Boc

Mayor of Cluj-Napoca Konstantinos Zervas

Mayor of Thessaloniki Luca Vecchi

Mayor of Reggio Emilia **Almut Möller**

State Secretary of Hamburg

Femke Halsema

Mayor of Amsterdam



Response European Commissioners

To assist us in these efforts, we are heartened to see evidence of the outreach activities of the CSI network as a discussion forum and peer learning processes platform, bringing together different actors in cities' governance arrangements.

Yours sincerely,

Maroš Šefčovič

Mariya Gabriel

Elisa Ferreira

Vice-President European Commission Interinstitutional Relations and Foresight European Commissioner Innovation, Research, Culture, Education and Youth European Commissioner Cohesion and Reforms





Values for Survival

Pandemic Lockdown 2020- 2021: exploring, realizing, analyzing, making



Hashim Sarkis

https://openresearch.amsterdam/en/page/52688/values-for-survival



33 digital folders 100 scientists, artists, activists

20. CITY SCIENCE 22. EVERYTHING & NOTHING 28. RHYTHM & ALGORITHM **Editors:** 29. CIRCLES IN FIVE **Caroline Nevejan Huda AbiFarès**

02. MULTISPECIES URBANISM

@3. MULTIPLICITY OF OTHER

86 . ARCHITECTURES OF TRUST

1. 08. VANISHING HOMELANDS

09. TIDES OF TOURISM

07. ARSENALS OF GLOBALIZATION

10. TALKING SANDS - FISHEYE

12. PROTEST OR NOT TO PROTEST

04. SHARING RESEARCH

05. CIRCULAR CITY





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Chapters 1 - 5

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Learnalest, Bernastere Hillege With theologies (Ser. Joens Faul Gernstein, Zide Carr. Inch Groot, 1000 de Foster, Frank van bros Farsacient, Eller de Bordh, Agen Vadder, Madae Kulterdolouwer, Kees Breed

Cahier 1: Setting the Scene

agenda for integrating social and ecological dynamics in the coming ena of climate change

a shared activity for the common by to enfunce their local climate future by planting teen for discle, for mample. For manid palities it is had to unlegrate the kind of initiatives in daily policy. As a reads, it is hard its residents to affect their own energy ment. Only planning practices often do not reconatural fit personal majorismos of olsce. For which sharing reason and personant approximate place is visited. Authoring place is a fraidang, culture and public appears is visited. Authoring place is made for meighbourhoods to train in how to suffey and the local quality of 8th instructor of chimate crises, and to and mail data of all descripts as in this fidure.

Design for diversity has acquired train unempty because it 2021 structures of power or government and the sciences still include some, yet suchabo many. To engage with diverotic and the many relations has this can ential, requires the while of internang and asting questions an ofthinking together not lead. Here of power including the dasse that inmeges as made of digital data contraction and algorithms, rein-forces the deset opposits of fals a dichatomes of good and had between people and places.

camparticipale; and that the eight person his access to subcome of research at the right moment, and in the right place to handle the care out hand. The City of Ameterday has also died to transition to a drouble economy by using doughnut economics, in which a social and ecological age da in integrated and now structures are halfs.



Platta lieds:

Chapter 15: Studio Wild.

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Platter Warel is, Victorius B. Elera Rutt, Janua Suitran Chapter 16: So Young His

Chapter 17: Ulas Krier, Hugo Sourts, Fanner Subsequed, Parecial dault Quarter 18 Hatter Stock

Chapter & Conventions Chapter 9 Prox Sellati, Scott Chapter 19 Hoto/Infrare Canningfant Castin Smith, Julia Ubieda Smithe, Seetina Michel Barobila, Micharde

Sesure Spigs Grad to Nertolini Chapter VI. July Car. Territolic., Iarrob. Macathoristics illena-Steklet, Edrard Safadolivare. Apregal Karasa, Carren Hogg, Adnas Asis, Gunifort lations Paragonic Barriotis. Heart tags, Quality Year, Wage: Wideox Streets El treet.

Cahier 2: Conducting Experiments

Cabler 3 year released in December 2020, and shows the research logbook of scientificand attribic teams of the Version Exploratorium that happened during Covid-19 lock down. The focus of we surch was on challenges that Venice and Amsterdam and other European others have Early team designed to own automin the Cahler, out-minuting in a deathing series of contributions hall of colour and other. For the resistanch in Venice, the collective We are here Venice the real activity when the collection. We are tree whole, which address are Vencer's Antilingue as a living sity and advancable establishes are denoted based approaches to policy making, jorned the curativatalisary. For a description of projects, we the other sels of this map.

In the Viet or Biologatorium, the teams collaborated for three months to push the collective imagination and de-velopnese methodologise for addressing the urgent challanger. It appears that it is possible to share in fultion and reperience with beopte one does not know and cannot meet by building architecture of trust insult on thattens is and sharing presentations to the larger group. Greative skills and an attitude of empathy between participants renieve rary to auppoint over another in this stransell acids may a pace

> language, and without meeting each other, it became apparent that we need to re-invent solidarity for the 2 Tet. century. An eur per oral engagement with 'people-one-dose-not-frose-and-carnot-met' is needed for handling. the many local crises incretation to one another, as they as all the result of global dynamics, in which my action affects

Cahier 3: Telling the Story

Calvier 3 was barached in may 2021. When integrating social and ecological dynamics, shiften in a face that connects differed spheres. The sanisty of ecologies and the eat ety of human organization of school, work and care are all right missed. In the many cultures the coming together of 4 od 4 and ecological rhythmic can be observed in the cal-ebration of his vects or the collective return to school after the Long summer break. For centuries people have studied rhythm. With the introduction of the digital information and communication technologies and the 24/7 global is conomy rhythm as a field of study has acquired remined attention.

Knowledge about rhathers is experiential and often task as eed. Brythm relates to the megic of direct seathetic experence. Righten holds the network together and defines what happens nest. Musicians, grafts people, dancers, surfers, biologists or psychologists have in depth knowledge about hythm without even formulating it. During the Coad 19

To make the task browledge disast rhathm water insearchise seth different backgrounds were asked to serie a a toy about rhythm as they not or this dynamic in their field of sepertise. They were asked to tell the story for children. of about 1 Tyears old. Every author's story was then given to a situal artist to illustrate. As result the Caber 3 offers a a precial and beautiful resight in the force of rhythm. Yan ing to in shirt energies as the Value for Sanunal we need.



Chapters 6 - 20

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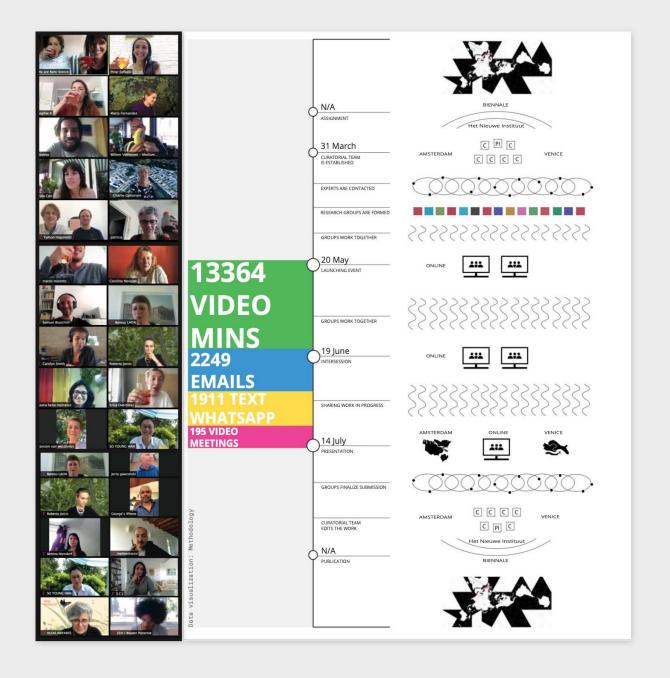




Cahier 2:

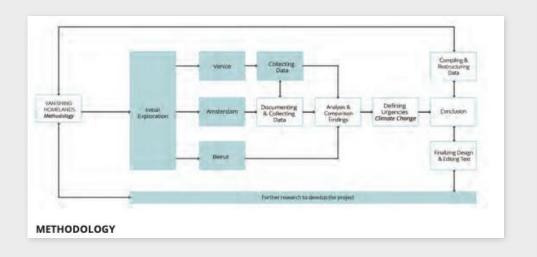
Exploratorium is a methodology for international group working on local urban challenges

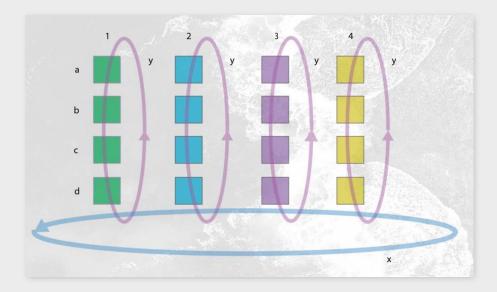


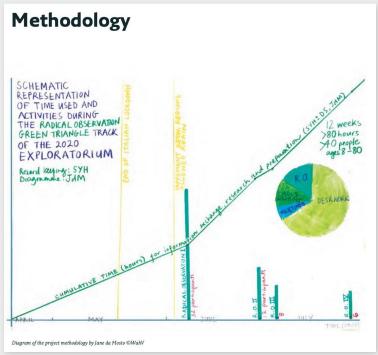


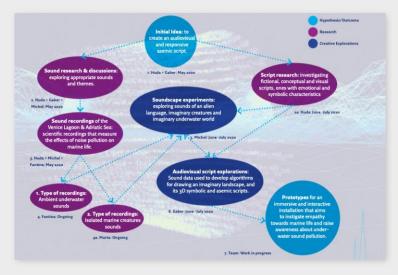


Teams invent their own specific methodologies for collaboration



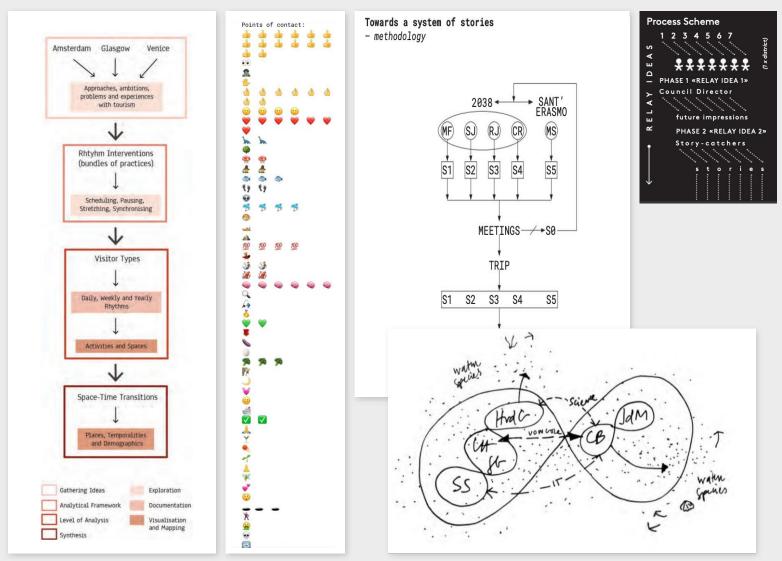


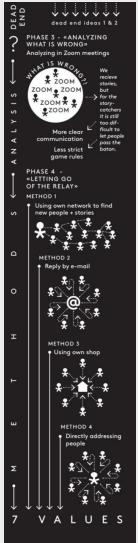






Teams invent their own specific methodologies for collaboration

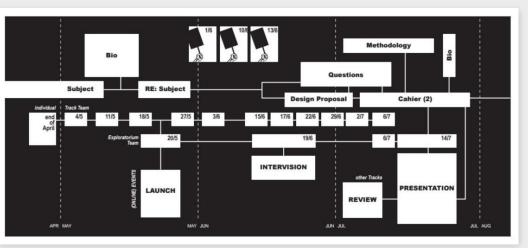


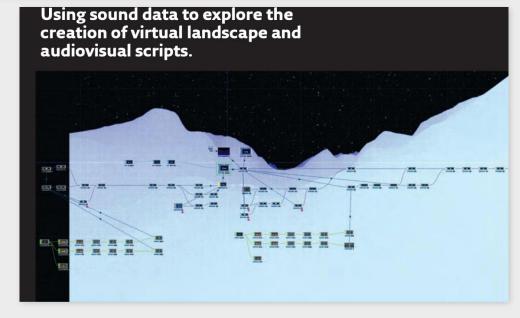


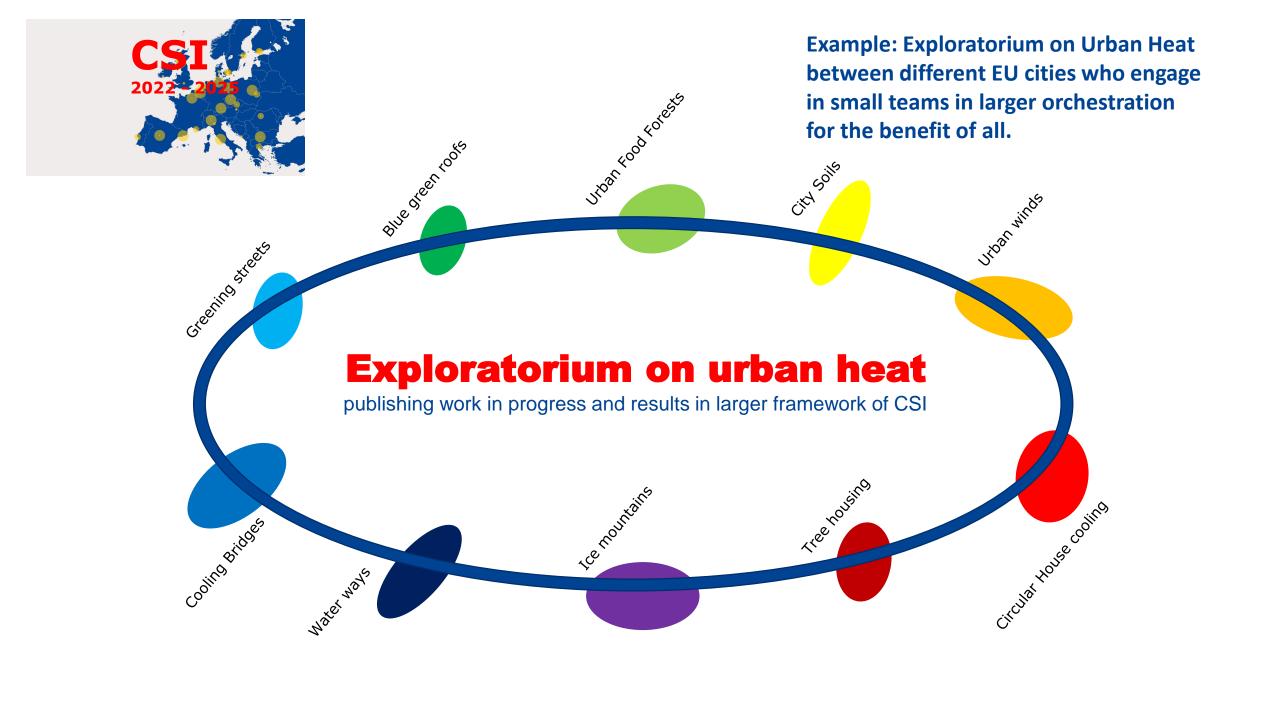


Teams invent their own specific methodologies for collaboration



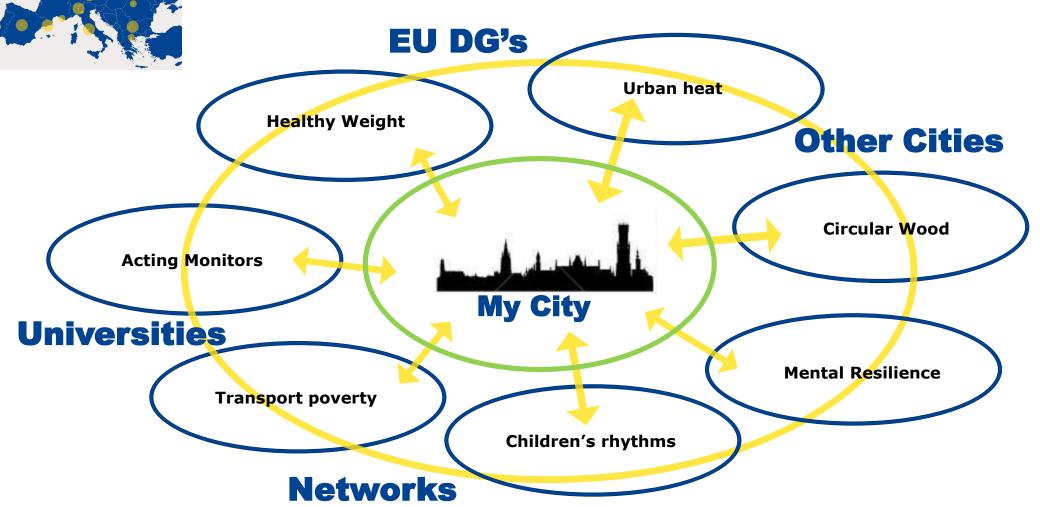


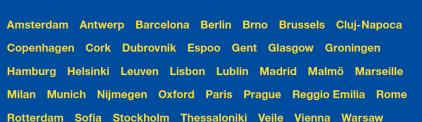






A city can participate in the small teams of different exploratoria to enhance the benefit of European interaction for its city while contributing to all

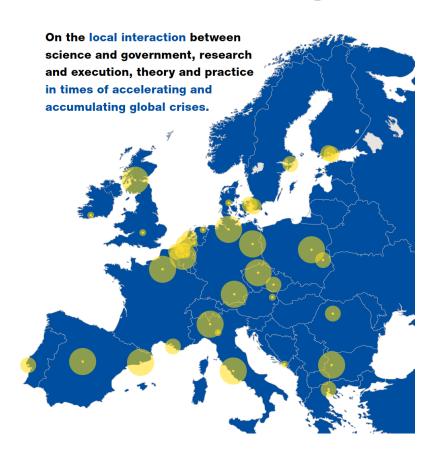




City Science Initiative, May 2022



Urban Regional Research Ecology



Caroline Nevejan (CSO Amsterdam)
Christian Fernando Iaione (Reggio Emilia)
Panagiotis Bamidis (Thessaloniki)
Thomas Jacob (Hamburg)
Anne-Sophie Hollstein (Paris)

Jean-Charles Lardic (Marseille)



Urban regional research ecology

- To enhance resilience of cities in transition
- To develop methodologies for cities in transition
- To facilitate learning and collaboration between cities
- To create effective interfaces for the European Commission
- To become a sounding board for the European Commission



Blue prints for Messy Cities

Structural reflection on action

- Merging on- and offline realities
- Cultural orchestration
- Rhythm in interactions
- Iteration in research design

Incommensurability

- Different kinds of knowledge
- Different kinds of disciplines
- Different kinds of stakeholders
- Different kind of experts
- Different kinds of engagement

In need for new methodologies for handling urban challenges



A variety of Emerging Communities of Practice

- Theory and practice based (reflexive)
- Sharing a sense of urgency (vital information)
- Accepting responsibility (crucial network)
- Committed to shared values for design (value sensitive design)



Accelerating and accumulating crises

1. In an **acute crisis** certain actors or institutions gain special authority to be able to take decisions quickly, such as 'lockdown' measures

2. In a **chronic crisis**, as when the pandemic changed after the first wave, there is more room for doubt and democracy.

3. The **predicted crisis**, such as the climate crisis, is highly politicized from the beginning.



National & international handling of Science and policy in times of crises

NL-WRR:

handle crisis on national level

- Adaptation (learning capacity)
- Responsibility
- Multidisciplinarity
- Preparedness

EU Scientific Advisors about handling crisis from EU perspective

- Communicate uncertainty
- Be open and transparent
- Take a multidisciplinary approach
- Ensure a clear demarcation between science, advice and politics



Local handling of science and policy in times of crises

Urban regional research ecology

- Using interdependence as a force for resilience
- Based in communities of practice, built on mutual experience with each other's way of working, methods and techniques, relationships and networks
- Values direct policy and research processes
- Orchestrate relations which offer efficient and effective synergy in (un)expected ways
- To maintain a transparent urban regional research ecology that welcomes newcomers at all times



Values Urban Regional Research Ecology

Sharing research for democracy

Evidence-based policymaking

Societal impact in the city

Design for
Planet
People
Profit



Dynamics Urban Regional Research Ecology

Inspire

&

Advise

Connect

&

Collaborate

Faciliatate

&

Implement

Document

&

Publish

Learn

&

Test

Collect

&

Organize

Include

&

Control

Just-in-time

&

All-the-time



Organisation Urban Regional Research Ecology

Research capacity

in management, organization

Formal agreements

between city & universities

Structural collaborations

ateliers, centers, institutes

Temporary collaborations

living labs, pilots, projects

Data

harvest aggregate, publish

Networking

different kinds of knowledge

Catalysts

science,
innovation
business culture

Publish

relevant research work in progress



Urban regional research ecology

urban regional research ecology My City		VALUES		DYNAMICS							
Organisational	Research for society	Evidence based policy	Valorization of research	Inspiration and Advice	Connect & Collaborate	Faciliatate & Control	Gather & Orgnanize	Make public and Publish			
Capacity in Management											
Formal Agreements											
Structural Collaborations											
Projects and Programs											
Innovation Catalyst											
Science Catalyst											
Business Catalyst											
Regional Catalyst											
Expert Networks, workshops ateliers & labs											
Data organization											
Publishing platforms (data, maps, openresearch)											



Contributions to an Urban Regional Research Ecology

ACTIVITIES MUNICIPALITY				ACTIVITIES UNIVERSITIES										
EXPLORE	CHOOSE	EXECUTE EVALUATE				EDUC	ATION							
Doing research	Strategize & Evaluate	Execute Faciliate & Control	Innovate of practices	Just in Time research & policy- making	Facilitate Learning	ORGANIZATIONAL ELEMENTS for science & policy	Bachelors	Masters	PhD's	Experiments/ Pilots/ Living Labs	Structural collaborations	National subsidies	EU subsidies	Incubators
						Capacity in Management								
						Formal Agreements								
						Structural Collaborations								
						Projects and Programs								
						Innovation Catalyst								
						Science Catalyst								
						Business Catalyst								
						Regional Catalyst								
						Expert Networks, workshops ateliers & labs								
						Data organization								
						Publishing platforms (data, maps, openresearch)								



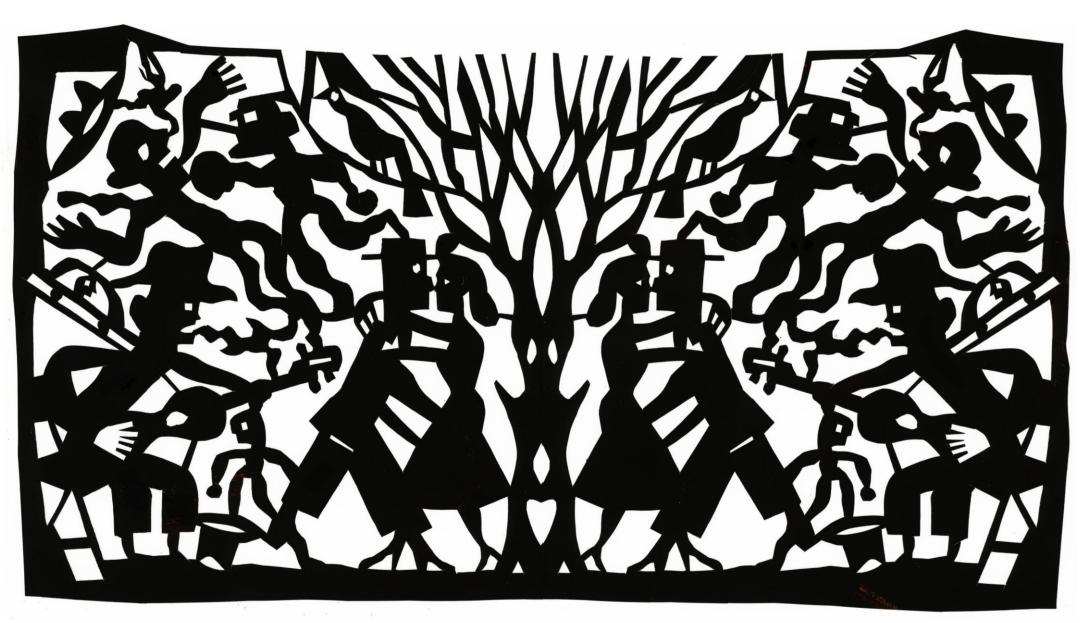


Image: Cyprian Koscielniak

