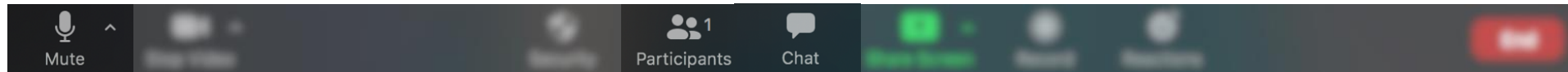


WELCOME – THE SESSION “*ULL setup and initiation*” WILL BEGIN SHORTLY

1. KEEP YOUR MICROPHONE MUTED WHEN NOT SPEAKING
2. CLICK ON THE „PARTICIPANTS” BUTTON AT THE BOTTOM BAR OF YOUR ZOOM WINDOW, RENAME YOURSELF WITH YOUR NAME, FOLLOWED BY (ORGANISATION)
3. OPEN THE CHAT TO ASK QUESTIONS



THIS SESSION IS RECORDED

By continuing to be in the meeting, you are consenting to be recorded



KEYNOTE by PhD Abdolrasoul Habibipour



INTERACTIVE WORKSHOP Division in break-out rooms for the Urban Living Lab Roadmapping led by PhD Abdolrasoul Habibipour

--- BREAK ---



Real and Perceived Barriers to ULLs by Shahryar Ershad Sarabi



PANEL DISCUSSION with representatives from UNaLab partner cities



**BOTNIA
LIVING LAB**

Urban Living Labs for developing Nature Based Solutions: Understanding their Key Components

UNaLab Online Webinars

By: Abdolrasoul Habibipour

*Information Systems
Luleå University of Technology*

2020-11-24



**European
Commission**

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 730052 | *Topic*
SCC-2-2016-2017: *Smart Cities and Communities Nature based solutions*

Learning outcomes of this session

- To make the participants **familiar** with the **concept** of Urban Living Lab as a whole and its key **components**.
- To understand how NBS can be developed **following** an Urban Living Lab **approach**.
- To give the participants a better **understanding** of how an Urban Living Lab can be **set up** and **run** by considering different phases of innovation development and different actions/activities that can be done.

What is a Living Lab?

“LL is one **approach** to manage **open innovation** processes, where various **stakeholders** and individual **users** are involved to co-create, test, and evaluate innovations in **open, collaborative, and real-world settings**”

Theoretical Areas

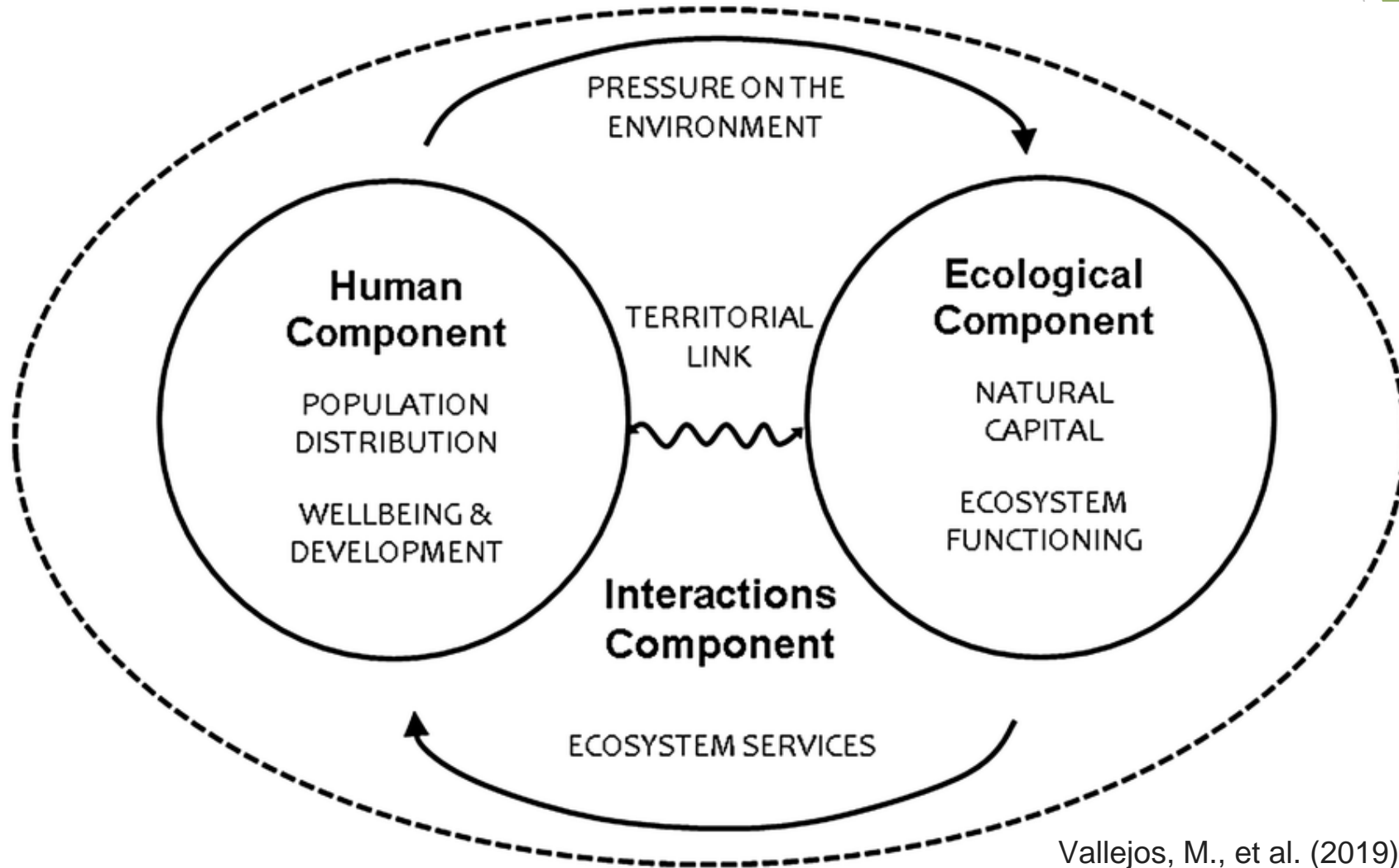
- Open Innovation
- Socio-technical systems
- Design Thinking
- Participatory Design
- Innovation management
- Stakeholder Theory

Human and innovation

- ▶ 55% of the world's population lives in urban areas → 68% by 2050 (United Nations)
- ▶ Cities as milieu for innovation with citizens
 - ▶ Large scale innovations
 - ▶ Digital innovations
 - ▶ Etc...



Socio-ecological systems perspective



Vallejos, M., et al. (2019)

What is an Urban Living Lab?

“An urban living lab is a **local place** for innovative solutions that aims to solve **urban challenges** and contribute to long-term sustainability by actively and **openly co-creating** solutions with **citizens and other stakeholders.**”

Urban Living Lab Framework



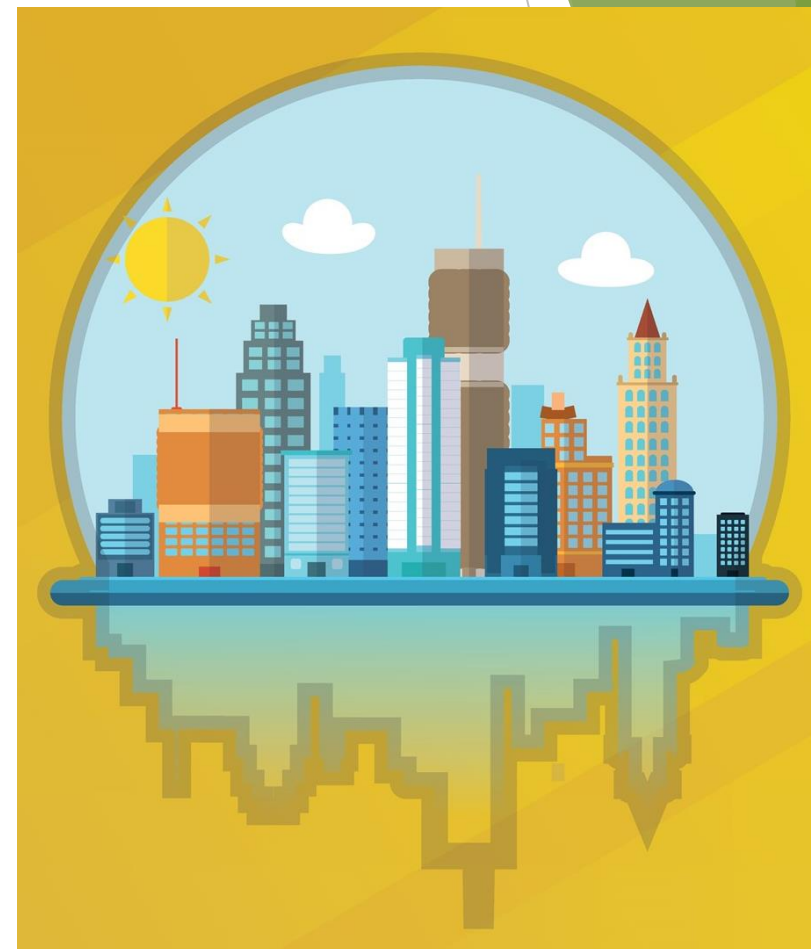
- The way that an Urban Living Lab in the strategic or operational level is managed and organized
 - Urban Living Lab vision and scope
 - Risks management
 - Risk assessment
 - Closing the project
 - Knowledge sharing
 - Dissemination



- A business model that creates, delivers, and captures value for all Urban Living Lab stakeholders
 - Revenue stream
 - Value
 - Crowdfunding
 - Cost structure
 - Financers
 - Resource allocation



- The physical setting in which the NBS will be implemented
 - Place
 - Ownership
 - Physical infrastructure
 - Technical infrastructure
 - Future plans
 - Responsibility
 - Activities



- Key characteristics of nature-based solutions in ULL
 - Address sustainability challenges
 - Real-world situations
 - Using nature
- Value co-creation
- Activities
- Innovation setting



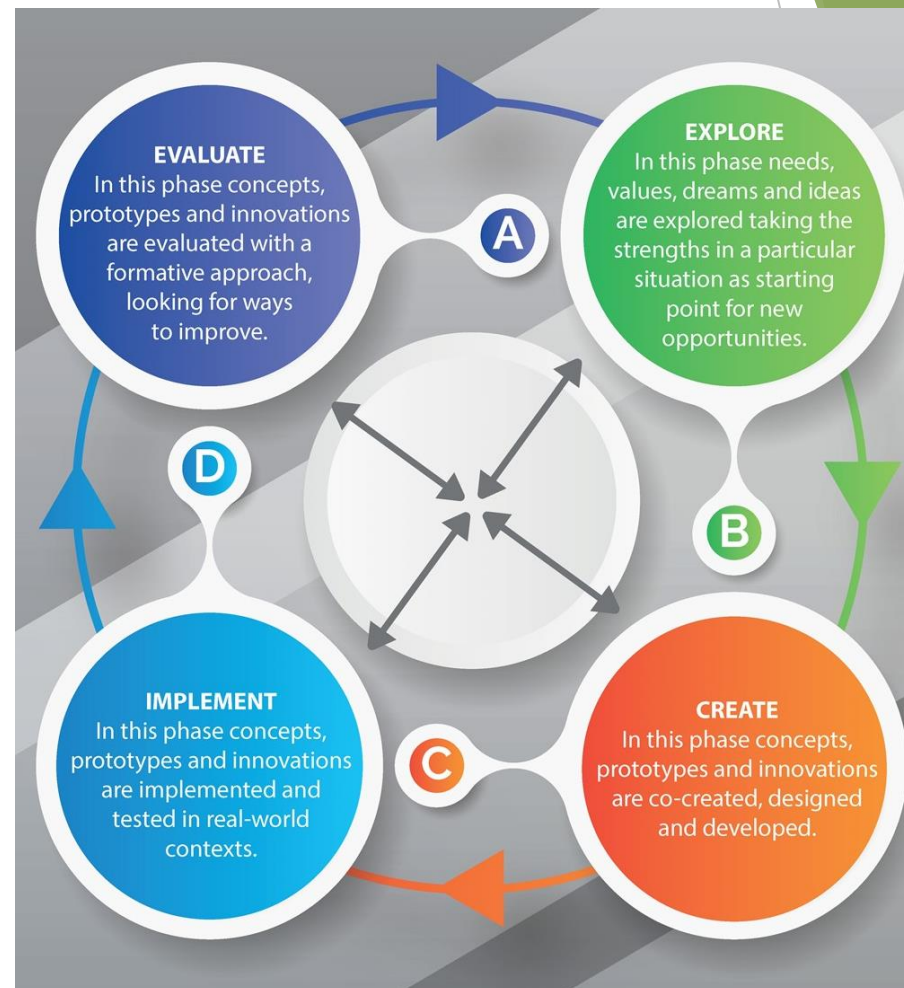
Key stakeholders

- Quadruple-helix approach
- Citizens have different roles
 - Affectee (passive)
 - Experimenter
 - Innovator
 - Lead participants
 - Tester
- Stakeholder engagement
 - Objective to contribute
 - Motivation
 - Degree of involvement
 - Activity type
 - Membership model



Approach and method

- Urban Living Lab approach includes
 - Data collection and analysis methods
 - Co-creation methods and techniques
 - Engagement methods
 - Engagement tools

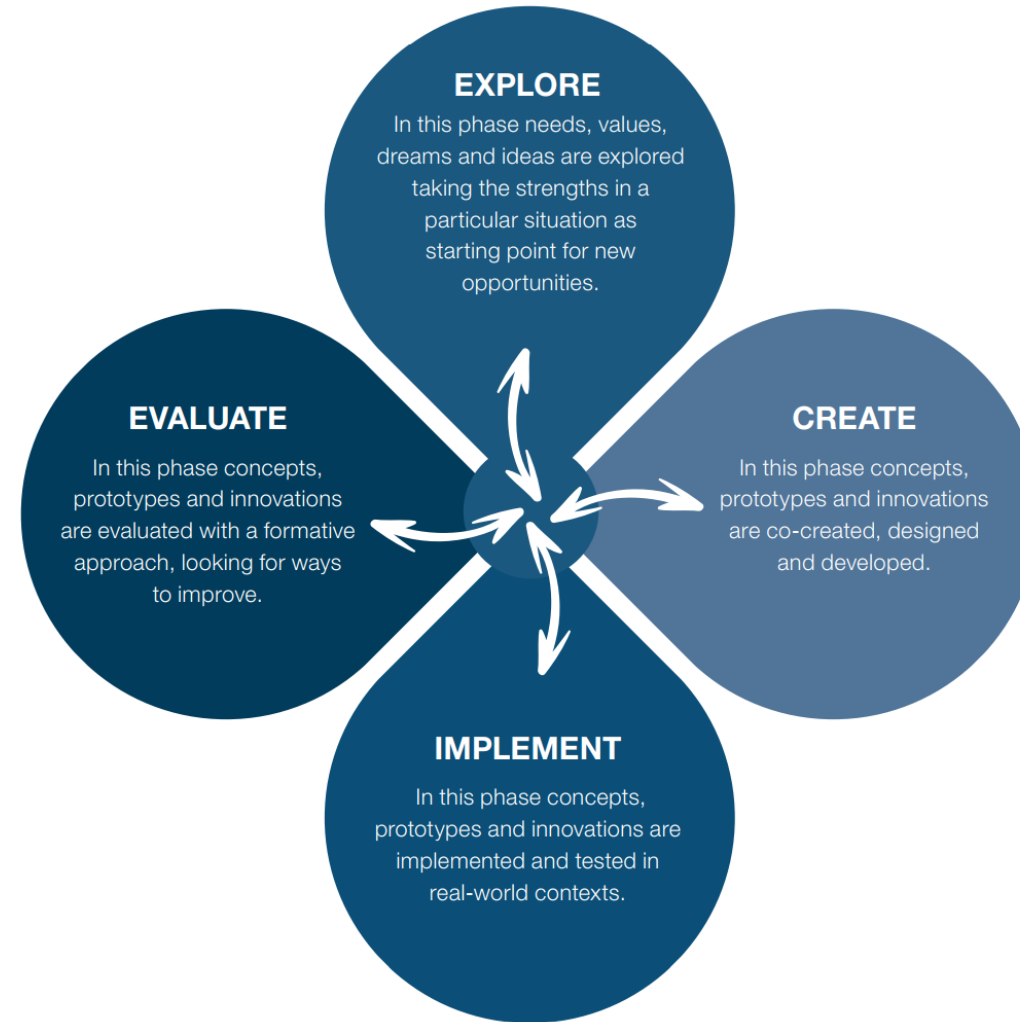


- Existing and desirable ICT tools and infrastructures that support ULL activities
 - Hardware
 - Software
 - Data
 - Network
 - Devices
 - Solutions



Main phases of innovation process in Urban Living Labs

- Planning
- Exploration
- Co-creation
- Implementation
- Test and Evaluation
- Adoption



➤ Planning phase

- The **background** and **type** of the NBS that will be developed in Urban Living Lab
- **Aim and scope** of the Urban Living Lab
- Different **perspectives** of the desired NBS
- Relevant **skills** that are needed within the Urban Living Lab setting
- The **context** of NBS development (city, home environment, workplace, etc.) in which the Urban Living Lab projects are located
- **Barriers** of setting up and running the Urban Living Lab

➤ Planning phase checklist (1)

- Who has the **power** to influence the ideas?
 - who makes the **decisions**
 - who are the **informal leader** that should be contacted
 - who can **stop** the Urban Living Lab or NBS process?
- What **risks** are associated with the Urban Living Lab set up?
- What is the Urban Living Lab vision?

➤ Planning phase checklist (2)

- Identifying the **target user group**, citizens, visitors, customers, potential users, as well as non-users.
- Are there any **ethical** considerations that need to be considered before starting the NBS development?
- Which important **time frames** need to be handled?
- **Stakeholder identification**: Who are relevant stakeholders that should be involved?
 - Public sector
 - Private sector
 - Academia
 - Citizens
 - Others

➤ Exploration phase checklist (1)

- What is the **NBS** vision and scope?
- What technical **equipment** does the NBS require?
- What in the **context** might influence the NBS development?
- What **problem** or **opportunity** does the NBS aim to contribute to?
- What **competencies** and **resources** are important to be involved in the process?
 - Content providers
 - Distributors
 - ICT consultant
 - Developers
 - Customers
 - Citizens
 - Other

➤ Exploration phase checklist (2)

- How to **motivate** different stakeholders and citizens to be engaged in the innovation development process?
 - Winning the prize
 - Monetary incentives
 - Learning
 - Technology in return
- How to **keep them engaged**?
- How to form a positive **dialogue** and **contact** with the relevant stakeholders?
- Does the NBS start based on **open calls**?
 - Is it disseminated in public channels?

➤ Co-creation phase checklist (1)

- What ICT infrastructures for co-creation activities are needed?
 - Hardware
 - Software
 - Data (public, private)
 - Networks (4G, fibre, etc.)
- How should citizens be engaged in the NBS process?
 - Interviews?
 - Workshops?
 - Focus groups?
 - Gamification
 - Observations?
 - Scenarios, visual?
 - Narratives?
 - Other?

➤ Co-creation phase checklist (2)

- Decide how to record the **collected data** from the co-creation activities
 - Camera, Notes, Video, Audio, Other...
- Are the Living Lab key **principles** addressed in the co-creation phase?
 - Value, Sustainability, Openness, Realistic
- What **supportive tools** are required for co-creation?
- What **value** is co-created in the process for all stakeholders?

➤ Implementation phase checklist

- Which **activities** does the **context** of NBS development currently **support**?
- Which **physical infrastructure** is available?
 - Streets
 - Districts
 - Parks
 - Electricity, 4G, etc.
 - others
- Who can **experiment** with the NBS?
- Are the Living Lab **Key Principles** addressed in implementation phase?
 - Value, Sustainability, Openness, Realistic

➤ Test and evaluation checklist (1)

- What is the aim of the **test** and evaluation of the NBS?
- Which **data collection methods** should be used in the NBS test and evaluation?
 - Observations, Interviews, Focus-Groups, Diaries, Questionnaires, Other
- For **how long** period of time should the NBS test last?
- What **technical equipment** does the NBS test and evaluation require?
- Which **technical infrastructure** is there **available** in the context to test and evaluate NBS?
 - Fiber, Wi-Fi, 4G, Sensors, IoT

- **Test and evaluation checklist (2)**
 - Are the Living Lab **Key Principles** addressed in the test and evaluation phase?
 - Value, Sustainability, Openness, Realistic
 - **How many users** should be recruited for NBS test and evaluation?
 - What are selection criteria?
 - Age, Gender, Occupation, Technical skills, Knowledge and competence
 - What **ethical considerations** need to be handled during the test and evaluation process of NBS?
 - Unwitting participation? (e.g., in crowdsensing)
 - Voluntariness of citizen engagement?
 - Cost and benefits of engagement for the citizens?
 - Consent form?
 - Others?

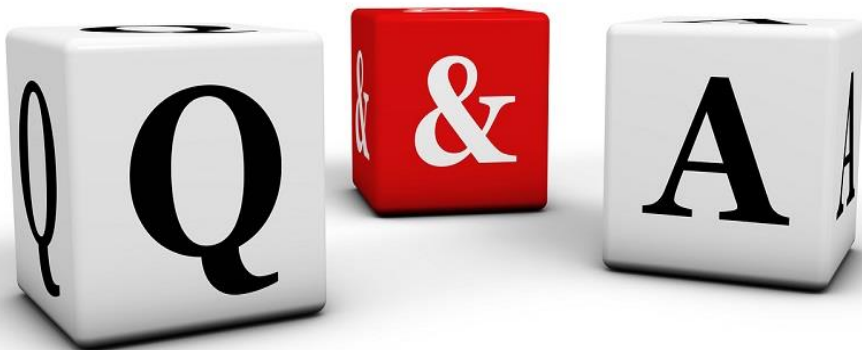
➤ Adoption phase checklist

- Who are the main **adopters** of the NBS in an Urban Living Lab context?
- In which **social** context is the NBS planned to be adopted?
- In which **physical** context is the NBS planned to be adopted?
- In which **technical** context is the NBS planned to be adopted?
- In which **organisational** context is the NBS planned to be adopted?
- What **barriers** are associated with the adoption of NBS?
- How should the identified NBS adoption barriers be **tackled**?
- Are the Living Lab Key Principles addressed in the adoption phase?
 - Value, Sustainability, Openness, Realistic

➤ Citizen engagement principles

- Citizen engagement must be **voluntary**.
- Think about **heterogeneity**: attempt to maximise the difference between different categories of citizens.
- Be **inclusive** to maximise the difference among user categories, all kinds of ages need to be represented.
- Engage citizens who are **flexible** towards change and have a strong social competence.
- Attempt for a balanced **gender distribution**. Traditionally, male engagement leads to developments focused more on **technical** performance, while female engagement leads to developments with a focus on **human** needs and expectations.
- Citizen selection should be on those who are in different **level of knowledge** about the area of NBS.

Questions?



**BOTNIA
LIVING LAB**

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Interactive workshop

Urban Living Lab Framework toolkit



The workshop instruction

- Open the shared google sheet (the link can be found in the chat box) and find the sheet in the name of your group (7-9 participants in each group):
<https://docs.google.com/spreadsheets/d/11zdfa2pmrStS1N373pk7yfDm7cYgr1SsQLLcM5uzue0/edit#gid=571899880>
- Try to find a connection between each development phase (i.e., exploration, test and evaluation, etc.) and the key component (i.e., key stakeholders, real-life context, etc.)
- Write in that cell what is relevant in each phase considering each key components (some examples are provided)
 - what **actions** can be done in exploration phase of an innovation
 - what is **relevant** in the planning phase in relation to the stakeholders
 - **barriers** of stakeholder engagement in implementation phase
 - you can write in a **general** level or very **specific**.
- Decide in your group who will share the insights (**one minute**)



fx

	A	B	C	D	E	F	G
1		Planning	Exploration	Co-creation	Implementation	Test & evaluation	Adoption
2	Governance and management	e.g., risk assessment					e.g., scaling up the NBS, refine the process and activities undertaken in ULL
3	Financing and business models						e.g., ownership cost for regular use of NBS
4	Real-life context					e.g., field test in real life	
5	NBS	e.g., SWOT analysis	e.g., map existing NBS solutions				
6	Key stakeholders		e.g., stakeholder identification, lobbying		e.g., barriers of stakeholder engagement in implementation phase		
7	Methods of engagement and data collection			e.g., brainstorming session with citizens			
8	ICT infrastructure	e.g., discover opportunities for collaboration platform					

Share your insights



One minute per group

BREAK

See you in 15 minutes