Climate Change, Cities, Communities and Equity in Health

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R3 Report

Educational toolkits for healthy urban planning and urban participation

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Contents

1. Introduction and purpose of the Toolkit

Cities are responsible for the majority of greenhouse gas (GHG) emissions as is now common sense. Also, we know by heart that climate change affects our health. The links between the two are observable[1] but scarcely addressed. This Toolkit promotes this articulation, which is urgent for the future of cities.

The CliCCHE toolkit is a health-oriented and climate-proof urban planning training instrument to support students in the creation of urban regeneration projects. It provides the tools to enable students:

- to evaluate climate change effects on urban health, and therefore to identify and design appropriate climate change adaptation and mitigation strategies;
- increase students' awareness and engagement in urban regenerative processes through new digital technologies, an innovative participatory process and by public art exhibitions, since students can learn by experiencing in first person the concepts provided by e-learning;
- innovate the learning/teaching experience by creating a fully transdisciplinary educational method, leveraging the citizens' involvement through urban simulation games, the gamification of urban modelling and simulation, and the exploration of virtual and immersive reality tools.

This toolkit aims to implement a joint European initiative that facilitates collaboration between disciplines, stimulates data-driven learning, and offers a platform for transdisciplinary learning in nontraditional classroom settings. It is made by a general methodology (learning/teaching modality, curriculum development, quintuple helix), which will be built upon IPCC recommendations, and customizable tools (immersive reality, public art, game simulation). Therefore, it will be easy to adapt and transfer it to other European countries with specific and targeted dissemination campaigns. A web tutorial will explain the toolkit, with a step-by-step guide, suggesting tricks and solutions from R2 – Healthy Urban Planning Teaching Methodological Guidelines –, aiming at learning the operating methods for urban regeneration design centered on adaptation to climate change. This Toolkit draws from the work of the European Consortium (University of Camerino - UniCam; The Cyprus Institute - CyI; University Institute of Lisbon - ISCTE; CNR IFT and University of Belgrade.)

Together, these partners built a Health urban planning Teaching Methodological Guidelines (R2), which form the basis for this Toolkit. The tools were tested in Local Workshops held in each educational institute. CNR IFT built the *reTeach* questionnaire concerning perceptions

[1] See, for instance, https://emme-cci.org/wp-content/uploads/04-Health-Web-r1-1.pdf

and acquired knowledge about climate change related with health in the cities. The users of this toolkit are invited to fulfill it.

In sum, this is a kit with practical tools, to use considering the local academic context and disciplinary environment, and the place(s) where intervention is needed, finding better solutions to adapt to climate change.

2. Toolkit step-by-step guide

2.1 Linking with Healthy Urban Planning Teaching Methodological Guidelines (R2)

This guide is intended to help students understand the CliCCHE methodology in the clearest and most communicable way possible. This chapter presents all the tools that were prepared within the scope of the Methodological Guidelines of CliCCHE. After a brief explanation of the rationale, the tools include a description, the types of participants, the sequence of steps to be followed, examples and complementary bibliography.

The CliCCHE methodology presents 7 activities, that are expressed within an educational sequence of 4 main phases, described as below. The 24 tools that we present in this toolkit are linked with the methodology activities and so with the phases, being that a tool can be developed in one more that a phase. The presented tools are recommendations selected by the CliCCHE team that does not exclude the introduction and application of other relevant tools.

LIST OF TOOLS BY ALPHABETICAL ORDER:

- 15-Minute Proximity (Urban game)
- Audio/Oral presentation
- Checklists for Project Proposals Evaluation_ Healthy Cities Generator
- Checklist - Using Checklists for Project Proposals Evaluation_ Healthy Urban Planning
- Climate Profile Ladybug Suite
- Data collection and best practices examples
- Debate
- Expert Panel
- Flipped Classroom
- Immersive reality software
- Interviewing
- Photo elicitation
- Place Standard Model with a climate lens tool
- Printed presentation: Posters and leaflets

- Public art presentation
- REBUS version for CliCCHE (Urban Game)
- Recording fieldnotes
- reTeach Questionnaire
- Scenario building Guidelines
- Selecting Project Proposal through Public Participation
- Self-Study
- Stone Soup (Urban Game)
- SWOT Analysis
- Walking as a research method

USING TOOLS ACCORDING TO METHODOLOGY AND PHASES:

According to the CliCCHE methodology, there are 7 activities and now 4 phases are introduced:

Table 1. Methodological Activities and Figure 1. Phases. Here, the relationship among them and variety of possibilities to use different tools for different activities in different phases is demonstrated. The CliCCHE partner that has developed the tools is also listed in Table 1, while Table 2 illustrates that some tools can be applied in more than one activity. Some tools are used specifically for one activity (example: Climate Profile Ladybug Suite for Activity 3 - Health and Climate Profile) but others can have other possible use in different activities (example: Self-study or Debate). The activity 1 is part of the **phase 1 – Background** and Problem specification, representing the **framework** of the issues of the CliCCHE project. Activities 2, 3 and 4 are part of the **phase 2 – Mapping**, representing the **collection of data** and useful information about the case studies under analysis. For example, in the case of the local workshops, neighborhoods or parts of cities were chosen. Activities 5 and 6 are part of **phase 3 – Design Development & Selection**, representing the **proactive part** of the process and how to choose among the various proposals designed. Finally, activity 7 is part of **phase 4 – Communication and Dissemination**. Unlike the first three phases which are consequential, phase 4 accompanies the entire methodological process, being able to be **implemented in all phases of the process**.

Table 1. Methodological Activities

ACTIVITIES	A1 Integrated vision of "urban health" regeneration	A2 Local inquiry and mapping	A3 Health and climate profile	A4 Evaluation framework	A5 Project scenario	A6 Project proposals selection	A7 Results communication and dissemination
RECOMMENDED TOOLS	Debate (CYI) Expert panel (CYI) Flipped classroom (CYI) Self-study activity (CYI)	Data collection and best practises examples (UNICAM) Walking as a research method (ISCTE) Recording fieldnotes (ISCTE) Interviewing (ISCTE) Photo elicitation (ISCTE)	Climate profile LadyBug Suite (UNICAM)	SWOT analysis (UNICAM) Place Standard with climate lens tool (UNICAM) 15 minutes proximity (ISCTE) reTeach Questionnaire (CNR)	Stone Soup – Urban game (ISCTE) REBUS ®- REnovation of public Buildings and Urban Spaces – Urban game – version for CliCCHE (UNICAM) Immersive reality Software (CYI) EASW Click Scenario Building (UNICAM)	Check-list for Project Proposals evaluation: Healthy Urban Planning Checklist (UBFA) Check- Lists for Project Proposals evaluation: Healthy Cities Generator (UBFA) Selecting Project Proposal through public participation (UBFA) Debate (CYI)	Audio/oral presentation (UBFA) Printed presentation: posters and leaflets (UBFA) Public art presentation (UBFA)

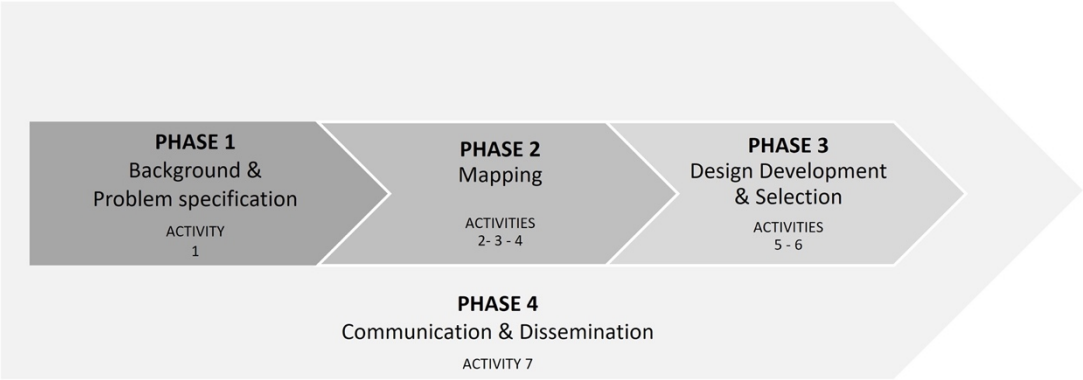


Figure 1. Phases

Table 2. Integrated vision of Methodological Activities, Phases, and Tools

	PHASE 4						
	PHASE 1	PHASE 2			PHASE 3		A7 Results communication and dissemination
	A1 Integrated vision of "urban health" regeneration	A2 Local inquiry and mapping	A3 Health and climate profile	A4 Evaluation framework	A5 Project scenario	A6 Project proposals selection	
15 min proximity				X			
Audio/Oral Presentation	X	X	X	X	X	X	X
CHECK–LISTs for Project Proposals evaluation_Healthy Cities Generator				o		X	
CHECK–LISTs for Project Proposals evaluation_ Healthy Urban Planning Checklist						X	
Climate Profile Ladybug Suite			X				
Data collection and best practices examples		X	o		o	o	
Debate	X					X	
Expert Panel	X					o	
Flipped Classroom	X	o	o			o	
Immersive reality software					X		
Interviewing		X					
Photo elicitation		X					
Place Standard with a climate lens tool				X		o	
Printed presentation: Posters and leaflets	o	o	o	o	o	o	X
Public art presentation	o				o		X
REBUS Urban Game (CliCCHE version)				X	X	X	
Recording fieldnotes		X					
reTeach Questionnaire			X				

Scenario Building Guidelines					X		
Selecting Project Proposal through public participation						X	
Self Study	X	o	o	o	o	o	
Stone Soup (Urban Game)					X		
SWOT Analysis				X			
Walking method as a research method		X					

X - principal use o - other possible/additional use

The next tables (Table 3 – Table 6) explain the fourth phases described through:

↘ The general objectives and topics (Why?)

↘ The targeted group of participants (Who?) – teachers and students' activities

↘ The location of the activities (Where?)

↘ The expected outcomes of the activity (What?)

↘ Timing of the activities (When?)

↘ Outputs/Deliverables

↘ Tools proposed

1st PHASE: Background & problem specification

(Activities 4.1 Integrated vision of "Urban health" Regeneration)

Table 3. 1st Phase: Background & Problem specification

Why? **General objectives and topics**	1.Background literature on urban challenges, principles of regeneration, urban health etc.	2. Successful regeneration projects
	3. Teaching/learning approaches (debate, self-study, expert panel, flipped classroom)	4. Presentation of Urban games and Immersive experience
Who? **Target Group participant**	**Students/Teachers/Tutors**	
Teachers' activities	1. Lecture on urban challenges, adaptation and mitigation design tools	2. Lecture on impacts of regeneration, successful examples
	3. Stimulate teaching/learning approaches	
	4. Examples of urban games, immersive reality and interactive tools experiences	
Students' activities	Know more about the subject (literature) and the object (state of art)	

Where?	In Class	
What? **The expected outcomes of the activity**	1. Study design options for urban regeneration to improve urban health to be used in the selected area	2. Study appropriate adaptation and mitigation strategies to mitigate the impacts of climate change to be used in the selected area
	3. Apply appropriate teaching/learning approaches	4. Study appropriate urban games and/or digital tools for immersive and interactive experience
When? **Timing of the activities**	**Total 6 hours**	
Outputs/Deliverables	Background Literature of the topics State of art of the case study Research questions	
Tools proposed	1. R1 Report (Background literature on urban challenges, principles of regeneration, urban health etc.) 2. Best practices examples 3. Teaching/learning tools (debate, self-study, expert panel, flipped classroom)	

2nd PHASE: Mapping

(Activities 4.2 Local inquiry and mapping, 4.3 Health and climate profile and 4.4 Evaluation Framework)

Table 4. 2nd Phase: Mapping

Why? **General objectives and topics**	1.To know the neighbourhood from above -Neighborhood data and facts -Shapes, spaces and functions -People, actors and networks	2. To know the neighbourhood from within -Observing and walking through the district -Meeting and knowing the community -Participating with the community
	3.Climate Profile	4.Health Profile
	5.Evaluation framework (SWOT Analysis, Place Standard Model, 15 minutes proximity)	
Who? **Target Group participant**	Students/Teachers/Tutors/ community and stakeholders	
Teachers and experts' activities	1. Lectures regarding different approaches on knowledge of the study area "From Above" and "From Within"	2. Seminars with experts or with public administration technicians on significant aspects and projects
	3. Examples of cataloging demographic and socio-economic data	4. Examples of interpretive maps on the characteristics of the neighborhood
	5. Support and facilitation activities in workshops and urban games; examples of interviews with privileged stakeholders	
	6. Lecture about the construction of Climate and Health Profile	7. Lecture about the assessment of sustainability and urban quality
Students' activities	1. Laboratory/In class	3.Workshop with citizens and stakeholders for the evaluation phase
	2.Excursion/Walking/Recording	4. Interviews/Questionnaire/ Application of Urban games
Where?	**In class** Laboratory Lectures/Seminars	**In the neighborhood** Interviews; Workshop; Urban games Questionnaires
What? **The expected outcomes of the activity**	Ability in interpreting the quantitative and qualitative data that characterize the neighborhood.	Ability to understand the hierarchy of problems, resources, threats and opportunities by categories of actors: citizens, administration, stakeholders
	Ability in interpreting the needs of the neighborhood and its community (technical capacity)	
When?	**Total 16 hours**	

Timing of the activities	
Outputs/Deliverables	1. Reports and Interpretive maps of the neighborhood, diagrams and schemes 2. Report interviews and social collage 3. Climate and health profile of the district 4. Report main results of the evaluation activity and maps with main "topics" emerging from the evaluation process to be placed at the basis of the design phase 5. Oral and design presentation
Tools proposed	1.**Neighborhood from Above** Data collection and best practices examples 2. **Neighborhood from within** Walking as a research method Recording Fieldnotes (photo, drawing and writing) Interviewing Questionnaires **3. Climate and Health Profile** Tool 3.1.Ladybug Suite 4. **Evaluation models** SWOT analysis Place standard evaluation tool guideline 15 minutes proximity **5. Urban Games & Immersive reality** Stone Soup's game Photo elicitation "REBUS ®- REnovation of public Buildings and Urban Spaces", version for CliCCHE Immersive reality

3rd PHASE: Design development and selection

(Activities 4.5 Project Scenario and 4.6 Project Proposals Selection)

Table 5. 3rd Phase: Design development and selection

Why? **General objectives and topics**	1. Main environmental and social vulnerabilities and threats	2. Adaptation Actions
	3. Project Concept	4. Project Proposals Selection
Who? **Target Group participant**	**Students/Teachers/Tutors/Local Stakeholders**	
Teachers' activities	Scenario analysis	Examples of adaptation measures and best practices
	Selecting project proposals (Checklists pr through public participation)	
Classroom students' activities	Preparation and Coordination of the Workshop Scenario	
Where? **The extension and delimitation of the territory under scrutiny**	**In Class** Laboratory Lectures/Seminars	**In the neighborhood** Scenario Workshop EASW Results of the Urban Games Immersive reality/Interactive tools
What? **The expected outcomes of the activity**	- Ability to recognize and assess the risks of climate change for health and living spaces in the neighborhood under study - Understanding the importance of comparing different skills and needs in the selection of actions and projects for adaptation to climate change -Development of an ethics of responsibility towards the risks of climate change	- Ability to know different future scenario and to choose the most suitable one - Understanding the role of community and different stakeholders' participation in decision making
When? **Timing of the activities**	**Total 12 hours**	

Outputs/Deliverables	Report: Summary test about the result of EASW Scenario workshop Project Concept map Oral and design presentation scenario workshop results
Tools proposed	**1. Project Proposals Selection** Checklist Healthy Urban Planning Checklist Healthy Cities Generator Selecting Project Proposal through public participation **2. Decision-Making Process** Scenario Building

4th PHASE: Experimentation & Dissemination

(Activity 4.7 Communication and Dissemination)

Table 6. 4th Phase: Experimentation & Dissemination

Why? **General objectives and topics**	1. Communicating the work done to civil society	2. Disseminating good and interesting practices
	3. Using of websites and social platform	4. Using of talks and word of mouth
Who? **Target Group participant**	**Students/Teachers/Tutors/Local Stakeholders**	
Teachers' activities	Preparation and Coordination of the Audio-oral presentation	Preparation and Coordination of the Printed presentation
	Preparation and Coordination of the Public art presentation	
Classroom students' activities		
Where? **The extension and delimitation of the territory under scrutiny**	In class	In the Neighborhood
What? **The expected outcomes of the activity**	Ability to present and summarize materials of the case study	Ability to use public participation in regeneration projects
	Ability to discuss selected project proposals in public	Creative skills in preparing a public art presentation
When? **Timing of the activities**	**Variable, even for all stages of the process**	
Outputs/Deliverables	Oral and design presentation for the case study's analysis and the proposals Materials about public art (photo render, installations, sculptures etc.) Posters, leaflets and flyers	
Tools proposed	Audio-oral presentation Printed presentation Public art presentation	

2.2 Structure of the tools

The tools presented are diversified and derive from various disciplines, which are those considered in the CliCCHE project. For a uniform reading of the tools in this report it was decided to opt for a standardized sheet, to guarantee a more homogeneous structure. The sheet template is organized based on the following points:

- Time required
- Resources required
- Rationale and Comments
- Participants
- Procedure
- Contents and variations
- References
- Examples and visual contents
- Support Documents

3. Toolkit Collection

This section consists of a collection of techniques, lectures, workshops and tools that could be applied in one or multiple steps throughout the CliCCHE methodology. The Tools are not mutually exclusive or inherently complementary; rather the planning of how, when, and which to be used must be subordinated to the concrete needs and local context of each course.

Tools are presented in alphabetical order, as the list described in the introduction. Each one was designed considering the following aspects: time required/duration; resources required; participants; rationale and comments/description (including risks); procedure (step by step); and references. This way, users can decide which they should use for their purposes.

After the Tools, a set of lectures produced by CliCCHE partners is provided, approaching the topics of climate adaptation at the local and global dimensions; the implications of projects through public space design; urban health and urban planning responsibilities in contributing to improve people's lives in cities; the role of the local community including the experience of the 15 minutes city concept; and finally, the neighborhood scale, which at the European level seems to be the optimal size to contribute to sustainability at a human scale.

Following that, it is possible to see, in a table, which tools were tested by each CliCCHE partner. The final part of this collection is dedicated to understanding the results from those tests/experiences with tools. Each university tells, briefly, how and where the Local Workshops developed, who participated and what was at stake, and which tools present more challenges versus the ones which were easy to put in practice.

15 Minutes proximity

Time required

2-3 hours. It depends on the size of the defined area.

Resources required

Map of the defined area, pencil, cellular phone/other device with camera.

Rationale and Comments

Inspired by D'Onofrio & Trusiani's paper about urban proximity and the 15-minutes city, the participants should find proximity services, taking no more than 15 minutes (walking and/or including public transports/soft mobility) to find services in the neighborhood and nearby, with the help of residents or who knows the territory well.

Participants

Students, professors, researchers, local community, and stakeholders.

There is no defined minimum or maximum number, however if the group is large, it is necessary to avoid participants' excessive dispersion.

Procedure

Step 1: Groups of 2 participants start the route with a map on which they write down. They will also have two tables to fill: the "walkability score" and important keywords to complement the evaluation for each selected service. The number of services selected for each group depends on the group size. Make sure to select at least one service for each category.

Step 2: The participants should find the services attributed to them and mark in the provided map where the 15 minutes end. If the service is beyond 15 minutes distant, the service is considered inexistent.

Examples of service categories are:

FOOD: Bakery; Grocery store; butcher shop; fish shop; Fruit and vegetable shop.

MOBILITY: bus or train stop, or underground stop (and where does it take us to);

HEALTH: health center or hospital; green walking space; public vegetable garden.

SUSTAINABILITY: general recycling zones; specific recycling zones (e.g. cork; batteries; lamps); bio products grocery store; local products sales; secondhand stores.

Some examples of keywords for evaluate the walkability score with a scale to 1 to 5: ACCESSIBILITY, COMFORT, SAFETY, ATTRACTIVENESS, REDUCED MOBILITY FACILITIES.

Step 3: The participants evaluate and comment the found services and the quality of the mobility experience, filling the "walkability score" on a scale of 1 to 5 score. They will evaluate the presence of risks and threats in the walking routes, as "Pedestrian shadows" — pockets of lower walkability, such as large schoolyards and industrial sites with inactive building frontages — and "border vacuums" — barriers or stunted urban life on the adjacent blocks.

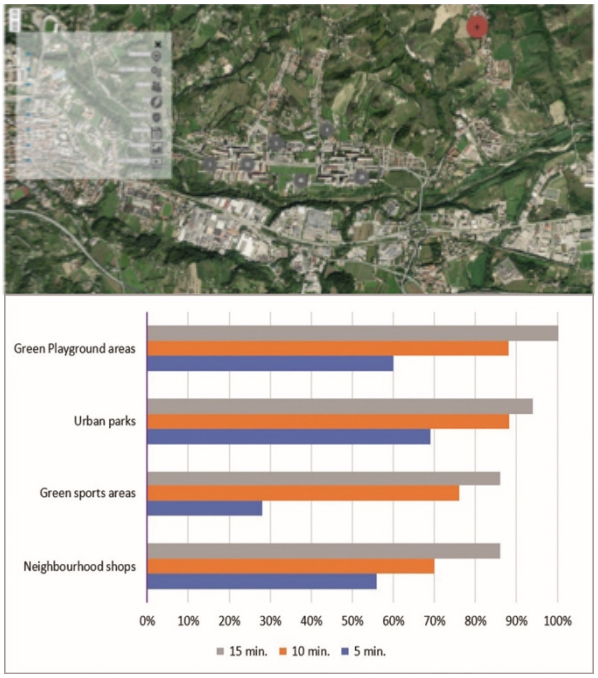
Contents and variations

The game is designed to be done preferably on foot, but could be combined with other mobility systems/transportation modes (bikes, public transport, cars, etc.) to have a more complete map of the services' proximity.

References

- D'Onofrio Rosalba & Trusiani Elio (2022). The Future of the City in the Name of Proximity: a New Perspective for the Urban Regeneration of Council Housing Suburbs in Italy after the Pandemic, Sustainability, 14, 1252, 1-26
- https://www.cnu.org/publicsquare/2021/02/08/defining-15-minute-city
- https://www.here.com/learn/blog/15-minute-cities-infrastructure
- https://transformtransport.org/research/livable-streets/proximity-services-for-children-the-case-of-bologna/

Examples and visual contents



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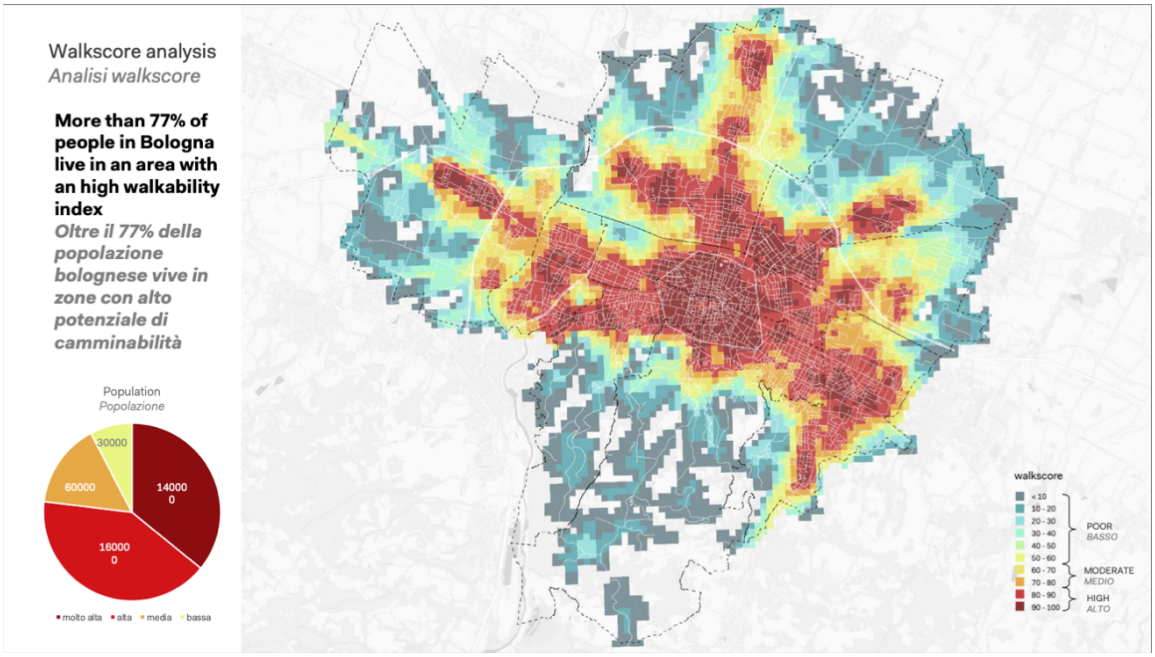
Paris en Commun's "15-minute city" concept sketch. In https://www.here.com/learn/blog/15-minute-cities-infrastructure



Walkscore analysis. Proximity services for children: the case of Bologna. In https://research.systematica.net/wp-content/uploads/2021/06/210513_BISP_report_completo_small.pdf

Support Documents

- 1st page with the map where participants will mark services and routes.

Tip: "Pedestrian Shadows" and "Border Vacuums" can be marked in two different colours. After filling in this way, the maps will have the problems clearly visible.

- 2nd page or on the same page as we see fit, with

Walkability score for each service.

Fulfil with a score from 1 to 5, where 1 is considered bad and 5 is excellent.

The topics below can be different, according to what we are interested in knowing about the route.

Service	Accessibility	Walkability Comfort	Path Safety	Attractiveness	Reduced Mobility Facilities
Ex. Supermarket	3	3	4		1

AUDIO/ORAL presentation

Time required/Duration

4 – 6 hours

Resources required

Computer

Participants

Students, teachers, researchers.

Rationale and Comments/Description

Audio/oral presentation of project results refers to conveying the information from a speaker to an audience**.** It is an activity where a presenter presents his/her ideas, explains a process, provides information, or raises questions regarding a subject for public debate. The purpose is to inform participants on overall results or results of specific project phases in order to engage them into discussion or decision-making.

Procedure

Basic steps refer to planning, practicing and presenting:

Step 1: Concept of the presentation: aim, title, audience, main points, expected effects of presentation. Planning includes taking into account the available time for presentation.

Step 2: Structure and content of the presentation: Introduction, objectives, main body and key results, conclusion.

Step 3: Physical and technical aspects of presentation. For example: How many people will there be in the audience? Where will it take place? How big is the room? What equipment do I need?

Step 4: Practice presentation: Voice and language, body language. Practicing presentation is essential to figure out word and phrase emphasis and the timing of sections and overall presentation.

Step 5: Presenting: When presenting, it is important to make audience feel comfortable and engaged with both you (as presenter) and the material of the presentation. This includes:

- *"Maintain eye contact. Only look at notes or slides very briefly. Sweep the room with your gaze, pausing briefly on various people.*
- *Be aware of your body posture.*
- *Be enthusiastic about your topic.*
- *Smile. "*. (Duke. Writing studio. Oral Presentations)

References

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- Presentation Definition & A Complete Guide For Beginners . Available at: https://www.free-power-point-templates.com/articles/presentation-definition/
- Duke. Writing studio. Oral Presentations. Avalable at: https://twp.duke.edu/sites/twp.duke.edu/files/file-attachments/oral-presentation-handout.original.pdf

Support Documents

Duke. Writing studio. Oral Presentations. https://twp.duke.edu/sites/twp.duke.edu/files/file-attachments/oral-presentation-handout.original.pdf

Writing Studio
http://twp.duke.edu/writing-studio

Oral Presentations

Thompson Writing Program
DUKE UNIVERSITY

Oral Presentations

Oral presentations are one of the most common assignments in college courses. Scholars, professionals, and students in all fields desire to disseminate the new knowledge they produce, and this is often accomplished by delivering oral presentations in class, at conferences, in public lectures, or in company meetings. Therefore, learning to deliver effective presentations is a necessary skill to master both for college and further endeavors.

Oral presentations typically involve three important steps: 1) planning, 2) practicing, and 3) presenting.

1. Planning

Oral presentations require a good deal of planning. Scholars estimate that approximately 50% of all mistakes in an oral presentation actually occur in the planning stage (or rather, lack of a planning stage).

Make sure to address the following issues:

Audience:

- Focus your presentation on the audience. Your presentation is not about how much you can say, but about how much your audience can understand.
- Organize your information into three to five points/categories. Audiences can only easily remember a maximum of three to five points.
- Build repetition. Listening is much different than reading. Your audience cannot go back and read over something they missed or did not understand. Build repetition through internal summaries, transitions, analogies, and stories.

Introduction:

- Introduce yourself if needed, providing your affiliation and/or credibility.
- Create an effective opening that will interest your audience: pose a question, give an amazing fact, or tell a short, interesting story.
- Reveal your topic to the audience and explain why it is important for them to learn about.
- Give a brief outline of the major points you will cover in your presentation.

Main Body:

- Explain your points. Give clear explanations. Provide sufficient evidence to be convincing.
- Use transitions between sections of your presentation (introduction, body, and conclusion) as well as between points in your main body section. The Writing Studio's handout on Roadmaps provides a great explanation of how to create clear signals and "signposts" that will guide the audience through your presentation.
- Use analogies and stories to explain complicated ideas and to build repetition.

Conclusion:

- Signal your conclusion with a transition.
- Summarize your points.
- Refer to future action if needed.
- End with, "Thank You."
- If answering questions, tell your audience, "I'll now be happy to answer any questions."

2. Practicing

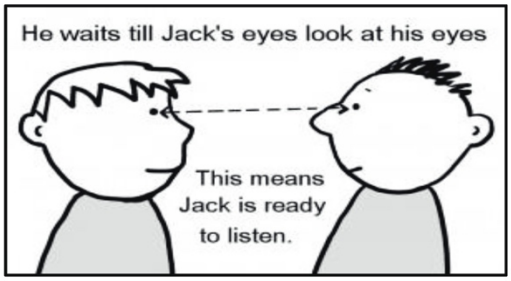
Practicing your presentation is essential. It is at this stage of the process that you figure out word and phrase emphasis and the timing of your sections and overall presentation.

- Record your presentation and review it in order to know how you sound and appear to your audience. You may notice that you are pausing awkwardly, talking too fast, or using distracting gestures.
- Consider using different colored highlighters to remind yourself when to pause, when to emphasize a particular point, when you have a slide change on your PowerPoint, etc.
- Practice in front of peers and elicit feedback. Ask your peers to comment on your delivery and content. What aspects of your delivery work well to convey the information and argument of the presentation, and what aspects of your delivery are not working as well as they could? Also, are there moments in your presentation in which your peers become confused, bored, or distracted?
- Remember that the more you practice, the more comfortable you will become with the material. As a result of repeated practice, you will appear far more polished and professional while delivering your presentation.

3. Presenting

As the person in charge of the situation when presenting, it is your job to make your audience feel comfortable and engaged with both you and the material of the presentation.

- Maintain eye contact. Only look at notes or slides very briefly. Sweep the room with your gaze, pausing briefly on various people.
- Be aware of your body posture.
- Be enthusiastic about your topic.
- Smile.



- Slow down your speech. We naturally talk faster when we are nervous. Include pauses to allow your listeners to keep up and time for you to think ahead.
- Use gestures to emphasize points and move about the space if possible.

- Calibrate the volume of your voice so that people in the back of the room can hear you.
- Avoid fillers, such as “Ah, uh, I mean, like, okay, um….”

- Act as natural and relaxed as possible.
- Dress appropriately.

Not like this…

Or like this…

Visual Aids - help explain your points, act as supporting evidence, and add visual interest.

- Do not turn your back on the audience to look at the visual or block the visual with your body.
- Provide an orientation to the visual (explain the X and Y axis, etc.).
- Highlight what you would like the audience to focus on, and then make sure you fully explain the information you are highlighting.
- Make your visuals readable and visually pleasing.
- Above all, make sure your visual aids augment what you are saying rather than compete with what you are saying. Try not to include too much text or too many images in your visual aid. Your spoken words and your visual aid should work together so the audience's attention is never divided between the two.

Questions and Answers – Do not underestimate the challenge of running a successful question and answer session. They are unpredictable by nature. In your planning, try to anticipate possible questions your audience might have. Follow this four-step process to successfully answer audience questions:

- Acknowledge the question. ("Good Question!") This polite gesture shows your interest.
- Rephrase the question. This important step allows you to: make sure you understand the question, ensure all audience members hear the question, phrase the question into one you want to or are willing to answer, and gain time to think about your answer.
- Answer the question as clearly and concisely as possible.
- Check for comprehension with the questioner and your audience. ("Does that make sense? Is that clear?")

CHECK–LISTs for Project Proposals evaluation_Healthy Cities Generator

Time required/Duration

4 hours.

Resources required

Computer

Participants

Students, teachers, researchers, local community, public administration and stakeholders.

Rationale and Comments/Description

Healthy Cities Generator is an evidence based on-line tool developed in order to help assessment of neighbourhoods and urban plan proposals. It is based on Healthy City model that recognizes key urban determinants of health (density, mobility, variety, landscape, housing) as well as the mental, physical, and environmental health impacts of each category (health determinants). It aims to help Urban planners, Health professionals citizens, Decision makers, Citizens, Local government interested in exploring the healthiest options the city

In urban planning, health should be addressed in its broadest sense, including environmental health, healthy habits, and factors which foster the general wellbeing of the public. From this perspective, health can be viewed as having environmental, lifestyle, physical, mental, and wellbeing determinants and outcomes, each of which is considered through 30 specific categories (ENVIRONMENTAL: air pollution, noise, biodiversity; LIFESTYLE: physical activity, sedentary behavior, social interaction food habits, PHYSICAL: general physical health, BMI, Obesity, Premature mortality, birth outcomes,type2 diabetes, cardiovascular diseases, asthma and respiratory diseases, functional capacity, accidents and falls, injury, pain, heat stress; MENTAL AND SOCIAL: stress, anxiety, depression, cognitive function, emotional wellbeing, attention deficit, general mental health; *Wellbeing*: perceived safety, perceived quality of life, happiness)

Impact on this domains is assessed and measured through variety of indicators related to specific urban determinants of health (DENSITY: population and residential density, business density; MOBILITY; street connectivity and intersection density, connection to points of interest, cyclability, walkability, public transport, traffic; VARIETY: availability of diverse public services, availability of physical activity and sport infrastructure, availability of commerce and economic activity, availability of public open spaces and natural areas, food environment; LANDSCAPE. Green coverage, Blue spaces, green space diversity, continuity of green infrastructure, urban landscape; HOUSING & ENERGY: quality of housing, energy efficiency measures

Procedure

Step 1 - The tool is structured like a questionnaire in which users first select topic to be examined. Two topics/modes for using this on-line tool are possible. They focus either on 1 - PLANNING - in order to assess urban planning actions to determine their health impact, or 2 – HEALTH – in order to select health goals to guide urban planning strategy

Step 2 – After selecting the topic/mode – a specific interface allows for defining the name and description of actions relevant to the project. Users should enter different actions proposed by the plan (e.g., transform the riverfront into a social and environmental corridor) by clicking on the "+" icon and evaluate the impact each action will have on each of the 20 Urban Determinants of Health.

Step 3 – User are supposed to choose the relevant criteria to be assessed for each action in the urban project.

Step 4 – For each chosen criteria, users should consider specific features of the project that were specified as relevant as well as issues to be taken into account. Based on this knowledge they would perform the assessment of the proposed urban action by referring to the criteria listed below each item to establish whether the impact will be negative, neutral, low, medium or high.

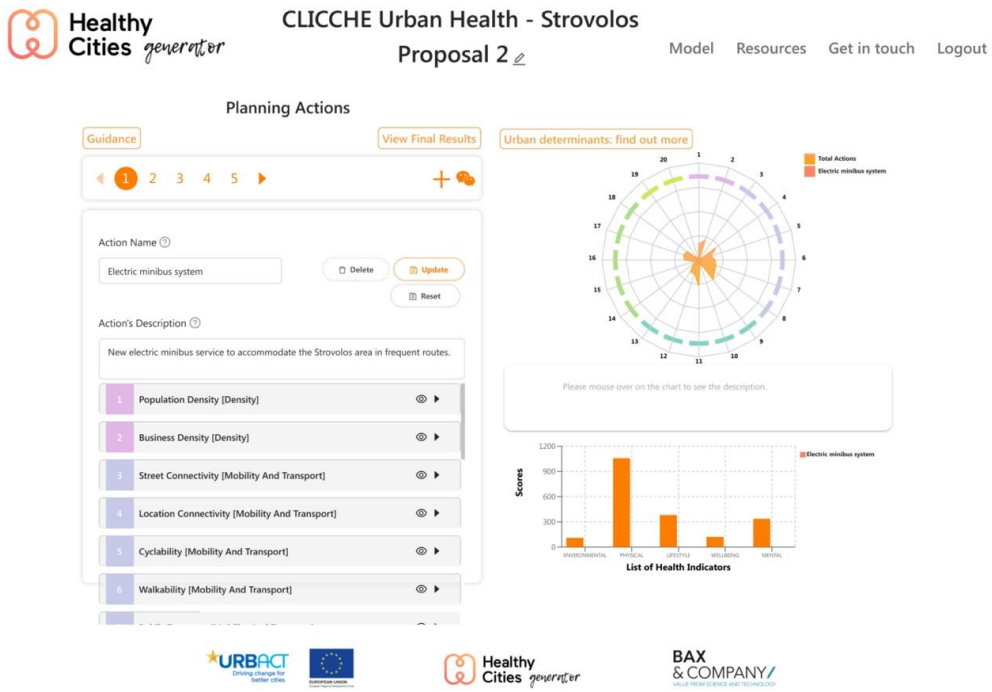
Step 5 - The evaluation through the HEALTHY CITIES GENERATOR is facilitated by the construction of a diagram in which the scores that refer to the results of a questionnaire on 20 urban determinants are reported. This diagram allows to visualize the strengths and weaknesses of the action, facilitating the process of defining intervention priorities. In this way it is possible to see the overall impact of the plan on health and a more detailed view of the impact on specific health indicators by clicking on the bars of each health category. The assessed plan is assigned a score based on whether it impacts all of the urban determinants and the degree of this impact. In this way, the results for each alternative proposal are presented through diagrams that can be printed, compared and discussed in the workshop.

References

- HEALTHY CITIES MODEL - https://healthycitiesgenerator.com/

TOOL CAN BE used as demo version on: https://healthycitiesgenerator.com/tool/

Examples and/or visual results (how do part of the procedures and/or results will look like)


Healthy Cities generator
CLICCHE Urban Health - Strovolos
Proposal 2
Model
Resources
Get in touch
Logout
Planning Actions
Guidance
View Final Results
Urban determinants: find out more
Action Name
Electric minibus system
Delete
Update
Reset
Action's Description
New electric minibus service to accommodate the Strovolos area in frequent routes.
Population Density [Density]
Business Density [Density]
Street Connectivity [Mobility And Transport]
Location Connectivity [Mobility And Transport]
Cyclability [Mobility And Transport]
Walkability [Mobility And Transport]
Total Actions
Electric minibus system
Please mouse over on the chart to see the description.
Scores
List of Health Indicators
ENVIRONMENTAL
PHYSICAL
LIFESTYLE
WELLBEING
MENTAL

CHECK–LISTs for Project Proposals evaluation_ Healthy Urban Planning Checklist

Time required/Duration

4 hours.

Resources required

Printed check-list layouts or computer

Participants

Students, teachers, researchers, local community, public administration and stakeholders.

Rationale and Comments/Description

This tool aims to promote healthy urban planning by ensuring that the health and wellbeing implications of local plans and major planning applications are consistently taken into account. Healthy Urban Planning Checklist seeks to mainstream health into the planning system by bringing together planning policy requirements and standards that influence health and wellbeing. It is developed by a steering group comprising representatives from the six Olympic and Paralympic Host Boroughs, local NHS, NHS London Healthy Urban Development Unit, Greater London Authority and Groundwork London, and builds on the Healthy Urban Planning in Practice for the Olympic Legacy Masterplan Framework report produced in September 2011.

The checklist supports collaborative planning approach and encourages different stakeholders to work together to address the health impacts of plans and development proposals. It could be used by: Developers, to screen and scope the health impacts of development proposals; Planning officers, to help identify and address the health impacts of plans and development proposals; Public health and environmental health professionals, to comment and scrutinise plans and development proposals; Neighbourhood forums, community groups and housing associations to comment on major planning applications to help foster community engagement.

Checklist is based on the assumption that healthy urban planning means good planning and high-quality urban design in a way that they can help reduce health care costs by preventing ill-health from risks attributed to urban planning, including air pollution, road injuries, worklessness and poor housing. It affirms ‘Active Design’ as a key element of healthy urban planning. This means that architecture and urban design should support activity in buildings and places in response to rising levels of obesity and related chronic diseases and contribute to health and wellbeing of people.

The checklist aims to ensure that health and wellbeing issues are embedded into local plans, masterplans and major planning applications and should be customized for local use to reflect local circumstances and priorities.

Procedure

The checklist is divided into four themes. Each theme contains a number of questions focused on a planning issue. Under each theme there are a number of related health and wellbeing issues that may be relevant at different planning scales. Each section summarizes the impact on health. Under each theme, key questions are asked linked to policy requirements and standards. The checklist identifies why each issue is important to health and wellbeing. Participants should fill the checklist by taking into account that not all the issues and questions will be relevant to a specific plan or development proposal and the user should select and prioritise the issues accordingly.

References

- London HUDU – Healthy Urban Planning Checklist, https://www.healthyurbandevelopment.nhs.uk/wp-content/uploads/2014/04/Healthy-Urban-Planning-Checklist-March-2014.pdf

Excerpt from:

London HUDU – Healthy Urban Planning Checklist, https://www.healthyurbandevelopment.nhs.uk/wp-content/uploads/2014/04/Healthy-Urban-Planning-Checklist-March-2014.pdf

Theme 1: Healthy Housing				
Issue	**Key questions**	**Yes /No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
a. Healthy design	Does the proposal meet all the health and wellbeing credits contained in the Code for Sustainable Homes for daylighting, sound insulation, private space and Lifetime Homes?		London Plan Policy 5.2 Minimising Carbon Dioxide Emissions: zero carbon residential buildings from 2016 and zero carbon non-domestic buildings from 2019. Communal space - London Plan Policy 2.18 (Housing SPG design standard 1.2.3) Private (amenity) space – Housing SPG design standards 4.10.1, 4.10.2 and 4.10.3 London Plan Policy 3.8 requires all new homes to be provided to Lifetime Homes standards. Sound insulation and noise – London Plan Policy 7.15, Housing SPG design standard 5.3.1.	Satisfying the health and wellbeing credits can help improve the code level and meet carbon dioxide emissions targets. Good daylighting can improve the quality of life and reduce the need for energy to light the home. Improved sound insulation can reduce noise disturbance and complaints from neighbours. The provision of an inclusive outdoor space which is at least partially private can improve the quality of life.
b. Accessible housing	Does the proposal provide accessible homes for older or disabled people?		London Plan Policy 3.8 requires 10% all new housing to be designed to be wheelchair accessible or easily adaptable for residents who are wheelchair users. Housing SPG Annex 2 Best Practice Guidance for Wheelchair Accessible Housing	Accessible and easily adaptable homes can meet the changing needs of current and future occupants.

9 Healthy Urban Planning Checklist

Theme 1: Healthy Housing				
Issue	**Key questions**	**Yes /No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
b. Accessible housing	Does the proposal ensure that every non-ground floor dwelling is accessible by a lift which can accommodate an ambulance trolley?		Good practice standard - the provision of an ISO standard 13 person lift in a rectangular configuration which can accommodate a trolley bed (see dimensions in Department of Health Health Technical Memorandum 08-02: Lifts).	One of the main methods of transportation of immobile patients is by trolley bed. It is important to ensure that non-ground floor dwellings are accessible by a lift which can accommodate an ambulance trolley.
c. Healthy living	Does the proposal provide dwellings with adequate internal space, including sufficient storage space and separate kitchen and living spaces? Does the proposal encourage the use of stairs by ensuring that they are well located, attractive and welcoming?		London Plan Policy 3.5 (Table 3.3) Minimum internal space standards Housing SPG Annex 4 - Minimum floorspace for all housing types Housing SPG design standard 4.4.3	Sufficient space is needed to allow for the preparation and consumption of food away from the living room to avoid the 'TV dinner' effect. Rather than having lifts at the front and staircases at the back of buildings hidden from view, it is preferable to have them located at the front to encourage people including those that are able to use them.

Theme 1: Healthy Housing				
Issue	**Key questions**	**Yes /No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
d. Housing mix and affordability	Does the proposal provide affordable family sized homes?		London Plan Policy 3.8 Housing choice London Plan Policy 3.11 Affordable housing targets. The revised London Housing Strategy, sets out that 36% of affordable rented homes allocated funding in 2011-15 will have three or more bedrooms.	The provision of affordable housing can create mixed and socially inclusive communities. The provision of affordable family sized homes can have a positive impact on the physical and mental health of those living in overcrowded, unsuitable or temporary accommodation. Both affordable and private housing should be designed to a high standard ('tenure blind').

Theme 2: Active Travel				
Issue	**Key questions**	**Yes / No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
a. Promoting walking and cycling	Does the proposal promote cycling and walking through measures in a travel plan, including adequate cycle parking and cycle storage?		London Plan Policy 6.3 (C) Travel Plans London Plan Policy 6.9 Cycling London Plan Policy 6.10 Walking London Plan Table 6.3 minimum standards for cycle parking provision Housing SPG cycle storage space standards (design standards 3.4.1 and 3.4.2)	A travel plan can address the environmental and health impacts of development by promoting sustainable transport, including walking and cycling. Cycle parking and storage in residential dwellings can encourage cycle participation.
b. Safety	Does the proposal include traffic management and calming measures and safe and well lit pedestrian and cycle crossings and routes?		London Plan Policy 6.9 Cycling London Plan Policy 6.10 Walking	Traffic management and calming measures and safe crossings can reduce road accidents involving cyclists and pedestrians and increase levels of walking and cycling.
c. Connectivity	Does the proposal connect public realm and internal routes to local and strategic cycle and walking networks and public transport?		London Plan Policy 6.9 Cycling, Map 6.2 Cycle Super Highways London Plan Policy 6.10 Walking, Map 6.3 Strategic walking routes All London Green Grid SPG. Transport for London 'Legible London' Transport for London Bus Service Planning Guidelines	Developments should prioritise the access needs of cyclists and pedestrians. Routes should be safe, direct and convenient and barriers and gated communities should be avoided. Developments should be accessible by public transport.

Theme 2: Active Travel				
Issue	**Key questions**	**Yes / No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
d. Minimising car use	Does the proposal seek to minimise car use by reducing car parking provision, supported by the controlled parking zones, car free development and car clubs?		London Plan Policy 6.13. Maximum parking standards in Table 6.2. Housing SPG Annex 3 Car parking provision guidance.	Space for pedestrians and cyclists should be given priority over commercial and private vehicles. Maximum car parking levels allows for provision to be reduced as far as practicable. Car clubs can be effective in reducing car use and parking demand at new residential developments

Theme 3: Healthy environment				
Issue	**Key questions**	**Yes / No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
a. Construction	Does the proposal minimise construction impacts such as dust, noise, vibration and odours?		London Plan Policy 5.3 Sustainable Design and Construction London Plan Policy 5.18 Construction, excavation and demolition waste Mayor of London 'The Control of Dust and Emissions from Construction Sites'.	Construction sites can have a negative impact on an area and can be perceived to be unsafe. Construction activity can cause disturbance and stress which can have an adverse effect on physical and mental health. Mechanisms should be put in place to control hours of construction, vehicle movements and pollution. Community engagement before and during construction can help alleviate fears and concerns.
b. Air Quality	Does the proposal minimise air pollution caused by traffic and energy facilities?		London Plan Policy 7.14 Improving Air Quality At least 'air quality neutral' – Housing SPG Design standard 5.6.1 London Plan Policy 5.10 Implementing Urban Greening London Plan Policy 5.3 Sustainable Design and Construction	The long-term impact of poor air quality has been linked to life-shortening lung and heart conditions, cancer and diabetes.

Theme 3: Healthy environment				
Issue	**Key questions**	**Yes / No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
c. Noise	Does the proposal mimimise the impact of noise caused by traffic and commercial uses through insulation, site layout and landscaping?		London Plan Policy 7.15 Reducing noise and enhancing soundscapes	Reducing noise pollution helps improve the quality of urban life.
d. Open space	Does the proposal retain or replace existing open space and in areas of deficiency, provide new open or natural space, or improve access to existing spaces? Does the proposal set out how new open space will be managed and maintained?		London Plan Policy 7.1 Building London's neighbourhoods and communities London Plan Policy 7.18 Protecting Local Open Space and Addressing Deficiency, Table 7.2 Public open space categorisation London Plan Policy 7.19 Biodiversity and Access to nature	Access to open space has a positive impact on health and wellbeing. Living close to areas of green space, parks, woodland and other open space can improve physical and mental health regardless of social background. To maintain the quality and usability of open spaces an effective management and maintenance regime should be put in place.

Theme 3: Healthy environment				
Issue	**Key questions**	**Yes / No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
e. Play space	Does the proposal provide a range of play spaces for children and young people?		London Plan Policy 3.6 Children and Young People's Play and Informal Recreation Facilities Shaping Neighbourhoods: Play and Informal Recreation SPG - benchmark standard of a minimum of 10sq.m per child regardless of age. Table 4.4 Accessibility to Play Space	Regular participation in physical activity among children and young people is vital for healthy growth and development. The location of play spaces should be accessible by walking and cycling routes which are suitable for children to use.
f. Biodiversity	Does the proposal contribute to nature conservation and biodiversity?		London Plan Policy 7.19 Biodiversity and access to nature. Table 7.3 London regional BAP habitat targets for 2020	Access to nature and biodiversity can contribute to mental health and wellbeing. New development can improve existing, or create new, habitats or use design solutions (green roofs, living walls) to enhance biodiversity.
g. Local food growing	Does the proposal provide opportunities for food growing, for example by providing allotments, private and community gardens and green roofs?		London Plan Policy 5.10 Urban Greening London Plan Policy 7.22 Land for Food London Plan Policy 5.11 Green Roofs and development site environs	Providing space for local food growing helps promote more active lifestyles, better diets and social benefits.

Theme 3: Healthy environment				
Issue	**Key questions**	**Yes / No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
h. Flood risk	Does the proposal reduce surface water flood risk through sustainable urban drainage techniques, including storing rainwater, use of permeable surfaces and green roofs?		London Plan policy 5.3 Sustainable Design and Construction, Policy 5.11 Green Roofs and development site environs, Policy 5.13 Sustainable Drainage. Housing SPG design standard 6.4.3	Flooding can result in risks to physical and mental health. The stress of being flooded and cleaning up can have a significant impact on mental health and wellbeing. It is likely that increasing development densities and building coverage coupled with more frequent extreme weather events will increase urban flood risk.
i. Overheating	Does the design of buildings and spaces avoid internal and external overheating, through use of passive cooling techniques and urban greening?		London Plan Policy 5.3 Sustainable Design and Construction Policy 5.9 Overheating and Cooling Policy 5.10 Urban Greening Policy 5.11 Green Roofs and development site environs Housing SPG Design Standard 6.3.1	Climate change with higher average summer temperatures is likely to intensify the urban heat island effect and result in discomfort and excess summer deaths amongst vulnerable people. Urban greening - tree planting, green roofs and walls and soft landscaping can help prevent summer overheating.

Theme 4: Vibrant neighbourhoods				
Issue	**Key questions**	**Yes/No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
a. Health services	Has the impact on healthcare services been addressed?		London Plan Policy 3.17 Health and social care facilities NHS London Healthy Urban Development Unit Planning Contributions Tool (the HUDU Model)	Poor access and quality of healthcare services exacerbates ill–health, making treatment more difficult. The provision of support services, including advice on healthy living can prevent ill health.
b. Education	Has the impact on primary, secondary and post-19 education been addressed?		London Plan Policy 3.18 Education facilities	Access to a range of primary, secondary and post-19 education improves self-esteem, job opportunities and earning capability.
c. Access to social infrastructure	Does the proposal contribute to new social infrastructure provision that is accessible, affordable and timely? Have opportunities for multi-use and the co-location of services been explored?		London Plan Policy 3.16 Protection and enhancement of social infrastructure London Plan Policy 7.1 Building London's neighbourhoods and communities	Good access to local services is a key element of a lifetime neighbourhood and additional services will be required to support new development. Failure to do so will place pressure on existing services. Future social infrastructure requirements are set out in Borough infrastructure plans and developments will be expected to contribute towards additional services and facilities.

Theme 4: Vibrant neighbourhoods				
Issue	**Key questions**	**Yes/No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
d. Local employment and healthy workplaces	Does the proposal include commercial uses and provide opportunities for local employment and training, including temporary construction and permanent 'end-use' jobs? Does the proposal promote the health and well-being of future employees by achieving BREEAM health and wellbeing credits?		London Plan Policies 4.12 Improving opportunities for all and Policy 8.2 Planning obligations. London Plan Policy 7.1 Building London's neighbourhoods and communities Workplace environment - BREEAM health and wellbeing credits	Unemployment generally leads to poverty, illness and a reduction in personal and social esteem. Employment can aid recovery from physical and mental illnesses. Creating healthier workplaces can reduce ill health and employee sickness absence.
e. Access to local food shops	Does the proposal provide opportunities for local food shops? Does the proposal avoid an over concentration or clustering of hot food takeaways in the local area?		London Plan Policy 4.7 Retail and Town Centre Development London Plan Policy 4.8 Supporting a Successful and Diverse Retail Sector London Plan Policy 4.9 Small Shops London Plan Policy 7.1 Building London's Neighbourhoods and Communities	A proliferation of hot food takeaways and other outlets selling fast food can harm the vitality and viability of local centres and undermine attempts to promote the consumption of healthy food, particularly in areas close to schools.

Theme 4: Vibrant neighbourhoods				
Issue	**Key questions**	**Yes/No / Not relevant Comment**	**Policy requirements and standards**	**Why is it important**
f. Public realm	Does the design of the public realm maximise opportunities for social interaction and connect the proposal with neighbouring communities? Does the proposal allow people with mobility problems or a disability to access buildings and places?		London Plan Policy 7.1 Building London's neighbourhoods and communities London Plan Policy 7.2 An inclusive environment London Plan Policy 7.5 Public Realm Mayor's Supplementary Planning Guidance 'Accessible London: achieving an inclusive environment'	The public realm has an important role to play in promoting walking and cycling, activity and social interaction. It also affects people's sense of place, security and belonging. It is a key component of a lifetime neighbourhood. Shelter, landscaping, street lighting and seating can make spaces attractive and inviting.

Climate Profile Ladybug Suite

Time required/Duration

4 hours for teaching and 4 hours for exercise.

Resources required

Pc or Mac with the following software installed: Microsoft Excel, McNeel Rhinoceros with various plugins such as Pollination, Bumblebee, Ui+ and others (everything downloadable from the official repositories at www.food4rhino.com).

The tool is available at:

- UnicamToolsFolder

The dependencies are available at:

- Bumblebee https://www.food4rhino.com/en/app/bumblebee
- Human and TreeFrog https://www.food4rhino.com/en/app/human
- Pufferfish https://www.food4rhino.com/en/app/pufferfish
- Ui+ https://www.food4rhino.com/en/app/ui?lang=it
- WombatGH https://www.food4rhino.com/en/app/wombatgh
- Polination https://www.pollination.cloud/grasshopper-plugin

Participants

Students.

Rationale and Comments/Description

The creation of interfaces simplifies the complex operations involved in managing data and verifying the environmental conditions of a site. The difficulty in learning multiple tools can often discourage students from embarking on a learning journey. The learning process becomes more straightforward and less frustrating by consolidating various tools under a single interface that provides straightforward and rapid outputs. The primary purpose of these interfaces is to streamline and centralise the functionalities required for data management and environmental analysis. Instead of students navigating through multiple tools with different interfaces and data formats, they can now access all the necessary tools through a unified interface. This integration saves time and reduces the cognitive load of learning and using different software. The unified interface also plays a crucial role in facilitating comprehension and interpretation of the output results. Students can easily understand and draw meaningful insights from the information by providing precise and concise visual representations and intuitive navigation. This enhances the overall learning experience and encourages students to actively engage with the tools, as they can quickly grasp the concepts and make informed decisions based on the output generated.

Additionally, having a user-friendly interface promotes inclusivity in the learning process. Students who struggle with complex software or have limited prior knowledge of specific

tools can now access and utilize the functionalities more effectively. This eliminates barriers to entry and empowers a broader range of students to participate in the learning path actively.

Procedure

The **first step** involves installing the necessary tools to initiate the UnicamTool software. Before proceeding with the installation, it is necessary to identify the specific system requirements stipulated by the required software. These may include installation files and additional libraries. The installation process can be initiated by carefully following the provided instructions. During the installation, it is essential to ensure that all steps are completed accurately to utilize the UnicamTool software within the system properly.

The **second step** entails opening the *UnicamTool* software to proceed with the identification of the four graphical interfaces. To achieve this, one must navigate the user interface of the Grasshopper software (within Rhinoceros) and open the Remote Control Panel (RCP).

The interfaces are each identified with a different colour. This visual identification feature can facilitate navigation, allowing users to distinguish between them easily.

The **white** interface, *Representative Day*, is specifically designed to perform statistical analysis using the representative day methodology (Grifoni et al., 2012; Tirabassi and Nassetti, 1999) to generate a ranking containing a representative real-world scenario for a specific variable. This interface provides users tools and functionalities to select a specific variable for analysis. Once the variable of interest and a period is selected, graphs depicting the trends are generated. These graphs provide visual representations of the data, allowing users to interpret and analyze the patterns and fluctuations associated with the selected variable. The *Representative Day* interface facilitates data-driven decision-making by presenting users with meaningful and representative scenarios based on the chosen variable. Through this interface, users can gain valuable insights into the behaviour and characteristics of the analyzed variable, aiding in informed decision-making processes and further analysis. The visual representation of data through graphs enhances the understanding and communication of statistical findings, supporting practical data interpretation and exploration. The representative day methodology is a statistical technique that allows the synthesis of daily data to represent the overall trend of a variable over time meaningfully. Applying appropriate statistical algorithms and models enables a clear and concise understanding of the critical characteristics of the variable at hand. This methodology helps identify trends, compare, or make data-driven decisions based on statistical results. Users must provide relevant meteorological data for the desired analysis, such as temperature, precipitation, humidity, wind speed, and other pertinent parameters. These data can be obtained from weather stations or reliable sources.

The second graphical interface, represented by the colour **green** and named *CSV weather data EPW*, is a tool component that allows users to create an EPW (EnergyPlus Weather) file for a specific year using the previously provided meteorological data. The output generated through this interface can be utilized in subsequent stages or analyses.

The **orange** interface, dedicated to the *Urban Weather Generator* (Nakano et al., 2015), is designed to assess the effects of the urban heat island phenomenon (Oke, 1982). The name of this is *Morph an EPW with UWG* and it is enabling the transposition of meteorological data acquired in a rural environment to adapt it to the specific meteorological conditions of a given city. To use the Urban Weather Generator, users need to provide several inputs, including the geometries of the target city, material characteristics of buildings, building usage information, traffic details, and the presence or absence of green areas. These inputs are crucial in determining the impact of anthropogenic activities on the formation of the urban heat island. The city geometries, encompassing building heights, distribution of open spaces, and other topographical details, are utilized to calculate the thermal flux within the city. The material characteristics of buildings, such as thermal capacity and thermal conductivity, influence their ability to absorb and release heat. Building usage and traffic contribute to heat emissions in the urban environment, while the presence or absence of green areas can affect cooling effects through plant evapotranspiration. The Urban Weather Generator processes all these inputs to generate an EPW file that accounts for the urban heat island effect. The resulting EPW file represents the meteorological conditions within the specific city, considering the influence of anthropogenic activities and urban characteristics on the thermal environment. This output is precious for urban design and planning studies, as it allows for the evaluation of the impact of urban meteorological conditions on health, thermal comfort, building energy efficiency, and other considerations related to the urban environment.

The **blue** interface dedicated to analysis allows for quick shading, solar radiation, and thermal comfort analysis using the EPW files and city geometries utilized in the previous steps. Users can perform detailed spatial analyses to assess shading at different times of the day. This is particularly useful for evaluating the impact of shadows on buildings or surrounding areas. Furthermore, the interface enables solar radiation analysis, allowing users to evaluate the amount of solar radiation reaching specific areas or buildings throughout the day. This can be crucial for energy design studies or assessing photovoltaic potential. Lastly, the Analysis interface supports thermal comfort analysis using the Universal Thermal Climate Index (Fiala et al., 2012) (UTCI). The UTCI assesses individuals' subjective perception of thermal conditions and considers factors such as temperature, humidity, and wind speed. The interface allows for calculating and visualizing coloured maps representing thermal comfort in different areas of the city. The generated graphical outputs include legends that enable users to visually evaluate spatial patterns and variations in shading, solar radiation, and thermal comfort within the city. This visualization facilitates understanding and interpretation of the results, enabling users to make informed decisions regarding urban design, energy efficiency, and comfort.

Using colours to identify the different graphical interfaces in the UnicamTool software makes navigation more intuitive and facilitates users in identifying and accessing desired functionalities. Each specific colour assigned to each interface helps create a clear and consistent visualization of the software, enhancing the overall user experience.

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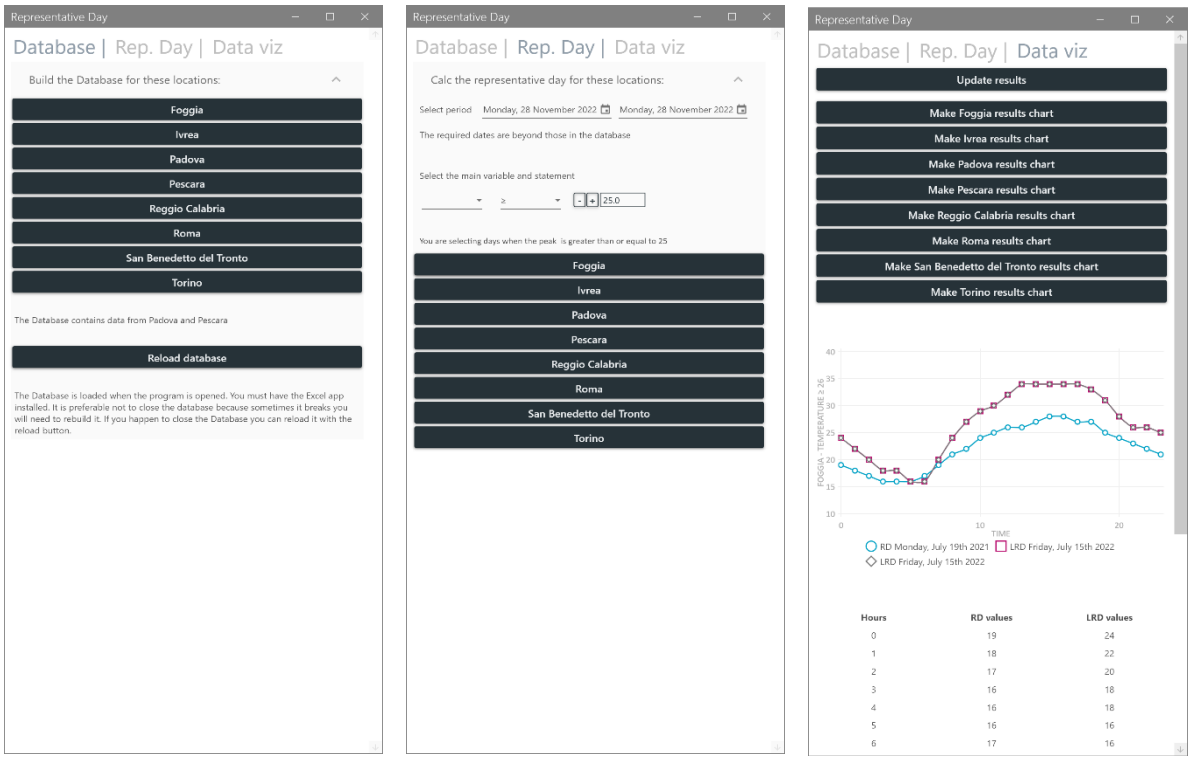
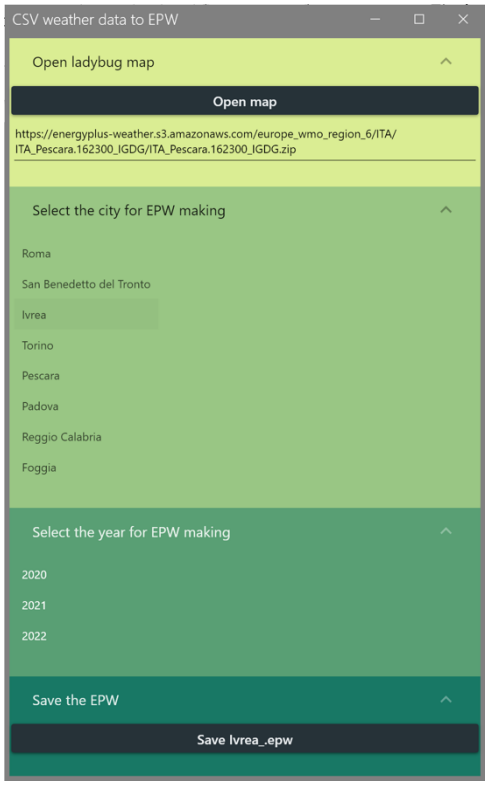
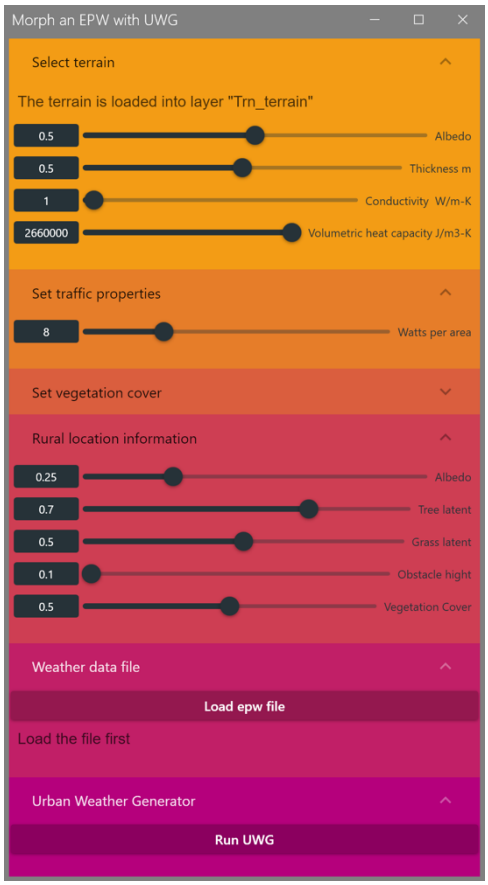
Examples and/or visual results (how do part of the procedures and/or results will look like)



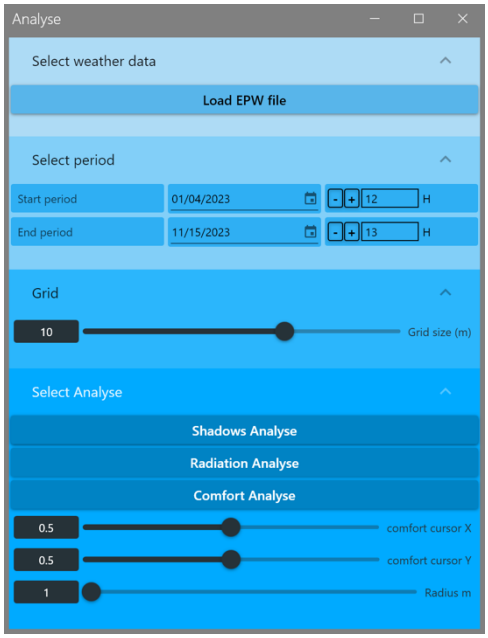
***First tool**: Representative Day Interface (White)*



***Second tool**: CSV weather data EPW (Green)*



***Third tool**: Morph an EPW with UWG (Orange)*



***Forth tool**: Analyse (Blue)*

Data collection and best practices examples

Time required/Duration

8 hours.

Resources required

Statistical sources, socio-demographic and health data, laptop or notebook, plans of the district, felt-tip pens.

Participants

Students, doctoral students, teachers, researchers. There is no minimum or maximum number of groups defined. Ideally, each working group is made up of three students supervised by educational tutors (PhD Students).

Rationale and Comments/Description

In the activity Knowing the neighborhood "from Above", the collection of data and examples of good practices concerns both examples of cataloging socio-demographic data on the neighborhood and interpretative maps of environmental, urban planning, infrastructural aspects, etc., and documents that can concern: the history and events of the district, projects, plans and programs of the Municipality. These documents will be discussed by students, PhD students, researchers and teachers in the Laboratory with the aim of understanding the neighborhood, the places and functions that characterize it and its peculiarities; its inhabitants or visitors; the expectations of citizens, actors and the municipal administration. The result of this analysis and exchange of information will allow the students (divided into small groups) to interpret the quantitative and qualitative data that characterize the neighborhood in order to develop interpretative maps of analysis and knowledge of the neighborhood.

Procedure

Step 1. Construction of a representation of the neighborhood based on the analysis of statistical data, such as socio-demographic and health data that can be inferred from the "geoportals of the municipalities" or from statistical sources on a local basis, and on qualitative information (information on the history of the neighborhood; recent projects; public policies; topics on the public agenda) and on the actors operating in the neighborhood (associations, groups, cooperatives, social enterprises, etc). The results that emerge from this analysis will be represented through the creation of graphs and maps.

Step 2. Analysis of the site, its uses and the location of the various urban components through a reconnaissance operation through on-site inspections or Google map/Street View of the things observed: public services and collective structures (schools, civic centers, markets, public administration offices, sports facilities, religious centers, clinics, hospitals and health services, post offices, etc.), green areas and open spaces (squares, gardens, parks), private services (commercial activities, banks, gyms, offices, warehouses workshops, factories, etc.). The objective of this analysis is to understand what kind of services the neighborhood offers,

whether it has a sufficient amount of green areas, cycle paths, whether there are shops or craft businesses; as well as the connections or barriers that build the space and determine the flows: of pedestrians, cars, bicycles; etc. The results that will emerge from this analysis will be represented through interpretative maps of the neighbourhood.

Step 3. Construction of a representation of the neighborhood based on the perceptive analysis deriving from observations recorded during the inspection in the neighborhood: description of the built environment, natural environment, accessibility, neighborhood safety, activities that take place in the neighborhood. Information also deriving from informal conversations with the inhabitants or visitors to the area. The results that will emerge from the inspection will be represented through perceptive maps of the neighborhood.

Learning outcomes

Build the ability to identify and interpret the quantitative and qualitative data that characterize the neighborhood. Acquire the ability to describe the various activities carried out in a concise manner and through the use of technical language.

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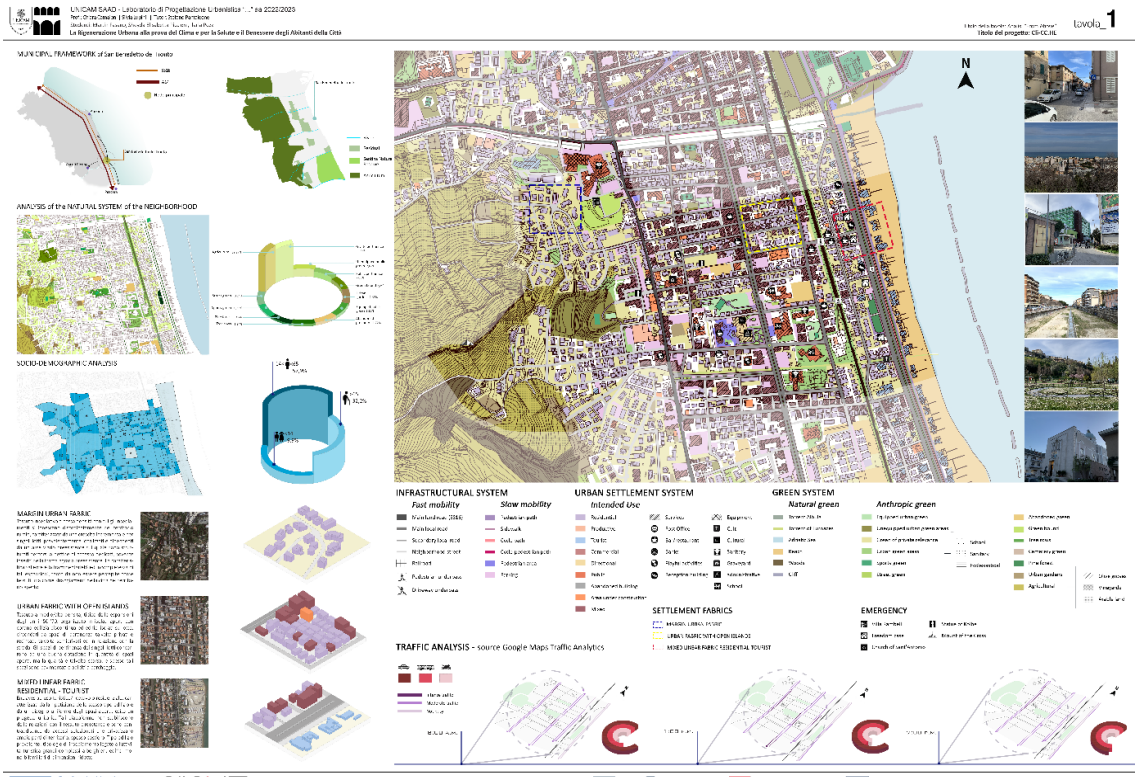
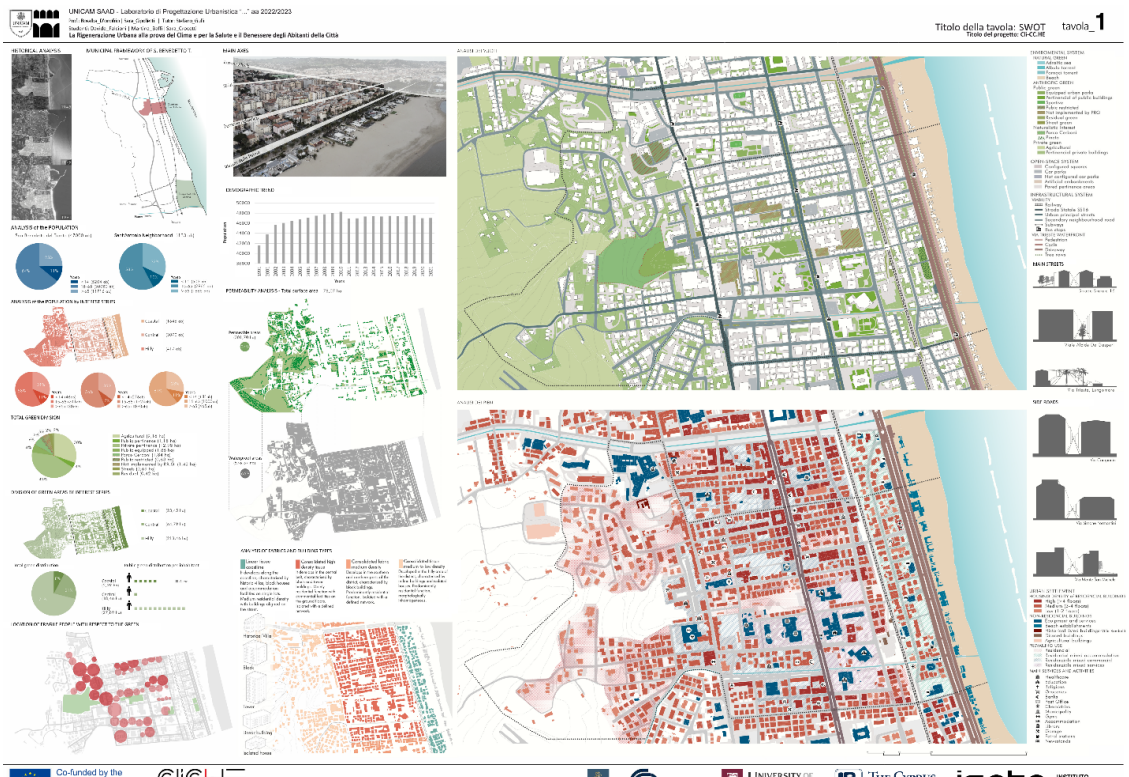
- D’Onofrio Rosalba & Trusiani Elio (2022) The Future of the City in the Name of Proximity: a New Perspective for the Urban Regeneration of Council Housing Suburbs in Italy after the Pandemic, Sustainability, 14, 1252, 1-26

Examples and/or results (how do part of the procedures and/or results will look like)

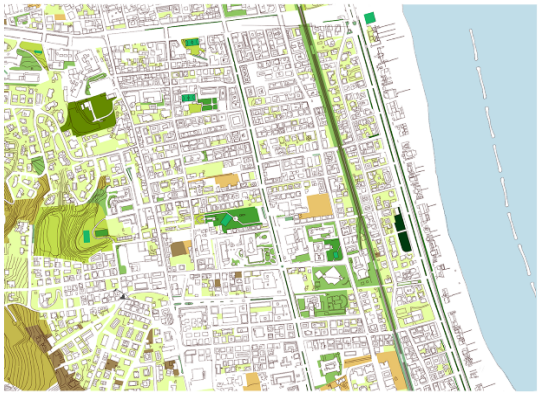
Local inquiry and mapping: getting to know the neighborhood **from above**

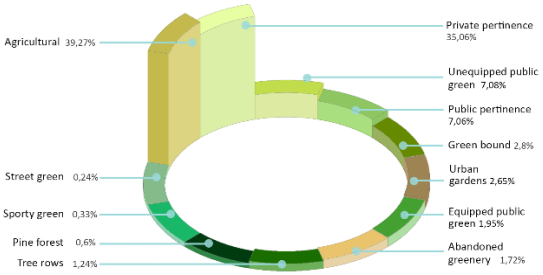




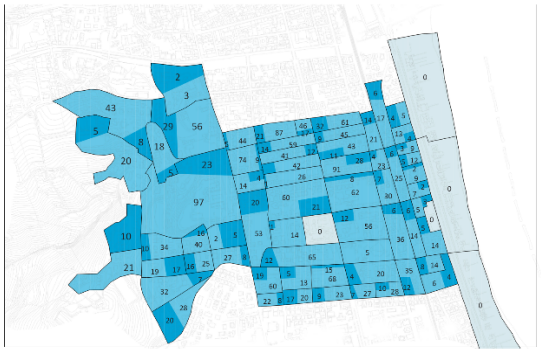
Analysis of statistical data: the main urban dimensions are investigated - population, population density, housing size, housing well-being (% green areas), etc. analyzing them through different variables and indicators. The exploration takes place through the elaboration of maps and graphs

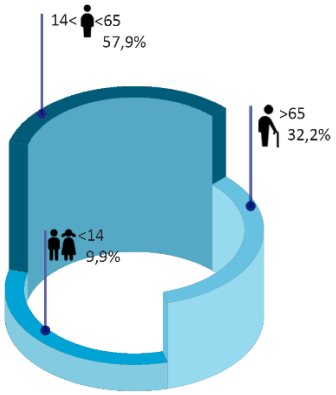
ANALYSIS of the NATURAL SYSTEM of the NEIGHBORHOOD

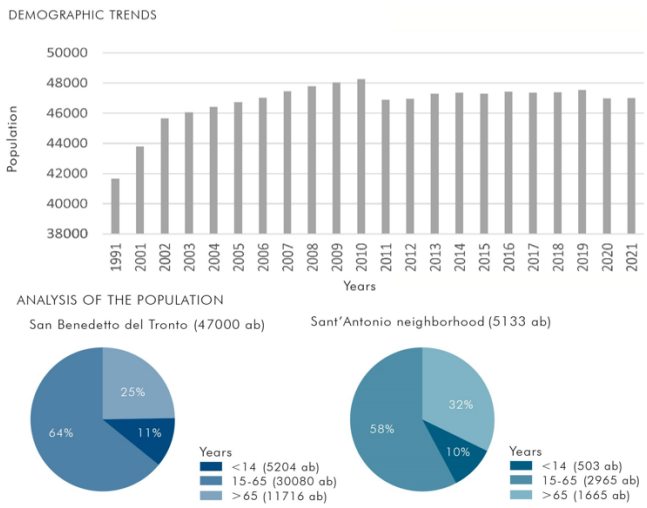


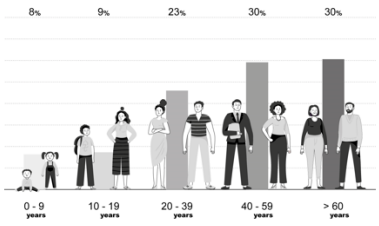


SOCIO-DEMOGRAPHIC ANALYSIS



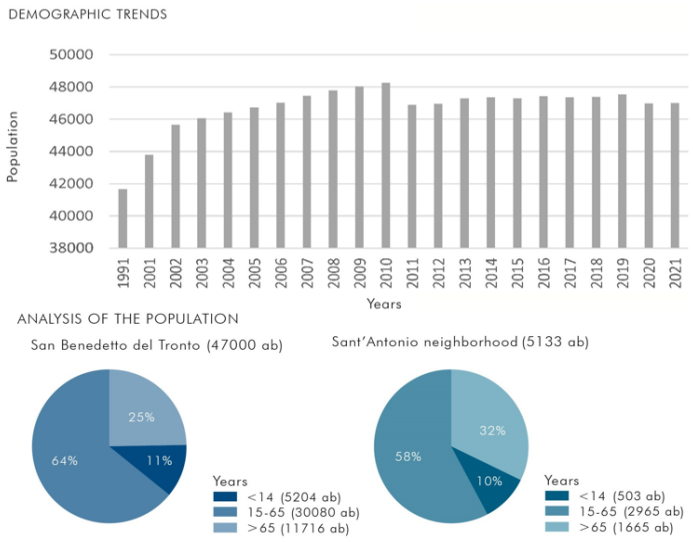


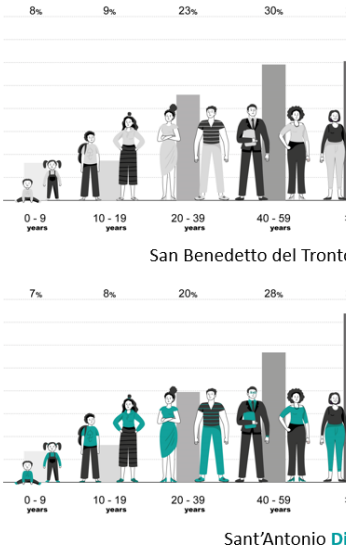


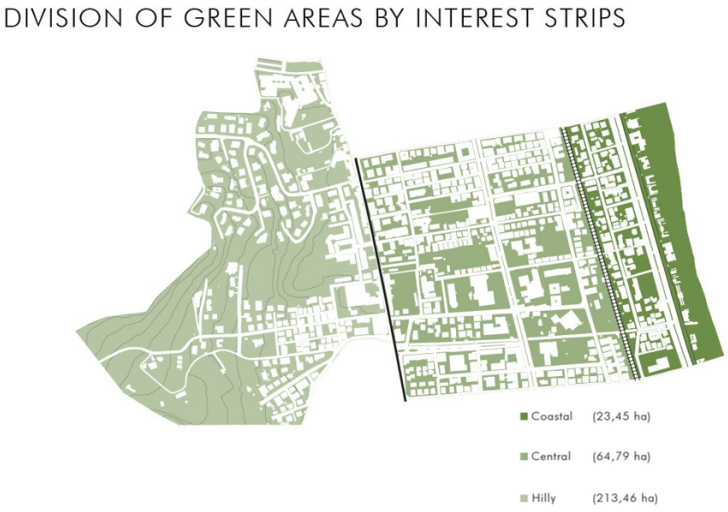


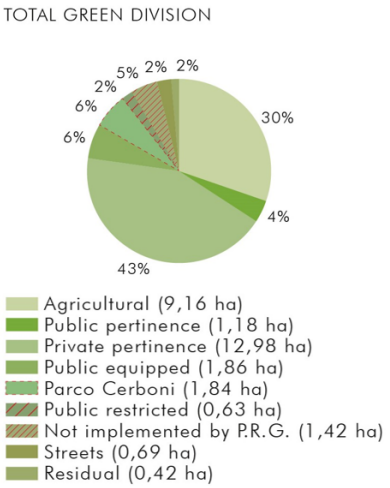
San Benedetto del Tronto **City**

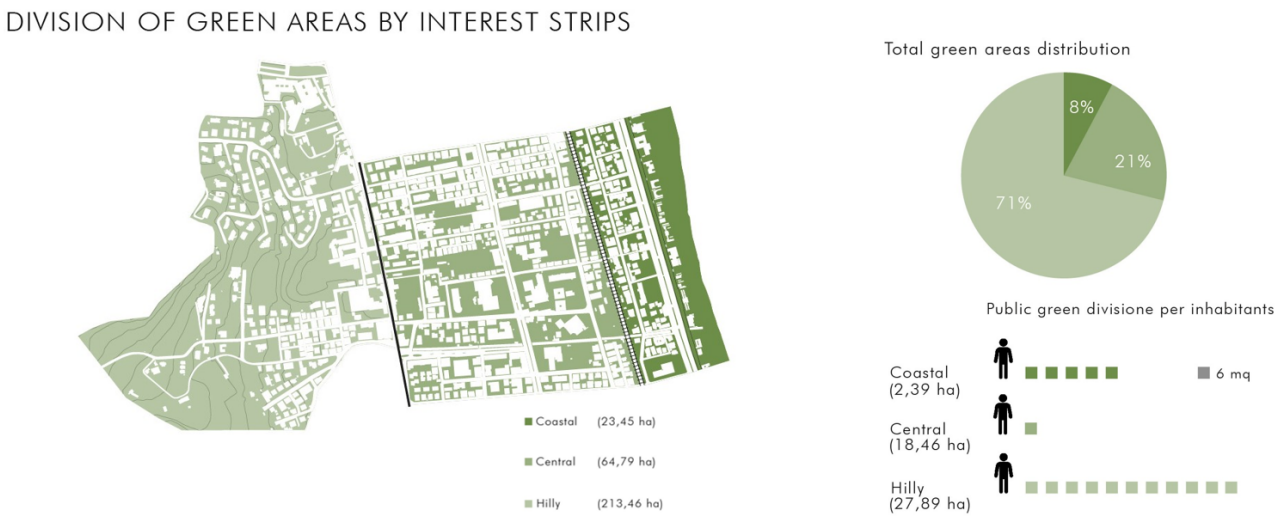
Sant'Antonio **District**


DEMOGRAPHIC TRENDS
Population
50000
48000
46000
44000
42000
40000
38000
1991 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
Years
ANALYSIS OF THE POPULATION
San Benedetto del Tronto (47000 ab)
25%
64%
11%
Years
<14 (5204 ab)
15-65 (30080 ab)
>65 (11716 ab)
Sant'Antonio neighborhood (5133 ab)
32%
58%
10%
Years
<14 (503 ab)
15-65 (2965 ab)
>65 (1665 ab)


8% 9% 23% 30%
0 - 9 years
10 - 19 years
20 - 39 years
40 - 59 years
San Benedetto del Tront
7% 8% 20% 28%
0 - 9 years
10 - 19 years
20 - 39 years
40 - 59 years
Sant'Antonio Di


DIVISION OF GREEN AREAS BY INTEREST STRIPS
Coastal (23,45 ha)
Central (64,79 ha)
Hilly (213,46 ha)


TOTAL GREEN DIVISION
30%
4%
43%
6%
6%
2%
5%
2%
2%
Agricultural (9,16 ha)
Public pertinence (1,18 ha)
Private pertinence (12,98 ha)
Public equipped (1,86 ha)
Parco Cerboni (1,84 ha)
Public restricted (0,63 ha)
Not implemented by P.R.G. (1,42 ha)
Streets (0,69 ha)
Residual (0,42 ha)



Analysis of the site: analysis and interpretation of the structural components of the neighborhood through the graphic representation of the **environmental systems** (elements that make up the city's vegetational ecosystem: public and private urban green micro-network, agricultural areas, etc.; the elements of the urban water system, the water system wastewater, the river and coastal ecosystem, etc.), **infrastructural systems** (mobility and logistics system that play specific roles in the functioning of internal and external connections: major crossing axes, interchange nodes, internal urban mobility, mobility slow, etc.) **and settlement systems** (type of fabrics, destination margins, mixed character; exhibition character; functional production areas; historical, cultural and recreational heritage, etc.)

Analysis of Urban Components

INFRASTRUCTURAL SYSTEM

Fast mobility
- Main land road (SS16)
- Main local road
- Secondary local road
- Neighborhood street
- Railroad
- Pedestrian underpass
- Driveway underpass

Slow mobility
- Pedestrian path
- Sidewalk
- Cycle path
- Cycle-pedestrian path
- Pedestrian area
- Parking

URBAN SETTLEMENT SYSTEM

Intended Use
- Residential
- Productive
- Tourist
- Commercial
- Directional
- Public
- Abandoned building
- Area under construction
- Mixed
- Services
- Post Office
- Bar/restaurant
- Banks
- Playful activities
- Reception building
- Equipment
- Cult
- Cultural
- Sanitary
- Graveyard
- administrative
- School

GREEN SYSTEM

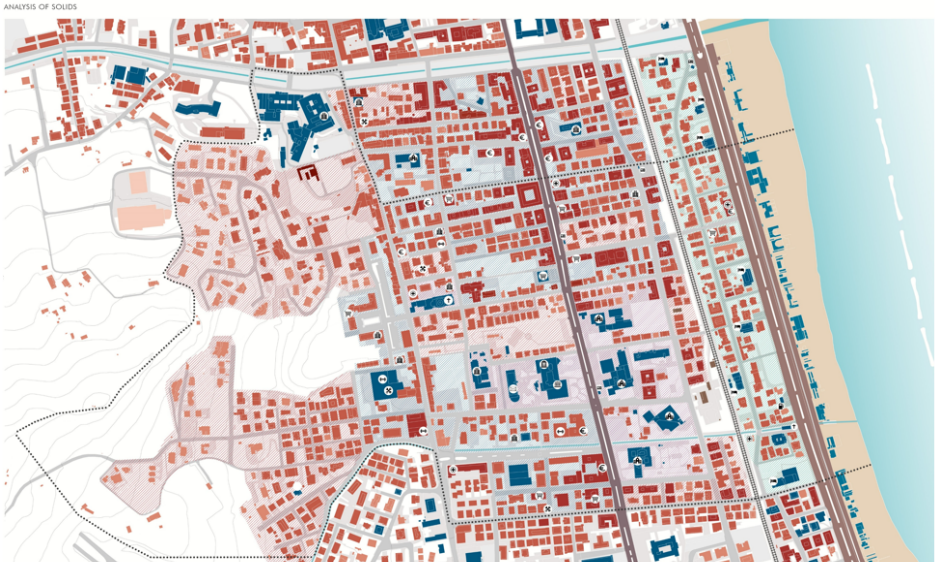
Natural green
- Torrent Albula
- Torrent of Furnaces
- Adriatic Sea
- Beach
- Woods
- Cliff

Anthropic green
- Equipped urban green
- Unequipped urban green areas
- Green of private relevance
- Urban green areas
- Sporty green
- Street green
- School
- Sanitary
- Ecclesiastical
- Abandoned green
- Green bound
- Tree rows
- Cemetery green
- Pine forest
- Urban gardens
- Agricultural
- Olive groves
- Vineyards
- Arable land

SETTLEMENT FABRICS
- MARGIN URBAN FABRIC
- URBAN FABRIC WITH OPEN ISLANDS
- MIXED LINEAR FABRIC RESIDENTIAL-TOURIST

EMERGENCY
- Villa Rambelli
- Freedom case
- Church of Sant'Antonio
- Statue of Kolbe
- Mount of the Cross

ANALYSIS OF SOLIDS



URBAN SETTLEMENT

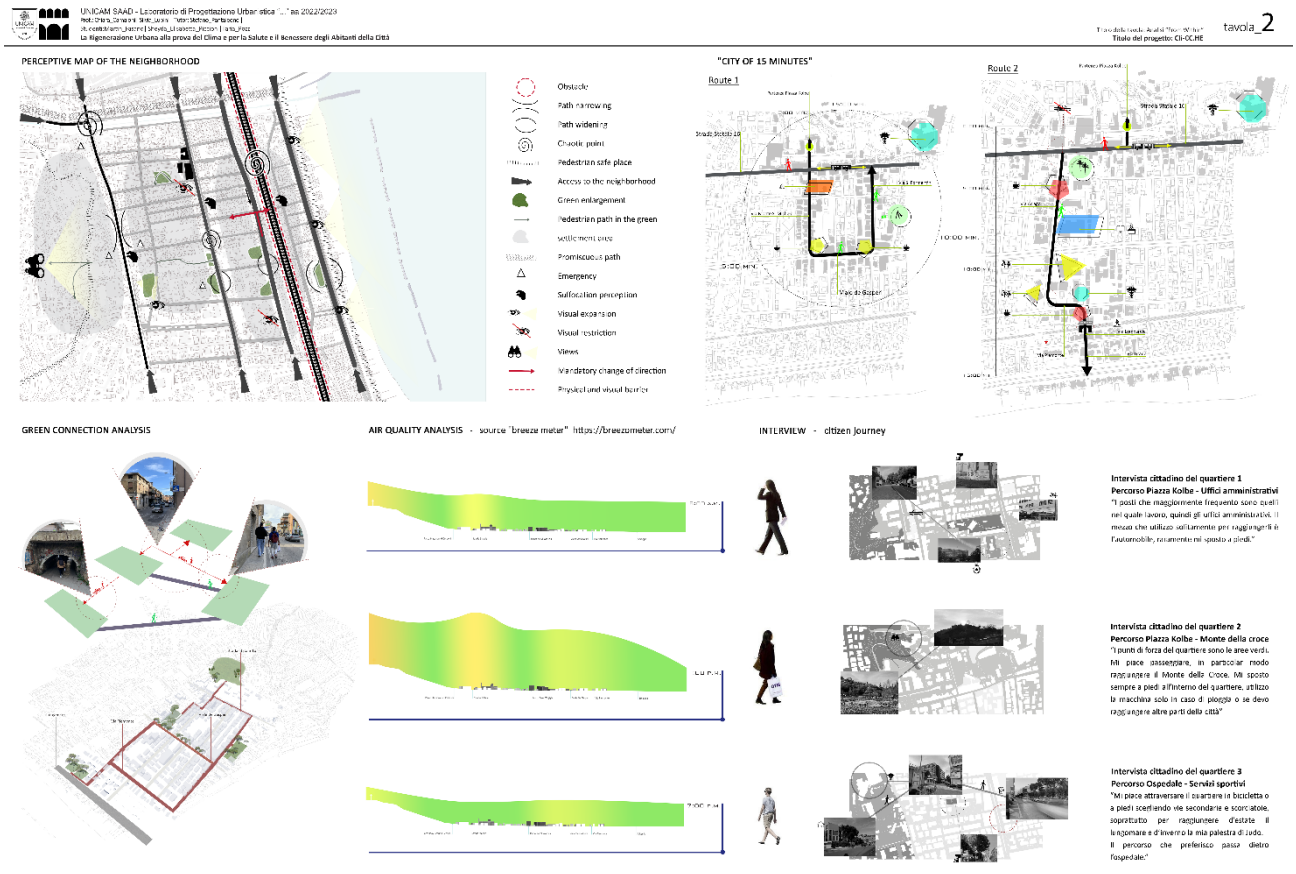
HOUSING DENSITY of RESIDENCIAL BUILDINGS
- High (>4 floors)
- Medium (3-4 floors)
- Low (1-2 floors)

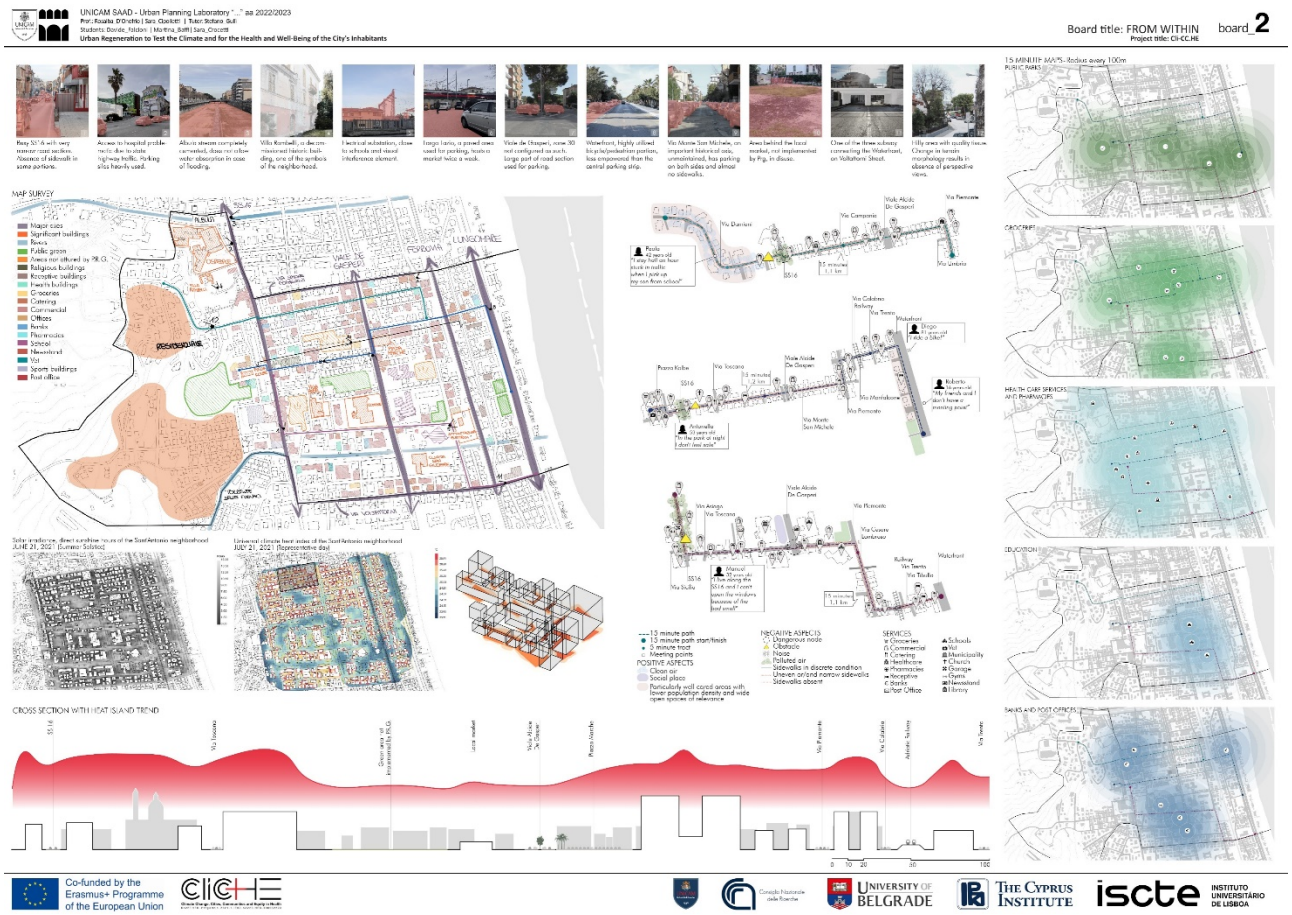
NON-RESIDENCIAL BUILDINGS
- Equipment and services
- Beach establishments
- Historical listed buildings-Villa Rambelli
- Disused buildings
- Agricultural buildings

PREVAILING USE
- Residencial
- Residential mixed accommodation
- Residenziale mixed commercial
- Residenziale mixed services

MAIN SERVICES AND ACTIVITIES
- Healthcare
- Education
- Religious
- Groceries
- Banks
- Post Office
- Chemistries
- Municipality
- Gyms
- Accommodation
- Library
- Garage
- Petrol stations
- Newsstands

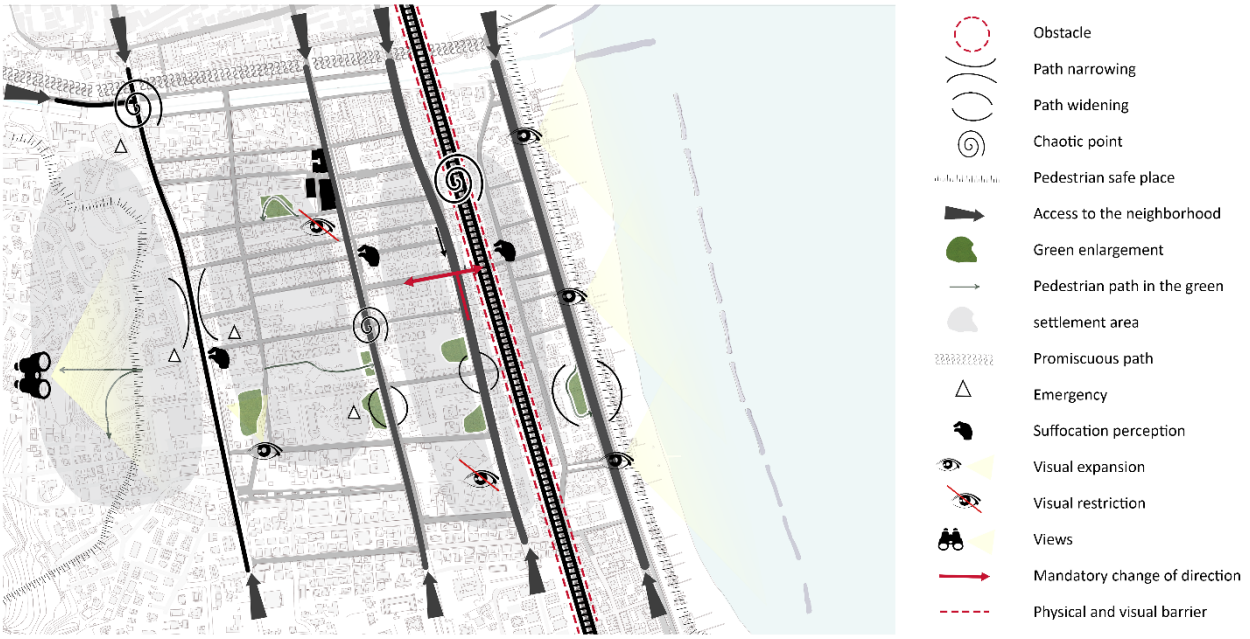
Local inquiry and mapping: getting to know the neighborhood **from within**



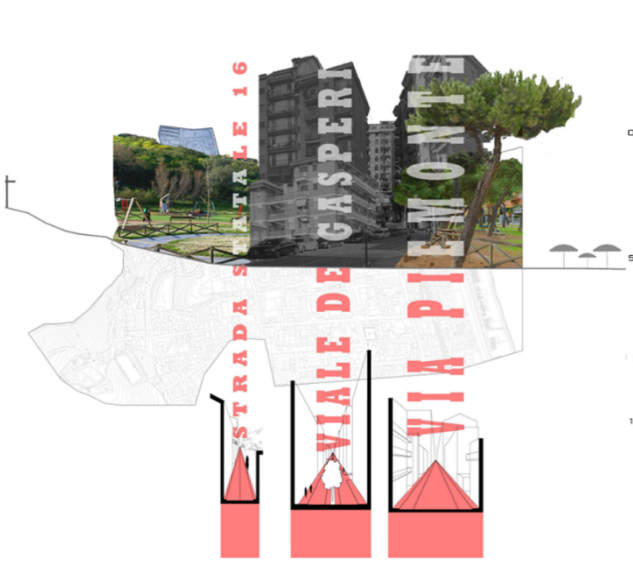


Perceptive (or cognitive) maps: describe the urban space in a qualitative way and are the result of individual and subjective reflections on the distinctive values of a place and their perception. Maps deriving from observations recorded from one's own experience in the neighborhood walk: the user perceives the elements of the space that surrounds him both as separate objects and as a single and coherent structure. Clearly symbolic elements are inserted into the maps with the aim of evoking more complex knowledge resulting from shared knowledge. The drawn map is the graphic reproduction of the mental abstraction operation of the space perceived and subsequently translated in a symbolic way.

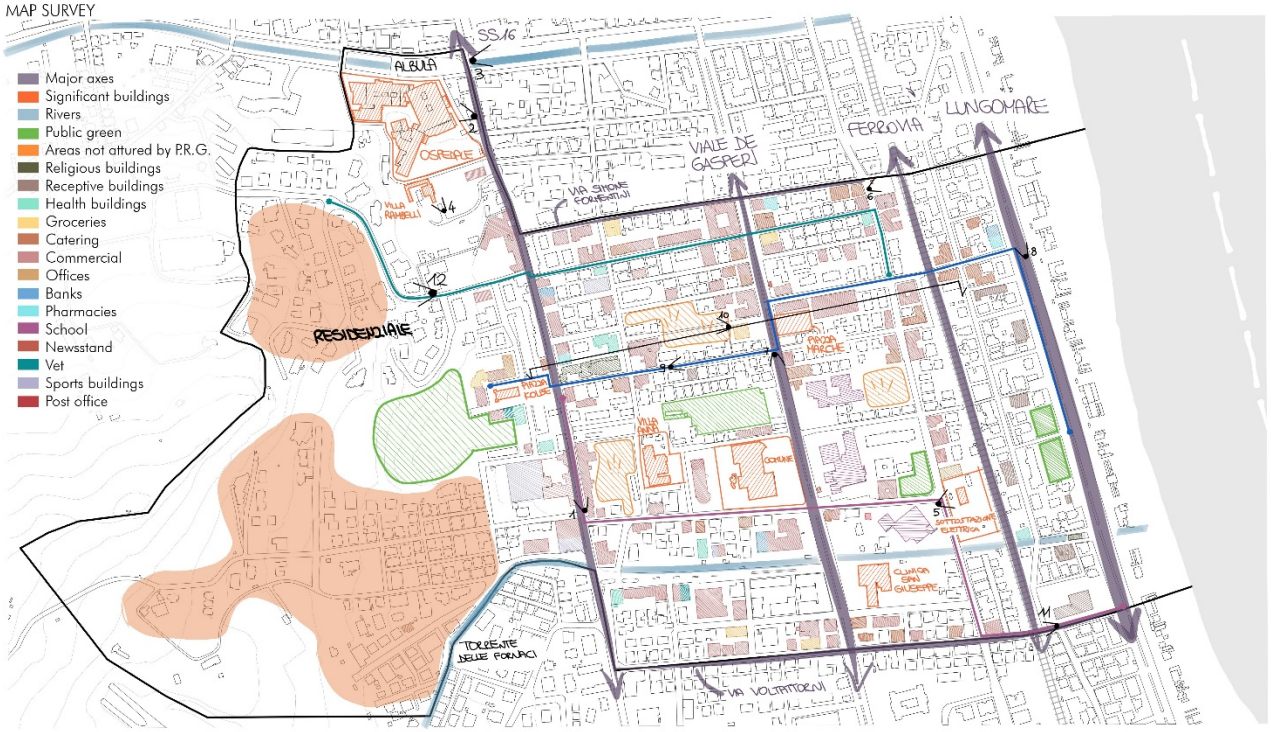
PERCEPTIVE MAP OF THE NEIGHBORHOOD



"CITY OF 15 MINUTES"



MAP SURVEY



Busy SS16 with very narrow road section. Absence of sidewalk in some portions.

Access to hospital problematic due to state highway traffic. Parking silos heavily used.

Albula stream completely cemented, does not allow water absorption in case of flooding.

Villa Rambelli, a decommissioned historic building, one of the symbols of the neighborhood.

Electrical substation, close to schools and visual interference element.

Largo Lazio, a paved area used for parking, hosts a market twice a week.

Viale de Gasperi, zone 30 not configured as such. Large part of road section used for parking.

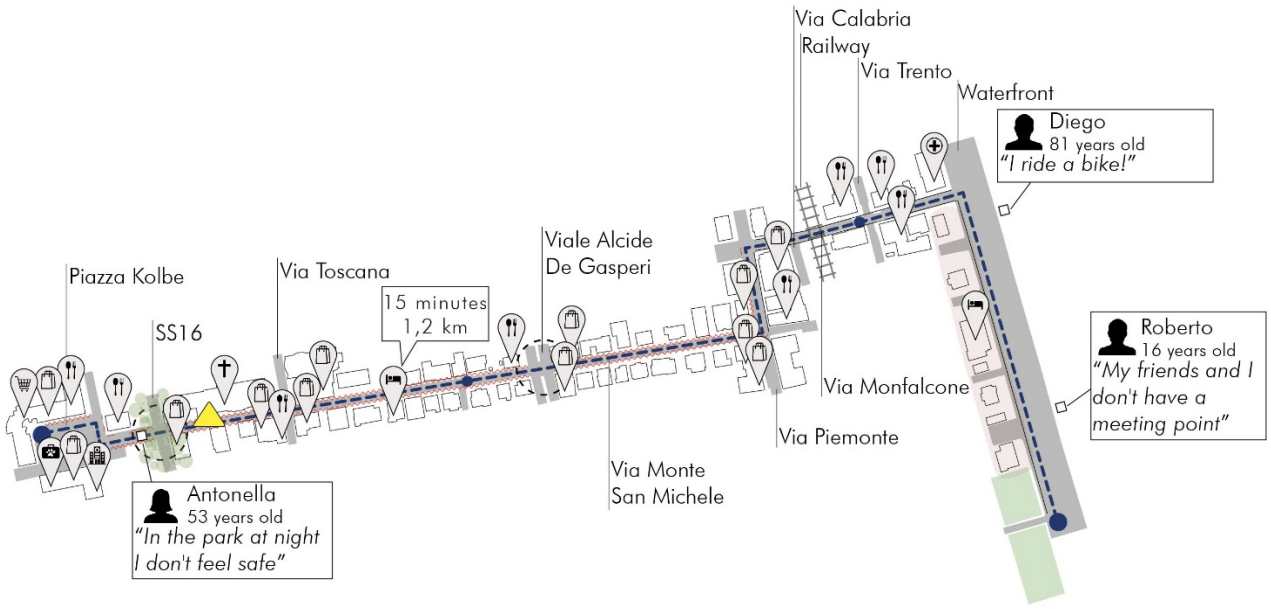
Waterfront, highly utilized bicycle/pedestrian portion, less empowered than the central parking strip.

Via Monte San Michele, an important historical axis, unmaintained, has parking on both sides and almost no sidewalks.

Area behind the local market, not implemented by Prg, in disuse.

One of the three subway connecting the Waterfront, on Voltattorni Street.

Hilly area with quality tissue Change in terrain morphology results in absence of perspective views.

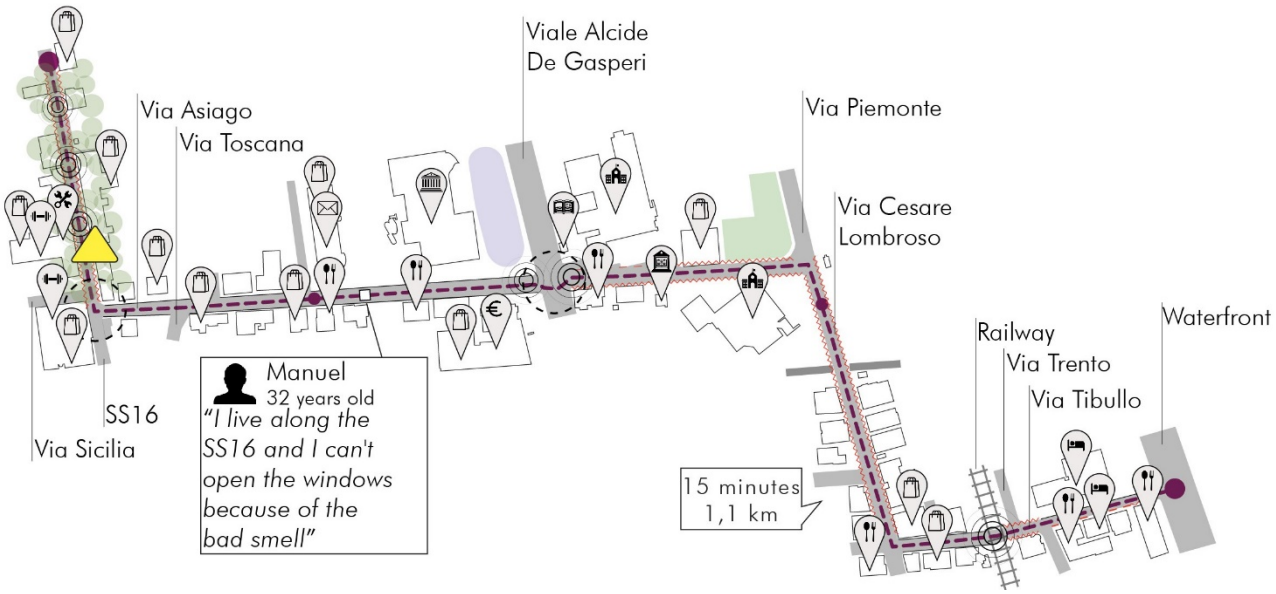


15 minute path
15 minute path start/finish
5 minute tract
Meeting points

POSITIVE ASPECTS
Clean air
Social place
Particularly well cared areas with lower population density and wide open spaces of relevance

NEGATIVE ASPECTS
Dangerous node
Obstacle
Noise
Polluted air
Sidewalks in discrete condition
Uneven or/and narrow sidewalks
Sidewalks absent

SERVICES
Groceries
Commercial
Catering
Healthcare
Pharmacies
Receptive
Banks
Post Office
Schools
Vet
Municipality
Church
Garage
Gyms
Newsstand
Library



Debate

Time required/Duration

1.5-hour interactive activity, after an introductory session (1.5-hour lecture) and discussion with students.

Resources required

Classroom facilities, video recording equipment (optional).

Participants

Students and teachers.

Rationale and Comments/Description

Debating is a form of participatory engagement where speakers aim to persuade one another, and classroom debate is a systematic instructional approach which has the potential to nurture the active engagement of students. Using classroom debate as a teaching/learning approach brings many advantages to learners, including promotion of critical thinking skills, mastering the course content, and improving the speaking abilities. For students to engage in this activity, they must first be familiarized with relevant literature (Hodgkinson et al., 2022; e.g., Roebbel et al., 2022; Schröder et al., 2022; UN-Habitat & World Health Organization, 2020), so that they obtain a "knowledge library". Such activity-based educational tools can be employed to engage students, promote critical thinking and the role of public participation and structured dialogue in urban regeneration projects. Pedagogical approaches featuring small group interactive learning modes have been scrutinized (Cohen, 2016), and research has shown that experimental learning environments implicating debates among students result in cognitive gains for the participants (Vosniadou et al., 2001). In this interactive session, students will use their knowledge library to discuss problems of urban regeneration and design solutions to improve urban health, while employing dialogue tactics to obtain a better understanding of the diverse motivations of stakeholders. Such activity-based educational tools can be employed to engage students, evoke critical thought, accurate and precise reasoning, as well as thinking under pressure. Students will learn to present their ideas in a clear and effective manner, gaining a better understanding of the role of public participation and structured dialogue in regeneration projects. The classroom debate approach therefore allows students to be immersed in realistic problems and to comprehend the dynamics among the public, local authorities, researchers, bodies with private interests and other stakeholders. This tool can ideally be applied at the beginning, or end of the workshop series, either as an introduction to urban regeneration or as a summary of knowledge resulting from the course.

Suggested types of classroom debate:

PUBLIC FORUM

Public Forum involves opposing teams of two, debating a topic concerning a current event. Proceeding a coin toss, the winners choose which side to debate (PRO or CON) or which speaker position they prefer (1st or 2nd), and the other team receives the remaining option. Students present cases, engage in rebuttal and refutation, and also participate in a "crossfire" (similar to a cross examination) with the opportunity to question the opposing team. Often times community members are recruited to judge this event.

TEAMS DEBATE

A two-on-two debate that focuses on a policy question, this format tests a student's research, analytical, and delivery skills. A teams debate involves the proposal of a plan by the affirmative team in support of a statement, while the negative team offers reasons to reject that proposal. Throughout the debate, students have the opportunity to cross- examine one another. A judge or panel of judges determines the winner based on the arguments presented.

WORLD SCHOOLS DEBATE

World Schools Debate features a dynamic format combining the concepts of "prepared" topics with "impromptu" topics, encouraging debaters to focus on specified issues rather than debate theory or procedural arguments. This highly interactive style of debate allows debaters to engage each other, even during speeches. This challenging format requires good teamwork and in-depth quality argumentation.

Procedure

Step 1. Prior to the debate, teachers should familiarize students with the general topic at hand and provide sufficient instruction (e.g. Debate training guide (2016))

Step 2. Teachers should select a general problem of the area of interest and a format of debate. Suggested formats include the public forum, policy debate and world schools debate, mentioned above. This should be done during an introductory lecture so that students can prepare their "knowledge libraries" before the debate takes place.

Step 3: The debate takes place during an interactive workshop session, with the teacher acting as mediator, intervening where necessary to keep the discussion on topic and evaluating the arguments of students throughout the activity. An example of guidelines for a specific topic are provided below, for one specific type of debate.

Step 4: Optionally, and with the consent of students, parts of the debate may be filmed to produce a short video as output of the first activity. Otherwise, students should produce a report or other type of deliverable to reflect the debate that took place.

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Examples and/or visual results (how do part of the procedures and/or results will look like)

This is an example of the format followed in the team policy debate, where two teams take turns to present their arguments and counterarguments, concluding with closing statements.

Team Policy Debate

- Two teams are called to provide arguments either in support or against a statement
- A coin flip determines the team that selects their positioning; the affirmative team gets to start first
- Format: teams take turns to provide constructive arguments, i.e. laying out their most important arguments to support their position. After each turn, there is a cross-examination period and both members of the team get to present NEW arguments
- After the 2nd cross-examination, each team presents their closing statement.

Turn	1	2	3	4	5	6
Speech	A	CE	N	CE	ACS	NCS
Time (min)	4	2	4	2	3	3

A: Affirmative
N: Negative

CE: Cross-examination
CS: Closing statements

The teachers are acting as evaluators and judges, assessing the arguments of both teams. An example of a debate assessment framework is presented here, where each turn takes its one score and the winner is determined by the sum of scores.

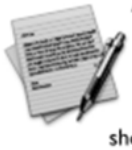
Debate Assessment

Turn/Speech	1A	2CE	3N	4CE	5A	6CE	7N	8CE	9ACS	10NCS
Directly addressed the topic										
Understood the basic issue										
Clearly explained their position										
Made a convincing case, complete with specific evidence										
Explained the other side's weaknesses										
Responded directly to the other side's critique										
Total score										

An example of debate regulations - teachers may search for the type of debate most suitable to their class, but they should provide detailed instructions and guidelines to students.

The Topic ~ Topics are worded as **resolutions,** meaning they advocate *solving* a problem by establishing a *position*. Teams must understand the meaning of terminology in a consistent manner so debates have a *clash* of ideas. If the topic were "Resolved: Free trade benefits all nations," it would be vital to understand the concept of *free trade*. An expert definition from an economics or legal dictionary or encyclopedia would be preferable to a standard dictionary. If the topic, "Resolved: NATO countries should act together on international matters," the more common terms 'act' and 'together' could be appropriately defined by a standard dictionary. Given the limited time of a round, debate should not center on obscure claims of minutia.

Case Development & Evidence



A team must develop both a pro and con case, persuasively supported by evidence and reasoning. Given the short nature of a Public Forum round, cases should center on a *few quality* arguments. A team, however, should research *several* arguments on both sides of the issue, so it can *adapt* its case to the opposing team's claims as necessary. Having arguments in direct contradiction with each other will enhance **clash** in rebuttals. Organization of speeches through effective communication and clear outlines is important so both judges and the opposing team can follow each of the arguments and their supporting evidence. Effective persuasion requires credible, unbiased, quality supporting evidence, which may include a mix of facts, statistics, expert quotations, studies, polls; but it may also be real-life examples, anecdotes, analogies, and personal experience. Since topics are based on current events, research should be accessible through periodicals, Web search engines and think tanks. Teams should not overwhelm their case with evidence; rather, they should *select* the *best* evidence to represent their claims.

The Coin Flip ~ The round starts with a **coin toss**; the winning team selects ***either***:

- The **side** (pro or con) they will argue
- The speaker **order** (begin the debate or give the last speech).

The team that loses the toss will then decide their preference from the option not selected by the winner *(i.e., if the winning team decides to speak last, then the losing team may decide which side they will argue)*. The debate, therefore may begin with the con side, arguing against the topic. Teams might consider: Is one side of the topic more acceptable to citizen judges? On which side is the team stronger? On which side of the topic are the opponents stronger? Is the first speaker position critical to "sell" the case by making a good first impression? Is the final focus speech critical for the last word to the judge(s)? Are the opponents so effective in either the first or last speaker position that our team needs to select speaker position rather than side? The first team sits to the judge's left.

Speeches and Time Limits

Speaker 1 (Team A, 1st speaker).....4 min.
Speaker 2 (Team B, 1st speaker).....4 min.

Crossfire (between speakers 1 & 2).....3 min.

Speaker 3 (Team A, 2nd speaker).....4 min.
Speaker 4 (Team B, 2nd speaker).....4 min.

Crossfire (between speakers 3 & 4).....3 min.

Speaker 1 Summary.....2 min.
Speaker 2 Summary.....2 min.

Grand Crossfire (all speakers).....3 min.

Speaker 3 Final Focus.....2 min.
Speaker 4 Final Focus.....2 min.

Each team may use up to two minutes of prep time.

First Pro Speech ~ This speech **constructs** arguments advocating the resolution's worthiness. The key analysis will be to present major reasons why there is a problem. An underlying concept will always be the risk of change versus the risk of not *changing*. This speech should have a brief introduction to frame the team's case for the judge. If a definition is important to understanding the case, it should be presented from the most appropriate source. A few reasons for adopting the topic should be presented with accompanying evidence. Each reason should be an independent reason to vote for the resolution, and should explain why it is pertinent. The speech should conclude with a summary of the arguments covered.

First Con Speech ~ This speech **constructs** arguments showing disadvantages of the resolution and why it should not be adopted. If the pro speech has the advantage of a changing future, the con speech has a *track record of experience* (status quo) and why change is ill-advised The rest of the speech elements will be the same as the pro speech.

Support Documents

· Literature related to the activity (e.g. see reading list below)

	Title	Type	Pages	Where to find it
1	Debate Training Guide	report	3	https://www.speechanddebate.org/debate-training-guide/
2	Urban health agenda - Big Cities Health Coalition	website	-	https://www.bigcitieshealth.org/urban-health-agenda/
3	Intended and Unintended Consequences of Two Paradigms of Urban Planning, and Their Social Justice and Human Health Impacts,	article	25	https://doi.org/10.3390/environments9100130
4	Urban climate walk: A stop-and-go assessment of the dynamic thermal sensation and perception in two waterfront districts in	article	20	https://doi.org/10.1016/j.buildenv.2022.109267
5	New development: Citizen science—discovering (new) solutions to wicked problems	article	5	https://doi.org/10.1080/09540962.2021.1967630

Expert Panel

Time required/Duration

1.5-hour workshop, following introductory session (1.5-hour lecture) and discussion with students.

Resources required

Classroom facilities, video recording equipment (optional).

Participants

Students and teachers.

Rationale and Comments/Description

An expert panel activity simulates the conditions encountered in conference settings, where a panel of experts and one Chair are responsible for delivering autonomous, but coherent to a certain narrative, short positionings. An audience should observe the proceedings and ask ad-hoc questions, directed either to specific panelists or anyone who wants to respond to them. An expert panel should be comprised of independent specialists who present an issue of their expertise and employ their critical thinking to reply to questions.

This activity relates to the notion of the Scholarship of Teaching and Learning, which stipulates that "*the time has come to move beyond the tired old 'teaching versus research' debate and give the familiar and honorable term 'scholarship' a broader, more capacious meaning, one that brings legitimacy to the full scope of academic work*" (Boyer, 1990, p. 16). Specifically, this activity focuses on the scholarship of application, where theory and practice interact, and the scholarship of teaching, which aims to not only transmit knowledge but also transform and extend it (Neck & Corbett, 2018).

Procedure

Step 1. The teachers specify the panel objective, based on the competencies of students that are participating in the workshop. The objective should be on a specific topic related to climate change, health and cities, allowing at the same time for different subtopics to be explored by each panelist. This step should be taken before the day of the activity.

Step 2. Groups of 3-5 students are formed, each one being a panel expert. Another student is acting as the Chair of the panel, and both panel members and Chair are working synergistically to define the subtopics presented by each panelist. The goal is for each panelist to discuss something ***unique but related*** to the topics of other panelists and the general objective of the panel.

Step 3. Students may prepare slides to support the time allocated to them, but slides should focus on visual components and be complementary to the speech; they should not be designed in scientific style.

Step 4: The activity starts with the panelists' statements on their selected subtopic; before each one, the Chair presents the panelist briefly. Throughout the expert panel, the Chair facilitates the speeches and questions from the public and at the end of the activity, the Chair is responsible to provide closing remarks, summarizing the day's discussion, and highlighting points of interest.

References

- Boyer, E. L. (1990). *Scholarship reconsidered - Priorities of the Professoriate*.
- National Speech and Debate Association. (2016). *Debate Training Guide*. https://www.speechanddebate.org/resources/
- Neck, H. M., & Corbett, A. C. (2018). The Scholarship of Teaching and Learning Entrepreneurship. *Entrepreneurship Education and Pedagogy*, *1*(1), 8–41. https://doi.org/10.1177/2515127417737286/FORMAT/EPUB

Examples and/or visual results (how do part of the procedures and/or results will look like)

Support Documents

Expert Panel

Objective: «*How climate modeling can enable the assessment of climate change impact on people lives*»

In this example, there are 4 students acting as panelists and one Chair facilitating the discussion. Speeches A-D should be relevant to the objective but on unique topics. For example: **A**-modelling on different scales of the city; **B**-early warning systems modelling; **C**-urban heat islands and impacts on health; **D**-climate modelling in decision-making

Panelist	Chair	1	Chair	2	Chair	3	Chair	4	Chair	Chair
Speech	Intro of pan. 1	**A**	Q&A Intro of pan. 2	**B**	Q&A Intro of pan. 3	**C**	Q&A Intro of pan. 4	**D**	Q&A	Closing remarks
Time (min)	0.5	5	5	5	5	5	5	5	5	3

Flipped classroom

Time required/Duration

½-2 hours, depending on format of class.

Resources required

Classroom facilities.

Participants

Students and teachers.

Rationale and Comments/Description

The Flipped Classroom is a pedagogical tool developed within the past decade as a means of engaging students and placing them in the spotlight of their own learning experience. It removes the traditional transmissive lecture and replaces it with self-study, either through literature or pre-recorded lectures that students can watch at home, which frees up class time for student-centered synchronous learning activities (Abeysekera & Dawson, 2015; Gilboy et al., 2015; O'Flaherty & Phillips, 2015). It has been shown that students participating in such classes become more open to cooperative learning and innovative teaching methods, while granting them ownership of learning through the completion of preparatory work and being more interactive during actual class time (O'Flaherty & Phillips, 2015; Strayer, 2012). Although some of the concepts included in flipped classroom approaches are not new, it has been argued that students have higher engagement and can be better prepared for the challenges of the 21st century (McLaughlin et al., 2014; O'Flaherty & Phillips, 2015). In fact, the flipped classroom was extensively employed during the Covid-19 pandemic (Chick et al., 2020; Latorre-Cosculluela et al., 2021; Martín et al., 2021), and although the online educational model of that period was met with general dissatisfaction, the combined model of online teaching with the flipped learning improved students' learning, attention, and evaluation of courses (Tang et al., 2020). The flipped classroom is a tool that fosters the implementation of further activities included in this toolkit, such as the Debate and Expert Panel. It can be viewed as a starting point from where students gain the capacity to participate in additional innovative educational methodologies.

Procedure

Step 1. Based on the activity that is planned, teachers assign specific material for study, so that students can prepare themselves at home. Teachers may also prepare additional material using multimedia approaches, such as recorded presentations or online resources.

Step 2. Students familiarize themselves with the material and obtain a "knowledge library", which they are called to use during further teaching activities that require critical thinking and dialogue facilitation (e.g. discussions, debates, expert panels etc.)

References

- Abeysekera, L., & Dawson, P. (2015). Motivation and cognitive load in the flipped classroom: definition, rationale and a call for research. *Higher Education Research & Development*, *34*(1), 1–14. https://doi.org/10.1080/07294360.2014.934336
- Chick, R. C., Clifton, G. T., Peace, K. M., Propper, B. W., Hale, D. F., Alseidi, A. A., & Vreeland, T. J. (2020). Using Technology to Maintain the Education of Residents During the COVID-19 Pandemic. *Journal of Surgical Education*, *77*(4), 729–732. https://doi.org/10.1016/j.jsurg.2020.03.018
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- Tang, T., Abuhmaid, A. M., Olaimat, M., Oudat, D. M., Aldhaeebi, M., & Bamanger, E. (2020). Efficiency of flipped classroom with online-based teaching under COVID-19. *Interactive Learning Environments*, 1–12. https://doi.org/10.1080/10494820.2020.1817761

Examples and/or visual results (how do part of the procedures and/or results will look like)

Example of an activity where students were in charge of delivering the class and teachers were observants or judges.

Immersive reality software

Time required/Duration

1.5 hours workshop, split into demonstration by experienced instructor and autonomous work by students.

Resources required

Classroom facilities, laptop pre-loaded with specific software (subject to the competencies of the instructor), monitor.

Participants

Students, teachers and tutor, local community, public administration, and stakeholders.

Rationale and Comments/Description

The immersive reality and interactive tools are used in the “Project scenarios” activity. They can enable users to experience the impact of design solutions on the urban environment, favoring a better understanding and interaction with the environment around us. Simulation-based tools such as the ones suggested here can be applied in designing structured learning experiences, as well as be used as a measurement tool linked to targeted teamwork competencies and learning objectives (Lateef, 2010). Interactive tools also directly link concepts and theoretical information, and their concrete application is immediately visible. Teaching that integrates this mode of learning provides more emphasis on learning experiences, meta-reflection, peer assessment and group work (Freitas & Neumann, 2009). Simulation-based techniques have been used in higher-level training, and with decreasing costs, it has now become accessible to a wider audience of students, who show higher motivation to engage in such activities, in relation to traditional pedagogical methods (Krajčovič et al., 2022).

Procedure

The use of interactive and immersive reality tools does not follow a strict procedure, as many software options are available. Teachers and students may opt for the suite of tools most convenient to them, subject also to the available expertise. Indicatively, some generic steps are outlined here:

Step 1. Identify area of interest and walking route using mapping software.

Step 2. Assess the current situation according to the capabilities of the selected software solution, under the guidance of the tutor in terms of walkability, thermal comfort or other indicators of wellness for urban dwellers.

Step 3: Apply interventions or solutions to create alternate project scenarios, such as greenery, shading, water bodies, points of interest etc. to create different scenarios.

Step 4: Assess the new situation based on the created scenarios in comparison to step 2terms of walkability, thermal comfort or other indicators of wellness for urban dwellers.

References

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- Krajčovič, M., Gabajová, G., Matys, M., Furmannová, B., & Dulina, Ľ. (2022). Virtual Reality as an Immersive Teaching Aid to Enhance the Connection between Education and Practice. Sustainability 2022, Vol. 14, Page 9580, 14(15), 9580. https://doi.org/10.3390/SU14159580
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Examples and/or visual results (how do part of the procedures and/or results will look like)

Support Documents

An example of our tutor's specific methodology is presented here:

Presentation of tools developed for a data- enabled Participatory approach.

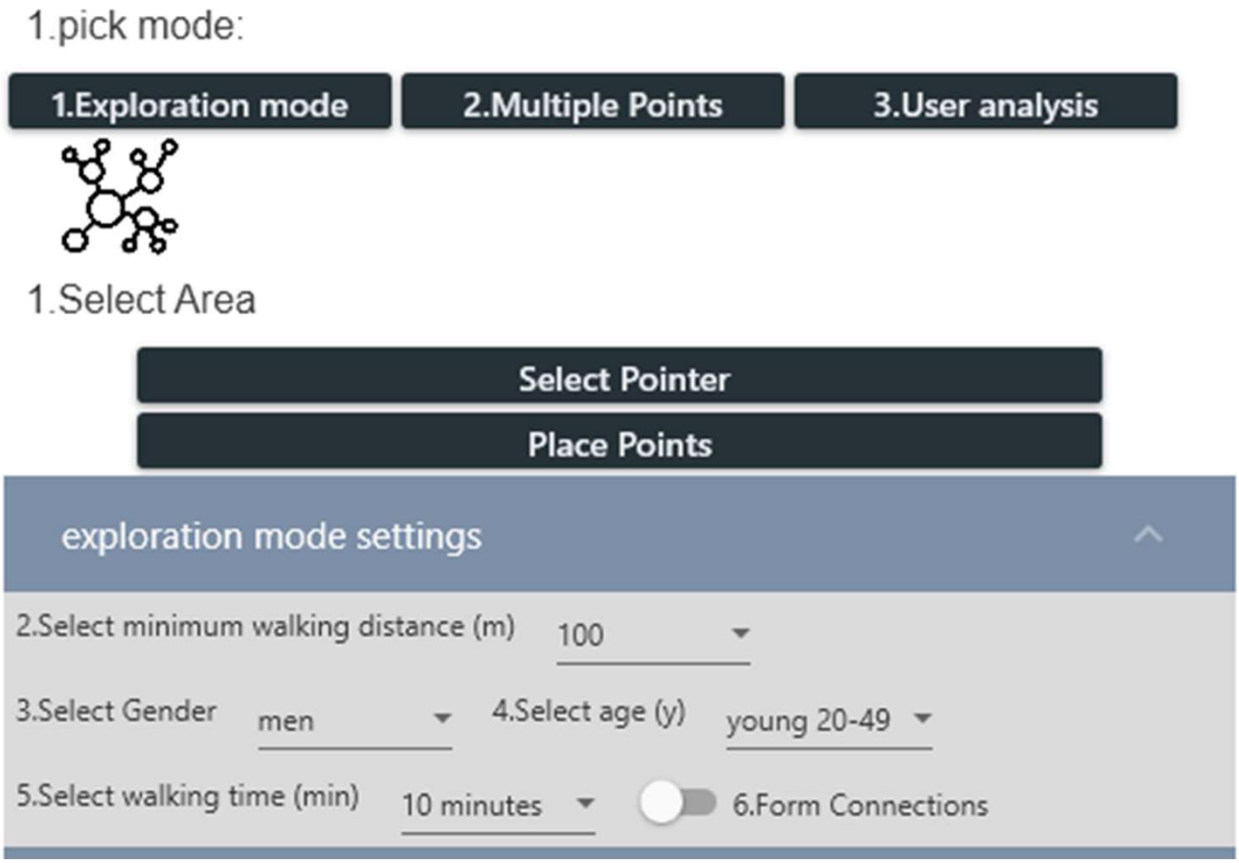
Iason Giraud, Architect NTUA, MSc NTUA, PostGrad Dip IAAC, PhD Candidate CYI

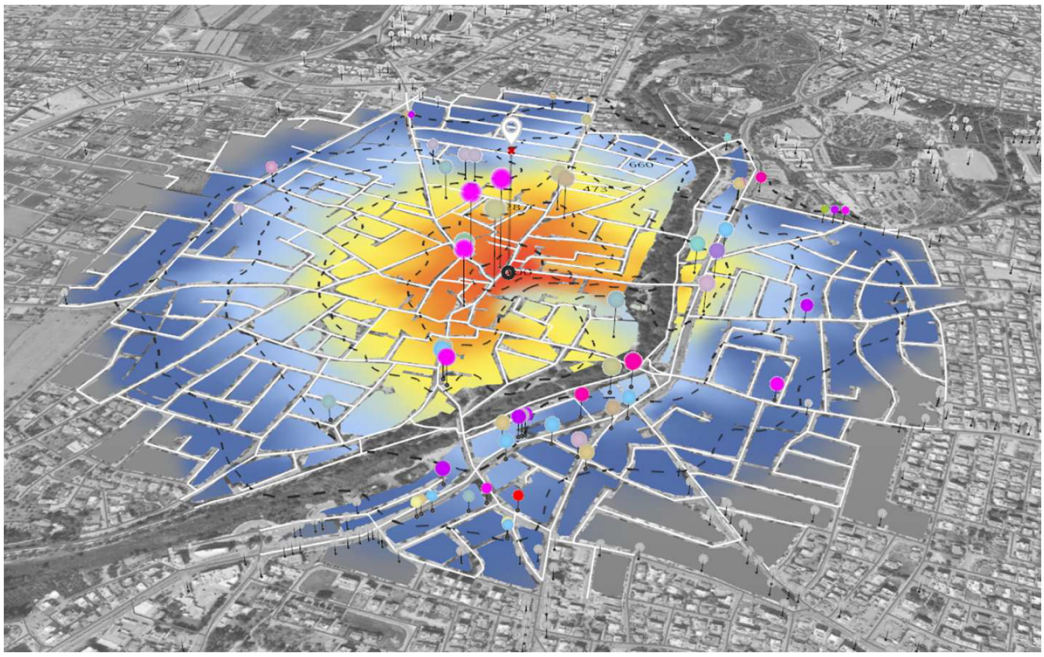
Presentation of tools and processes

The overall scope of the tools presented, are based on ideas established by the 15-minute city model and tries to integrate creative industries and user input along with established urban analytics and simulations in order to create a novel data-enabled par□cipatory decision-making toolkit focusing on

neighborhood sustainability and accessibility. All data depicted in the figures are in Chryseleousa- the Historic core of Strovolos in Nicosia.

The 1st tool called A_Mapper (accessibility mapper), tracks isochrones for a given time threshold depicting what is accessible in each area from a specific point of origin. It maps amenities based on OSM data that have been imported through QGIS in Rhino. There is the option to turn amenities on/off and there is also a visual line chart that shows populations of amenities per 5 time-intervals. In the pictures below we show amenities for a 10-minute walking threshold- approx. 850m. Furthermore, it gives as feedback an intersection density, as a visual cue on how walkable the area is based on parcel size. The higher the intersection density the smaller the parcel size. Also, the tool provides a mean street orientation diagram, showing the overall orientation of streets in a street network. Mean street orientation can be used as a tool to highlight which streets will be benefited mostly by the presence of green canopy during summer.





1.Clothes

2.Electronics

3.Convinience

4.Sports

5.Books & Paper

6.Department Stores

7.Furniture

8.Wellfare

9.HealthCare

10.Public Service

11.Culture

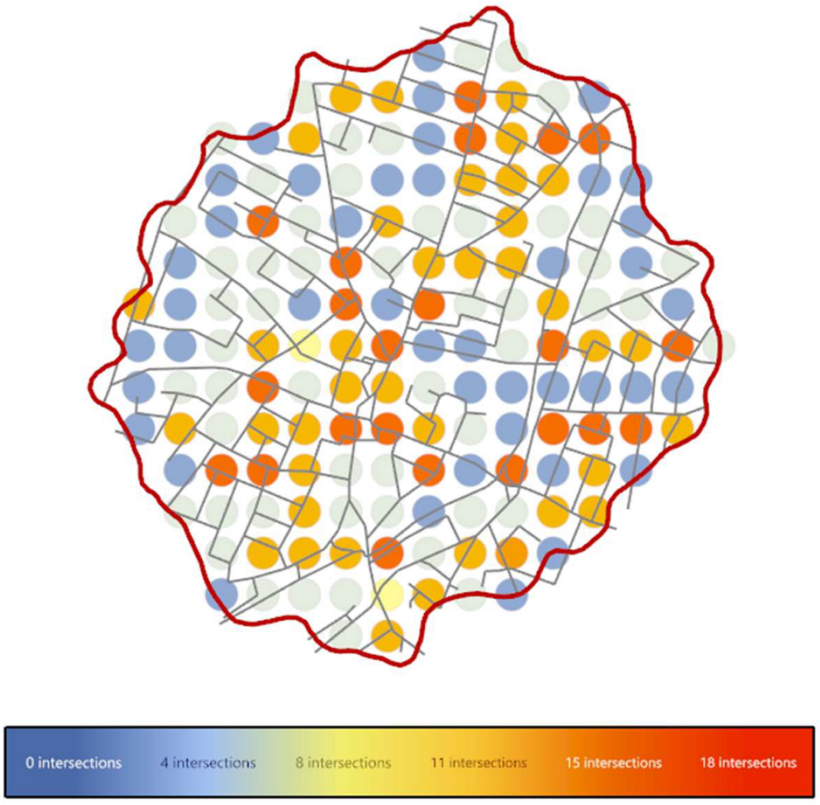
12.Food & Drinks

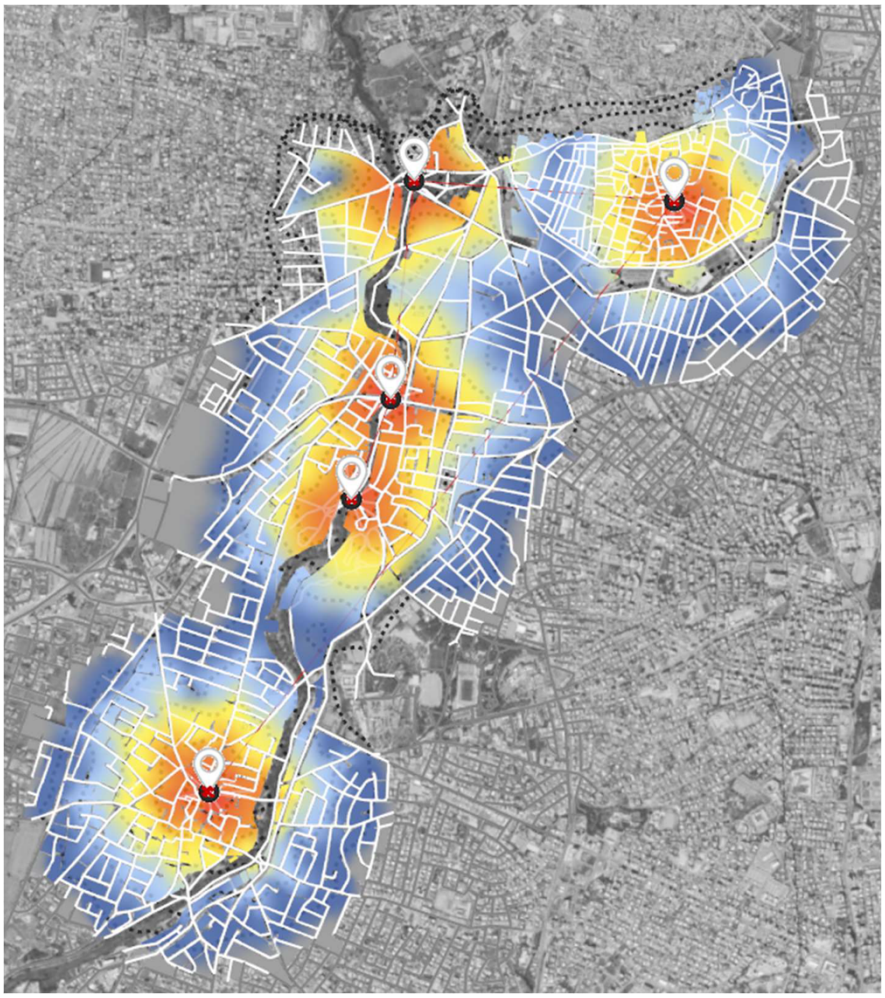
13.Leisure

14.Education

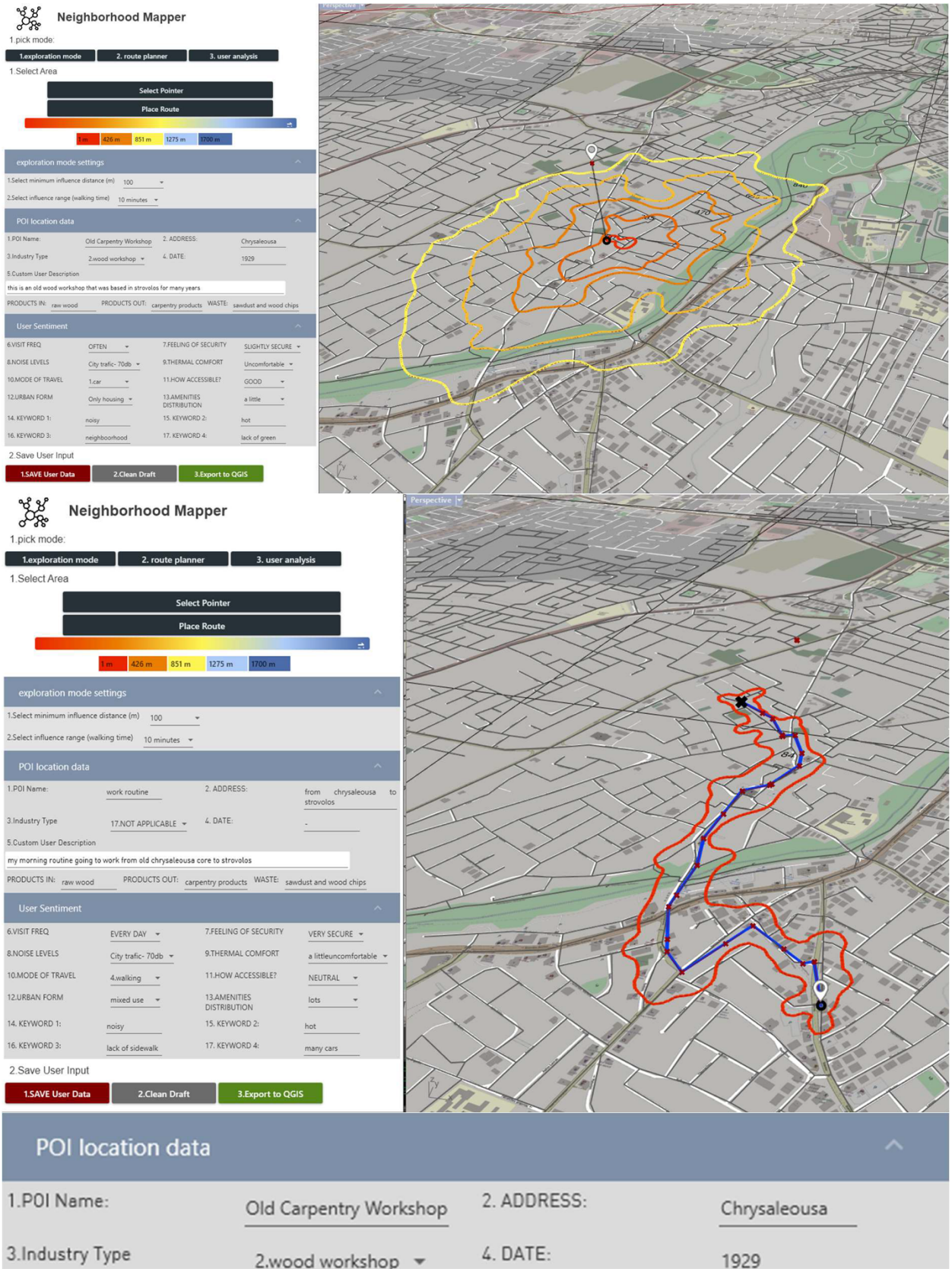
15.Sports

16.Office


0 intersections
4 intersections
8 intersections
11 intersections
15 intersections
18 intersections



The second tool developed is called Neighborhood Mapper or N_mapper and is basically a simpler version of the first one. Its focus is on mapping POI, potential sites of new creative industries, existing industries and workshops, highlighting potential production chains within the neighbourhood. Finally, it allows for users to highlight their usual route to work/labor, etc. and provide user feedback based on street level experience.


Neighborhood Mapper
1.pick mode:
1.exploration mode
2. route planner
3. user analysis
1.Select Area
Select Pointer
Place Route
1 m
426 m
851 m
1275 m
1700 m
exploration mode settings
1.Select minimum influence distance (m) 100
2.Select influence range (walking time) 10 minutes
POI location data
1.POI Name: Old Carpentry Workshop
2. ADDRESS: Chrysaleousa
3.Industry Type 2.wood workshop
4. DATE: 1929
5.Custom User Description
this is an old wood workshop that was based in strovolos for many years
PRODUCTS IN: raw wood
PRODUCTS OUT: carpentry products
WASTE: sawdust and wood chips
User Sentiment
6.VISIT FREQ OFTEN
7.FEELING OF SECURITY SLIGHTLY SECURE
8.NOISE LEVELS City trafic- 70db
9.THERMAL COMFORT Uncomfortable
10.MODE OF TRAVEL 1.car
11.HOW ACCESSIBLE? GOOD
12.URBAN FORM Only housing
13.AMENITIES DISTRIBUTION a little
14. KEYWORD 1: noisy
15. KEYWORD 2: hot
16. KEYWORD 3: neighboorhood
17. KEYWORD 4: lack of green
2.Save User Input
1.SAVE User Data
2.Clean Draft
3.Export to QGIS
Perspective
Neighborhood Mapper
1.pick mode:
1.exploration mode
2. route planner
3. user analysis
1.Select Area
Select Pointer
Place Route
1 m
426 m
851 m
1275 m
1700 m
exploration mode settings
1.Select minimum influence distance (m) 100
2.Select influence range (walking time) 10 minutes
POI location data
1.POI Name: work routine
2. ADDRESS: from chrysaleousa to strovolos
3.Industry Type 17.NOT APPLICABLE
4. DATE: -
5.Custom User Description
my morning routine going to work from old chrysaleousa core to strovolos
PRODUCTS IN: raw wood
PRODUCTS OUT: carpentry products
WASTE: sawdust and wood chips
User Sentiment
6.VISIT FREQ EVERY DAY
7.FEELING OF SECURITY VERY SECURE
8.NOISE LEVELS City trafic- 70db
9.THERMAL COMFORT a littleuncomfortable
10.MODE OF TRAVEL 4.walking
11.HOW ACCESSIBLE? NEUTRAL
12.URBAN FORM mixed use
13.AMENITIES DISTRIBUTION lots
14. KEYWORD 1: noisy
15. KEYWORD 2: hot
16. KEYWORD 3: lack of sidewalk
17. KEYWORD 4: many cars
2.Save User Input
1.SAVE User Data
2.Clean Draft
3.Export to QGIS
Perspective
POI location data
1.POI Name: Old Carpentry Workshop
2. ADDRESS: Chrysaleousa
3.Industry Type 2.wood workshop
4. DATE: 1929

5.Custom User Description

this is an old wood workshop that was based in strovolos for many years

PRODUCTS IN: raw wood PRODUCTS OUT: carpentry products WASTE: sawdust and wood chips

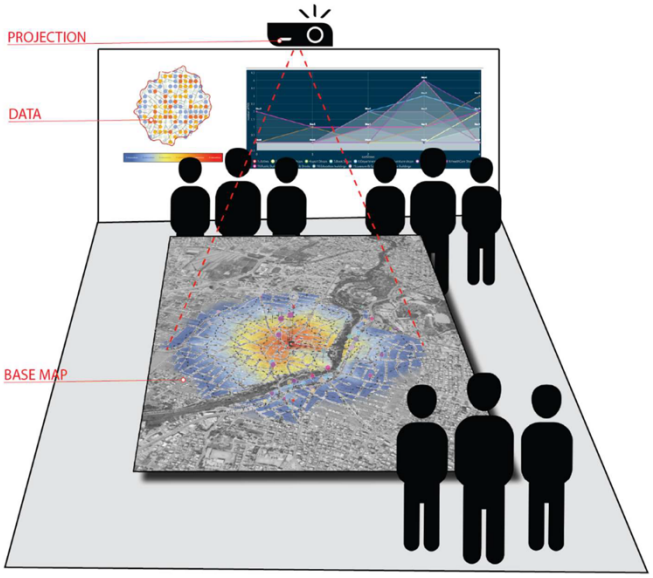
User Sentiment

6.VISIT FREQ	OFTEN	7.FEELING OF SECURITY	SLIGHTLY SECURE
8.NOISE LEVELS	City trafic- 70db	9.THERMAL COMFORT	Uncomfortable
10.MODE OF TRAVEL	1.car	11.HOW ACCESSIBLE?	GOOD
12.URBAN FORM	Only housing	13.AMENITIES DISTRIBUTION	a little
14. KEYWORD 1:	noisy	15. KEYWORD 2:	hot
16. KEYWORD 3:	neighboorhood	17. KEYWORD 4:	lack of green

All data are stored locally and then exported back to QGIS in the form of a shape files with points/isochrones and an attribute table.

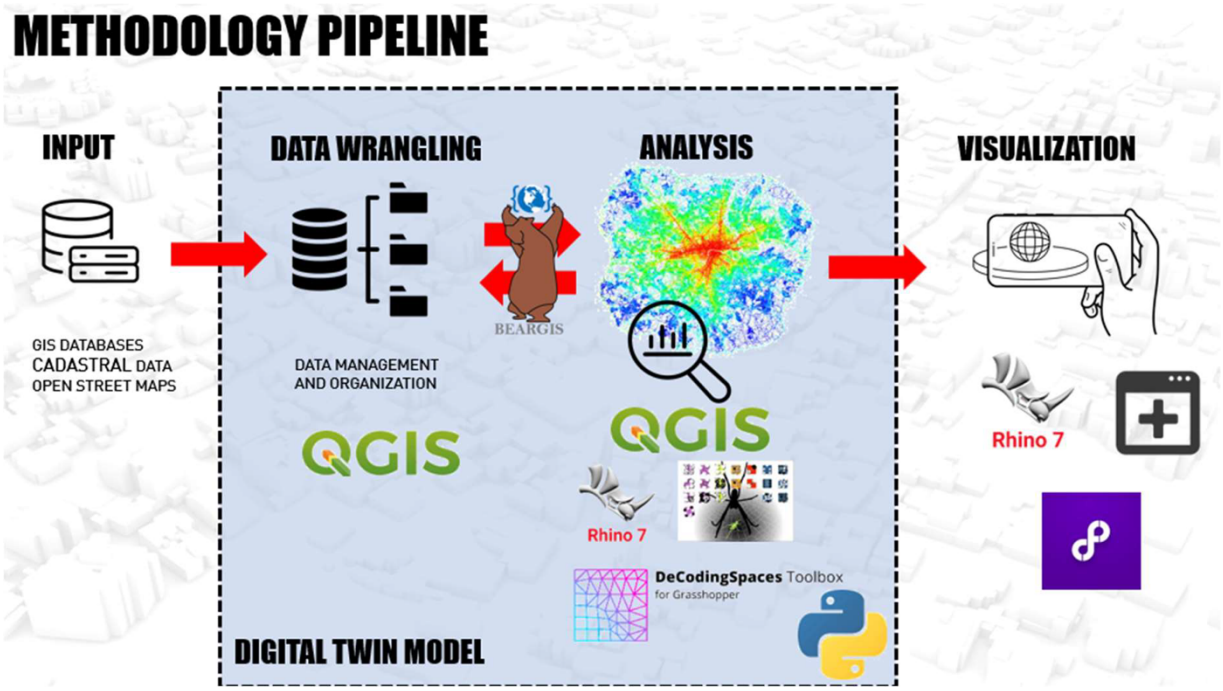
Data-enabled participatory process

The process could all take place in front of a computer screen, but with the use of hologram and a projector, we could have the data projecting on top of a physical map so that the process is hybrid.

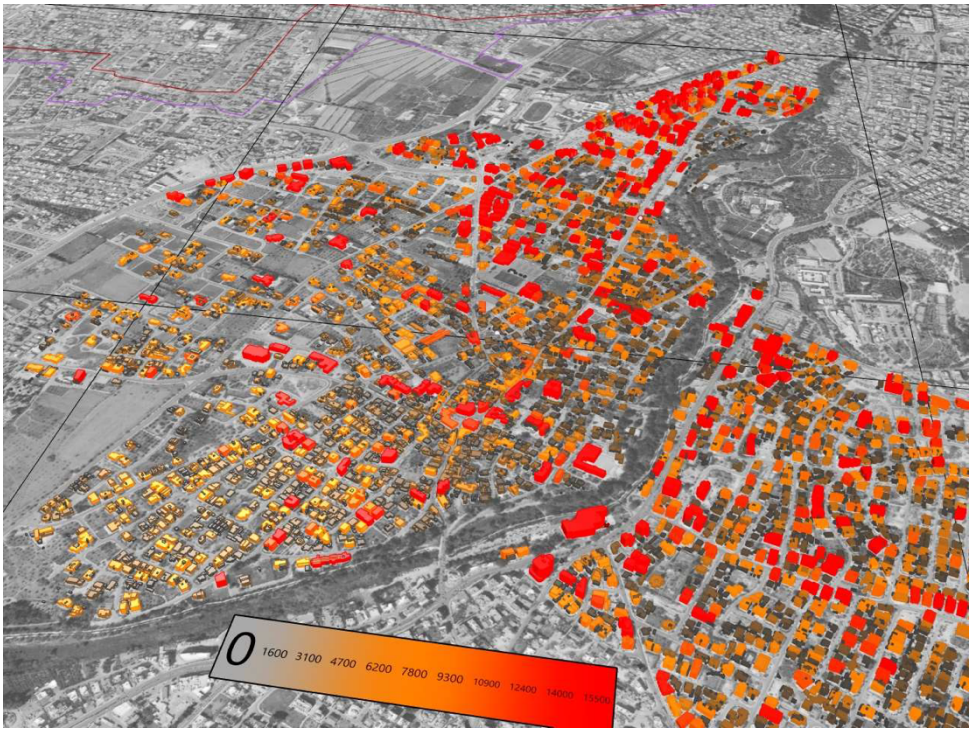


Integrated custom made- BIM model for urban analysis.

Lastly, we have been developing a model where each building block, holds data for occupancy and land use in the form of attributes. This process makes possible to create a series of urban analytics that can be correlated with tree-coverage- street network and parcel size.



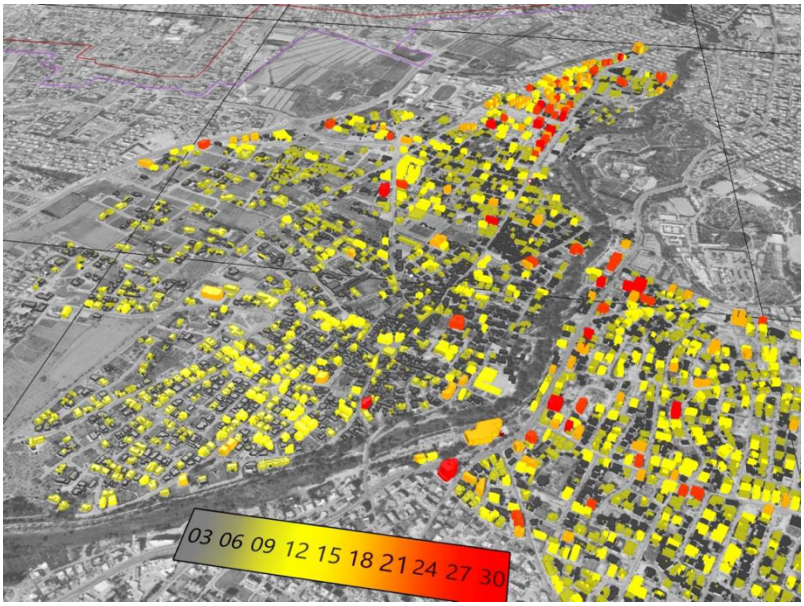
Area per Building



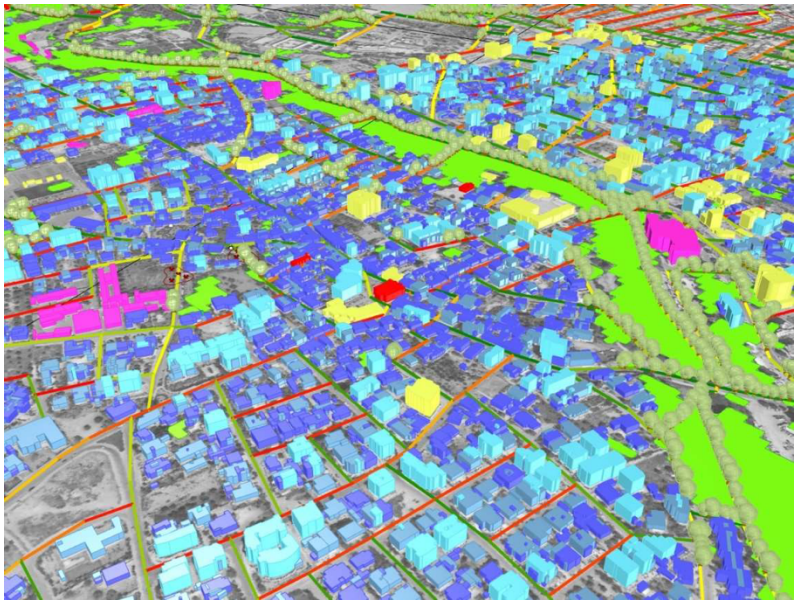
Coverage GSI

Floor Space Intensity FSI

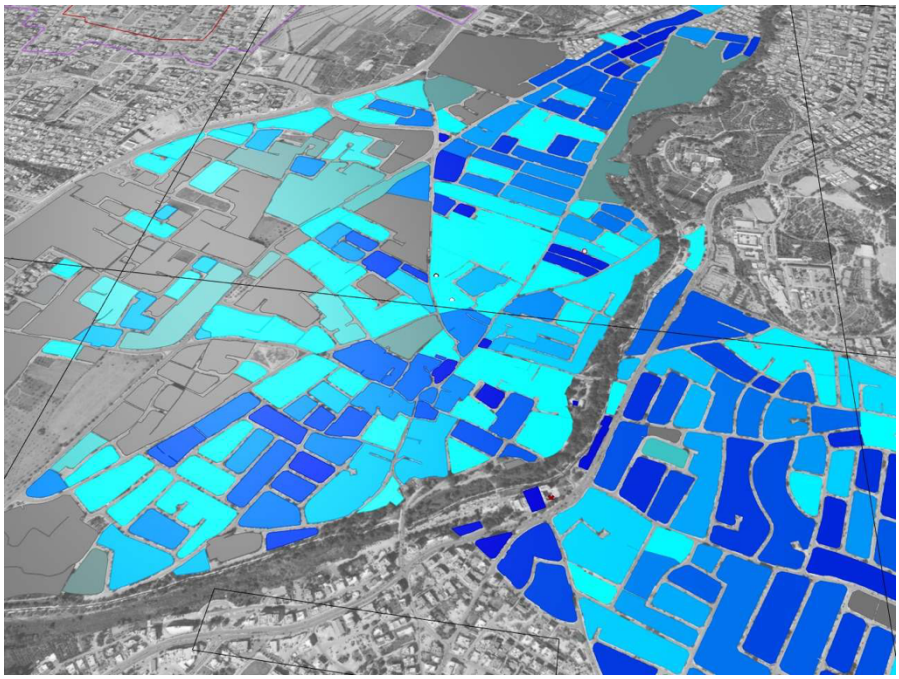
Height map in Strovolos- Chryseleousa



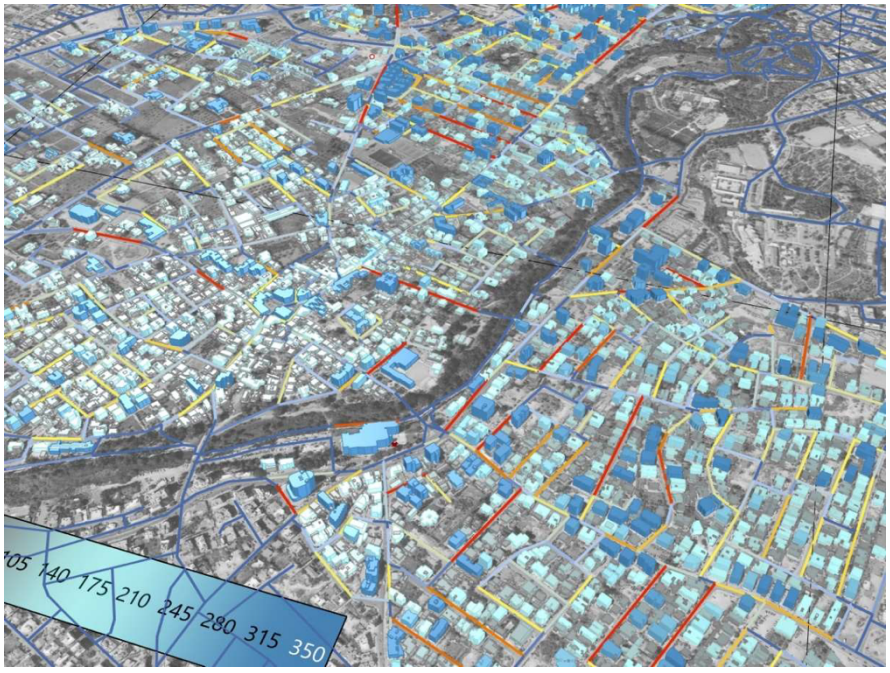
Need for high tree canopy based on street orientation and how far they are from the East-West orientation



SpatiousNess OSR



Population per building and population per street



The goal of the whole process and tools is to become a data enabled decision making toolkit that doesn't only rely on established urban analysis and simulation models but gives the possibility to capture user input from participatory design/budgeting sessions with local residents. By getting all user data into QGIS, there is the possibility for post-processing evaluation in order to provide new design criteria.

Interviewing

Time required

1 hour for each participant's interview, plus 8 hours for autonomous work to complete task.

Resources required

Recording device (mobile phone or recorder), notebook and pen (or digital notebook)

Rationale and Comments

In the get to know the neighborhood from within activity, the Interview tool is based on a mixed understanding of a life trajectory interview and interviewing people considering climate changes perception in present time. It is a qualitative method, and the questions will be opened rather than closed questions. Therefore, the provided interview guide is only a model that can and should be adapted to different settings and populations (Staples & Smith 2015). Possible results may vary from written summaries of the interviews; sets of quotations; or a chronological table considering different categories (see support documents).

Participants

Students, professors, researchers, local community, public administration, and stakeholders. There is no defined minimum or maximum number. Each group of 2 students can make an interview or more, depending on the time available during the course.

Procedure

Step 1. Interview guide. This toolkit provides a general interview guide to this purpose, but the groups of 2 students should adapt the interview guide to the setting and the population.

Step 2. Asking for the interview. Ideally, the selection of the people to be interlocutors of these interviews is made either by a local association or a close public administration service. Groups of 2 students should approach the person to be interviewed to ask for their availability, schedule a time and space, and to sign an informed consent, which can be signed some days earlier or right before the interview takes place.

Step 3. The interview. The students who make the interview should have different though complementary roles. One will ask the questions and the other takes notes. It's important not to rely only on the recorder, but also on these notes. The interview guide is only a guide. Questions might be asked in its order or following the order that the conversation takes the participants into.

Step 4. Transcription and full fieldnotes. The notes taken during the interview should be transformed in a narrative type of text, including self-evaluation notes of the way the interview was performed by both interlocutors and interviewers. The transcription should be made in a table with 3 entries: a first one for a timetable, to locate the quotations in the

audio record; a second one to the transcriptions; and a third one to integrate categories of analysis (see support documents).

How to select categories of analysis? Considering that the interviews aim at different types of knowledge – about the neighborhood; about the resident's life trajectory; about their perception of climate changes locally and currently – the categories can be built on that (see support documents)

Step 5. Result. Along with the teacher, the public administration, and/or a local association, the type of result should be decided in common. It can be a written form, with a summary for each interview, including small quotations, or a set of lengthy quotations. It can also take a visual format, with a chronological line where categories are hanged (adapted from Hanks & Carr 2008; see support documents).

Contents and variations

The interview tool is designed to be done preferably in a selected neighborhood, but the residents may decide otherwise, such as workplace, university, etc. Considering results variations, see step 5, above.

References

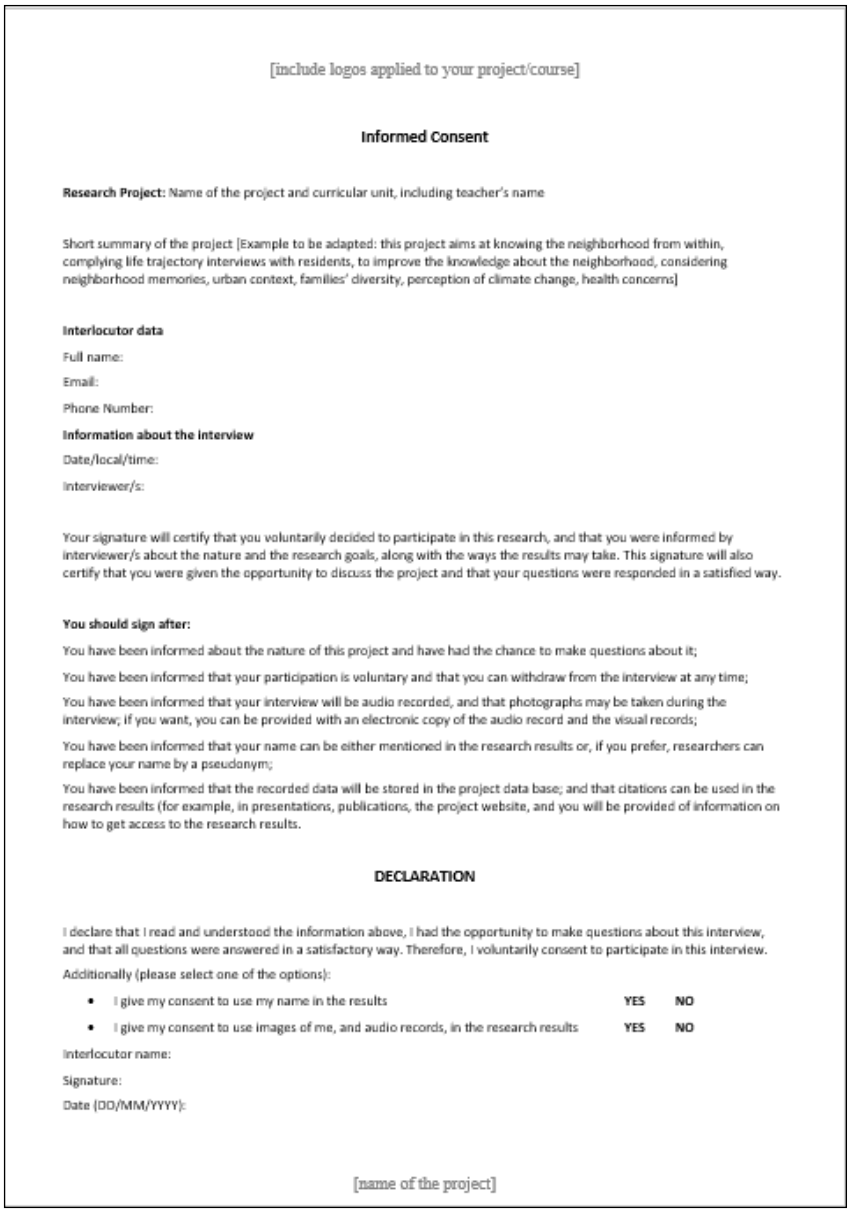
- Campbell, Elizabeth and Luke Eric Lassiter 2015. Doing Ethnography Today. Theories, Methods, Exercises. Malden and Oxford, Wiley Blackwell: 84-112
- Hanks, Roma Stovall & Nicole T. Carr. 2008. Lifelines of women in jail as Self-Constructed Visual probes for Life History Research. Mariiage & Family Review 42: 4, 105-116, DOI: 10.1300/J002v42n4_06
- Lofland John & Lyn H. Lofland. 1995. A Guide to Qualitative Observation and Analysis, Belmont, California: Wadsworth Publishing Company: 104-108
- Staples, James & Katherine Smith. 2015. "The interview as Analytical Category". IN Smith, Katherine, James Staples and Nigel Rapport (Eds.). Extraordinary Encounters. Authenticity and the Interview. New York and Orxord, Bergham Books, 1-18

Support Documents

Interview transcription table

Time	Transcription	Categories [examples to be adapted]
00'00''-05'00''	Insert transcription and after each sentence or paragraph insert category number	Life trajectory steps (birth, education marriage, deaths, housing changes, work, etc.) (1)
		Neighborhood (services, associations, other related local facilities) (2)
		Climate changes perception (3)
		Other categories (4)
05'00''-10'00''		[idem]

Informed Consent



[include logos applied to your project/course]

Informed Consent

Research Project: Name of the project and curricular unit, including teacher's name

Short summary of the project [Example to be adapted: this project aims at knowing the neighborhood from within, complying life trajectory interviews with residents, to improve the knowledge about the neighborhood, considering neighborhood memories, urban context, families' diversity, perception of climate change, health concerns]

Interlocutor data

Full name:

Email:

Phone Number:

Information about the interview

Date/local/time:

Interviewer/s:

Your signature will certify that you voluntarily decided to participate in this research, and that you were informed by interviewer/s about the nature and the research goals, along with the ways the results may take. This signature will also certify that you were given the opportunity to discuss the project and that your questions were responded in a satisfied way.

You should sign after:

You have been informed about the nature of this project and have had the chance to make questions about it;

You have been informed that your participation is voluntary and that you can withdraw from the interview at any time;

You have been informed that your interview will be audio recorded, and that photographs may be taken during the interview; if you want, you can be provided with an electronic copy of the audio record and the visual records;

You have been informed that your name can be either mentioned in the research results or, if you prefer, researchers can replace your name by a pseudonym;

You have been informed that the recorded data will be stored in the project data base; and that citations can be used in the research results (for example, in presentations, publications, the project website, and you will be provided of information on how to get access to the research results.

DECLARATION

I declare that I read and understood the information above, I had the opportunity to make questions about this interview, and that all questions were answered in a satisfactory way. Therefore, I voluntarily consent to participate in this interview.

Additionally (please select one of the options):

- I give my consent to use my name in the results **YES** **NO**
- I give my consent to use images of me, and audio records, in the research results **YES** **NO**

Interlocutor name:

Signature:

Date (DD/MM/YYYY):

[name of the project]

Interview Guide

NAME OF THE PROJECT

Short summary of the project [Example to be adapted: this project aims at knowing the neighborhood from within, complying life trajectory interviews with residents, to improve the knowledge about the neighborhood, considering neighborhood memories, urban context, families' diversity, perception of climate change, health concerns]

Interviewer/s name/s: Name Surname; Name Surname

Interview Guide | Date DD/MM/YYYY | Time:

Interlocutor general data: Birth Year; Birth location; Current Home location/address; Work: occupation and workplace

[add any other data you find useful for your specific goals, such as Religion, Marriage Status, Ethnic Identity, among other]

Questions

1. Life trajectory
   - Where have you born? Where did you grow up?
   - Did you marry? Had children? When? What is your household composition currently?
   - When did you begin to work and what work changes have you experienced?
   - Can you name a few turning points in your life? How did the national/local context affect your life?
2. Neighborhood
   - How did came/choose to live in this neighborhood?
   - Are you satisfied with your home? Neighbors? Neighborhood services?
   - Which services do you use in the neighborhood?
   - Which services are lacking in the neighborhood? (Examples: public transports; food stores; etc.)
   - District services satisfaction/dissatisfaction: mobility, schools, food stores, sports, other facilities
3. Climate changes perceptions
   - Considering the neighborhood where you live, what types of climate concerns do you have? [examples if needed: air pollution (industrial, traffic); heat and cold in general; heat and cold at home; rain floods; droughts; lack of green spaces]
   - Were you or any member of your family directly affected by climate changes? Or indirectly? How?
   - What health concerns do you have? Are they related to climate changes anyhow?
4. Do you have a special story to tell considering the neighborhood

Visual result example

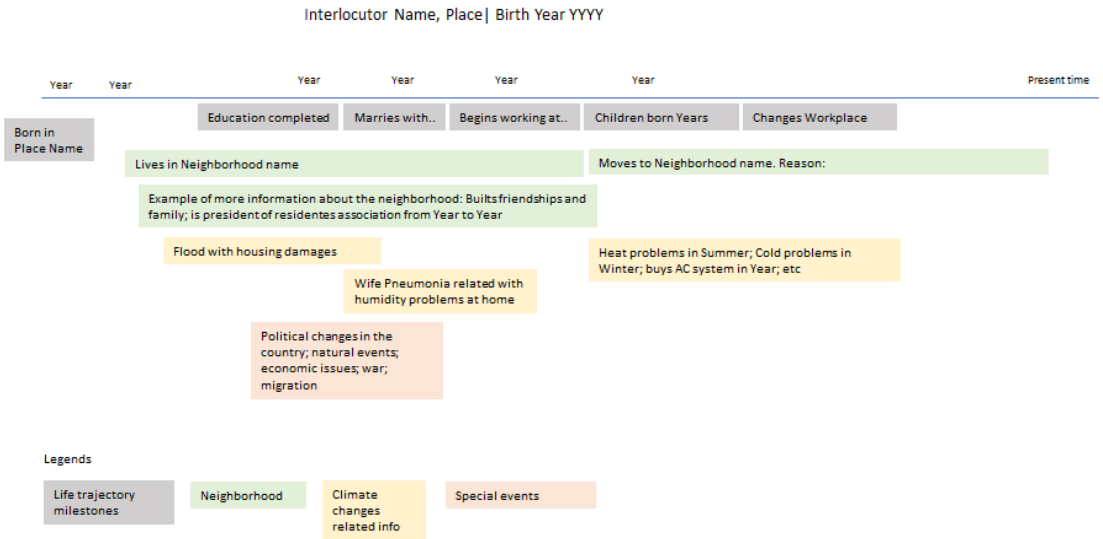


Photo elicitation

Time required

3-4 hours.

Resources required

Camera, mobile phone/phone/another device with camera, notebook, pen.

Rationale and Comments

This activity aims at increasing participation within the communities, by actively integrating the participants. Photo elicitation/photo voice will be motivated either to show photo albums including images of the neighborhood, or to make their own pictures. In both versions, participants are invited to narrate, explain the images at stake.

Participants

Members of the local community will be the central participants for they will collect/select the images. Teachers, students, researchers, local community, and stakeholders may all participate.

Procedure

Step 1: The activity is presented to all participants, including goals and procedures. Participants will be divided in groups of 3 or 4. All groups should include one community member or stakeholder association member, who will be called the “core member” of this activity. This step won’t take more than 15 minutes.

Step 2: The “core member” will decide if she/he prefers to select photographs from her/his albums (case 1) or to make new photos (case 2). For case 1, the main goal is to know about the community/neighborhood history. For case 2, the objective is to make pictures about the problems/challenges of the community. This step will take about 10 minutes.

Step 3: The groups will make the activity together. For case 1, the “core member” explains the albums, while other participants take notes and ask questions. For case 2, the “core member” takes the pictures and explains why, while other participants also take notes and ask questions. Two types of documents will be provided for this step: one to take the notes and other with suggested questions. This step will take about 2 hours.

Step 4: The groups take half an hour to decide how to summarize their findings/results. After that, they present to the whole group in short presentations (10 minutes each).

Contents and variations

This activity may include going to some participant’s houses and to share personal pictures. “Core members” of the groups should sign an informed consent before beginning the activity.

References

- Atlas Visual Infinito: Zona Ribeirinha de Lisboa, https://repositorio.iscte-iul.pt/handle/10071/23314
- Campos, R. 2011. "Imagem e tecnologias visuais em pesquisa social", Análise Social 199, XLVI: 237-25.
- Datta, A. 2012. "'Where is the Global City?' Visual narratives of London among East European Migrants", Urban Studies 49(8): 1725-1740
- Harper, D. 2002. "Talking about Pictures: a case for photo elicitation", Visual Studies 17(1): 13-26

Examples and visual contents

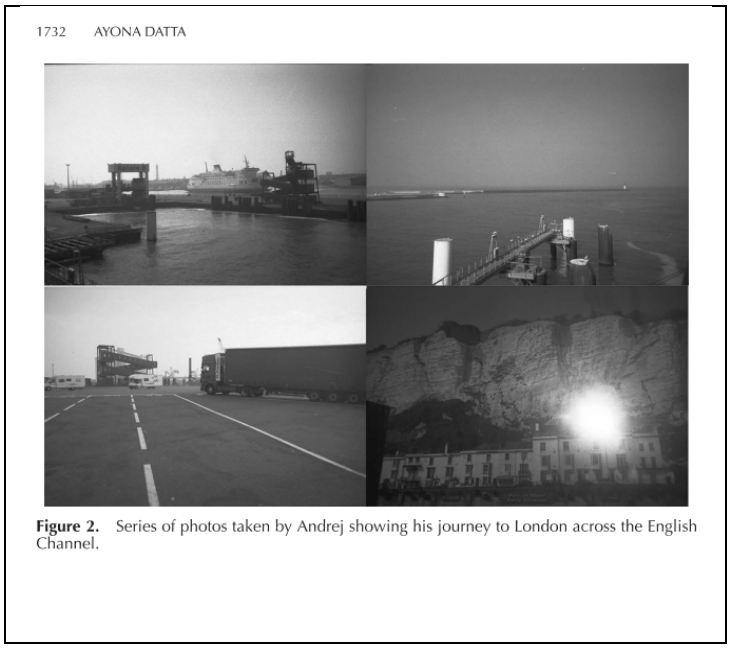


Figure 2. Series of photos taken by Andrej showing his journey to London across the English Channel.

Datta, 2012: 1732.

Ayona Datta uses photo elicitation, where the observer and the photographer is the research subject, and not the researcher as in classical research. Her interlocutors were East European migrants in London, who took photos from their daily lives and then built "visual narratives",

Following Harper, "photographs appear to capture the impossible: a person gone; an event past. That extraordinary sense of seeming to retrieve something that has disappeared belongs anole to the photograph, and it leads to deep and interesting talk" (Harper 2002: 23).

Support Documents

Case 1 – Photo elicitation where an interlocutor shows his/her photos from albums or from a computer/mobile phone commonly conduct to interesting conversations where one can learn a lot from a single interlocutor. However, we suggest a set of questions. Choose what makes sense in your situation and guarantee that the situation is recorded in new photos and registered in fieldnotes.

Examples of questions:

a) General questions about the community/neighborhood history
- Do you/your relatives remember how was the beginning of the community/neighborhood?
- Is there a story about the neighborhood that is told to children?
- What are the main events that happened until the present time here?
- What changes can be signaled about this neighborhood?
- How was (introduce a national event here?

b) Specific questions to the interlocutor holding the photos from a recent or not so recent past
- From these photos which is the one that brings you more memories and why?

Case 2 – Photo elicitation where an interlocutor selects what should be recorded in photos implies that the set of potential interests is well defined in advance. Topics can include situations in the neighborhood/district where there is/are:

- Health threat to the community;
- Housing problems (heat/cold structure issues);
- Evidence of climate changes results (after continuous rain, for instance);
- Green spaces – presence, types, etc;
- Sociability spaces – gardens, shops, associations, other community services in the area;
- Daily life problems signaled by the interlocutor.

Despite presenting these suggestions, the interlocutor should be free to choose if he/she has already a group of images he/she wishes to record and talk about.

PLACE STANDARD with a climate lens tool

Time required/Duration

4 hours.

Resources required

The evaluation through the Place Standard Tool is facilitated by the construction of a diagram on a sheet in which the scores that refer to the results of a questionnaire on 14 urban dimensions are reported.

This diagram allows you to visualize the strengths and weaknesses of the district, facilitating the process of defining intervention priorities.

Participants

Students, teachers, researchers, local community, public administration and stakeholders.

Rationale and Comments/Description

This Tool is based on the main tool of the Place Standard, which originated in Scotland, where it has been applied since 2015, and then developed in several European countries such as Holland, Spain and Germany. Originally conceived as a participatory tool to increase the potential of a place's physical and social environment (neighborhood) to support health, well-being and quality of life, it has recently (2022) been implemented to support a joined up, collaborative, and participative approach to climate action within a place.
On the site https://www.ourplace.scot/Place-Standard-Climate, you can find all the documentation produced by the collaboration of Public Health Scotland, the Scottish Government, Sniffer, SSN and Architecture and Design Scotland.
The tool is used to evaluate what is working and what needs to be improved in a given place; the tool produces results in the generation of place-based data and knowledge and in the identification of regeneration actions deemed to be priorities to improve quality. The Climate Lens helps people understand the dimensions of climate change and its impacts on the places they live by providing more information to diminish the negative aspects of climate change.
The tool is structured like a questionnaire and includes 14 dimensions (physical, social and economic characteristics of the neighbourhood), each of which is made up of a few questions for a total of 99, and is addressed to the various actors (citizens, administrators, associations, etc.), and allows to identify strengths and weaknesses of the and develop priority actions to improve the quality of places and the well-being of the people who use and live there. The 14 dimensions explored are: 1. Moving Around; 2. Public transport; 3. Traffic & Parking; 4. Streets & Spaces; 5. Natural Spaces; 6. Play & Recreation; 7. Facilities & Services; 8. Work & Local Economy; 9. Housing & Community; 10. Social Interaction; 11. Identity & Belonging; 12. Safety; 13. Care & Maintenance; 14. Influence & Sense of Control. A facilitator addresses the questions to the members of a community, who assign a score ranging from 1 (very low margin of improvement = critical situation) to 7 (very low margin of improvement = good situation), for each of the dimensions listed above. The points that are closer to the center represent areas that need improvement, while those towards the edge are considered strengths. The

basic model, which is used to collect comments and feedback on the 14 topics identified, has been supplemented with instructions relating to climate objectives, which contribute to the definition of strengths and areas for improvement.

Procedure

For each topic there are two cards to fill. The first identifies the main survey questions of Place Standard. The second tab notes the climate lens suggestions.

Step 1. filling out the questionnaire by assigning a score from 1 to 7.

Step 2. report the scores of each topic on the diagram so that you can immediately see the strengths and weaknesses aiding the process of setting priorities.

Learning outcomes

Build the ability to understand the resources and critical issues of the neighborhood, the needs of its community and identify intervention priorities to improve the quality of life and to adapt to climate change.

References

- https://www.ourplace.scot/Place-Standard-Climate
- Hasler, K. (2018) Place Standard: a practical tool to support the creation of healthier places, European Journal of Public Health, Volume 28, Issue suppl_4, November 2018, cky213.022 https://doi.org/10.1093/eurpub/cky213.022
- NHS Health Scotland (2017), Place Standard process evaluation: learning from case studies in year one. https://www.healthscotland.scot/media/1394/place-standard-process-evaluation_may2017_english.pdf
- NHS Health Scotland (2017), Piloting the Place Standard in Hillhead and Harestanes A joint project by East Dunbartonshire Community Planning Partnership, Keep Scotland Beautiful and NHS Health Scotland Final Report 2017. https://www.keepscotlandbeautiful.org/media/1559233/ksb-place-standard-report-final-31-05-17.pdf

Excerpt from: “Template for use with an online whiteboard”

https://www.ourplace.scot/place-standard-climate-lens-resources

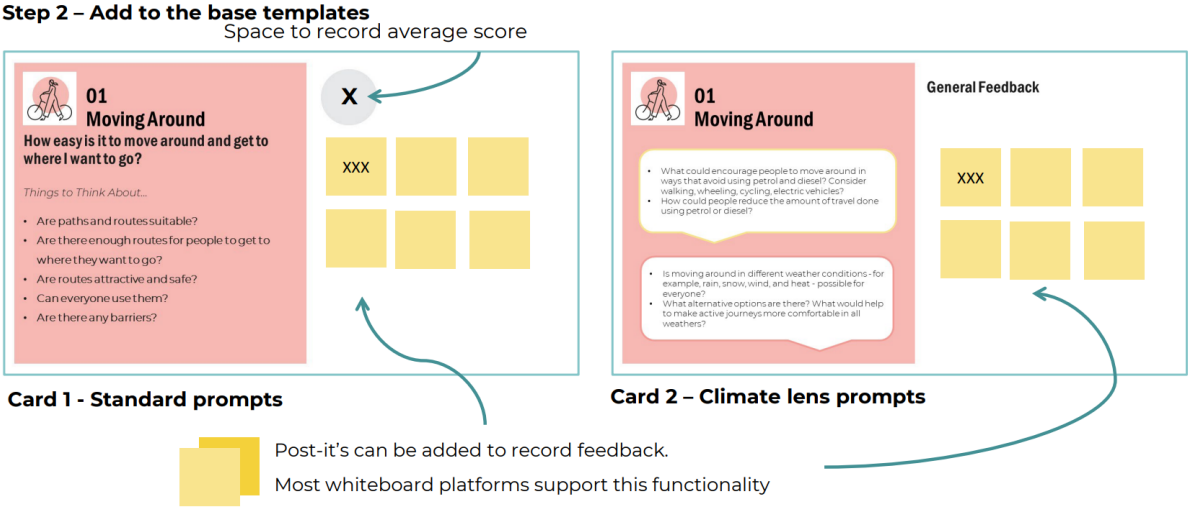
How to use – Overview

How to use – What to add...

Step 1 – Upload the pdf base template to your online whiteboard space.

NOTE: Make sure to extract the pages of the pdf so they appear as separate slides. Depending on the online whiteboard platform being used you may need to split the pdf first before uploading.

Step 2 – Add to the base templates



Card 1 - Standard prompts

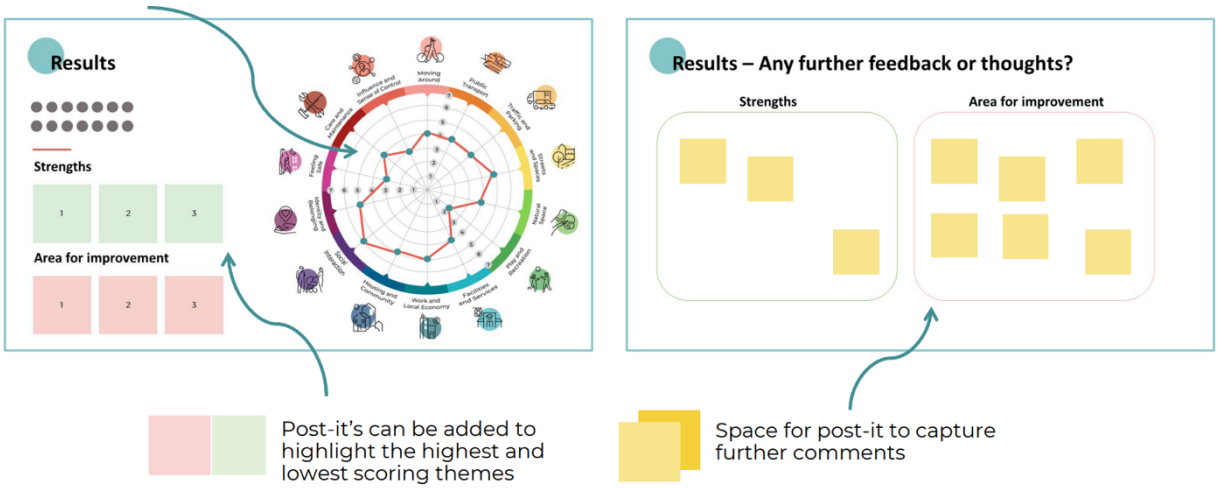
Card 2 – Climate lens prompts

Post-it's can be added to record feedback.

Most whiteboard platforms support this functionality

How to use – What to add...

Use circle shapes & lines to plot the scores onto the Place Standard wheel.



Post-it's can be added to highlight the highest and lowest scoring themes

Space for post-it to capture further comments

01
Moving Around

How easy is it to move around and get to where I want to go?

Things to Think About...

- Are paths and routes suitable?
- Are there enough routes for people to get to where they want to go?
- Are routes attractive and safe?
- Can everyone use them?
- Are there any barriers?

X

Voting

1	2	3	4	5	6	7
1	2	3	4	5	6	7

General Feedback

Type your feedback here	Type your feedback here	Type your feedback here	Type your feedback here
Type your feedback here	Type your feedback here	Type your feedback here	Type your feedback here

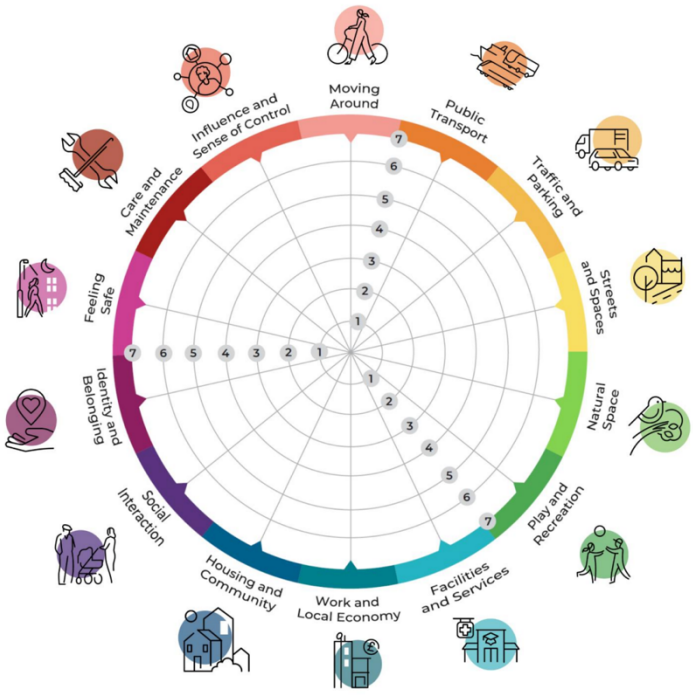
Results

Strengths

1	2	3

Area for improvement

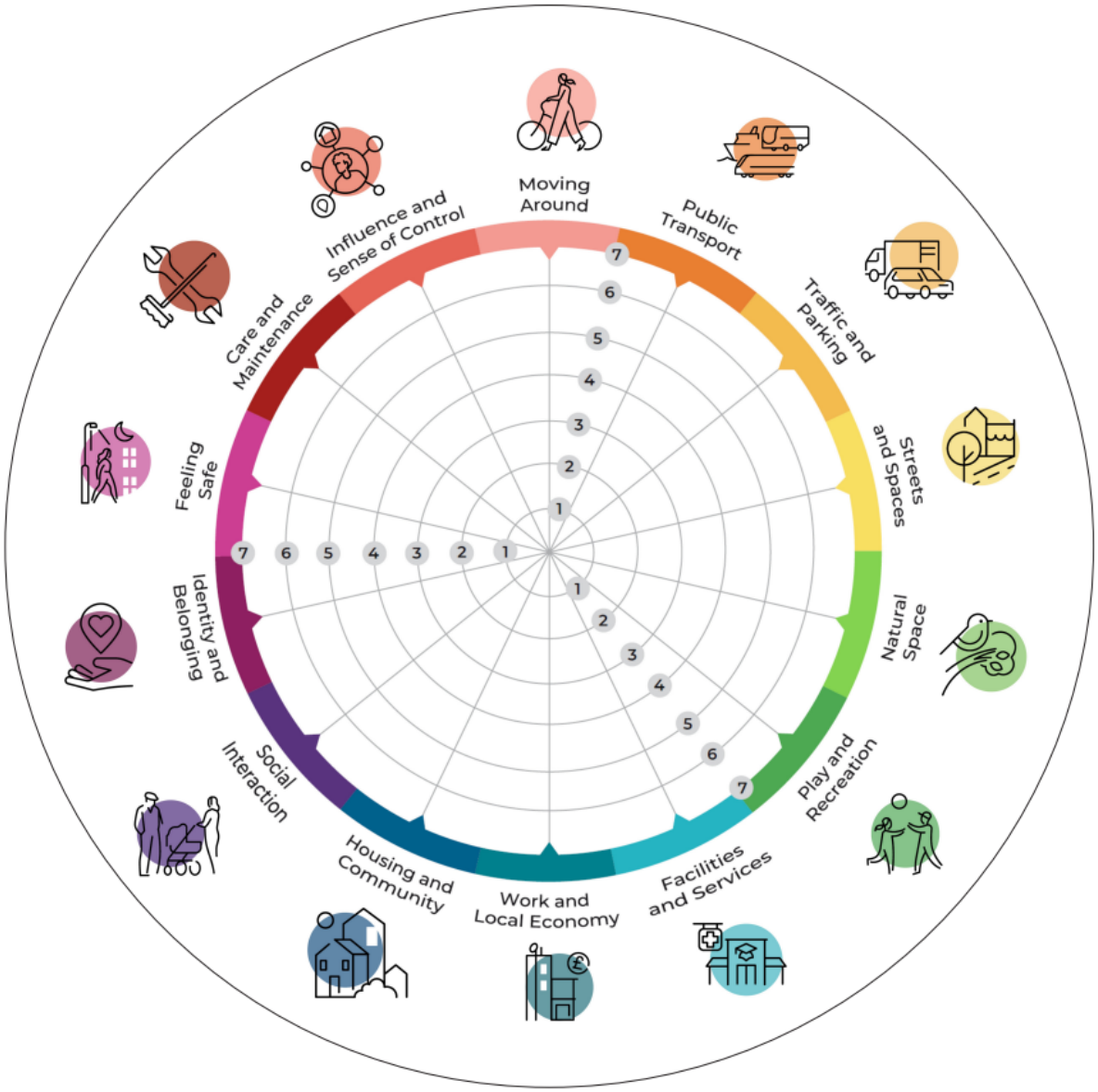
1	2	3



Results – Any further feedback or thoughts?

Type your feedback here		

Type your feedback here		


Moving Around
Public Transport
Traffic and Parking
Streets and Spaces
Natural Space
Play and Recreation
Facilities and Services
Work and Local Economy
Housing and Community
Social Interaction
Identity and Belonging
Feeling Safe
Care and Maintenance
Influence and Sense of Control
1
2
3
4
5
6
7

PRINTED presentation: Posters and leaflets

Time required/Duration

4 -6 hours.

Resources required

Computer.

Participants

Students, teachers, researchers.

Rationale and Comments/Description

Printed presentation provides a visual representation of the project results through drawings, text, charts, graphs, and other visual aids. The display of the poster enables viewers to ask questions about the project and the benefits it can provide.

Two modes of printed presentation of the project, **posters and leaflets**, are especially useful for supporting public participation in regeneration projects. Exhibitions are usually organized by representatives of local authorities in cooperation with experts (urban planners, architects, environmentalists, designers, etc.) in order to inform and engage citizens and other stakeholders. Leaflets are portable and help conveying additional information to audience.

A) Posters – exhibition panels

"Exhibition panels are used to present information with a high proportion of visual content. Besides spreading the information, they can encourage the public and stakeholders to get involved in the participatory process. (Čolić et al. 2013). Posters include text and drawings, maps, models, etc. They are usually exhibited in public spaces and public institutions. It is preferable to inform the general public about the exhibition.

Procedure

Preparatory activities include design and printing of poster.

Step one: Poster Design

Posters range in size, and it is possible to present a poster either arranged portrait or landscape. Content and type of information that is to be displayed affects the concept of poster. It can include basic schemes, but also complex drawings, maps and models.

Although there are some differences in research and project poster presentation, some general instructions maybe followed (https://libguides.bc.edu/posterpresentation):

- *Do not be too wordy! Keep text concise and clear.*
- *Organization is key. Think about what you want to say first and then carefully consider layout.*

- *Consider your audience. What do you want them to learn from your poster?*
- *Make sure your title is descriptive and large enough to be readable from far away.*
- *Think about image and font sizes so the poster is readable from 5-8 feet away.*
- *Use headings, bullets, and graphics to break up text.*
- *Make sure your images and graphics have contrast so they pop on the page.*
- *Think about including contact information for those who want more information.*
- *Remember, your poster will read left to right just like a page."*

Regardless of how you lay out your poster, general tips include (https://urca.msu.edu/posters):

- *"Make sure all of the text on your poster is in a large, readable font face—a size that people can easily read from standing, say, 10 feet away. (Do not use a size smaller than 20 pt.)*
- *Make sure that the font faces you use are appropriate for your presentation and your audience (for instance, don't use an "immature"-looking font face like Comic Sans or KidPrint, or a really aggressive, sloppy font face like Brutality or Laundromat.*
- *Remember that text set in ALL CAPS and long chunks of text set in italics is harder to read than text in standard sentence case.*
- *Effectively use headings and subheadings for the content of your poster, and make sure these headings stand out visually.*
- *Do not clutter your poster with long, dense paragraphs of text. When it's appropriate and when you can, present your information in succinct bullet points.*
- *Avoid using dark backgrounds with light text on top—most readers are most comfortable reading dark text (i.e., black) on light backgrounds (i.e., white). You don't have to stick with black and white, but know that putting light yellow on dark purple might be difficult for your readers.*
- *Make sure all of your figures, graphs, photos, and other visual content are high-quality and will print well (and not get blurred or pixelated); make sure all of this content is clearly visible and readable from 10 feet away.*
- *Label each of your figures, graphs, photos, and other visual content so that your readers know exactly what the figure is referring to or presenting."*

A visually appealing poster can be judged based on the following criteria (https://libguides.bc.edu/posterpresentation):

- *"Do visuals enhance poster content? Is it eye-catching?*
- *Are the components of the poster balanced across the space?*
- *Easy to read, pleasing-on-the-eye font/ colour scheme choices? Is text error-free?*
- *Are photographs, graphs, tables, and other graphics creative?"*

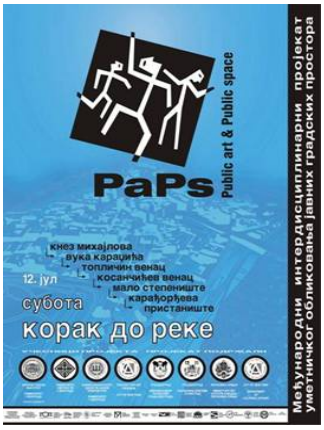
Step two - Printing: Preparing poster for printing refers to considering:

- Resolution. Make sure all of your images are at least 300 dpi (dots-per-inch)
- File Size & Project Dimensions. Make sure your file is sized correctly for output.
- CMYK/Crop Marks./Bleed & Safe Zones.
- Spell Check/Fonts.

- Image Content.

Step three - Display of posters: Posters maybe displayed using foam board or easel and binder clips, or some other method of securing and displaying posters.Exhibition panels can be interactive if the visitors are allowed to be engaged in a dialogue on project by adding comments or performing modifications to pre-prepared items. (Čolić et al. 2013).

Examples and/or visual results (how do part of the procedures and/or results will look like)



Source: Public art & Public space "Step towards the river" project 2003, PaPs archive. publicart-publicspace.org

B) LEAFLETS

Leaflets and flyers are printed sheets of information that are used for promotions or marketing. They are usually simple, made out of a single sheet of paper that may be folded. They are affordable to print and disperse in large numbers. Flyers are usually single, unfolded pages, printed on one side. Leaflets tend to be folded to create multiple pages or sides. Leaflets can therefore be used to provide more information or when you have already caught the attention of the reader.

Procedure

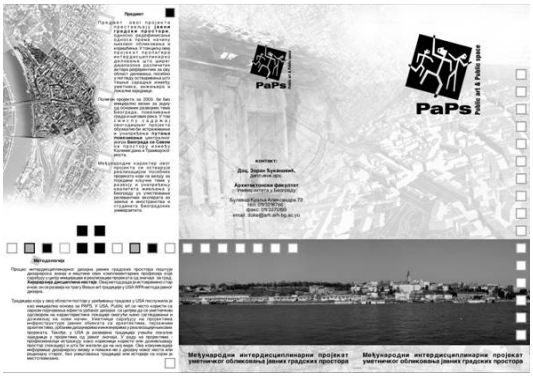
Step one: Specify size of paper and number of folds.

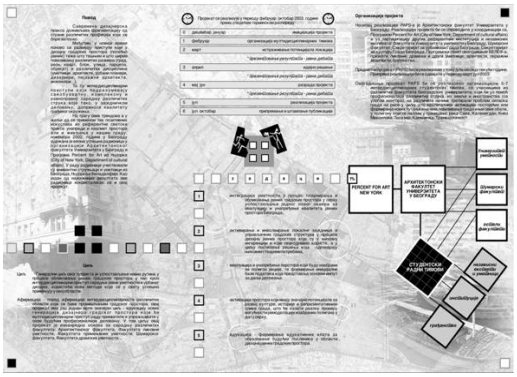
Step two: Content and design. Main steps include:

1. Figure Out Your Goal + Message.
2. Identify Your Leaflet's Target Audience.
3. Optimize Your Message.
4. Choose The Most Appropriate Format + Size.
5. Utilize A Bold + Eye Catching Headline (and subheadings)
6. Utilize Imagery (but only where appropriate)

Step three: Printing. Preparation is the same as for poster.

Examples and/or visual results (how do part of the procedures and/or results will look like)





Source: Public art & Public space "Step towards the river" project 2003, PaPs archive

References

- Čolič, R., Mojović, Đ., Petković, M., Čolić, N. (2013). Guide for Participation in Urban Development Planning. Belgrade: GIZ/AMBERO-ICON. http://www.urbanlandmanagement.rs/wp-content/uploads/2014/10/VODIC-Engleski.pdf
- Public Art & Public Space (web site + books + exhibitions). https://www.publicart-publicspace.org
- Poster Presentation, available at: https://urca.msu.edu/posters
- How to Create a Poster Presentation, available at: https://libguides.bc.edu/posterpresentation
- What is the Difference Between Flyers and Leaflets? Available at: https://www.cityprintingltd.co.uk/what-is-the-difference-between-flyers-and-leaflets.php
- How To Design the Perfect Leaflet. Available at: https://www.fastprint.co.uk/blog/how-to-design-the-perfect-leaflet.html

PUBLIC ART presentation

Time required/Duration

4 -6 hours.

Resources required

Public space, different tools and materials.

Participants

Students, teachers, researchers, citizens.

Rationale and Comments/Description

Public art presentation provides a sensorial (visual, auditory, tactile, gustatory, olfactory or combined) representation of the project results through public artworks, public art installations, public art events and other artistic aids exposed or performed in public spaces, feely accessible to all. It could be of visual art (painting, sculpture, architecture, and art, graffiti), performing arts (theatre, dance, performance), literature, music, film, digital art, street art and so on. The display of the public artworks enables viewers to ask questions about the project and the benefits it can provide. Public art does not solve problems. For example, public art cannot alleviate the problems that climate change creates, but it makes the problems more visible. It educates, sensitizes and warns the public about the problem and thus motivates the public to take action. On the other hand, there are a variety of ways that art and culture can create positive health impacts. There is evidence that engagement with artistic activities, either as an observer of the creative efforts of others or as an initiator of one's own creative efforts, can enhance one's moods, emotions, and other psychological states as well as have a salient impact on important physiological parameters.

Since public art refers to works of art in any medium that are planned and executed with the specific intention of being located or performed in the public spaces and freely accessible to all, there are countless various possibilities for using a public art as a presentation of the project. But generally speaking, there are two types of use of public art for the purpose of presenting results: **public art installation** for exhibition or event setting, a **public artwork** that artistically illustrates the results of the project.

A) Public art installation for holding an exhibition or event

This type of public artwork is designed and realized as an art installation with the specific purpose of holding an exhibition or event that presents the results of even non-artistic content. It can be realized as a scenography for an event or an exhibition display, with the intention of enhancing the effects of the presentation. It is temporary in nature by its purpose and lasts as long as the presentation lasts. At the end of the presentation, the installation is dismantled. In special cases, the installation can be reused, in whole or in parts, in a different or the same place, but only if it is designed in advance to be reused.

Examples and/or visual results (how do part of the procedures and/or results will look like)

"The climate and us - the (In)visible impact" photographs by Vladimir Živojinović

B) Public artwork that artistically illustrates the results of the project

This type of public art work is an original unique work of art, specially designed and realized in a public space, with the explicit intention of illustrating in a creative-artistic way the results that can be of a non-artistic character. It must be thematically specific by poetically reflecting the mission of the results it represents. It is also desirable that the work of art somehow reflects the local identity of the community in which it is created. It could be temporary or permanent. That kind of art is widely used for presentation of climate change effects and urban health matter all around the world.

Examples and/or visual results (how do part of the procedures and/or results will look like)

Procedure

The procedure for realizing both types of public art use for the purpose of presenting results, a public art installation as well as a public artwork, is more or less the same.

Step one: Conceiving

This step precedes the beginning of design and implementation.

- Permission - Given that the activity takes place in a public space, it is first necessary to check whether the local administration supports and allows this kind of action. This is the phase in which it is very important to first prepare the project proposal with as detailed as possible descriptions of intentions, effects, participants, duration and phases of implementation, as well as the place of implementation and sources of financing of the project. With the project proposal prepared in this way, negotiations with the local administration are entered into. If the negotiations succeed, this phase ends with an agreement and results in obtaining an official permit to implement the project. If the negotiations fail, the project as a whole has no conditions for implementation and is cancelled.
- Funding - At this step, it is first necessary to secure financing for the project.
- Stakeholders - it is necessary to select, motivate and mobilize the key stakeholders and agree with them on the tasks, conditions and dynamics of implementation. Expect delays in advance. Have a backup option for each of the work packages.

Step two: Design

During the design step, it is necessary to take into account the following issues:

WHAT?

- What is presenting? (topic, content, product…) – a topic or content or product specific public art.
- What kind of art(s) will be used?
- What and how convert/translate from not artistic to artistic matter… (poetic)… don't forget that everything has an artistic potential.
- At the very beginning of this step, it is strategically necessary to decide whether the public art will be permanent or temporary - this decision must be made together with all relevant actors, especially the public administration.

WHO?

- Who is the artist(s)/designer(s)? Professionals only or participatory design with targeted stakeholders?
- To whom is addressing? Who is the audience? To all or to specific target groups, e.g. kids? Community based public art.
- With whom is realizing? Level and scope of participation? (citizens, kids, pupils, passing-byers, elderly people, local authority, companies, NGOs… artists, workers, audience…)

WHERE?

- Public space (outdoor or indoor) – better in open space if possible
- Site? Particular location in open space is very important matter – site-specific art if possible – think on cultural specificity, surrounding urban elements, identity…
- Freely and comfortably accessible to all.
- Physical characteristics of the space: dimensions, configuration (topography and existing surrounding architecture), occupation by vegetation or urban furniture.
- Sensory accessibility - internal and external visibility and audibility are very important for the development of the event and are of crucial importance for the presence and behavior of the audience - if the sensory accessibility is not adequate, the audience will not want to participate in such an event.
- Weather impact - it is necessary to count in advance the positive or negative impact of different weather conditions on the planned activities (sun, rain, snow, wind...)

HOW?

- An official permission to display the presentation in a public space (issued by the local government) is mandatory, before the start of the activity (as previously stated).
- Announcement - the event must be announced on time through information that is distributed among the participants and the audience in different ways - the information should contain information about the four "W": What, Who, Where and When (what will happen, who will participate, where and when it will be implemented) - information should be short, but complete and interesting in content and attractively illustrated - use all the media at your disposal (mass media, social networks, flyers, announcement posters, etc.) - information should be distributed successively and gradually, from more basic to more complex.
- Funding – must be sufficient and absolutely transparent.
- Understanding context - thematic, spatial and cultural - thematic context refers to the project whose results are presented - spatial and cultural context refers to the public space and community in which public art is displayed.

WHEN?

- Season - think in advance about the seasonal conditions that can be expected in the public space where the event is organized (weather conditions, presence of tourists, local holidays and customs, duration of daylight and so on)
- On weekends or weekdays - the type of event and the expected target groups of participants and audience influence the decision on whether the event will be organized during working or non-working days - during non-working days it is more difficult to organize institutional stakeholders and it is easier to have a larger audience - during non-working days, the situation is reversed - this should be taken into account when planning the day of the event.

- Holidays - during local holidays the attention of local residents is focused on holiday matters, and it is very difficult to refocus their attention on our event - for this reason, it is recommended to avoid holidays for organizing those events.
- Weather conditions - this factor cannot be predicted with certainty before the event itself - since the activities are planned in open public spaces, the weather factor can play a crucial role in the realization of the event - for this reason, it is recommended to provide alternative implementation options in advance (e.g. .realization in an alternative closed public space, or an event with a flexible implementation date, etc.).

Step three: Realization

During the realization, it is necessary to take into account the following issues:

WHAT?

- Public Art proposal – present and discuss project proposal with all stakeholders – be open minded and accept critic if there are – be ready to adapt the project according to prevailing opinion of stakeholders.
- Adaptation of the project – present adapted project to stakeholders – after they accept it it's ready for realization

WHO?

- Participation – motivate people to participate – make the roles of the participants clear to everyone, motivate them to act and conduct the activities kindly and patiently.
- Motivation – make the participants proud to be part of the event - this is the best halo effect for the project and one the best gifts that project can give to the local community with such activities – the pride is echoing long after the activity is over.

WHERE?

- Site – check, secure and prepare location in advance (a day or two before)
- Alternative site – provide and alternative site if necessary

HOW?

- Materials – the use of local materials and the local way of processing those materials is highly recommended, because it directly and unequivocally celebrates the local identity.
- Tools – avoid tools and machinery, especially heavy machinery - if necessary use simple local tools.
- Safety - this does not mean safety – make all participants and audience feel comfortable and relaxed – entertainment is one of the best tools to achieve this goal
- Security - given that the event is held in an open space, it is necessary to take into account the possibility of unforeseen side events that may affect the participants of the event from the environment - for this reason, it is recommended to assign a couple of participants to discreetly take care of internal and external security.

- Organization - anticipate everything in advance and be prepared for surprises - be creative in planning, flexible in implementation and objective in expectations.
- Time - manage time carefully – divide activities into successive phases between which provide time for rest - too long realization exhausts human resources but also resources of time and money – do not forget that interesting and entertaining events give a subjective feeling of shortening time.
- Phases – carefully plan each phase of the implementation – especially the opening and closing ceremonies, because everything you promise at the opening must be fulfilled at the closing, and it would be good to give something more than promised (joy, fun, pride ...) – think about the time, participants, audience, equipment. Be creative.

WHEN?

- Date – find a proper time/date together with stakeholders
- Option – include alternatives in the process before realization starts
- Schedule - decide on the schedule together with all participants - make the schedule so that it is easy for everyone to understand - clearly explain the role of each participant.

Step four: Dismantling or Maintenance and effects

Depending on whether the event is permanent or temporary, the following should be taken into account:

- Maintenance - if the event lasts a long time (several days, weeks or months) or is permanent, it is necessary to think in advance about the maintenance of installations and equipment and to plan it adequately.
- Dismantling - if the event is temporary, it is necessary to plan in advance the dismantling of installations and equipment and the cleaning of the space. It is important that after the event we bring the location back to its original state in the same or better quality than it was before the event.
- Effects - monitor and analyze effects, draw conclusions, share and verify findings with the community - improve

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- Valenza, D. (2019) When Art Meets Climate Change - Towards a Model Involving Youth Actors, in *EU-funded initiatives Research Paper*, link: https://www.iedonline.eu/download/climate-crisis/Valenza_Domenico_IED-Climate-Paper_2019.pdf
- Aylesbury Vale Public Art Toolkit, link: https://www.aylesburyvaledc.gov.uk/sites/default/files/page_downloads/Public-Art-Toolkit.pdf

Websites with useful examples:

- https://artistsandclimatechange.com/tag/public-art/
- https://www.publicart-publicspace.org/
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12. Anne Sikora and Sophia Regner (2019) „Ice on the rope“, public art installation and performance, Brandenburg Gate, Berlin, Germany, Tom Weller/picture alliance via Getty Images, link: https://www.social-climate-art.com/

"REBUS ®- REnovation of public Buildings and Urban Spaces" URBAN GAME - Version for CliCCHE

Time required/Duration

14 hours of workshops and 6 hours in total of preparation of materials for the workshop activities.

Resources required

Laptops, drawing paper, coloured pencils, markers, video projector.

Participants

Students, teachers, researchers, local community, public administration, stakeholders, experts. Three working groups will have to be set up.

Rationale and Comments/Description

"…REBUS, acronym of Renovation of public Building and Urban Spaces is a game/simulation for the planning and design of urban areas aimed at improving the comfort of public spaces for the mitigation of the heat island, conceived and developed for the Region Emilia-Romagna (Italy) within the Europe Republic-Med project" (Farnè, 2017).

In Rebus the players are architects, planners, landscapers, consultants and public administration officials who compete on the basis of a "fake" Call for the design and construction of public works to improve the resilience and quality of life in densely built neighborhoods. In the simulation game, tested on several occasions in the Emilia Romagna Region, there will be a competition between 3 teams with a (fake) regulation and a (fake) tender for the award of public funding with the aim of transforming a neighborhood, proposing interventions for squares, streets, paths, abandoned buildings, and public spaces.

Each team is made up of 16 players, including 4 architects, 2 landscapers, 2 agronomists, three engineers (including 1 expert in hydraulics and 1 in mobility); 2 urban planners, 3 public officials. The participants are called to act according to their professional and personal profile. Gender equality is guaranteed; during the game the teams will be able to make use of external consultants (experts and tutors). At the end of the "Game" a jury of experts engages in the evaluation on the basis of the criteria established by the announcement. The evaluation takes place in public session in front of the participants with the role of listeners.

In the CliCCHE methodology, the "Rebus" simulation game is updated to meet the needs of the training course. For each team there will be a certain number o of players made up of: some students, student-architects; 1 facilitator tutor; some citizens; 1 public administration technician; 1 administrator, some economic operators. The 3 groups can make use of external technicians, e.g.: 1 agronomist, 1 doctor, 1 landscape architect, 1 expert in environmental sciences, etc. The objective of the simulation game is to respond to a "fake call" for the assessment of the quality of life and well-being in a neighborhood and the selection of climate adaptation actions and interventions through artificial solutions and NBS.

Procedure

Step 1. Presentation of the initiative: Reading of the Notice ("Almost true") CliCCHE for District X and Formation of working groups. Sharing a Work Program. 2.00 hours activity.

Step 2. 1st Workshop activity: Evaluation of the quality of life and well-being of citizens in the District through the administration of the questionnaire "Risk pErcepTion and willingnEss to pAy on Climate cHange (reTeach) QUESTIONNAIRE" (see Tool n.4.3a)/ Evaluation Model Place Standards with climate lens (Tool 4.4a)/ SWOT Analysis (Tool4.4.b). 3.00 hours activity.

Step 3. 2nd Workshop activity: Construction of urban regeneration strategy: project objectives, list of adaptation actions and priorities (See Tool 4.5.a). 3.00 hours activity.

Step 4. 3rd Workshop activity. Construction of the Adaptation Project Concept, localization of adaptation proposals (artificial solutions and NBS) (See Tool 4.5.b). 3.00 hours activity.

Step 5. 4th Workshop activity. Project proposals in sample areas. 3.00 hours activity.

Step 6 Closing event: Exhibition and awarding of the winning strategy.

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Support Documents

CliCCHE'S (ALMOST REAL) CALL

STRATEGY FOR THE REGENERATION OF PUBLIC SPACES, FOR HEALTH AND WELL-BEING IN THE NEIGHBOURHOOD (?)

Article 1. Purpose of the Call

1. The Municipality of … is aiming at the regeneration of the city's districts with a project addressed at young future technicians, citizens, with the contribution and the experience of municipal technicians and experts through the activation of an Idea Competition for the definition of a urban regeneration, as the result of a co-planning process with the citizens of the neighborhood (?), aimed at:
2. Understanding the level of satisfaction of the district inhabitants' quality of life (?), the quality of existing or potential public spaces and the present and future risks to the health and well-being due to the impacts of climate change; Select the climate change adaptation measures

deemed to make the neighborhood resilient, improve existing and potential public spaces and ensure the well-being of citizens;

3. Locate and represent nature-inspired design solutions (NBS) as an outcome of the co-design process.
4. Promote citizen participation in the conception and use of public spaces by promoting forms of responsible protagonism.

Article 2. Participants and methods of participation

The participation of three design teams is required, consisting of: 5 future young professionals; 1 facilitator tutor; 3(X) citizens; 1 public administration technician; 1 administrator.

The three teams will be able to make use of external technicians who are experts in agronomy, environmental sciences, medicine, etc.

The co-planning meetings will take place in ..... and consist in a number of ... meetings, according to a shared work program.

Article 3. Criteria for selecting the winning proposal

At the end of the co-planning process, a Jury of Experts will select the urban regeneration strategy deemed best for the purposes of satisfying the following criteria:

-well-being and health of citizens;

-urban quality;

- resilience to climate change;

social, functional and economic quality

Article 4. Creation of an event for the dissemination of the Project and for the awarding of the winning project

Preparation of an exhibition and awarding of the winning strategy

Recording Fieldnotes

Time required

Depending on the time of the walking and observing the district (approximately 2 hours), plus the time to organize and analyze the materials collected (approximately 2-3 hours).

Resources required

Camera, mobile phone or another device with camera, computer, notebook, photo viewing and text editing computer programs, pen, pencil, colours.

Rationale and Comments

This activity aims at recording the material collected during the activity of observing and walking through the district. The written material collected during fieldwork might be in a form of small texts and scratch notes. Small texts and scratch notes can be written both during observation or after. Fieldnotes may include fast sketches and drawings, which may be also made during or after observation.

Participants

This tool mainly addresses to students, researchers, professors, and anyone who wants to do fieldwork in the case study.

Procedure

Step 1: Writing and/or drawing during fieldwork requires concentration. Observations to be registered in fieldnotes may include: built environment descriptions, nature environment, informal conversations, and description of everyday activities.

Step 2: Observations can be recorded by written and/or visual notes: use what you feel most comfortable.

Step 3: Analyze fieldnotes: review all written fieldnotes, select parts of text, make reflections, and write a summary, including drawings (if existent).

Contents and variations

Usually, anthropologists register in a notebook, while architects begin to sketch, draw, photograph. However, written fieldnotes are not limited to anthropologists or writers, and visual notes are not limited to architects or artists; anyone can try their hand at writing and drawing, making photography or video to collect data about a neighborhood.

Written notes can represent not only what one sees during fieldwork, but also what happens during the observation (sounds, smells, people met on site), capturing how spaces are used in different ways and by different people.

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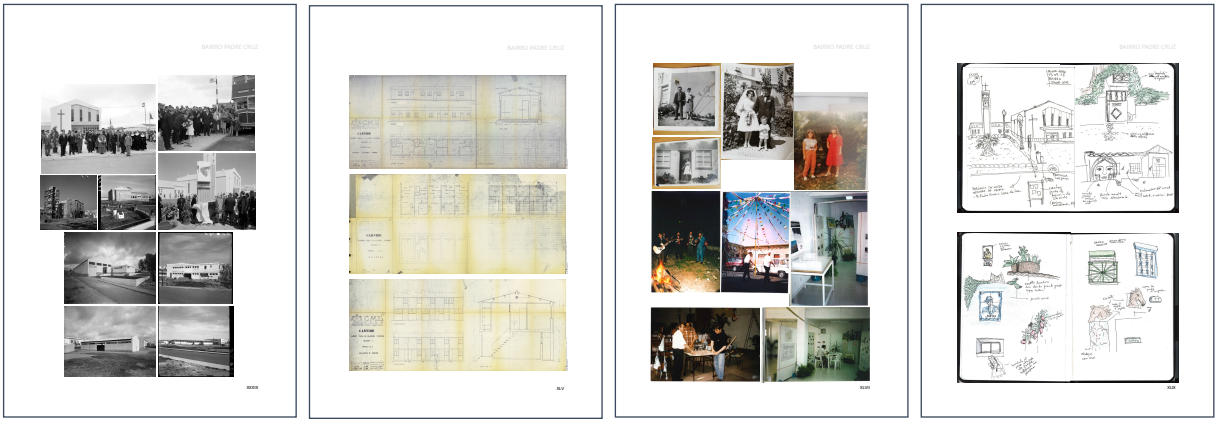
Examples and visual contents

Photographs of some material given during the Workshop of Ethnographic Drawing organized by FCSH-NOVA on the 3rd-7th of February 2018. (Ph. Caterina Di Giovanni).



Some pages of the photographic diary of the doctoral thesis in Urban Studies by Caterina Di Giovanni, available at https://repositorio.iscte-iul.pt/handle/10071/27654. The diary contains archival photographs, original drawings of the houses, old photographs by the inhabitants, current photographs, and ethnographic drawings of the neighborhood.

reTeach Questionnaire

Risk pErcepTion and willingnEss to pAy on Climate cHange (reTeach) questionnaire

To fill online: https://forms.gle/PwDgGjateyaD3nvS6

Section 1. Socio-Demographic information

Q1.1 Select your year of birth
A1.1.1 drop-down list (2005-1900)
A1.1.99 Don't know/refuse

Q1.2 Select your gender
A1.2.1 Male
A1.2.2 Female
A1.2.3 Other/don't know/refuse

Q1.3 Select your country of birth
A1.3.1 drop-down list (all the Countries)
A1.3.99 Don't know/refuse

Q1.4 Select your country of residence
A1.4.1 drop-down list (all the Countries)
A1.4.99 Don't know/refuse

Q1.5 Are you a public administrator in your municipality?
A1.5.1 Yes
A1.5.2 No
A1.5.99 Don't know/refuse

Q1.6 Select your residential area
A1.6.1 Urban
A1.6.2 Suburban
A1.6.3 Rural/Countryside/Seaside
A1.6.4 Other
A1.6.99 Don't know/refuse

Q1.7 Is the air quality in the vicinity of your home affected by one (of more) of these factors? Select one or more answers

A1.7.1 Car/truck traffic
A1.7.2 Industries
A1.7.3 Harbour
A1.7.4 Airport
A1.7.5 Other: …… (max 50 characters)
A1.7.99 Don't know/refuse

Q1.8 Why do you live in your municipality? Select up to 3 answers

A1.8.1 I have always lived here
A1.8.2 Proximity to school/university
A1.8.3 Good air quality
A1.8.4 Lower household expenses
A1.8.5 Proximity to shops
A1.8.6 Proximity to transportation
A1.8.7 Neighbourhood safety
A1.8.8 Proximity to beaches
A1.8.9 Proximity to workplace
A1.8.10 I have no alternatives
A1.8.11 Other
A1.8.99 Don't know/Refuse

Q1.9 If you could, would you move out of your current dwelling?

A1.9.1 Yes
A1.9.2 No
A1.9.99 Don't know/Refuse

Q1.10 In what capacity do you/your family occupy the dwelling?

A1.10.1 Property/usufruct
A1.10.2 Rent (from a private individual)
A1.10.3 Rent (from a private society)
A1.10.4 Rent (public housing)
A1.10.5 Rent (from other public entities)
A1.10.6 Free of charge
A1.10.7 Other
A1.10.99 Don't know/Refuse

Q1.11 Since what year have you lived in your house?

A1.11.1 drop-down list (2023-1900)
A1.11.99 Don't know/Refuse

Q1.12 Have you ever lived in another country for at least 1 year?
A1.12.1 Yes
A1.12.2 No
A1.12.99 Don't know/Refuse

Q1.13 Have you ever lived in another city for at least 1 year?
A1.13.1 Yes
A1.13.2 No
A1.13.99 Don't know/Refuse

Q1.14 Select your marital status
A1.14.1 Single
A1.14.2 Civil union/registered partnership
A1.14.3 Married
A1.14.4 Separated
A1.14.5 Divorced
A1.14.6 Widowed
A1.14.99 Don't know/Refuse

Q1.15 How many people usually live in your household (including yourself)?
A1.15.1 drop-down list (1, 2, 3, 4, 5, 6, 7, 8, 9, 10+)
A1.15.99 Don't know/Refuse

Q1.16 Do you live with people under the age of 18?
A1.16.1 Yes
A1.16.2 No
A1.16.99 Don't know/Refuse

Q1.17 How often do you eat red meat?
A1.17.1 Once a month or less
A1.17.2 More than once a month but less than once a week
A1.17.3 Between once and twice a week
A1.17.4 More than twice a week
A1.17.99 Don't know/Refuse

Q1.18 Do you smoke?
A1.18.1 Yes, currently
A1.18.2 No, but smoked in the past
A1.18.3 No, never smoked
A1.18.99 Don't know/Refuse

Q1.19 How regularly do you engage in outdoor physical activity?
A1.19.1 At least 150 minutes per week of moderate-intensity aerobic physical activity

A1.19.2 At least 75 minutes per week of vigorous-intensity aerobic physical activity
A1.19.3 At least 2 days a week of muscle-strengthening activities
A1.19.4 A combination of some (or all) of the above
A1.19.5 None of the above
A1.19.99 Don't know/Refuse

Q1.20 What is the highest level of education you have successfully completed?
A1.20.1 None
A1.20.2 Primary Education
A1.20.3 Lower Secondary Education
A1.20.4 Upper Secondary Education
A1.20.5 Bachelor's degree or equivalent
A1.20.6 Master's degree
A1.20.7 PhD or more
A1.20.99 Don't know/Refuse

Q1.21 Considering the income of all the members of your family, the financial level of your family allows you to live:
A1.21.1 Comfortably
A1.21.2 Quite comfortably
A1.21.3 Uncomfortably
A1.21.4 Most uncomfortably
A1.21.99 Don't know/Refuse

Q1.22 In general, how is your health?
A1.22.1 Very good
A1.22.2 Good
A1.22.3 Bad
A1.22.4 Very bad
A1.22.99 Don't know/Refuse

Q1.23 Compared to five years ago, would you say the quality of life in your city or area has:
A1.23.1 Worsened
A1.23.2 Stayed the same
A1.23.3 Improved
A1.23.99 Don't know/Refuse

Q1.24 Are you satisfied with your life at the moment?
A1.24.1 Definitely yes

A1.24.2 Yes
A1.24.3 No
A1.24.4 Not at all
A1.24.99 Don't know/Refuse

Q1.25 Do you suffer from certain pathologies? (Select one or more answers)
A1.25.1 Allergies
A1.25.2 Cancer
A1.25.3 Heart disease
A1.25.4 Mental illness
A1.25.5 Chronic respiratory diseases
A1.25.6 Diabetes
A1.25.7 Obesity
A1.25.8 Other
A1.25.9 None
A1.25.99 Don't know/Refuse

Section 2. Risk perception

Q2.1 Indicate how much you agree with the following statement: "Risk is the Probability of an unfavourable event".
A2.1.1 Totally agree
A2.1.2 Agree
A2.1.3 Disagree
A2.1.4 Totally disagree
A2.1.99 Don't know/Refuse

Q2.2 Indicate how much you agree with the following statement: "Risk is a consequence of individual or group behaviour".
A2.2.1 Totally agree
A2.2.2 Agree
A2.2.3 Disagree
A2.2.4 Totally disagree
A2.2.99 Don't know/Refuse

Q2.3 Indicate how much you agree with the following statement: "Risk depends on the nature of the event (e.g. earthquake, floods, pollution) and not on one's own behaviour".
A2.3.1 Totally agree
A2.3.2 Agree

A2.3.3 Disagree
A2.3.4 Totally disagree
A2.3.99 Don't know/Refuse

Q2.4 Indicate how much you agree with the following statement: "Risk is associated with financial loss/gain".

A2.4.1 Totally agree
A2.4.2 Agree
A2.4.3 Disagree
A2.4.4 Totally disagree
A2.4.99 Don't know/Refuse

Q2.5 Indicate from 1 to 4 how much you think these environmental risks are NOW possible in your residential area.

	Very unlikely	Somewhat unlikely	Somewhat likely	Very likely	Don't know/refuse
A2.5.1 Urban Heat Islands					
A2.5.2 Heatwaves					
A2.5.3 Increasing pollen amounts					
A2.5.4 Landslides					
A2.5.5 Flooding					

Q2.6 Indicate from 1 to 4 how much you think these health risks are NOW possible in your residential area and based on your current housing conditions.

	Very unlikely	Somewhat unlikely	Somewhat likely	Very likely	Don't know/refuse
A2.6.1 Diseases related to heat stress					
A2.6.2 Diseases related to cold stress					
A2.6.3 Exposure to allergens					
A2.6.4 Bacterial growth					
A2.6.5 Cancer					
A2.6.6 Heart disease					
A2.6.7 Mental illness					
A2.6.8 Chronic respiratory disease					
A2.6.9 Diabetes					
A2.6.10 Obesity					
A2.6.11 Pollen allergies					
A2.6.12 Asthma					

Q2.7 Indicate whether these environmental risks will decrease/remain stable/increase in 2033 in your residential area.

	Decrease	Remain stable	Increase	Don't know/refuse
A2.7.1 Urban Heat Islands				

A2.7.2 Heatwaves				
A2.7.3 Increasing pollen amounts				
A2.7.4 Landslides				
A2.7.5 Flooding				

Q2.8 Indicate wheter these health risks will decrease/remain stable/increase in 2033 in your residential area and based on your current housing conditions.

	Decrease	Remain stable	Increase	Don't know/refuse
A2.8.1 Diseases related to heat stress				
A2.8.2 Diseases related to cold stress				
A2.8.3 Exposure to allergens				
A2.8.4 Bacterial growth				
A2.8.5 Cancer				
A2.8.6 Heart diesease				
A2.8.7 Mental illness				
A2.8.8 Crhonic respiratory disease				
A2.8.9 Diabetes				
A2.8.10 Obesity				
A2.8.11 Pollen allergies				
A2.8.12 Asthma				

Q2.9 How often have you read news on climate change in the last three months?

A2.9.1 Never
A2.9.2 Sometimes
A2.9.3 Often
A2.9.4 Always
A2.9.99 Don't know/refuse

Q2.10 How much confidence do you have in the measures implemented by your public authorities to face climate change?

A2.10.1 None
A2.10.2 Low
A2.10.3 Quite high
A2.10.4 High
A2.10.5 Don't know/refuse

Section 3. Soft skills

Q3.1 Do you believe in climate change?

A3.1.1 Yes
A3.1.2 No
A3.1.99 Don't know/refuse

Q3.2 Do you think climate change has an impact on human health?
A3.2.1 Yes
A3.2.2 No
A3.2.99 Don't know/refuse

Q3.3 Do you deem yourself prepared to adapt and deal with the health impacts of climate change?
A3.3.1 Yes
A3.3.2 No
A3.3.99 Don't know/refuse

Q3.4 Do you think your way of life can influence climate change?
A3.4.1 Yes
A3.4.2 No
A3.4.99 Don't know/refuse

Q3.5 Do you think you, in your own small way, can make a difference in combating climate change?
A3.5.1 Yes
A3.5.2 No
A3.5.99 Don't know/refuse

Section 4. Willingness to pay

Q4.1 How much do you expect to spend in 2033 to address the effects of climate change?
A4.1.1 Nothing
A4.1.2 A negligible part of my income
A4.1.3 A substantial but sustainable part of my income
A4.1.4 A substantial part of my income that could put me in difficulty sometimes
A4.1.5 A substantial part of my income that will put me in difficulty almost most of the time
A4.1.99 Don't know/Refuse

Q4.2 Would you agree to an increase in taxes if the extra money were used to tackle climate change?

A4.2.1 Totally disagree
A4.2.2 Disagree
A4.2.3 Agree
A4.2.4 Totally agree
A4.2.99 Don't know/Refuse

Q4.3 How much of your income would you be willing to address for these taxes?

A4.3.1 None
A4.3.2 Less than 1% of my income
A4.3.3 Between 1 and 5% of my income
A4.3.4 Between 5 and 10% of my income
A4.3.5 More than 10% of my income
A4.3.99 Don't know/Refuse

Scenario Building Guidelines

Time required/Duration

8 hours to build the BAU SCENARIO, the S&S SCENARIO and the Project's Concept.

Resources required

Laptop, pens and markers.

Participants

Students, teachers, researchers, local community, public administration, and stakeholders.

Rationale and Comments/Description

Students will guide citizens, administrators, technicians, and local stakeholders in understanding and being aware of the need to challenge the **BAU_"Business-as-usual"** scenario and to explore the S&S_"**Shared and sustainable scenario**".

The "BAU Scenario" maintains the current "status" of the places, and leaves everything as it is, taking responsibility for evaluating the consequences, dealing with an expected climate framework that will evolve in a certain way. It assesses the impacts on health, on the well-being of citizens, and the quality of life in the neighborhood.

The "Shared and sustainable scenario" can respond to the major issues of climate change raised in the assessment phase, to the hopes, the expectations, and the anticipated threats and risks of negative repercussions of incautious decisions, on the populations' health and on its well-being. This scenario must necessarily emerge from the relationship between the local population, public administration, technicians, local professionals, and stakeholders of the territory, who will have to discuss in the "European Awareness Scenario Workshop (EASW)", to select possible actions that can mitigate the expected consequences of climate change and define specific adaptation measures.

With the **S&S "Shared and sustainability"** Scenario, a "**Project Concept"** will be created: a conceptual map which will report the identified mitigation and adaptation solutions, on the basis of the objectives of urban regeneration aimed at improving well-being and the quality of conditioned life.

Potential Risks: the lack of climate data and studies/mitigation plans for the target area. If not available, it will be possible to consider using the data known at national level and data taken from cities and areas with homogeneous characteristics as a reference.

Learning Outcomes

Teachers aim to enable students to develop the following:

-reasoning and problem-solving skills;

-decision-making capacity by comparing the criticalities and resources of the territory with the different needs of local actors.

It is possible to observe how the students:

-relate to each other and with local actors (their potential future interlocutors during their professional activity);

-how they communicate, listen, engage in dialogue, and give feedback;

-they cooperate and coordinate as team members, build relationships, and solve practical problems and sometimes conflicts.

Procedure

Step 1. Construction of the BAU Scenario through the definition of the **Risk Matrix**.

Based on the recognition of the impacts of Climate Change on the neighborhood's key socioeconomic and environmental sectors, the risks that could affect the neighborhood and that could endanger the health and well-being of the population in the future will be identified. The matrix will identify a low to high level of risk, also with reference to the possible effects on the health and well-being of citizens.

Step 2. Construction of the S&S Scenario

On the basis of the Climate Adaptation Guide "A Handbook for Provinces, Regions and Cities" (Prutsch et al., 2014), adaptation measures will be selected for some of the socio-economic and environmental sectors exposed to the impacts of climate change (**Promising Actions List**) and the criteria will be identified for the identification of priorities.

Step 3. Adaptation Project Concept

The objectives of climate adaptation in the district will be explained using a map as well as the adaptation measures expected with the aim to improve the quality of life and the health and well-being of the inhabitants. The adaptation measures, symbolically located on the map, will have to refer to design solutions, attributable to: nature-based solutions and nature and artificial solutions.

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Support Documents

Scenario Guidelines	4.5.a	Business-as-Usual “BAU Scenario”
	4.5.b	Shared and sustainable Scenario (S&S SCENARIO)

Scenario Guidelines

The European Environment Agency has specified the purpose of scenario-based analyses: “Environmental scenarios, forecasts and other types of prospective studies help us to address the gaps and uncertainties of future developments and to formulate sound policies capable to stand the test of time” (EEA, 2009).

According to Rubin and Kaivo-oja, (1999) scenario-building methods operate within the domain of three questions associated with the future:

• Possible futures _ what could happen?

• Probable futures – what is most likely to happen?

• Preferable futures – what should we prefer to happen?

For the purposes of testing the CliCCHE Methodology, reference will be made to two main Scenarios:

- Business-as-usual scenario (BAU SCENARIO).This scenario will assume that there will be no significant change in people's attitudes and priorities, or no major changes in technology, economics, or policies, so that normal circumstances can be expected to continue unchanged.

- Shared and sustainable scenario (S&S SCENARIO).This scenario will emerge from the relationship between the local population, public administration, technicians, local professionals, and stakeholders of the territory. It will have to discuss in the “European Awareness Scenario Workshop (EASW)” in which will be select possible actions that can mitigate the expected consequences of climate change and define specific adaptation measures.

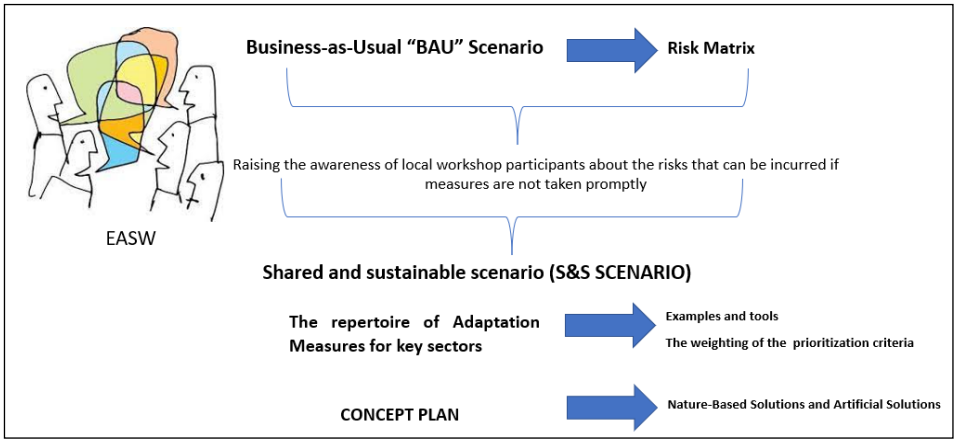
The contents of the BAU Scenario on the potential consequences of climate change and the S&S Scenario are inspired by the Document “A HANDBOOK FOR PROVINCES, REGIONS, AND CITIES of the Environment Agency Austria (2016)”. This Document is present in the "Climate Adapt" database among the Guides to climate adaptation, at the link: https://climate-adapt.eea.europa.eu/en/metadata/guidances/methods-and-tools-for-adaptation-to-climate-change-a-handbook-for-provinces-regions-and-cities.

The construction of the scenarios will make use of official sources and documents (meteo-climatic data, climate plans, European studies and projects, etc.) and the knowledge of local stakeholders. The Awareness Scenario Workshop (EASW) will use a participatory methodology. It is a methodology tested at European level, especially with reference to sustainability issues, in which the participants, representatives of the four main social categories of the same local community (citizens, technicians-professionals, administrators and representatives of the entrepreneurial sector), meet to exchange opinions, develop visions and propose ideas on how to solve the main problems of the area in which they live and to find an agreement. The main activities taking place during a workshop on European outreach scenarios are:

• vision making: make participants aware of the problems under discussion and the consequences that current choices will produce on future lifestyles;

• idea generation: to help workshop participants identify the best performing adaptation actions to improve the neighborhood's future.

Schematization of the scenario construction process



4.5.a. Business-as-Usual "BAU Scenario"

What will happen if adaptation and mitigation actions are not implemented?

The BAU Scenario will consider the impacts and major climate and health risks that emerged in Activity A 4.3 and Activity A 4.4. of Result 2 "Healthy urban planning Teaching Methodological Guidelines ".

The **BAU SCENARIO** will be represented through the **Risk Matrix** (Tab.1), which for each of the climatic variables (Temperature, Precipitation, Wind), and for each of the socio-economic and environmental sectors most exposed to climate change (Urban Health; Open Spaces ; Transportation and Infrastructure; Construction and housing; Energy Supply; Tourism; Nature, Conservation, Biodiversity; Water Management; Forestry; Economy, etc.), will identify the indicators of the climatic variables examined, their trend, potential impacts, risks, their current level and evolution over time, the place(s) that are most affected. The construction of this matrix will take place with the contribution of the local community (EASW Methodology).

TAB.1 "RISK MATRIX"

TEMPERATURE/ PRECIPITATION/WIND							
Indicators	**Trend**	**Sector** Urban Health; Open Spaces; Transportation and Infrastructure; Construction and housing;Energy Supply; Tourism; Nature, Conservation, Biodiversity; Water Management; Forestry; Economy, etc.	**Potential impacts** (See Annex 1)	**Risks** (See Annex 2)	**Actual Risks Level** Risk Level !: Low; !!: Moderate; !!!: High Evolution	**Risks Level Evolution** *: Low; ** Moderate; *** High	**Where?**

					Risk Level: +: Growth; _: Decline; =: no change;? = not know		

Specifically, the Matrix is organized as follows:

- **Indicators.** Climatic indicators are synthetic parameters, deriving from one or more fundamental meteorological quantities measured (temperature, precipitation, wind, etc.), identified with the aim of highlighting significant aspects of the average climatic trend in a given area, noting, over the long term any changes. Ex: average temperature; summer days; tropical nights; consecutive days without rain, etc.
- **Trend.** For each climate indicator, the trend will be indicated in the form of a symbol. The trend will be referred to the scientific literature, from official sources and from local climate plans. The potential risks identified for each sector of interest and with reference to citizens' health may undergo evolutions (in intensity and frequency) if no adaptation/mitigation measures are taken. If the data are not easily accessible for the local reference context, data that refer to cities with similar climatic conditions will be used.
- **Exposed sector**. The exposed sectors can be implemented according to the local context, the reference list can include: Urban Health; open spaces; Transportation and Infrastructure; Construction and housing; energy supplies; Tourism; Nature, Conservation, Biodiversity; water management; Forestry; Economy, etc.
- **Potential impacts.** This definition refers to the impacts of climate change on exposed sectors. Below is a definition of Impact taken from the IPCC AR5 2014 and SRCCL 2019 Reports. In Annex 1 there are some Fact Sheets: Impact of Climate Change present in the "HANDBOOK FOR PROVINCES, REGIONS, AND CITIES of the Environment Agency Austria". These fact sheets are examples to guide the debate within EASW.

IMPACTS (CONSEQUENCES, OUTCOMES) - Effects on natural and human systems that stem from extreme meteorological and climatic events and from climate change. Impacts generally refer to the effects on lives, livelihoods, health, ecosystems, economies, societies, cultures, services and infrastructure, due to the interaction of climate change or hazardous climate events occurring over a given period of time and the vulnerability of an exposed company or system. Impacts can be referred to as consequences or outcomes and can be negative or positive. The impacts of climate change on geophysical systems, including floods, droughts, and sea level rise, are a subset of impacts called physical impacts. (IPCC AR5 2014 - IPCC SRCCL 2019)

- **Risks.** This definition refers to the risks that climate change impacts generate on exposed sectors. Below is a definition of Risk according to IPCC SRCCL 2019.

RISK – The potential that negative consequences occur to human or ecological systems, distinguishing the diversity of values and goals associated with those systems. In the context of climate change, risks can arise from potential climate change impacts and human responses to climate change. Relevant adverse impacts include those on human lives, livelihoods, health and well-being, economic, social and cultural assets and investments, infrastructure, services (including ecosystem services), ecosystems and species. (IPCC SRCCL 2019)

- **Actual Risks Level and Risks Level Evolution .** This definition refers to the current risk levels and the potential risk levels on a pre-set time scale (2030-2050). The selection of the different levels of risk will be made on the basis of studies, scientific publications, results of projects in the study area (e.g. LIFE, LIFE+, H2020 projects, etc.), on the basis of institutional methodological statistics and on the basis of local knowledge and experience.
- **Where?** If possible, the area/areas of the city/territory under study will be indicated, where the risk was revealed on the basis of the comparison with the citizens and the available sources.

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Annex 1: FACT SHEET IMPACTS OF CLIMATE CHANGE

By: PRUTSCH, A., FELDERER, A., BALAS, M., KÖNIG, M., CLAR, C., STEURER, R. (2014): Methods and Tools for Adaptation to Climate Change. A Handbook for Provinces, Regions and Cities. Environment Agency Austria, Wien.

B.2 FACT SHEET: IMPACTS OF CLIMATE CHANGE

HEALTH

- Direct health-related problems due to heat waves and natural hazards such as floods, landslides, mudslides, etc.
- Adverse effects on performance and well-being, as well as an increase in heat-related illnesses and deaths (esp. cardiovascular and respiratory diseases) due to heat waves and an increase in minimum temperatures at night
- Intensified bioclimatic stress, particularly in urban centres (urban heat island effect)
- Expansion of distribution areas and establishment of new disease vectors (insects, ticks, rodents) and pathogens (e.g., TBE and Lyme disease)
- Changes in the prevalence of plants and animals with allergenic impact
- Reductions in the quantity and quality of drinking water
- Increase in food-borne infections as higher temperatures facilitate the growth of microorganisms in food
- Increase in the formation of ground-level ozone, which can cause irritation of mucus membranes and respiratory reactions
- Higher risk of skin tumours and cancer due to the increase in UV radiation

BIOLOGICAL DIVERSITY

- Changes in species composition of ecosystems (e.g., predicted shifts in distribution limits towards the north and higher elevations)
- Threats to biodiversity due to limited adaptive capacity
- Changes in the lifecycles of plants and animals (e.g., migration and breeding behaviours, foliation, flowering)
- Establishment of non-native species may be facilitated
- Propagation of thermophilic species
- Displacement of cold-sensitive and moisture-loving species
- Depletion of the gene pool due to population failure, leading to reduced adaptive capacity
- Adverse effects on ecosystem functions, such as the protective function of mountain forests
- Increase in water temperatures, with implications for aquatic ecological communities, especially fish ecology
- Changes in aquatic vegetation due to higher temperatures
- Increased desiccation of wetlands and marshes.

WATER MANAGEMENT

- Melting of glaciers
- Increase in the intensity of precipitation
- Changes in groundwater recharge
- Increased pollutant effects due to higher temperatures and reduced groundwater recharge
- Reduced water levels in summer (exception: glacier-fed rivers) in parallel with increasing water demand due to rising temperatures
- Temporal and size-related changes in the levels of rivers
- Shift of flood risk to winter and spring
- Increased regional flood risk for many rivers due to small-scale severe precipitation events
- Operational limitations for hydropower plants due to high or low water levels and increased sediment transport
- Increased evaporation and variability of precipitation in summer, resulting in a decrease in the soil moisture available to plants

1/4

- Reduction in spring discharge (water yield) of near-surface springs

AGRICULTURE

- Shifts in the growing areas for specific species
- Changes in the growing season
- CO2 fertilization effect and potential yield increases, especially for C3 plants
- Changes in the lifecycles of crops (e.g., foliation, flowering, maturity)
- Decrease in total precipitation during the growing season
- Increased stress for plants due to the increase in dry spells and heat waves
- Decrease in soil water content in the second half of the summer
- Increase in evaporation
- More radical fluctuations in summer precipitation
- Higher risk of soil erosion due to torrential rains and drought
- Increase in disease pressure in both plants and animals resulting from new thermophilic pests and diseases
- Increased production of fungal toxins (mycotoxins)
- Acceleration of mineralization processes in the soil and decline in soil fertility
- Less frost action due to the decrease in frost days
- Late frosts -> danger to plant development
- Emergence of new pathogens in livestock (need for research!)
- Higher summer temperatures reduce food intake and productivity in animal husbandry

FORESTRY

- Changes in the lifecycles of trees (e.g., foliation)
- CO2 fertilization effect and longer growing seasons may have a temporary positive impact on timber growth (as long as the water supply is sufficient)
- CO2 fertilization effect could affect wood and fibre quality
- Changes in site-suitability for species -> thermophilic and drought-tolerant tree species (esp. beech) will propagate more widely
- Increase in drought stress and decrease in soil water content due to a decline in water supply and an increase in demand
- Decrease in water availability in summer
- The combination of temperature increases and decreasing precipitation in the growing season will negatively affect the vitality and productivity of forest ecosystems
- Increasing pressure from forest pests (e.g., bark beetles, fungi)
- Appearance of non-native, drought- and heat-tolerant harmful organisms
- Higher risk of forest fires due to increases in heat waves and droughts
- Potential increase in the frequency and intensity of storm events, leading to a higher risk of wind-related breakage and reducing the productivity of forests
- Late frosts -> danger to tree development
- Higher risk of snow breakage due to an increase in wet snow
- Increased climate stress can lead to the destabilization of many protected forests and represent a threat to their protective functionality (for locations and species)

2/4

TOURISM

- Downward trend in snowfall in lower and middle elevations (consider the regional situation!)
- Rise in the natural snow line (rule of thumb: 150m increase per 1°C)
- Reduced opportunities for snow-making in low elevations (consider the regional situation!)
- Decline in snow reliability can affect the economic viability of ski areas at low and middle elevations - a regional perspective is essential here
- Shift in the start of the winter season to later in the year and shortening of the season
- Decrease in the frequency of precipitation in summer months
- Increase in water temperatures (longer periods suitable for swimming, but also a potential decrease in water quality)
- Lengthening of the summer season
- Renaissance of the Sommerfrische (summer resorts) in cooler regions of Austria
- Changes in the landscape due to glacial retreat
- Thawing of the permafrost can increase the probability of rock falls, rockslides, and mudslides, representing a potential danger for mountaineers and the stability of tourism infrastructure
- Higher maintenance costs for Alpine paths
- Spatial and temporal changes in seasonal conditions and potential shifts in popularity for tourists
- Changes in the demand for and availability of energy and water for the tourism sector

CONSTRUCTION/HOUSING

- Increased heat stress and worsened indoor conditions (higher concentrations of pollutants inside buildings, also due to sealing/insulation measures)
- Increase in cooling demand in summer
- Decrease in heating demand in winter
- More frequent heavy precipitation and thawing of the permafrost can lead to an increase in mass movements (such as mudslides, landslides, and rock falls)
- Damage to building structures due to increased temperature fluctuations and pronounced changes in the water table
- Danger to buildings resulting from an increase in wet snow
- More frequent heavy rainfall can overburden the capacities of building and residential rainwater and waste-water systems (gutters, sewer systems, sewage treatment plants, etc.)
- Increase in storm damage to buildings and infrastructure

ENERGY

- Disruptions at power plants due to high or low water levels
- Shortages in summer due to rising energy demand (e.g., for cooling) and lower water levels in rivers
- Adverse effects on power plants due to the lack of water or water that is too warm
- Reduced efficiency of electricity generation due to higher air temperatures
- Decrease in heating degree days, but increase in cooling degree days
- Extreme weather events can increasingly lead to interruptions in supply networks
- Climate change, in particular droughts and

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INFRASTRUCTURE/ TRANSPORTATION

extreme events, can affect the security of the profitability of biomass production

- Damage to infrastructure (e.g., rails, asphalt roads) due to high temperatures
- Higher stress on materials resulting from increased temperature fluctuations
- Higher heat-related failure risk for electronic equipment
- Increased fire hazard for adjacent vegetation
- Increase in frost damage to roads due to changes in days above 0°C and frost days
- Negative effects on infrastructure as a result of mudslides, avalanches, wet snow, storms, etc.
- Dangers to the stability of roadways, embankments, and slopes (risk of mass movements) triggered by heavy precipitation

SPATIAL AND RESIDENTIAL PLANNING

- Reinforcement of the urban heat island effect (overheating in densely developed residential areas)
- Increasing risk of natural hazards such as landslides, mudslides, and rock falls in Alpine regions due to the increase in heavy precipitation and thawing of the permafrost
- Shift of flood risk to winter and spring
- Increase in the frequency and intensity of heavy precipitation throughout the year
- Reduction in the effectiveness of protective forests due to climate stress and other stressors
- Increase in conflicts over spatial planning, e.g., due to the demand for active and passive flood protection or the expansion of hazard zones and the resulting reduction in development potential

INDUSTRY/ECONOMY

- Higher temperatures and heat waves will increase the cooling demand for the storage and transport of various products
- Higher temperatures and heat waves will negatively affect working conditions (decline in productivity, risks to health and safety on the job)
- Changes in consumer behaviour due to rising temperatures and longer hot periods (e.g., beverages)
- Decrease in the availability of cooling water during heat waves and droughts can impede cooling-intensive production
- Potential changes in the availability of raw materials and intermediate products due to changes in temperatures and precipitation can have an impact on the entire value chain
- Regional differences in water availability due to changes in precipitation and its seasonal distribution
- Potential increase in extreme events and extreme weather conditions can cause massive damage to operational infrastructure and production (risk of liquidity shortages for enterprises and insurance companies)
- Impact on internal company logistics resulting from the increasing occurrence of extreme events and negative effects on transportation and storage infrastructure

Based on:

➡ see additional information in F.4

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ANNEX 2: FACTSHEETS IMPACTS AND RISKS BY KEY SECTORS. EXAMPLES RELATED TO HEALTH AND OPEN SPACES

Legenda:

Climate Indicator Trend:

↗ Expected increase

↘ Expected decrease

~ Trend uncertain

Risk Level **!**: Low; **!!**: Moderate; **!!!**: High

Evolution Risk Level: **+**: Growth ; **_**: Decline ; **=**: no change; **?** = not know

Reliability of estimation

*: Low; ** Moderate; *** High

TEMPERATURE							
Climate Indicators	**Trend**	**Sector**	**Potential impacts**	**Risks**	**Actual Risks Level**	**Risks Level Evolution at 20/30/50 Years**	**Where**
Average temperatures		**URBAN HEALTH**	-Longer growing season, changes in plant and animal species	-Increasing spread of disease vectors and establishment of new pathogens -Spread of allergenic plants and animals -Shift/extension of the pollen season			
			-Depletion of stratospheric ozone	-Higher risk of skin tumours and cancer through the increase in UV radiation			
			-Higher water temperatures	Decrease in drinking water quality			
Number of hot days (daily high temperature ≥30°C) Higher temperatures on hot days			-Overheating (esp. in urban areas) -Rise in night-time temperature minima	-General health problems -Increase in heat-related illnesses and deaths (especially in high-risk groups such as infants, children, and the elderly) -Negative impacts on performance and well-being - Unfavourable living environment			
			-Conditions favouring the accumulation of air pollution (e.g., summer smog, ozone)	-Health problems (inflammation of the respiratory tract, intensification of allergies and asthma, cardiovascular diseases)			
			-Conditions favouring the accumulation of ground-level ozone	Irritation of the eyes, nose, throat, and lungs			

PRECIPITATION							
Climate Indicators	**Trend**	**Sector**	**Potential Effect**	**Risks**	**Actual Risks Level**	**Risks Level Evolution at 20/30/50 Years**	**Where**
Largescale heavy precipitation Intensive local precipitation		**URBAN HEALTH**	-Flooding/ risk of flooding -Mass movements	Potential injuries and deaths Post-Traumatic Stress Disorder (PTSD) Mental problems due to mould infestations arising from water damage to homes			
WIND							
Local thunderstorms		**URBAN HEALTH**		Potential injuries and deaths			

TEMPERATURE							
Climate Indicators	**Trend**	**Sector**	**Potential Impacts**	**Risks**	**Actual Risks Level**	**Risks Level Evolution at 20/30/50 Years**	**Where**
Average temperatures		**OPEN SPACES**	-Longer growing season, changes in green and open spaces	Increased water and maintenance demands in green and open spaces			
			-Changes in urban plant and animal species	Spread of thermophilic plant and animal species (especially allergenic plants and animals and harmful organisms)			
				Changes in the demands on species (e.g., urban trees)			
Number of hot days (daily high temperature ≥30°C) Higher temperatures on hot days Increase in night-time temperature minima of over 20°C			Intensification of the heat island Impactsin cities	**Health problems (see Health)** Increasing demand for drinking water, industrial water, and shade			
			Conditions favourable to the accumulation of air pollutants in summer high - pressure weather	**Health problems (see Health)**			

PRECIPITATION							
Climate Indicators	**Trend**	**Sector**	**Potential Impacts**	**Risks**	**Actual Risks Level**	**Risks Level Evolution at 20/30/50 Years**	**Where**
Large-scale heavy precipitation Intensive local precipitation		**OPEN SPACES**	-Hail	-Damage to buildings/building structures/infrastructure -Overburdening of building and urban rainwater drainage and sewer systems			
			-Flooding/risk of flooding -Mass movements	-Potential overburdening of building and urban rainwater drainage and sewer systems -Threat to residential areas -Increasing conflicts over the use of space, e.g., due to requirements for active and passive flood protection or the expansion of hazard zones and the resulting narrowing of options for spatial development			
WIND							
Local thunderstorms		**OPEN SPACES**		-Storm damage to buildings, infrastructure, energy systems, etc.			

4.5.b Shared and sustainable Scenario (S&S SCENARIO)

Based on the Guide to Climate Adaptation "**A Handbook for Provinces, Regions and Cities"(Prutsch et al., 2014)** , an initial collection of adaptation measures was carried out for some of the socio-economic and environmental sectors exposed to the impacts of climate change in the urban district to be regenerated.

This collection will provide a basis for discussion among local workshop participants on the selection and concrete planning of the most suitable measures to be implemented. The list is based on the current state of knowledge and illustrates the variety of possible options. In dialogue with stakeholders, measures should be selected and integrated with further proposals, if necessary. The following list is indicative and should be harmonized with what emerges from local contexts and on the basis of existing plans and projects.

The adaptation measures can be implemented with the support of "The Adaptation Support Tool (AST) of the Climate ADAPT platform https://climate-adapt.eea.europa.eu.

The contents of this Platform help prepare the ground for adaptation, explore risks and vulnerability to current and future climate risks, identify and evaluate adaptation options, develop and implement activities for an adaptation strategy and/ o an adaptation plan, and monitor and evaluate its results, to know the main adaptation projects present in the Climate-ADAPT database.

Directory of Adaptation Measures for key sectors

With reference to some fields of action, including HEALTH, NATURE CONSERVATION/BIODIVERSITY, TOURISM, CONSTRUCTION AND HOUSING, ENERGY, TRANSPORTATION INFRASTRUCTURE, OPEN SPACES, ECONOMY.

The aforementioned Guide identifies a repertoire of possible adaptation measures which, compared and integrated with what is investigated in Result n.1, will have to be submitted to the participants in the local workshops who will have to decide on the following questions:

- Is the measure relevant to the project area?

- If so, what is the current state of implementation?

The last column will report design examples, guidelines, tools that can help in the selection of adaptation measures.

Measure relevant?	**Implementation status**	**Examples and tools**
Is this measure relevant for the planning area? **X — mark when the measure is relevant**	Assign a number to the measure: **No entry = no implementation** **1 = initial implementation** **2 = advanced implementation** **3 = complete implementation**	Examples of European projects, tools (repositories, guidelines, etc.)

Through these analytical steps, the wide range of potential measures should later be narrowed down to those measures that address the real challenges of the study area. In the next step, the selected measures can be prioritized if necessary. Once filled in, the worksheets will show at a glance which measures are relevant for the project area and where priority action needs to be taken. A final column of the worksheet will indicate the design solutions that correspond to the proposed adaptation action and the possible tools to be used.

Worksheets. Adaptation measures. Excerpt from: A Handbook for Provinces, Regions and Cities" (Prutsch et al.,2014)

EXAMPLES: HEALTH

Measures recommended in the literature?		**Is the measure relevant?**	**Implementation status in the project area**	**Examples and tools**
Protection from heat	Development of medium- and long-term strategies to reduce heat exposure in buildings (especially hospitals, nursing homes, schools etc.) and enhancement of the summer-suitability of buildings (through renovation): Consideration of heat waves in long-term urban planning, involving structural aspects, energy policy, and transportation policy (see especially the areas of Spatial Planning, Urban Green and Open Spaces, and Construction and Housing) Creation and maintenance of fresh-air corridors and green spaces in urban areas Promotion of façade and roof greening			**https://www.barcelona.cat/barcelona-pel-clima/sites/default/files/documents/climate_plan_maig.pdf** **https://www.climate-kic.org/programmes/deep-demonstrations/healthy-clean-cities/publications/** Evaluating the Impact of Nature-based Solutions: A Handbook for Practitioners https://oppla.eu/product/22250 https://www.urbangreenup.eu/
	Development of a shading concept for open spaces, transit stations and bus stops, playgrounds, etc., through the planting of trees.			
Protection from extreme weather events	Increased coordination and communication as well as more intensive networking of aid agencies			
	Increasing the capacities of emergency services in case of crises			
	Preparation of on-site crisis intervention teams for first aid in catastrophes			
	Organization of long-term mental help for those suffering from post-traumatic stress			
	Safeguarding the drinking water supply and maintaining hygienic and ecologically safe disposal facilities for sewage following extreme events			

	Implementation of the WHO's water security plan for operators of water supply facilities			
Allergenic & poisonous species	Intensification of phytosanitary import controls			
	Active publicity and informational efforts though the public health system to create appropriate problem awareness			
Pollutants & UV radiation	Identification of regions with above-average UV radiation (measurement of exposure)			
	Review and potential adaptation of conditions that reduce exposure to pollutants			
Monitoring & early warning systems	Mapping, representation, and characterization of areas/regions at increased risk of flooding and with increased susceptibility (sensitivity) to heat, infectious diseases, etc.			
	Evaluation of the interactions between heat and other factors (air pollution, UV Index, noise, stress, etc.)			
	Representation of risk groups in terms of high-risk neighbourhoods within cities, etc.			
	Review and potential linking or adaptation of existing monitoring systems with regard to their utility under changed climatic conditions			
	General consideration of the creation of a monitoring system for climate-related diseases, including: -Heat-related illnesses and mortality (cardiovascular problems) -Infectious diseases -Allergies - UV radiation -Swimming lakes			
Public relations	Information and awareness campaigns on the subject of climate change and health, both in general and specifically to prepare for extreme events or outbreaks of infectious diseases			
Additional measures				

NATURE CONSERVATION/BIODIVERSITY

Measures recommended in the literature		Is the measure relevant?	Implementation status in the project area	Examples and tools
Endangered species & populations	Support for endangered populations and species - Networking of habitats and migration corridors through the establishment of interlinked biotopes - Preventing further stress factors such as air pollutants, land use, etc.			**https://nbsbenefitsexplorer.net/usage** **https://naturvation.eu/atlas.html** **https://drpp-greeninframadagascar.ireport.royalhaskoningdhv.com/downloads** **https://geoikp.operandum-project.eu/nbs/explorer** **https://www.cerema.fr/en/actualites/decision-support-platform-implementing-nature-based** **https://nbs-explorer.nature4cities-platform.eu/?hl=fr&nbs=FR_** Voskamp, I.M.; de Luca, C.; Polo-Ballinas, M.B.; Hulsman, H.; Brolsma, R. Nature-Based Solutions Tools for Planning Urban Climate Adaptation: State of the Art. Sustainability **2021**, 13, 6381. https://doi.org/10.3390/su13116381 http://www.reconect.eu/network-of-cases/ijssel-river-basin/ http://nwrm.eu/measures-catalogue https://www.urbangreenup.eu/ **R1 CliCCHE Project**
Ecosystem services	Promotion of ecosystem services in inland locations that make a positive contribution to climate change mitigation and adaptation			
Wetlands habitats & water bodies	Targeted restoration of drained wetlands and adaptation of their use under local requirements			
	Promotion of drainage-delaying measures, ranging from the opening of former floodplains to investment in new retention basins or pools			
Land use & tourism	Erosion control measures in arable soils to prevent the wash-out of fine humus			
	Leisure and vacation activities that can interfere with sensitive habitats must be designed to minimize negative impacts			
Design of public & private open spaces	Adaptation to climate change in the design of green spaces (e.g., preferential selection of heat- and drought-resistant trees and shrubs for planting)			
	Nature-oriented design of green spaces and creation of re-treats for animal and plant species (including rare and endangered species), e.g., through fallow land			
	Creation of additional green and open spaces and extension of tree planting in public spaces (e.g., along city streets, plazas, etc.), greening of roofs and façades			
Public relations	Intensified PR and awareness-raising efforts among the general public with regard to the holistic significance of biodiversity and ecosystems			
	Increase motivation for behavioural changes in the public towards a sustainable and climate-friendly way of life			
Additional measures				

Development of Adaptation measures

The selected adaptation measures should be illustrated using the following matrix

TITLE OF THE MEASURE SELECTED	
Adaptation objective	What will be achieved with this measure?
Description of the measure	What is this measure about?
Significance of the measure	What climate change-related impacts are addressed by the measure?
Link to existing instruments	Are there any existing instruments (laws, strategies, networks) that support the measure's objectives?
Potential obstacles	What obstacles could impede the success of adaptation? How can these barriers be removed?
Effects on the urban health	Which areas/sectors interact with the measure or will be affected by it? Are positive or negative impacts on other sectors expected? If yes, how can these be utilized or prevented?
Additional affected actors/sectors within the organization	Which areas within the organization/additional stakeholders can support the measure's implementation or will be affected by the measure?

Criteria for Prioritization

Furthermore, priorities should be identified with the support of stakeholders in the implementation of adaptation interventions, based on:

Importance/significance	A measure will always be designated as particularly important when it prevents or mitigates significant economic, ecological, or social damage (especially in relation to human health and welfare) or can generate benefits.
Supporting key questions:	-Can the measure prevent significant damage? - Will irreversible damage be avoided by means of the measure? -Does the measure have a broad (protective) impact on the population health?
Urgency	A measure is designated as urgent when it could have prevented damage that has already occurred, thereby highlighting an adaptation deficit. Such measures are useful and/or necessary for the current climate

Supporting key questions:	- Are extensive damages already occurring that could be prevented or reduced through the measure? - How much time will pass from the planning stage through implementation until the measure becomes effective? Does the measure have a long lead time or development phase before coming into effect?
Robustness and flexibility	All adaptation measures should be carefully examined for their suitability to the widest possible range of future climate developments. Potential future adjustments or revisions of concrete adaptation measures should also be considered
Supporting key questions:	-Can the measure contribute to adaptation even if climate change takes place more rapidly and more radically, or if there are unforeseeable changes? - Can the measure be adjusted to meet greater or different protective needs? - Can the measure be economically dismantled or removed as needed (applies only to structural measures)?
Environmental consequences	Adaptation measures can also entail significant interference in the environment. This applies in particular to so-called 'grey'/structural measures. One must therefore carefully consider whether a specific protective goal justifies interference in an ecosystem, or whether there are alternative measures (generally less invasive planning measures or ecosystem-function strengthening measures) that might offer slightly less protection but incur no negative environmental consequences.
Supporting key questions:	Does the measure help to strengthen the functions/services of the natural ecosystem? -Can the adaptation or protective objectives of a 'grey'/structural measure also be achieved through a less invasive 'soft' or 'green' measure? - Does the measure avoid negative impacts on protected assets or areas?
Social consequences	In addition to ecological, economic, health, etc., aspects, adaptation measures must also consider social aspects. Among the most vulnerable population segments are those with the lowest income levels. These aspects are most critical in the area of health. In the planning and implementation of adaptation measures, it is therefore especially important to make sure that social inequalities will not be exacerbated; rather, if possible, a reduction in inequality should be the goal.
Supporting key questions:	- Does the measure contribute to a fair distribution of climate risks or create protective advantages for as many people as possible, fostering the welfare and health of the entire population? - For measures funded by the public sector, has it been ensured that they will bring advantages to the widest possible range of population groups? - Does the measure entail benefits for particularly vulnerable segments of the population (elderly, chronically ill, poor)?
Economic efficiency	Adaptation measures should be both effective and efficient. A measure is effective when it achieves a defined protective goal for the widest possible range of potential future developments; a measure is efficient when the benefits of the measure exceed its costs. The costs of technical adaptation measures are usually fairly straightforward to determine; however, the benefits of a measure can depend on many (uncertain) factors, such as the future climate or exposed assets and people. Socio-economic and demographic developments are therefore an essential factor.
Supporting key questions:	- Does the measure support the public sector in achieving its medium- and long-term fiscal policy objectives?

	- Put more simply: Does the investment in the measure pay off in terms of the potentially prevented damage? -Does the measure achieve a certain protective objective in the most cost-effective manner (in comparison to other measures with the same protective/adaptation objective)?

Weighting of the prioritization criteria

The priorities should be agreed on the basis of values to be assigned for the different Key Questions 1 to 5.

Evaluation of measures on a scale from 1 (low) to 5 (high).

ADAPTATION MEASURE	WEIGHT						
	Result of weighting	Importance/ significance	Urgency	Robustness and flexibility	Environmental consequences	Social consequences	Economic efficiency

Representation of the S&S Scenario and Repertory of Good Practices

After the selection of the adaptation measures on the basis of the comparison between the participants in the local workshop (Students, citizens, local administrators, operators and technicians), the S&S scenario consisting of a list of adaptation actions, will have to be represented, through an **Adaptation Project concept.** In the Adaptation Project Concept the objectives of urban regeneration will be explained and the adaptation measures envisaged to improve the quality of life and the health and well-being of the inhabitants of the neighborhood will be symbolically located. See Fig. 1 and 2 Horizon 2020 Project proGIreg www.progireg.eu.

The adaptation measures will have to refer to design solutions, attributable to: nature based solutions and nature and artificial solutions.

The design alternatives called *Nature Based Solutions (NBS)* include all the technical and architectural elements characterized by natural vegetable and/or mineral solutions. These represent solutions capable of increasing the degree of urban climatic adaptation, they are economically convenient and bring significant climatic, environmental, social, economic benefits and can play a central role to enhance the physical and mental health of citizens (Mussinelli et al., 2020).

Fig.1 Deliverable 3.5 Implemented Living Lab Torino. https://progireg.eu › Turin

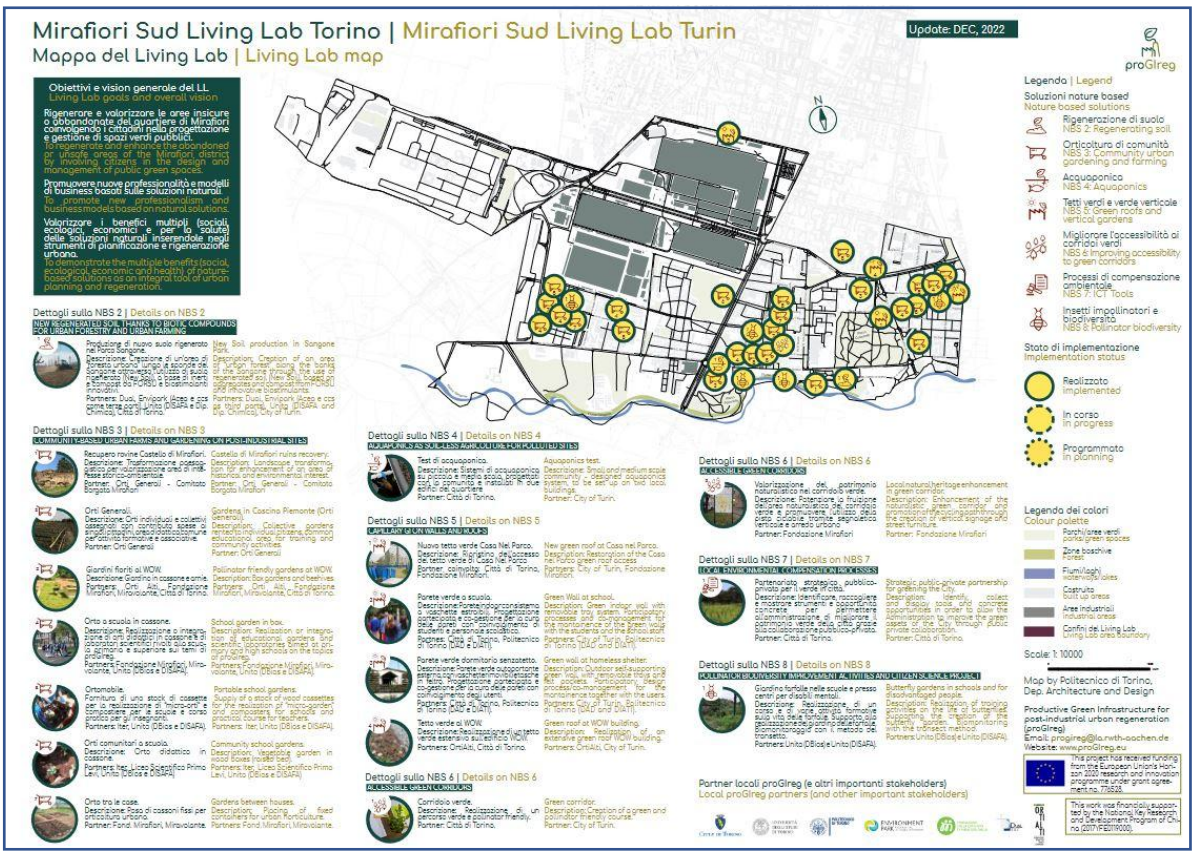
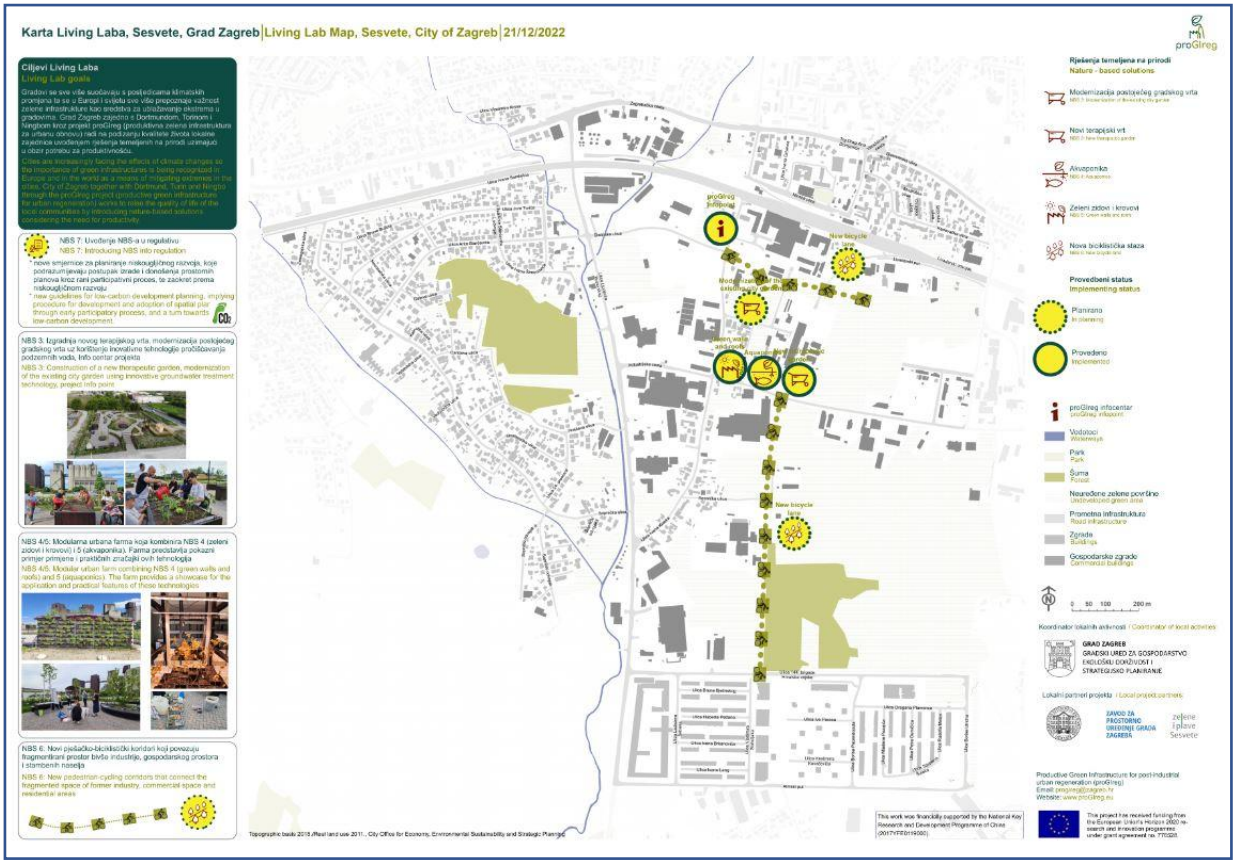


Fig.2. Deliverable 3.5 Implemented Living Lab Zagreb. https://progireg.eu › Zagreb



Survey of case studies of adaptation projects

The following references refer to several European case studies that have used nature-based solutions and artificial solutions, often in an integrated manner. This survey is clearly not exhaustive, but it constitutes useful material for starting to deal with the scale of the project.

The design solutions concern the study of neighborhoods, park projects, public areas, buildings and building sectors.

The neighborhoods *cover Zoho Climate Proof* in Rotterdam; (Nederland), *Sant Kjeld Kvarter* in Copenhagen (Denmark) and *One step be-yond* in Athens (Greece).

https://www.urbanisten.nl/work/climate-proof-zomerhofkwartier

https://www.aanpakagniesebuurt.nl/content/uploads/2019/10/ZoHo-Climate-Proof-A5-booklet.pdf

https://klimakvarter.dk/projekt/skt-kjelds-plads/

https://www.tredjenatur.dk/en/portfolio/the-first-climate-district/

https://www.archdaily.com/266077/climate-adapted-neighborhood-tredje-natur

https://www.archisearch.gr/architecture/one-step-beyond-by-okra-wins-1st-prize-at-rethink-athens-competition/

https://www.okra.nl/en/projects/re-think-athens/

Public spaces are analyzed in the cases of *Watersquare* in Tiel (Nederland), *Zollhallen Plaza* in Freiburg (Germany) and *Kettingplein* in Ghent (Belgium).

https://www.urbanisten.nl/work/watersquare-tiel

https://klimaatadaptatienederland.nl/en/@163386/water-square-tiel/

https://www.urbanisten.nl/work/kettingplein

Finally, among the buildings and building sector: *Climate-Proof Social Housing Landscapes* in London (United Kingdom) and *Condominio 25 Verde* in Turin (Italy).

https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/climate-change/surface-water/climate-proofing-social-housing-landscapes

http://www.lineeverdi.com/portfolio/25-verde/

A useful reference is also the database in the Climate Adapt Platform; by the Urban Climate Change Research Network (UCCRNe), on the C40 Cities website https://www.c40.org/case-studies/

Selecting Project Proposal through public participation

Time required/Duration

2 hours.

Resources required

Depending on type of the activity.

Participants

Students, teachers, researchers, local community, public administration, and stakeholders.

Rationale and Comments/Description

Selecting project proposals through public participation is a process of analyzing, evaluating and comparing alternatives (or options) in a way that facilitates decision-making (choice) on the future development of the area. It can be done by using different participatory tools in relation to purpose and type of the projects, participants included and time available for the activity. Local communities and different stakeholders may favor different design alternatives in relation to their specific interests, and therefore the role of the planner is to present and mediate public discussion on the alternatives. This activity should be conducted based on informative, well-structured and clear presentation of all projects so that all participants are aware of benefits and weakness of each alternative as well as of how much and in what ways urban design proposal fits the key quality criteria. “Choice Catalogue” and “Dot Voting” are two forms of this activity that are appropriate for educational purposes and will be presented in detail.

a) “CHOICE CATALOGUE” - SOURCE: (Čolić et al. Guide for Participation in Urban Development Planning)

“*A choice catalogue is a communication method that enables interest groups to choose among the number of pre-prepared options. This method aims to help participants to fully understand the planned spatial interventions and harmonize their desires and needs with solutions that can be implemented…*”

Presented alternative solutions/options are based on data collection and analysis, which usually include information gained through citizen surveys, interviews and different formats of citizen participation. Besides that, communication process is carried out through a catalogue and enables discussion on alternative project proposals. As such, Choice catalogue is both the result and the means of communication. Various stakeholders participate in this activity - people who are initiating the project (the commercial sector, national or local government), the ones who are responsible for the implementation (urban planners, architects, engineers) and potential users (citizens, customers, consumers, etc.).

There are different types of catalogues. Some are aimed at reviewing preferences and needs of the target groups, contain suggestions and examples. Others are related to presenting alternative urban projects/actions/solutions and aim to enable discussion and choice of the most preferable one.

Procedure

Step 1 – "Materials used to make choice catalogues are brochures or posters with graphic elements containing key information. The catalogues describe options and background information among which citizens can decide." The presence of a facilitator is desirable in order to encourage citizens to participate and to ease the interpretation of the displayed information.

Step 2 - Part of Catalogue are supported by a questionnaire where participants mark the most desirable solution.

Step 3 – Results are analyzed and discussed.

Strengths and Weaknesses:

Strengths are related to the variety of solutions and the possibility of choice. It is assumed that the sense of responsibility for the outcome of the project will be developed among the participants and may lead to better acceptance of applied solutions, as well as to reduce the financial risk for the investor. Weakness is related to the fact that the results may not be representative, which is usually affected by a poor response or lack of participant diversity Besides that, "*the costs for preparation and printing of choice catalogues depend on the size of the target group/s and the scope of consultations. If the catalogues are combined with other methods of informing and consulting (ex. Internet consultations), space and facilitators are not required, but the information must be clear and understandable to the widest audience*."

Examples and/or visual results (how do part of the procedures and/or results will look like)

SOURCE: Čolić et al. Guide for Participation in Urban Development Planning

b) "DOT VOTING" – Source: Thayer-Hart, Nancy. 2007. Facilitator Toolkit: A Guide For Helping Groups Get Results

"*Dot voting is a very simple and quick method for groups to use in setting priorities when there are many options. It can be used to identify where to start in addressing an issue, which project to start first, what is our top core value, etc*."
Group of participants can generate a list of all the things they believe they should address for improving the urban area. They know they cannot do it all. This method would help participants give a sense (albeit unscientific) of which items are most important and should be addressed first.

Procedure

"*Steps in the Dot Voting Method are:*

1. *Begin by brainstorming all the options and list on a flipchart in any order. Leave enough space between the items to place sticky dots.*
2. *Give each person in the group 10 dots (for this exercise, colour is irrelevant). Instruct them that to indicate their priorities, they are to "use all 10 dots but no more than 4 on any ONE item." Therefore, 4 dots would indicate their top priority. Some items will have no dots.*
3. *Participants walk up to the flipcharts and place their dots under the items. If you have a larger group, split the items on 2 flipcharts on opposite sides of the room so as not to take too much time or cause congestion. Start half the group on each chart.*
4. *When everyone has placed his/her dots, count the number of dots for each item and make a priority listing on a new flipchart page. There usually are a few clear winners. You may then discuss with the group if they agree those should be top priorities on which to start working. It does not mean the others are eliminated*."

Strengths and weakness

This exercise creates a "fun" activity, good visual, and limits discussion if it has gone on too long, as well as getting input from the entire group.

Examples and/or visual results (how do part of the procedures and/or results will look like

Source: Ben Chun - https://www.flickr.com/photos/benchun/2508411695/ CC BY-SA 2.0

References

- Čolič, R., Mojović, Đ., Petković, M., Čolić, N. (2013). Guide for Participation in Urban Development Planning. Belgrade: GIZ/AMBERO-ICON. https://www.apps.org.rs/wp-content/uploads/publikacije/(A5)-Guide-for-participation-in-urban-development-planning-2013.pdf
- Thayer-Hart, Nancy. 2007. Facilitator Toolkit: A Guide For Helping Groups Get Results. PDF. Madison: University of Wisconsin. https://www.nj.gov/education/AchieveNJ/teams/strat14/FacilitatorToolKit.pdf
- Facilitation Tools for Meetings and Workshops. https://www.arc-swp.nihr.ac.uk/uploads/attachments/Facilitation%20toolkit.pdf
- Essential Meeting Facilitation Toolkit. https://www.sessionlab.com/meeting-facilitation-toolkit/
- FACILITATOR TOOL KIT A GUIDE FOR HELPING GROUPS GET RESULTS. https://www.nj.gov/education/AchieveNJ/teams/strat14/FacilitatorToolKit.pdf
- Facilitation tools for meetings and workshops A compilation of tools and techniques for working in groups and facilitating meetings or workshops. https://seedsforchange.org.uk/tools.pdf

Self-study

Time required/Duration

Unspecified; depending on students.

Resources required

Reading list (see below).

Participants

Students.

Rationale and Comments/Description

The first activity in the workshop series, "Integrated vision of "Urban health" regeneration", aims to familiarize students with the principles of urban regeneration, design solutions to improve urban health and dialogue tactics to obtain a better understanding of varying motivations of stakeholders. Self-study is a self-directed approach to the acquisition of knowledge and/or competence in which a student plans and carries out learning activities on their own, carried out under the guidance of an instructor. Student works independently and they should go through the reading material prior to the first lecture.

Procedure

Step 1. Reading list is prepared by teachers some time before the workshops start, to allow students sufficient time to go through it. The list should include the report R1 produced in the CliCCHE project, as well as further mandatory material on the topic of urban regeneration, urban health and climate change impacts and adaptation and mitigation strategies.

Step 2. Suggestions for further online material and optional reading should be provided by teachers, in case students would like to extend their knowledge.

References

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- Ruijsbroek, A., Wong A., den Hertog F., Droomers M., van den Brink C., Kunst A.E, van Oers, H.A.M. and Stronks K. (2022). "Do Inhabitants Profit from Integrating a Public Health Focus in Urban Renewal Programmes? A Dutch Case Study." Edited by Dylan A Mordaunt. *PLOS ONE* 17 (6): e0270367. https://doi.org/10.1371/journal.pone.0270367.
- The Urban Health Council. (2021). "About The Urban Health Council." 2021. https://www.urbanhealthcouncil.com/about-the-urban-health-council.
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Reduce Health Inequalities? A Synthesis of the Evidence from UK Policy and Practice (1980-2004).” *Journal of Epidemiology & Community Health* 60 (2): 108–15. https://doi.org/10.1136/jech.2005.038885.

- UN-Habitat.(2016).“The New Urban Agenda.” In, 175–95. https://doi.org/10.18356/4665f6fb-en.
- UN Habitat. (2021). “Urban Regeneration as a Tool for Inclusive and Sustainable Recovery.” Bilbao.
- WorldBank. (2015). “Managing the Potential Undesirable Impacts of Urban Regeneration: Gentrification and Loss of Social Capital.” 2015. https://urban-regeneration.worldbank.org/node/45.

Examples and/or visual results (how do part of the procedures and/or results will look like)

	Title	Type	Requirement	Pages
1	R1 final report	report	mandatory	72
2	Global research priorities for urban health	editorial	mandatory	2
3	Selected Research Issues of Urban Public Health	review	mandatory	28
4	New development: Citizen science—discovering (new) solutions to wicked problems	article	mandatory	5
5	Street Tree Structure, Function, and Value: A Review of Scholarly Research (1997–2020)	review	suggested	22
6	Integrated Assessment of Urban Overheating Impacts on Human Life	review	suggested	41
7	Experimental study and theoretical discussion of dynamic outdoor thermal comfort in walk	article	suggested	14
8	Urban climate walk: A stop-and-go assessment of the dynamic thermal sensation and perce	article	suggested	20
9	Evaluating the public acceptance of sustainable mobility interventions responding to Covic	article	suggested	15
10	Urban health agenda - Big Cities Health Coalition	website	optional	-
11	Urban Regeneration	book	optional	350
12	Integrating health in urban and territorial planning: A sourcebook for urban leaders, health	report	optional	108
13	Intended and Unintended Consequences of Two Paradigms of Urban Planning, and Their Sc	article	optional	25

Stone soup (Urban game)

Time required/Duration

90 minutes.

Resources required

Post-its in 5 different colours; a stone; a big pot; a wooden spoon; pen and/or pencils (one per participant).

Participants

Students, teachers, researchers, local community, public administration, and stakeholders. There is no defined minimum or maximum number.

Rationale and Comments/Description

The Stone Soup (*Sopa da Pedra*) derives from a popular Portuguese myth, where a good monk was begging in the plains. He got tired and knocked on the door of a rich, though greed, farmer. The monk picked up a stone from the ground and said he could make a very good soup with it. The farmer could not believe, so the monk asked for a big pot to do it. After getting the pot, he asked for a cabbage lead, and the farmer gave it; then he asked for a little bit of ham; then a carrot; a potato; a little bit of olive oil. In the end, while not noting that he gave all the ingredients, the farmer was astonished with the soup made from a stone, which seemed like a miracle.

This story provides a moral lesson about generosity on the one hand, and about the fact that, from scarce resources there is always a chance to get good results.

In the game form, this tool is designed to be either an assessment tool or a participatory tool for planning. Considering a determined area, which can be a neighborhood or a small territory, the objective is to guarantee participation by the local population, along with contributions from the public administration and academics.

The game aims at providing a safe space for everybody to participate in planning small suggestions and/or to make critics to a previous urban project. The metaphor behind the pot and the stone soup is as follows: the stone represents the future; the pot represents the settlement/neighborhood at stake; the different ingredients will be transformed in sticky notes/post its, which will represent different categories to be transformed/improved in a specific space (see Step 2).

As in the case of the stone soup myth, the result is a lesson to be learned by all. Therefore, the written or oral (recorded) summary should include the idea with which everyone agrees, along with the diversity of ideas, thoughts, suggestions.

Procedure

Step 1. The tool mediator presents the tool to everybody, including all steps; distributes different coloured post its to each participant; puts a big pot in a table (10 minutes).

Step 2. All participants are asked to write their thoughts about the issue at stake in post-its with different colours:

Yellow, the olive oil, considers the local plan;
Blue, the water, considers the responsible consumption;
Green, the vegetables, consider the green spaces;
Orange, the carrot, considers the health;
Pink, the meat, considers the pollution/toxicity/risks.

Small sentences, phrases or keywords should be written in the post its. After that, each person puts his or her papers in the pot (10-15 minutes)

Step 3. The tool mediator mixes all the ingredients in the pot. This way, it will be impossible to know who wrote what. This is important since this game wishes to de-hierarchize societal positionalities (5 minutes)

Step 4. The tool mediator asks for 2 volunteers to separate the post its in a board, by colours (10 minutes)

Step 5. The mediator reads all, sequentially, without interruptions. After that, everybody can intervene in a mediated debate (20 minutes).

Step 6. Another volunteer will be asked to make a summary. Possible results may vary from written summaries of the debate; oral summary video recorded.

References

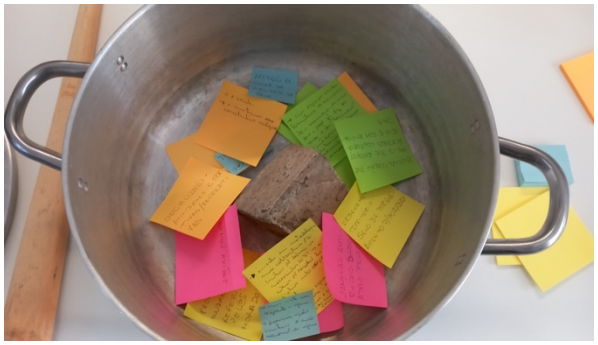
Portuguese Myth

- Costa, L.S. 2014. Sopa da Pedra. In Costa, L.S. Lendas encantadas. Guimarães, Opera Omnia ISBN 9789898309709

Participatory Games

- Christensen, B.T., K. Halskov & C.N. Klokmose. 2020. The properties of sticky notes for collaborative creativity: An introduction. In Christensen, B.T., K. Halskov & C.N. Klokmose. Explorations in Creativity Research. Sticky Creativity. Academic Press, 1-16 ISBN 9780128165669, https://doi.org/10.1016/B978-0-12-816566-9.00001-X
- Rosol, M. 2010. Public Participation in Post-Fordist Urban Green Space Governance: The Case of Community Gardens in Berlin. International Journal of Urban and Regional Research 34.3, 548-63, https://doi.org/10.1111/j.1468-2427.2010.00968.x

Examples and/or visual results (how do part of the procedures and/or results will look like)



Images above: Local Workshop from Iscte for CliCCHE Erasmus+ Project, April 2023. Location: Coruchéus Library, Alvalade District, Lisbon.

SWOT Analysis

Time required/Duration

4 hours.

Resources required

A SWOT analysis is facilitated with a piece of paper divided into four quadrants: Top-left: Strengths Top-right: Weaknesses Bottom-left: Opportunities Bottom-right: Threats.

Participants

Students, teachers, researchers, local community, public administration and stakeholders.

Rationale and Comments/Description

A SWOT analysis provides programs and organizations with a clear, easy-to-read map of internal and external factors that may help or harm a project, by listing and organizing a project's strengths, weaknesses, opportunities, and threats. SWOT can clearly show a program its chances for success, given present environmental factors. The SWOT analysis is developed by taking into consideration two levels, one with a spatial nature, distinguishing between the internal and external environments, and the other of a temporal nature, distinguishing between the present and the future. The strengths and weaknesses, opportunities, and threats that constitute the investigation areas of a SWOT analysis within the neighborhood will have to take into account the characteristics/factors that affect the impacts of climate change and the health of the inhabitants of the neighborhood.

While the strengths and weaknesses will refer to the environment of the neighborhood in the current situation; the opportunities and threats broaden the consideration of the future and to the external environment, or rather to the more general territorial, economic and social context that can generate critical issues and threats for the neighborhood.

The clarification of these elements is functional to the pursuit of the following objectives:

- enhance the strengths of the local context;

- minimize and eliminate weaknesses;

- take advantage of the opportunities that may arise;

- try to counter future threats.

Learning outcomes: Building the ability to know how to identify in depth all the aspects that determine and the possibility of carrying out an effective cross-reading. Acquisition of the ability to narrow down the topics and have a clear goal, otherwise the analysis will be generic and consequently ineffective.

Procedure

It is realized with the contribution of a double matrix: one for the internal variables and one for the external variables. Each matrix is organized with 3 columns (see attached example): Sectors of investigation; Internal: Strengths and Weaknesses; External: Opportunities and Threats.

By Sectors of investigation**,** we mean the environmental, social, economic, and structural aspects of the district, which are affected by the impacts of climate change and which influence the health and well-being of the inhabitants.

Step 1: Strengths (STRENGTHS) and weaknesses (WEAKNESSES) are internal factors of the neighborhood (endogenous variables) and it is necessary to develop the former and modify – remove – protect the latter.

Step 2: Opportunities (OPPORTUNITIES) and threats (THREATS) are forces external to the neighborhood (exogenous variables) and can only be monitored and analyzed to try, as far as possible, to grasp the benefits associated with the former and contain the damage deriving from the latter. They can be elaborated with the contribution of citizens and stakeholders in a workshop activity.

Step 3: Swot Map.It is also possible to create a graphic work, attributing different colours according to the 4 identified investigation keys.

Some recommendations:

- Try looking at the neighborhood you're studying from an external perspective, even when evaluating internal factors: what would others say about your neighborhood?
- Try to verify/quantify statements whenever possible, rather than making blanket statements about your strengths, weaknesses, opportunities and threats
- Avoid having too many aspects to consider, it could be useful to start identifying priorities.
- Start thinking about how you can convert weaknesses into strengths? Using strengths to overcome threats? Use strengths to maximize opportunities? Use strengths to compensate or minimize weaknesses?

References

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- Halla, F. (2007) A SWOT Analysis of Strategic Urban Development Planning: The Case of Dar es Salaam. Habitat International, 31, 130-142. https://doi.org/10.1016/j.habitatint.2006.08.001

- Panagopoulos T.(2014), Enhancing city resilience to climate change by means of ecosystem services improvement: a SWOT analysis for the city of Faro, Portugal, International Journal of Urban Sustainable Development 6(2).
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Support Documents

Annex: **Example of SWOT matrix**

Learners then fill out the SWOT sheet, identifying their strengths, weaknesses, opportunities, and threats.

	INTERNAL	
SECTORS that are affected by the impacts of climate change and that affect the health and well-being of the neighborhood	**Strengths** **Characteristics of the neighborhood and its population that will help it address the impacts of climate change on health and well-being and may contribute to the success of adaptation policies**	**Weaknesses** **Neighborhood and population characteristics that could pose challenges in coping with the impacts of climate change and adversely affect the health and well-being of residents**
Environmental: **What aspects of the neighborhood's environmental structure play an important role in terms of "Strengths and Weaknesses" in relation to the impacts of climate change on people's health and well-being?**	May include (For example): -Presence of many green areas (parks, gardens, etc.) in good maintenance conditions and very popular with the population -Presence of protection barriers against the risk of flooding of watercourses (lamination tanks) also used for the use of citizens	May include (For example): -The area will be at high risk of natural disasters -Absence of natural lighting and ventilation. -Absence of green spaces -Absence of infrastructure for rain drainage
Social: **What aspects of the neighborhood's social structure play an important role in terms of "Strengths and Weaknesses" in relation to the impacts of climate change on people's health and well-being?**	May include (For example): -People stay within a close radius of their house, as relatives and friends live in proximity (sense of unity). -Presence of many neighborhood events that facilitate people's relationships and activism -Presence in the district of citizens/structures able to manage climatic and health emergencies -Good level of education - Presence of a young population (young couples with children)	May include (For example): - Low level of information on the effects of climate change on health - Presence of phenomena of juvenile bullying and lack of security/assistance on the part of the fragile population - Lack of forms of assistance to the elderly and fragile population - Presence of sources of air and soil pollution
Economic: **What aspects of the neighborhood's economic structure play an important**	May include (For example): - Presence of numerous "Green" type	May include (For example):

role in terms of "Strengths and Weaknesses" in relation to the impacts of climate change on people's health and well-being?	economic activities and services to households and businesses - presence of a very active and diversified entrepreneurial fabric - presence of a good level of employment in the sectors	- Presence of numerous low-income families who do not have easy access to housing and primary services
Structural: **What aspects of the neighborhood's physical structure play an important role in terms of "Strengths and Weaknesses" in relation to the impacts of climate change on people's health and well-being?**	May include (For example): - The neighborhood has an excellent network of cycle paths connected with the main public spaces of the neighborhood -The settlement hosts a variety of service buildings and public institutions, such as workshop places, schools, and hospitals, which are spread throughout the whole site in medium conditions	May include (For example): -Lack of organized parking in… many cars are parked alongside the streets; congestion of traffic -Lack of bike lanes -Poor technical condition of the infrastructure, buildings conditions are a major threat to public safety, as most homes that suffer from cracks are threatened with collapse
Sectors that are affected by the impacts of climate change and that affect the health and well-being of the neighborhood	**EXTERNAL**	
	Opportunities Economic, political, economic, technological, social factors that could contribute to initiating projects and programs with positive effects on the health/well-being of the population and on the responses to the impacts of climate change (Forecasts in City Projects and Programs or even economic development forecasts by research groups, associations; climate forecasts for the future)	**Threats** Economic, political, economic, technological, social, environmental factors, which could have negative effects on the health/well-being of the population and on the responses to the impacts of climate change (Forecasts in City Projects and Programs or even forecasts of economic development by groups of research, associations; climate forecasts for the future)
Environmental: What predictions concerning the aspects of the neighborhood's environmental structure could play an important role in terms of "Opportunities and Threats" in relation to the impacts of climate change on people's health and well-being?	May include (For example): - Beach nourishment projects, flood defense barriers, dunes, etc. - Forecasting of new green areas - Interventions for the re-naturalization of river courses	May include (For example): -Rising temperatures, sea level rise, heavy precipitation (heavy rain and hail), shore degradation, heavy flooding could cause the death of residents and completely destroy the settlement structure. - Reduction of biodiversity and increase in soil consumption for expansive urban planning policies -Increase of the effects of the urban heat island for the construction of new areas with dense urbanization in the city center.
Social: What predictions concerning the aspects of the neighborhood's social structure could play an important role in terms of "Opportunities and Threats" in relation to the impacts of climate change on people's health and well-being?	May include (For example): -Involvement of the community in projects to increase the sense of responsibility and awareness towards the common goods and climate change - Implementation of projects for the creation of social structures to counter the marginalization of immigrants -Projects to train citizens to increase local	May include (For example): -Increased risks of energy poverty for less well-off populations -Growth of social isolation due to the increase in the immigrant population in the absence of inclusion policies.

	skills in the field of health and the fight against climate change.	
Economic: What predictions concerning the aspects of the economic structure of the neighborhood could play an important role in terms of "Opportunities and Threats" towards the impacts of climate change on people's health and well-being?	May include (For example): -Development of sustainable and green tourist equipment projects -Development of agreements and pacts for the circular and green transition of productions	May include (For example): - Loss of appeal of the tourism sector due to the inadequacy of the offer to the new demands of green and sustainable tourism - Market losses by local businesses due to the failure to promote green and sustainable products
Structural: What predictions concerning the physical structure aspects of the neighborhood could play an important role in terms of "Opportunities and Threats" towards the impacts of climate change on people's health and well-being?	May include (For example): - Launch of policies and public funding for the regeneration of the neighborhood in the direction of adaptation to climate change and health promotion -Launch of the process of drafting a new urban planning tool with the theme of green infrastructure and social inclusion at the center	May include (For example): - Expansive urban planning forecast -No planning or design forecasts to address the impacts of climate change

Example of SWOT Map

https://www.behance.net/gallery/124207155/Aplicando-SWOT-

https://portfolio.cept.ac.in/fp/urban-policies-design-studio-ur3598-spring-2020/recomposing-the-fragments-spring-2020-ud1416

https://issuu.com/amruta_meh/docs/reporta3_team8

https://issuu.com/amruta_meh/docs/report_a4c

https://issuu.com/amruta_meh/docs/reporta3_team8

Walking as a research method

Time required

Depending on the size of the neighborhood and the time granted by the accompanying persons, approximately 2 hours.

Resources required

Camera, mobile phone/phone/another device with camera, notebook, pen.

Rationale and Comments

This activity aims at observing the neighborhood through the activity of walking, using fieldnotes registered in notebooks or iPad/Tablet. This is an interdisciplinary method, used in art/architecture as well as in social sciences, which allows to observe in first person the territory and at the same time to conduct an informal interview made on foot as a "walk along". This is a tool to use whenever researchers and students have a small amount of time to get to know the case study. It allows considering realities and scales that are usually not observed, scales and layers that can be discovered by visiting the neighborhood and walking with those who know the territory well, capturing the experience of people.

Participants

The walking activity is done with an insider or someone who is familiar with the area: inhabitants, associations, local workers, and public administration. Teachers, students, researchers, local community, and stakeholders are all called to participate.

Procedure

Step 1: Before starting the walk, it is necessary to make a contact with someone of the territory available to walk-along. If possible, prepare support material, such as maps, photographic cameras, or other graphic and visual supports. The route to take might be established before the walk takes place or leave our interlocutor free to walk with the rest of the group, allowing the unexpected or "serendipity" to happen.

Step 2: The next step is to go to the place at the established time and the meeting point. Each element of the research group (student, researcher, professor) can ask questions to interlocutors about the history of the place, present and future events, the physical and social space, and the living experience (heat stress, building construction, urban green, etc.).

Step 3: Despite being a dynamic activity, it's expected to have moments of stopping during the walking, to rest and to take time to listen to the interlocutors, and to take fieldnotes.

Step 4: All observation and listening notes must be recorded. Fieldnotes include what the participants are seeing during the walk as well as the information given by interlocutors. For more information about the types of notes and how to make written records in the fieldwork, please see the following tool 1.2 "Fieldnotes".

Contents and variations

This activity may include walking along with more than an insider/interlocutor. If an interview is recorded with audio, video and/or photos during the walk, it is necessary to ask for an informed consent to use the material later. For more information about this, please see the following tool 2.1 “Interviewing”.

References

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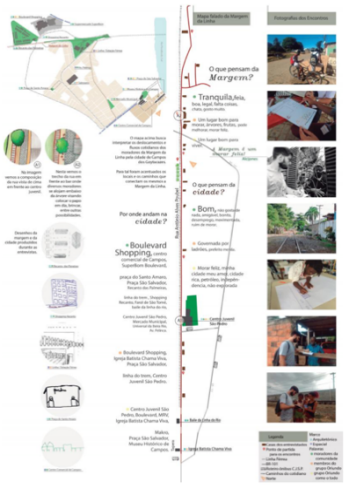
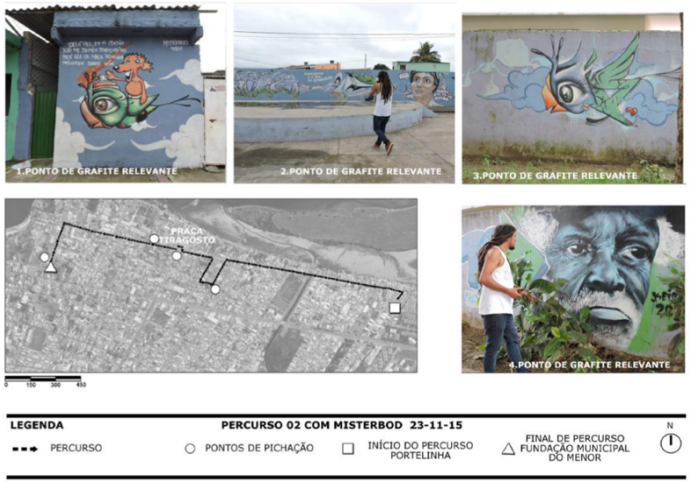
- Reginensi, C. (2017). Como praticar etnografia nas margens e fronteiras das cidades? Ponto Urbe 20, Como praticar etnografia nas margens e fronteiras das cidades? (openedition.org)
- https://eutopiacreativeresearchmethods.wordpress.com/walking-methods/

Examples and visual contents



Photographs of the walk-along in Marvila (Lisbon) as part of the academic course “Walking as a research method: the itinerary method” organized by CRIA-Iscte on the 20th-22nd of February 2020. (Ph. Caterina Di Giovanni).





Maps and some material given during the academic course “Walking as a research method: the itinerary method” organized by CRIA-Iscte on the 20th-22nd of February 2020.

4. Web tutorials

In addition to the written material, a web-based outcome has been produced, to present the Toolkit and the tools in an audio-visual format, generally very short, with few exceptions. A presentation of the structure of this document precedes the web tutorials of the tools and it explains what objectives and what it contains such as the chapters and sections present.

The web tutorial is a part of the toolkit document and consists in a series of videos that help tobetter understand the implementation of the tools in practice. Having a single file on all the selected tools would have been inconvenient for the users. Therefore, the CliCCHE team decided to make separate videos, according to the tools' names.

The videos or web tutorials of the tools are based on the following structure:

1. What it is about
2. Who participates and how
3. Phases
4. Materials and tools

It should be kept in mind that the 24 tools presented in the toolkit are the ones recommended and fully tested by CliCCHE partners during their Local workshops. These tools allow students to learn by comparing themselves with local actors and through a transdisciplinary approach.

Web tutorials give a quick and intuitive explanation of the tool, but they are not complete in every steps. Users may always come back to the Tool Collection in this Toolkit for more details. The time length of each tutorial is approximately three minutes.

The video tutorials developed begins with the Toolkit presentation, followed by these tools:

- Climate Profile Ladybug Suite
- Debate
- Expert Panel
- Printed presentation: Posters and leaflets
- Public art presentation
- Recording fieldnotes
- REBUS ®- REnovation of public Buildings and Urban Spaces" URBAN GAME - Version for CliCCHE
- Scenario building Guidelines

- Selecting Project Proposal through Public Participation
- Self-Study
- Stone Soup (Urban Game)
- Walking as a research method

Not all tools have their own web tutorial. The CliCCHE team has selected the most complex and those that have a decisive role in determining the originality of the CliCCHE structure. All the web tutorials of the tools will be available on the CliCCHE website https://clicche.org/.

5. CliCCHE Lectures

The CliCCHE Lectures aim to stimulate a critical interdisciplinary debate on Urban Regeneration of European cities and constitute a useful deepening of the "CliCCHE" methodology for the training of European university students of different disciplines. In the spirit of CliCCHE the topic of urban regeneration is addressed from multiple perspectives:

- climate adaptation at the local and global dimension (CYI)
- the project's implications through public space design (UBFA);
- urban health and urban planning responsibilities in contributing to improving people's lives in cities (IFT CNR);
- the role of the local community in experimenting with the model of the 15 minutes city (ISCTE);
- finally, the neighborhood scale, which at European level seems to be the optimal size to make cities sustainable and more on a human scale (UNICAM).

During the various lectures the speakers, involved in various ways in the CliCCHE project, will present their recent, innovative research and will open up to discussion with colleagues and students. The seminars are aimed at students, PhD students, research fellows and researchers and will be part of the tools made available by the research group for European Universities.

https://clicche.org/lw0/

CliCCHE LECTURES' ABSTRACTS

Introduction to CliCCHE lectures (Timothy Brownlee/UNICAM).

https://www.youtube.com/watch?v=XsMn6_1XpV4&feature=youtu.be

15 minutes proximity and citizens participation. Notes from Lisbon - ISCTE

This lecture develops the concept of "15 minutes-city", presenting an example that was put in practice by the municipality of Lisbon, which involved citizens' participation, to understand which parts of the capital are better equipped without the need for travelling more than 15 minutes, and a case study implemented by Iscte students is also shown.

https://www.youtube.com/watch?v=mEwO3imZAWk&feature=youtu.be

Climate adaptation through public space design - UBFA

PUBLIC SPACES are social spaces that are simultaneously part of the urban open space system and part of the public sphere. Besides their aesthetic, functional and cultural importance, today they have a significant role in adapting cities to climate change. The lecture presents and discusses the variety of public space design strategies and measures concerning main climate change risks (flood, overheating, water management), with a special reference to the role of PUBLIC ART.

https://www.youtube.com/watch?v=AHJCn-J1Vq4

Urban regeneration at the neighborhood scale: comparing European experiences
Alessia Guaiani, Simone Porfiri and Ludovica Simionato
PhD students Sustainable Curricula: Urban Planning and Inland Areas Development Strategies

This lecture develops the concept of "Urban regeneration" as a vital process of urban centers facing the pressing issues of: land consumption, climate change, and crisis. In the first part, are offered some examples in which infrastructural spaces are reconsidered for sustainable urban mobility. The second part proposes shapes and urban figures of the contemporary adaptive public space. And, in the last one, bringing attention to the intangible component of regeneration, are shown bottom-up processes and tactical urbanism in marginal
contexts.

https://www.youtube.com/watch?v=EuhjasCA-xw&feature=youtu.be

Debate

https://www.youtube.com/watch?v=CF9kSb0PaVg&feature=youtu.be

Climate modelling: from global to local - CYI

By using mathematical reconstructions of climate processes and code that runs in powerful computer systems, we simulate the Earth's climate system and help understand past and future climate change. This lecture takes us from the global to the local scale, explaining approaches used to address the challenges for human comfort and health induced by urban overheating and climate change, introducing us in the world of climate modelling.

https://www.youtube.com/watch?v=AzXhxI24L0k&feature=youtu.be

Climate adaptation through fostering perspective in urban planning – IFT CNR

Climate change interacts with other environmental conditions, such as air pollution and urban greenery. Urban green infrastructure provides benefits for biodiversity and human well-being, helping to reduce all-cause mortality for cardiovascular or respiratory diseases. For this reason, the role of public health is important to be considered in the planning processes of the urban territory.

https://www.youtube.com/watch?v=2z0xvtwrKSY&feature=youtu.be

5.1. Tested tools in Local workshops

This Educational Toolkit presented the tools that were used in CliCCHE workshops, so that it can be related to the results of the workshops. In the case of a new course, useful additional tools may be added.

The local workshops were an excellent opportunity to test not only the activities of the methodology but also the tools built and/or adapted by each partner. Not all partners developed all tools. The tools developed were determined by the time and resources of each local workshop.

Below is an overview of the tools presented and tested in each local workshop. As can be observed, some were used by all partners, and others were specifically tested only by one:

Tool Name	LW UNICAM	LW UBFA	LW CYI	LW ISCTE
15 min proximity	X			X
Audio/Oral Presentation	X	X	X	X
CHECK–LISTs for Project Proposals evaluation_Healthy Cities Generator	X	X	X	
CHECK–LISTs for Project Proposals evaluation_ Healthy Urban Planning Checklist	X	X		
Climate Profile Ladybug Suite	X	X	X	
Data collection and best practices examples	X	X	X	X
Debate	X	X	X	X
Expert Panel			X	
Flipped Classroom		X	X	
Immersive reality software			X	
Interviewing	X		X	X
Photo elicitation				X
Place Standard with a climate lens tool	X	X	X	
Printed presentation: Posters and leaflets	X	X	X	
Public art presentation	X	X	X	X
REBUS Urban Game (CliCCHE version)	X			

Recording fieldnotes			X	X
reTeach Questionnaire	X	X	X	X
Scenario Building Guidelines	X	X		
Selecting Project Proposal through public participation	X	X		
Self Study		X	X	X
Stone Soup (Urban Game)				X
SWOT Analysis		X		
Walking method as a research method	X		X	X

5.2. Results of Local Workshops

As mentioned above, the **tools recommended** in this toolkit have been **tested by CliCCHE partners** (University of Camerino, Cyprus Institute, University Institute of Lisbon and University of Belgrade) **during the local workshops** that involved professors, researchers, students, stakeholders, local associations and public administrations. Each university organized local workshops according to resources and time spent, as a semester of lessons during the period October 2022-May 2023 or as intensive workshops of a few days.

All workshops allowed working with students, applying some selected tools and involving civil society. They were focused on a neighborhood or part of the city: Bairro Sâo João de Brito in Lisbon (ISCTE), Quartiere Sant'Antonio in San Benedetto del Tronto (UNICAM), Historical centre of Strovolos in Nicosia (CYI), City centre in Valjevo (UBFA). The results of the four local workshops were summarized on the CliCCHE website, answering to the questions: What? Where? When? Who?

- UNIVERSITY OF CAMERINO – UNICAM

  https://clicche.org/lw1-university-of-camerino-unicam-italy/

- CYPRUS INSTITUTE – CYI

  https://clicche.org/lw2-cyprus-institute-cyi-cyprus/

- UNIVERSITY INSTITUTE OF LISBON – ISCTE

  https://clicche.org/lw3-university-institute-of-lisbon-iscte-portugal/

- UNIVERSITY OF BELGRADE – UBFA

  https://clicche.org/lw4-university-of-belgrade-ub-serbia/

The Local Workshops took different forms and different lengths, from a full week to a full semester. Following the students' considerations about the workshops, both types have advantages and

challenges. In the case of the shorter form, only one phase was totally implemented, while the other phases and their activities were only learned by e-learning videos, or scarcely experienced.

CYI prepared an **assessment questionnaire** that was administered by each university to **students, teachers, citizens, and stakeholders**; a template can be found in Figure 2, applied for each activity of the local workshops. The questionnaire reached in total 41 citizens, 29 stakeholders, 190 students and 52 teachers. As can be seen from the analysis of data prepared and presented during the Intensive Course meeting in Lisbon (Figure 3 – Figure 5), the results are interesting even if not very diverse for each activity. Nevertheless, it is pointed out that students, being the ones who had to apply the tools, responded a little more critically than the other categories (Figure 6).

Considering the assessment **questionnaires to students**, there is a diversity of opinions regarding the usefulness, interest, and clarity of the objective for each activity. The grades between different activities are very close to each other - actually, they barely vary - but a short reflexive exercise can still be conducted.

In every university, the tools related with the activity 4.2 **"Local inquiry and mapping**", meaning, to know the field by experience, were in every case very well scored. Nevertheless, this might be more related to fact that the tools implicated here entailed interaction with residents and the city, therefore, it would always be dynamic. Another activity always very well scored by students is the one related with results **communication and dissemination**. Science communication is an asset today, so the realization of this need by students is interesting, to say the least. It was also verified that the activities and the respective tools developed in a specific university tended to be better evaluated by the immediate receptors, the students from that specific university.

Students' considerations about the local workshops in which they were involved emerged that some tools were completely new for them (such as the use of some apps related to **climate change / climate profiles in the activity 4.3**). On the one hand, these tools proved to be challenging, on other hand students understood as useful and to be used and explored in the near future.

Overall, students demonstrated enthusiasm for participating in the workshops, gained new skills on the topics approached, and interest for participatory methodologies. With an expanded knowledge, turns out that acting towards adaptation to climate change and better health in the cities is a real possibility for this young generation.

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Activity Evaluation Questionnaire

CliCCHE - Climate Change, Cities, Communities and Equity in Health

Activity ID
Activity 4.1 Integrated vision of "Urban health" regeneration

	Teachers	**Students**	**Stakeholder**	**Citizen**
Please, indicate your status				

Please, indicate how much you agree or disagree with the following statements					
	Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
The activity has clear objectives					
The activity has a clear structure					
The instructor demonstrated knowledge of workshop material					
The instructor stimulated interest in the topic					
Learning material was relevant and useful					
Overall, this workshop has stimulated my interest in this subject					
The activity has increased my competencies and skills					
Do you have any suggestions on how to enhance this activity?					

Figure 2. Assessment questionnaire's format administered during the local workshops

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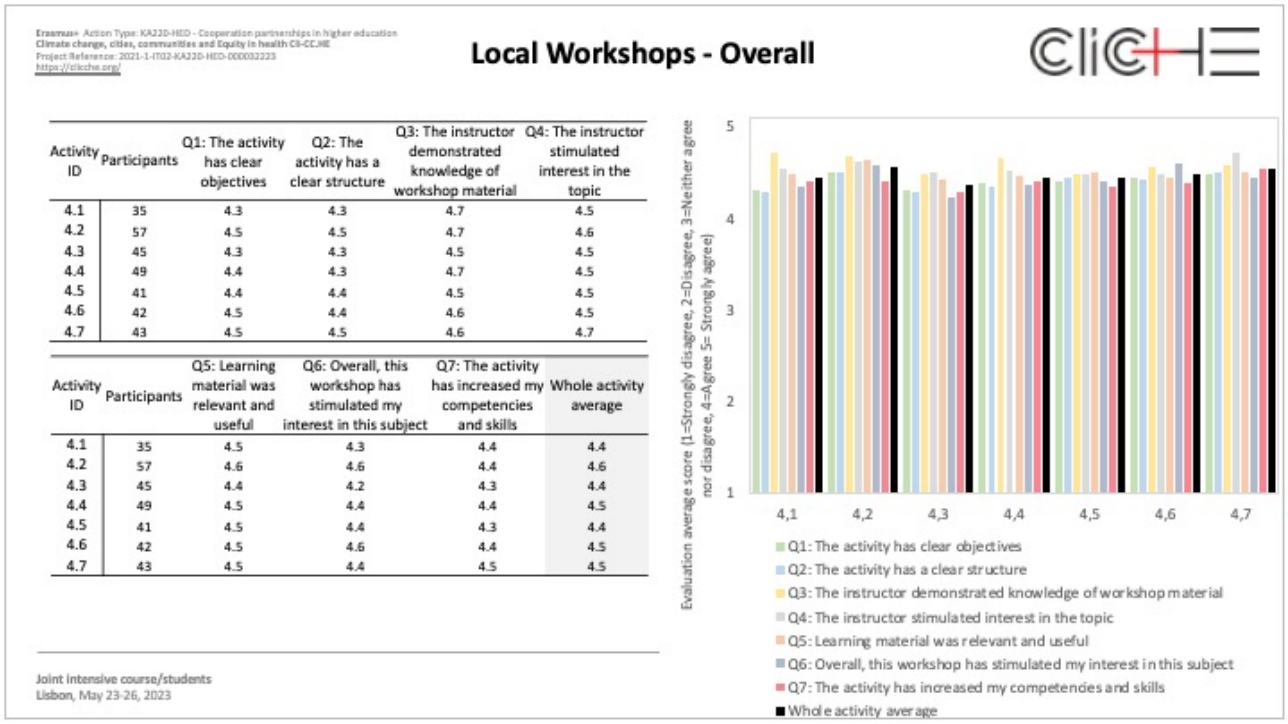

Figure 3. Overall scores of all local workshops, in aggregate for all partners

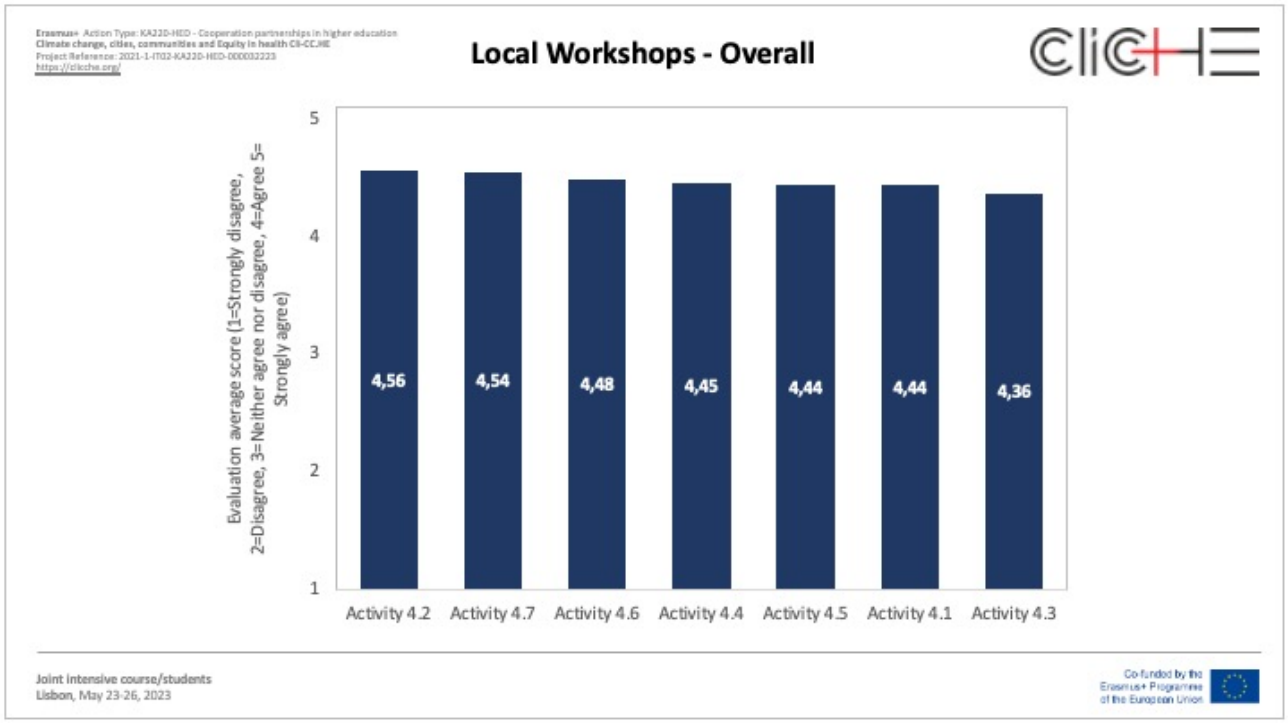

Figure 4. Score per activity, from highest to lowest, in aggregate for all partners

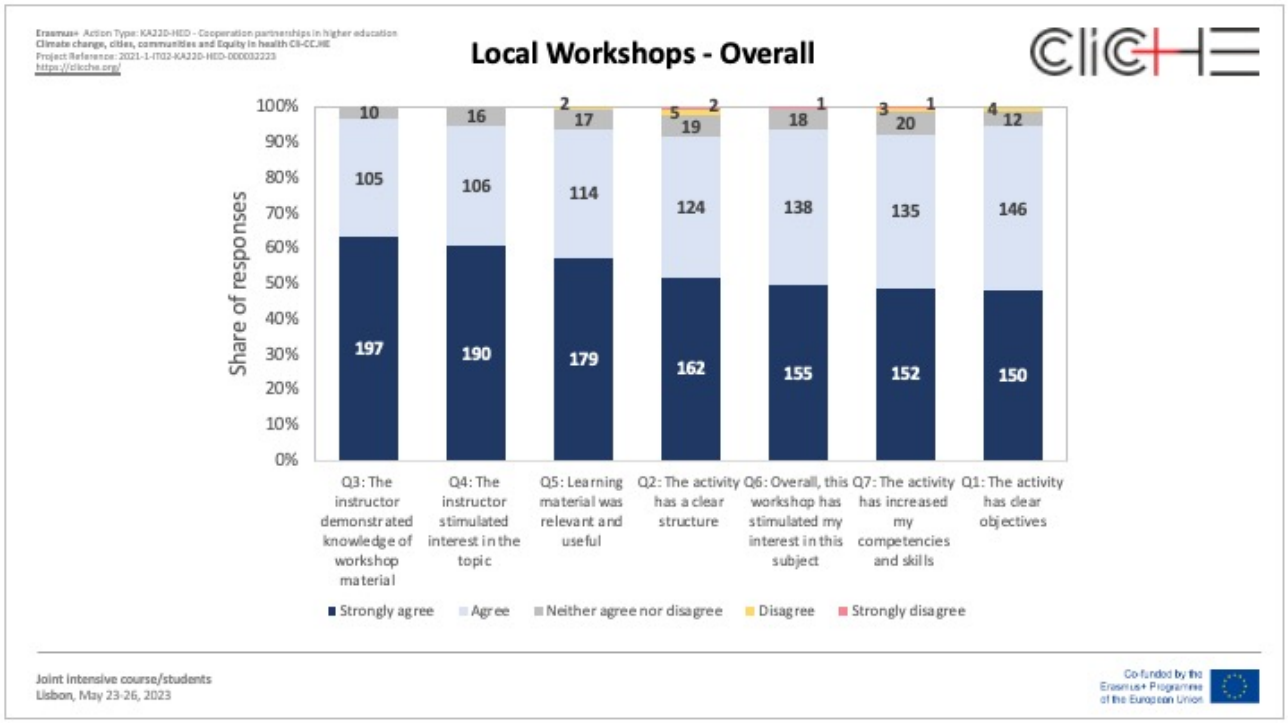

Figure 5. Score per question, from most replies for "Strongly agree" to least replies for "Strongly agree", in aggregate for all partners

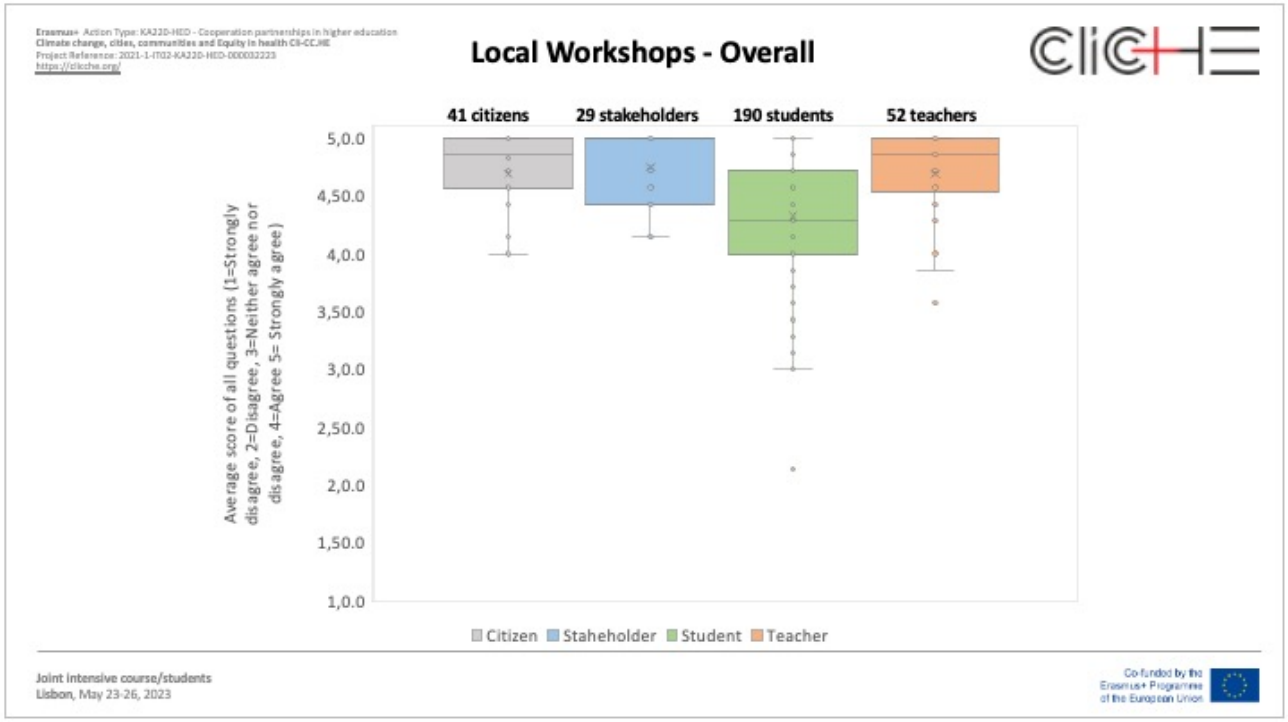

Figure 6. Range of average scores of all questions, by type of participant, in aggregate for all partners