

Deliverable D.2.4

# Newsletters and Policy Brief

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Sustainable Urban Governance through Augmented Reality  
(SUGAR)

15th August, 2020

## Deliverable 2.4

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## Executive Summary

The Sustainable Urban Governance through Augmented Reality (SUGAR) project aims to develop innovative best-practice protocols and guidelines on Sustainable Urban Governance and specifically Public Participation through Augmented Reality. Urban Design and Planning worldwide have long been criticised for their lack of meaningful public consultation and participation in the process of the making of our cities. Currently, the existing practices of consultation and participation are within the confines of council meetings, complex form filling and survey reports that most often than not carry little weight towards the decisions made by the planning authorities. For the last decades, the concept of Participatory Planning as an approach of designing has been heavily incorporated in many disciplinary fields. This project investigates the role of participation as the process that users, and other stakeholders, are actively involved in the decision-making process through the approach of achieving Sustainable Urban Governance and utilising innovative immersive technologies (specifically AR). We argue that the application of participatory design in the design process is essential to provide economically and socially sustainable outcomes. SUGAR aims to empower both citizens that seek ways to participate in the decision-making process for the design of their cities and neighbourhoods and stakeholders that would like to involve the public actively in the process of shaping their environment creating a lasting and meaningful impact.

This deliverable 2.4 is created in accordance with the description of work of Work Package 2 of SUGAR, particularly Task 2.4. This task aims to document the newsletters created as part of the project as well as a policy brief that summarises the main policy actions that can be adopted by the key stakeholders and decision makers..

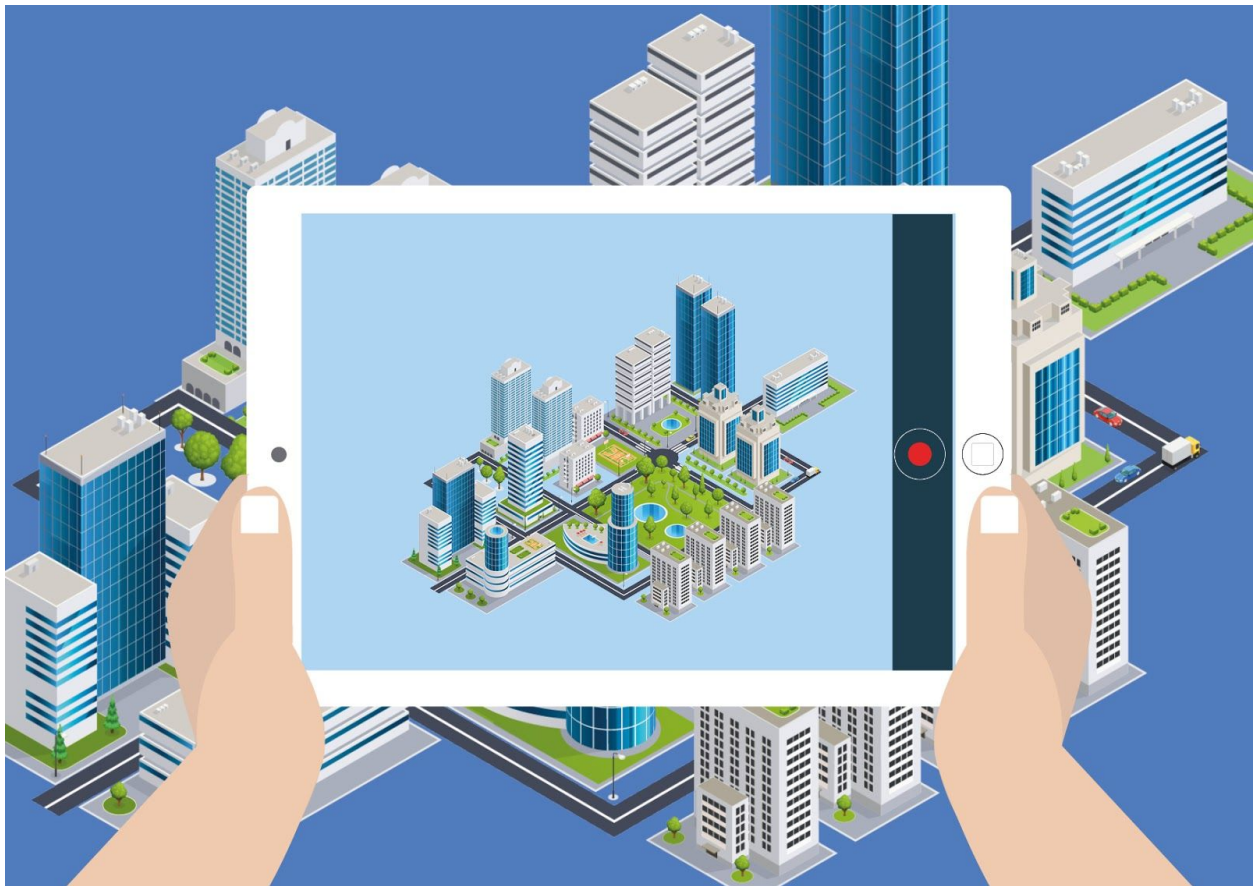
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## Newsletters & Policy Brief Summary

This SUGAR consortium has circulated two newsletters, one half-way through the project when some key milestones have been reached and another at the end of the project. Both newsletters have been circulated to the mailing lists created for the project and through social media of the project and consortium. In addition, these have been sent directly to the Advisory Committee and major stakeholders that were involved throughout the project such as the Technical Chamber of Cyprus (ETEK) , the Planning Department of the Ministry of Interior and others. In addition to the newsletters, the University of Cyprus with assistance from the Cyprus University of Technology and Harvard University have created a policy brief document that summarises why Sustainable Urban Governance is a key issue for planning authorities and advocates towards the use of the framework developed through the project. While Aglantzia Municipality has benefited directly through the implementation of the workshop and the use of one of its project as a case study we invite all municipalities and planning authorities to re-think their decision-making processes and we have made ourselves available beyond the confines of this project to consult and guide them through more inclusive and participatory processes through the use of innovative technologies such as Augmented Reality. The policy brief is also available as an annex to this deliverable.

# SUGAR

# Newsletter



Sustainable Urban Governance through Augmented Reality  
(SUGAR)

November 2019

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## Limassol 2040: Part 1



# LIMASSOL 2040

The SUGAR team, in collaboration with NGO Oxygono and the Youth Council of Cyprus, have organised a two-part discussion panel series under the theme of “Limassol 2040”, which aim to discuss how a long-term plan for a city can come to fruition through the participation of citizens, the community and the authorities.

The first discussion took place on the 21st of November 2019 at the Cyprus University of Technology in Limassol. The discussants included Prof. Spiro Pollalis from Harvard University, Dr. Vyronas Ioannou, Urban Planner representing the Technical Chamber of Cyprus, Eraklis Achiotis the Regional Officer of the Town Planning Department of Limassol and Kyriakos Xidias, Mayor of Yermasogia. In what can be described as a very successful event supported by a large attendance of around 150 interested members of the public and key stakeholders and a particularly insightful discussion between the panel of experts, the discussion was centred around five main themes:

1. The main reasons why cities need strategic planning and a clear vision for the future
2. The modern challenges faced by cities
3. The pillars of sustainable urban design
4. The environmental, social and financial issues faced by the city of Limassol due to the rapid expansion of high-rise developments along the coastal front
5. The role of citizens in sustainable urban design



Following the discussion, the audience was given the opportunity to ask questions in relation to the topics debated. The people gathered there strongly expressed their concern against the impacts associated with gentrification that is evident in the historic centre of Limassol, the ongoing development of high-rise developments in their city's coastal front as well as the lack of car-park spaces.

To shed a positive light into the future of Limassol, the Mayor of Yermasogia, Kyriakos Xidias, has revealed the intention of Limassol's six municipalities to collaborate on creating an effective strategic plan for their city. It was also recommended by experts from the panel that the city's governing authorities should collaborate with the Cyprus University of Technology in exploring opportunities to educate the community in sustainable urban design. In this way, citizens would feel less distant from the planning process and could be encouraged to participate in public consultations in an effective manner.

The second discussion will take place on the 5th of December 2019 at the Cyprus University of Technology in Limassol. The discussants invited include Nicos Nicolaides (Mayor of Limassol) and Pantelis Eutixiou Georgiou (Mayor of Ypsonas).



## Harvard University visit (20th – 23rd July 2019)

On the 20th of July, the SUGAR team from Cyprus met with the partners from Harvard University (Graduate School of Design) to run a Design Thinking workshop in an adapted format of Google's Design Sprint. The Design Sprint took place at Harvard University as a 3-day structured activity that focused on a collective process of decision making, prototyping and validating, by understanding the problem and the contextual elements of participation in Cyprus. The objective was to deliver a storyboard and prototype an application that uses Augmented Reality (AR) as a tool to engage participation in the planning process of a real-life project in Cyprus.



Different steps organized the app's storyboard



Affinity mapping was used to group ideas into categories

The Design Sprint was informed by a literature review on Sustainable Urban Governance and Participatory Planning, as well as the use of IT and AR in participatory initiatives. The fundamental idea was to have the prototype tested on the selected case study in Cyprus in order to assess the viability and effectiveness of embedding innovative technology in participatory practices to improve urban governance. By the end of the 3-day workshop, the storyboard was completed and a collective review of the key moments brought the participants together to discuss the usability and the effectiveness of the application, in order to conclude the Design Sprint. The prototype app includes a user-friendly environment that generates a 3d model of the project, and provides a series of specified elements to create their own proposal and view or comment on other proposals. The app can be used as an educational tool for the citizens in order to be motivated and participate in public matters.

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## University of Cyprus meeting (18th June 2019)

On the 18<sup>th</sup> of June, SUGAR has held its consortium meeting with literature review presentations from (i) the Cyprus University of Technology on the use of Augmented Reality for Public Participation and Urban Governance and (ii) from the University of Cyprus on Public Participation practice through creating a systematic taxonomy of methods and approaches. This comprehensive overview of the literature was key in taking the project forward and proposing a Sustainable Urban Governance through Augmented Reality framework to be implemented in Cyprus.

On the same day, SUGAR has held its first Advisory Committee meeting. The Advisory Committee consists of key stakeholders, with in-depth knowledge of the Cypriot planning system and its bureaucratic processes. A lively discussion between the stakeholders revolved around the capabilities and dangers of public participation as it should be viewed positively but also critically. Examples brought to the table by stakeholders and their insights complemented the information we have received from the public and have offered a different point of view to the consortium that will reconcile the multiple complex parameters that formulate the planning system in Cyprus. The case studies that were proposed by municipal authorities in order to facilitate the implementation of the project were presented and through the discussion that ensued, while many possible projects had merits, a specific opportunity seemed stronger as it was in a manageable scale given the limited time and resources of SUGAR. The selected case study was also primarily chosen due to its capability of actually instigating change and influencing the decision-making process.

## A message from the coordinator, Prof. Panayiotis Zaphiris



The SUGAR project is progressing well and gradually meeting its milestones as set out from the project's initiation. Over the past few months, we have completed an extensive desk research which analysed materials and approaches, reports and statistics, best-practice case studies as well as instructional practices, focusing on activities and methods for involving the public in the decision making process through Augmented Reality.

Following our visit in Boston, Massachusetts, where we met with our SUGAR partners from Harvard, we successfully organised a 3-day Design Spring workshop, which focused on developing a prototype app that can be used as an educational tool for the citizens in order to be motivated and participate in public matters. The case study selected for our app platform concerns the creation of a two-lane road to cross the road of Athalassa through its forest Athalassa (adjacent to ATI) towards Platy (RIK area) and end at the roundabout that connects Akadimias Avenue with Aglantzia Avenue. Our SUGAR partners at Harvard University are currently in the process of converting the 3D site models and the associated 3D components to AR content to populate the activities of the app. Our framework will be tested in a workshop format that is scheduled to take place in February 2020.

The large attendance at the first part of the 'Limassol 2040' discussion panel series is a testament to our project's successful presence in the social media. We have gained an overwhelming amount of support, particularly from citizens that seek to participate in public consultations but wish to do so using more engaging methods of participation. We remain committed to our project objectives aiming to implement our project in our real case study hoping that the outcomes of the project influence the decision-making process and the project reveals opportunities for the evolution of the planning system in new participatory processes.

Prof. Panayiotis Zaphiris

# SUGAR

# Newsletter



Sustainable Urban Governance through Augmented Reality  
(SUGAR)

August 2020

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## SUGAR AR Application Implementation Workshop

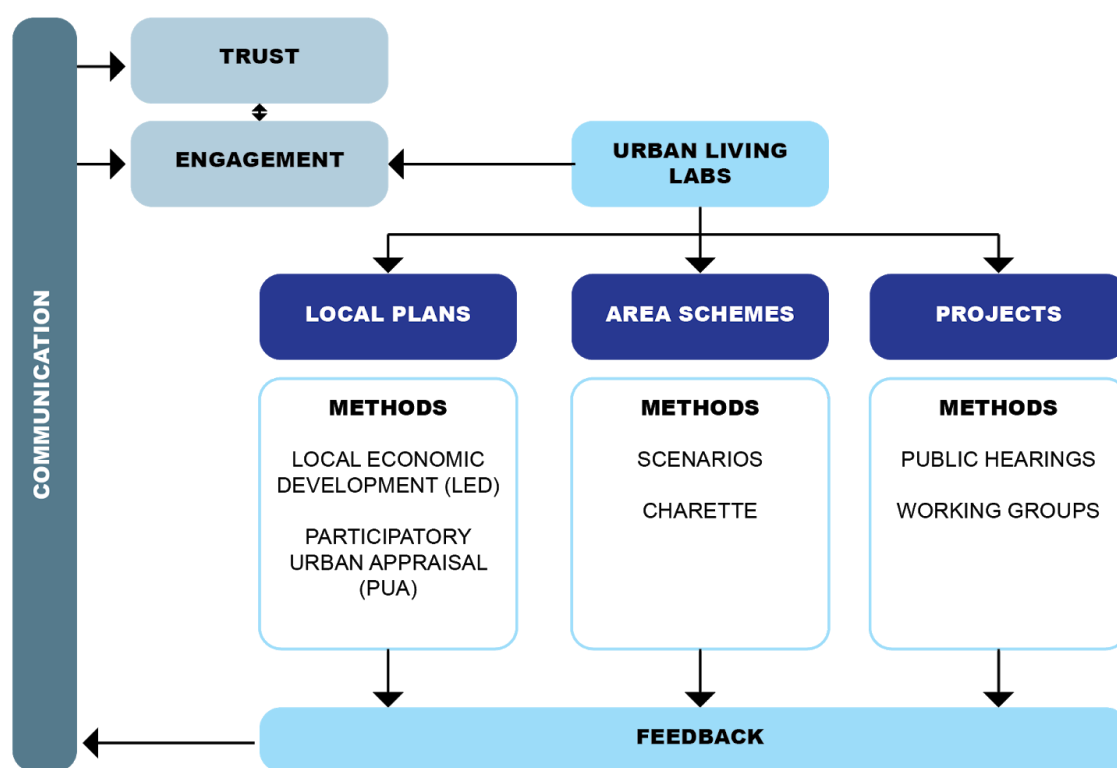
Due to CoVid-19 related restrictions, the implementation workshop has been conducted in two parts. Part 1 took place on the 7th of July 2020 at the Cyprus University of Technology and Part 2 took place on the 14th of July 2020 at the University of Cyprus.

In addition, we have allowed the public to access download instructions for the app and install it in their own devices. In total 20 participants have engaged with the application and more have downloaded in their own devices and sent us screenshots of their creations. All these are available in the SUGAR facebook page.



## Briefing Paper is Out

The consortium has developed a briefing paper to summarise the key issues relating to participatory planning in Cyprus and provide guidelines for authorities to improve participatory practices. The briefing is based on a review of the current state-of-the-art on participatory planning and design, a systematic review of case studies, a critical assessment of provisions for public consultations in Cyprus, and two dialogues held with professionals and users. The key factors identified as contributing to successful participatory planning are creation, process and community. A full framework was developed as part of the project aiming at supporting improved urban governance and participation in planning by proposing a strategy for engagement through trust building, a systematic approach to public participation and specific methods for participatory activities. Here is a schematic of the SUGAR framework:



The full briefing paper is available in the SUGAR website ([sugar.cyprusinteractionlab.com](http://sugar.cyprusinteractionlab.com))





## Published Work

During the project implementation we have managed to publish 3 papers while 2 working papers are still under review in key international peer-reviewed journals.

Papallas A., Zaphiris P., (2019) “Designing a framework for public participation and sustainable urban governance through user-centred design methods”, 26-31 July 2019, 21st International Conference on Human-Computer Interaction, Orlando, Florida, US

Charalambous N., Papallas, A., (2019) “The role of Participatory Planning methods in the development of cities: A systematic literature review on Sustainable Urban Governance”, 2-6 July 2019, ISUF 2019 XXVI International Seminar on Urban Form: Cities as Assemblages, Cyprus Network of Urban Morphology, Nicosia, Cyprus.

Geddes, I., Charalambous, N. & Papallas, A. (2019) “Participatory methods in the development of public space: case studies review”, Planning for Transition. Proceedings of the AESOP Annual Congress.

## A message from the coordinator, Prof. Panayiotis Zaphiris



Planning worldwide have long been criticised for their lack of meaningful public consultation and participation in the process of the making of our cities. Through our Sustainable Urban Governance through Augmented Reality project, we have found that in Cyprus especially, the public participation process in the domain of urban planning has been confined in strict presentation formats limiting the scope of co-creation and meaningful understanding of user needs. In addition, we have documented shortcomings related to understanding proposals and spatial intentions as well as pain points related to transparency, building trust and engagement.

The work that has been done in the short period of time the project has taken place has indeed shown promising results in how interactive visualisations can facilitate a more inclusive decision-making process.

The SUGAR project has successfully completed its milestones as set out from the project's initiation. We have completed an extensive desk research which analysed materials and approaches, reports and statistics, best-practice case studies as well as instructional practices, focusing on activities and methods for involving the public in the decision making process through Augmented Reality. Through an effective collaborative process with our partners from the University of Cyprus and Harvard University, as well as the inclusion of major stakeholders in Cyprus such as representatives from the National Technical Chamber (ETEK), the Cyprus Architects Association, the Planning Department and Aglantzia Municipality, we have managed to create and pilot an innovative application and complete framework of sustainable urban governance. Our proposed framework is available as a briefing document in the project's website and we invite any interested stakeholders to use it as a guide to enhance their participation processes.

Throughout the project we have received an overwhelming amount of support, particularly from citizens that seek to participate in public consultations but wish to do so using more engaging methods of participation. This project has been a wonderful collaboration opening new avenues of research for all members of the consortium.

Prof. Panayiotis Zaphiris

This project has received funding from the Cyprus Research Promotion Foundation RESTART 2016-2020 research and innovation programme under grant agreement no: INTERNATIONAL/USA/0118/0058



# Briefing Paper

## Participatory Planning for Sustainable Urban Governance

### Introduction

This briefing paper was developed as part of the Sustainable Urban Governance through Augmented Reality project (SUGAR). It summarises the key issues relating to participatory planning in Cyprus and provides guidelines for authorities to improve participatory practices. The briefing is based on a review of the current state-of-the-art on participatory planning and design, a systematic review of case studies, a critical assessment of provisions for public consultations in Cyprus, and two dialogues held with professionals and users. The definition of 'participatory development' by the World Bank's Learning Group on Participatory Development is used as a benchmark to assess participatory practices: "a process through which stakeholders influence and share control over development initiatives and the decisions and resources which affect them". The key factors identified as contributing to successful participatory planning are *creation*, *process* and *community*. A full framework was developed as part of the project aiming at supporting improved urban governance and participation in planning by proposing a strategy for engagement through trust building, a systematic approach to public participation and specific methods for participatory activities.

### Key Issues

**Trust.** On the one hand, the timing and the location of the public hearings, as well as the effective dissemination of this information to citizens are thought to be prohibitive in achieving meaningful participation. On the other hand, authorities feel that a lot of effort has been put in achieving participation in public hearings, but with disappointing results in terms of interested parties attending. Lack of trust is triggered by the authorities' view that such processes are a non-determining routine given low level of participation achieved and involve mainly biased participants who express individual interests. The late stage of the design phase at which the public hearings take place, leads to difficulties in influencing design decisions that the citizens suggest in

the first place.

**Transparency.** This is regarded as a process that requires the involvement of citizens and systems that are pivotal in facilitating participation and understanding of the planning process. Navigating through the bureaucracy required to respond to public consultations is especially complex; the lack of cross-verified details regarding the information given and the need to dedicate much personal time to develop the know-how to digest the technocratic tone of the information hinder transparency.

**Power.** There are concerns regarding power relations and land ownership: the government is exempt from planning application processes and the church seems to be treated more leniently than other private landowners. Another key concern is the extent to which authorities are (not) legally bound to follow what is expressed in the public meetings.

**Culture and Education.** The lack of planning education was mentioned as one of the most significant obstacles to meaningful participation of the public in the planning process. According to the authorities, citizens do not realise the importance of planning and design in the quality of their lives, therefore they focus on unimportant personal issues rather than the bigger picture. The public is said to not be sufficiently educated to decide on serious matters, and this leads to suspicion towards the authorities and the reluctance in listening to the reasoning behind decisions.

**Over-democratisation.** There is a firm belief among authorities that, in some cases, good design that benefits the wider community is not necessarily an outcome of participatory planning, but of the skills and expertise of planners and designers, and in these cases consultations endangered the quality of design and the timely progress of beneficial developments. The purpose of the public hearing should not be to just "giving people a voice" for the sake of having a

# Briefing Paper

## Participatory Planning for Sustainable Urban Governance

public opinion, sometimes dogmatism and trust is needed to achieve good results.

*Practicalities.* The absence of public space to host hearings, the lack of funding, human resources and quality methods of presentation in order to create a productive model of participation are all barriers to sustainable urban governance. The presentation quality and methodology for participation is not efficient, and both the public and the officials need further education and training to communicate with each other effectively.

### Proposed Solutions

1. Good communication between the public and the authorities, which can be achieved by simplifying the information given to the public and providing different participatory tools suitable to different groups, including advanced visualisation tools;

2. Technology, currently non-existent, could assist by providing digital maps, drawings and information regarding projects in a manner accessible to laymen, by documenting the progress of the planning process and providing feedback following consultations;

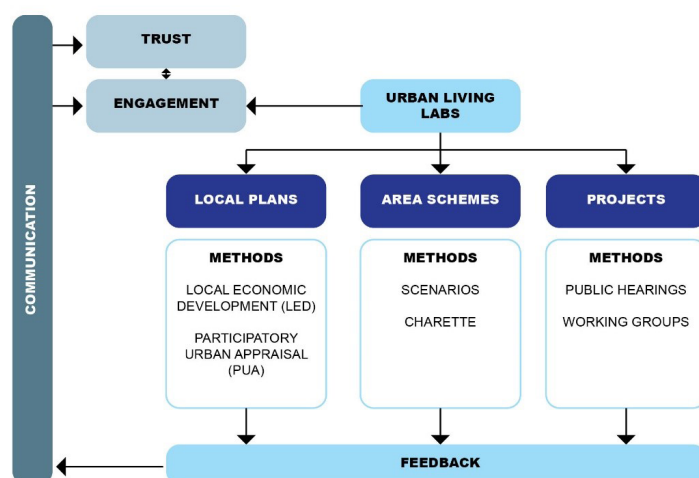
3. Improving interest in public matters and the importance of good planning in education. This could lead to the cultural development of citizens, and therefore to the prevention of errors and conflict during public consultation;

4. More structured and well-designed participatory procedures, that aim to inform citizens ahead of public hearings, with the use of technological innovation and media, could simplify and enhance participation in urban development and its meaning.

### Framework

The framework developed as part of the project sets out the vision for sustainable urban governance in Cyprus by proposing a structure for participation on three levels: setting the ground for engagement, a methodological strategy for participation, and specific methods for participatory activities. The ambition of the framework is to provide guidelines to establish a planning environment where information is easily accessible, transparent, and in a format that makes it simple for the public and other stakeholders to understand the nature, content and context of policy and proposals. The framework suggests creating means of communication to build trust among citizens and stakeholders, which will lead to greater engagement and more relevant debates on key development issues. Practical engagement activities should take place through the strategy of Urban Living Labs (ULLs), which would apply to all policy levels and projects. All outcomes of the activities should be feedbacked to the par-

ticipants and the wider public in order to sustain trust and engagement through communication. The basic features of the framework are summarised in figure below.



### Guidelines

#### 1. Setting the ground: developing trust for meaningful engagement

The first step to secure engagement is to build trust. This can be achieved through increasing public awareness about planning issues on the one hand and providing accessible information on the other. The process of mutual learning between authorities and the public should be viewed as the basis as well as an outcome of participation. Transparent communication is vital to build trust; for this purpose, a user-friendly online planning platform and system can be developed for stakeholders to access information, be informed about activities, submit contributions and gain feedback on the outcomes of participatory activities. It must be underlined that the platform itself and access to information does not necessarily ensure the building of trust. From the point of view of the participants, feedback will be the key factor in trust development, especially the specificity of information as to how their input was embedded in policy or design, as well as clear reasoning in case this was not. From the point of view of the planners, meaningful, informed and constructive input will be vital in trust development; for this to happen the evidence and information on key planning issues must be clear and convincing for the users, while the format for input should enable users to be constructive.

#### 2. A methodological strategy for participation: Urban Living Labs

Urban Living Labs (ULLs) are effective instruments in bringing different actors together and developing solutions to specific issues (Puerari et al., 2018). The production of local knowledge is one of the most significant outcomes of ULLs, which are flexible formats for participation and can comprise several methods and tools. Since ULLs were shown to be



# Briefing Paper

## Participatory Planning for Sustainable Urban Governance

successful when set up for a specific purpose, case or scale, this briefing suggests that rather than using a single format for all policy and design levels, ULLs should be designed and comprise specific tools for different levels of policy making and for specific projects.

Continuity of engagement is a key element of sustainable urban governance and ULLs can be set up as a continuous process, at least for certain levels of policy making. This framework suggests that for the level of *Local Plans*, ULLs are run continuously once every six months regardless of the implementation stage of the plan. The content of these ULLs should be adapted according to whether the plan is undergoing the study phase, the drafting or being implemented. The same recurrent model of participation should be used for *Area Schemes* whenever these are in place, new ULLs should be set up prior to the study phase of a scheme for areas which did not have an existing one. In this case, however, if a specific area scheme is to remain 'dormant' for a substantial amount of time with no deadline set for its renewal, then consideration should be given to interrupting the relevant ULL. When it comes to individual projects, authorities should initiate a ULL prior to a call for a competition or any discussion with potential developers, so that the outcomes of participatory activities can be embedded in the call and plan requirements, or as soon as it becomes clear that a proposal will be submitted to the authorities. In these cases, the ULLs should take place more intensively, according to the timeframe of the project, possibly ranging from once a month to once every three months.

### 3. Specific methods for participatory activities

The methods proposed for use in *Local Plans* ULLs are Local Economic Development (LED) (Majale, 2008; Bonilla, 2009) and Participatory Urban Appraisal (PUA), adapted from the participatory rural appraisal (PRA) method for use in urban environments (Halkatti, Purushothaman and Brook, 2003; Sharmin et al., 2013). LED aims at developing private-public partnerships, social networks and mobilisation of local resources. As such, it is more geared towards engaging businesses, from large companies to SMEs, NGOs, civic groups, knowledge and innovation industries. The aim of LED is to achieve consensus and build a common vision for the future of the city. PUA aims at developing shared learning to assess resources, identify issues and propose solutions, as well as evaluating plans and interventions. Its benefit is that it requires no technical knowledge to collect data, as such it is particularly suitable to work with the general public.

The methods proposed for use in *Area Schemes* ULLs are Scenarios (Celino and Concilio, 2010; Chakraborty, 2011) and Charrette (Lundström, Savolainen and Kostinen, 2016). Rather than using methods to build a broad vision, at the level of area schemes, it should be possible to be more specific and gain participants' input into developing relatively

detailed scenarios for an area. Furthermore, ULLs at this level should facilitate embedding user perspectives into planning and design policies. The use of scenarios would enable the development of long-term plans, which can evolve as do the socio-economic characteristics of the area and can help finding an agreed solution through the selection of a preferred scenario.

The briefing proposes that with regards to individual projects, the current system of public consultation should remain in place until a re-evaluation of the legislative procedure. However, it is proposed that this should work in parallel with the method of the Working Group (Al-Nammari, 2013) to enable democratisation of planning practices in specific contexts. The benefit of a working group is that it develops a set of highly engaged and committed individuals, who are afforded the ability to gain information, analyse issues, consider a variety of views and propose solutions and alternatives outside of the limited time and framework provided through public hearings. This enables committed participants to develop understanding and ideas collaboratively, to question proposals aside of the pressures of public hearings, and to converge to possible solutions prior to public meetings.

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