

Deliverable D.4.2

Report on the implementation of the workshop

Sustainable Urban Governance through Augmented Reality (SUGAR)

15th August, 2020

Deliverable 4.2

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Executive Summary

The Sustainable Urban Governance through Augmented Reality (SUGAR) project aims to develop innovative best-practice protocols and quidelines 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 or 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 4.2 is created in accordance with the description of work of Work Package 4 of SUGAR, particularly Task 4.5. This task aims to document the implementation of the workshop initially scheduled for March 2020 but due to the CoVid-19 pandemic was postponed and completed in July 2020. The implementation workshop rather than a single one-stage workshop as it was initially envisioned, was split in two parts, one in Limassol at the Cyprus University of Technology and one in Nicosia at the University of Cyprus to ensure social distancing measures are kept without reducing the amount of participants or the quality of the evaluation. The description of T.4.5 has also included a keynote lecture. The consortium had decided at an earlier stage to conduct the keynote lecture in two parts in November and December 2019, this is also described in this report.



Introduction

To evaluate the SUGAR AR application, the University of Cyprus and Cyprus University of Technology teams have organised an implementation workshop in two parts at both universities. During the implementation phase, we have invited the wider public in both cities to engage with the activities and offer feedback both in the process of participation and in the case study itself. Furthermore, to account for limitations in the manner the workshop has been conducted in both locations due to social distancing restrictions and covid related health and safety instructions imposed by the institutions hosting the activities, we have created a guide for the public to download and use the app in their own devices at their own leisure and time, inviting them to complete the evaluation questionnaire at the end of their experience and share their creations with the SUGAR team in a similar manner as it will be done in the face to face workshop. The consortium has decided on these measures and methods of implementing the final task of SUGAR in light of the CoVid-19 health emergency and to ensure the quality of the evaluation.

The implementation and analysis operates on two levels. First, at the level of the SUGAR project, the participants have made use of the equipment and took part in AR activities that aimed to examine and evaluate the successfulness of said activities and equipment in facilitating meaningful participation. Second, at the level of the case-studies in hand, the participants have provided visual feedback on the schemes and engaged in co-creation design activities that pertain to the aims of encouraging meaningful participation. Their creations have been shared publicly through the page of the project in social media and the website. In addition, these have been delivered to the municipality for further actions. Finally, a keynote lecture and discussion on the themes of SUGAR has been conducted separately before the CoVid-19 pandemic (November and December 2019) under the theme Limassol 2040. Participants have included beyond our SUGAR partners from Harvard University, stakeholders that are decision-makers either in the implementation of such projects or in the planning process itself, including mayors and head of planning committees and national technical chamber representatives.



Workshop

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. The guidelines have been included in the D.2.7 Handbook and a press release announcing this has been communicated (also see D.2.5 Presence in Media).

In total 20 participants have engaged with the application and provided feedback through a questionnaire that included structured likert scale questions and open-ended questions.



Photographs from the Workshops



























Selected Produced images by participants







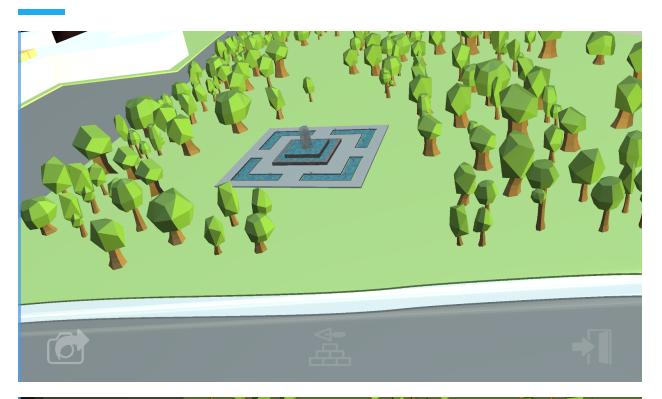


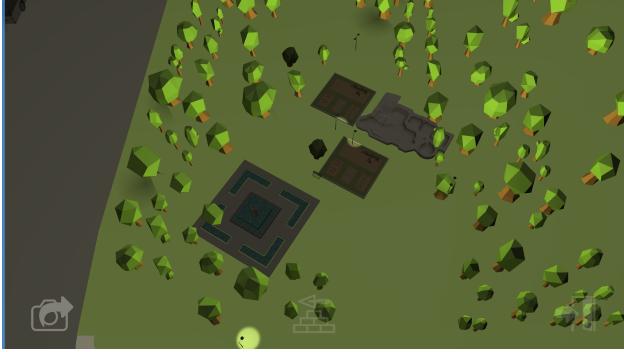




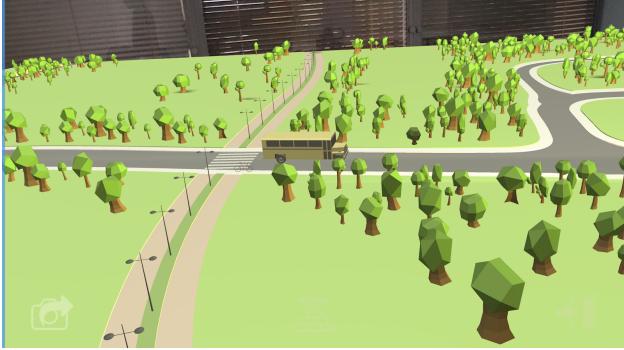








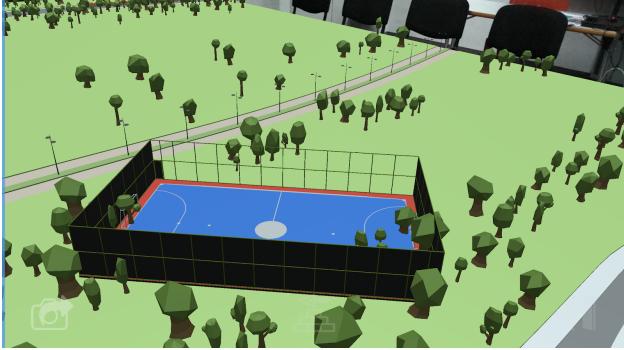


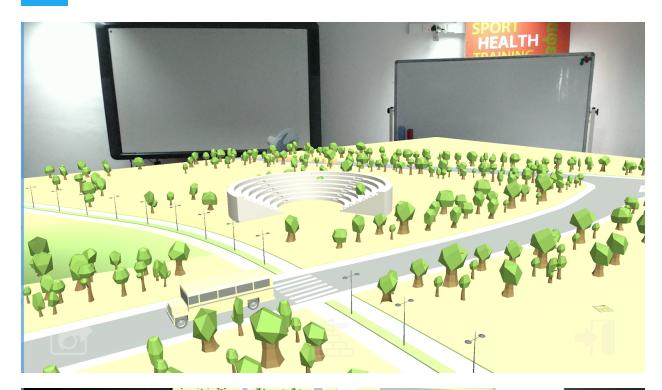






















Sign-Up Sheets

Events

Limassol 2040: Part 1

The SUGAR team, in collaboration with NGO Oxygono and the Youth Council of Cyprus two organisations that have been organising public events with sustainable urban development as subject-matter, have organised a two-part discussion panel series as part of the SUGAR project under the title 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 Achniotis 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

Limassol 2040: Part 2



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 second part of the discussion took place on the 5th of December 2019 at the Cyprus University of Technology in Limassol. The invited speakers were Nicos Nicolaides (Mayor of Limassol), Pantelis Eutixiou Georgiou (Mayor of Ypsonas) and Charalampos Theopemptou (MP of the Ecologists – Citizens' Coalition Movement). The discussion evolved around five main themes, including local government reform, tall buildings, sustainable strategic planning, future challenges and the long-term plan for Limassol.

The two Mayors emphasized the need for local government reform and expressed their support for the proposal put forward by the Government so that Municipalities could acquire the necessary responsibilities and financial capacity to perform their duties more efficiently towards improving citizen welfare. From his point of view, Mr. Theopemptou expressed that, although the proposed bill has "good potential", it also appears to have "many shortcomings", leaving "many unanswered questions for the Parliament to discuss".

Concerning future challenges, Mr. Theopemptou strongly underlined that Municipalities need to employ certain measures that address the impacts associated with a poor public transportation system, lack of green space, inadequate waste management system, rising temperatures and air quality. Particularly for the latter, Mr. Theopemptou pointed out that, according to a research carried out by the Cyprus Institute, statistics indicate that on average two Cypriots die prematurely, every day, due to poor air quality.

Moreover, The Mayor of Ypsonas expressed his concern on the forthcoming effects of climate change, particularly rising sea levels. "With the sea levels set to rise, by approximately two metres, over the coming decades", Mr. Georgiou strongly urged that we need to take measures and protect our coastal cities. Among other things, he also referred to the design of the Limassol Metropolitan Park, which has been put on hold due to the cancellation of the Local Plan, while at the same time assuring that this goal remains a high priority on the agenda of all six Limassol Mayors and will be included in the revised Local Plan as well as the strategic planning proposals 2021-2027.

Regarding the Sustainable Urban Mobility Plan (ΣΒΑΚ), the Mayor of Limassol noted that the aim is to solve the issue of excessive car use "which in Limassol exceeds 92%". Mr. Nicolaides suggested that the implementation of such a Plan, requires the necessary funds and technocratic approach, but above all, a strong political will. He also indicated that the Plan entails major changes "that are in conflict with the mind-sets of Cypriots, who are accustomed to drive everywhere exclusively in their cars". Regarding the controversial topic of tall buildings, Mr.



Nicolaides did not exclude the possibility of strategically locating future high-rise developments on the Coastal Road, also known as Aktaia Odos (a road ranging from Limassol Marina to the Port of Limassol). The Mayor recalled that the former, as well as the current City Council felt that this strategic approach could be achieved successfully through proper procedures. "It is an issue that is currently being discussed and should be assessed in light of the current situation", he added. Mayor of Ypsonas said that although there is a need for tall buildings, so far these have been constructed in the wrong locations. Instead, "they should be strategically positioned in such a way as to form a strong financial district — in order to attract other companies", he also commented.

We allowed the businessmen to build towers where they wanted, without sufficient strategic planning and design, said Mr. Theopemptou, who also noted that on a daily basis every construction site of a high-rise building dumps 2500 tonnes of water into the sea, the quality of which is controlled by the associated companies themselves. He indicated that everyone was rushing to obtain planning permits because the legislation for almost zero energy consumption buildings was planned to be implemented from the coming year.

At the end of the discussion, the audience had the opportunity to ask the invited speakers a series of questions in relation to the topics discussed as well as their views on the future of the city

The events were announced in various local, regional and national media outlets and news reporters have also reported on the discussion held in various media outlets (see also deliverable D.2.5 - Presence in Media).









Cyprus Times

Το μέλλον της Λεμεσού απασχόλησε την 1η στο είδος της διαλογική συζήτηση



Top Stories

Αυτοί είναι οι 26 ποι επιστρέφουν τα κυπριακά διαβατήρι

Του ποδ να τ

Του έκλεψαν το ποδήλατο....το εντόπισε να πωλείται σε ιστοσελίται Χειροπέδες

Βροχέ χαλάζ καιρο προει

ΒΙΝΤΕΟ: Μαρτυρία Έλληνα ομογενή που

αναζητα τους δυ στα χαλάσματα « Αλβανία

Θρήνος, πόνος, αγι και «μυρωδιά» θαι κάτω από τα συντρ

Χειροπέδες σε 27; καταζητούμενο γι

Τις ανησυχίες και τις θέσεις των πολιτών κατέγραψε χθες βράδυ, το πρώτο σκέλος διαλογικών συζητήσεων, υπό τον τίτλο «Limassol 2040», με τους ομλητές να επικευτρώνονται σε πέντε θεματικές, που αφορούσαν τον στρατηγικό σχεδιασμό και το όραμα μιας πόλης, τις προκλήσεις των πόλεων, τα ψηλά κτίρια, τον βιώσιμο αστικό σχεδιασμό και τον ρόλο των πολιτών στον σχεδιασμό του.

Η πρωτοβουλία, χορηγός επικονωνίας της οποίας είναι και το ΚΠΕ, διοργανώθηκε από τον ανεδάρτητο, μη κυβερνητικέ, μη κερδοκοπικό οργακομό Οργαρο, το Τοχικόριγο Ποιπιπατίμιο Κίπρου και το Συβρόλιο πολιτάς στα πότο για το Συβρόλιο από τη



Survey

Ενσωματώνοντας τη συμμετοχή του κοινού στη διαδικασία λήψης αποφάσεων σε θέματα που αφορούν το δομημένο περιβάλλον

Λαμβάνοντας υπόψη την εμπειρία της χρήσης της εφαρμογής του προγράμματος SUGAR, σας ζητούμε να διαβάσετε προσεκτικά τις πιο κάτω δηλώσεις και να απαντήσετε κατά πόσο συμφωνείτε ή διαφωνείτε με αυτές.

Το ερωτηματολόγιο είναι ανώνυμο

* Απαιτείται

ΜΕΡΟΣ Α΄						
Η χρήση της εφαρμογής μου έδωσε την ευκαιρία να καταλάβω καλύτερα το έργο *						
	1	2	3	4	5	
Διαφωνώ απόλυτα	0	0	0	0	0	Συμφωνώ απόλυτα
Πιστεύω ότι η εφαρμογή θα βοηθούσε τη γνώμη μου να ληφθεί σοβαρά υπόψη από τις αρχές. *						
	1	2	3	4	5	
Διαφωνώ απόλυτα	0	0	0	0	0	Συμφωνώ απόλυτα



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Θεωρώ ότι η εφαρμογή χρειάζεται περισσότερες επιλογές για τον χρήστη όσο αφορά το περιεχόμενο και τα αντικείμενα για να είναι χρήσιμη *						
	1	2	3	4	5	
Διαφωνώ απόλυτα	0	0	0	0	0	Συμφωνώ απόλυτα
	Ο λέσω κι	Ο νήσεις	Ο με τα χε	Ο έρια *	0	Συμφωνώ απόλυτα
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Η εφαρμογή δεν ανταποκρινόταν αρκετά γρήγορα (υπήρχαν καθυστερήσεις ή τρεμούλιασμα) *						
	1	2	3	4	5	
Διαφωνώ απόλυτα	0	0	0	0	0	Συμφωνώ απόλυτα
ΜΕΡΟΣ Γ΄						
Άλλα σχόλια / πληροφορίες Η απάντησή σας						
Σελίδα 1 από 1 Υποβολή					Υποβολή	

Μην υποβάλετε ποτέ κωδικούς πρόσβασης μέσω των Φορμών Google.

Αυτή η φόρμα δημιουργήθηκε μέσα στον τομέα Cyprus Interaction Lab. Αναφορά κακής χρήσης

Google Φόρμες

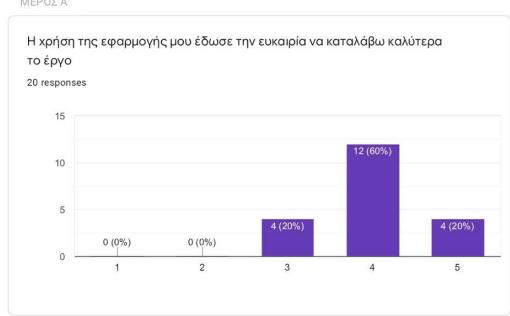
Results

Ενσωματώνοντας τη συμμετοχή του κοινού στη διαδικασία λήψης αποφάσεων σε θέματα που αφορούν το δομημένο περιβάλλον

20 responses

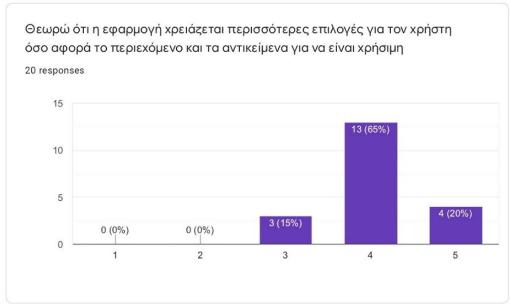
Publish analytics

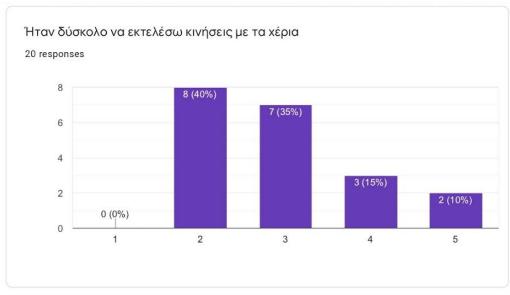


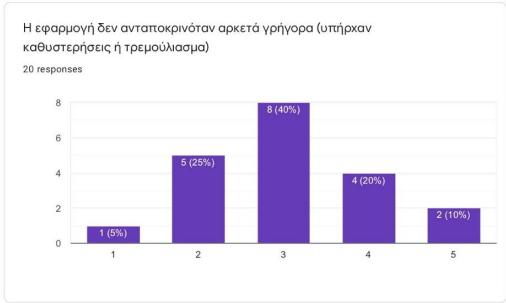




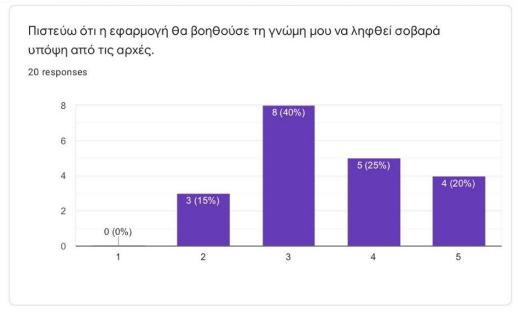


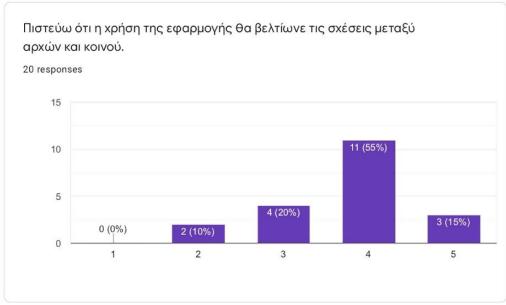






ΜΕΡΟΣ Γ΄





ΜΕΡΟΣ Β΄

Άλλα σχόλια / πληροφορίες

6 responses

ηταν σχετικά δύσκολη και χρονοβόρα η εγκατάσταση της εφαρμογής, οι χειρονομίες με τα χέρια δεν δούλευαν όπως θα έπρεπε

Very interesting application with a lot of potential. Needs to be more user-friendly i.e. navigation, adding objects (size and rotation) etc.) and also provide some info about the area / projects.

Η εφαρμογη χρειάζεται καλυτερο σχεδιασμο. Κατα τη διάρκεια που τη χρησιμοποιησα δεν ανταποκρινόταν σε ικανοποιητικό βαθμό, έχανε τη φωτεινότητα της. Χρειάζεται μεγαλύτερη βελτίωση στο κομμάτι διάδρασης ανθρώπου υπολογιστή. Επίσης ο χρήστης συνηθισμένος να κάνει zoom με συγκεκριμένο τρόπο και όχι περπατώντας είναι δύσκολο να αντιληφθεί το πως θα πάει στο σημείο που τον ενδιαφέρει. Πάντως αποτελεί μια καινοτόμο και σημαντική εφαρμογή που θα βοηθήσει να συλλεγούν στοιχεία για το τι θέλουν οι κάτοικοι σε σχέση με τη πολεοδομική διάταξη.

User interface can be improved, especially in relation to object placement and position adjustemn. It should also allow the simultenious positioning of manyy objects (i.e many trees).

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Google Forms

Discussion

Most participants responded positively in understanding the project better through the use of the application and utilising a 3D model they can navigate. An observation that occurred was that most people are not familiar with navigating with Augmented Reality and attempted to use gestures to navigate the 3D environment of the model even when it was explained that you have to move around the physical environment.

Most participants found the particular technology useful but a significant percentage thought that other technologies might be more helpful in public participation processes. This is in line with the observation that additional features, assets, objects and options would be required if the particular application were to be useful as a creation tool.



Participants did not find it that difficult to use the gestures. This might be because they have been used to using similar gestures in other applications such as moving and rotating objects. In regards to the application's efficiency and ease of use there is a fair distribution across the board in terms of lag or glitches with most participants rating responsiveness around the middle. Having observed the participants, there are some particular gestures that resulted in problematic behaviour by the application such as after sharing a screenshot, the scale of new objects changes.

One of the main themes established early on in the project was transparency and a major research question was whether technology can help build trust between authorities and the public. Through the participant responses, we deduce that many participants believe that such an application would help their opinions be more seriously heard (in contrast to the current format of public consultations) and even more participants feel like such an application would improve the relationship between authorities and public.

We have also allowed participants to offer other comments and information. The 6 responses received here relate to technical aspects such as the functionality of the gestures (lagging or not tracking properly), the user interface design (positioning of many objects such as through a brush-like gesture) and device-related capabilities such as brightness. Interestingly issues of navigation that are specific to Augmented Reality came up and few participants have noted a preference to have been sitting to use the app rather than having to move around.

Conclusion

The initial assumptions related to the benefits of visualising 3D space in order to enable the public not trained in reading architectural plans or not trusting carefully curated CGI renders of proposals aligns with the observations of the research team. Participants perceive technology, albeit not Augmented Reality necessarily, to be crucial not only in allowing them to perceive and navigate proposed urban environments but more importantly to enable them to voice opinions and explain better thoughts, worries and concerns. The SUGAR application, in its first exploratory format, has shown that such an application can be foundational in building trust between public authorities or decision makers and the public, therefore becoming a platform to communicate in the same terms, using the same language and tools.





Sign-Up Sheet - Tuesday 7th July 2020

SUGAR Workshop

Name	Signature
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Sign-Up Sheet - Tuesday 14th July 2020

SUGAR Workshop

Name	Signature
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Paisios Shlim	The state of the s
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