





Project ID

Project Acronym:	C4P			
Programme:	HORIZON2020			
Topic:	MG-4.5-2016 "New ways of supporting development and implementation of neighbourhood-level and urban-district-level transport innovations"			
Type of Action:	Research and Innovation Action			
Start date:	1 June 2017			
Duration:	36 months			
Website:	www.cities4people.eu			
Coordinator:	Copenhagen Business School (CBS, Denmark)			
Consortium:	Oxfordshire County Council - United Kingdom			
	UCL Institute of Health Equity – United Kingdom			
	Municipality of the city of Budapest – Hungary			
	Institute for Transport Sciences Non-profit LTD (KTI) – Hungary			
	City of Hamburg and District Office of Hamburg Altona - Germany			
	HafenCity University Hamburg – Germany			
	e-Trikala SA – Greece			
	Q-PLAN INTERNATIONAL PC - Greece			
	Üsküdar Municipality – Turkey			
	Istanbul University – Turkey			
	White Research SPRL - Belgium			
	Stichting Waag Society – The Netherlands			
Project overview:	Cities-4-People unfolds in five European areas: the Oxfordshire County, Hamburg District of Altona, Üsküdar in Istanbul, Budapest and Trikala. In these areas Mobility Communities are set up involving citizens, city authorities, mobility providers and innovation experts. By developing and providing a framework of support services and tools, Cities-4-People empowers these communities to actively contribute to shaping their local mobility innovation ecosystems in line with a People-Oriented Transport and Mobility (POTM) approach. POTM encompasses a blend of new digital and social technologies under an inclusive and multidisciplinary approach in order to bring out solutions that have a low ecological footprint, a sharing mentality and the potential to solve real urban and peri-urban mobility issues.			

LEGAL NOTICE

Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use, which might be made, of the following information. The views expressed in this report are those of the authors and do not necessarily reflect those of the European Commission.

$\ensuremath{\mathbb{C}}$ Cities-4-People Consortium, 2017

Reproduction is authorized provided the source is acknowledged

Main authors

 $\sqrt{
m [Tuba inal Çekiç and Kimberly Tatum]}$ (HCU)

√ [Andre Landwehr] (HCU-CSL)

Contributors

 $\sqrt{[Dr Ruth Bell and Mr Paul Mullins]}$ (reviewers, [UCL])

 \sqrt{M} [Máté Lénárt, Kinga Lőcsei-Tóth,] (reviewers, [BKK, MUNBUD])

Table of Contents

Ав	ABBREVIATIONS4			
Ex	EXECUTIVE SUMMARY			
1.	ГИ	RODUCTION	6	
2.	BA	CKGROUND FOR THE CONCEPTS	7	
	2.1	Lab events	7	
	2.2	Hackdays	8	
	2.2.1	Promotion and Setting of Hackdays	9	
	2.2.2	Challenges and the successes of the Hackdays	.10	
3.	GE	NERAL LIST OF CONCEPTS	.12	
	3.1	Budapest-List of concepts	.13	
	3.1.1	Actions for the concepts	.15	
	3.1.2	Rationale of the Concepts	.19	
	3.1.3	Actions for the concepts	.22	
	3.1.4	Rationale of the Concepts	.25	
	3.2	Oxfordshire-List of concepts	.27	
	3.2.1	Actions for the concepts	.29	
	Ratio	nale of the Concepts	.34	
	3.3	Trikala-List of concepts	.36	
	3.3.1	Actions for the concepts	.38	
	3.3.2	Rationale of the Concepts	.43	
	3.4	Üsküdar -List of concepts	.45	
	3.4.1	Actions for the concepts	.47	
	3.4.2	Rationale of the Concepts	.50	
4.	GE	NERAL CONCLUSIONS OF THE CONCEPTS	.52	
	4.1	Challenge profiles of the cities	.52	
	4.1.1	Challenge profile for Budapest	.53	
	4.1.2	Challenge profile for Hamburg	.53	
	4.1.3	Challenge profile for Oxfordshire	.54	
	4.1.4	Challenge profile for Trikala	.55	
	4.1.5	Challenge profile for Üsküdar	.55	
	4.1.6	Discussion of the challenges	.56	
	4.2	Types of interventions	.57	
	4.3	Conclusions	.61	
Ар	PENDI	(1: PROMOTIONAL MATERIALS FROM HACKDAYS	.62	
Ар	PENDI	(2: PHOTOS FROM HACKDAYS	.65	

List of figures

Figure 1. C4P process to develop mobility interventions	6
Figure 2. Count of challenges by category	52
Figure 3. Challenge Categories Budapest	53
Figure 4. Challenge Categories Hamburg	54
Figure 5. Challenge Categories Oxfordshire	54
Figure 6. Challenge Categories Trikala	55
Figure 7. Challenge Categories Üsküdar	55
Figure 8. Intervention counts by category	58
Figure 9. Interventions to promote active travel	59
Figure 10. Affordable/Quality travel options	60
Figure 11. Traffic Reduction Strategies	60
Figure 12. Hackday poster of Hamburg	62
Figure 13. Promotional material of Oxfordshire	63
Figure 14. Agendas from Hackdays	64
Figure 15 Photos from Budapest Hackday	65
Figure 16. Photos from Hamburg Hackday	66
Figure 17. Photos from Oxfordshire Hackday	66
Figure 18. Photos from Üsküdar Hackday	67

List of tables

Table 1. List of Lab activities	8
Table 2. Hackdays	9
Table 3. Challenges and successes of Hackdays	11
Table 4. Challenge and Intervention categories	12
Table 5. Long List of Concepts-Budapest	13
Table 6: Actions for the Concepts for Budapest	16
Table 7. Advantages and disadvantages of the Budapest concepts	19
Table 8. List of Concepts-Hamburg	20
Table 9: Actions for the Concepts for Hamburg	22
Table 10. Advantages and disadvantages of the Hamburg concepts	26
Table 11. List of Concepts-Oxfordshire	28
Table 12: Actions for the Concepts for Oxfordshire	30
Table 13. Advantages and disadvantages of the Oxfordshire concepts	34
Table 14. List of Concepts-Trikala	36
Table 15: Actions for the Concepts for Trikala	39

Table 16. Advantages and disadvantages of the Trikala concepts	43
Table 17. List of Concepts- Üsküdar	45
Table 18: Actions for the Concepts for Üsküdar	47
Table 19. Advantages and disadvantages of the Üsküdar concepts	50
Table 20. Challenge categories	52
Table 21. Conclusion of concepts addressing challenges	
Table 22. Intervention types and subcategories	57
Table 23. Conclusion of concepts and the intervention	58

Abbreviations

Centre for Budapest Transport (Hungary)
Barton Neighbourhood Centre (UK)
Cities-4-People
Demand Responsive Transport
Deliverable 3.1
Deliverable 3.3
HafenCity University, Hamburg (Germany)
Healthy Urban Mobility
Horizon 2020
Institute for Transport Sciences (Hungary)
National Health Service (UK)
Oxfordshire County Council (UK)
People-Oriented Transport and Mobility
Question and Answer
Quadruple Helix Stakeholder
Work Package

Executive Summary

This report summarizes the activities of the Cities-4-People Mobility Labs and the concepts which they have developed from April through July 2018. The Mobility Labs have been set up in five areas in Europe [Budapest, Hamburg, Oxfordshire, Trikala, and Üsküdar (Istanbul)] as part of the Cities-4-People project, sponsored by the Horizon 2020 Program of the European Union.

From the launches of the Mobility Labs (April 2018), the partners have held 32 public events, all together, and have reached approximately 1,100 local participants. These interactions resulted in the collection of over 350 different ideas for the resolution of local mobility challenges in the five project focus areas. In July 2018, all partner municipalities hosted Mobility Lab Hackdays, where the previously generated ideas were discussed and assessed by the local community, the top ideas were selected, and these were subsequently developed into 10 to 12 more concrete concepts to address the mobility challenges.

Following the categorization of challenges and interventions as developed in previous stages of the Cities-4-People project (Deliverable 5.1), some commonalities can be seen among the challenges which the concepts of all project areas address and among the intervention areas which they target.

In general, though the profile of challenges differ from city to city, most of the selected concepts address issues related to road congestion, low quality and provision of end-to-end cycle and pedestrian infrastructure, and low connectivity of public services (service gaps). Similarly, three intervention areas are preferred in the concepts selected across all five project areas. These are promotion of active travel, traffic reduction strategies, and affordable and quality travel options.

In the next stage of the project, the 'long list' of 10 to 12 concepts will be shortened once again to a 'short list' of 5 concepts which can be considered for implementation. This will take place at a further workshop for the local Mobility Community, experts, and decision-makers to take place in September 2018.

1. Introduction

This report documents the work done to develop mobility concepts within the Task 3.1 of the Cities-4-People. Task 3.1 activities, in general, aimed to assist the local communities translate their mobility challenges into mobility concepts that will potentially trigger mobility interventions at a later stage. A concept is a concrete, well thought out, community driven and creative proposal for a solution, that deploys a strategy to improve the mobility challenge. By exploiting the project's formed structures in WP2 (i.e. Citizen Mobility Communities, Citizen Mobility Labs, Citizen Mobility Kit) we aimed to offer local communities the ability to navigate from need identification (in WP1) to concepts (Task 3.1), by ensuring strong expert support and training. Accordingly, for the Task 3.1 which is supposed to run in two iteration rounds, we engaged in a series of activities aiming at transferring knowledge to the local mobility communities and enable them to ideate and cocreate possible concepts as solutions to these already identified challenges.

The first iteration built upon WP1 and WP2 results and conclude on a first set of mobility concepts/interventions that will be introduced for endorsement by the Quadruple Helix City Stakeholders so as to conclude on a final set of interventions (Task 3.2) for development (Task 3.3) and piloting (WP4).

The co-creation activities implemented in this concept development phase are the following:

- The organisation of Presentation Days

- The utilisation of the Citizen Mobility Labs to ensure a balanced mix of people able to tackle local issues.

- The organisation of Mobility Hackdays

Deliverable 3.3 is a public report on the preliminary (long list) of concepts as developed and collected through the Mobility Lab actions which took place between April, 2018 and August, 2018 in each partner cities as part of Task 3.1. The report will also provide an overview of Hackdays and their results which will briefly summarize the list of concepts prepared during the Hackday events in Citizen Mobility Labs.

Figure 1 shows the process up to the development of interventions. This report encompasses the third arrow in Figure 1, covering the final development of concepts during Hackdays.





Source: D.3.1 Report Activities for the generation of mobility concepts, issued by Oxfordshire county Council

The Hackday is a setting in which a broad range of interested mobility stakeholders including citizens, developers, mobility providers, policy makers and entrepreneurs use a co-creation process to generate convincing and innovative mobility concepts. Participants at the Hackday were introduced to already generated ideas and findings, discussed barriers and potential solutions, and also investigated new ideas. Facilitated by co-creation tools from the Citizen Mobility Kit, the citizen mobility concepts that will then be brought to the Quadruple Helix Stakeholders Workshop in Task 3.2.

The report has been organized in four sections. Chapter 2 provides background information on the events that took place in pilot cities to generate new ideas and develop concepts for the Hackday. The third section presents the list of concepts focusing on the actions and actors that should be taken into account during the implementation phase. The last section provides a conclusion on the general comparison between partner cities. The results of the five Hackday events presented here offers some important insights into the sustainable mobility solutions that were generated by different communities in each of five cities.

2. Background for the concepts

Concepts generated through Lab-Events after April, 2018 have been incorporated into the new ideas and concepts developed during the Hackday events. Hackdays were organized to develop latent ideas into convincing concepts that will then be brought to the Quadruple Helix Stakeholders Workshop which will take place in September 2018.

2.1 Lab events

During the period starting from April, 2018-the launch of Citizen Mobility Labs- until the end of June, each partner city hosted some events including the compulsory Mobility Lab launch events, Presentation Days and Hackdays. In addition, the cities also hosted a number of other Mobility Lab events, including roadshows, pop-up events, ongoing displays and workshops. Table 1 gives an overview of the lab events hosted within pilot cities.

Table 1 illustrates the composition of in total 32 Lab events in each cities. From the table, it can be seen that each city reached quite a good number of participants, in events in which all types of mobility stakeholders were represented. Participants co-created solution ideas to different mobility challenges by means of co-creative tools provided by Mobility Kit¹.

¹ Co creative tools can be found <u>https://ccn.waag.org/navigator/</u>

Table 1. List of Lab activities

Торіс	Budapest	Hamburg	Oxfordshire	Trikala	Üsküdar
Number of Lab Events	5	6	11	3	7
Number of total participants (approx.)	200	200-250	170	83	420
Composition of the stakeholders (Mobility/plann ing/citizen initiative/regul ar citizen)	 40 stakeholders, 25-30 mobility enthusiasts, 130 local regular citizens 	• 4 parts of the QHS are well- represented	• 4 parts of the QHS are well- represented	 Citizens and community representatives Government and city authorities representatives, Industry representatives Entrepreneurs, 	 Mobility experts, University students, Representative s of citizen groups, Experts from related departments of the municipality, Local representatives, Regular citizens, The Mayor,
Methods-tools used during the events	 Value tree, Story puzzle, Open discussions, Presentations Group work, Post-it notes collection on maps, Offline voting board, Round table discussion 	 Iteration Postits: Feasibility vs Impact Iteration Dice Prioritisation Matrix Prioritisation Matrix World Café Crazy 8's Story Puzzles, 	 Portrait Drawing: Iteration Postits: Feasibility vs Impact Prioritisation Matrix Ideas-Concept Template: Iteration Dice: I Like, I Wish, What If Ambition Ranking 	 Presentations and easy co- creation exercises Brainstorming in groups Crazy 8's 	 Story Puzzles, World Café Up-voting, Ambition ranking, Brain Storming, Energizers.
Number of ideas generated through events	80	65	38	60	111

2.2 Hackdays

Each city took a slightly different approach to develop the ideas into concepts, but in all cases Hackdays were planned to ensure that 10 concepts were developed out of these high level ideas. Some cities refined the ideas into concepts through lab activities and workshops before the Hackday, while others have kept to high level ideas until the Hackday. Accordingly, varying from 38-111 ideas were discussed during the Hackdays and facilitated

by co-creation tools to develop convincing concepts that will then be brought to the city's Quadruple Helix Stakeholders² Workshop.

2.2.1 Promotion and Setting of Hackdays

To make sure that Hackday events are well-publicized and to attract the mobility community and citizens as much as possible, partners used several different media used by their target audience(s), and promoted the event through their Presentation Days and other Lab events. Table 2 provides a summary of Hackday events regarding the event dates, duration of the events, number of attendees and the promotional activities. The bottom half of the table presents the tools used during the events to eliminate the higher level and number of ideas into 10-15 concepts and the number of concepts in each city that will be taken to the QHS workshop.

As Table 2 shows, Hackday events were realized in each partner city between June 29th and July 27th, 2018. All events took place in public spaces over a 3 to 5 hour duration. Depending on the location in an open public park, Budapest attracted 50 participants to the event. With the exception of Oxfordshire and Üsküdar, Hackdays were promoted publicly by means of social media, web site and newsletters.

Topic	Budapest	Hamburg	Oxfordshire	Trikala	Üsküdar
Date	10 th July	27 th July	14 th July	29 th June	18 th July
Venue	Pop Up Park near the Municipality, Budapest, V. district, Városháza Park	HausDrei Community Center	Barton Neighbourhood Centre	Matsopoulos Mill	Project Office (Keşfet Üsküdar) Municipality of Uskudar
Duration (hours)	2 hours	3,5 hours	3.5 hours	2.75 hours	5,5 hours
Number of participants	50	28	19	21	18
How was it promoted?	Public	Public	 Invitation only. Incentive of £20 Amazon vouchers 	Public	Invitation only

Table 2. Hackdays

² stakeholders from public institutions (at the level of cities, regions & local, regional, national & European policy), private organizations (start-ups, SMEs, corporations), as well as academia (researchers, universities, research organizations) and citizens.

Торіс	Budapest	Hamburg	Oxfordshire	Trikala	Üsküdar
Public Promotion					
Flyers/Posters		x			
Social Media	x	x		x	
News Media/Print		X			
External organization newsletters		x			
Local Project Website		x		x	
Mobility Community Prom	otion				
At previous events		X	X		
Own Newsletter/Contact List	X	X	X	X	
Targeted individual invitiations	X			X	x
Incentive/Prize Offer			Х		
Tools/Methods	 Vote board, Post-it idea collection on maps, idea drawing. 	 Feasibility to implement within 2 years Importance /usefulness/ impact 	 Portrait Drawing Iteration Post-its Feasibility vs Impact Prioritisation Matrix Iteration Dice I Like, I Wish Ambition Ranking 	 Four Quadrants (Check-in activity). Ideas Ranking. Brainstormin g in groups. One word before leaving. 	 "4 Quadrants" World Café Story Puzzles. Up-vote activity. Solution analysis table with 5 W
Number of Concepts	• 10	• 12	• 12	• 11	• 10

Several methods were used to eliminate and prioritize the ideas and finally to develop them into concepts. Eventually each pilot city managed to reach a substantial amount of concepts to be taken to the QHSs.

2.2.2 Challenges and the successes of the Hackdays

The organization of the event was done by the partner city teams to ensure the development of concepts in a well-structured event. Depending on the purpose of the event, ideas that had been generated previously through the Lab-events were presented in each

city. Events ended up with many outputs and success however some partners also faced some challenges which can be seen in Table.3.

According to the partners, the greatest challenge for the Hackdays was selecting the date of the event since it was the middle of the summer break in all pilot cities. This was due to the overarching C4P project schedule and timeline. There was a resulting challenge to attract relevant stakeholders and regular citizens also due to the high temperatures. The second most highlighted challenge was the co-creative method chosen for the event, either in terms of timing or complexity, however each partner city achieved the appropriate number and details of concepts co-created by stakeholders.

City	Challenges	Successes
Budapest	Attracting local citizens due to the touristic form of the event location - Pop Up Park near the Municipality of the City of Budapest.	Offline voting tool attracted the attention of local citizens and transparency were provided via the voting tool on 20 pre-identified ideas. 10 new micro intervention ideas are collected for further work.
Hamburg	Reaching sufficient number and sufficient diversity of participants due to high temperature. Regular citizens participated less compared with previous events. High temperature also had an influence on the concentration of participants. Loss of concentration was somehow avoided by offering lots of drinking water, ice and little breaks. The method chosen for the selection of concepts it was quite hard to predict which concepts would make it into the QHS.	Attendance of stakeholders and politicians. This indicates that cities-4-people has grown in its importance and gets recognized not only by the public, but also by institution, companies and politics. During the workshop we were able to go through all 32 ideas and filter the 12 most relevant and feasible ideas. An evaluation questionnaire for the event was prepared and the feedback received was very good revealing that the boundaries of the project have been clear and high level of participation was recognized by stakeholders.
Oxfordshire	 Scheduling: in order to get participation from regular citizens event was scheduled on a weekend. However, participation from professional bodies such as the Local Authority was reduced. Outside events: We selected a day when there were no significant events happening. However, England ended up playing in the World Cup runner-up game, which meant we lost some participation toward the end of the workshop. Time: 3 hour event was limited amount of time for the work needed to ideate, develop, and prioritise concepts. 	Achievement of the key objective: fleshing out 12 ideas into convincing concepts. Continuation to build the Citizen Mobility Community: showing how their time and effort is being directed into interventions in their community and showing how their ideas and problem solving are being used by the C4P project towards a productive end.

Table 3. Challenges and successes of Hackdays

City	Challenges	Successes
Trikala	Belated starting of the event due to the late arrivals. Homogeneity within the groups as a consequence of strong tendency of people to form groups with their friends or peers ; Check-in activity (4 Quadrants) required the participants to move between the quadrants of a circle; people on wheelchairs, although they could, did not feel comfortable.	Extremely interesting new ideas were introduced for the first time during the event. Increased awareness of the people without mobility problems to the challenges faced by people with mobility problems, and especially the ones that are restricted on wheelchairs. Spontaneous participants have been included
Üsküdar	Reaching some of participants due to the summer break. The Story Puzzles activity was new to the participants. With a good instruction, it would work better however, the activity was not implemented well enough.	Chosen location and the co-creative environment provided leaded to success of the event. Energizing tool caught and motivated the participants to co-create.

3. General list of concepts

This chapter presents the outputs of the Hackdays which is the long list of concepts endorsed by the community to take to the QHS Workshop. Each pilot city wrapped up the Hackday with 10-15 concepts to be processed during the QHS workshop. The overall structure of this chapter takes the form of one section for each pilot city, including the key aspects of the concepts within sub-sections on the possible action plans for the concepts and the rationale lying behind the selected concepts.

The types of challenges that the concepts address were identified in the Deliverable 5.1 report based on analysis of the views of the city transport expert stakeholders from Work Package 2 across all 5 cities (as seen in table below). In this report we refer to these as challenge categories (CC). Deliverable 5.1 also summarized a set of intervention types (IT). The list of IT can be seen in Table 4 below.

Challenge Category	Main Challenge Type
CC-1	Road Congestion
CC-2	Low quality and provision of end-to-end cycle and pedestrian Infrastructure
CC-3	Low -connectivity of public services (service gaps)
CC-4	Affordability & access to a viable private car based alternative
CC-5	Parking provision/capacity
CC-6	Low-frequency of public services (service gaps)
CC-7	Air & noise pollution (due to traffic)

Table 4. Challenge and Intervention categories

Intervention Category	Intervention Type	
IT-1	Promotion of active travel	
IT-2	Traffic reduction strategies	
ІТ-3	Affordable and quality travel options	
IT-4	Inclusive mobility infrastructure	
IT-5	Travel information provision and literacy	
ІТ-6	Emission & noise control strategies	
IT-7	Speed control strategies	

3.1 Budapest-List of concepts

Intervention area in Budapest is the Embankment of the Danube on the Buda side. Lack of green spaces and difficult access to the riverfront are the main mobility challenges in the area. Depending on the specific challenges endorsed concepts are listed in Table 4 and can be seen that concepts focus on handling the low quality and provision of end-to-end pedestrian infrastructure and promoting active travel is most highlighted intervention category.

No	Concept	Concept description	Target Audience	Challenge Category	Intervention Category
1	Installation of street furniture and plants/trees on community spaces	Install river floating docks for recreational activities, or even for sunbathing under outdoor garden umbrellas on the Danube river.	 Local citizens Stakeholders Civil Organizations and the business of the area Tourists 	CC-2 CC-7	IT-1 IT-7
2	Widening the staircase towards the Danube river	As the upper Danube river bank had to be protected from flooded water, the flood wall is too high, and local people have only a narrow staircase as access to lower embankment of the river bank. Widening the staircase, people could sit down on it enjoy their lunch and have an excellent community spot to enjoy the picturesque panorama of the Parliament at Batthyány square.	 Local citizens Stakeholders Civil Organizations and the business of the area Tourists 	CC-2	IT-1

Table 5. Long List of Concepts-Budapest

No	Concept	Concept description	 Target Audience 	Challenge Category	Intervention Category
3	Installation of "floating docks" on the Danube river with community functions	Install river floating docks for recreational activities, or even for sunbathing under outdoor garden umbrellas on the Danube river.	 Local citizens Stakeholders Civil organizations and the business of the area Tourists 	CC-2	IT-1
4	Covering the lower- embankment	Covering the lower embankment (it is currently a street with busy car traffic, linking the northern and southern part of the city centre, with a few entrances and exits) would connect the upper embankment with the river Danube. By this intervention, citizens (and visitors, tourists) would be able to enjoy the embankment area and its future services and activities in a human environment, i.e. currently unexploited potentials of the river and its direct surroundings.	 Local citizens Tourists Visitors 	CC-2 CC-7	IT-2
5	Closure of the lower- embankment on weekends	On the weekends, the lower embankment will be given for public active transport use. All generations from the younger ones to the elderly could enjoy a free walk, sit down, and be active along the Danube river embankment.	 Local citizens, Tourists General public 	CC-2	IT-1
6	Pedestrians crossing without traffic lights towards the Danube river	Giant pedestrian crossings without traffic light post will be installed, to ease the access to the Danube river.	 Local citizens Stakeholders Civil organizations and the business of the area Tourists 	CC-2	IT-1
7	Creation of multifunctional areas with service functions	Public spaces in front of the main building of the University (BME) are currently used by motorised vehicles. The redefinition of the area before the University is necessary. The focus is on providing the public with community areas where people can meet up, take time, do recreation activities, etc. and have access to services that increase the value of their time in the area.	 Local citizens (and their organizations), Students and employees of the University (BME) Tourists Visitors 	CC-2 CC-5 CC-7	IT-1 IT-2

No	Concept	Concept description	 Target Audience 	Challenge Category	Intervention Category
8	Elevators and ramps to ease the accessibility of the Danube river	This intervention may provide people with easy options to access the lower embankment area. This may increase the demand for people- oriented traffic management on the lower embankment roads and community activities by the river.	• People with reduced mobility (disabled, elderly, children, etc.)	CC-2	IT-4
9	Mobility Point to encourage the use of sustainable transportation modes	Especially university students and citizens could use sustainable modes of mobility. Car parking space would be utilized to have an innovative Mobility Point.	 University students Citizens open to sustainable modes of mobility 	CC-6	IT-6 IT-7
10	Deployment of "real- time service tools" e.g.: travel info points and useful passenger information with transfer facilities;	Local citizens, tourists, public could use and follow "real-time" information.	 Local citizens Tourists 	CC-3	IT-5

3.1.1 Actions for the concepts

The concepts presented from Budapest focus on access to the Danube River, as their stated goal from the inception of the project. In general, the concepts focus on overcoming the barrier nature of the lower embankment, which is currently a heavily trafficked road with few crossings. Possible solutions suggested include several options for access, such as crossings, elevators, or staircases, and improvements to attract more people to the riverbank. More extensive concepts are also included such as closing the embankment to vehicles on weekends or building a cap over the car street on part of the embankment.

One major challenge that has been identified is uncertainty in timing. As the implementation is so heavily reliant on obtaining correct permits and permissions, which can easily become hung up in red tape, it is often difficult to predict the time needed to take a concept to completion. As the short list of concepts are further developed this is one area of emphasis to work on.

Table 6: Actions for the Concepts for Budapest

Concept	Actions	Resources/Actors	Timeplan
C1: Installation of street furniture and plants, trees on community spaces	 Contact the public road operator BP KÖZÚT Kezelő, to clarify the ownership of the area and permitting responsibility. Determine need to fix the tree pots or the benches to the ground. Contact the Traffic Directorate Determine impact on pedestrian traffic. List conditions and detailed information Make a visualization plan of the area. 	 The Duna-Buda project, dealing with the renewal of the Műegyetem embankment Local government funding for implementation. Possible EU source? 	 6-7 months needed In the case of the Danube-Buda project, implementation would be scheduled after 2020.
C2: widening the staircase towards the Danube river	 Contact parties responsible for staircase (Budapest Sewage Works Pte Ltd. (FCSM Zrt.)) Contact owners of connecting pavement (BP KÖZÚT Kezelő) Contact the National Directorate General for Disaster Management, Ministry of the Interior (NDGDM), Közép-Duna- völgyi Vízügyi Igazgatóság/Central Danube Water Directorate 	 Cultural Heritage Protection Agency Budapest Sewage Works Pte Ltd. (FCSM Ltd.) General Inspectorate for Disaster Management BKK and BKV Municipality of Budavár (I. district) 	 Varies Depending mainly on permitting and permissions
C3: installation of "floating docks" on the Danube river with community functions	 Involvement of the locals in the pilot site selection. Easy access to the river should be discussed. Consultations with the competent authorities, obtaining permits, start of construction works. 	 Közép-Duna-völgyi Vízügyi Igazgatóság/ Central Danube Water Directorat BP KÖZÚT Kezelő The General Inspectorate for Disaster Management 	 Varies Depending mainly on permitting and permissions.

Concept	Actions	Resources/Actors	Timeplan
C4: covering the lower-embankment	 Intervention #5 may be a first pilot test of this intervention. a short section of the lower embankment could later be covered (temporarily). Based on the experiences, the project may be extended. 	 BKK Budapest Közút Zrt. Municipality of the City of Budapest, KTI Transport/infrastruct ure planners Dedicated C4P stakeholders and motivated volunteers 	 24–36 months (for a short section)
C5: closure of the lower-embankment on weekends	 In Stages: Close car traffic on the lower embankment during a mass event (Regatta, running competition) partially covering the area. Closure of the lower- embankment for cars for a test (pilot) weekend day, or part of the day (for the evening) - not connected to an event Closure of the lower- embankment for cars for an entire weekend. 	 Municipality of the City of Budapest, BKK - Budapest Közút (public road operator) 	 Varies Probational weekend could be in spring 2019, regularly perhaps from summer 2019
C6: pedestrians crossing without traffic lights towards the Danube river	 Gather statistics on travel and mobility accidents, Pedestrian traffic study (because to establish a pedestrian crossing: at least 60 to 100 people per hour should pass through the area) Testing the illumination quality of the area Space occupancy testing, Traffic engineering plan is needed for the pedestrian crossing implementation, Licensing procedure, Road works of BKK and of BP KÖZÚT. 	 BKK Budapest Közút Zrt. Municipality of Budapest, KTI Valyo (River and the City) Dedicated C4P stakeholders and motivated volunteers, Students of Budapest University of Technology and Economics (BME)etc. 	• 9-12 months

Concept	Actions	 Resources/Actors 	 Timeplan
C7: creation of multifunctional areas with service functions	 The first multifunctional area may be used as a pilot project to define the extension in the same University campus area and/or towards other parts of the Danube embankment area. 	 BKK Budapest Közút Zrt., The Municipality of the City of Budapest, KTI Designer companies like Hello Wood in Budapest Dedicated C4P stakeholders and motivated volunteers Employees and students of Budapest University of Technology and Economics (BME) 	• 3-6 months
C8: elevators and ramps to ease the accessibility of the Danube river	 Building ramps and/or installing elevators at the busiest sites Gradually install more ondemand or after the realization of other interventions (e.g. #3, #5). Pilot tests may be carried out to choose the best solution at each site. 	 BKK Budapest Közút Zrt., The Municipality of the City of Budapest, KTI National Federation of Disabled Persons' Associations (MEOSZ) Dedicated C4P stakeholders and motivated volunteers. 	• 6-12 months
C9: Mobility Point to encourage the use of sustainable transportation modes	 Reduce the car parking area in front of the university Creating a mobility point with bicycle parking, E- charging point, bike sharing docking station, information point and car sharing station 	 BKK Budapest Közút Zrt., Municipality of the city of Budapest, KTI Dedicated C4P stakeholders and motivated volunteers Students of Budapest University of Technology and Economics (BME) 	 Varies Planning Spring 2019, implementation Summer 2019
C10: deployment of "real-time service tools" e.g.: travel info points and useful passenger information with transfer facilities;	 Creating one info point, and signs on the ground helping citizens and travellers get around More info points, signs on vehicles Signs in PT stops 	 Municipality of the City of Budapest BKK, Budapest Közút (public road operator) 	 Varies Phase one at spring 2019, phase two from early summer 2019, phase three based on the feedbacks

3.1.2 Rationale of the Concepts

Table 6 provides information on how the intervention will help the target audience tackle the challenge giving the advantages (A) of the intervention. Disadvantages (D) or obstacles (O) that would need to be tackle are also listed.

Table 7. Advantages and disadvantages of the Budapest concepts

Concept	Rationale
C1: installation of street furniture and plants, trees on community spaces	A: The new / expanded recreational area on the upper quay plays a significant role in strengthening the city-water connection. This will enable university students and other local citizens to take advantage of the benefits of the Danube river.
	O: lack of resources, pedestrian and cycling conflicts.
C2: widening the staircase towards the Danube river	A: Connecting the upper and lower quays strengthens the water-water connection. Benefits: significant design to the lower quay.
	0: obtaining approval of site protection of flood protection certificates.
C3: installation of "floating docks" on the Danube river with community functions	A: It plays a significant role in city-water connections. Physical connection to the Danube river ("touching the surface of the water ") Unique city image. Sensing the rhythm of the river.
C4: covering the lower-embankment	O: The local and national regulation of monument protection. The obligations and restrictions must be considered during the implementation.
C5: closure of the lower-embankment on weekends	A: It can better connect the citizens to the river. D: Car traffic of the north-south axis would choose Hungária ring road instead, this can lead to increased traffic on other roads.
C6: pedestrians crossing without traffic lights towards the Danube river	A: The target audience (university students) at the upper Műegyetem embankment can move more freely towards the river, and they can have maximum use of its embankment area. Earlier, only P+R parking and high-volume car traffic were visible on the embankment. Locals were blocked and could have only limited area for crossings.
C7: creation of multifunctional areas with service functions	O: Traffic restrictions may be implemented and some parking places would be eliminated. Car drivers may have objections and do not agree with the intervention.
C8: elevators and ramps to ease the accessibility of the Danube river	O: The local and national regulation of monument protection. Installation of any new large infrastructure element may be in line with the world heritage requirements or approved by UNESCO
C9: 'Mobility Point' to encourage the use of sustainable transportation modes	A: Parking spaces occupy most of the area. If Mobility Points are to be built, not only cars, but e- transport (bikes, wheel chairs) modes are to be found.
C10: deployment of "real-time service tools" e.g.: travel info points and useful passenger information with transfer facilities;	D: static signs, limited flexibility

3.2 Hamburg-List of concepts

The intervention area in Hamburg is the surrounding neighborhoods of the Mitte Altona and Holsten development projects. Poor accessibility and need of connecting paths and areas between services are the main mobility challenges in the area. Depending on the challenges endorsed concepts are listed in Table 7. Reducing the traffic and promoting active travel are the main intervention categories that the endorsed concepts focus on.

No	Concept	Concept Description	Target Audience	Challenge	Intervention
				Category	Category
1	Mobility Day	(Regular)mobility days/events will be organised, which enable citizens to fruitful discussions and exchange about mobility-related topics and which promote alternative travel options (e.g. car free days, street festivals, parking day events, test-drives and – rides)	 General public Local residents 	CC-4	IT-1
2	Cargo bike delivery	Restriction (temporary) for	 General public 	CC-1	IT-2
		Support of start-ups, Education of delivery companies and consumers, Parking control and incentives for cargo bike deliveries		CC-7	
3	Micro depots	Neighbourhood-related micro	• Residents	CC-1	IT-2
		all delivery companies to drop off and consumers to pick up parcels at a defined place and flexible time.	 Consumer Delivery companies Neighbourhood 	CC-7	
4	Identification of critical areas and times, enhanced control and impact assessment	Collection of data to identify areas which are very problematic.	 Local residents Cyclists Mobility impaired citizens 	CC-5	IT-2
5	Regulation of street parking and introduction of payment system	Introduction of parking management: parking passes for residents and introduction of payed parking for visitors in all of central Altona	 Local residents Non-motorised traffic Pedestrians 	CC-5	IT-2

Table 8. List of Concepts-Hamburg

No	Concept	Concept Description	Target Audience	Challenge Category	Intervention Category
6	Additional Switchh ³ points at specific locations in Altona	New switch point (car share /bike share station, mobility hub) are implemented to reduce the number of privately owned vehicles and increase mobility options and connectivity with public transport.	 General public Switchh Users Residents 	CC-4	IT-3
7	Priority lane for metro bus line 3	Pilot routs on which a bus lane gets introduced make the bus to an attractive alternative to the private car.	 PT users PT operators, Cyclists Pedestrians Local residents 	CC-4	IT-3
8	"Kommunaltrasse" dedicated route for PT and non- motorized traffic	Pilot zone (street) converted into a "Kommunaltrasse" which is only accessible for public transport and non-motorised traffic	 PT users Cyclists Local residents 	CC-7	IT-1
9	Conversion of on- street car parking into bike parking facilities	Conversion of one car parking space into a parking space for 10 bikes gives additional bike parking spaces, reduces obstacles, gives a safe place to park a bike and motivates to use the bike instead of a car.	 Cyclists, Pedestrians 	CC-2	IT-1
10	Highlighting of pedestrian areas and bike lanes	Highlighting the pedestrian and cycling areas is especially important on big crossroads or other complicated traffic structures to reduce confusion and ensure safety.	 Pedestrians Cyclists Car drivers 	CC-2	IT-1
11	Integration in "Meldemichel" platform and maintainance	The already existing platform "Meldemichel" will be improved to make sure every concern is heard and people have the possibility to give a feedback. Furthermore, the category dangerous zones will be added.	 Pedestrians Cyclists Car drivers 	CC-2	IT-1
12	Networking, communication and promotion	Giving NGOs/groups/stakeholders/auth orities a format in which they can regularly co-create innovative ideas. Furthermore, everyone is informed on other citizens' activities. The coordination of action is improved.	 Everyone involved (residents and stakeholders) 	CC-2 CC-4	IT-1

³ Switchh is a platform combining PT with car and bike share schemes, run by the local PT provider

3.2.1 Actions for the concepts

Hamburg's concepts cover a quite diverse range of actions. For this reason, a broad range of actors and resources have also been identified. Political will and the cooperation of political partners receives the most mention, and outreach to the political networks in the community will need to compose much of the preparation work both going towards the selection of a short list of concepts and in considering implementation plans. This can implement the timeline of several concepts. However, the majority of concepts have timelines which can fit well into the overall Cities-4-People trajectory.

Concept	Actions	Resources/Actors	Timeplan
C1: Mobility Day	 Formation of organising team Identification of topics, aims and concrete actions Set date and time Communication and promotion of event Getting permissions 	 Stakeholders to involve: neighbourhood management, districts committees, local schools, sponsors, local business, mobility providers, advocacy groups, residents, neighbourhood assemblies Funding, permits, fire brigade and police for implementation (security during the event) Local political support 	 3-4 months Depending on scale
C2: Cargo bike delivery	 Establish communication to delivery companies and local business Concept for information and education of consumers Pilot phase/MoUs (non- binding) 	 Political support Cooperation with companies Ability to convince stakeholders (logistic companies, politicians, consumers) Funding and organizing of concepts and campaigns 	 1-2 months For procurement or setting up a rental scheme of cargo bikes
C3: Micro depots	 Identification of feasible locations, capacity and catchment area Development of concept Network/cooperation of delivery companies Assessment and optimization of integration into existing shops Pilot project at one or two locations 	 space (storage and delivery zones) will to cooperate possibly political support Stakeholders: Administration for location identification, permits and concept development; delivery companies; shop owners 	 Minimum 6 months Highly dependent on availability of feasible location and commitment of the relevant stakeholders

Table 9: Actions for the Concepts for Hamburg

Concept	Actions	Resources/Actors	Timeplan
C4: Identification of critical areas and times, enhanced control and impact assessment	 Concept to identify problematic areas Collection of data to identify priority zones 	 Parking control staff (sufficient staff to regularly patrol the area) Political mandate Clear identification and communication of responsibilities Funding for survey of problematic areas 	 6 months This might be dependent on political will
C5: Regulation of street parking and introduction of payment system	 Definition of residents' parking zones (boundaries of each zone, assessment of displacement effects) Political decision Authorisation of responsible public entity (Landesbetrieb Verkehr - LBV) Communication of measures to local residents Priority on Mitte Altona development, so people do not get used to parking on the street in the car reduced neighbourhood Focus on most densely populated areas 	 Staff for implementation and control Re-financing partly through parking fees and fines Signage (through police) 	 Varies Usually, LBV can implement two parking zones per year (due to limited resources). Short term actions could include blocking of access points (e.g. low curbs) to improve access and more controls of illegal parking
C6: additional Switchh points at specific locations in Altona	 Identification of suitable locations (land availability, support of residents) Political support Communication among participating companies Communication, marketing and PR Combination with C1 – mobility day possible 	 Space Financial resources and staff Acceptance of local residents, neighbourhood support Relevant stakeholders: Hamburger Hochbahn AG (operator of Switchh), Switchh members: Cambio CarSharing, Car2Go, DriveNow; local administration and public authorities: traffic entities (Verkehrsdirektion – VD, Behörde für innere Sicherheit – BIS, Behörde für Wirtschaft, Verkehr und Innovation – BWVI, Landesbetrieb Straßen, Brücken und Gewässer – LSBG, Borough of Altona), transport association HVV, railway company DB AG, local political assembly (Bezirksversammlung) 	 Varies If location clear /space available implementation quickly possible

Concept	Actions	 Resources/Actors 	 Timeplan
C7: Priority lane for metro bus line 3	 Permission from the Traffic Authority Signage and highlighted labelling on the streets Publicity to inform the people why this action was done Could be introduced as a pilot project for a limited time period Permanent implementation would require traffic monitoring and evaluation of possible negative effects 	 Staff resources to ensure the bus lane is not used by private cars Traffic signs Communication, marketing and PR Stakeholders: PT providers HVV,VHH, Hamburger Hochbahn AG Dublic transport schedules Traffic authorities (LSBG, BWVI) and district authority implementation 	• Varies
C8: "Kommunaltrasse" dedicated route for PT and non-motorized traffic	 Examination of feasible streets/ feasibility study 	 Support of relevant institutions (administration on district and city level, politics) Communication with PT providers and residents/local business 	 2 months for trial period implementation Only of feasible street can be identified
C9: Conversion of on- street car parking into bike parking facilities	 Identification of areas were random bike parking is an obstacle for pedestrians Evaluation of the platform "Meldemichel" were people might have already suggested specific areas Viewing of the already requested semi-private bike parking houses that might not have been set into place yet Defining areas were the conversion should take place Permit from the local administration needed Political support would be helpful 	 Public car parking space Funds for installing bike parking facilities Statement from the police Other stakeholders: local administration and public authorities: traffic entities (Verkehrsdirektion – VD, Behörde für innere Sicherheit – BIS, possibly Landesbetrieb Verkehr – LBV, Behörde für Wirtschaft, Verkehr und Innovation – BWVI, Landesbetrieb Straßen, Brücken und Gewässer – LSBG, Borough of Altona), the public 	 2 - 3 months Once location is defined

Concept	Actions	Resources/Actors	- Timeplan
C10: Highlighting of pedestrian areas and bike lanes	 Campaign or PR so everyone knows what the highlights mean (including social media) Political support Concept for highlighting Identification of dangerous areas Evaluation of the platform "Meldemichel" were people might have already suggested specific areas AND C4P survey "Wie bewegt sich Altona" Prioritising most dangerous areas 	 staff and colour for highlighting financial support stakeholders: police, district authority, public (through platform "Meldemichel"), ADFC (cyclists association), politics, sponsors (for the colour possibly bike stores for temporary interventions), cycle traffic coordination 	 4 months Once locations are defined
C11: Integration in "Meldemichel" platform and maintainance	 Include all city authorities that are involved Develop a concept with different options on how to integrate/solve a problem as fast as possible. Add registration of dangerous zones Add a feedback function 	 Staff (and a substitute in case the responsible person is sick or on vacation) PR- Inform about the platform and make it more common so everyone uses it Stakeholders: all city authorities, people who manage the platform and forward the reported problems, party effected authorities or companies 	 Varies Input from relevant stakeholders is needed
C12: Networking, communication and promotion	 Identifying the groups/stakeholders/au thorities that work on mobility innovations Organisation of a format to exchange ideas Define joint goals/concepts Involve residents 	 Will to cooperate and commit time to the exchange Stakeholders: private person to coordinate/guide the group/meetings/concep ts 	• Varies

3.2.2 Rationale of the Concepts

Table 9 provides information on how the intervention will help the target audience tackle the challenge in Hamburg. Concepts are listed with advantages (A) of the intervention, disadvantages (D) or obstacles (O) that would need to be tackled.

Concept	Rationale
C1: Mobility Day	A: Facilitating knowledge exchange, increased acceptance of alternative transport modes, supports networking and community building
	O: lack of funding, bad weather, lack of support of local citizens, incompatible interests among residents, lack of political support
C2: Cargo bike delivery	A: reduction of emissions, noise and congestion, increase in road safety
	D: cargo bikes might block sidewalks, delivery zones needed; logistic companies might need additional/ different drivers
	0: lack of willingness of companies to cooperate
C3: Micro depots	A: reduction of emissions, noise and congestion, increase in road safety, better service for consumers
	D: responsibility for operation and maintenance, cost, danger of exclusion of certain groups (elderly, handicapped), size and weight of parcels
	O: lack of willingness of companies to cooperate
C4: Identification of critical areas and times, enhanced control and impact	A: reduction of obstacles and increased road safety, better accessibility (esp. for mobility impaired user groups)
assessment	O: lack of staff for controls and lack of (political) support
C5: Regulation of street parking and introduction of payment system	A: reduction of obstacles and increased road safety, better accessibility (esp. for mobility impaired user groups)
	D: introduction of residents' parking zones takes time and might be too long for the project's time frame
	0: lack of staff for controls and lack of (political) support.
C6: additional Switchh points at specific locations in Altona	A: increased visibility and availability of alternative transport options can work as incentive to give up private cars
	O: limited availability of (public) space
C7: Priority lane for metro bus line 3	A: Increases the attractiveness of the bus compared to private vehicles, as it becomes faster,
	Reduces stress level for residents living along the route and bus users and provides more safety for cyclists, who don't have to share the road with large number of cars (bus drivers are used to sharing lanes with cyclists)
	O: Might increase congestion, noise pollution in the short term (but reduce it in long term), limited availability of space, aversion to the bus lane from private car owners
C8: "Kommunaltrasse" dedicated route for PT and non-motorized traffic	A: increased usability of public open space, reduction of noise and air pollution
	D: possible increase of traffic in neighbouring streets

Table 10. Advantages and disadvantages of the Hamburg concepts

Concept	Rationale
C9: Conversion of on-street car parking into bike parking facilities	A: through additional bike parking spaces, the obstacles on the sidewalk will be reduced and the cyclists have a safe place to park their bikes. Increased motivation to use a bike instead of a car.O: rejection of residents owning a car (low amount of parking spaces per household in the area), lack of funding
C10: Highlighting of pedestrian areas and bike lanes	 A: highlighting the pedestrian and cycle areas makes the roads (especially crossroads) safer and less confusing. O: lack of support by the police and other institutions when it comes to temporary solutions. Permanent solutions need to follow certain guidelines – highlighting is only recommended in particularly dangerous places, to avoid familiarization
C11: Integration in "Meldemichel" platform and maintainance	A: the platform gives the authorities a better overview on were changes need to be made. The public feels involved and can speak out their concerns. Road safety improves.O: platform seems to be understaffed, so it might be difficult to find support for adding additional functions
C12: Networking, communication and promotion	A: power of the people and organisations will be bundled and have more impact and develop solutions together that are realizable O: strong disagreement among the different stakeholders can lead to fragmentation into small groups again

3.3 Oxfordshire-List of concepts

Intervention area in Oxfordshire is Barton. Lack of radial bus routes and cross connectivity within the Eastern Arc are mentioned as the main mobility challenges of the area. Depending on the low connectivity challenge, endorsed concepts listed in Table 10 are concentrated on affordable and quality transportation options.

Challenge No **Concept Description** Intervention Concept Target Audience Category Category Under 1 Face to face app Train community members to train peers in how app works, targeting training confident vulnerable members of the community. Limited IT-3 mobile device CC-3 Materials could be in different formats literacy IT-5 including you-tube video. Elderly Potentially use time-banking to reward volunteers. 2 Pick Us Up Under Work with existing organisations to offer a buddy service in which firstconfident time users could go on a trip with a Without knowledgeable person smartphone CC-3 IT-3 Non-mobility related disability 3 PickMeUp A trip to cinema at Kassam taking 10 Users of partnerships residents on PickMeUp and BCA paying PickMeUp for all costs incurred. Use this model service CC-3 IT-3 and hopefully engage with local Business businesses to sponsor BCA to invest in offering more trips. discount. 4 PickMeUp champions Find, train, and reward champions from Potential a variety of communities to promote users who don't CC-3 IT-3 service and mentor people on their first know about journey/booking. PickMeUp Concession 5 Introduce PickMeUp Distributing leaflets/marketing concessionary materials to those who register and pass users to passengers receive a concession pass. Introducing • Elderly. IT-3 this to the current process. New CC-3 material being created for concession IT-5 pass users. Flyer/leaflet more prescriptive for new concessionary pass holders. 6 Multi-modal link up Ensure different modes link-up e.g., in All users locations and/or timing. Provide app Elderly IT-1 that works out the options available for CC-3 a given journey. Through ticketing. IT-3 Link-up: PMU, bus services, trans, docked bikes/dockless bikes, walking. 7 PickMeUp School Bus Find a local school to partner with in Parents providing PickMeUp as an alternative Children ++ transport for students in a specific year. Schools CC-3 Select a period to do intervention IT-3 CC-6 (morning, afternoon, and evening) Create awareness about the program and parents enrolled.

Table 11. List of Concepts-Oxfordshire

No	Concept	Concept Description	 Target Audience 	Challenge Category	Intervention Category
8	Information about PickMeUp to new residents	Provide information about PickMeUp as people move into new housing development at Barton Park	 New residents- particularly in the Barton Park development just north of Barton 	CC-3	IT-3 IT-5
9	Speech recognition in app	Creating a voice interface with the app recognising speech and reads out loud.	 Sight impared Under confident. General Public 	CC-3	IT-4
10	Translate App	Translate app into language(s) other than English spoken in Barton, work with community groups to spread understanding of DRT service to ESL communities in Barton	 People who speak English as a second language, Tourists 	CC-3	IT-3 IT-5
11	Partner with existing charities to provide information and technology	Use charities as an organisation to distribute information and technology. Teach potential passengers about the service. Smartphone app sessions to provide confidence in using the service.	 Concession pass holders Recipients of charity support/help. Recipients of Barton Association support. 	CC-3	IT-3 IT-5
12	Promotion through Digital Reviews	visibility: links from parent website to media sites eg. Facebook/trip advisor/twitter etc. If bus wifi is enabled, note in bus to review service	 Internet- accessible population via: app pop-up social media review site visibility 	CC-3	IT-3 IT-5

3.3.1 Actions for the concepts

Oxfordshire's concepts have a strongly community based focus, spreading access about and information related to the PickMeUp service. Accordingly, the actions for each concept rely heavily on work with community members and citizens, for example training individuals to represent the service or teach others how to use the service. Due to the narrow range of concepts overall, the resources and actors identified, as well as time plans, are quite concrete for most concepts.

Concept	Actions	Resources/Actors	Timeplan
C1: Face to face app training	 Identify community that would like to use service, but do not have the technical literacy to do so Identify group to act as trainers Design training materials and program Hold face-to-face training 	 Councillors Barton Neighbourhood Centre Communities with low tech literacy Age UK gadget group 	• 3-4 months
C2: Pick Us Up	 Determine if there is a need for supported use of PickMeUp service Build volunteer base Identify good time/destination. Advertise program across Barton Run program for several weeks Determine demand for location and adapt or confirm choice of Kassam Engage with local businesses to ascertain interest Engage with PickMeUp to see if possible to get group discounts Promote the service to potential users 	 Funding for cost of PickMeUp journeys Volunteer base advertising The will of the BCA trustees to support this and actively become involved and encourage BCA to take this onboard Local business support PickMeUp support re group discounts. Advertising. 	3 to 6 months 3 months
	 Run first trip 		
C4: PickMeUp champions	 Decide what buddies will do and how they will be rewarded (if at all) Recruit buddies Train buddies Publicise service- think how buddies and users will be linked 	 training of buddies, incentives for buddies eg-free travel, publicity, tshirts etc Hooking buddies up to potential users Groups such as cyclox, broken spoke, age uk, BNC, getting heard, community groups. 	• 3-6 months

Table 12: Actions for the Concepts for Oxfordshire

Concept	 Actions 	 Resources/Actors 	Timeplan
C5: Introduce PickMeUp to concessionary passengers	 Check process used is compatible with this approach with relevant OCC team Creation of material: content of material, brief for flyer/information. Test with audience Make any amendments based on feedback from audience OCC to distribute this information through their process 	 OBC: basic but comprehensive literature opening the service up and discussing how to register a concession pass. OCC: Adding the literature to the concession pass issuing process 	• 4 months
C6: Multi-modal link up	 Assess best method to integrate different modalities with PickMeUp Assess modes to be included – what is possible Work with PickMeUp and other stakeholders to design app/campaign/service integration Promotion Launch 	 Zipabout - possible app provider (already creating multi-modal journey planner) PickMeUp Providers of other transport modes wanting to integrate (Stagecoach, Ofo, Great Western Rail etc) Popular destinations for multimodal destinations Mode transfer nodes (rail stations) Healthy Urban Mobility 	 Integration of PickMeUp service to multi-modal journey planner or MaaS service: 1 year Implementation of campaign to encourage multi- modal journeys: 4-6 months
C7: PickMeUp School Bus ++	 Have PickMeUp service on board and contact school. Select age group- get PickMeUp to offer a promotion featuring trial Inform parents and create awareness; onboard parents and students Select timeframe. Run intervention- advertise the process Analyse results and need for scaling up 	 one school group of parents and students PickMeUp service 	• 4-6 months

Concept	 Actions 	 Resources/Actors 	Timeplan
C8: Information about PickMeUp to new residents	 Consult with Barton Park developers and Oxford Bus Company to seek synergy with move-in schedules and potential incentives for new residents Work with BCA to seek method of sharing knowledge that can help integrate new residents into wider Barton community Develop materials, program, and/or event to introduce PickMeUp service and other East Oxford transport options to new residents Disperse materials, install program, and/or hold event in Barton/Barton Park 	 Barton Park developers Oxford Bus Company Barton Community Association Oxfordshire County Council transport planners 	• 3 months
C9: speech recognition in app	 Assess options open in Via app, existing voice recognition systems (Alexa, Siri, OKGoogle etc), and other means of making the app interface accessible to a greater number of people Scope requirements needed & tender Develop interface/technology training Test interface/equipment & gather feedback to make amendments Deploy 	 Funding - this would probably not be low- cost. Via PickMeUp Technology training 	• 6 months

Concept	 Actions 	 Resources/Actors 	 Timeplan
C10: Translate App	 Develop relationship with community leaders and identify language needs in Barton Seek overlap with existing languages on Via app or other means of making app available in other languages such as google translate coupled with mentoring. Create translated materials and develop app mentors that speak identified language(s) Promote service within non-English speaking communities 	 Via: translate app into other languages Non-English speaking community groups and community leaders Translation services App mentors fluent in identified language(s) 	• 4-6 months
C11: Partner with existing charities to provide information and technology	 Identify charity group(s) to work with Seek out the support they would need to allow the people they serve to access PickMeUp Find source of support and materials for pilot Design method of support based on needs and resources available Implement pilot use of resources 	 Charity that works with vulnerable group in Barton: Age UK? Source of tech support/mobile devices 	• 4-5 months
C12: Promotion through Digital Reviews	 Decide on targeted review sites (compare usage figures in Oxford) Create pop-up functionality within App Consider use of incentives for reviews 	 In bus advert cost Social media/review site setup Via – app functionality; PickMeUp 	• 4 months

3.3.2 Rationale of the Concepts

The advantages (A) and the disadvantages (D) of the endorsed concepts in Oxfordshire are listed in Table 12.

Table 13. Advantages and disadvantages of the Oxfordshire concepts

Concept	Rationale	
C1: Face to face app training	 Increase usage of service, particularly from concessionary pass holders who are not confident on mobile devices. A: relatively easy & cost effective. Could act as strong motivator to develop tech literacy and confidence in underserved groups, which has other benefits than just PickMeUp patronage D: technology needs to be consistent when training given and changes may reduce value of training. Principals of adult learning require more than a single intervention point. 	
C2: PickUs Us Up	This intervention would help by providing a means and community by which people who are underconfident in the service or technology can learn to use it independently.A: Relatively simple and straightforward. Opportunity for people to develop higher level skills as they come to repeated meetings.D: Need volunteers/burden on them. Only 1 wheelchair space means buddying would be hard for disabled.	
C3: PickMeUp partnerships	This intervention will help by introducing a significant number of people to the benefits of the PickMeUp service. While people are aware of the potential savings of doing their shop at discount supermarkets, they rarely make it out to them: this service could lead to better stretching of incomes.A: potential advantages for local businesses in getting greater patronage as well as increasing use of PickMeUpD: people may take advantage of the service; businesses may not be willing to sponsor	
C4: PickMeUp champions	This will help by getting more people to use service, overcoming people's concerns, and barriers to using it.A: getting more people to use service, overcoming people's concerns, and barriers to using it.D: getting people to be buddies. Need to think about right format: volunteers, paid, 3 months free travel?	
C5: Introduce PickMeUp to concessionary passengers	This intervention will help those who need support at a crucial point of change A: catching audience at a point of change in their life. Open to new methods of transport. Could be linked to a more holistic approach to improving mobility for older people overall. Concept of travel information packs was extended to students and other demographics at key points of change in their life. D: an organisational body would need to be responsible for distributing information (OCC). OCC process for distributing information, limitations to this. O: Competitive market environment may make it impossible to disseminate the info.	

Concept	Rationale
C6: Multi-modal link up	This intervention will help by making people aware of options open to them and simplifying link-up between modes.
	A: flexible system. Average user tends to only consider/use one form of transport, integrating different modes rather than overlapping or leaving gaps.
	D: educating people to think about alternatives; time-consuming to create an app that links together services unless one already being produced (and if one is, need to get into process at a point when we can influence development)
C7: PickMeUp School Bus ++	This intervention will help by providing new means of transport to school; facilitate parents schedule; improving air quality/reducing traffic jams
	A: facilitate access to activities and community; school and community working together; help parents
	D: bus capacity, time restriction, school needs to engage
C8: Information about PickMeUp to new residents	This intervention will help new residents overcome reliance on their personal car by making them aware and comfortable with the travel options available to them.
	A: reduce reliance on personal car. Reach people when they are most likely to change their transport habits. Potential for funding source through S106 if not already allocated.
	D: requires synergy with move-in schedule – new build schedules speed up and slow down relative to demand, so this can be difficult to predict with precision
C9: speech recognition in app	This intervention would help by making the PickMeUp service more accessible to a greater number of people
	A: helps people with sight impairments, learning disabilities etc, as well as people less confident with technology to more easily interact with the app. Opportunity to test the potential for technology to improve the health and care of individuals
	D: may be expensive; may be difficult to transfer some functionalities into speech-enabled; increased chance of choosing an incorrect location on the app?
C10: Translate App	This will make the app accessible to people who are not fluent in English.
	A: Could use existing functionality in VIA app used in other countries. Has potential to reach underserved community in Barton.
	D: Non-English speakers may already have access to app using google translate. Do not currently have relationship with non-English speaking community in Barton. Languages spoken in Barton may not overlap with languages spoken by tourists. Few tourist destinations in Eastern Arc. There may be a significant number of different languages spoken, each with a small number of users – this could mean significant work with little impact. Scoping of language requirements would be needed to assess possible impact and work required in more detail
C11: Partner with existing charities to provide	This intervention will help by supporting people who need access to the service and who could be considered vulnerable with minimal access to transport.
information and technology	A: providing people with confidence in using the app and service. Those who may not currently have a support network would be reached. Provide a means by which people without mobile device literacy or availability to access the service.
	D: Time span and sustainability due to resources needed.

Concept	Rationale
C12: Promotion through Digital Reviews	This intervention will help by advertising service, reinforce positive experience A: low cost, broad promotion D: will not reach non-internet/social media/review site enabled

3.4 Trikala-List of concepts

The intervention area in Trikala Central Square and its immediately surrounding area. Heavy traffic congestion is the main mobility challenge which is also the key converging area in the city. Depending on the congestion problem and low quality and provision of endto-end cycle and pedestrian infrastructure, concepts endorsed by Trikala Mobility Community feed various types of intervention categories. People with mobility challenges are targeted in most of the solution concepts.

No	Concept	Concept Description	Target Audience	Challenge	Intervention
				Category	Category
1	Replacement of central bus station with plain bus stop	New central bus station will be designed and developed outside the central square, and a simple bus stop will be constructed in its place.	 All citizens Commercial store owners in the area. People with mobility challenges (people with disabilities, elderly people, parents with baby carriers). 	CC-1	IT-2
2	Redesign and restriction of TAXI stations combined with smart ways for calling a TAXI	The land take of TAXI stations in the perimeter of the central square will be reduced, and the use of smartphone applications for calling a TAXI will be encouraged.	 All citizens Commercial store owners in the area. People with mobility challenges (people with disabilities, elderly people, parents with baby carriers) Bicyclists 	CC-1	IT-2 IT-5
3	Ban large vehicles from city center	A complete ban of large private vehicles from the city center of Trikala will be enforced, rendering sustainable transportation safer and more attractive to current and prospective users.	 PT users Bicyclists Private vehicle drivers. Local residents Workers Commercial store owners 	CC-1 CC-7	IT-1 IT-2 IT-3 IT-6

Table 14. List of Concepts-Trikala

No	Concept	Concept Description	Target Audience	Challenge Category	Intervention Category
4	Ban private car circulation around city square in specific days/times. Circulation only of public transport means and TAXIs.	A ban of private car circulation around the city square in specific days/times will be enforced, rendering sustainable transportation safer and more attractive to users.	 This concept will benefit all citizens and commercial store owners in the area. 	CC-1 CC-7	IT-1 IT-2 IT-3 IT-6
5	Construction of more wheelchair ramps	Integrated design and construction of wheelchair ramp network, benefitting elderly people, parents with baby carriers and bicyclists. It will be combined with the protection of the ramps from illegal parking.	 Wheelchair users- their families and their caregivers that move in the city center. Elderly people, Parents with baby carriers Bicyclists. 	CC-2 CC-4	IT-1 IT-4
6	Provision of free wheelchair scooters for people with disabilities.	Supply of wheelchair scooters (on which wheelchair users can ride without getting off their wheelchair) that will be stored in public buildings and will be available to disabled people without charge.	 Wheelchair users- their families and their caregivers that move in the city center. Local shop owners Service providers 	CC-2 CC-4	IT-4
7	Development of more public and green spaces	Development of new parks/green spaces and playgrounds for children around the square. These spaces will be developed either on already existing pedestrian streets or will be combined with new pedestrianisation initiatives.	• This concept will benefit all citizens that walk or bike, as well as commercial store owners in the area.	CC-2 CC-7	IT-1 IT-4 IT-6
8	Pedestrianisation of more streets around the square	Development of a radial network of pedestrian walkways and woonerfs from and to the square, which will be connected with infrastructures such as bicycle routes, public transport stops and TAXI stations.	• This concept will benefit all citizens that walk or bike, as well as commercial store owners in the area.	CC-2 CC-4 CC-7	IT-1 IT-2 IT-3 IT-4

No	Concept	Concept Description	Target Audience	Challenge Category	Intervention Category
9	Installation of smart storage locker stations in central locations, where citizens can place their staff for a while (e.g. their shopping bags, so as to move more easily around for other purposes, without the need of a car)	Enable users to complete multiple tasks/obligations in the center of the city in a fewer visits and using more sustainable transportation modes (public transport, walking, cycling). The result will be an increase in the share of sustainable transport users.	 All citizens Commercial store owners in the area. People with mobility challenges (people with disabilities, elderly people, parents with baby carriers) Bicyclists 	CC-2	IT-1 IT-3
10	Development of electric bicycle and scooter station for the transportation to and from the city center.	Supply of a number of electric bicycle and scooters in strategically positioned stations in protected areas (e.g. City Hall) and will be available to everyone without charge.	 All citizens Visitors Tourists People who do not drive or own private vehicles, scooters or bicycles. 	CC-1 CC-2 CC-3 CC-4 CC-7	IT-2 IT-3 IT-6
11	Parking restriction around the square	Complete parking prohibition and possibly pedestrianisation of the streets surrounding the square, along with the development of green areas, cultural and recreational activities.	 All citizens Commercial store owners in the area People with mobility challenges (people with disabilities, elderly people, parents with baby carriers) Bicyclists People who work in the area, Customers of the bank 	CC-1 CC-2 CC-4 CC-7	IT-1 IT-2 IT-3

3.4.1 Actions for the concepts

Trikala's concepts benefit from the definition of a specific target intervention area. Still, the actions required for many concepts still include siting of new infrastructures as they have recognized the need for impacts extending into the near-by transportation networks and community. The concepts also offer potential in terms of preliminary pilot implementation, allowing for relative flexibility in design and siting in the first stage and iterative improvement over ultimate implementation timelines.

As a practical focus, Trikala has identified efforts to obtain funding as a primary action in most concepts. They are therefore prioritizing the feasibility of implementation in consideration of short-list concepts.

Table 15: Actions for the Concepts for Trikala

Concept	Actions	Resources/Actors	Timeplan
C1: Replacement of central bus station with plain bus stop	 Adoption of required decisions by the City Council. Choice of new place to host the central bus station Re-design of public transport vehicle routes Secured source of financing Receipt of necessary authorizations Construction of plain bus stop 	 Financial resources: Resources for the design and implementation of the projects Publicity costs Publicity costs Human Resources: Employees of the Public Transport Authority Employees of the Public Transport Operator Municipal employees Traffic Police employees Transportation engineers, architects, and urban planners 	 4 months for the pilot operation 12 months for the full design and implementation, if required space for the relocation of the bus station has been found
C2: Redesign and restriction of TAXI stations combined with smart ways for calling a TAXI	 Discussion/Consultatio n with local TAXI company representatives. Design/study for how the newly freed land will be will be used for more socially, environmentally and economically beneficial way Secured source of financing Adoption of required decisions by the City Council. Selected, customization and communication of smartphone app 	 Financial resources: Resources for the design and implementation of the study Publicity costs Human Resources: Municipal employees TAXI drivers 	 2 months for the pilot operation. 4 months for the full design and implementation.

Concept	• Actions	Resources/Actors	• Timeplan
C3: Ban large vehicles from city center	 Secured source of financing Adoption of required decisions by the City Council Public awareness campaign 	 Financial resources: Resources for the study of the alternative routes for large vehicles Awareness and publicity costs Human Resources: Municipal employees Traffic Police employees Drivers of large vehicles 	 1 month for the pilot operation 1 months for the full design and implementation
C4: Ban private car circulation around city square in specific days/times. Circulation only of public transport means and TAXIs.	 Adoption of required decisions by the City Council and the Traffic Management Committee of the Municipality Secured source of financing New transport study for the area Design and construction of related infrastructure must be Consultation of urban stakeholders 	 Financial resources: Resources for the design and implementation of the study Publicity costs Human Resources: Municipal employees Traffic Police employees volunteers 	• 12 months
C5: Construction of more wheelchair ramps	 Design of the ramp network, with consultation and proposals from people with disabilities and their associations Secured source of financing The construction of the ramps Public education and awareness about the necessity to respect and protect the ramps 	 Financial resources: Resources for the design and implementation of the study Human Resources: Expert planners Municipal employees Traffic Police employees 	• 3 months

Concept	Actions	 Resources/Actors 	 Timeplan
C6: Provision of free wheelchair scooters for people with disabilities.	 Adoption of required decisions by the City Council Secured source of financing Procurement of scooters Appointment of scooter stations and the responsible employees Public awareness campain 	 Financial resources for the supply of scooters Donations and subsidies from state agencies and entrepreneurs in the region 	• 2 months
C7: Development of more public and green spaces	 Adoption of required decisions by the City Council, the Quality of Life Committee and the Traffic Management Committee of the Municipality. Urban, architectural and transportation studies Procurement and installation accompanying equipment, for example plants, seats, playground equipment, etc. 	 Financial resources: Resources for the design and implementation of the study Publicity costs Human Resources: Transportation planners Urban planners Landscape architects Engineers 	 2 months to 24 months Depending on the scale and intensity
C8: Pedestrianisation of more streets around the square	 Adoption of required decisions by the City Council and the Traffic Management Committee of the Municipality Transport study Design and implementation of accompanying infrastructure, i.e. green spaces, resting spaces, and parking spaces 	 Financial resources: Resources for the design and implementation of the study Publicity costs Human Resources: Transportation planners Urban planners, landscape architects, and engineers 	• 24 months

Concept	• Actions	Resources/Actors	Timeplan
C9: Installation of smart storage locker stations in central locations, where citizens can place their staff for a while (e.g. their shopping bags, so as to move more easily around for other purposes, without the need of a car)	 Survey to verify the necessity and the willingness of the prospective users Adoption of required decisions by the City Council Secured source of financing Siting of stations Development of smartphone app 	 Financial resources: Resources for the design and implementation of service (est. 2.000 euros for one pilot) and development of the smartphone application (est. 2.000 euros) Human Resources: Municipal employees Smartphone app developer 	• 3 months
C10: Development of electric bicycle and scooter station for the transportation to and from the city center.	 Adoption of required decisions by the City Council Secured source of financing Procurement of electric bicycles and scooters Siting of stations Appointment of employees Public awareness campaign 	 Financial resources: Municipal resources for the design and implementation of the intervention. Human Resources: Transportation planners Urban planners 	 12 months 6 months of pilot application 6 months for implementation and calibration
C11: Parking restriction around the square	 Adoption of required decisions by the City Council and the Traffic Management Committee of the Municipality Pilot ban with the help of the police Public awareness campaign Citizens' vote for a complete parking ban or a ban at specific times of day 	 Financial resources: Resources for the design and implementation of the study Publicity costs Human Resources: Municipal employees Traffic Police employees Civilians (especially those facing transportation challenges, pedestrians, and cyclists) Public Transport Vehicle drivers Experts / urban and transport planners 	 12 months 6 months of pilot application 6 months for implementation and calibration

3.4.2 Rationale of the Concepts

Table 15 provides information on how will the intervention help the target audience tackle the challenge in Trikala. Concepts are listed with advantages (A) of the intervention, disadvantages (D) or obstacles (O) that would need to be tackled.

Table 16. Advantages and disadvantages of	of the	Trikala	concepts
---	--------	---------	----------

Concept	Rationale
C1: Replacement of central bus station with plain bus stop	A: address traffic congestion and increase road safety in the area. It will support the improvement of the environment and the microclimate.
	O: A possible obstacle would be the reluctancy of the local public transport operator to implement the idea.
C2: Redesign and restriction of TAXI stations combined with smart ways for	A: improve accessibility to the central square with safer and greener means of transportation.
calling a TAXI	O: prevalence of the interests of professional TAXI drivers and the lack of knowledge of some people on how to use smartphone applications.
C3: Ban large vehicles from city center	A: improve accessibility to and mobility at the central square area with safer and greener means of transportation.
	D: risk of an increase in road traffic congestion which will come as a result of the improvement of the transportation conditions and the attraction of more motorized vehicles in the area.
	O: prevalence of the interests of large vehicle owners
C4: Ban private car circulation around city square in specific days/times. Circulation only of public transport means and TAXIs.	A: address traffic congestion and increase road safety in the area. It is a quick, easy and economical solution which retains flexibility in how the local road network is used.
	D: increase in the time required to overpass the city centre and decreased accessibility for tourists.
C5: Construction of more wheelchair ramps	A: improve the accessibility of disabled people from/to the central square, including their accessibility to the city's more remote areas for recreational activities and their accessibility to local shops. It will also enhance tourism for people with disabilities and their families, who will now have access to local events and attractions.
C6: Provision of free wheelchair scooters for people with disabilities.	A: improve the accessibility of disabled people from/to the central square, including their accessibility to the city's more remote areas for recreational activities and their accessibility to local shops. It will also enhance tourism for people with disabilities and their families, who will now have access to local events and attractions.
C7: Development of more public and green spaces	A: enhance social interaction and lead to a positive change in mindsets about sustainable lifestyles. It will also support the improvement of the environment and the microclimate of the area.
	D: increase in the traffic in the area surrounding the intervention area due to the attraction of more visitors.

Concept	Actions
C8: Pedestrianisation of more streets around the square	A: improvement of the environment and the microclimate of the area. It will lead to a positive change in mindsets about sustainable lifestyles.D: increase in the traffic in the area surrounding the intervention area.
C9: Installation of smart storage locker stations in central locations, where citizens can place their staff for a while (e.g. their shopping bags, so as to move more easily around for other purposes, without the need of a car)	A: increase in the share of sustainable transport users (public transport, walking, cycling) will be achieved, resulting to environmental, economic and social benefits for all.D: The possible threats include vandalism, theft and improper exploitation, which can be addressed by means of increasing awareness about the significance of this service.
C10: Development of electric bicycle and scooter station for the transportation to and from the city center.	 A: improve accessibility, tackle traffic congestion and increase road safety in the area. D: fact that electric vehicles move at a low speed, that a relatively high infrastructure maintenance cost is incurred, and that a vehicle charging station is required. O: reluctancy of private vehicle drivers to implement the idea.
C11: Parking restriction around the square	A: address traffic congestion and increase road safety in the area. O: reluctancy of private vehicle drivers to implement the idea.

3.5 Üsküdar -List of concepts

Intervention area in Üsküdar is the Üsküdar Square, including Selmanipak Street, Hakimiyet-i Milliye Street and New Mosque Square. High mobility density is the challenge of the intervention area. Accordingly the intervention options endorsed by the community targets various categories.

No	Concept	Concept Description	Target Audience	Challenge Category	Intervention Category
1	Civil audit on public transportation service gaps.	An online platform where citizens can apply to become civil auditors. Whenever they face a problem on public transportation, they can inform the authorities. This would cost less than hiring fulltime workers and would be more affective to since the citizens are the first users of public transportation. It would be a real time audit.	• Every type of public transportation users in Istanbul.	CC-3	IT-4
2	Locating benches on uphill roads for citizens to sit while walking to make their travel easier.	Since Uskudar has too many hills and some of them are sharp and long for walking. There is a need for innovative and fast solutions.	 Elderly Disabled people 	CC-2	IT-1
3	Encourage citizens to use motorcycles.	Motorcycles are affective and easy to use as an alternative to private car. Decreasing the number of private cars in traffic could help to reduce road congestion. Therefore, citizens can be encouraged to choose alternative methods like motorcycles.	• Citizens who are stuck in heavy traffic every day and lose time in traffic.	CC-1	IT-2
4	To promote a safe environment in social places and green areas to encourage people to spent time.	The citizens do not feel safe in late hours or early in the morning to go to social areas. And there are some kidnapping cases. If the security can be increased on those areas, citizens would prefer to spend time there more. It would help even psychology of the citizens, because, otherwise they spent time in shopping malls or inside their homes	 Local citizens, Families Women Children Elderly people 	CC-2	IT-1

Table 17. List of Concepts- Üsl	küdar
---------------------------------	-------

No	Concept	Concept Description	 Target Audience 	Challenge Category	Intervention Category
5	To promote riding bicycle for healthier and more active life for citizens.	Riding bicycle is not popular in Uskudar because of its geographic features. Electronic bicycle would be a good solution but there is a need for encouraging activities. For example, state might decrease the prices for a limited period to invite people to use it.	 Local citizens, Workers Students Families Children 	CC-1	IT-2
6	To increase the sufficiency of real time information system on public transportation.	There should be high quality IT researches and developments on real time information system of public transportation. The online portals and applications should be improved.	• PT users	CC-6	IT-5
7	To decrease duration and frequency of road excavations.	To stop constructions on roads caused by infrastructure problems, we can use a canal system which is under used in some of European cities. By that system, we would stop destroying a whole road to fix an infrastructure problem and stop destroying transportation and mobility of local citizens.	 Local citizens 	CC-1	IT-2
8	To increase car parking opportunities.	We might use underground of mosques, green areas, schools or such public places. It is almost impossible to find an empty place in Uskudar to build a car parking place. Therefore, we need to find innovative solutions like using social areas to build an underground park.	 Private car drivers in Uskudar. 	CC-5	IT-3
9	To increase awareness of disabled transportation	Both regular citizens, public and private drivers and authorities are not enough careful on needs of disabled people. There is a need to increase awareness and by that to increase transportation opportunities and safety for disabled people.	• Disabled people who lives or has to travel in Uskudar.	CC-2	IT-4

No	Concept	Concept Description	• Target Audience	Challenge Category	Intervention Category
10	To increase awareness on alternative transportation modes	Citizens need to be informed about alternative transportation modes. This would decrease the road congestion. There are possible and suitable alternative modes such as motorcycles, however local citizens are not properly informed about alternatives.	 General public 	CC-1	IT-2

3.5.1 Actions for the concepts

Üsküdar's concepts are heavily focused on networking, communication, and behavioral change concerns. Accordingly, the identified actions, resources and actors emphasize cooperation with existing municipal and city departments, as well as major local transportation stakeholders. As such broad changes, especially to transportation users' habits, can move quite slowly, the identified timeplans for the concepts tend to be longer-term.

Concept Actions		Resources/Actors	Timeplan
C1: Civil audit on public transportation service gaps.	 Take up contact with public and private institutions Assign intervention team Convince authorities to imply this intervention Open an online platform and advertise the idea Find volunteer citizens to work as an auditor Control and manage the implementation and audits 	 Citizens IETT Metro Istanbul Marmaray Metrobus Istanbul Ferry Lines Transportation Department of the Municipality of Istanbul 	• 12 months
C2: Locating benches on uphill roads for citizens to sit while walking to make their travel easier.	 Contact related departments of the Municipality of Uskudar Analysis of need and siting of benches Installation of benches 	 Transportation Department of the Municipality of Uskudar Local representatives 	• 6 months

Table 18: Actions for the Concepts for Üsküdar

Concept	• Actions	Resources/Actors	Timeplan
C3: Encourage citizens to use motorcycles.	 Contact related departments of the Municipality of Uskudar and related departments of state Assign intervention team Public awareness campaign 	 Transportation Department of the Municipality of Uskudar Radio and Television Department of the state 	• 12 months
C4: To promote a safe environment in social places and green areas to encourage people to spent time.	 Contact related departments of the Municipality of Uskudar Secured source of financing Analysis of locations and needs of the social places Assignment of personnel to the security team of Municipality Siting of CCTV cameras 	 The Security Department of the Municipality of Uskudar Park and Green Areas Department of the Municipality 	 6 months Depending on budget
C5: To promote riding bicycle for healthier and more active life for citizens.	 Contact with related departments of the Municipality of Uskudar and related departments of the state Obtain sponsorship to decrease the prices of bicycles Public awareness campaign 	 Youth and Sport Department of the Municipality of Uskudar Youth and Sport Department of the Municipality of Istanbul Youth and Sport Department of the state and private bicycle companies 	 3 years Depending on sponsorship and uptake by citizens
C6: To increase the sufficiency of real time information system on public transportation.	 Contact with related departments of the Municipality of Uskudar, related departments of the state and transportation institutions in Istanbul Obtain sponsorship to build the team and give financial support to infrastructure of the portal 	 Transportation Department of the Municipality of Uskudar Transportation Department of the state IETT Metro Istanbul Marmaray Metrobus Istanbul Ferry Lines 	 24 months Depending on sponsorship and portal development

Concept	Actions	Resources/Actors	• Timeplan
C7: To decrease duration and frequency of road excavations.	 Contact with related departments of the Municipality of Uskudar Knowledge exchange programs with the institutions who already apply this system Build an expert team who are trained about the system Secure budget to start the implementation. 	 The Department of Public Works and Engineering of the Municipality of Uskudar Expert institutions on this system abroad 	• 10 years
C8: To increase car parking opportunities.	 Contact with related departments of the Municipality of Uskudar Assign intervention team Analysis of suitable spaces to build a car parking area in different points of Uskudar Organization of a budget and action plan 	The Transportation Department of the Municipality of Uskudar	• 24 months
C9: To increase awareness of disabled transportation	 Contact with related departments of the Municipality of Uskudar Assign intervention team Convince the Mayor and the City Council to implement the project Find sponsorship to support the budget Stakeholder and public awareness campaign 	 The Mayor of Uskudar Head of Transportation Department of the state CEO of IETT Metro Istanbul Marmaray Metrobus Istanbul Ferry Lines 	 6 months Depending on necessary contacts an permissions
C10: To increase awareness on alternative transportation modes	 Contact with related departments of the Municipality of Uskudar Secured source of financing Creation of a system to register phone numbers of citizens and to send regular messages Development of yearly campaign plan 	 The Mayor of Uskudar Transportation Department of the Municipality Press and Information Department of the Municipality Public relations experts 	• 12 months

3.5.2 Rationale of the Concepts

Table 18 below shows some challenges and advantages of the selected list of concepts regarding their advantages (A), disadvantages (D) or obstacles (O) that would need to be tackled.

Concept	Rationale
C1: Civil audit on public transportation service gaps.	A: The authorities would be pushed to be faster to solve the problems on public transformation. This means the citizens will no longer have to wait too long to have solution for their problems.O: Facing struggle to convince the authorities to cooperate and
	maintenance of this intervention.
C2: Locating benches on uphill roads for citizens to sit while walking to make	A: The target audience will find an opportunity to sit and rest while going to their homes or work places in their daily life.
their travel easier.	O: The physical features of streets and side walk would be an obstacle to build the benches because there is not enough space on some roads.
C3: Encourage citizens to use motorcycles.	A: decreased time spent in traffic would let people have more time to rest and save time for their social activities. There would be positive psychologic effect on the target audience. People would be less stressed, and they could use their time more efficiently.
	0: legal process of making a public announcement can be challenging.
C4: To promote a safe environment in social places and green areas to encourage people to spent time.	A: increased security in on public places, citizens would prefer to spent time there more. It would help even psychology of the citizens, because, otherwise they spent time in shopping malls or inside their homes.
	O: finding a financial support would be challenging; expanding the security team would cost a long term spending.
C5: To promote riding bicycle for healthier and more active life for citizens.	A: increased use of electronic bicycle, people would become able to travel in short distance and on sharp hills of Uskudar and easily without any need of public transportation or private car. This would decrease the number of trucks and cars on roads in daily life. And people could have healthier life by using bicycle every day.
	O: Finding a financial support would be challenging. Even after everything, citizens might not be willing to use electronic bicycles in their daily life because of deep-seated habits.
C6: To increase the sufficiency of real time information system on public transportation.	If there is an online application where the citizens can see the schedule and real time information of public transportation, the citizens would not have to wait for long amount of times for transportation modes, and would organize their trip more sufficiently. Whenever there is cancelation or road construction, they would know about it earlier and do not waste time to wait for the modes.
	Finding a financial support would be challenging. A high qualified IT work requires a big budget and that would be not affordable for many possible supporters.

Concept	Rationale
C7: To decrease duration and frequency of road excavations.	A: Uskudar can have the canal system for infrastructure, there would be less road constructions on streets. By that, traffic would be lighter and people would not face a problem of dust and unorganized environment. Intervention by experts to any problem would become easier and faster for institutions.D: Training experts would take long time.O: There is a risk that the project team might not build any contact with necessary institutions which are already using the canal system. Political instability might cause risk for the project
C8: To increase car parking opportunities.	A: If there is enough parking area in Uskudar, the streets would have less parking cars, and by that the streets would not be blocked. This would lead the congestion to be decreased. The drivers would not be worried about their cars because the cars would be in a safe place, not on the street. The drivers who lives in Uskudar would save time because current situation, they spent much time to find a parking lot for their cars in everyday life. D: Constructions on different points of Uskduar would disturb the local citizens: especially for the parking areas which are under green areas.
	O: Finding a financial support would be challenging. Increasing the capacity of parking lots might increase the number of private cars in Uskudar.
C9: To increase awareness of disabled transportation	A: Race event, which is done by CEOs, the Mayor and important authorities from the state would help to emphasize the importance of disabled transportation. Also, the authorities and experts, who will be the participants, would have a chance to experience a trip on a wheelchair and by that, they would see the needs better. This would make them to be more careful on implementing disabled transportation solutions.O: convincing the authorities and experts to join the race.
C10: To increase awareness on alternative transportation modes	A: Number of private cars would decrease in traffic. Air pollution would be less if citizens decrease driving their private cars. Car crash ratio would decrease since the traffic would become less.D: the citizens might be uncomfortable because of the texts coming their phones regularly. In addition, the citizens might not take the texts into account. Also, the density in public transportation modes would increase because of their capacity. Then, it would cause to increase the capacity of public transportation.

4. General conclusions of the concepts

Drawing together the long list of concepts endorsed by 5 cities' mobility communities, there are a few conclusions which can be made around the types of challenges and intervention types which each cities focused on.

4.1 Challenge profiles of the cities

Challenge Category	Main Challenge Type
CC-1	Road Congestion
CC-2	Low quality and provision of end-to-end cycle and pedestrian Infrastructure
CC-3	Low -connectivity of public services (service gaps)
CC-4	Affordability & access to a viable private car based alternative
CC-5	Parking provision/capacity
CC-6	Low-frequency of public services (service gaps)
CC-7	Air & noise pollution (due to traffic)

Table 20. Challenge categories

The challenges addressed by the concepts from the project partners were categorized into 7 different main challenge categories (Table 20), as developed from the preliminary challenge analysis in each project area after the interviews and survey conducted in the first stages of this project in 2017. While the overall distribution of challenges seems to suggest a clear focus on bicycle and pedestrian infrastructure, congestion and pollution, as well as low connectivity of public services for all partners (Figure 2), a closer analysis on partner level reveals the existence of several different challenge profiles among the partners.

Figure 2. Count of challenges by category



These challenge profiles seem to be due to the prevailing infrastructure, mobility culture and dominating transport use in the cities, however also a potential bias stemming from a certain focus of the local community cannot be excluded.

4.1.1 Challenge profile for Budapest



The majority of identified challenges in Budapest are related to cycling & pedestrian infrastructure, while also public transport and air pollution are named. Interestingly neither congestion nor the need of alternatives to private car use are challenges which Budapest's concepts respond to. This challenge profile matched Budapest's central concern of increasing access to the Danube – where the main barrier to access is the lower embankment road – so the concepts produced work to overcome this obstacle and increase the potential for people to stay and use the space rather than only to travel through it.

4.1.2 Challenge profile for Hamburg

Hamburg's community developed concepts which respond to challenges solely for individual modes of transport, be it cycling or private car use and its consequences like congestion or air pollution. None of the challenges named belong to the categories of low public transport connectivity or frequency. There are however identified challenges related to public transport priority over individual modes of transport. This reflects the central concerns of the community, which were expressed in the first survey results from 2017.

Figure 3. Challenge Categories Budapest



A high percentage of concepts (11/12) address the challenges that can be related to an overload of car traffic, with only 2 of those concerning Road Congestion and the others focusing on car related issues like air-quality and parking issues. 1/3 of the challenges point to insufficient biking and pedestrian infrastructure.

4.1.3 Challenge profile for Oxfordshire



The challenges identified in Oxfordshire focus solely on public transport improvements, as the team has made substantial steps towards producing concrete options for implementation related to the specific local concern of transit connectivity and access. A large share of the concepts developed addresses the low connectivity of public services. 1 out of the 13 challenges was allocated to the "Low Frequency of public services" category.

4.1.4 Challenge profile for Trikala





Whereas the challenges identified in Oxfordshire strongly focus on public transport, only 1 out of 11 concepts developed in Trikala are related to public transport (low connectivity). The vast majority of concepts are in response to an overload in car traffic. Road congestion and air pollution are the overarching topics, combined with missing alternatives to private car use. Consequently almost 1/3 of the challenges are related to insufficient biking and walking infrastructure.

4.1.5 Challenge profile for Üsküdar



Figure 7. Challenge Categories Üsküdar

Like Trikala, the main challenges addressed in Üsküdar are congestion and low quality of bike and pedestrian infrastructure. Unlike Trikala, 2 out of 10 concepts are connected to

public transport, both connectivity and frequency of the services, and 1 to parking capacities. Despite having a fair share of challenges related to congestion, the concepts developed in Üsküdar focus primarily on methods of reduction or increased efficiency for traffic rather than on effects of traffic, such as noise and air pollution.

4.1.6 Discussion of the challenges

Each city or area within a city has their own unique challenge profile, often with challenges being interdependent and co-fueling each other. Often a lack of alternatives to private car use is identified; the challenges with private cars however differ from city to city, from parking issues to traffic congestion. To a certain extent the challenges listed will mirror the mobility situation in the cities or area within cities. For example, within Oxford, Barton was identified as a local area with a specific challenge concerning low radial connectivity, and therefore the majority of concepts in Barton sort to address this challenge. Table 21 shows the overall break-down of challenges address through all partners' concepts.

Challenge Category	Budapest	Hamburg	Oxfordshire	Trikala	Üsküdar	Total
Road Congestion	-	2	-	6	4	12
Low quality and provision of end-to-end cycle and pedestrian Infrastructure	8	4	-	7	3	22
Low -connectivity of public services (service gaps)	1	-	12	1	1	15
Affordability & access to a viable private car based alternative	-	4	-	5	-	9
Parking provision/capacity	1	2	-	-	1	4
Low-frequency of public services (service gaps)	1	-	1	-	1	3
Air & noise pollution (due to traffic)	2	3	-	6	-	11

Table 21. Conclusion of concepts addressing challenges

Differing approaches to concept development across all partners can be seen through the number of multicategory concepts produced - that is which concepts respond to more than one challenge category. Budapest and Hamburg both have 3 multicategory concepts and Oxfordshire has1 multicategory concept. Trikala leads in this with 8 multicategory concepts. This speaks to the varying nature of the participatory process and the local context in each focus area. There is also a relationship in this respect related to the number of lab events offered.

Oxfordshire (11 events) and Üsküdar (7 events) have the fewest multicategory concepts with respect to challenges, e.g. they show the highest level of focus on specific challenges among their concepts. Hamburg (6 events) and Budapest (5 events) have some diversity across challenges. And, Trikala (3 events) shows the highest diversity across address challenges. This suggests that the frequency and intensity of interactions with the mobility community can have a positive effect on the targeting and narrowing of concepts under development.

For each city there might also be larger infrastructural challenges that were excluded in the Hackday process, due to a focus on feasible interventions within the projects timeframe and budget and within the local project context. A strong indicator for this is the focus of Oxfordshire on public transport challenges, whereas public transport only plays a minor role in the other cities challenge profiles. An ongoing public transport project in Oxfordshire allows for interventions within the project scope, whereas addressing challenges within the public transport sector might be out of scope for other cities due to high demands on planning time and budget.

4.2 Types of interventions

The concepts themselves can be considered as well by which intervention category they fall under, again following the categorization of interventions as developed though the first analysis of local areas and challenges in 2017 (Table 22).

Intervention Category	Intervention type	Examples of related interventions
IT-1	Promotion of active travel	Conversion of on-street car parking into bike parking facilities (Hamburg)
IT-2	Traffic reduction strategies	Decrease duration and frequency of road excavations (Üsküdar)
IT-3	Affordable and quality travel options	Introduce PickMeUp to concessionary passengers (Oxfordshire)
IT-4	Inclusive mobility infrastructure	Provision of free wheelchair scooters for people with disabilitie (Trikala)
IT-5	Travel information provision and literacy	Face to face app training (Oxfordshire)
IT-6	Emission & noise control strategies	Development of electric bicycle and scooter station for the transportation to and from the city center (Trikala)
IT-7	Speed control strategies	Installation of street furniture and plants/trees on community spaces (Budapest)

Table 22. Intervention types and subcategories

The overall number of concepts by intervention type (Figure 8) suggests a strong emphasis by all partners on the 3 intervention types IT1, IT2 and IT3 as they together almost make up for 75% of all interventions. The second strongest intervention types are IT4 and IT5, with covering roughly 12.5% of the concepts each. Only 5 concepts aim directly at IT6 and 2 at

IT7. However, interventions that promote active travel (IT1) and reduce traffic (IT3) are also likely to reduce emissions and noise pollution (IT6).

A strong correspondence between the challenge categories (Figure 2) and intervention categories can be identified. The numbers of challenges in quality and provision of bike and pedestrian infrastructure and interventions promoting active travel match up exactly. Moreover, a large number of interventions fall into the categories of traffic reduction strategies or affordable quality travel options – as there were a high number of identified challenges in road congestion and public transport. Compared to the number of identified challenges in air and noise pollution there is a relatively small number of interventions directly addressing these issues. Pollution reduction though is a likely side-effect of traffic reduction, for which many intervention suggestions have been developed.



Figure 8. Intervention counts by category

 Table 23. Conclusion of concepts and the intervention

Intervention Category	Budapest	Hamburg	Oxfordshire	Trikala	Üsküdar	Total
Promotion of active travel	6	6	1	7	2	22
Traffic reduction strategies	2	4	-	7	4	17
Affordable and quality travel options	-	2	11	6	1	20
Inclusive mobility infrastructure	1	-	1	4	2	8
Travel information provision and literacy	1	-	6	1	1	9
Emission & noise control strategies	1	-	-	4	-	5
Speed control strategies	2	-	-	-	-	2

As Error! Reference source not found. shows, the intervention profiles differ from partner to partner, as did the challenges. This suggests that the interventions developed match the unique challenge profile for each city. Oxfordshire's interventions are closely related to affordable quality travel options, as the challenges identified there were related to public transport. The majority of interventions in Budapest concern the promotion of active travel, matching the identified challenges in bike and pedestrian infrastructure. Hamburg, Trikala and Üsküdar suggest a mix of interventions with different mainly ranging from promotion of active travel, over traffic reduction to provision of affordable quality travel options. The weights of the intervention categories in these intervention mixes are unique for the 3 cities and correspond to the local challenge profile.

Regarding the proportion of the first three intervention types (IT1, IT2 and IT3) a deeper analysis may help to a better understanding of the planned interventions.

The first type of intervention focusing on the promotion of active travel can be discussed under 5 intervention topics; which are (i) cycling infrastructure, (ii) pedestrian infrastructure, (iii) car free zone/time, (iv) implementing or developing public amenities and (v) local campaigns to gain publicity. As figure 9 shows that there is a clear tendency of pilot cities to promote active travel by offering public amenities and attraction points. 7 out 22 endorsed concepts aim to implement an intervention that offers more public amenities to citizens.



Figure 9. Interventions to promote active travel

Providing affordable/quality travel options is the second most preferred intervention in pilot cities. Improving access to public transportation and promoting the new and existing public transportation are the most referred strategies to tackle the mobility challenges of pilot areas. Figure 10 shows the breakdown of the intervention categories.



Developing traffic reduction strategies is the third most highlighted intervention type among the pilot cities. The majority of the endorsed concepts fall under the traffic reduction intervention type focused on promoting alternative modes of travel and banning motorized traffic (Figure 11).





4.3 Conclusions

Moving forward, each team is now working together with their mobility communities in person and via online tools to further develop the concepts in preparation for selection of the short list of concepts at the upcoming Quadruple Helix Stakeholder Workshops (late summer 2018). Focus of this work includes in all cities the building and strengthening of relationships with relevant stakeholder groups, investigation of resources for the implementation, and further narrowing and definition of intervention steps and goals. These efforts continue the spirit of participation and improve the implementation potential of the proposed concepts.

The process from lab creation, through lab events, to the Hackdays, 32 events have been realized and pilot cities managed to reach approximately 1100 attendees in total, during these events. Regarding the Hackdays and the aim to co-create a long list of concepts has in all partner cities been productive. Each partner has been able to build a mobility community and work together with them to prepare a list of possible concepts and potential solutions which correspond both to their identified local challenges and preferred intervention areas. Through this process there were several challenges, some shared between cities, such as the overall timeline and weather conditions, and some individual, related to method selection and local contexts. However, the results of this report demonstrate that each unique area has been able to overcome these with assistance and guidance from other partners via community calls. Last but not least, inclusively created mobility solutions to those challenges in pilot areas show promise for people-oriented transit and mobility.

Appendix 1: Promotional Materials from Hackdays

Figure 12. Hackday poster of Hamburg



Figure 13. Promotional material of Oxfordshire



Figure 14. Agendas from Hackdays

CITIES UPEOPLE PEOPLE PEOPLE PEOPLE PEOPLE PEOPLE Cit	USKUDAR BELEDIYESi ies-4-People - Hackday 1	Ideas Day Workshop Barton Neighbourbood Centre 14/7/18 10:30am to 11:30pm
Ven Program	uue: The Center of Idea and Art	Agenda: 10:30-10:40 Introduction 10:40-10:50 Warm-Up:
18 th July 09:30 - 10:00 10:00 - 10:10	Wednesday / 09:30 - 16:30 Gathering & Coffee The Center of Idea and Art Meeting Boom Openine & Project presentation	 10:50-11:10 Project Presentation 11:10-11:35 Ideating activity 11:35-12:25 Developing Ideas into Concepts
10:10 - 10:40	Obox.Exabit 1 ^{r5} Session Potrati Draving 4 Quadranta Presenting the concepts Presenting the concepts	 12:25-12:45 LUNCH 12:45-1:15 Presenting Concepts 1:15 - 1:30 Selecting Concepts
10:40 - 10:50 10:50 - 12:20 12:20 - 13:50	2nd Session The World Code Nethod (Mobility problems of Lipbajdar) Lunch Tableerin Tableeri	
13:50 - 14:50 14:50 - 15:00	Sard Session Story Puzzle (Possible solutions) Coffee Break	
15:00 - 16:00 16:00 - 16:30	4 th Session Lego Serious Flay (Solution Analysis) Up-vote - Closing Up-vote solution ideas Closing Speech	· · · · · · · · · · · · · · · · · · ·
	Contact: elifsenturk@ustudar.belt norm Site: www.dtlestpeople.eu	



HACKDAY AGENDA

15:30	Registration + Coffee	
	Table of ideas and C4P timeline will be viewed on the wall	
15:45	Welcoming speech and greetings (representatives from BA)	
15:50	Presentation on Timeline/Goals	
	C4P – what we've done so far, what we're doing today, what we're	
	doing in the future	
	Warm-up activity	
16:00	Ranking Ideas	
	4 groups with 4 moderators	
	 Q1 feasibility to implement within 2 years 	
	 Q2 importance/usefulness/impact 	
17:00	Coffee Break	
	Results of the idea ranking will be placed on the wall	
17:15	Selection and the discussion of the selection	
	Top 10 to 12 ideas are selected for further development	
	Basic confirmation with participants that we agree on the selected	
	ideas	
17:30	World Café	
	Discussion on the details of the ideas and concepts Each idea gets own	
	table	
18:30	Presentation of the titles of concepts from each table	
18:30-19:30	Reception with a Cool-down activity	

Appendix 2: Photos from Hackdays













Figure 17. Photos from Oxfordshire Hackday





Figure 18. Photos from Üsküdar Hackday



