



Integrated NBS-based Urban Planning Methodology for Enhancing the Health and Well-being of Citizens

D6.1

The city requirements and resources translated to GDPM

WP6 – Design and Development of the euPOLIS solutions and implementation plan



This project has received funding from the European Union's Horizon 2020 Research and Innovation Program under grant agreement No 869448. The contents of this publication are the sole responsibility of the authors and can in no way be taken to reflect the views of the European Commission.

Lead Contributors	Ranko Bozovic (ENPL)
Other Contributors	C. Maksimovic (ICL), M. Zindovic (ENPL), S. Boskovic (ICL), A. Randjelovic (FCEBG), V. Charalampopoulou (GSH), A. Aliaga (AMPHI), K. Krauze (ERCE), D. Podmirseg (VFI), Angeliki Paraskevopoulou (PRS), Efthymios Chardavellas (PRS), Tassos Karatasakis (PRS), GLM (Gladsaxe Municipality), Anne Stalk
Reviewers	E. Protopapadakis (NTUA), E. Sardis (NTUA) K. Krauze (ERCE), R. Włodarczyk (ERCE), Marciniak (ERCE)

Due Date	30 Nov. 2021
Delivery Date	30 Nov. 2021
Type	REPORT (R)
Dissemination Level	Public (PU)
Keywords	City Resources, customized Goal Driven Planning Matrix, Goals, Targets, Stakeholders concerns, NBS design

Document History

Version	Date	Description	Comments	Edited by
0.1	01 Sept. 2021	First internal version of document D6.1	Include comments from the leader's team	ENPL, Ranko Bozovic, Milena Zindovic, Ratomir Nevenic
0.2	05 Oct. 2021	First version submitted to the Task partners	Include first public version	Angeliki Paraskevopoulou (PRS), Efthymios Chardavellas (PRS), Tassos Karatasakis (PRS), Erzsébet Poór-Pócsi (BIOPOLUS), Alix Aliaga (AMPHI), Sandra Baki (NTUA)
0.3	18 Oct 2021	Second version, submitted to the Task partners	Structure changed based on partners suggestions,	Anja Randjelovic (FCEBG), Erzsébet Poór-Pócsi (BIOPOLUS), Alix

				Aliaga (AMPHI), Sandra Baki (NTUA), Tassos Karatasakis (PRS),
0.4	05 Nov. 2021	Third version, submitted to the Task partners	corrected based on partners inputs,	Alix Aliaga (AMPHI), Anja Randjelovic (FCEBG), Sandra Baki (NTUA), Erzsébet Poór-Pócsi (BIOPOLUS)
0.5	24 Nov.2021	Review	Include comments from reviewers	E. Protopapadakis (NTUA), E. Sardis (NTUA), Renata (ERCE)
0.6	30 Nov. 2021	Review – Final version	Include comments from reviewers	

Legal Disclaimer

This document reflects only the views of the author(s). Neither the Innovation and Networks Executive Agency (INEA) nor the European Commission is in any way responsible for any use that may be made of the information it contains. The information in this document is provided “as is”, and no guarantee or warranty is given that the information is fit for any particular purpose. The above referenced consortium members shall have no liability for damages of any kind including without limitation direct, special, indirect, or consequential damages that may result from the use of these materials subject to any liability which is mandatory due to applicable law.

This document and the information contained within may not be copied, used, or disclosed, entirely or partially, outside of the euPOLIS consortium without prior permission of the project partners in written form.

© 2021 by euPOLIS Consortium.

Table of Contents

Legal Disclaimer	4
Table of Contents	5
Executive Summary	7
List of Figures	9
List of Tables	9
List of Acronyms / Abbreviations	10
Glossary of Terms.....	10
1. Introduction.....	11
1.1 Task 6.1 description.....	11
1.2 Deliverable 6.1 description.....	13
1.3 WP6 relation and interactions with other euPOLIS WPs	14
2 Provisional GDPM production (Construct PH and WB - GDPM as an overall planning framework and guidance)	17
2.1 The GDPM Goals and Targets	17
2.2 GDPM entering data and outputs.....	18
2.3 Screening of demo sites through the GDPM supporting matrixes (utilization of GDPM matrix tools) 19	
2.3.1 Matrix of Urban Interactions.....	19
2.3.2 BGS BLEND IN MATRIX implementation	23
2.3.3 Gender / User groups Inclusivness matrix implementation	26
2.3.4 Business activation matrix.....	35
2.4 Provisional GDPM.....	35
3 Coordination of euPOLIS time schedule for each demo site	36
3.1 The euPOLIS time schedule for Lodz demo site.....	37
3.2 The euPOLIS time schedule for Gladsaxe demo site.....	38
3.3 <i>The euPOLIS time schedule for Belgrade demo sites.....</i>	<i>40</i>
4 Workshop No 1 - Customized GDPM and Minutes of the Meeting No 1	41
4.1 GDPM customization for each demo site	41
4.1.1 Workshop with FL cities	41
4.2 Minutes of the Meeting No 1, for each demo site.....	42
4.3 The existing demo site resources	42



4.3.1	Resources categories related to DS planning.....	42
4.3.2	Greenery resources - Innovative EuPOLIS greenery selection methodology	43
4.3.3	Modelling resources selection	44
5	Potential euPOLIS interventions at demo sites	45
6	Conclusion	46
7	Annexes.....	47
A1.	Customized GDPMs.....	47
A2.	Matrix of Urban Interactions.....	47
A3.	Minutes of the Meeting No 1, for FR cities demo sites	47
A4.	Demo Site Resources.....	72

Executive Summary

This document presents Deliverable D6.1 “The city requirements and resources translated to GDPM” corresponding to Task 6.1 (T6.1) of Work Package 6 (WP6) (Design and Development of the euPOLIS solutions and implementation plan).

General objective of WP6 is to introduce and implement innovative master planning system and demonstrate benefits and significant impacts on life quality in demonstration site. Another important objective of this task is to set a stage for the systemic introduction of PH&WB related design criteria, as standard, into urban planning practice.

More specifically, the objectives of this WP are: to apply innovative interactive analysis methodology of complex set of city project requirements and resources defined in the WP2 and WP3; to systematically define, explore, optimise and utilise synergies of different urban functional units and urban metabolism for achieving planning results mainly based on ESS. Define optimal NBS to be applied in city projects; to include gender mainstreaming strategies into urban planning methodology to ensure inclusivity and equality in created spaces.

The Task 6.1 comprised three main activities:

1. GDPM customization – The GDPM is a unique holistic tool used as a main tool for the planning and detailed design of project interventions tailored to improve PH&WB at selected demonstration locations.

The customization process of provisional GDPM, for euPOLIS demo sites, was completed at Workshop W1. The extensive analysis was achieved with all four FR city experts on the subject. The aim was to produce GDPM with site specific recommendations, ready to be utilized as an engineering platform for the selection of NBS interventions at FR cities demo sites. The importance of this process was the fact that it revealed actual interventions implementation conditions and identified potential barriers for the construction of some.

2. Identification of Demo Site Resources – Workshop W1 was used to define demo site resources, through detailed analysis of site conditions, with FR cities. Comprehensive lists of resources were produced for 18 categories for each demo site. During the workshop with FR cities the coordination and sorting out information regarding local resources was achieved, complete with provisional analysis of resources applicability and potential barrier for the implementation of some resources. The identified resources were used to establish realistic potential for the NBS interventions within the customized GDPM platform.

3. Demonstration of GDPM matrix tools utilization – The utilization of GDPM supporting matrix tools was initially completed during the construction of provisional GDPM in the Task 3.2. Within the Task 6.1 we enclose documentation demonstrating the use of three main matrix tools: 1. Matrix of



Interactions, 2. BGS Blend in Matrix, and 3. Gender related planning Matrix. The Business Activation Matrix will be finalized and demonstrated as a part of Task 6.2.

List of Figures

Figure 1 Task 6.1 Process Schematic	12
Figure 2 WP6 relation to other WP's schematic.....	15
Figure 3 The DS Requirements coordination	16
The GDPM structure is demonstrated in the Figure 6: Provisional GDPM basic functional schematic	17
Figure 4 GDPM construction methodology framework.....	18
Figure 5 The Provisional GDPM entering data and outputs	19
<i>Figure 6 Provisional GDPM basic functional schematic.....</i>	<i>35</i>
Figure 7 euPOLIS implementation time schedule – city of Lodz.....	37
Figure 8 euPOLIS implementation time schedule – city of Gladsaxe.....	38
Figure 9 euPOLIS implementation time schedule – city of Piraeus.....	39
Figure 10 euPOLIS implementation time schedule – city of Belgrade	40
Figure 11 NBS based PH&WB planning model	44

List of Tables

Table 1. Acronyms, Abbreviations.....	10
Table 2. Glossary of terms.....	10
Table 3 Exempt from the original table (T3.2) The Task 3.2 Goals and Targets definition approach.....	17
Table 4 list of urban Interactions.....	20
Table 5 Examples from detailed matrix of interactions.....	22
Table 6 Blend in Matrix customized for the euPOLIS project and applied in the construction of provisional GDPM.....	23
Table 7 Gender / User groups Inclusiveness planning matrix.....	27
Table 8 Demo site resources categories	43
Table 9 Minutes of the Meeting No1, for Gladsaxe demo site	48
Table 10 Minutes of the Meeting No1, for Lodz demo site	52
Table 11 Demo site Gladsaxe – Resources & analysis	72
Table 12 Demo site Lodz – Resources & analysis.....	73
Table 13 Demo site Piraeus – Resources & analysis	76
Table 14 Demo site Usce, Belgrade – Resources & analysis	78

List of Acronyms / Abbreviations

Table 1. Acronyms, Abbreviations

Acronyms/Abbreviations	Explanation
BAM	Business Activation Matrix
BG	Blue Green
BVOC	Biogenic volatile organic compounds
CI	Contextual Indicators
DS	Demo site
EC	Ecosystem
ESS	Ecosystem Services
EI	Evaluation Indicators
ENPL	EnPlus SME
FR	Front Runner
GA	Grant Agreement
GDPM	Goal Driven Planning Matrix
KPI	Key Performance Indicators
NB	Nature Based
NBS	Nature-Based Solutions
PH	Public Health
PH & WB	Public Health and Well-Being
POI	Place of Interest
SMEs	Small Medium Enterprises
Q1	Questionnaire 1
Q2	Questionnaire 2
Q3	Questionnaire 3
(U)HI	Urban Heat Island
VOC	Volatile Organic Compound
WB	Well-being
WP	Work package

Glossary of Terms

Table 2. Glossary of terms

Term	Explanation

Covered in D3.1

1. Introduction

The overall WP6 objective is to consolidate acquired data, complete Concept design of demo sites and propose practical framework for the NBSs implementation process.

This deliverable 6.1 represents Report on the Task 6.1 activity, which are the first activities in the design of actual NBS solutions to be implemented within the euPolis project at proposed demo sites. Task 6.1 purpose is to coordinate, customize and refine all demo sites data obtained from previous WP's to prepare ground for demo sites NBS design in accordance to euPOLIS proclaimed principles.

The overall WP6 objective is to introduce and implement innovative urban design system to define optimal NB solutions for the benefit of significant improvement of PH&WB at demonstration sites. More specifically, the objectives of this WP are:

- To apply innovative interactive analysis methodology of complex set of city project requirements and resources defined in the WP2 and WP3.

To comply with this objective, the demo site existing resources were identified for each city during the Workshop No1, completed as a part of the Task 6.1 activities, specified as a part of Minutes No1. for each demo site and presented in the Annex 2 of this document.

- To systematically define, explore, optimise and utilise synergies of different urban functional units and urban metabolism for achieving planning results mainly based on ESS. Define optimal NBS to be applied in city projects.

The utilization of synergies was achieved by the implementation of euPOLIS planning matrix tools (within the GDPM framework): Matrix of Interactions, BGS Blend in Matrix, Gender planning Matrix and Business Activation Matrix. This analysis also produced the potential list of optimal NBS's to be applied at the demo sites. These documents are enclosed within the item 2.3 to demonstrate these matrixes use in GDPM construction. The business activation matrix will be finalized in the Task 6.2.

- To include gender mainstreaming strategies into urban planning methodology to ensure inclusivity and equality in created spaces.

The BGS Gender / User Groups Inclusiveness Matrix (Item 2.3.3) was applied within the GDPM framework, to achieve this particular objective.

1.1 Task 6.1 description

The summary task 6.1 description: Convert the cities' resources to Goals and Targets. The detailed task 6.1 description: 1: Perform comprehensive and systematic analysis of resources in the participating cities, through euPOLIS' matrix developed for each demo site (completed through Workshop W1). Identify and define finally agreed city / project resources, and produce a list of direct,

indirect, natural and other euPOLIS resources suitable for the systematic implementation of NBS (completed). 2: Systematically define, explore, and utilize synergies of different urban functional units for achieving planning results mainly based on ESS (completed through the provisional GDPM construction). 3: Construct PH and WB - GDPM as an overall planning framework and guidance (completed). Define resulting potential NBS concepts to be applied in city projects (in process).

4. The main activities to be carried out in the framework of this task are the following: Using euPOLIS matrix tools to make identification of potential synergies deriving from interactions between different city components and functions in order to address PH and WB issues and concerns identified at the demonstration sites. Based on that provisionally define NBS that can be utilized on the project. 5: Develop instructions on biophilic design conducive to euPOLIS' strategies. The following Figure 1 demonstrates Task 6.1 activities and products:

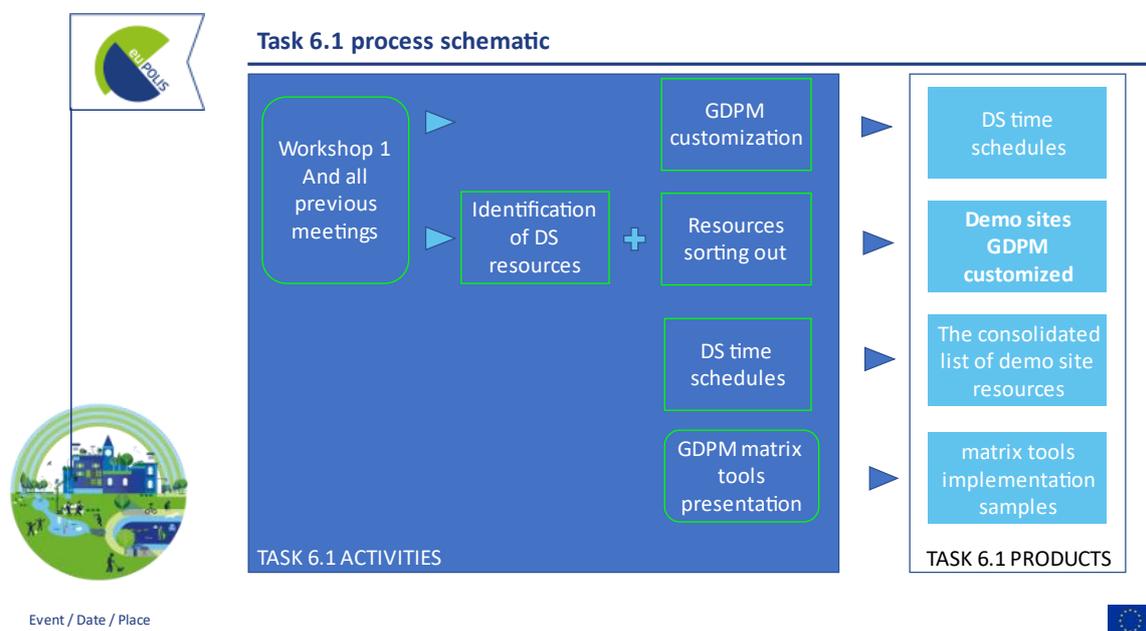


Figure 1 Task 6.1 Process Schematic

The following practical steps were undertaken within the Task 6.1, to fulfil above requirements:

1. Check overall planning and construction time schedule with the cities to make sure it fits into the euPOLIS time schedule (product: coordinated euPOLIS time schedule for each demo site, item 3 of this document).
2. Presentation of BGS matrix tools that were applied for the provisional GDPM construction. (Product: demonstration examples of planning matrixes implemented, item 2.2 of this document).

3. Organize WORKSHOP No.1 with the aim to achieve GDPM customization for each demo site. Workshop was held with city planners and euPOLIS supporting experts in order to develop / discuss / evaluate / decide the potential interventions list specified in the provisional GDPM. Apart from customized GDPM, the Minutes of the meeting No. 1, were produced to be used as a project implementation control tool (products: customized GDPM and Minutes of the Meeting No 1 (Annex 2)).
4. One of the Workshop 1 items on the agenda was the identification and provisional analysis of Demo site Resources. This was performed with the aim to identify resources suitable for the systematic implementation of NBS. All four FR cities teams have supplied information relevant for each resource category, data relevant to the systematic implementation of NBS at demo sites (product: the comprehensive list of demo site resources, with provisional analysis for each, (Annex 3 of this document)).
5. Define resulting potential NBS concepts to be applied in city projects

1.2 Deliverable 6.1 description

The D6.1 Deliverable title is 'The city requirements and resources translated to GDPM'. This deliverable will use the comprehensive list of city project requirements (as coming from WP2) so as to convert them into Goals and Targets.

This deliverable (D6.1) reports the activities undertaken under Task T6.1, which aims at identifying demo site resources and systematically define, explore, and utilize synergies of different urban functional units for achieving planning results mainly based on NBSs.

The activities of Task T6.1 are running in parallel with those of Task 2.2 and Task 3.3 aimed at analysing the existing demo-site conditions. Task 6.1 goes further ahead to establish the sites' resources usable for the implementation of NBS interventions.

The innovation of the euPOLIS project is the need to consider and coordinate both euPOLIS project requirements and Demo Site requirements, in order to provide adequate inclusion of both into the practical NBS interventions. The task 6.1 develops the method which correlates Project requirements with Demo Site requirements and converts them into Goals, Targets and, furthermore, to the GDPM for euPOLIS interventions.

To define above methodology this report consists of 6 chapters,

- starting from the current one that is the section including the introduction and overall description of the Task 6.1.
- Chapter 2 consists of the GDPM construction procedure description, including the implementation of matrix tools.
- Chapter 3 presents Project implementation time schedules for euPOLIS demo sites, while

- Chapter 4 presents result from the workshop W1 comprising customized GDPM, Minutes of the meeting no 1 and specification of resources identified at the euPOLIS demo sites.
- Chapter 5 describes potential euPOLIS interventions, while Chapter 6 offers conclusion on Deliverable 6.1.

1.3 WP6 relation and interactions with other euPOLIS WPs

The framework for evaluation of indicators for urban, social, economic, environmental, and PH & WB categories is defined within the T3.2 (Baseline status and indicators identification), quantified in T3.3 (Set-up Project Requirements) and fine-tuned in WP8 (Evaluation of euPOLIS solutions, Training and Capacity Building).

The provisional list of CIs was developed by several expert working groups composed of WP3 (Gap analysis, Requirements and Solutions identification for cities), WP4 (Public Health and Well-Being with related Social and Behavioural aspects) and WP8 (Evaluation of euPOLIS solutions, Training and Capacity Building) teams.

The preliminary identification of EIs (based on GDPM proposed interventions) will be accomplished in WP4 in conjunction with WP8. The consolidation of all indicators, to support the quantification of main project results, will be completed within the WP4, WP5 (Technologies to support development of NBS in the cities), WP6 (Design and Development of euPOLIS solutions and implementation plan), WP7 (Deployment of the NBS and Monitoring Solutions in the cities), for all five categories (urban, social, environmental, economy & business and PH & WB) and in WP8 following the completion of PH&WB site testing.

- The WP2, WP3 and WP4 results will be used as entering data for demo site planning purposes in the Task 6.2.
- The WP5 results will influence design process as demo site planning criteria with regard to the priorities relevant to the expected euPOLIS results.

The schematic illustrating relations to other WP's is enclosed.

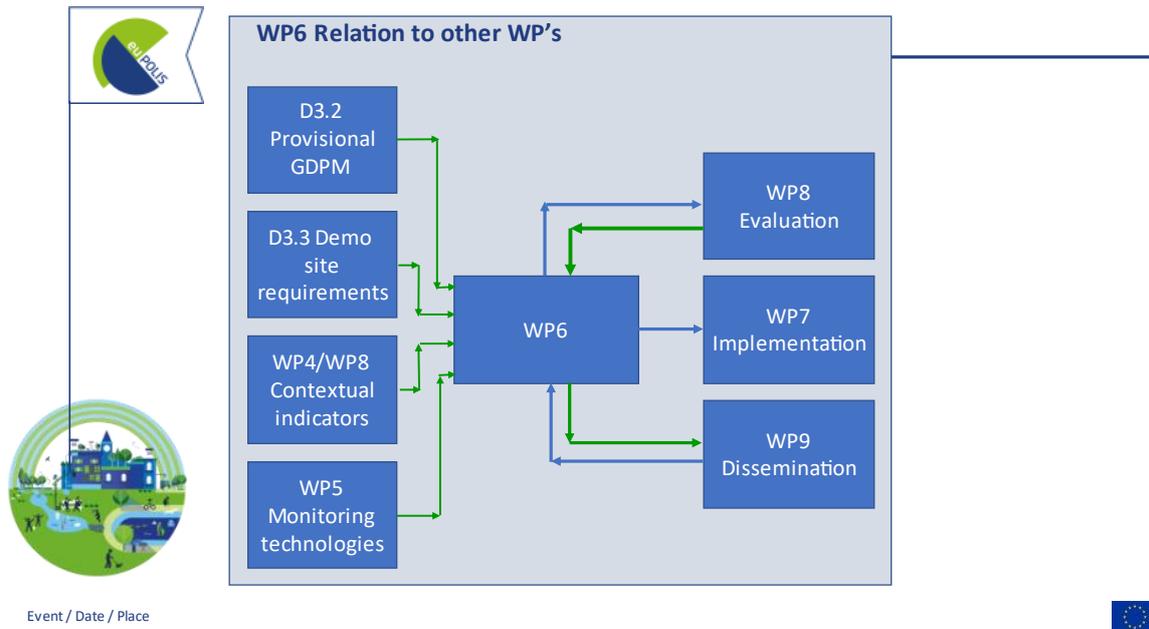


Figure 2 WP6 relation to other WP's schematic

WP 6 uses the data and tools developed in previous WPs as input to define site-specific Goals and Targets. Provisional GDPM developed in the Task 3.2 is the basis for the customization process conducted during the Workshop no.1 and presented with two documents: Customized GDPM and Minutes of the meeting No1.

The euPOLIS Project Requirements expressed through comprehensive euPOLIS approach and Demo Sites requirements are defined in Deliverable D3.3. It was necessary to create methodology that will consolidate these requirements with overall project requirements into one usable for the demo site NBS planning process. As a partner in D3.3 ENPL has participated on a level of entering data coordination and for that purpose proposed to the Task 3.3 team to consider following data consolidation methodology:

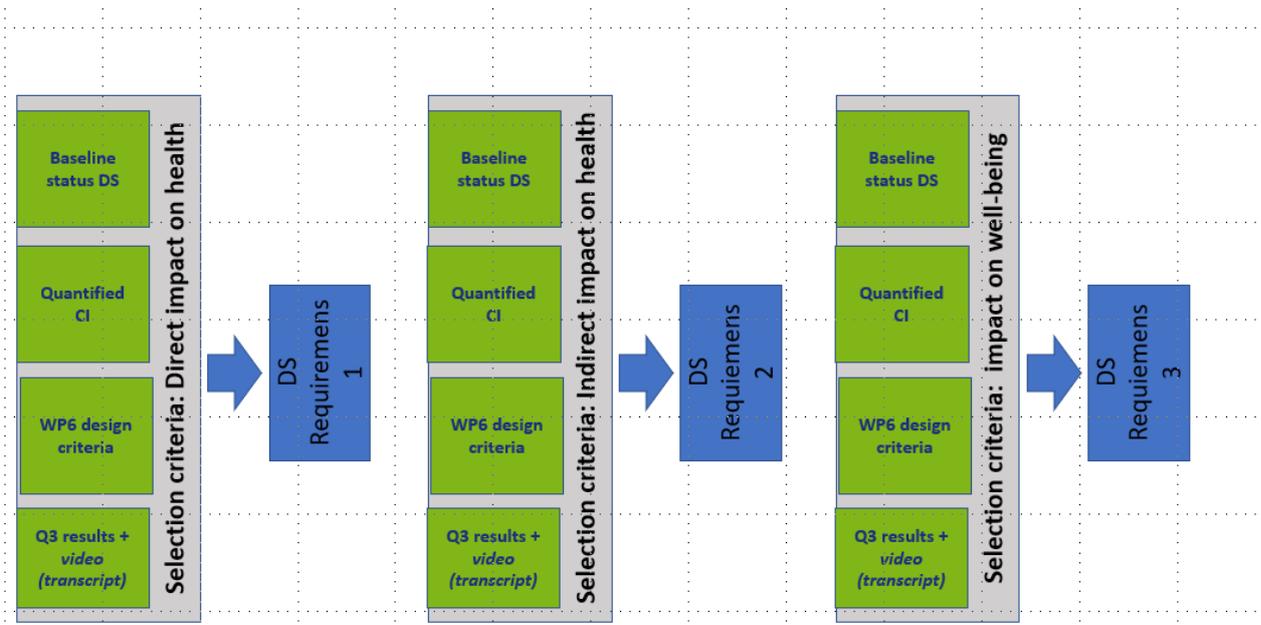


Figure 3 The DS Requirements coordination

The final coordination and cross-referencing between customized GDPM, Demo Site requirements and Minutes of the Meeting No 1 results (DS resources and their applicability) will be completed during the Task 6.2 as a final planning entering data preparation.

2 Provisional GDPM production (Construct PH and WB - GDPM as an overall planning framework and guidance)

2.1 The GDPM Goals and Targets

The GDPM structure is demonstrated in the Figure 4: Provisional GDPM basic functional schematic. The GDPM system is composed of the following main sections:

- Goals - these are the original project KPI's converted into GDPM Goals (D3.2, Table 9).
- The set of targets / challenges, developed for each goal, basically obtained from the KPI's components/ sub-functions (column 1, Table 2 of this document).
- The set of concept solutions / potential interventions that is developed for each target as a set of practical activities designed to meet the target requirements.

As a final step of the GDPM design process, the adequate site NBS facilities (adjustment of existing or new ones) will be designed to support each one of the accepted concept solutions / interventions.

The Concept design for euPOLIS demo sites will be the main activity within the Task 6.2.

The actual methodology for the identification of GDPM Goals and Targets was defined in detail within the Deliverable 3.2 (D3.2, Table 9). As an initial phase of GDPM construction, the project KPI's have been converted into GDPM Goals as they clearly define euPOLIS project strategic goals. The KPIs conversion into the GDPM Goals is demonstrated in the exempt from that table in the following example (Table 2). The table defines GDPM Targets for each goal. Targets are identified from the KPI functions specified in the KPI description (underlined in the KPI description here below). The site desired effects with potential positive impact on Targets are defined against each target; they represent the initial list of concepts for potential demo site interventions. A sample from the Deliverable 3.2, Table 2 is enclosed to demonstrate described initial GDPM construction methodology.

Table 3 Exempt from the original table (T3.2) The Task 3.2 Goals and Targets definition approach

GDPM - Goal 1	
KPI_1 – Psychological and physiological responses, psycho-emotional states: Optimization of relevant psychophysiological parameters among users of re-designed public space, including the <u>reduction of stress, depression, and anxiety levels</u>;	
KPI sub-functions as GDPM Targets	Bases for site enhancement concept solutions / interventions (Site conditions /effects with potential impact on Targets)
Stress reduction	1.Location beauty, comfortable resting points, presence of biodiversity - urban green spaces (parks, playgrounds, and residential greenery).
	2.Presence of birdlife (positively affects mood and happiness levels)
	3.Relaxation areas, sheltered from noise
	4.Availability of spaces for physical activities

Depression reduction	1.Elements to draw visitors’ attention and improve their mood and provide enjoyment, such as location beauty, comfortable resting point, presence of biodiversity
	2.Inclusion in community socialisation and possibility to make new connections, through activities like community gardening
	3. Ecotherapy (a type of formal treatment which involves doing activities outside in nature)
	4.Connection with people with similar experiences (peer support)
Anxiety levels reduction	Security – passages, visibility, comfortable materialization, biophilic design and exposure to green spaces

The definition of Goals and Targets is adjusted through the inclusion of Challenges and Themes and Contextual Indicators as demonstrated in the Figure 3: GDPM construction methodology framework.

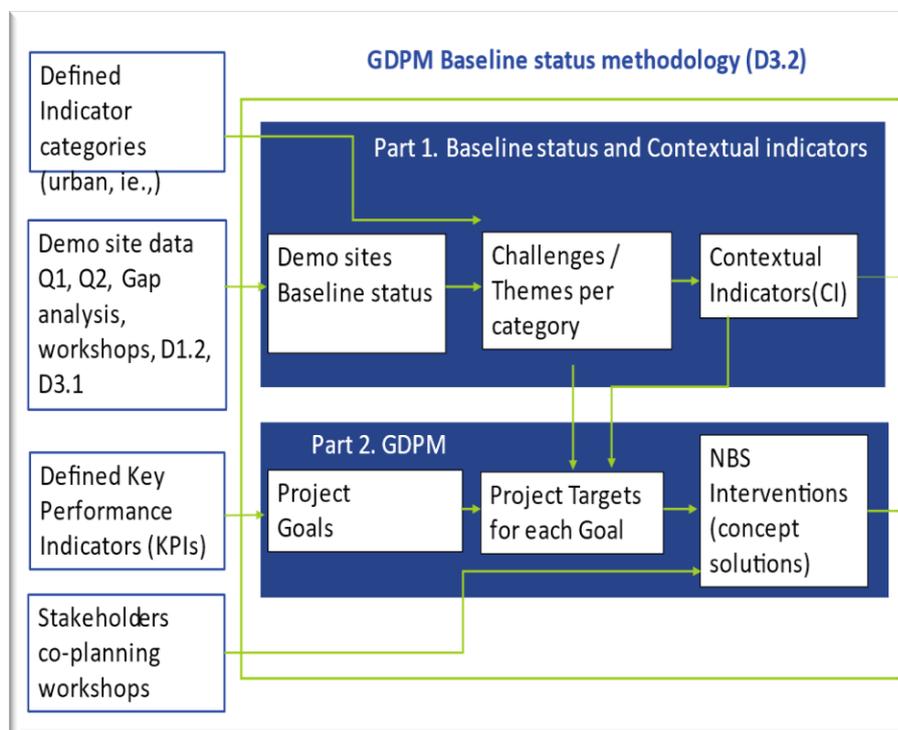


Figure 5 GDPM construction methodology framework

2.2 GDPM entering data and outputs

The GDPM construction entails complex set of entering data, all developed through WP2, WP3 and WP4. As always with dynamic data we expect some to be adjusted during the project duration to reflect dynamic character of euPOLIS planning and design process. The schematic demonstrating initial data input and expected GDPM outputs is demonstrated in the following Figure 5.

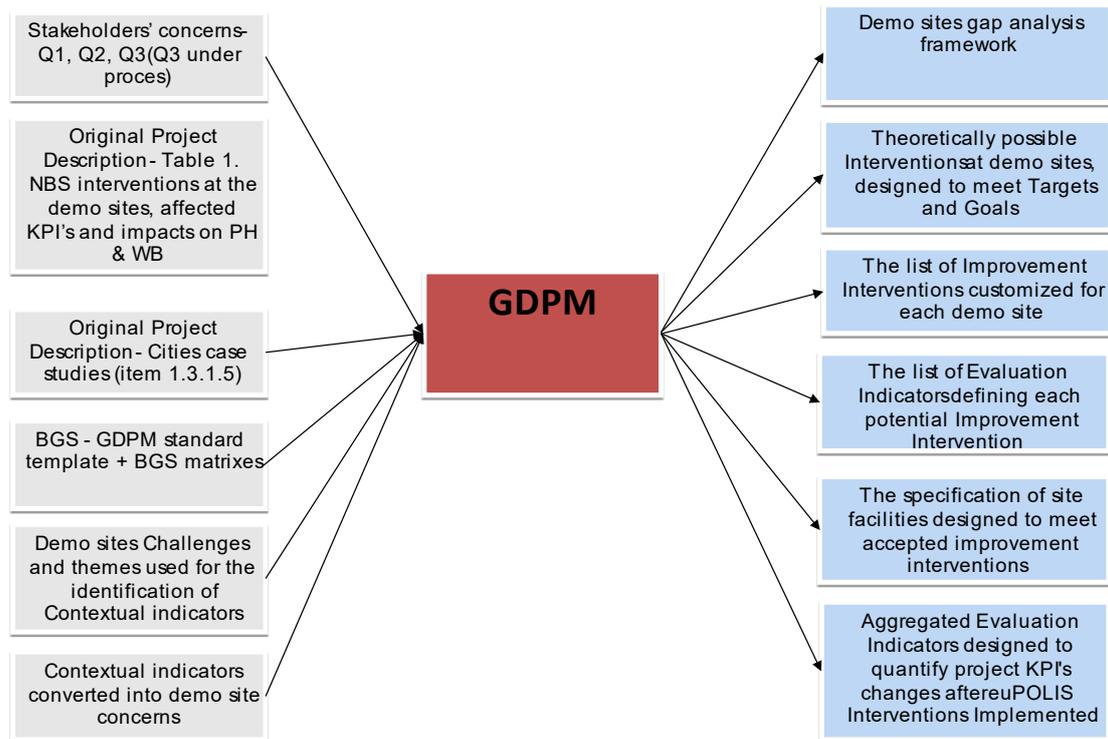


Figure 6 The Provisional GDPM entering data and outputs

2.3 Screening of demo sites through the GDPM supporting matrixes (utilization of GDPM matrix tools)

For the purpose of demo sites initial planning, the following euPOLIS matrix tools were utilized:

- Matrix of urban interactions,
- Blend in matrix,
- Gender / user groups inclusiveness matrix and
- Business activation matrix.

Demonstration of Planning matrixes implemented in the construction of GDPM is presented here below.

2.3.1 Matrix of Urban Interactions

Matrix of functional Interactions between urban components - City synergies are identified and quantified by means of systematic integration of resources and urban components functional characteristics, from different urban categories, to create desired interactions between them. The utilization of urban components' synergies is identified at a demonstration project planning level by implementing systematic, pre-developed matrix of urban elements, demonstrating potential urban interactions. The Matrix of Interactions with items utilized in the euPOLIS GDPM construction is enclosed in the Annex 2 of this document.

The first part of Matrix of Urban Interactions (Table 3) specifies grouped urban components or urban categories interactions between each other. There are 50 grouped interactions recognized in cities we live in. Specified interactions are common phenomenon's occurring in cities regular daily life and are relevant for the advanced euPOLIS urban planning approach.

Table 4 list of urban Interactions

MATRIX OF URBAN INTERACTIONS			
		1 - Urban solutions / water	1 Urban solutions
		2 - Urban solutions / greenery	
		3 - Urban solutions / ren. energy	
		4 - Urban solutions / buildings	
		5 - Urban solutions / pollution	
		6 - Urban solutions / conv. energy	
		7 - Water cycle / conv. energy	2 Water
		8 - Water cycle / pollution	
		9 - Water cycle / buildings	
		10 - Water cycle / ren. energy	
		11 - Water cycle / greenery	
		12 - Greenery / conv. energy	3 Greenery
		13 - Greenery / pollution	
		14 - Greenery / buildings	
		15 - Greenery / ren. energy	
			4 Climate extremes - (separate – Matrix 4)
		16 - Ren. energy / conv. energy	5 Energy
		17 - Ren. energy / pollution	
		18 - Ren. energy / buildings	
		19 - Buildings / conv. energy	6 Buildings
		20 - Buildings / pollution	
		21 - Pollution / conv. energy	7 Pollution
		22 - Health / urban solutions	8 Health
		23 - Health / water cycle	
		24 - Health / greenery	
		25 - Health / energy	
		26 - Health / buildings	
		27 - Health / pollution	
		28 - Health / weather extremes	
		29 - Health / energy	
		30. Ecosystem services - urban solutions	9 Ecosystem services

	31. Ecosystem services - water		
	32. Ecosystem services - greenery		
	33. Ecosystem services - energy		
	34. Ecosystem services - buildings		
	35. Ecosystem services - resilience		
	36. Ecosystem services - pollution		
	37. Ecosystem services - health / humans		
	38. Contact with nature - Important planning criteria		
	39. BGS WWT systems - Urban solutions	10	BGS Wastewater Treatment systems
	40. BGS WWT systems / Water		
	41. BGS WWT systems / Greenery		
	42. BGS WWT systems / Resilience		
	43. BGS WWT systems / renewable energy		
	44. BGS WWT systems / Conventional energy		
	45. BGS WWT systems / Health		
	46. BGS WWT systems/- Eco system services		
	47. BGS WWT systems / Connection with nature		
	48. BGS WWT systems / Finances		
	49. City / EU regulations compatibility	11	Eu compatibility
	50. GENDER RELATED PLANNING INTERACTIONS / CRITERIA	12	Gender related planning criteria (Separate Matrix 6)

The detailed version of Matrix of Urban Interactions table (placed at Share Point, link https://mailntuagr.sharepoint.com/:w:/r/sites/Eupolis/Shared%20Documents/03.%20Deliverables/Ongoing%20Deliverables/D6.1%20-%20Ongoing/WP6_D6.1%20-%20Matrix%20of%20urban%20interactions%20-%20for%20Share%20Point.docx?d=w7d2cd88f029f4818ad69dc8f907b2276&csf=1&web=1&e=g4J1LI) represents detailed analysis of interactions, within each of above groups. The left column defines specific interactive components and right column specifies usable synergies and potential interventions resulting from interaction between these urban components. The purpose of this table is to enable identification of potentially applicable tangible and non-tangible benefits from synergies

and resulting concept solutions. Short example from the detailed matrix of interactions table is presented here below:

Table 5 Examples from detailed matrix of interactions

3	Urban solutions - water storage + water	Introduce gravel beds or storage tanks - from streets sloped intakes for greenery watering - tap water saving - no water supply infrastructure & less water in drainage & less energy for ww treatment
13	Urban solutions - human activity zoning + water	Human activity zones are enhanced with water - water presence does influence activities zoning - water features should be coordinated with zoning > water presence improves OEQ which brings more people and enhanced trading and socializing activities
5	Urban solutions - Streets orientation with regard to the winds + greenery	winter winds stopping > better OEQ & more comfortable buildings
8	Urban solutions + conv. energy	Water retention infrastructure - influences greenery disposition, influences microclimate, influences amount of energy consumed by buildings
1	Greenery + renewable energy	Biomass - production from greenery regular maintenance and/or biomass species planting
5	Health + urban solutions - conducive to comfort	Urban environment to include - aesthetic appeal, presence of footpaths, cycle ways, shade trees, separation of pedestrians from vehicle travel, interesting streetscapes - citizens visual and communication comfort

In euPOLIS project application, Demo Sites were screened through above matrix of interactions and potentially applicable synergies / concept solutions were identified. Those interactions found to be applicable in euPOLIS projects were marked and used in the GDPM construction. These were first entering data in making of provisional GDPM to be implemented in euPOLIS project with entries defining actual potential euPOLIS interventions at Demo Sites.

2.3.2 BGS BLEND IN MATRIX implementation

Project “blend in” module - New urban developments within the city rarely develop a good integration with the surrounding urban tissue that provide benefits for both parties: urban neighbourhood and new development complex. EuPOLIS proposes that new developments should systematically “blend in” into the wider city area to create a cohesive and continuous urban matrix and facilitate public acceptance and use of new public areas. In order to achieve this, new developments should:

- not have any negative impact on life in the neighbourhood,
- contribute to the neighbourhood life quality by providing spaces, services and activities lacking in existing areas.

To facilitate blend in criteria, we have developed euPOLIS customized “blend in” matrix: a mandatory set of sub- criteria for the planning and design of new developments and revitalization of existing ones. EuPOLIS proposes that the “Blend in” criteria become obligatory for all new developments or revitalized existing ones and will cover both bio-physical aspects and societal issues. This can be an active tool for supervising of new and refurbished city developments in the future.

The euPOLIS customized Blend-in matrix with items utilized in the GDPM construction is presented here below (Table 5).

Table 6 Blend in Matrix customized for the euPOLIS project and applied in the construction of provisional GDPM

BGS blend in matrix (customized to euPOLIS project)			
	1. New development should not have any negative impact on life in the neighborhood, 2. Should contribute to the neighborhood life quality		New development systemic blend into neighborhood - to become compulsory for all developments – (this would be an active city management participation in the city development)
<i>Identify potential interactions between new development and neighborhood – To be transferred into GDPM</i>			
	Goals		Targets
1	Enhance surrounding streets ventilation - to reduce air pollution and improve summer outdoor micro-climate	1	Utilize predominant wind corridors
		2	Create stack effect (enhance air movement) with new buildings
2	Green corridors for micro-climate and biodiversity	1	Neighboring greenery mapping (including remote park areas – possible interactions)
		2	Introduce greenery (tree canopies and ground level greenery) corridors for animal species migration
		3	Enhance end points by creating bio-hubs



D6.1 – The city requirements and resources translated to GDPM

		4	Analyze where, why, and how to apply greenery 9 functions specified in the GDPM document
3	Introduce phytoremediation	1	Create phytoremediation (air purification) ring around and within new development and monitor the effects
4	Address negative OEQ (Outdoor Environment Quality) effects of new development on neighborhood	1	Building shading in winter (passive heating reduction)
		2	Daylighting influence
		3	Noise influence
		4	Air quality influence
		5	Influence on mobility - on pedestrian and cycling
5	Influence new development urban solutions to utilize the combined effect of water components in correlation with predominant winds - enhance air flow over water surfaces - intensify evaporation to eliminate heat island effect	1	Limit building size around water surfaces (creeks, rivers and ponds) – create air corridors
		2	Create wind corridors in line with water surfaces
6	Multifunctional surface water management	1	Remove flooding risks
		2	Utilize excess of water
		3	Use flood defense system as functional and visual amenities
7	Introduce vertical farming	1	New knowledge category - accessible to wider population will have to be developed: farming under city conditions
8	Extreme weather conditions drainage design criteria	2	No surplus of water on the streets around development
		3	Water that can cause flood problem within neighborhood should be controlled
9	Universal climate change resilience solutions, extendable to neighborhood	1	Identify neighborhood vulnerability points
		2	Identify new development vulnerability points
		3	Develop common resilience solutions for both above
10	Address neighborhood social interactions/cohesion issues	1	Identify existing social issues
		2	Identify potential social issue that could be triggered by and within new development
		3	Develop specific solutions for specific issues
		4	Example: create facilities for spontaneous social interaction between different income groups and groups with different traditions
11	New development programs for reduced need for citizens mobility	1	Analyze existing population skills and new development building programs - try to create interactive cross employment system to reduce need for citizens mobility

12	Unify diverse neighborhoods	1	Through trade - trading units central to all + pedestrian protection from elements - corridors
		2	Through spontaneous kids' engagement / entertainment units
		3	Through cultural hub
13	Enhance neighborhood economy for mutual benefits	1	New development needs could be sourced from the neighborhood (services and production)
		2	Development to analyze potential business activation within neighborhood that will serve new facilities activities or be compatible with them
		3	Analyze future human resources need of the development + analyze availability of potential resources within the wider neighborhood + organize their high-quality education for future operational and maintenance needs
14	Protection of neighborhood existing economy	1	Check all private enterprises existing in the circuit of (800) m. Make sure there is no competition from new development that can undermine existing economy points
15	The development compactness and access points related to the number of future occupants	1	Should be adjusted to the existing infrastructure of the neighborhood to minimize negative impact on outdoor comfort criteria, transport congestion and access
16	Address gender issue as compulsory planning component	1	Include into planning process gender inclusion and wellbeing related criteria
17	Consider bringing / offering as many services as possible and new functions, presently surrounding community is not covered with	1	Discuss with neighborhood their needs, their interest in using them in interaction with the new development
		2	Analyze - mapping daily: recreational, healing, social, entertainment needs of the surrounding neighborhood - adopt "everything is handy in this neighborhood"
18	Exploit development criteria: how would our city look in 25 years	1	Professional teams will have to project all major changes to the city for the next 25 years - and make provisions in the design to accommodate these changes
19	Running and maintenance - consider interactions with neighborhood	1	To be developed
20	Ultra-high-speed internet for 1000m all around	1	To be developed
21	Consider reducing total development cost by purchasing appropriate localities within the neighborhood and adjusting them to the original development programs	1	To be developed

22	Connect and create places for interactions within development and neighborhood	Small markets + public transportation + playgrounds + walking and biking trails + theatres, sports facilities, and other places where people gather for entertainment and leisure activities + venues for community festivals and other special events / music / street performers / playhouses, concert halls, and movie theatres.
		Seating, a mix of sun and shade, a mix of large and more intimate spaces, food and drink, pleasant or spectacular views, green space, water, quiet amid the noise and hurry of a city, interesting or pleasant places to walk, safe areas for children to play, cleanliness and visible maintenance, lots of light, particularly natural sunlight, protection or screening from street traffic, comfortable furniture, visibility and a welcoming entrance, handicap accessibility, signs, plaques, statues, murals, ease of entry and passage, rest rooms.
23	Consider potentials for neighborhood having financial gains - savings, earnings, joint ventures with new development owners...	Consider Business activation potential within the site neighborhood

2.3.3 Gender / User groups Inclusiveness matrix implementation

Important WP6 task was the development and implementation of innovative gender related planning criteria.

Standard planning does not consider equality of different gender groups as regular planning criteria. The functional equality of different gender/user groups (women, seniors, kids, other ethnicity, refugees, technologically obsolete, disabled, etc.) within an urban environment, as well as influence on their social state, cannot be achieved without it. EuPOLIS will propose the introduction of customized, gender / user groups related planning criteria as mandatory urban planning component.

Table defining basic Gender / user groups Related urban planning requirements customized for euPOLIS needs is presented here below (Table 6).

Table 7 Gender / User groups Inclusiveness planning matrix

Basic principle:	Planning and construction systematically geared to the requirements of different groups daily life – spatial planning criteria: equitable distribution of space and time Note: following planning criteria and instructions should be checked against local customs, conditions, habits, circumstances, and legislation.		
	CITY AREAS		
	<i>STREETS</i>	<i>PUBLIC PLACES</i>	<i>PUBLIC PARKS AND GARDENS</i>
	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS
1. SOCIAL GROUPS			
ALL			
	CITY AREAS		
	<i>STREETS</i>	<i>PUBLIC PLACES</i>	<i>PUBLIC PARKS AND GARDENS</i>
	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS
	Create well laid-out main pedestrian pathways with a high degree of visibility (avoiding threatening places)	Appropriate distribution of public, communal / semi-public, and private spaces	Make picnic and seating areas available
	Consider gender related criteria in public transportation solutions (multi-faceted transport system)	Both sunny and shaded areas are incorporated in the public spaces and are easily accessible	Parks include designated play areas for age appropriateness, while also incorporating a space conducive to family gatherings
		Avoiding purely residents orientated areas, designating mixed-use areas	Park should include spaces that foster frequent use
		Ensuring high-quality usage of public spaces during different seasons	Provide number of sitting benches that give seater pleasant views
		Suitable proximity of usages and usage groups; infrastructure for leisure, play, sports, communication; arrangement of special-use areas for specific groups	Greenery to create varied environment with ranges of color, texture shapes and smell

		Graduated and differentiated areas for movement (slow, fast, small, large); options depending on the intensity of movement, direction and scale of spaces	Provide sitting area close to the park perimeter for people concerned with security or little time
		Various sequence of spaces with different qualities. Light and shade denote quiet and active zones, change and differentiated spaces	Entries to the park should coincide with bus stops and crosswalks
			Provide sheltered areas for older people
			Major Park signs should be lit for night visibility
			Create youth hangout zone at the perimeter of the park
			Create few small private areas where couples or small groups can sit
			Park trees should be designed for particular functions
	CITY AREAS		
	<i>STREETS</i>	<i>PUBLIC PLACES</i>	<i>PUBLIC PARKS AND GARDENS</i>
	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS
2. AGE - SEX			
Children aged 6 and under			
	Specific greenery at specific location for minimum heat island effect	Shade planning should be part of planning process to determine sun/light incidence at open spaces	
	If there is a lack of private or semi-public open spaces, safe streets and playgrounds near the home are needed	The common courtyard helps to define the neighborhood, and creates a safe and nurturing place for children and youth	

	SUDS should be properly fenced of	Areas of active play to be included	
	Safe streets and playgrounds near the home significantly improve housing quality for children and caregivers.	“Buffer zones” that demarcate private, semi-public, and public spaces.	
	Specific greenery at specific location for maximum OEQ		
Children aged 6 to 12 years - BOYS			
	Shared streets remove the car as the principal user, and, as a result, create a dynamic streetscape of pedestrian movement, child’s play, social interactions,	Create technological areas for free Bluetooth connectivity, Wi-Fi, etc. that is easily accessible for children and youth	Mixed parks and cycle routes which have to be protected from direct sun radiation at least 50% of Daily time during extreme summer months
	Short distances for everyday trips		Provide one or two green axes through whole area and position sport facilities on or along them
	Access to public transportation is within walking distance		Public open and green spaces are increasingly important and also frequently visited by children on their own
	Transport should be more varied for this age group: walking, public transport, scooter, bicycle, etc.		
	CITY AREAS		
	<i>STREETS</i>	<i>PUBLIC PLACES</i>	<i>PUBLIC PARKS AND GARDENS</i>
	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS
Children aged 6 to 12 years - GIRLS			



D6.1 – The city requirements and resources translated to GDPM

	Trees distance from buildings with adequate illumination of pedestrian passages should be appropriately designed from the safety point of view	Areas of active socializing and play to be included	To make it more usable for girls, divide large areas into smaller areas to avoid large area being dominated by the one particular group
	Short distances for everyday trips	Design incorporates amenity space	Park paths should be well lit
	Gateway signs and access points into the neighborhood with traffic calming measures	Places that include technology, play, and social interaction are an important part of Child and Youth Friendly communities, to meet their social, physical, and emotional health needs.	To make the park more appealing to girls, create segregated spaces, installing volleyball and badminton courts for the girls, and dividing open areas into more private spaces with landscaping.
	Transport should be more varied for this age group: walking, public Transport, scooter, bicycle, etc	Girls preferring to socialize and play in quiet corners	
		Create technological areas for free Bluetooth connectivity, Wi-Fi, etc. that is easily accessible for children and youth	
Young people aged 13 to 17 years - BOYS			
	Cycle routes with summer shading from greenery	Interactive spaces (Wi-Fi, multimedia and other technologies) and places may be as simple as a meeting space near a local park, a child and youth center, Child and Youth Friendly coffee shops, or the front porch of a home.	Public parks, youth centers, are important meeting-points and places of communication



D6.1 – The city requirements and resources translated to GDPM

	Include active transportation with delineating bicycle traffic from pedestrian and automobile traffic, while ensure barrier-free design.	Places of undisturbed retreat that also allow them to be noisy and exuberant	Places of undisturbed retreat that also allow them to be noisy and exuberant. Create pathways for skateboards, rollerblades, and other transportation
	CITY AREAS		
	<i>STREETS</i>	<i>PUBLIC PLACES</i>	<i>PUBLIC PARKS AND GARDENS</i>
	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS
Young people aged 13 to 17 years - GIRLS			
	Cycle routes with summer shading from greenery	Open spaces that can be (safely) used by girls	Public parks, youth centers, are important meeting-points and places of communication - open spaces that can be (safely) used by girls
		Interactive spaces (Wi-Fi, multimedia and other technologies) and places may be as simple as a meeting space near a local park, a child and youth center,	Girls meeting areas should be located along to pathways to discourage onlookers - to motivate girls to stay active and use these public spaces
WOMAN			
	Should not be scary to walk around at night	Design incorporates amenity space	
	Neighborhood design provides walking access to retail and other services		
	Diversified requirements regarding open spaces and the urban circulation network.		
CAREGIVING WOMEN AND MEN			



D6.1 – The city requirements and resources translated to GDPM

	Local centers and adequate size residences to be connected with clear straight walkable routes	Public open places, squares, and public sites to correspond to neighborhood size and characteristics (age, religion, etc.)	3 to 5 sq m of public space (parks, squares, etc.) per inhabitant of a housing project is recommended
	The principle of a “city of short distances” supports the complex demands made during this life phase often characterized by family chores and paid work	3.5 sq m of open space per inhabitant is the recommended size of such spaces at least one third should be sunlit (on 15 April, 11 a.m./3 p.m.).	
	Complex mobility chains and more spacious indoor and outdoor transport routes		
	Walkways wide enough	In commercial or mixed-use areas ensuring that the buildings are located close to the sidewalk and to one another in order to create an “urban sense of spatial definition.	
	CITY AREAS		
	<i>STREETS</i>	<i>PUBLIC PLACES</i>	<i>PUBLIC PARKS AND GARDENS</i>
	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS
	Walkways should accommodate free movement of people with heavy loads carrying them on foot		
HOUSEWIFE			
	Walkways wide enough	In commercial or mixed-use areas ensuring that the buildings are located close to the sidewalk and to one another in order to create an “urban sense of spatial definition.	
SENIOR MEN			

	1. pavements should be flat, wide enough to accommodate wheelchairs, no cracks, low curbs, not congested, no cars parked, 2. pedestrian crossing should be safe	1. peacefulness of their environment, 2. city's cleanliness, 3. noise levels, 4. odors, 5. safe and easily accessible green spaces, 6. availability of seating areas. Create conditions to support local shops or convenience store	Park paths should be well lit
	Outdoor seating is available, spaced at regular intervals	Outdoor seating is available, particularly in parks, transport stops and public space-es	Well-maintained and safe green spaces, with adequate shelter, toilet facilities and seating that can be easily accessed.
	Transportation, including accessible and affordable public transport, is a key factor influencing active ageing	Design incorporates amenity space	A need for small, quieter, contained green spaces in the fringe areas of the city rather than the large busy parks used by children and skateboarders.
		Vicinity of areas for very young - kindergarten open spaces, etc.	Short distances for every day's trips
SENIOR WOMAN			
	Planning should exclude any physical barriers not suitable for older people	Market Center in the middle of the area	Short distances for every day's trips
	Ensure walkways have a smooth surface		
CITY AREAS			
	<i>STREETS</i>	<i>PUBLIC PLACES</i>	<i>PUBLIC PARKS AND GARDENS</i>
	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS	GROUPS SPECIFIC NEEDS
	Pedestrian crossing lights allow sufficient time for older people to cross the road and have visual and audio signals		

	Pedestrian paths should be naturally shaded in summer		
LARGE FAMILIES (OFTEN LOW INCOME)			
		Communal and public open spaces are essential	Communal and public open spaces with facilities for more generations
3. SPECIAL NEEDS			
OLD MAN - DIFFICULT MOVEMENTS	TBA	TBA	TBA
OLD WOMAN - DIFFICULT MOVEMENTS	TBA	TBA	TBA
WHEELCHAIR LOCKED	TBA	TBA	TBA
	Pavements are well-maintained, smooth, level, non-slip and wide enough to accommodate wheelchairs with low curbs that taper off to the road		
	Pavements are clear of any obstructions (e.g., street vendors, parked cars, trees, dog droppings, snow) and pedestrians have priority of use		
4. RELIGION			
ALL GROUPS			
		Facilities should fully correspond to religious requirements and norms for specific religious group. Particularly residential and places of worship	

2.3.4 Business activation matrix

The business activation matrix utilizes demo site resources and defines potential business interventions as defined in the GDPM Target 9.1 to 9.5. This cross-referencing process between identified resources and potential business interventions will be completed in the Task 6.2.

2.4 Provisional GDPM

The Provisional GDPM constructions starts with definition of Goal and Targets and continues as described in the above item 2.2. and 2.3. This process was completed in the Task 3.2. The result was the Provisional GDPM ready to be customized for each demo site, to support euPOLIS planning process at the FR cities. The GDPM schematic is enclosed here below.

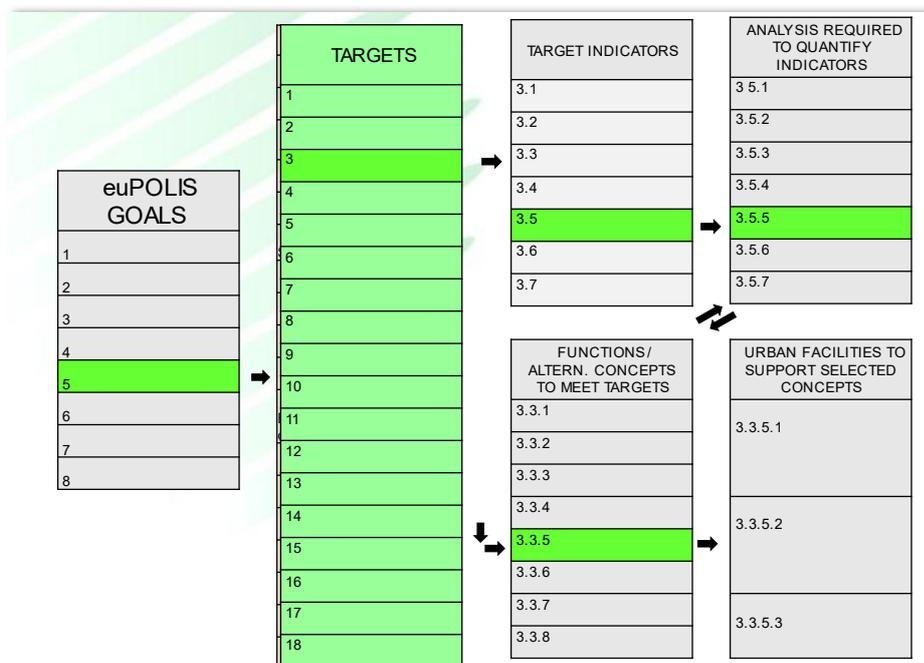


Figure 7 Provisional GDPM basic functional schematic

The full version of Provisional GDPM was presented in the Deliverable 3.2, and the customized GDPM versions in Task 6.1 for project demo sites (due to the size) are presented in the Share Point,

link:
https://mailntuagr.sharepoint.com/:w:/r/sites/Eupolis/Shared%20Documents/03.%20Deliverables/Ongoing%20Deliverables/D6.1%20-%20Ongoing/WP6_D6.1%20-%20Customized%20GDPM%27s%20-%20for%20Share%20Point.docx?d=wdf197a3d66f3431cb4e6db6bd29dc62f&csf=1&web=1&e=peb1ld

3 Coordination of euPOLIS time schedule for each demo site

As a part of WP6, it was necessary to check with FR cities their euPOLIS time schedule compatibility with the project overall time schedule.

Time schedules were checked for each demo site. The results from all four FR cities confirmed compatibility of their individual time schedules with the overall project time schedule, as demonstrated in the following items 3.1 to 3.4. At this stage cities could not foresee serious barriers for the fulfilment of these schedules.

4 Workshop No 1 - Customized GDPM and Minutes of the Meeting No 1

In order to customize the provisional GDPM to the specific demo site requirements and resources, within the Task 6.1, workshops were organized for each city and demo site separately. Generally, the workshop is intended for urban planners, city managers, representatives of various city departments (forestry, greenery, water and sewage, electricity, waste management, equipment, social services, etc.) that hold knowledge and data on available city resources. Through mutual engagement of various city stakeholders, a variety of information is gathered, as well as possible issues and challenges identified. Workshop 1 also includes horizontal euPolis partners from FR cities, as providers of additional knowledge and data related to demo sites, that might not be in the scope of City departments. Workshop general agenda was the same for all FR cities, and consisted of following items:

1. Information on euPolis interventions proposed within the original project proposal, enter into GA,
2. Demonstration site information,
3. Data Resources analysis – relevant for the systematic implementation of NBS. Agreement on further adjustments related to T3.3, T3.4, WP4 and WP5,
4. Provisional GDPM customization for each site

4.1 GDPM customization for each demo site

During Workshop 1 attendees are introduced to the GDPM matrix methodology and provisional GDPM matrix developed in the Task 3.2. The provisional GDPM is used as a starting template, through which the entire team present at the Workshop is led by the meeting moderator. Individual concept solutions/interventions are discussed from the point of view of demo site requirements, resources, and issues, with the aim to eliminate those solutions and interventions that cannot be applied at the specific demo site. Those, non-applicable solutions/interventions, are marked in red in the produced Customized GDPM document.

Additionally, applicability of some concepts and solutions were questioned, but not completely rejected during team discussion. These items are marked with comments, defining analysis of potential issues and specifying required actions.

The Customized GDPM tables for euPOLIS demo sites are enclosed in the Share Point, link: https://mailntuagr.sharepoint.com/:w:/r/sites/Eupolis/Shared%20Documents/03.%20Deliverables/On%20going%20Deliverables/D6.1%20-%20Ongoing/WP6_D6.1%20-%20Customized%20GDPM%27s%20-%20for%20Share%20Point.docx?d=wdf197a3d66f3431cb4e6db6bd29dc62f&csf=1&web=1&e=eJxIO2

4.1.1 Workshop with FL cities





Workshop for Follower Cities was organized in coordination between Task 2.2 and Task 6.1 – euPOLIS education for their professional teams and euPOLIS basic Planning approach at actual demo sites in FR cities.

Presentation snap-shot demonstrating to Follower cities basic euPOLIS concepts is available at the Share Point, link: [https://mailntuagr.sharepoint.com/:b:/r/sites/Eupolis/Shared%20Documents/08.%20Workpackage%20\(anything%20that%20does%20not%20fit%20to%20categories%201%20to%207\)/WP02%20E2%80%93%20Stakeholders%20and%20communities%20E2%80%99%20engagement%20and%20benchmarking/Task%20T.2/Workshop%20with%20FL%20cities%2028.07.2021/euPOLIS_WP2_WP3_WP6%20Joint%20Workshop%20for%20FL%20cities%2028072021.pdf?csf=1&web=1&e=60s1Ql](https://mailntuagr.sharepoint.com/:b:/r/sites/Eupolis/Shared%20Documents/08.%20Workpackage%20(anything%20that%20does%20not%20fit%20to%20categories%201%20to%207)/WP02%20E2%80%93%20Stakeholders%20and%20communities%20E2%80%99%20engagement%20and%20benchmarking/Task%20T.2/Workshop%20with%20FL%20cities%2028.07.2021/euPOLIS_WP2_WP3_WP6%20Joint%20Workshop%20for%20FL%20cities%2028072021.pdf?csf=1&web=1&e=60s1Ql)

EU REVIEWERS NEED OUR (euPOLIS) PASWORD TO HAVE ACCESS TO ABOVE SHARE POINT LINKS !! WHEN SUBMITTING THIS DELIVERABLE WE SHOULD SPECIFY THAT, FOR THEM, DOCUMENTS WILL BE DELIVERED UPON THEIR REQUEST

4.2 Minutes of the Meeting No 1, for each demo site

The Workshop 1 proceedings were minuted in detail and Minutes of the meeting from the Workshop 1 were produced to define present status and future actions in the following areas:

1. Planning relevance to NBS specifications in the GA
2. Data Resources analysis - relevant for the systematic implementation of NBS
3. GDPM Customization

Detailed analysis of above categories is performed with each FR city team, required activities defined, responsible persons or entities specified, and provisional time frame defined.

The purpose of the Minutes is to define all activities, at each site, to secure smooth development of the project. The specified items will also be utilised as a basis for the development of the WP6 Deliverable D6.3 (Implementation framework for the developed NBS).

These minutes are designed to be used also as a project development control tool throughout the project implementation phase. The use of the minutes is at the discretion of FR city project implementation teams.

Minutes of the meeting from each FR city are enclosed in the Annex A2 of this document.

4.3 The existing demo site resources

4.3.1 Resources categories related to DS planning

The Task 6.1 activity was to perform comprehensive and systematic identification and provisional analysis of resources in the participating cities and define finally agreed city / project list of resources. The template specifying resource categories was produced to be populated by city teams (Table 7). The prescribed process of resources identification was completed during the Workshop 1. The specification of resources was produced for each category, complete with provisional analysis of their validity and implementation potential.

At the stage after the Workshop 1, the acquired lists of resources were compared with the customized GDPM to assure applicability of proposed euPOLIS interventions.

The Resources lists applicable at demo sites, identified with FR city teams, complete with initial analysis for each, are enclosed in the Annex 3.

The list of resources categories investigated during the Workshop 1 is enclosed here bellow.

Table 8 Demo site resources categories

N.	List of Resources - relevant for the systematic implementation of NBS
1	Human resources (knowledge, training level)
2	Any material or recycling resources
3	Or any potentials related to business activation such as business drivers
4	Any cultural resources (existing events and / or traditions)
5	Any positive social resources
6	Any geographical resources (location advantages)
7	Any local knowledge resources (specific knowledge)
8	Local problems as resources (solving problem creates business)
9	Market receipt potential (market non saturated segments)
10	Any renewable energy resources.
11	Food & agriculture
12	Waste management and recycling (links that create circular economy)
13	Integral solutions (combination greenery and public place - new resource)
14	Water & wastewater
15	EuPOLIS demonstration point (demo Hub)
16	Information & communication technology
17	Government incentives - citizens related functional improvements
18	Analysis of business drivers

4.3.2 Greenery resources - Innovative EuPOLIS greenery selection methodology

State of the art urban landscape planning is predominantly based on visual impact of greenery, much less on the actual plant's functionality, let alone on their direct impact on health of people visiting green areas.

EuPOLIS project is proposing the introduction of innovative compulsory landscape planning criteria - the greenery functional & impact planning. This planning model derives from the necessity to apply functional NBS that will meet overall NBS based PH&WB planning model, as presented in the following Figure no. 11: NBS based PH&WB planning model

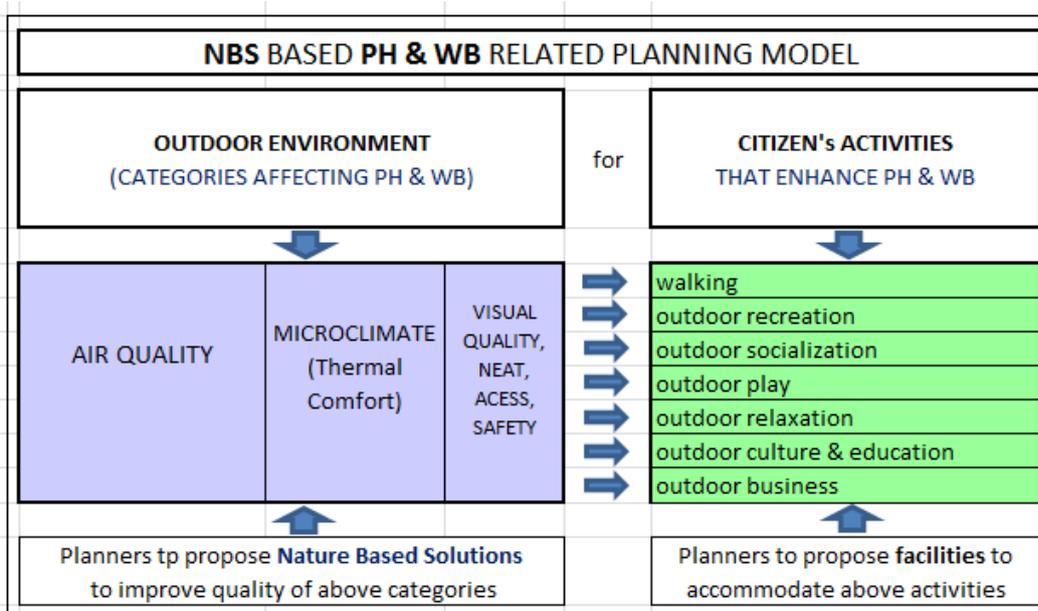


Figure 12 NBS based PH&WB planning model

To achieve maximal positive impact on PH&WB from natural plants it is necessary to select plants that influence three main areas: a. local microclimate, b. air quality and c. pleasant appearance, thus jointly produce impact on PH&WB.

Greenery planning teams should therefore select plants within following categories:

1. Plants with specific functions required by the euPOLIS planning methodology (items a,b and c)
2. Plants with direct positive impact on PH&WB,

Additionally, they have to identify:

3. Plants with direct negative impact on PH&WB, and make sure these plants are excluded from the design.

The process of greenery selection to meet requirements of above proposed three categories will be described in the Task 6.2. as a part of advanced euPOLIS urban design methodology.

4.3.3 Modelling resources selection

Demo site components modelling, as a method for the comparative analysis of different alternative solutions, will be required within the euPOLIS planning process. Simplified modelling will be required in the Task 6.2 to indicate design guidelines. The more detailed modelling and comparative analysis of selected solutions will be required in the WP7 as a part of the detailed design process.

The euPOLIS partners are encouraged to analyse potential modelling requirements and select appropriate modelling tools.

5 Potential euPOLIS interventions at demo sites

The majority of potential NBS interventions applicable at FR cities demo sites, are specified in the provisional GDPM produced in the Task 3.2. The customized GDPM, produced within the Task 6.1 scope of works, includes data received from the demo sites data, specify more detailed lists of applicable or non-applicable interventions at demo sites (Annex 1).

The next planning stage will be completion of Workshop No2. This workshop will produce citizens particular suggestions and requirements related to each Demo Site.

The final planning stage will be conducted at a workshop No 3 in each FR city. The selected teams comprising city management, city planners and representatives of relevant city services will, with the assistance from euPOLIS teams, consolidate results from customized GDPM, DS requirements from D3.3 and citizens requirements from the Workshop No 2, and make final decision on euPOLIS intervention concepts to be applied at Demo Sites.

The WP7 task will be to develop these concepts into detailed design and carry out their full implementation process at Demo Sites.

6 Conclusion

This deliverable has clearly defined the framework for introduction and implementation of innovative master planning system with benefits and significant impacts on life quality in demonstration cities (i.e., urban design, social, environmental, hydrological, etc.).

The main stakeholders' concerns/problems (answers to Q1, Q2, and Q3, as well as information from WP3's conceptual indicators, demo sites requirements and project partners information coming from their direct contacts with citizens) are entered into the euPOLIS' planning system (GDPM).

Deliverable 6.1 has also demonstrated the application methodology of supporting planning matrixes within the GDPM construction process.

The D6.1 has consolidated the demo sites actual intervention potentials through the process of GDPM customization conducted with all FR cities, during the workshops No 1.

It is significant to underline differences between FR cities in GDPM customization results. The differences are related to FR cities specifics in PH&WB related planning methods, environmental social and economic issues. These differences will be important guidance when designing euPOLIS extrapolation approach.

Customized GDPM's in each FR city have produced multifunctional platform for the demo sites interventions and at the same time defined resources euPOLIS project can count on at each demo site.

The customization process has also revealed contextual implementation barriers and challenges and produced the specification of mitigation measures and activities designed to secure smooth project implementation.

7 Annexes

- A1. Customized GDPMs
- A2. Minutes of the meetings No 1
- A3. Demo site Resources

A1. Customized GDPMs

Due to the size of Customized GDPM's tables, they are located at the Share Point, link https://mailntuagr.sharepoint.com/:w:/r/sites/Eupolis/Shared%20Documents/03.%20Deliverables/Ongoing%20Deliverables/D6.1%20-%20Ongoing/WP6_D6.1%20-%20Customized%20GDPM%27s%20-%20for%20Share%20Point.docx?d=wdf197a3d66f3431cb4e6db6bd29dc62f&csf=1&web=1&e=eJxIO2

A2. Matrix of Urban Interactions

Due to the size of Customized GDPM's tables, they are located at the Share Point, link https://mailntuagr.sharepoint.com/:w:/r/sites/Eupolis/Shared%20Documents/03.%20Deliverables/Ongoing%20Deliverables/D6.1%20-%20Ongoing/WP6_D6.1%20-%20Matrix%20of%20urban%20interactions%20-%20for%20Share%20Point.docx?d=w7d2cd88f029f4818ad69dc8f907b2276&csf=1&web=1&e=g4J1L!

A3. Minutes of the Meeting No 1, for FR cities demo sites

Minutes of the meeting contain detailed information related to:

- a. Planning relevance to NBS specifications in the GA – Important for consistency with the GA.
- b. Demo site Resources – presented in the Annex 3 – Used in construction of the GDPM
- c. GDPM Customization – Provisional GDPM converted into specification of interventions related to specific conditions at a particular demo site
- d. DS planning - additional proposals – Additional local teams' proposals for demo site specifics, important for the final version of Customized GDPM adjustment.
- e. Minutes of the meeting contain initial information and format for the project management implementation process control.



Table 9 Minutes of the Meeting No1, for Gladsaxe demo site

01	Minute number	01/PIR 011206	
	Date of meeting:	12/06/21	Week no. 1
	Place of meeting:	Demo site - GLADSAXE	
	Participants:		
	Alix Aliaga	BYS	
	Morten Rask Madsen	AMPHI	
	Milena Zindovic	ENPL	
	Ranko Bozovic	ENPL	
		Executor	Deadline
	ADOPTION OF PREVIOUS MINUTES		
	No previous meetings		
	Agenda: 1. Introduction and Information on euPOLIS interventions proposed within the original project proposal, entered into GA (reading through original project proposal description for Gladsaxe – to remind ourselves on what we proposed) 2. Data Resources analysis - relevant for the systematic implementation of NBS - (from available data + from citizens - Q3 answers missing?) 3. Proposed provisional GDPM template customization for each demo site. The product: Customized GDPM - the list of desired and / or potentially applicable interventions at the demo site.		
1	Planning relevance to NBS specifications in the GA		
1.1	Ranko explained that that all considerations related to euPOLIS interventions should be guided by a principle that they should create conditions conducive to PH&WB enhancement proof.	NA	

1.2	The goal of the workshop is to start defining optimized NBS interventions for Gladsaxe, with the main choice criteria being the possibility of proving their positive impact on PH&WB	NA	
1.3	Introduction given by Ranko Bozovic – explained in more details the construction and purpose of GDPM	NA	
1.4	Morten has offered following clarifications on proposed solutions at the site	NA	
1.4.1	Green wall reservoir, tree water reservoir, garden and meadow reservoir – meant to collect rainwater for winter, not yet defined how to store it – what material decision pending	Morten	4-6 weeks
1.4.2	Vertical green walls on existing facades, with willow wood as construction will be investigated	NA	
1.4.3	Water running on the surface – problem on site because we cannot let water infiltrate the ground. In Gladsaxe, underground water is raising. – Problem to be addressed – GSX team to contact Cedo	Cedo + Morten	4-6 weeks
1.4.4	The project is looking for solutions to get rid of rainwater without ground infiltration – evaporation showed good results. For 1,5 years they have 3 walls where testing of evaporation is done. Measures have been gathered in a tool that allows for planning of evaporation. Forced evaporation because summer is short and not too hot. Goals it to use as little energy as possible for forced evaporation – give the plants as much water as possible to force them to evaporate – further tests in progress; results expected	GSX	??
1.4.5	Ranko mentioned that there are tools simulating the water uptake by the tree roots. The analysis of water supply via roots or leaves in relation to relative humidity has to be analysed and method optimized. The slides demonstrating this	Ranko +Morten	1 week + 4 weeks

	simulation will be submitted to GSX team. GSX team to consider applying		
1.4.6	Replace existing neat lawns with parks that have more natural vegetation and provide more possibility for evaporation – proposal pending	GSX	4-6 weeks
2	Demo site Resources – presented in the Annex 3		
3	GDPM Customization		
3.1	Purpose of applying GDPM is to explore synergies to optimize solutions and make them cost effective. In euPolis project we used project KPIs to create GOALS, that then created TARGETS. For each target, after analyzing answers to Q1, Q2 and Gap analysis, concepts were developed to achieve the specified targets and goals	NA	
3.2	Today's workshop goal is to eliminate euPolis interventions that cannot be applied to the Gladsaxe demo location.	NA	
3.3	Perform analysis of negative effects of some trees.	GSX	4 weeks
3.4	Include analysis of soil nutrition, to decide if it is present or needs intervention – could be included in DAMP phase 2, for which additional government funds are being asked.	GSX	?
3.5	There is a lot of traffic around, so mitigation from pollution might be needed. Proper local phytoremediation plants to be identified	GSX	4 weeks
3.6	Everything we do will have to be accepted by the local citizens, that will "judge" the project proposals. Discuss at city level methods to arrive to "beautiful", as this might affect Workshop no 2 with citizens	Alix	4 weeks
3.7	Eco-café as a business is not applicable, but it can be included in the educational HUB. To be checked through legislation	Morten	4 weeks
3.8	Surface waterways to be organized to prevent water to going into the aquifer, the legislation also defines the cleanliness, how to secure access. To be discussed with Cedo.	Morten	4 weeks



3.9	Ground water usage for energy to be checked	Morten	4 weeks
3.10	Water retention model making to be considered	Morten	4 weeks
3.11	Security on site is an issue that is being discussed with the local citizens. This issue to be addressed in detail on W2	Alix	4 weeks
3.12	There is pluvial flooding in the building basements. To be discussed with Cedo	Morten	4 weeks
3.13	There is a kindergarten close-by, so it would be possible to organize events with seniors. Discuss with kindergarden management	Alix	4 weeks
3.14	Corridors between our site and other parts of the city – there is an existing corridor in a nearby area, there is space for improvement of habitat corridors on site. Analyse whether this can be included into city planning documentation	Morten	4 weeks
3.15	Do we need a control site, where these interventions have not been made, to provide comparison with the achieved effect? Health team will be coming up with a scientific methodology for following the results. Check with project health teams the testing method and necessity for the control site	Morten	4 weeks
3.16	Check with Health team which environment parameters should be monitored	Morten	4 weeks
3.17	We want to attract other people, use the site for demonstration – scientists, students, citizens, people interested in NBS. Information also in English, for foreigners. Information on evaporation and show what the site is doing with NBS. Include this item into W2	Alix	4 weeks
3.18	Ethnic and gender diversity to be enhanced on location, was discussed already. Not allowed in Q3 to ask people what their nationality/culture is, but to ask them what they would like to have in the space. Include this item into W2	Morten	4 weeks
3.19	Business is not permitted since the site is zoned as residential only. Pop-up businesses are acceptable, but permanent business with facilities is not allowed. Check exact wording of this legislation.	Morten	4 weeks

3.20	If vegetables are produced in urban farming, is it possible for consumption or sale? If it is a business, there are strict regulation. Regulation for individual and local purposes (sharing with neighborhood) should be explored.	Morten	4 weeks
3.21	On a larger level, the site should be demonstrational for scientists/professionals to visit and learn about the results. Check with local institutions their interest in participating. Define what would be their requirements within the euPOLIS context	Morten	4 weeks
3.22	Beekeeping, growing of specific plants – actual activities on site need to come from the local community. We can suggest, but the citizens must decide how to actually use the space. Consult local experts on this issue	Alix	4 weeks
9	General Conclusions :		
9.1	Above items are identified to initiate preparation for the Gladsaxe demo site.		
9.2	These minutes will be used as a tool for the regular updates on above and new activities relevant to demo site planning process. The regular update time schedule will be agreed as required		
9.3	Next meeting proposal: in ? weeks		
10	Minutes completed by - Ranko, Morten, Alix		
10.1	Next Meeting ?		

Table 10 Minutes of the Meeting No1, for Lodz demo site

01	Minute number	01/	
	Date of meeting:	17/06/21	Week no. 3
	Place of meeting:	Demo site – Pasaz Anny Rynkowskiej	
	Participants:		

	Marta Chomczyńska	City of Lodz		
	Patrycja Wojtaszczyk	City of Lodz		
	Paweł Więciór	City of Lodz		
	Inga Nowakowska	City of Lodz		
	Piotr Kade	City of Lodz		
	Izabela Berent	City of Lodz		
	Maciej Filipowicz	City of Lodz		
	Dominika Wojtysiak	City of Lodz		
	Anna Sokolowska	City of Lodz		
	Justyna Krakowiak	City of Lodz		
	Marzena Przepiórkiewicz	City of Lodz		
	M. Grabicka	City of Lodz		
	Mateusz Piasecki	City of Lodz		
	Łukasz Urbaniak	City of Lodz		
	Andrzej Stańczak	City of Lodz		
	Wiesława Grochulska	City of Lodz		
	Marta Turtoń	City of Lodz		
	Katarzyna Wąsik	City of Lodz		
	Justyna Witecka	City of Lodz		
	Kinga Krauze	ERCE PAS		
	Renata Włodarczyk-Marciniak	ERCE PAS		
			Executor	Deadline
	ADOPTION OF PREVIOUS MINUTES			
	No previous meetings			
	Agenda: 1. Introduction and Information on euPOLIS interventions proposed within the original project proposal, entered into GA (reading through original project proposal description for Piraeus – to remind ourselves on what we proposed) 2. Data Resources analysis - relevant for the systematic implementation of NBS - (from available data + from citizens - Q3 answers missing?)			

	3. Proposed provisional GDPM template customization for each demo site. The product: Customized GDPM – the list of desired and / or potentially applicable interventions at the demo site.		
1	Planning relevance to NBS specifications in the GA		
1.1	Marta pointed out that this is internal meeting where city authorities can determine what can be implemented on site (what solutions, what is possible/impossible), so as to be able to tell the residents which solutions will not be allowed in the square for specific technical, legal or organisational reasons.	NA	
1.2	Marta pointing out that (according to coordinator information) we have the possibility to change the planned implementations but they have to fit into the budget allocated for these activities in euPOLIS. No budget extensions are possible.	NA	
1.3	Marta presented plan for next months regarding GA: i) workshops/meetings with a wide group of stakeholders, which will combine educational workshops and design/selection of preferred NBS with residents.	City of Lodz + ERCE PAS	28 th of July
1.4	Marta presented plan for next months: ii) by the end of September it is planned to prepare a description of the subject of the contract, so that by the end of the year it will be possible to select designers. Patrycja pointed out that as part of the contract and preparation of the project, the contractor will be required to conduct consultations with the residents	City of Lodz	M13-14 M16-17
1.5	Kinga noted that the euPOLIS project considers greenery in relation to PH&WB, so it is important that the NBS intervention has a clear impact on this.	NA	
2	DS planning - additional proposals		

2.1	Playground: change the type to more wild/natural or water playground than the existing one or change its location on the DS (collision with new apartments); additional new solutions: using of unevenness of the terrain (characteristics) for children's play, stones e.g. absorption basin	NA	
2.2	Patrycja presented information from consultation with citizens (Q3): i) the walkway is mainly for passage, people don't spend time there; ii) lack of security: darkness, iii) elements of urban gardening; iv) opportunity to interact with nature: sensory garden, herb garden	NA	
2.3	Greenery office proposition: shade structures with plants, drinker, community vegetable gardens, air filter walls, vertical gardens	NA	
2.4	Green walls: covering buildings, and separation from streets (noise reduction, air pollution),	NA	
2.5	Vertical gardens: on separate construction not on buildings due to risk of mould and mildew in walls; What about irrigation system for vertical gardens? Abandoning energy- and water-intensive solutions or adapting them - so as not to discourage other residents from taking action Collision of vertical gardens with trees. Possibly climbing plants as green walls with minimal option (2 pots) for people to create their own gardens. ACTION: Meeting with the fire department and reviewing possible solutions related to water supply and capturing excess water from the area. Rainwater storage tank near the kindergarten – meeting with principal	City of Lodz	During workshop with citizens
2.6	Kindergarten: rainwater storage tank near the kindergarten, and additional solutions like water park,	NA	
2.7	Stormwater Tree trench – DS as area for testing new solutions	NA	
2.8	Noise and pollution reduction:	City of Lodz	M12-14

	<p>i) vertical greenery close to roads on the edges of DS, moving trees to places that reduce pollution (on roads, changes of trajectory)</p> <p>ACTION: consultation with the Road Department and fire deptmen the possible tree planting</p> <p>ii) gazebos, enclaves in the middle of the walkway –(security issues), live wicker gazebo</p>		
2.9	<p>Security issues:</p> <p>i) Motion-activated light for security reason, spotlights;</p> <p>ii) Public space safety trainings for planners and authorities (accreditation principles and systems) - possibility to separate zones in DS (reconciling security with microclimate, tranquility, biodiversity)</p> <p>ACTION: inclusion of the skilled designers in planning process, workshops for citizens/planners/authorities with Lodz University of Technology - project consultations in terms of space security + putting it in the procurement necessity of such consultations</p>	City of Lodz	M12-14
2.10	<p>Trees: replanting young trees, no tree cutting</p> <p>ACTION: city experts to propose preferable tree specs having in mind that they have to meet euPOLIS conditions</p>	City of Lodz; greenery department	later
2.11	<p>Surfaces: concrete blocks/granite slabs proposed at the stage of project preparation - resignation due to the fact that it is not NBS, narrow passageways not separate for bicycles/walkers; changing the course of alleys</p> <p>ACTION: looking for permeable pavements as a substitute, which are also accesible by different groups; checking what is the appropriate width of the walking surface</p>	City of Lodz	M12-14
2.12	<p>Solutions to the existing brick wall, wheelchair ramp (Wólczańska street)- according to universal design this should be combined, we can demolish it and create a slightly raised road on which everyone can enter, curb lowering</p> <p>ACTION: conslutation with Road Department</p>	City of Lodz	M12-14
2.13	<p>Animals:</p>	Department of Climate	later

	<p>Beehives on the premises of the kindergarten or close by - cancellation due to children's allergies – eventually another location on the fire department roof</p> <p>More important - houses for wild pollinators (due to biodiversity reasons)</p> <p>hedgehog houses</p> <p>(additionaly worksops with citizens how to create houses for wild pollinators and hedgehog, and preparation houses for the DS)</p> <p>ACTION: checking who can take care of such hives</p>		
3	DS - additional information important for implementation area		
3.1	<p>Patrycja pointed out that there is an undeveloped square adjacent to the demosite that will be sold by the city and could be developed. This led to a discussion on possible solutions to make the new buildings planned there fit in with the layout of the square. A possible solution is to write in the terms of sale that there will be NBS for water retention, designation of root protection zone (tree inventory made by greenery office showed that no building line should be allowed to the lot boundary due to the need to protect trees)</p>	NA	
3.2	<p>Plans for the neighoburing areas – extending the walkway to Piotrkowska Street, thanks to other funds, (civic budget)</p>	NA	
3.3	<p>Wólczańska street (combines two parts of DS): proposition to provide there some new solutions pedestrian crossing device even temporary solutions like plants in pots; changing the layout to combine the 2 areas</p> <p>ACTION: consultation with roads department</p>	City of Lodz	M12-14
4	Environment Monitoring sensors		
4.1	<p>No monitoring items on square. There are no existing sensors for air or water quality that could provide input data for euPolis project</p>	NA	
4.2	<p>External project submitted for the purchase of EcoClou (it is an advanced device for measuring</p>	Department of Climate	This year

	and signaling air quality, using the color of LED lighting and mobile app. Based on the current measurements results of the concentration of suspended dust, as well as other pollutants, it informs and warns about air quality) Action: to check if can be installed on DS just for citizens education issues		
5	Workshop no 2 – Planning with citizens		
5.1	ACTION: City of Lodz will advertise (social media, on-site promotion, own website, mails to relevant stakeholders) to residents their participation in 2nd workshop (meeting) in July	City of Lodz + ERCE PAS.	July
6	Demo site Resources – presented in the Annex 3		
7	GDPM customization process – City of Lodz		
7.1	The Lodz GDPM customization process completed for items 1		
7.2	Marta will organize customization of items 2-9		
8	General Conclusions :		
8.1	Above items are identified to initiate preparation for the Lodz demo site.		
9	Minutes completed by - R. Włodarczyk-Marciniak, M. Chomczyńska		
	Distribution :		

Table 10: Minutes of the Meeting No1, for Piraeus demo site

01	Minute number	01/PIR 011206	
	Date of meeting:	12/06/21	Week no. 1
	Place of meeting:	Demo site – Akti Deliveri - Mikrolimano	
	Participants:		
	Betty Charalampopoulou	GSH	
	Kostas Fokeas	GSH	
	Aggeliki Paraskeuopoulou	Mun. Piraeus	

	Sandra Baki NTUA Manolis Sardis NTUA Eftychis Protopapadakis NTUA Manthos Bibas NTUA Tasos Karatasakis Munic. Piraeus Efthymis Chardavelas (Piraeus), Ioannis Niadas (NTUA) Milena Zindovic ENPL Ranko Bozovic ENPL		
	Minutes produced on 14/06/21 Minutes adjusted with Sandra comments on 22/06/21 – rev.1	Executor	Deadline
	ADOPTION OF PREVIOUS MINUTES		
	Comments received from Sandra on 21/06/21 and entered into rev. 1		
	Agenda: 1. Introduction and Information on euPOLIS interventions proposed within the original project proposal, entered into GA (reading through original project proposal description for Piraeus – to remind ourselves on what we proposed) 2. Data Resources analysis - relevant for the systematic implementation of NBS - (from available data + from citizens - Q3 answers missing?) 3. Proposed provisional GDPM template customization for each demo site. The product: Customized GDPM - the list of desired and / or potentially applicable interventions at the demo site.		
1	Planning relevance to NBS specifications in the GA		
1.1	Ranko explained that that all considerations related to euPOLIS interventions should be guided by a principle that they should create conditions conducive to PH&WB enhancement proof.	NA	

1.2	<p>It was agreed that the items specified in the Grant Agreement, connect to the two Piraeus demo sites: Microlimano with Akti Delaveria and Pathway to Tzavela and Alexandrou in front of Ralio School Complex, do not exemplify nature-based solutions. The goal of the workshop is to start defining optimized NBS interventions for Piraeus, with the main choice criteria being the possibility of proving their positive impact on PH&WB</p>	NA	
1.3	<p>Mantos and Manolis both clarified it is possible to change the planned NBS interventions by adding new ones and skipping some that are specified, as well as shifting fund between items, within the allocated euPolis budget. No budget extensions are possible.</p>	NA	
1.4	<p>Prices in project proposal: The prices in the ppt and products are ver.2021(so Kostas has already done a draft homework), but of course are partial/totally different than the ones in 2018. Only the info kiosk is not the one that was selected (we need a good one with surrounding bench to sit and of course all IT infrastructure + plugging for the mob of the visitors – maybe a green roof can be an option).</p>	NA	
1.5	<p>Sandra raised question about possible leaving out some of the GA specified interventions, such as the cleaning of the canal, which is the biggest budget item. The discussion conclusion was that any changes to the budget items will be done with the aim to introduce the least amount of change, to prioritize NBS and not remove the main specified interventions.</p> <p>There is flexibility in transferring funds from one intervention to another, especially if there is a good reason (prioritisation of appropriate NBS interventions) and a good justification to go with it</p>	NA	

1.6	Manthos concluded that amending the GA interventions to include more NBS solutions will be positive for the euPolis project, and that the success of the site depends on how we prove the effect of NBS to PH&WB.	NA	
2	Mikrolimano planning - additional euPOLIS proposals		
2.1	Microlimano works status: Betty and Efthymios clarified that there are already reconstruction works going on in Microlimano, with plans of introducing walking areas and a in the existing street. The tender for the construction company is already finished and should not be further delayed	NA	
2.2	Microlimano additional proposals from euPOLIS: . Municipality is open to consider suggestion is changing some of the plans, in collaboration with the architects, but euPolis reaction needs to be quick so that the process of reconstruction is not delayed. ACTION: We can only suggest type of plants in dedicated already areas as per Architects drawings . City and WP6 team to prepare proposal	City and WP6 team	4 weeks
2.3	ACTION: Piraeus Municipality to provide euPolis team with detailed project plans and designs, so that the euPolis team can prepare suggestions and proposals to include NBS and euPolis principles into the project.	Piraeus city + NTUA team + Ranko	2 weeks
3	Akti Dilaveri - Greenary planting		
3.1	Trees as NBS: In discussion about rearranging budget funds, shading from trees was used as an example. EuPolis would like to use the budget to buy grown, nursed trees to plant in the demo areas, as to be able utilize shade and subsequently to demonstrate effects within the euPolis project timeline	WP6	M9-M14
3.2	Betty commented on the earthquake legislation that will not allow for planting of tall trees, that could be a hazard in case of earthquake.	NA	

3.3	<p>Also, there are restrictions for planting palms close to the coastline – the distance from coastline is defined by law.</p> <p>ACTION: Additional info on these issues can be obtained from the Ministry of Agriculture. Contact : https://www.apdattikis.gov.gr/apokentromeni-dioikisi-attikis/dioikitiki-domi-organogramma/geniki-dnsi-dason-agrotikon-upotheseon/%CE%B4%CE%BD%CF%83%CE%B7-%CE%B1%CE%BD%CE%B1%CE%B4%CE%B1%CF%83%CF%8E%CF%83%CE%B5%CF%89%CE%BD/</p> <p>Also a list of plant items were in the initial 2018 proposal. See attached doc.</p>	Angeliki	1 week
3.4	<p>Traditionally, pines and olive trees are used in coastal areas, which do not grow very tall. (shading problem?)</p> <p>ACTION: city experts to propose preferable tree specs having in mind that they have to meet euPOLIS conditions</p>	Angeliki	2 weeks
3.5	<p>Angeliki has warned on the use of nursery grown trees in coastal conditions, since fully grown trees have problems adapting to the coastal environment and are stunted in growth. Younger trees can be easier to adapt to coastal environment and often grow faster and reach full growth faster than grown trees. Municipality also wants to keep coherent character of the coastline.</p> <p>ACTION: propose adequate Mediterranean species and trees that adapt well to coast environment, with the criteria to provide shade in certain times, as per euPolis project requirement and with specified time of growth</p>	Angeliki + City Expert on Trees and plants	2 weeks for Microlimano (green specs) 5 weeks for Akti Dilaveri (green specs)
3.6	Information for the cost of for the small park in Dilaveri area, which will be provided by Angeliki	Piraeus city + Betty?	later
3.7	Check green areas for their negative impact on PH (allergens and BVOC) and other - introduce mitigation measures	NA	
3.8	Take measures to systematically analyse existing trees and other greenery health and take necessary measures, including analysis of soil nutrition values	NA	

3.9	Analysis of soil quality and required interventions to support new trees - the nutrient quality of soil to be checked, nutrients supply to be considered,	NA	
3.10	ACTION : Items 3.7, 3.8, 3.9 – City experts to advise	Angeliki + ?	6 weeks
3.11	Planting of trees should take place only in positions where allowed by Archeological authority	NA	
3.12	ACTION: city team to provide site layouts with archeological restrictions as well as site infrastructure layouts (not schematic)	Piraeus city	2 weeks
3.13	Manolis showed presentation of the current state of Akti Delaveri, that is to be transformed into pocket park. Estimated surface area of the location for the park is 470 m2. ACTION: WP6 to consider this area for the pocket park construction	WP6	M12 - 14
3.14	Demo site visual appearance: There was an architectural competition in 2015, for Microlimano and Akti Delaveri (the project currently in construction?). The Municipality want the two areas to be visually coherent. ACTION: obtain Microlimano project and point out crucial items providing coherency (possibly arrange meeting with Municipality to coordinate this request with euPOLIS concepts	Betty	4 weeks
4	Canal cleaning		
4.1	Manolis: Canal water quality and cleaning the canal important issue for the demo location, sensors should be placed as soon as possible to provide information to euPolis (2-3 sensors in the canal, and 1 in Microlimano for seawater). This week we expect from Cedo to inform us for the needed tasks for the water cleaning, then Piraeus Municipality should start requesting quotations for Divers/specific teams to clean and inform the euPOLIS the possible costs) -- NTUA + Imperial should provide the indicators + final parameters to be measured from the instruments ACTION: Prof Maksimovic to prepare specifications in terms of wastewater monitoring	Cedo	2 weeks (max)

	for municipality tendering; advice on sensors plan (to cover all above)		
4.2	<p>ACTION: NTUA(Sandra) + Imperial should provide a table with min specs to be used for the instruments tender. The table should specify the specs but should not name any instrument. According to this table Piraeus will make a public tender. If the budget is <=20k needs min 3 months to receive the goods, if is 20-60k needs 6-8 months. This is the best scenario if there will be no objections</p>	NTUA + ICL	2 weeks (max)
4.3	<p>ACTION: Once received information from ICL – Betty: all tender tables for the instruments + water cleaning to be ready by end of June, so I can apply the tendering next steps. If the budget is <=20k needs min 3 months to receive the goods, if is 20-60k needs 6-8 months. This is the best scenario if there will be no objections.</p>	Betty	3 weeks
4.4	<p>Existing pump in the canal doesn't work, there is no circulation of sea water. The pump is Government property.</p> <p>ACTION: obtain a report on the current status of the pump and why it doesn't work? It's unclear whether the service for pump repair and maintenance of the pump is eligible for fund from euPolis, depends on the pump current status. Later discussion established that equipment is eligible.</p>	Piraeus city	2 weeks
4.5	<p>There are existing pipes leading water from the road straight into the canal, but have no filters. Who is responsible for the placement of filters on the pipes? Sensors are also needed to measure water quality before and after filters.</p> <p>ACTION: Cedo to advise on engineering solution</p>	Cedo	2 weeks
4.6	<p>The water cleaning is a service contract - that will be under bid and according to the Greek Law, the contractor will be the one that should maintain the existing infrastructure, put any kind of material etc, is like going for a KTEO for your car, that you have to change some parts, check the</p>	NA	

	fuel and the gas/air pollution etc (so this is a full service + add-ons).		
4.7	ACTION: The Municipality can only make the products / service tenders, the procedure for their implementation has to do with the tender contractor and technical table of each tender. Document proposal to be prepared. The research partners to provide possible actions for the water cleaning, in order the Municipality know what to ask and get quotations from a team of divers? Or a team that “cleans” under water areas. For this scope Efthimis (Piraeus team) can collaborate with NTUA + Imperial.	Efthimis + NTUA	4 weeks
5	Environment Monitoring sensors		
5.1	See item 4.1, 4.2 - GSH made a market research on sensors and presented during the workshop. The research showed a large discrepancy between budgeted funds and market prices. A new specification for equipment should be made so that the city can organize a tendering procedure in September the latest.	NA	
5.2	See item 4.1, 4.2 - There are no existing sensors for air or water quality that could provide input data for euPolis project. Nautical businesses have some sensors for their purposes, should be checked if they are willing to share information	NA	
5.3	Existing environment monitoring resources – noting present . Some companies have sensors – to be checked (some sensors we can buy from municipality). ACTION: Costas to send sensors info to wp5 + tendering windows !	Costas	3 weeks
5.4	Related to 5.3 - Municipality can acquire goods and services based on three offers, within 2-3 months, in the amount up to 20.000 euros (30.000 euros ?)	NA	
6	Workshop no 2 – Planning with citizens		
6.1	ACTION: Piraeus Municipality should start advertising to residents their participation in 2nd workshop in July	NTUA + Munic.	urgent

6.2	Relates to 6.1 - Next week NTUA+ Piraeus (+PLEGMA?) to discuss the "participatory tool" usage that currently NTUA is preparing and may be integrated in Piraeus web site? as demo during June, in order to work in the 2nd workshop with the residents.	NTUA + Munic.	urgent
7	Piraeus demo sites Resources – presented in the Annex 3		
8	GDPM customization process – Akti Dilaveri		
8.1	The Akti Dilaveri GDPM customization process completed for items 1 to 6	NA	
8.2	Betty will organize customization of items 7 to 8	Betty	1 week
8.3	Ranko will organize customization of item 9. Items 7 to 9 will be exchanged between partners for comments. – Already included into GDPM excel table	Ranko	complete
8.4	The Ralio school customization (excluding items that can not be implemented at this site) process will be organized by Betty and results will be submitted to Ranko for comments	Betty	1 week
9	General Conclusions :		
9.1	Above items are identified to initiate preparation for the Akti Dilaveri demo site.		
9.2	These minutes will be used as a tool for the regular updates on above and new activities relevant to demo site planning process. The regular update time schedule will be agreed as required		
9.3	Next meeting proposal: in two weeks		
10	Minutes completed by - R. Božović, Betty Charalampopoulou, Manolis		
10.1	Next Meeting 25/06/21 – 09.00 CET		
	Distribution :		

Table 11: Minutes of the Meeting No 1, for Belgrade demo site

01	Minute number	01/BGD	
	Date of meeting:	16/07/21	Week no. 1
	Place of meeting:	Demo site – Park Usce – Micro location, Zemunski kej	
	Participants:		
	<ul style="list-style-type: none"> • Marijana Radovanović, City of Belgrade – Urban planning division • Vesna Šabanović, City of Belgrade – Secretariat for Environment Protection • Aleksandra Krstić, City of Belgrade – Secretariat for Environment Protection • Sonja Mitrović, City of Belgrade – Secretariat for Environment Protection • Tijana Đurović, City of Belgrade – Secretariat for Environment Protection • Ivana Jarić, City of Belgrade – Secretariat for urbanisam and construction • Predrag Čolić, City of Belgrade – Secretariat for investments • Nataša Šišaković, JKP Zelenilo Beograd – City Green infrastructure • Aleksandra Vukičević, JKP Zelenilo Beograd – City Green infrastructure • Gordana Petrović, JKP Zelenilo Beograd – City Green infrastructure • Radmila Vukadinović, JKP Zelenilo Beograd – City Green infrastructure • Maja Joković, City Urban Planning Institute • Milena Solujić, City Urban Planning Institute • Ana Popović, JKP Beogradski vodovod i kanalizacija – City Water & Sewerage infrastructure 		

	<ul style="list-style-type: none"> Aleksandra Krsmanović, JKP Beogradski vodovod i kanalizacija - City Water & Sewerage infrastructure Ranko Božović, ENPL Milena Zindović, ENPL Anja Ranđelović, FCEBG Branislava Lekić, FCEBG Filip Stanić, FCEBG Nataša Đurić, MIKS 		
	<p>Minutes produced on 16/07/21</p> <p>Please enter your comments in this document not later than 30.July.</p> <p>After that date this document will be rendered accepted</p>	Executor	Deadline
	ADOPTION OF PREVIOUS MINUTES		
	No previous meetings		
	<p>Agenda:</p> <ol style="list-style-type: none"> 1. Introduction and Information on euPOLIS interventions proposed within the original project proposal, entered into GA (reading through original project proposal description for Belgrade – to remind ourselves on what we proposed) 2. Demonstration sites information. 3. Data Resources analysis - relevant for the systematic implementation of NBS - (from available data + from citizens - Q3 answers missing?) 4. Proposed provisional GDPM template customization for each demo site. The product: Customized GDPM - the list of desired and / or potentially applicable interventions at the demo site. 5. Note: The Minutes of the meeting no 1 will be produced to be used in the future activities as project development and implementation tool. 	NA	
1	General comments		
1.1	Mrs. Marijana Radovanovic opened workshop with general euPOLIS introduction. Workshop participants introduced themselves.	NA	
1.2	Marijana Radovanović: euPolis to advise on further steps related to euPOLIS interventions design and mode of operation with this workshop participants. Ranko Božović: Next event will be joint workshop WP6 and WP2,	MR, RB	3 weeks

	<p>which will include city stakeholders (citizens). After that, the expert teams will analyse collected information and data to prepare for final decision proposal on the selection of euPOLIS interventions. This proposal, prior to final acceptance, will be submitted to all workshop participants for their comments.</p> <p>ACTION: Marijana Radovanović and Ranko Božović to prepare plan for all envisaged activities</p>		
1.3	<p>Vesna Šabanović: Propose that the existing planning documents information should be included into W2 agenda (stakeholders participation)</p> <p>ACTION: Milena Zindović to prepare these documents for W2</p>	MZ	2 weeks
2	Planning relevance to NBS specifications in the GA		
2.1	<p>Ranko explained that all considerations related to euPOLIS interventions should be guided by a principle that euPOLIS interventions should create conditions conducive to the proof of their positive impact on PH&WB.</p>	NA	
2.2	<p>Milena presented Park Usce, Zemunski kej, as Usce park micro location, selected for the euPOLIS demo site. Aproximate 1Ha will be occupied by euPOLIS interventions</p>	NA	
2.3	<p>Ranko presented interventions at Belgrade locations, originally proposed within the Project proposal, now forming part of the Grant Agreement with European Commission</p>	NA	
3	Demo site resources analysis – Presented in Annex 3: Demo site Resources		
4	Provisional GDPM template customization		
4.1	<p>Belgrade supporting team has submitted to the city of Belgrade the list of recommendations to be included into the Linear park design. The chief urban planner has announced that the euPOLIS team will be invited to a separate meeting to discuss submitted proposals.</p> <p>ACTION: Meeting on Linear Park euPOLIS proposals completed on 22nd. July</p>	NA	

4.2	<p>The workshop no. 1 for the Linear park will be held with the city Urban Planning Institute as part of project public assesment process.</p> <p>ACTION: meeting with wih the Institute completed on 21st. July. Ranko to prepare GDPM</p>	NA	
4.3	<p>The Park Usce, Zemunski kej GDPM customization process completed for all specified items</p>	NA	
4.4	<p>At the subsequent meeting of BGD supporting partners following actions are proposed:</p>		
4.5	<p>EuPOLIS supporting team has submitted to the city urban planning office detailed proposal for the Hub building including legislation analysis regarding this type of facility at the given location.</p> <p>ACTION: City of Belgrade to inform on the status and dynamic of the preparation of tender documentation (TOR) for the preparation of urban design documentation and conceptual design (URBANISTICKI PROJEKAT SA IDEJNIM RESENJEM OBJEKTA). Program prepared by euPolis was sent to the City of Belgrade on June 25th.</p>	MR	<p>1 week We have already informed the other members of the euPolis team. At the beginning of the September the activities related to the implementation of the tender will start.</p>
4.6	<p>Belgrade supporting team to submit to city of Belgrade formal enquiry regarding Linear Park construction time schedules.</p> <p>ACTION: Linear park time schedule to be obtained from city of Belgrade.</p>	RB	1 week
4.7	<p>Note from Marijana Radovanović: There is need to coordinate citizens participating activities with the time schedule for the completion of urban plans and design documentation for the demo site</p> <p>ACTION: city of Belgrade to advise on time schedule specified above</p>	MR	3 weeks
4.8	<p>Note from Vesna Šabanović: It important to check compatibility of proposed euPOLIS interventions and existing relevant legislation.</p> <p>ACTION: City of Belgrade to urgently advise status and possible barriers related to the design and implementation of euPOLIS interventions at the</p>	MR	1 week



	microlocation Zemunski kej. Please also advise Belgrade supporting team of any assistance required from them.		
4.9	General coment related to proposed potential euPOLIS interventions: at this stage it is not possible to define which exactly interventions will be applied, as number of these items are subject to existing legislation. Once design starts it will be checked through standard procedures. The Project Brief (Programski Zadatak) will be finally completed once particular euPOLIS interventions, to be implemented, have been selected ACTION: ITEM 4.4 – city to advise on potential barriers	MR	1 week We have already done it!
4.10	The procedure for the securing of the licences for art items to be exhibited at the location, to be investigated ACTION: city to advise which institution is responsible	MR	At the beginnig of the September
4.11	Urban farm ownership securing procedure to be investigated ACTION: Natasa Djuric to investigate who is responsible for this licence	NĐ	4 weeks
5	General Conclusions :		
5.1	Above items are identified to initiate preparation for the Park Usce, Zemunski kej demo site planning and design process		
9.2	These minutes will be used as a tool for the regular updates on above and new activities relevant to demo site euPOLIS implementation process. The regular update time schedule will be agreed as required		
9.3	Next meeting proposal: in two weeks		
10	Minutes completed by - R. Božović, M. Zindović		
10.1	Next Meeting TBA		
	Distribution : All present & project management		

A4. Demo Site Resources

Demo site resource tables contain detailed information on the existing resources available at the demo sites. These resources represent base case status of demo sites and will be considered as starting points for the development of euPOLIS interventions, relating to PH&WB, environmental, social, urban and economic status at location. This information will be used in all GDPM items with particular attention to the potential business activation at the demo site.

Table 11 Demo site Gladsaxe – Resources & analysis

2	Data Resources analysis - relevant for the systematic implementation of NBS - (from available data + from citizens – Q1,Q2, Q3		
2.1	Human resources (knowledge, training level) - the project would like to include citizens in maintaining of greenery – other use of human resources to be analysed	GSX	4-6 weeks
2.2	Any material or recycling resources - Recycling of water only	NA	
2.3	Any business - No business present on site - Legislation wise we cannot open shop at the site – street market pop-up events possible. This to be investigated	ENPL + GSX	4-6 weeks
2.4	Any cultural resources (existing events and / or traditions) - Existing library on site, possible collaboration to introduce cultural events – to be investigated	GSX	4-6 weeks
2.5	Any positive social resources - Tradition to have summer party and outdoor events + the engagement of existing elderly society in neighbourhood to be analysed and proposals formulated (in line with GDPM proposed concepts)	GSX	4-6 weeks
2.6	Any geographical resources (location advantages) – Site has good connections	NA	
2.7	Any local knowledge resources (specific knowledge) – Contact with plant suppliers for the urban farming to be made - This will be done during fall when DAMP phase 1 is expected to be constructed	Morten	as specified

2.8	Local problems as resources (solving problem creates business - problem is costing someone and they pay for remedial action) - Area was abandoned for a long period of time, but now new investment in happening, hence there might be this potential – no such item identified	NA	
2.9	Market receipt potential (market non saturated segments) – not known – to be analysed	GSX	8-10 weeks
2.10	Any renewable energy resources - In Denmark there is no need for cooling of existing buildings in the area. Ground water exists. There are no plans to use it (STATEMENT: Will not extract energy from water at this stage). GSX to analyse (as this is important euPOLIS item)	GSX	4-6 weeks
2.11	Food & agriculture – to be analysed	GSX	4-6 weeks
2.12	Waste management and recycling (links that create circular economy) - Not allowed existent – not planned	NA	
2.13	Integral solution (combination greenery and public place - new resource)	NA	
2.14	Water & wastewater – covered in item 1.4.4	NA	
2.15	EuPOLIS demonstration point - Hub for education of citizens/researchers/professionals on what is being done with water on the demo site	GSX	4-6 weeks
2.16	Information & communication technology – the wifi coverage of the location to be analysed	GSX	4-6 weeks
2.17	Government incentives - Applied for government incentives for additional funds for the project – waiting for response	GSX	Nov. 2020
2.18	Analysis of business drivers, with city supporting partners -	NA	

Table 12 Demo site Lodz – Resources & analysis

6	Data Resources analysis - relevant for the systematic implementation of NBS - (from available data + from citizens – Q1,Q2, Q3		
---	---	--	--

	The questionnaires have been sent to all people that have been involved in gathering data	WP6	M12 - 14
6.1	Human resources (knowledge, training level) - There are people interested and practically daily involved in taking care of the demo sites nature. They place water drinkers in the area in summer and keep bird feeders in winter. Around some of the tenement houses there are small gardens also sustained by the members of local communities.	WP6	M12 - 14
6.2	Any material or recycling resources - b. Locally available recyclable materials. Please specify: The Łódź city centre undergoes complex revitalization of buildings and roads, Potentially there is a recovered construction material available for re-use. Additionally also trees could be recycled, namely moved from new construction areas to the demo site	WP6	M12 - 14
6.3	Or any potentials related to business activation such as business drivers – - Hi Piotrkowska office block (157A Piotrkowska Street) as a dominant and Światowit Hotel (68 Tadeusza Kościuszki Avenue) as a subdominant. - A huge variety of public transport connections (Buses): 80, 83 (Night buses): N1A, N1B, N5B, N6, N7A, N7B, N3A, N3B (Trams): 2, 3A, 3B, 6, 7, 8, 9, 10A, 10B, 11A, 11B, 13, 14, 18 - „Stara drukarnia” business center, 130 Gdańska Street - „Kuźnia Centrum Atletyki” gym, 126/128 Gdańska Street - „Gwardia Łódź” sports club, 73/75 Tadeusza Kościuszki Avenue	WP6	M12 - 14
6.4	Any cultural resources (existing events and / or traditions) - An antique fire engine, + "Czas pożarł nas" mural	WP6	M12 - 14
6.5	Any positive social resources - NGO "Społecznie Zaangażowani" is a group of citizens from Łódź who have been jointly implementing social activities for several years. They see many needs around them and try to respond to them. They undertake tasks in the field of development, education, culture, neighbourhood help, building civil society, ecology, intersectoral cooperation; they implement them through workshops and trainings, meetings and discussions, cultural and social events, individual and group activities. They run Stare Polesie Community Centre / Meeting Place in Łódź	WP6	M12 - 14
6.6	Any geographical resources (location advantages) - A very good location e.g.:	WP6	M12 - 14

	<ul style="list-style-type: none"> - About 5 minutes on foot to get to Piotrkowska Centrum train stop (350m). - About 8 minutes on foot to get to Piotrkowska promenade (650m) - About 11 minutes on foot to get to Galeria Łódzka (850m) - About 3 minutes on foot to get to Manufaktura (2,7km) 		
6.7	Any local knowledge resources (specific knowledge) – Not known	WP6	M12 - 14
6.8	Local problems as resources (solving problem creates business – people who drink, problem – solution: new business ?	WP6	M12 - 14
6.9	Market receipt potential (market non saturated segments) - ?	WP6	M12 - 14
6.10	Any renewable energy resources - There is a plan (reflecting site potential) to use solar energy to run all the monitoring devices in site. Solar energy can be also used by solar lamps – small and near ground located lamps securing safety of the area while significantly reducing light pollution.	WP6	M12 - 14
6.11	Food & agriculture (???? TO BE DESCUSED ???) - Due to its location (in the busy city centre) the demo site is not suitable for agricultural use – threat of contamination of products with heavy metals and other toxic substances. However, for nonconsumption purposes – mostly educational, and sensual recreation of handicapped people, there is a plan to transform patches of the passage into stands of flowers and herbs of various textures and fragrances. Also, introduction of flowering trees and shrubs or even fruit trees can be discussed with users of the area, with clear goal of supporting local biodiversity.	WP6	M12 - 14
6.12	Waste management and recycling (links that create circular economy) - There is no solid waste management on the site, however – if accepted by the users of the area – there is a potential to set up a composter for recycling of biomass coming from the maintenance of the passage (leaves, grass, herbs, fruits). Potentially such composter could be also placed in the kindergarten as an educational element about the decomposition processes, importance of proper segregation of biowastes and role of micro and macro biota in recycling.	WP6	M12 - 14
6.13	Integral solution (combination greenery and public place - new resource) – potential is complete demo site	WP6	M12 - 14

6.14	Water & wastewater – Plots number 335/5; 335/6 and 336/1 bounded from the west by Wólczańska Street, and Kosciuszki Street to the east. Plots No. 127/5 and 127/7 are bounded on the west by Gdańska Street. All three streets are lined with combined sewage and water supply systems. On the plot of land No. 336/1 there is a kindergarten building, which has a connection to the combined sewage system and the water supply system. In the courtyard of the kindergarten there is a sewage grate, an underground chamber and a hatchway connected to the combined sewage system. On plot 335/5 and 172/7 there is drainage from the heating facilities to the stormwater drainage to the heating facilities. As a potential, rainwater drained from the kindergarten area can be used for the rain garden facility.	WP6	M12 - 14
6.15	EuPOLIS demonstration point - ?	WP6	M12 - 14
6.16	Information & communication technology – We do not see any information & communication technology potentials here.	WP6	M12 - 14
6.17	Government incentives - citizens related functional improvements - ?	WP6	M12 - 14
6.18	Analysis of business drivers, with city supporting partners - ?	WP6	M12 - 14
6.19	Water source for plant watering is an issue – euPolis to make proposals		
6.20	Ground water aquifers – not available		

Table 13 Demo site Piraeus – Resources & analysis

7	Data Resources analysis - relevant for the systematic implementation of NBS - (from available data + from citizens – Q1,Q2, Q3		
7.1	Human resources (knowledge, training level) - Area is a cultural heritage neighborhood. In the area are present human resources of different level – both highly educated citizens and workers.	WP6	M12 - 14
7.2	Any material or recycling resources - The use of recycled material is not allowed.	WP6	M12 - 14

7.3	Or any potentials related to business activation such as business drivers - EU funds exist for driving new business in the area	WP6	M12 - 14
7.4	Any cultural resources (existing events and / or traditions) - In 2022 there will be event to commemorate the end of the Greco - Turkish war. It could be good to combine euPOLIS activities and events with the planned commemoration events.	WP6	M12 - 14
7.5	Any positive social resources - Nautical club, sailing club and other sport unions present on site	WP6	M12 - 14
7.6	Any geographical resources (location advantages) - The site is already a tourist hub with many hotels and restaurants	WP6	M12 - 14
7.7	Any local knowledge resources (specific knowledge) – The area is archeological protection area with related knowledge	WP6	M12 - 14
7.8	Local problems as resources (solving problem creates business - problem is costing someone and they pay for remedial action) - Area was abandoned for a long period of time, but now new investment in happening, hence there might be this potential	WP6	M12 - 14
7.9	Market receipt potential (market non saturated segments) - Tourist hub + restaurants	WP6	M12 - 14
7.10	Any renewable energy resources - In terms of renewable energy, there are only small solar panels in the area	WP6	M12 - 14
7.11	Food & agriculture (???? TO BE DESCUSED ????) - Urban agriculture (producing food) not permitted in the area, it is only possible for shops to have as demonstration, but the products not to be used for human consumption	WP6	M12 - 14
7.12	Waste management and recycling (links that create circular economy) - Not allowed – only waste redistribution to other locations	WP6	M12 - 14
7.13	Integral solution (combination greenery and public place - new resource) – Collaboration with SEF? – prepare collaboration proposal	WP6	M12 - 14
7.14	Water & wastewater - There is new wastewater infrastructure in place, to replace old one that caused flooding and pollution. However, there is no local greywater treatment in place. Ralio	WP6	M12 - 14

	School will demonstrate graywater treatment - we can discuss with clubs, regulations permitting		
7.15	EuPOLIS demonstration point - euPolis budget provides for an info kiosk. Municipality wants it to be Mediterranean style, wooden and with benches around.	WP6	M12 - 14
7.16	Information & communication technology - There is municipal wifi in Microlimano, but not in other areas (only private wifis from local businesses). Possible solutions, possibly the kiosk. There will also have Acces Points in order to integrate the installed sensors (that will need close to sensors installation and position, plus internet infrastructure), or GPRS cards per sensors to broadcasting standalone (considering payment for these cards) .	WP6	M12 - 14
7.17	Government incentives - citizens related functional improvements - possible after microlimano finished as an extention (use 100 y celebr.). After Microlimano project is finished it is expected to become a gathering space for citizens (it is now a construction site), and activate surrounding urban blocks. Additional interventions and reconstructions can also be expected in the area due to the Municipality preparation for the Centenial commemoration	WP6	M12 - 14
7.18	Analysis of business drivers, with city supporting partners - to prepare discussion with surrounding companies and/or city level extrapolation. ACTION: ENPL to propose the list of business drivers	WP6	M12 - 14
7.19	Water source for plant watering is an issue – euPolis to make proposals	WP6	M12 - 14
7.20	Ground water aquifers – All with salt water. The water temperature to be investigated.	WP6	M12 - 14

Table 14 Demo site Usce, Belgrade – Resources & analysis

3	Demo site resources analysis		
3	Resources analysis - relevant for the systematic		

	implementation of NBS - (from available data + from citizens – Q1,Q2, Q3)		
3.1	Human resources (knowledge, training level) - Nataša Šišaković: Zelenilo Beograd (ZB) (Green infrastructure city department): This location is already one of most visited in the city, during the day and evenings – that could be a source for quality human resources. ACTION: Work Package 6 teams to assess	WP6	M12 - 14
3.2	Any material or recycling resources - Nataša Šišaković: ZB already makes compost of all biomasses collected within the city NO ACTION	NA	M12 - 14
3.3	Or any potentials related to business activation such as business drivers - Nataša Šišaković: There are, at the site, small stands selling beverages, popcorn and ice cream. - Nataša Šišaković: ZB is authorized to grant one year permits for any small trading stands and cultural events at this location ACTION: WP6 to assess	WP6	M12 - 14
3.4	Any cultural resources (existing events and / or traditions) – As item 3.3	WP6	M12 - 14
3.5	Any positive social resources - Nataša Đurić: There are number of socializing and recreational facilities at the site, including a marina, (active coastal nautical traffic). Project will consider interaction with these, existing facilities. WP6 to assess any other useful sources	WP6	M12 - 14
3.6	Any geographical resources (location advantages) – The site has excelent location well connected with public transport NO ACTION	NA	
3.7	Any local knowledge resources (specific knowledge) – No specific knowledge ACTION: to be further investigated	WP6	M12 - 14
3.8	Local problems as resources (solving problem creates business) Nataša Šišaković: ZB has not identified vandalism and / or significant damage at the site. During the day site is predominantly occupied by parents with kids and senior citizens. In the evenings, when there is intensive visit to number of restaurants at floating rafts, there are no damages in the park.	NA	

3.9	<p>Market receipt potential (market non saturated segments) - Nataša Šišaković: Adjacent to the demo site there is important communication port for the larger boats and vessels ACTION: other potential resources to be investigated</p>	WP6	M12 - 14
3.10	<p>Any renewable energy resources – Sun energy and ground water energy exploitation are to be assessed. (Nataša Šišaković : Zelenilo Beograd comented that they have experience with this process. To secure approval is lengthy process (sometimes 2 years) with Ministry of mining and energy. It is also necessary to check whether some other entity already has obtained testing licence for this location. ACTION: FECBG to report on the ground water testing procedure</p>	BL	2 weeks
3.11	<p>Food & agriculture – There are no regulative limitations for urban agriculture except for ownership issue, which will be investigated. ACTION: urban farm ownership issue to be investigated (Vesna Šabanović, please)</p>	VS	4 weeks
3.12	<p>Waste management and recycling (links that create circular economy) - Vesna Šabanović: waste management is organized centrally by the devoted department within the city structure. There is regularly updated plan for that purpose. ACTION: Vesna Šabanović will check the possibility of installing separate waste recycling containers within the euPOLIS area of intervention.</p>	VS	4 weeks
3.13	<p>Integral solutions (combination greenery and public place - new resource) – Branislava Lekić: There is sewerage collector conveniently placed along the site border (to be used for euPOLIS WWTP demonstration plant) NO ACTION</p>	NA	
3.14	<p>Water & wastewater - Branislava Lekić: The demo site is located outside of the water sanitation protection zone, allows us more freely water management. NO ACTION</p>	NA	
3.15	<p>EuPOLIS demonstration point (demo Hub) - euPolis budget provides for an info Hub. The fixed buildings are not allowed in the park. City will consider alternative options</p>	MR	2 weeks Done!

	ACTION: Marijana Radovanovic to clear with related city structures and advise urgently		
3.16	<p>Information & communication technology - Nataša Šišaković: There is WiFi system covering Usce park. The range will be checked and improved, if necessary, at no extra cost for infrastructure.</p> <p>ACTION: WiFi range at location to be checked by Belgrade Supporting team</p>	Supp. Team	6 weeks
3.17	<p>Government incentives - citizens related functional improvements – Not existing</p> <p>ACTION: potential solutions to be checked with the city</p>	WP6	M12 - 14
3.18	<p>Analysis of business drivers, with city supporting partners - project will make analysis of existing businesses interest in participation in any form.</p> <p>Nataša Šišaković: ZB is open to consider the inclusion of others into greenery regular maintenance; there are already examples in the city. ZB will give its full support to the euPOLIS project, with all its technical and intellectual resources.</p> <p>ACTION: to be assessed by WP6 team</p>	WP6	M12 - 14
3.19	<p>Water source for plant watering is an issue – The waste water treated in the euPOLIS experimental plant could be used for watering</p> <p>ACTION: Any barriers to be identified (FCEBG)</p>	BL	4 weeks
3.20	<p>Ground water aquifers – availability to be investigated – first information's are positive</p> <p>ACTION: as item 3.10</p>		