



URBAN GreenUP

## D1.17: Final Methodology Validation

### WP 1

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## 0 Background

The aim of this report is to provide a useful guide to the validation methods of the URBAN GreenUP methodology for the Renaturing Urban Planning concept (RUP). It incorporates the validation proposal to the urban planning aspects directly related to NBS as a part of the Sustainable Urban Planning (SUP), but also to the processes on implementation of one or a set of NBS in a specific area of the city, and finally to deliver the valuable and realistic methodology.

The document explains the GreenUP methodology validation principles and presents its possible methods and focus. In continuation, it provides the validation specific concept definition and includes the descriptions of the main activities improved. The validation proofs the URBAN GreenUP methodology processes proposed and specifies the most important components. It also proposes the validation Committee, linking this one to the activities on methodology social aspects, in continuation improving the same all methodology replication aspects given.



## 1 Introduction

### 1.1 What is the GreenUP validation?

The URBAN GreenUP methodology is a holistic process, requiring the systematic strategy to reach high level of impacts for climate change mitigation and efficient water management, takes into account a numerous process analysis linked between them. The prioritization of the processes, and all aspects related to them, are not always easy to be considered by one singular team of developers.

The validation works in this case as a kind of the “methodology certification”, proving its high quality and accuracy of all contents, technical, logistic components, and workflow between them. In order to validate the URBAN GreenUP methodology, and to improve its value, different validation activities are considered during the methodology development process.

### 1.2 What is the focus of the validation?

URBAN GreenUP aims at the development of a methodology to support the re-naturing of cities increasing the capabilities of local authorities and stakeholders to reach a better implementation of NBS as main priority to mitigate the effects of climate change. The process of methodology development, what follow its validation, focusing two relevant technical aspects of re-naturing:

- Assist to co-develop the **Renaturing Urban Plans (RUPs)** on harmonization and systematization of existing information, creation of procedures to consider not only individual solutions but also integrated approaches going further than technical issues considering as well social and economic aspects as essential to achieve high impact.
- Supporting **co-implementation of NBS** in specific areas, what requires support guidelines, procedures and tools, in order to guarantee that the selected solutions are appropriate on the basis of a predefined expected impact.

The methodology, conceived as a collaborative strategy, supporting the stakeholder’s engagement, from the initial diagnosis to the NBS deployment and evaluation, following innovative co-creation and open innovation strategies. Those same actors are involved during the methodology validation process.

In addition, a set of advanced techniques will be used to assess the impact of the interventions, using the main Key Performance Indicators (KPIs) and rigorous evaluation procedures, paying special attention to get maximum social engagement and acceptance. It is foreseen that the follower cities (Mantova, Ludwigsburg, Quy Nhon, Chengdu and Medellin) will validate this methodology developing their own RUPs and integrating them in the City Strategic Urban Planning. The front-runner cities (Valladolid, Liverpool and Izmir) will validate the second level of the methodology, implementing several pilots of integrated NBS in a large scale demonstration action focused on contributing to the main city challenges.



### 1.3 Methodology main components to be validated

Methodology validation is strongly dependent the level of the development reached for the methodology specific components (catalogues, guides) and processes (diagnosis, plan, and implementation). The current level of the developments corresponding the second project-reporting period, and the level of developments associated to the deliveries, see indicated below.

Table 1.1: Methodology components development by project reporting stages.

Methodology Component:	1 <sup>ST</sup> reporting period	2 <sup>ND</sup> reporting period	3 <sup>RD</sup> reporting period	Final Reporting
<b>NBS Catalogue</b> ( <i>URBAN GreenUP D1.1</i> )	√ available	√ available	√ available	√ available
<b>Societal Challenge Catalogue</b> ( <i>URBAN GreenUP D1.2</i> )	√ available	√ available	√ available	√ available
<b>Barriers and Boundaries Guide</b> ( <i>URBAN GreenUP D1.5</i> )	√ available	√ available	√ available	√ available
<b>Diagnosis procedure Guide</b> ( <i>URBAN GreenUP D1.3</i> )	√ available	√ available	√ available	√ available
<b>Baseline Calculation Guide</b> ( <i>URBAN GreenUP D1.4</i> )	√ available	√ available	√ available	√ available
<b>Zoning and Mapping Guide</b> ( <i>URBAN GreenUP D1.6</i> )	√ available	√ available	√ available	√ available
<b>NBS scenarios generation Tool</b> ( <i>URBAN GreenUP D1.7</i> ) <b>with KPIs prioritization criteria Guide</b> ( <i>URBAN GreenUP D1.8</i> )	√ available	√ available	√ available	√ available
<b>Tendering Process Guide</b> ( <i>URBAN GreenUP D1.9</i> )	√ available	√ available	√ available	√ available
<b>Scaling UP Guide</b> ( <i>URBAN GreenUP D1.10 with interim version D1.18</i> )	√ available	√ available	√ available	√ available
<b>Co-creation and Co-development Guide</b> ( <i>URBAN GreenUP D1.11 with interim version D1.19</i> )	√ available	√ available	√ available	√ available
<b>Methodology Guide</b> ( <i>URBAN GreenUP D1.17 with interim versions D1.12, D1.13, D1.14</i> )	√ available	√ available	√ available	On-going

Out of the WP1, the activities focused demonstration (wp2, 3, 4), monitoring and evaluation (wp5), and replication actions (wp6), contribute significantly to the results of the validation.



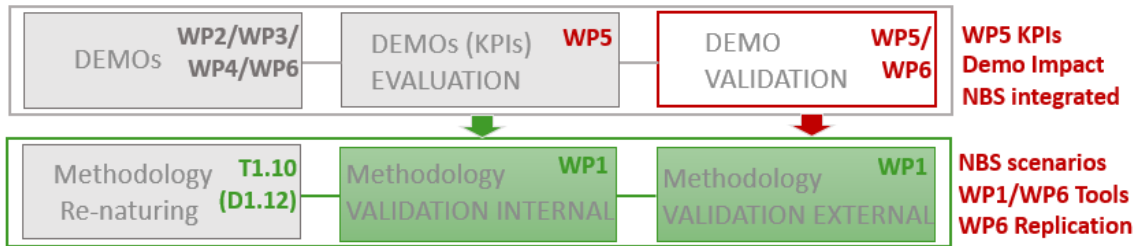


Figure 1.1: URBAN GreenUP validation process from theoretical to empirical

**At the first development level, 1st** reporting period (month 1-month 18), the key methodology catalogues have been developed. The first methodology structure was defined, describing the main methodology components, and input-output links outlined. The demonstration action have started integrating the NBS solutions identified, the implementation process outlined. At this stage, the list of barriers and boundaries for methodology is identified only. The monitoring, and evaluation strategy outlined, and the key performance indicators listed.

**At the second development level, 2nd** reporting period (month 19-month 36), all methodology elements are outlined, but only the crucial elements corresponding city diagnosis and NBS Scenarios definition, are at advance stage. The demo cities initiated their NBS implementations and outlined their monitoring strategies, however the data evaluation is still not available. The cities outlined briefly the lessons learnt from their respective processes.

**At the final development level, 3rd** reporting period (months 37-months 60, extended 72), all methodology elements development reached the advance stage. The demo cities finalized their implementation and run their monitoring and evaluation. The follower's cities drafted their RUP plans and get into the methodology issued (D1.13, D1.14).

## 2 Methodology validation process (update to v1 D1.15)

### 2.1 Validation steps

The URBAN GreenUP Validation Process objective is to guarantee the RUP (Re-naturing Urban Plan) methodology high value and accuracy, allowing the successful City Planning RUP and the NBS smooth implementation and maintenance, contributing to the Climate Change Challenge of the Cities. The base logic to the validation is proposed:

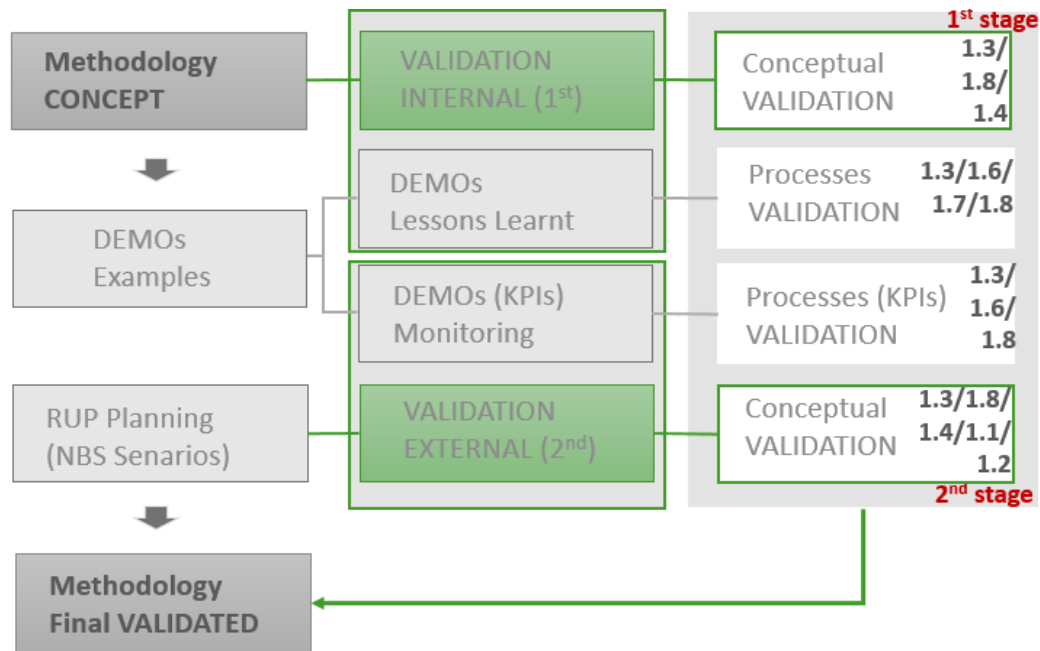


Figure 2.1: URBAN GreenUP validation components

The methodology validation were performed, focussing different methodology aspects:

- **Concept proposed (RUP methodology concept)**, where methodology structure is evaluated, its focus to the procedures, the modular character, its steps, implementation phases, and in continuation, the interlinks between both, the main outputs considered and the supporting tools indicated, finally the stakeholder groups, and the first set to the lessons learnt gathered from real demonstration actions according to the procedures needed.
- **Technical background (NBS Scenarios accuracy)**, thank to results from implementation actions a large scale and fully replicable demonstration actions of NBS accompanied by innovative business models will provide evidences about the benefits of NBS contributing to the creation of new market opportunities for European companies, and fostering citizen insight and awareness about environmental problems and specific city barriers and boundaries. Two European cities will act as followers to strengthen the replication potential of the results ( Ludwigsburg and Mantova) and finally three non-European cities (Medellin, Chengdu and Quy Nhon) will allow to identify the market opportunities for European companies out of Europe and fostering the European leadership in NBS implementation at global level.

- **Implementation background (RUP methodology adoption)**, integration between the lessons learnt during the demo process, the results from the validation method procedures (internal and external), all will give the final product on systematized and validated URBAN GreenUP methodology, close to real and different European cases, situation, characteristics, legal and economic situation. It will be checked the integrated way of solving of various problems of the city RUP maintenance and replication. Finally, the step-by-step guide method proposed will be simplified and checked.

## 2.2 Validation quality

The goal of this part is to discuss and validate the developed methodology, during a systemic process, and involving the relevant stakeholders. The ambition is to provide the deepest and most extensive coverage of expertise and **both theoretical and empirical based improvements.**

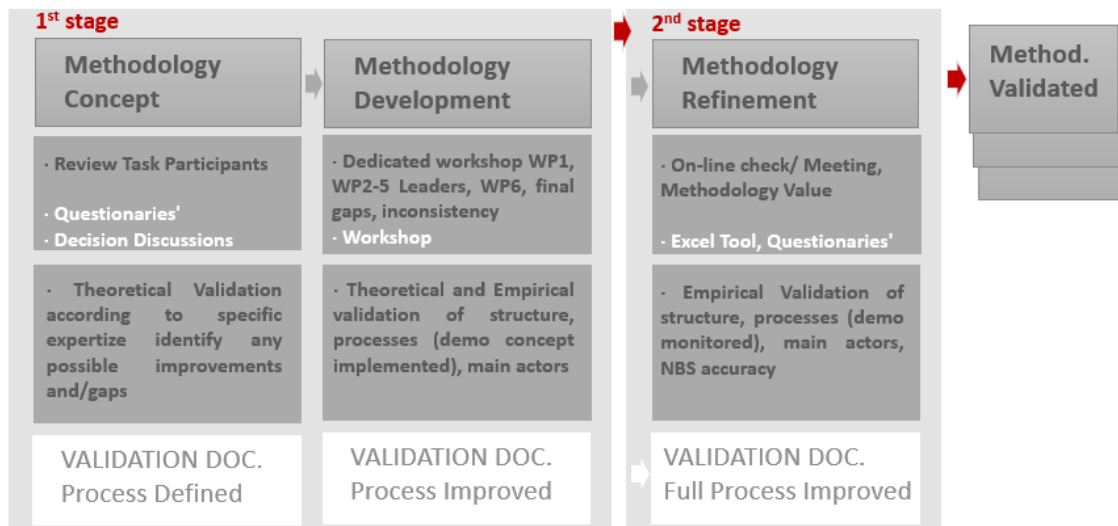


Figure 2.2: URBAN GreenUP validation from internal to external

Firstly, the methodology is validated at qualitative level (theoretical) and then, after the demo execution and evaluation phase, in a quantitative level (empirical).

**The first internal stage** corresponds to Methodology Concept, both theoretical and then empirical validation, divided in two sub-processes on Methodology Concept and Development.

- **Methodology Concept Validation:** the activity consist on reviewing of the draft methodology version in terms of its structure, processes and workflow between different activities and inputs/outputs generated. The objective is to identify the methodology gaps/inconsistences and to apply the adjustments needed. The method used in this phase are questionnaires' and discussions during the regular project calls and meetings. The evaluators are going to be the WP1 Tasks Participants.
- **Methodology Development Validation:** the activity consist on reviewing of the draft methodology version in terms of its structure, processes and workflow but alimented in addition with the lessons learnt from the demonstration process of design and implementation. The objective is to improve the methodology process, and to detail all

its processes and documentation. The method used in this phase is the workshop between different projects WPs. The evaluators are going to be the leaders of the representatives sectors (authorities, industrial, innovation, decision makers...), selected between the project partners.

The **second external stage** corresponds to Methodology Concept Full Design, where process annexes are developed and the demo results from NBS implementations available, indicated as Methodology Refinement. The evaluators in this case are going to be external stakeholders of the project, or other identified as relevant to the URBAN GreenUP Project (SmartCities Leaders, Citizens).

Table 2.1: Validation Progress cross check, methodology components vs project reporting stages.

Project stages:	1 <sup>ST</sup> reporting period	2 <sup>ND</sup> reporting period	3 <sup>RD</sup> reporting period	Final Reporting
Quality steps	Theoretical	Theoretical/Empirical	Empirical	Market Feedback
Methodology Concept	Internal	Internal	External	EC Commission + Integrated Urban Plan Networking
Methodology Development	-	Internal	Internal	
Methodology Design Full	-	-	Internal	

### 2.3 Validation methods

The main objective of URBAN GreenUP is the demonstration of an innovative methodology to renaturing cities through piloting different actions, considering advanced technologies towards the adaptation of the cities to fight against the climate change. The methodology that will be developed and validated will foster the replication of the foreseen actions, at different levels, in the follower cities during the project lifetime. In every moment citizens, and the group of relevant stakeholders, are at the heart of a city, the same take part which solutions to be adopted. As a first methodology step, and once identified the key stakeholders groups and their aspirations, the different techniques for engaging these group were considered, as same, some of them directly adopted for methodology validation.

- **Project Brainstorming (project meetings, calls and workshops)**, to the methodology Diagnosis and Evaluation processes. To perform a good decision, the first approach is to identify the problem. A city needs requirement process will be followed. In all this process, the active participation of the citizens will be assured.
- **Lessons Learnt (questionaries' and workshops)**, through the reports of the key stakeholders. Industry and business partners are essential as technology and



solutions providers. The validation process, apart from industry, will include SMEs, starts-ups and entrepreneurs, but citizens as well along this process to fulfil a shared goal following a collaborative approach.

- **Demo Experience (RUP reporting)**, through the demo cases in Valladolid, Liverpool and Izmir. All the technology-based actions, together with the business models and public procurement schemes, are going to be validated. (RUP reporting)
- **Impact Levels (KPIs reporting)**, to the methodology Evaluation and Replication at EU level. All interventions will be evaluated through rigorous measurement protocols, monitoring programs and evaluation plans to assess the performance of the solutions envisaged. All these analysis taken from technical perspective, but also economical evaluation to assess the feasibility of the proposed technologies.

All validation methods will follow the methodology structure, and a logical process of development, demonstration and validation and refinement of the renaturing methodology.

Table 2.2: Validation method cross check, methodology components vs project reporting stages.

Project stages:	1 <sup>ST</sup> reporting period	2 <sup>ND</sup> reporting period	3 <sup>RD</sup> reporting period	Final Reporting
Method steps	Theoretical	Theoretical/Empirical	Empirical	Market Feedback
Brainstorming	✓	✓	-	-
Workshops	✓	✓	✓	✓
Questionnaire's	-	✓	✓	✓
RUP reporting	-	-	✓	✓
KPIs reporting	-	-	✓	✓

## 2.4 Validation reporting

The background of the methodology developed is to be validated by several experts, at both stages defined. Two main outputs to be generated, according to the validation stage and level of the development of the methodology:

- URBAN GreenUP Methodology Validation Lunched at Conceptual and Development Level Internally (D1.15 First Methodology Validation)
- URBAN GreenUP Methodology Validated at Conceptual and Development Level Internally (D1.16 Methodology Validation Interim)
- URBAN GreenUP Methodology Validated in All its aspects (D1.17 Final Methodology Validation)





Table 2.3: Validation reporting, methodology development vs project reporting stages.

Project stages:	1 <sup>ST</sup> reporting period	2 <sup>ND</sup> reporting period	3 <sup>RD</sup> reporting period	Final Reporting
Methodology Development	D1.12	D1.13	D1.14	Methodology Fully Developed
Methodology Validation	D1.15	D1.16	D1.17	Methodology Fully Validated
Reporting:	√	√	√	Tb completed

The URBAN GreenUP methodology, divided in three development stages, and reported in D1.12, D1.13, D1.14 and D1.17 methodology fully developed and validated. The idea was to maintain the methodology report continuously updated with all the project outcomes and lessons learnt coming from the demonstration and replication actions executed along the project. The final version of the methodology, and externally validated, will be delivered at the end of the project (M60).

## 2.5 Validation committee

At first stage of internal validation, the project partners and experts in different disciplines, which will take part in validation process.

- Cities public authorities**, the main actors, assuming mayor responsibilities and workload according their commitment. Front-runners (Valladolid, Liverpool and Izmir) are cities advanced in Green Infrastructure and renaturing strategies, as an authority and expert to legalisation issues, will provide comments to those matters at regional but also European level.  
 Five followers cities, with a very good geographical, social, economic and climatic complementarity, acting as a followers (Mantova, Ludwigsburg, Medellin, ChengDu and Quy Nhon), will provide comments to the processes on replication plan and particular challenges for those regions.
- European Industry**, big companies and SMEs involved as representative, Acciona, Singular Green and GMV in Spain, DEMIR and Bitnet in Turkey and Community Forest in UK represent all together the main targeted expertise, will ensure the validation of the renaturing ecosystems at local levels and functionality of the main methodology processes. CHD, as a main body managing water issues in Valladolid, what will provide high expertise in water challenges.



- **Knowledge entities**, CARTIF, CENTA, Univ. of Liverpool, Ege Univ, Izmir Institute of Tech, Leitat, U.Bocconi, RMIT and SPI, will provide an expertise from technical implementation to the evaluation processes.

**At second stage** of external validation, the project non-linked partners are going to be defined to evaluate the main processes of the methodology, and to propose the improvements of their main catalogues and guides.

- **City methodology experts**, smart city projects like Remourban, Cityfied, Smartencity, R2Cities...other potential Smarcity Projects or platforms
- **Citizens**, public view to the actions of URBAN GreenUP in their city

The Front-runner and Lighthouse cities, as the main methodology clients, will confirm the final methodology value and accuracy as well.

In the present document, some key questions methodology aspects have been listed, with the objective to guide the validation improvement of the methodology accuracy and value. After every validation stage, as a result, the additional inputs and comments are to be included into the methodology descriptions and structure **(See Annex 4.1.1)**.



### 3 Methodology validation exercises

#### 3.1 Methodology background

At this stage of the project (M40) the second report on the methodology development was presented. This report (D1.13) extends the methodology and structure drafted initially in report D1.12 (M20). In this second report, the WP1 methodology structure has been revised to align fully with the one proposed in WP6 Replication. The concept was validated internally with the project partners through the joint WP1 and WP6 workshop.

The methodology report D1.13 explains the different phases and steps of the methodology. It indicates clearly the objectives of each of actions needed and list all of the outputs considered. It outlines the methodology and defines the specific concepts used in this process, which includes a step-by-step guide to the main processes involved in the methodology. All the processes and actions, when linked together, enable cities to meet the main objective, which is Re-Naturing urban areas with NBS. **To support the validation process, and easily get into the methodology different steps and actions, the executive document report was prepared (See Annex 4.1.2 updated with D1.14).**

Table 3.1: Graph to the methodology main components by phases, steps, actions and RUP chapters (Source: URBAN GreenUP).





### 3.2 Validation process adopted

The methodology consists of **18 actions**, organized in **phases (1- 3)**, and **strategic steps (A- F)** that leads to the creation of the “Renaturing Urban Plan” (RUP) of the city. The phases deal with the maturity of the objective of the re-naturing in time (from present to future); while the steps develops the specific, technical components of the methodology process (from engagement to plan).

Table 3.2: Methodology structure under validation presented by phases and steps.

Actions organized at horizontal axis by phases:		Actions organized at vertical axis by steps:	
<b>i.</b>	<b>Understand your present</b>	A.	Engage and explore
<b>ii.</b>	<b>Choose your future</b>	B.	Diagnose
<b>iii.</b>	<b>Write the actual plan</b>	C.	Visualize
<b>iv.</b>	<b>Implement and monitor the actions</b>	D.	Plan
		E.	Inform and co-create

Depending on the current status of each municipality, the point of departure can vary as some methodological steps might have been previously completed as part of other planning processes. In addition, the way of following of the methodology by different re-naturing team may vary. They may choose to follow it vertically or mainly in horizontal order. One of the important analysis consist in evaluation of the current situation regarding this process.

During the methodology development process different actions have been implemented:

Table 3.3: Validation progress achieved by project reporting periods.

	Validation Progress	Stakeholders Involved	
<b>1<sup>st</sup></b>	The validation process is defined, in division to internal and external, the guide to the methods and the stakeholders groups are indicated.	Internal groups.	stakeholders
<b>2<sup>nd</sup></b>	The validation of the methodology started, applying the internal meeting-calls, workshops, and surveys at internal level, improving the process.	Internal groups.	stakeholders
<b>3<sup>rd</sup></b>	The validation of the methodology is completed at the internal level, and may be lunched to the external publics. The strategic actions may be taken, including the workshops and surveys at external level, improving the full methodology process.	External groups.	stakeholders
<b>Final Review</b>	The methodology development and validation is completed.	EC Commission, Market feedback	



### 3.3 Validation methods adopted

The interactive session where cities worked with the joint WP1:WP6 methodology for RUP development, engaging directly with key steps of the process and sharing their experiences and learn from each other. The discussion allowed the improvement of the methodology structure, accuracy, definitions used, the same it concluded with the validation of the one common URBAN GreenUP methodology vision.

The methods selected for validation at this stage are:

**Project Meetings Validation Sessions, Calls:** During the project WPS1, regular monthly calls, where methodology development aspects discussed and agreed.

**Project Workshops:** The WP1 validation workshops (in link to other WPs 2-4 demo, 5 – monitoring, 6 – replication), according the methodology crucial aspects (concept and outline). The workshop included the exercise activities, brainstorming, decision voting.

**Accuracy questionnaires:** The key questions summaries prepared, containing list of question and answers voted and evaluated, in reference to the Methodology Concept and Structure, assessed thanks to lessons learnt in Demo Design process and implementation.

**Experiences Reports Demo Evaluation (KPIs):** on-line questionnaires, or/and telephone questionnaire in reference to the demo evaluated (KPIs) and their impact as well as demo Interventions (Public Votes).

**Project Workshops:** The WP1 validation workshops (in link to other WPs 7 and 8) concerning the exploitation face of the methodology.

The validation progress is summarized into the table in continuation.



Table 3.4: Validation Progress cross check, methodology components vs project reporting stages.

Project stages:	1 <sup>ST</sup> reporting period	2 <sup>ND</sup> reporting period	Final Reporting
Quality steps	Theoretical	Theoretical/Empirical	Market Feedback
Methodology Concept	Calls/Meeting Brainstorming of methodology main components, inputs-outputs	Workshop session for WP1:WP6 methodology alignment Short exercise to diagnosis step.	
Methodology Development	-	Workshop session for WP1, D1.13 Guide Validation. Methodology Surveys. Quick survey to methodology structure and outline proposed. Extended survey to methodology contents by steps and actions.	European commission report
Methodology Design <b>Full</b>	-	-	Meetings with agent 8 to improve the presentation of the methodology. A flyer and new schemes were created



## 4 Validation conclusions

The document explains the URBAN GreenUP methodology validation principles and presents its possible methods and focus. In continuation, it provides the validation specific concept definition and includes the validation results from each activity realized. The validation proves the URBAN GreenUP methodology processes proposed and specifies the most important components. It also proposes the validation Committee, linking this one to the activities on methodology social aspects, in continuation improving the same all methodology replication aspects given.

At that level of validation (D1.13), it is related the methodology Concept and Development, allowing both theoretical and then empirical check among the project partners.

The total 6 Cities taken part into the different surveys and activities prepared. The cities that are represented are Mantova, Quy Nhon, and Medellin, Valladolid, Liverpool and Izmir. At that level the developments from Chengdu and Ludwigsburg still are on-going, and the data is not available. The cities still covering the range of the different world climates, from Mediterranean warm/cool summer (Csb-EU): Valladolid; Oceanic Marine West Coast (Cfb-EU): Liverpool; Mediterranean hot summer (Csa-EU): Izmir; Tropical monsoon (Am- S.AMERICA): Medellin; Mediterranean hot summer (Csa-EU): Mantua according to Köppen-Geiger Climatic Zones Classification, and representing different urban and socio-economic profiles according to main barriers consideration, and city urban structure. This is important for guarantying of the RUP methodology future scaling up and replication potential.

The workshops were executed in form of interactive sessions where cities worked with the methodology concept developed under WP1, but also crossed the first insights coming out the first RUP implementations performed under the WP6. The data gathered allowed the deep analysis of the city's current level of preparation for RUP adoption, the same allowed the preparation of the teaching program still, and methodology proper material preparation.

The valuable expertise and lessons learnt gathered in this exercise allowed the methodology update in terms of its structure, accuracy, definitions used, concluding with a renewed concept of RUP.

The final external validation involves the external public, which is performed once the project methodology is fully developed (D1.14). The decision was taken to continue looking for a methodology outline friendlier and simplified at that time. The workshops were executed in form of interactive sessions where cities worked with the methodology concept renovated and crossed between WP1, WP6, and WP8 graphic phase.

At that level of validation, it is related to the methodology Concept and Development Renovated, allowing both theoretical and then checked among the project partners but also including the external publics, like URBAN GREENUP cluster cities.

The total 9 Cities taken part in the different surveys and activities prepared. The cities that are represented are Lviv, Ukraine; Vila Franca de Xira, Portugal; Hammam-Lif, Tunisia, Loannina, Greece, Santa pola; Athienou, Cyprus; Thessaloniki, Greece; Oslo, Norway; Budaest 12th district, Hungary. The cities still covering the range of the different European climates but also





the different administrative- legal scenarios, what at that level of the development is needed to allow the validation of the last implementation phase of the methodology.

The results indicate the level of understanding of the RUP methodology is satisfying, the cities easily moved under different methodology stages, find the methodology accurate to be addressed their city particular challenges, are able to identify easily the main stakeholder groups, and are aware about the need to consider the coordination group under their municipality structure, and including the experts from technical, business academia but also politicians side, and have quite a clear idea on how to involve them under the process, and recognizing the support of the RUP methodology materials prepared. The legal and finance constrains still seems to be the key aspects to be addressed in methodology, the main financial organism to promote the NBS implementation locally is still European Commission funds, but with some examples to the local funds might be activated for this need.



## 4.1 Annexes

### 4.1.1 Key Questions Aspects List.

Table 4.1: Key Questions Aspects List – Validation 1<sup>st</sup> Stage – Methodology Concept

#### 1st Stage - Internal

<b>Methodology Concept</b>		
<b>· Output: Validation Document to Method. Process Defined</b>		
<b>Methodology Components to be Validated</b>	<b>Method/Doc</b>	<b>Evaluators</b>
<b>·General Structure</b>		
<ul style="list-style-type: none"> <li>.. Components Missing, to be Delayed</li> <li>.. Processes Considered</li> <li>.. Processes Inputs Accuracy</li> <li>.. Processes Outputs Accuracy</li> <li>.. Methodology Workflow</li> <li>.. Other</li> </ul>	Questionnaires/ Discussion/ Decisions	WP1 Task Leaders, WP1 All
<b>·Gaps Identification and Possible Improvements</b>		
<ul style="list-style-type: none"> <li>.. Conceptual and Structure</li> <li>.. Graphic, Names and Processes Systemized</li> <li>.. Other</li> </ul>	Questionnaires/ Discussion/ Decisions	WP1 All
<b>·Partner Role Identification</b>		
<ul style="list-style-type: none"> <li>.. Processes vs Roles</li> <li>.. Missing Roles</li> <li>.. Management Structure</li> <li>.. Other</li> </ul>	Questionnaires/ Discussion/ Decisions	WP1 All
<b>·Validation Process and Workshop Objectives Results</b>		
<ul style="list-style-type: none"> <li>.. Pending Aspects for next stage validation</li> <li>.. Main Actors</li> <li>.. Other</li> </ul>	Questionnaires/ Discussion/ Decisions	WP1 All



Table 4.2: Key Questions Aspects List – Validation 1<sup>st</sup> Stage – Methodology Development

<b>Methodology Development</b>		
<b>·Validation Document Methodology Process Improved</b>		
<b>Methodology Components to be Validated</b>	<b>Method/Doc</b>	<b>Evaluators</b>
<b>· Main Aspects of Methodology to be Improved</b>		
· Components Missing, to be Delayed	Workshop Exercise/ Discussion/ Voting	WP1, WP2-5, WP6
· Sub-Processes Considered		
· Sub-Processes Inputs Accuracy		
· Sub-Processes Outputs Accuracy		
· Processes and Sub-Processes Detailed Workflow		
· Methodology Tools Considered		
· Other		
<b>· Restructure the Methodology Workflow</b>		
· Demo Design Aspects Lessons Learnt	Workshop Exercise/ Discussion/ Voting	WP1, WP2-5, WP6
· Demo Implementation Aspects LL		
· Demo Legal Construction Aspects LL		
· Demo Economic Aspect LL (Catalogues NBS)		
· Demo Evaluation Aspects LL (KPIs NBS Considered)		
· Demo Evaluation Aspects LL (CC considered)		
· Other		
<b>·Main Actors Identification</b>		
· Demo Replication Aspects (Social Involvement)	Workshop Exercise/ Discussion/ Voting	WP1, WP2-5, WP6
· Other		
<b>· Restructure the Methodology Phasing (Demo)</b>		
· Tendering Models	Workshop Exercise/ Discussion/ Voting	WP1, WP2-5, WP6
· Organisational Models		
· Business Models		
·Other		



Table 4.3: Key Questions Aspects List – Validation 2<sup>nd</sup> Stage – Methodology Refinement**2nd Stage - External**

<b>Methodology Refinement</b>		
<b>· Validation Document Full Process Improved</b>		
<b>Methodology Components to be Validated</b>	<b>Method/Doc</b>	<b>Evaluators</b>
<b>· Main Aspects of Methodology to be Improved</b>		
·· Components Specification	On-line/Telephone	Citizens, Craft
·· Sub-Processes Specification	Questionaries/	People, Smart Cities
·· Sub-Processes Inputs Specification	Dissemination	Experts
·· Sub-Processes Outputs Specification	Meeting	
·· Detailed Workflow Specification		
·· Tools Considered Specification		
·· Other		
<b>· Restructure the Methodology Workflow</b>		
·· Demo Evaluation Aspects LL (Catalogues NBS)	On-line/Telephone	Citizens, Craft
·· Demo Evaluation Aspects LL (Implementation Problems)	Questionaries/	People, Smart Cities
·· Demo Evaluation Aspects LL (Replication Opportunities)	Dissemination	Experts
·· Other	Meeting	
<b>· Main Actors Identification</b>		
	On-line/Telephone	Smart Cities Experts
·· Demo Replication Aspects (Social Involvement)	Questionaries/	
·· Other	Dissemination	
	Meeting	
<b>· Restructure the Methodology Phasing (Demo)</b>		
·· Tendering Models	On-line/Telephone	Smart Cities Experts
·· Organisational Models	Questionaries/	
·· Business Models	Dissemination	
·· Other	Meeting	



## 4.1.2 Methodology Executive Summary

### URBAN GreenUP cities engagement

The cities compromise to create the local RUP plans.

*The cities are facing currently different situations, starting with cities of **Liverpool (UK)**, **Izmir (Turkey)**, **Valladolid (Spain)**, which 'leading' the NBS real implementations currently, following with cities of **Mantova (Italy)**, **Ludwigsburg (Germany)**, **Medellin (Colombia)**, **Changdu (China)**, and **Quy Nhon (Vietnam)** which preparing their local Re-naturing Urban Plans at the planning level.*

**The aim of this report is to provide the URBAN GreenUP cities with a useful guide to the re-maturing methodology and its process.** The Public Authorities of the local municipality can initially take the role of a leader and coordinate all of the re-naturing actions, in parallel linking them to the local goals established, identifying the team, its communication channels, and taking care about the proper dissemination and evaluation of all the results. The guide is created with this audience in mind.

The method produces a RUP outline, which should be fully integrated in the city's urban planning and land use planning processes. The method also enables cities to specify a set of NBS to mitigate one or several societal challenges, ready to the tendering process. The methodology will support the direct implementation of one or a set of NBS in city or/a specific area of the city addressed the specific challenges in a more effective way.

The document explains **the different phases and steps** of the methodology. It indicates clearly **the objectives of each of actions needed** and **list all of the outputs considered**. It includes a **step-by-step guide to the main processes** involved in the methodology. **All the processes and actions, when linked together, enable cities to meet the main objective, which is Re-Naturing urban areas with NBS.**

- **What is the purpose?** – Development of the local (RUP) Renaturing Urban Plan answering the city challenges established.
- **What is new?** – The focus on NBS, projects and initiatives, as an integral part of the plan and a solution to local city barriers and functions.
- **How to focus your actions?** – Linked to the current city strategy and planning, in specific city environment, traditions, local character.
- **What should be the process?** – Cities develops the RUP plan being supported by easy to follow step-by step procedures and tools.
- **Who should be involved?** – City re-naturing key partners including citizens.
- **How far should be considered?** – This is an iterative process starting with assessment, and adjusting responses based on the lessons learnt. Proper monitoring, evaluation, and appropriate timing should be established in the planning process.

***At this stage of the project (M40) we present the results of the second development stage on the methodology development (from a total of four). This report (D1.13) extends the methodology and structure drafted initially in report D1.12 (M20).***



## URBAN GreenUP re-naturing strategy

### A journey towards the Cities Re-naturing with Nature Based Solutions (NBS)

To support re-naturing journey of the cities, URBAN GreenUP developed a **systematic strategy to reach high level of impacts through the use of NBS**. It aims to provide an **integrated methodology to support the Urban Planning of NBS at the local city level**, as a powerful strategy to **contribute to increase sustainability, addressing a range of societal challenges**.

URBAN GreenUP introduces the concept of **Renaturing Urban Planning (RUP)**, which **incorporates NBS alongside** the traditional urban planning aspects **to generate a more sustainable approach to Urban Planning**. In parallel to traditional planning processes, the methodology supports cities in the direct implementation of one or more NBS in a specific area or across the city to address specific societal challenges in a more effective and ecologically sustainable way.

The **social aspects** are considered one of the main key elements, and **the economic issues** complementing the environmental one, fostering **the creation of good business cases to solve the general lack of budget of the public administration**. To achieve good outcomes, a **co-creation approach is adopted in the definition of the methodology**, from the definition and design of the technical solutions to the final assessment. This ensures that NBS are adapted to the local context, that they address local priorities and needs of stakeholders, and work within the opportunities and constraints of the local context.

With this final objective for European cities, and wishing to spread the re-naturing good practices across the World, the following guide to the strategy has been developed.

## What is the real value of re-naturing in your city?

### Nature Based Solution (NBS) definition adopted

The methodology outlined in this report provides a way to implement Nature-Based Solutions (NBS) in urban areas, “solutions that are inspired and supported by nature (Cohen-Shacham et al., 2016), which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. (Maes J et al., 2015)” (Source: Sustainability 2020).

The governance of urban areas is directly linked to the decisions being made regarding economic and social stability which are all tied to the inclusiveness, functionality and quality of life of urban landscapes (Kabisch et al., 2016). **NBS are offered as a mechanism to promote resilience within socio-political discussions of landscape and urban development**.

But, what is the real value of re-naturing in my city? How to establish the goals? How can NBS be designed and implemented? What is the step by step action plan that can help you to achieve the goals you have in your city? This document addresses these questions, and is directed toward cities who are developing plans to re-nature their cities through the use of NBS.

### Why I am doing this? How to consider the value of NBS?



To begin to answer these questions, let's try to answer the opposite question, what would be a potential scenario of growth for our city without consideration of re-naturing? **How would your city address challenges related to climate mitigation and adaptation? How would you address public health and well-being, air quality, urban regeneration and space management? What about the potential for a better economy?** The nature-based solutions (NBS) are solutions to a number of societal challenges and not only climate change issues, but also water management, coastal resilience, urban green space management, air/ambient quality, urban regeneration, participatory planning and governance, social justice and social cohesion, public health, economic opportunities and green jobs (Source: based on classification created by the EKLIPSE initiative).

**This guide will help you with the process on exploration, diagnosis and evaluation, as well with the definition of the impact that process on re-naturing may have on your city. Using NBS as a means of climate change adaptation and to mitigate carbon emissions can provide more resilient responses than conventional approaches. Improving risk management and resilience using NBS can lead to greater benefits than conventional engineered methods and offer synergies in reducing multiple risks.**

### How to read the methodology structure?

The documents supporting it.

Urban GreenUP methodology is developed as a modular procedure in order to achieve a clear, easy to follow method, a **step-by-step procedure** for re-naturing urban areas.

List of Catalogues and Guides will help to specify the particular methodology components:

- NBS Catalogue (*URBAN GreenUP D1.1*)
- Societal Challenge Catalogue (*URBAN GreenUP D1.2*)
- Diagnosis procedure Guide (*URBAN GreenUP D1.3*)
- Baseline Calculation Guide (*URBAN GreenUP D1.4*)
- Barriers and Boundaries Guide (*URBAN GreenUP D1.5*)
- Zoning and Mapping Guide (*URBAN GreenUP D1.6*)
- Tendering Process Guide (*URBAN GreenUP D1.9*)
- Scaling UP Guide (*URBAN GreenUP D1.10*)
- Co-creation and Co-development Guide (*URBAN GreenUP D1.11*)

List of the Tools

- NBS scenarios generation Tool (*URBAN GreenUP D1.7*) with KPIs prioritization criteria Guide (*URBAN GreenUP D1.8*)
- Co-creation and Co-development Tools (*URBAN GreenUP D1.11*)

**RUP – Re-naturing Urban Plans** – which incorporates the urban planning aspects directly related with nature-based solutions as major strategy to fight against climate change. It will be part of



the Sustainable Urban Planning and totally integrated with the urban strategy for dealing with the main city challenges.

**Methodology Component** – All components needed for methodology developments, those could be activities, but also, catalogues, guides, decisions.

**Methodology Processes** – methodology activities that analyse/ define/ evaluate the methodology concept, and create corresponding outputs, in many cases, basing also on inputs from different activities.

**Methodology Procedure** – methodology output related to the systemized step-by-step activity for Re-naturing Methodology Implementation.

**Input** – Information coming from other project processes, or external, not developed in the project but needed for methodology definition.

**Output** – Information created in a project process, could be an input to other project process.

**Workflow** – relation among different project processes and components. It also indicates the correct direction to implement the methodology.

**Zoning** – The term “zoning” has a number of meanings and can often be used to identify areas that have statutory policy in place for their development and management. In other cases, zoning can be a generic term for identifying “areas of focus” or interest that have no statutory implications. In this document the term zoning is used to refer to targeting areas for NBS.

**Assets** – green infrastructure that is delivering a function or functions in an area of identified need. For example, woodland that is intercepting and storing water in an area of flood risk is a water management asset; it is providing functions that help to reduce the risk of flooding.

**Pinch Points** - Area where a need has been identified and where green infrastructure could provide part of the solution to address the need but at present is not.

**Co-creation** - an advanced, modern form of community engagement.

**Scaling up** – The term “scaling up” in its pure definition it is to make something larger in size, amount etc. In this document the term “scaling up” referring, the set of processes, methodology based, providing a larger scale of implementation of NBS strategies. The viability of the scaling up, will be identified according to how, “Credible, Relevant, Relative advantage over existing practices have, Easy to adopt, Compatible and Able to be tested” the methodology is.





## Who is it for the RUP planning?

*“Citizens are at the heart of a city and also at the heart of the challenges cities face through on-going urbanisation and demographic mix, consumption habits as well as increasing expectations as regards quality of life. Citizens must therefore also be at the heart of the solution” (Source: European Innovation Partnership on Smart Cities and Communities - Strategic Implementation Plan, 2013).*

Co-creation is an advanced, modern form of community engagement. Collaboration of diverse stakeholders such as governments, NGOs, scientists, interest-groups, philanthropists and charities are likely to enhance the social and environmental outcomes of NBS. Involving of the residents, business and other groups of society taking part in the development and implementation of your Renaturing Urban Plan can also greatly improve its chances of success. **When citizens are engaged in shaping their public spaces, services, and there is a true culture of empowerment and co-creation between citizen and local authorities**, then NBS are thought to be more effective in addressing societal challenges. **Citizens are central stakeholders because they not only help to build the cities and the services to better focused their (users) interest, but also will automatically protect the environment once created.** Collaboration of diverse stakeholders such as governments, NGOs, scientists, interest-groups, philanthropists and charities are likely to enhance the social and environmental outcomes of NBS.

**As a first step, and once identified the key stakeholder groups and their aspirations, the different techniques for engaging these groups need to be considered. The choice of each method or technique should come from an examination of approaches that are likely to be beneficial for the stakeholders as well as supporting the desired decision or co-creation outcome.**

The team involved in developing the RUP can then start to define the main targets for the city, and to translate them into the language of challenges, and select the ones that will most positively affect the city environment and its habitants. The process will allow the identification of the different nature-based solutions that are the best option to the city environmentally, socially, technically and economically.

## Once proposed the city re-naturing objective, you can start!

**Remember, the URBAN GreenUP methodology process is referring to the strategic planning framework of the city**, with the aim to introduce the re-naturing concept by means of NBS, towards the EU sustainable politics. **It enables the city administration to perform an effective step by step RUP urban action plan, and once defined, it will be followed by project ‘design’ stage and real intervention and assessment ‘project’ stage.**



The methodology consists of **18 actions**, organized in **phases (1- 3)**, and **strategic steps (A- F)** that leads to the creation of the “Renaturing Urban Plan” (RUP) of the city. The phases deal with the maturity of the objective of the re-naturing in time (from present to future); while the steps develop the specific, technical components of the methodology process (from engagement to plan).



Depending on the current status of each municipality, the point of departure can vary as some methodological steps might have been previously completed as part of other planning processes. In addition, the way of following of the methodology by different re-naturing team may vary. They may choose to follow it vertically or mainly in horizontal order. One of the important analysis consist in evaluation of the current situation regarding this process.

The re-naturing process followed in a particular city will depend on a number of factors. For example, it will vary depending on the specific structure of the municipality, e.g. the execution of the re-naturing plan, and its different phases, steps and actions, can be associated to different departments of municipality, or selected multidisciplinary groups, supported by key experts or a team leader (RUP coordinator). In addition, the interactive and co-creation activities between them established will support the coherence between all the actions, its outputs and inputs needed.

**In this document, the methodology is described following the vertical order, and the action plan to RUP is described according to the results achieved in each methodology step (Outputs from A-F).**

**The names and contents proposed for the chapters are:**

- STEP I. Understand Your Present
  - Identify and involve stakeholders (1.A.)
  - Understand your needs & capacity (1.B.)
  - Map challenges (1.C.)
  
- STEP II. Choose Your Future Aspirations
  - Prepare for co-delivery (2.A.)
  - Choose your “city” targets (2.B.)
  - Evaluate NBS scenarios and select one (2C)
  - Set spatial priorities (2.D.)
  
- STEP III. Write the Actual Plan
  - Establish Baselines and KPIs (3.C.)
  - Choose how success will be monitored (3.D.)
  - Publish and promote RUP (3.E.)
  
- STEP IV. Implement and monitor the actions
  - Integration into the Council’s Urban Plans (4.C.)
  - Define budget, roles, and responsibilities (4.D.)
  - Assess lessons learnt and validate the strategy (4.E.)

All the descriptions contains the indication to the potential helping tools, and most important tips and links.



The methodology proposes **the outputs (phase and step linked)** to be delivered once you have completed the specific action. The link between the different actions is indicated in detailed in D1.13 below the section **List the Action/s linked**, which describes the Action Inputs and Outputs. The supporting tools, in preparation of the outputs of the step B. Explore, step C. Diagnose, Step D. Visualize, are listed.

STEP 1 UNDERSTAND YOUR PRESENT	STEP 2 COOSE YOUR FUTURE	STEP 3 WRITE THE ACTUAL PLAN	STEP 4 IMPLEMENT AND MONITOR THE ACTIONS	
<p><b>1.A. IDENTIFY AND INVOLVE STAKEHOLDERS</b></p> <ul style="list-style-type: none"> <li>-List of key stakeholder groups</li> <li>- List of capabilities, interest, relationships in each group</li> </ul>	<p><b>2.A. PREPARE FOR CO-DELIVERY</b></p> <ul style="list-style-type: none"> <li>-Co-creation plan</li> </ul>	<p style="text-align: center;"><b>ENGAGE AND EXPLORE</b></p>		
<p><b>1.B. UNDERSTAND YOUR NEEDS AND CAPACITY</b></p> <ul style="list-style-type: none"> <li>-The city re-naturing goal</li> <li>-City profile</li> <li>-1st kick off City Workshop</li> </ul>	<p><b>2.B. CHOOSE YOUR "CITY" TARGETS</b></p> <ul style="list-style-type: none"> <li>-List of city challenges and sub-challenges</li> </ul>			<p style="text-align: center;"><b>DIAGNOSE</b></p>
<p><b>1.C. MAP CHALLENGES</b></p> <ul style="list-style-type: none"> <li>-Key focus areas for NBS</li> </ul>	<p><b>2.C. EVALUATE NBS SCENARIOS AND SELECT ONE</b></p> <ul style="list-style-type: none"> <li>-NBS Scenario Tool</li> </ul>	<p><b>3.C. ESTABLISH BASELINES AND KPIS</b></p> <ul style="list-style-type: none"> <li>-Plan for collecting baseline data across a setoff indicators</li> </ul>	<p><b>4.C. INTEGRATION INTO THE COUNCIL'S URBAN PLANS</b></p> <ul style="list-style-type: none"> <li>-List of the main constraints to public procurement</li> <li>-Funding opportunities</li> <li>-Outline to the integration of the RUP methodology into the Municipality Planning</li> </ul>	
<p style="text-align: center;"><b>VISUALIZE</b></p>		<p><b>2.D. SET SPATIAL PRIORITIES</b></p> <ul style="list-style-type: none"> <li>List of green assets and pinch points</li> </ul>	<p><b>3.D. CHOOSE HOW SUCCESS WILL BE MONITORED</b></p> <ul style="list-style-type: none"> <li>-KPIs Guide</li> <li>-KPIs prioritization for NBS Tool</li> </ul>	<p><b>4.D. DEFINE BUDGET, ROLES, AND RESPONSIBILITIES</b></p> <ul style="list-style-type: none"> <li>-Definition of internal roles and responsibilities</li> <li>-Co-create a Local Communication plan with your stakeholders</li> <li>-Financial plan, innovative financial tools, annual budget</li> </ul>
		<p style="text-align: center;"><b>PLAN</b></p>		<p><b>3.E. PUBLISH AND PROMOTE RUP</b></p> <ul style="list-style-type: none"> <li>-Promotion among the stakeholders</li> <li>-Validation of the early list of NBS</li> <li>-Write the RUP plan</li> </ul>
<p style="text-align: center;"><b>INFORM AND CO-CREATE</b></p>				



The URBAN GreenUP project includes **the tools and guides that supporting the methodology process**, and help in the development of the outputs in actions 1B, 2B, 1C, 2C, 3C, 3D, 3A.

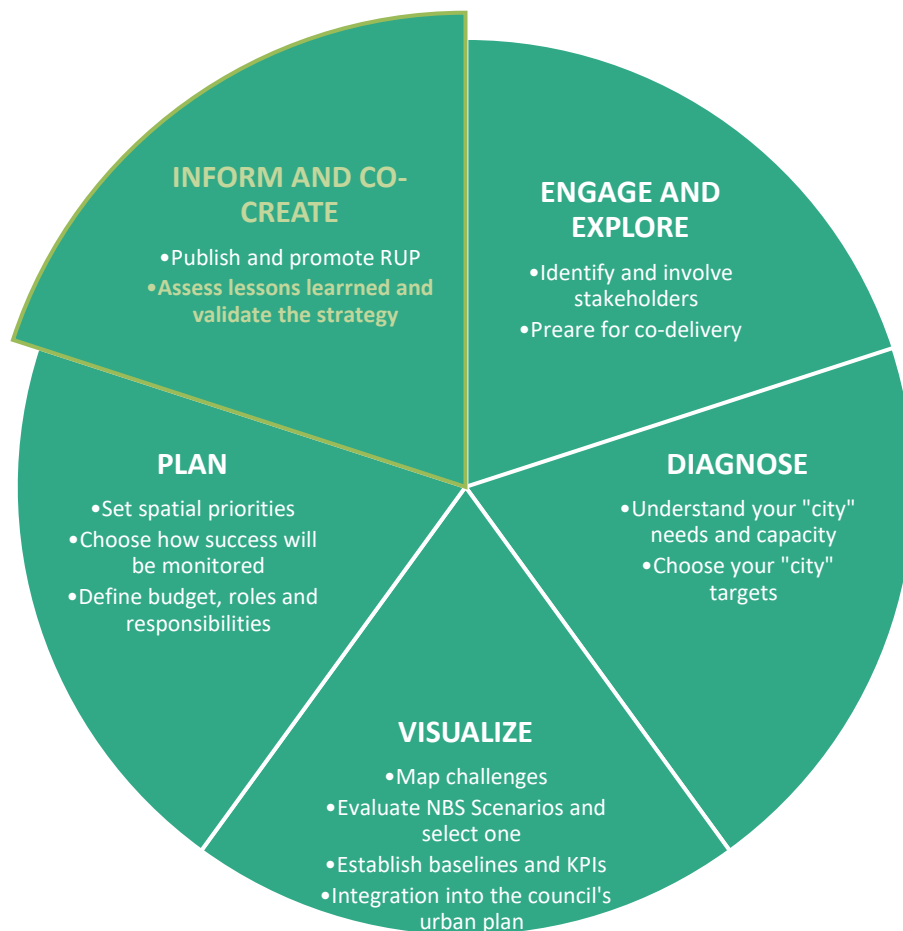
STEP 1 UNDERSTAND YOUR PRESENT	STEP 2 COOSE YOUR FUTURE	STEP 3 WRITE THE ACTUAL PLAN	STEP 4 IMPLEMENT AND MONITOR THE ACTIONS
<p><b>1.A. IDENTIFY AND INVOLVE STAKEHOLDERS</b></p> <p>-Output 1A-1 -Output 1A-2 Tool related: Co-Creation Toolkit (D1.19)</p>	<p><b>2.A. PREPARE FOR CO-DELIVERY</b></p> <p>-Output 2A-1 Tool related: D1.19 Co-Creation</p>	<p><b>ENGAGE AND EXPLORE</b></p>	
<p><b>1.B. UNDERSTAND YOUR NEEDS AND CAPACITY</b></p> <p>-Output 1B-1 Tools related: 1st kick off Workshop of the city (D1.3) SWOT analysis (D1.3)</p>	<p><b>2.B. CHOOSE YOUR "CITY" TARGETS</b></p> <p>-Output 2B-1 Tools related: URBAN GreenUP Societal challenges Catalogue (D1.2)</p>		
<p><b>1.C. MAP CHALLENGES</b></p> <p>-Output 1D-1 Tools related: GvSIG QGIS GeoServer</p>	<p><b>2.C. EVALUATE NBS SCENARIOS AND SELECT ONE</b></p> <p>-Output 2C-1 Tool related: URBAN GreenUP NBS Scenario Tool (D1.7)</p>	<p><b>3.C. ESTABLISH BASELINES AND KPIS</b></p> <p>-Output 1E-1 Tool related: Climate change catalogue (D1.6)</p>	<p><b>4.C. INTEGRATION INTO THE COUNCIL'S URBAN PLANS</b></p> <p>-Output 3B-1 -Output 3B-2 -Output 3B-3 -Output 3B-4 Tool related: Gidelines to tendering process specification (D1.9)</p>
<p><b>PLAN</b></p> <p>-Output 2D-1 Tool related: Graphic of assets and pinch points</p>		<p><b>3.D. CHOOSE HOW SUCCESS WILL BE MONITORED</b></p> <p>-Output 2E-1 Tool related: NBS Scenario Tool (D1.7)</p>	<p><b>4.D. DEFINE BUDGET, ROLES, AND RESPONSIBILITIES</b></p> <p>-Output 1F-1 -Output 1F-2 -Output 1F-3 Tool related: URBAN GreenUP info channel (D1.11)</p>
		<p><b>3.E. PUBLISH AND PROMOTE RUP</b></p> <p>-Output 2F-1 Tools related: Stakeholder's database Local communication dissemination plan Social networks Local newspaper, TV, radio</p>	<p><b>4.E. ASSESS LESSONS LEARNT AND VALIDATE THE STRATEGY</b></p> <p>-Output 3A-1 URBAN GreenUP NBS Selection Tool</p>
<p><b>INFORM AND CO-CREATE</b></p>			



## How to maintain the methodology over time?

The role of evaluation actions and assessment of lessons learnt.

This step-by-step methodology is not conceived as linear process, but as circular one. The step A (Engage and co-create step) is considered at the beginning and at the end of vertical actions.



### Scaling up for NBS

**URBANGreenUP applies the term "scaling up" the set of processes, methodology based, providing a larger scale of implementation of NBS strategies.** You may follow the guide according to the specific methodology **Action 3E Prepare the upscale plan** set of specific scaling up procedures of evaluation of economic, technical, social and environment matters in different city scales and the way in which a successful scaling up will be done. **Its viability of the scaling up, will be identified according to how, "Credible, Relevant, Relative advantage over existing practices have, Easy to adopt, Compatible and Able to be tested" the methodology is.**

The information generated will allow the calculation for the KPI'S corresponding city baselines (NBS based) and the level reached with respect to the targets defined. Thanks to monitoring

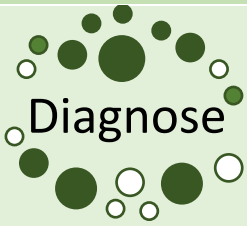


procedures integrated to the City Urban Plans RUP, the scaling up to the city zones, districts, cities will be continuously improved.

RUP plan: Chapter I. Introduction to Re-naturing

STEP A. Engage and Co-create	
Which level of development of the RUP we are?	I II III IV V
<p><b>STEP A Main Objective:</b></p> <p>The objective of this step is to deliver trans-disciplinary and community-based stakeholder engagement strategy including the social sciences and humanities best practices in the co-design, co-development and co-implementation of the city’s NBS projects.</p> <p>The engagement-oriented program focuses on the social benefits of engaging with nature, biodiversity and green spaces in cities. Key elements of this program are the development and execution of BioBlitz type activities in which citizens are encouraged to observe, document and provide feedback on the biodiversity and other ecological elements present in the project’s NBSs.</p> <p>This methodology step establishes the bases on co-creation and co-developments to all the steps in continuation.</p>	
<i>Phase 1. Understand your present</i>	<b>Action 1A. Identify and involve stakeholders</b>
<p><b>Main outputs:</b></p> <ul style="list-style-type: none"> <li>• <b>Output 1A-1.</b> List of key stakeholders groups.</li> <li>• <b>Output 1A-2.</b> List of capabilities, interests, relationships for each group.</li> </ul>	Identify all key stakeholders for your RUP, including teams inside your organization, the general public, businesses and relevant agencies in other levels of government.
<i>Phase 2. Choose your future aspirations</i>	<b>Action 2A. Prepare for co-delivery</b>
<p><b>Main outputs:</b></p> <ul style="list-style-type: none"> <li>• <b>Output 2A-1.</b> Co-creation plan.</li> </ul>	This Action involves preparing a clear engagement Plan which outlines clearly how your stakeholders will be involved in preparing and delivering the RUP.

RUP plan: Chapter II. City Targets

STEP B. Explore	
<i>Which level of development of the RUP we are?</i>	I II III IV V
<p><b>STEP B Main Objective:</b></p> <p>The objective of this step is to define the aspirations for re-naturing process of the city. The Societal Challenges and NBS solutions will be proposed, to answer the city/area different criteria, characteristics, problems, targets, budget, social issues, climate, previous experiences, etc. Those analyses is somehow the brainstorming base to the next methodology step on Diagnosis, where the societal challenges will be crossed with the barriers and boundaries of the city.</p>	 <p>• Understand your needs and capacity • Choose your "city" targets</p>
<i>Phase 1. Understand your present</i>	<b>Action 1B. Understand your needs and capacity</b>
<p><b>Main output:</b></p> <ul style="list-style-type: none"> <li><b>Output 1B-1.</b> The city re-naturing goal.</li> </ul> <p><b>Supported by:</b> Organization of the 1st Kick-off City Workshop (Source: UGU D1.3)</p>	Understand the “value” of the re-naturing for your particular city. Identify the main “city” tendency and the main goal.
<i>Phase 2. Choose your future aspirations</i>	<b>Action 2B. Choose your “city” targets</b>
<p><b>Main output:</b></p> <ul style="list-style-type: none"> <li><b>Output2B-1.</b> The city challenges and sub-challenges and why they’re prioritised. Specific targets will be selected for each challenge.</li> </ul> <p><b>Supported by:</b> Societal Challenge Catalogue (Source: UGU D1.2)</p>	Identify the “city” targets and translate them into the URBAN GreenUP language of challenges and sub-challenges.

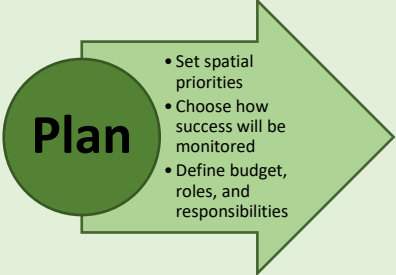




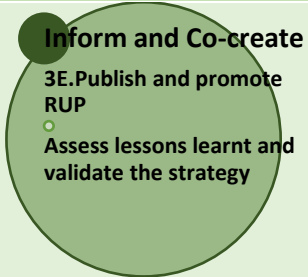
RUP plan: Chapter III. City NBS Adopted Scenarios

STEP C. Diagnose	
<i>Which level of development of the RUP we are?</i>	I II III IV V
<p><b>STEP C Main Objective:</b></p> <p>The objective of this step is to deliver a detailed diagnosis of the city/area in respect to the societal challenges selected for a city in the previous step. The deep analysis on barriers, boundaries and opportunities for corresponding NBS indicated will complete the study. The information will allow the selection of the city societal challenge scenarios with selected NBS. The systemic method proposed and the tools developed with will support the process.</p>	 <ul style="list-style-type: none"> <li>• Map challenges</li> <li>• Evaluate NBS scenarios and select one</li> <li>• Establish baselines and Kpis</li> <li>• Integration into the council's urban plan</li> </ul>
<i>Phase 1. Understand your present</i>	<b>Action1C. Understand your “city” capacity.</b>
<p><b>Main output:</b></p> <ul style="list-style-type: none"> <li>• <b>Output 1C-1.</b> City profile definition.</li> </ul> <p><u>Supported by:</u> Organization of the <b>2nd City Diagnosis Workshop</b> (Source: UGU D1.3)</p>	The main goal of this action is to detail the city profile and to prepare it for deep analysis in respect to the NBS implementation.
<i>Phase 2. Choose your future</i>	<b>Action 2C. Evaluate NBS Scenarios and select one</b>
<p><b>Main output:</b></p> <ul style="list-style-type: none"> <li>• <b>Output 2C-1.</b> NBS scenario.</li> </ul> <p><u>Supported by:</u> Use of the <b>URBAN GreenUP NBS Scenario Tool</b> (Source: UGU D1.7)</p>	The main goal of this action is to provide the user with a list of the best NBS for the needs, targets and capacities of the city (diagnosis/challenges/barriers/en ablers). Using this list the user will refine the NBS list if needed.
<i>Phase 3. Write the actual plan</i>	<b>Action 3C. Establish baselines and Kpis</b>
<p><b>Main output:</b></p> <ul style="list-style-type: none"> <li>• <b>Output 2C-1.</b> NBS Scenario Report</li> </ul> <p><u>Supported by:</u> Use the <b>URBAN GreenUP NBS Catalogue</b> (Source: UGU D1.1)</p>	The mail goal of this action is to generate a report with all the needed information that the user needs to define the project.
<i>Phase 4. Implement and monitor the actions</i>	<b>Action 4C. Establish baselines and Kpis</b>
<p><b>Main output:</b></p> <ul style="list-style-type: none"> <li>• <b>Output 1E-1.</b></li> </ul>	The mail goal of this action is to generate a report with all the needed information that the user needs to define the project.

RUP plan: Chapter V. Monitoring Program and Action Plan

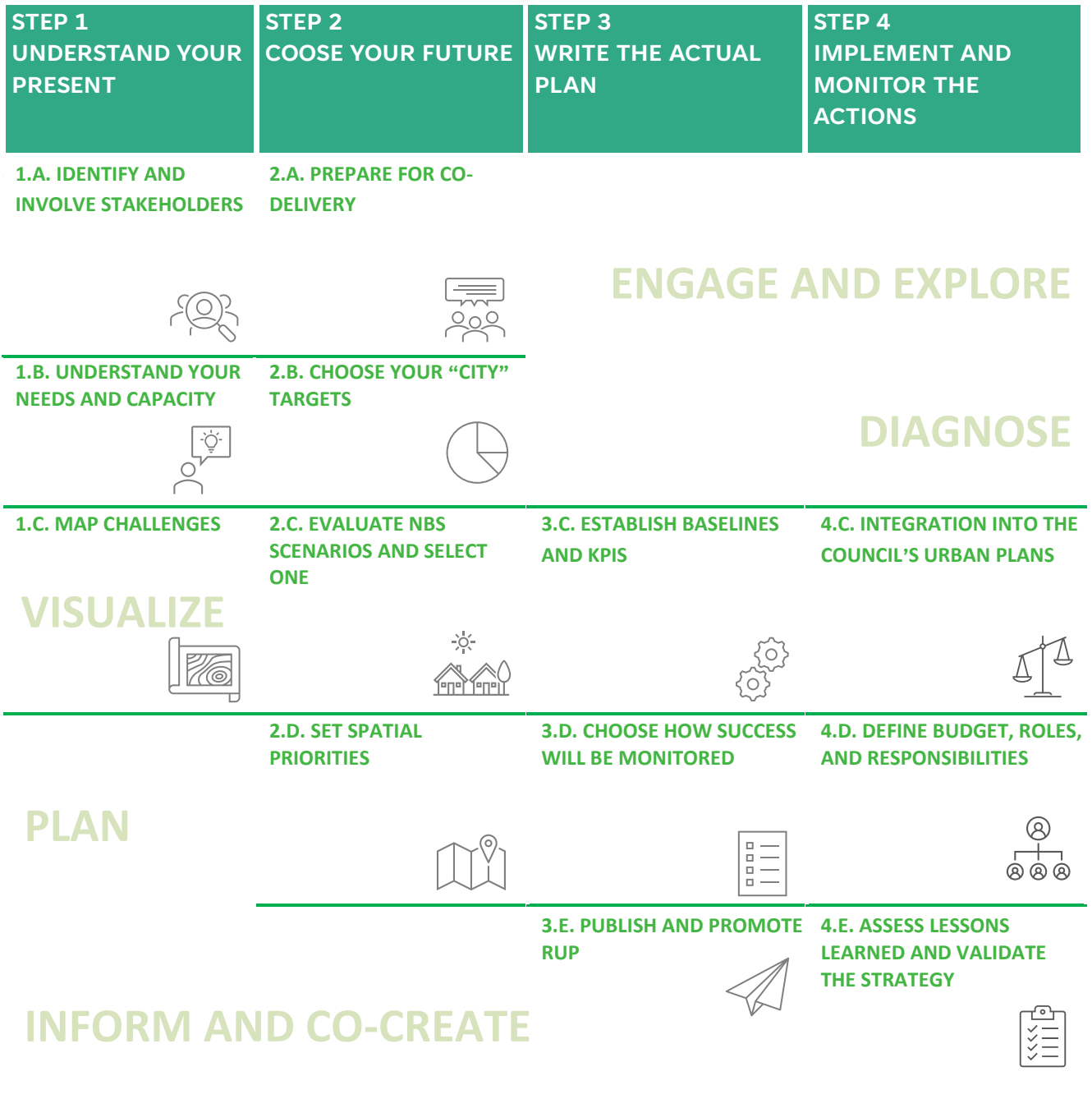
STEP D. Plan	
<i>Which level of development of the RUP we are?</i>	I II III IV V
<p><b>STEP E Main Objective:</b></p> <p>The objective of this step is to deliver the evaluation plan for the NBS scenarios generated. It will include the KPIs prioritization criteria. The information generated will allow the calculation of the KPI's corresponding each NBS. The level reached with respect to the targets defined and the baseline calculation will be identified. The procedure implementation will allow the continues monitoring of the NBS integrated into the City Urban Plans RUP and its evaluation, Scaling UP and replication to the other City Zones, Districts, Cities.</p> <p>The process is based on the diagnosis procedures developed into the previous steps B-D, and takes into account the social, economic and more specific technical criteria.</p>	
<i>Phase 2. Choose your future</i>	<b>Action 2D. Set spatial priorities</b>
<p>Main output:</p> <ul style="list-style-type: none"> <li><b>Output 2D-1.</b> Plan for collecting baseline data across a defined set of indicators</li> </ul>	The main objective of this task is to establish the baseline condition in the locations where the interventions will be implemented, e.g. within a region, city, or neighbourhood.
<i>Phase 3. Write the actual plan</i>	<b>Action 3D. Choose how success will be monitored</b>
<p>Main output:</p> <ul style="list-style-type: none"> <li><b>Output 2E-1.</b> KPIs prioritization for NBS</li> </ul> <p>Supported by: Use of the <b>URBAN GreenUP NBS Scenario Tool</b> (Source: UGU D1.7)</p>	The main goal of this action is to help cities to choose and prioritize KPIs. In addition, with this action, a framework will be drawn on monitoring the results of NBSs to be implemented, taking into account the challenges and needs of the cities.
<i>Phase 4. Implement and monitor the actions</i>	<b>Action 4D. Define budget, roles and responsibilities</b>
<p>Main output:</p> <ul style="list-style-type: none"> <li><b>Output 1F-1.</b> The up-scale plan</li> </ul>	The main goal of this action is to prepare the up-scale action plan in accordance to the assessment of the Risk and potential Impact for selected NBS.

RUP plan: Chapter VII. Processes and reforms

STEP A. Engage and Co-create	
<i>Which level of development of the RUP we are?</i>	I   II   III   IV   V
<p><b>STEP A Main Objective:</b></p> <p>The objective of this step is to maintain the re-naturing process in time. The strategy template will help to establish structures to leverage the experiences of stakeholder committees to identify and overcome key barriers, drawing on learnings from other processes of the methodology.</p> <p>Citizens can play a role in research to support RUP development, as well as ongoing monitoring of RUP success; it is important that these programs are carefully selected and tailored for local contexts. The template strategy will offer guidance and best practice examples to develop locally appropriate citizen science programs. The template will also offer broader guidance and case studies on helping people connect with the natural values they find important.</p>	
<i>Phase 3. Integrate RUP and keep</i>	<b>Action 3E. Publish and promote RUP</b>
<p><b>Main output:</b></p> <ul style="list-style-type: none"> <li><b>Output 2F-1. Assess lessons learnt and validate the strategy.</b></li> </ul>	To collect the feedback on the implementation process of the RUP methodology and assess the strategy of the RUP development to inform any revision and/or tailoring the process.
<i>Phase 4. Implement and monitor the actions</i>	<b>Action 4E. Assess lessons learnt and validate the strategy</b>
<p><b>Main output:</b></p> <ul style="list-style-type: none"> <li><b>Output 3A-1. Assess lessons learnt and validate the strategy.</b></li> </ul>	To collect the feedback on the implementation process of the RUP methodology and assess the strategy of the RUP development to inform any revision and/or tailoring the process.



Methodology diagram of actions by steps and phases



Level of developments to city local RUP Plan

Level of development of RUP:	
<b>Chapter I. Engage and explore</b>	I II III IV V
<b>Action 1A.</b> Identify and involve stakeholders. <b>Action 2A.</b> Prepare for co-delivery.	
<b>Chapter II. Diagnose</b>	I II III IV V
<b>Action 1B.</b> Understand your needs and capacity <b>Action 2B.</b> Choose your “city” targets.	
<b>Chapter III. Visualize</b>	I II III IV V
<b>Action 1C.</b> Map challenges <b>Action 2C.</b> Evaluate NBS Scenarios and select one. <b>Action 3C.</b> Establish baselines and KPIS <b>Action 4C.</b> Integration into the council’s urban plan	
<b>Chapter IV. Plan</b>	I II III IV V
<b>Action 2D.</b> Set spatial priorities. <b>Action 3D.</b> Choose how success will be monitored. <b>Action 4D.</b> Define budget, roles, and responsibilities.	
<b>Chapter V. Monitoring Program and Action Plan (Budget)</b>	I II III IV V
<b>Action 3E.</b> Establish Baselines. <b>Action 4E.</b> Choose how success will be monitored.	



## References

Methodology full guide

- **Methodology Guide** (*URBAN GreenUP D1.14*), Source: *URBAN GreenUP, May 2022 (on-going)*; **URBAN GreenUP, July 2020 Second ver. D1.13**, currently available, <https://www.urbangreenup.eu/resources/deliverables/>

List of Catalogues and Guides will help to specify the particular methodology components:

- **NBS Catalogue** (*URBAN GreenUP D1.1*), Source: *URBAN GreenUP, May 2018*, <https://www.urbangreenup.eu/resources/deliverables/>
- **Societal Challenge Catalogue** (*URBAN GreenUP D1.2*), Source: *URBAN GreenUP, July 2018*, <https://www.urbangreenup.eu/resources/deliverables/>
- **Diagnosis procedure Guide** (*URBAN GreenUP D1.3*), Source: *URBAN GreenUP, September 2020 (on-going)*
- **Baseline Calculation Guide** (*URBAN GreenUP D1.4*), Source: *URBAN GreenUP, September 2020 (on-going)*
- **Barriers and Boundaries Guide** (*URBAN GreenUP D1.5*), Source: *URBAN GreenUP, July 2018*, <https://www.urbangreenup.eu/resources/deliverables/>
- **Zoning and Mapping Guide** (*URBAN GreenUP D1.6*), Source: *URBAN GreenUP, May 2020*, <https://www.urbangreenup.eu/resources/deliverables/>
- **Tendering Process Guide** (*URBAN GreenUP D1.9*), Source: *URBAN GreenUP, December 2020 (on-going)*
- **Scaling UP Guide** (*URBAN GreenUP D1.10*), Source: *URBAN GreenUP, May 2022, URBAN GreenUP, September 2020 Interim ver. D1.18* currently available, <https://www.urbangreenup.eu/resources/deliverables/>
- **Co-creation and Co-development Guide** (*URBAN GreenUP D1.11*), Source: *URBAN GreenUP, May 2022 (on-going)*; *URBAN GreenUP, December 2019 Interim ver. D1.19*, currently available, <https://www.urbangreenup.eu/resources/deliverables/>

List of the Tools

- **NBS scenarios generation Tool** (*URBAN GreenUP D1.7*) with *KPIs prioritization criteria Guide* (*URBAN GreenUP D1.8*), Source: *URBAN GreenUP, September 2020 (on-going)*
- **Co-creation and Co-development Tools** (*URBAN GreenUP WP6*), Source: *URBAN GreenUP, May 2022*, <https://www.urbangreenup.eu/resources/nbs-selection-tool/nbs-selection-tool.kl>

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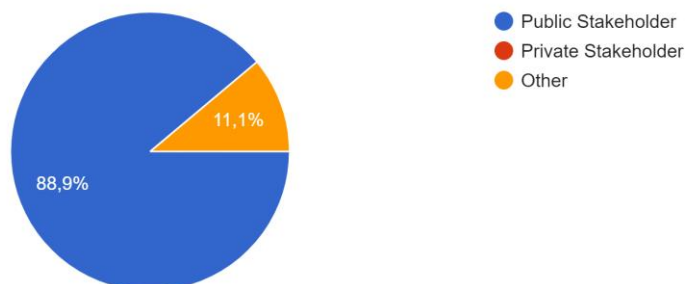


### 4.1.3 Survey for final validation (External)

#### Organization type

Organisation type

9 respuestas



#### 1. Please indicate the name of the city you are supporting

- Lviv, Ukraine
- Vila Franca de Xira, Portugal
- Hammam-Lif, Tunisia
- Ioannina, Greece
- Santa pola,
- Athienou, Cyprus
- Thessaloniki, Greece
- Oslo, Norway
- Budapest 12<sup>th</sup> district, Hungary

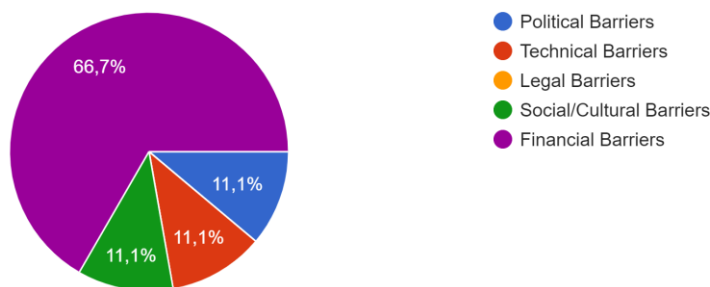


CITY PROFILE DATA. City main barriers

2. In your feeling, which is the most important barrier in NBS application of your city, having in mind the innovative growth NBS focused?

In your feeling, what is the most important barrier in NBS application of your city, having in mind the innovative growth NBS focused?

9 respuestas

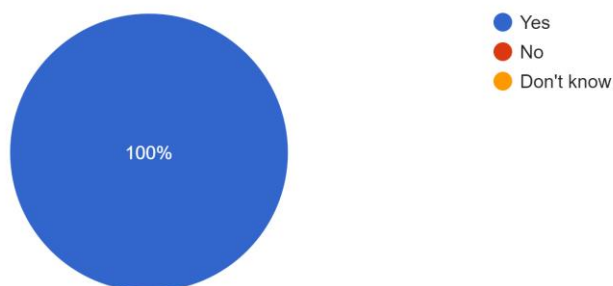


- Financial barriers. 66.7%
- Political barriers. 11,1%
- Technical barriers. 11,1%
- Legal barriers. 11,1%
- Social/Cultural barriers. 11,1%

3. In your feeling, can NBS address the city challenges?

In your feeling, NBS can address city challenges?

9 respuestas



- Yes. 100%
- No. 0%
- Maybe. 0%



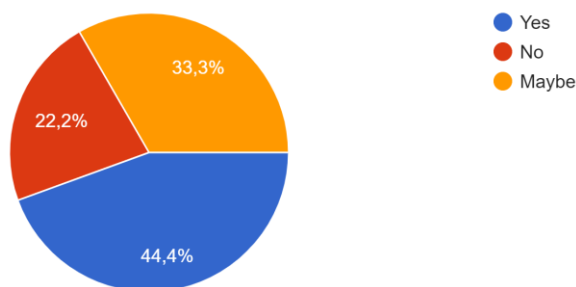


ENGAGE AND CO-CREATE. How to start?

**1. Will you have a stakeholder coordination group on the panel for your RUP? (Local authority, politicians, technical experts, business, academia...?)**

1. Will you have a stakeholder coordination group our panel for your RUP?

9 respuestas

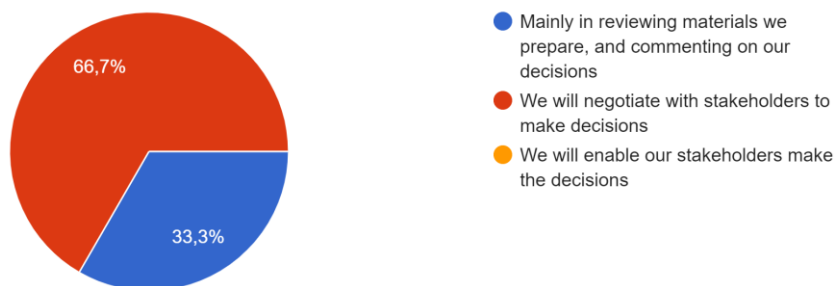


- Yes. 44,4%
- Maybe. 33,3%
- No. 0%

**2. Do you have a clear idea of how you will involve your stakeholders in the RUP development?**

2. Do you have a clear idea of how you will involve your stakeholders in the RUP development?

9 respuestas



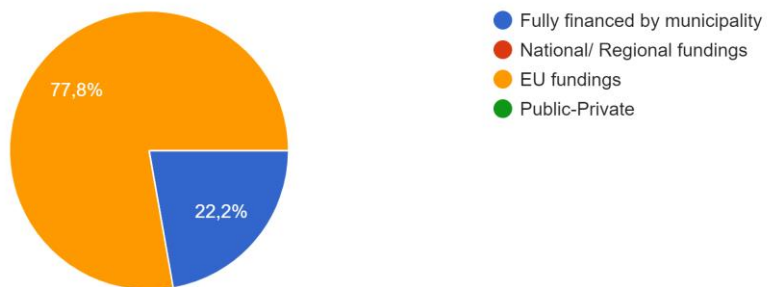
- We will negotiate with stakeholders to make decisions. 66,7%
- Mainly in reviewing materials we prepare and comment our decisions. 33,3%
- We will enable our stakeholders to make decisions. 0%

**3. Do you have any preference on how to finance?**



3. Do you have any preference on how to finance this group?

9 respuestas



- EU fundings. 77,8%
- Fully financed by municipality. 22,2%
- National/ Regional fundings. 0%
- Public-Private. 0%



EXPLORE. How to define city targets?

1. How will you approach understanding and prioritising your city’s NBS needs?

4. How will you approach understanding and prioritising your city’s NBS needs?

9 respuestas

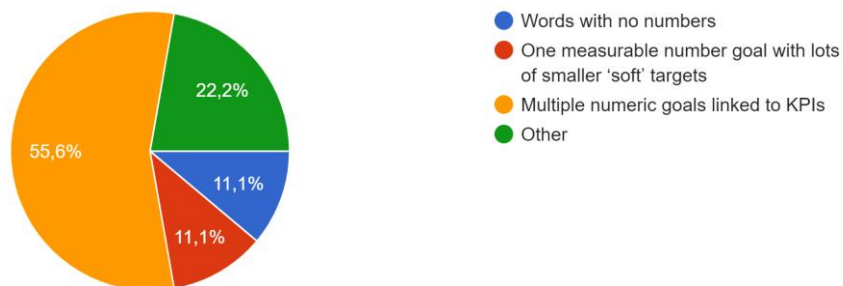


- Asking key experts or stakeholders. 44,4%
- Reviewing existing strategy. 33.33%
- Organizing brainstorming/workshop with key stakeholders. 22,2%
- Brainstorming with official experts in theMunicipality, stakeholders and actors willbe involved. Multilevel approach. 11,1%
- Mapping/GIS. 0%
- Other. 0%

2. How will you present your targets to show what you want to achieve?

5. How will you present your targets to show what you want to achieve?

9 respuestas



- Multiple numeric goals linked to KPIs. 55,6%
- Other. 22,2%
- Words with no numbers. 11,1%

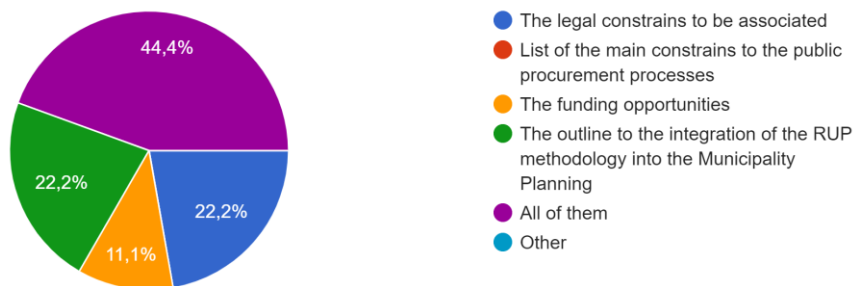


- One measurable number goal with lots of smaller “Soft” targets. 11,1%

**3. What is the most interesting/ necessary part for you to be explained in the RUP?**

6. What is the most interesting/necessary part for you to be explained in the RUP?

9 respuestas



- All of them. 44,4%
- The legal constraints to be associated. 22,2%
- The outline to the integration of the RUP methodology into the Municipality Planning. 22.2%
- The funding opportunities. 11,1%
- Other. 0%
- List of the main constraints to the public procurement. 0%

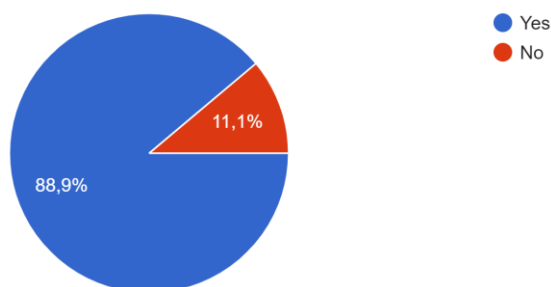


DIAGNOSE AND VISUALIZE. How to define the NBS Scenario?

1. Have you done a city diagnosis in connection with re-naturing aspects (for example, socio economic, business, and financial, urban environment and quality of life, societal challenges or strategies, existing policies, and regulations)?

7. Have you done a city analysis and diagnosis in connection with the re-naturing aspects (for example, socio economic, business, and financial, ur... or strategies, existing policies, and regulations)?

9 respuestas

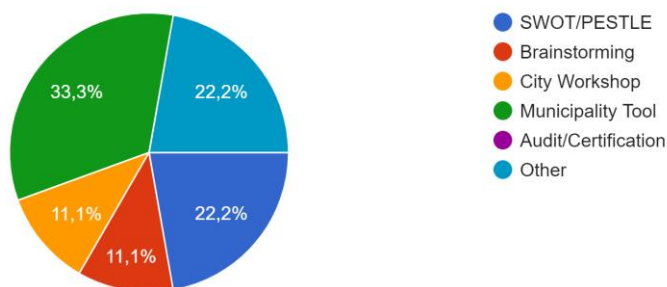


- Yes. 88.9%
- No. 11.1%

2. Which methods did you use to perform a city diagnosis?

8. Which methods did you use to perform a city diagnosis?

9 respuestas



- Municipality Tool. 33.3%
- SWOT/PESTLE. 22.2%
- Other. 22.2%
- Brainstorming. 11.1%
- City workshop. 11.1%
- Audit/Certification. 0%

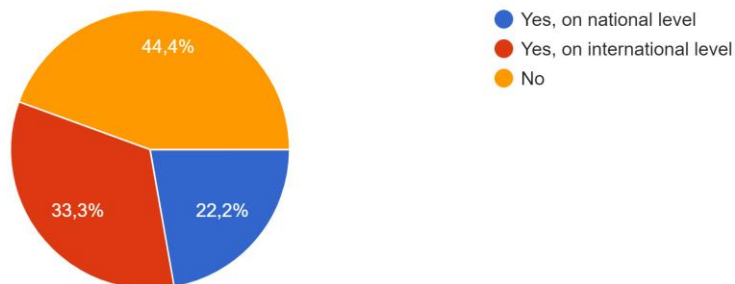


PLAN. How to evaluate the city NBS Scenario?

1. Do you collaborate with other cities regarding re-naturing ambition?

9. Do you collaborate with other cities regarding re-naturing ambition?

9 respuestas



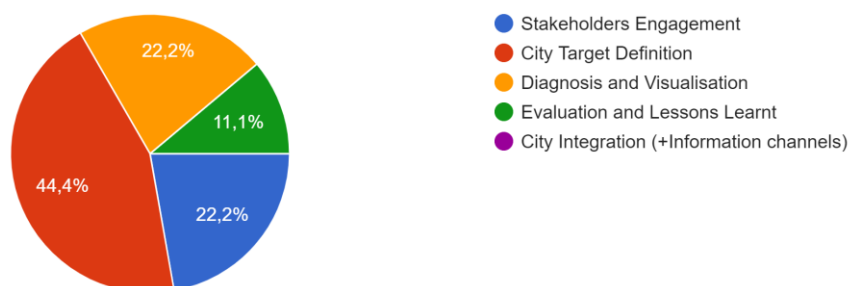
- No. 44,4%
- Yes, on international level. 33,3%
- Yes, on national level. 22,2%

2. Which collaborative or/and co-design tools did you use to support your RUP performance?

10. Which collaborative or/and co-design tools did you use to support your RUP performance? a.

Please Indicate the stage:

9 respuestas



- City target definition. 44,4%
- Stakeholders engagement. 22,2%
- Diagnosis and visualization. 22,2%
- Evaluation of lessons learnt. 11,1%
- City integration (+Information channels). 0%

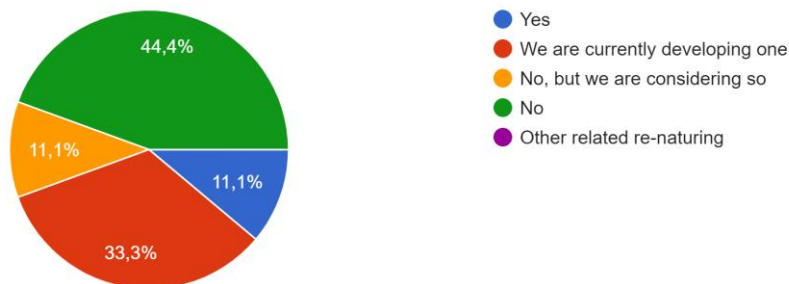


## INFORM. How to integrate the RUP Plan?

## 1. Does your city have a strategic plan on re-naturing or related?

11. Does your city have a strategic plan on re-naturing or related?

9 respuestas



- No. 44,4%
- We're currently developing one. 33,3%
- No, but we're considering so. 11,1%
- Yes. 11,1%
- Other related re-naturing. 0%

## 2. Do you have any current experience to NBS implementation (past/present)?

- No.
- Rainwater gardens, natural retaining walls, etc.
- Yes, we have several city projects with NBS implementation, and we are preparing future interventions.
- Breakwater yard management as leisure area.
- We're implementing some actions from the IAP.
- The Directorate of Environment and Green Management use to implement nature based solutions. Me, as a partner of the Municipality for one year, it is the first time I work on related projects.
- Several projects.
- URBACT Method.

