**Grant Agreement No**.: 730468

**Project acronym**: Nature4Cities

**Project title**: Nature Based Solutions for re-naturing cities: knowledge diffusion and decision support platform through new collaborative models

**Research and Innovation Action**

**Topic**: SCC-03-2016: New governance, business, financing models and economic impact assessment tools for sustainable cities with nature-based solutions (urban re-naturing)

**Starting date of project**: 1st of November 2016

**Duration**: 48 months

# D1.3 – NBS Project Observatory specifications

| **Organisation name of lead contractor for this deliverable: CER** | | |
|---|---|---|
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| | Authors | CER, NBK, TEC, CAR, LIST, METU, SZTE, AO, ACC, RINA, G4C, P&C, MUTK, DW |

| **Dissemination Level** | | |
|---|---|---|
| **PU** | Public | X |
| **CO** | Confidential, only for members of the consortium (including the Commission Services) | |

# Document history

| History | | | |
|---|---|---|---|
| **Version** | **Date** | **Author** | **Comment** |
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| 2 | 03/30/2018 | CER | Document submitted to 1st review |
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| 8 | 11/05/2018 | CER | New version following the review report comments |

**About this version:**
Following the review report comment, the executive summary has been re-written and formatting changes have been done.


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# Glossary

| Acronym | Full name |
|---|---|
| D | Deliverable |
| EC | European Commission |
| GIS | Geographic Information System |
| N4C | Nature4Cities |
| NBS | Nature-based Solutions |
| NGO | Non-Governmental Agency |
| R&D | Research & Development |
| T | Task |
| UC | Urban Challenges |
| WP | Work Package |


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# Executive summary

## Purpose & Methodologies

One main output aimed by Nature4Cities is to implement a web-based Nature Based Solution (NBS) project observatory based on an inventory of pioneering experiences. In Task 1.1, the first step was to define the specifications and components of this NBS observatory,

The notion of pioneer, which is a pillar concept of this observatory has been defined. Two main values are attached to this notion: the novelty of the projects and their success. Nature4Cities, especially targets projects whose originality brings new knowledge and experience lessons.

Secondly, an analysis grid has been produced to describe NBS.

Finally the links between the NBS observatory and the Geocluster4NBS tool, the pre-selection tool for the exploration of the project database have been defined. The Geocluster4NBS, which is an open online data repository gathering context data for the implementation of NBS projects throughout Europe and linked with a georeferenced visualisation interface, is the key tool in exploring the NBS pioneer projects database. It also includes a pre-selection tool, which aims to support decision making to choose NBS with context and project specifications.

## Key findings & conclusions

Three main results are presented :

- The definition of Urban NBS pioneer projects
- The grid to document these projects
- The articulation between tools: pioneer observatory pioneer project database, geocluster tool, and pre-selection tool : The geocluster4NBS will include and articulate all these tools and database.

## Link with N4C platform

The geocluster is a part of the NBS integrated analysis framework. It will be directly implemented in the platform as one of its elements.

## Lessons Learned and EC expectations:

By offering a way to visualize the pioneer projects database, the NBS project observatory will contribute to

- kick-start of a collective learning process to foster creative and visionary urban design in re-naturing cities, securing an equitable distribution of the multiple benefits that city re-naturing entails to various stakeholders and citizens at different scales
- develop an integrated evidence base and a European reference framework on


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nature-based solutions, in order to create a global market; new business opportunities, growth and jobs, and a green economy.

# I. Introduction

## *I.1 Purpose*

This deliverable refers to the Task 1.3 “Analysis of pioneering experiences and development of a NBS projects observatory”.

The NBS project observatory is composed both of the NBS pioneer project database and of the exploration tools associated with it. It aims at developing a better understanding of the new concept of NBS[1]. It helps to enlighten key points in terms of methods, actors, etc. It especially provides concrete examples in illustrating what NBS projects look like.
It is a base of knowledge and a decision making tool for urban practitioners such as architects or landscape architects who used to pick references to build their own projects.

This deliverable deals with the specifications of the NBS project observatory. It describes:

- The specifications of the data collection of the NBS pioneer projects. In other words, it is the analysis grid for the NBS pioneer projects
- The specification of exploration tools of the database: the way the project database will be explored through the tools (mainly the Geocluster4NBS).

## *I.2 Contribution of partners*

### I.2.1 Community tools

To structure our discussions in this work, we used the WP1 work blog (Figure 1). This blog was developed as an internal tool. It was shared with the other tasks of this WP, but special pages were dedicated to the NBS pioneer projects and project observatory.

[1] See D1.1: Nature-based solutions are positive responses to societal challenges, and can have the potential to simultaneously meet environmental, social and economic objectives. They recognize the importance to develop a systemic approach and at the same time to adapt interventions to the local context


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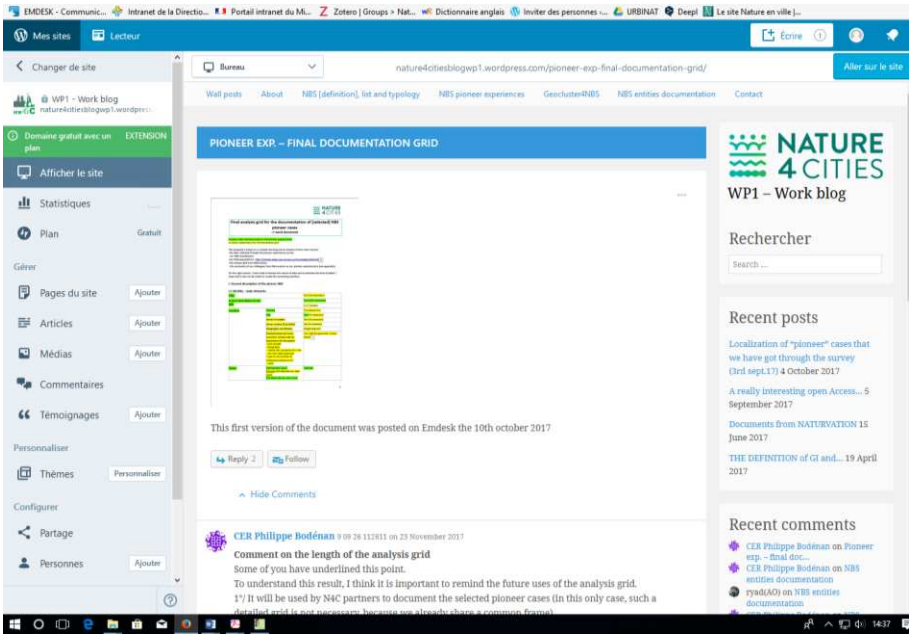


*Figure 1: Front page of the WP1 blog dedicated to the final analysis grid for the NBS projects*

### I.2.2 Efforts of the partners for the writing of the deliverable

| Partners | Contributions |
|---|---|
| **CER** | Coordination of the deliverable, ToC<br>Responsible of summary<br>Contributions to sections I, II, III. |
| **RINA** | Contributions to sections I.3.1, IV |
| **LIST** | Contributions to section II.1.1 |
| **METU** | Review of the deliverable |
| **NBK** | Review of the deliverable |

## *I.3 Link with the rest of the N4C project*

### I.3.1 Link with the other tasks of the WP1

**Links with the Tasks 1.1 and 1.2**

The NBS pioneer database development uses the main results of the T1.1 and T1.2 as inputs for the development of the pioneer project analysis grid. Moreover, its database is fully complementary with the NBS database (T1.1) and the Implementation models typology (T1.2) as part of the NBS knowledge base.

**Links with the Tasks 1.4 and 1.6**

The project observatory is based on the two tools – the pre-selection tool (T1.4) and the Geocluster4NBS tool (T1.6) – for the exploration of the project database.

Concerning the Geocluster4NBS tool (T1.6), the collected pioneer projects have to be included in a Geographic Information System (GIS) interface. As shown on the


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figure below, the End-User can interact with a map and explore all pioneering projects. When a single project is selected, the tool shows a data sheet containing detailed information about the pioneer project in which the End-user is interested in a new page.


*Figure 2: Geocluster4NBS tool (T1.6) Pioneer Projects Map*

The links are represented in figure 3.

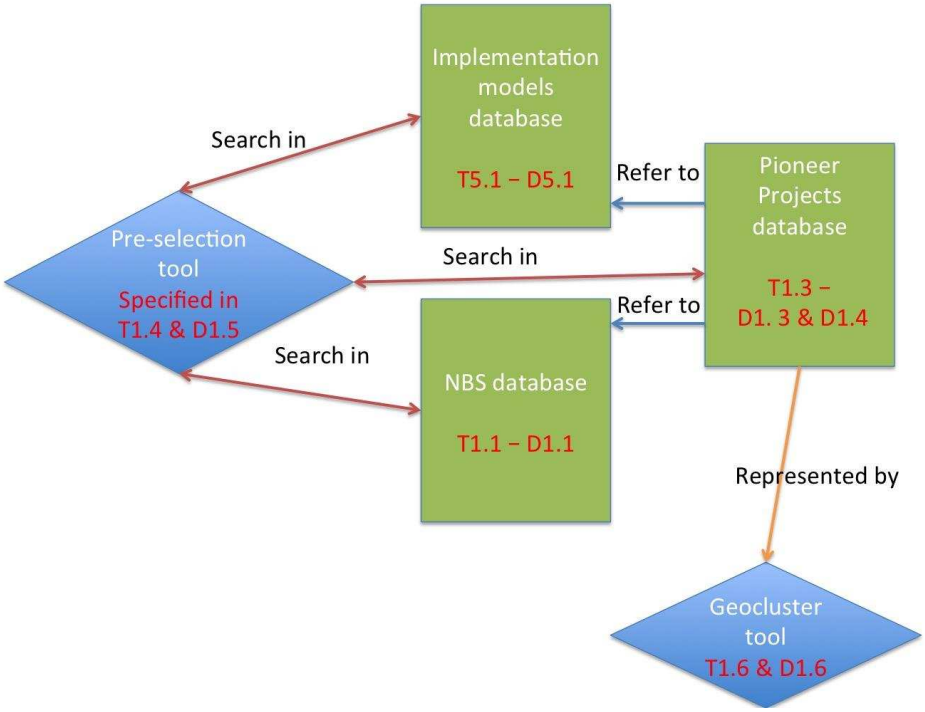


*Figure 3: links between databases and tools produced in WP1*

### I.3.2 Link with the other WPs

**WP2**

Both the project database and the tools associated with the observatory use the


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analytical parameters of NBS (list of urban challenges, selected urban scales, etc.) which have been developed in link with WP2.

### *I.4 General Structure of the deliverable*

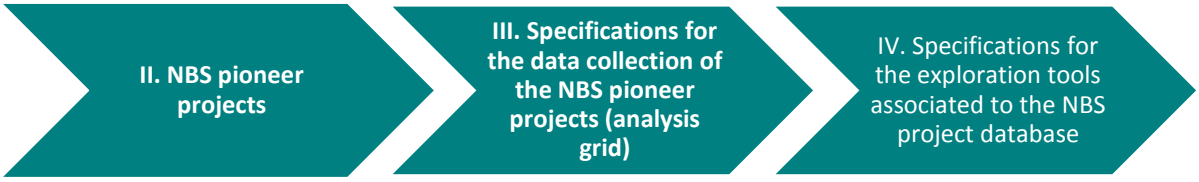


*Figure 4: Parts of the deliverable*

# II. NBS pioneer projects

### *II.1 The notion of "pioneer" – definitions*

**PIONEER,** properly a foot-soldier (Med. Lat. *pedo, pedonis,* through O. Fr. *peonnier, pionnier,* cf. "pawn") who with spade, axe and other implements, precedes an army or smaller military body, and clears or makes a road, digs intrenchments, prepares a camping ground, &c. The word is thus applied to all who, actually or figuratively, are first in exploring or working an undiscovered or undeveloped country or field of inquiry. (Encyclopedia Brittanica, 1911)

To develop this concept more widely, it will be helpful to refer to economical literature. Indeed, the "pioneer advantage" (also called "first mover advantage") (Golder, Tellis, 1993) is a classical concept in this discipline. The literature dealing with "innovation" also assists in understanding the concept.

Emerging from these references, we note that the concept has two main meanings/values:

- the first one insists on the novelty.
- the second meaning gives much more importance to the success

**The novelty** is the most redundant value in literature definitions. A pioneer case corresponds to a project that develops an idea or a concept for the first time. It is an explorative and an innovative new experience.

The novelty is not easy to evaluate because, as it is well described by the economists Peter N. Golder and Gerard J. Tellis (1993), it depends on the considered stage (Figure 5). The authors identify three stages at which the pioneers can be identified: the inventor, the product pioneer and the market pioneer. And as they underline, the "market pioneer" is probably the more widespread, because it is also the more publicised stage.


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| | |
|---|---|
| **Inventor** is the firm(s) that develops patents or important technologies in a new product category. | More than one firm may be an inventor in a product category because many ideas and processes can be involved in a completely new product. |
| **Product pioneer** is the first firm to develop a working model or sample in a new product category. | We provide a separate classification for product pioneers because they are not always the same as the market pioneer, but are important players in new markets. |
| **Market pioneer** is the first firm to sell in a new product category. | Our definition of "market pioneer" is consistent with that of "pioneer" or "first mover" in other studies. |
| (Summarized from Peter N. Golder and Gerard J. Tellis, 1993) | |

*Figure 5: Pioneer: at which stage?*

Regarding **the success**, intuitively the notion of pioneer refers to a positive action. It is associated with the idea of progress, of creativity, etc. In that sense, the notion of “pioneer” is similar to the idea of a model. It is an example to follow, a good practise.

However, this value is controversial. The “pioneer” character doesn’t necessary prefigure the value of the project (see Alter, 2000[2] and Petit, 2015[3] on the neighbour concept of “innovation”). The notion may also refer to negative issues. Pioneers can be controversial and do not necessarily benefit (all) people or to the environment. For instance, some case studies are successful regarding the services they offered, but the society or certain social groups do not perceive them positively. Sometimes their success is limited (e.g. magnificent from an ecological point of view, but with no value from a social or economic one). The case study of an NBS can also worked perfectly, but the way it is finally implemented can be a disaster or *vice versa*. As last example, it can happen that only few elements of the implementation model can be successful, such as the institutional one or the financial one.

**What does pre-value, the novelty or the success?**
The novelty and the success are discussed as the predominant value of a pioneer. Some believe that the novelty of the experience prevails on its success. For some others, the novelty is secondary and a “pioneer experience” is more important if it is the first time that the experience is considered as success (that means that, in absolute terms, it is not necessary the first experience).

## *II.2 The notion of pioneer in N4C*

In N4C, we are compromising with these two values (novelty and success) associated

[2]ALTER Norbert, 2000, L’innovation ordinaire, PUF, 282 pages.

[3] PETIT Sandrine, 2015, *Faut-il absolument innover? À la recherche d'une agriculture d'avant-garde*, Courrier de l’environnement de l’INRA, n°65, pages 19-28


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to the notion of pioneer.

The pioneer is supposed to bring something new (original) with a sensitive difference in comparison with what was previously existed. But we are not fussy on the novelty criteria. In a similar way, we are not necessary looking for exemplary cases. N4C is mainly interested on projects that are sources of new knowledge, regardless of their success, partial success or failure.

Here are some additional criteria based on our discussions:

| |
|---|
| The originality may concern:<br>- The response to one or several challenges<br>=> a specific urban challenge<br>=> a set of challenges (presence of multiple co-benefits)<br>- The implementation<br>=> institutional aspects<br>=> finance model<br>=> network of actors<br>=> etc. |
| Pioneer are related to:<br>- an invention (conception of novelty) – a specific discovery (rare)<br>ex. A new highly efficient system for green wall based on a new technology<br>- existing solutions implemented in a new specific context<br>ex. Combination of existing solutions that bring new benefits.<br>- combinations of NBS that improve the global expected benefits |
| They are pioneers because they are designated and recognized by other as pioneers. |

# III. Specifications for the data collection of the NBS pioneer projects (analysis grid)

Here we explain how we build the analysis grid that we intended to use to describe NBS projects and store the information about these projects.

## *III.1 Construction method of the analysis grid*

### III.1.1 Steps of the construction

The construction method of the analysis grid was divided in three main steps. At first, we have built a questionnaire (given in D1.4) that has been used to collect candidates to the pioneer database. This questionnaire has been distributed to external stakeholders to the project and the information collected aimed at helping us to select pioneer projects. This questionnaire was less complete than the analysis grid, and has served as a first step, completed with other questions about the project.

To complete the grid, a collaborative work has been carried out so that to collect information related to all the topics treated in N4C: NBS typology, IM typology and UC. We also integrated suggestions from NATURVATION[4] colleagues. This grid also

[4] NATure-based URban innoVATION is a 4-year project, funded by the European Commission and involving 14 institutions across Europe in the fields of urban development, geography, innovation


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evolved slightly during the documentation step when partners have detected questions difficult to answer or not clear enough.

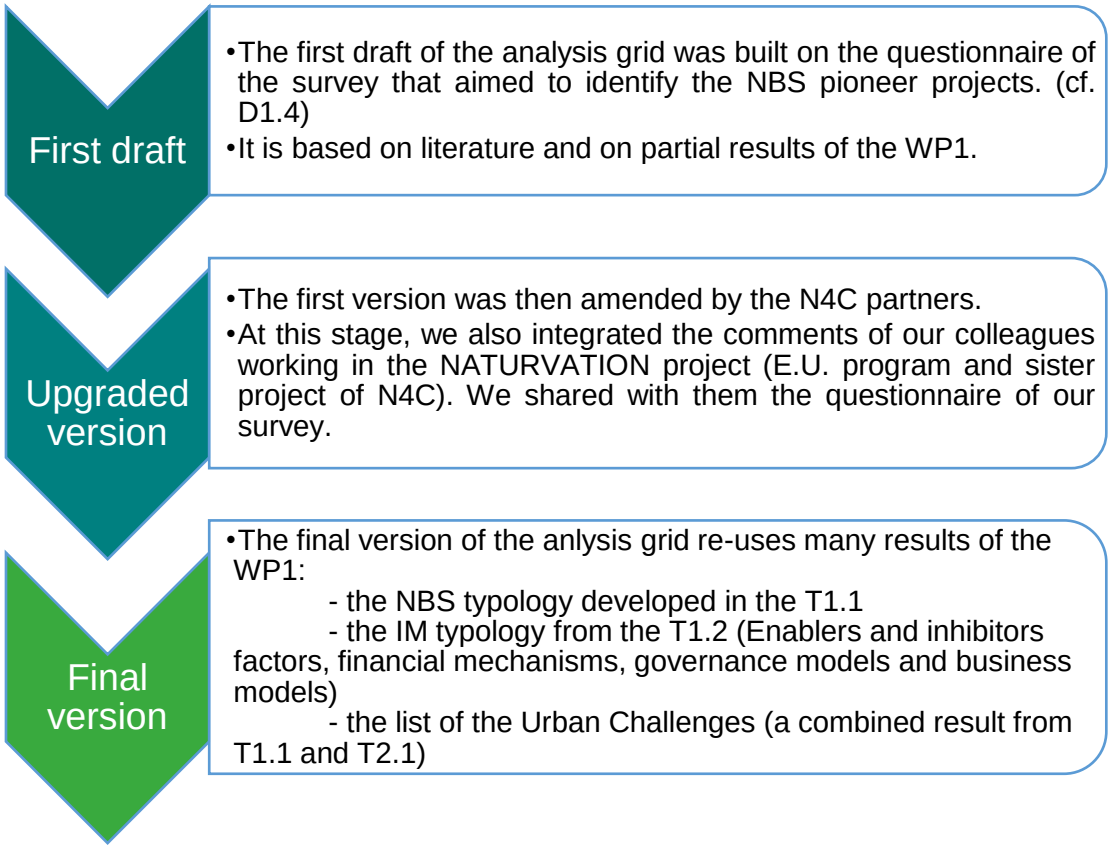


*Figure 6: The steps for analysis grid building*

### III.1.2 The structure of the analysis grid

The analysis grid is composed of 5 main sections:

| Main sections of the NBS project analysis grid | Objectives (justification) |
|---|---|
| I/ General description<br>I.1 Identity<br>I.2 Objectives & challenges addressed<br>I.3 Description (physical aspects)<br>I.4 Stakeholders & governance<br>I.5 Financial aspects<br>I.6 Business models<br>I.7 Legal aspects<br>I.8 Temporal perspective<br>I.9 Success and limiting factors | The description targets simultaneously:<br>- The technical components (both contextual and of the NBS itself)<br>- The implementation aspects<br>- The stakeholders |
| II/ Pioneer characters | This section is important for our objective to initialize the database with a set of pioneer projects. |

studies and economics. We will seek to develop our understanding of what nature-based solutions can achieve in cities, examine how innovation can be fostered in this domain, and contribute to realising the potential of nature-based solutions for responding to urban sustainability challenges by working with communities and stakeholders. https://naturvation.eu


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| | |
|---|---|
| | However, we assume that this criterion will be marginalised when the NBS pioneer project database becomes a NBS project database. |
| III/ Author of the project factsheet | It is important to keep the origin of our data. |
| IV/ Sources | |
| V/ Comments (optional) | The urban projects are so diverse, thus we assume that some elements may be missing in the analysis grid. |

## *III.2 Description of the analysis grid*

Here is the analysis grid developed to describe the NBS pioneer projects:

| | |
|---|---|
| Reference of the case | |

## I. General description of the pioneer NBS
### I.1 Identity – main elements

| | |
|---|---|
| Title | Text (30 characters) |
| A short description of the NBS | Text (200 characters) |
| | 2 or 3 photos |

| | | |
|---|---|---|
| NBS Types | Selection of the NBS types according to the Figure 7: Typology tree | Pre-selected list<br>1 project may refer to several types (1-3)<br>(Cf. notes at the end of the document) |
| Location | Country | Pre-selected list |
| | City | Text |
| | Street or location | Text (30 characters) |
| | Street number (if possible) | text (6 characters) |
| | Geographic coordinates: | Google map tool |
| | Environmental and socio-economic context with an importance for the project:<br>- local climate<br>- topography<br>- coastal site / presence of a river<br>- city with rapid expansion<br>- type of city (number of inhabitants/surface (km²))<br>- other | Link with the geocluster (urban data). |
| State of progress of the project | Studies and conception<br>Works stage<br>Ongoing<br>Project delivered | Pre-selected list |
| Dates (for project delivered): | End date (year): | Calendar |


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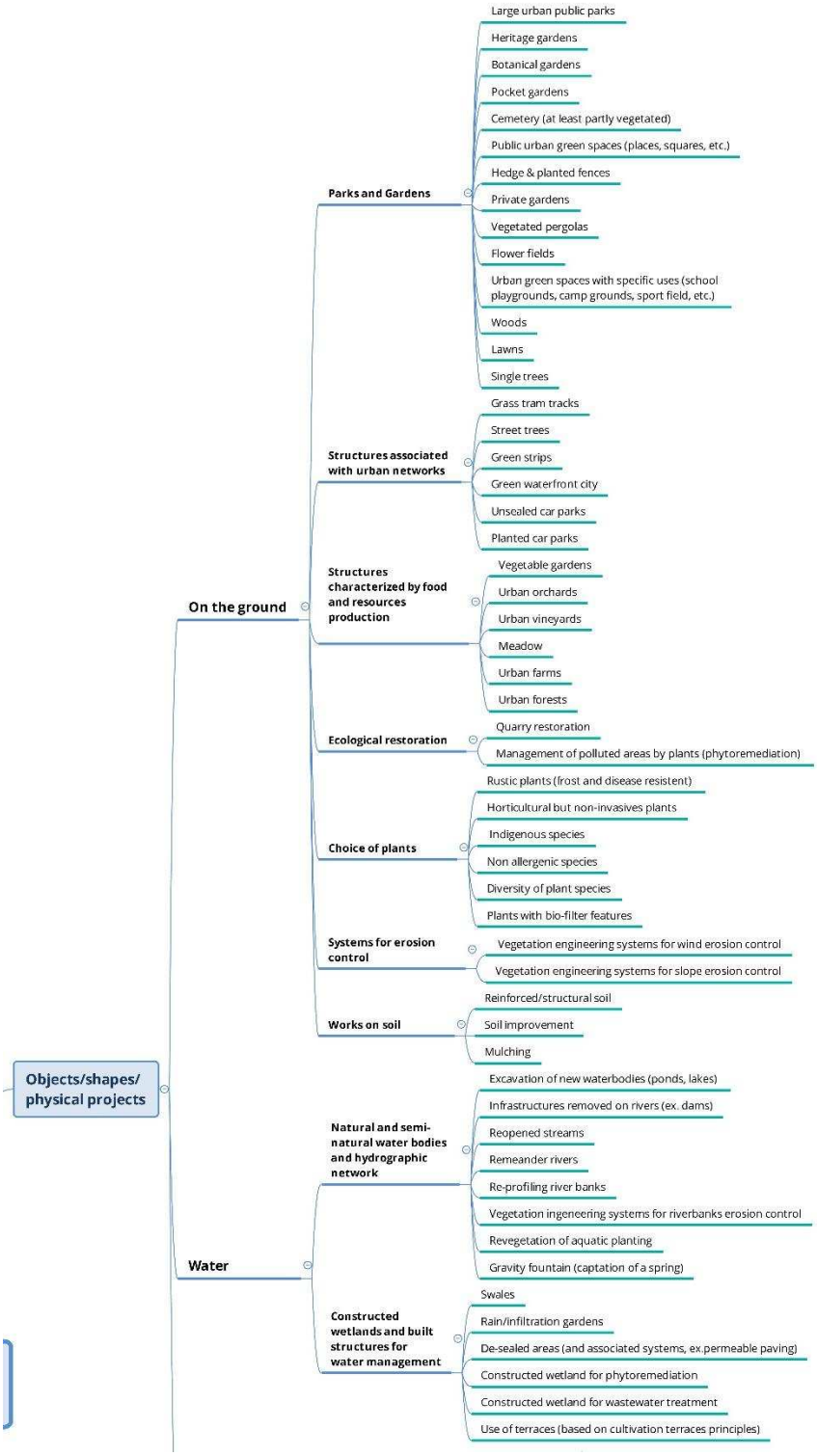


*Figure 7: Typology tree*


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## I.2 Objectives of the action and urban challenges addressed

| What is/are the objective(s) of the intervention? | Text (300 characters) |
|---|---|

| Urban challenges addressed and co-benefits foreseen | | Pre-selected lists (multiple answers are possible) | | |
|---|---|---|---|---|
| | | **Main challenge** | **Foreseen co-benefits** | **Not a challenge of the project** |
| 1. Climate issues | Climate mitigation | | | |
| | Climate adaptation | | | |
| | Other | | | |
| 2. Urban water management and quality | Urban water management and quality | | | |
| | Flood management | | | |
| | Other | | | |
| 3. Air quality | Air quality at district/city scale | | | |
| | Air quality locally | | | |
| | Other | | | |
| 4. Urban space and Biodiversity | Biodiversity | | | |
| | Urban space design | | | |
| | Urban space management | | | |
| | Other | | | |
| 5. Urban Regeneration and Soil | Soil management | | | |
| | Other | | | |
| 6. Resource efficiency | Food, energy and water | | | |
| | Raw materials | | | |
| | Waste | | | |
| | Recycling | | | |
| | Other | | | |
| 7. Public health and well-being | Acoustics | | | |
| | Quality of life | | | |
| | Health | | | |
| | Other | | | |


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| | | | | | |
|---|---|---|---|---|---|
| 8. Environmental justice and social cohesion | Environmental l justice | Recognition | | | |
| | | Procedural Justice | | | |
| | | Distributional justice | | | |
| | | Capabilities | | | |
| | | Responsibility | | | |
| | Social cohesion | | | | |
| | Other | | | | |
| 9. Urban planning and governance | Urban planning and form | | | | |
| | Governance in planning | | | | |
| | Other | | | | |
| 10. People security | Control of crimes | | | | |
| | Control of extraordinary events | | | | |
| | Other | | | | |
| 11. Green economy | Circular economy | | | | |
| | Bioeconomy activities | | | | |
| | Direct economic value of NBS | | | | |
| | Other | | | | |
| 12. Others | => Feel free to list additional challenges that your project intends to address | | | | |

## I.3 Description of the NBS

| | | |
|---|---|---|
| Scales | Scale of the project:<br>- object (building, etc.)<br>- neighbourhood<br>- city | Pre-selected list |
| | At which scales impacts from this NBS action should be assessed?<br>-object (building, etc.)<br>-neighbourhood<br>-city<br>-regional<br>-national<br>-global | Pre-selected list |
| Urban context | Kind of project:<br>- NEW district/building/park<br>- Refurbishment/ urban renewal | Pre-selected list |
| | Urban density in which the NBS is implemented<br>- high (dense city center, etc.)<br>- medium<br>- low (suburb at the limit with rural areas, etc.) | Pre-selected list |
| Is the NBS combined with other(s) environmental | - No<br>- Bio-sourced materials<br>- Renewable energy system (solar panels, etc.)<br>- Bioclimatism<br>- Other | Pre-selected lists (multiple choices possible) |


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| | | |
|---|---|---|
| friendly solution(s)? | Specify: | Text (60 characters) |

## I.4 Stakeholders & governance

| | | |
|---|---|---|
| Who started this initiative? | - A public institution, a local organization (city or metropolitan)<br>- A public institution, a regional organization<br>- A public institution, a national agency/ the state<br>- Citizens<br>- A private stakeholder<br>- Other | Pre-selected list |
| | If “other”, please specify | Text (50 characters) |
| | Please specify the process and the role of the different stakeholders (How did it happen?) | Text (150 characters) |
| Contracting authority | | Text (50 characters) |
| Project manager (leader and his/her main partners)<br>1/ Entities ‘ names and 2/ knowledges and know-how involved (ecology, landscaping, civil engineering, etc., but also economy expertise, artist, sociology expertise, etc. | 1/Entities ‘name<br>- … (leader) ↔ - … (leader)<br>- … ↔ - …<br>- … ↔ - …<br>- ... ↔ - ...<br>- ... ↔ - ... | 2/ Knowledge and know-how involved (ex.: Architect, landscape architect, etc.)<br>Face to face cells (40 characters by cell) |
| Who (else) was involved in the project?<br>(Inhabitants/citizens, companies, association, local authorities, NGO, research centers (University, private R&D), school, - etc.) | Please list the entities them with their type and name<br>Please describe their role and their level of collaboration in the participatory process (please indicate for each actor involved). | Text (100 characters)<br>Text (200 characters) |
| Considering the actual impacts, who are the primary beneficiaries of the project. | | Text (200 characters) |


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| | | |
|---|---|---|
| Governance model | **CLUSTER 1: Traditional public administration**<br>Hierarchical governance<br>Closed governance<br>Participatory planning & budgeting<br>**CLUSTER 2: New Public Management**<br>Public–private partnership (PPP)<br>Business-led self-regulation<br>**CLUSTER 3: Private-private partnerships**<br>Non State Market-driven governance (NSMD)<br>Business–NGO partnerships<br>Sustainable Local Enterprise Networks (SLEN)<br>**CLUSTER 4: Societal Resilience**<br>Co-management<br>Civic ecology practices<br>Self-governance/grassroots initiatives<br>**CLUSTER 5: Network Governance**<br>Collaborative governance<br>Adaptive governance<br>Adaptive co-management<br>+ other? | Pre-selected list |
| Can you briefly describe the governance model? | | Text (300 characters) |


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## I.5 Financial aspects

| | | |
|---|---|---|
| Global (estimated) cost of the project | > 20 000€<br>20k€ - 50k€<br>50k€ - 200k€<br>200k€- 1M€<br>1M€- 5M€<br>more than 5M€ | Pre-selected list |
| Financing mechanism | **CLUSTER 1: PUBLIC FINANCING**<br>ERDF<br>Cohesion Fund<br>European Investment Bank<br>European Social Fund<br>EAFRD<br>LIFE - Climate Action<br>Urban Innovative Actions<br>European Territorial Cooperation<br>Horizon 2020<br>Project Development Assistance<br>**CLUSTER 2: FINANCIAL INSTITUTIONS**<br>European Fund for Strategic Investments EFSI<br>Natural Capital Financing Facility NCFF<br>European Development Financial Institution<br>Municipal Green Bonds<br>Revolving Funds<br>**CLUSTER 3: CITIZEN INCLUSION**<br>Cooperatives<br>Crowdfunding<br>Sustainable Savings Account<br>Volunteering<br>Crowdsourcing (sustainable)<br>**CLUSTER 4: PUBLIC-PRIVATE**<br>Private Finance Initiative PFI<br>Preferential Loans<br>Guarantee Funds<br>Soft Loans/Dedicated Credit Lines<br>City Planning Regulations<br><br>+ other? | Pre-selected list |
| Can you briefly describe the financing mechanism? | | Text (300 characters) |


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## I.6 Business model

Nota: The concept of “Business model” comes from the business world, but it also can be applied a certain way to public institutions

| | | |
|---|---|---|
| Which type of business model is involved? | **Technological**<br>Maximize material productivity and energy efficiency<br>Create value from waste<br>Substitute with renewables and natural processes<br>**Social**<br>Deliver functionality, rather than ownership<br>Adopt a stewardship role<br>Encourage sufficiency<br>**Organizational**<br>Re-purpose the business for society/environment<br>Develop scale-up solutions<br>+ other? | Pre-selected list |
| Can you briefly describe the business model? | | Text (300 characters) |

## I.7 Legal aspects

| | | |
|---|---|---|
| Does a policy driver strongly influence the initialization of the intervention? | Yes/no | Check boxes |
| | If yes, specify which ones | Text (300 characters) |
| What is/are the main legal driver(s ) involved in the intervention? | Specify | |
| Were legal aspects a constrain for the intervention? | Yes/no | Check boxes |
| | If yes, specify which way | Text (300 characters) |

## I.8 Temporal perspective

| | | |
|---|---|---|
| What is the expected time for the NBS to become fully effective after its implementation ? | - short (immediately to few months)<br>- medium (between 2 to 5 years)<br>- large (beyond 5 years) | Pre-selected list |
| Feedback on the functioning of the project? (recent projects are not concerned by this question) | - Not concerned<br>- still well adapted<br>- the project has already been adapted to new requisites | Pre-selected list |
| | In case, the project has already been adapted to new requisites, please explain the modifications brought | Text (300 characters) |
| What is expected life time of the intervention? | - Temporal (few months to 1-2 years)<br>- around 10 years<br>- around 25 years<br>-more than 30 | Pre-selected list |


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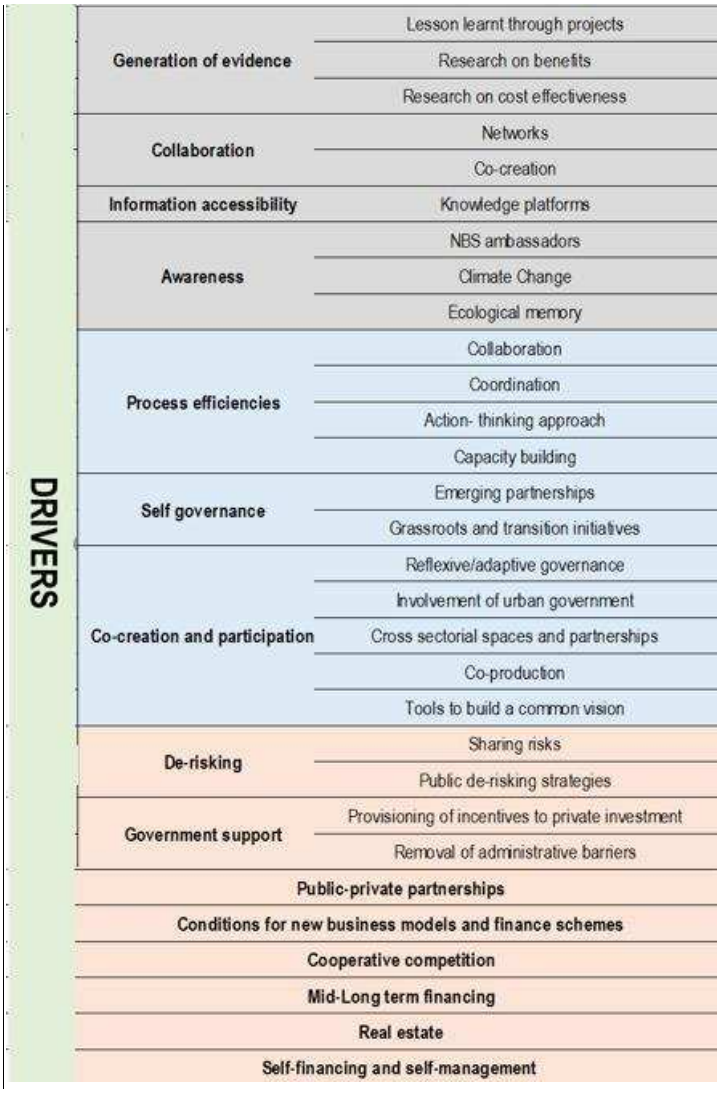
## I.9 Success and limiting factors of the intervention

| | | |
|---|---|---|
| Process enablers |  | Pre-selected list |
| | Can you briefly describe the main enablers factors | Text (300 characters) |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| | | | | |
|---|---|---|---|---|
| Process inhibitors | BARRIERS | Knowledge | Uncertainty | Operational unknown |
| | | | | Performance unknown |
| | | | Accesibility to information | Information overload |
| | | | | Incomprehensible presentation of results |
| | | | Technical inadequacy | Lack of ready-to-apply scientific results |
| | | Governance | Disconnection between short-term actions and long term goals | Short-term decision-making cycles |
| | | | | Long term responsibilities |
| | | | | Gentrification |
| | | | Institutional barriers | Lack of coordination |
| | | | | Lack of flexibility of decision making |
| | | | | Unsupportive legal frameworks |
| | | | Complexity of governance structure | Goal misalignment |
| | | | | Apathy |
| | | | | Role ambiguity |
| | | | Participation and awareness | Perception |
| | | | | Lack of participation |
| | | Economy | Perception of the benefits | Appreciation of non-economic benefits |
| | | | | Uncertain economic feasibility |
| | | | | Short term vision |
| | | | | Vandalism |
| | | | Budget constraints | NBS not a priority |
| | | | | Lack of funding knowledge |
| | | | Risk perception | |
| | + other | | | |
| | Can you briefly describe the main inhibitor factors and how they were solved | | | Text (300 characters) |

Pre-selected list

## II. What makes this project a pioneer?

| | | | |
|---|---|---|---|
| The originality, the innovativeness concerns | The design or the technique employed | - a new design and/or technique<br>- the combination of existing ones | Pre-selected list |
| | The implementation | - the business model<br>- the financing mechanism<br>- the governance model | |
| | The challenge(s) targeted | - the response to a specific challenge<br>- the response to a set of challenges (research of multiple co-benefits) | |
| | Other | | |
| Short description of the innovativeness | | | text (200 characters) |


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Has this originality been recognized by other:
(nota: it is not a compulsory factor of the pioneer, but it can help)

| | | |
|---|---|---|
| Has the project received a prize, an award? | - Yes/No | Pre-selected list |
| | If yes, please specify (entitle, level purpose, etc.): | Text (150 characters) |
| Has the project received a media coverage? (in reviews, in press, etc.) | - Yes/No | Pre-selected list |
| | If yes, please specify references: | Text (250 characters) |

## III. Author of the factsheet

| | | |
|---|---|---|
| Type of organization | - Municipality or metropolitan service<br>- Governmental agency<br>- Company (landscape/architecture agency)<br>- Non-profit organization<br>- Other | Pre-selected list |
| First name & family name | | Text |
| Address | | |
| E-mail | | |
| URL | | |

## IV. Sources

| | |
|---|---|
| Please indicate the references (and eventually URL) of your sources. | Text |

## V. Additional comments (optional)

***

### Additional comments to the analysis grid:

1°/ For the “NBS types”

Some of the studied projects only refer to one NBS (“simple” case), but other can simultaneously refer to several NBS (they are “composed” of several NBS). For example, the general composition of a park can be a NBS, but at another scale, the choice of tree species in the same park refers to another NBS. For that reason, it will be possible to describe several types per project in the analysis grid.

However, for the general functioning of the database, and also to provide a more targeted description of cases, it is important to select the 2-3 most relevant NBS. (In detail, a large park can refer to more than a ten of NBS).

2°/ For the urban challenge list

The list of Urban Challenge (UC) here proposed is based on the one produced in T2.1. But we leave the possibility to add other UC (our list is necessary not exhaustive). However, only the UC of the T2.1 list will be available to query the database.


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3°/ General reading of the analysis grid

Items of the typologies and of the urban challenges are not all intuitive, therefore they require definitions to be understood. T1.3 partners will have the possibility to consult the deliverables 1.2 and 2.1.

Because the future users of the platform will have the possibility to feed the projects database, we can imagine that information bullets could be useful in the online form.

## *III.3 The pioneer projects data collection*

### III.3.1 A first set of pioneer projects collected by N4C partners

A first set of data (44 projects) has been collected by N4C partners in order to initialize the project database. We cared to have a representativeness sample of NBS projects in terms of geographic origin, NBS types, etc.

The details on the way these data have been collected are presented in the D1.4 entitled “Report on NBS pioneering experiences”.

### III.3.2 A form on the N4C platform to continually collect pioneer projects

The projects database intends to continue to be fed by future users of the N4C platform. The aim is to enlarge the database and to continuously update it with new projects. It also aims to implicate the users in the N4C project.

The analysis grid will be rewritten as a form in the observatory, which will be used to enter new projects.

### III.3.3 Data obtained through the contextual data of the Geocluster4NBS

Most of the data on pioneering experiences will be collected through the completion of the analysis grid by N4C partners (1) or by the future users of the platform (2).

However, a part of the data useful to describe the local context of the NBS pioneer, like local climate for example, could be redundant with the contextual data collected in the Geocluster4NBS (T1.6). Partners will not collect this data project by project, but they will be directly available on the Geocluster.


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# IV. Specifications for the exploration tools associated to the NBS project database

This section describes how the NBS project database will be explored through the Geocluster4NBS tool and through the pre-selection tool.

## *IV.1 Project observatory explored through the Geocluster4NBS tool*

The geocluster4NBS tool is the main tool to explore the NBS pioneer project database. It is based on a GIS system.
The specifications of the Geocluster are detailed in a specific deliverable (D1.7: "Geocluster4NBS tool"), but here are the main functions relative to the project observatory:

This tool develops several functions:

- Geolocalization of the projects which is both:
    i. A research tool based on mapping
    ii. A way to visualize the results of the user's research
- Contextualization of the projects by using georeferenced catalogue of local data (climate zones, administrative and political limits, geographic context, etc.)
- The clickable projects on the map allows to directly query the NBS project database and to obtain details on selected project


*Figure 8: Geocluster4NBS tool Workflow Concept*

## *IV.2 Project observatory explored through the pre-selection tool*

The NBS database can also be queried through the preselection tool.
Several entries are possible: UC, NBS, urban scale.

Then the pre-selection tool output will propose a list of pioneer references (and also a list of NBS factsheet, etc. …,). The complete specifications of the pre-selection tool are described in the deliverable 1.5 "Specifications for NBS pre-selection tool".


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# V. Conclusion

This deliverable presented the definition of pioneer projects on which we based our collection and the components of the NBS observatory, which is a part of the NBS integrated analysis framework:

- The NBS project database (through the analysis grid produced to describe NBS projects) and the developed methodology for data collection. The content of the observatory (i-e. the pioneer projects are presented in D 1.4).
- How this data will be integrated into the Geocluster4NBS (The specifications of which will be detailed in D1.7: “Geocluster4NBS tool”) and used by the pre-selection tool (the specifications of which are given in D 1.5 “Specifications for NBS pre-selection tool”).

As the documentation process is just finishing, there is currently no complete feedback on the use of the analysis grid. In particular, some sections may be difficult to document and may be changed to better correspond to the information commonly available about NBS projects. The analysis grid will be updated if these difficulties have been frequently encountered during the documentation process of the 44 pioneer projects. We foresee some minor changes in the formulation of the form, but no major revision.


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