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Deliverable 6: Connecting Nature Framework Reports for
Fast-Follower Cities



DOCUMENT PROPERTIES	
Document Title	Deliverable 6: Connecting Nature Framework Reports for Fast-Follower Cities
Work Package	WP2
Task Leader	DRIFT
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Dissemination level	Open Access
Version	Final
Status of Document	Final
Deadline	Month 58 (March 2022)

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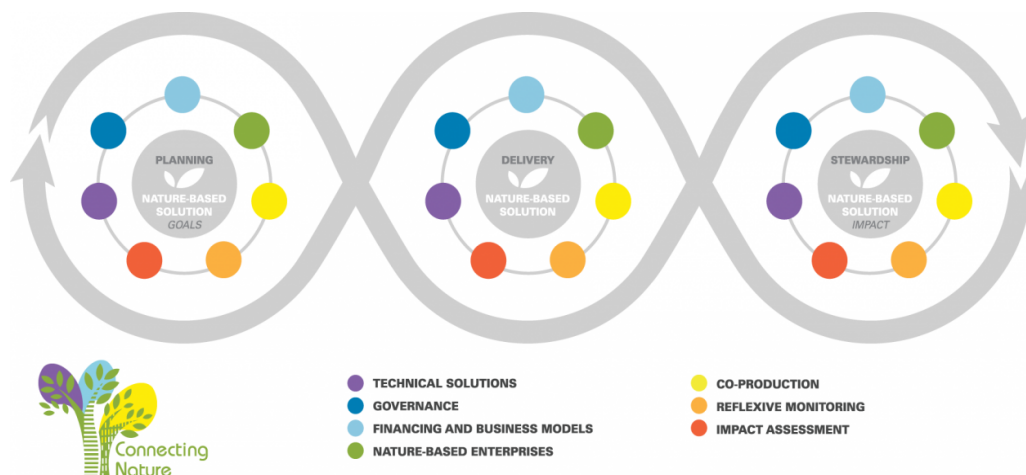
Executive summary

This Deliverable reports on the Connecting Nature Framework Reports of the Connecting Nature cities by presenting a cross-city analysis of how the cities have adapted and applied the Connecting Nature Framework for the large-scale implementation of nature-based solutions. Specifically, we identify the diverse types of innovations materialising in the cities to overcome barriers and leverage opportunities across the different elements of the Framework. These innovations represent changes in existing ways of nature-based solution planning, delivery and stewardship and thus generate new insights for science and practice about how to facilitate the large-scale implementation of nature-based solutions in cities.

The Connecting Nature Framework

The Connecting Nature Framework is a process tool that has been co-produced and co-applied with science and practice partners in the project with the aim to give a hands-on and comprehensive guide to the Connecting Nature cities to develop their nature-based solution exemplars. It places the nature-based solution at the core of an interactive process that distinguishes three phases of development for a nature-based solution: planning, delivery and stewardship. Throughout each phase there are seven separate elements that need to be considered: *Technical solutions, Governance, Financing and business models, Nature-based entrepreneurship, Co-production, Reflexive monitoring and Impact assessment* (Figure 1). While the first phase of the Framework development and application has focused on three Front-Runner Cities (2017-2019), we have in the second phase (2019-2022) transferred the Framework, including the generated knowledge and insights about how to apply it to different city contexts, to the seven Fast-Follower and Multiplier Cities.

Figure 1: The Connecting Nature Framework



Outcomes and impacts: analysis of innovations

The different elements of the Framework challenge the traditional urban planning practice and provide new ways to support integrated, collaborative and adaptive approaches. We identify the following key innovations that impact existing nature-based solution planning in the cities:

- Knowledge innovation: Urban planners are able to **generate systems' knowledge** about landscape conditions at various scales, involved actors and stakeholders, multiple benefits and trade-offs, financing opportunities and impacts. This knowledge is generated through collaborative processes involving other urban stakeholders.
- Technical and social innovation: **Linking the technical design of nature-based solution to social innovations** such as environmental education, cultural values, new human-nature relationships, which foster socio-cultural values, include environmental awareness raising and education and facilitate (intra-generational) exchange.
- Governance innovation: **Generating political support** through widely communicating nature-based solutions, linking nature-based solutions to strategic agendas, piloting examples of nature-based solutions and measuring the benefits.
- Organisational innovation: **Establishing cross-departmental collaboration and public-private partnerships** in order to generate systems' knowledge, facilitate co-financing and co-stewardship, and increase awareness, support and empowerment.
- Organisational innovation: **Employing new methods and tools for co-production** such as actor mapping, the Business Model Canvas and envisioning exercises to generate systems' knowledge, increase awareness, support



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- and empowerment for co-stewardship.
- Organisational innovation: Developing and implementing a **communication strategy** about nature-based solutions and the exemplar in different formats tailored to diverse target audiences.
 - Organisational innovation: **Creating space for reflexive monitoring and impact assessment** to keep track on the progress in real-time and facilitate adaptive decision-making, mobilise opportunities and address barriers in view of long-term goals.
 - Organisational innovation: **Investing in organisational conditions** to ensure human resources, skills and institutions for taking up integrated, adaptive and inclusive ways of working and mainstream nature-based solutions.
 - Market innovation: Identifying and facilitating **provision of new products and services** related to the nature-based solution and supporting NBEs.

Benefits of the Connecting Nature Framework

The cities reported the Connecting Nature Framework as a valuable tool supporting the implementation of their nature-based solutions and urban planning more generally. From the cross-city analysis, we identify the following main benefits of the Framework and corresponding impacts in urban planning:

- A holistic and integrated approach to generate multiple benefits and break silos based on generating systemic knowledge and collaborative governance approaches;
- Keeping track of the progress and results with a long-term perspective based on reflexive monitoring and impact assessment tools;
- Innovative methods to generate knowledge, involve multiple actors, leverage financing, facilitate learning and evaluation;
- Building a narrative of nature-based solutions and the novel way of working, which also serves to leverage funding and support.

Challenges

We also identified several challenges the cities faced when implementing the Framework as a novel and complex approach. Challenges are about coming to grips with the Framework, others refer to barriers of existing planning contexts:

- Introducing the nature-based solutions concept: novel and complex
- Applying the Connecting Nature Framework tools challenges business-as-usual planning practice and requires investing in new human resources and skills of urban planners;
- Transformative nature-based solutions with multiple benefits require breaking departmental siloes and hierarchical ways of working;
- Complex and rigid regulations and fragmented ownership over land impede multi-functional nature-based solution planning, delivery and stewardship;
- Mobilising financial resources and co-financing for nature-based solutions for long-term stewardship;
- The COVID-19 pandemic slowed down implementation processes, but offered opportunities for consolidation and experimentation

Facilitating peer-to-peer learning about how to apply the Connecting Nature Framework

Our approach to facilitate peer-to-peer learning between the Connecting Nature cities has been valuable to transfer knowledge about how to adopt the Framework and implement nature-based solutions on a large-scale. It is evident that both Front-Runner and Fast-Follower Cities benefit from each other's experiences with the Connecting Nature Framework. The Learning Platform Webinar structure supported:

- Cities to verify learning objectives about the implementation of the Framework and the large-scale implementation of nature-based solutions, as well as to recognise relevant learning objectives from other cities;
- Cities to share examples and innovations that address the learning objectives;
- Scientific experts to support the cities with follow-up activities to address the learning objectives.

Outlook: transferring the Connecting Nature Framework beyond Connecting Nature

In the course of the project the Connecting Nature Framework has been transferred in different ways, specifically through the UrbanByNature programme and a video for the Glasgow Summit. To ensure the continued application of the Framework after the project, several steps have been taken, both per Connecting Nature Framework element and through overarching programmes (e.g. the continuation of UrbanByNature regional hubs and the availability of all developed materials, including guidebooks and videos in the Connecting Nature Resource Centre on the OPPLA Platform).



1 Introduction

This Deliverable reports on the Connecting Nature Framework Reports of the Connecting Nature cities by presenting a cross-city analysis of how the cities have adapted and applied the Connecting Nature Framework for the large-scale implementation of nature-based solutions. Specifically, we identify the diverse types of innovations materialising in the cities to overcome barriers and leverage opportunities across the different elements of the Framework to facilitate nature-based solution planning, delivery and stewardship.

In Connecting Nature, we have developed the Connecting Nature Framework (Box 1) to provide a comprehensive perspective on what kind of innovations are required for the planning, delivery and stewardship of nature-based solutions on a large scale in cities, as well as on how and when to develop those innovations. We approach nature-based solutions as ‘living’ sustainability transition experiments that aim to generate multiple benefits by testing “a range of new technical, regulatory, and institutional configurations as well as social practices” (Williams 2016, p. 80). For example, the large-scale implementation of nature-based solutions requires new forms of collaboration across institutional siloes to deliver on multiple policy and planning priorities, innovative financing and entrepreneurship for long-term stewardship and novel governance processes to mobilise societal support and empowerment (Frantzeskaki et al. 2020; Connop et al. 2016; Kabisch et al. 2016). Key challenges concerning the large-scale implementation of nature-based solutions centre on the question of how to facilitate the emergence and embedding of these multiple innovations – including for instance technical, market, social, and governance innovations – that together have the potential to facilitate radical, long-term societal change to transform urban systems towards sustainability (Dumitru et al. 2018).

The Connecting Nature Framework guides urban planning on how to facilitate the emergence and connections of these multiple innovations along critical elements for nature-based solutions planning, delivery and stewardship. The Connecting Nature Framework and its elements – Technical solutions, Governance, Financing and business models, Nature-based entrepreneurship, Co-production, Reflexive monitoring and Impact assessment – were in detail introduced in our previous Deliverable 5 (Hölscher et al. 2019a). The Framework has been co-produced and co-applied with science and practice partners in the project. Particularly, the Connecting Nature cities have worked with the Framework to develop their nature-based solution exemplars. While the first phase of the Framework development and application has focused on the Front-Runner Cities (as reported in Deliverable 5), we have, in the second phase, transferred the Framework, including the generated knowledge and insights about how to apply it to different city contexts by materialising diverse innovations, to the Fast-Follower and Multiplier Cities.

In summary, in this project we sought to use the Connecting Nature Framework

- to **facilitate, connect and collate** the diverse types of innovations emerging and interleaving through nature-based solutions implementation and scaling;
- to **facilitate learning and internal and external communication** by the Connecting Nature cities with regard to how they are developing and scaling their nature-based solutions exemplar; and
- to **generate best practices for interventions** that serve as a process initiation to be transferred to other cities and that helps them identify what they need to consider and to push nature-based solutions excellence.

In this Deliverable, we present our cross-city analysis of how the Connecting Nature cities have applied the Framework and what can be learned from their experiences. Importantly, we do not aim to assess the cities in terms of how well they have implemented the Framework and what impacts they have achieved regarding their nature-based solution exemplars. (this is addressed in Deliverables 2 (Dumitru, 2022a) and 11 (Connop and Georgiou 2021)). Rather, **we aim to identify practice-oriented lessons for the large-scale implementation of nature-based solutions in cities**. It is interesting to look across cities and learn about different contexts as well as highlight cities pioneering best practices for some Connecting Nature Framework elements while struggling with others. Specifically, we derive practice-oriented lessons about how to apply the Framework step-by-step, by identifying how and when innovations can be facilitated and connected, what opportunities can be mobilised, and which barriers need to be addressed. Building on our Experiential Learning Framework (ELF) methodology (Xidou et al. 2021), especially the Knowledge Transfer Phase 2 process, we additionally identify learning questions emerging in cities when applying the Framework, as well as opportunities and barriers emerging in practice.

This Deliverable is complemented by various documents:

- The **Connecting Nature Framework Manual**, which supported the cities to design, implement and report on their exemplar through a comprehensive set of steps and guiding questions per Framework element (Appendix A).

- The **city reports** by the Front-Runner Cities Genk (Belgium), Glasgow (United Kingdom) and Poznań (Poland) (see Deliverable 5, Hölscher et al. 2019a), as well as by the Fast-Follower Cities A Coruña (Spain), Burgas (Bulgaria), Ioannina (Greece), Málaga (Spain), Nicosia (Cyprus), Sarajevo (Bosnia) and Pavlos Melas (Greece), which showcase how the cities made use of the Framework to plan, deliver and steward their nature-based solutions exemplars (Appendix B). The city reports are living documents and will be updated by the cities.
- Guidebooks on each element of the Connecting Nature Framework, i.e. for Technical solutions (Connop and Nash 2020), Governance (Vandergert et al. 2020), Financing and business models (McQuaid and Fletcher 2020a), Nature-based enterprises (McQuaid and Fletcher 2020b), Co-production (van der Have et al. 2022), Reflexive monitoring (Lodder et al. 2022) and Impact assessment (Dumitru and Tomé-Lourido 2020) (**Figure 2**).

Figure 2: The Connecting Nature Framework Guidebooks



2 Method

In this section, we briefly introduce the Connecting Nature Framework (Section 2.1), the co-production steps we have undertaken to develop and apply the Framework (Section 2.2) and how we have identified and analysed the innovations resulting from the Framework application across all Connecting Nature cities (Section 2.3).

2.1 The Connecting Nature Framework

The Connecting Nature Framework has been co-produced and co-applied with science and practice partners in the project with the aim to guide the Connecting Nature cities to develop their nature-based solution exemplars. The Framework is essentially a process tool to give a hands-on and comprehensive guide to cities and specifically urban policymakers, planners and other practitioners to implement nature-based solutions on a large scale by materialising multiple innovations along critical elements for nature-based solutions planning, delivery and stewardship.

The Framework, including how it was developed and applied in co-production between the scientific partners and local city officers, has been introduced in detail in Deliverable 5 (Hölscher et al. 2019a). This focused on the Front-Runner Cities. Deliverable 4.1 (Xidou et al. 2021) focused on the Experiential Learning Framework (ELF) between Front-Runner and Fast-Follower Cities. Deliverable 11 (Connop and Georgiou 2021) presents the individual progress of the Front-Runner Cities' in terms of nature-based solution implementation, and Deliverable 14 (Xidou et al. 2022) that of the Fast-Follower Cities. Deliverables 15 (Rizzi et al. 2020) and Deliverable 17 present the roll-out of the UrbanByNature programme to bring the Framework to multiplier cities. Box 1 gives an overview of the main resources for practitioners

interested in learning more about and using the Connecting Nature Framework.

Box 1: Overview of resources on the Connecting Nature Framework

Various supporting documents and videos have been created to support the cities in the Connecting Nature project and other cities interested in working with the Connecting Nature Framework.

1. YouTube video Connecting Nature Framework figure (for Glasgow Summit)

This video is intended as first short introduction to the framework for any listener working on urban challenges.

See: https://youtu.be/bM3ds_ZdYfc

2. Connecting Nature Framework guidebook on the CN website

See: <https://connectingnature.eu/innovations/connecting-nature-framework> and

<https://connectingnature.eu/sites/default/files/images/inline/Connecting%20Nature%20Framework.pdf>

3. Guidebooks per Connecting Nature Framework element

Every Connecting Nature Framework element has its own practical guidebook published on the Connecting Nature website to support urban practitioners in working with this element. On this website additional resources are added per element.

- Technical solutions <https://connectingnature.eu/innovations/technical-solutions>
- Governance <https://connectingnature.eu/innovations/governance>
- Financing and business models <https://connectingnature.eu/innovations/financing-and-business-models>
- Nature-based enterprises <https://connectingnature.eu/innovations/nature-based-enterprises>
- Co-production <https://connectingnature.eu/innovations/co-production>
- Impact assessment <https://connectingnature.eu/innovations/impact-assessment>
- Reflexive monitoring <https://connectingnature.eu/innovations/reflexive-monitoring>

4. Connecting Nature Framework Manual (Appendix A)

In this manual guiding questions for all Connecting Nature Framework elements are written for the cities to support them in writing their Connecting Nature Framework Reports.

5. Personal learning narratives by the Connecting Nature Cities

These videos are intended as testimonials of how the framework has impacted the cities in working on nature-based solutions. They have been shared with all project partners, and as examples in courses.

- A Coruña: https://youtu.be/x5yeivy1_L0
- Burgas: <https://youtu.be/PazHCQzeWb4>
- Genk: <https://youtu.be/-UaoY3ME1iA>
- Glasgow: <https://youtu.be/bEyF6pt-cs>
- Nicosia: <https://youtu.be/LoP8Rfmqglw>
- Pavlos Melas: <https://youtu.be/vqTyAEfdi6k>
- Poznań: <https://youtu.be/xNCrAze39Oc>
- Sarajevo: <https://youtu.be/4mLadSUMI2U>

6. The Connecting Nature Framework Narratives

These narratives were developed to communicate about how the cities worked with the framework with others, for example within the city governments and to wider networks.

- From Front-Runner Cities: reported in Deliverable 11 (Connop and Georgiou 2021)
- From Fast-Follower Cities: reported in Deliverable 14 (Xidou et al. 2022)

7. Information on the nature-based solution “Green Wall for kindergarten” in the city Yerevan, Armenia

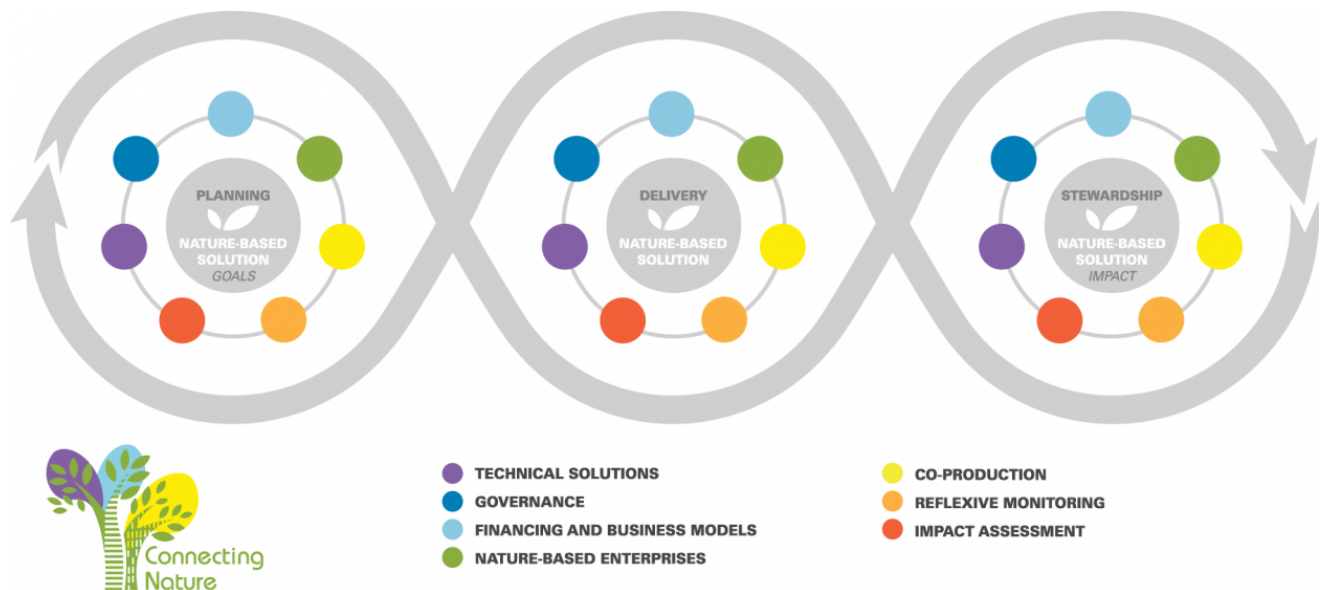
- On Oppla platform: <https://oppla.eu/casestudy/18930>
- On Youtube: <https://www.youtube.com/watch?v=NO-H1XR9NA4>

All these resources are included post project in the Connecting Nature Resource Centre on Oppla.

The Connecting Nature Framework places the nature-based solution at the core of an interactive process that distinguishes three phases of development for a nature-based solution: planning, delivery and stewardship (

Figure 3). In the *planning phase*, the goals for the nature-based solution are defined, the various innovations needed to realise it are developed – including for example the technical design, new governance models – and the activities required to implement it, for example a specific co-production process, are identified. The *delivery phase* refers to the process of implementing the nature-based solution including all its innovations. In the *stewardship phase*, stakeholders work on the ongoing participatory management and maintenance of the nature-based solution. Stewardship includes the monitoring and evaluation of the nature-based solutions, which enables adaptations to be made to ensure long-term sustainability and resilience.

Figure 3: The Connecting Nature Framework



Throughout each phase there are seven separate elements that need to be considered (see Hölscher et al. 2019a and Appendix A for more detail on each element): *Technical solutions* (the detailed design of the nature-based solution and its features, and how they are informed by local context and need), *Governance* (the organisational conditions and skills for connecting different actors across sectors under the same vision of nature-based solutions for the city), *Financing and business models* (the different sources of finances and business models for the delivery, long-term maintenance and operation of the nature-based solution that inform a new approach as a local business spin-off and attractor), *Nature-based entrepreneurship* (the stimulation of new market and business opportunities through and for nature-based solutions), *Co-production* (the process of active involvement and part-taking of different actors in the planning, delivery and stewardship of nature-based solutions), *Reflexive monitoring* (the process of facilitated, continuous and adaptive monitoring and assessment of the whole nature-based solutions process to capture lessons learnt in real time and adapt the planning and implementation process) and *Impact assessment* (the set of indicators that will be used as a reference for monitoring and evaluating nature-based solutions implementation and scaling that is adaptable to every city context and open to inputs over time).

It is important to emphasise that the Connecting Nature Framework is not a static step-by-step process. While there is of course a direction of travel in terms of rolling out nature-based solutions and their benefits on a city scale, the steps involved in this journey are interrelated and non-linear. It encapsulates the many elements that need to be considered for the implementation of nature-based solutions on a large scale in cities, whereby starting points and order of steps per elements are determined by the respective cities' contexts and needs. The Framework is therefore not meant as a linear blueprint with each step leading to the next; instead, it is meant to raise questions about what are starting points and what steps are needed in a city's or community's context and needs. In this sense, the Framework is different from traditional urban planning approaches that move in a linear process from planning to delivery. In our view, it offers a more realistic representation of the complexities in such processes and is thus better able to guide cities through them.

2.2 How the cities worked with the Connecting Nature Framework

We have co-produced the Connecting Nature Framework, its translation to the Front-Runner and Fast-Follower Cities' contexts and practices, and the derivation of lessons from the application through iterative interaction between researchers and planners of the cities in the Connecting Nature project. This means that we adopted a 'learning-by-doing' approach based on inter- and transdisciplinary cooperation (see Appendix C for a full overview of activities and workshops and Hölscher et al. 2019a and Xidou et al. 2021 for more detail on our approach). Our 'co-production team' brings together researchers from diverse disciplines – including ecology, business, psychology, governance, monitoring/evaluation and transformation research – and urban planners from the three Front-Runner Cities – Genk (Belgium), Glasgow (United Kingdom) and Poznań (Poland) – as well as seven Fast-Follower Cities– A Coruña (Spain), Burgas (Bulgaria), Ioannina (Greece), Màlaga (Spain), Nicosia (Cyprus), Pavlos Melas (Greece) and Sarajevo (Bosnia and Herzegovina).

Our aims were to, in this way, collaboratively:

- Explore which needs the cities have with regards to planning, delivery, and stewardship of nature-based solutions, leading to the identification and operationalisation of the critical elements of nature-based solutions implementation that the Connecting Nature Framework builds on;
- Test this approach together with the Connecting Nature cities in an iterative process and adapt the Framework based on what was learned from the cities' practice; and
- Identify the innovations and connections of innovations that result from the cities' implementation processes and lessons learned that benefit other cities interested in developing and scaling nature-based solutions.

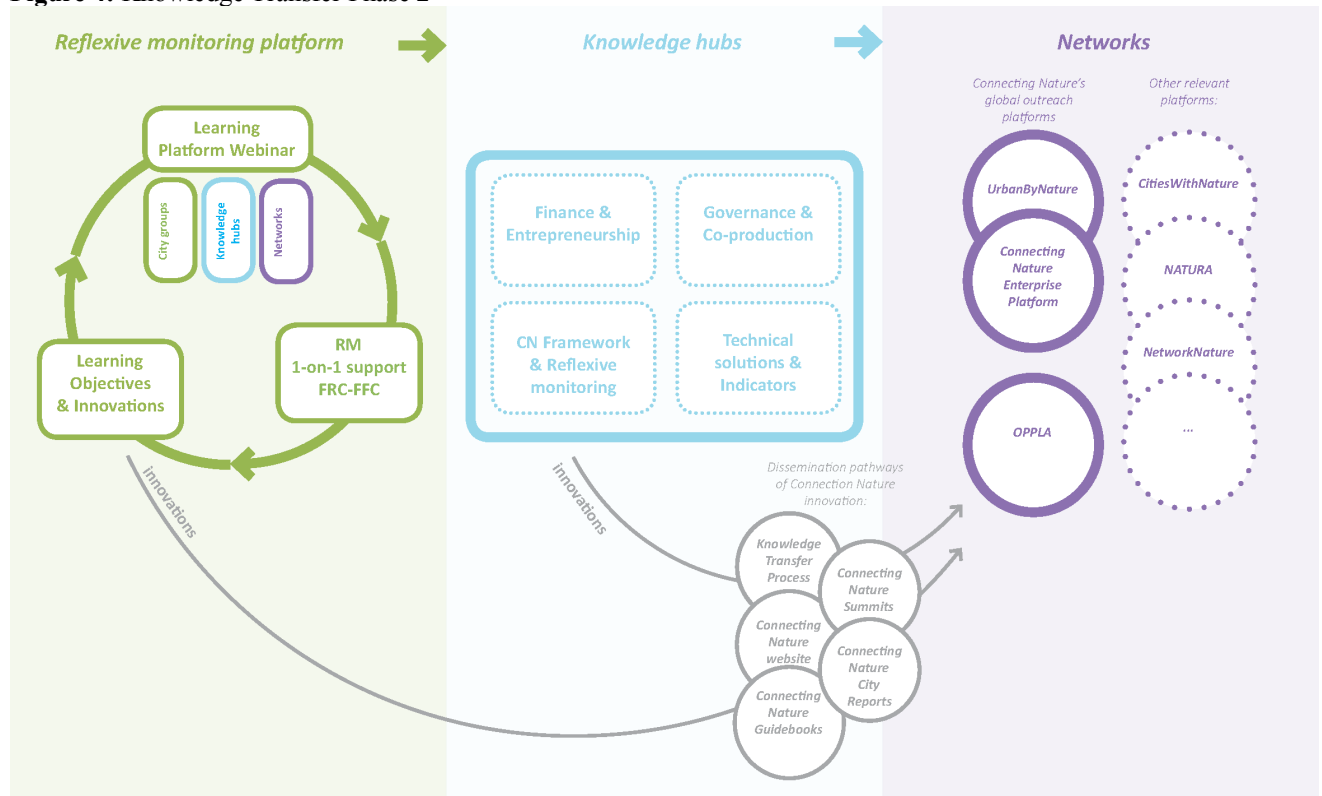
In line with our co-production approach, we undertook several iterative activities between all work package leaders and the Connecting Nature cities to include all the elements that are required (from the experience, knowledge, and perspective of the Connecting Nature project team) to successfully and effectively scale nature-based solutions at city level. Our first steps in developing and applying the Connecting Nature Framework with the Front-Runner Cities were reported in Deliverable 5 (Hölscher et al. 2019a). In the next phase of our project, we have developed a comprehensive approach for knowledge transfer between Front-Runner and Fast-Follower Cities: as part of the ELF of Work Package 4 that is reported in Deliverable 4.1 (Xidou et al. 2021;

Figure 4). Specifically, the second phase of the knowledge transfer in Work Package 4 was “intended to be an exploration of how expertise emerging from our Connecting Nature cities can be shared through peer-to-peer support; how learning processes captured by reflexive monitoring can be continued for the Fast-Follower Cities and transitioned to a more city-to-city process by the Reflexive monitoring platform; how learning objectives and innovation emerging from the exemplar implementation processes can be explored and solutions shared in the Networks; and how expertise held within consortium (and beyond it) can be mobilised by the Networks” (Xidou et al. 2021: p.7).

The process was intended as an exploration of how expertise emerging from our Connecting Nature cities can be shared through peer-to-peer support. It was designed to build on, and from, the current and previous one-to-one support provided to Front-Runner Cities and Fast-Follower Cities by Connecting Nature Framework element leads, scientific support partners (for example, UVT) and SME support partners. We grouped the Front-Runner Cities with the Fast-Follower Cities based on their phase in the process and their focus on specific elements (see Section 3.2.2.1, in Deliverable 4.1 (Xidou et al. 2021)). The knowledge transfer process was designed so that the Front-Runner Cities could support the Fast-Follower Cities in their reflexive monitoring process. This was to allow a process where more city-to-city exchange takes place in different settings shown in Figure 4: The **Reflexive Monitoring Platform** comprises three different activities starting with the 1-on-1 learning sessions between one Front-Runner City and Fast-Follower City. The notes of these sessions are analysed to abstract learning objectives and innovation emerging from the exemplar implementation

processes (Appendix D). During the Learning Platform Webinars, the learning objectives and innovation are shared, discussed and verified with all cities and scientist in **Knowledge Hubs** resembling different Connecting Nature Framework elements. The resulting learning objectives and innovation can be explored and solutions shared in various **Networks**; and how expertise held within Connecting Nature (and beyond it) can be mobilised by the Networks such as the UrbanByNature programme (Rizzi et al. 2020).

Figure 4: Knowledge Transfer Phase 2



2.3 Analysing innovations

We conducted a cross-city comparative analysis of how the Connecting Nature cities translated the Connecting Nature Framework to their respective contexts. Our main aim was to identify what innovations resulted from the cities' efforts to plan, deliver and steward their nature-based solutions exemplars across the various Framework elements, as well as how and when these innovations emerged. The innovations resemble at the same time different types of outcomes and impacts that were generated for urban planning of nature-based solutions in the cities. Building on this, we sought to generate practice-oriented lessons about how to apply the Framework step-by-step, by identifying how and when innovations can be facilitated and connected, and what opportunities can be mobilised, and which barriers need to be addressed.



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To these ends, in this report, we applied the Connecting Nature Framework primarily as an analytical lens. This means that we have identified for each city and each element of the Framework what has been done to translate the element into the respective city context, in which phase this was relevant and which innovations are embedded in these activities. We have then compared the results across all Connecting Nature cities. Our analysis builds on a wealth of information and data generated and collected throughout our co-production activities (Section 2.2, Appendix C). Additionally, the reports¹ by the Front-Runner (see Deliverable 5) and Fast-Follower Cities (Appendix B) provided valuable data sources by showcasing how the cities applied the Framework.

In a first step, we have identified for each city what has been done to advance nature-based solution planning, delivery and stewardship in reference to each Framework element. This led us to identify the critical conditions or activities that were put in place to implement the Framework elements, marking the overall change in how nature-based solutions are planned, delivered and stewarded. Additionally, we identified the phase in which the activities took place/the conditions were put in place in order to time stamp them.

In a second step, we have identified the innovations that are embodied in the activities or conditions. Following Rogers (2003), we define an innovation as “idea, practice, or object that is perceived as new by an individual or other unit of adoption”. In order to implement the Connecting Nature Framework and plan, deliver and steward nature-based solutions the cities introduce different types of innovations that manifest in changes in existing knowledge, institutional and organisational conditions, relations etc. (Box 2). Digging deeper into the innovations helps understanding how the Connecting Nature Framework is implemented. For example, new knowledge generation about multiple benefits of nature-based solutions broadens the definition of values delivered through such solutions and thus boosts political and societal support and promotes new forms of collaborative financing.

Finally, we have compared the activities and conditions, innovations and connection to Framework elements across all Connecting Nature cities. This analysis is presented in Section 3.1. Importantly, we did not aim to assess the cities in terms of how well they have implemented the Framework compared to other cities. Rather, we sought to learn from the different cities about what they needed to do to implement the Connecting Nature Framework, what were best practices and what are context-specific questions and challenges. Interestingly, we found that different cities pioneered best practices in some Framework elements, whilst they struggled in others – and thus were able to learn from what other cities have done in the peer-to-peer learning sessions (Section 2.2; Xidou et al. 2021).

In addition to the analysis of innovations and building on our complex Knowledge Transfer Phase 2 Methodology (Section 2.2), we have identified the learning questions emerging in cities when applying the Framework. In order to identify and compare the learning objectives of the Fast-Follower Cities, we analysed a survey we conducted for the introductory Learning Platform Webinar #0 and the 1-on-1 learning sessions between Front-Runner Cities and Fast-Follower Cities. In the minutes of these 21 meetings (3 for each fast-follower City), we coded learning objectives per Connecting Nature Framework element, and also marked in which reflexive monitoring category they would fit (rules / relations / practices / discourse (see Deliverable 7 Section 2.2, Hölscher et al. 2022)). Furthermore, we analysed whether the learning objective has received a response or advice from another city, either during one of the 1-on-1 learning sessions, or during a Knowledge Hub meeting or the third Learning Platform Webinar. In addition, we considered the latest versions of the cities’ Dynamic Learning Agendas, but only to give context in times of uncertainty. After making the overview of the learning questions, we subsequently asked the other fast follower cities to mark the learning objectives that they recognised in their own cities.

Examples of key learning questions and responses of how to deal with them are presented in Section 3.2, along with a comparison of main challenges the cities faced when implementing the Connecting Nature Framework as well as how they have overcome them. This provides further insights into the practical application context of the Framework (see Appendix D for the full list of learning objectives). In Deliverable 7, we reflect on the learning process between cities.

Our ultimate aim is to foster peer-to-peer learning in a community of cities about how to implement nature-based solutions on a large scale. In Section 4, we present a starting practical guide about key steps for implementing the Connecting Nature Framework step-by-step for each phase of planning, delivery and stewardship. This guide builds on the identification of relationships between Connecting Nature Framework elements and corresponding innovations per phase of the Framework.

¹ The reports will also be made available on the OPPLA platform.

Box 2: Different types of innovations engendered in nature-based solutions planning, delivery, stewardship (adapted from Hölscher et al. 2019a)

The following types of innovations are both engendered by and necessary to plan, deliver and steward nature-based solutions on a large scale:

Technical innovations (changes in technical design, construction, management and service delivery) that can be used by urban planners or companies result in advanced technology readiness of nature-based solutions. Technical innovations of nature-based solutions consider regionally-contextualised multifunctionality in the design, introduce system-oriented site selection, create interconnections between policy and planning fields (e.g. water management, mobility, urban regeneration), and facilitate long-term legacy focusing on the desired benefits.

Market innovations (the creation of new financing models, markets and business opportunities) set the stage for urban planners, enterprises and other groups (e.g. NGOs) to exploit new financing opportunities to replicate and scale nature-based solutions. They incubate new business opportunities and financial models to develop products and businesses (e.g. green roofs or gardens can generate marketable produce that adds to local economic activity). Market innovations also exploit the financial value of the multiple benefits of nature-based solutions, such as cost savings to water management by flood damage avoidance or energy savings. This helps to overcome fragmented (costs and benefits do not accrue to the same stakeholders) and create multifunctional value chains.

Social innovation (changes in social relations and social practices) activate and empower citizens and place-makers (Avelino et al. 2019; Haxeltine et al. 2016). Social innovations involve people doing things differently, alone or together (Franz et al. 2012). They are often driven by social entrepreneurs or grassroots initiatives, and can be fostered through the active involvement of residents, community leaders, and local businesses.

Governance innovations (new processes of co-planning and co-design and reflexive learning) facilitate the emergence of a new governance paradigm for making nature-based solutions inclusive and multi-beneficial and linking nature-based solutions to institutional contexts. The co-production of knowledge and action by residents, local businesses, planners and other relevant professionals is a governance process method for the participatory identification of needs and resources, paying attention to different institutional contexts and empowering diverse actors. Reflexive monitoring and evaluation are a key feature for adaptive policy making and planning to facilitate learning-by-doing and doing-by-learning in view of the intended multiple benefits.

Organisational innovations (new organisational networks, resources and skills) facilitate the new governance processes for collaboration and reflexive learning. Leadership, network structures and provision of resources and skills manifest in the capacities to design, implement, operate and maintain nature-based solutions in a way that provides multiple benefits and connects diverse innovations.

Knowledge innovations (new (processes for) knowledge creation) provide new scientific evidence as well as practical and accessible standards about designs, technical standards, benefits generated, financing and ongoing operation and legacy of nature-based solutions. Knowledge innovation also relates to a new way of science-practice partnerships and new ways of inquiring and generating knowledge such as processes for the co-production of knowledge (Popa et al. 2015; Frantzeskaki and Kabisch 2016).

3 Results: Innovations related to the Connecting Nature Framework during the implementation of nature-based solutions

This section presents our cross-city comparison of how the Connecting Nature cities translated the Connecting Nature Framework to their respective contexts. In Section 3.1, we first present per Framework element which conditions were put in place as well as which innovations these conditions embody and how they relate to other Framework elements. Section 3.2 summarises key challenges and learning questions the cities faced when implementing the Framework as well as possibilities for dealing with them.

3.1 What the cities did to implement the Connecting Nature Framework

Based on our cross-city analysis we describe what the cities did to implement the different Connecting Nature Framework elements. This gives direction on the different kinds of activities and conditions needed to, including the diverse types of



innovations that are embedded within them to make it happen. We illustrate what the cities did with examples of best practices from the different cities.

3.1.1 Technical solutions

Nature-based solutions bring more nature and natural features and processes into cities, through locally adapted, resource-efficient and systemic interventions that provide multiple benefits (Nesshöver et al. 2017; Raymond et al. 2017). The technical design, including construction and management legacy, of a nature-based solution needs to ensure that the desired outcomes are achieved and sustained in the long-term, and that trade-offs are avoided where possible (Connop et al. 2016; Kabisch et al. 2016). This includes both the practical construction aspects and the broader contextualisation in relation to the character and needs of the locality, region, and landscape into which a nature-based solution is being introduced (Connop et al. 2016; Nash et al. 2019).

All Connecting Nature cities focus on urban formal and informal greenspaces that form the basis of green urban networks and include multiple interventions to transform them into nature-based solutions (see Connop and Georgiou 2021 and Xidou et al. 2022 for an overview of exemplars in the Front-Runner and Fast-Follower Cities, respectively). The entry points to the creation of green urban networks differs. Several cities start from a strategic level. For example, Glasgow focused on the development of its Open Space Strategy that covers the whole city and is being rolled out incrementally through diverse small-scale projects such as the Growchapel community garden. Nicosia aims to design a network of open green spaces on a district level, including nine parks. There will be the physical interventions in the parks themselves and the development of smaller parks, as well as the creation of mobility connections to link the parks to each other by an integrated bicycle and pedestrian network. Other cities focus on a particular urban area or park that are to be transformed into nature-based solutions through multiple interventions. Genk is developing a multi-functional blue-green urban valley – the Stiemer Valley, which has been a neglected corridor of eight kilometres running through the city and suffering from poor water quality. A suite of pilot projects was selected for implementation – including the Gardens of Waterschrei, Slagmolen, SuDS and Soda and the Valleyroute – that range from redeveloping a former mill as an arts and information centre and gateway to the Stiemer, to developing rain gardens and other sustainable urban drainage system (SuDS) features to attenuate rainwater across the Stiemer catchment. Burgas, Ioannina and Pavlos Melas similarly focus on the regeneration of existing under-used or derelict urban parks and post-industrial spaces to transform them into nature-based solutions. Other cities start from small-scale interventions in specific areas that are to be replicated (out-scaled) across the respective cities – including open garden and nature-oriented playgrounds in kindergartens (Poznań), urban gardens for agriculture (A Coruña), urban gardens and sensory parks in schools (Sarajevo) and multifunctional urban gardens to flourish the Lagunillas neighbourhood (Málaga).

The Connecting Nature cities are in different stages of planning, delivery, and stewardship of their nature-based solution exemplars. Table 1 shows what has been done in the different cities, in which phase and what innovations were engendered. Building on the generation of a comprehensive knowledge base, all cities have developed a multifunctional technical design that lays the foundation for the delivery of the exemplars. All Front-Runner Cities and several Fast-Follower Cities have additionally started to ensure long-term co-stewardship and scaling in terms of replicating their exemplar.

The **generation of system's knowledge** building on the introduction of nature-based solution as a transformative concept was a crucial condition for developing a multifunctional design for multiple benefits while balancing local needs and local landscape contexts. An in-depth look at individual spaces and local contexts was found necessary especially when connecting multiple nature-based solutions as in Glasgow, since a one-size-fits-all approach does not fit well (Box 3). In Nicosia, European funds supported knowledge generation and technical studies. For example, a research project currently studies opportunities for improving and extending the Linear Park of Pedieos in the areas of Lakatamia, Strovolos and Engomi Municipalities. Additionally, a landscape competition supported the design the Urban Park of Pallourokampos. Various forms of collaborations – across public agencies and city departments – as well as the inclusion of private actors and specifically local communities contributed to the generation of knowledge and adapting the design to local needs. The generation of in-depth insights was also important for the development of novel nature-based solutions strategies and agendas (see Section 3.1.2) and for generating financing (see Section 3.1.3), which both in turn support the nature-based solution delivery. For example, in Pavlos Melas, following the directions of the Metropolitan Park Strategic Plan, a Special Spatial Plan was prepared to determine land-uses and urban planning of the former camp area. The Special Spatial Plan included a geological suitability assessment, an environmental impact assessment, and a study of economic viability, supporting the planning decisions and approval of the municipal council.

Box 3: Generating a thorough knowledge base for nature-based solutions' planning in Glasgow

In Glasgow, the Open Space Strategy builds on a wealth of data and spatial analysis to identify open space in Glasgow, assess the quality of open space, and assess the needs of the local area. This shows how the strategy and data can be used to develop locally-contextualised nature-based solutions based on *knowledge innovations* to improve open space in Glasgow.

An Open Space Quality Assessment was developed and carried out on all amenity greenspace, parks and public gardens and other open space types that can have multiple uses and are >0.3ha across the city. This provides a foundation for understanding both the current state of open spaces and the future potential. A Geographic Information System (GIS) database enabled quantification of how much open space there is in Glasgow and what is the quality of that space. Local Context Analyses were undertaken to show how to translate the strategic goals into operational projects within 15 areas of the city, with the aim that local communities will be embedded in developing projects at this scale. The open space mapping – in terms of quality, quantity and accessibility – were complemented with information and data on flooding, housing, and economic land. This served to show whether open space is in the right place, whether it needs to be improved if it is in the right place, or whether something else can be done when it is in the wrong place. For example, it has revealed that some spaces that seemed to be of bad quality are actually good. Overall, assessing open space is about asking different questions: Is it in the right place? If so, can it be made multifunctional? If it's in the wrong place, can it be swapped with some of the vacant derelict land that might be more accessible to those communities that are deficient in open space? Or can we look at doing different things that will make it more accessible? The analyses also addressed questions such as whether open space can be used for flood alleviation, heat reduction in the inner city, air quality management, or other issues.

Site visits were found to be a very effective mechanism for evaluating the topography, constraints, access, etc, when planning nature-based solutions. Additionally, site visits can be an effective mechanism for strengthening relationships with, and learning about projects from colleagues from other departments. Such face-to-face conversations provide opportunity for more informal conversations that can strengthen collaboration between colleagues from different departments. Knowledge generation also requires collaboration with local communities through co-production and by using place standards as an additional tool to add information about which parts of the city have no access to any good quality open space.

The Open Space Quality Assessment is now being used by the city government as a tool for understanding the local context needs when planning optimal nature-based solutions design, delivery, and stewardship. The tool is being used across departments/themes including the Development Plan, playspace revitalisation, urban agriculture, water management, and the Woodland Strategy. Building from the spatial database development, Glasgow City Council is partnering with NatureScot, the Scottish Government, and Dark Matters Labs to develop TreesAI: an open-source platform to map, value and finance urban forests. This will underpin better decision-making in relation to tree planting, management, and stewardship. The Open Space Strategy has been developed, peer-reviewed, and adopted by the council. It is now shaping urban planning and development activities across the city.

Knowledge also covers the identification of potential **trade-offs**. This has been challenging for some cities, especially in view of ensuring sufficient expertise on the various topics relating to nature-based solutions. Poznań has sought to balance trade-offs between delivering local benefits (based on the immediate needs of the users and locality) and broader benefits (based on key strategic needs of the city). This has included a design focus on the creation of aesthetics balanced with functional spaces that attract a high degree of activity, daily interactions, and social gatherings. Additionally, Poznań and Málaga raise concerns about gentrification when regenerating urban green spaces and facilitating local economic development. This is why urban regeneration should be supported by community-led activities, focusing on building social and relational capital and strong involvement of non-governmental organisations and bottom-up initiatives in order to counter the exclusion of low-income groups. Poznań also highlights potential conflicts from different user groups, such as increased noise levels during events in the open garden or conflicting opinions and visions of the best solutions for area development. During a family event in the kindergarten, a neighbour complained about the high noise levels. The solution was to better inform the neighbours living in the vicinity of the kindergarten about upcoming events and to organise workshops and events targeted at different neighbour groups to involve them in the garden activities, highlighting the importance of co-production (see Section 3.1.5). In Genk, the Stiemerdeals (Box 14) were created to ensure socio-economic benefits of the Stiemer Valley programme.

Based on the generation of knowledge, the cities developed a **multifunctional technical design** to provide diverse social, environmental and economic benefits, such as climate adaptation, biodiversity protection, pollution reduction, social cohesion and supporting local economic development. For example, the design of the Saint Trinity Park in Burgas aims to deliver multiple benefits while preserving and incorporating existing elements of the park, providing various functions



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(e.g. outdoor games, sport and cultural activities, picnic areas, shared workspace areas) and modern solutions (e.g. innovative surfaces, water effects). The urban network of linked open green spaces in Nicosia aims to create mobility linkages through an integrated bicycle and pedestrian network. Embedded in the multifunctional design are social innovations that provide new types of accessibilities and social interaction spaces (e.g. for education, recreation, work). Cross-generational exchange and education are common themes in many exemplars. In Sarajevo, the design is tailored to and includes educational activities and programmes for different target groups (youth, elderly, children with disabilities), including a weekly agenda for the urban garden (e.g. one day a week dedicated to urban gardening). An aim is also to provide economic opportunities for nature-based enterprises (see Section 3.1.4). The urban garden in Málaga aims to provide a space for education and community activities to promote relationships among neighbours and the community. Several cities further link their nature-based solution exemplar to historical and cultural values and use those to create (new) narratives and foster new human-nature relationships (Box 4). Such narratives are important sources for communicating about the exemplar and obtaining wider societal and political support (see Section 3.1.2).

Box 4: Multifunctional design of the Metropolitan Park of Pavlos Melas to mobilise cultural and historical values for community transformation

The creation of the Metropolitan Park of Pavlos Melas on a former military camp emphasises the park as a place of special historical and environmental value for the city and integrates *technical innovations* and *social innovations*. Since its organisational abandonment in 2006, the ex-camp is declared as an “urban gap”: a space that lacks “the clarity of a specific use in physical and functional continuity” (Pavlos Melas report), while also being a place for spontaneous and informal appropriation. The latter is visible in permanent and scattered activities in the park, such as concerts, open meetings, festivals and educational and sports programmes organised by various associations, organisations and groups. In addition, research on the conditions of poverty in the individual municipal units of Pavlos Melas municipality found the greatest deprivation to be concentrated in the neighbourhoods of the old residential core located in the immediate intervention pocket of the ex-camp. By transitioning the ex-camp into nature-based solutions, Pavlos Melas municipality intends to unlock its potential as a valuable natural resource, historical site, and driving force for economic growth and job creation, social cohesion, and environmental sustainability.

As part of Connecting Nature, many cities have put in place **long-term co-stewardship** of their nature-based solution exemplars. This required organisational and social innovations to embed and ensure the multifunctional use. In A Coruña, new conditions were put in place for granting a plot in the urban garden (e.g. adoption of organic agriculture) and reserving plots for collective management by educational centres, non-profit associations and other groups. Additionally, the urban garden is available to NGOs to develop educational projects and support citizen engagement. A new information point was created by the municipality to provide advice, support, information and workshops for citizens interested in urban gardens. A new pilot project to implement gardens in schools and organise educational activities seeks to integrate the urban gardens into school curricula. Long-term stewardship often marks a shift towards collaborative governance arrangements involving public and private actors, yet for many cities such approaches are still challenging because they are used to more centralised approaches (see also Section 3.1.2).

Additionally, several cities started **scaling their nature-based solution exemplar**. For example, Poznań has successfully replicated (out-scaled) and upscaled nature-oriented playgrounds in kindergartens. To achieve this, additional knowledge was needed to identify suitable areas, partners and funding sources as well as disseminating knowledge about nature-based solutions and the specific exemplars (**Fehler! Verweisquelle konnte nicht gefunden werden.**). In Sarajevo, the aim is to create a replicable model for the design and implementation of urban gardens. To these ends, other centres for healthy ageing, schools, kindergartens etc. were identified as potential places. Additionally, organisational changes are needed to integrate the design concept into existing planning procedures and identify responsibilities for replication. Important for scaling is the showcasing of pilot projects to demonstrate the multiple benefits. In Genk, the SuDS and Soda project is used to build engagement and capacity for SuDS more fundamentally in the region. To these ends, a SuDS engagement and demonstrator is developed as part of the SuDS and Soda project, which is used to increase the visibility of SuDS approaches and acts as a catalyst for the Water Strategy Masterplan, scaling SuDS approaches in all neighbourhoods around the Stiemer Valley. The water company – Aquafin – is financing the installation of the SuDS. As this is a significant shift for them from funding grey to green infrastructure, it is also a key learning experiment for them at a Flemish regional level.

Box 5: Out-scaling open garden and nature-oriented playgrounds in kindergartens in Poznań

The city of Poznań has successfully replicated (out-scaled) and upscaled their nature-based solutions. There are now 46 kindergartens with eco-demonstrators (e.g. insect houses, garden wooden pots/flower beds filled with compost soil for planting, live willow huts) that also include ecological education classes and 21 nature-oriented playgrounds in kindergartens. Additionally, five floating gardens have been completed. There were some interesting collaborations to replicate open garden in kindergartens, but due to lack of finances, organisational barriers and the COVID-19 pandemic it was not possible to open new open gardens in the city.

During every stage of the process it is crucial to spread knowledge and awareness about nature-based solutions in the city, including activities like ecological education, communication among stakeholders, partners, policy-makers as well as entrepreneurs. Additionally, a series of information activities promoting the idea of natural playgrounds were organised. This included a seminar on "Natural playgrounds in pre-school gardens" at the Poznań International Fair as part of a two-day conference "Education for public space". The workshops included activities in which the directors and teachers of nursery schools tried their hand at designing their own natural playgrounds under the supervision of an expert. These events were designed to build awareness of, and demand for, nature-based approaches to playspaces at kindergartens and schools, both at an academic and political level.

Importantly, Poznań found that nature-based solution technical design out-scaling is not a copy and paste approach. Each time the concept is replicated there needs to be consideration of the local context. For example, older children have different learning and play space needs that need to be reflected through technical designs. This closely links to the co-production of nature-based solutions, which involves multiple actors in the design and implementation as well as in the identification of financing opportunities.

For the operation of the open garden at kindergarten no. 42, it was important to put in place new regulations and safety rules. There are currently no legally binding instruments for the implementation of open gardens and natural playgrounds. Embedding such instruments as well as financing processes into the investment planning for the municipal kindergarten budget could support further replication. To ensure financing, it is also important to clarify long-term visions, strategies and goals in order to identify the activities that will help achieve these goals and diagnose the financial possibilities and opportunities for leading future projects.

Identifying responsibilities to replicate could safeguard against loss of momentum. While the local government is important for the initiation of new projects, the kindergarten management will be responsible for maintaining their preschool garden. Therefore, to ensure delivery, it is recommended to create a financial and management "map" as a tool to support directors and managers of kindergartens.

Table 1: Technical solutions and embedded innovations

What has been done?	Which phase?	Enablers (embedded innovations)
Generation of systems' knowledge (A Coruña, Genk, Glasgow, Málaga, Nicosia, Poznań, Sarajevo) <i>See Box 3</i>	Planning	<i>Knowledge innovation:</i> system knowledge about local needs, landscape context, synergies and trade-offs <i>Knowledge innovation:</i> introduction of nature-based solution as new concept
Multifunctional technical design that balances local needs and local landscape context (all FRCs and FFCs) <i>See Box 4</i>	Planning	<i>Technical innovation:</i> multifunctional design to deliver multiple benefits <i>Social innovation:</i> new types of accessibilities and social interaction spaces (e.g. education, recreation, work) <i>Social innovation:</i> creation of narratives about the nature-based solution
Long-term co-stewardship (A Coruña, Genk, Glasgow, Málaga, Nicosia, Poznań, Sarajevo) <i>See Box 7</i>	Stewardship	<i>Organisational innovation:</i> new conditions for management and operation to ensure sustainability of benefits (A Coruña, Poznań) <i>Organisational innovation:</i> flexible involvement of different types of stakeholders for co-management <i>Social innovation:</i> promoting educational projects and citizen engagement <i>Market innovation:</i> promoting new products for nature-based entrepreneurship



<p>Scaling the nature-based solution</p> <p>(A Coruña, Genk, Glasgow Poznań, Sarajevo)</p> <p>See Box 5</p>	<p>Stewardship</p>	<p><i>Technical innovation:</i> implementing pilot projects and experiments to showcase benefits</p> <p><i>Knowledge innovation:</i> identifying suitable areas and flexible approaches, partners and financing for replicating</p> <p><i>Knowledge innovation:</i> disseminating knowledge about urban gardens and organic farming</p> <p><i>Organisational innovation:</i> integrating the design concept into existing procedures and regulations</p> <p><i>Organisational innovation:</i> identifying responsibilities and roles for scaling</p>
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3.1.2 Governance

Because of the multifunctional benefits that can be achieved from nature-based solutions, their planning, delivery and stewardship requires cross-sectoral, multi-scale and inclusive approaches (Buijs et al. 2018; Pauleit et al. 2017; Kabisch et al. 2017). Facilitating governance for cross-sectoral, multi-scale and inclusive nature-based solutions can be a significant challenge to the ‘business as usual’ way of working within city governments and other organisations, that are used to working in (e.g. departmental) silos and not involving the broader public (Frantzeskaki et al. 2019; Connop et al. 2016). This means that there is a need to re-think the organisation of urban governance, including the organisational and institutional conditions such as skills, legal frameworks, resources and partnerships, to align nature-based solutions with broader social, political and business priorities and goals and facilitate collaboration (Frantzeskaki et al. 2020; Hölscher et al. 2019b).

Governance is a key element of the Connecting Nature Framework, which underlies the implementation of all other Framework elements. Table 2 summarises the key changes in terms of governance that were generated in the Connecting Nature cities. All cities have linked nature-based solutions and their exemplars to strategic goals, agendas and planning documents to gauge political support and leverage financing. Cross-departmental collaboration and public-private partnerships supported the generation of systemic knowledge for the technical design and strategy development and to leverage funding for delivery, stewardship and scaling. Some cities have put in place (Genk and Glasgow) or are planning to develop (Nicosia) new governance models to set-up a clear and formalised structure and clarify responsibilities while combining top-down and bottom-up approaches when planning, delivering and stewarding nature-based solutions. The Front-Runner Cities have further mainstreamed their novel approaches in strategies, regulations and organisational resources. Finally, all cities identified the need for tailored communication strategies to increase societal and political awareness and support.

A critical condition in all cities was **linking nature-based solutions to strategic goals, agendas and planning documents** on urban, regional, national and European levels. This has been crucial to introduce the novel nature-based solutions concept to policy and planning and ensure political support and financing for the exemplars planning and delivery as well as long-term stewardship and scaling. Many cities have integrated their nature-based solutions with urban strategies. In Nicosia, the Local Strategic Sustainable Development Plan and Integrated Spatial Development Strategy (OXA) include the proposal for the urban garden network. As thus, the open garden network is linked to the spatial framework of the area and budgets were ensured. Additionally, the creation of the urban garden network in Nicosia including the development of active mobility connections between plans is aligned with sustainable transport policy, health and wellbeing to ensure links across multiple goals and agendas. Many cities also developed strategic plans for their specific nature-based solution exemplars to set the aims and objectives and ensure implementation. The Pavlos Melas Metropolitan Park Strategy outlines the regeneration of the former military camp towards a green space, marking an important administration mechanism that is legally binding because it is connected to existing policy plans and official documents. For Glasgow, a major transformation point was the adoption of the Open Space Strategy by the city council, making it a key consideration for any development of Glasgow’s open spaces.

The development of the plans closely links to the creation of a profound knowledge base (see Section 3.1.1; Box 5) as well as various forms of communication and collaboration with other departments, public agencies, and private actors. A starting point for linking nature-based solutions to multiple city goals has been the Connecting Nature tool for the strategic alignment with the Sustainable Development Goals (SDGs) (van der Have et al. 2022; Vandergert et al. 2020). The tool helps to present the nature-based solution in alignment with broader social, political and business priorities to capture the multiple benefits, build the case and communicate about it to build alliances with partners who have different interests. In Poznań, it was critical to map the expected benefits of the open garden and nature-oriented playgrounds programme onto key city strategies to demonstrate how the exemplar would deliver these and ultimately to ensure the



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engagement of senior decision and policy-makers. Additionally, a series of information activities promoting the idea of natural playgrounds were organised.

Box 5: Employing strategic environmental assessment to integrate nature-based solutions into legally binding plans in the Caucasus region

Geographic sought to exploit the fact that Strategic Environmental Assessment (SEA) are mandatory in Georgia, and thus an opportunity to specify nature-based solutions as part of the SEA for urban plans. The Connecting Nature impact assessment element has critically supported this process to generate knowledge about the benefits of nature-based solutions as well as catalogues of nature-based solutions. It is very much hoped that, due to the legally binding nature of urban plans and their SEA, the approach would sustain attention to nature-based solutions shaping citywide strategies for scaling nature-based solutions. The integration of nature-based solutions into land-use plans and SEAs was piloted in two cases in Georgia (Kutaisi municipality and small coastal settlement of Grigoleti), and application is in the process for Kazbegi district/municipality and Stepantsminda township. Various Connecting Nature outputs and nature-based solution catalogues developed by Connecting Nature and other European projects were utilised to provide choice of selections for technical solutions as part of the land use plans through the SEA process.

All cities stated siloes and rigid bureaucratic structures as a main barrier to nature-based solutions delivery, yet were able to mitigate those through the **establishment of various forms of cross-departmental collaborations**, formal and informal, for the generation of systemic knowledge for the technical design, linking nature-based solutions to overarching goals and strategies, and to leverage funding for delivery, stewardship and scaling. The Nicosia Development Agency has worked closely with the Directorate General for European Programmes, Coordination and Development of the Ministry of Economy as well as with its member municipalities to find the best possible way to include nature-based solutions as a policy theme in national and local strategies. In A Coruña, collaboration with the education department provided links to schools and kindergarten as places for urban gardens and collaboration with the employment department enabled training courses on urban gardening, thus ensuring multifunctional delivery. The nature-based solutions concept supports opening up discourses for collaboration and combine budgets of multiple departments. In Glasgow, the Open Space Strategy was used to provide a framework for cross-departmental collaboration and financing by formalising meetings with key officers focusing on the 15 themes of the strategy.

All cities also sought to **establish public-private partnerships** for all phases of planning, delivery and stewardship as well as scaling. While such partnerships supported the technical design and delivery and generated financing (see Section 3.1.3), they become especially relevant for long-term stewardship. Co-stewardship is found to ensure multiple functions, for example by collaborating with partners from cultural, sports and educational sectors to organise events and initiatives, and requires clearly defining and formalising roles and responsibilities as well as capacity building to ensure responsibilities are met (**Fehler! Verweisquelle konnte nicht gefunden werden.**). In Sarajevo, for instance, the urban garden and sensory park at the Secondary Vocational Education and Training School is managed by the International Center for Children and Youth Novo Sarajevo, Children's House, which has a right to use this part of the land although it is public land. The centre also maintains this area (e.g. cutting, cleaning) on a voluntary basis. In Málaga, the stewardship use of the garden was split among two associations (Lagunillas Neighbours Association and Association Fantasia) to guarantee activities for schools and the elderly. The lease was set for a year with a calendar of meetings between both associations and the environmental department with the aim to control the development of the activities. Overall, such co-stewardship arrangements need to be flexible depending on the specific nature-based solution. In Nicosia the stewardship arrangement differs for each park, depending on which stakeholders need to be involved, who is responsible and authorised.

Box 7: Towards co-stewardship of urban gardens in A Coruña

A Coruña is aiming to facilitate the self-management of the ecoHortas by its users. This has been supported by an expert trainer and facilitator of collaborative processes and team work who organised workshops and advised users with the objective of facilitating the provision of operation norms and the election of a Management Committee for each of the urban gardens. At the same time, the municipality offered training in the field of organic agriculture to users of ecoHortas, with theoretical classes, practical workshops at the ecoHortas and an online platform in which users can ask their questions. In three municipal urban gardens associations of gardeners were created ("De leira na leira") to manage the plots better (more direct contact, on the ground, with less bureaucracy). There will also be one dedicated person from the municipality to assist the gardeners.

Several cities identified the need to develop **new governance models** for the planning, delivery and stewardship of their nature-based solution exemplar to set-up a clear structure and clarify responsibilities and combine top-down and bottom-



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up approaches. Genk pioneered a novel governance model based on an analysis of possible governance models and with the aim to replicate the novel model to other urban planning and policy processes (Box 6). Nicosia, due to the nature of the exemplar comprising multiple parks, plans to establish a semi-governmental body incorporated by law, which will be responsible for planning and delivery, coordinating the involved actors, as well as monitoring and reporting of the nature-based solution and other development projects in the District of Nicosia. The aim is to reform existing centralised governance towards more decentralised decision-making in the municipalities. Glasgow formulated a step-by-step Action Programme that establishes the implementation plan for the next five years with goals, responsibilities, funding sources and time frames. The Action Programme touches on different dimensions of the implementation and the goals of the Open Space Strategy, including the engagement with local communities, identifying opportunities for improving community spaces, reviewing existing landscape designation boundaries and working with children when considering the future distribution of formal play spaces across the city. This should build on a shared responsibility approach to ensure coordination and suitable structures at the local level. The aim would be for community-led projects to put in place their own governance structures to be monitored by those community groups, social enterprises or other actors responsible, while larger scale nature-based solutions will still require some formal institutional governance and facilitation from the Council and strategic partners.

Box 6: A novel governance model for the Stiemer Programme in Genk

In Genk, a novel governance structure was set up in order to realise integrated urban projects in the valley by involving various actors (Figure 5). Specifically, by not considering the Stiemer exemplar as a project anymore, but rather as a process, the governance model was fundamentally transformed towards a horizontal working process bridging multidisciplinary groups in sub-projects, with a clear implementation strategy for integrating across those. Instead of the sum of project structures, this required a clear and integrated governance model characterised by a horizontal, co-creative approach in which involvement and ownership are central principles.

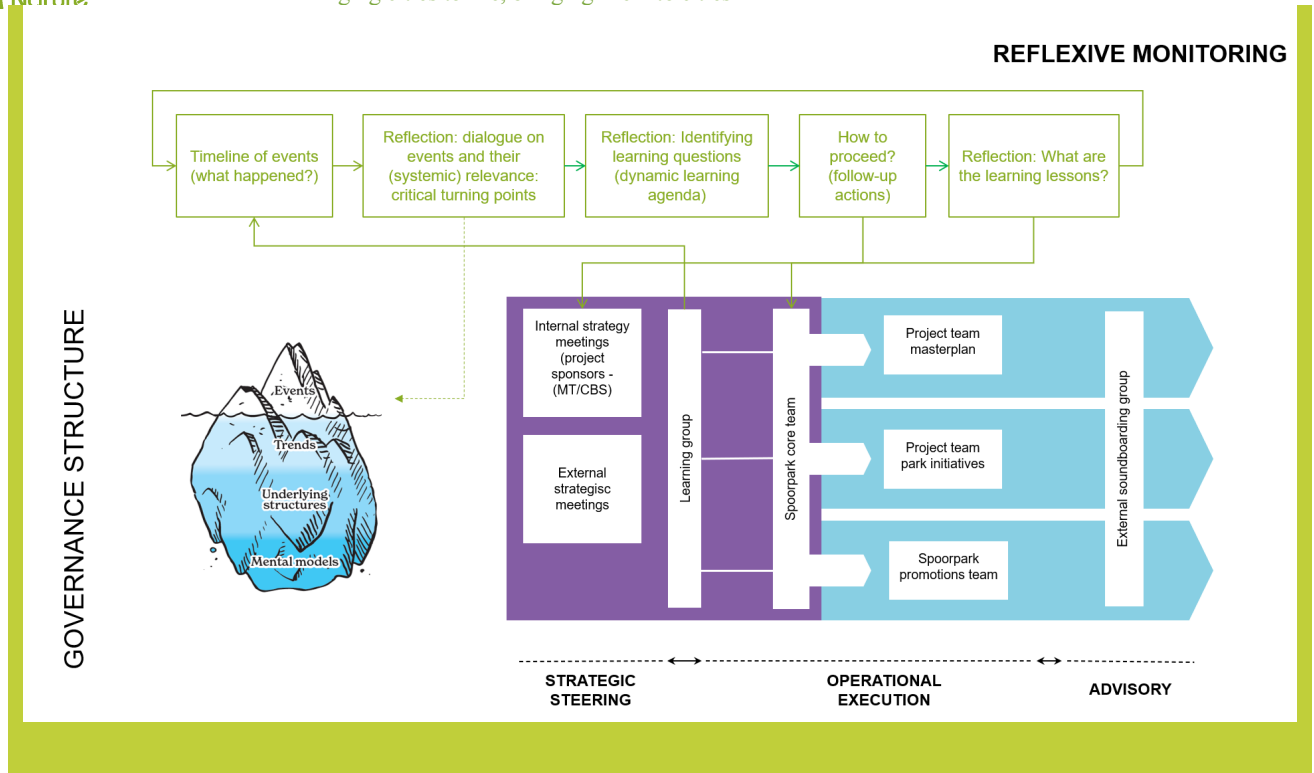
In the beginning of the process there was one project manager for the Stiemer Valley: the manager of the environmental department. Together with a small working group with colleagues from the spatial development and social department the master planning process was managed. To supplement the expertise of the team, internal and external experts from government administration and NGOs were involved to strengthen the strategies on ecology, trajectories, water and public culture. The top-down opportunity-driven approach and bottom-up convergence of small and large projects and visions represented an organisational challenge for the small Environment and Sustainable Development Department within the city of Genk.

The structure is characterised by a working, advisory and steering body. The daily project management is in the hands of two city employees, who take on an equal, active role and come from different departments in light of horizontal project operation. An advisory group composed of internal and external thematic experts, enriches and strengthens the project. They are consulted by the project managers whenever relevant. Finally, a steering committee ensures the monitoring of milestones in the project and strategic management. This steering group is composed of representatives from the policy, management team and external, thematic experts.

For the development of the Stiemer Valley, the following actors play an important role: experts from regional administrations (city, province, and region), experts from universities, experts and volunteers from nature conservation NGO, citizens brought together in the co-production platform 'Friends of the Stiemer', citizens, NGOs, entrepreneurs and others. Representatives of the following four strategic departments of the City of Genk will take up a role in the Stiemer Valley programme: Spatial Department, Social Department, Economy and Tourism Department, and the Sports and Culture Department. The strategic objectives of these departments are closely linked to the objectives of the Stiemer Valley programme. These objectives are related to urban planning, soft mobility, recreation and tourism, nature conservation, climate change/adaptation, social cohesion, economic development and others.

The innovative collaborative governance model developed is now being mainstreamed across other major city programmes (e.g. Energy Sector).

Figure 5: Stiemer Programme governance model



Several activities and conditions were important to establish and nurture the various forms of collaboration. Firstly, it was important to identify the key actors and enablers for collaboration. For example, in A Coruña, an important enabler was the participation of the employment department in an Urbact project on urban agriculture, which made it easy to cooperate with them on urban gardening. It also helped transfer good practices on urban agriculture. In relation to this, it was important to clearly identify the roles and responsibilities of each actor. Moreover, good communication was thought to be key, especially to overcome existing barriers for collaboration such as departmental siloes and diverging goals. In Nicosia, a professional mediator was appointed for these purposes, who was responsible to coordinate the discussion and the communication between the different stakeholders involved in each phase of the project. Keeping actors well-informed was considered significant, so relevant newsletters were sent and short face-to-face meetings were arranged. Depending on the audience, roundtable discussions, workshops or presentations have taken place with clusters of stakeholders (e.g. mayors, engineers). To facilitate good communication and trust building, Sarajevo and Nicosia also employed new methods, namely the EM|Path approach pioneered by Connecting Nature (see Box ; van der Have et al. 2022). For cross-departmental collaboration, high level meetings with key political responsible persons from different departments were important. For example, it can be beneficial to form alliances with senior decision-makers to help navigate budgeting processes that can have unwritten rules and important power relations. Additionally, cross-departmental collaboration is often facilitated by fostering direct relations with individuals from different departments. The Glasgow team organised regular lunchtime slots to present the Open Space Strategy and open up discussion about where to add nature-based solutions, to reach uninterested colleagues and create a shared narrative.

In several cities, especially frontrunning cities, we can witness a **mainstreaming of the strategic nature-based solutions goals and new governance models**. This comprised firstly the mainstreaming of nature-based solutions within city policy frameworks. In Genk, the Stiemer Valley programme was promoted as the flagship project within the adaptation policy of the city: a programme in which new strategies can be tested and demonstrated. Nature-based solutions are now being mainstreamed in the next policy round and social and ecological benefits of nature-based solutions are being increasingly recognised and adopted across city departments. This includes transfer of the nature-based solution concept to a new flagship project climate-proofing the city centre through greening. In Glasgow, the Open Space Strategy has contributed to embedding a place-based approach with nature-based solutions in policy to create a climate adaptive city. Additionally, new working relations were formalised. In Genk, city-wide thematic working groups were established to facilitate discussions with responsible actors in relation to 'safe-guarding' the vision of the masterplan during project development. They also create new working dynamics, creating direct collaborations with external partners that would previously have been managed by another department. Finally, mainstreaming is visible in the investment in organisational capacities. In Poznań, it was found that scaling-up nature-oriented playgrounds also the scaling of skills and 'green agents' were identified across city departments to ensure influence beyond the immediate team. In Genk, recruitment of personnel was



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expanded to work both within and beyond the Stiemer Valley programme. In Glasgow, the Scottish UrbanByNature Hub aims to drive knowledge exchange and build capacity in relation to nature-based solution implementation amongst several stakeholder organisations including statutory nature, environment, and planning organisations, and local authority network representatives.

A final governance element was the **development of a communication strategy** to communicate about nature-based solutions and their benefits to a wide audience. One of the barriers for implementing nature-based solutions is a lack of understanding what the concept actually means. For these reasons, it is important to increase awareness by developing different communication formats tailored to different audiences and building on the narrative of the nature-based solution exemplar (see **Fehler! Verweisquelle konnte nicht gefunden werden.**). All cities stated the use of the Connecting Nature Framework and corresponding reports for communication purposes. In Genk, a professional communication strategy with recognisable visual language was developed to reach out to and involve stakeholders. For example, the logo that was designed for the Stiemer Valley is used by an entrepreneur who is selling Stiemer ice-creams (a Stiemer deal initiative, see Box 14), which contributes to the visibility of the valley. Similarly, Nicosia aims to build a communication strategy and brand name for its exemplar: “Connecting Nicosia”. In Sarajevo, all co-production activities are followed by a journalist who writes articles about urban agriculture and promotes urban gardens on social media.

Table 2: Governance and embedded innovations

What has been done?	Which phase?	Enablers (embedded innovations)
Linking nature-based solutions / exemplar to strategies and agendas (all FRCs and FFCs)	Planning, delivery, stewardship	<p><i>Governance innovation:</i> linking nature-based solutions to SDGs</p> <p><i>Governance innovation:</i> linking nature-based solutions and exemplar to local, regional, national and European strategies, agendas and planning documents</p> <p><i>Governance innovation:</i> new strategic plans for nature-based solution and exemplar to set ambitions, objectives and aims (A Coruña, Nicosia, Pavlos Melas, Sarajevo)</p> <p><i>Organisational innovation:</i> collaboration with other departments, public agencies and the public to include nature-based solutions as a policy theme</p>
Cross-departmental collaboration to break silos (all FRCs and FFCs)	Planning, delivery, stewardship	<p><i>Knowledge innovation:</i> identification of key actors for collaboration and engagement and enablers of cooperation</p> <p><i>Organisational innovation:</i> establishing channels, spaces and mechanisms for communication and exchange</p> <p><i>Organisational innovation:</i> High level meetings with key political responsible persons from different areas (A Coruña, Ioannina, Nicosia, Pavlos, Melas, Sarajevo)</p> <p><i>Organisational innovation:</i> involving middle management in collaboration and first build trust and agreement before asking for help</p> <p><i>Organisational innovation:</i> employing new methods for bringing actors from different departments together</p> <p><i>Organisational innovation:</i> appointing a mediator responsible to coordinate the discussion and the communication between the different stakeholders to ensure good communication between the involved actors (Nicosia)</p> <p><i>Organisational innovation:</i> identifying roles and responsibilities and ownership</p>
Public-private partnerships for co-stewardship (A Coruña, Burgas, Málaga, Nicosia, Sarajevo)	Stewardship	<p><i>Knowledge innovation:</i> identify all relevant and involved actors</p> <p><i>Organisational innovation:</i> bringing together relevant actors in formal or informal groups</p> <p><i>Organisational innovation:</i> partnerships with local actors (e.g. cultural, sports, educational) to organise events and initiatives in the park</p> <p><i>Organisational innovation:</i> identify and formalise lease agreements, roles, responsibilities for stewardship and use</p> <p><i>Social innovation:</i> promote educational and neighbourhood activities, e.g. training in public space management, urban garden design, agriculture organic and nature-based solutions</p> <p><i>Organisational innovation:</i> public contact points for self-organisers (A Coruña)</p> <p><i>Knowledge innovation:</i> facilitating capacity building for self-management (A Coruña)</p>



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New governance models (Genk, Glasgow, Nicosia)	Planning, delivery, stewardship	<i>Knowledge innovation:</i> analysis of existing governance models (Genk) <i>Governance innovation:</i> combination of bottom-up and top-down approaches for decentralised governance <i>Organisational innovation:</i> setting up clear structure with responsibilities and roles <i>Organisational innovation:</i> replication to other governance processes (Genk)
Mainstreaming nature-based solutions (Genk, Glasgow, Poznań)	Stewardship	<i>Governance innovation:</i> promoting nature-based solutions across multiple strategic agendas <i>Organisational innovation:</i> formalising new working relations and cross-thematic task forces <i>Organisational innovation:</i> investing in organisational skills and resources
Communication strategy (all FRCs and FFCs)	Stewardship	<i>Knowledge innovation:</i> identifying different target audiences <i>Organisational innovation:</i> creating a nature-based solution brand <i>Organisational innovation:</i> hiring communication specialists

3.1.3 Financing and business models

Planning for financing of nature-based solutions is a critical element of nature-based solution implementation and includes both securing financing for capital investment as well as sustainable business models in the long-term to secure return-on-investment and stewardship. In view of increased pressure on public sector resources combined with a shift towards more collaborative governance models, there are calls to shift from primarily public sector financing to innovate financing and business models especially with a long-term view (Sekulova and Anguelovski 2017). Against these backgrounds, key financing questions include: What is the business case for investing in nature-based solutions over other competing public sector priorities? To attract alternative sources of investment what return on investment can nature-based solutions deliver? How should return-on-investment be measured (McQuaid and Fletcher 2020a).

In all cities, still the most dominant financing source comes from public budgets, yet the cities worked to diversify their financing opportunities and business models (**Table**). Ensuring financing is particularly crucial for the delivery of the nature-based solution as well as the long-term stewardship and scaling. It closely links to governance: the creation of political support for nature-based solutions as well as the establishment of cross-departmental collaborations and public-private partnerships to co-finance nature-based solutions delivery, stewardship and scaling.

A first step of all cities was to **identify mechanisms for long-term and collaborative financing** for the nature-based solution exemplar. To support cities for these purposes, Connecting Nature has developed a Business Model Canvas (BMC) tool (McQuaid and Fletcher 2020a), which has been applied in all cities as a co-production method. The cities report that working through the BMC has allowed them to elaborate the wider value propositions of their nature-based solutions and to clarify how these will be delivered through key activities and partners. The broader value propositions open up new financing opportunities by tackling multiple issues simultaneously. Importantly, a BMC needs to be tailored to a specific nature-based solution. In Nicosia, for instance, a BMC was needed for each park that is part of the open park network – each park is a single project with different value propositions and funding sources. A key challenge in the cities was to find personnel with knowledge of both nature-based solutions and financing. Often such knowledge is ‘siloes’ in departments or organisations, so it is important to build collaborations or develop the capacities internally in order to approach new partners and pitch for new sources of funding. Genk stated that the increased knowledge of financing and business planning for nature-based solutions, including a better understanding of formal and informal processes around budget preparation, made them more confident in discussions with other departments and external partners to secure collaboration and financing.

In order to leverage public financing, the cities explored opportunities for **co-financing nature-based solutions with different public sector departments or agencies**. For example, in A Coruña, the cooperation between different municipal departments (urbanism, social services, education, economical promotion) was improved for joint capital investment. In Poznań, the recognition of co-benefits of nature-based solutions facilitated co-financing of nature-oriented playgrounds together with the department of education. Important for leveraging public (co-)financing is also the inclusion of nature-based solutions in strategic agendas. In Burgas, the Saint Trinity Park is included in the Plan for Development of Burgas Municipality 2014-2021, which ensures that it is among the priority sites of the city and will be funded in the coming years. Successful pilots further increase opportunities for co-financing. In Glasgow, the Open Space Strategy provides a mechanism for combining departmental budgets under one umbrella.

Additionally, it is important to **prepare applications or bids for financing**, e.g. European grant financing opportunities



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but also financing from charities and philanthropic organisations. In Pavlos Melas, like most cities, the capital expenditure costs of green infrastructure projects have been financed mainly from national funds and EU structural funds, while the respective ongoing operational costs are included in the annual budget of the municipality. Preparing applications and bids requires identifying suitable programmes and topics relevant to find nature-based solution financial support, such as related to climate mitigation and adaptation, social participation and inclusion and activation of local labour market. In Pavlos Melas, for instance, the financial mechanism of Integrated Territorial Investments also contributes to social, economic and spatial cohesion, which through the simultaneous utilisation of various development axes promotes the territorial capital and the comparative advantages of the intervention area. Nicosia also sought European funds to support technical studies (EU Research and Development funds, LIFE+ Programme). The framing of interventions as pilot projects or “proof-of-concept” approaches facilitates leveraging financial funds. As proof of concept for the Open Space Strategy approach, £500K has been secured from the Scottish Government through the Parks & Operation Department to deliver and update playspaces across the city. The project will be developed as a pilot for the Open Space Strategy approach, with the intention that this will be mainstreamed for the subsequent £5m that the Scottish Government will be investing in open space improvements. For Nicosia, Ioannina and Pavlos Melas, the Connecting Nature Framework Reports were critical to support funding applications – and they were successful in securing large sums for their exemplars. While working on tenders or applications can be challenging for the cities, several cities noted that even failed funding proposals can create new opportunities by leading to new, collaborative ways of working.

Several cities also developed **new instruments to stimulate investment in nature-based solutions** such as taxes and subsidies. For example, Nicosia identified that Pay-as-you-throw schemes (residents are charged for the collection of municipal waste based on the amount they throw away) could provide additional financing for extended waste separation. Ioannina explored alternative financing opportunities such as income from leasing out buildings for cultural events and user fees for certain services, as well as ways to reduce costs through donations, research funds, the work of volunteers or sponsorships. In A Coruña, plot fees for the users of municipal gardens or association fees for the urban gardens create additional income streams.

Many cities explored **hybrid public-private financing models**, building on public-private partnerships and attracting private investment especially for stewardship. Poznań developed a hybrid financing model for the implementation of nature-oriented playgrounds and also look into private sponsorship of nature-oriented playgrounds. Such models involve an agreement with pre-schools to make their grounds available. The planning and upfront development costs are covered by different departmental budgets and community budgets. The costs of ongoing maintenance and management are then taken up by the kindergarten managers who access direct and in-kind contributions from a variety of sources. The Connecting Nature team is now looking for similar opportunities with other departments such as Health or the Department of Business Activity and Agriculture in relation to allotment gardens. Pavlos Melas states that contracts for maintenance services and the employment of individuals in collaboration with social cooperatives, the neighbouring Psychiatric Hospital of Thessaloniki, schools (apprenticeships), university (traineeships, internships) and volunteers can help reduce personnel costs. Burgas and Nicosia identified suitable spaces for private sector involvement, such as by identifying and facilitating new revenue sources (e.g. from cinema, cafeteria, work places). While the reconstruction of the Holy Trinity Park will be financed by the city government, Burgas aims to attract private investors for the landscaping activities in the park, with the responsibility to create and maintain attractive green space, by giving them advertising space. Nicosia is developing a novel approach to facilitate hybrid public-private financing (Box 7).

A more recent innovation to emerge in hybrid financing is **collaboration with intermediary platforms** such as TreesAI (Glasgow) and Reforest-Action (Poznań). These platforms see local government organisations as trusted partners in the identification and implementation of NBS projects at a local level. The platforms aggregate private sector investments and channel these towards suitable projects. The OSS online dashboard in Glasgow provides investors with increased data for decision making and subsequent impact measurement.

Box 7: Adopt a park scheme to attract private investment in Nicosia

The idea for the “Adopt a Park” Scheme in Nicosia was born due to the main challenge that Nicosia faces to involve the private sector, as larger parks in Cyprus are all financed and operated by the government (Ministry of Agriculture, Rural Development, and Environment – Department of Forest and Department of Environment). The identified opportunity was the existence of lots small green spaces, most of them underused or abandoned, in the neighbourhoods, which had the potential for pocket parks. These spaces are owned and supposed to be designed and maintained by local authorities (Municipalities) which are more open to private sector involvement in investing and developing these smaller green spaces. A key opportunity for this scheme was the culture of organisations in Nicosia, using outdoor spaces for social staff events.

The scheme is developed to promote long-term partnerships between local businesses and local governments, in order to maintain and beautify the small/medium-sized neighbourhood parks. The specific objectives of the interventions in the parks are to provide shady areas in summer, involve actively the private sector, facilitate co-design with citizens and increase the sense of ownership.

200 suitable small green spaces have been identified and the adoption scheme for these parks is being developed. Nicosia Development Agency is currently developing guidelines (in collaboration with the Forest Department and the heads of the Environmental Development Departments in the municipalities) that need to be followed by the applicants for the scheme. Responsibilities are to plan, plant and maintain the selected green space and commit to its ongoing care for a 5-years period. The municipalities along with the Nicosia Development Agency will set a team to monitor all the phases of the process.

It is also possible to engage commercial enterprises to co-finance nature-based solutions through **linking civic budgets with corporate responsibility/sponsorship processes**. Nicosia and A Coruña aim to link sponsorship of companies to Corporate Social Responsibility (CSR) strategies and reporting to incentivise companies to invest in nature-based solutions. Both cities thus explored cooperation with the private sector and specifically with officers responsible for companies' CSR policies to inform them about the nature-based solution, engage with them and try to build a win-win situation. The Nicosia team contacted CSR Cyprus to access all large companies in the area of intervention. Similarly, the Poznań Connecting Nature team has met with the CSR departments of a chain of grocers interested in green development and is putting together a database of other interested private sector partners.

Table 3: Financing and business models and embedded innovations

What has been done?	Which phase?	Enablers (embedded innovations)
Identifying mechanisms for long-term and collaborative financing (all FRCs and FFCs)	Planning	<p><i>Knowledge innovation:</i> wider value propositions for nature-based solutions</p> <p><i>Knowledge innovation:</i> identification of funding sources and financing partners, including local, regional and national public financing, European funds and private companies</p> <p><i>Knowledge innovation:</i> identification of how to reduce costs</p> <p><i>Organisational innovation:</i> Connecting Nature Business Model Canvas tool</p> <p><i>Organisational innovation:</i> new partnerships and collaborations</p>
Co-financing nature-based solutions with different public sector departments or agencies (all FRCs and FFCs)	Delivery, stewardship	<p><i>Market innovation:</i> new collaborative business models</p> <p><i>Knowledge innovation:</i> recognition of co-benefits</p> <p><i>Governance innovation:</i> including nature-based solution in strategic city plans</p> <p><i>Organisational innovation:</i> cooperation between the different municipal departments/jurisdictions for capital investment</p>
Prepare applications / bids for financing (all FRCs and FFCs)	Delivery, stewardship	<p><i>Knowledge innovation:</i> identifying suitable programmes and topics</p> <p><i>Technical innovation:</i> seeking financing for 'proof-of-concept' pilot projects</p> <p><i>Organisational innovation:</i> new partnerships and collaborations</p>
New instruments to stimulate investment in nature-based solutions (A Coruña, Burgas, Genk, Glasgow, Ioannina, Málaga, Nicosia)	Delivery, stewardship	<p><i>Knowledge innovation:</i> identifying new revenue sources and ways to reduce costs (e.g. from cinema, cafeteria, work places, volunteers)</p> <p><i>Organisational innovation:</i> changing rules and regulations for additional revenue (e.g. taxes, fees)</p>
Hybrid public-private financing models (Burgas, Glasgow, Nicosia, Pavlos Melas, Poznań, Sarajevo)	Delivery, stewardship	<p><i>Knowledge innovation:</i> identifying opportunities for private sector involvement</p> <p><i>Organisational innovation:</i> public-private collaborations and formal agreements for hybrid financing</p> <p><i>Organisational innovation:</i> collaboration with intermediary platforms (Glasgow, Poznań)</p>
Linking civic budgets with corporate responsibility (A Coruña, Nicosia, Poznań)	Delivery, stewardship	<p><i>Market innovation:</i> linking sponsorship to CSR strategy and reporting to incentivise private companies</p> <p><i>Knowledge innovation:</i> identifying commercial enterprises and responsible officers working with CSR policies</p>



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Organisational innovation: developing an incentives plan and guidelines for the private sector

Organisational innovation: meetings and collaborations with CSR departments of companies

3.1.4 Nature-based entrepreneurship

A nature-based enterprise (NBE) is defined as “[a]n enterprise, engaged in economic activity, that uses nature sustainably as a core element of their product/service offering” (Kooijman et al. 2021, cf. McQuaid et al 2021: 1). NBEs engage nature either “directly by growing, harnessing, harvesting, or sustainably restoring natural ecosystems, and/or indirectly by contributing to the planning, delivery or stewardship of nature-based solutions” (ibid.). NBEs can be very diverse, including creative enterprises using nature as inspiration for the organisation of arts or cultural activities, eco-tourism enterprises, not-for-profit community allotments, and environmental consultants or green infrastructure companies. The common denominator is that each NBE contributes positively to biodiversity and ecosystem services. NBEs can support public financing in view of increasing pressures on public sector resources and the increased outsourcing of public sector services to third parties (Osborne 1993; Pestoff et al. 2006). These changes present opportunities for market innovation both in the form of new public-private governance entities such as Community Interest Companies (CICs) and the emergence of product and service innovation.

The concept of nature-based entrepreneurship is highly novel in all Connecting Nature cities. The identification and facilitation of NBEs has been considered a key value in order to facilitate the delivery and long-term stewardship of the nature-based solution exemplars (Table 3).

Important for facilitating nature-based entrepreneurship is first of all the **identification of nature-based enterprises and related services and products**. This was important in all cities because lack of pre-existing knowledge and awareness. The introduction of the NBE concept facilitated the identification of NBEs in the cities and raised awareness about their potential contributions to delivery and stewardship of nature-based solutions. The cities identified a large diversity of NBEs and related products and services, including environmental protection and ecology in all segments (e.g. lifestyle, nutrition, horticulture, logistics, energy and technology, landscape architects, retail, craftsmanship, healthcare, tourism) that can contribute to multifunctional delivery and long-term stewardship while promoting local economic development (**Fehler! Verweisquelle konnte nicht gefunden werden.** and 11). For instance, in A Coruña and Málaga, an opportunity for NBEs rests on the commercialisation of products of the urban gardens to re-invest money in maintenance or expansion of urban gardens. In Glasgow, a novel collaboration with the nature-based enterprise Urban Good is able to show uses of open spaces. Urban Good also produced offline paper maps, making them accessible to different audiences.

Box 80: Nature-based Entrepreneurship in Poznań

Poznań creates conditions for the development of entrepreneurship in the sector of nature-based solutions, basing on pilots projects implemented in the city. One of the flagship projects is the network of natural playgrounds in Poznań kindergartens. By carrying out this activity, the city has learned together with subcontractors about how to implement this specific nature-based solution, what are the challenges and needs of this enterprise. To capitalise on this knowledge, Poznań organised pilot training programme in the frame of NBS Academy dedicated to natural playgrounds in the public space. Training was conducted in various formats (meeting, webinar, videos, technical materials) by Anna Komorowska, a landscape architect from “pracownia.k” company in Krakow. Anna Komorowska is the author of the majority of natural playgrounds projects in Poznań and was deeply involved in co-design process of them. Her experience does not only include designing, but also consultation and cooperation with kindergartens, schools and city hall. In the coming months and years other examples of nature-based solutions will be promoted and shared with potential contractors and ordering parties.

Box 91: Linking nature-based entrepreneurship to outdoor workplaces in Burgas

Burgas explores the opportunity to provide outdoor workplace in the Saint Trinity Park. This draws from the recognition that the need for a physical workplace is decreasing, because of digitalisation and underscored by the Covid-19 pandemic: “The workplace is the laptop and the phone and is in no way limited by city, building and office” (Burgas city report). At the same time, while companies look for attractive working conditions, it has been proven that spending more time outside in nature has multiple benefits for people’s physical and mental health. Therefore, Burgas embeds the promotion of work, entertainment, sport, etc, in the concept for the renovation of Saint Trinity Park.

An important condition for facilitating nature-based entrepreneurship is **integrating the development of nature-based solutions with economic priorities** to enhance political support and create demand for products. In all cities, main barriers for NBEs were a lack of critical mass to sustain especially SMEs, lack of awareness and demand for nature-based solutions and resistance from competing companies. Poznań’s communication activities (**Fehler! Verweisquelle konnte nicht gefunden werden.**) thus also sought to address these barriers through eco-education and branding nature-based entrepreneurship along nature-based solutions. Pavlos Melas highlighted the connection between promoting NBEs and providing evidence of the effectiveness of nature-based solutions (see Section 3.1.7). Similarly, A Coruña stated that decision-makers needed to be made aware about local NBEs and set up new collaborations with the municipal Department of Entrepreneurship to identify and connect with NBEs. Noted as a key lesson learned by Genk, NBE creation, incubation, and acceleration is a unique challenge requiring sector specific understanding.

All cities aim to **facilitate connection and networking of nature-based enterprises** in view of the current fragmentation of the sector and the difficulty to reach NBEs. A main mechanism for doing so has been the launch of the Connecting Nature Enterprise platform², an online marketplace connecting potential buyers with suppliers of nature-based solutions who can help to plan, deliver and steward nature-based solutions (McQuaid et al. 2020). According to the cities, the platform is a useful tool to register NBEs, facilitate networking and cooperation of local and supra-local NBEs. Several cities expanded on the platform and created local versions: In Pavlos Melas, a Cluster of Metropolitan Park NBEs was set up, Glasgow ran a successful NBE accelerator pilot (Box 12) and Málaga sought to establish a nature-based solutions accelerator La Bocaná de Lagunillas Project (Box 13).

² This platform is a stand-alone innovation developed in the Connecting Nature project: <https://www.naturebasedenterprise.eu>. It is a sustainable platform that will continue after the Connecting Nature project ends in May 2022.

Box 102: NBE accelerator pilot in Glasgow

Glasgow's Nature-Based Accelerator is a 6 month fully funded programme for early-stage nature-based ideas and enterprises that could create positive environmental, social, or economic change in Glasgow. The Nature-Based Accelerator was developed by Good Ideas and Glasgow City Council. It's all about encouraging local and resilient nature-based economies, creating more green jobs, and helping achieve net-zero targets.

In the NBE accelerator pilot, starting nature-based entrepreneurs were taken through:

- 6 month fully funded programme.
- A facilitated process using design thinking methodology.
- 18 interactive workshops (online and in person).
- Working closely with other nature-based enterprises.
- A final launch event connecting you with key stakeholders.
- Expert advice and ongoing support.

By the end of the programme they:

- Have a clear value proposition and unique selling point (USP).
- Understand who your potential customers are.
- Have a strong peer network of support with others working in a similar field.
- Understand your business model and how your enterprise can be financially viable.
- Have learned from entrepreneurs and experts within the field.
- Identify the social, environmental, and economic benefits your enterprise can have.
- Have access to business support throughout the programme.
- Connect into the wider ecosystem.
- Launch to a network of key stakeholders.

The cohort have continued to meet up as a support network; have joined the Nature Based enterprise platform and have linked in with other networks. Based on the success of this pilot, Glasgow was able to secure funding to run a second mainstream programme.

Box 113: Planned Lagunillas Incubator in Málaga

Málaga sought to develop a comprehensive, incubation program for social entrepreneurs, based on IUCN Global Standard for nature-based solutions, and the principles of economic localisation, as defined by the non-profit organisation Local Futures. Planned activities include the identification of nature-based enterprises, providing training on nature-based solution and economic localisation and co-design projects. The proposal for the incubator also had some extra interesting activities to be executed outside in nature, including a day of Sustainable Mediterranean Entrepreneurship and a day of Youth-led Eco-entrepreneurship at University of Málaga's Green Ray business incubator. The programme includes key partners including for example IUCN & IUCN-Med for a learning platform, knowledge, and compliance with Global Standard for NbS, the NbS Cluster, the University of Málaga and Local Futures for knowledge on economic localisation.

It is very difficult to launch a new product specially one that is not yet well known so many difficulties arose to try to disseminate this program and to have students willing to do it. Because of the pandemic and low subscriptions the incubator was cancelled. A future goal for the accelerator is to find a physical place for an NBS incubator and accelerator in the Lagunillas Neighborhood. The idea is to create an incubator with office space for the NbS cluster from Málaga and for startups and SME.

Several cities **created support mechanisms** (e.g. schemes, funds, grants and trainings) to make NBEs more competitive compared to conventional enterprises and ensure that new and existing NBEs meet the market demand. A very successful example to facilitate NBE is the Stiemerdeals developed by Genk (Box 14). A Coruña stated that it was necessary to change tenders, because tenders and contracts requiring more specific knowledge and experience tend to be more accessible to local SMEs. For instance, the education department signed a contract for the preparation of the school garden with a new SME (hortaECORuña) with experience in specifically school gardening, as opposed to all-purpose landscaping companies. Interestingly, the set-up of the new SME hortaECORuña was stimulated by a training programme on organic agriculture and urban gardening provided by the city's Employment Department – thus showing the effectiveness of such training initiatives. In Poznań, the Entrepreneurship Programme launched at the Connecting Nature Enterprise Summit comprised next to awareness raising of decision-makers also training on good practice for contractors/NBEs. A NBE was used as leader of this training. In addition, technical training materials were produced that



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could be shared with city and district councillors responsible for making budget decisions on a district level. This is further supplemented with an additional training cycle in relation to animating and maintaining natural playspaces. This approach to engaging entrepreneurship with nature-based solutions is being expanded to include other type of NBS (e.g floating gardens).

Box 14: The Stiemerdeals – using nature-based solutions to stimulate social innovation in Genk

The Stiemerdeals programme adopted an entirely novel social innovation approach for the city: a voluntary agreement between the City of Genk and other partners from across the city (other city services, citizens, organizations, companies) in relation to delivering mutually aligned ambitions associated with the Stiemer Valley. The Stiemerdeals are an effective mechanism for unlocking ‘dormant’ capacity but require a novel way of governing by the city team (e.g. with regards to the contact point and facilitating the network) and collaboration with the purchasing department. As thus, the Stiemerdeals also represent a new approach to collaborative governance (see Section 3.1.2).

Through city Stiemerdeals, other actors – citizens, organisations, knowledge institutions, companies, project developers – are invited to play an active role in the development of the Stiemer Valley. Stiemerdeals are used for a social, cultural and economic upgrading of the valley. For example, Crème Le Lis & Nostalgie, an ice cream company from the Stiemer Valley developed a Stiemer-ice-cream inspired by a Friend of the Stiemer. This was a great success for the ice-cream entrepreneur, who became an ambassador for the Stiemer Programme. Stiemerdeals can also contribute to the spatial transformation of the valley through thematic interventions in terms of experience, use, ecology and hydrology. In this way, besides the urban projects, other projects are also started by stakeholders. For example, Aquafin optimises the sewerage infrastructure.

The roles and task distribution between city and stakeholders are made explicit in the deal. A light and flexible project structure is custom designed and depending on the deal, this can be a facilitating, inspiring, connecting or supervising role. This experiment required additional resources and capacity. The active search for deals is done by the social innovation project leader for deals with citizens, associations, civil society etc. by the business development consultant for deals with companies, governments, investment companies, etc. These 'deal makers' work closely with the Neighbourhood Development and Economic Department. If the experiment is successful, the aim is to anchor this approach in these city services.

Table 3: Nature-based entrepreneurship and embedded innovations

What has been done?	Which phase?	Enablers (embedded innovations)
Identification of NBEs and related services and products (all FRCs and FFCs)	Planning, delivery	<i>Knowledge innovation:</i> introduction of NBE concept <i>Knowledge innovation:</i> identifying new revenue sources, nature-based enterprises and mechanisms to support them <i>Market innovation:</i> stimulating new products and services relating to nature-based solution (e.g. organic products)
Integrating nature-based entrepreneurship with economic priorities (A Coruña, Genk, Glasgow, Pavlos Melas, Poznań)	Planning, delivery	<i>Governance innovation:</i> integrating nature-based solutions with economic priorities <i>Knowledge innovation:</i> awareness raising, communicating about NBEs <i>Organisational innovation:</i> cross-departmental collaborations <i>Organisational innovation:</i> skills development in local governments about NBEs
Facilitate connection and networking of NBEs (all FRCs and FFCs)	Delivery, stewardship	<i>Organisational innovation:</i> NBE platform to register NBEs and provide opportunities for cooperation <i>Organisational innovation:</i> participating companies pay a fee that supports the funding of the accelerator programme (Málaga) <i>Social innovation:</i> linking urban gardens and commercial organic agriculture producers (A Coruña)
Support mechanisms for NBEs (Glasgow, A Coruña, Genk, Málaga, Nicosia, Poznań)	Delivery, stewardship	<i>Organisational innovation:</i> provision of schemes and incentives to strengthen start-ups and local SMEs (Glasgow) <i>Knowledge innovation:</i> setting up educational activities for potential businesses (A Coruña, Málaga)



3.1.5 Co-production

Co-production is a novel form of collaborative governance, which allows for deep participation to leverage and weave together local, expert and tacit knowledge and ultimately to address complex urban problems in an inclusive way. By bringing together diverse actors – for example, civil servants, practitioners, social innovators, scientists, entrepreneurs and citizens – co-production can support the generation of transformative nature-based solutions addressing local needs (Frantzeskaki 2019; van der Jagt et al. 2019; Mees et al. 2018). In addition, the collaborative nature of co-production generates novel and shared problem framings and visions, spurs new relationships between actors (for example between local government and citizens, across city departments) and triggers the (re-)definition of roles and responsibilities and empowerment of actors (Frantzeskaki and Kabisch, 2016; Hölscher et al. 2019c).

Most cities did not have prior experience with co-production, yet found it valuable to learn about relevant stakeholders, including those who are not usually involved in urban planning, and to generate more localised and contextualised knowledge about as well as support for the nature-based solution planning and long-term stewardship (**Table 4**). More detail on how the cities have applied co-production is provided in Deliverable 7 (Hölscher et al. 2022). In general, co-production closely links to facilitating new collaborative governance and long-term co-stewardship (see Section 3.1.2) as well as collaborative financing (see Section 3.1.3).

The cities first **set the scene for using co-production** in working on their nature-based solutions, including the identification of goals and actors to be involved. Notably, most Fast-Follower Cities sought to use co-production to get public feedback on their plans and strategies for nature-based solutions. Co-production was novel to all cities: they were used to develop the plans on their own. Other cities, especially the Front-Runner Cities, who used more far-reaching approaches to co-production, sought to generate a sense of community and empowerment as well as new relations between humans and between humans and nature. Corresponding to the goals, the cities identified diverse types of actors to be involved in their co-production processes. All cities emphasised the importance of identifying the right people, which are motivated and can contribute to the project, irrespective of their function or level of hierarchy. Stakeholder mapping workshops and tools were considered critical to find out which actors are operating where and identify unusual suspects. Such workshops can also raise awareness about the value of partnerships. For instance, in Sarajevo, the workshops conducted by Osmos to create Open Innovation Teams led to the conclusion that partnerships will be essential for their project delivery and financing. They differentiated between a relatively small group of actors who will be involved directly in planning, delivery and stewardship and a larger communications network to engage new actors in the long-term.

Most cities employed **strategic co-production** to develop strategic agendas for nature-based solutions and connect them to broader city strategies and agendas. Strategic co-production involved mainly actors from different city departments or jurisdictions to build cross-departmental collaboration and alignment towards shared goals, while the wider public is involved through consultation processes. For example, the Open Space Strategy, which serves as an overarching framework for open space implementation in Glasgow, was developed together with multiple strategic partners and engaged the wider public through online questionnaires, public exhibitions, and key questions on postcards. Partners and local communities were involved in the identification and assessment of open spaces, building on participatory data collection and citizen science approaches to develop an interactive map. Similarly, Burgas sought feedback from the public on the concept for the Saint Trinity Park renovation and conducted a sociological survey in which people stated that they want more green areas in the city. Additionally, a temporary office in the park was set up for citizen consultation. In Ioannina, a public consultation process was conducted through the city's internet platform.

In many cities, **tactical co-production** was used to specify action agendas and build local coalitions and networks between public and private actors. Such tactical co-production has become embedded in formalised groups of engaged citizens with strong connections to the city government. For example, in Genk, the Friends of the Stiemer is a group of engaged citizens that are ambassadors of nature-based solutions in their city and mediate between the city government and citizens using the Stiemer Valley. In A Coruña, Local Group on Urban Agriculture including urban gardeners, teachers, trainers, representatives of municipal departments, NGOs, SMEs has been set up to exchange knowledge and experience on urban gardening and facilitate co-stewardship (see **Fehler! Verweisquelle konnte nicht gefunden werden.**).

Finally, several cities employed **operational co-production** to design concrete initiatives and projects. In operational co-production, local communities are directly engaged in the co-design of the nature-based solution. In Genk, operational co-production activities included bicycle tours, neighbourhood dialogues, Stiemer quizzes, and the engagement of a Junior Team of local school children as child ambassadors (Hölscher et al. 2019d). In A Coruña, an open participatory process involved meetings with citizens, associations, architects and gardeners in the planning and delivery of the urban garden in the Adolfo Suarez Park. The gardeners of the existing urban gardens made a special emphasis on the fact that they don't



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have a dedicated area for gathering or even a shadowed area where to sit for a rest. This is why the new project includes a small building with a multifunctional common room and an outside area with a pergola to facilitate social interactions. In Glasgow, local communities are engaged in the development of nature-based solutions in specific areas. Co-production has led to the co-development of Every Tree Tells a Story: a social cohesion and lived experience project to capture and map tree stories across the city. Co-designed with Strathclyde University and GCC Education Improvement Service, it seeks to empower communities to use creativity to capture stories about the trees and the spaces in which they sit. In Poznań, a visioning workshop with children, teachers and parents contributed to the design of a natural playground at a kindergarten: The participants made models of what they would like in the natural playground. This knowledge was then used by the designer to further shape the nature-based solution.

The cities **applied collaborative methods and workshop designs** for stakeholder engagement. Several innovative methods for co-production were pioneered by the Connecting Nature team, including the BMC (McQuaid and Fletcher 2020a, see Section 3.1.3) and the EM|Path approach (Xidou et al. 2022; van der Have et al. 2022). Such methods gave structures and tools to identifying key actors and goals, building partnerships and developing a common understanding and trust. Specifically, the arts-based and created EM|Path approach was applied by A Coruña, Nicosia and Sarajevo, adapting it to their respective contexts and needs (Box 15). A main value in all cities was that it unlocked new perspectives and experiences, build a common understanding and language as well as new relations also between people and nature. Outputs in terms of sketches, videos, and records could be used for the communication materials. The cities stated that the innovative methods they learned will also be used for other projects.

Box 15: The EM|Path approach to unlock new perspectives and relations in A Coruña, Nicosia and Sarajevo

The EM|Path approach was pioneered in Connecting Nature as a novel co-production method that support preparing the ground for working on nature-based solutions by identifying local values, embedding the local narrative in the project, building new relationships and reconnecting with nature. The process invites creative encounters with the past, present and future and inspires imaginative and innovative storytelling to support the design, delivery, and stewardship of nature-based solutions. The process builds on a process skeleton including methods like memory work, immersion-in-nature and embodied reflection, eco-therapy, body mapping and art map. It was first piloted in Sarajevo and then brought to Nicosia and A Coruña – each implemented the process in a contextually adapted manner.

Reflecting on the outputs from the pilot testing of the process in March 2020, the idea of 'circularity' continues to persist as a driver for framing the intangible elements that are at the foundation of the tangible aspects of the Sarajevo NBS exemplar (i.e. their focus on sensory gardens, and fostering intergenerational exchange seems to be bringing this idea of a circle (on two fronts) centre stage – the metaphorical circle as a garden – from seed, to plant, to seed again; and then the circle of exchange between and among generations. Furthermore, the memory works that were produced in Sarajevo still carry an emotional element worth exploring, particularly as it relates to how co-production can help shed light on what is meaningful and important in peoples' lives (and how this can then be threaded through the various phases of planning, delivery and stewardship of NbS). The EM|Path Approach, as a co-production process, is valuable for uncovering the meanings that people carry with and in themselves, with respect to their relationship to, and with, nature; this can also help in further understanding individuals' motivation for engaging in co-production processes, as well as reinforcing a sense of connectedness, care, and ownership specific to outcomes of the process

In Nicosia, the method was employed to facilitate team building amongst the members of the Nicosia Development Agency working on the open parks network. Even though in the beginning of the process, the team did not fully understand the reasons and the scope behind this exercise; during the process' development the team started realising the significant benefits that could arise in two dimensions. The first concerned the implementation of the exemplar, as the team had the opportunity to spend quality time in the parks included in Nicosia's exemplar. The second was related to the ways that Nicosia's team members worked together. Through the process, the participants had the opportunity to work in a very different manner. Art and nature helped the team to unlock a new perspective, utilise personal experiences and memories, approach the project and express in a very fruitful way, thus contributing to the overall team's tasks. After the three days session, Nicosia's team saw the exemplar in a very different perspective. There are several arts-based outputs (sketches and videos), with an illustrator and filmmaker working alongside the group, which have been important dissemination material.

In A Coruña, application of the EM|Path approach has reinforced the values underpinning their urban garden network (Connecting Nature NBS exemplar) – namely, ideas and reflections specific to attachment, memories, and heritage; the EM|Path Approach has brought these words (and their meanings) into sharper focus. Furthermore, in follow-up discussions with A Coruña, the city shared that the urban gardeners are not motivated to have an urban garden because of the NbS benefits (be they related to health and well-being, environmental or economic), but rather, it is primarily

because the gardens offer the gardeners an opportunity to re-connect with their childhood and the happiness and joy that they connect with nature, and that particular moment in their lives.

The EM|Path approach was found a useful method that will be applied again in the cities. In Sarajevo, the method will be implemented to enable key stakeholders to tell the story of nature and nature-based solutions in Sarajevo, to engage with citizens to tell their stories and to use these stories to design nature-based solutions. The process will be tested during public consultations on the exemplar and implemented within exemplar implementation with multiple purposes: to provide inclusiveness of the specific target groups into society (children with disabilities/other marginalised groups), to provide intergenerational exchange (youth and elderly people) and to raise awareness on nature importance for health and well-being. In Nicosia, EM|Path approach is planned to be used to engage other groups of people as well such as professionals working on nature (e.g. people working for the Forest Department or the Department of Environment), who are often lost in the paperwork, screens and offices and rarely have the opportunity to connect with nature through their work.

The experiences of the Connecting Nature cities with co-production also underscore that co-production is not a panacea and required **developing new conditions for co-production**, including skills, institutional space and partnerships. For example, actor mapping tools supported the identification of actors (see e.g. van der Have et al. 2022 for applied methods for actor analysis and unusual suspect mapping). In Poznań, the green classroom was developed in a district the team didn't know well before, therefore the team asked the kindergarten management and voluntary district council for contacts. In Glasgow, Greenspace Scotland had contacts with a variety of relevant organisations and actors to be included. Several cities sought to ensure there are the right skills by engaging professional facilitators or community engagement experts. They emphasised that it was important to have facilitators who are charismatic, trusted, objective and embedded or knowledgeable about the local context. It has been stated in the cities that sometimes there is just no time for participation in general, because decisions have to be made soon. In addition, there are multiple competing priorities with insufficient time, so that there is no time to learn about, discuss and trial new methods of work such as co-production. It takes time to integrate it into the everyday design. Genk has succeeded in mainstreaming co-production across all elements of the Stiemer Programme, thus ensuring political and institutional support.

Table 4: Co-production and embedded innovations

What has been done?	Which phase?	Enablers (embedded innovations)
Setting the scene for co-production (all FRCs and FFCs)	Planning	<i>Knowledge innovation:</i> identifying actors and goals for co-production <i>Organisational innovation:</i> creation of Open Innovation Teams with key stakeholders
Strategic co-production (all FRCs and FFCs)	Planning, delivery, stewardship	<i>Knowledge innovation:</i> new insights about local needs and ideas for design <i>Organisational innovation:</i> public-private collaboration in design, delivery and stewardship with various city departments and private actors
Tactical co-production		<i>Organisational innovation:</i> temporary office in the park for citizen consultation (Burgas) <i>Organisational innovation:</i> local citizen groups on exemplar issue
Operational co-production		<i>Knowledge innovation:</i> exchanging knowledge and experience <i>Social innovation:</i> new relations and commitment <i>Organisational innovation:</i> public-private collaboration in design, delivery, and stewardship with various city departments and private actors <i>Social innovation:</i> empowerment of, and buy-in from, local communities
New methods for co-production	Planning, delivery, stewardship	<i>Organisational innovation:</i> new collaborative methods (e.g. Business Model Canvas, EM Path approach) <i>Knowledge innovation:</i> identification of new value propositions, goals, actors, funding sources and prioritisation <i>Knowledge innovation:</i> unlocking new perspectives, utilising personal experiences and memories <i>Social innovation:</i> building common understanding and language <i>Social innovation:</i> new relations, also between people and nature <i>Knowledge innovation:</i> learning innovative methods also for other projects (Nicosia)

		<p><i>Organisational innovation:</i> innovative technique for stakeholder engagement that is planned for more engagement processes</p> <p><i>Social innovation:</i> empowerment of and buy-in from local communities</p> <p><i>Knowledge innovation:</i> development of skills for co-production (e.g. facilitation)</p>
<p>Developing capacities for co-production (all FRCs and FFCs)</p>	<p>Planning, delivery, stewardship</p>	<p><i>Organisational innovation:</i> investing in skills and new personnel for co-production</p> <p><i>Organisational innovation:</i> mainstreaming co-production as a governance approach (Genk)</p> <p><i>Knowledge innovation:</i> learning about co-production about new governance method</p> <p><i>Governance innovation:</i> new partnerships with professional co-production experts</p>

3.1.6 Reflexive monitoring

Reflexive monitoring is a participative and dynamic monitoring and learning process that enables urban practitioners to gain insight into the progress and direction of their nature-based solution project in real time, not just retrospectively (van Mierlo et al. 2010; Bussels et al. 2013). It is about taking a reflexive mindset: reflexivity is the ability to interact with and alter the environment within which one operates (Beers and van Mierlo 2017). As a method, reflexive monitoring enables systematic embedding of continuous and collaborative learning into urban policy-making, planning, and other project management practice from the start. Specifically, the reflexive monitoring methodology helps to identify (institutional) barriers that block the desired structural change of the project, and to formulate actions to address, navigate, and mobilise these (Arkesteijn et al. 2015). Reflexive monitoring thus becomes an instrument for learning that helps to evaluate the day-to-day activities, decisions and progress, and how these align with the long-term ambitions of the nature-based solution.

Reflexive monitoring has been another novel method and process for all cities. Taking a step back and facilitating ongoing learning and adaptation in real time, not retrospectively, has facilitated all steps of nature-based solution planning, delivery and stewardship (Table 6). More detail on how the cities have applied reflexive monitoring is provided in Deliverable 7 (Hölscher et al. 2022).

The cities **set up reflexive monitoring processes** with dedicated reflexive monitoring teams, meetings and tools. The extent of reflexive monitoring differed between Front-Runner and Fast-Follower Cities. The Front-Runner Cities got introduced to reflexive monitoring by workshops and webinars in September 2018 and started to work with reflexive monitoring in their own team. They participated in (bi)monthly learning sessions with the Connecting Nature elements leads and reflected upon their learning outcomes during the biannual learning experience webinars. They additionally facilitated in the 1-on-1 learning sessions with the fast follower cities and participated in the Knowledge Hub sessions during the learning platforms webinars. The Fast-Follower Cities got introduced to reflexive monitoring in the Knowledge Transfer workshops and webinars as of January 2019. They started working with reflexive monitoring in their own team since October 2020 and participated in 1-on-1 learning sessions with their Front-Runner City in November 2020, February/March/April 2021 and June/July/August 2021. They reflected upon their learning objectives during the Learning Platform Webinars (June 2019, March 2020, June 2021, September 2021).

As part of the set-up, all cities defined reflexive monitoring teams, including roles within that team such as a reflexive monitor responsible for keeping the overview of the process (Lodder et al. 2022; Hölscher et al. 2022). Some cities set up teams including the Connecting Nature city teams, other cities set up broader teams including actors from different departments and key private actors. For example, in Sarajevo, participants in the reflexive monitoring process included actors from other departments in City of Sarajevo, SERDA, University of Sarajevo, NGOs and the Children's House that are partners of the exemplar. In A Coruña, reflexive monitoring included people from other departments and the Local Urban Garden group to raise awareness and get more people on board.

To implement reflexive monitoring, the cities **employed various methods**, including recording of important events and analysing critical turning points, to identify main challenges and opportunities, formulating learning questions as well as follow-up actions (Box 16; Lodder et al. 2022). The reflexive monitor is in charge of preparing an overall timeline of all important events related to the implementation of the exemplars. The timeline is used to structure the reflexive monitoring meetings for further discussion and planning. A Dynamic Learning Agenda identifies the critical turning points that



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brought about change in how certain situations were handled, for instance in the communication with other actors or in the internal and external collaboration. According to the cities, these reflexive monitoring methods support the daily work by revealing different perspectives, pro-actively anticipating and solving problems and mobilising opportunities and ensuring short-term actions are aligned with long-term goals. Many learning outcomes exceed the nature-based solution exemplar and sit at the organisational levels of the cities, thus reflexive monitoring is primarily a method for organisational learning.

Box 16: Reflexive monitoring in Ioannina

In Ioannina, regular bi-weekly project meetings are held with the participation of all the members of the city's Connecting Nature team, where the status of the project is discussed and the critical turning points are formulated. The reflexive monitor is responsible for updating the dynamic learning agenda with contributions of all the members of the team. Updates are made when a significant event happened. Since the Connecting Nature team in Ioannina consists of members from almost all departments of the municipality, all follow-up actions in the project are known to a member of different departments.

One of the most important critical turning points was related to "Designing the key elements of the Exemplar" and its learning question "How do we determine the key design elements to include in the restoration of the Park?". The follow-up actions in essence reveal all the methodology that was followed and involved internal and external meetings, city board decisions and public participation.

Setting up reflexive monitoring in Ioannina was challenging due to the novelty of the process, which is quite different from the usual way of managing a project. In the beginning, every member involved in the project had to be persuaded of its value. Eventually, with everyone on board, reflexive monitoring was appreciated. Through the identification of critical turning points and the formulation of learning questions, the team can be more proactive and anticipate possible problems, in contrast to the traditional way of managing a project, where a substantial amount of time is dedicated in dealing with problems after their appearance.

Applying reflexive monitoring required all cities to **make space for and embed a reflexive way of working** in order to integrate it into daily practice. Reflexive monitoring embodies a new way of working, which is reflexive, collaborative and adaptive. The cities highlighted that such an explicit learning process requires a considerable time effort and communication, though that nonetheless it is worth it. Since the method was considered complex, it was important to simplify it and adapt it to the existing decision-making context. Genk set-up the Stiemer Conclave that takes place every six months next to their regular reflexive monitoring meetings to allow reflexivity and zooming out for a longer period of time. During this conclave, Genk focusses with the Stiemer Programme team in the Stiemer loft (a physical space they created to work on the Stiemer Valley) for two days full-time on the Stiemer Programme. The agenda is determined in advance focussing on a number of fundamental aspects of the Stiemer Programme that need specific attention. For example, the new governance model (Box 6) and the Stiemer deals (Box 14) originated from one of the Stiemer conclaves. Genk also used reflexive monitoring for other process/projects. They designed a novel structure based on their reflexive monitoring meeting structure in Connecting Nature and applied this to a project on energy. They did use other terminology, to make it easier for other colleagues to get introduced to the method. For example, using the term: "learning sessions" instead of reflexive monitoring.

A specific Connecting Nature innovation was the use of reflexive monitoring to facilitate knowledge transfer and **peer-to-peer learning** between Connecting Nature cities. During the 1-on-1 learning sessions the Front-Runner Cities and Fast-Follower Cities exchanged their knowledge and experience about how they worked with the different Connecting Nature Framework elements in their exemplar. For example, Malaga learned about Glasgow's NGOs that organize clean-ups. Ioannina reported that they learned from Poznań how to make the reflexive monitoring method fit their everyday work and implement it more actively in their exemplar. For the Learning Platform Webinars, we created a miro board to share and verify the learning objective analysis with the scientists and the cities in the project. This worked well to select the most important learning objectives to discuss in smaller groups facilitated by the Connecting Nature element leads in the Knowledge Hubs.

The Front-Runner Cities started **analysing the reflexivity of own learning outcomes** during the second part of their learning sessions. They learned how to formulate their learning using the reflexivity categories rules, relations, practices, discourses and connecting their learning to the Connecting Nature Framework elements.

Table 5: Reflexive Monitoring and embedded innovations

What has been done?	Which phase?	Enablers (embedded innovations)
Setting up reflexive monitoring (all FRCs and FFCs)	Planning	<i>Organisational innovation:</i> set up reflexive monitoring team and define roles <i>Social innovation:</i> involving people from other departments (Genk, Poznań, Glasgow, A Coruña, Sarajevo) and NGO's and/or university (A Coruña, Sarajevo) <i>Organisational innovation:</i> new way of working included into daily activities, in collaboration and in real time, provides a big picture
Employing reflexive monitoring methods (all FRCs and FFCs)	Planning, delivery, stewardship	<i>Knowledge innovation:</i> identification main challenges, barriers and opportunities in real time <i>Knowledge innovation:</i> learning about diverse tools for reflexive monitoring <i>Organisational innovation:</i> eye-opener workshop in Genk and Poznań to introduce the concept of nature-based solutions for other departments
Making space for and embedding reflexive way of working (all FRCs and FFCs)	Planning, delivery, stewardship	<i>Organisational innovation:</i> making time and space for reflexive monitoring <i>Organisational innovation:</i> Stiemer Conclave meeting of 2 days in Genk <i>Organisational innovation:</i> Genk uses reflexive monitoring (learning sessions) for energy project
Peer-to-peer learning (all FRCs and FFCs)	Planning, delivery, stewardship	<i>Knowledge innovation:</i> learning about tools or processes other cities worked with. <i>Organisational innovation:</i> learning sessions with Connecting Nature cities for knowledge exchange <i>Governance innovations:</i> learning platform webinar as a tool to facilitate peer-to-peer learning by cities
Analysing reflexivity of own learning outcomes (all FRCs and FFCs)	Planning, delivery, stewardship	<i>Knowledge innovation:</i> learning how to recognise the reflexivity of their own learning outcomes, formulate them connected to the reflexivity categories and connecting them to the Connecting Nature Framework elements

3.1.7 Impact assessment

Nature-based solutions have been proposed as a promising policy approach to simultaneously provide social, environmental and economic benefits (Haase et al. 2014), such as climate change mitigation and adaptation, improved quality of life, physical and mental health (Kabisch et al. 2017), social cohesion, well-being (Brink et al. 2016), and a sense of belonging and place (Hartig et al. 2014; Sullivan, Kuo & de Pooter 2004; Keniger et al. 2013; Gulrud et al. 2018). However, the evidence for their multiple benefits is rather scarce and highly fragmented, as evaluations often fail to plan for the assessment of multiple outcomes across different categories of impacts (i.e. environmental, social, economic, etc) (Brink et al. 2016; Raymond et al. 2017; Samuelsson et al. 2018).

The cities struggled with, yet appreciated, learning about how to clearly delineate the impacts of their nature-based solutions, including synergies and trade-offs between different types of impacts (Table 6). Robust, flexible and cost-effective methods for their monitoring and evaluation are essential to building an evidence base for the performance of nature-based solutions to guide urban policy-making.

All Connecting Nature cities developed an impact assessment plan for their nature-based solutions exemplar, with support from Connecting Nature researchers. As a first step, this included **the selection of appropriate and robust indicators** to capture impacts across multiple categories. In order to select indicators, the cities first linked city strategic objectives to expected outcomes of their nature-based solution exemplars. This also provided opportunity to think over potential co-benefits and multiplier effects or potential trade-offs between objectives. To measure the expected results, the cities selected some of the Connecting Nature indicators across multiple categories including environment, health and wellbeing, social cohesion, economic and participatory planning and governance (see e.g. European Commission 2021 and the CO-IMPACT platform³). Important was conducting a search whether baseline data was available that allows measuring the different indicators. For instance, A Coruña analysed which data was available, including the source and year of the baseline, the granularity (specifying the level the baseline data refers to: street, district, neighbourhood or the entire city) and periodicity. In addition, it was indicated whether new data will be collected for the indicators. In terms of environmental indicators, it was found that the city council had a number of meteorological stations distributed around the

³ <https://co-impact.app/>



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city. One of them was relocated next to one of the urban gardens to provide very precise data like air temperature, humidity, wind. Similarly, it was found that the city council has already very accurate mathematical models to measure noise and air quality levels. The council has a lot of GIS data that is not necessarily organised in a user-friendly way, but the Connecting Nature team of A Coruña is in contact with the relevant department in order to access this data and include it in the assessment plan. Other identified indicator sources related to existing local implementation plans such as the Spanish Urban Agendas and REDS Indicators (Spanish Network for Sustainable Development).

The cities highlighted the importance of **specifying indicators and impacts across scales and for different target groups**. For example, in Glasgow, the uniqueness and geographical coverage of the Open Space Strategy means that the indicators need to allow measurement of the impact of the enhancements at each open space site both at neighbourhood and street level, as well as at the city as a whole. Glasgow has therefore worked to develop a suite of indicators to evaluate the impact of nature-based solutions at both a city level (to monitor the incremental impact of the Open Space Strategy) and at a local level (to monitor the impact of individual nature-based solution pilots). In Poznań, the nature-based solution exemplars like pre-school gardens, open garden and pocket parks represent small-scale interventions. Thus, it was important to adapt the indicators to the scale of nature-based solutions implemented in Poznań. A challenge is that, because of this, the effects of this type of intervention are difficult to capture on the scale of the whole city. This means that the monitoring of the impact of small green interventions on the environment, wellbeing and social cohesion in dynamic terms can only be implemented on a site scale.

After the final selection of indicators, the **data collection methods were defined**. This includes the identification of existing data gathering methods and possible data gaps where new data collection would be needed, as well as needed technologies and software. Collaboration, especially across city departments, is an important condition for ensuring data collection and dealing with data gaps, because different departments already undertake evaluations and other actors such as from academia can further support impact monitoring. In Glasgow, collaboration with colleagues within the city council and other organisations has been essential to identifying the right data sources. For example, the National Health Service (“NHS”) Greater Glasgow and Clyde is a critical source of social and health data, which are collected for nine areas across Glasgow. Internal departments within Glasgow City Council are instrumental in identifying economic data, such as numbers and locations of businesses, or biological species data after liaising with the Biological Records Centre. For some indicators, it was not possible to identify a partner able to supply the data. For these, it was necessary to implement new evaluation processes. In A Coruña, as a part of the EidusCoruña urban sustainable development strategy a new Urban Observatory will be created to collect indicators on urban sustainability. Existing indicators will be ordered and put together, new indicators are being collected and a new webpage and a software application are under development. Additional data on indicators where data is not readily available – like place attachment, trust in community, mental health and wellbeing – was collected by the UDC Connecting Nature team (academics), who conducted surveys with schools and gardeners’ associations.

A next crucial step is **integrating the collected evidence into the policy process** to facilitate adaptive management of the nature-based solution exemplars. Impact assessment was considered vital for capturing benefits, synergies and trade-offs as well as communicating the effectiveness of nature-based solutions to decision-makers and external stakeholders. Impact assessment supports cities in building the case for investments in nature-based solutions, by providing evidence regarding the types of impacts they are able to deliver and it provides an essential tool to make adaptations in real time, thus increasing their performance. So far, several cities stated that the list of indicators has been useful at producing template-like list of topics that may be relevant to nature-based solutions allowing for organised data-gathering. This also contributed to systematise knowledge about links between city’s strategies and priorities and nature-based solutions. Explicating the links between different goals contributed to engage different stakeholders and actors from different city departments. In Glasgow, the Scottish UrbanByNature Hub is envisioned to focus on impact assessment to align with the Scottish Government priorities in relation to Digital Planning and Data. By bringing disparate datasets together into a central resource it is possible to also support more integrated and targeted decision-making by promoting data sharing and interdepartmental working.

Box 17: Impact assessment dashboard in Glasgow

As part of Glasgow City Council’s (GCC) work on building a baseline of health, social, economic and environmental data for impact assessment purposes, it became evident that data were not widely available between teams. In order to increase awareness of existing and newly collected data, a dashboard with graphical and mapping elements was created. ESRI’s ArcGIS Online platform was customised by Connecting Nature’s GIS Officer so that the dashboard provides a visualisation of commonly needed datasets across these topics. This has allowed non-technical colleagues to access and interrogate data that were previously out of their reach along with raising awareness of the data gaps and

data quality issues present. The dashboard has helped raise awareness of the importance of data sharing and evidence-based decision making, within GCC's teams.

Overall, the cities stated that implementing impact assessment requires the **development of new skills and expertise**. The cities found that, due to their limited experience with indicators and monitoring, developing an elaborate monitoring strategy has been a challenging task, especially given the wide spectrum of objectives. The Glasgow Connecting Nature team brought in a GIS officer to support the impact indicator and dashboard development. Now that the value of this position has been demonstrated, work is ongoing to secure the legacy of this GIS position to ensure continuity of the spatial analysis and impact evaluation components of the Open Space Strategy through the Glasgow City Dashboard.

Table 6: Impact assessment and embedded innovations

What has been done?	Which phase?	Enablers (embedded innovations)
Selecting indicators	Planning	<p><i>Knowledge innovation:</i> linking city strategic objectives to expected outcomes of their nature-based solution exemplars</p> <p><i>Knowledge innovation:</i> identifying benefits and trade-offs</p> <p><i>Knowledge innovation:</i> learning about diverse indicators for different scales and target groups</p>
Defining data collection methods	Planning	<p><i>Knowledge innovation:</i> identifying existing data methods, available baseline data and gaps</p> <p><i>Organisational innovation:</i> cross-departmental collaboration to identify data sources</p> <p><i>Organisational innovation:</i> public-private partnerships for data collection</p>
Integrating evidence into policy process	Stewardship	<p><i>Knowledge innovation:</i> capturing and communicating benefits, synergies and trade-offs</p> <p><i>Organisational innovation:</i> producing templates about relevant indicators to organise and systematise data gathering</p> <p><i>Organisational innovation:</i> collaboration and linkages to communicate evidence</p>
Building skills and conditions	Planning, delivery, stewardship	<p><i>Organisational innovation:</i> development of new skills and expertise for impact assessment, hiring additional human resources</p> <p><i>Organisational innovation:</i> cross-departmental collaboration and partnerships</p>

3.2 Learning questions, challenges and opportunities when implementing the Connecting Nature Framework

While implementing the Connecting Nature Framework, the cities have experienced several challenges and raised specific learning questions about how to implement the different elements vis-à-vis their existing urban planning contexts. These challenges and questions, as well as how these could be addressed, give additional indications to other cities about how to implement the Framework and, ultimately, nature-based solutions.

Overall, all challenges relate to the novelty of the Framework, including concepts and tools, which often have been at odds with traditional urban planning approaches in the cities. While some challenges are about coming to grips with the Framework, others relate more specifically to barriers relating to existing planning contexts. For each challenge, we give examples of learning questions and corresponding responses that arouse in the cities. The full overview of learning questions raised is provided in Appendix D, and Deliverable 7 reflects further on the knowledge transfer and peer-to-peer exchange between the cities (Hölscher et al. 2022).

Introducing the nature-based solutions concept: novel and complex, yet an opportunity for multiple benefits and collaboration

The nature-based solution concept itself was considered a challenge in all cities, mainly due to its novelty and thus limited awareness about, support for, and experience with nature-based solutions. A main barrier for working with nature-based solutions has been that policymakers and policy officers were not sufficiently aware of the meaning and implications of nature-based solutions – including the Connecting Nature city teams. Because of the concept's novelty, nature-based solutions have not yet been recognised as a priority in local and regional strategic documents or development plans, often resulting in lack of political support and success in leveraging private financing and promoting NBE. The limited



familiarity with the term also hindered communication between the involved actors, as it was not easy to convey and comprehend the meaning of the concept from the outset. To some extent, this could be mitigated by actively linking nature-based solution to strategic documents and diverse communication formats (see Section 3.1.2). Box 18 provides an example how to specifically wage political support for nature-based solutions based on the peer-to-peer exchange.

Box 18: How to wage political support for nature-based solutions?

***Learning question:** Sarajevo raised the question about how to wage political support for nature-based solutions. In Sarajevo it is very sensitive working with politicians, so they wanted to be smart and wise about this.*

***Response:** Reach out to political parties and invite the local media; politicians love to raise their profile, and simultaneously will gather local attention.*

Glasgow waged political support by reaching out across political parties. In Scotland, politicians love having their picture taken with a project like this. In Glasgow, there is a formal process for communicating with politicians, but they advise to ask your contacts how to go about getting cross-party political support and to invite the local media at the same time. This, they add, can be an avenue for additional funding.

Additionally, Glasgow strategically used high-level initiatives such as COP26 in Glasgow and the Climate Emergency announcements to increase awareness around the multiple benefits of nature-based solutions. Technical demonstrators are also an effective way to raise the profile of nature-based solutions by demonstrating what can be achieved in a local context.

At the same time, all cities valued how the comprehensive nature of nature-based solutions' thinking opened up thinking towards multiple functions and benefits, and facilitated collaboration across different departments and with other stakeholders. This is, for example, illustrated by the multifunctional design elements, especially including social innovation elements, of all nature-based solution exemplars (see Section 3.1.1), as well as the provision of multiple benefits for delivering on several political and societal goals and agendas. Poznań has developed a nature-based solution catalogue that was shared during the 1-on-1 sessions with Fast-Follower Cities. By creating such a catalogue it is possible to raise awareness about how nature-based solutions are already embedded in the city delivering on strategic objectives, rather than being an entirely new concept. The holistic thinking also helped the cities in thinking about how to combine the nature-based solutions with the commercialisation of urban spaces in order to create an opportunity for revenue generation, thus easing the municipal budget for subsequent stewardship and scaling (see Section 3.1.3). An important challenge though for such holistic approaches is ensuring sufficient expertise on diverse planning elements and paying attention to trade-offs, as illustrated by the learning question and response presented in Box 19.

Box 19: How to design nature-based solutions to enhance biodiversity?

***Learning question:** Sarajevo and Burgas raised the question about how to better design for biodiversity from the beginning.*

***Response:** Generate knowledge about biodiversity and involve experts in planning.*

Glasgow faced a similar problem, because they did not always consider the timing for planting until later stages. They responded that through their Open Space Strategy they are now able to map where existing habitats are and how different habitats can be connected. Additionally, they state that it would be beneficial to consult biodiversity experts or ecologists for advice. To further support this learning question, a knowledge exchange [webinar](#) was organised through the NBO community of the CN enterprise platform to give cities a space to share learning on this topic

Applying the Connecting Nature Framework: a new language and approach that challenge business-as-usual, while providing a valuable communication format

In addition to the nature-based solutions concept, also the Connecting Nature Framework has posed many challenges to the cities. Specifically, the terminology of the Framework was considered complex and academic, so that the Connecting Nature city teams struggled to explain it to colleagues or external stakeholders. This was further exacerbated by the fact that the only reference language was English, including that of the guidebooks and City Framework Reports. The latter was overcome by several cities and partners translating the Framework Reports or handbooks (for example on the BMC) into local languages to support uptake.



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Nonetheless, the Connecting Nature Framework and the cities' reports on them was valued as a communication tool. All cities stated the need for extensive communication about nature-based solution and the Framework as a new way of working. As such, the Framework itself and writing up the report, as well as several workshops with the Connecting Nature partners, aided them in building a narrative of nature-based solutions and their way of working (Box 20). In addition to providing a means to have all the information about their exemplar registered and organised, this helped the cities to generate shared understanding and convey their story in a more accessible way, which was a good starting point to create synergies and collaborations, leverage political and societal support, and secure funding. Some cities used their reports as a basis to apply for financing or to enter award competitions. A Coruña used the Connecting Nature Framework to apply for a national award for Best Local Practices on Climate from the Spanish Federation of Municipalities and Provinces (FEMP) and the Spanish Network of Cities for Climate. Having all the information written and organised in the Framework document made it easy to write the application for the award, and thanks to this the city managed to prepare quite a strong entry that won the prize.

Box 20: How to use the Connecting Nature Framework as a communication tool?

Learning question: *A Coruña, Nicosia and Pavlos Melas raised the question about how to use the Connecting Nature Framework as a communication tool.*

Response: *Have a light version of the Framework Report for transmission.*

Ioannina, Genk and Nicosia thought that the Framework was a good source for strengthening proposals. Genk added that the Framework makes proposals more professional and credible for the administrations involved. In order to make it suitable for communication, they made a 'light version' with more visuals and less text. Additionally, Genk translated the Framework Report into Flemish, the local language.

Applying the Connecting Nature Framework tools challenges business-as-usual planning practice and requires investing in new organisational resources

The cities considered the Connecting Nature Framework as a new way of thinking and practicing governance and planning. The many different elements of the Framework as well as the diverse concepts and tools – including nature-based entrepreneurship, co-production, reflexive monitoring and impact assessment – that were new to the cities required various expertise and skills, as well as the creation of space to experiment with such novel ways of working. This was often at odds with the existing working environments in the cities that tend to be more rigid, hierarchical, and bureaucratic. For example, most cities did not have experience with co-production and reflexive ways of working. Additionally, many cities governments faced budget cuts and were understaffed and underfunded.

Nonetheless, because of the support by the Connecting Nature partners and the peer-to-peer exchange and the intensive efforts of the city teams to communicate and convince colleague about the new approach, the cities became convinced of the value of the approach. Many learning questions evidence questions about how to adapt and implement specific aspects of the Framework elements, such as co-production (Box 21), reflexive monitoring (Box 22) and impact assessment (Box 23). The learning journeys of the cities further evidenced the constant commitment by the city teams to learn something new and acquire new knowledge and skills. Many cities stated that the Framework and methods will be applicable to other urban planning processes also beyond nature-based solutions.

Box 21: How to encourage stakeholders to join the initiative, engaging “outsiders” or when people are not committed?

Learning question: *Burgas, Málaga, Nicosia, Pavlos Melas, and Sarajevo raised the question about how to encourage stakeholders to join the initiative, engaging "outsiders" or when people are not committed?*

Response: *Partner with well-known/established organisations to find a way to get people on board.*

Glasgow recognised this challenge; they partnered with the Royal Horticultural Society and organised events with them. During the first event, they gave the participants seeds to share with colleagues – this generated a lot of interest.

Nicosia also advises to partner with well-known or established organisations and calls them ‘ambassadors’. These ambassadors build a common language, step by step. Nicosia starts with the people who work directly with them, who are most open-minded and happy to talk about nature-based solutions with them. Then these ambassadors talk to others to make the case for nature-based solutions.

Box 22: How to integrate reflexive monitoring into daily practice?

Learning question: Burgas, Ioannina, Malaga, Nicosia, and Sarajevo raised the question on how to integrate Reflexive monitoring into daily practice?

Response: Scale back the reflexive monitoring process to make it more approachable/tailored.

Glasgow also found reflexive monitoring complicated to begin with; it has taken them a long time to understand how it works. Then they decided to streamline the process: only a few people review the Dynamic Learning Agenda and create an agenda – and they use that to frame the discussions. Now, they are finding it useful as they are getting individuals in meetings they wouldn’t normally get.

Box 23: How to find impact assessment expertise within the city?

Learning question: A Coruña, Málaga, and Pavlos Melas raised the question on how to find impact assessment expertise within the city?

Response: Look to form partnerships with local academic institutes/universities (particularly students), and then frame it as a mutually beneficial relationship.

Glasgow advised to work with senior level students and to frame it as a mutually beneficial relationship: they are getting ‘real life’ experience, and the project benefits from the assistance. In Glasgow, the relationships with municipalities and universities are established for a long time. They advise to see where the university has expertise; this will facilitate relationship building - and agree on (mutual) benefits. Sarajevo subsequently took this advice on consulting with the university. Now co-production with the university is happening and they find it a nice cooperation.

Transformative nature-based solutions with multiple benefits require and prompt breaking siloes in the city government

A key starting challenge in all cities have been siloes within the city governments, characterised by hierarchical municipal structures and lack of collaboration between different departments that hinders the implementation of integrated strategies. This is exacerbated by some inter-departmental rivalry, lack of clear responsibilities and of trust, as well as competition for political support and resources. As a result, there is no sharing of knowledge and distributed expertise, no wide awareness about nature-based solutions and limited collaborative financing.

All cities realised that the implementation of the Connecting Nature Framework and multifunctional nature-based solutions requires profound collaboration between multiple departments for knowledge sharing, co-financing etc. Applying the Connecting Nature Framework preconditions but also facilitates overcoming siloes and in many cities became a best-case example of how to collaborate across multiple departments (see Section 3.1.2). Such collaborations have been facilitated by linking nature-based solutions to overarching strategic goals and agendas, continued communication and trust building efforts and the establishment of formalised thematic working groups.

Complex and rigid regulations and fragmented ownership over land

Another central barrier the cities faced while implementing the Connecting Nature Framework related to complex or fragmented ownership structures and rigid bureaucratic processes, manifesting in some levels of inflexibility and challenging permission-seeking procedures. This could be mitigated by strategically selecting sites for the nature-based solutions, changing regulations and tendering processes, and establishing collaborations across multiple levels of governments and public-private partnerships. For instance, in Ioannina, Pirsinela Park was selected because the municipality is the sole managing authority and it isn’t governed by strict laws that don’t allow significant changes, which may restrain the possibilities for intervention. In Glasgow, a barrier is that some abandoned open spaces across the city



are not owned by the municipality. Stalled spaces has been a successful project to collaborate with communities and solve conflicts with the uses of the plots. In Poznań, it has been necessary to put in place new safety rules for the operation of the open garden at kindergarten no. 42, because there have not been any previous legally binding instruments for the implementation of open garden and natural playgrounds.

Mobilising financial resources and co-financing for nature-based solutions on a large scale and for long-term stewardship

All cities struggled with securing financing for the nature-based solutions – especially for the implementation of nature-based solutions at a large scale and for ensuring long-term stewardship – due to limited budget and limited cross-departmental collaboration and partnerships with private actors. Generally, the cities most heavily rely on public budgets for financing while external financing is not extensively used (Section 3.1.3). However, while public agencies often invest heavily in the initial phases of planning and capital investment for delivery, they need to look for opportunities to reduce their ongoing financial commitment by engaging with other actors in the operation and stewardship phase. Additionally, sources of public financing such as grants are subject to varying restrictions and conditions which create uncertainty. A key challenge identified by the cities has been political will (relating to the awareness about the multiple benefits of nature-based solutions) (Box 24) and difficulty in quantifying benefits, further highlighting the need for impact assessment (Section 3.1.7). Relating to the need for cross-departmental co-financing, the cities did not find it easy to secure funding and decide who is going to pay for what. Additionally, it has been challenging to establish contact and collaboration with the private sector, linking to the need for new hybrid co-financing models, limited awareness about and contacts to the private sector and no well-developed market for green services.

Box 24: How to increase the prioritisation of nature-based solutions on funding agendas?

Learning question: A Coruña, Burgas, Nicosia, and Pavlos Melas raised the question about how to increase the prioritisation of the Nature Based Solution on funding agendas.

Response: Use the historical and/or cultural significance of the nature-based solution strategically.

Ioannina had a similar challenge; they did not know if their mayor was willing to spend €10 million on a new green park. Later they were able to secure the funding, partly because they realised that the park had historical significance and used this insight in a strategic way.

A first step has been to identify potential companies and involve private actors in the joint planning, delivery and stewardship. Generally, the BMC exercise and nature-based solutions accelerator have been helpful to open up views on co-financing (Sections 3.1.3 and 3.1.4). In the cities, new sources of private and blended financing are emerging. Setting up a NBE accelerator has become a key strategy in some cities to incubate nature-based entrepreneurship (Box 25).

Box 25: How to set up a nature-based enterprise incubator?

Learning question: Glasgow raised the question about how to set up a nature-based enterprise incubator?

Response: Form a cluster of companies related to nature-based solutions.

Glasgow was looking at establishing a nature-based enterprise incubator. The idea was to identify NBEs and to help them establish themselves. Málaga responded that they did this by creating a cluster of 30 companies on nature-based solutions: some private companies (landscaping, gardening, water treatment, topology), and some institutional, like the University of Málaga. Málaga created the cluster for several reasons: to disseminate the importance of nature-based solutions and to litigate in municipal calls (municipal procurements). The University of East London's Sustainability Research Institute also provided guidance for Glasgow by sharing their experience of setting up the ARENA NBE accelerator/incubator in London.

The COVID-19 pandemic slowed down implementation processes, but offered opportunities for consolidation and experimentation

The COVID-19 pandemic hit mid-way through the Connecting Nature project. Due to the pandemic, priorities shifted (making nature-based solutions a lower priority), planning and delivery of physical interventions has paused or become slower, urban gardens and school gardens closed and pressures on the private sector increased (making it harder to secure private funding). It has also been more challenging to collect data for impact assessment, especially on social indicators



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that heavily relied on surveys of human interactions. Moreover, collaboration was slowed down as no in-person meetings could be held. In particular, co-production was heavily affected by the Covid-19 pandemic because it was more challenging to approach groups, especially vulnerable groups.

Despite these drawbacks and barriers, the cities persisted and succeeded in keeping their projects on track, even with some delays. Some cities even stated that the pandemic provided opportunities for consolidation. In Poznań, the open garden had to be closed to residents, but this provided space for the team to develop new ideas for nature-oriented playgrounds at kindergartens. Similarly, the focus of work has shifted: when implementation has not been possible, the Poznań team sought to build capacity instead. For example, it developed multimedia resources showcasing the eco-demonstrator approach to unlock broader rollout and ensure the quality of the approach. Additionally, while face-to-face meetings were not possible, many cities experimented with new online formats for co-production. Glasgow continued collaboration with their “Friends of” groups in a virtual or hybrid way and created videos to support capacity building with a different legacy compared to one-off workshops (Box 26). Finally, the cities found that while immediate priority has shifted away from nature-based solutions, the lock-down experience highlighted the benefits of green and open spaces for mental and physical health and wellbeing.

From a project perspective, the COVID-19 pandemic required partners had to reflect on and imagine new ways of working (shifting from face-to-face to online engagement), to meet objectives, particularly in relation to knowledge transfer activities. The collaboration between work packages 2, 3 and 4 in the development of Knowledge Transfer – Phase 2 created a permeability between work packages which allowed for knowledge transfer activities to be delivered in a holistic manner (and in this way, served to reinforce the holistic nature of the Connecting Nature Framework itself) (Xidou et al. 2021).

Box 26: How to carry out effective co-production with stakeholders in COVID times?

***Learning question:** A Coruña, Burgas, Málaga, Nicosia, Pavlos Melas, Sarajevo raised the question about how to carry out effective co-production with stakeholders in COVID times?*

***Response:** Simpler solutions are often more effective*

Glasgow has found that going back to basics, like a ‘stall on the street’ to share information works well. Also, simple solutions like newsletters are a good way to keep in touch with people. Furthermore, they set up a couple of digital mapping engagement tools, which allowed people to click on areas and discuss issues online.

4 Towards a practical guide: What needs to happen, when

Based on our analysis of what innovations resulted from the cities’ efforts to implement the Connecting Nature Framework, as well as how they were connected across Framework elements, we sought to generate practice-oriented lessons about how to apply the Framework step-by-step per different phases of nature-based solutions planning, delivery and stewardship.

Overall, the different elements of the Framework challenge the traditional urban planning practice and provide new ways to support integrated, collaborative and adaptive approaches. We identify the following key innovations to implement the Framework:

- Knowledge innovation: Urban planners are able to **generate systems’ knowledge** about landscape conditions at various scales, involved actors and stakeholders, multiple benefits and trade-offs, financing opportunities and impacts. This knowledge is generated through collaborative processes involving other urban stakeholders.
- Technical and social innovation: **Linking the technical design of nature-based solution to social innovations** such as environmental education, cultural values, new human-nature relationships, which foster socio-cultural values, include environmental awareness raising and education and facilitate (intra-generational) exchange.
- Governance innovation: **Generating political support** through widely communicating nature-based solutions, linking nature-based solutions to strategic agendas, piloting examples of nature-based solutions and measuring the benefits.
- Organisational innovation: **Establishing cross-departmental collaboration and public-private partnerships** in order to generate systems’ knowledge, facilitate co-financing and co-stewardship, and increase awareness, support and empowerment.
- Organisational innovation: **Employing new methods and tools for co-production** such as actor mapping, the



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Business Model Canvas and envisioning exercises to generate systems' knowledge, increase awareness, support and empowerment for co-stewardship.

- Organisational innovation: Developing and implementing a **communication strategy** about nature-based solutions and the exemplar in different formats tailored to diverse target audiences.
- Organisational innovation: **Creating space for reflexive monitoring and impact assessment** to keep track on the progress in real-time and facilitate adaptive decision-making, mobilise opportunities and address barriers in view of long-term goals.
- Organisational innovation: **Investing in organisational conditions** to ensure human resources, skills and institutions for taking up integrated, adaptive and inclusive ways of working and mainstream nature-based solutions.
- Market innovation: Identifying and facilitating **provision of new products and services** related to the nature-based solution and supporting NBEs.

The Framework distinguishes three phases of development for a nature-based solution: planning, delivery and stewardship. From the perspective of these phases and based on our cross-city analysis, it is possible to define in more detail how and when the mechanisms and conditions can be put in place. Importantly, our Framework and the steps are not meant as a static process; the starting points and order of steps being determined by the cities' contexts and needs.

In the **planning phase**, it is important to define the goals of the nature-based solution, start developing the innovations needed to realise the nature-based solution and define which activities are needed to deliver it:

- Develop a systemic understanding of the landscape context and ecosystem service needs of the nature-based solution;
- Identify the key actors and stakeholders including roles, responsibilities and levels of involvement;
- Co-define goals and impacts of the nature-based solutions, connect these to strategic goals and agendas and select indicators and baselines;
- Formulate value propositions for the nature-based solutions, identify financing opportunities and nature-based enterprises for delivery and long-term stewardship and prepare bids, instruments and models for financing;
- Review existing regulations and institutional conditions that influence the nature-based solutions delivery and stewardship;
- Establish cross-departmental collaboration and public-private partnerships for joint delivery, stewardship and financing;
- Communicate about the goals and impacts of nature-based solutions to create awareness and support;
- Ensure organisational space and skills for diverse elements associated with nature-based solutions' planning, delivery and stewardship (e.g. technical design, ecology, financing, co-production, reflexive monitoring and impact assessment).

The **delivery phase** refers to the process of implementing the nature-based solution including all its innovations. Again, the approach will be different per city but some characteristics are that:

- Setting in stone partnerships and collaborations and identify roles and responsibilities for joint delivery and stewardship, including financing and impact assessment;
- Develop a hybrid governance model and co-financing mechanisms for ensuring delivery and stewardship;
- Facilitate nature-based entrepreneurship by setting up NBE accelerators;
- Continue to involve various stakeholders in the delivery of nature-based solutions and communicate about the story and achievements;
- Put in place impact assessment plans and data collection methods;
- Continuously reflect on and monitor the process and impacts and adapt if needed, including indicators;
- Implement organisational and institutional changes to facilitate nature-based solutions delivery and stewardship.

The third phase in the Connecting Nature Framework is the **stewardship phase**. The stewardship of a nature-based solution describes the long-term management and maintenance of the nature-based solution.

- Put in place partnerships for co-stewardship, including organisational conditions for management and operation;
- Promote social activities (e.g. education, events), new products and services related to the nature-based solution and NBEs;
- Establish tactical citizen groups to become ambassadors of the nature-based solution and mediate between the city council and citizens;
- Continuously monitor and assess the impacts of the nature-based solution and linking results to decision-making;
- Identify proof-of-concept lessons, integrate design concept into existing procedures and regulations and showcase the nature-based solution as pilot for replicating and scaling;
- Identify suitable areas, partners, roles and responsibilities for replicating and scaling.



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5 Conclusions and outlook

We have collaboratively developed and implemented the Connecting Nature Framework as a new reference tool for urban planning to facilitate the large-scale implementation of nature-based solutions. The application in and learnings from the Connecting Nature cities yielded in-depth insights about how to apply the Framework in different city contexts, address barriers and challenges and what the impacts and benefits are for urban planning.

Benefits of the Connecting Nature Framework

Despite the challenges of adopting such a novel and complex approach, all cities considered the Connecting Nature Framework a valuable tool to support the implementation of their nature-based solutions and urban planning more generally. A main value was found in the structured and comprehensive methodology that can be used to develop any nature-based solution and that can also be transferred to other urban planning issues.

The main benefits and impacts of the Connecting Nature Framework for the cities are as follows:

- **A holistic and integrated approach to generate multiple benefits and break silos:** By encompassing multiple elements, the Connecting Nature Framework supports urban planners in creating a 360° picture of planning, delivery and stewardship of nature-based solutions with transformative impact. The cities stated that this comprehensiveness allows them to expand their imagination and expertise, consider their exemplar from more angles and connect all contributors and stakeholders to stay focused on the same goals.
- **Keeping track of the progress and results with a long-term perspective:** The Framework helped the urban planners from the Connecting Nature cities keep a register of all steps and considerations of the process, while identifying key learnings and integrating those in the next activities. In this way, the process can also serve as a model for future implementations of nature-based solutions.
- **Innovative methods to generate knowledge, involve multiple actors, leverage financing, facilitate learning and evaluation:** The Framework encompasses multiple innovative methods, including reflexive monitoring, co-production, the BMC and impact assessment, which were for the first time incorporated by the teams in the Connecting Nature cities in the development of a project. While requiring new organisational conditions and resources, the methods helped change urban planning practices towards more integrated, adaptive and collaborative approaches.
- **Identifying needs for organisational capacity-building:** By promoting multiple new practices, relations and rules, the Framework application requires – but also guides – the development of new organisational conditions and resources to cover expertise, time and skills for implementing all Framework elements.
- **Building a narrative of nature-based solutions and the novel way of working:** A key value of the Framework and the city reports was that the cities are enabled to tell their story about what they have done in an impactful way to colleagues within the city council, to external stakeholders and to other cities. In this way, they can create awareness, establish new collaborations and further scale nature-based solutions. Using the principles of storytelling, considering your audience is, and identifying a key message creates a convincing narrative to serve this purpose (Georgiou et al. 2022).

Facilitating peer-to-peer learning about how to apply the Connecting Nature Framework

Our knowledge transfer approach has proven extremely valuable to facilitate peer-to-peer learning between the Connecting Nature cities. In a very real way, through the dialogue fostered during the sessions, it is evident that both Front-Runner and Fast-Follower Cities benefit from each other's experiences with the Connecting Nature Framework (as a whole, and also when discussing specific elements that the cities have found challenging). As described in Deliverable 4.1 (Xidou et al., 2021) and Deliverable 7 (Hölscher et al., 2022), the Learning Platform Webinar structure helped the cities to prepare themselves to look at the learning objectives of the other cities per Connecting Nature Framework element and flagging which objectives they recognise as well. This helped the Knowledge Hubs leads to select the learning objectives to discuss per Connecting Nature Framework element in small break-out groups with several cities together. This started a discussion about specific examples and innovations the cities developed in both ways as the Front-Runner and Fast-Follower Cities both attended these break-out groups.

We want to emphasise the importance of going this process going to facilitate inter-city dialogues and knowledge exchange at less formal levels. These topics have been picked-up for follow-up by the cities themselves, or by the Knowledge Hubs leads who organise webinars to share the innovation with all the cities. For example, Genk gave a webinar about their governance model March 8th, 2021. Additionally, the Nature-based Organisations (NBO)

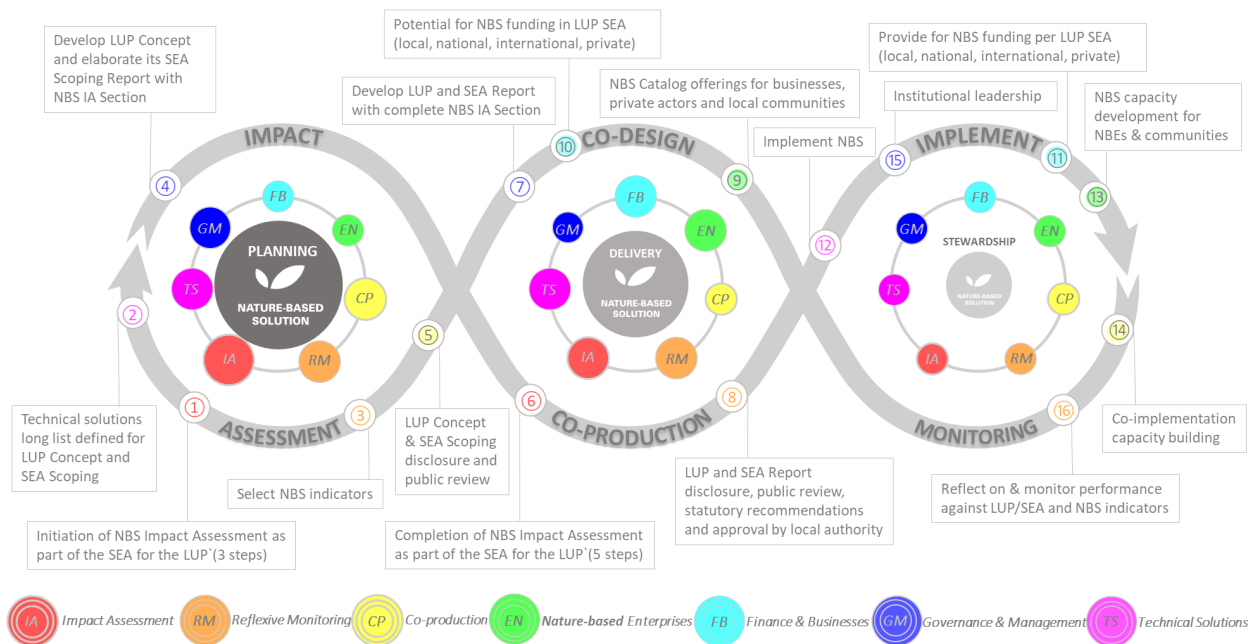
community⁴ within the NBE platform aims to further advance knowledge exchange.

Transferability of the Connecting Nature Framework

As part of the UrbanByNature programme⁵, the Connecting Nature Framework has been brought to multiplier cities in four regional hubs – Brazil, the Caucasus, Korea and China – building on an analysis of the landscape of implementation conditions for nature-based solutions and the Connecting Nature Framework (Rizzi et al. 2020, see also Box 1 on webinar recordings to introduce the Framework to a larger audience).

As one example of a regional hub, the Connecting Nature partners in the Caucasus region (CENS and Geographic) have worked with the Connecting Nature Framework. For example, the Connecting Nature Framework figure was adapted to the Strategic Environmental Assessment of Land Use Plans (Figure 6, see also Box 6 above). Through the UrbanByNature programme, for instance, dialogue with potential NBEs in the region is catalysed and there are initial agreements with some NBEs that help ensure the sustainability of the Caucasian hub. The impact assessment approach supports ongoing research by CENS to assess the role of the installed green wall in a kindergarten as a barrier preventing the penetration of dust and pollutants. In general, it was found that the Connecting Nature Framework elements suitably reflects the phases of the implementation of the green wall. Additionally, the Connecting Nature guidebooks were utilised to develop workflow for mainstreaming nature-based solutions into urban land use plans and gauge an understanding and relevance of locally appropriate solutions (see Box 6 above).

Figure 6: Connecting Nature Framework for Strategic Environmental Assessment of Land Use Plans



Outlook: advancing the Connecting Nature Framework beyond Connecting Nature

Sadly, the Connecting Nature project is about to end in May 2022. However, this does not mean that all the innovations produced by the project will end, too. To the contrary: we have been working to put in place several mechanisms to ensure the long-term sustainability of the Connecting Nature Framework – in particular to continue to spread knowledge about the Framework and how to apply it in cities.

First of all, the separate elements of the Connecting Nature Framework will continue to be used and made available in different ways (Table 8). The main stakeholders addressed through these initiatives are urban planners and practitioners, who are interested in different aspects of nature-based solution planning, delivery and stewardship. Some initiatives target researchers, that can build upon the knowledge developed in this process (e.g. through collaboration in Taskforce 6 etc).

⁴ <https://www.naturebasedenterprise.eu/communities/nature-based-organisations>

⁵ <https://connectingnature.eu/urbanbynature>

Along these lines, it is worth noting that the guidebooks are going to be translated into local languages in Sarajevo (Bosnian, Serbian and Croatian). Additionally, several partners and organisations have already translated the BMC guidebook into local languages (e.g. Spanish).

Table 8: Long-term sustainability of Connecting Nature Framework elements

Element	Initiatives for advancing and disseminating the Connecting Nature Framework beyond Connecting Nature
Technical solutions	<ul style="list-style-type: none"> • A guidebook on Technical solutions for nature-based solutions will be openly available via the OPPLA platform • A practical guidebook for working through the Technical Solutions element based on the Connecting Nature city experiences is in development • Knowledge Hub resources developed to support Connecting Nature cities in addressing Technical Solutions challenges will be made open access
Governance	<ul style="list-style-type: none"> • A guidebook on Governance for nature-based solutions and a guidebook on creating narratives for nature-based solutions will be openly available via the OPPLA platform.
Finance & Business models	<ul style="list-style-type: none"> • A guidebook on financing and business models for nature-based solutions, and a Nature-based business model canvas guidebook are openly available via the OPPLA platform
Nature-based entrepreneurship	<ul style="list-style-type: none"> • Nature-based enterprise platform • A Nature-based enterprise guidebook will be openly available via the oppla platform
Co-production	<ul style="list-style-type: none"> • A practical guide for using co-production for nature-based solutions is openly available via the OPPLA platform and DRIFT website. This guide can be used by city-makers considering to use a co-production approach to working on nature-based solutions. • DRIFT courses and course materials on Co-production will be used and offered to new clients. The course series on Just Sustainability transitions contains a lecture on co-production, which will benefit from the course materials and the guidebook created during the project. • The EM Path approach will be continued to offered as co-productive series of method to prepare the ground for working on nature-based solutions through reconnecting people with nature and unlocking personal and local narratives (www.empathway.org). • The knowledge developed on co-production will be integrated in a guidebook prepared by Task Force 6 on Co-creation of nature-based solutions for an inclusive nature-based urban regeneration. In this document content form different H2020 projects on co-creation are gathered and shared.
Reflexive Monitoring	<ul style="list-style-type: none"> • A practical guide for using Reflexive monitoring for nature-based solutions is openly available via the OPPLA platform and DRIFT website. This guide can be used by city-makers considering using a co-production approach to working on nature-based solutions. • DRIFT courses and course materials on reflexive monitoring will be used and offered to new clients and networks. The course series on Just Sustainability transitions contains a lecture on reflexive monitoring. Also a recurring training solely focused on Reflexive monitoring will benefit from the course materials and guidebooks created during the project • The knowledge developed on how to use reflexive monitoring to monitor co-production processes, will be integrated in a guidebook prepared by Task Force 6 on Co-creation of nature-based solutions for an inclusive nature-based urban regeneration. In this document content form different H2020 projects on co-creation are gathered and shared.
Impact Assessment	<ul style="list-style-type: none"> • A guidebook on impact assessment for nature-based solutions will be openly available via the OPPLA platform • A mini-guidebook on evaluating the impact of nature-based solutions on biodiversity is in development. The evidence collected in the Front-Runner and Fast-Follower Cities when developing evaluation and monitoring plans, as well as evaluating the

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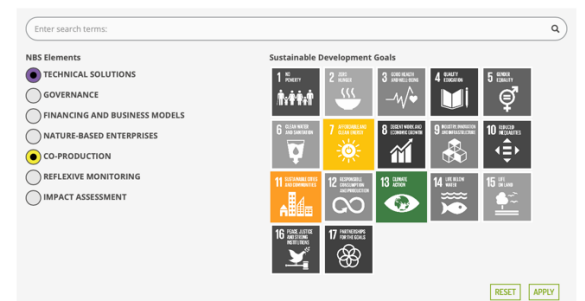
real impact of the nature-based solution, can be consulted for future reference in Deliverable 2 (Dumitru et al. 2022a)

- Deliverable 3 (Dumitru et al. 2022b) will constitute an online toolkit where all the resources generated on Impact Assessment will be available to users in a simple and intuitive way. These resources will include: Impact Assessment Guidebook, assessment results in Connecting Nature Cities, Indicator Reviews and CO-IMPACT.
- The collaboration effort will be maintained with Task Force II to develop new indicators and/or update the scientific knowledge of existing ones.
- The open use of the indicators generated in Connecting Nature will be facilitated, through the free CO-IMPACT tool. CO-IMPACT is a decision-support tool allowing officers and cities to create impact assessment plans for their nature-based solutions. The main objective is to make the process of building a baseline and impact assessment plan straight forward and simple for anyone who wishes to do so, with the final report providing advice around suitable methodologies based on scale and project characteristics.
- The city of Glasgow developed the “Glasgow Connecting Nature Dashboard”, a GIS based platform where data from different sources can be visualized. This online tool does allow users to check the status of indicators in the city in an open and intuitive way. As more data will be incorporated into this Dashboard, more comparative qualitative analyses may be carried out between different areas of the city and facilitate the identification of intervention needs, or the most suitable areas to implement a Nature-based Solution.

Second of all, several initiatives foster the overall connectedness of these elements, as the Connecting Nature Framework describes:

- **Oppla platform:** The Oppla platform is the EU repository for nature-based solutions. It provides a knowledge marketplace, where the latest thinking on natural capital, ecosystem services and nature-based solutions is brought together. Its purpose is to simplify how we share, obtain and create knowledge to better manage our environment. On this platform a dedicated Connecting Nature Resource Centre has been established presenting a attractive, user-friendly and searchable interface to sustain project outcomes and share them with wider audiences. Specific search criteria guide users to resources related to the different elements of the framework, such as guidebooks, publications, video testimonials and case studies of the cities. To date 120 key project outcomes have been identified for inclusion in this knowledge repository. 1 of the most important outputs of the Connecting Nature project are shared. This fosters the overall connectedness in different ways, including the different guidebooks that introduce the Connecting Nature Framework and its elements.

Resources



The screenshot shows the Oppla platform search interface. At the top, there is a search bar with the placeholder text "Enter search terms:". Below the search bar, there are two main sections: "NBS Elements" and "Sustainable Development Goals".

NBS Elements: A list of radio buttons with the following options: TECHNICAL SOLUTIONS (selected), GOVERNANCE, FINANCING AND BUSINESS MODELS, NATURE-BASED ENTERPRISES, CO-PRODUCTION, REFLEXIVE MONITORING, and IMPACT ASSESSMENT.

Sustainable Development Goals: A grid of 17 icons representing the SDGs, with the 17th goal (Partnerships for Sustainable Development Goals) selected.

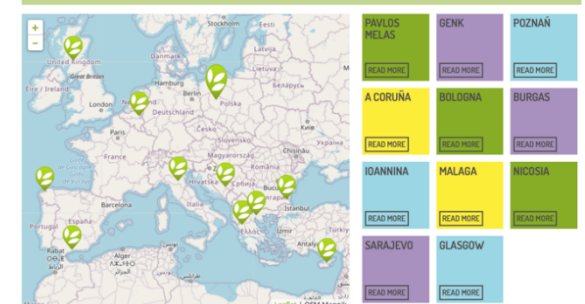
At the bottom right of the filter section, there are "RESET" and "APPLY" buttons.



The screenshot shows a grid of project cards. Each card features a small image, a title, a brief description, and a "READ MORE" button. The cards include:

- COMMUNITY GARDENS, POZNAN - SOCIAL AND OPEN GARDENS ON KINDERGARTEN LAND, CITY PARKS AND HOUSING ESTATES:** Residents in Poznan have a strong desire for more opportunities for social and physical exercise...
- DEVELOPMENT OF FLOOD PLAN OF WARTA RIVER, WILDA RIVER BEACH, POZNAN - RECONNECTING THE CITY WITH THE RIVER:** By around 2010, increasingly vocalised perception had emerged through Poznan's citizens that the...
- JEZYCE DISTRICT POCKET PARK, POZNAN - CO-DEVELOPED GREENING:** The Jezyce District pocket park is an example of a co-developed urban greening project. The...
- STALLED SPACES, GLASGOW - TEMPORARY COMMUNITY USE OF UNDERUSED SPACE:** Many land plots across Glasgow currently have contamination issues which prevent housing or...

CITIES



The screenshot shows a map of Europe with green location pins indicating participating cities. To the right of the map is a grid of colored buttons for each city, each with a "READ MORE" button:

- PIVILLOS MELIAS (green)
- GENK (purple)
- POZNAN (blue)
- A CORUNA (yellow)
- BOLDINA (purple)
- BURGAS (purple)
- IOANNINA (blue)
- MALAGA (yellow)
- NICOSIA (green)
- SARAJEVO (purple)
- GLASGOW (blue)



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- **UrbanByNature (UbN):** The UrbanByNature programme will continue to facilitate expertise-sharing and capacity-building of local governments, civil society and businesses in Europe and around the world about how to implement nature-based solutions on a large-scale. Specifically, four UrbanByNature regional hubs (Korea, China, the Caucasus and Brazil) and three new European hubs (led by Connecting Nature partners in Spain, Scotland and Belgium) will continue to promote nature-based solutions and the Connecting Nature Framework. The UbN hubs have developed regionally-specific NBS roadmaps along the Connecting Nature Framework reflecting future possibilities in the regional hubs post-Connecting Nature and linkages with Network Nature, the Connecting Nature Enterprise Platform, Oppla and other strategic partners and collaborators. The roadmaps will be published on an online interface that allows users to navigate to each of the UrbanByNature hubs and to access content via the Connecting Nature Framework. Through collaboration with other H2020 projects such as Clever Cities these activities will be sustained and expanded after the end of the project.
- **Connecting Nature Enterprise Platform:** Many Connecting Nature partners are actively engaged in this platform which features multiple communities of practice from sustainable agriculture to community engagement. Nature-based enterprise partners such as Bioazul and Helix are ambassadors for the communities of practice in water management and green buildings for example and these communities will be sustained through other H2020 projects such as GoGreenRoutes and NICE after the end of the project. The City of Bologna also leads a community of practice for other city councils and public organisations interested in supporting nature-based solutions. This community has facilitated the continuation of learning on key challenges identified through the learning platform. For example, UEL have delivered a webinar recently on biodiversity planning with webinars on co-production and financing challenges planned.

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Appendix A: A practical guide to using the Connecting Nature Framework

The guide is enclosed in a separate document and can be accessed here:

https://drive.google.com/file/d/16GJBLqVZs1sEN_gqfUWApv172eFSKujc/view?usp=sharing

Appendix B: The Fast-Follower City's Connecting Nature Framework Reports

The reports are enclosed in separate documents and be accessed on the OPPLA platform:

- A Coruña: <https://oppla.eu/product/24731>
- Burgas: <https://oppla.eu/product/24732>
- Nicosia: <https://oppla.eu/product/24734>
- Pavlos Melas: <https://oppla.eu/product/24735>
- Sarajevo: <https://oppla.eu/product/24736>
- Ioannina: <https://oppla.eu/product/24738>
- Málaga: <https://oppla.eu/product/24733>

Appendix C: Overview of workshops and activities

The appendix is enclosed in a separate document and can be accessed here:

<https://drive.google.com/file/d/1UpLtwcRcAIX1OGcBStwIjttF77j63j62/view?usp=sharing>

Appendix D: Learning questions FRCs and FFCs per Connecting Nature Framework element

The appendix is enclosed in a separate document and can be accessed here:

<https://drive.google.com/file/d/1AiZbmkGJZQwOUHwpSMNZIR4j0kADoWfT/view?usp=sharing>

How to tell your city's story

Connecting Nature framework



STEP 1 Identify the city context

- What is the status quo of your city with regards to implementation and scaling of nature-based solutions?
- What are challenges and opportunities for implementing and scaling nature-based solutions in your city?



STEP 2 Define the goals of your nature-based solution

- What (city) goals do you intend to achieve with your exemplar?
- Describe the main aims, benefits and co-benefits of your exemplar.
- How does the exemplar connect to and deliver on existing urban agendas?
- What makes your nature-based solutions' strategy legally binding, e.g. by connecting it to existing policy plans?

The connection to strategic agendas comes back in the Governance section so you can be brief here!

use sticky notes, draw or write down your ideas per step on these sheets.

use this input to write your city's story for the Connecting Nature Framework report

How to tell your city's story

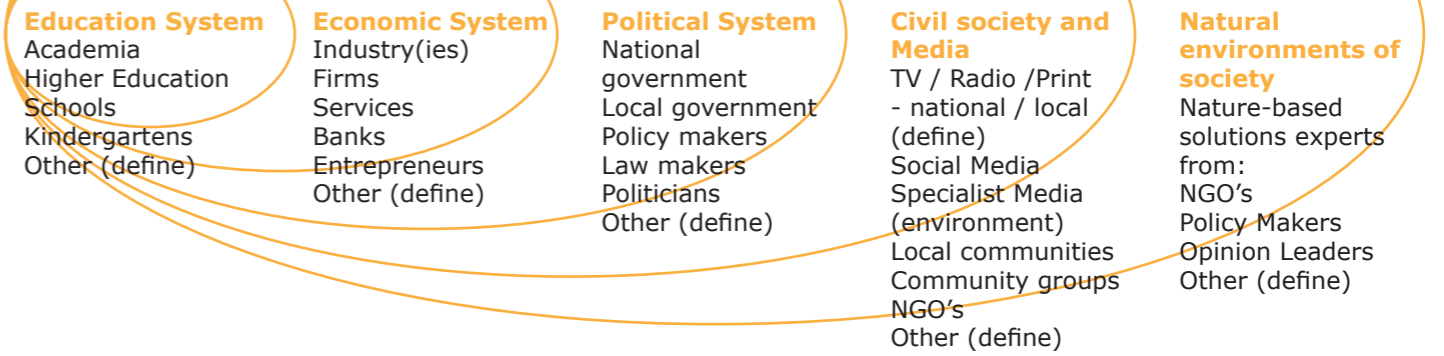
Connecting Nature framework



STEP 3 Identify your target audience and other relevant actors

- For whom is this document?
- Who has been involved in developing it?
- How did you engage/plan to engage with all quintuple helix actors (see figure to the right) across all of the different elements for your nature-based solutions exemplar? Please explain why you have chosen the actors and how you will engage with them.

Keep it general - you will be asked more detailed questions on stakeholders involved in the 'Governance' and 'Co-production' section.



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How to tell your city's story

Connecting Nature framework



STEP 4 Introduce your nature-based solution exemplar

- What is the nature-based solution exemplar about?
- How was the concept developed?
- What is the timeline for planning, delivery and stewardship and what is the current status?

Focus here on the general description and main aims. You will go more in detail on these questions in the sections on 'Technical solutions' and 'Impact assessment'



STEP 5 Position this report

Explain the big picture

- Why do you find the Connecting Nature framework necessary?
- How do all Connecting Nature framework elements come together to facilitate nature-based solutions implementation and scaling?

Identify the innovations

- What is innovative about your approach?
- What is different in your way of working compared to conventional urban planning?
- What are the different types of innovations that you have developed from the Connecting Nature framework?
- How has the Connecting Nature project helped the development of the exemplar?

You can keep the reference to the Connecting Nature project to a minimum – we will provide a one-pager to be included in the Connecting Nature framework reports of all cities.

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How to tell your city's story

Technical solutions

3 | How we do it?

The Connecting Nature Framework is designed as a process to help you explore the potential for a nature-based solution.

For example, some projects start with a community co-production process where the community leads the way in identifying the solution.

Alternatively, the Nature Based Solutions may arise out of an enterprise/industry based approach such as a new housing development requiring green roofs or green walls.

Other projects may be driven by government such as meeting CO2 targets to meet EU targets for net-zero by 2050.

Regardless of the approach taken, the project team needs to identify a number of factors that will influence the success of the solution.

Where exactly will the solution be?
Is it one solution in one location, or multiple solutions in a number of locations?

What do we want to build?
Design the solution that will deliver the intended benefits.

How will it be maintained?
Develop a plan to ensure the desired benefits will be sustained.

The Technical Solution building block of the Framework provides a series of guiding questions to support you in answering these questions.

Five steps to help achieve your Nature-Based Solution:

Step 1: Define the nature-based solution
To the best of the location and scale of the nature-based solution need to be determined. At this point, a basic outline or conceptual design for the type of nature-based solution planned could be produced.

This design will of course be shaped by the initial drivers for the proposed nature-based solution. For example, the location and scale need to be understood.

open space with an opportunity for recreation, or a site with a natural asset requiring protection or redevelopment opportunity linked with achieving biodiversity net gain.

The conceptual design could be a green roof, a sustainable drainage system, a green square project, or a series of pocket parks.

STEP 1 Define the nature-based solution

- What is the name of the nature-based solution exemplar?
- What type(s) of nature-based solution does it include?
- Where is the location that the project is being delivered?
- What is the size of site?
- Give a brief description of the technical design of the project and supplement with plans/images.

STEP 2 Develop an understanding of the landscape context and ecosystem services needs

Landscape scale:

- What is the broad landscape context (e.g. watershed, ecosystems, geology of the peri-urban and rural areas surrounding the city)?
- What challenges does the broad landscape face (environmental, social, economic)?

City scale:

- What is the city landscape context (e.g. watershed, ecosystems, geology)?
- What challenges does the city face as a whole (environmental, social, economic)?

Local scale:

- What is the local landscape context of the site of the nature-based solution exemplar (e.g. watershed, ecosystems, geology)?
- What are the needs of the locality of the nature-based solution exemplar (e.g. what are the environmental, social, economic needs)?

Exemplars that cover multiple local scales:

- If your exemplar is being delivered across multiple local scales, how does your technical design balance variation across local scales (in terms of variation in social, economic, and environmental needs of place)?
- How does the technical design improve biodiversity and ecological connectivity in relation to local habitats/city-wide connectivity strategies/the broader landscape across the multiple local scales?

Step 2: Develop an understanding of the landscape context and ecosystem services needs

Understanding the landscape context is essential to ensure that the nature-based solution is a good fit with the local landscape and makes a positive impact on local stakeholders.

This step can include everything from a water assessment such as the area around a river or body of water - which can include consideration of potential habitats of local conservation importance, to a detailed assessment of potential habitats, habitats and species.

All this knowledge will provide the context for ensuring that the nature-based solution is a good fit with the local landscape and makes a positive impact on local stakeholders.

Ecosystem services are the services such as food and water, climate control and recreational facilities that the natural environment provides for humans.

The human side understanding what the people of the area need from the natural landscape.

In addition to developing an understanding of the natural landscape, it is also important to understand what the people of the area need in terms of the benefits that nature can provide. Therefore, an important part of step 2 is understanding the social, economic and environmental needs of the people living in or using the area and mapping the relationship with the design of the nature-based solution, incorporating these community needs.

leads to a more holistic and holistic nature-based solution.

This understanding of social, economic and environmental needs should consider the needs of the community and the wider environment. The indicator that provided in the Framework provides a guide to the range of different benefits that nature-based solutions can deliver.

Technical assessment can take into account a wide range of information sources from large scale mapping and remote sensing down to local community engagement and site-specific data. For example, the indicator on how biodiversity has increased or air quality has improved or water quality has improved.

An effective method for delivering, managing and monitoring information about the progress of the development could be through the development of a centralised spatial dataset portal that combines all available data. This could include, for example, remote sensing, air pollution, access to green spaces, crime, unemployment, etc. in a single accessible portal.

Step 2 involves generating info on the locality. After completing the guiding questions, you can feed this iteratively improve the design.

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How to tell your city's story

Technical solutions

STEP 3 Embedding multiple functions into the planning, delivery and stewardship of the nature-based solution

- How are you targeting benefits, co-benefits and trade-offs related to the landscape/city/local scale through the nature-based solution exemplar technical design?
- How are you managing the transition from technical planning to technical delivery of the nature-based solution?

Step 3 involves implementing the finalised design. The finalised design depends on your input to step 1 and 2!

If you need more support, have a look at the guiding questions for this step in the appendix.

STEP 4 Monitoring and evaluation

Stewardship management

- How was a stewardship plan developed for managing and maintaining the nature-based solution?
- What technical and operational tools are needed/being used for stewardship management?
- Who is delivering the exemplar stewardship management?
- Was there an appropriate skillset available for such management or was a training/apprenticeship scheme needed? If so, how was this established?
- Were local residents involved in maintenance through employment/enterprise opportunities or volunteer friends of/stewardship schemes? If so, how were these schemes established?

Provision of benefits

- How are benefits expected to change over time?
- How is monitoring being used to inform management to ensure that technical performance is retained/enhanced?
- How flexible is the nature-based solution management to future demands? How was flexibility built into the design of the nature-based solution?
- Are any mechanisms in place to change the design if the expected benefits are not delivered?

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How to tell your city's story

Technical solutions

STEP 5 Build an evidence base to promote nature-based solutions to a wider catchment

Step 5: Build an evidence base to promote nature-based solutions to a wider catchment

Step 5 is about generating the concept of nature-based solutions using the learning from step 4 to reproduce nature-based solutions in other areas (local catchment and beyond).

It should be noted, however, that when creating a localised example of a nature-based solution to spreading or controlling a pollutant, it is important not to lose sight of the wider catchment and to consider how nature-based solutions can be increased in this scale or ambition (see page 10).

By sharing successes in relation to achieving benefits beyond the local catchment, it is hoped that others involved in city-making or community development processes will adopt similar approaches, generating widespread adoption of the Connecting Nature Framework building blocks across a city or local government departments and external stakeholders.

This can only be achieved by building evidence of the value of nature-based solutions and sharing it with a wide audience. Sharing learning from failure is also important as we can learn from mistakes.



- Are key technical barriers remaining in relation to the stewardship management? If so, what are they?
- How is the knowledge creation from addressing technical barriers associated with stewardship being captured and shared within and beyond the project stewardship management team?
- What were the key lessons learned from the technical solutions planning, delivery and stewardship/operation in relation to the exemplar and its implementation?
- What additional skills and capacities could the team develop to strengthen your effectiveness in developing nature-based solutions?

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How to tell your city's story

Technical solutions APPENDIX



STEP 3 Embedding multiple functions into the planning, delivery and stewardship of the nature-based solution

Technical design for benefits, co-benefits, and trade-offs

Benefits

- How are social benefits related to the landscape/city/local scale being targeted through the nature-based solution exemplar technical design?
- How are economic benefits related to the landscape/city/local scale being targeted through the nature-based solution exemplar technical design?
- How are environmental benefits related to the landscape/city/local scale being targeted through the nature-based solution exemplar technical design?
- How are biodiversity/ecological benefits related to the landscape/city/local scale being targeted through the nature-based solution exemplar technical design?

Co-benefits

- What co-benefits (non-target/non-designed for benefits) are expected from the exemplar and how will the technical design help to deliver each one?
- Were any co-benefits upgraded to benefits through the technical design process (e.g. incidental co-benefits changed to benefits through change in technical design)? How was the design changed to deliver this?
- What is the expected scale of these benefits and co-benefits (spatial and timescale)?

Trade-offs

- Were any trade-offs identified in terms of benefits and co-benefits? If so, how were these balanced in the technical design (e.g. how did you prioritise the demands of the community vs broader city strategic objectives in relation to the technical design)?
- Are any identified local needs not targeted through the technical design of the nature-based solution exemplar? Were any benefits not considered? Why?

Note: Step 3 involves implementing the finalised design. The finalised design depends on your input to step 1 and 2.



STEP 3 Embedding multiple functions into the planning, delivery and stewardship of the nature-based solution (continued)

General technical planning issues

Technical design

- How was baseline data used to inform the design?
- What technical and operational tools did you need/use to design the exemplar (e.g. spatial mapping, iTree, SuDS planning tool)?
- Who were the key stakeholders for informing the technical design? How were they engaged in a shared vision?
- Was any expertise lacking in relation to the technical design? If so, how was this skills gap addressed?
- How is long-term resilience to future climate change built into the technical design?
- How has accessibility been considered in relation to technical design?

Knowledge sharing

- How are experiences of technical implementation of other nature-based solution projects in your city being used to shape the exemplar?
- Did you compare your project to other EU/global examples? If so, which ones?
- How is the knowledge creation from addressing technical planning barriers being captured and shared within and beyond the project planning team?

Planning the technical design

- What were the timelines for planning? Were these sufficient for achieving a suitable design? If not, why not?
- What, if any, key technical barriers remain unresolved in relation to the nature-based solution technical design planning?

Note: Step 3 involves implementing the finalised design. The finalised design depends on your input to step 1 and 2.

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How to tell your city's story

Technical solutions APPENDIX



STEP 3 Embedding multiple functions into the planning, delivery and stewardship of the nature-based solution (continued)

Delivery status

- What is the current status in relation to delivery?
- What are the timelines for delivery?
- How was the timeline for delivery determined?
- Were there any unforeseen delays in delivery? If so, how were these managed?

Delivery preparation

- Was an environmental impact assessment (EIA) carried out for construction?
- Did the results of the EIA impact delivery of technical aspects of the design?
- Were contractors available that had expertise in this type of nature-based solution design? If not, did they need training? How was this delivered?

During delivery

- What technical and operational tools were needed/used for delivery?
- Was there scope to react to new opportunities for benefits during delivery? If so, how was this achieved?
- How were benefits prioritized if benefits were lost/reduced during delivery?
- Were any other unforeseen challenges related to technical delivery experienced during delivery? If so, how were these dealt with?

Post-delivery knowledge

- What key technical barriers remain in relation to the exemplar delivery?
- How is the technical knowledge creation from delivery, particularly the process of addressing barriers to delivery, being captured and shared within and beyond the project delivery team?

Note: Step 3 involves implementing the finalised design. The finalised design depends on your input to step 1 and 2.

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How to tell your city's story Governance

STEP 1 Make the case: aligning nature-based solutions with the wider goals of a city or a community

Make the case: aligning nature-based solutions with the wider goals of a city or community

Nature-based solutions can deliver multiple benefits, so to ensure the capture of these multiple benefits a wider range of actors need to be brought together. This requires that your nature-based proposal can be presented in alignment with the broader social, political and business priorities and goals of your city or community. It is useful to check not only how your nature-based solution meets these local priorities but also how it delivers on multiple global themes, such as the UN Sustainable Development Goals and emerging nature-based solutions challenges. This will help you build the case for your solution and communicate how it can generate a wider benefit. This can be useful, for example if you are applying for funding. Communicating the wider benefits of a nature-based solution helps to build alliances with partners who have different objectives. For example, your nature-based solution could support people to become healthier by providing space for exercise, or it could enhance biodiversity or improve water management. Therefore, you should communicate the benefits to organisations working to improve cleaner health and wellbeing, local settings to improve the natural environment, those maintaining open spaces and for development planning organisations in order to secure their buy-in.

Our Connecting Nature city partners have done this with their nature-based solution exemplars, to align the goals of the project with broader city-level and global goals. For city organisations, from a community group to local business, **check the fit** with a list of research. Use the exemplar of Glasgow in Figure 3 below.

Figure 3. Example of the connection between city strategic goals, United Nations Sustainable Development Goals (SDGs) and nature-based solutions frameworks.

- Identify the home of the exemplar within the city departmental structure and which other departments are needed for successful implementation
- Identify the legal framework within which the exemplar will be implemented, for example by being formally integrated into the city spatial plan, climate resilience plan
- Identify the city strategic goals at various scales (local/city/national/larger) that the exemplar helps to achieve

STEP 2 Current status of the location: identify the current use, ownership and management of where you want to implement your nature-based solution

Current status of the location: identify the current use, ownership and management of where you want to implement your nature-based solution

Whether you are a community group, a city government, a local government department, a business or a third sector organisation, there are some fundamental questions to answer:

- Who currently uses the space?
- Who owns the space?
- Who manages the space?

Finding the answers can be complicated, especially if the space is used, owned and managed by many different people. However, answering the questions is an essential first step.

Many viable locations for nature-based solutions already exist but their use, ownership and management by local government, business, public or private organisations can be complex. Therefore, when identifying a location, the involvement of local government is almost certainly needed at the early stages.

Clear identity: identifying the diverse users, owners and managers of the Broomer Valley Park

In our Connecting Nature partner city of Glasgow, the Connecting Nature project team identified an 8-acre nature-based solution site spanning through the city - the Broomer Valley Park - on the basis of its nature-based solution potential. To develop this exemplar, the team identified the multiple users, managers and owners of the site, which include private property, municipality land and property, health, different management and the private land part of the water management for the region.

Image: Broomer Valley, Copyright: City of Glasgow

- Who currently uses the space?
- Who owns the space?
- Who manages the space?

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How to tell your city's story Governance

Who are the required partners? Identify all relevant partners and bring everyone together to co-create a vision and goals for the nature-based solution.

Case study: Making community organizations the lead actors in the Waals River area, Flanders

In our Connecting Nature project (see of course, they city have used the strategic policy for the Waals River to develop an activity programme to revitalize parts of the watershed. Over time, it increased the leadership role of community organizations and small businesses while strengthening the traditional city government role in nature. This has had multiple benefits, including improved financial and economic benefits that are the only way to gain long-term success on the project and has created more opportunities to involve youth, for nature and commercial activities. The focus of the land is allowed for both to operate separately, community organizations who must ensure continuity of operation by agreeing to long-term contracts.

By completing the steps outlined above, you will already have identified many of the individuals, groups and organizations who will have to work in partnership to address the nature-based solution. In this step, identify partners not only community organizations and small businesses but also the various bodies of water and the various bodies of land that are significant stakeholders.

Once all the partners have been identified, you will need to think about the best way to bring them together as well as structures to be involved in the plan of the proposed activities, so both. The Co-production Quadrangle provides ideas on how to bring the partners together and on co-producing a shared vision for the space. While the various partners and organizations will have their own aims, values and plans, agreeing a shared vision for the project will be essential to aligning their interests and clarifying common goals, boundaries, management and stewardship.

The aim in Flanders has been to reduce the number of traditional city government controlled interventions and have the community organizations and private sector take the lead, with the public sector playing a supporting, advisory and low-level role.

Image: Steiner Valley, Copyright: City of Ghent



STEP 3 Who are the required partners: identify all relevant partners and bring everyone together to co-create a vision and goals for the nature-based solution

- Map required partners, stakeholders and beneficiaries according to the phases of exemplar delivery – planning /delivery/stewardship
- How did you bring the required partners together?
- How did you use co-production tools to build trust and agree a shared vision?

Look back at your quintuple helix analysis in the Connecting Nature Framework section for input!

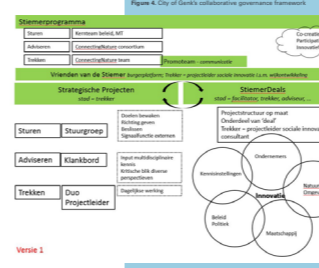
How will you work together? Develop and agree a collaborative governance framework so that the different partners work together effectively, sharing roles and responsibilities.

Case study: The Steiner Valley project in Ghent

Developing a collaborative governance framework so that the different partners work together effectively, sharing roles and responsibilities.

In Ghent, the Steiner Valley programme involves many different organizations that address ecological, social and environmental issues. The various partners in the Steiner Valley project are engaged in different ways. The various partners in the Steiner Valley project are engaged in different ways. The various partners in the Steiner Valley project are engaged in different ways.

Figure 4: City of Ghent collaborative governance framework



Stemprogramma	
Doel	Overname van de Steiner
Acties	Overname van de Steiner
Beleids	Overname van de Steiner

Strategische Projecten

Projecten die op maat zijn ontwikkeld voor de Steiner Valley. Het project is gericht op het verbeteren van de natuur en het creëren van nieuwe mogelijkheden voor de inwoners van de Steiner Valley.

Stemmer-Details

De Stemmer-Details zijn de verschillende rollen die de partners spelen in het project. Dit omvat onder andere: Advies, Toezicht, Samenwerking, en Overname.

STEP 4 How will you work together? Develop and agree a collaborative governance framework so that the different partners work together effectively, sharing roles and responsibilities

- What roles and responsibilities will each partner have?
- Who will be accountable and to whom?
- What is new in how this project is governed compared with your historic case studies?
- What does the city department have to do in order to ensure success?
- What can the city department let other partners be responsible for?

use sticky notes, draw or write down your ideas per step on these sheets.

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How to tell your city's story

Governance



STEP 5 What will you need to succeed? Identify conditions, skills and reflexive learning capacities to ensure ongoing success

- Analyse existing nature-based solution experiences, barriers and opportunities to understand your organizational culture
- Think about how you will work with colleagues to open-up silos, enhancing multi benefits
- What personal/team qualities are needed to create and maintain effective collaborations?
- What advocacy and evidence can you use to make the case for collaborative working?
- What strategies can you use with colleagues who are resistant to collaboration?
- What additional skills and capacities could the team develop to strengthen your effectiveness in dealing with colleagues and partners? How can you develop those?
- Can a neutral bridging organisation help build trust between partners?

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How to tell your city's story

Financing and business models

Following the Business Model Canvas workshop, you have drafted already this section of the Connecting Nature Framework on Finance and Business Models for your exemplar. Since then, you have had several quarterly calls with the element lead to review progress.

You can submit the most recent version of this for your Connecting Nature Framework report.

use sticky notes, draw or write down your ideas per step on these sheets.

use this input to write your city's story for the Connecting Nature Framework report

How to tell your city's story Nature-based enterprises

STEP 1 Awareness and strategic alignment

- What are the priorities for economic development in your city? E.g. priority sectors for development, priority geographical areas for economic development, other economic priorities?
- How can the planned NBS contribute to these economic development priorities?
- For each NBS exemplar please consider, how could NBEs contribute to the planning, delivery, maintenance and sustainability of these solutions?
- What are the challenges and enablers from a city perspective in involving NBEs in the implementation of NBS?

How to support nature-based enterprises?
Combining what we know about the characteristics of nature-based enterprises with the barriers and enablers to growth in Connecting Nature we propose a three-step model to support the growth of nature-based enterprises. This approach is being piloted by the partner cities of Connecting Nature, namely Preston (UK), Gwent (UK), Glasgow (UK), Berlin (Germany), London (UK), Bristol (UK), Newcastle (UK), Birmingham (UK), Brighton (UK), and Liverpool (UK).

Step 1 - Awareness and strategic alignment
Lack of awareness of the multiple benefits of nature-based solutions leads to a lack of support and financing, which in turn limits the number of private and social enterprises that can be established. Increased awareness leads to increased financing and increased demand. So how to raise awareness?

In the public sector, a good first step is to consider how nature-based solutions may support the strategic goals of your city or community as outlined in city plans or other strategic planning documents. It is important that nature-based solutions are aligned with the city's social, economic and environmental goals. Global frameworks such as the UN Sustainable Development Goals, The Connecting Nature Governance Guidelines, and the Technical Solutions Guidelines provide an excellent starting point for this. Securing the awareness and support of political leaders and department heads for nature-based solutions is crucial. This can be achieved by demonstrating the value of nature-based solutions to the city and how they can contribute to the city's strategic goals. The Connecting Nature Governance Guidelines provide a helpful framework for this. It is also important to consider the impact of major market shocks such as Covid-19 on the value of nature-based solutions. Nature-based enterprises can create a positive impact on the economy and provide a source of income for the community. The Connecting Nature Governance Guidelines provide a helpful framework for this.

Step 2 - Building alliances
Addressing internal and external barriers faced by nature-based enterprises will require support and alignment from a broad coalition of actors. Mapping the expertise required to build nature-based enterprises directly in this process is important to ensure the support and alignment of all relevant actors. Connecting Nature encourages an open innovation approach engaging a wide variety of innovation ecosystem stakeholders in the development of a plan to support nature-based enterprises. The Connecting Nature Co-creation Guidelines provide useful guidance on how to engage multiple actors to collaborate in building a common vision and plan including:

- **Internal barriers:** Lack of awareness of the multiple benefits of nature-based solutions leads to a lack of support and financing, which in turn limits the number of private and social enterprises that can be established. Increased awareness leads to increased financing and increased demand. So how to raise awareness?
- **External barriers:** Lack of awareness of the multiple benefits of nature-based solutions leads to a lack of support and financing, which in turn limits the number of private and social enterprises that can be established. Increased awareness leads to increased financing and increased demand. So how to raise awareness?

Internal Ecosystem
POLITICIA & GOVERNANCE
BUSINESS & INVESTMENT
ACADEMIA & RESEARCH
COMMUNITY & SOCIETY
END-USERS
TECHNOLOGY & INNOVATION
FINANCE & INVESTMENT

Take so many nature-based enterprises will be impacted negatively rather than positively by Covid-19.
It is also important to consider the impact of major market shocks such as Covid-19 on the value of nature-based solutions. Nature-based enterprises can create a positive impact on the economy and provide a source of income for the community. The Connecting Nature Governance Guidelines provide a helpful framework for this.

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Step 2 - Building alliances
Addressing internal and external barriers faced by nature-based enterprises will require support and alignment from a broad coalition of actors. Mapping the expertise required to build nature-based enterprises directly in this process is important to ensure the support and alignment of all relevant actors. Connecting Nature encourages an open innovation approach engaging a wide variety of innovation ecosystem stakeholders in the development of a plan to support nature-based enterprises. The Connecting Nature Co-creation Guidelines provide useful guidance on how to engage multiple actors to collaborate in building a common vision and plan including:

- **Internal barriers:** Lack of awareness of the multiple benefits of nature-based solutions leads to a lack of support and financing, which in turn limits the number of private and social enterprises that can be established. Increased awareness leads to increased financing and increased demand. So how to raise awareness?
- **External barriers:** Lack of awareness of the multiple benefits of nature-based solutions leads to a lack of support and financing, which in turn limits the number of private and social enterprises that can be established. Increased awareness leads to increased financing and increased demand. So how to raise awareness?

Internal Ecosystem
POLITICIA & GOVERNANCE
BUSINESS & INVESTMENT
ACADEMIA & RESEARCH
COMMUNITY & SOCIETY
END-USERS
TECHNOLOGY & INNOVATION
FINANCE & INVESTMENT

Take so many nature-based enterprises will be impacted negatively rather than positively by Covid-19.
It is also important to consider the impact of major market shocks such as Covid-19 on the value of nature-based solutions. Nature-based enterprises can create a positive impact on the economy and provide a source of income for the community. The Connecting Nature Governance Guidelines provide a helpful framework for this.

STEP 2 Building alliances

- From an NBE perspective what are the challenges and enablers to start-up and growth of NBEs? Do NBEs face specific challenges or enablers?
- Who are the main actors in the innovation ecosystem in each city (see figure)?
- How can these actors be engaged to stimulate a culture of nature-based entrepreneurship and support the emergence and growth of nature-based enterprises?
- What is the level of knowledge and skills of the Connecting Nature team in your city in terms of supporting the emergence and growth of NBE? If skills gaps have been identified, how do you plan to address them.

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How to tell your city's story Nature-based enterprises

How to support nature-based enterprises?
Combining what we know about the distribution of nature-based enterprises with the barriers and enablers to growth in Connecting Nature we propose a three-step model to support the growth of nature-based enterprises. This approach is based on the experience of Connecting Nature across several cities and is being piloted by the partner cities of Connecting Nature: Coventry (UK), Glasgow (UK), London (UK), Manchester (UK), Newcastle (UK), Norwich (UK), Oxford (UK), Plymouth (UK), Reading (UK), Southampton (UK), and York (UK). The model is being piloted by the partner cities of Connecting Nature: Coventry (UK), Glasgow (UK), London (UK), Manchester (UK), Newcastle (UK), Norwich (UK), Oxford (UK), Plymouth (UK), Reading (UK), Southampton (UK), and York (UK).

Step 1: Awareness and strategic alignment
Lack of awareness of the multiple benefits of nature-based solutions leads to a lack of support and funding, which in turn limits the number of nature-based enterprises that can be established. Increased awareness leads to increased funding and increased demand. So how to raise awareness?

In the public sector, a great first step is to consider how nature-based solutions may support the strategic goals of your city or community. Strategy planning documents, such as Local Nature Recovery Strategies, Local Nature Recovery Action Plans, and Environmental Improvement Plans, are key documents to review. Connecting Nature provides a range of guidance to help you align your nature-based solutions with your city's strategic goals. The Connecting Nature Guidance Framework provides a range of guidance to help you align your nature-based solutions with your city's strategic goals.

Step 2: Building alliances
Addressing the internal and external barriers faced by nature-based enterprises will require support and resources from a range of stakeholders. Mapping the expertise required and building strategic alliances is an important step. It is important to include nature-based enterprises directly in this process to ensure the support measures proposed meet their actual needs.

Connecting Nature encourages an open innovation approach engaging a wide variety of innovation ecosystem stakeholders in the development of a plan to support nature-based enterprises. The Connecting Nature Co-creation Challenge provides useful guidance on how to engage multiple actors to collaborate in building a common vision and plan including innovation ecosystem actors and enterprises, academics, institutions, policy makers, local governments and NGOs.

Building public sector market demand for nature-based solutions will require cross-departmental collaboration and changes to current public sector procurement procedures to place a greater emphasis on the non-financial benefits of nature-based solutions. The time and political will required to effect such systemic change should not be underestimated.

Alliances with potential funders
Addressing internal barriers such as lack of access to start-up or growth finance for nature-based enterprises may benefit from collaboration and existing financial institutions that are open to supporting the development of nature-based enterprises. Given the recent emergence of the nature-based enterprise sector, it will be low and specific actions to raise awareness and engagement will need to be undertaken. Particular attention should be focused on impact investors.

Innovation Ecosystem
The Connecting Nature Guidance Framework provides a range of guidance to help you align your nature-based solutions with your city's strategic goals. The Connecting Nature Guidance Framework provides a range of guidance to help you align your nature-based solutions with your city's strategic goals.

Take us more seriously
It is also important to consider the impact of major market shocks such as Covid-19 on the nature-based enterprise sector. While this crisis led to an increased awareness of the value of nature-based solutions, more nature-based enterprises found that business and contracts were frozen in the short-term. It is important to consider the impact of major market shocks such as Covid-19 on the nature-based enterprise sector. While this crisis led to an increased awareness of the value of nature-based solutions, more nature-based enterprises found that business and contracts were frozen in the short-term. It is important to consider the impact of major market shocks such as Covid-19 on the nature-based enterprise sector.

STEP 3 Planning, implementing and monitoring a customised support programme

- What are the primary objectives of your NBE strategy?
- How will NBE contribute to the implementation of your NBS?
- What measures are you putting in place to stimulate the emergence of a culture of nature-based entrepreneurship and to support the emergence and growth of NBEs?
- What innovation ecosystem actors have been engaged in the development of your NBE strategy and what actors are engaged in the implementation of the strategy?
- How will you know if your NBE objectives have been achieved? How will impact be measured?
- How did you translate your NBE strategy into an actionable implementation plan?
- Who will be following up with ecosystem actors and on specific measures to support the emergence and growth of NBEs? Within what timeframe?

Case study: ARENA business support programme for nature-based enterprises
Building from the collaboration developed as part of the EU FP7 project ARENA (Advanced Research and Innovation for Nature-based Enterprises), ARENA is a Regional Development Fund (ERDF) funded business support programme led by the Sustainable Research Institute at the University of Exeter. The programme provides support with market intelligence and evidence, research and development, commercialisation and procurement, market access and procurement support. With over 20 businesses already engaged, support for nature-based enterprises has focused on the development of partnerships and research, supporting the development and growing evidence of the effectiveness of nature-based solutions.

Supporting Street Food Vendors
In the city of Exeter, the programme is supporting the development of nature-based solutions. ARENA is supporting the development of nature-based solutions. ARENA is supporting the development of nature-based solutions. ARENA is supporting the development of nature-based solutions.

Impact measurement
As part of Step 3, impact measurement needs to be considered at multiple levels - at the level of the individual nature-based enterprise in respect of the specific product or service it provides and at the level of the overall nature-based solution which is likely to include multiple enterprises providing different cultural and economic outputs.

It is also important to measure the success of the support programme in terms of: impact indicators, such as quantitative and qualitative, stage and data gathered throughout the process of implementation. Indicators such as number of enterprises, number of employees, number of products or services developed, impact on business confidence, contribution to overall strategic goals and so on.

Guiding questions in planning a programme to support nature-based enterprises

1. What are the goals of a nature-based enterprise support plan? How do these align with broader strategic goals, in particular the large-scale implementation of nature-based solutions?
2. Who needs to be involved to deliver this plan? How will innovation ecosystem stakeholders be involved?
3. Who is going to lead on planning, development and monitoring? Have an adequate budget and resources for piloting or full-scale implementation been assigned?
4. What specific support measures will be put in place locally to address challenges and enablers? How will these connect with national or international support measures and platforms?
5. How will success be measured? What are the impact indicators?

Planning a programme to support nature-based enterprises

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How to tell your city's story

Co-production



3 | How to design and implement co-production

Co-production processes can be designed and implemented in five steps. The steps are iterative, which means that they are continuously reflected upon, refined and adapted if and when needed.

For example, the goals of the co-production process are defined in step 1 (see below) but they may change or be adapted throughout the process.

Step 1: Define the goals of the co-production process

It is important to define goals for the co-production process. Goals may include the development of new visions and strategies, concrete solutions, networks or partnerships and the empowerment of citizens. The goals influence who should be involved (what actors) and how the collaboration can be defined (the tasks used in each activity) as to empower the actors and produce shared results.

STEP 1 Define the goals of the co-production process

- What are the (different) goals for co-production? *Think for example of: adapting plans to local needs, mobilising and empowering local actors, legitimacy, ... You might want to think of different co-production processes, which address different co-production goals.*
- Who do you involve in your co-production activities? How will you engage them?
- What are the different roles and responsibilities for organising the co-production process, and who will take them up? *Think of roles and responsibilities in terms of process design, facilitation, aggregating the generated knowledge, communicating results etc.*

Step 2: Use the design principles to flesh out the co-production goals and structure

The design principles guide our approach to the co-production process by highlighting key knowledge to be shared, who should be involved, what type of knowledge is needed and what level of results are sought. The principles also help us to reflect on the process and results.

In this step we would work through each design principle in the framework to define how we will be addressed. For example, looking at inclusivity, we would define who will be involved and who will not, and why, what types of knowledge and results we want to generate, and so on.

We would also describe how we will meet the design principles during the co-production process. For example, how do we ensure that co-production processes are inclusive, legitimate and open? How can we facilitate engagement of the actors? How can we involve them in the design, delivery and monitoring of the nature-based solution?

Learning from practice: co-production goals in Ghent

In Ghent, Mieke Charlier works on the design and implementation of the co-production process of the Ghent Nature-based Solutions Plan for key about her experience of co-production.

"We, the city government, believe that all residents have individual interests for creating a better city. We are trying to ensure that the public has a say in the co-production process for a particular step. In the co-production process of the Ghent Nature-based Solutions Plan, we engage citizens through various activities. One example is the 'Shimmering' like trees, to discuss the value of a tree. Our Friends of the Ghent take part in conversations and register events throughout the whole co-production process."

"We have learned that the process is at least as important as the end result. It helps to create a common vision and approach with the involved stakeholders. We need to ensure that the process and outcomes are visible for everyone involved. There are also important people to take action. We thus focus on identifying and connecting with the right actors, identifying learning relationships and planning our engagement formats."

STEP 2 Use the design principles to flesh out the co-production goals and structure

- How do you approach each design principle in your co-production projects? For example, looking at inclusivity, who will you involve and who will you not involve overall, and why? What types of knowledge do you want to generate?
- How do you ensure the design principles? E.g., how do you ensure that the quality criteria for the principles are being met?

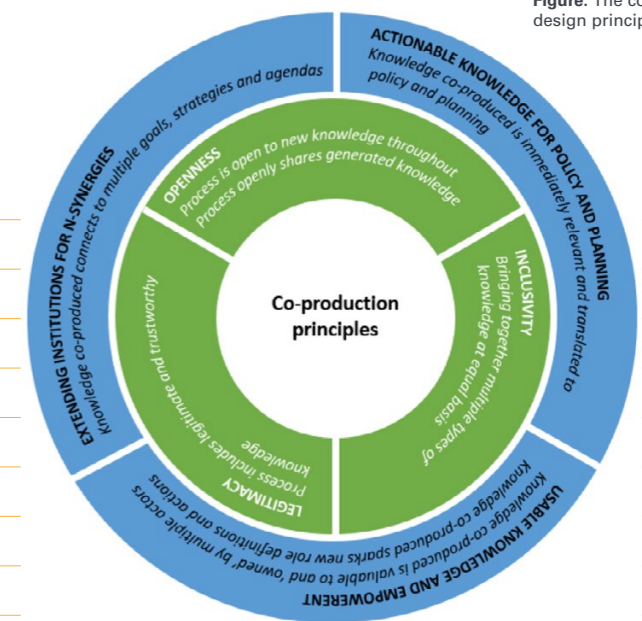


Figure: The co-production design principles

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How to tell your city's story Co-production

STEP 3 Plan the co-production steps and activities

- What are your different co-production steps and activities?
- Which of the goals does each step/activity address?
- Who will be involved in each step/activity?



You can present this in form of a timeline of activities from the start and highlighting the different steps, when and where they took place, which tools you used and who was involved.

It would be nice if you could include pictures from your co-production activities (also at later stages as the document evolves). Please include dates that the pictures are taken and acknowledge sources or copyrights when applicable.

STEP 4 Select the co-production tools

- Which tools do you use for each co-production step?
- How do you use the tool?
- Which materials, skills and other requirements (e.g. room, atmosphere, time) are needed for the tool?
- Which results did the tool generate?



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How to tell your city's story

Co-production

Step 5: Reflect on the co-production process and results

Co-production processes are never set in stone. They are open processes and evolve over time as learning progresses. They go with the flow of the participant ideas and needs. This requires continuous reflection. Reflectivity helps to identify lessons learned and to adapt the process in light of changing objectives. Therefore, those involved in co-production should set out objectives of the process along the way such as: Which goals does the process aim to achieve? In the process on the way to achieving them, or do we need adaptations? Reflective monitoring can help to achieve this. See the Connecting Nature Reference Monitoring guidelines.



STEP 5 Reflect on the co-production process and results

- Which of your intended results did you achieve?
- Which other (unintended positive/negative) results were generated?
- What are the main opportunities and barriers you experienced throughout your co-production process?
- How did you adapt the process to address the opportunities and barriers?
- What are key lessons learned for future co-production processes?

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How to tell your city's story Reflexive monitoring

STEP 1 Rethink what learning process you need to achieve the goals of the nature-based solution

- What are the (different) goals of your nature-based solution?
- What are the main learning questions that need to be addressed to achieve these goals? Think what needs to change for a successful implementation of the nature-based solution compared to a regular planning process. Which barriers or challenges are expected? Can these be translated into things your team or other actors in the process need to learn?
- Which actors have a role in this process and how can they be activated to contribute to answer your learning questions?
- How to create a learning environment and plan for additional time to get acquainted with the reflexive monitoring method for the reflexive monitor and the team members involved?

Step 1: Rethink goals
what do you need to learn about implementing nature-based solutions?

Reflexive monitoring coach
If the method is new for the members of the reflexive monitoring team, it is wise to involve an expert who can coach the reflexive monitor on applying the tools and practice with the different facilitation techniques and abilities as well as handling the ability to assess the reflexivity when analyzing the process.

Other participants in the reflexive monitoring process
We recommend that the following actors participate in the reflexive monitoring team:
• The project leader who is responsible for the overall project
• One or two other collaborators who work on implementing the nature-based solution on a daily basis

Step 2: Define the roles within the process
Reflexive monitoring should be happening during all the phases of nature-based solution development, from the planning phase, right through delivery and monitoring. From the very start of the nature-based solution, it should be made clear that each actor has a role in reflexive monitoring and that assessing this role will involve collaborating closely and monitoring regularly. The level of involvement of each role depends on the steps in the process. Some of the reflexive monitoring roles require specific skills.

The reflexive monitor
The most important role is that of reflexive monitor. The reflexive monitor is responsible for steering the learning process of the monitoring team. The person who needs to be able to balance thinking conceptually with the participants in reflexive monitoring sessions with stepping back to ask critical questions of him- or herself and the participants and analyzing the process.

Step 1: Rethink goals
what do you need to learn about implementing nature-based solutions?

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STEP 2 Define the roles within the project team

- Who is involved in the reflexive monitoring process?
- How are the roles divided over the team? It is possible to divide the different tasks of the reflexive monitor over multiple team members but important to explicate who is responsible for what. In case the project manager takes the (or parts) of the role as reflexive monitor: How do you ensure there is no conflict between these two roles?
- How do you ensure there will be enough space for the reflexive monitor to familiarize his-/herself with the reflexive monitoring tools and the capacities required for this role?

reflexive monitor:

reflexive monitoring coach:

other participants in the reflexive monitoring process:

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How to tell your city's story Reflexive monitoring

STEP 3 Recording important events and analysing critical turning points

- How do you track the important events in time? When do you discuss what happened with your team and formulate to critical turning points? Is it connected to 'regular' project meetings? Do you organise an additional meeting for this step and if yes, who is involved in this 'timeline meeting'?
- Who is involved in updating the dynamic learning agenda? How often are the updates made? With whom is this agenda shared?
- How to you keep track on the follow-up actions, especially when they are executed by colleagues who are not (closely) involved in the reflexive monitoring process?
- Can you give 2-3 example(s) of follow-up actions and describe who was responsible for them and how they relate to the critical turning points and learning questions?

Depending on your team parts of the process can be done together or alone. The reflexive monitor is responsible to produce the dynamic learning agenda and the other team members can be involved at different levels. However, the different responsibilities and the planning needs to be transparent and clear for all people involved in order to ensure everybody is contributing in time and follow-up actions are implemented in practice. This to avoid parallel processes between 'regular' project meetings and the reflexive monitoring process.

Timeline of events
This figure shows a detailed timeline of events from 2018 to 2020. It includes dates, event descriptions, and critical turning points. The timeline is organized into columns representing different stages of the project.

Dynamic learning agenda
A dynamic learning agenda is a tool to record and trace the reflexive learning process. It consists of critical turning points and learning questions. For each turning point, follow-up actions are identified. This helps to identify the essence and the specific learning points. The agenda is updated as the process evolves. The agenda is shared with the team and used to guide the learning process.

Timeline meeting
When the timeline is updated, hold a meeting with your colleagues to discuss it. Critical turning points are identified and learning questions are formulated. This meeting is held on the main agenda. The agenda is updated as the process evolves. The agenda is shared with the team and used to guide the learning process.

Follow-up actions
Follow-up actions are identified for each critical turning point. These actions are implemented by the team. The actions are tracked and reported back to the team. This helps to ensure that the learning process is ongoing and that the team is learning from its experiences.

STEP 4 Use learning sessions to identify learning outcomes

- What are the main opportunities and barriers you experienced throughout your reflexive monitoring process (including working with the reflexive monitoring tools)?
- How did you include the reflexive monitoring process into your daily activities?
- What came up during the learning sessions that influenced the planning, co-production and/or implementation of your nature-based solution?

Use learning sessions to identify learning outcomes
Learning sessions are used to discuss the learning process and identify learning outcomes. These sessions are held regularly and involve all team members. The sessions are structured to allow for open discussion and sharing of experiences. The learning outcomes are recorded and used to inform the next steps of the project.

Learning session structure
1. Review the learning agenda and discuss the progress. 2. Share experiences and challenges. 3. Identify learning outcomes. 4. Plan next steps. 5. Reflect on the session.

Reflexive monitoring workshop in Gork (Source: Gork)

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How to tell your city's story Reflexive monitoring



Urban practitioners discuss the effectiveness of reflexive monitoring. (Source: DRPT)

Step 5: Share your findings with others
 Reflexive monitoring is a novel governance process that allows many lessons to be learned. It is valuable to share these lessons, along with tips and tricks, with other cities and the public. The following box lists are selected to support this end-goal: the eye-opener workshop and the personal learning narrative.

The purpose of eye-opener workshops is to share what is learned from co-producing nature-based solutions with people who are not yet involved in your project. For example, colleagues from other departments, the mayor's office or professionals working with co-production or nature-based solutions. The format for the workshop is described based on the outcomes of the tools used in step 3 and 4 of the reflexive monitoring process.

Personal learning narratives are stories that describe the learning journey of yourself or your team members throughout the co-production process. They may present an experience, a thinking factor, a struggle or a challenge. These personal stories can be shared in different ways: with the public, in different reports, as a video about his or her own learning journey and it is shared out through social media or played at an eye-opener workshop.

STEP 5 Share your findings with others

- What lessons on reflexive monitoring did you learn from the other cities? And what lessons did you share with other cities?
- Did you organise an eye-opener workshop and what did you and the participants gain from it?
- How was it to write a learning history narrative? Did the learning history narratives from other cities inspire or surprise you and in what way?
- What are the main take ways from the peer-to-peer learning sessions you participated in (these are the knowledge transfer workshops and learning platform webinars)?

not obligatory for first draft December 2020, but good to start thinking about how you will answer these for the final reporting



Urban practitioners discuss the effectiveness of reflexive monitoring. (Source: DRPT)

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STEP 6 Reflecting on the method and peer-to-peer sharing

- How is reflexive monitoring new/different from your usual way of working?
- How does this method help you in the process of co-producing and scaling nature-based solutions?
- Did it influence your change existing relations, rules, social practices and discourses for the co-production and scaling of nature-based solutions (reflect upon why or why not)?
- What are the main lessons learned for the internal organisation of the exemplar?
- Did the applied reflexive monitoring tools help you with the analysis of key barriers and opportunities for the co-production and scaling of nature-based solutions (if yes, explain how)?
- Did the applied reflexive monitoring tools help you with enabling third party learning, i.e. transferring the lessons learned in the project to project outsiders (if yes, explain how)?

not obligatory for first draft December 2020, but good to start thinking about how you will answer these for the final reporting

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How to tell your city's story

Impact assessment



STEP 1 Engage in structured reflection on NBS impacts, pathways and trade-offs

- How are the strategic objectives of the city related to the United Nations Sustainable Development Goals?
- What are the objectives of your NBS and its expected results?
- How are the objectives related to the NBS actions and the expected results?
- Are there possible synergies or trade-offs between the expected results?

STEP 2 Choose appropriate indicators

- Please list which core and feature indicators you have selected for each category
- Based on your exemplar's expected results, what are the reasons for selecting those indicators?

This step can be skipped for the 1st draft of your Connecting Nature framework report in December 2020. You will complete it later, by April 2021.

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How to tell your city's story

Impact assessment

STEP 3 Develop a data plan for impact evaluation

- Do you have data available for the selected indicators?
- Please describe their sources and years.
- Based on your exemplar, what is the granularity of this data?
- Please describe by which method this data is collected, and how often.

This step can be skipped for the 1st draft of your Connecting Nature framework report in December 2020. You will complete it later, by April 2021.

STEP 4 Implement the data plan

- Please describe the selected methods to measure each indicator and why.
- In which indicators will the city be able to perform causality analysis?
- Please describe the plan for the collection of new data

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How to tell your city's story

Impact assessment

STEP 5 Integrate evidence into the policy process

- What type of data (quantitative or qualitative) will you have for each indicator?
- Please list for which indicators you will be able to geolocate the data.
- How will you disclose the results for each indicator?
- Please describe to which stakeholders you will disclose the results of each indicator.

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Appendix C:

Overview of workshops and activities

When	What	Participating partners	Participating Frontrunner cities	Participating Fast follower cities
Webinars and workshops on the Connectign nature Framework				
21-4-2020	PSC call - first ideas on figure & terminology	DRIFT, TDC, UEL, Horizon Nua, ICLEI, UDC	Genk, Poznan, Glasgow	
14-5-2020	Working group session #1 - First ideas on figure & terminology	Stuart Connop (UEL), Isobel Fletcher (Horizon Nua), Marleen Lodder (DRIFT), Kato Allaert (DRIFT), Dimitra Xidou (TDC), Graphic designer	Poznan, Glasgow	Pavlos melas, A Coruna
26-5-2020	Working group session #2 - evaluate first designs for figure & terminology	Stuart Connop (UEL), Isobel Fletcher (Horizon Nua), Marleen Lodder (DRIFT), Kato Allaert (DRIFT), Dimitra Xidou (TDC), Graphic designer	Poznan, Glasgow	Pavlos melas, A Coruna
2-6-2020	Working group session #3 - finalize figure & terminology	Stuart Connop (UEL), Isobel Fletcher (Horizon Nua), Marleen Lodder (DRIFT), Kato Allaert (DRIFT), Dimitra Xidou (TDC), Graphic designer	Poznan, Glasgow	Pavlos melas, A Coruna
9-6-2020	PSC call – present proposed Framework figure	TDC, UEL, Horizon Nua, ICLEI, DRIFT, UDC	Genk, Poznan, Glasgow	Pavlos Melas, Burgas, Malaga, A coruna, Sarajevo, Ioannina, Nicosia
15-7-2020	Webinar: Re-introduction to Connecting nature framework	DRIFT	Genk, Poznan, Glasgow	Pavlos Melas, Burgas, Malaga, A coruna, Sarajevo, Ioannina, Nicosia
5-5-2021	CN Framework narrative workshop	Kato and Shibeal (DRIFT), Svenja (Climate Alliance), Gerardo (BioAzul), Dimitra (TDC), Paulina (UEL)	Glasgow	Malaga, Sarajevo & A Coruna

11-5-2021	CN Framework narrative workshop	Kato and Shibeal (DRIFT), Svenja (Climate Alliance), Gerardo (BioAzul), Dimitra (TDC), Paulina (UEL)	Genk	Burgas & Pavlos Melas
12-5-2021	CN Framework narrative workshop	Marleen and Shibeal (DRIFT), Svenja (Climate Alliance), Gerardo (BioAzul), Dimitra (TDC), Paulina (UEL)	Poznan	Nicosia & Ioannina
Co- production workshops and webinars				
26-2-2018	Frontrunner city workshops - Assessment of (a) organisational conditions, barriers and strategies, (b) policy needs and (c) experiences with co-production, to identify good practices for co-production and tailor the co-production methodology	DRIFT	Genk	
11-4-2018	Frontrunner city workshop - Assessment of (a) organisational conditions, barriers and strategies, (b) policy needs and (c) experiences with co-production, to identify good practices for co-production and tailor the co-production methodology	DRIFT	Glasgow	
26-4-2018	Frontrunner city workshop - Assessment of (a) organisational conditions, barriers and strategies, (b) policy needs and (c) experiences with co-production, to identify good practices for co-production and tailor the co-production methodology	DRIFT	Poznan	
June 2018	Co-production workshop at General Assembly meeting of the Connecting Nature project held in Ioannina, Greece	DRIFT	Glasgow, Genk, Poznan	Pavlos Melas, Burgas, Malaga, A coruna, Sarajevo, Ioannina, Nicosia
02.11.2018	Co-production guidebook webinar - to discuss the first draft of the guidebook on co-production	DRIFT	Glasgow, Genk, Poznan	
21.11.2018	Co-production focus group in Rotterdam, the Netherlands - presentation of co-production processes the frontrunner cities put in place	DRIFT	Glasgow, Genk, Poznan	
14.01.2019	Co-production Webinar #0 <i>with all the FFC's together</i>	DRIFT		Pavlos Melas, Burgas, Malaga, A coruna, Sarajevo, Ioannina, Nicosia
23.01.2019	Workshop on co-production during the 'Learning Transfer Workshop' in Nicosia - Peer-to-peer learning on co-production principles and good practices	DRIFT		Pavlos Melas, Burgas, Malaga, A coruna, Sarajevo, Ioannina, Nicosia
14-3-2019 18-3-2019 10-4-2019	Co-production workshop #1 <i>with each of the FFC's seperately</i>	DRIFT		Pavlos Melas, Burgas, Malaga, A

2-5-2019 29-5-2019 18-6-2019 21-6-2019 27-6-2019	2019			coruna, Sarajevo, Ioannina, Nicosia
31-01-2020 3-2-2020 5-2-2020	Co-production webinar #1 <i>- with each of the FRC's separately</i>	DRIFT	Katrien, Peter (Genk) Agnieszka D, Natalia and Dominika (Poznan) Sean, Gilian, Rania (Glasgow)	
25-9-2020 24-9-2020 21-9-2020 28-9-2020 4-10-2020 29-9-2020 1-10-2020	Co-production workshop #2 <i>with each of the FRC's separately</i> 2020	DRIFT		Pavlos Melas, Burgas, Malaga, A coruna, Sarajevo, Ioannina, Nicosia
20-10-2020	Co-production webinar #2 <i>with all the FRC's, 2020</i>	DRIFT	Glasgow, Genk, Poznan	
8-10-2021	Co-production webinar #3 <i>with all the FRC's, 2021</i>	DRIFT	Rania Sermpezi, Sean Kelly (Glasgow), Natalia Madajczyk, Agnieszka D. (Poznan), Mien Quartier (Genk)	
7-6-2021 8-6-2021 31-2021 28-6-2021 26-5-2021 4-6-2021 27-5-2021	Co-production workshop #3 <i>with each of the FRC's separately</i> 2021	DRIFT		Pavlos Melas, Burgas, Malaga, A Coruna, Sarajevo, Ioannina, Nicosia
8-3-2021	Knowledge hub session: Peer 2 peer sharing - Genks Co - production governance model	UEL, DRIFT	Genk	all invited
11-5-2021	Knowledge hub session: Webinar 0 -Stakeholder mapping Webinar	OSMOS, DRIFT	all invited	all invited
13-5-2021	Knowledge hub session: Webinar 1_ Organizational coaching program: Stress management during Covid	UVT, UEL, DRIFT		Malaga, Sarajevo, pavlos melas, A Coruna
20-5-2021	Knowledge hub session: Webinar 2 - Organizational coaching program: Understanding how to foster interpersonal skills	UVT, UEL, DRIFT	Poznan	A Coruna, Malaga, , Burgas
27-5-2021	Knowledge hub session: Webinar 3 - Organizational coaching program: Collaboration & Teambuilding	UVT, UEL, DRIFT	Poznan	A Coruna, Sarajevo, Malaga, Nicosia
Reflexive monitoring workshops and webinars				
10.09.2018	Webinar reflexive monitoring - to introduce reflexive monitoring to the FRC's	DRIFT	Genk, Poznan & Glasgow	
20.11.2018	Workshop on the reflexive monitoring methodology in Rotterdam - to introduce Reflexive monitoring and facilitate peer-2-peer learning	DRIFT	Genk, Poznan & Glasgow	
12.12.2018	Webinar reflexive monitoring - to introduce reflexive monitoring	DRIFT		Pavlos Melas, Burgas, Malaga, A



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	to the FFC's			Coruna, Sarajevo, Ioannina, Nicosia
23.01.2019	Workshop on reflexive monitoring during the 'Learning Transfer Workshop' in Nicosia	DRIFT,	Genk, Poznan & Glasgow	Pavlos Melas, Burgas, Malaga, A Coruna, Sarajevo, Ioannina, Nicosia
10-6-2019	FFC RM in practice 1-on-1 webinars	Igno Notermans and Daan Sillen (DRIFT)		Ioannina
13-6-2019	FFC RM in practice 1-on-1 webinars	Igno Notermans and Daan Sillen (DRIFT)		Nicosia
14-6-2019	FFC RM in practice 1-on-1 webinars	Igno Notermans and Daan Sillen (DRIFT)		A Coruna
16-7-2019	FFC RM in practice 1-on-1 webinars	Igno Notermans and Daan Sillen (DRIFT)		Bologna
17-6-2019	FFC RM in practice 1-on-1 webinars	Igno Notermans and Daan Sillen (DRIFT)		Sarajevo
18-6-2019	FFC RM in practice 1-on-1 webinars	Igno Notermans and Daan Sillen (DRIFT)		Malaga
19-6-2019	FFC RM in practice 1-on-1 webinars	Igno Notermans and Daan Sillen (DRIFT)		Pavlos Melas
25-9-2019	FFC RM in practice 1-on-1 webinars	Igno Notermans and Daan Sillen (DRIFT)		Burgas
6-5-2021	1-On-1 Support – for FFCs, to support development of RM Chapter of CN Framework report	Shibeal Mc Cann, Kato Allaert, Marleen Lodder (DRIFT)		Ioannina
14-4-2021	1-On-1 Support – for FFCs, to support development of RM Chapter of CN Framework report	Shibeal Mc Cann, Kato Allaert, Marleen Lodder (DRIFT)		Nicosia
15-4-2021	1-On-1 Support – for FFCs, to support development of RM Chapter of CN Framework report	Shibeal Mc Cann, Kato Allaert, Marleen Lodder (DRIFT)		A Coruna
16-4-2021	1-On-1 Support – for FFCs, to support development of RM Chapter of CN Framework report	Shibeal Mc Cann, Kato Allaert, Marleen Lodder (DRIFT)		Sarajevo
22-4-2021 6-5-2021	1-On-1 Support – for FFCs, to support development of RM Chapter of CN Framework report	Shibeal Mc Cann, Kato Allaert, Marleen Lodder (DRIFT)		Malaga
22-4-2021	1-On-1 Support – for FFCs, to support development of RM Chapter of CN Framework report	Shibeal Mc Cann, Kato Allaert, Marleen Lodder (DRIFT)		Pavlos Melas
15-4-2021	1-On-1 Support – for FFCs, to support development of RM Chapter of CN Framework report	Shibeal Mc Cann, Kato Allaert, Marleen Lodder (DRIFT)		Burgas
Learning experience webinars frontrunner cities				
20-6-2019 23-3-2020 21-9-2020 9-6-2021	Learning Experience Webinars - to Identify lessons about co-production that are captured	Different element leads	The Reflexive monitors of Genk, Glasgow, Pozan,	



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	through reflexive monitoring (input for co-production analysis) - to reflect and facilitate peer-to-peer learning on the method of reflexive monitoring, introduction of learning outcomes structure		and some of their teammembers	
Learning sessions frontrunner cities				
1-10-2018 9-10-2018 6-11-2018 6-12-2018	Learning session Genk 2018 -[4x]	DRIFT as Reflexive monitoring coach, elements leads for Co-production, technical solutions, impact assessment, governance e.a.	Peter Vos, (the Reflexive monitor of Genk) and teammembers (e.g. Mien Quartier, Katrien van de Sijpe)	
8-1-2019 14-2-2019 2-4-2019 5-6-2019 22-10-2019 16-12-2019 6-1-2020	Learning session Genk 2019 -[7x]	DRIFT as Reflexive monitoring coach, elements leads for Co-production, technical solutions, impact assessment, governance e.a.	Peter Vos, (the Reflexive monitor of Genk) and teammembers (e.g. Mien Quartier, Katrien van de Sijpe)	
4-3-2020 15-6-2020 3-9-2020 10-11-2020	Learning session Genk 2020 [4x]	DRIFT as Reflexive monitoring coach	Peter Vos, (the Reflexive monitor of Genk) and teammembers (e.g. Mien Quartier, Katrien van de Sijpe)	
15-2-2021 29-3-2021 1-6-2021	Learning session Genk 2021 -[3x]	DRIFT as Reflexive monitoring coach	Peter Vos, (the Reflexive monitor of Genk) and teammembers (e.g. Mien Quartier, Katrien van de Sijpe)	
3-10-2018 16-10-2018 13-11-2018 18-12-2018	Learning session Glasgow 2018 - [4x]	DRIFT as Reflexive monitoring coach, elements leads for Co-production, technical solutions, impact assessment, governance e.a.	the Reflexive monitors of Glasgow (Gilian Dick, Sean Kelly) and teammembers	
15-1-2019 22-1-2019 19-2-2019 19-3-2019 18-4-2019 21-5-2019 18-6-2019 9-2019 10-2019 12-2019	Learning session Glasgow 2019 - [9x]	DRIFT as Reflexive monitoring coach, elements leads for Co-production, technical solutions, impact assessment, governance e.a.	the Reflexive monitors of Glasgow (Gilian Dick, Sean Kelly) and teammembers	
30-1-2020 5-3-2020 1-4-2020 28-4-2020 23-6-2020 22-9-2020 17-12-2020	Learning session Glasgow 2020 - [7x]	DRIFT as Reflexive monitoring coach, elements leads for Co-production, technical solutions, impact assessment, governance e.a.	the Reflexive monitors of Glasgow (Gilian Dick, Sean Kelly) and teammembers (laura, Rania)	
14-4-2021 8-6-2021	Learning session Glasgow 2021 - [2x]	DRIFT as Reflexive monitoring coach, elements leads for Co-production, technical solutions,	the Reflexive monitors of Glasgow (Gilian Dick, Sean Kelly) and teammembers	



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		impact assessment, governance e.a.	(laura, Rania)	
5-10-2018 15-11-2018 5-12-2018	Learning session Poznan 2018 - [3x]	DRIFT as Reflexive monitoring coach, elements leads for Co-production, technical solutions, impact assessment, governance e.a.	the reflexive monitor of Poznan and teammembers (Agnieszka D. & Natalia)	
8-1-2019 12-2-2019 15-03-2019 26-3-2019 10-4-2019 17-5-2019 11-6-2019 19-10-2019 11-12-2019	Learning session Poznan 2019 - [9x]	DRIFT as Reflexive monitoring coach, elements leads for Co-production, technical solutions, impact assessment, governance e.a.	the reflexive monitor of Poznan and teammembers (Agnieszka D. & Natalia)	
28-1-2020 18-2-2020 17-3-2020 30-4-2020 18-6-2020 3-9-2020 5-11-2020	Learning session Poznan 2020 - [7x]	DRIFT as Reflexive monitoring coach, elements leads for Co-production, technical solutions, impact assessment, governance e.a.	the reflexive monitor of Poznan and teammembers (Agnieszka D. & Natalia)	
8-2-2021; 30-3-2021; 10-6-2021	Learning session Poznan 2021 - [3x]	DRIFT as Reflexive monitoring coach, elements leads for Co-production, technical solutions, impact assessment, governance e.a.	the reflexive monitor of Pzanan (Natalia)	
Learning platform webinars				
5-10-2020	Learning Platform webinar #0 - to set up the structure for Knowledge transfer – phase 2 and 1-on-1 learning sessions FRC & FFC	Leads of WP 2 and WP4, Knowledge hub leads [DRIFT, TCD, Green space schotland, Climate alliance, Horizon NUA, ICLEI, OPPLA]	Genk, Glasgow, Poznan	
7-12-2020	Learning Platform webinar #1 - to identify learning question sfor the knowledge hubs	Leads of WP 2 and WP4, Knowledge hub leads [DRIFT, OSMOS, UVT, ICLEI, Climate Alliance, TDC, UIRS, UBER, UDC, UEL, AMU, GeoGraphic, CENS, Bioazul, UBER, OPPLA, Green space schotland, Horizon NUA]	Genk, Glasgow, Poznan	Pavlos Melas, Burgas, Malaga, A coruna, Sarajevo, Ioannina, Nicosia
26-5-2021	Learning Platform webinar #2 - to validate findings from the learning objectives analysis and identify learning question sfor the knowledge hubs	Leads of WP 2 and WP4, Knowledge hub leads [DRIFT, OSMOS, UVT, ICLEI, Climate Alliance, TDC, UIRS, UBER, UDC, UEL, AMU, GeoGraphic, CENS, Bioazul, UBER, OPPLA,	Genk, Glasgow, Poznan	Pavlos Melas, Burgas, Malaga, A coruna, Sarajevo, Nicosia



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		Green space schotland, Horizon NUA		
20-10-2020	Learning Platform webinar #3 - to validate findings from the (extended) learning objectives analysis and look ahead with the knowledge hubs	OSMOS, UVT, ICLEI, Climate Alliance, TDC, UIRS, UBER, UDC, UEL, AMU, GeoGraphic, CENS, Bioazul, UBER, OPPLA, Green space schotland	Genk, Glasgow, Poznan	Pavlos Melas, Burgas, Malaga, A coruna, Sarajevo, Ioannina, Nicosia
1-on-1 Learning sessions frontrunner cities and fast follower cities				
30-11-2020 03-2021 07-2021	1-on-1 learning sessions FRC &FFC: [3x]	Dimitra Xidou (TCD)	Genk	Burgas
17-11-2020 03-2021 07-2021	1-on-1 learning sessions FRC &FFC: [3x]	Dimitra Xidou (TCD)	Genk	Pavlos melas
5-11-2020 03-2021 07-2021	1-on-1 learning sessions FRC &FFC: [3x]	Dimitra Xidou (TCD)	Glasgow	A Coruna
3-12-2020 03-2021 07-2021	1-on-1 learning sessions FRC &FFC: [3x]	Dimitra Xidou (TCD)	Glasgow	Malaga
3-12-2020 03-2021 07-2021	1-on-1 learning sessions FRC &FFC: [3x]	Dimitra Xidou (TCD)	Glasgow	Sarajevo
2-12-2020 03-2021 07-2021	1-on-1 learning sessions FRC &FFC: [3x]	Dimitra Xidou (TCD)	Poznan	Ioannina
30-11-2020 03-2021 07-2021	1-on-1 learning sessions FRC &FFC: [3x]	Dimitra Xidou (TCD)	Poznan	Nicosia

Appendix D: Learning objectives FFCs and FRCs

Learning objectives	Cities with the questions	Response (by which cities)
<i>Connecting Nature Framework</i>		
1. How to use the Connecting Nature Framework as a communication tool?	A Coruña, Nicosia, Pavlos Melas	Genk, Ioannina
2. How to work with the Connecting Nature Framework to scale-out from project level to city strategy level?	A Coruña, Burgas, Málaga, Nicosia, Pavlos Melas, Sarajevo	
3. How to create space/time to use the Connecting Nature Framework?	A Coruña, Málaga, Nicosia, Sarajevo	
4. How to balance the different elements of the Connecting Nature Framework	Poznań, Nicosia	
<i>Technical solutions</i>		
1. How to identify spaces for nature-based solutions (cities need more space)?	A Coruña, Burgas, Ioannina, Málaga, Nicosia	Glasgow
2. How to deal with trade-offs (e.g. between biodiversity versus recreation)?	Burgas, Ioannina, Pavlos Melas	Genk
3. How to design nature-based solutions to enhance biodiversity?	Sarajevo, Burgas	Glasgow
4. How to boost awareness of environmental/ health benefits of the nature-based solution?	A Coruña, Málaga, Nicosia, Pavlos Melas, Sarajevo	
5. How to efficiently update existing infrastructure?	Burgas, Ioannina, Nicosia	
6. How to cooperate with external bodies/ expertise to design and/or implement the nature-based solution?	A Coruña, Burgas, Ioannina, Nicosia, Pavlos Melas, Sarajevo	
7. How to satisfy the criteria / definition for nature-based solution?	Sarajevo	
8. How to combat vandalism/ protect NBS ?	Pavlos Melas	Genk
<i>Governance</i>		
1. How to engage with other departments ? / break silos	A Coruña, Burgas, Ioannina, Málaga, Pavlos Melas, Glasgow	A Coruña, Genk
2. How to continue cross-departmental collaboration in COVID times ?	Ioannina, Málaga, Nicosia	
3. How to wage political support ?	Sarajevo	Glasgow
4. How to shift the existing governance model	A Coruña, Ioannina	A Coruña
5. How to get experience in organising a strategic adaptive governance process to oversee complex large scale NBS?	A Coruña, Málaga, Nicosia, Pavlos Melas	A Coruña
6. How to design and implement bottom-up governance models?	A Coruña, Ioannina, Nicosia	

7. How to organise continued support for the NBS ?	A Coruña, Burgas, Málaga, Nicosia, Pavlos Melas	
8. How to align the goals of the NBS with the wider goals of the city in order to build the case for delivering multiple benefits ?	Burgas, Málaga, Nicosia, Pavlos Melas	
<i>Financing and business models</i>		
1. How to increase the prioritisation of the NBS on funding agendas ?	A Coruña, Burgas, Nicosia, Pavlos Melas	Ioannina Glasgow
2. How to strategically link the NBS to other departments in order to raise more funding ?	A Coruña, Ioannina, Nicosia, Pavlos Melas, Sarajevo	
3. How to deal with CSR ? What is the protocol ?	Poznań	Nicosia
4. How to fund / create revenue for the stewardship phase of the project ?	A Coruña, Burgas, Ioannina, Málaga, Nicosia, Pavlos Melas, Sarajevo	Genk
5. How to find collaborating parties that are funded elsewhere ?	Málaga, Pavlos Melas, Sarajevo	
6. How to engage the private sector /raise awareness and interest in projects among the private sector to attract funding ?	A Coruña, Burgas, Málaga, Nicosia, Pavlos Melas, Sarajevo	
<i>Nature-based entrepreneurship</i>		
1. How to find potential entrepreneurs ?	Nicosia, Pavlos Melas	Nicosia
2. How to find maintenance entrepreneurs for the maintenance of the gardens ?	A Coruña, Málaga, Nicosia, Pavlos Melas, Sarajevo	
3. How to establish an NBE pilot /incubator programme ?	Glasgow	Málaga
4. How to deal with the logistics of an incubator programme ? e.g. economic evaluation, physical space.	Málaga	Glasgow
5. How to use accelerator/ incubator to promote NBS in locality ?	A Coruña, Málaga, Nicosia	
6. How to manage expectations of participants / outcomes in NBE pilot programmes - incubator and/ or accelerator ?	Málaga	Glasgow
7. How to successfully market the pilot / incubator programme to attract the right participants ?	Nicosia, Glasgow	Málaga
8. How to create economic opportunities, specifically for the maintenance phase of the NBS ?	Burgas, Málaga, Nicosia, Pavlos Melas, Sarajevo	
<i>Co-production</i>		
1. How to encourage/ motivate stakeholders to join the initiative, engaging "outsiders" or when people are not committed ?	Burgas, Málaga, Nicosia, Pavlos Melas, Sarajevo	Nicosia Glasgow
2. How to encourage and support other organisations to organise co-	A Coruña, Málaga, Sarajevo	



production activities?		
3. How to engage organisations through co-production activities?	A Coruña, Burgas, Ioannina, Pavlos Melas, Sarajevo	Glasgow, Genk
4. How to carry out effective co-production with stakeholders in COVID times?	A Coruña, Burgas, Málaga, Nicosia, Pavlos Melas, Sarajevo	Glasgow
5. How to manage conflict among NBS users ?	A Coruña, Pavlos Melas	Glasgow
6. How to manage the expectations of collaborators in Co-production processes ?	Burgas, Nicosia	
7. How to prevent gentrification through co-production?	Málaga	
8. How to/ when to use co-production tools ?	A Coruña, Burgas, Málaga, Nicosia, Sarajevo	
9. How to engage large stakeholder groups through co-production (instead of consultation)	Málaga, Nicosia, Pavlos Melas, Sarajevo	
10. How to carry out public consultation regarding draft design of NBS	Sarajevo	Glasgow
11. How to engage private sector stakeholders?	A Coruña, Burgas, Málaga, Nicosia, Pavlos Melas, Sarajevo	Poznań
12. How to engage organisations through co-production activities?	A Coruña, Ioannina,	
13. How to facilitate knowledge exchange between different groups?	Pavlos Melas, Sarajevo	
14. How to decide to engage specific stakeholder groups at what stage of the project?	Burgas, Nicosia, Pavlos Melas, Sarajevo	
15. Who are the required partners and how can we bring them together ?	Málaga, Nicosia, Pavlos Melas, Sarajevo	
16. How to bring plot owners/ managers together, communicate interest in the plot and possibly arrive at a shared vision ?	A Coruña, Málaga	
17. How to support cultural and sport activities to increase social cohesion?	Ioannina, Pavlos Melas	
18. How to decide on next steps after a co-production activity ?	Burgas, Ioannina, Málaga, Nicosia, Pavlos Melas, Sarajevo	
19. How to encourage a changed approach to the way land is managed ?	Málaga	Glasgow
<i>Reflexive monitoring</i>		
1. How to integrate Reflexive monitoring into daily practice ?	Burgas, Ioannina, Málaga, Nicosia, Sarajevo	Glasgow
2. How can we move from using Reflexive monitoring from officer to senior level ?	A Coruña, Sarajevo	
3. How to elaborate upon items on the Dynamic Learning Agenda ?	Ioannina	



4. How to efficiently/ effectively use Reflexive monitoring ? i.e. internal use versus attempting to use RM with external stakeholders	Málaga	
<i>Impact assessment</i>		
1. How to find impact assessment expertise within the city ?	A Coruña, Málaga, Pavlos Melas	Glasgow
2. How to evaluate the (indirect) benefits ?	Nicosia, Pavlos Melas, Sarajevo	
3. How to narrow down/ select appropriate indicators ?	Pavlos Melas	Genk
4. How to find expertise outside the city ? e.g. universities	Ioannina, Málaga, Nicosia, Pavlos Melas, Sarajevo, Poznań	Nicosia
5. How to budget monitoring?	A Coruña, Málaga, Nicosia, Pavlos Melas	
6. How to do surveys during COVID ?	A Coruña, Sarajevo	