



Green cities for climate and water resilience, sustainable economic growth, healthy citizens and environments

The Green Cities Framework

"Exchange on Nature-based Solutions with GrowGreen"

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What is the GCF?



The Green Cities Framework (GCF) a comprehensive guidance tool for any city to carry out its NbS City Strategy and implementation



GCF key features



- ✓ based on **existing planning processes**, i.e. climate adaptation (SECAP), urban plans, etc.
 - ✓ specifically designed for the **distinctive characteristics of NbS**, benefits and co-benefits.
 - ✓ customized towards **water and climate resilience** in cities.
 - ✓ boosting systemic change by **embedding NbS/GI as part of long-term city planning**, investment, development and management.
 - ✓ drawing on the **outcomes of GrowGreen Project**.
 - ✓ GCF **still underdevelopment** learning from the project and partner cities
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Principles and key ingredients



Although there is no one-size fits all formula for delivering an NbS strategy, there are some tips and principles that contribute to the success of its development and implementation.

- ✓ Apply a **strategic thinking** about planning
 - ✓ Use a **co-participative, inclusive, multi-stakeholder approach**
 - ✓ Identify potential **beneficiaries and users**
 - ✓ Apply a **knowledge-based** decision making
 - ✓ Define **clear, achievable and measurable targets** and objectives and implementation pathway
 - ✓ Align your strategy with **policy landscape and planning frameworks**
 - ✓ Define **efficient funding, business model and delivery** mechanisms
 - ✓ Apply a systematic and long-term reflexive **monitoring and reporting**
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GCF in a nutshell



- ✓ Modular
- ✓ 3 core phases
- ✓ Iterative process
- ✓ Methodological resources with inspirational examples from our partner cities
- ✓ Multiscale



GCF online



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Green Cities Framework - Grow



https://growgreenproject.eu/greencitiesframework/

THE TRAINING PROGRAMME STRUCTURE

ACCORDING TO THE STEPS OF THE GREEN CITIES FRAMEWORK



**SETTING UP
your process and
CO-DESIGN
your strategy**



Define a **vision** for your NBS strategy
Set up your **local working group**
Make your **stakeholder and citizen engagement plan**
Collaborative design of your strategy

**PLANNING
your strategy**



Review your city's **governance and policy** framework
Define and identify **climate change-related problems**
Assess the **current financing** available for NBS and additional financing needed
Identify and assess **scenarios for NBS** implementation

**MOBILISING
your resources**



Identify **business models** for NBS
Develop the financial plan for the strategy
Embed NBS into **existing planning instruments**
Develop standards and design criteria for **NBS procurement**

**EVALUATING AND
REPORTING
on your strategy**



Decide on **monitoring and data** management
Evaluate, report on and **communicate** the strategy's impacts

**CO-DESIGN
on your NBS project**



Collaborative design of your project



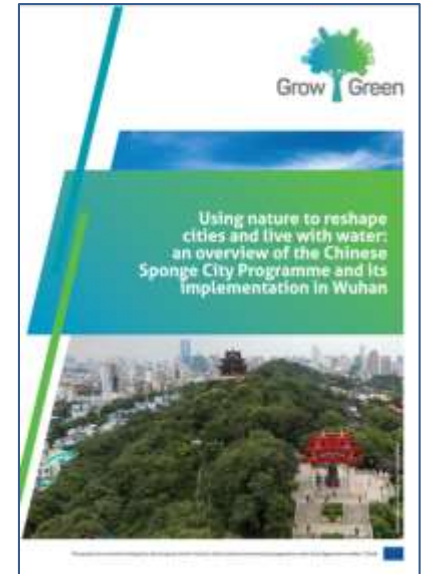
Escribe aquí para buscar





Define a vision for your NBS strategy

“NbS Towards Climate Proofing Urban Planning in Valencia”

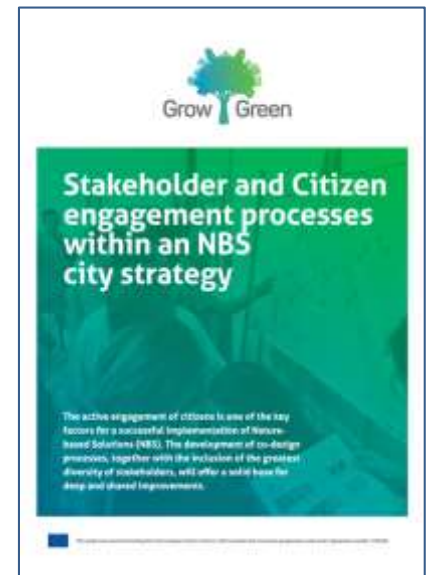


Set up your local working group

Stable group of local stakeholders in the context of local governance structure,

- Internal: different departments in the municipality responsible for Urban Planning, Environment, Climate Change, Green Space Management, Water bodies, Public Works, Public infrastructures amongst others.
- Internal and external stakeholders: including environmental associations, NGOs, Civil Society.

Make your stakeholder and citizen engagement plan →



Collaborative design your NBS strategy

The **Our Rivers Our City** campaign invites the public to share their ideas of Manchester’s river valleys, contributing to the development of river valley action plans.



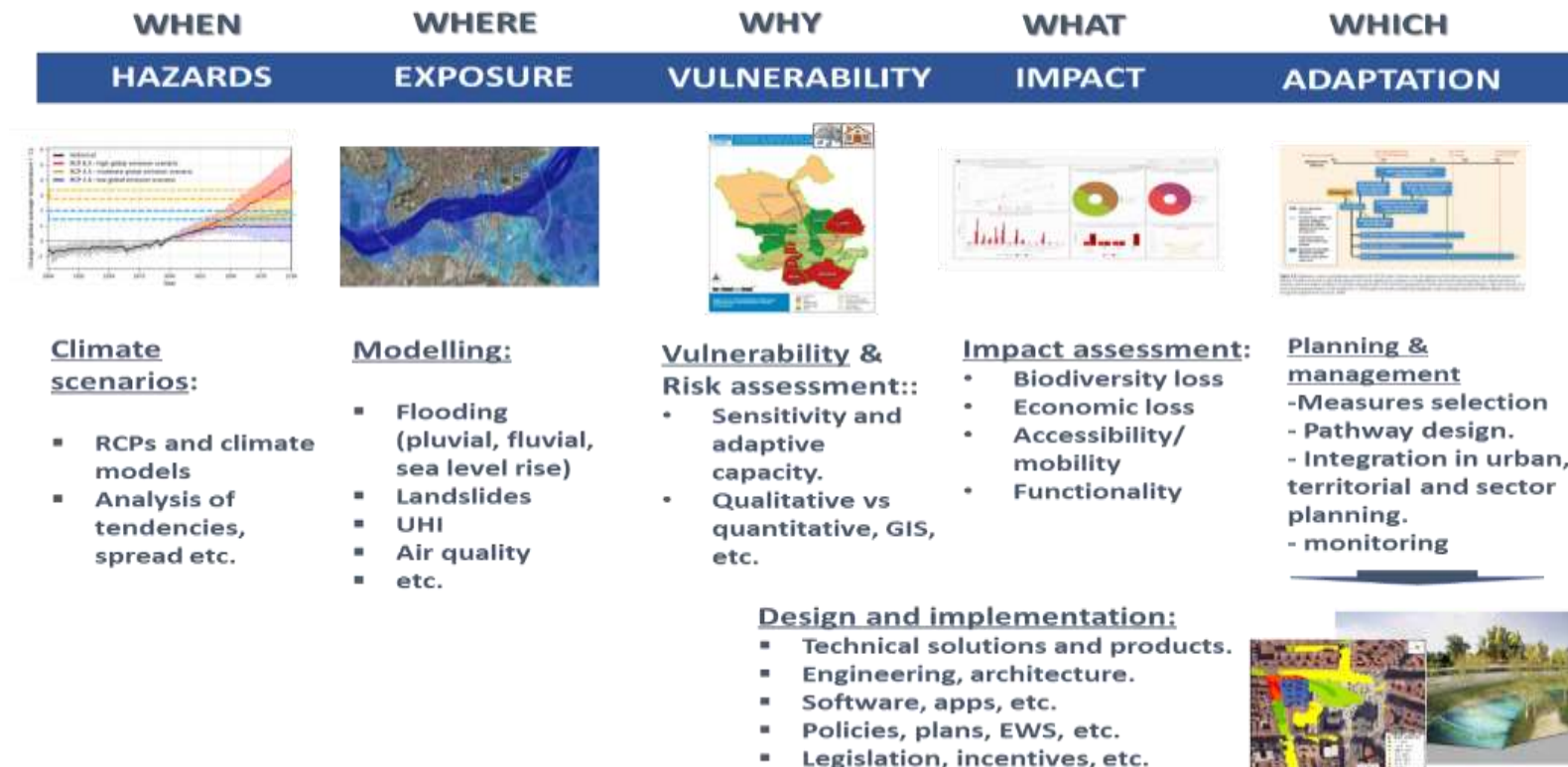
[VIDEO](#)



Review your city's governance and policy framework

Define and identify your city's climate change-related problems

Decision making sequence THE 5W MODEL





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NbS as climate adaptation measures with many co-benefits →

Capitalize your existing resources and exploit your potential



Tour of the demonstration projects in Wroclaw →



Benicalap a NbS laboratory in Valencia →



Manchester's new park that drinks water →



PLANNING
your strategy



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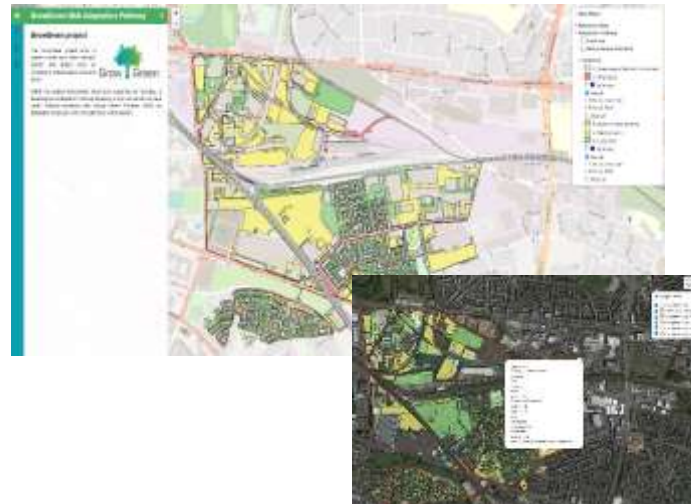
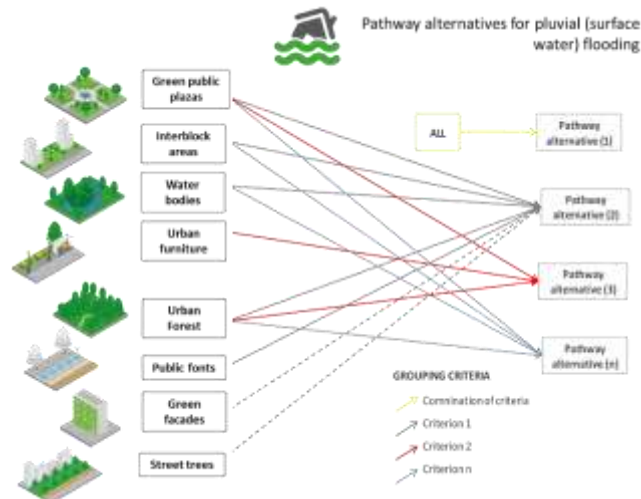


Assess the current financing available for NBS and the additional financing needed



Identify and assess scenarios for NBS implementation

Adaptation Pathway Approach





Identify business models for nature-based solutions



Business Model Canvas for NBS

The NBS Business Model Canvas is an adaptation of the classical Business Model Canvas that aims to support public and private organisations to design their own NBS interventions and to enhance their mechanisms to deliver value with it.

The use of NBS instead of traditional or grey solutions to respond to environmental challenges within cities is a growing trend in recent years.

A correct use of these type of solutions can mitigate the unwanted effects of excessive urbanization, growing the city and offering effective solutions to water management, mitigation of climate change, and improvement of the health and well-being of citizens.

Additionally, this type of solutions used in the urban environment, offer a series of "unexpected" environmental, social and economic co-benefits for different stakeholders, that suppose a greater added value with respect to traditional solutions.

Supporting decision-makers

A segmented visualization of all the key points involved in an NBS intervention can help decision makers to **evaluate the viability** of the NBS to be implemented in a certain place, and also help them to visualize and organize the different activities and resources to combine in order to obtain a successful performance.

Other benefits of the NBS Business Canvas is to show a clear proposal of the intervention to be developed and its expected benefits and costs. As this template can also support decision makers to present NBS interventions as an effective ready-to-use option at urban planning.

Sections of the NBS Business Canvas

- VALUE PROPOSITION**
 - What value does the NBS intervention offer to the stakeholders?
 - How does the NBS intervention create value for the stakeholders?
 - How does the NBS intervention deliver value to the stakeholders?
- KEY FACTORS**
 - What are the key factors that are critical to the success of the NBS intervention?
 - What are the key factors that are critical to the success of the NBS intervention?
 - What are the key factors that are critical to the success of the NBS intervention?
- KEY ACTIVITIES**
 - What are the key activities that are critical to the success of the NBS intervention?
 - What are the key activities that are critical to the success of the NBS intervention?
 - What are the key activities that are critical to the success of the NBS intervention?
- KEY RESOURCES**
 - What are the key resources that are critical to the success of the NBS intervention?
 - What are the key resources that are critical to the success of the NBS intervention?
 - What are the key resources that are critical to the success of the NBS intervention?
- CHANNELS / CANALS**
 - How do the NBS intervention reach the stakeholders?
 - How do the NBS intervention reach the stakeholders?
 - How do the NBS intervention reach the stakeholders?
- Governance**
 - Who are the key actors involved in the NBS intervention?
 - What are the key roles and responsibilities of the key actors?
 - How are the key actors involved in the NBS intervention?
- COST STRUCTURE**
 - What are the key costs involved in the NBS intervention?
 - What are the key costs involved in the NBS intervention?
 - What are the key costs involved in the NBS intervention?
- REVENUE / INCOME STRUCTURE**
 - How does the NBS intervention generate revenue/income?
 - How does the NBS intervention generate revenue/income?
 - How does the NBS intervention generate revenue/income?

How to use the model

The Canvas is mainly developed to be used by public organisms, as municipalities use to be the main promoters in urban planning, but other users as private companies, gardening companies, building promoters or even citizens can develop their own Model for interventions and promote their own developments in a private or public-private way. The model offers the possibility to all of them to create their own proposal, and examples are shown for creating all kind of promoters when planning their intervention. (See examples of real NBS Business Canvas interventions from the Grow Green Project)

This template helps to describe the viability of having a green development, its costs, delivery, and customer economic, social health and environmental value with an NBS intervention.

Grow Green NBS Business Model Canvas

The Canvas can be used in a double direction:

- To present interventions in addition, to optimize resources and attract a certain implementation and resource management.
- To help urban planners to justify the viability of the investment required to set up a determined NBS intervention that needs this model in a sustainable way.

Develop the financial plan for the strategy



Approaches to financing NbS in cities. Working document. GrowGreen 2019





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Embed NBS into existing planning instruments

Example Valencia

- Review process of Urban Master Plan in Valencia
- Vulnerability screening of planning areas Against Thermal Stress
- (detailed) Planning guidelines for boosting NbS as adaptation measures per vulnerable planning area

Áreas Funcionales	Diagnóstico	Recomendaciones SdH
<p>Centro histórico, urbano consolidado alta densidad, desarrollo compacto, residencial, comercial, administrativo,</p>	<p>En estas zona se encuentra el desarrollo más compacto, el núcleo del centro histórico de la ciudad. El objetivo es mejorar las condiciones microclimáticas y prevenir su mayor deterioro. Estos objetivos también son criterios para futuras construcciones y renovaciones.</p>	<p>Diseñar una red de refugios climático y recorridos peatonales confortables con mucha sombra.</p> <p>Islas frías Micro-climas de agua- disponible públicamente en máx. distancia 250m de cada edificio.</p> <p>Mobiliario urbano verde - paradas de autobús</p> <p>Perforación y pavimento permeable</p> <p>Arbolado - sombreado</p> <p>Cooperación intensiva con los actores locales.</p>
<p>Urbano consolidado alta densidad, desarrollo compacto, residencial, comercial, administrativo</p>	<p>En estas zona se encuentra el desarrollo más compacto. El objetivo es mejorar las condiciones microclimáticas y prevenir su mayor deterioro. Estos objetivos también son criterios para futuras construcciones y renovaciones.</p>	<p>Diseñar una red de refugios climático y recorridos peatonales confortables con mucha sombra.</p> <p>Islas frías Micro-climas de agua- disponible públicamente en máx. distancia 250m de cada edificio.</p> <p>Implementar plazas de aparcamiento con representación de vegetación arbórea.</p> <p>Arbolado - sombreado</p> <p>Cooperación intensiva con los actores locales.</p>
<p>Urbano consolidado residencial entorno de huerta</p> <p>No urbano</p>	<p>En el caso de la ciudad de Valencia, se trata de una zona importante por su necesidad de permeabilidad con el entorno de la huerta.</p>	<p>Implementación de medidas de adaptación verde y azul con carácter prioritario. Implementar medidas de mitigación y selección de materiales durante la construcción y renovación de edificios y espacios públicos para minimizar la generación de calor secundario y maximizar el enfriamiento ambiental.</p> <p>Incremento de áreas verdes / preservación - no especificado con precisión.</p> <p>Garantizar la conexión entre zona urbana y rural en particular con zona de huerta: infraestructuras de transporte como conectores</p>
<p>Peri-urbano equipamientos, infraestructuras</p>	<p>Principalmente zonas residenciales, casas unifamiliares, equipamientos</p>	<p>Potenciar los servicios de los ecosistemas de las áreas naturales protegidas</p> <p>En las zonas, donde el uso funcional del área permite una mayor construcción, esto debe realizarse con la condición de que no afecte negativamente al microclima en las zonas circundantes con mayores niveles de riesgo</p> <p>La construcción local / cambio de uso funcional no debe reducir el confort térmico, por lo que se deben priorizar las soluciones basadas en la naturaleza. Las medidas de mitigación y la selección de materiales durante la construcción y renovación de edificios y espacios públicos deben minimizar la generación de calor secundario y maximizar la refrigeración ambiental.</p> <p>Pavimentos permeables en aparcamientos en superficie</p>

Develop standards and design criteria for NBS procurement

Define specifications for NbS design



Decide on monitoring and data management

- Local monitoring Plan
- Local monitoring team and thematic experts
- Pre-greening baseline assessment
- Post-greening evaluation

Evaluate, report on and communicate the strategy's impacts

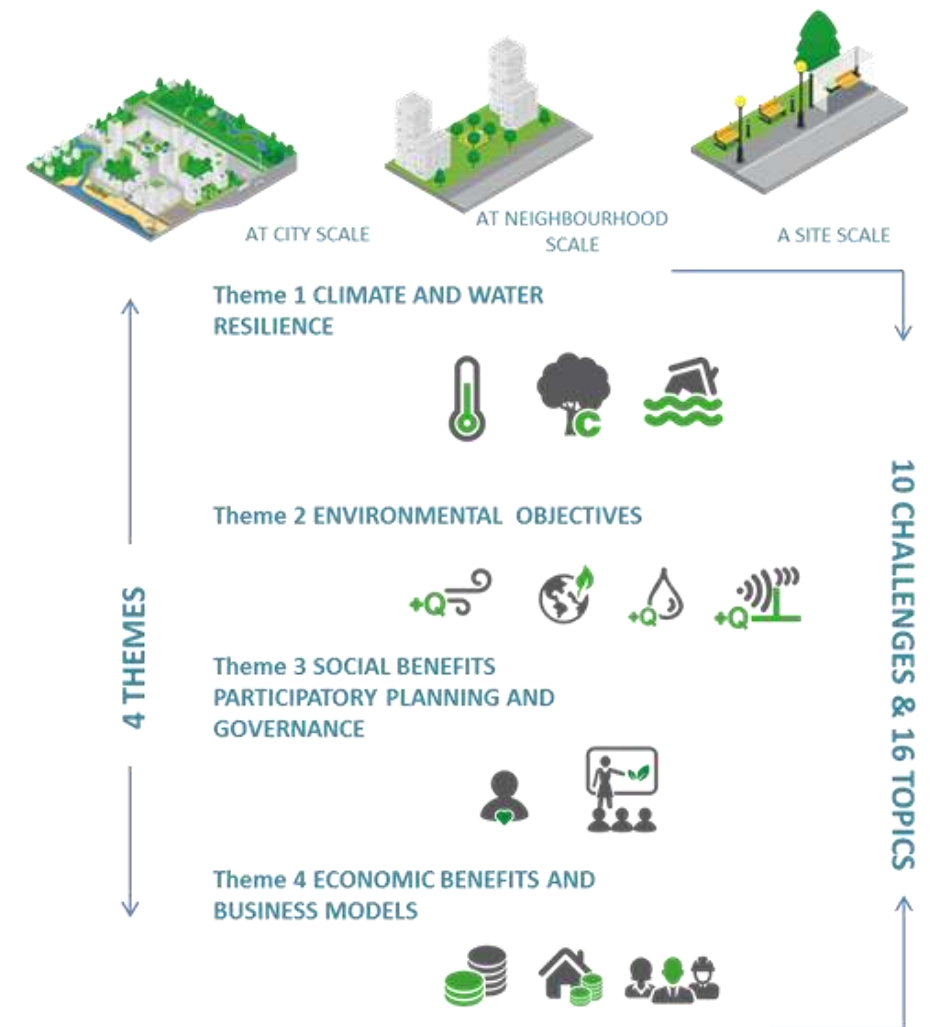
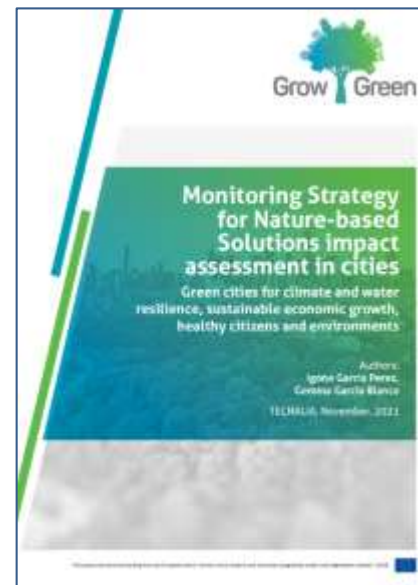


Figure 1 GrowGreen Impact Assessment Canvas (Tecnalia, 2017) all pictures protecx



Co-design guide underdevelopment

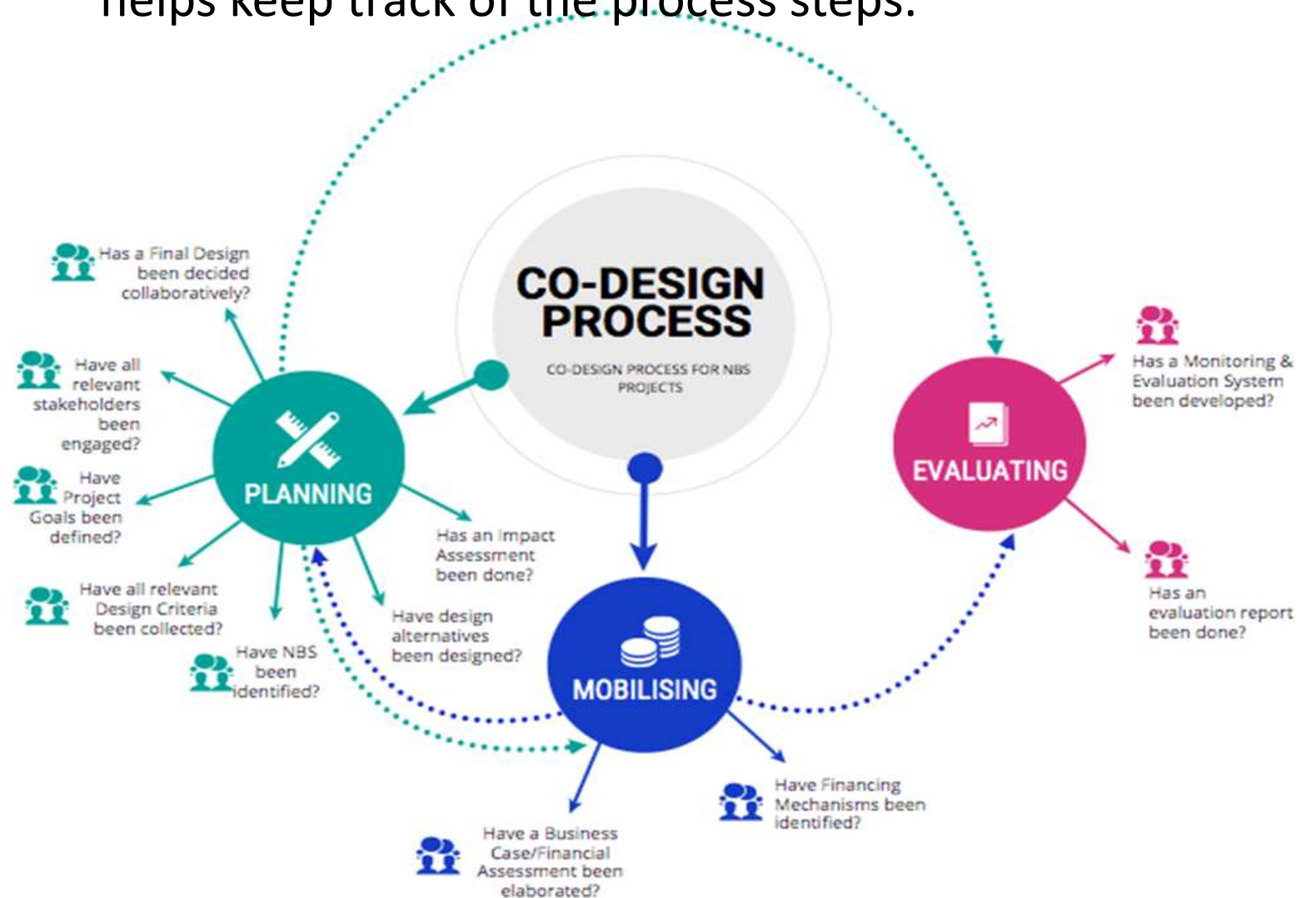
Similarly to the GCF, the GG Co-design process is conceived following the phases below:

Planning. NbS project design > Diagnosis, collection of spatial data, policies, strategies, people diagnosis, etc.; Definition of Project Goals; Assess impact of design alternatives; Collaborative decision on final design.

Mobilizing. Implementation of the NbS project > Financial Assessment; Identify financing mechanisms.

Evaluating. Implementation of the NbS project > Monitoring of the project.

The guide will be accompanied by a digital tool, that helps keep track of the process steps.



Thank you!



LAS NAVES



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paisaje transversal

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