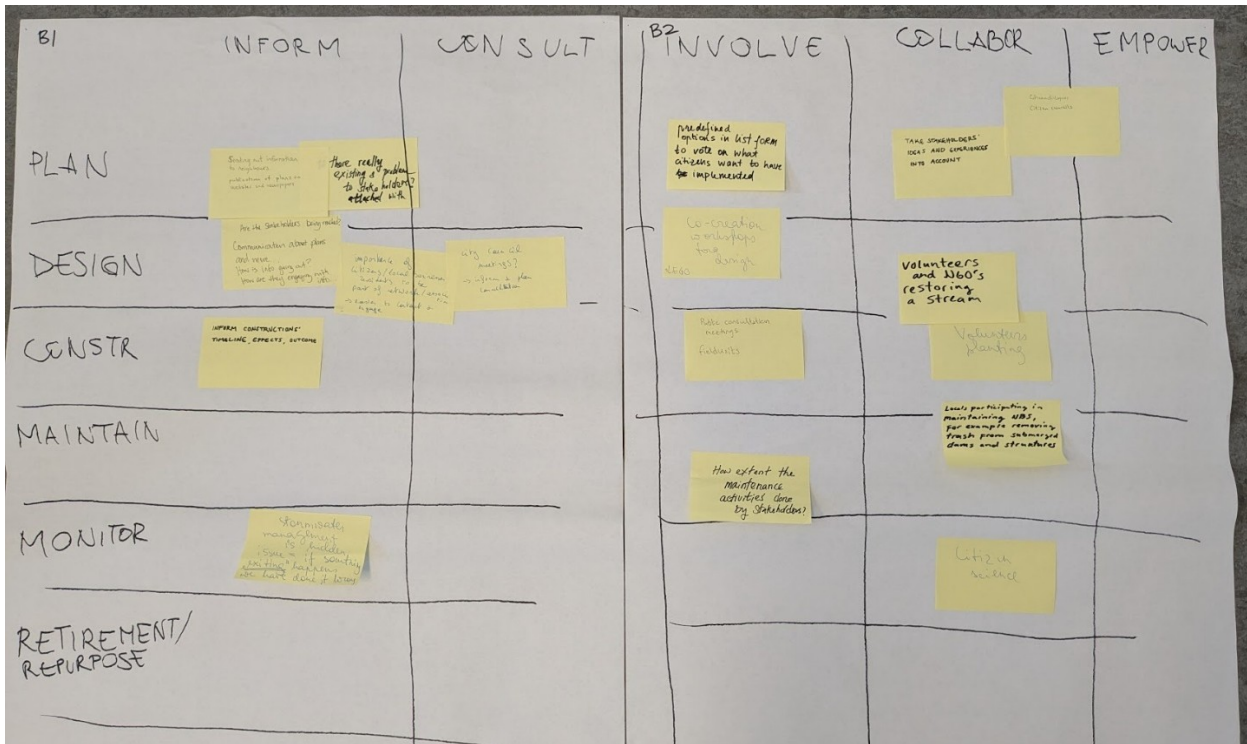


# Stakeholder engagement framework

Across project stages in nature-based stormwater solutions

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This document is an introductory guide for municipal practitioners working on nature-based stormwater solutions. It sets out a framework for thinking about stakeholder engagement across the full project lifecycle and is intended to be read alongside the City Blues case examples and workshop materials.

# 1. Introduction

Nature-based stormwater solutions bring many people into a project, and probably more than most urban infrastructure works. Engineers and planners share the table with utility companies, heritage authorities, landowners, local businesses, residents, and the maintenance teams who will be responsible for the solution long after construction is finished. Each of these groups has a legitimate stake. Nevertheless, they do not all need the same thing from the project, nor do they all need to be involved in the same way or at the same moment.

This is where many NBS projects run into difficulty. It is not because engagement is absent, but because it is poorly timed, poorly matched to what is actually being decided, or poorly communicated about what stakeholders can influence. The result is friction that could have been avoided, trust that is difficult to rebuild, and solutions that work less well in practice than they should.

Urban development processes involve actors with different relationships to the project: public authorities with planning powers, private developers with financial interests, local communities facing the outcomes, civil society groups expressing certain concerns, and future users whose needs may not be fully articulated. These actors hardly share the same priorities and rarely have the same influence. Designing engagement that accounts for these differences is perhaps one of the most important and most skipped steps in NBS project planning.

*Stakeholder engagement is not an optional addition to the planning process. It is a fundamental component of how knowledge is produced, how decisions gain legitimacy, and how solutions remain functional once the project team has moved on.*

This framework is a practical starting point for thinking through engagement. It will not provide a fixed process to follow, but it offers a structure for building one's own process, grounded in established participation theory and the experience of municipal practitioners working on NBS projects across the Baltic Sea region.

## 2. The conceptual framework

Effective stakeholder engagement requires a clear conceptual structure. This conceptual structure defines both the degree of participation and the role of different stakeholders throughout the project lifecycle. The framework presented here builds on two established tools from participation theory and stakeholder management, adapted for the specific context of NBS implementation in cities.

### 2.1 Levels of participation

A widely used model for understanding participation is the ladder of participation, originally developed by Arnstein<sup>1</sup>. Originally framed as a critical political tool for assessing how much power citizens actually hold in planning processes, the ladder remains highly practical for structuring engagement strategies, particularly when used as a planning tool.

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<sup>1</sup> Arnstein, S.R. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners*, 35(4), 2 16–224.

The ladder distinguishes five main levels of participation. It starts from the most basic, such as keeping stakeholders informed, to the most intensive, such as delegating decision-making power to them. In an NBS project, different stakeholders will sit at different levels at different times. The question now is: to what level is appropriate for a given group at a given stage, and whether the engagement being offered is honest about what it is.

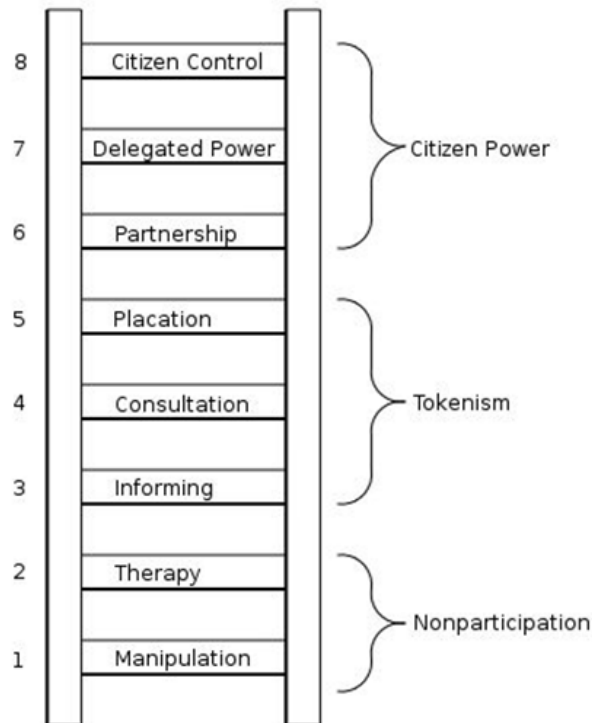


Figure 1. Ladder of participation (adapted from Arnstein 1969)

Table 1 describes each level and gives concrete examples of what it looks like in NBS practice.

Table 1. Participation levels and corresponding methods for NBS projects.

Level	Meaning	Typical methods in practice
Empower	Decision-making is partially or fully delegated to stakeholders	Governance co-management, community-led maintenance, joint evaluation boards
Collaborate	Stakeholders co-design solutions as genuine partners	Co-design workshops, joint feasibility studies, shared problem-solving sessions
Involve	Stakeholders contribute to developing ideas; their input shapes proposals	Participatory design sessions, scenario discussions, working group participation
Consult	Stakeholders are invited to share opinions; decisions stay with the project team	Public hearings, surveys, focus groups, written consultation periods
Inform	Relevant information is shared clearly and transparently	Site information boards, newsletters, public meetings, digital updates

These levels should not be seen as a ladder that every project must follow. Higher is not always better. Informing is sometimes appropriate. When a decision has been made correctly, what stakeholders need is clarity, not a reopened process. The key is intentionality, choosing the level thoughtfully, communicating it honestly, and not offering one level while delivering another.

**Note:** In practice, the most commonly offered participation level is consultation without genuine influence. This is most likely the one that frustrates stakeholders the most. Inviting input on a proposal that is already effectively decided, or gathering feedback that is never visibly reflected in outcomes, erodes trust quickly and makes future engagement harder.

## 2.2 Understanding your stakeholders: power and interest

The participation ladder tells you what level of involvement to offer. But it does not tell you which stakeholders to prioritise, or how to allocate your engagement resources across a group of actors with very different relationships to the project.

A complementary tool for this is the power-interest matrix, originally proposed by Mendelow <sup>2</sup>. It organises stakeholders along two dimensions. First, how much power or influence they hold over the project, and second, how much interest they have in its outcomes. The combination of these two dimensions suggests a different engagement strategy for each of the four resulting groups.



Figure 2. Stakeholder categories by power and interest, with corresponding engagement strategies

Table 2. Power-interest matrix adapted for NBS stakeholder management.

	Low interest	High interest
High power	<b>Keep satisfied</b> Ensure their support; keep informed without overloading	<b>Engage closely</b> Actively involve in decisions; maintain ongoing dialogue
Low power	<b>Monitor</b> Minimal effort needed; keep aware of any changes in their position	<b>Keep informed</b> Share information and create opportunities for meaningful contribution

For NBS projects, this matrix is most useful at the beginning of a project, as part of a deliberate stakeholder mapping exercise. It helps avoid some common failures, such as overinvesting effort

<sup>2</sup> Mendelow, A. (1991). Stakeholder mapping. Proceedings of the 2nd International Conference on Information Systems, Cambridge, MA.

in groups with low power and low interest, while underinvesting in groups whose support is essential for the project to move forward.

In NBS contexts, the high-power, high-interest group frequently includes utility companies, water authorities, and key municipal departments. Such actors are sometimes treated as passive approvers rather than active partners. Experience from City Blues partner cities suggests that bringing these groups in early and treating them as partners rather than gatekeepers significantly reduces delay and conflict during construction and operation.

*Stakeholder mapping is not a one-time exercise. As a project moves through its phases, the power and interest of different actors change. A community group with low influence during strategic planning may become a critical partner during the operation and maintenance phase. The map should be revisited at each major stage transition.*

Used together, the participation ladder and the power-interest matrix give a project team two complementary lenses. One for deciding what kind of engagement to offer, and the other for deciding where to focus attention. Both require judgement, and both are more useful when used clearly and collectively by the project team rather than left to the instincts of a single coordinator.

## 2.3 Engagement across the project lifecycle

The second dimension of the framework is time. Stakeholder engagement is a continuous process that changes character as the project moves through its phases. What is useful during strategic planning is different from what is needed during design, construction, or operation.

The NBS project lifecycle can be broken into six stages: strategic planning, design, construction, operation and maintenance, monitoring, and renewal or repurposing. Each stage presents different opportunities for participation, and each has a different acceptance for the kind of input that can influence outcomes.

A common challenge is that engagement is primarily concentrated during the planning and design phases, then diminishes during delivery and operation. This is understandable because planning is seen as the ideal time for consultation, and construction is busy and disruptive. However, this approach often results in the people most affected by the NBS's long-term operation. They stand for users, maintenance teams, and local communities, yet their insights are often least considered when they are most valuable.

Table 3 maps each project phase to the participation levels most appropriate for that stage and provides examples of commonly used methods. This mapping is not prescriptive, and the right approach will always depend on the project, the stakeholder group, and the local context. Nevertheless, it provides a useful starting point for thinking through what engagement should look like at each moment.

Two phases emerge as the most critical from the experience of partner cities. Design is where the greatest opportunities for meaningful co-creation exist. This is where the project is still shapeable and where stakeholder input can genuinely change what gets built. Operation and maintenance are where engagement most commonly drops off, often with real consequences for the solution's long-term performance. Both deserve thoughtful attention in any engagement plan.

**Table 3.** NBS project phases, participation levels, and engagement methods.

Phase	What is happening	Suggested participation levels	Typical methods
Strategic planning	Direction, priorities, and goals are set. Big choices are still open.	Inform, Consult	Surveys, interviews, public meetings, stakeholder mapping
Design	The solution takes shape. Greatest opportunity for active co-creation.	Involve, Collaborate	Workshops, co-design sessions, physical pilots, scenario discussions
Construction	Physical implementation. Scope for influence is narrower.	Inform, Involve	Regular updates, on-site information, direct feedback channels
Operation & maintenance	The solution functions in practice. User needs and long-term performance matter.	Involve, Collaborate	User feedback, community monitoring, participatory maintenance
Monitoring	Outcomes and impacts are assessed over time.	Collaborate, Empower	Participatory evaluation, citizen-based data collection, joint review
Renewal & repurposing	The solution adapts to changing conditions or reaches end of life.	Collaborate, Empower	Strategic dialogues, co-creation processes, governance partnerships

### 3. Using this framework in your project

The framework described here is useful as a planning exercise carried out at the beginning of a project, before engagement activities are scheduled. The steps are straightforward, and the exercise works best when done as a team rather than by a single person.

#### Step 1. Map your stakeholders

Before deciding how to engage, establish who is relevant. List the actors who have a stake in the project (internal departments, utilities, professional partners, community groups, businesses, future users). Then, use the power-interest matrix to think through where each sits, and what that implies for how much attention they need and at what level.

Be thoughtful. Actors who are formally less powerful are not always less important. A community group with limited formal influence may be essential to the long-term acceptance and functioning of the NBS. A utility company that seems like a passive approver may hold the key to avoiding months of construction delay.

## Step 2. Decide what you are truly offering

For each stakeholder group, and at each project phase, decide what level of participation you are able and willing to offer. Use the participation ladder as a reference. Be specific. Are you informing this group, consulting them, involving them in developing ideas, or treating them as genuine co-design partners?

This step often raises gaps between intention and capacity. A team may want to offer collaboration but lack the time or resources to run a meaningful co-design process. It is better to offer a well-run consultation than a poorly run collaboration. Be honest about this with stakeholders up front rather than overclaiming and underdelivering.

**Note:** Transparency about the level of influence being offered is one of the most important principles in engagement design. Stakeholders who understand what they can and cannot affect are less likely to feel misled, and more likely to engage constructively within those limits.

## Step 3. Assign methods to each phase and group

Once you know who you are engaging and at what level, select the methods that fit. Use Table 3 as a starting point. Adapt the methods to your local context. What works in one city does not always translate directly to another, and the best engagement activities are often those designed specifically for the stakeholders and the moment.

Consider how you will reach stakeholders who are hard to involve through standard channels. Formal public hearings, digital calendars, and social media posts reach some groups effectively and miss others entirely. The most meaningful engagement activities in NBS projects are often the ones that meet people where they are: physically in the space, during activities they are part of, or through organisations they trust.

## Step 4. Revisit at each phase transition

At the end of each project phase, return to the stakeholder map and the participation plan and ask whether anything has changed. Are there new actors who have become relevant? Have any groups become more or less influential? Has the level of participation you offered matched what you committed to?

This review does not need to be elaborate. A short team conversation at the transition between phases is often enough to catch the gaps before they become problems.

*The goal of this exercise is not a perfect plan. It is a shared understanding within the project team of who matters when and a commitment to being honest with stakeholders about what their involvement will and will not influence.*