D7.2 - TOOLKIT

Title	Toolkit for scenario building: guidelines for local implementation
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Disclaimer

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Purpose of this document

This toolkit provides a practical introduction to scenario building as a strategic foresight method. It offers a curated selection of tools, techniques, and guidance to support the design and facilitation of participatory processes aimed at exploring future pathways.

The purpose of this document is to support the FOSTER project partners - but also other relevant stakeholders in public institutions, civil society, and private organisations - in applying scenario thinking to inform long-term planning, strengthen anticipatory capacities, and facilitate inclusive dialogue in the face of complex and uncertain change.

Rather than offering a prescriptive formula, the toolkit highlights principles and key steps for conducting a scenario-building process in a way that is locally grounded, participatory, and adaptable. Drawing from recognised foresight practices, the tools presented here have been selected and adjusted to respond to the specific goals and challenges addressed by the FOSTER project.

Whether you are entirely new to foresight or looking to integrate scenario methods into your work, this toolkit serves as a concise and accessible entry point for initiating your own creation of future narratives.

Introduction

Objectives

The main objective of this toolkit is to enable users to design and carry out a structured scenario-building process that enhances collective reflection and strategic thinking.

In particular, it aims to:

- support local actors in dealing with emerging challenges, risks and opportunities;
- promote a culture of anticipation and openness to multiple futures;
- offer practical guidance for participatory foresight processes involving diverse stakeholders;
- encourage the integration of foresight into local governance, planning, and innovation efforts;
- help users explore how current decisions may shape longer-term outcomes;
- facilitate collective sense-making in contexts of uncertainty and change;
- provide inspiration and structure for building robust, locally relevant future scenarios;
- expand the capacity of communities and organisations to navigate complexity and imagine alternative, more resilient futures.

Structure

The toolkit is organised into two modular sections that guide the reader both through the foundations and the practical application of scenario building:

- the **background section** presents the rationale for using scenarios in foresight activities. It explores what scenarios are, their main types, and how they function within a broader strategic foresight process. It also discusses the value and characteristics of effective scenarios;
- the **methodological section** presents a step-by-step guide to scenario building, from preparation to facilitation. It includes practical tools and exercises tailored for participatory use, with guidance on how to apply them in a local context workshop. Each tool is accompanied by facilitation tips and supporting notes for effective delivery.

At the end of the methodological section, a brief appendix titled *"What happens next?"* outlines the typical steps that follow a scenario-building process. It explains how the insights generated can be further developed and integrated into decision-making processes, helping to ensure that the scenarios can contribute effectively to long-term strategic reflection and action.

Target

Minimum of 25 and a maximum of 50 among staff members - from the organisation implementing the workshop - and local stakeholders at different levels (political, social, private) and from different sectors, widely representing the needs of different community categories.

Local stakeholders

Local authorities and local public officers

Local authorities are one of the main targets of the training whose scope is to improve their capacity for long-term governance and citizen involvement. Looking at a governance of complex challenges that is truly

forward-looking and attentive to the needs of the population and future generations, it is important to raise awareness at all levels of decision-making. In local authorities this forward thinking is often not well-developed, compared to other levels of government. Nor is the culture of citizen participation always fully taken into account, although local administrations can have a pivotal role in establishing frameworks and opportunities for engagement and fostering a participatory culture.

Civil Society Organisations, associations, organised groups of citizens

These are groups and individuals who already have familiarity with civic engagement, either because they promote it through their organisations' actions or because they engage in it through diverse forms of civic participation. It is recommended to ensure a great variety of CSOs. Environmentally-driven associations and groups will be targeted in light of their established efforts in the fields of advocacy and awareness-raising actions for the long-term environmental sustainability of policymaking. Moreover, such entities have important knowledge of the local territories, their climate change-related risks and therefore are particularly relevant for orienting the dialogue between citizens and local authorities on local issues. The training will also target women-led associations and organisations aimed at promoting LGBTQ+ rights. Their involvement will help integrate the gender mainstreaming approach into the local project actions, emphasising how local problems and solutions may impact citizens differently based on gender. It recommended committing to involve organisations that promote the visibility of usually underrepresented groups, especially people with disabilities, people with migrant backgrounds and people with limited socio-economic opportunities. This will increase the chances of orienting the training and related discussions in line with the principles of inclusion, equity and environmental justice.

Sectoral-specific stakeholders

These categories encompass entities and individuals well-versed in their respective fields, often due to their involvement in specific professional domains. Their engagement arises from their capacity to advocate for sectoral-specific concerns and innovations. Their substantial expertise allows them to establish constructive dialogues with public authorities, particularly local administrations, proposing evidence-based interpretation of the local issues at hand and formulating science-based and forward-looking solutions. Such groups will be targeted mainly in the form of representatives of the private sector, and environmental experts and researchers. The former encompass for example workers' associations, trade unions, chamber of commerce, private small-and-medium enterprises. These groups will be targeted in the local areas of implementation, providing the project and its activities with essential inputs that cannot be addressed by CSOs and citizens only. Moreover, these actors can play an important role at the level of local policy-making, both because of their economic influence and their professional relevance. For this reason, it is important to include them in the dialogue between citizens, civil society and local authorities, so as not to create limited and unrealistic forms of participation. The second group is made of environmental experts and researchers. They are local-scale representatives of the scientific community and holders of a science-based approach that is particularly needed to address complex challenges such as climate change and climate-driven policies.

Background section: *principles of scenario building*

This section provides the conceptual foundations of scenario building, offering a shared understanding of why and how scenarios are used in foresight processes. While primarily intended to inform partners and facilitators, it can also serve as a reference for introducing the topic during local workshops.

By outlining the rationale for scenario use, the different types of scenarios, and their role in supporting strategic thinking, this section helps to clarify the value of working with possible futures. It also highlights key characteristics of effective scenarios, setting the stage for their practical application in the methodological section that follows.

1. What are scenarios?

Scenarios are a central element of strategic foresight, a discipline concerned with systematically exploring and preparing for future challenges and opportunities. By offering structured ways of thinking about what might happen, scenarios help organizations and communities shift their perspectives, move beyond short-term thinking, and navigate uncertainty with greater awareness and creativity. This section introduces the concept of scenarios, outlines the different typologies, and locates them within the broader foresight process.

Definition and key features

Scenario building is one of the core methods in the field of future studies, and among the most widely adopted by both public and private sector organisations. Its popularity lies in its ability to support long-term strategic thinking by helping decision-makers explore, anticipate, and prepare for a range of possible futures. Rather than predicting what will happen, scenarios offer structured, imaginative accounts of what might happen under different conditions.

At its heart, a scenario is a **narrative description of a potential future**. It is not a forecast or a policy recommendation, but rather a story constructed through the analysis of emerging trends, drivers of change, and early signals of transformation. Scenarios offer compelling visions of diverse futures, each presenting a distinct world shaped by a unique set of circumstances, events, and decisions. These narratives help individuals and organisations imagine what it could feel like to live in those futures, and what implications these changes may carry for their work, goals, and strategies.

Importantly, scenarios are not simply speculative. They are the **result of both analytical rigour and creative thinking**. The scenario-building process involves identifying key uncertainties, mapping cause-and-effect relationships, and crafting storylines that explain how the future could plausibly unfold from today's vantage point. A well-developed scenario addresses the question: *how might things come to this?*

In foresight practice, scenarios serve as narratives of alternative futures in which today's choices and actions take shape, bringing about **both intended and unintended consequences**. They are based on assumptions, perspectives and hypotheses about the evolution of issues, systems, or environments. By externalising these views into distinct stories, scenarios offer reference points for testing current strategies and imagining new ones.

Another defining feature of scenario thinking is its explicit attention to uncertainty. Unlike short-term prognoses, which seek to estimate likely outcomes with a degree of probability, scenarios embrace ambiguity. They explore possible developments that lie beyond the realm of quantifiable forecasts, including discontinuities, shocks, or novel trends. This outside-in perspective encourages organisations to **consider**

changes in the broader environment that might otherwise be overlooked, particularly those developments that are hard to capture with data alone.

Scenarios can take **many forms and levels of complexity**, but they are most effective when limited in number - typically between three and five - in order to support discussion and strategic use. They also lend themselves well to **participatory methods**, and can be adapted to engage a wide range of actors, including in public consultation and deliberation settings.

Ultimately, the aim of scenario building is **not to get the future "right", but to prepare for it**. It helps to visualise how systems might evolve, identify possible risks and opportunities, and develop robust strategies that can remain effective under different future conditions. In this sense, scenario thinking invites organisations and communities to **move beyond 'business as usual'**, and to imagine alternative paths with curiosity and openness.

Understanding the diversity of scenarios

Scenarios can take a variety of forms, **reflecting the different aims, levels of detail, and resources involved** in the foresight process. Numerous scenario development methods exist - some of which will be explored later in this toolkit - and each offers a distinct pathway for imagining the future. The approach chosen often depends on the specific purpose of the exercise, the strategic questions at stake, and the participants involved.

Broadly speaking, scenarios can be grouped into **two principal categories**: exploratory and normative. These represent fundamentally different orientations toward the future and serve different roles within foresight and strategic planning.

Exploratory scenarios begin with the present and seek to investigate how the future might unfold. They are rooted in current trends, uncertainties, and possible disruptions. This type of scenario does not assume a particular destination but instead maps out a range of plausible futures. The objective is to deepen understanding of how various driving forces - such as social, technological, economic or political factors - might interact to shape different outcomes. Exploratory scenarios are particularly valuable for navigating uncertainty and stress-testing strategies against multiple future conditions.

In contrast, **normative scenarios** start from a clearly defined future goal or vision. They start by asking the question *"what do we want to achieve, and how do we get there?* These scenarios are typically used in planning exercises that aim to identify concrete steps and policies needed to realise a desired future. One common approach within this category is backcasting, where participants work backwards from the envisioned outcome to map out the necessary decisions, actions, and milestones along the way. Normative scenarios are especially useful for aligning strategy with long-term goals and values.

While both types of scenarios are essential tools in the foresight practitioner's toolkit, they serve different functions. Exploratory scenarios are well suited to anticipating change and embracing complexity, whereas normative scenarios are better for guiding goal-oriented planning. **In the context of the FOSTER project, this toolkit will focus on the development of exploratory scenarios**, given their relevance for examining a diverse set of plausible futures and supporting adaptive responses.

Scenarios may also **vary in format and depth**. In some cases, they may be presented as "*kernel*" statements, concise expressions that capture the core essence of a future situation. These are useful for summarising the fundamental logic of a scenario in just a few words or sentences. Alternatively, scenarios can focus solely on the future endpoint itself - for example, by describing a "day in the life" within a future world - without detailing the process that led there. In other cases, scenarios may be elaborated as detailed storytelling that

explain how a particular future came to be. These pathway-oriented scenarios trace the development from today to tomorrow, highlighting key events and turning points along the way.

Ultimately, the choice of scenario type and format depends on the goals of the foresight initiative and the methodology applied. Some projects may benefit from brief, evocative snapshots of the future, while others require detailed storylines that explore the dynamic evolution of systems over time.

Scenarios within the foresight process

As stated before, scenarios play a central role **within the broader framework of strategic foresight**, which is concerned with systematically exploring potential futures and preparing for emerging issues and opportunities. Rather than attempting to predict what will happen, foresight seeks to expand our understanding of the medium to long-term future, pushing us to look beyond familiar trends and assumptions. In doing so, it promotes greater resilience and adaptability by encouraging decision-makers to consider alternative trajectories and the potential consequences of different choices.

Within this process, scenario building is often regarded as one of the most important and recognisable activities. It offers a structured way to visualise "*what might happen*", supporting a deeper and more nuanced understanding of the future. However, scenarios are not simple stand-alone tools. To be meaningful and impactful, they must be embedded in a wider framework, that includes earlier phases of **exploration, analysis, and interpretation**[1].

Scenario development typically occurs in the **prospection** phase of a foresight process, the stage concerned with generating possible future outcomes. Yet this phase depends heavily on a thorough understanding of the issue at hand, built through the collection and interpretation of relevant data, stakeholder perspectives, and contextual drivers. Without this preparatory work, scenario building risks being disconnected from reality and lacking strategic value.

In the case of the FOSTER project, for instance, the scenario-building phase is informed by a prior local needs assessment (WP6), which provided essential insights into place-based vulnerabilities, priorities and potential drivers of change. This should **ensure that scenarios are grounded in the real conditions and aspirations of local communities**, and are therefore more relevant and actionable.

When applied effectively, scenarios act as a bridge between insight and action. They help organisations not only to anticipate change but also to align their strategies with a more dynamic and uncertain environment. In this way, strategic foresight - with scenarios at its heart - becomes a powerful methodology for enhancing long-term vision, informing better decisions, and shaping more resilient pathways to the future.

2. Why do we use scenario building?

Scenario building offers a structured and systematic approach to exploring a range of alternative futures that differ from the present. It helps organisations and stakeholders consider alternative developments that may emerge from complex and often unpredictable forces shaping our world. By combining rigorous analysis with compelling storytelling, scenarios create vivid, engaging images of potential pathways that encourage decision-makers to think differently and inspire proactive action.

In today's **rapidly changing environment**, driven by **disruptive forces** such as the climate crisis, digital transformation, and mass migration, **the pace and scale of change can overwhelm traditional planning methods**. **Scenario building responds to this challenge by enabling organisations to anticipate**

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[1] More details about the strategic foresight process can be found in the FOSTER ToT toolkit

uncertainty rather than avoid it. This method strengthens strategic foresight by revealing potential risks and opportunities before they fully materialise, acting as an early warning system and fostering resilience.

The value of scenarios goes beyond forecasting: they provide a common language and workspace for dialogue, debate, and shared learning. They help stakeholders build a **collective understanding of complex issues and improve collaboration**, even when immediate decisions or actions are not yet possible. This collaborative dimension is **particularly important when addressing social conflicts, local development, or contentious policy areas,** where diverse perspectives must be acknowledged and integrated. A well-known example of this feature is the <u>Mont Fleur Scenarios</u> from South Africa in the early 1990s, which engaged a wide range of actors and fostered public dialogue about the country's post-Apartheid future. Similar initiatives in other regions demonstrate how scenario building can serve as an effective tool for intercultural and interdisciplinary dialogue, contributing to social cohesion and mutual understanding.

Furthermore, scenario building **supports strategic planning** by **enabling organisations to test new ideas and policies against multiple futures**. This process helps avoid the pitfalls of *"business as usual"* thinking, ensuring that strategies are robust across a variety of potential developments. The creation of different scenarios also allows competing visions and priorities to be examined openly, facilitating constructive debate and improving organisational adaptability.

It is important to remember that scenarios are neither predictions nor forecasts, they are neither right nor wrong. Instead, they offer multiple, often challenging visions of how the future might unfold. In doing so, scenarios help us **embrace uncertainty as an opportunity rather than a threat**, enabling **more flexible and informed decision-making**. Although no single scenario is likely to materialise exactly as imagined, elements from different futures may emerge over time. Working through scenarios can sharpen our ability to **recognise early warning signs and adapt our responses accordingly**.

Finally, scenario building invites us to move beyond short-term thinking and engage with **longer time horizons**, typically looking **at least 10 to 20 years ahead**. This prospective mind-set is crucial in a fast-changing world where the unexpected is becoming the norm. By fostering systemic thinking and tapping into collective wisdom, scenarios enable us to better understand the interdependencies and feedback loops that shape complex issues, ultimately expanding human choice and agency in shaping the future

Given these considerations, we can conclude that scenario-building processes play a crucial role in extending thinking beyond the present, creating a shared framework for orientation and dialogue, and supporting preparation for a range of possible futures. By actively engaging with scenarios, individuals and organizations can sharpen their strategic imagination, question long-held assumptions, and uncover new pathways for action in the face of change.

3. What makes for good scenarios?

There are **no strict formulas for creating effective scenarios**, but the following **key characteristics** can help make them powerful and effective instruments for navigating uncertainty and informing decision-making:

- a good scenario is **rich, evocative, and multidimensional**. It should provide a vivid, immersive representation of the future, one that includes not only facts and trends, but also emotions, relationships, tensions, and emerging opportunities. The aim is to construct a comprehensive picture that engages both strategic thinking and imagination, drawing in stakeholders on both rational and emotional levels. Storytelling plays a central role here, helping to create meaningful connections and stimulate reflection;

- a **noteworthy title** makes a difference. Each scenario should be given a distinctive, evocative name that resonates with stakeholders' perceptions and makes the scenario easy to refer to in discussions. A compelling title reinforces the scenario's message and strengthens its communicative power;
- **plausibility and internal consistency** are essential. Scenarios must remain within the bounds of what could conceivably happen. They are not exercises in fantasy, but structured explorations of plausible futures. For a scenario to be credible, its internal logic must hold together: key developments should follow coherent causal pathways, even if they involve disruption or low-probability events. Even surprising turns of events need to be grounded in a reasonable narrative trajectory;
- scenarios should be **clearly differentiated**. When developing multiple scenarios - as is generally recommended - it is crucial that they are structurally and qualitatively distinct. They should not merely represent minor variations on a single baseline, but instead reflect alternative configurations of key drivers, assumptions, and outcomes. Their value lies in expanding the field of vision and encouraging critical thinking;
- **long-term orientation** is vital. Well-constructed scenarios typically look **at least 10 years ahead**, or at minimum 5 years beyond the current policy or planning cycle. Only by reaching beyond the near-term horizon can scenarios truly challenge present assumptions and explore deeper shifts, including systemic or non-linear transformations;
- scenarios should **challenge conventional wisdom**. They are not intended to validate existing beliefs, but rather to provoke new thinking, test mental models, and highlight blind spots. The most effective scenarios stretch an organisation's understanding of what the future might hold, encouraging resilience and adaptability;
- **clarity and conciseness** matter. Scenarios should be accessible and engaging, avoiding technical complexity or unnecessary detail. Their elements should be presented at a consistent level of abstraction, focusing on conveying meaning and strategic insight rather than exhaustive information;
- above all, scenarios should be **useful**. Their ultimate purpose is to generate insights that help decision-makers explore strategic options, evaluate risk, and prepare for diverse future contexts. Strong scenarios are directly linked to the focal question of the foresight process, transforming data and trends into actionable intelligence.

Good scenarios, once again, bring together analytical rigour and creative imagination. They strike a balance between plausibility and challenge, maintaining internal coherence while remaining open to unexpected developments. Their strength lies in their capacity to clarify complexity, stimulate new perspectives, and support decision-making in the face of uncertainty and change.

Methodological section: *a path to crafting scenarios*

This section offers a practical guide to designing and facilitating a participatory scenario-building process. While different combinations are possible depending on time and context, **we recommend - whenever feasible - following the full sequence proposed:** starting with one or more scenario thinking starters, moving into the Futures Wheel, and concluding with the construction of scenarios using the 2x2 matrix.

Each of these tools plays a different role in the overall process. Introductory exercises such as the Polak Game or Future Headlines are not scenario-building tools in themselves. Rather, they serve to activate imagination, surface assumptions, and foster group connection. The Futures Wheel, while occasionally used as a stand-alone method, does not in itself produce full narrative scenarios. Its strength lies in helping participants explore the ripple effects of a change or challenge and setting the stage for more structured storytelling. In our experience, it works particularly well as a bridge between exploratory reflection and scenario construction. **If time is limited and only one method can be developed in depth, we suggest focusing on the 2x2 matrix**. It is the most complete and versatile tool for generating rich, contrasting narratives, and offers the clearest entry point into scenario thinking as a method for long-term strategic reflection and participatory planning.

Each tool in this section is modular and adaptable. **Feel free to adjust the sequence and depth based on your local needs and facilitation resources.** What matters most is that the overall process remains inclusive, engaging, and grounded in the reality and priorities of the people involved.

1. Scenario thinking starters

There are many possible ways to initiate a scenario-building process, especially when working with diverse groups. **Introductory exercises** can play a key role in **setting the tone, encouraging reflection, and stimulating imagination from the very start**. They help participants to **connect personally with the topic**, while also surfacing assumptions, emotions, and expectations that may influence their thinking about the future.

According to the FOSTER project needs, we have selected two exercises - The **Polak Game** and **Future Headlines** - which we believe are particularly suitable for participatory scenario-building workshops due to their simplicity, accessibility, and limited time requirements. Depending on the available time and the flow of the session, both exercises can also be used in combination during the same workshop.

We also introduce **Photovoice** as an alternative opening activity. While it offers a richer and more in-depth process grounded in participants' lived experiences, it typically requires more time, facilitation, and preparation in advance.

Other useful examples of opening activities can be found in the <u>Foresight Book</u> published by the Solferino Academy.

The Polak Game

a) Overview

Facilitator level: ■□□
Participant level: ■□□
Duration: 20-30 minutes

The Polak Game is a participatory exercise designed to help participants **explore and visualise their personal attitudes towards the future** (in the FOSTER project case case, the climate future). It encourages self-reflection and open group dialogue by mapping emotional and cognitive orientations along two key axes: optimism/pessimism and sense of agency (feeling able or unable to make a difference). It is especially effective at the start of a scenario-building workshop to surface underlying mental models and assumptions about the future.

b) Intents

➢ Making visible individual perceptions of the future.
➢ Promoting initial dialogue and empathy among participants.
➢ Highlighting group patterns in attitudes towards the issue identified.
➢ Providing a soft entry point into scenario thinking and long-term visioning.

c) Materials needed

✓ A large poster or sheet (to draw the grid), or masking tape to mark the on the floor or wall.
✓ Pens/markers.
✓ Post-it notes (one per participant).
✓ Alternatively: tape or rope to mark a grid on the floor for a *"spatial"* version.

d) Process development

Step 1: create the grid (before the workshop)

Draw or mark a large 2x2 grid on a poster, flip chart, wall, or directly on the floor. Label the axes as follows:

- Horizontal axis - *"I can't make a difference"* ↔ *"I can make a difference"*
- Vertical axis - *"Pessimistic"* ↕ *"Optimistic"*

Make sure the labels are clearly visible. If using the *"spatial"* version, use tape or rope to mark the lines.

Step 2: introduce the activity (5 minutes)

Briefly explain the purpose of the game, underlying that this is a chance to reflect on how they currently feel about the future – in the case of the FOSTER project, in relation to climate change issues - and how much they believe they can personally influence it. Introduce the two axes and clarify that participants will place a post-it (or themselves) on the grid according to how they feel right now:

- *Upper right - optimistic and influential* → believe things are getting better and can actively contribute to that improvement.
- *Upper left - optimistic and passive* → believe things are getting better but feel less able to influence the direction.
- *Lower right - pessimistic and influential* → believe things are getting worse but still feel they have some agency.
- *Lower left - pessimistic and passive* → believe things are getting worse and feel powerless to change

Step 3: individual positioning (5 minutes)

You have two options:

- using post-its: each participant writes their name on a post-it and places it on the grid in the spot that best represents their current position;

- live-spatial format: participants physically move to the point in the room where they feel they belong on the grid.

Step 4: collective observation (5 minutes)

Invite the group to step back and observe the overall distribution. Encourage participants to look for patterns, with prompt questions like:

- o *"Are people mostly optimistic or pessimistic?"*
- o *"Do many feel they can or can't make a difference?"*
- o *"Is there clustering or wide dispersion?"*

Step 5: reflection and group discussion (10-15 minutes)

Facilitate a short debrief. Use open questions such as:

- o *"What stands out to you about this distribution?"*
- o *"Were you surprised by where others placed themselves?"*
- o *"Would anyone like to share why they chose their position?"*

e) Tips for facilitation

- ➢ Keep the tone light and open; this is not a test or evaluation.
- ➢ Avoid interpreting the grid on behalf of participants: let them describe their own thoughts if they wish.
- ➢ When necessary according to the context, consider rewording the axes with simpler or more accessible language.
- ➢ You may refer back to the grid later in the workshop to explore whether scenario-building exercises shift perceptions.

f) Reference and grid example

This version of the Polak Game has been adapted from the one presented in the *Strategic Foresight Book* by Solferino Academy, which is available for free download. Below, you will find an example of the grid we designed and used during the *international pilot event on participatory scenario building,* held in Bologna for the FOSTER project (WP7).

How do you feel about the climate future?
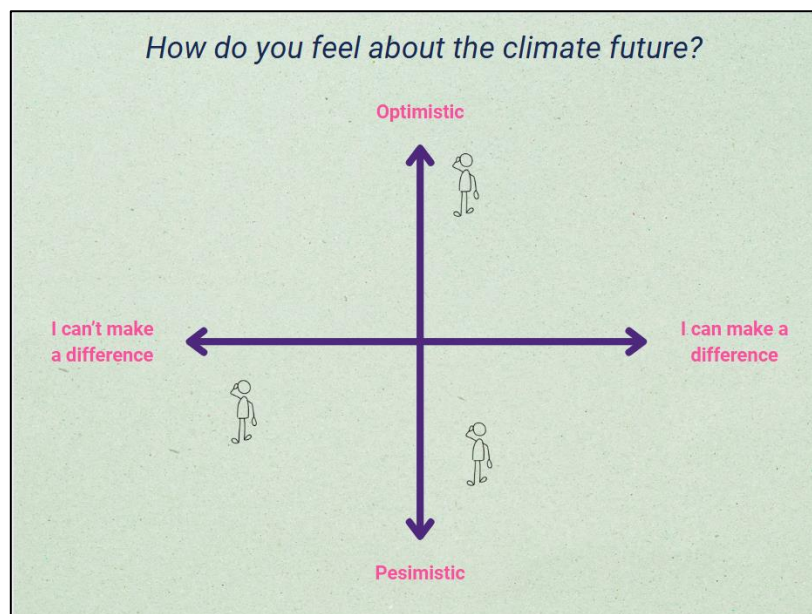
Future Headlines

a) **Overview**

> *Facilitator level:* ■□□
> *Participant level:* ■□□
>
> *Duration***:** 20-30 minutes

The Future Headlines activity is a creative foresight tool that invites participants to **imagine possible futures by crafting newspaper headlines from - usually - 10 or more years ahead**. It's a flexible, low-threshold method that stimulates imagination, surfaces collective hopes and concerns, and opens up a playful yet meaningful **entry point into scenario building activities**.

It can be conducted digitally (e.g., via Slido or similar platforms, like Mentimeter) or using physical materials such as posters and pens.

b) **Intents**

➤ Activating imaginative thinking about the future.
➤ Surfacing emotional responses (hopes, fears, provocations...) related to the challenges being addressed (in this case, related to climate change issues).
➤ Encouraging participants to articulate what kind of futures they consider possible or plausible.
➤ Fostering group reflection and discussion around shared and diverging visions.

c) **Materials needed**

✓ Access to a platform like Slido or similar.
✓ Devices (smartphones, tablets , lapotops) for participants to enter their headline.
✓ A projector and screen to display the headlines in real time during the sharing phase.
✓ Alternatively: A3 or A4 sheets, ideally with a newspaper layout template; pens, markers, and sticky notes; flipchart or poster board to collect and display the headlines (optional).

d) **Process development**

Step 1: introduce the activity (5 minutes)

Explain that participants are going to imagine a news headline that might appear in a local or national newspaper in 10+ years (e.g., 2035). In the case of the FOSTER project, the topic should relate to climate change and its impact on their community.

Clarify that headlines can take any tone: hopeful, worrying, surprising, or provocative. The goal is to express a possible future outcome, not necessarily a prediction.

Step 2: individual creation (5-10 minutes)

Participants respond to a prompt like the following one: *"What might a local newspaper headline say about climate change in your community in year [...]?"*

Two formats are possible:

• digital - participants scan a QR code to access the Slido platform - or similar - and type their headline anonymously or with their name, answering the question you asked;

- physical - participants write their headline on a sheet or post-it. Optionally, they can draw an illustration or logo to simulate a real newspaper look. If more time and materials are available - such as current newspaper clippings or photographs - they can also be invited to create a collage that visually represents their imagined headline.

Step 3: sharing and display (5-10 minutes)

Read the headlines aloud, or invite participants to do so. If using a digital platform, project the responses onto a screen. If using paper, collect and display them on a wall or flipchart/poster board.

Step 4: group reflection (10 minutes)

Facilitate a brief discussion using open questions like:
- *"What stands out to you from the headlines?"*
- *"What hopes and concerns are emerging?"*
- *"What kind of future are we collectively imagining?"*
- *"Are these visions more utopian, dystopian, or realistic?"*

e) Tips for facilitation

➢ Encourage imagination and openness, stressing that there are no right or wrong answers. This is an opportunity to explore bold and unexpected possibilities.
➢ Use the headlines as a launchpad to reflect on different dimensions of climate futures (e.g. social, political, technological), drawing connections based on the content that emerges.
➢ If you retain it appropriate, you can invite participants to include a date and location in their headline to give it more context and specificity.
➢ If time permits, cluster the headlines into thematic categories (e.g. innovation, crisis, adaptation, community resilience) to deepen the collective discussion.

f) Some headlines examples, references and notes

Below are a few sample headlines illustrating different tones and thematic angles participants might explore:
- Hopeful, policy-oriented → *Europe declares just transition complete: coal communities thrive in green jobs boom.*
- Worrying, urgent → *Mediterranean heatwave claims thousands: EU calls for climate emergency treat.*
- Empowering, participatory → *Youth climate parliament proposes EU-Wide resilience budget.*
- Critical, high-impact → *Southern Europe faces 100 consecutive days without rain: EU agricultural markets in crisis.*

Future Headlines is one of the most widely used and versatile foresight exercises, as recognised by several toolkits[2]. In this case, we introduced it as a **starter to familiarise participants with scenario thinking and to surface their initial feelings and intuitions on a given topic which, in the case of the FOSTER project, is climate change**. However, the exercise can also be expanded into a longer session and serve as a foundation for developing full scenarios. Like many participatory foresight tools, its use depends on the context, goals, and available resources.

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[2] Among the others, by the International Civil Society Centre, the Utrecht University and the UNDP, all available for free download.

A possible alternative for local pathways: **Photovoice**

a) Overview

Facilitator level: ■■□
Participant level: ■□□

Duration: 60 minutes

Photovoice is a participatory method in which participants take photographs of meaningful places, objects, or issues in their daily environment, especially those they would like to preserve, improve, or change in the future. These visual narratives serve as the **basis for reflection and dialogue about desired futures, lived experiences, and collective priorities**.

Photovoice can work well as a starting point in scenario-building workshops, particularly in **community-based or place-sensitive contexts**. While not strictly rooted in foresight methodologies, it draws on participatory and critical pedagogical traditions to support collective reflection and imagination, making it a valuable complement in such settings.

b) Intents

➢ Encouraging participants to express concerns, values, and aspirations using visual language.
➢ Ground future thinking in lived experience and local reality.
➢ Building empathy and mutual understanding across diverse perspectives.
➢ Engaging stakeholders through emotionally resonant storytelling

c) Materials needed

✓ Participant's own devices to take pictures: cameras or smartphones.
✓ Printed photos or digital display (laptop, projector).
✓ A wall, board, or computer tool/online platform to exhibit the images.
✓ Sticky notes or pens for adding eventual captions or comments.
✓ A flipchart or poster to collect main findings (optional)

d) Process development

Step 1: photo-taking (before the session)

Prior to the workshop, ask participants to take 1-2 photos in advance that respond to a prompt such as:

o *"Show how climate change is visible in your community"*
o "*Capture something you fear losing, want to protect, or wish to change in the face of climate change*"

Step 2: sharing and explanation (30-40 minutes)

Each participant presents their photos and explains what they represent: a concern, a change already seen, or a future hope. Since everyone will have a turn to speak, encourage participants to be concise - especially in larger groups - and manage time carefully to ensure space for all voices. A time guideline, establishing how many minutes per person, may help keep the activity flowing.

Step 3: collective reflection (15-20 minutes)

Guide a discussion using prompts like:

o *"What do these images tell us about climate impacts here and now?"*
o *"What kinds of futures do they point towards?"*
o *"What ideas for action or adaptation emerge from what we see?"*

Photos can be grouped to reveal common themes or tensions (e.g. loss, adaptation, injustice, resilience). See which shared challenges or concerns emerge, and cluster related images together. You can add comments, keywords or reflections using sticky notes or by writing directly on a flipchart nearby.

e) Tips for facilitation

➢ Tailor prompts to the specific issue being addressed - in the case of the FOSTER project, climate change issues - while leaving room for creative interpretation.
➢ Emphasise that emotional or symbolic content is as valid as physical impacts.
➢ Ensure all participants feel safe sharing personal or sensitive topics.
➢ Use the photos later in the workshop to inspire scenario writing.
➢ After the workshop, consider turning the photos into an exhibition or digital gallery to involve the wider community.

f) References and notes

Although the two methods mentioned above - the Polak Game and the Future Headlines - can be considered easier and more immediate for both participants and facilitator(s), as well as less time-consuming, we have nevertheless decided to include Photovoice as a worthy alternative. As a participatory methodology, Photovoice appears **particularly well-suited to addressing complex community issues** such as the ones related to climate change effects. This choice was inspired by the foresight toolbox developed by Utrecht University, Towards a Climate-Resilient Future Together.

2. Developing scenarios

This section focuses on the core activity of this toolkit: the development of structured, plausible, and creative future narratives. The aim is to support participants in moving from broad reflection and trend exploration into to **generating concrete and creative representations of how the future might unfold under different conditions.** The exercises proposed here have been **selected looking at the objectives and the needs of the FOSTER project, with a strong emphasis on participation, civic engagement, and creative thinking**.

At the heart of this section is the construction of alternative futures using the **2x2 matrix**, a widely used and highly adaptable foresight method that enables groups to develop four contrasting scenarios based on critical uncertainties. However, we suggest beginning with the **Futures Wheel**, a tool that helps participants map out possible ripple effects of a central issue. It supports structured brainstorming and systems thinking, laying a valuable foundation for scenario construction. While the 2x2 matrix can be used as a stand-alone activity, especially when time is limited, combining it with the Futures Wheel often leads to more coherent and insightful scenario development.

Among the many available foresight techniques, we also introduce two possible alternatives that may be relevant for FOSTER's aims and participatory approach: **Scenario Archetypes** and **Visioning**. Although we do not examine them in detail, we have chosen to include them to provide a broader overview of how scenario building can be approached through different methods.

Please note that **the suggested facilitation levels and time durations for each activity are indicative only, and should be adapted to your specific context**. What matters most is that the scenario-building

process generates meaningful and usable outputs: narratives that support reflection, dialogue, and action within the local pathways of the FOSTER project.

Structuring brainstorming: **the Futures Wheel**

a) Overview

Facilitator level: ■■□
Participant level: ■□□

Duration: 70-90 minutes total (if the central driver is already defined)

The Futures Wheel is a collaborative foresight tool used to **explore the ripple effects of a central trend, change, or issue**. Starting from a selected central driver, participants identify its first-order consequences, then expand outward to map second-, third-, and further-order consequences, **revealing interconnections, cascading impacts, and potential systemic dynamics**. There is no fixed limit to how many levels of consequences can be explored. Groups may continue mapping outward as far as is meaningful for the process and manageable within the available time.

This tool is particularly **effective in the early phases of scenario building processes**, where it helps participants generate ideas, uncover tensions, and **visualise how specific drivers might influence future developments**. However, **it can also function as a stand-alone exercise**, for instance to support discussion or the analysis of a strategic challenge.

The central driver may be pre-selected by facilitator(s) or defined collaboratively with participants. While co-defining the driver with the group can enhance ownership and engagement, it typically requires additional time as well as a certain level of analytical work and facilitation. **In the context of the FOSTER project, we recommend that facilitator(s) come to the local scenario-building workshops (WP8) with at least one proposed central driver already in mind, ideally identified on the basis of concerns and priorities that emerged during the previous local needs assessment (WP6)**. For example, the Bologna local pathway highlighted "high levels of land consumption" as a theme of particular concern to the community, reflecting anxieties around urban sprawl and the sealing of natural and agricultural land.

To help ensure a comprehensive exploration, the **STEEP framework**[3] is a useful - though not strictly required - option when analysing first-order consequences. It encourages participants to consider a broad range of impacts and to avoid focusing too narrowly on a single domain.

b) Intents

➢ Exploring the systemic and indirect consequences of a selected driver of change.
➢ Supporting holistic thinking across multiple dimensions.
➢ Stimulating critical discussion about the implications of a certain issue.

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[3] The STEEP framework is a strategic analysis tool used to assess the external macro-environment that may impact an organisation. STEEP stands for Social, Technological, Economic, Environmental and Political factors. By analysing these five areas, organizations can better understand the forces shaping their environment and make more informed strategic decisions. When applied to the Futures Wheel, the STEEP framework serves as a guiding lens to help participants explore a broad and balanced range of consequences. Each category prompts reflection on how the central driver might generate impacts in different areas of society. Using STEEP encourages more holistic thinking, helping groups avoid narrow or one-dimensional analysis. It can be particularly useful in the first round of mapping (first-order consequences), where facilitator(s) may divide participants into subgroups based on the STEEP categories. This ensures a diversity of perspectives from the outset, which can later be expanded as consequences interact and multiply across domains.

➢ Laying the groundwork for scenario development or thematic prioritisation.
➢ Making abstract trends or risks more tangible through group mapping.

c) Materials needed

✓ A large sheet of paper (e.g. flipchart size or A1) or a whiteboard.
✓ Coloured post-its or cards in different colours.
✓ Markers or pens.
✓ Alternatively: digital whiteboard tools (e.g. Miro, Mural) and internet connection if conducted online.

d) Process development

Step 1: introduce the activity and the central driver (10 minutes)

Begin by introducing the purpose of the Futures Wheel, which is to collaboratively explore the possible consequences of a specific issue, trend, or change that may shape the future. Clarify that this tool helps visualise how a particular driver might generate ripple effects, expanding through different layers of impact.

Present the central driver, which should already have been selected by the facilitator(s) in advance, ideally based on insights gathered during a previous research or participatory phase. In the case of the FOSTER project, it can be selected according to what emerged from the local needs assessment in the WP6.

Before starting the mapping, agree with participants on a time horizon for the exercise: for example, are you imagining consequences that might unfold in 5, 10, or 20 years? This helps frame the type of impacts considered and aligns expectations around the scale and plausibility of the changes explored[4].

Step 2: first-order consequences (20-30 minutes)

Invite participants to focus on the first-order consequences, that is, the immediate and most direct effects of the central driver. These are the impacts that would likely be seen soon after the change begins to occur.

To help structure the discussion, you may wish to introduce the STEEP framework, which encourages consideration of the following different domains:

• Social - effects on communities, health, demographics, cultural practices
• Technological - developments in infrastructure, innovation, communication, knowledge
• Economic - implications for employment, productivity, markets, inequality
• Environmental - changes to ecosystems, resources, climate, biodiversity
• Political - influence on governance, decision-making, regulation, participation

You can divide participants into five small groups, each assigned to one STEEP category. Ask each group to identify two or three direct consequences within their domain and place them visibly around the central driver (e.g. on a large sheet or board).

Alternatively, if you or the group prefer a more fluid process, consequences can be brainstormed collectively, with STEEP categories that can maybe be applied later as a way to cluster and reflect on the ideas.

Step 3: second and further-order consequences (20-30 minutes)

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[4] Since in this toolkit we consider the Futures Wheel as a pivotal bridge towards scenario development, we recommend working with a time horizon of at least ten years. This allows participants to move beyond short-term thinking and consider deeper, more systemic transformations that may unfold over time.

Participants now expand the Futures Wheel outward by identifying second-order consequences, the impacts that follow as a result of the first-order consequences. If time and interest allow, the group can go even further, mapping third- and fourth-order consequences.

Use lines or arrows to connect each consequence to its preceding cause, making visible the logical chains and interdependencies.

Encourage participants to think in a divergent and multi-layered way. Consequences may unfold at different spatial and temporal scales: some may be highly local, others wider; some may appear quickly, others only in the longer term.

If STEEP was used earlier, invite participants to notice when consequences cut across multiple categories, highlighting potential cross-sectoral dynamics.

Step 4: group reflection and discussion (20 minutes)

Once the wheel is sufficiently developed, bring the group back together for a plenary reflection. Ask each group or a designated spokesperson to share a brief summary of their contributions:

- o *"What consequences did you identify?"*
- o *"Why did certain consequences stand out?"*
- o *"What assumptions or perspectives informed your thinking?"*
- o *"How did they interpret their STEEP category, if relevant?"*

After all groups have presented, take a moment to collectively observe the completed Futures Wheel. Open the floor for a wider discussion, using open-ended guiding questions such as:

- o *"What patterns, clusters, or themes are emerging?"*
- o *"Are there any surprising or unexpected consequences?"*
- o *"Which consequences seem more immediate? Which are more long-term?"*
- o *"Do we observe any tensions, contradictions, or feedback loops?"*
- o *"How do certain consequences trigger others? Can we trace any causal chains?"*
- o *"Which areas seem most uncertain or contested?"*

Encourage participants to connect and build on each other's insights. This step is crucial for making sense of the complexity surfaced through the mapping process, and for beginning to identify possible scenarios, which can be developed in the next phase of the workshop.

e) Tips for facilitation

- ➢ Clarify the central driver, making sure participants understand the issue at the centre of the wheel. If it was identified in a previous activity (e.g., local needs assessment), briefly revisit how it emerged.
- ➢ As introduced, STEEP framework is optional. It can help explore diverse dimensions - social, technological, economic, environmental, political - but it's not methodologically required. If used, consider colour-coding or clustering consequences by category to support comparison.
- ➢ Encourage reasoning, asking groups to briefly explain their chosen consequences and making them explain what they mean and why they matter. This promotes shared understanding and reflection.
- ➢ Show links and levels, helping participants distinguish between first- and further-order consequences - e.g. using different-coloured post-its and placing them at different distances from the centre - and highlight any cross-cutting or cascading effects.
- ➢ Be flexible on depth, since there is no fixed number of consequences or levels. The process can be as short or in-depth as needed.

f) Ending notes, structure and examples

The Futures Wheel is **one of the most widely used foresight tools** and features in virtually every handbook or manuals on strategic foresight and scenario planning. Its popularity lies in its **simplicity and adaptability**: while it offers a structured approach to mapping systemic consequences, it is also highly versatile and can be tailored to different groups, settings, and purposes.

Because of this flexibility, there is no single, definitive version of the Futures Wheel. A wide variety of templates are available online, each with slightly different layouts or instructions. This diversity is a strength, as it allows facilitator(s) to choose - or co-create - the format that best fits their context and objectives. In this toolkit, we include below, as an example, the structure presented by the UNDP Accelerator Lab in Argentina, based on the diagram of the tool original designer Jerome C. Gleen.
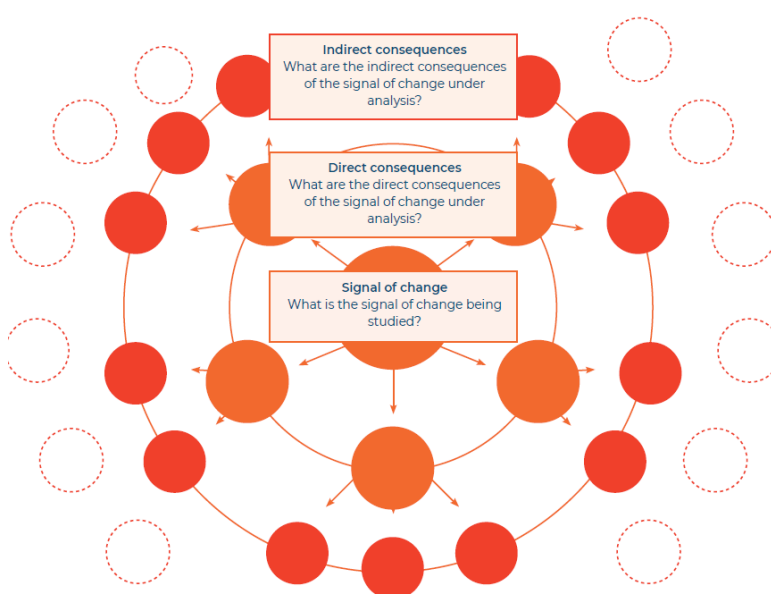
We encourage facilitator(s) to design their own structure, for example, by **drawing a central circle for the driver on a large sheet of paper or whiteboard, and progressively building the wheel outward using post-its or cards of different colours and sizes**. Alternatively, digital whiteboards such as Miro or Mural can be used to create custom templates, still offering participants an interactive and dynamic experience.

Ultimately, we suggest exploring two illustrative examples of completed Futures Wheels, shared on Barry O'Reilly's blog: one focused on the COVID-19 virus outbreak, and another on increased capabilities in artificial intelligence. These examples can be useful references to see how different levels of consequences are mapped in practice.

Writing alternative scenarios: the 2x2 matrix

a) Overview

Facilitator level: ■■□
Participant level: ■■□

Duration: 120-140 minutes (if axes are pre-defined)

The 2x2 Matrix is a widely used and effective foresight tool to structure scenario development. It helps participants **explore potential futures by focusing on two critical uncertainties (drivers) that have significant impact on the topic or system under investigation**. These two drivers form the axes of the matrix, each ranging between two contrasting poles, creating **four quadrants that represent four different possible futures.**

How to select the axes (drivers):

From a methodological standpoint, identifying the two key drivers is often done collaboratively with participants during the scenario-building workshop itself. This can foster shared ownership and generate rich discussions.

However, **to optimise time and maximise the effectiveness of the session, especially if participants are not familiar with foresight activities, we recommend that the facilitator(s) pre-selects the two axes based on prior research, consultations, or a preliminary analysis of the context. In the case of the FOSTER project, facilitator(s) can draw upon the key themes and issues identified in the local needs assessment (WP6) to inform their choice of drivers**.

This approach **ensures that the axes are grounded in local realities** and address highly relevant uncertainties for the community or system under investigation. Choosing them beforehand allows the workshop to focus directly on scenario building and narrative development, reducing the risk of lengthy or inconclusive debates during the session.

Given the **centrality of participatory governance** within the FOSTER project, we also recommend that at least one of the selected drivers reflects a dimension of this theme. Anchoring an axis in this area can help ensure that scenarios speak directly to the democratic and governance challenges that shape environmental resilience.

When pre-selecting drivers, facilitator(s) should:

- ensure drivers are relevant and highly uncertain factors influencing the future of the topic;
- confirm drivers have clear and distinct contrasting poles;
- select drivers that cover different dimensions (social, political, economic, environmental, technological, legal etc.) to maximise scenario diversity;
- communicate clearly to participants why these axes were chosen, inviting reflection on their significance.

This preparatory work can support a more focused, timely, and engaging workshop.

To assist facilitator(s), here are key criteria to choose effective axes:

- relevance: the axes must address the most important uncertainties for the scenario theme,
- uncertainty: avoid factors with known or stable futures; select those with unclear trajectories;
- impact: drivers should meaningfully shape how the future unfolds.
- distinctiveness: ensure axes represent different forces or logics to create contrasting scenarios.
- clarity: poles on each axis must be understandable and concrete to participants.

One example can be[5]:

- o horizontal axis ↔ social cohesion and institutional trust (low to high)
- o vertical axis ↕ climate action and sustainable innovation (low to high)

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[5] The example is taken by the UK Government Office for Science's Futures Toolkit.

b) Intents

➢ Developing a structured understanding of how critical uncertainties may shape alternative future contexts.
➢ Practising collaborative thinking and collective imagination through structured scenario-building.
➢ Strengthening the ability to articulate complex future dynamics in a clear and engaging narrative form.
➢ Encouraging reflection on diverse perspectives, values, and potential implications of future change.
➢ Generating creative outputs that can inform further planning, dialogue, or strategic processes.

c) Materials needed

✓ A large sheet or board with the 2x2 matrix clearly drawn (on paper). If made digitally, use a projector.
✓ Markers and pens.
✓ Post-its, cards or blank sheets for brainstorming.
✓ Lined sheets for scenario writing. Alternatively, at least one laptop per group.

d) Process development

Step 1: introduce the activity and the axes (15–20 minutes)

Begin by presenting the 2x2 Matrix structure and its purpose. Clarify that the aim of this phase is to collaboratively explore four plausible and distinct futures, based on two key uncertainties that shape the context being discussed.

If the two axes were pre-selected - as recommended - introduce them clearly:

- explaining why they were chosen (e.g. based on findings from the local needs assessment).
- clarifying what each pole of the axis means in concrete terms.
- inviting participants to reflect on the relevance and plausibility of each dimension.

Some facilitator(s) prompt can be:

o *"This matrix helps us think about how the future might unfold if these two key uncertainties evolve in different directions."*
o *"Let's look at the first axis: what does this driver means in practice? Can you imagine examples of this in your own context? And what about the second driver?"*
o *"Do these axes effectively capture tensions or dilemmas that feel real in your local experience?"*

If drivers are to be co-defined, you can follow this trends prioritisation procedure[6]:

1. start with a broad brainstorming of possible uncertainties and write them in a list;
2. discuss and cluster these into themes;
3. use voting or consensus to select two drivers;
4. define clear opposing poles for each.

You should allow, at least, 45-60 minutes for this step.

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[6] The following process for selecting the drivers of the 2x2 matrix is presented here in a simplified form, drawing on approaches from toolkits such as those by the International Civil Society Centre and UN Global Pulse. However, in many cases, driver selection results starting from more methodologically rigorous procedures, including horizon scanning, environmental scanning, Delphi method and driver mapping. These approaches can also be adapted to be more or less participatory, depending on the context and objectives of the foresight process.

Step 2: matrix showing and quadrants definition (10–15 minutes)

Draw (or poject) a large version of the 2x2 grid where all participants can see and interact with it. Clearly label the horizontal and vertical axes with the selected drivers and their contrasting poles.

Explain that each quadrant represents a unique combination of the two uncertainties, and therefore a different possible future**.**

Label each quadrant with provisional titles (e.g. A, B, C, D), or use descriptive working titles (e.g. "high social cohesion and institutional trust with low growth and tech progress").

Facilitator(s) prompt examples:

- o *"If we imagine a future where community engagement is high but governance is weak, what might that look like?"*
- o *"This quadrant combines strong institutions with disengaged citizens, what kind of tensions could emerge?"*
- o *Encourage participants to start imagining what each world could feel like, without yet going into too much detail.*

Step 3: group work: build a scenario narrative (50-60 minutes)

Once the 2x2 matrix has been introduced and each quadrant briefly discussed, divide participants into four groups**,** assigning each to one of the quadrants. Their task is to develop a rich scenario narrative, imagining a plausible future world shaped by the specific combination of uncertainties represented in their quadrant.

This scenario should take place in a local setting familiar to participants - for example, their city, neighbourhood, or community - and be projected at least ten years into the future. We recommend choosing a specific year (e.g. 2035 or later) to ground the narrative in a concrete temporal frame, encouraging participants to think in terms of long-term transformations rather than short-term changes.

Each group is expected to produce a narrative that can vary in length depending on time available and workshop goals; as a rough guideline, the narrative might correspond to about one typed page (approximately 400 to 500 words).

The story should have a clear and evocative title that captures the essence of the imagined future it can be metaphorical or straightforward. Importantly, the narrative should bring this future world to life through concrete, relatable details that illustrate what daily life could look and feel like in that scenario. It should go beyond abstract trends or broad generalisations, instead offering vivid insights into how people might live, interact, and navigate challenges within this envisioned context.

To support sharing and discussion, each group should also select a presenter who will bring their scenario to the plenary session, telling the story with clarity and engagement.

The following dimensions and questions are offered as suggestions to help structure scenario development. They are by no means prescriptive and depending on the workshop's specific context, goals, and the nature of the chosen drivers, facilitators and participants may wish to focus on different aspects or tailor these prompts accordingly.

- o **Everyday life**
    - ▪ *"How do people live, work, study, and move around?"*
    - ▪ *"Are lives stable, precarious, connected, or isolated?"*
    - ▪ *"What does a typical day look like in this future?"*

- o **Community and social relations**
    - *"How do people interact within their communities?"*
    - *"What is the role of families, networks, or solidarity movements?"*
    - *"Are there strong ties and civic engagement, or is there disconnection and mistrust?"*
    - *"Which groups are most vulnerable or empowered?"*

- o **Technology and innovation**
    - *"What technologies are available and widely used?"*
    - *"How are they integrated into daily life (e.g. in education, mobility, communication)?"*
    - *"Do they enhance equity or deepen divides?"*

- o **Economy and work**
    - *"What are the main sources of income or employment?"*
    - *"How are resources and opportunities distributed?"*
    - *"Are there local economies, sharing systems, automation, or new inequalities?"*

- o **Urban and spatial environment**
    - *"What does the physical landscape look like (housing, public space, infrastructure)?"*
    - *"Are cities compact and regenerated, or sprawling and degraded?"*
    - *"Is there accessible green space or evidence of environmental stress?"*

- o **Environmental conditions**
    - *"How has the climate or biodiversity changed in the area?"*
    - *"Are there visible impacts like pollution, heat islands, or resource scarcity?"*
    - *"How is the community responding to these challenges?"*

- o **Institutions and governance**
    - *"What is the role of local and national institutions?"*
    - *"How are decisions made, and who holds power?"*
    - *"Are policies inclusive and transparent, or exclusive and rigid?"*
    - *"Is there trust in institutions?"*

As you develop your scenario, remember to anchor your narrative clearly within the axes of the matrix, the unique combination of drivers that define your quadrant should shape the world you're imagining. Try to bring this world to life by describing it with sensory and narrative detail: think about names, places, daily routines, and the specific challenges people face. You don't have to predict the future precisely. Instead, aim to create one plausible and imaginative version of it, grounded in today's uncertainties.

If it helps, you can use a "day in the life[7]" approach or introduce one or two characters to illustrate what life looks and feels like in this future. This can be a useful way to make abstract ideas more concrete and relatable.

Step 4: scenario presentations (20-30 minutes)

Once the groups have completed their scenario narratives, it's time for them to share their visions with everyone. Encourage each group's chosen presenter to tell their story in an engaging and vivid way. The idea

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[7] "A day in the life" is a scenario-building technique that imagines what a typical day might look like for a real or fictional person - or a representative type of person, such as a parent, a policymaker etc. - in a possible future. It helps make abstract trends more tangible by translating them into concrete, everyday experiences

is to bring the imagined future to life, not just to read out a list of points. They can use drawings, keywords, or symbolic objects to help illustrate their scenario if they like and if there are resources available.

Here are some simple guidelines for the presentations:

1. start by stating the title of the scenario;
2. then briefly remind everyone which quadrant the scenario represents, naming the two axes and their poles;
3. share the scenario narrative with clarity and storytelling flair;
4. aim for each presentation to last about 5 to 6 minutes.

After each presentation, allocate a few minutes for clarifying questions or brief reactions from the other participants. Facilitator(s) should gently keep this part brief, since the aim is to appreciate the variety of futures imagined, rather than to debate or critique them at this stage.

Step 5: reflecting together and capturing insights (10-15 minutes)

After all four scenarios have been presented, guide a collective reflection. This helps participants connect the scenarios to their own realities, and surface insights that may inform further discussion or action.
To support the conversation, you might consider asking questions such as:

o *"What surprised you in these future visions?"*
o *"Which scenario felt most plausible? Which one most desirable? Most alarming?"*
o *"What common patterns or contradictions did you notice?"*
o *"What does this tell us about what we value, fear, or hope for?"*

Please make sure to carefully document all the outputs. This can be done by collecting or photographing the written narratives and recording the titles of the scenarios developed. Optionally, and with the participants' consent, you may also record the oral presentations or create summary posters that capture the key points.

These materials serve as valuable inputs for subsequent stages of the foresight process. In the context of the FOSTER projects, the scenario narratives will be the starting point for the "co-creations of solution" (WP10) in the local pathways.

e) **Tips for facilitation**

➢ Set a welcoming and imaginative tone. Scenario-building benefits from a relaxed and open environment. Encourage participants to think creatively, explore unusual ideas, and take a step beyond what feels immediately realistic. Remind them that this is a space for collective imagination, not for prediction.
➢ If participants struggle to get started, you can use prompt questions to encourage storytelling and help them to bring their scenarios to life.
➢ Ensure that everyone in the group has the opportunity to contribute. Pay attention to participation dynamics and foster an atmosphere where different perspectives are welcomed and valued. Being mindful of how space is shared helps create a more balanced and engaging discussion for all.
➢ Keep the process focused but flexible. While creativity is encouraged, it's important to maintain a clear structure. Keep track of time, guide the group through each phase (from identifying logics to developing narratives), and gently steer them back if discussions drift too far.
➢ Support internal coherence within each scenario. As scenarios develop, encourage participants to check that the elements they introduce are logically consistent with the rest of the imagined world. This doesn't mean enforcing realism, but ensuring that the different parts of the scenario make sense together.

➢ Refer to this toolkit's guidance on "What makes for good scenarios?". Throughout the activity, it can be helpful to come back to the principles outlined in the "background section", since these criteria can serve as an orientation to support participants in shaping scenarios that are not only imaginative, but also meaningful and usable for further reflection and discussion.

f) Examples and template model:

Several references can offer valuable inspiration, both for how to structure the matrix and how to write narrative scenarios.

For example, the International Civil Society Centre's toolkit includes a filled matrix based on the work of the Wales Future Network (p. 62), as well as rich scenario narratives drawn from the ParEvo exercise "A history of civic space, 2024-2034" (pp. 57-61). These stories were developed by condensing multiple future paths into coherent narratives and show how scenario thinking can be turned into engaging, plausible storytelling, even when not strictly built from a 2x2 matrix.

A combination of matrix and narratives can be found in this Foresight Scenario Exercise report by the Institute of Development Studies (IDS). On page 20, you'll find a 2x2 matrix framework to explore the role of edible insects in future food systems. Then, in the following pages, the resulting scenario narratives are presented in detail.

Although not structured through a 2x2 method, the OrganicTargets4EU project also offers examples of scenario narratives. These stories were created to explore future directions for the development of the organic farming sector in Europe, and they illustrate how narrative scenarios can help guide policy reflection and strategic thinking.

Ultimately, the TNFD Scenario Toolbox provides additional narrative examples (pp. 10-13), offering concise, structured approaches to designing scenarios that explore future nature-related risks and opportunities.

Here is a **simplified template of the 2x2 matrix** that can be reproduced on paper or digitally:
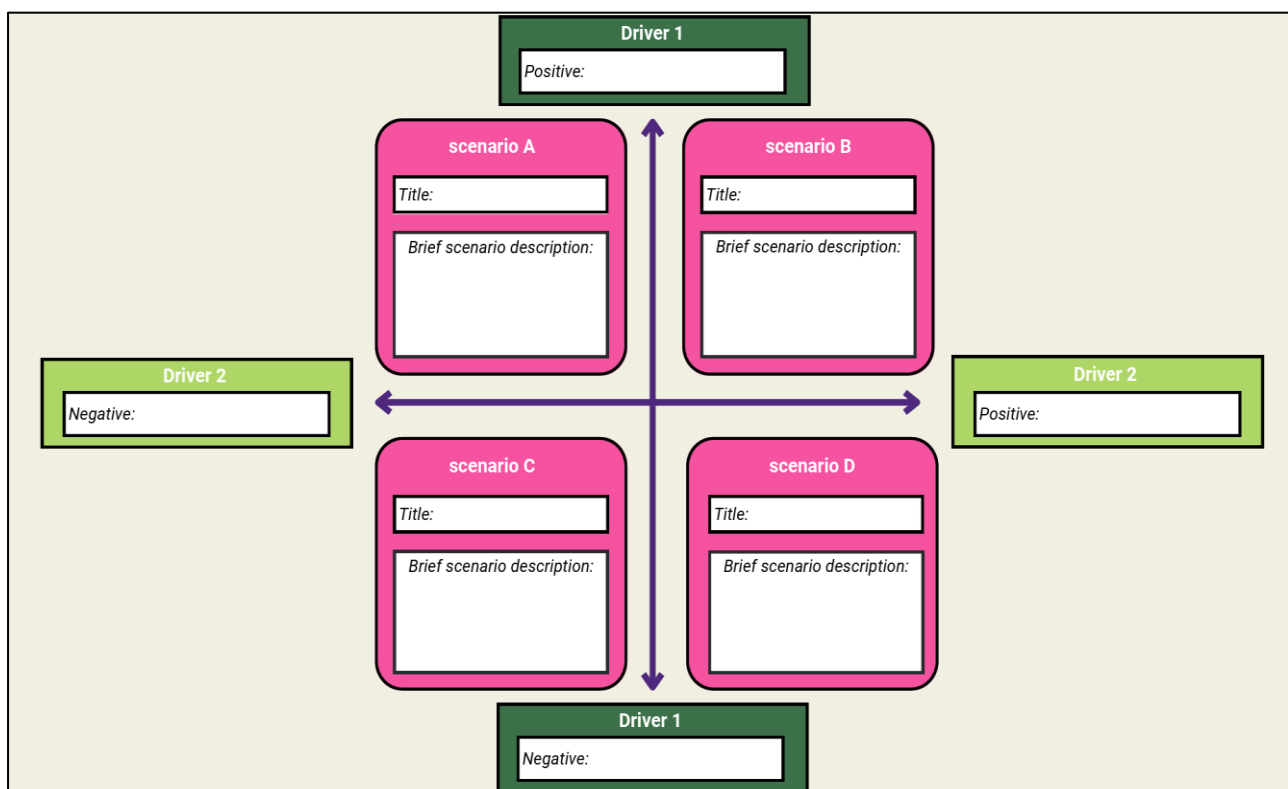
Alternative scenario building techniques

While the 2x2 matrix remains probably the most widely used and accessible scenario building method - and the one we recommend as the main approach for FOSTER due to its adaptability, versatility and time-efficiency - there are many other techniques that can be used to explore possible futures in a structured and participatory way.

Here, we briefly introduce two alternative approaches that we believe are also well aligned with the aims of FOSTER. Although we do not describe them in the same level of detail as the 2x2 matrix, they can provide useful inspiration for designing scenario-building processes following different pathways.

Generic images/Scenario archetypes[8]

One of the best alternatives to the 2x2 matrix is the use of Scenario Archetypes, or Generic Images of the future, developed by futurist Jim Dator and the Manoa School at the Hawaii Research Center for Futures Studies. Based on extensive comparative analysis of foresight exercises, Dator (2009) and his colleagues identified four recurring patterns in alternative futures. These archetypes are not standardised scenarios but broad categories that share distinctive theoretical and methodological foundations.

The four generic futures are:
- *Continued growth*: also referred to as "business as usual", this archetype imagines a future characterised by further economic, technological, or societal growth along current trajectories.
- *Collapse*: this future assumes a breakdown of current systems, triggered by crises, conflict, or environmental limits.
- *Discipline*: a controlled or regulated future, where societies consciously limit growth to remain within ecological or social boundaries.
- *Transformation*: a radical rethinking of society, driven by technological, spiritual, or social change that fundamentally alters how people live.

Rather than constructing scenarios from a blank slate, this approach begins with these four overarching narrative types. The exercise then invites participants to **deepen each archetype by exploring how the focal issue or question of the foresight process might evolve under each of the four conditions**. This allows for both structure and creativity, ensuring comprehensive exploration across the "futures cone", the space of plausible futures.

This method typically begins with an introduction to the four archetypes, helping participants understand the distinct logics behind each future: growth, collapse, discipline, and transformation. Once the group is familiar with these overarching narratives, participants can be divided into smaller groups, each tasked with exploring how a specific issue or question might unfold within one of the archetypal futures.

Through guided discussion, each group develops a detailed version of their assigned scenario, considering not only trends and challenges but also the behaviours, policies, or technologies that might shape life in that particular future. Depending on the desired level of engagement, this process can be enhanced by setting up immersive environments where each future is brought to life through visual elements, stories, and even fictional artefacts designed to evoke a deeper emotional and sensory connection.

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[8] More details about this methodology can be found in: *The future is ours: strategic foresight toolkit. Making better decisions* (p.53), *CIFS toolkit for applied strategic foresight* (p.47*)*; *Foresight manual. Empowered futures for the 2030 agenda* *(*p. 37); *The futures toolkit* (p,109*).*

Facilitating this method requires a moderate to high level of preparation and familiarity with the archetypes, as well as strong guidance to help participants move beyond surface-level thinking. Its length can depend on how in-depth the narrative exploration is and whether experiential components are included.

Visioning[9]

Visioning is a powerful participatory method used to **co-create a compelling and aspirational picture of a desired future**. Unlike other foresight techniques that explore a wide range of possible futures, **visioning focuses on a single, preferred future, one that reflects shared values, priorities and hopes**. In foresight practice, this approach is sometimes referred to as "incasting" because **it allows participants to go in-depth into one specific scenario**, offering a contrasting approachal to more exploratory techniques like the 2x2 matrix.

The process typically begins by inviting participants to imagine themselves in a future where a particular policy, strategy or initiative has succeeded or, more broadly, where positive changes have taken place in response to the issue at hand. They are encouraged to describe what that success looks and feels like: *"What has changed?" "Who has benefited?" "What challenges remain?"*. This exercise is intentionally unconstrained by current limitations, helping participants to think beyond the present and articulate bold, creative aspirations.

Visioning is especially effective when it involves a diverse group of stakeholders. Since the intended outcome is not "my own vision" but rather a shared vision, this method is a valuable tool for building consensus and collective ownership. It can serve as a springboard for more concrete planning, anchoring future strategies in a strong sense of purpose and direction.

The process usually unfolds in the following stages. After an introductory part, participants describe their vision of success. They then examine the current situation in relation to that vision and identify what needs to change. Finally, the group presents their vision, often using narrative or visual formats to bring it to life. When time and resources allow, experiential elements such as mock newspaper headlines or "artefacts from the future" can help participants fully inhabit the world they are imagining.

This technique is widely used in policy, community planning, and organisational transformation. While it can be adapted for quick sessions, a full visioning workshop typically lasts at least 2–3 hours, with additional time required for preparation and follow-up. Group size is flexible, but it works well with a minimum of 6 to 10 participants and can accommodate much larger groups, especially in public engagement settings.

Visioning requires a moderate to high level of facilitation, since you should be able to guide creative thinking while ensuring that conversations remain grounded in the exercise's purpose. Crucially, facilitators should also be prepared to challenge limiting assumptions and encourage participants to look beyond immediate obstacles.

This technique is particularly useful for:

- reaching a shared understanding of what success could look like;
- identifying areas of agreement and disagreement among stakeholders;
- set the pillars to prioritise the steps needed to achieve a long-term goal;
- mobilising communities or teams around a common vision.

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[9] More details about this methodology can be found in: *The futures toolkit* (p. 70); *The future is ours: strategic foresight toolkit. Making better decisions* (p.79), *Foresight manual. Empowered futures for the 2030 agenda* (p. 34).

Visioning provides not only a vivid picture of a better future, but also lays the foundation for a roadmap to reach it, grounded in collaboration, imagination, and strategic intent. It is no coincidence that this technique is often used in combination with methods such as backcasting, which help translate long-term aspirations into actionable step.

3. What happens next?

The end of a scenario-building workshop is never truly the end. On the contrary, it often marks the **beginning of a deeper and more challenging phase**: that of making sense of what has emerged, and of asking **how these imagined futures can inform what we do today**. Scenarios, after all, are not meant to remain speculative stories. They are tools for reflection, and ideally, for transformation.

In the context of the FOSTER project, the goal is not simply to explore alternative futures, but to **use them as a starting point for shaping more inclusive, responsive and resilient local strategies**. This means moving from possibility to planning, and from collective imagination to concrete steps without losing the richness and diversity of voices that made the scenario-building process meaningful in the first place.

Turning exploratory scenarios into strategic guidance is not a linear process. Scenarios speak of potential external environments; strategies deal with how organisations and communities act within them. Relating the two requires iteration: strategies must be tested against different futures, and scenarios can evolve in response to local priorities. This dynamic relationship helps to align external complexity with internal direction, connecting what might happen with what we are prepared to do.

A wide range of techniques can support this transition, but the choice of methodology depends on the context, time available, and objectives. What matters most - especially within the FOSTER framework - is that the process remains **participatory, grounded in civic engagement, and open to multiple perspectives.** The richness of the scenario narratives created should not be reduced to predefined outputs, but rather expanded upon through inclusive dialogue and shared reflection.

This toolkit thus represents just one stage of a broader journey. Another complementary toolkit will follow (D9.2), focused on the **co-creation of local solutions**. Building on the scenarios developed, this next phase will support communities and institutions in identifying priorities, imagining new forms of collaboration, and designing interventions that are responsive to future challenges. In doing so, it will contribute to strengthening the anticipatory capacities of local governance, empowering citizens and civil society to shape public agendas, and fostering spaces of meaningful, long-term engagement between public authorities and communities.

Scenario thinking does not offer answers, it invites better questions. And **when it works, it helps transform uncertainty into a shared capacity to imagine, decide, and act together.**

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