

Evaluating transformative innovation policy. Insights from two experimental policies

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Abstract

This article presents our approach to the evaluation of transformative innovation policies. To be consistent with the principles and objectives of these policies, we needed to implement an evaluation approach that was supportive of experimental policies designed for highly complex and uncertain environments. The article presents a flexible approach to formative evaluation, which is, however, rooted in a specific theoretical understanding of how transitions occur. We present the approach, the practical challenges we faced when trying to implement it, how we dealt with them and the implications of our responses for the skills, attitudes and values required from evaluators.

Transformative innovation, social learning, evaluators' role, evaluators' attitudes

Introduction

A recent editorial piece in the American Journal of Evaluation (section on International Developments in Evaluation) points out the relevance of evaluating transformational change from a systemic perspective. As the editors underline, there is a sense of urgency for the evaluation field “to revisit, redesign and reconfigure evaluation theories and practices to support the large scale, transformative changes our societies and ecosystems need” (Ofir and Rugge, 2021). Risks are rapidly multiplying, stemming from severe biodiversity loss, growing inequalities and the advancing climate crisis (Ripple et al., 2020). In addition, the COVID-19 global pandemic has provided evidence for the premise that significant system transformations are urgently needed to address the global emergency we are facing (Patton, 2021).

For evaluation to enable system transformation, business as usual is no longer possible (Patton, 2021). When policy environments are complex and very diverse, and policy

objectives are ambitious and radically innovative, there is a high degree of uncertainty about the ways in which an intervention will develop and the effects it will have. Policy, then, needs to be experimental in nature, and evaluation practices have to support the development of the experiment rather than judge its final results against a set of well-defined criteria derived from precise expectations. Conventional results-based management, linear theories of change and measuring and attributing predetermined impacts are no longer suited to a world defined by uncertainties and interdependencies (Ofir and Rugge, 2021).

How can policy evaluation support transformative policies that are experimental in nature? A key goal of evaluation is to inform and provide developmental feedback for system transformations (Ofir and Rugge, 2021), and to support social learning built on such feedback. Indeed, social learning is critical for changing socio-technical systems (Schot and Steinmueller, 2018); it occurs when a heterogeneous set of actors share their knowledge and assumptions in an interactive process aimed at creating new knowledge, generating trust among the actors and leading to joint action (Pahl-Wostl, 2006). To support social learning, evaluation practice takes on specific characteristics and requires values and attitudes that are different from those required for other kinds of evaluative practice.

This article (1) explores how and whether social learning can happen through evaluation practice, and (2) identifies specific values and attitudes that evaluators need to develop to support such practices. We address these objectives by means of a detailed study of two contrasting cases:

1. A pilot initiative launched by the Swedish Innovation Agency (Vinnova) developing innovative food production and commercialisation strategies to transform the Swedish food production, distribution and consumption systems to make them more sustainable.
2. The Adaptive Cities Through Integrated Nature-Based Solutions (ACT on NBS), a project that aims at upscaling the application and quality of NBS to increase urban resilience against the effects of the climate crisis.

The work was conducted in the context of the global Transformative Innovation Policy Consortium (TIPC). This consortium consists of research and policy partners, including innovation and research agencies from Finland, Sweden, Norway, South Africa and Colombia (<http://www.tipconsortium.net/>). TIPC aims to shape and deliver a new transformative innovation policy (TIP) framework based on the notion that addressing our societies' key challenges requires profound changes in current socio-technical systems.

The next section presents key concepts of the evaluation approach we have developed. We then describe the two cases, providing contextual information and describing the evaluation process in which we engaged. We then use the experience derived from these cases to address the two aforementioned objectives.

A formative approach to the evaluation of Transformative Innovation Policies

TIPC has developed a formative approach to the evaluation of Transformative Innovation Policies (TIPs) that involves assessing the changes associated with or leading to socio-

technical transitions (Molas-Gallart et al., 2021). This approach is based on an understanding of how transformation of socio-technical systems happens according to a specific type of sustainability transition theory known as the Multi-Level Perspective (MLP) (Rip and Kemp, 1998; Geels, 2002; Geels and Schot, 2007). In the TIPC's formative evaluation approach, the MLP is used as a baseline, and the generic Theory of Change (ToC) for the development of specific ToCs tailored to individual programmes and interventions. In this section, we discuss this generic ToC approach and how TIPC has used it for developing a formative evaluation approach.

Multi-Level Perspective and the twelve Transformative Outcomes

A transition is a change in socio-technical systems, which are stable and dominant configurations of markets, user preferences, industries and industrial strategies, policies, cultural practices and technologies providing specific ways of serving a particular basic need or societal function (Smith et al., 2010). Socio-technical systems are constructed and maintained by actors who are guided by a set of formal and informal rules that together form a regime. These systems change when shifts occur at different levels, as theorised by the MLP: dynamic and complex interactions emerge between actors advancing new solutions and ideas in niches deviating from the dominant rules, and exogenous trends and shocks generate tensions from the landscape level (Rip and Kemp, 1998; Geels, 2002; Geels et al., 2016).

These interactions can follow different pathways depending on the emergence and maturity of alternative socio-technical systems in niche spaces, the influence of landscape trends and shocks (the climate crisis, increasing inequality, pandemics such as COVID-19, and digitalisation) as well as the “hollowing out” of the regime as regime actors lose confidence in the ability of regime rules and improved system performance to provide responses to landscape shocks and to compete with solutions offered by niche actors (Smith et al., 2005; Schot and Geels, 2007; Ghosh et al., 2021). The main contribution of the MLP is the insight that systems transitions may occur when three conditions are met: 1) a regime is destabilised, 2) niches provide strong alternatives at scale, and 3) landscape trends and shocks are perceived by regime and niche actors as a window of opportunity for a transition.

Building upon the MLP, TIPC developed and experimented with a formative evaluation methodology focused on twelve Transformative Outcomes (TOs) that together address the three conditions referred to above. The TOs are divided into three macro-processes: (1) building and nurturing niches, (2) expanding and mainstreaming niches, and (3) unlocking and opening up regimes (Ghosh et al., 2021; Molas-Gallart et al., 2021). In TIPC's methodology, the notion of “outcome” refers to a goal to be achieved — for example, a better network — but it also refers to the related process (networking) that will develop over time. As a result of the formative evaluation process, the state of play of these outcomes can be measured at a particular moment in time, but then it can also be stretched for transformation purposes (Gosh et al., 2021). In other words, these outcomes need to develop over time, and it is the aim of a formative evaluation process to contribute to this development.

Table 1 introduces the twelve types of TOs adapted from Schot et al. (2019) and Ghosh et al. (2021), as presented in Molas-Gallart et al. (2021: 437).

Niche building

Shielding	Offering protection for niche experiments and normalising these protection measures. Protection can be offered through subsidies but also market benefits, such as a VAT exemption or cultural protection by trying to change the meaning or perceptions of a specific solution through a media campaign.
Learning	The first order (optimising existing behaviour) and second-order (changes in frames and assumptions) in or across several system dimensions (science, technology, innovation; markets; culture and symbolic meanings; industrial strategy).
Networking	Participation in the niche of a wide range of diverse (in terms of niche and regime actors and in terms of regime dimensions) stakeholders. Building and strengthening ties among actors in a niche. Creation of a community of practice ensuring resource mobilisation. Emergence of intermediaries in facilitating the above.
Navigating expectations	Creating space for voicing new and alternative expectations and bridging the diversity of expectations, building a shared vision.
Niche expansion and embedding	
Upscaling–Increasing user adoption	Spread of the adoption of new practices and rules, bandwagon effect.
Replication	Replication of niche conditions in different contexts. Adaptation of a niche in a different locality.
Circulation	Circulation of ideas, people, tacit knowledge, rules across niches and system dimensions. Emergence of system intermediaries.
Institutionalisation (formal and informal rules)	Developing standard definitions, narratives, regulations and preferred types of behaviours, beliefs and values. Establishment of certification schemes, protocols, etc. Development of a mature market niche.
Opening up and unlocking regimes	
Destabilising and de-aligning regimes	Disrupting policy frameworks and governance arrangements taking advantage of tensions between regime dimensions. Phasing out of policies and implementation of other policies disrupting the dominant socio-technical system.
Unlearning and deep learning of regime actors	Second-order learning among regime actors — change existing values and beliefs. Unlearning routines based on existing skills and capabilities. Emergence of new policy assumptions.
Empowering niche-regime interactions	Creation of formal and informal linkages between niche and regime actors. Emergence of intermediators facilitating such linkages.
Changing perceptions of landscape pressures	Regime actors develop new interpretations of the nature and consequences of trends (such as climate change, loss of biodiversity, pollution, rising inequality, digitalisation, urbanisation) and shocks.

Table 1: The twelve TOs. Source: Molas-Gallart et al. (2021: 437).

Key principles of the formative evaluation approach

TIP evaluation focuses on assessing the progress in achieving TOs, in order to enhance the prospects for system change or a sustainability transition. This focus makes it possible to assess whether and how interventions (projects, programmes and policies) contribute to system change, within a certain time period and space. In this evaluation approach, the TOs are defined as changes in behaviours, organisations and institutions that are expected to come about as a result of the activities carried out through the intervention. The processes through which these changes are expected to occur are presented in a ToC which is built collaboratively by the policy stakeholders. Our approach shares commonalities with the adaptive and systemic approaches to evaluation called for by Patton (2011; 2020), but it differs in that it is grounded on a theoretical base (the MLP and the twelve derived TOs) informing how system change is expected to happen. Unlike most theory-oriented approaches in which the evaluator builds the programme theory interpreting the expectations of the actors involved in the intervention (Stame, 2004), we actively use TIP theory to co-produce with the policy actors a ToC that focuses on TOs

(Molas-Gallart et al., 2021). Table 2 presents a short description of the six key principles of this approach, described extensively in Molas-Gallart et al. (2021: 435–436).

Adopt a formative approach to evaluation	An evaluation conducted with the participation of stakeholders with the main purpose of improving the definition and implementation of the interventions being evaluated. Under this perspective, evaluation should be understood as a reflexive practice aiming at helping policy actors to navigate their TIPs and contributing to their capacities to do so.
Integrate evaluation with policy design and implementation	Evaluation as part of the transformative policy and, therefore, coherent with the stated research and innovation policy objectives (directionality, societal goals and system impact). Evaluation as a strategic part of the design and implementation process of TIPs.
The evaluation process should be inclusive and participatory	The inclusivity characterising TIPs should also be present in the evaluation process. Participants in TIPs should join in their evaluation, with external evaluation experts mainly acting as facilitators; for instance, paying attention to the power dynamics that may lead to some voices being heard more than others. Therefore, evaluation should facilitate participation and open debate, channelling power conflicts, and differences in interests and perceptions.
Use a mix of methods and techniques	Rather than being driven by formalised standard protocols, evaluation needs to be adaptable and flexible, selecting different methods and techniques according to the policy context and its transformative nature.
Use a nested approach to assess multi-level TIPs	TIPs can operate at different levels. Niche projects are local initiatives attempting to generate or support a specific niche. Programmes may bring together several niche projects and will seek to develop links and relationships between them that will facilitate scaling up. Finally, several programmes can combine with other policies in policy mixes.
Use a flexible Theory of Change (ToC)	ToC is typically defined by policy stakeholders and starts by identifying the main changes that an intervention is aiming to achieve. Policy goals are therefore defined as changes to a baseline situation. Next, participants work backwards from such intended changes to identify the processes that will lead to them, and how these processes will be triggered by the intervention. In this way stakeholders, with the help of evaluation experts, produce an expected process linking the activities triggered by an intervention with its results. Our ToCs will be flexible, implying that they should not be understood as a fixed causal chain; rather, they can be revisited and redefined as a result of the formative evaluation process. The ToCs will be used to foster learning and reflexivity among participants and to help assess if the policy is contributing towards advancing its objectives.

Table 2: Six principles of formative evaluation approach. Source: Molas-Gallart et al., 2021.

When stakeholders, including policy-makers, are co-constructing the ToC, they will identify how expected changes due to the policy intervention can be mapped against the twelve types of TOs described in Table 1. It is important to note that we are not proposing that policy interventions should comprehensively cover all outcome types; in most cases this would not be feasible. What the TO framework offers is a guide that enables users to become aware of how their activities are positioned against the range of processes required to achieve socio-technical transformation, and how they can improve the contribution of their intervention to a specific transition. The framework also clarifies what is still missing and may lead to a search for combining various projects, programmes and policies in order to cover all outcomes.

Applying our approach

The case of food policy at Sweden’s Innovation Agency (Vinnova)

In 2019, Vinnova started an experimental process to design mission-oriented policies for mobility and food challenges guided by the Sustainable Development Goals (SDGs). In December 2019, the agency engaged TIPC researchers to explore the rationale, practice and feasibility of a formative evaluation to enhance the transformative capacity of their mission-oriented experiment. Through this process, Vinnova aims to deliver an in-house demonstrator for how to work towards systems transformation. Vinnova’s leadership recognised that this type of work implied dealing with complexity and uncertainty on a much higher level than they were used to, and they wanted to develop a new role for Vinnova as a change agent across government. The mission-oriented experiment intended

to push Vinnova to develop new relationships with other national agencies that need to be involved in system transformation (Sjöblom, 2021).

The main objectives of our work were to assess whether the policy initiatives being assessed were advancing towards delivering on system transformation and to derive and apply learning from this assessment. Our core assumptions were as follows:

1. Researchers and practitioners must move beyond the specific *outputs* generated by a specific innovation activity and focus on achieving socio-technical systems change.
2. Such socio-technical systems change will occur beyond the locations and periods where the initial projects and interventions have taken place. If we wait to assess a policy until its potential *impacts* are starting to emerge, it may be impossible to attribute such impacts to the policies under assessment, and the lessons derived from the analysis will be obtained too late to be used in an effective learning process. Therefore, it is essential to define a set of more immediate transformative outcomes.

The process in which we engaged can be summarised in three phases.

Phase 1: Navigating expectations (February–July 2020)

For six months, the teams from Vinnova (an analyst, the head of the mission-oriented policies group, two programme managers) and TIPC (four researchers, one communications manager) held five collaborative sessions to develop a mutual understanding, define the area on which the evaluation would focus (food or mobility) and agree on a number of selected transformative outcomes.

After several discussions, the Vinnova team decided to map the activities for the food retail mission, where Vinnova was developing a series of working relationships with other national agencies. These interactions had been focused on defining and implementing entry points for the missions through expert participatory workshops with other relevant government agencies and actors from the food sector.

The TIPC and Vinnova teams organised three workshops to find common ground and develop a theory of change. This proved to be difficult since Vinnova was engaged in an experimental approach that was less directed, in which the desirable intervention results would emerge and be identified as a result of the experimentation, instead of being guided by a pre-existing ToC. Therefore, instead of developing a full-fledged ToC, the work focused on identifying desired outcomes and their accompanying assumptions. Twenty outcomes were initially defined related to changes in local food production and distribution, local shops, shopkeeper skills, neighbourhoods and others. In the next step, these outcomes were matched to our set of Transformative Outcomes. This process led, on the one hand, to a refining of the desired changes anticipated by the Vinnova team, and on the other hand, to the selection and definition of six transformative outcomes, mainly related to one of the three macro-processes: the opening up and unlocking of regimes.

Besides the joint workshops, a fluid and closer relationship was built with one of the Vinnova team members who acted as an intermediary, helping in the application of our

approach to the Vinnova context. Having such an intermediary proved to be crucial in guiding the process and defining the best approach to advance in the engagement. The team meetings were co-designed and co-developed with the intermediary, and this was conducive to building trust between both teams and navigating expectations more effectively. The final part of each of the three workshops was dedicated to reflecting on the encounter, on how the participants felt, what worked and what did not. As a parallel strategy to reflect upon the engagement, the Vinnova team member who served as an intermediary and two TIPC team members used a diary in which they recorded their reflections on the learning process from the perspective of knowledge, attitudes and interactions (van Mierlo et al., 2010). This “reflexive learning log” was an effective tool for recording the process and reflecting on what type of learning was or was not being developed.

Phase 2: Adaptation and transformation (August–December 2020)

During the second half of 2020, the context for the formative evaluation work changed. Vinnova launched a new organisational configuration which included the creation of a food area within the agency. As a consequence of the changes this caused, the Vinnova team engaged with this work was reduced to two people (the person who had acted as an intermediary and the previous project manager, now head of the newly created food area), while other members of the original team were reallocated to other tasks. The continuing involvement of the new head of area signalled that the engagement continued to be seen as important, despite the reduced resources. Work continued reducing and refining the six previous outcomes down to four, focusing on the mid and long term. The reduced Vinnova team and the TIPC researchers team defined assumptions for four outcomes along with indicators for measuring progress. The result could be seen as a simplified ToC reflecting elements of both the original strategic design approach used within Vinnova and the TIPC approach (see Figure 1). Three of the final four outcomes focused on regime changes:

- Understanding of the food system in terms of agents and configuration.
- Policy and business actors within the food system change their perception and behaviour towards the relationship between the three dimensions of sustainability.
- Government agencies are working together to produce alternatives for new sustainable retail systems.

While one outcome addressed changes in niches of the food system:

- New understanding and agreement on a future store in terms of functioning and services

Phase 3: Broadening learning

From 2021 Vinnova’s re-organisation took full effect, affecting the human resources available to implement the evaluation and other planned activities for the retail food strategy. The prototyping of a new kind of store, which provided the basis for one of the outcomes, was put on hold, leaving three outcomes to monitor and evaluate. Yet, the TIPC and Vinnova teams expanded their efforts beyond food retail to analyse additional food mission activities aiming to change the school food system. The underlying assumption was that by analysing the historical data and activities for both initiatives, the food area would be in a better position to reflect on the learned lessons and re-shape their future activities to avoid transformation failures. Furthermore, the work expanded beyond

the food area, thus reconnecting with the original objective of disseminating learnings to the whole organisation. In this phase, three workshops were organised, two with the food area and one with other Vinnova areas, and a co-creative and collaborative space was maintained to support learning and reflexion for the core Vinnova-TIPC teams and showcase the results. At the time of writing, the work with Vinnova is expanding beyond the food area.

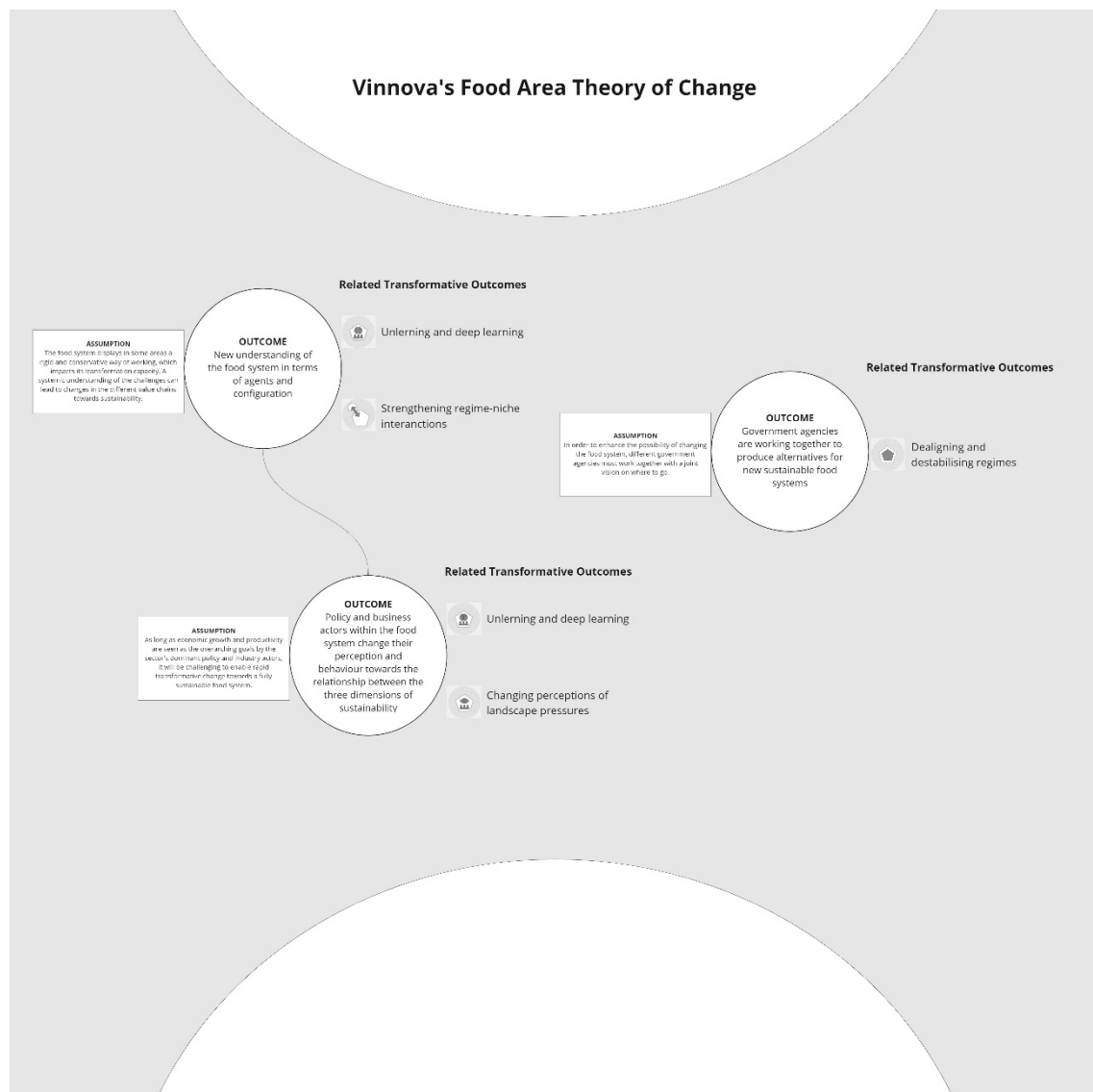


Figure 1: Vinnova's food policy ToC

Case 2: ACT on NBS

ACT on NBS was a three-year project (2018–2020) funded by EIT-Climate KIC. It aimed to upscale nature-based solutions (NBS) in cities to increase urban resilience against the effects of climate change. NBS are living designs inspired and supported by nature that address various environmental challenges while simultaneously providing socioeconomic benefits, helping build resilience, and bringing natural features and processes into cities, landscapes and seascapes through place-based, resource-efficient and systemic interventions (EC, 2015; EC, 2016). One of the project's initial aims was to create a self-sustainable Innovation Ecosystem, bringing together city representatives

and stakeholders, including researchers and experts, from different cities. The goal was to create a space for EIT Climate-KIC and its partners to build on existing initiatives to rapidly upscale current applications of NBS within cities.¹

Our engagement started in February 2020 as part of the MOTION project, a partnership between TIPC and EIT Climate-KIC aiming to develop and test an innovative methodology to advance transformative change. MOTION was positioned with the EIT Climate-KIC programme as a demonstrator of a way to facilitate learning on how to induce system change.²

For ACT on NBS, we constructed a Theory of Change through an inclusive and participatory approach in which the research team worked in partnership with project stakeholders. The ToC played the role of a roadmap to maximise the project's transformative potential.

Phase 1: Navigating expectations (February – April 2020)

Between February and April 2020, we engaged with an ACT on NBS core group formed by nine participants playing key roles in the various ACT on NBS work packages. When we started our collaboration, the project was midway through its implementation. Following Climate-KIC funding requirements, it was managed using a logic-frame logic, with measurable Key Performance Indicators to demonstrate how effectively it was meeting its objectives (i.e., number of start-ups created, number of products launched to the market, etc.).

Since we joined a project that had already developed its own management and evaluation practices, it was critical to introduce our approach and clarify our role in this engagement, acting not as external evaluators but as partners to help ACT on NBS become more transformative. In addition, we made efforts to understand the working context of the project and the perspectives and expectations of the members to ensure that our participation would not be disruptive and to enable us to build trust with our partners. To this end, we collected data to document the main lessons learned during the initial stages of ACT on NBS, the overall engagement process, and the partners' expectations in relation to their work with us. The data consisted of the initial material provided by Climate-KIC (project plan, performance report and community engagement report) and the results of a series of initial semi-structured interviews with ACT on NBS partners. Finally, we performed a stakeholder analysis drawing on the information gathered, internet searches and communications with our Climate-KIC clients.

Phase 2 – Understanding changes (April–May 2020)

During our preliminary assessments, we learnt that, before MOTION started, ACT on NBS partners had already established five log-frame ToCs for each of the project's work packages (COR, 2019). This highly structured format posed a challenge for the

¹ <https://www.wur.nl/en/Research-Results/Research-funded-by-the-Ministry-of-LNV/Expertisegebieden/kennisonline/Adaptive-Cities-Through-integrated-Nature-Based-Solutions-ACT-on-NBS-1.htm> The cities involved are Amsterdam, Bologna, Bratislava, La Spezia, London, Madrid, Milan, Nicosia, Orleans Metropole, Prague, Savona, Torino, Union of cities in Slovakia, Utrecht, Valladolid, Vejle, Warsaw and others.

² <https://www.tipconsortium.net/experiment/the-motion-project/>

enablement of our approach, in particular for articulating how transformative outcomes would emerge due to the interactions across the five WPs. For this reason, in this phase we co-produced a general overarching ToC, without using transformative outcomes, by analysing and synthesising the five log-frames. We prepared it using a colour code so that all partners could keep track of the original content while working on the synthesis.

Based on the insights gained through this analytical step, we organised a first online workshop. This two-hour workshop was attended by five key participants divided into two groups: one worked at the level of city representatives, and the other at the level of general stakeholders/end-users and the community of innovation. In both groups, we sequentially asked participants to further specify the (1) activities, (2) outputs and (3) outcomes included in the elicited overarching ToC. The results from this first workshop helped us inform the design of Phase 3, particularly the overlaying of the initial ToCs with our TOs.

Phase 3 – Connecting ToC with transformative outcomes (July–August 2020)

Next, we organised a second workshop to assess the usefulness of the TOs typology as a formative evaluation tool. During the first part of the workshop we introduced the notion of TOs, the theoretical origin of concepts used and their use in MOTION to underpin a formative evaluation process. Participants were asked to review the twelve TOs, their corresponding macro-processes, and a series of examples prepared to illustrate them. In the second part of the workshop, we asked participants two evaluative questions: (1) to describe why and how they considered that their own outcomes could be linked to the TOs typology; and (2) whether they were comfortable with using the Transformative Outcomes to produce a new ToC using the TOs.

To complement this workshop, we undertook a series of interviews to understand whether and how the introduction of the Transformative Outcomes had contributed to the partner's systems thinking and reflections regarding the project's activities, long-term goals and desired impacts.

Phase 4: Building a synthesis narrative of ACT on NBS (October 2020–April 2021).

From October to December 2020, we developed a narrative of ACT on NBS using a qualitative descriptive approach. We produced two data visualisations providing an overview of the information obtained, performed a “thematic analysis” of the interviews to understand how they referred to the TOs and carried out a “content analysis” of the bulk of edited transcripts in order to develop the ToC further. It was important to understand which outcomes were the most relevant by taking into account their leveraging potential, the availability of resources and the support we could provide. Next, we mapped the resulting outcomes and their potential causation chains. Finally, we produced the final ACT on NBS Theory of Change narrative, including a graphic representation of the expected change pathways. Through several rounds of internal drafting and revision, three main pathways were identified (Figure 2):

- *Networking and learning (Orange pathway)*
- *Circulation and replication (Green pathway)*
- *Upscaling and institutionalisation (Blue pathway)*

Each narrative presents a pathway that includes activities, outputs, and outcomes. Significantly, partners suggested the inclusion of a path developing Community of Innovation (e.g., entrepreneurial actors, start-ups, innovators) and a Community of Practice (e.g., general stakeholders including unconventional actors), which were both considered to be fundamental components of a robust Innovation Ecosystem for upscaling NBS in cities.

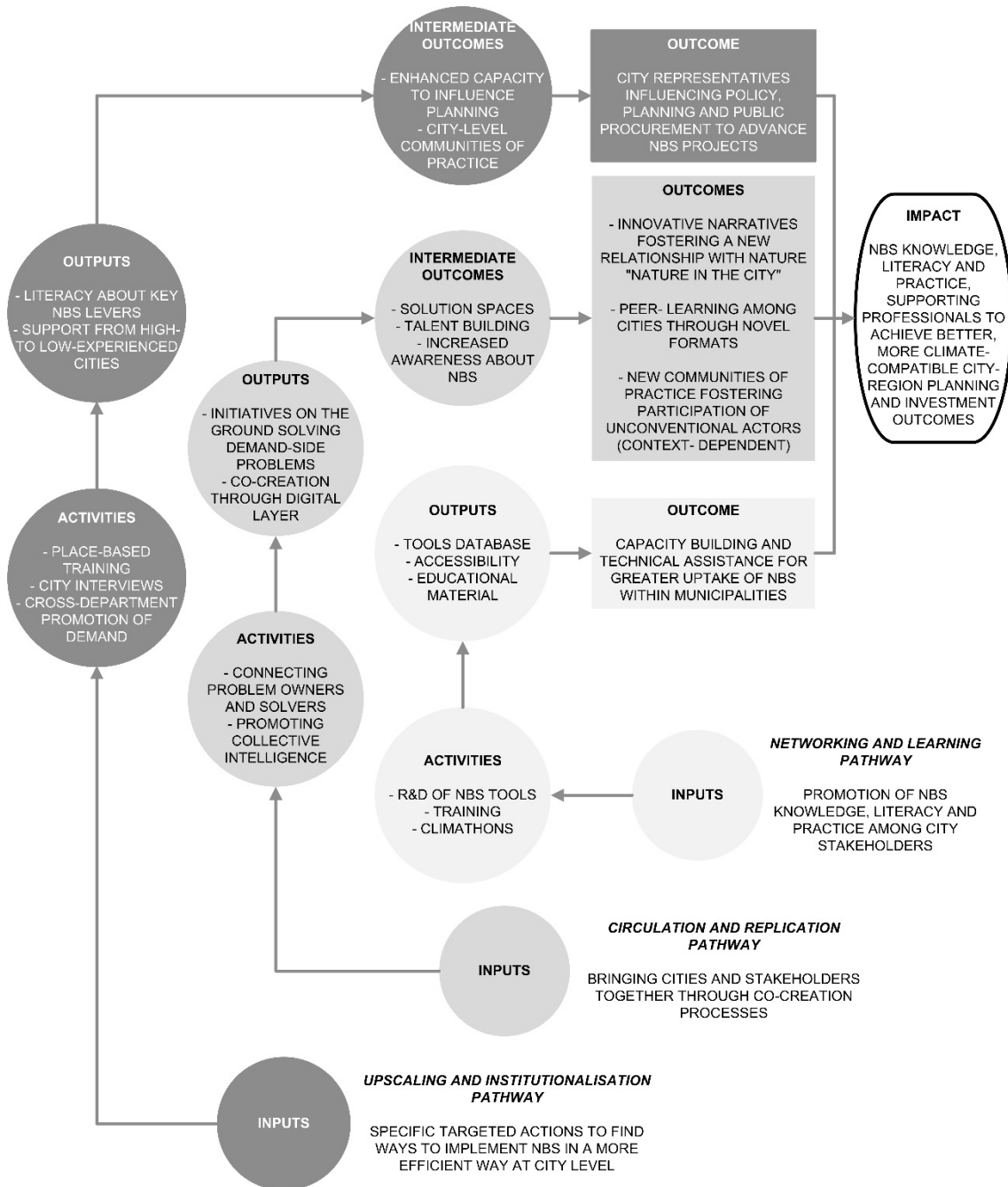


Figure 2 ACT on NBS Transformative Theory of Change

Social learning and the implementation of formative evaluation approaches

In this section, we return to our two research questions about how and whether social learning took place in the two cases presented above, and which specific values and attitudes the evaluators had to develop and perform to enable social learning. As we show in this section, we can identify several ways through which social learning took place: through the construction of mutual understanding and trust, the creation of safe spaces and with the assistance of different evaluation techniques assembled to fit the specific context of application (bricolage) and the supporting use of transition theory as presented through the twelve Transformative Outcomes. Finally, we will discuss engagements, challenges and tensions that emerged during the process and the role of intermediaries mitigating the tensions.

All the quotes appearing in the three subsections have been anonymised. They are taken from the interviews conducted in the two cases, the learning history and the “log” developed during Vinnova’s engagement.

How evaluation practice supported social learning

Building trust and understanding through safe spaces

“We have found that clearly expressing each other’s assumptions and expectations and the intervention at the start of the process is a factor of success.” (Vinnova team member). In Vinnova’s engagement, we did not spend enough time at the beginning of the engagement to get to know each other and to understand each other’s (TIPC’s and Vinnova’s) perspectives and methodologies. This happened because the TIPC team felt pressed by the need to deliver tangible outputs, so we focused on defining a ToC and did not pay enough attention to clarifying mutual expectations. As a result, the amount of time needed to work together, the mission-oriented methodology used by the Vinnova team and the roles of each of the TIPC and Vinnova members were not initially clear. This led to misunderstandings and frustrations, but, progressively, through the interactions and conversations, the group gained a deeper understanding of each other’s expected contributions, context and similarities and differences in their understanding of how policy could support transformation. The following quote from a Vinnova team member expresses the relevance of dedicating time to share and agree on goals and expectations.

When I think of setting up a similar project in the future or in another context, I think one of my main takeaways is that it would be necessary to spend more time talking at the beginning of the project. Within the group, you need to allow for everyone to clearly speak out about expectations and assumptions. What are the assumptions about each other, and what do we as researchers and practitioners, as well as individuals, expect when it comes to working with each other? (Vinnova team member).

In Act on NBS’s engagement, we followed a different approach: we invested two months (February and March 2020) in getting to know each other’s context and expectations on the engagement. These previous interactions were helpful in designing the workshops, in which we insisted on the importance of aligning mutual expectations. However, the virtual challenge provoked by COVID-19 added another layer of complexity. We engaged with experimental methodologies, built up a team and did it all through online tools.

Having a safe and respectful space to talk about the process has been fundamental for us to enable co-creating processes:

Having the opportunity, in a safe space, to have a serious conversation around what we are doing while we are doing it and to build up trust. To come to that point has taken some time, with some excursions outside of the map that we intended to be within, but I think I have learned a lot. (Vinnova team member).

A “bricolage of techniques”

Yet, understanding each other’s points of view when the participants hold different sets of capabilities, backgrounds and cultural background can be stressful, challenging and time-consuming. It requires the team to remain flexible regarding the expected outputs from each interaction and assume that diversions from the original plan can be a source of meaningful learning and should be accepted and even embraced. To this end, we used different sets of techniques. In Act on NBS, we employed (online) interviews and workshops, a stakeholder analysis using an interest-influence matrix, a “thematic analysis” and a “content analysis” to get ideas to develop the ToC. In Vinnova, we organised face to face and online workshops, used online interviews and developed two tools (the log and the learning history) to capture the learnings accumulated through the process. We acted as *bricoleurs*: “Bricolage is built on a foundation of eclecticism, an open-minded approach that eschews rigidly following recipes about how things ought to be done but instead considers multiple methods, designs, and inquiry possibilities, often combining diverse approaches in creative and situationally appropriate, insightful, and useful ways.” (Patton, 2020: 101). As in the Blue Marble evaluation approach proposed by Patton (2020), in our formative evaluation approach, a *bricolage* of techniques proved to be essential given the diversity of situations, applications and the dynamic nature of the different policy interventions with which we interacted.

Rooting the evaluation approach in theory

Our formative evaluation approach has a strong theoretical background based on transitions theory. We have realised how this distinctive feature makes our approach meaningful for participants, allowing them to reflect on their intervention and, eventually, to reorient it. In the ACT on NBS engagement, participants stressed how transitions theory helped them reflect on their interventions and find common elements among the different working packages that were initially designed individually. Our external position with regard to the project helped us to introduce theory as a means for further reflection and to help develop a ToC.

From my perspective, what was useful is that you posed questions that are really important and it is always good to think about those questions but also to discuss them with someone who is neutral in a way, and then you can provide us with your view of the project, about what we are really doing, and how the dots connect together. (ACT on NBS participant).

The following quotes are more specific on the role we played to clarify the directionality of the intervention and to reinforce the transformative capacities of key actors:

Thanks to the interaction I perceive transformative innovation in a more positive and focused way [...] For me, working with a Theory of Change approach was really new.

It's a prerequisite now in projects, so [ACT on NBS] was kind of a preparation for future projects. It opened my eyes into what you can or cannot influence, what resources you need, what paths you can follow in a structured way to reach the final goals. (ACT on NBS participant).

You have done a great job helping us through the process, both in terms of understanding and implementation of objectives. Very useful for honing and translating our initial ideas about what an innovation ecosystem should be doing, a bit more targeted with goals and objectives that you have to articulate around the transformative outcomes. (ACT on NBS participant).

In the Vinnova case, our theoretical inputs were more difficult to introduce. When the TIPC team started its engagement, Vinnova was designing its intervention following an experimental strategic-design approach (Hill, 2012). According to this approach, a way of delivering ambitious change is a continuous design of a prototype that can be tested and refined over time (Young, 2010), without pre-defining specific desired outcomes (Gaziulusoy and Erdogan Oztekin, 2019). Instead, we started our engagement attempting to build a ToC and then deriving the TOs from it. This resulted in a clash between the two different perspectives, which brought tensions and difficulties. As one of Vinnova's participants recalled:

From the broader perspective of the mission-oriented work and its design-oriented approach, it has turned out to be complex and somewhat "unfitting" to map up a ToC in the "classical way" [input-output-activities-actors-outcomes] at this point in time. The mission-oriented work is not based on a pre-defined map; rather, the work is to build up along the way, with an overall direction [the missions] as the guiding principle. (Vinnova participant).

To address this initial differences, we focused on the objectives and practices laid out in the previous two sections: developing trust and mutual understanding through the generation of safe spaces, and the use of a variety of techniques in a flexible way. We also abandoned the idea of mapping up a ToC and focused, instead, on identifying the four most relevant outcomes that the food policy team wanted to achieve (see Figure 1).

The role of intermediaries

In the Vinnova project, a crucial element that helped us deal with the difficult situation and the theoretical complexity of our approach was the role of the intermediary. In our experience, the intermediary became essential to the progress of our engagement:

When you try to bring something as new as the transformative outcomes, which is somewhat theoretical, to a group of people who work within different contexts, you need a translator, and you need someone who translates our words. I think we are fulfilling this role as well, but it is obvious to me that you need someone from the agency, from the organisation. (TIPC team member).

Online interactions make it more difficult to grasp an experiential understanding of the context of the project, and thus the role of an intermediary becomes even more crucial. The person who took on this role helped us to make our theoretical framework and methodology more applicable and context-sensitive. In addition, she gave us updated information on relevant organisational changes, participants' duties and time constraints,

etc. Finally, these numerous interactions between the intermediary and the TIPC team became essential for establishing trust with the intermediary and, through her, with other Vinnova participants.

As one TIPC member pointed out:

Her intermediation had opened up possibilities to understand each other's expectations and to unblock different stages in the process when frustration was growing among all the team members [...] I have had one-to-one conversations with her, and she has helped me to understand better the mission's group dynamics and reflection processes. By doing that, I have gained trust, and I have enlarged my readiness to reflect on the processes. Then, I consider that having a person in her role is fundamental for each of the projects we envisage in the coming times. (TIPC member).

In the Act on NBS engagement, nobody emerged to play the intermediary role and the result was the need to establish trust with each and every one of the Act on NBS team members with whom we were engaging. We relied on individual conversations as the main way of communicating, and our engagement thus became much more time consuming.

The evaluator: attitudes and values

As we have described, the two engagements became sources of learning both for the project participants and ourselves, but both processes were challenging. A Vinnova team member described in some detail the problems we faced:

One problematic, and commonly occurring, aspect of this is the way we as practitioners tend to relate to researchers as consultants [...] researchers are viewed as experts who are supposed to help the practitioners to solve specific issues. Practitioners, who tend to be busy and focused on practical solutions, thus enter the exchange with a "what's-in-it-for-us" mentality, and expect the researchers to deliver tools and advice in a similar way as consultants would. In the case of TIPC, I think this generally occurring tendency was a bit further enhanced by the ambitious (and indeed partly selling) tone and professional format of communications material of the consortium. Actually, in the same way, the high expectations on Vinnova (in general and within TIPC) might partly derive from the agency's capacity and strategy regarding communications and self-proclaimed profile. Another, quite contradictory, aspect of the imbalance in expectations, lies in the simultaneously existing assumption that researchers do not know the reality of the practitioners as well as the practitioners do themselves. (Vinnova team member).

In this way, the practitioners questioned our role as evaluators and brought us to a "discomfort zone". To deal with this situation, we had to acquire some of the values and attitudes that Patton (2020: 123) highlights as relevant for transforming the field of evaluation. Although these values and attitudes are part of a competence frame for educators,³ many of them are relevant to our role as evaluators and, taken together, they provide a distinctive set of evaluation competences. To what extent were they present in the way we carried out our engagements in the two cases presented here?

³ Patton's (2021: 123) global competence matrix was created in collaboration with the Teachers College Columbia University and the Asian Society for the Global Competence Certification Programme. More information at www.worldsavvy.org

Questioning prevailing assumptions. The experimental ethos and the reflexive practice we have developed have been key to questioning our assumptions and aligning expectations. For the TIPC team, one main assumption we questioned was the need of a “classical” ToC to conduct the formative evaluation. As we have described before, in the case of Vinnova, we abandoned this idea and focused instead on the identification and monitoring of desired outcomes.

Empathy and humility. These two attitudes go hand in hand with the evaluation practices supporting social learning described above. Building trust and mutual understanding, as well as recognising the essential role of intermediaries, requires putting aside the “expert” ego and engaging with the practitioners with a high degree of empathy.

Openness to new opportunities, ideas and ways of thinking and valuing of multiple perspectives. In the two cases presented in this paper we have used a combination (“bricolage”) of techniques. In the Vinnova case we combined our approach with the design thinking approach that was being used by the practitioners looking for and finding common points, and in the ACT on NBS case we tried to integrate the participants’ perspectives and ways of thinking with our Multi-Level Perspective and the use of Transformative Outcomes.

Comfort with ambiguity and unfamiliar situations. The COVID-19 pandemic forced us to work remotely, not only with our partners but also within the TIPC team. This was a totally “unfamiliar” situation. Another “discomfort” came from the characteristics of the cases we addressed. We are mainly trained as researchers rather than facilitators. Yet, our role as evaluators in this approach required the application of facilitator skills: many of our tasks were those of a facilitator. Also, we were unfamiliar with the two contexts within which we worked and the communities we engaged with. We had never met any of our partners, nor had we worked with their institutions. Taken together, we were often outside our comfort zone, and yet the combination of flexibility, openness and humility and the individual and collective reflection we engaged in after each interaction helped us adapt and work comfortably.

Adaptability and the ability to be cognitively nimble. This attitude is closely related to the previous ones. Due to the experimental character of the engagements, we had to be adaptive and agile. The bricolage of methods and the flexibility in using the ToC are examples of these attitudes. Challenges like the difficulties in applying our theory-based approach required adaptations that, while preserving the theoretical foundations of our approach, led to diverse ways of setting up the evaluation activities. We combined our approach with others and played facilitating and mediating roles to make our interactions more dialogical without losing theoretical depth.

Conclusions

We have opened this paper highlighting the need to revisit, redesign and reconfigure evaluation practices to support transformative changes (Ofir and Rugge, 2021). We have described how a formative evaluation approach, based on transition theory, had contributed towards triggering social learning in Vinnova and ACT on NBS engagements. Social learning is critical to bring about transitions and transformative changes (Schot and Steinmueller, 2018), and in the two cases, mutual understanding, trust

building, safe spaces and the bricolage of methodologies were identified as drivers that made social learning possible. Moreover, we have highlighted how the use of transition theory (the Multi-Level Perspective and the twelve Transformative Outcomes) was useful for participants to bring a more transformative directionality to their interventions. During the engagements, however, challenges and tensions emerged and the role of the intermediary became a very important support for the implementation of our evaluation approach.

We were also challenged in our role as evaluators, as we had to develop different values and attitudes from those common in evaluation practice. We *questioned prevailing assumptions*, and exercised *empathy and humility* without difficulty, but *opening to new opportunities, ideas and ways of thinking and valuing multiple perspectives* became more difficult because of our reliance on a specific and rather complex theoretical framework. We also found it difficult to be *comfortable with ambiguity and unfamiliar situations*, and with *adaptability and the ability to be cognitively nimble*. Some discomfort was present in the two engagements, but we learned how to deal with it and become more relaxed in situations where disagreements and differences in practices and culture emerge. *Adaptability* has been a must throughout the engagement, but, given our theory-led approach, there were limits to the extent to which we could become “cognitively nimble”. We did, however, combine different theoretical foundations when applying our approach to adapt it to the needs and concepts held by the participating practitioners. Although Patton (2021) does not mention reflexivity as a key attitude, it became very relevant in our context. A reflexive practice was crucial in both engagements, helping us overcome challenges and enabling social learning.

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