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## **Fostering Pluriversal Perspectives in Theory of Change**

*A Case of an Urban Regeneration Project*

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# Fostering pluriversal perspectives in Theory of Change: A case of an urban regeneration project

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**Abstract:** This paper chronicles how we used a Theory of Change visual map to support pluriversal perspectives in urban regeneration projects. The map was tested in four cities under regeneration as part of the T-Factor project. Unlike most Theory of Change maps, it supported city stakeholders in three main aspects: 1) planning interventions to operate within multiple time horizons, 2) considering multiple actors, both human and non-human, in the decision-making process, and 3) reflecting on planned interventions to ensure a long-term impact beyond project scope. In addition, the Theory of Change map led towards a new approach for portfolio-based interventions in urban regeneration projects, emphasising long-term thinking and prioritising care activities over tangible hard ends. The map supplements the classic evaluation-based Theory of Change model, expanding the logic of how a polyphonic change process in the urban realm could occur through collaborative design practice.

**Keywords:** Theory of Change; Urban regeneration; pluriversal design; Visual mapping

## 1. Introduction

Complex design projects, such as urban regeneration projects, often aim to create a positive transformation towards a more just and sustainable future by addressing the long-term considerations of a broad range of actors (Hölscher & Frantzeskaki, 2021). To plan effective interventions, city stakeholders need to map the current situation through existing problems and opportunities, envision the desirable change, and plan the necessary steps to make it possible. One tool that can help them do so is Theory of Change (van Tulder & Keen, 2018). Theory of Change was created in the 1990s as a logical planning model and as a way to explore and represent how a significant change can occur over time by mapping critical elements of a strategic process such as goals, envisioned impact and key change mechanisms and assumptions (Simeone et al., 2021). Nowadays, Theory of Change is also used in participatory setups for measurement and evaluation, favouring more granular communication,



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enhancing a systemic perspective and creating shared mental models among city stakeholders (Zohar et al., 2022).

However, traditional Theory of Change maps have two main shortcomings: first, they mostly take a single, often human-centred perspective (van Tulder & Keen, 2018); second, they are usually bound to a predefined and specified period of a project and suffer from a lack of conceptual clarity around time and temporality (Dawson, 2014). These two tendencies are problematic because urban regeneration projects involve various actors, such as individuals, institutions, animals, plants and, more broadly, complex social and environmental landscapes, each operating within a specific timeframe with different implications. By overlooking it, urban regeneration projects are not fully elaborating complexity. As a result, these projects tend to be limited to a 'series of 'now' moments' (ibid) and avoid considering the long-term (intended and unintended) consequences of design interventions (Zohar et al., 2023).

This paper will show how we experimented with various participatory mapping strategies within the context of T-Factor, an urban regeneration project supported by the European Commission and deployed in six European cities (Bilbao, Amsterdam, Milan, Kaunas, London and Lisbon). Our experiments show how mapping multiple perspectives and timeframes, which could remain abstract and elusive at times, can be better grasped, communicated and thought to address the full complexity of urban regeneration projects. Furthermore, this paper chronicles how we experimented with some visual aspects of Theory of Change to address these drawbacks.

The structure of this paper will be as follows: In Section two, we review existing literature according to the categories 'pluriversal perspectives in design' and 'Theory of Change in transformation projects'. Section three explains the methodology in use. Section four presents the case of the T-Factor project and the main findings. Section five contains the discussion and articulates the paper's main contribution. Section six summarises the conclusions.

## 2. Literature review

### 2.1 Pluriversal perspectives in design

Contemporary design practices, such as participatory design, stress the need to embrace diverse experiences, epistemologies, and histories (Kambunga et al., 2023). However, mainstream design practices generally adopt a human-centred perspective, addresses human needs (Akama et al., 2020) and relates to human time frames (Pschetz & Bastian, 2018; Ciobanu & Juhlin, 2022). In recent years, following the global environmental crisis, design scholars and practitioners have questioned the human-centred approach by pointing out the risk of having tunnel vision and occluding other beings (Fry, 2020). Paradigms like 'more-than-human design' advocate for pluralistic and relational approaches (Borthwick et al., 2022) to expand our understanding of the perspectives and needs of non-human species (Sachs Olsen, 2022). They call to consider a 'wider field of perspectives' (Redstrom, 2017), adopt the practice of 'participating with many' (Akama et al., 2020), and give voice to other species and actors operating within a non-human timeframe (Clarke et al., 2018). As a result,

entities such as animals, viruses, plants, landscapes, weather systems and artificial intelligence are slowly entering urban political life as active, interconnected bodies with a stake in the design process (Franklin, 2017). The concept of pluriversal perspectives is linked to the idea of polyphony by Bakhtin (1984, p. 208), as a 'multiplicity of independent and unmerged voices and consciousnesses... each with equal rights and its own a world [that] combine, but do not merge, into the unity of an event'.

The call to embrace multiplicity and plurality in design also relates to how we perceive and interact with time. Social and empirical sciences tend to conceptualise time as a linear, homogeneous and continuous flow (Pschetz & Bastian, 2018; Drucker, 2014; Ciobanu & Juhlin, 2022) measured on a human scale (Bridle, 2022). This approach is common in complex design processes such as urban transformation projects depicting time from a single, human-centred perspective (Farías, 2017). Alternative conceptions of temporality perceive time as an imaginary concept and, therefore, subjected to the perspective of the one who imagines it. According to this view, each actor has a different approach and narrative about the nature of time (Bridle, 2022; Drucker, 2014) and, therefore, time is always plural. The multiplicity of time recognises conflict and inherently requires compromise and adjustment between and among the various actors (Latour, 1997; Pschetz & Bastian, 2018).

Recognising the strong connection between design and our perception of time, design scholars have started to ask how we can treat time's special character (Aigner et al., 2011) and how we can design for other-than-human timescales, manage longer timescales and disclose the existence of simultaneous times latent in the world (Clarke et al., 2018; Mbembe, 2022; Pschetz & Bastian, 2018). Joining the call for designers to create artefacts and systems revealing the complexities of temporal relationships and negotiations across people, groups, and institutions, Bridel (2022, p. 120) suggests developing design tools that can "widen and extend our view across time and space so that we may become more attuned to the broader scale of the world we are entangled with". However, while the need to actively expand our thinking beyond the human-centred perspective and time scale is becoming increasingly evident, how to embody multiple worldviews and forge them into our consideration and practice (Akama et al., 2020) still needs to be clarified, as visual design tools used to support, develop and strategise urban regeneration processes adopts and strengthen the human-centred approach and avoid unfolding actors' full diversity and multiplicity.

## *2.2. Theory of Change and its use in urban regeneration projects*

Theory of Change was developed in the mid-1990s by practitioners in philanthropic programmes and impact evaluation (Weiss, 1995) as an analytical planning tool that could develop a more comprehensive understanding of how change may occur (Simeone et al., 2021). Traditionally, Theory of Change maps organise the logic of a project into categories, where every step leads to the following: context (the problem and opportunities that the project aims to address), planned activities/interventions, outputs (what is directly produced by the project), outcomes (the added value brought by the outputs), impacts (the long-term

aim of the project) and all the assumptions made when drawing the map (Simeone et al., 2023). This structure supports two purposes: promoting better-informed project planning by tracking causal links (Stein & Valters, 2012; Vogel, 2012) and supporting evaluation by articulating the basic assumptions behind the intervention (van Tulder & Keen, 2018).

Theory of Change is conventionally displayed using a map, which usually appears with a left-to-right orientation and a linear tabular structure (Davies, 2018; Simeone et al., 2021). Originally, most Theory of Change maps resembled those engineering diagrams that draw a process starting with 'inputs' and continuing with 'outputs' and describe it as a set of sequential instructions to accomplish a task (Zohar et al., 2022). Over the last decades, Theory of Change maps have been used in various situations of high complexity (Simeone et al., 2023), such as urban regeneration projects. Correspondently, the design of the maps has become increasingly diverse, and the visual representation can be adapted to the various contexts it serves.

Theory of Change addresses two main characteristics of urban regeneration projects. The first is the need to deal with complex and interlinked city domains, such as pollution, poverty and inequality, ageing infrastructure and climate change (Hölscher & Frantzeskaki, 2021). These kinds of wicked problems (Buchanan, 1992) can only be approached through long-term interventions, often lasting dozens of years, where multiple activities are needed over time. Theory of Change maps support stakeholders in shifting the focal point from the present situation to thinking in time, considering what could happen in the future and how the change can occur (Zohar et al., 2022); thus, these maps can help 1) co-create visions of a desired future (Irwin, 2018) which are an important key for generating a transformation and 2) break these visions into concrete steps to provide stakeholders with an operative plan to drive change.

Another characteristic of urban regeneration projects is the involvement of many city stakeholders, such as local government bodies, policymakers, companies, citizens, NGOs and local communities (Abbasi et al., 2018; Wang et al., 2021). Despite this polyphonic setup, the traditional structure of Theory of Change mainly results in a coherent and linear storyline presenting a single perspective, which risks failing to capture the behaviour of complex systems (Ofek, 2017).

To conclude, most Theory of Change maps are designed to represent a single, chronological and unspecified timeline, unfolding from the current to a future state (Rogers, 2014). At the same time, they often synthesise the needs and wants of different voices into a general unifying plan to support the great good without specifying who they represent. As such, the logic behind most of Theory of Change maps often avoid pluriversal perspectives and do not address the full complexity of transformation processes. This paper addresses the question: How can Theory of Change foster pluriversal perspectives within urban regeneration projects?

### 3. Methodology

This work employs a case study approach, closely investigating a real-life phenomenon (Crowe et al., 2011; Ridder, 2017). The case is T-Factor, a project funded by the European Commission that centres on developing "meanwhile activities" to optimise the transformative potential of urban regeneration areas. According to T-Factor, "meanwhile activities" are interventions in underutilised places, such as vacant lots and buildings, which create shared public value and alter the neighbourhood's social, cultural, and economic networks of the neighbourhood (definition derived from [www.t-factor.eu](http://www.t-factor.eu)). T-Factor aimed to support local communities in approaching the 'meanwhile time' as a window of opportunities to define desirable futures and create a portfolio of interventions to achieve them. To do so, T-Factor partners consolidated a methodology to support the communities involved in the project in the strategic process of defining their goals based on local needs and ideating how to reach them through local interventions. Among the missions defined by the local communities were promoting an active, healthy and green lifestyle, developing new collaborative governance models and laying the foundations for an alternative masterplan. T-Factor worked with six communities in Amsterdam, Bilbao, Kaunas, London, Lisbon, and Milan during this four-year initiative. Most of the communities were not organic but instead brought together numerous stakeholders with varied backgrounds, experience and levels of involvement. The stakeholders were employed by universities, research institutions, advisory companies, NGOs, and municipalities involved in T-Factor. In most cases, they acted as 'duty holders' and joined the local community due to their professional roles. Each community operated under a local regeneration strategy ranged in scope and duration.

We participated in the design and implementation of T-Factor, where we contributed to developing a Theory of Change map that informed the portfolio of interventions designed by each of the six communities. Through participant and direct observation (Czarniawska, 2012), we followed their work, examining how local stakeholders developed, adjusted and executed their portfolio of interventions using the maps. Later, we conducted six interviews with the coordinators of four cities to gather their reflections on the process and feedback on the map. The coordinators facilitated the work with the Theory of Change map in their communities and had a systemic perspective and an overview of the various local voices.

Following two years of participatory observations, we suggested a second map to support the inclusion of pluriversal perspectives in the local portfolios. We tested the second map, presented and discussed in this paper, in six workshops involving individual community facilitators from Amsterdam, Lisbon, Bilbao and Milan (Figure 1). The participants previously worked with the Theory of Change model and were familiar with the local contexts. The goal of the iterative testing was threefold: first, to validate that the suggested changes support pluriversal thinking; second, to improve the map according to stakeholders' feedback; third, to carry out a design process considering multiple perspectives. In the workshop, we asked stakeholders to adjust content from their previous Theory of Change map according to the new map. We asked about the changes, how the new map informed their thinking, and what

adjustments they would like to apply. We implemented some of their suggestions before using the map in the next workshop.



Figure 1 The sequence of workshops.<sup>1</sup>

## 4. The case: T-Factor

### 4.1. Preparatory work to define a template for a pluriversal Theory of Change

In the first year of T-Factor, we designed a Theory of Change map to be used by each community individually (Figure 2). The map aimed to internalise the Theory of Change logic, negotiate and define the local strategy among stakeholders and develop initial ideas for a portfolio of interventions in the area (Zohar et al., 2022). The map followed a traditional Theory of Change logic, which implies a single temporality and an unspecified perspective (Zohar et al., 2023). The format was a Miro board to be filled collaboratively. During the first year of the T-Factor project, all six communities used this map to consolidate their activity plan for the project duration.

During the project's third year and following the participatory observation on the pilot cities' work, we were tinkering with how the Theory of Change map could be adjusted to support pluriversal perspectives. To do so, we adjusted three elements of the map described below: (1) the timeframe, (2) the actors and (3) the categories for intervention.

#### The timeframe

In the initial Theory of Change map, time was unspecified. The implicit assumption was that we relate to the four-year project duration, even though the overall regeneration process varies across pilots between four and 50 years (Zohar et al., 2023). The limited timescale forced stakeholders to think for the short term. To address this issue, we explicitly assigned the first row to project time. Then we added two more rows, representing longer timeframes: near future (end of potential next project) and far future (end of the regeneration project). Thus, stakeholders had to foresee the evolvment and impact of their work beyond the project. To help stakeholders come up with scenarios of what the future may be like, we defined four categories for them to consider: political, social, climate and technological changes that are likely to occur (Figure 3).

<sup>1</sup> All figures are available in high resolution on: <https://miro.com/app/board/uXjVNmqXrIM=/>




Problems & Opportunities	Desirable situations (What is the future state that you would like to reach?)	Your innovation missions (What are the key improvements that you want to achieve to reach the desirable situation?)	Concrete meanwhile activities that you could implement to fulfil your innovation missions	Which impact theme of T-Factor is being fulfilled by your innovation missions?
<p><b>Problem:</b> A matter or situation regarded as unwelcome or harmful. In T-F, problems are framed in negative terms and describe the status-quo. <i>Example:</i> Obesity among children</p> <p><b>Opportunity:</b> A time or set of circumstances that makes it possible to do something <i>Example:</i> Available funding to fight diabetes</p>	<p><b>Desirable situation:</b> The situation you would like to reach after the problem will be solved <i>Example:</i> Reduce obesity among children in the local community</p>	<p><b>Mission:</b> An achievable, time-bound innovation towards a key set of problems. <i>Example:</i></p> <ul style="list-style-type: none"> <li>Implementing healthy diets at schools</li> <li>Develop public space for physical activity (e.g. bike lanes, football courts, playgrounds etc.)</li> <li>Promoting sport activities</li> </ul>	<p><b>Meanwhile activities:</b> A meanwhile activity is a concrete way in which you can implement one of more of your innovation missions and, consequently, try to achieve your desirable situation (The How) <i>Example:</i> Community kitchen, sport activities for families, green festival</p>	<p>Impact theme: A framework for the local innovation missions. The impact framework of T-Factor consists of six themes:</p> 
<p>Problem 1</p> <p>Problem 3</p> <p>Problem 4</p> <p>opportunity 1</p> <p>opportunity 2</p> <p>opportunity 3</p>	<p>Desirable situation</p> <p>Desirable situation</p> <p>Desirable situation</p> <p>Desirable situation</p> <p>Desirable situation</p> <p>Desirable situation</p>	<p>Mission 1</p> <p>Mission 2</p> <p>Mission 3</p>	<p>Your new idea</p> <p>Your new idea</p> <p>Your new idea</p>	
<p>overarching challenge</p>				

Figure 2 The initial Theory of Change map used in T-Factor.

### The actors

As preparatory work to filling out the Theory of Change map, city stakeholders specified who was affected by the urban regeneration projects and what problems and opportunities they expressed. They then synthesised the information into thematic categories such as space and planning, engagement, motivation, etc. (see Figure 4) and placed it in the first column of the new Theory of Change map.

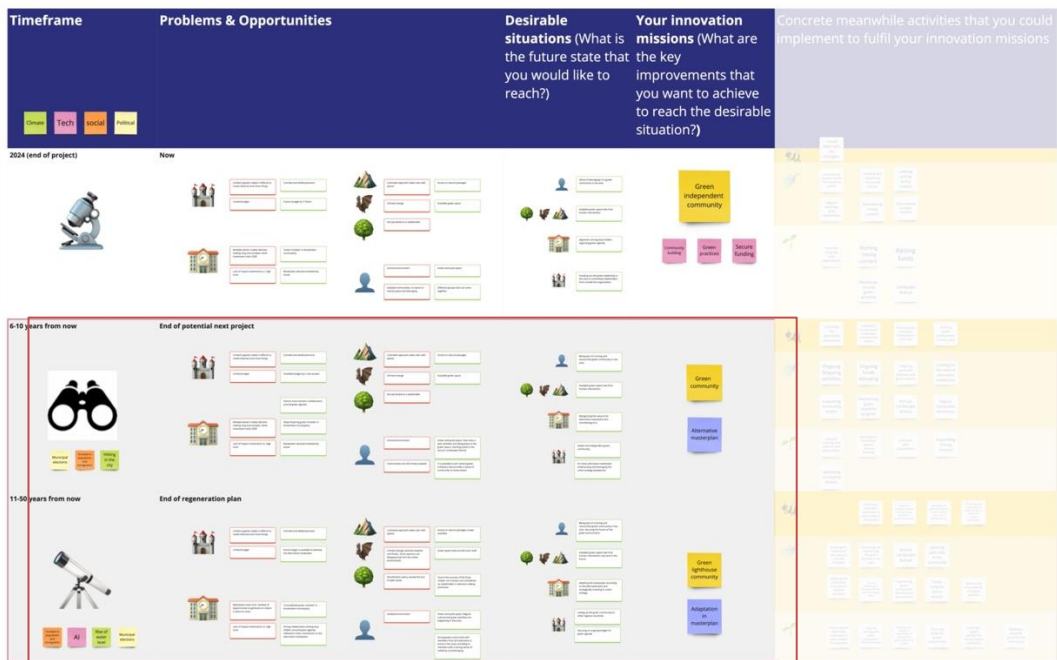


Figure 3 Additional timeframes. The added sections are marked in red. The left column provides room for defining political, social, climate and technological changes that can occur over time (to be defined by stakeholders). The two additional rows (in grey) propose time horizons beyond the project.

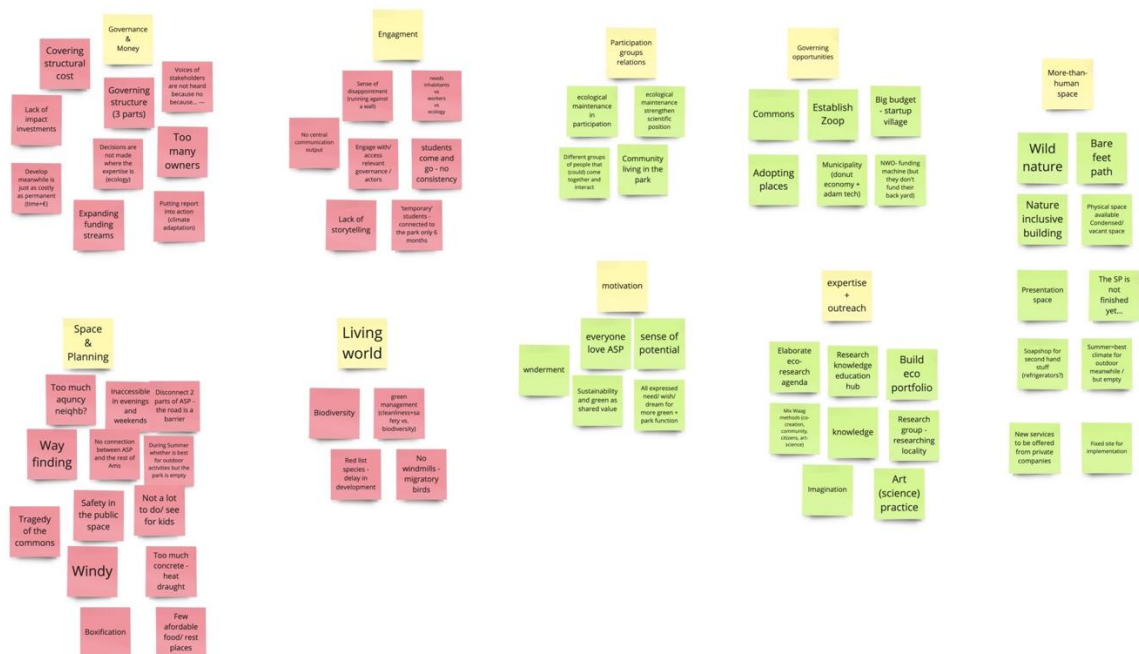


Figure 4 An example of how problems and opportunities were clustered in Amsterdam following the thematic categories: space and planning, engagement, living world, governance and money, participation, motivation, outreach and more-than-human space.

In the new Theory of Change, we aimed to show how problems and opportunities are associated with specific perspectives and time horizons. To facilitate the complexity of representing multiple actors, we defined several categories: non-human actors (including landscapes, animals and plants) and human actors (including individuals, organisations and institutions) (Figure 5). We then asked the stakeholders to distribute the problems and opportunities detected earlier concerning these categories (Figure 6).



Figure 5 Multiple perspectives. We presented a few stakeholders' categories to consider when defining problems and opportunities.

Timeframe	Problems & Opportunities	Desirable situations (What is the future state that you would like to reach?)
2024	Now	
2026	Near future	

Figure 6 An example of how stakeholders in Amsterdam categorised their problems and opportunities assigned to various perspectives.

### The categories for interventions

We asked stakeholders to describe concrete activities ('portfolio of interventions') that will facilitate the change to come (Figure 2, fourth column: 'concrete meanwhile activities you can implement to fulfil your innovation missions'). To support this process, we provided them with 'activity cards' describing potential activities as an inspiration (Figure 7). We di-

vided these activities according to three categories: prompt (one-time events, e.g. a meeting, a festival, a pop-up exhibition, etc.), regular (events happening regularly and unfolding through a program, e.g. monthly meetings, concert programs, etc.) and stable (things that are meant to last, e.g. as a library, ecology hub, a community market, etc.). The underlying assumption was that one-time interventions can become permanent and be primarily manifested with physical evidence (e.g. a flower bed workshop can scale up to an eco-gardening course that, in turn, will scale up to an ecology hub).

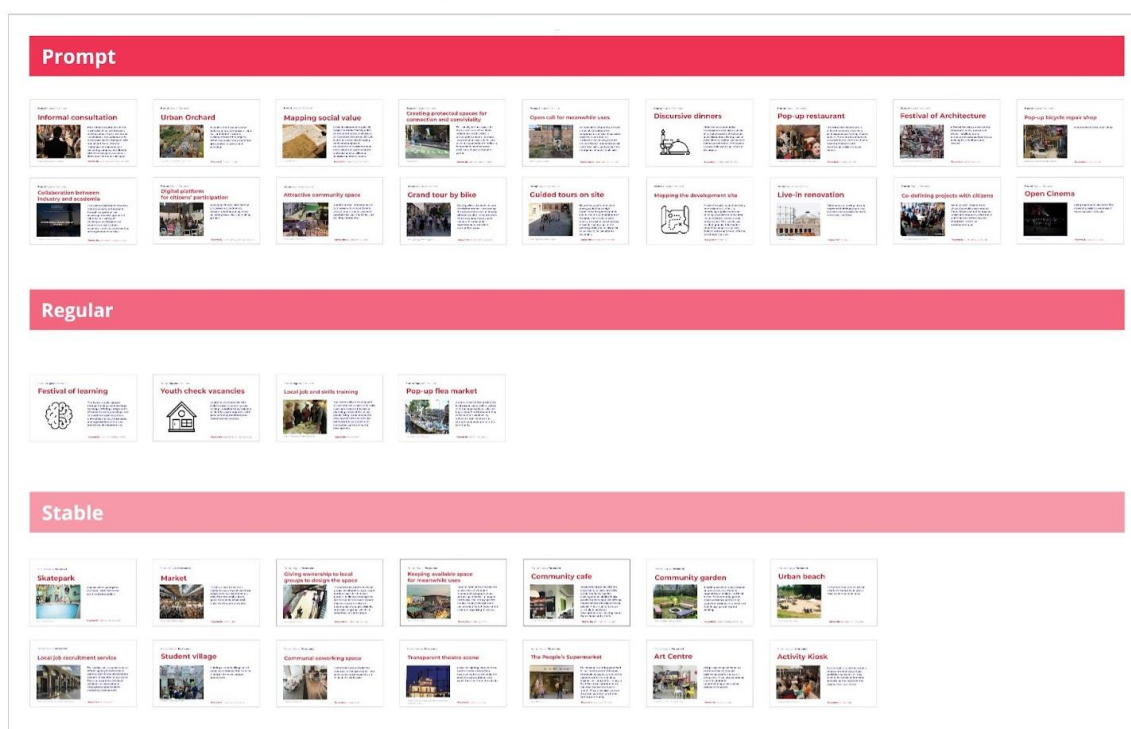


Figure 7 Activity cards originally used in T-Factor, divided according to the categories: prompt, regular, stable, demonstrating a linear logic from occasional to permanent.

When we came to think about the activities through multiple dimensions of time (Zohar et al. 2023), we identified a paradox. While the making of a tangible output (such as a skatepark, concert venue or an ecology hub) often has clear start and end points and can happen relatively fast, other things evolve at a much slower pace. For example, building a house may take one year, a tree will need a few decades to mature and creating good relationships between the residents of the house and their neighbours is a never-ending process of maintenance and care, unlimited to a specific period. To capture this dynamic and substitute the linear logic behind the previous categories, we suggested alternative criteria (Figure 8): Seeding - things we start now, knowing they can grow in the future (e.g. planting a garden, starting a civil society organisation, initiating collaboration among stakeholders, etc.). Watering - things (created by us or others) we can support and maintain through acts of stewardship (e.g. educational activities, social events, community building, landscape maintenance, etc.). Pollinating - activities connected to expanding and scaling (e.g. connecting to policy,

adding another pilot, etc.). We assumed that local activity plans will start with many seeding activities and, as the project advances, will increase pollination activities. We then asked stakeholders to rethink their portfolios throughout these categories.



*Figure 8 Planning interventions according to three categories based on their potential type of impact over time.*



Figure 9 The three intervention categories as they appear in the Theory of Change map.

#### 4.2. Our pluriversal Theory of Change in use in T-Factor: Feedback received

In this section, we will share the main benefits of the pluriversal Theory of Change maps as they were described and reflected in the interviews with the stakeholders.

##### Revealing tensions early in the process

When defining problems and opportunities, specifying ‘for whom’ can detect potential tensions and conflicts early in the process. For example, stakeholders in Milan initially recognised the opportunity to leverage green immersion. By examining this point from different perspectives, they realised that the meaning of ‘green immersion’ differs from the standpoint of the city managers and developers and one of the animals inhabiting that space. The first standpoint is about leveraging green immersion to increase the area’s attractiveness for companies; therefore, the implications could be the need to communicate about these green immersion spaces or develop new facilities to attract employees to visit the area. The second standpoint, instead, values the preservation of the existing ecological system; therefore, the implications could be that the green management of the area should carry out no or minimal interventions in artificially alternating existing ecosystems. Understanding how these two perspectives contradict each other can give the possibility to mitigate conflicts.

**Understanding the multiple dimensions of a problem** - when stakeholders in Bilbao questioned what green space means for different actors, they realised that for the individual, poor greening means low attractiveness and livability; for nature, the problem is a lack of space; and for municipalities, the problem is about investments and the cost of greening.

Each dimension introduces a different angle to address the problem and different matters of concern.

### **Developing awareness of institutional perspectives and limitations**

When stakeholders had to articulate their organisational perspective against other views, they became more mindful of their shortcomings. For example, a stakeholder from Lisbon realised that the approach of his organisation for addressing the problem could have been different, saying: “If we would have mastered a different discipline, we would probably see other opportunities”. A stakeholder from Amsterdam became aware of organisational shortcomings, saying, “We did not consider that our society would quit after the four-year project. When planning our portfolio, we avoided considering our capacities and limitations”.

### **Considering multiple time horizons**

Thinking through multiple perspectives helped stakeholders to consider different dimensions of time. For example, a stakeholder from Lisbon assigned a long-term impact to the institutional perspective, saying, “The rising sea level could be an opportunity to provide people with a more decent solution for living, freeing the area from illegal settlement and preventing the negative effect of climate change on the shore”. A stakeholder from Bilbao reflected: “Whatever you plan to do, you should start from the longer-term time scale that maps how local natural ecosystems will slowly develop over time, and then reverse engineer to identify the most immediate needs in terms of city interventions”.

### **Prioritising and strategizing**

At the beginning of the project, stakeholders had to define what missions would guide their work. Over time, many of them realised the initial decision was too ambitious. Thinking through longer time horizons helped stakeholders prioritise their missions (what to focus on in each step) and structure them as progressive steps over time. A stakeholder from Bilbao demonstrated how the future may look more within reach when thinking about missions as incremental steps: “Collaborative and participatory governance is a long-term mission. A good mission for now will be a collaborative community around the area's future by activating actors who never talked to each other. In the near future, the municipality must get fully onboard. In the far future, we can address the governance model”.

### **Changing the mindset from ‘interventions’ to a process**

The categories ‘seeding’, ‘watering’ and ‘pollinating’ helped stakeholders to think about their plan not as a set of separate interventions but as an iterative process, where specific actions mature over time to generate an impact. For example, a stakeholder from Amsterdam realised that involving another community should have started earlier through informal meetings, saying: “If we would have done this exercise before, I would at least have had more coffee meetings with them.” A stakeholder from Lisbon realised that to reach their goal, they must invest in constant relationship building. In his words: “Accessibility is a matter of willingness for lobbying - much watering which is not there”. In Bilbao, a stakeholder

suggested that this logic can inform the development of a grassroots collaboration between students and the university. It is perceived as a seeding activity when prototyping small green interventions and allowing the municipality to try them out in more places. Then, they can upscale into a civic curriculum embedded by universities, co-funded by municipalities and run through collaborative forms of governance. The seeds grow in number, diversity, type and actors involved.

### **Prioritising care and stewardship**

Following our suggested categories, stakeholders shifted from creating a permanent output towards 'watering', that is, focusing on care and stewardship. A stakeholder from Amsterdam mentioned that even though watering actions are challenging to grasp, "they make the deal of our success". She vocalised that focusing on 'watering' challenges the innovation paradigm as "It means that I do not necessarily need to make something visionary but just notice what is worth maintaining". Prioritising care informs the process in terms of funding, time allocation, and human resources: "Because it is labour-intensive, we can build a hub in a week, but we can not pay someone to just be in the field and listen to everything", said the same person. The outcomes of care, both tangible (as growing a garden) and non-tangible (like building relationships), are likely to show up after a while and, therefore, need to be measured over a longer period than tangible outputs: "The strength of these relationships will only become visible in a much later stage, maybe after the project", she further said.

## **5. Discussion**

### **5.1 Answer to the research question**

In this paper, we asked: How can Theory of Change foster pluriversal perspectives within urban regeneration projects? We experimented with redesigning three categories of a Theory of Change map (actors, time horizons and intervention categories). We tested them with four local communities involved in the T-Factor project. Our experiments show how the map supported stakeholders in adopting pluriversal perspectives by thinking through several time horizons, multiple viewpoints, and categories of interventions based on an agricultural narrative of iteration and care.

### **Thinking through multiple time horizons**

The strategy of design interventions in urban regeneration projects often addresses the projects' timeline (Bishop & Williams, 2012) and, consequently, is geared towards a short-term impact. As a result, stakeholders tend to direct their efforts towards activities providing a tangible outcome. By providing them with a framework to envision future scenarios and extend their thinking towards longer time scales beyond project time, the Theory of Change map gave space to interventions likely to give slower results, such as relationship building, greening actions and interventions aiming at affecting policy.



### **Thinking through multiple perspectives**

We often gear urban regeneration projects towards a general notion of a 'greater good', but who is behind the term 'greater' usually remains unstated. As a result, unempowered actors such as non-human entities or vulnerable communities risk being unheard or overlooked. By describing problems and opportunities from different perspectives, the Theory of Change map helps to articulate the abstract concept of the greater good by asking 'greater for whom?'. As design processes are more and more used to support strategic decision-making, stakeholders need to choose what views to address or to dismiss deliberately. The Theory of Change map informs their decision not only by making underlying present conflicts more visible but also by pointing out potential alliances among stakeholders based on long-term interests.

### **Thinking through alternative categories of intervention**

Portfolios of intervention in urban regeneration projects generally move from prompt to stable or occasional to permanent. This logic of linear development reflects a modern Western perception of time as a linear, homogeneous and continuous flow driven mainly by human perception and measured on a human scale (van Amstel & Gonzatto, 2022, Pschetz & Bastian, 2018; Rapp, 2022). Embracing this view, we tend to think about activities happening throughout time as subject to our human actions; intensive work will rush processes and generate more results, while a passive approach will result in stagnation (Zohar et al., 2023). Correspondingly, urban regeneration projects are mostly geared towards tangible outputs manifested physically in the urban space. Extending our notion of temporality beyond human time is challenging, primarily because we govern time and maintain a human-centred universal and globalised time code through human-scale measurement devices and technology like calendars and watches (Bridle, 2022; Ferdinand, 2019; van Amstel & Gonzatto, 2022). The categories 'prompt', 'regular' and 'stable' initially used in T-Factor to plan interventions are another example of applying such measurements in urban regeneration projects.

In the Theory of Change map introduced here, we suggested a different approach to time to help stakeholders recognise its multiplicity, think beyond human timescales and construct their portfolio of interventions to exceed the project scope. To do so, we substituted the categories 'prompt', 'regular' and 'stable', reflecting a linear process, with the categories 'seeding', 'watering' and 'pollinating', reflecting an iterative process. The agricultural narrative recognises the non-linear nature of time. It acknowledges casualty by taking to heart that "you reap what you sow" and, thus, emphasises long-term stewardship and care. The same narrative substitutes the 'innovation' mindset with the idea of fostering and enabling what already exists. It exceeds the logic of rapid making by embracing periods of undoing and acknowledging processes we cannot rush.

By supporting pluriversal thinking, as thinking "of and with other beings and processes which exist at different scales of time and geography" (Bridle, 2022, p. 117), the Theory of Change affected the ontology of how we perceive and generate change in the urban realm. While

urban regeneration projects often embrace the logic of creating visible solutions within a limited timeframe, stakeholders who used the Theory of Change map revisited some of these initial concepts by acknowledging and prioritising the need for process-based iterative and long-term work and recognised the value and impact of care.

### *5.2. Limitations and future directions*

A key drawback of this work is that although the pluriversal Theory of Change map was tested through individual interviews with local community representatives, it was not thoroughly assessed with all members. We hypothesise that multiple voices of stakeholders using the map together could evoke further tensions that may remain hindered. Furthermore, the suggested city interventions were not executed in practice and remain theoretical.

In future work, we envision further developing our approach by testing the pluriversal Theory of Change map in another context and adjusting it according to the findings. Forthcoming research shall elaborate on how to develop and implement future scenarios in the map concerning the extended time horizons and consider how to frame hypothetical possibilities to orient the collective actions.

## 6. Conclusion

This work responds to calls in design to consider multiple worldviews and practice (Akama et al., 2020) and avoid the occlusion of others (Redstrom, 2017). More particularly, our paper provided suggestions on how to interact with more-than-human entities as multiple and heterogeneous (Clarke et al., 2018; Bridle, 2022; Ciobanu & Juhlin, 2022; and Mbembe, 2022) and, as a result, manage longer timescales and disclose the simultaneous existence of different conceptions of time. Additionally, the paper contributes to developing Theory of Change maps by offering a take that will allow them to better support complex design processes by acknowledging and visualising diverse perceptions and timeframes (Dawson, 2014; Nguyen Huy, 2001).

By creating visual design tools that support stakeholders in new ways of thinking, we contribute to the evolution of a design discipline still anchored to modern values such as objectivity, efficiency and progress (Sachs Olsen, 2022) towards diversity, pluralism and care.

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