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The Municipalities in Transition instrument was cocreated, tested, and is now scaling. How do we evaluate it? What are the possibilities? Some ideas from a research perspective.



Municipalities
in Transition

Municipalities in Transition

From systemic collaboration to regenerative and integral governance

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“We celebrate that public administration is much warmer to the idea of listening to and co-leading with civil society on future endeavours. This is very positive news and a significant potential leverage point - A door has opened!! Now, it is time to enter the age of grassroots-governmental collaborative regenerative development.”

MiT participant

Content

A.	Introduction and Background	3
B.	‘What is’ and ‘What if’	5
	A governance instrument.....	5
	Measuring transformation	6
	An integral and regenerative approach	7
	Usability.....	9
	Scaling	10
C.	On the research process.....	10
	Impacts in society.....	11
	Outreach.....	12
	Next steps.....	14
	References.....	15
	Acknowledgments.....	19

A. Introduction and Background

We live on the edge of chaos (Box A.1). New possibilities for transformation arise from existing experiments with alternative practices, new policy commitments, and a growing sense of urgency. For the next phase of transition to happen, with the emergence of sustainable and disruptive patterns of activity, there is the need to reinforce bridging activities. Social innovation leaders are expected to jointly reframe their messages and strategies to navigate the new possibilities.

This research wants to explore the diversity of (trans)local transformative initiatives and how they can synergistically generate broad societal change towards sustainability and democracy. We want to seize doable alternatives to deal with existing institutional barriers and social impasses and explore possible approaches and instruments for 'governing' transition.

We adopted transdisciplinary participatory action research and focused on developing spaces where renewal can be nurtured in the context of reorganization (in the resilience sense). This approach is expected to lead to new agreements and actions. Still, it is primarily designed to facilitate multi-stakeholder learning processes and open the floor for the emergence of new shared meanings.

We assumed that the complexity of the sustainability challenge demands for collaboration between different actors, namely local governments and community-led initiatives. Existing research revealed that many tensions and obstacles to partnership persist, and results are far from meaningful, while providing insights on how to overcome these challenges. We summarized the state of the art in a Compass for Transformative Collaborations (Macedo et al., 2020).

The research process was based in two projects nested in the Transition movement, namely the *Municipalities in Transition* and the *Dive Deep & Dream Big*. The Transition movement is one of the most significant examples of local communities leading the way to a post-carbon society. The movement is spread world-wide and demonstrates a distinctive openness for collaborations, providing therefore, an experimental space with transformational ambition.

Both these action research projects were supported by the University of Lisbon and DRIFT, anchored by their role within ECOLISE (European Network for Community-Led Initiatives on Climate Change and Sustainability), with the broad participation of other organizations. The author of this report played the role of an embedded researcher, fully partaking as an observer and participant, contributing actively and reflectively to the codesign and facilitation.

The *Municipalities in Transition* project started in 2017 and aimed at exploring how municipalities and civil society could work better together. The research included codesigning a systemic and operational instrument that could boost the transformative reach of cooperation between local actors of sustainability (Macedo, 2019a) and testing in six pilots in five countries (Macedo, 2019c). Local actors can use this instrument together to capture the governance imprint of transformational efforts and are challenged to reorganize and expand it, improving the stock of change actions and related experiences.

The *Dive Deep & Dream Big* project started in 2019 and was set as a collaborative inquiry to support break-through change at the municipal scale. Individuals and organizations working in different contexts got together to share knowledge and develop new transition pathways. Creating a social learning environment gave visibility to barriers that prevented effective action by fractally reproducing patterns of polarization. There was an agreement on the building blocks of a new integral governance framework based on reconciliation and imagination (Macedo, 2020b).

These two action research projects provided complementary information, opening the floor to a regenerative approach to transition (Macedo et al., n.d.).

In this 'final' report we try to make sense of achievements and explore the potential of future developments.

Box A.1 – The 'edge of chaos'.

In the research, we assume that we are somehow and metaphorically in the 'edge of chaos', "juggling between the demands of stability and flexibility" (Robinson & Robinson, 2014), namely:

- Climate change (and other sustainability challenges) is creating disruptive change that is perceived as moderate. Accordingly, regime actors are slowly changing the direction of development trajectories, frustrating demands from several outsiders, including activists and researchers (Ripple, Wolf, Newsome, Barnard, & Moomaw, 2019), leading to even more pressure on regimes.
- The COVID-19 outbreak can be considered a specific shock, as defined by Suarez & Oliva (2005), with high amplitude and speed (still unpredictable scope and frequency). It is challenging regimes profoundly and can bring the destabilization necessary to overcome path-dependencies and lock-ins.
- A multitude of niche-innovations are flourishing, at all levels, but they keep fragmented, underdeveloped and often competing with each other, lacking structure and organization.
- Using the multi-level perspective on transitions (Geels & Schot, 2007), we might argue (Macedo, Santos, Tristan Pedersen, & Penha-Lopes, 2021) that we are now moving from transformation to a reconfiguration path (where some niche-innovations are adopted, especially at local level), possibly followed by de-alignment (including collapse and chaos) and re-alignment.
- A new translocal governance might emerge by linking cross-scalar, collective, and distributive agencies (Moragues-Faus & Sonnino, 2019).

In these times there is the need to deal with a great complexity and uncertainty, and an increasing risk of social and ecological collapse. However, the 'edge of chaos' has a strong potential for sustainability by favouring deep learnings (individually and collectively) and accommodating the necessary order (for self-perpetuation) and flexibility (to allow sensible evolution) (Kuenkel, 2019, pp. 74, 274). Innovation and dramatic shifts in activity patterns can occur, and systems can move to higher levels of performance if adequate collaborative planning activities occur (Innes & Booher, 1999).

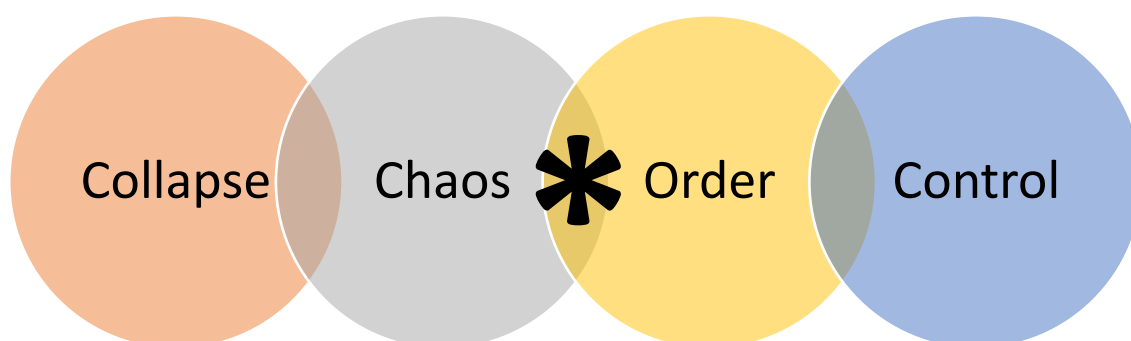


Figure A.1 – In our socio-institutional systems, the 'edge of chaos' is an exceptional place, full of opportunities... and risks. It is a place of innovation, self-organization and adaptive behaviour. Climate change, biodiversity loss, resources' depletion, inequality... and, of course, the related pandemic, all these are demanding a vast and immediate transformation in our regimes. However, an excess of control manifested in path dependencies and institutional lock-ins prevent meaningful change, leading us to the brink of collapse.

B. 'What is' and 'What if'

In this chapter we try to make sense of the nature of the *Municipalities in Transition* instrument and possibilities for its development.

A governance instrument

The *Municipalities in Transition* (MiT) instrument is expected to represent an innovative way to **collectively govern transformative change** and act as a systemic instrument for local reflexive governance. Therefore, the proliferation of experiments using the MiT instrument is envisioned primarily to lead to a change in the socio-institutional system, facing the dominant locked-in regime (Loorbach, Frantzeskaki, & Avelino, 2017).

We argued that the MiT instrument has the potential to bring institutional and cultural change by providing a **'learning arena'** (Macedo, 2019a). The transition grid (Figure B.1) stores and structures the collective learning about the transition efforts happening in the community, increasing the overall system's resilience by nurturing renewal and facilitating reorganization (Folke, Hahn, Olsson, & Norberg, 2005). The support in the (re)design of interventions allows participating agents to learn and co-evolve in their 'stakeholding' (Collins & Ison, 2009).

		Actors Categories							
		U Upper Institutional Levels	A Municipality Political	B Municipality Organization	C Controlled Entities	D Suppliers	E Organizations	F Businesses	G Public
Actions Categories		b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e
	1	Vision	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
2	Organization	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
3	Planning	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
4	Technical aspects	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
5	Relations	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
6	Cultural change	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
7	Networking	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

Figure B.1 – The 'transition grid' is at the core of the *Municipalities in Transition* instrument, allowing to capture the governance imprint of transition efforts, making sense of complexity in tipping point times. Local initiatives are mapped according to actors and actions involved, with cells storing information on the baseline (b), the potential (p) and the evaluated impact (e). Additional evaluation cycles assess if initiatives use the best information available, take care of relationships, look for tangible results, support inclusion, contribute to resilience and deep adaptation, or facilitate replication. Planning activities are supported by leverage cells (with coloured background), a database of tools based in pattern language, and several algorithms. A governance model based in sociocracy, and a community of practice nurture the social learning process.

In conclusion, the MiT is fundamentally a **governance instrument**, namely an instrument to support the *governance of transitions towards sustainability*. In other words, an instrument that can activate the system of structures and practices that determine how people take decisions and exercise responsibility relating processes of fundamental changes in human society involved in moving towards more sustainable and equitable futures (Patterson et al., 2017). These changes are inherently complex and contested and can relate to structural, functional, relational, and cognitive aspects of socio-technical-ecological systems (*ibid.*).

In other words, the MiT instrument provides a concrete way to operationalise the **metagovernance** of sustainability transitions. Metagovernance is about re-articulating and 'collibrating' the different modes of governance (Jessop, 2003). As stated, the MiT instrument provides a structured way to visualize the governance of sustainability efforts (capturing the complexity of who is involved, in what kind of actions, and how initiatives are being steered), facilitating the process of collaboratively introducing changes to re-equilibrate the governance of transitions. What Dunsire calls *holistic governance* or 'collibration', a process with many parallels in natural systems (Dunsire, 1990, 1996).

This **holistic approach** means that it is assumed that individual transition interventions are so intimately interconnected that can all be interpreted by reference to the whole transformation process (as perceived by local actors). This 'collibrating' approach, we can argue, allows local actors to adequately cope with others and their own self-referentiality (Dunsire, 1996; Jessop, 2003). The purpose of the MiT instrument is not to create a model or a 'good practice' that can be replicated as such, but to bring cultural change while providing the tools to govern complexity that can be effectively adapted to the different situations of the local context (Rossi, Pinca, Cavalletti, Bartolomei, & Bottone, 2014). The instrument provides the resources to an incremental tactic related to 'collibration': "a little at a time, let things settle, see whether another touch is required" (Dunsire, 1996, p. 319).

Measuring transformation

In their paper related to the evaluation of sustainability transitions, Turnheim et al. (2015, p. 240) express that "in addition to the societal challenge, there is also a serious analytical challenge" and that we lack a practical approach that "involve the ability to capture analytically as robustly as possible the current state of transitions processes, through an assessment of the current scale, scope, and momentum of transitions".

The MiT instrument can provide a '**governance imprint**' of transitions, by mapping the actors and ongoing management actions that are involved (the building elements of governance), together with an assessment of how much transformative initiatives are inclusive, educated, caring and tangible. In this way, the MiT instrument can provide a practical tool to contribute to the "assessment of the scale, scope, and momentum of transitions", as demanded by Turnheim et al.

As previously stated, it is possible to easily calculate a grid score that can be considered a proxy of the wideness of the transition governance in place in each community. By using the evaluation cycles, the MiT instrument can additionally provide a qualitative evaluation. Together, these scores represent a proxy for the **broadness of the transition governance in place**, which is similar to say a proxy for the full spectrum of transformative efforts happening in each community. This measurement can be used to monitor and evaluate specific interventions and transition as a whole, something that is considered to be a key theme related to societal transformation (Fazey et al., 2018).

By measuring transition, even if roughly, the MiT instrument can help transformation becoming the new system goal in (trans)local governance – system goals are parameters that can make big differences, acting as a powerful leverage (Meadows, 1997).

An integral and regenerative approach

From the perspective of the research, the *Dive Deep* process fulfilled two main objectives:

- It allowed to confront the cocreated MiT instrument with existing knowledge in scientific and societal practice (the MiT instrument was presented and discussed in the event), thus contributing to the third stage of the transdisciplinary research, namely the (re)integration of knowledge.
- It allowed to illuminate some of the **root causes of our unsustainability** and the ‘blind spots’ of the MiT instrument, providing an **integral approach** to transition governance, appropriate to face the scale and urgency of change.

The Integral Theory (Wilber, 2011) represents an effort to embrace epistemological and ontological pluralism and the realms of consciousness, culture, and nature. It has been used to explore possibilities in climate adaptation (e.g. O’Brien & Hochachka, 2005), social transformation and sustainability (e.g. Riddell, 2013).

The Integral Theory proposes four quadrants to express the recognition that everything has an inside and an outside and is both singular and plural. Individuals have subjective *experiences*, express *behaviours*, and are members of collectives that manifest *cultures* and organize in *systems* (Esbjorn-Hargens, 2005) (Figure B.2).

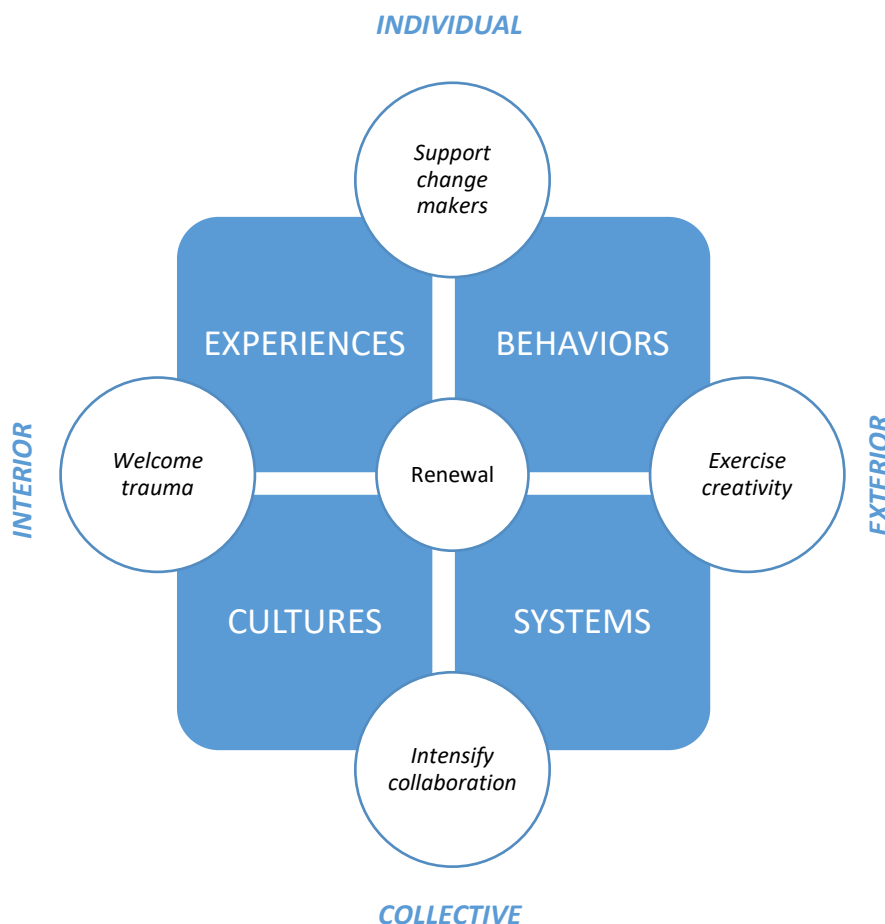


Figure B.2 – The dimensions included in the *Dive Deep* framework align with the four interconnected quadrants of the Integral Theory, representing interventions in the frontiers between experiences, behaviours, cultures and systems.

There is a significant alignment between the Integral Theory and the *Dive Deep* framework to support transition governance (Figure B.2). We could argue that the *Dive Deep* framework expresses an intention to work in the borders of the quadrants:

- *Supporting change makers* has a focus on the individual, including providing experiences that might deeply embed a 'worldcentric' identity, contribute to a reconnection with nature and spiritual awakening, along with supporting the thrive of the individual from a cognitive and materialistic perspective, allowing the emergence of new practices and behaviours.
- *Welcoming trauma* focus on the interior, dealing with perceived experiences of separation and domination in order to deeply embed ethics in a new and reconciliatory culture.
- *Exercising creativity* is about materializing a new reality by questioning the way that individuals and communities express and organize themselves and exploring wild possibilities that might come into manifestation.
- *Intensifying collaboration* directs efforts to support a new culture based in systems thinking and reflection, facilitating collective intelligence, embedding agency and promoting a synchronicity of initiatives with the emergence of new patterns of collaboration.

The *Municipalities in Transition* instrument, in its current formulation, relates mainly to the topic of *intensifying collaboration*. Thus, we can argue that the *Dive Deep & Dream Big* process allowed to enlarge the scope of intervention, suggesting a more integral approach to transition governance.

How could we explore all these dimensions in a **governance experiment** based in the MiT instrument? Possibly a preliminary phase could be developed focusing on *reconciliation* and exploring tools to welcome cultural trauma and actively support change makers from a 'personal' perspective (e.g., [empathy circles](#)). This could allow the participation of individuals that are usually sidelined in these processes.

After setting the governance model and doing the baseline, other tools could be integrated in the planning phase of MiT experimentation to support *imagination* (e.g., [pop-up tomorrow](#)).

Also in the planning phase, a **regenerative approach** (Mang & Haggard, 2016) could be integrated, focusing on the recognition of the place-sourced potential and vocation (what makes a place unique and the value that this uniqueness can bring into the world). Also, the regenerative approach on leveraging systemic regeneration by making nodal interventions (Mang & Haggard, 2016, p. 153) could enhance the planning step. The regenerative approach could also be included as a new evaluation cycle, assessing the value-generating capability of each intervention (we suggest merging the interconnected cycles of resilience and deep adaptation).

The suggested 'update' of the MiT instrument would allow to integrate all the recently redefined [characteristics of the Transition movement](#), some that are not yet fully addressed, namely:

- Co-create motivating and imaginative narratives and visions.
- Connect and care for each other.
- Support inner transformations.
- Address injustice.
- Apply Living Systems Design.

Usability

Usability was a critical design feature of the MiT instrument. It can be easily used without previous knowledge or experience on systemic change or similar topics. And it is flexible enough to adapt to different contexts (even the ones leading with scarcity of resources) and in everyday practices. From this perspective it can be contrasted against approaches like social network mapping (and other equally sophisticated quantitative systems modelling).

The capacity of the MiT instrument to be effective in supporting transformative processes is amplified by the use of a database of tools connected to the grid. This database is not merely a repository, since it incorporates guidance according to the structure of pattern language (Alexander et al., 1977). This means that tools in the database are linked to the deeper wisdom of what brings aliveness within a particular field of human endeavour, through a set of interconnected patterns. These patterns express the challenge to be met and activities that are necessary, with a practical perspective.

Taking the lessons from the MiT experimentation, a few other topics should be considered in the update of the MiT instrument. Relating the process:

- Create a sound and diverse steering circle (supporting the action group), also including political opponents, controlled entities and suppliers, educational organizations, upper institutional levels...
- Favour the participation of 'bridging organizations'.
- Motivate community trainings.
- Facilitate the capturing and sharing of critical turning points.
- Guarantee the necessary resources for collecting initiatives for the baseline, with a systematic and 'neutral' process.
- Find ways to connect between the MiT instrument and formal governance structures.
- Work for continuity since the beginning and keep a long-term perspective (process, not project).
- Support the development of the local and wider community of practice.
- Celebrate!

Relating the tools:

- Bring more clarity on what is being measured.
- Revise categories.
- Consider merging the interconnected cycles of resilience and deep adaptation and related questions.
- Do not override with assessments, but...
 - Provide new (and optional) ways to measure impacts more deeply and dynamically (possibly using the frame of the Sustainable Development Goals)
 - Explore the possibility to introduce flagging of inter-initiatives connections (allowing systemic mapping)
 - Capture the territorial scale of the initiatives.
- Promote (local) debate on 'leverage cells' and allow them to be movable.
- Create operative and impactful visualization tools.
- Offer a database of tools, with cocreative features and a wide spectrum (e.g., also including tools to support 'inner transition').

Scaling

Strategies to scale the use of the MiT instrument have already been discussed (Macedo, 2019c), namely on how to scale up, out and deep (Moore, Riddell, & Vocisano, 2015).

A great potential lies on the Transition movement itself – the MiT can be framed has a **program ‘offered’ to local governments**, possibly in partnership with an organization like ICLEI. A more integral and regenerative approach can significantly increase the reach of this option, by integrating a [‘inner transition’](#) perspective.

Also, **embedding** the MiT instrument in projects and programs can be an effective way to spread it. As an example, the MiT instrument was set as an ‘experimental framework’ for the project CLEMATIS (Community-led Experimental Missions Advancing Transformative Innovation for Sustainability), submitted to European funds. Again, this should/could be done in partnership with other frameworks, sustainability projects and networks (e.g., Climate-KIC, Energy cities, One Planet Living).

The proposed **new name** - Local Transformation Toolkit – can support the second option but it disfavours the first one.

Having a **Community of Practice** fully functional and central in the initiative’s governance system can play a critical role in the scaling process.

In terms of **funding**, and besides further exploring private sources, we suggest a dedicated EU proposal for relaunching the MiT (e.g., Horizon Europe programme) and the support in the preparation of sustainable dissemination projects at national level.

C. On the research process

The research process unfolded in a smooth while intense way, due to the amount of work developed. There was enough time to prepare the field work, to theorize, to fully experiment, and to reflect on results. Though, time and resource constrain did not always allowed to explore all the potential of the generated data.

The Transition movement showed once more to be an excellent experimental space with transformational ambition. By partnering with local governments, it is able to rethink, reconnect and revolutionize sustainability transitions, even in diverging local governance contexts (Ehnert, Egermann, & Betsch, 2019). The role of the embedded researcher was fully embraced and supported, both in his observant posture and active engagement.

The research did not limit itself to the Transition movement, as demonstrated. However, we could argue that the movement had a significant influence in what and how things happened, namely by assuming a dominant position in both the MiT and Dive Deep research teams. Efforts to have a greater diversity in the projects lead and participants not always were successful. Members of local governments, both civil servants and politicians, participated in the experimentation processes, but had a less prominent role facing the representatives from civil society. We can therefore label the outcomes as a grassroots policy innovation.

The transdisciplinary participatory action research approach brought some critical innovations (a paper is being prepared on this topic), allowing to deepen the social learning process. The three most critical components were the community of practice and the two intense participatory workshops – the MiT reflecting meeting (based in a transformative social innovation approach) and the Dive Deep event (inspired by Theory U and so able to explore the challenges of disruptive change). Complemented by a prolific outreach effort, we can argue that the research was able to

positively “apply and adjust integrative research methods and transdisciplinary settings for knowledge generation and integration” (Lang et al., 2012).

But were the many challenges of transdisciplinary research in sustainability science faced appropriately? Looking once more at the reflections of Lang et al. (2012), we see issues on the “unbalanced problem ownership” and possible “lack of legitimacy of transdisciplinary outcomes”. This is mostly related to the way how the practice partner ‘controlled’ the unfolding of the research (as previously mentioned) – this manipulation can make the MiT instrument vulnerable to the critiques of acting as a ‘trojan horse’, as described by Leach et al (2010, p. 100), intended solely to lead to the uptake of the Transition principles by incumbent actors through unfolding practice.

However, developments in some of the pilots exhibited the capacity of bringing the MiT instrument into play alongside official political processes, reinforcing its legitimacy. This happened through legal resolutions (like in Valsamoggia), political ownership of the process (like in La Garrotxa, with administration leading decisions) and formal structures (CADES, a consultative and deliberative body playing a *pivot* role in Vila Mariana).

Looking at quality criteria of transdisciplinary and participatory research (Belcher, Rasmussen, Kemshaw, & Zornes, 2016; Bergmann et al., 2005; Blackstock, Kelly, & Horsey, 2007), we recognize a lack of self-reflection and monitoring in the research process. Even though ‘revision points’ were promoted and discussions took place relating individual and collective performances, there was no clarity on criteria for success or an evaluative methodology.

Also, no ‘outside’ perspectives were considered in the evaluation in a meaningful way. In the beginning of the process, a ‘support circle’ was in place, with people from Transition Hubs and Transition Network, but this limited participatory approach was dissolved. The late integration of a member of the Transition Network more deeply in the research process allowed to manage existing tensions, reinforce reflexivity, and support the dissemination of knowledge in the movement and beyond.

In sum, we consider that genuine and explicit inclusion of a more diverse set of actors in the research steering and/or evaluative process, with their unique perspectives, values, and contexts, could have had reinforced aspects like legitimacy, credibility, fairness, transparency, accountability, and effectiveness of the research.

Impacts in society

How to evaluate the impact generation of this transdisciplinary research, in the context of sustainability transformations? Many frameworks already exist, but they are still struggling to account for the complexity of the task (Schneider et al., 2019). We can divide between scientific and societal effects (Walter, Helgenberger, Wiek, & Scholz, 2007), with the former ones already discussed in the previous reports.

Relating societal effects (*ibid.*), we can identify the *outputs* or immediate results of the research process. This includes all the meetings, workshops, trainings, guides, databases, etc., produced in the context of the experimentation places, within the community of practice, the research team and beyond. They also include the significant social impact of the 14 actions implemented in the initial pilots, related to awareness-raising and capacity-building (workshops, trainings, an online TV, and a cocreated ideal profile for local politicians), increased resilience (by collaboratively planting trees and caring for vegetable gardens, producing renewable energy or promoting reusable cups), including tangible manifestations (two new centres for community development) or more intangible ones (working groups and a regional observatory). To evaluate outputs, the critical variable is stakeholder’s involvement, and assessing all the impact of the research would almost be an impossible task.

The second kind of societal effects are *impacts* (*ibid.*). These are intermediate effects corresponding to changes in knowledge, attitude, or behaviour of the stakeholders (caused by their involvement in the research). They were well studied in this research and were presented in the second report, from a socio-institutional perspective. They essentially correspond to changes in social relations between participants, involving new ways of doing, organising, framing, and knowing about sustainability transitions. They translate into a more systemic and collaborative way of *transitioning*.

Finally, we should consider *outcomes* (*ibid.*), defined as long-term effects related to the research. Outcomes can be evaluated by the (hopefully) enhanced decision-making capacity of the stakeholders, being able to co-produce the knowledge necessary for a better response to current sustainability challenges. Two years after the MiT reflecting meeting in Telheiras, it is possible to identify concrete examples where there was an increased capacity for decision-making, with new institutional arrangements in place¹, and a continuous use of the MiT instrument in supporting decisions.

Outreach

We shared the learnings from this research in scientific publications, namely through:

- Previous research reports (Macedo, 2019c, 2019a, 2020b).
- A paper in the Sustainability journal (Macedo et al., 2020).
- A chapter on the Handbook of Climate Change Management (in press) (Macedo, n.d.).
- A full paper presented at the IST2020 - 11th International Sustainability Transition conference (Macedo, 2020a).
- A PhD thesis already submitted.
- Two additional papers under submission.

We also presented the research at several other scientific conferences:

- GEOINNO2018 – 4th Geography of Innovation Conference in Barcelona, Spain (extended abstract and presentation in the special session on Geography of Sustainability Transitions) (Macedo, 2018).
- Leverage Points 2019 – International Conference on Sustainability Research and Transformation in Lüneburg, Germany (abstract, presentation and session chair) (Macedo, 2019d).
- ECCA2019 – 4th European Climate Change Adaptation Conference in Lisbon, Portugal (poster) (Macedo, 2019b).
- Climate 2020 – 7th Climate Change Online Conference (paper) (Macedo, 2020c).

All these research outputs were shared via the *zenodo* platform².

We have prepared an additional paper to explore the implications of the COVID pandemic relating sustainability transitions (Macedo et al., 2021).

¹ A good example is the Climate emergency declaration in Valsamoggia. Also, the changing relations between civil society and the local government in Kispest (more information here <https://municipalitiesintransition.org/wekerle-transition-opens-the-commons/>). A longitudinal evaluation of experiments is outside the scope of this research.

² <http://zenodo.org/communities/mits/> (Zenodo is a free and open data repository for researchers).

Additionally, we presented the research in meetings within related research teams, namely:

- Climate Change Impacts, Adaptation and Modelling - CCIAM (December 2017, in Lisbon, Portugal).
- PhD in Climate Change and Sustainable Development Policies (December 2018, in Lisbon, Portugal).
- Dutch Research Institute of Transitions – DRIFT (January 2019, in Rotterdam, Netherlands).
- Urbanlab / Centre for Ecology, Evolution and Environmental Changes – cE3c (May 2021, online).

Other outreach activities included media appearances (in TV, radio, and newspaper), the participation in several meetings, conferences, debates, trainings and events, including³:

- Advanced training *Cities Resilient to Climate Change* (April 2018, in Braga, Portugal).
- Radio interview, program *Education and Transition* (June 2018, in Rádio Movimento PT Online)⁴.
- Speakers' corner at URBACT City Festival 2018 (September 2018, in Lisbon, Portugal).
- Workshop *Participate in a world in transition* (February 2019, in Lisbon, Portugal).
- TV interview, program *Jornal 2* (March 2019, in RTP2)⁵.
- Newspaper report (March 2019, in *Público*)⁶.
- Online debate *Talking Climate – Fostering Transition!* (April 2019).
- 3rd Seminar on Local Adaptation to Climate Change - *adapt.local* (November 2019, in Seia, Portugal).
- Online debate *What is the role of local activists and initiatives in the transition to sustainability?* (May 2020).
- Webinars on the *Municipalities in Transition* instrument (June 2018, December 2019 and July 2020).

We have submitted contributions to the ECOLISE wiki⁷ and *2019 Status Report on Community-led Action on Sustainability and Climate Change in Europe* (Penha-Lopes & Henfrey, 2019).

We have also participated in ICCA 2019 – International Conference on Climate Action (Heidelberg, Germany, May 21-23rd, 2019), where the Municipalities in Transition was included in a short list of exemplary “initiatives for collaborative climate action”.

Finally, we have organized a ‘last’ workshop in Lisbon in October 2020: Communities in Transition | From Dream to Action - A Workshop on how individuals, organizations and local governments can transform the world together. This workshop explored an integral version of the MiT instrument.

Many other outreach activities were performed in the context of the Municipalities in Transition project, including in the communities where pilots took place.

³ Outreach activities performed directly by the author of the report. Many others were developed by other participants in the research.

⁴ <https://www.facebook.com/watch/live/?v=640495086285462>

⁵ <https://www.rtp.pt/play/p5343/e398074/pagina-2>

⁶ <https://www.publico.pt/2019/03/03/local/noticia/municipio-transicao-comunidade-ate-escolher-perfil-autarca-1863976>

⁷ <http://wiki.ecolise.eu>

Next steps

Future research can be directed to answer still **open questions** like:

- Does the MiT instrument adequately integrate the concept of planetary boundaries (Galaz et al., 2012)⁸? Should we include the environment as an actor in the transition grid, allowing to support a fully adaptive and/or regenerative approach?
- What is the desirable connection between the MiT instrument and formal governance structures, something that is often overlooked regarding transition governance practices (EEA, 2018, p. 116)?
- Transformation implies challenging the *status quo* in a profound way (Patterson et al., 2017) – is the present approach radical enough or it lacks a strong normative perspective? Should it integrate the role of destabilization (Geels, 2014), to prevent incumbent regimes to ‘dominate’ the grid? Or for the sake of wide acceptance, we pragmatically need to avoid a ‘political’ dimension⁹? Can the MiT approach be the ‘middle-ground’, pulling ‘rivalry’ forces together gently into a more desirable direction, as in ‘collibration’ (Dunsire, 1990)?

New research is also expected to focus on testing the updated instrument in new communities, exploring new configurations (including the use of the instrument embedded in a sister framework or top-down approach). Also, the longitudinal assessment of pilots’ experience will probably deliver important insights relating the institutional arrangements that can favour continuity (e.g. the critical role of bridging organizations). Questioning and researching on ‘leverage cells’ would also be recommended.

There is the need to crystalize the proposed narrative of change and to look for creative ways to communicate it, also integrating the health crisis. According to Hetherington and Reid (cited in EEA, 2018), and from an evolutionary perspective, “the combination of crisis, communication and collaboration is a powerful generator of emergent social novelty”. Something that is welcomed in these tipping point times.

⁸ We can reason that this concern is included in the evaluation cycle related to the ‘head’ principle, namely using information concerning environmental impacts. Should this be made more explicit? Should we consider only local or also global impacts, since some actions can generate locally desirable outcomes but bring significant environmental and social trade-offs at a global perspective (EEA, 2018, p. 23)? Should the social boundaries (Leach, Raworth, & Rockström, 2013) also be stressed (namely social and gender equity), possibly inside the ‘heart’ principle? What about economic viability?

⁹ This is something that could be associated to the Transition Culture (McGregor & Crowther, 2016). This approach can bring the risk of co-optation, with “apparent acceptance and silent neutralization”, but simultaneously opens possibilities for transformative action (Pel, 2016). This kind of institutional engagement, concurrently disruptive and conciliatory, might minimise the risks and maximize the opportunities (Henfrey & Penha-Lopes, 2018).

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