The Local Climate Contract
How to Foster Co-response-Ability for Sustainable Societal Transformation

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Abstract
This work explores how designerly practices drawing from embodied sensemaking, can foster actionable systemic perspectives that allow for co-response-ability in the formulation of a Climate City Contract in the city of Umeå, Sweden. The paper describes the design and facilitation process of 3 cross-disciplinary roundtable conversations that build on notions of *thriving together, making kin and commoning.* The main aim is to contribute to creating alternative collaborative practices that develop means to acknowledge the complexity of — and our entanglement with — systemic challenges. Such practices are necessary for addressing the mission-driven approach that the public sector in Europe is adopting. The outcomes of this research point toward three elements that might foster such an *ability to respond together* and propose ways for building resilient collaborative practices: (1) stimulating the emergence of situated knowledge to be shared and used, (2) creating legitimacy within the ecosystem through an embodied exploration of the systemic perspective, and (3) cultivating trans-disciplinary interconnectedness of actors through aesthetics.

Keywords
Design
Embodied sensemaking
Co-response-ability
Thriving together
Sustainability

Situating our Quest

The current social, economic and environmental crises urgently call for systemic transformations (Meadows, 2015; Williams et al., 2017) regarding the quest of *thriving together* on this planet (Raworth, 2017). Notwithstanding global efforts in fostering change, over simplistic and linear cause-effect approaches to the interconnectedness of planetary phenomena produce overloaded and fragile communities (Rittel & Webber, 1973; Flach, 2012). As such, elephants in the room such as the climate emergency cannot be handled in the comfort of existing silos (Mazzucato, 2021).

Such a challenge calls for the transition from *goals* to *missions* as proposed by Mazzucato (2021), which means gathering a plurality of value creators around public purpose and boosting the transformative capacity of the public sector. However, the mission-driven approach requires the creation of organisational tools, models, and cultures for institutions and organisations to attune themselves to systemic interconnectedness, so that alternative conditions to experiment with integration of efforts might occur.

This resonates with recent turns in sustainability studies (Walsh, Böhme & Wamsler, 2020) and humanities. Here, staying with the trouble, as Haraway (2016) puts it, means learning to *make kin* with and within *public* matters, common concerns crossing all boundaries of sectors and disciplines. Thus, a call for commoning, i.e., the act of people with different life experiences reaching an accord that allows them to carry on their lives together in new ways (Ingold, 2018). As the shapes of togetherness become key in bringing interdependence to the foreground, *climate care* would then ensue from unlocking the path towards *making kin* in the age of *entanglement* (Barad, 2007). Here, feminist works on *recognition* (Tyler, 2019), *noticing* each other (Tsing, 2015) and being together as *embodied and plural performativity* (Butler, 2015) infuse a vital energy in healing *collective entanglement* to act together in climate transition.

This work ties into such an opportunity by engaging in a European initiative that explicitly acknowledges the need to experiment with alternative forms of contractual relationships aimed at bridging global goals and local responses to tackle the climate crisis.

Our quest is set in the city of Umeå, Sweden, one of the 23 municipalities developing "a multi-level and co-creative process formalised in a Climate City Contract (CCC), adjusted to the realities of each one of them, [...] aiming at the shared goal of the mission" (European Commission, 2020). Developed with four government agencies inside the broader framework of the Viable Cities' programme (2020), the journey towards climate neutrality is currently meeting each city's needs and character. However, while portfolios related to the "*what*" — as in agenda setting — display a number of explorative experiences, practices related to the "*how*" — as in building conditions and pathways for cross-sectoral collaboration within the mission-thinking approach — are still in the drafting stage.

The context of Umeå's Climate City Contract provided the authors with the opportunity to approach not only the "*what*", but the "*how*" specifically through a Research through Design (RtD) approach (Zimmerman et al., 2010; Koskinen et al., 2011; Gaver, 2012; Frayling, 2015; Stappers & Giaccardi, 2017). In fact, with the

engagement of the design unit in RISE, Research Institutes of Sweden, the process and its complexity have been handled through designerly means: here, the aesthetic engagement delivered through forms, compositions and assemblages triggered specific behaviours, contributing to provoke and establish forms of interconnectedness, empowering participants towards forms of co-response-ability within a system.

Pathmaking

Previous design experiences in embodied sensemaking (Hummels & Van Dijk, 2015; Trotto & Hummels, 2013; Jaasma et al., 2017) infuse the main body of Design for Transforming Practices (Trotto et al., 2021) used here as a method to design roundtable discussions, tying into the previous explained notions of *thriving together, making kin and commoning.* The method unfolds actions by adopting *transformation lenses,* with the aim of designing material arrangements to support a plurality of stakeholders in exploring alternative ways of embodying values, while triggering different behaviours. This resonates with the CCC's mission-driven framework, as it provided the quest to investigate the "*how*" to work together through a designerly approach. Hence, Umeå's CCC is the result of a RtD process that bridges multiple perspectives, micro-meso-macro scales of human, geographical, temporal relationships, and the modes of engagement in co-creation, with particular attention to ownership — responsibility — accountability.

Conceived as a milestone moment in the broader journey of a Transformation Partnership between RISE and the Municipality of Umeå, the project has been developed and tested in three round table sessions in the form of 2,5-hour workshops, with 15 businesses participating along with the Municipality of Umeå. Our design challenge was to open a collaborative working space that would enable stakeholders coming from the forest and food industries, to the architectural, financial, energy and estate sectors, to share their knowledge and build a cross-sectoral roadmap to contribute to common missions, interpreted here as opportunities for change.

The following section will take the reader through Umeå's CCC's workshop sessions, illustrating its process step by step.

STEP 0

After a brief introduction to illustrate the main challenges that the CCC's workshop sessions are meant to address, 6 participants are gathered around a roundtable.

STEP 1: Citizen Perspective

As a kick-off, participants introduce themselves from an individual, civic perspective while they receive personal boards, *fields-of-view*, with printed questions for inspiration Fig. 1. Experienced as an icebreaker, the main goal of the exercise was to bring out what

could be possible and desirable for Umeå's future community (Ehn, Nilsson & Topgaard, 2014). After writing down their thoughts, they share them one at a time. After a final discussion, *desire tokens* Fig. 2 are placed in the centre of the table, providing an orientation for further discussions.

Fig. 1
Personal boards from the citizen's perspective.

Fig. 2
Desire tokens. Safety, equality and plurality emerge as main themes.

STEP 2: Professional Perspective

Participants turn their *fields-of-view* to unlock the professional perspective and introduce themselves as representatives of their own organisation, shifting the discussion from a conceptual to a practical point of view.

Similarly to the first exercise, printed questions on the *fields-of-view* suggest topics such as practices, achievements and successful strategies that participants would share as *agents of change* in their respective professional role Fig. 3, acknowledging the ability to affect the system towards specific directions.
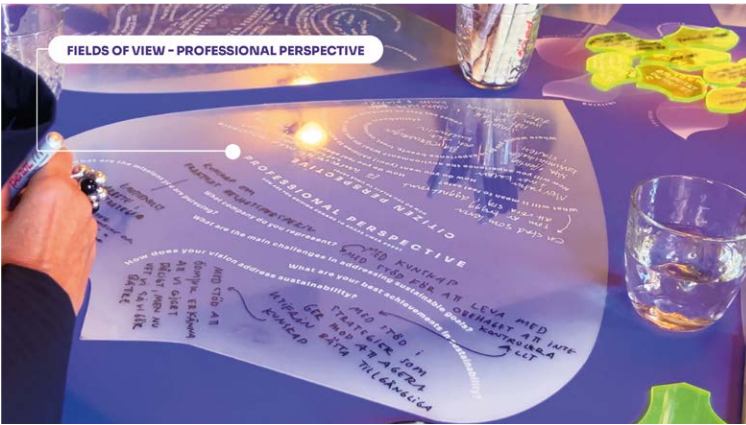
Fig. 3
Personal boards from the
professional perspective.

STEP 3: Identification of Opportunities Through Role Play

The content built so far gives participants a basis to look for *opportunities for change,* topics that will be worth addressing based on professional profiles and common desires. Since it is an explorative, divergent exercise, it would be highly constrained if performed in one's own board. As such, the exercise would benefit from a look from the outside, with someone else from a different background looking at *desires* through someone else's field-of-view, inviting an empathetic approach towards the narrative of others.

Thus follows the roleplay exercise: after swapping positions, participants can look for opportunities for change based on the content before them. By the end of the exercise, participants will go back to their starting position and discuss the opportunity suggestions left by others on their personal board.

STEP 4: Ecosystem Perspective

After a brief pause, participants gather around the table. Here, a donut-shaped layer provides a different setting, connecting *fields-of-view* in a boundaryless place to build together.

Participants look at the opportunities on the board and discuss them, selecting the ones worthy of urgent, collaborative focus. The chosen opportunities are covered with clear hemipheres that function as points of attention Fig. 4.

STEP 5: The Landscape of Interdependence

In this step, participants are asked to identify resources to act towards the chosen opportunities. By writing on personal tokens, participants are invited to join an open discussion on competences, expertise, tangible and intangible assets they could contribute with. *Resource tokens* are placed around *opportunity tokens* to build a landscape of cross-sectoral collaboration. Additionally, *emotion*

tokens might be used to express confidence, excitement or vulnerability about certain combinations of resources or unconventional partnerships.

　　This exercise is the core step of the session and revolves around the embodiment of building multiple, eventually overlapping, cross-sectoral roadmaps — and partnerships. Here, tangible tokens elicited the conversation, shaping the way of interacting with each other, as intuitive expressions come to the fore, verbally, when moving them physically Fig. 5. Moreover, the placement of the tokens on the board represents how a participant is distributed in the ecosystem, unlocking interdependence as the essential stance to navigate the system-as-entanglement: *needing* each other and being *able to respond* to what is being brought to the *public*, communal space.

STEP 6: Signing the Roadmap

As for the final step, participants identify "engines" in the landscape, standing for triggering points to start building the emerging roadmaps. Then, the landscape is captured with a camera, printed and distributed among the participants .

A moment is taken to collectively reflect on the landscape, perceived as a polychromatic mosaic, in which the *self* is portrayed not as a single entity holding a fixed position, but the sum of plural components distributed in the system. This perception opens for new ways to understand and acknowledge collective effort, building confidence and trust to take next actionable steps.

Fig. 6
Contracts take the shape of intersectoral roadmaps, working as starting points for further action.

Designerly Reflections

This section will discuss how the setting, the flow, and the aesthetic engagement stimulated the emergence of situated knowledge while multiple perspectives were coming together during the roundtable discussions. These reflections derive from direct observation and are supported by annotations that captured the participants' feedback.

The physical proximity afforded by the roundtable and its actionable surface contributed to building trust: sized to host seven people, the board allowed everyone to see one another, establishing a non-hierarchical approach towards a shared workspace, so that "it felt different from other workshops; none of us left the table or the room once, nor got distracted by emails or phone calls". All the exercises were designed to be performed on the board, no other displays or supports were introduced in the room, unlocking a seamless engagement that, in turn, helped to keep the focus.

Moreover, participants underlined the value of staying in place and working together through tangible tokens to sustain the train of thoughts, pushing the systemic experience beyond cognition: "it was unusual in a good way, I feel inspired to take the next step". Participants expressed how glad they were to be in the room: the journey felt memorable as a different way of collaborating.

As for the process flow, the limited number of people per session was proportionate to the time they would spend together in each exercise. The atmosphere was relaxed, unlocking the flow of

conversation gradually; participants got to know each other, fueling enough trust to talk everyone through their perspectives. Moreover, having rounds before the plenary discussion was particularly appreciated as a strategy of equality, since, as a participant said, "the one that speaks the most is also the one that is being heard the most; ensuring everyone a fixed amount of time helps all in this".

Sharing personal thoughts about their city and its desirable futures through a citizen perspective was the most frequently mentioned exercise in the final comments, as it was pushing for a different way to bridge the private and public persona: most participants struggled to give their pitch as a citizen, whereas they felt more comfortable pitching their businesses; furthermore, the exercise seemed to expose participants to vulnerability, as it was poking for desirable images to take shape and being discussed — "I don't know how to approach it, since it might turn political".

In regards to aesthetic engagement, printed questions on fields-of-view, rather than a proposal of sample topics, afforded a "fill-in" interaction during the first session. New fields of view were designed, displaying only two broader sentences "My vision for Umeå 2030" and "My company's sustainable work". Other design changes occurred during the roleplay exercise, as participants struggled to grasp it during the first session. As a result, that step has been turned into open conversations led through skillful facilitation.

On top of that, engaging with resource tokens allowed for an *intuitive playfulness that constituted a new form of reasoning, broadening the perspective of actionability as a group*: their matching shapes could be combined like a puzzle into a pattern; thinking out loud was channelled through embodied sensemaking. Here, participants noticed how effortlessly they could come up with new contributions and place them at the intersection of other resource tokens, so that "it was nice to discuss topics without being mono-sectoral" and even though "participants didn't have all the pieces to complete the puzzle, it was nice that you could attach pieces few at the time".

Design qualities such as the use of *transparency* contributed to the ability to navigate in between all the produced content. The possibility to move from fields of view to resources was experienced as a *broadening reasoning path*. This opened a *meta-perspective* on the transformative process, acknowledging how conversations evolved throughout the sessions, maintaining the ability to explicitly remind each other where the discussion originated.

As for the final reflections of the participants, two of them proposed testing a similar approach within their company, others took photos of the board, leaving comments such as "I walk away feeling positive", "This was inspiring" and "We may lack some other guidelines, but I trust the process [...], it's fantastic how quickly people can get to know each other". Additionally, reflections were not limited to the content of the sketched roadmaps' — i.e., what they were meant to address and through what combination of resources, but they were more specifically commenting the entire workshop journey, describing it as a "newly born constellation", a needed starting point in which everyone felt able to relate, to contribute and take responsibility. This suggests that the process successfully built forms of interconnectedness.

In the following section we will zoom out and present a few elements that might have been valuable to the success of this case. Although not exhaustive, these elements might be useful for future reiterations of this work.

Zooming Out

The Project of Umeå's Climate City Contract provided us with the opportunity to work in a mission-oriented framework towards climate neutrality. The process illustrated so far has been designed not only to tailor the climate agenda to the value creators engaged in the city of Umeå, but most importantly to work on the "how", namely providing the conditions — a setting, a combination of materials, a series of exercises expressed through a specific vocabulary — to stimulate behaviour towards trans-sectorial collaboration. Here, the designerly means did not provide a solution, or a fixed model or framework for designing for systemic transformation. Rather, their aim was mainly to stimulate interconnectedness and sensitise towards a systemic perspective through devices designed on the basis of notions coming from relational approaches to tackling societal challenges: *thriving together* and *making kin* through *commoning*.

From a design-focused reflection on these notions and by testing them through embodied methods of collaborative practices in roundtable discussions, a series of elements emerged. These elements qualify the project, by empowering participants towards forms of actionability that enable them to take responsibility together. These elements are described in the following paragraphs.

Situatedness

The first element is situatedness, as different people possess and shape knowledge situating it in geographical, physical, social and cultural experiences over time. This knowledge constitutes a specific vantage point from which everyone experiences their being-in-the-world (Haraway, 1988). In this sense, situated knowledge appears to be essential for planetary citizens facing global challenges, to intervene in the implementation of local sustainable plans (Brand & Rocchi, 2011).

Bringing participants together and having them discuss, overlap, share and merge their situated knowledge produces a one-of-a-kind instance, in which the personal stance towards the experience (i.e., first-person perspective) plays a central role: both the *situatedness* and the *path dependency* of knowledge production — relative to the practical ways in which people engage with and experience each other and the world — constitute a vital feature of processes of collaborative sensemaking. For this reason, such processes are bound to not be scalable in a traditional sense (Tsing, 2015), as they rely on their inherent contingency to pay attention to and draw from the "meaningful diversity of life on earth, the indeterminacy of transformation and the ways in which contact across difference generates new agendas and possibilities" (Tsing, 2015).

Fostering Legitimacy Through Embodied Sensemaking

The second element is about fostering legitimacy through embodied sensemaking. The design setup made sure not to display the system and its parts, so that participants would understand it by observing it while *standing outside* the system; rather, it gathered participants in a space where they would produce, from *inside out,* a mapping and understanding of the system so that they could interact with(in) it, moving from a barely rational understanding to an embodied understanding, pregnant with possibilities for action. Here, the tangibility of interaction allowed participants to establish an intimate relationship with materials, shaping their own way to approach the system. Embodied ways of knowing are therefore elicited through aesthetics: participants engage with the tokens by tagging them, moving them about, creating physical landscapes of existing concepts, using them to explore and prototype new concepts. This process increased their confidence about how participants could make sense of the system and contribute to its transformation. As a result, confidence shapes into trust towards the process, it creates ownership and legitimacy, as the system becomes readable, approachable, despite its complex and uncertain character.

Fostering Interdependence Through Aesthetics

Lastly, the cultivation of a feeling of interconnectedness between the actors around the table allowed for the emergence of a new kind of competence: fostering systemic sensitivity toward the system and the relations that constitute it, understood from within (see previous element). Through the aesthetic qualities of the resource tokens, an exploratory and playful approach made it possible to build the field of interconnections between the actors. The sum of the people present around the table did not only result in a stacking of competences and knowledge; it allowed for the emergence of something bigger than the sum of its parts. This led to a new way of acting *together* in response to the opportunities and desires identified in previous steps. This competence of systemic sensitivity allowed participants to collaboratively navigate the entangled structure, finding new paths and opportunities to act and co-respond to common goals and desires.

Amatullo et al. (2022) hypothesise that sustainability is "the result of perceived legitimacy, which grows when outcomes of design works are experienced as positive, which itself requires that the work and its goals are legible". Through this project, we have addressed these elements: the design, applying techniques of embodied sensemaking, elicited the creation of a feeling of trust in the process; participants developed a sensitivity towards understanding the system at hand and felt empowered to be able to transform it.

These elements contribute to indicate that this process might contain important seeds for a sustainable transformation.

This work, although punctual and, as of yet, limited in time, fuels the hope that we can "heal the entangled", that we can honour the complexity of existence, its plurality and open ways to face the complexity of contemporary societal challenges, in a collaborative, situated way, where aesthetics hold the quid for triggering the creation of sustainable ways of thriving together.

Acknowledgements

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