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Berlin, Germany – Research Lab Project

Urban Heat Studio

HeatCon

CIRCE Creative Impact Research Centre Europe

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HEAT CON

DESIGN RESEARCH

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ABSTRACT Policy makers dealing with climate resilience have the difficult task of aligning diverse stakeholders to understand problems that will manifest 20 years from now. Experiential futures allow to step into radically different “worlds”, and critique today’s situations in light of desired future states. This research explores how experiential climate scenarios might help climate practitioners to a) surface emotions about futures and b) openly investigate barriers and opportunities that underlie our assumptions about these futures. It applies research for design, involving a futuring process to develop a narrative scenario and qualitative interviews with resilience leaders to understand the use of narrative, visioning and experiences in policy and civil society. In research through design, it translates insights generated in the futuring process into an experiential future of a long-term transformation in the form of an immersive theater play, supported by sense making and community building activities in a two-day event for 30 climate resilience practitioners, policy makers and creatives. Experiential climate futures still need to gain trust among policy makers, so we designed a case study to communicate the value of the approach. Finally, we discuss experiential climate scenario approaches in the context of transformative governance, anti-discrimination, and the cultural and creative industries.

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Humanity is on the brink of a weird and non-linear climate experimentation: our planetary thermostat is shooting up and we will have to adapt to a fast warming, drastically changing world.

We are always behind – we are not transforming away from unsustainable practices and structures fast enough, nor adapting to the impacts getting more extreme year by year.

There are plenty of knowledgeable, talented and committed people in policy and administration across Europe. However, their options to act are limited by a lack of funds and accountability on their and higher levels of governance to make relevant decisions that can save many lives.

People in policy dealing with climate resilience have the difficult task of engaging diverse stakeholders – from urban managers to civil society – to acknowledge and understand not just the problems of today, but those that will manifest 20-30 years from now.

They need to make them understandable, and create empathy with the needs of those who will inhabit cities in the future. Some started using narratives (van der Horst et al. 2022, Reachout Cities2023), an approach previously used by community organizers (brown, 2019), climate fiction writers (ex. Octavia Butler) and other culture makers alike.

This is also the work of futures and foresight – but more extensive scientific climate scenarios won't bridge the gap between foresight and transformative action. What we need are practices of imagination.

Creative practices can help bring distant, abstract futures to life. It is difficult to see what alternative worlds can look like unless you invest imagination and effort in exploring them, and put ourselves in a situation to choose between one response and another.

We need experiential climate scenarios for anticipatory governance to build preparedness and bring upon transformations. Transformative governance is about engaging people in transformative conversations and making decisions. And so we need to make room for creative and playful practices in serious government contexts.

Scientists and creatives alike have pointed out how it is so hard to grasp the climate crisis (Ghosh, 2018), the need to facilitate emotional over intellectual engagement for such complex issues through immersion (Jain et al., 2019), and suggested using experiential futures to advance policy (Candy, 2010) to design for transitions (Lockton & Candy, 2019).

Traditional ways of responding to the climate crisis have been insufficient so far. **Transformative adaptation** (Pelling et al., 2015) goes beyond this and involves fundamental and dynamic changes in systems, structures, and behaviors to describe sustainability transitions. It recognizes that some changes may be so profound and pervasive that they require a transformative approach to cope with and respond to them effectively. Key features of transformative adaptation include: Systemic change, innovation, long-term perspective, participation and inclusivity, learning and flexibility, and multidisciplinary approaches.

Experiential futures allow to step into a radically different “world” than the one we know today, and to look at today’s situations and (policy) design proposals to be compared and critiqued in the light of desired future states.

(ex. Hawaii 2050, US Earth Force, Imagination is a Commons, and Urban Heat Island Living.)

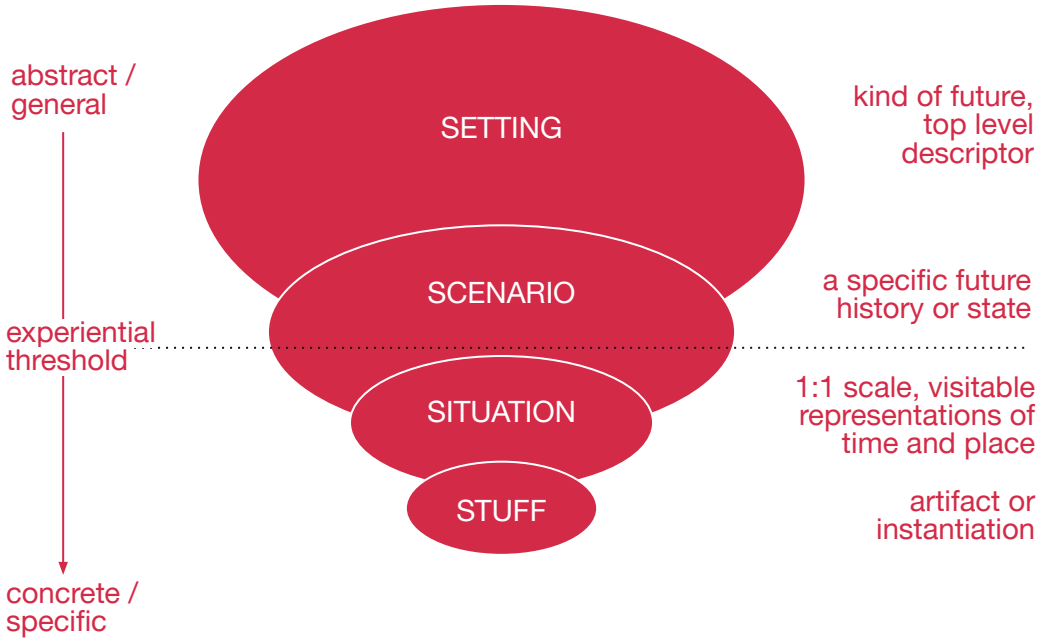

Fig. 1: The Experiential Futures Ladder based on Candy, 2016

Experiential futures bring participants inside a scenario, brought to “life” by futures-inspired versions of present design objects and/or by using creative methods such as immersive theater, live action role play, games etc. to facilitate engaging with feelings, thoughts and ideas that arise within the scenario (Candy & Dunagan, 2017). They translate an abstract data-driven scenario to a concrete, tangible, embodied, immersive experience that helps to inspire imagination. Key features of experiential futures include: Concrete representations of the future, artifacts, creative methods, immersion, and reflexive contemplation of alternatives.

This research continues an evolving strain of experimentation on experiential futures for anticipatory governance with a climate inflection, exploring how European cities (such as Berlin) might radically adapt to the climate crisis. Since 2020, Urban Heat Studio has engaged policy makers, sustainability consultants, social innovators, creatives and locals in experiential climate scenarios (e.g., Sikorska 2022, Kompetenzzentrum Kultur- und Kreativwirtschaft des Bundes 2022).

Research Question

How can experiential climate scenarios help climate practitioners to a) surface emotions about futures and b) openly explore perspectives about barriers and opportunities that underlie assumptions about these futures?

From our past work, including five previous editions of an experiential climate scenario, we went into this project asking:

- Our past scenario was too short sighted, focusing too much on an immediate emergency response and changes to the urban built environment – what could transforming structures to reduce inequalities look like?
- Where are policy makers at – what matters to them, and what role do they see for fiction, narrative, visions and experiences?
- Can we engage participants more closely and even more emotionally than before?

These questions shaped the subsequent research process and the three research phases.

Following a practice-based action research approach: We create new knowledge through a rigorous creative approach where rigor comes from an exhaustive, holistic creative exploration. We seek transformative change in a simultaneous process of taking action and doing research and critically reflecting on the two.

RESEARCH *FOR* DESIGN

In order to inform and inspire the design, we explored future scenarios of climate resilience that would provide content and serve as the basis for the experiential future. We also explored the current role of narrative, fiction, and experiences in climate resilience to inform the format of the experience.

RESEARCH *THROUGH* DESIGN

Building on the findings from the previous phases, we translated the narrative into experiential scenarios in the form of an immersive play, paired with sensemaking activities, organized a 2-day event in the form of a half-real, half fictional conference on climate resilience for people in policy and creatives.

Methods	Output
Extrapolating themes around resilience	12 themes around resilience
Climate Projections	3 scenarios x 6 risk areas; consequences
Crafting a narrative scenario	Narratives at two points in time, key scenario elements
	→ **INSIGHT & OPPORTUNITY 1**

Methods	Output
Screener & Discussion guide	Desired audiences to participate in the experience
Qualitative in-depth interviews	Role of narrative & experience in resilience, observations
Data synthesis	→ **INSIGHT & OPPORTUNITY 2**

Methods	Output
Intention setting	Engaging policy-makers in conversations around long-term, structural transformations
Team setup	Learned & lived experience
Venue scouting	Community space and church in Berlin
Gathering people	Policy makers, activists, civil society leaders
Anti-discrimination & safety principles	Principles for Anti-Discrimination & Diversity, 4 key measures before / during / after the event
Immersive structure	Immersive theater play in two acts
Sensemaking	Debrief, Deconstructing Metaphors
Community-building activities	Opening & closing activities, shared meals
	→ **INSIGHTS & OPPORTUNITIES 3 & 4**

INSIGHT 1

Community-led response, transitioning economic systems, large scale rehousing projects, and accelerating decarbonization are critical to transformative adaptation, but not considered sufficiently in current climate adaptation plans.

1. RE-FUTURING

OPPORTUNITY 1

Bring in long-term, structural transformation into current climate adaptation debates.

Narrative scenario of a highly decarbonizing in the midst of a transition towards post-growth with two "timestamps" at different points in time. The timestamps show a possible evolution of one scenario over time, and how the policies initiated in the near term scenario transform society in the long term.

Resilience Workers In the Near Term (ca. 2030)

Set in a near-term future where multiple climate impacts are colliding, and immediate health and emergency response is most urgent. New local and global policies are created. Long-term impacts set in motion a series of dominoes that unleash more structural change.

Consequences of climate projections

Relocating, rehousing, food (in)security, community health preparedness, health effects, informal community networks, focus on strengthening local economies.

Key Scenario Elements

Compounding Climate Impacts: Heat + Fire + Flash Flood / Heat + Terror Attack; Rehousing; Universal Basic Services & Income

Resilience Beyond The Current View (ca. 2070)

Set in a far-term future where we have almost reached global carbon neutrality and are in the midst of a transition to post-growth. Emissions – now considered a security threat – are at a record low, but decarbonization has come at a high cost. Social justice is strong and the globe is more and more adapted to the higher temperatures. In changing economic conditions, people are rediscovering what is worth living for.

Consequences of climate projections

Relocating and rehousing at higher intensity, self-sufficient food networks and energy supply, community-led healthcare and emergency preparedness, designated safe/unsafe areas to live.

Key Scenario Elements

Resilience is: Community-Led Healthcare, Retraining for Post-Growth Activities, Decarbonization Marathon, Climate Safe Havens

SOFI
BALANCING ABUNDANCE

INSIGHT 2

Speculative and experiential approaches could have huge political potential, but people in climate resilience policy aren't utilizing it.

2. UNDERSTANDING NARRATIVE IN CLIMATE RESILIENCE

OPPORTUNITY 2

Shift the role of narratives from merely communicating scientific facts to speculating, exploring alternatives and building anticipation.

Insights from interviews with policy makers on the role of fiction, narrative and experience in climate resilience & policy.
Interviewees were people in policy and civil society organizing in European cities dealing with climate adaptation and transitions who have worked with relevant approaches.

Communicating scientific facts to build emergency preparedness	Telling better stories to transform systems	Exploring scenarios to build anticipation
"Climate stories are a way to communicate and to engage citizens – we talk about the most vulnerable groups of society." *– external project manager for a European city*	"We use [the doughnut economics model] not as a future vision, because it's partially already here, but rather as a narrative to engage people on a different level" *– independent leader of a chapter of the Doughnut Economics model in a European city*	"Design fiction is good for asking big political questions and raising questions about political topics that the elected representatives need to answer" [but they don't apply it that way yet] *– design fiction manager in a European city*

Additional Observations

Localized stories, reduced to scientific facts: Two interviewees worked with stories tailored to their cities to communicate risks to citizens; one of them was reduced to local geography such as a thermal map, freshwater and walking distance to green spaces.

Just a step in the process: One participant saw making the future climate story as a step in a process, after defining communication goals and before organizing a citizen engagement activity.

The people crafting those stories are not the people commissioning them: One person would decide what stories to tell or topics to explore and commission another to do so.

INSIGHT 3

Intention determines key parameters for the experiential future, including the team, participants, anti-discrimination, transparency & safety, venue, immersive structure, sense making, and community.

OPPORTUNITY 3

Define the intention early and use it to guide challenging design decisions

Key parameters of HeatCon. Various parameters and their manifestations have been tried in the previous iterations, and in this HeatCon finally synthesized to these eight key parameters for creating experiential climate futures to a) surface emotions about futures and b) openly explore perspectives about barriers and opportunities that underlie assumptions about these futures.

INTENTION Bring long-term transitions into current conversations on climate adaptation and policy.

TEAM Interdisciplinary expertise of strategic and experience design, foresight, climate adaptation, policy, with diverse lived experiences.

VENUE A former church in Berlin-Neukölln that is used as a space for community, spirituality, and events.

IMMERSIVE STRUCTURE A two-day half real, half fictional conference on climate adaptation and resilience. Participants explored an immersive scenario in the form of an immersive theater play. Guided by a narrator, they visited two experiential situations exploring resilience beyond technical measures, as well as a community-based decision making process on long-term transformative adaptation.

PARTICIPANTS came from policy and administration on federal and local level, intermediary between business and policy on federal level, activism, NGOs, non-profit/social cooperatives, (social) business, cultural sector, and academia. They included e.g. a municipal design fiction project manager, urban heat consultant, climate adaptation advisors and researchers, elected leaders of associations (NGOs), designers, artists, writer, curator, and a death worker.

ANTI-DISCRIMINATION, TRANSPARENCY & SAFETY
Diverse representations of those related to and affected by (climate) resilience in European cities, including historically underrepresented and overpowered communities in Europe. This includes various a) levels of "power" (in governance and civil society), b) north/west & east/south Europe, c) economically richer and poorer municipalities, d) race and ethnicity, e) structural and individual backgrounds. Covered via signup questions about safety, anonymous signup review, financial support for participants (incl. for care work), safety person & spaces during the event, invitation to share reflections and feedback after the experience.

SENSE MAKING Debrief immediately after the immersive experience, deconstructing metaphors utilized in the scenario to uncover values behind them.

COMMUNITY Community building activities, four meals to facilitate informal connections, and opened up the space to questions and suggestions from the participants.

Behind the scenes: Exploring parameters for creating experiential climate scenarios

Throughout various iterations of HeatCon, the team have been exploring relevant elements of the experience, which they have finally consolidated into eight key parameters that serve as a “working framework” for designing experiential climate scenarios, comparing them, and visualizing the most relevant design choices. Early elements additionally included nominating participants to gather the right audience, experiential invitations to build excitement ahead of time, custom research interviews to adapt the experience to local circumstances, on- and offboarding calls, assigning roles / characters to participants, physical artefacts, and designing for all senses including smell and taste.

Premise and Immersive Structure
Under what pretense do the audience step into the fictional world to help them ease the transition in time and mindsets? In a co-created, rapid prototyping process of devised theater, the team have explored settings such as simulating a heat emergency in a cooling center that would focus on the emergency response, an annual gathering of resilience workers that would focus on re-skilling, to a conference format that allows “site visits” to various points in time and fictional situations, while maintaining a veil of a formal conference.

Sense Making
How do participants process the experience on an emotional rather than intellectual level? As getting people truly on board requires not just intellectual explanations, but emotional connection (Jain, 2019), the team has tested emotional after-care and debrief sessions to facilitate emotional processing, let people share what about the experiential scenario they considered desirable and probable, as well as deconstructing the metaphors behind key transformations from the scenario, exploring the associations, values and world views behind them.

Audience / Participants
The team has played with various audience setups, closely linked to the intentions of various iterations of HeatCon: generative climate scenario explorations with climate-minded creatives, debating impacts of heat resilience measures with people who can build local heat resilience (in Berlin), as well as connecting long-term eco-social-economic transformations with current conversations on climate adaptation with people in climate policy and culture across Europe, allowing the often isolated professionals to connect, get inspired and backed by peers.

INSIGHT 4

HeatCon brought together 30 people adjacent to policy to inspire their imaginative capacity to explore pathways to transformative adaptation uninhibited by present-day factual boundaries

OPPORTUNITY 4

Stage experiential interventions from the niches of political spaces and continue building awareness and trust for experiential climate futures among policy makers

Emotions that participants experienced through the immersion

Participants expressed feelings ranging from joy and curiosity to sadness, guilt, fear and frustration.

"I felt relief that this wasn't a doom scenario"
"I felt comfort and curiosity in the space"
–HeatCon Participants

Reflections on barriers and opportunities

Participants suggested to create **community (safe) spaces**, a sense of **urgency** and to spur action by paying resilience work and making care and volunteer work even more visible; support **bipartisanship** and abolish perfectionism in politics; address inequalities in **housing** distributions issues; establish practices of **care**; and create spaces (such as HeatCon) that show an alternate way, allow to feel and experience resilient futures.

"There was a situation that we should turn our mindset away from scarcity towards abundance and that for me was something completely new and inspiring. I always think of scarcity and of lack of things. Just to have this change of mindset I find very helpful to be able to imagine possible future scenarios which as the topic as it may sound, may not be that dystopian" –HeatCon Participant

Values participants saw behind the metaphors in the immersion

Decarbonization Marathon
long-term thinking, hardship, conserving resources, commitment, and duty

Safe Havens
sense of trust in the community; Common decision-making and co-creation

Balancing Abundance
Belonging, sharing, letting go, love, trust, identity, openness

STARTING POINT

This design research set out to understand how experiential climate scenarios can help climate practitioners to a) surface emotions about futures and b) openly explore perspectives about barriers and opportunities that underlie assumptions about these futures.

Building on past work, in the first phase the research team looked out to understand what is beyond the immediate emergency response and changes to the built environment, and how policy makers saw the role of fiction and narrative in climate adaptation.

In the second phase of the design research, the team asked how we might engage participants more closely and more emotionally than in previous iterations of the experiential climate scenario, in particular to surface emotions about futures and openly explore perspectives about barriers and opportunities (see RQ).

INSIGHTS

Seeing that community-led response, transitioning economic systems, large scale rehousing projects, and accelerating decarbonization are critical to transformative adaptation, but not considered sufficiently in current climate adaptation plans, the team decided to **bring long-term, structural transformations into current climate adaptation debates,** and crafted the narrative and experiential scenario to include them (Insight & opportunity #1).
Speculative and experiential approaches could have huge political potential, but people in climate resilience policy aren't utilizing it, so the immersion was designed to **show the potential of immersive scenarios to explore, rather than merely communicate scenarios, and build anticipation for transformative governance.** (Insight & opportunity #2)
Based on the interest and who signed up, the team reflected that engaging policy makers in long-term transitions requires more than engaging them in the immersion from the moment they sign up. Starting earlier in the engagement process, it could be beneficial to raise awareness about experiential future approaches, their potentials, benefits and limitations.

Following the **intention** to engage policy-makers and include long-term transitions into current debates and plans on climate resilience and adaptation, the team synthesized key parameters for the experiential climate future, such as **team setup, participants, anti-discrimination, transparency & safety, venue, immersive structure, sense making, and community** (Insight #3).
Moving forward, the intention determined the explorations and decisions the team took related to the key design parameters (Opportunity #3)
Responding to the research question, the experiential climate future HeatCon managed to **bring together 30 people adjacent to policy to inspire their imagination to explore pathways to transformative adaptation uninhibited by present-day factual boundaries** (Insight #4). There is potential to stage experiential interventions from the niches of political spaces – such as this HeatCon – and continue **building awareness and trust for experiential climate futures among policy makers** (#Opportunity 4).
Based on these insights and opportunities, the team synthesized the key potentials and benefits of experiential futures, as well as the conditions to set them up, from our iterative practice of hosting experiential climate futures.→

SAFE HAVEN COUNCIL
Meeting Agenda
SAFE HAVEN COUNCIL
Meeting Agenda
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Meeting Agenda

Through reflection with participants and in the team, the team have synthesized five potential potentials and benefits of experiential futures for anticipatory governance with a climate inflection, as well as the conditions for the project within the team and project partnership.

Potentials and benefits of experiential climate futures

1. Inspiring and practicing radical imagination
2. Exploring how it could feel to live in radically climate-changed scenarios
3. Investigating pathways to long-term, systemic transformations within climate adaptation
4. Surfacing assumptions about a future and the values behind them
5. Opening mindsets to new perspectives and connect it back to daily lives and work

What does it take to make experiential climate futures approaches impactful?

Start early: choose a point in a (political) decision-making process that's allowing for open-ended discussions. Consider the approach as shaping the framework rather than the outcomes

Invite different perspectives: ensure that the group of participants represents different points of view on the status quo, balancing across levels of power and theories of change

Engage with the unknown: not knowing, and not being able to predict the future can be uncomfortable. Create a safe space for experimenting with what might feel difficult and challenging assumptions about the "normal"

Open up about values: design fiction is a highly political tool, and inevitably everyone brings assumptions and subjective thinking to the table. Reflect on your own desires and be transparent about your set of values

Acting on the final opportunity (#4)

Showing potentials of experiential climate scenarios for anticipatory governance: Case Study

To build awareness and trust among policy makers for experiential climate scenarios, the team designed a case study to communicate the benefits of the approach:

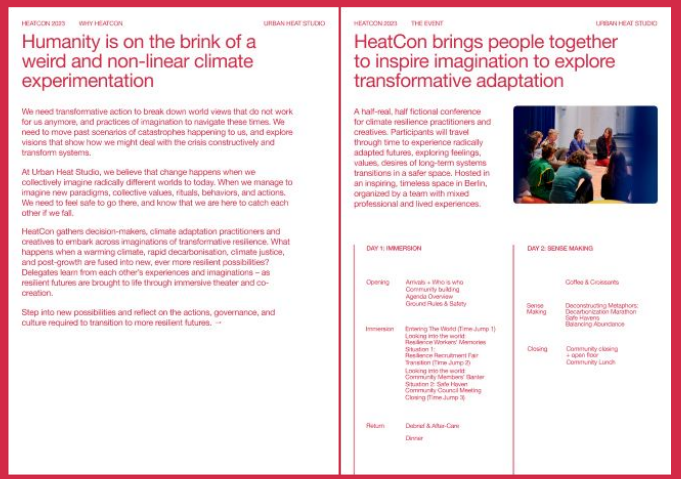
A. **Why:** Need for more experiential climate futures in climate policy for more transformative pathways
B. **What** an experiential climate future can look like, using the example of HeatCon
C. **What it does**: Highlighting five key benefits of experiential climate futures

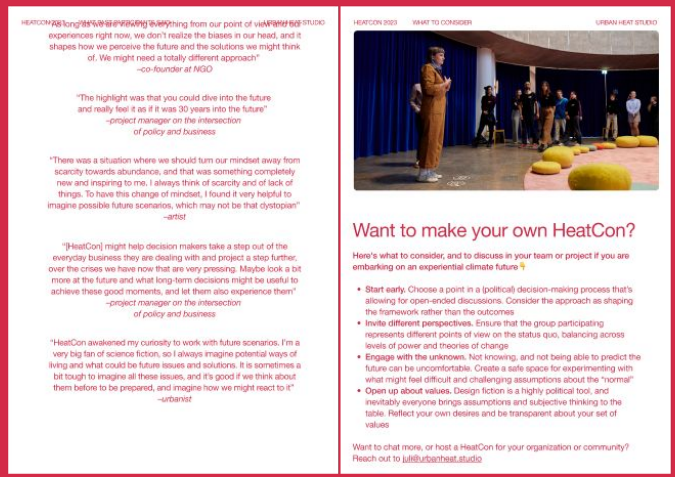
Presented in the form of a zine (a small-circulation self-published “maga*zine*”, easily reproduced via a printer or copy machine) that can easily be placed on policy maker’s desks.

GET THE ZINE

https://bit.ly/heatcon2023-zine

Print on A3, set to “scale: 100%”





Researching Transformative Governance in the Creative Impact Research Centre Europe (CIRCE) Research Lab Berlin

As part of the CIRCE Research Lab Berlin, this research dealt with the parameters for transformation in governance structures in close cooperation with creative economies. In particular, it looked at the role of anti-discrimination, cultural and creative industries and transformative governance in the exploration of how public structures can better and more inclusively support people from the creative / innovative ecosystem who generate a positive impact on society, the environment and the economy.

Anti-Discrimination

Climate impacts are disproportionately experienced by disempowered communities – for instance heat waves affect manual laborers such as construction workers and agricultural workers much more than office workers, or elderly and shelterless populations much more than healthy, housed populations; countries in Southern Europe experience more days with extreme heat, Southern and Eastern European countries as well as smaller municipalities in Northern/Western Europe have fewer funds for infrastructure and resilience projects. Yet often these people, communities and regions are not given an equal voice when it comes to policy decisions. Truly just climate adaptation needs ways to incorporate these voices. Experiential climate futures creates a framework to do so.

During HeatCon, participants were intentionally welcomed into a fictional space where status and traditional power were deprioritized, creating a more equal starting point for participants (Insight #3). People could still contribute to the future through the lens of their own lived experiences, but it was made safer through the boundaries of a half-fictional, half-real world. The experience evoked real emotions in people, and gave them permission to shift mindsets, also creating a space for different voices and opinions to be heard (Insight #4). Participants described the experience as ‘collaborative’, where people truly listened, rather than spoke past each other to prove their point.

To spark even deeper change, the content of the scenarios used in the experiential futures could have been better rooted in more just visions. The longer term issues that formed the core of the scenario narrative were ultimately shaped by the design team to set the stage of the immersive experience (Insight #1). However there was a lack of representation and diversity in the core design team as these were shaped. More privileged lived experiences interpreted extensive desk research and made choices about what elements to highlight in the experiential future.

A more diverse core team, or seeking coaching and advice from an expert, could help the content of the experiential futures better provoke discussions about policy and actions that would better support marginalised communities on the front lines of climate impacts.

Researching Transformative Governance in the Creative Impact Research Centre Europe (CIRCE) Research Lab Berlin

Cultural and Creative Industries

Design research as *research through making* is a core competency of the cultural and creative economies that recognizes exploration, experimentation and play as part of a rigorous creative approach, and rapidly alternates between creative and analytical thinking. As a way of knowing, it can stand alone or complement scientific research approaches.

Designing experiences and surfacing emotions in particular is a key component of creative practices, and creatives bring a specific mindset of learning through experience and reflecting on those subjective experiences.

This makes creative approaches relevant beyond the creative spheres – here, finding its application in transformative governance and climate adaptation, but also in broader eco-social transformation contexts (see e.g., CreaTures, Ampatzidou 2021).

Permeable relationships between cultural and creative industries and (climate) policy spaces could advance the development of transformative adaptation and governance through experiential learning and emotional connections.

Transformative Governance

Experiential climate futures allow to process complex eco-social issues and systemic transitions through personal (emotional) experiences. On top of analytical processing, this adds a necessary layer of understanding that deals with how people might respond in a given situation they had not yet experienced. It renders concrete the otherwise “fuzzy” values, goals of systems, mindsets and paradigms – the highest levers of systemic change (Meadows, 1999) –, and this in turn allows transformative conversations for transformative governance. From a systems transitions perspective, this is valuable in both established, official political spheres (the “regime” in systems transformations as seen by Geels & Schot, 2007) as well as informal, grassroots spaces (what they called the “niches”).

The public sector can better support and involve creatives by embracing transformative practices to climate mitigation and adaptation, encouraging transfer of creative insights and methods to climate policy, using experiential scenarios in political decision-making and administration, making funds available for experiential futures practices, and creating experiential futures staff positions in the administration.

Conclusion

One of our aims was to advance transformative climate adaptation through an experiential climate scenario with European policymakers, with an emphasis on long-term systems transitions. We embedded experiential futures in transformative adaptation and followed a rigorous research approach based in practice and imagination.

We created a narrative scenario, uncovered different roles of narrative and experiential approaches in (climate) policy today, designed an experiential climate future and hosted an event for thirty people in and adjacent to climate policy to inspire their imaginative capacity to explore pathways to transformative adaptation. The experiential climate future surfaced emotions ranging from fear and frustration to curiosity and joy, as well as values and mindsets that underlie assumptions about the future.

Through interviews, observations from an experiential climate scenario and reflections with participants and the research team, we have found that despite the huge potential experiential climate futures as a political tool in futures-oriented climate policy in particular, they yet have to reach policy makers and earn their trust to help explore transformative pathways and inform decision making. We found the need to clearly communicate the values and benefits of experiential futures to facilitate building awareness and trust, and designed a case study in the form of a zine to show what an experiential future such as HeatCon can look like and communicate the value for climate policy.

There is a tremendous potential of experiential approaches that surface emotions – a core competency of the cultural and creative economies – for transformative governance and transformative climate adaptation in particular, and creatives bring a mindset relevant beyond the creative spheres and should be involved in transformative governance and climate adaptation. As climate impacts are disproportionately experienced by disempowered communities, also within Europe, experiential climate futures provide a working framework to incorporate these voices for a just, transformative climate adaptation.

Next Steps

Deepen Futures And Social Science: As this was an early stage exploratory research with limited resources, it could be extended with a more extensive futures, qualitative and ethnographic research.

Co-Create Experiential Futures With Policy Makers: In a subsequent experiential climate futures process, move from experiencing to exploring, co-creating and experiencing a scenario together with policy makers (e.g. in the form of a 10-day residency).

Design Systemic Interventions: Examine and shape climate resilience measures to include measures that address interconnected issues and have the potential to transform systems, including e.g. community-led response, large scale rehousing, accelerating decarbonization and transitioning economic systems, among others.

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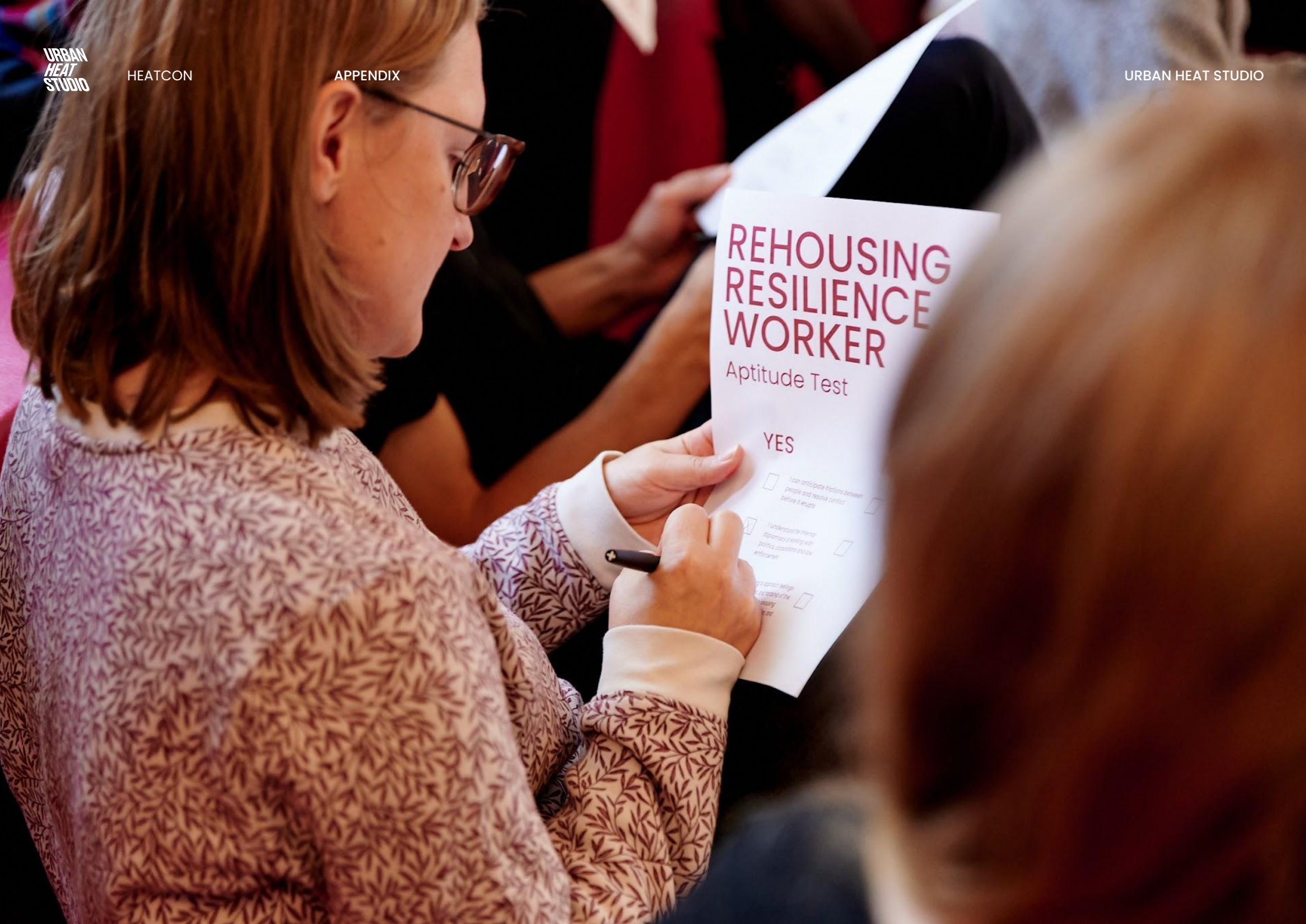
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Recommendations for policy makers on how to work with experiential climate futures

November 2023

Dealing with multiple crises is complex and full of uncertainty. The climate crisis requires rapid decarbonization, adaptation, and long-term systemic transitions to build climate resilient communities, prepare for impacts that often extend years or decades into the future, and advance social justice. This poses challenges for decision-makers in federal and local politics: Not only do they have to work evidence-based, but also be able to explore a variety of alternative scenarios, assumptions about futures, and understand how it could feel to live in them, which is a domain of creativity and imagination. Despite evidence on how creative practices can support sustainability transitions (CreaTures 2023), there is not enough room for them in the political arena, and so many climate concepts have failed to deliver on their transformative promise.

Scientists and creatives alike have pointed out how hard it is to grasp the complexity of the climate crisis (Ghosh, 2018), the need to facilitate emotional over intellectual engagement for such complex issues through immersion (Jain et al., 2019) and have suggested using experiential futures to advance policy (Candy, 2010) to design for transitions (Lockton & Candy, 2019). Immersions make future scenarios tangible and open up a participatory arena for creating new and richer scenarios. They also allow to put up ideas for discussion that sometimes seem wildly preposterous from today's perspective.

The design research project (HeatCon 2023) dedicated to experiential futures practices in climate adaptation policy, conducted by Urban Heat Studio, resulted in the following recommendations for policy makers.

1. Embrace transformative practices to climate mitigation and adaptation

Adopt systemic change, innovation, long-term perspectives, participation and inclusivity, learning and flexibility, and multidisciplinary approaches to climate mitigation and adaptation policy. As conventional ways of mitigating the climate crisis have been insufficient, transformative mitigation (and adaptation) approaches (Pelling et al., 2015) go beyond this and involve fundamental and dynamic changes in systems, structures, mindsets and behaviors. Experiential climate scenarios can help envision and embody alternatives and facilitate these shifts. More specifically, consider the interconnectedness of ecological, social, economical, political and infrastructural issues and their compounding impacts in concepts and policies,

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imagine desirable visions of the future, and bring them to life through experiential scenarios.
Policy makers should propose opportunities derived from longer-term future scenarios and multidisciplinary approaches that are typically overlooked, which can include e.g. community-led responses to climate emergencies, large scale migration, transitioning economic systems and accelerating decarbonization. Instead of designing by disaster, decision makers can choose a more proactive, participatory, more sustainable and intentional approach to building resilient futures for their communities.

2. **Encourage transfer of insights and methods from the cultural and creative industries into climate policy**

Encourage a transfer of creative methods and insights to the development of climate protection and adaptation measures, and projects in the cultural and creative industry should be allowed to venture further into designing solutions for the climate space. Establishing a permeable relationship between climate and culture is especially relevant, because designing experiences and surfacing emotions – a key component of creative practices – bring a valuable, subjective level of understanding of an issue. This can support political decision-makers in developing more nuanced scenarios and visions of the future, and making better informed decisions. Further, the participatory context of immersive scenarios can be used to strengthen the involvement of civil society, administration, business, and local creatives.

3. **Use experiential scenarios in political decision-making and administration to explore other alternatives and make better informed choices**

Include experiential futuring in (climate) policy processes at an early stage. Creatives can and should be invited to co-create scenarios, explore new possibilities and facilitate better informed decision making, rather than merely doing science communication. This has been successfully applied in e.g. the experiential futures “Hawaii 2050” by the Hawaii state legislature (Candy et al., 2006). Experiential scenarios can further be utilized internally as training opportunities for administrative staff and political decision-makers to practice response mechanisms, for strategy development, or to carry out participatory engagement formats with external stakeholders. Engaging employees of public organizations in these practices can help foster a co-creative atmosphere and it could engage them in shaping responses and processes. Given the right conditions, stepping into an alternative future can allow them to disconnect from present-day hierarchical or interpersonal barriers, which often stall transformative ideas in governance.

4. **Make funds for experiential futures practices available to advance anticipation and systems transformations**

Allocate funds for experiential futures practices across a wide range of funding schemes and budgetary planning, from individual municipalities to larger networks of organizations, ministries, and cultural institutions, especially as many municipalities have budgetary constraints that make

it hard for them to apply creative methods. Funding transformative practices cannot be evaluated with conventional tools or based on direct carbon emissions prevention alone, hence embrace transformative evaluation approaches (Vervoort 2023). Therefore, funding programs in the climate sector should focus on removing barriers, allow for flexibility that the creative process needs, and encourage transformative processes applied with funding.

5. **Create and maintain experiential futures staff positions in the administration to strengthen long term transformative mindsets**

Create positions for experiential futures and related creative practices, following examples of the Design Fiction Manager at the City of Grenoble, France, and embedded artists in Scotland (Creative Carbon Scotland, n.d.). Their creative potential should be used in the policy making process, rather than embellishing a conventionally derived policy or measure. By doing so, the technical efforts in climate mitigation and adaptation can be complemented with richer scenarios and responses to more complex, interconnected issues. Though visiting creatives can be a start, hired staff members can better align the city's projects and processes and build long-term imagination and anticipation capacity. Consulting over a long term process, they can use scenarios to inform concrete policies. To avoid isolation, facilitate exchange and sharing good practices between these staff positions.

These recommendations emerged from a design research project on transformative governance in climate adaptation, HeatCon 2023 *(July - November 2023).* HeatCon 2023 *was dedicated to the question of how experiential climate scenarios advance transformative governance in the climate policy space. The project was carried out by Urban Heat Studio and funded by the Creative Impact Research Center Europe. These recommendations reflect the outcome of the project and were written by the Urban Heat Studio team. They don't reflect the opinions of the funder and its team.*

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