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System Change Hive

Project Learnings Report

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SYSTEM CHANGE HIVE

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Contents

1. **Summary**.....2
2. **Overview of Project Methodology**.....4
3. **Academic Component – System Change Thematics**.....11
4. **The Immersive Exhibition – Artistic and Curatorial Approach**.....16
5. **Learnings**.....18
   - 5.1 Communications Insights – Breaking Down and Communicating System Change.....18
   - 5.2 Impact on Artists Practice/Capacity to Engage in System Change.....22
   - 5.3 Critical reflection on Project Design/Methodology.....23
6. **Replicability**.....29
   - 6.1 In Educational Contexts.....29
   - 6.2 In Other Contexts.....30

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Photos inside by Idil Bozkurt. Artworks featured in photos from the exhibition *Hidden Paths,* launched at ONCA Gallery, Brighton Digital Fest 2019. 'Council of the Future' photo from tour to Warwick Arts Centre – *Change Fest* 2019.

A full list of participants and contributors to the Hive project can be found at https://systemchangehive.org/participants/

1. Summary

The System Change Hive was a fascinating interdisciplinary project that pioneered new ground via its exploration of socio-economic system change, and how to communicate a desire for alternative, sustainable futures through the use of arts. The Hive was many things – an educational project, an experiment in using virtual reality technologies to explore and communicate alternative futures, a training ground for young artists mastering their craft, and in the final phase, an informative immersive exhibition inspiring the public about the barriers and possibilities for new systems, operating upon very different value and narrative sets to those which we find ourselves in today.

Delivered across 2019 and early 2020 before COVID19 struck, the project was created by environmental/arts charity Swarm Dynamics, developed and delivered jointly with University of Brighton School of Media, sustainability researchers from ESRC STEPS Centre, and a virtual reality technologist at Wired Sussex.

As an experimental, arts-based enquiry, the project aimed to progress the understanding of system change and find ways to communicate positive visions of life in transformed systems, with zero carbon societies based on well-being for all at heart. In particular, it aimed to bridge the disconnected worlds of policy and research with the arts, and gain insights about possible ways to communicate this complex and hugely timely topic.

This report looks back on the journey, documents the project parameters, and contains learning and recommendations for what worked well and what could have been improved. The Hive achieved a number of its aims, and succeeded in forging a positive collaborative culture where students and participants were clearly inspired by the importance of the mission of the project. As the Hive grappled with what system change means, and the barriers to getting there, powerful movements like Extinction Rebellion and Fridays for Future gained further momentum and began calling more vociferously for 'System Change not Climate Change' – yet without any substance, or shared meaning yet, for what new System(s) they wish to see.

Not all of the approaches or project design worked as effectively as hoped. Learning from failings is vital and expected when entering unchartered territory, so we have documented the places it fell short and suggested factors that could be improved in future to address these weaknesses. In some cases, shortfalls were due to a lack of sufficient budget, which is another way of saying, overly high ambition for the available budget! In other cases, some aspects of the project design itself did not work as well as planned. In some of these cases, specific elements of the approach that failed may have worked in other interdisciplinary contexts from which we drew

experience or inspiration but did not work as well in this particular constellation of people, ages and skill sets. These learnings about shortfalls are equally important and have led to the formulation of a few recommendations for the design of future interdisciplinary processes seeking to bridge arts, education, and system change theories. These recommendations can be found in chapter 5 - *Learnings*. They are intended to be a helpful steer for the design of future interdisciplinary labs working on system change in ways that give a central role for artists.

Caveats – this report draws upon evaluation calls with the project managers, ad-hoc feedback from the extended project team throughout 2019, a set of participant entry and exit surveys as well as a very small sample of exhibition audiences surveys. However, the pen was ultimately held by the lead project manager representing Swarm Dynamics. A round of feedback on the text was incorporated from the other project managers representing University of Brighton and STEPS Centre prior to finalising. Therefore, it is possible that not all of the large number of contributors or participants would share all these conclusions or observations equally, but efforts have been taken to indicate where findings and recommendations are based on recorded feedback or questionnaire data.

We hope this is useful for anyone planning interdisciplinary work on system change issues where artists are central, and welcome hearing from anyone who is interested to get in touch. To learn and see more about the project and exhibition, visit www.systemchangehive.org and www.swarmdynamics.org

2. Overview of Project Methodology

Project structure

The System Change Hive comprised 2 project phases. The **first phase** was an 11-week journey of weekly afternoon sessions held at Edward Street campus of University of Brighton. This included approximately 2 hours of 'academic time' comprising an expert lecture or presentation from a predefined course, followed by full group discussion time. Each of these sessions was followed by loosely guided creative time to explore, process or spark off ideas presented. Some of the experts chose to break up the discussion time by running small group topics or discussion challenges. Others stayed in full circle throughout.

During this academic phase, the Hive aimed to operate as a creative learning and ideation space, with mentors succeeding in establishing a safe culture of shared values and attempting to transcend some of the traditional knowledge hierarchies of universities. Participants were encouraged to use the *right to fail,* and to work within a number of *creative constraints* to spark creative 'leaps,' discovery and problem solving regarding how to break down and portray the sustainable radical futures they wanted, and how to communicate system change through art. The course and open-ended discussions were framed around an overall scenario of a complex world where ecological and social systems are constantly changing and affecting each other.

The opening session stressed the importance of addressing injustices and vulnerabilities linked to climate change, unfair use of resources, perverse forms of economic growth and development, enduring poverty, and the marginalisation of people's views, rights, knowledge and needs. Participants were presented with the insight or argument that despite the complexity of interlocking systems, the responses on offer are often based around big solutions, 'magic bullets' and too often - scalable tech fixes rather than deeper transformation of socio-economic models, values and behaviours. Uncertainties are ignored or treated as if they are calculable and rationalised risks while the importance of unpredictable, unruly, cultural movements to spur rapid radical transformations is often neglected. Hive participants were encouraged to view their engagement in the project not as merely learning, or as just part of a creation of an immersive exhibition, but as a thinking contribution to system change and actively considering the futures they wanted. In the first sessions, all participants including researchers, emerging artists and creative mentors – were invited to share and discuss their views, emotions and uncertainties about the future and how they see it unfolding. This aimed to probe and connect participants with

their deep seated or even unconscious beliefs about the future, which may or may not differ from socially acceptable responses in some settings.

The **second phase** followed with another 4 months of weekly or bi-weekly creative time. Artistic ideas and curatorial approaches to best give effect to the creative brief and what participants wanted audiences to take away about System Change were discussed and reworked. At this point the participants split into 2 groups, with the virtual reality group working on the VR simulation at Fusebox, Wired Sussex, and the analogue artists working at the ONCA barge. A number of full group meetings were held to maintain cohesion towards the collective exhibition. Whereas the original plan was that participants would be largely in making mode by the commencement of this phase, many of the emerging artists took longer than planned on deciding creative concept and intention and were still deciding what they would like to create well into this second phase. Many rich ideas and meaningful deviations were conceived during this phase, more than were able to be developed and fit within the final exhibition and curated information.

Participant Selection and Composition

A balance of skill sets was sought in the selection of artists, with the final selection comprising approximately half on-campus students and half not enrolled in studies. Out of 14 selected, 2 of these identified not as artists but as communicators or coders. These non-artist skills were regarded by the project managers as complementary and were included as having an equal role in the Hive including on production processes towards the resulting public exhibition and VR creation. A balance of gender was achieved however the group lacked diversity on the basis of other criteria, including socio-economic background, ethnicity, etc. A longer and deeper recruitment process could have resulted in applications from a more diverse range of people and identifications. 2 bursary awards were awarded to assist young artists who may otherwise have found it harder to cover time and/or transport to Brighton to access the programme. Out of the 14, 12 participants successfully completed the entire project and exhibited work in the resulting exhibition, with the remaining 2 pulling out part way due to personal or family reasons.

Mentorship – Composition

The weekly sessions were facilitated by two artist mentors, and less frequently, the lead project manager who also provided occasional guidance and mentoring to a

smaller number of the participants. This was supported by the other project managers from the University of Brighton and from Steps Centre, who both joined the intellectual journey and helped to lead break out group discussions and exercises during the Edward Street phase.

In addition, two specialist mentors were brought in to guide the production processes towards the final exhibition. These included a technologist adept in arts based virtual reality creation, who both provided initial training modules in Unity software to 6 of the participants and helped them execute the final simulation, and a creative producer with experience in arts-science collaborations to oversee the preparation and installation of the group exhibition.

Model and Pedagogical Approaches

The model of the Hive drew some inspiration from previous projects run by Swarm Dynamics (in a non-educational setting) such as the Creative Factory bringing together artists communicators and climate change experts at UNCOP21. It also drew on some of the dynamics of maker spaces and Fab-labs, with more than one of the project team having experience in arts-science collaborations and arts-based enquiry into the communication of climate change. The System Change Hive model was different however, and unique in its challenging incorporation of new technologies as both learning and communication tool. Unlike the Creative Factory by Swarm Dynamics at COP21, the Hive worked with predominantly *emerging* artists or arts students with no prior background in the subject matter of system change and some not yet expert in their own artistic discipline. The Hive was also without precedent, to our knowledge, in aiming to both break down and explore socio-economic system change through the arts.

The Hive project managers and mentors placed some emphasis on developing *contextualised critical thinking skills* (in the context of system change) by repeatedly drawing conversations back to what sort of futures would they like to see eventuate. It was emphasised from the earliest sessions that a plurality of viewpoints and framings of a broadly shared destination was both allowed and vital if the meta objective (to figure out how to mainstream a desire for, and belief in the plausibility of, system change) was to be achieved. Academic research on a variety of interdisciplinary education confirms the importance of providing an intellectual journey where participants move from an acceptance of knowledge authority towards developing some of their own views, as preconditions to fruitful interdisciplinary 'discovery' or insight in interdisciplinary labs. This is common to both arts related and other types of interdisciplinary labs.

From the first session onwards, there was a conscious effort to establish a safe space, where the right to fail was celebrated, and operating on a set of basic rules that the group established together during session one, that differed from the usual academic (or corporate) conventions of knowledge transfer and hierarchy.

A key exercise was run in the third session, which aimed to allow participants to become comfortable with voicing different or even oppositional views regarding desirable futures, climate governance, and social aspects of future systems. This entailed the facilitator designing and running a guided visualisation into a day in a life in a deliberately polarising sketch of a zero-carbon future. As expected, participants reacted very differently and to different aspects of the visualisation, with some embracing visions of high levels of environmental regulation and/or communal living to ensure zero emissions targets were maintained. Others recoiled from the suggestions of big government control and the banning (for example of meat,) or strong social expectations around collaborative involvement with the neighbourhood - commenting that they would prefer systems that were not reliant on control or peer pressure, regardless of whether such climate 'governance' was local, municipality, or state led. Locating responses and enquiry in the body, each participant was asked in turn to tell the group how different parts of the scenario made them feel and which aspects their body responded positively or negatively.

In the spirit of moving students from their own pre-determined certainties and preferences towards *intelligent confusion* in the early to middle phases of the project, the exercise then ended with the facilitator highlighting that some of the underlying differences relate to aspects of system change policies and theories, as well as participants own values and assumptions – for example the conditioning we have all received if raised in the individualistic cultures of late capitalism. It was highlighted that if we, the self-selecting and identifying as environmentalists feel aversion or disagreement about some of these 'how' questions, similar questions or reactions will almost certainly turn up as barriers to gaining wider public support for rapid transitions unless we learn how to frame or navigate through these effectively. Questions such as 'how will the new zero carbon or solidarity behaviours be held in place? (for example, by laws or taxation, or carrots instead of sticks, or primarily by education, new social norms and expectations alone?) are key questions without single or easy answers. There was some reflection in the Hive that these sorts of questions turn up frequently when discussions with friends, family and colleagues broach the topics of system change, with the disbelief in feasibility of alternatives also sometimes appearing as a form of resistance to shut down these politically marked discussions.

Linked to this, a number of academic sessions including the presentation in week 7 aimed to lead participants towards an understanding of the extent to which late capitalism has shaped and conditioned all of us, (even those of us identifying as

progressive, feminist, or radical left etc.) A sociological reading of human behaviour being a product of living within social systems, instead of the commonly received narratives about innate or immutable flaws of humans reveals ways that the current order shuts down serious conversations about alternatives. In short - Capitalism depends partly upon beliefs about the moral imperfectability of the human being.

Some of the specific pedagogical tools and exercises created and incorporated (at least briefly) in some of the early sessions were as follows below. The intention for each was to break down thematic aspects of system change, and to a lesser extent, *systems thinking*, into manageable components that allowed participants to explore transformations and pathways to alternative socio-economic futures in connection to the creative brief.

- **Systems thinking warm up game** - quick basic game ran during the first session of the Hive. Introducing the Hive community of participants as a 'system', small groups are guided to identify and map surprising connections between each other. The exercise then folds into full group, mapping and naming connections until everyone is connected to everyone else. Used to warm up participants' attention to interconnections, interdependence, and the often-invisible connections between parts of systems.
- **Future scenarios guided visualisation** - 15-minute guided visualisation into alternative socio-economic futures operating on zero carbon principles. The prepared scenario included a deliberate mix of regulatory, control-based measures (for example bans on meat consumption, strong penalties for cutting any tree or uprooting wild plants) through to cultural and community empowerment measures to control emissions, with socially reinforced expectations and morality.
- **Tensegrity structures** - abstract sculpture concept created by one of the artist participants, involving systems of balanced rods held together with tension cables. These sculptures were intended as three-dimensional abstractions of 'systems' to understand interlinkages, tensions and leverage points within systems. While the components were never labelled, interesting discussions were held where some of the participants played with the sculptures as a 'totem' for our socio-economic system, realising that with the right leverage point, a small push or pull could change the entire balance of the structure, or even topple it down. This device

could be developed further as a teaching tool for understanding and conceptualising '**leverage points**' and potentially '**paths of least resistance**' within systems.

- **Transformations card deck game.** A bespoke deck of over 25 cards created by Swarm Dynamics as a learning tool for the Hive to explore and create plausible pathways from now into zero carbon, post-capitalist systems. The deck was divided into 4 suits – transformations in Money, Work, Nature, and Power/Governance. Participants were encouraged to play with sequences of cards, using at least 3 of the suits, to plot a smooth, plausible sequence of social, cultural or political shifts or pressures.
- **Money game.** A role-playing game ran by one of the mentors in the early sessions of the Hive, revealing inherent assumptions and values within money as an exchange mode, 'problematising' money or at least its commodification.
- ***Exquisite Corpse.*** Narrative variation on the visual arts 'surrealist imagination game' invented by the surrealists in the 1930s as tool to jumpstart the unconscious imagination. Hive participants were invited to generate text in free flow in response to a prompt. Each prompt was a character sketch in a date in the mid future. Participants were given a time limit to write and were challenged to link the spontaneous 'story' with at least one thematic from the academic course. As a result, each small group came away with a story fragment about life in transformed systems generated from 3 different perspectives.

Some of these yielded rich and fascinating discussions, too many to capture within the scope of this report, and some contributed to the works within the final exhibition. However as described further in the learnings chapter of this report, a clearer developmental process of working through the creative brief, and additional preparation and sequencing of creative entry points or parameters linking academic content with artistic exploration would definitely have strengthened both the learning and discovery within the Hive, as noted by some of the older participants in feedback surveys.

'Open' and 'Held' Discussions as Key Engine of the Hive Thought Processes

The open and inclusive culture of the Hive that was established quickly gave birth to an emphasis on certain themes, with ideas from some of the expert talks becoming repeated points for discussions and creative ideas, and others either not processed

or viewed as less important by the group. A strong emphasis on intersectionality, gender, empowering minorities and decolonisation in all its forms emerged early on from the artists group in the Hive, and remained one of the themes presented in the final exhibition and VR as a pillar not only of life in the new zero carbon systems participants wanted, but also as aiding theories of change in multiple ways. This included repair of democracies, learning how to view what is broken in current systems through the voice and experience of marginalized or oppressed groups, and learning from modes of resistance and resilience practiced by these groups across generations.

3. Academic Course Component - Thematics

During the preparatory phase, an initial set of system change thematics was defined, partly aligned with the research areas of the knowledge partners – STEPS centre. A number of key ideas from these topical themes were explored and picked up by the artists and participants for the resulting immersive exhibition. The weekly academic presentations and discussions were delivered by different academics, and the content is summarised briefly below.

Throughout the academic journey, a number of broad crosscutting themes were traced throughout the academic and discussional journey of the Hive and influenced the direction of discussions in the Hive and the final curatorial approach. Several of these are central to the STEPS Centre approach to sustainable transformations, with 7 out of the 9 lectures being delivered by STEPS academics. These crosscutting themes included a focus on ***caring transformations*** (as opposed to heavily controlled transformations), the benefits of ***multiple futures and pathways*** as opposed to singular theories and limited solution sets (for example the over reliance on tech-fix solutions in our current system.) Related to this - the potential dangers of reducing the messy complexities of politics and systems to any single parameter (such as climate change) was stressed by a number of the expert talks, highlighting that a ***systems approach*** makes clear that rapid decarbonisation can only be achieved on time, and in a socially just ways, if broader interlocking transformations of our social and economic life are pursued. This is one difference between transition, and *transformation*. Another repeated theme was the '***decolonisation of the imaginary'*** introduced by Oxana Lopatina in a lecture that touched on the Degrowth movement and referred to in Hive discussions as an emphasis on 'what if' thinking about desirable, sustainable, futures.

In addition to the 7-system change thematics below, a half session was dedicated to **climate change communication. Professor Julie Doyle** (University of Brighton), an expert in communicating climate change through the use of the arts, provided an overview of key communications principles. As one example, art or imagery that appears 'remote' geographically or temporally can be problematic and lose impact. We could hypothesise that a number of the research findings into effective communication of climate change (a 'wicked problem') might also be applicable to communicating the broader, even more political reform sets referred to as system change. However, the research base for the latter does not yet appear to exist. The insights and creative investigations made by the artists, students and experts in our System Change Hive made some important if humble beginnings in conceiving ways

to frame and approach system change through the arts. These are summarised in section 5.1.

Thematics

Systems, Change, and the Dilemma of Economic Growth

(Amber Huff, Phd)

Participants were presented an overview of some of the defining, and problematic, features of our current socio-economic paradigm. This included analysis of capitalism as a system of exploitation and control, and questioned why it has become 'easier to imagine the end of the world than to imagine the end of capitalism?' (Jameson.)

Experts in this session looked at ideas about alternatives to the current GDP growth dependent economic model that is causing crises, ranging from the degrowth movement, through to ideas about communicating forms of abundance versus planetary boundaries. One expert challenged participants to think about 'what does scarcity thinking do to us as a society?' and reflect upon whether notions of abundance (of renewable things and resources) would be more helpful in communicating change. In many cases, abundance, of course, first requires deep redistribution of wealth and resources.

From Transition to Transformation

(Professor Andy Stirling)

This theme delved into the politics of system change. Participants were provoked to reflect upon what the Hive was undertaking - exploring how big, radical changes might happen in technology, economies, environments and culture, but the word 'system' sometimes makes us tempted to think of the world as something that can be *controlled*, with the powerful people in the cockpit flying the plane.

What if there's no cockpit, and powerful actors are just taking advantage of events, boosted by their privilege? What if we think of the world (and each other) as things to care for rather than control? Examples from radical movements of the past and the pioneers of sustainability show more emergent, bottom-up forms of transformation. This theme encouraged participants to examine control within our current socio-political systems and introduced ideas of moving from controlled transitions towards caring transformations.

Gifting Economics

(Professor Pat Huff)

This thematic provided participants with a radical alternative model of economics drawn from anthropological examples. In the 1920s sociologist Marcel Mauss challenged western economic theory by writing about societies where gift-giving was central to modes of change. He noted the anthropological evidence showed how objects flowed to where they were needed and highlighted the famous Potlach ceremonies- where the people who gave the most away were the winners, turning our notions of 'success' on their heads, and inviting a range of revelations about how exchange modes influence social interaction. His writings influenced the Surrealists and the Situationists. Hive participants were also invited to think about how gifting (while not always 'pure' or 'free') can liberate us from the fear of scarcity, helping us imagine how resources could be shared more fairly, while meeting people's psycho-social needs and unconscious motivations.

What is money? Do we need it? How can it be 'de-commodified'? in alternative, ecologically centred economics?

Resistance and Community Empowerment

(Amber Huff, Phd)

This thematic exposed participants to ideas and research about the historical and contemporary role of resistance in spurring change, including the intersection between art and political or protest movement. Movements of resistance have been important throughout history for provoking change, with civil rights and workers' rights being commonly known examples. We asked what some of the preconditions might be or 'ingredients' for successful resistance movements having a discernible impact upon profound societal shifts.

When enough people get together to resist injustice, this can create a space to imagine how the world could be different. To create hope and provoke action, resistance movements often incorporate visual arts, song, and dance. In different settings and different ways, from the International Workers of the World to the Zapatistas and Kurdish fighters in Syria, and in many other groups and places: images, movement and music are an important way to tell stories, forge shared identity, and communicate radical visions. This theme connected with the cross-cutting theme of 'unruly' transformations, key to the Steps Centre approach. Learning from more unpredictable social transformations, which can and have occurred rapidly when a constellation of changes and pressures in society, economy, and sometimes scientific or artistic discovery, can provide key sights into how our systems may change in the near future.

Making and Re-imagining the role of Technology

(Adrian Smith, Phd)

This thematic focused on makerspaces, making and the role of technology in system change. System change might mean rethinking technology in the service of new values or goals. From genetically modified crops to driverless cars, new technologies are often presented as inevitable but who shapes them, who decides and who benefits? Outside of corporate R&D and public policies, what other spaces are there to invent, alter, adapt and question technology and its effect on human lives? Drawing on examples, the week dedicated to this theme also touched on the potentials of democratisation of science and technology to help new socio-economic systems come into being.

Rapid Decarbonisation

(Professor Pete Newell)

How do we get to zero carbon futures on time? Different people put their faith in technology, markets, states or citizens to provoke meaningful change on greenhouse gas emissions. But not all solutions are equally possible, desirable or just. The situation is highly urgent, yet emergency narratives can be paralysing too – calls for urgent action, however well-meaning, can sometimes close down spaces for deliberation and allow powerful actors behind 'quick fixes' and tech solutions to push their own agendas.

Given the scale of the challenge, radical and joined-up change can seem impossible. But rapid, surprising changes have been known before, and they are happening all the time around the world. What can we learn from these examples about the problems and possibilities of taking rapid action? How can responding to climate change link to wider concerns for social justice and sustainability? Could promising movements and changes we are seeing in different places add up or link together in new and scalable ways?

Human Identity in New Systems

(Oxana Lopatina, researcher)

This thematic from week 7 of the Hive went deeper into some of the invisible assumptions upon which the current capitalist system depends. All socio-economic systems are based on IDEAS. Participants were encouraged actively to try 'decolonise the imaginary' to use a term coined by the Degrowth movement. This is essential if we are to avoid the pitfalls of earlier transformations and revolutions, and not inadvertently recreate the same problems and values in a different guise.

This thematic delved into the topic of **transformations in work,** and connections between work, identity, and social barriers to deep and rapid decarbonisation. What is adding value to society? What happened to the old promise that technology would free up more leisure time or time for meaningful work? Drawing on a report by

the New Economics Foundation, we learned that corporate elites of certain sectors actually destroy value to society, and the planet, when a fuller picture is taken into account. Is it more important to create jobs, (many of which may be 'bullshit jobs') or do work that needs doing?

We are becoming ever more dependent on the capitalist system. Yet most of us accept it. Why DO we accept the outrageous salaries of bankers and other corporate elites from planet wrecking corporations? Does it mean we have absorbed, rather than actively believed, the constructed stories about their added value? Post-capitalist futures will require us to open to change ourselves – both our individual and collective selves. New forms of human identity. New modes of interacting. New role models. New social codes to address human motivational values. New dreams.

4. Immersive Exhibition - Artistic and Curatorial Approach

Artist participants felt it important to create a cohesive exhibition experience, where the virtual reality environment was meaningfully connected to the analogue exhibition. They were also united in the need to a poetic and emotive approach, to inspire audiences about the potentials and need for system change, and to balance head and heart in creating an informative exhibition that might help shift how audiences thought about the future.

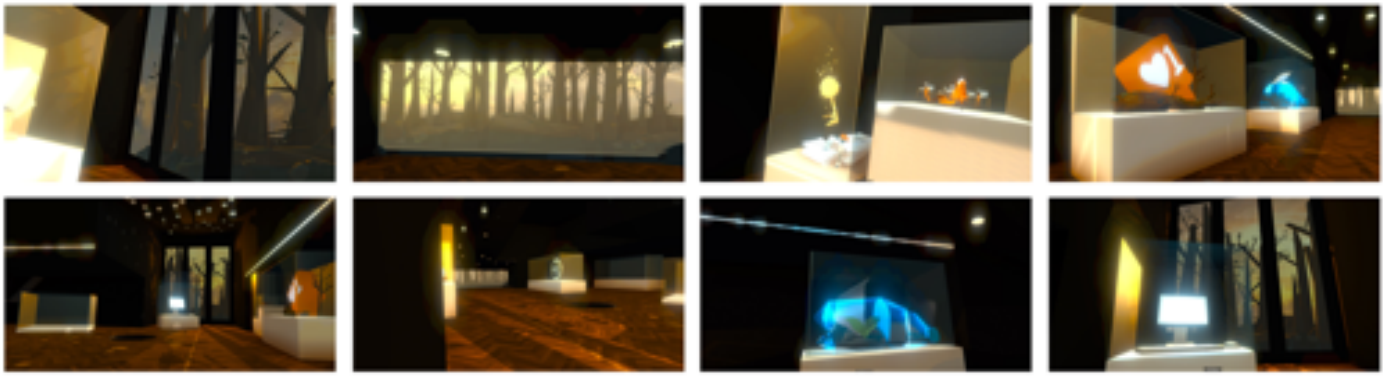
After exploring and abandoning a number of curatorial approaches, their chosen curatorial device was a 'museum of futures.' Connecting with the STEPS Centre academics approach of emphasising multiple pathways, the initial idea was a space to 'archive' aspects of the current system, and intermediary stages along the way towards the new systems we need. The device of a 'museum of futures' was felt to be useful in helping audiences situate system change in time, project into the future, and understand that the current moment will soon be 'past'.

Considerable time was spent discussing ways to break down and structure the key information and ideas into an experiential flow through the gallery. The progression they chose was a temporal one, beginning with a chapter on 'Now' – with artworks and signage articulating problems with the current system and barriers to changing it. Then moving to 'Change' – a short series of artworks and information engaging with promising 'seeds' of system change already happening in Brighton and elsewhere in the world. The final chapter was 'Possible' – where glimpses of life in future systems, and narrative pathways to get there, were experienced in an amazing 15 minute virtual reality experience (with use of a headset) and in a sound art installation curating fictional story fragments from life in future systems, adapting or coping with an inevitable degree of climate and other breakdown, but implementing pillars of post-capitalist, zero carbon futures. It was a rich and thoughtful collection, comprising visual art, sculpture, short film, sound art, and an impressive virtual reality experience built by 6 of the artist participants.

The virtual reality experience contained 3 broad pathways to changed systems – transformations in money, in society, and in our relationship with nature. Artists felt the aesthetic decisions were very important – that communicating system change requires colourful, beautiful aesthetics that represented changed values and relationships. In particular, the museum environment they created blurred boundaries between the built and natural environment, with rivers and plants merging seamlessly within the museum. One of the artists astutely commented that

"there is no visual lexicon yet to convey what we are talking about with the new systems we want.[1]"

As an action oriented 'take away' from the show, a QR code allowed participants with a smart phone to access additional information including weblinks to projects initiatives or movements they could join in their area that represented key and scalable pillars of system change.



[1] Thomas Buckley, artist, in conversation with David Holyoake at the launch event.

5. Learnings and Impact

5.1 Communications Insights - Breaking Down and Communicating System Change

One of the memorable insights artists arrived at regarding how to communicate the need and benefits of system change to audiences was the importance of **linking system change to a broad range of people's daily struggles.** To cut across a broad base of demographics and socioeconomic backgrounds (including, importantly, people who may not identify as oppressed or marginalised) - there is value in these narratives including internal psychological struggles and demons that may be exacerbated, created, or silenced by current systems. A sociological reading of individual behaviour within capitalist (or other) systems highlights the extent to which people are conditioned by interlocking systems around them, and challenges the notion that people do bad or undesirable things because they are innately greedy or selfish when such behaviours may be encouraged, rewarded or wilfully ignored by 'the system.'

This insight, captured in Sam Hewitt's copper monolith print '*Welcome Honoured Visitor*' chimes with communications principles of starting where the audience are at, as well as the work of Mark Fischer and other contemporary thinkers highlighting the underutilised potential of politicising mental health in socially engaged struggles against the current environmentally and socially unsustainable order. Techniques of far-right populism often rely upon the distorted fabrication of simple but highly memorable and effective origin stories - in the case of the far right, this usually involves negative portrayals and blame of 'the other.' **Progressives could do more to develop and deploy origin stories that avoid blaming others, but which effectively link and explain a broad range of peoples suffering and struggles to overarching socio-economic systems that rewards and inhibits behaviours.**

Another conclusion reached by several of the artist participants, picking up on early STEPS lectures, was the potential power and importance of communicating ideas of forms of **sustainable 'abundance'** as benefits of system change to mainstream audiences - instead of, or as counterbalance to the more familiar scarcity narratives pushed by environmental NGOs. Guided by speakers and mentors, many of the participants appeared to receive positively the notion that this would require not only deep redistribution of wealth and resources, but the implementation of new systems based on emancipatory reforms in work, society, identity etc. The broader lens of system change to achieving zero carbon futures affords new and wider opportunities to tell compelling stories about wider sets of benefits and deeper transformations.

Consistent with the Degrowth movement's call to '*decolonise the imaginary*' from capitalism, moving beyond the limited sets of benefits around health, clean air and cheaper energy bills that predominates the communications of the climate movement, the frame of system change provides untapped opportunities to link rapid decarbonisation with a whole set of intrinsic and extrinsic benefits, from rich use of leisure time to emancipation from meaningless and exhausting work, to revaluing care and essential workers through to access to nature and gains in mental health. Thinkers such as Mark Fischer also highlight the untapped potential of politicising crashing mental health in the struggles of progressives today.

Unpacking and communicating visions of a better life in systems that place **care** at the heart of the economy (including valuing unpaid care work, care for the well-being of communities and nature, and investing heavily in social infrastructure) was felt to be a vital and potentially popular part of challenging the logic and subliminal narratives of late capitalism. When asked to describe in sensate or abstract terms what they would like new systems to *feel* like, words like 'caring systems, soft systems, slow and inefficient systems, and adaptive' predominated and starkly contrasted how many people would describe current life under late capitalism. In the VR experience, participants emphasised centring the voices of marginalised groups and identities in stories of system change, not only to reveal oppressions or exclusions operative in the current order, but also as potent illustrations of resistance and resilience, and as examples of different cultures functioning upon different core values or foundational narratives. Equally, the lens of class must not be obscured, and the multiple but shared narratives towards the care based, zero carbon economies we need should seek to unite and embrace both the more traditional 'blue collar' struggles of working class and rust belts (targets of 'just transition' climate activism) together with more recent (sometimes viewed as 'white collar') activism focused more on ethnicity, gender, sexuality etc. **An intersectional approach is truly vital to making sense of system change.**

The Hive repeatedly landed on notions of time, both the way our current system chains us to it in rigid ways, time poverty, and also in the sense that we find ourselves cut off from both the past, our ancestors, and the future which increasingly feels too frightening to behold. Project leaders suggested that **by foregrounding transformations related to work and time, such as shorter working weeks and universal basic income, that rarely appear in the 'better world' promised by environmentalists, we might gain broader support for system change and climate emergency agendas**. Here, there is a real challenge in making people understand the connections between these 'social' reforms and, for example, barriers to decarbonisation.

At the same time, some of the Hive participants, had mixed feelings about the notion of universal basic income, questioning whether the UK was 'ready for it yet' and whether we could trust people to receive 'free money'. It is interesting to observe that people who respond positively to ideas 'free health care' or other free services may yet react with discomfort to the notion of giving money for free, even at the level necessary to secure human basic needs and dignity. Might *universal basic services* be easier to communicate? Research into how to frame, and how the many differing policy design options for universal basic income are received by audiences would be powerful data for system change campaigners.

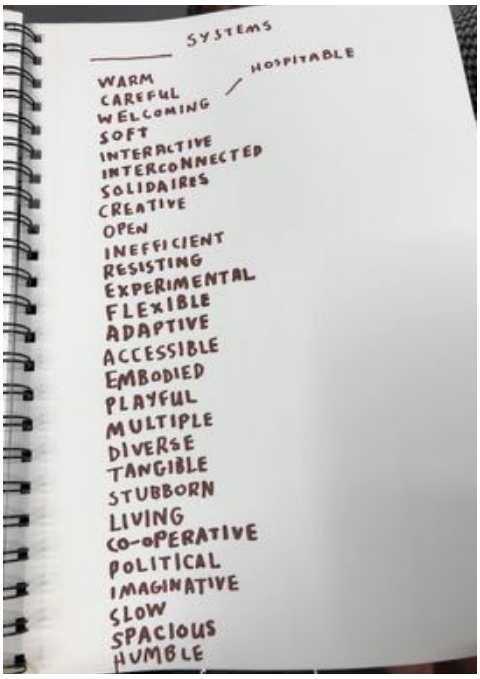
A general point felt to be important by many of the artists was **the need to connect 'head and heart' on the topic of system change.** Conveying a sense of wonder, inspiration and longing for a better world was viewed by the artists and mentors as key to overcoming the scepticism, political disengagement, disillusionment and fatigue from audiences who do not identify as activists or environmentalists. This goes to the *poetics and aesthetics* of system change - how to sensitise and humanise complex reform sets and values shifts. This is territory of the soul and of the nuances and poetics of the human condition that artists may be better placed to navigate than researchers and policy experts. The approach taken by the artists in the virtual reality simulation relied heavily on an emotive approach and on beauty - the creation of richly coloured, luminous and richly decorated visual environment for the Museum of Futures, blurring natural and human built forms in a compelling dreamscape.

Prefiguring COVID-19, an insight emerging from artists discussions was that **the denial of death** is deeply bound up in barriers to changing the current system. This resonated with ideas of death being the '*vital lie*' that capitalism depends upon (George Marshall and many others). A number of the artists understood and felt the power of making people aware of their own mortality, and (learning from the wisdom of indigenous cultures) of awareness of themselves existing in a continuum of ancestors, and unborn generations. If it were possible to create more space for societal conversations about death, would mass acceptance of 'bullshit jobs' and 60 working weeks remain?

Quickly realising they could not arrive at easy answers to the 'how will we get there' questions within the scope of this project, some participants appeared to make an intentional decision to avoid going far into 'how might it work' in order to focus on conveying a more universalising desirability of a new world based on a shifted set of foundational values and narratives, and the feasibility of this if values were to change rapidly. This was the approach taken by the VR team in the poetic approach intentionally taken in the VR simulation. The immersive and visceral effect of the virtual reality experience combined with a narrative that centred around voices of real activists and children describing how rapid transition to a new world, operating in

harmony with natural systems and with intersectionality and inclusivity at its heart.

A few of the other artworks however, in the analogue collection, presented more detailed imaginings of how aspects of life in future systems would operate. These included an architectural inspired visual design of multiple rooms within a future collaborative workspace exploring how our relationship with work could transform in new systems, and a sound installation 'waterfall' of multiple story fragments from a variety of future systems grappling with climate change and other impacts. Importantly, in all these cases the artist and group decided to present and frame these as playful imaginings, in some degree informed by real issues theories and solutions sets, with elements of fantasy and playful imagination.



A large list of adjectives seeking to describe how participants would like new systems to *feel* was also compiled during the end of phase 1 of the project. A photograph of this list of abstract or sensate decisions about how life in future systems should *feel* can be seen here, right.

Audience Testing/Survey Data

Due partly to COVID-19 and the cancellation of the tour, we have been unable so far, to complete any research based approach to gathering feedback from audiences on the VR experience, or from the exhibition as a whole. Anecdotal feedback collected informally by mentors and artists during exposure sessions was that a majority of people were visibly impressed and some emotionally moved by the experience[2]. Some young people who attended the exhibition also commented positively upon the VR experience, particularly the sensory aspect of the visuals, sound and movement. A smaller amount of other feedback however, while also wowed by the experience gave oral feedback that the VR experience "didn't really say much about system change" other than what they described as a 'hippy' story about enough people coming together to change the world and live in harmony with each other and with nature[3]. When exposed in video format only (without the use of VR headset) to MA students of *Changing the Frame* short course at Schumacher College, a number of students commented that it looked beautiful, but queried whether the narrative approach would work for mainstream or unconverted

[2] Feedback collected from user testing at Wired Sussex in early October 2019.
[3] Feedback from 2 audience members relayed orally to David Holyoake from Swarm Dynamics

audiences, noting that the narrative still seemed tailored to achieve audience identification with 'people like us.[4]'

This last observation, while not sufficiently tested with audience feedback but coming from people already schooled in some communications theory, may have related to the artists' decision to make the key speakers in the voiceover environmental/social activists. It may also have referred to a lack of engagement with motivation values of people from other *values worlds*. Narrative approaches designed to achieve audience identification with more mainstream audiences could still be compatible with centring the voice of intersectional, minority or oppressed groups - if utilizing story techniques to connect with other groups (not only reliant on the visual hook of the wow factor of a beautiful VR experience) in the first moments. A longer and/or better resourced Hive would have been required to, in addition to all the other training and grappling with system change theory, also equip artists in principles of story theory and audience identification. Alternatively, screen writers or film makers could have been included in the VR team.

Regarding the exhibition as a whole, a very small number of completed audience surveys were collected by ONCA Gallery staff on the last day of the exhibition. These were all positive overall with comments such as 'the exhibition felt engaging and relevant to the times' but a larger sample would be required to draw any firm conclusions.

5.2 Impact on Participant's Artistic Practice, and Engagement in System Change

Hive participants were required to complete a pre-project questionnaire that aimed to measure their baseline self-assessment of their knowledge and understanding of system change issues at commencement. An exit survey was also requested at the end of the project. Out of the 12 participants who successfully completed the whole project, 9 returned a completed exit survey.

All of the 9 artists/student participants who completed the exit survey reported that their understanding of system change had improved either 'significantly' (4 participants) or 'somewhat' (5 participants) as a result of the project.

[4] Changing the Frame 2020, group of 12 students of *Economics for Transition*, MA Programme, obtained during exposure during guest teaching by David Holyoake delivered online due to Covid, March 2020.

2 of the 9 reported that on completion of the project they felt 'very confident' in addressing system change through their art practice as a result of the project, and 4 reported they felt 'somewhat confident' and 3 'unsure'. In open field comments, some participants explained that they were aware of the complexity of the subject and how much they still 'did not know'.

Many of the exit surveys attested that the project would influence their future creative practice. Some wrote that the project helped them feel empowered with knowledge and gave a desire to connect with groups like Extinction Rebellion, as well as projects researching alternative futures. Several of the exit surveys also attested that the project influenced them regarding both the potentials and challenges of collaborative creative practice (co-creation), and the potentials of interdisciplinary collaborations – which was new to many of them. One student wrote that the project helped her "learn to be more open to other perspectives on the issues we are facing", and another wrote the project had "given me a deeper interest to document what's going on in the world at the moment." Another "I will definitely incorporate elements of system change in my work and keep looking and experimenting with ways of changing the system through my work projects".

5.3 Critical Reflection on Project Methodology

Method versus emergence

2 of the artist mentors and at least some of the participants were very comfortable with the degree of creative chaos and prioritising emergent, organic processes through which system change issues were processed, defined and prioritised by participants for the exhibition preparation. At the same time, a clear reflection from the project managers was that learning outcomes could have been enhanced, at least regarding engagement with the system change academic content. A clearer methodology, including more adherence to the light methodology that had been sketched for the first 6 weeks during preparations, as well as additional preparation needed to unite and whittle down the complex learning and creative processes better. More prepared facilitation would have been beneficial at key anticipated phases of both the learning and creative journeys. Differing views and comfort zones amongst creative mentors and project managers may have played a role here, and while we might expect that an artist led hive would naturally lean heavily towards organic and more messy processes of exploration and creation, this is not always the case as some artists engage in very methodical approaches to their own artistic research and engagement with a brief. There is no 'best' way here, but for

interdisciplinary projects such as Hive, a recommendation for future projects is that increased structure and clearer development and adherence to guiding method (whilst retaining necessary flexibility to follow unexpected discoveries and spontaneity) would lead to enhanced learning outcomes and clearer creative communication research outcomes into system change.

Academic content - definitions, pitch and structure

Many of the participants reported being greatly stimulated by the ideas and content presented in the Hive and recognised the power, or potential power, of combining their creative and imaginative skills as artists and communicators with insight and research into system change. While the project was fully intended to be intellectually challenging, several of the younger participants reported feeling 'lost' too much of the time, and at the end of the early sessions some alerted us to feeling frustrated by overly complex vocabularies used by both experts and at times facilitators, with the unintended consequence of language feeling exclusionary to some of the younger participants. Efforts were then made to alter the 'pitch' of the remaining expert talks.

A set of largely common reflections were shared by all 3 project managers regarding the systems change course content, as well as its incorporation within the creative processes of the Hive. Firstly, greater preparation time was needed between the project start date/securing of funding and the commencement of the Hive. As there is no commonly agreed meaning in our societies behind the term 'system change,' even when it is used by progressives and environmental/social justice NGOs, the project team needed to spend more time in collaboration with the academics to define a shared and clearer definition on what we mean by system change and how change happens. At the same time, one source of richness from this open-ended pilot project was the opportunity to be challenged and surprised by the insights and personal stories of participants regarding how transformative change happens at the more intimate level of the self, peers and local communities. Future projects could strike a better balance by building on these first attempts to break down key pillars of system change.

The difficulty of even defining socio-economic system change reflects the lack of academic work on this field as well as the innate challenges of naming and defining paradigm shift in the era of late capitalism where its ideological and functional parameters have become so ubiquitous as to be almost invisible.[5] The very act of defining it reveals the limits and 'professional biases' of any one discipline. For example, academics are sometimes regarded by campaigners as leaning towards

[5] See generally, Mark Fischer, *Capitalist Realism*

over complexity (due to a fear of 'closures' of important angles or issues) sometimes to the detriment of sense making, grounded theories of change, and the distillation of insights into campaignable asks. Conversely, experts can at times quite rightly see risks in over-simplification of issues or how we speak about interlocking issues, or systems.

In addition to the need for more preparation time behind the facilitation, differing areas of focus or ideological slants between project partners may have also contributed to a sense of confusion or 'nebulosity' that some participants reported feeling part way through the journey with at least one participant stating in week 7 "I'm confused about which system we are trying to change." For example, for Swarm Dynamics, introducing system change consistently through critical lenses to deconstruct and move beyond capitalism and unsustainable growth based economics was a clear and preferred approach, whereas for another partner, the risk of overly emphasising a birds eye lens such as capitalism was that the complexities of interlocking systems, and hidden leverage points for change that may exist between them, could be lost or diminished. In general, the academic content, as foundational or introductory short course on 'System Change' effectively set up many rich and rewarding discussions that influenced the final exhibition, but probably aimed to cover too many issues. This would have been improved through more consolidation and returning to a central set of guiding questions that could be explored through more tangible examples of how systems affect 'us' and how they can be changed, for example through a focus upon work, leisure, nature (as used in the Transformations Card Deck, see page 8). This could also have enabled more focused attention on the link between values and systems – how certain values (such individualism), support specific systems (such as capitalism) through specific practices (such as work). This could then have enabled an exploration of how more equitable and sustainable values, for example, of care and respect (which the participants were very committed to practicing in the Hive), could be realised through different ways of working in different systems (sets of relations) that support these values. This could make the idea of system change less abstract.

RECOMMENDATION: Future interdisciplinary labs on System Change, if comprising participants without background in systems change related research or policy, should be guided and brought back to a smaller and more defined set of guiding questions and tangible examples throughout the project. If the lab involves artists these guiding questions should be explicitly linked to the creative brief(s).

Interdisciplinary cross fertilisation and composition of the Hive

One of the observations of the dynamics of our Hive was that several of the participants were arts students in the early or middle years of their studies who had not yet 'mastered' any specific discipline. This was contrasted with other participants who were professional artists or mature age students who felt more comfortable participating actively to thought discussions. Good efforts were made by mentors to avoid the unintentional replication of hierarchical relationships within the group.

The initial plans for the Hive were for academics and the artists to mingle and work together on the brief, however this part did not eventuate fully. Although several experts did linger after their presentations and discussions to join small groups of ideation and creative brainstorming. Building stronger relationships between artists and experts in the Hive was hindered due to budget constraints on academic time, lack of continuity of the experts, (with a different expert present each week there was no chance for the sustained relationships to develop,) and not enough occasion for the visiting experts to understand the creative process and brief artists were embarking on. Doing this differently would entail both larger budgets as well as improved design, although could also mean a smaller set of experts better embedded in the project and present more regularly.

Recommendation: Future interdisciplinary projects working creatively on system change might wish to draw upon just a couple of experts qualified in a broad set of system change topics and theories and embed them more deeply in the journey including creative outputs.

The balance of direction versus creative freedom is always a challenge in processes of co-creation. The virtual reality creation was highly ambitious in this project – as the majority of participants had no prior experience of working with the software. Some participants in the virtual reality group in particular fed back the need for stronger production management and clearer creative direction as there was a sense of some participants feeling lost too frequently when they were supposed to engage and work together in the production processes.

One of the unintended effects of the strong sense of community and non-hierarchical decision making that was successfully established in the early weeks of the Hive, may have been a reluctance of the creative mentors to exercise the type of direction that was initially envisaged. This at times resulted in frustrations and a degree of stress in meeting production deadlines, and a sense of re-starting from a blank slate for too many consecutive weeks in the early and middle weeks instead of building sequentially on the creative process and creative research alongside the academic journey. An understandable tension exists here, and an important

recommendation for future projects is that facilitators take participants through a process of defining roles and parameters for necessary leadership and direction - so that ownership and buy-in is achieved without impeding efficient and clear direction across creative, intellectual and production processes.

Recommendation: for future projects, facilitators should take participants through a process of defining parameters for necessary leadership and direction - so that ownership and buy-in is achieved without impeding efficient and clear direction across, creative, intellectual and production processes.

Making space

One of the unexpected patterns during the creative phase of the project was that art making for the analogue team happened primarily after hours in the homes of the artists and students. Weekly meetups during this phase ended up being used to discuss, modify and refine creative ideas and how they would fit together to comprise a coherent and impactful art exhibition, despite the time being flagged as making time. A number of factors may have contributed to this blow out of time. One may be the participants sense of prolonged inhibition towards defining what they wanted to say about system change, having been made conscious or even overwhelmed by the complexity of key and interrelated issues. This underscores the need for a more guided and interdisciplinary approach to the facilitation with a clearer breakdown and setting of parameters for issue sets artists should explore. This required further break down and definition by facilitators at the end of the academic phase, beyond the broad parameters of the creative brief.

Another factor, raised by some participants in the exit surveys, was the nature of the space. While basic facilities existed, the space, in particular during the phase that took place on the ONCA barge, did not feel like studio space, and having to pack-up at the end of each session was not ideal for a 'makers space'. One participant fed back that as alternative to having space that lent itself more to artistic creation, we could have 'used the spaces we had more creatively'.

Recommendation: the right choice of space is key if the intention is to use it partly for artistic co-creation. Ideally, participants need to feel free to grow and use the space as a studio.

Other recommendations and issues from participant exit surveys

3 of the exit surveys stated that the process would be improved by having more structure and support in the creative and making sessions, with a clearer creative development cycle where a "visually reflected academic dialogue cooperatively moved the visual material forward". This again suggests the need for improved coherence between the intellectual journey and artistic journey, and underscores the desirability (budgets permitting!) for the presence of consistent mentors who can cross disciplines – from the research and policy, to the creative arts practice.

A couple of participants stated that simplification of the academic/expert input would have been preferable. Two of the participants stated that it would have been more effective to spread out the academic input rather than lose touch with it after the initial 9-week journey or find some other way of not losing touch with those initial ideas.

6. Replicability

6.1 Educational Contexts

Our approach of using VR not merely as an educational tool but as new tool for arts-based learning to explore ways to communicate system change was both novel and exciting for participants and for cultural venues programming the show. While the level of ambition was too high for the scale of the project budget, and the entry level of technical knowhow from participating artists in virtual reality software, there is great potential to build upon the core concept of utilising virtual reality to explore alternative futures. Emerging evidence from clinical application of VR technology for trauma therapy shows it has the unique ability to 'trick' the brain into acting as if the experience was real. There seems great potential to utilise VR to help overcome collective inability to visualise or believe in the possibility of alternative systems. Regarding COVID implications, virtual reality *can* be experienced online if the viewer has a headset. Cheaper (cardboard) headsets are not cost prohibitive costing only £4 to £5 each, however significant quality of the experience is lost when using the cheaper headsets.

However, we recommend that future projects separate the goals *of educating on system change/alternative futures*, and the goal of *creating inspiring VR* to communicate and inspire audiences. Despite the impressive virtual experience that wowed audiences from the System Change Hive exhibition, the process and outcomes would likely have been enhanced if it focused primarily on one goal instead of both of these goals, - or at least focused on one at a time.

Our System Change Hive model itself holds a lot of potential for development, improvement and replication as an academic programme, but could equally be condensed into short course, intensive programme across a summer or winter school. Greater preparation time, ensuring that the staff and mentors guiding participants are also among the people involved in planning and preparing the journey, and greater consistency of mentors and relationship building with experts are recommended to ensure successful replication. The strong focus on delivering a complete and high-quality public exhibition in the Hive derived partly from its main source of funding being from the Arts Council. Variations on the model could certainly place education, discovery and generation as the main goals instead, thus reducing the time commitment when compared to delivering full scale public exhibitions.

Some of the condensed learnings and a small number of educational tools from the Hive have already been successfully adapted for short modules of teaching in Higher

Education settings – including for *Changing the Frame – the art and science of communicating transition* at Schumacher College 2020. One of the facilitators also presented findings of the Hive project at the online POLLEN 2020 conference on 'Contested Natures: Power, politics and Prefiguation' (22-25 September 2020), to an audience of academics and practitioners. Focusing more on moving system change theories and ideas into art driven explorations of *place-based transformations*, scenarios and storification hold great promise in advancing understanding, and belief, from both public and practioners.

6.2 in Non-Academic Contexts

There is huge potential, and urgent need, for arts based and interdisciplinary enquiry into alternative futures and system change. After seeing our exhibition and hearing about the System Change Hive, Swarm Dynamics was approached by the City of Brighton and Hove with a proposal to replicate similar arts based dynamics of the System Change Hive to help bring to life the Citizens Assembly on Climate Change and help convey to citizens positive images of zero carbon Brighton by 2030. The status of that project is unclear since COVID which raises difficulties in replicating projects like the HIVE, for as long as physical contact remains problematic or prohibited. It is unlikely that the same experience or the rich exhibition created could have been achieved the same way online. That said, with adaptation, many of the core processes *could* work online in different project format. As evidence, some of the creative exercises and pedagogical approaches created for the Hive were trialled online during online teaching by Swarm Dynamics at Schumacher College in March 2020, succeeding in co-creating some creative outputs, though certainly more tiring through a screen!

In the original New Deal, America seeded a Public Works Programme putting thousands of unemployed artists back to work designing murals and artworks for public spaces, rebuilding the nation after the ravages of the Great Depression. With the Green New Deal discussions being the landing point for system change advocacy and the call for a new economic model over the next few years, there is huge scope to spotlight and foster the renewed potential for artists within a Green New Deal, to aestheticize and communicate transformations, and to contribute thinking to breathe life into the profound shifts needed.

A number of civic innovation labs exist around the world, where artists and town planners and communities come together to re-create the city around them[6], or to clash artists with topical experts to generate new thinking. In the corporate world, a

[6] See Mexico Lab for the City archive, available at: https://labcd.mx

much longer history exists of collaborating with artists, both to help communicate, 'sell' and also to spark innovation in the design of products or processes.

As brought to a head by COVID-19, we are living in a moment of fracture, where a prolonged period of increasingly failing systems, and cultural decadence has, some would argue, reflected a loss of purpose and rationale within many western capitalist societies, combined with growing public existential angst about climate change and the future of our civilisations. Projects that combine artists with civic planners, progressive policy makers, scientists, to work towards new shared dreams, have never been more urgently needed.