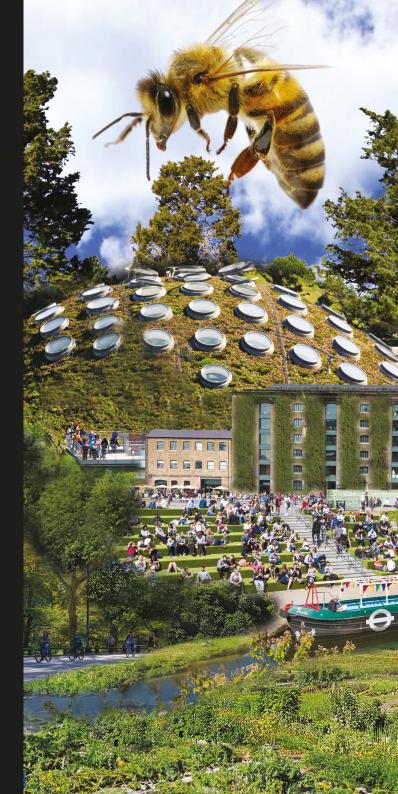# ual:

UAL Climate Systems Mapping
Report on the pilot research project

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Image: David A. Garcia (architect)

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EXECUTIVE SUMMARY

"
The idea of system, implying our interconnectedness with all that was, is and will be, is the most radical and necessary in our language.

—*David Orr (2024)*

In 2023, University of the Arts London declared its intention to become a 'social purpose' university – a fundamental commitment by UAL to garner its capabilities in the service of the public good. The Social Purpose Implementation Plan[1] takes an unwavering challenge-orientation across four cross-cutting goals. It draws upon the distinctiveness of UAL's communities, their disciplinary and tacit knowledges as well as artistic and 'designerly' approaches to making sense of the world at personal and societal levels. The plan offers a values-framing to the why and how of UAL's 10-year strategy and, indeed, all of the strategies and plans within the university.

..the research recognises and responds to the complex interdependencies among climate, environment (including biodiversity) social, economic and cultural dimensions of social purpose.

The Climate Systems Mapping Pilot Project contributes content and process opportunities towards all the social purpose goals, with an emphasis on the 'regenerate the environment' goal. The project was conceived through the Ecosystems Infrastructure strand of the UAL Climate and Environmental Action Group's work in realising UAL's Climate Action Plan (CAP).2 In order to extend the group's work into an ethos and practice that permeates everything we do at UAL, the CAP has been integrated into the work of the recently-established Social Purpose Lab. The focus and, indeed, title of this project is 'climate systems mapping' and, whilst UAL's emissions targets warrant direct focus, the research recognises and responds to the complex interdependencies among climate, environment (including biodiversity) social, economic and cultural dimensions of social purpose.

This pilot research project was commissioned by Polly Mackenzie in her leadership role as UAL's Chief Social Purpose Officer. The key audiences for this report on the project are the Social Purpose Group, especially the Social Purpose Lab, UAL's Executive Board, and participants in the project. Findings from this research will be shared with wider UAL communities.

In parallel with this report, new knowledge developed through this research (as well as our contribution to wider audiences in research, Higher Education, the creative industries and beyond) is and will be published through the international Design Research Society (DRS) 2024 conference, peer-reviewed journal articles, and other formats.

Social Purpose Implementation Plan, available at https://www.arts.ac.uk/__data/assets/pdf_file/0024/411486/social-purpose-implementation-plan.pdf (accessed 10 June 2024).

This pilot research project has engaged both imagination and pragmatism to identify connections among perceptions, practices and cultures at UAL in terms of extraction and regeneration. It has highlighted the interdependencies of change across multiple levels and temporal scales by understanding UAL in terms of in a 'nested system' of strategies, (infra)structures, processes and ways of working.

The year-long research has explored uncharted territory through its research premise of 'insider knowledge.' We researchers are part of the university's community and, through our participatory action and design-based approach, staff and students have been substantively engaged from across UAL's colleges, roles, identities and departments. With participants, we have been researching from within UAL's material and operational structures, while nevertheless engaging critically with wider influences and references. The theoretical approach – grounded in complex systems, social practice and transitions theories - enables complex mapping of UAL's interconnected systems. Resulting insights offer 'insider' (e.g. adapted and practicable) knowledge into two research questions: 'what is' in terms of perceived extractive and regenerative practices, and; 'what if' in terms of creative, pragmatic imagining of a regenerative university.

The year-long research has explored uncharted territory through its research premise of 'insider knowledge.'

The project:

■ Explores and applies a systems approach and multi-level perspective transition design framework to the complex challenge of deep-rooted change necessary to achieve social purpose.

■ Develops, tests and adapts a set of methods and tools for systemic change, generating findings for this research and for application in other social purpose projects.

■ Tests and demonstrates the value of participatory action research (PAR) and research through design (RtD) in identifying perceptions of 'what is…' UAL and creative imagining of 'what if…'.

■ Takes an 'insider knowledge' approach to frame, gather, analyse and present insights from research with three key UAL departments (Research Management Administration, Library Services and Student Marketing Recruitment Administration), UAL higher education and climate experts as well as wider staff and student communities.

■ Outlines findings from six key areas of our primary and secondary research.

■ Offers insights to inform UAL's leadership position in becoming a social purpose university.

What we did

Methodologically, the research references grounded-theory principles to surface, map, deliberate and analyse extractive and regenerative dynamics shaping UAL. The primary research approaches are participatory action research (PAR) and research through design (RtD). We have taken an iterative approach – developing 'design for transitions' methods and tools (complemented with those from Transformation Design and Design Futures), applying these to engage participation and analyse findings. Emergent findings have been disclosed and activated along the way for purposes of collaborative sense-making around 'what is' and co-creation of forward-looking 'what if' scenarios and pathways. Primary research is complemented by secondary research, e.g. rapid literature reviews including academic and grey literature about climate and sustainability transitions and futures of Higher Education and UK HE, organizational studies of HEIs, and key UAL policy and planning documents relevant to this project.

What we learnt

Findings from the research are presented in terms of six key areas, which address the multiple objectives corresponding to our two research questions. One of the six is a top-line review of key UAL documents relevant to climate commitments and actions, which confirmed some (mis-)alignments between high-level policies and on-the-ground experience of participants. Other research and strategic approaches would complement ours (e.g. quantitative approaches concerning carbon emissions and management and comprehensive policy alignment and action planning). The benefit (and delimitation) of our research approach is an accounting that is more granular and holistic, including a variety of participant perceptions, experiences, and expertise. The benefit is considerable in this case, since knowledge relevant to climate action and justice is largely undocumented across UAL but, rather, diffuse, often tacit, and dispersed across many individuals, (in)formal groups and levels.

Image: Alice Blencowe, Collaborative Mapping 2024 (Session type #3)

Data-based findings covering the six key areas are presented in-depth in the report. Below are key insights to five of these areas:

Expert perceptions of Extractive Action

■ Four identifiable themes emerge from the analysis that are cross-cutting (across multiple levels in the system, across multiple data sets collected as part of this research). Analysis within and across each of these themes reveals tensions, which indicate UAL's 'position' as in flux and transition as the institution grapples with the complexities of in- and external demands and drivers. There is an opportunity to develop deeper mutual understanding of the tensions at play for actors across UAL.

■ UAL's commitment and capacity to realise social purpose by regenerating the environment is hindered by a variety of perceived and practical disconnects. An example of a practical disconnect is the big investment in new spaces, while existing spaces could be improved and better utilised. Further aspects are outlined in this report.

■ Experts perceive a strong sense of bottom-up action and some top-down commitment but identify a 'stuckness' and lack of traction or evidence in 'the middle'. Staff find themselves in a bind between competing agendas and not-yet unaligned environmental, social and racial justice commitments, Social Purpose plans and business as usual expectations.

■ There is an increase in support and people working on new Social Purpose commitments but this conflicts with staff-led and supported activities due to already heavy (and some invisible) workloads and a generalised sense of pressure and precarity. There is a push towards phasing in new commitments, plans and actions, with little or no focus on phasing out the old.

Ecosystem of positive action

Thematic analysis of actions towards climate action and justice resulted in 5 themes: Materials & Waste with 19 actions, Collaborations & Networking with 18 actions, Courses & Curriculum with 17 actions, Ways of Working with 16 actions and Learning & Development with 14 actions. The granularity of these multiple actions, recorded for the first time in this research demonstrates the value of the PAR in connecting policy and action and in identifying levers for change across systems levels. These findings are described in detail in the report.

..high volume of actions here reflect this and demonstrate action that cuts across multiple levels...

Insights from the five themes

■ The tangibility of **materials and waste** creates a highly visible problem. The high volume of actions here reflect this and demonstrate action that cuts across multiple levels in the system, from niche action that is student-led and precarious in nature (e.g. swap shops) through to action that is more stable and supported within the regime at a departmental level (e.g. Library Services eliminating plastic book covers, Student Marketing Recruitment Administration reducing marketing giveaways). The stabilised actions in the regime indicate a demand for structural change, but the precarity of some niche actions suggests that regardless of 'popularity' of an initiative, stability is not a given end-point, and a careful embedding through institutional structures is needed to stabilise niche actions in the regime.

■ The explicit integration of social, racial and climate justice principles in **courses and curriculum** evidences how these co-created principles operate, with each cohort of students engaged in these courses contributing to UAL's growing regenerative culture. Such exemplars act as 'attractors' in the system, reflecting and demonstrating possibility both internally and externally, and provide inspiration for larger cultural shifts in the higher education sector. As more courses follow suit a critical mass will likely emerge in the regime, thereby demonstrating more tangibly, a systemic shift towards higher education that is led by principles of social, racial and climate justice.

■ UAL's integration of eco-literacy and justice focused training and development programmes (e.g. Carbon Literacy) takes a first step in supporting Staff Development. This crucial action acknowledges that a shift towards Social Purpose demands a shift in the **learning and development** of staff alongside students. Though these programmes are in their infancy, the supported nature of actions in learning and development are evident in programme funding, its implementation through HR learning systems and connection to performance reviews. Continuous and expanded actions in learning and development will help stabilise this action in the regime and permit a normalisation of UAL staff self-reflecting on knowledge gaps in the face of dynamically shifting crises, a process which could also permit greater psychological safety for staff in the face of continuing change within UAL and HE.

..exemplars act as 'attractors' in the system, reflecting and demonstrating possibility both internally and externally...

■ As UAL's **ways of working** continue to evolve in response to climate crisis and in pursuit of climate, racial and social justice, documentation of what is working will be key to the continuous generation of insights about what could be amplified and what else might be needed. UAL's openness to listen and respond to staff and students' needs, to experiment with alternative support structures, and to foreground diversity and inclusivity in its responses will be key to furthering positive actions. Some positive ways of working are more normalised and institutionalised than others (e.g. remote working policies) whereas other beneficial niche actions (e.g. microsolidarity practices) may remain less understood without the increased visibility that comes from open communication and sharing about what works across the UAL community.

■ The development of meaningful relationships with longevity and integrity is key to UAL's collaborative success. Partners are an extension of the institution, so the why, who, what, where, when and how of UAL's **collaboration and networking** is crucial to the authenticity of Social Purpose endeavours. Although UAL currently engages with communities of practice and collaborations that have a regenerative outlook, consistent and consolidated efforts will be needed to stabilise these relationships and shift them from the niche into the regime. Such a shift relies on a strong network of relationships between multiple individuals across the institution that is further galvanised by institutional ties.

Observations on key UAL documents in terms of climate commitments

There has been significant work on multiple fronts in relation to UAL's public facing climate commitments, as evident in multiple internal and external documents. Across the institutional documents analysed, findings show tens of commitments, upwards of 50 actions and a couple hundred ideas. Across commitments, there is a critical mass around: 'ecological footprint,' 'travel,' and 'food'. In actions, around 'ecological footprint', 'space for climate and ecological action' and 'learning and development.' In ideas, there is a critical mass in terms of 'travel', 'ecological footprint' and 'ways of working.' Particularly relevant are those relating to UAL's Climate Action Plan, further plans relate to carbon management, biodiversity action and workplace travel, and two policy documents. High-level commitments relating to UAL's Net Zero goals for 2030 (Scope 1 and 2) and 2040 (Scope 3) are visible across multiple plans.

Comparing action-oriented statements in the document analysis and PAR data, there are significant gaps in staff and student knowledge of UAL's stated commitments and actions. Staff and students are aware of many more actions than are reported in the documents, and they are especially aware of directly experienced 'niche-level' activity. Awareness and clarity around UAL's commitments and actions would benefit from (a) consistent terminology across the relevant internal and external statements (b) a cross-referencing system to trace commitments, actions and progress across multiple documents located across diverse online locations (c) alignment of commitments across documents, (d) articulated timelines and terms for evaluating progress.

Multiple possible futures

Through the 'Possible Futures Tool', three scenarios for UAL tell stories of 'what if' to inform UAL's understanding and decision-making. Drawn from primary and secondary research, they offer a holistic sense of future imaginaries and demonstrate interdependencies between biosphere level where the symptoms of environmental change play out, societal level, where the symptoms of global and local policy and culture play out and, and at UAL level, where cause and effect of activity takes place. The vivid visual element of these scenarios acts as an informed and insightful provocation that might be applied across UAL's departments and teams to back-cast and question what they are doing and planning, and how it links to desired futures.

> *Comparing action-oriented statements in the document analysis and PAR data, there are significant gaps in staff and student knowledge of UAL's stated commitments and actions.*

Regenerative trajectories & milestones

The data gathered from sessions with departments, experts and open call to wider staff and students fed into a thematic analysis of 'what if' to create four regenerative trajectories, emerging from the data. This emergent set of aspirations was then applied to a Trajectories Tool, where participants created milestones and pathways to each trajectory across systems levels and temporal dimensions. This fore and back casting approach helps to identify enablers and barriers, as well as to address ideological tensions at play.

Fossil Fuels Phased Out – This is possibly the most well developed future trajectory, with 12 identified milestones. These range from ecology- to regime-level with no foreseen necessity for niche-level activity. Whilst UAL has articulated ambitions relating to net zero, there is a need for HE-wide verifiable routes to the phasing out of fossil fuels to be developed and infrastructural change is required. Changes at regime level can increase the pace and speed needed in taking leadership in this area.

Biodiversity Positive – This emerged as a highly populated future trajectory with 13 identified milestones, spanning ecology- to niche-level with a multitude of proposed pathways. In contrast to more established UAL work on carbon reduction (and wider 'fossil fuels phase-out'), this trajectory is nascent, though UAL document analysis reveals relevant commitments. Work towards this trajectory is challenging, given the complex systems adaptation needed (including measures and accountability across the sector and state) whilst internal knowledge creators can act as motivators for taking a bold, sector leadership role.

Reparations in Action – This trajectory includes 7 identified milestones. These span ecology to regime-level with a clear emphasis on regime-level in the present, with clusters of pathways towards the milestones that are perceived to be actionable within UAL and its networks. In contrast to 'Fossil fuels phase-out', and 'Biodiversity positive', there are fewer unknowns, and the trajectory builds solidly on actions to date, whilst underpinned by mentalite (ethos) and regime (operational) change. The diversity of cultures, knowledges and experiences of UAL staff and students offers insider knowledge, whilst the external landscape makes this trajectory challenging in relation to UAL's sector and societal-level pressures.

7th Generation Governance – A trajectory towards '7th generation governance' emerged with 9 milestones identified from ecology (beyond UAL) to regime (operational) level. Pathways toward the milestones depend upon mentalité (ethos) and landscape traction as well as regime commitment. With UAL already moving towards longer-term planning (e.g. a ten-year strategy and three-year accountability cycles), it is well-placed to explore the chronology of this commitment to future generations. Motivations include student lifetime wellbeing and the inter- and intra-generational aspects of the university's communities and networks. It is recognised that the political and economic landscape makes this trajectory challenging due to UAL's sector and societal-level pressures.

Insights on leverage points for systemic change

The current context of UAL is defined by a multitude of complex external and internal influences which, when analysed in terms of regeneration and extraction surface tensions that are expected and present an opportunity to work with complexity more openly. This insider-generated research identifies a variety of UAL contributions to extraction and regeneration, historically and currently and at multiple levels. There are likely many more contributions not documented, due to the limit of the pilot in scope and number of participants. Through the analysis, four key leverage points for systemic change are identifiable.

■ The first relates to information flows (how accessible and transparent information and communication could be across UAL). This is a powerful leverage point that can empower and engage the UAL community by enabling access, dissemination and processing of information to nurture a knowledgeable and informed UAL community. When complemented by public transparency, 'changing in the open' this could further position UAL as a leader of sectoral change. Making public the tensions and 'struggles' involved in systemic change can also dissipate perceptions of '_____washing' by being open and transparent about the complex reality of 'doing the work' and demonstrating to others how to sit in the discomfort of such complexity.

■ The second relates to the goals or purpose of the system (how the competing goals of growth and social purpose might be reconciled or how the tension between these goals might be used strategically to catalyse a forward motion). Clearly articulated goals or purpose accompanied by transparent information and open communication flows can increase the synergy between actors in a system, allowing for a shared understanding of the 'what and why' to encourage cooperative efforts to realise the goals.

■ The third relates to reinforcing feedback which can be approached in a twofold manner – first by slowing down areas of growth (e.g. reliance on fossil fuels) and secondly by amplifying positive actions (e.g. those related to social purpose). This leverage point can be thought of as a kind of dance that seeks to reinforce feedback loops associated with the phasing in and phasing out of particular activities.

■ The fourth leverage point intervenes in the rules of the system (how action is incentivised, and desirable behaviours rewarded) and works in tandem with point three above. How feedback is balanced in the system to provide stability (how we balance what is introduced or phased in with what is let go or phased out) is a crucial aspect of this leverage point. Successful intervention here is highly dependent upon the agency held by those involved, particularly those with the power to influence system rules and the overarching goals and purpose for the system. It is clear from the collected data that significant top-down and bottom-up activities and strategies are already in play across UAL and initial analysis indicates varying degrees of agency are felt by those involved. Further intervention at the level of 'rules' could increase the sense of agency felt by those 'in the middle', where there is a potential for feeling a sense of 'stuckness' in actioning strategic change or a lack of agency to affect change 'from the middle'.

How we work with such leverage points is crucial in how change is experienced by the UAL community as an exponentially growing set of contradictions, or as a consistent, measured and strategic effort that acknowledges the tensions it sits with and maintains open communication about their navigation.

Future work

This pilot project is a brave undertaking for UAL. It recognises the value of insider generated research and the contribution of art and design research methods and tools to Social Purpose ambitions. These are not usual practices in a university. In gathering and presenting 'perceptions' of extraction and regeneration from participants within and across the university, there will be contested elements, and the raising of emotive issues.

The project has a clear set of outputs: a toolkit with tools and facilitation guidance; an extensive set of findings that are grounded in participant inputs, co-creation, and our rigorous analysis; a set of clear, comprehensive insights, and; the cultivation of a network engaged in the questions raised through the project. The 'so what' of this project lies in the will and capacity of its audiences and participants in changing-through-learning and learning-by-changing, towards our social purpose goals.

A priority for future work is development of clear and actionable recommendations from this research. From our systems transition perspective, recommendations would sit at multiple levels within and beyond UAL and span from 'now' to 'near-' and 'far-future'.

Thus, such recommendations would be best developed in collaboration – and our top recommendation at this stage is to do this together with the Social Purpose Lab.

INTRODUCTION

The UAL Climate System Mapping is a 1-year pilot project conducted by researchers and team members employed at UAL. An institutional driver for the project is the commitment to net-zero emissions across scope 1, 2 and 3 by 2040 and scope 1 and 2 by 2030 in UAL's Climate Action Plan (UAL, 2022) and UAL's Strategy 2022-32 (UAL, 2022). Beyond science-based targets, UAL's social purpose and anti-racism strategies motivate a 'climate-justice' framing for this pilot research project.

UAL – like all HEIs and organisations – will be challenged to meet the targets. Our creative capabilities, collective spirit, track-record and momentum are some of our greatest assets moving ahead.

With this project and report, we aim to provide a realistic and systematic overview of where we're at, to illuminate the diversity, amount and momentum of positive actions and momentum, at as well as to illuminate clear pathways and actions toward an ecologically regenerative university.

Our aim is to brief, inspire and equip UAL leaders, colleagues and our community to act collaboratively, collectively and systematically across colleges and levels.

Image: Alice Blencowe, Collaborative Mapping 2024 (Session type #3)

EXTRACTION

Extraction of resources refers to the withdrawing of materials from the environment for human use, including fossil fuels (oil, gas, and coal), rocks and minerals, biomass via deforestation and fishing and hunting. Fossil fuels, because of their origins, have a high carbon content. Extraction, transport and burning of fossil fuels generates harmful levels of greenhouse gases and emissions (especially CO_2) as well as contributing to global temperature rise, a high proportion of these emissions are absorbed by the global oceans, which results in acidification of seawater, damaging the biodiversity of marine ecosystems. Given the severe nature of the climate threat, fossil fuel extraction should be curbed to ensure warming does not exceed 1.5°C. (1,2) The shift away from fossil fuels raises profound equity concerns that, if left unresolved, could well continue to hobble our ability to deal with the increasingly urgent climate crisis. (3) Extraction can also be considered in relation to surplus value extracted from an individual or group, which relates to the whole of human culture. (4)

(1) Intergovernmental Panel on Climate Change (2018). Global Warming of 1.5°C – Glossary.

(2) Natural Resources Defense Council (2019). Fossil Fuels: The Dirty Facts.

(3) Muttitt, G., & Kartha, S. (2020). Equity, climate justice and fossil fuel extraction: principles for a managed phase out. Climate Policy, 20(8), 1024–1042. https://doi.org/10.1080/14693062.2020.1763900

(4) BUZGALIN, A. V., & KOLGANOV, A. I. (2013). The Anatomy of Twenty-First Century Exploitation: From Traditional Extraction of Surplus Value to Exploitation of Creative Activity. Science & Society, 77(4), 486–511. http://www.jstor.org/stable/24584618

REGENERATION

Regeneration refers to the capability of ecosystems to self-regulate and self-maintain and so adapt to change and interference.(1) The capacity of natural systems to regenerate has been severely affected by human actions, there is a need to restore, renew and revitalise ecosystems to combat climate change. Regenerative land use and agriculture combines conservation and rehabilitation practices to foster resilience and improve the health of ecosystems. The concept of regeneration is increasingly applied in design and economics.(2,3)

(1) United Nations Statistics Division (2016). Environment glossary. https://unstats.un.org/unsd/environmentgl/
(2) Intergovernmental Panel for Climate Change (2019). Climate Change and Land.
(3) Society for Ecological Restoration (2019).

CLIMATE ACTION AND JUSTICE

UAL signalled its commitment to addressing the climate emergency in a statement made in September 2019. The term was listed by the Oxford English Dictionary as the Word of the Year 2019. In November 2019, 11000 scientists issued a warning that planet Earth is facing a climate emergency.(1) The urgency to act has also been amplified by global grass-roots movements. In June 2021, UAL set out the university's net-zero commitments, with a bold pledge to achieve net zero across our total carbon footprint by 2040. UAL's Climate Action Plan, launched November 2022, with annual update, outlines actions and goals aligned to UAL's Social Purpose Objectives. UAL's anti-racism strategy and social purpose commitment orients a stance beyond climate per se, e.g. climate action and justice.

(1) Ripple, W.J. et al. (2019). World Scientists' Warning of Climate Emergency. Bioscience, 70(1), pp. 8-12.

TRANSITIONS

Design for Transitions is an emerging approach to Design that is futures facing, attentive to the systemic nature of complex societal problems and the need to address these through design that is systems-oriented and focused on designing for systemic change.

Multi-level Perspective (MLP) is a framework from Transitions Studies (adapted by Co-PI Wallace) that is used for observing activity across five scales (levels) within socio-technical systems. The ecology level provides the living system as a context for the socio-technical system; Landscape is a slow moving highly structured level; Mentalité represents the complexity of thinking and culture including ideologies, mindsets, attitudes, and beliefs; Regime is a stable centre-point of the system where the rules and norms of the system play out in everyday life; Niche is a fast paced level often containing bottom-up initiatives and incubation spaces for innovation. The MLP framework can be applied as an integrative approach to thinking strategically about transitions and transformative change as occurring in dynamic ways across these five levels of a system.

Transition Pathways comprise of multiple interventions into a system (or problem) that are developed in applications of the MLP within Design for Transitions. Pathways of activity can be generated through backcasting and forecasting processes to project complex/ multi-levelled possible futures (including preferable futures) as well as the steps we may need to get there.

Action-ecosystems document the actions being taken in a system and makes them visible as an ecosystem of positive actions. An action-ecosystem reflects the action being taken by different actors and across different 'levels' of the system and makes this action more visible, thereby creating opportunities for interconnecting actions that can amplify a transition and providing a view of current activity that can be used to inform strategic future actions.

SYSTEMS

Systemic change refers to an intentional transformation of the ways in which a system, such as an organization, industry, society or economy operate. Systems change focuses on the root causes of problems, instead of investing time and resources in temporary fixes that can only treat symptoms. Systems change draws on a recognition that all systems consist of parts which relate to each other and influence the way the system behaves across time. Any attempt at resolving issues within a system must rely on seeing it as a whole and addressing the underlying values and goals, instead of tweaking parameters.

Systems Mapping is a method used to explore and document (as a map) the wholeness of relationships and organisation of things (actors, events, etc) that make up systems and ecosystems. Systems mapping provides social learning opportunities through the act of mapping and its design-orientation allows us to visualise interactions and relationships.

Leverage Points are places within a complex system (a corporation, an economy, a living body, a city, an ecosystem) where a small shift in one thing can produce big changes in everything.

Agency is a kind of social power and broadly, an agent is a being with the capacity to act, and 'agency' denotes the exercise or manifestation of this capacity.

Lock-ins are entrenched modes of working and thinking that keep the dominant system as is. Lock-ins often relate to economic investments, rules and norms that are barriers that must be overcome to achieve profound transformation.

RESEARCH QUESTIONS, APPROACH AND METHODS

Image: Alice Blencowe, Collaborative Mapping 2024 (Session type #3)

Knowledge about the current situation of UAL in terms of climate action and justice is diffuse, often tacit, and dispersed across many individuals, groups and levels, as well as, to some extent, documented in internal or public reports and news items. This is also true for knowledge about how change has happened (and therefore potential for future change and transition).

To surface knowledge from many diverse and dispersed sources, our chosen research approach is qualitative – specifically Participatory Action Research (PAR) with integrated Research through Design (RtD). Into PAR and RtD, we further integrate some futures research methods and targeted literature reviews.

Answers to research questions in all qualitative research are inevitably partial and situated. Findings reflect research choices, participant knowledge and perceptions, information and data known and available in a particular time and place. Insights produced reflect evidence-based, nuanced and in-depth insights reflecting a diversity of positions, experiences, perspectives and sources. PAR and RtD, in particular, produce knowledge that is empowering, action-oriented and potentially transformative.

Our position as 'insiders' at UAL has benefits in terms of access, trust and baseline knowledge. Our rigorous approach to research standards and ethics, as well as systematic approach to data collection and analysis, ensures quality, reliability and validity.

OUR RESEARCH QUESTIONS
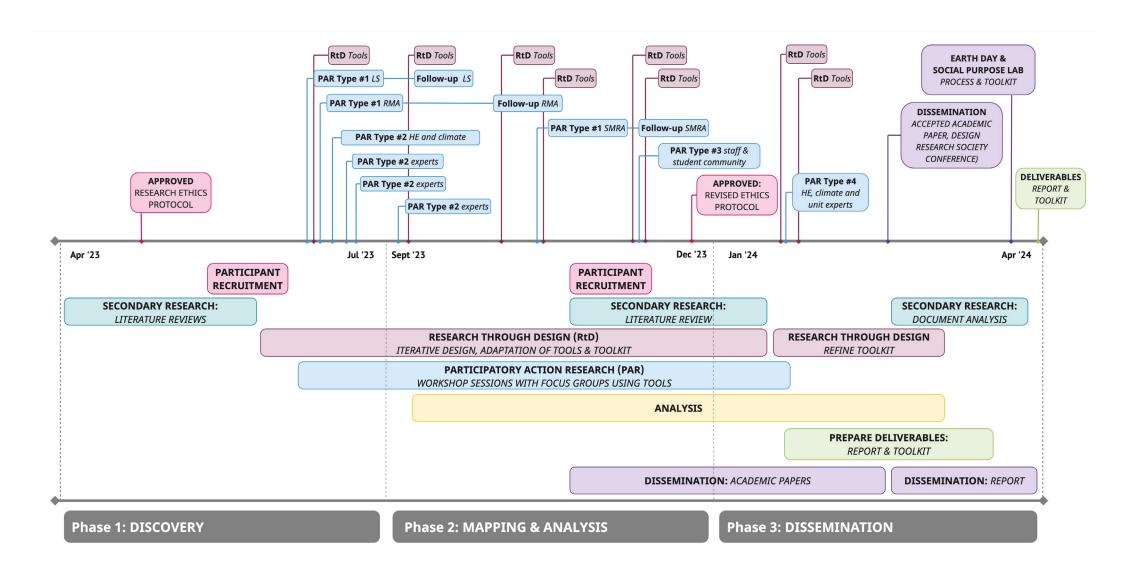
What is…?

- What is UAL's contribution to extraction?
- What is UAL's contribution to regeneration?

What if...?

- What are possible futures of UAL?
- How might we transition to a regenerative future UAL?

RESEARCH PROJECT PROCESS

Our PAR involved focus-group type sessions with particular sets of staff and students. Our participation plan enabled breadth and depth of inquiry.

'Units' such as departments comprise groups of specialised and employed staff (e.g. 'unit experts'), whose participation enabled a 'deep dive' into daily working practices of long-running formally-established units. Three participating units included: Library Services (LS); Research Management & Administration (RMA), and; and Student Marketing, Recruitment & Admissions (SMRA). These units reflected specific criteria – such as being typical within Higher Education and representative of different spatial/technical footprints. This allowed multiple 'deep dives' in order to probe across diverse but context-typical practices.

Higher Ed experts (such as specialised educational developers and heads of education and academic programs) and climate expert staff members provided perspectives that cross-cut operational, technical, management and academic functions, multiple organizational levels and campuses.

An open invitation to all staff and students to participate for a community session increased breadth and diversity.

To address different research questions and objectives, multiple different types of PAR sessions were convened.

- Session Type #1 with units: Library Services, Research Management and Administration, and Student Marketing Recruitment and Admissions

- Session Type #2 with Higher Education and climate experts

- Session Type #3 with students & staff (UAL community)

- Session Type #4 with unit, HE and climate experts

Within PAR sessions, tools and sequences of tools were used to guide individual and group participation.

Our 'Research through Design' (RtD) involved development of several 'tools'. Each tool takes the form of a graphical 'canvas' (a digital page or printable poster) that is designed for collecting, generating, validating, sense-checking and analysing data. Research questions and objectives guided our tool selection and development.

The tools are theoretically-grounded in the fields of Transition Studies, Complex Adaptive Systems, and Design for Transitions.

For example, the 'Multi-Level Perspective' (MLP) is a core theory of change in these fields, where it is typically used to map the historical evolution of a particular problem and, in more action- and design-oriented approaches, to explore opportunities for intervention. Our prior research further integrates approaches of 'relational thinking', 'indigenous knowledge', 'critical and participatory futures'. We translate the MLP into practicable tools suited to collaboration and action.
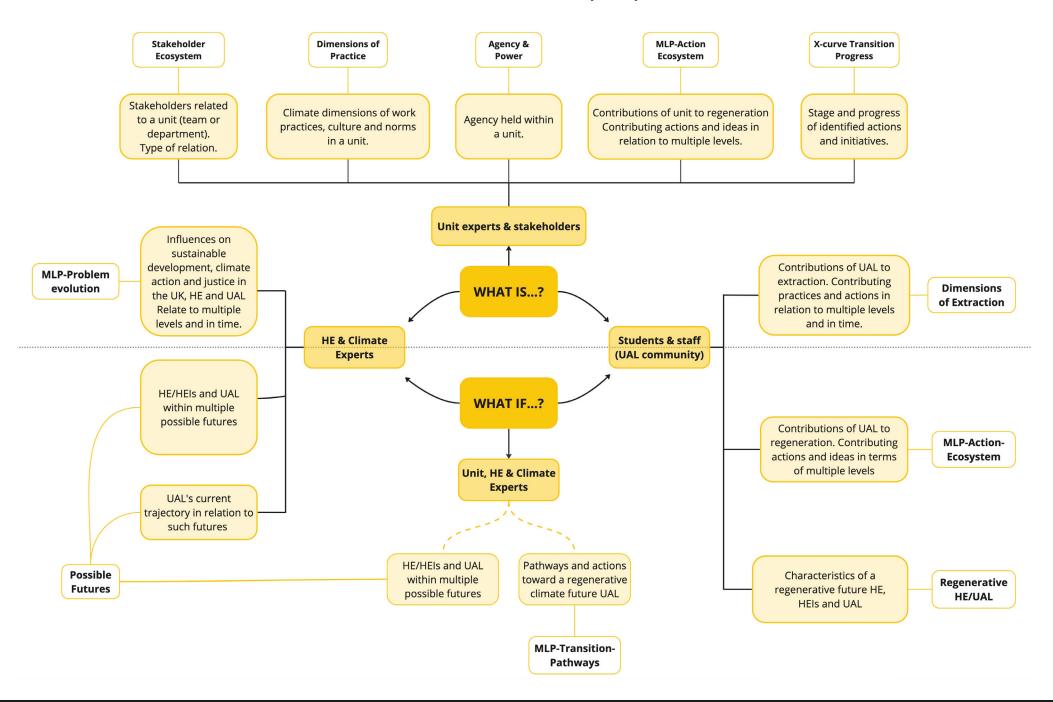
Tools are adapted in this project for use in the Higher Education sector and within UAL. Individual tools and sequences of tools were iterated through experimentation and a nimble 'make-test-reflect-respond' RtD approach, through which we developed and sharpened a set of criteria for tool design. These tools and toolkit can be used for further research and by others.

Read more in Wallace, Mazé, Williams and Landin (2024) *Universities Undergoing Climate Transition: Developing MLP tools from a context- specific and critical standpoint*, in Proceedings of the Design Research Society DRS conference.

An outcome of the project is a Toolkit including graphical canvases and facilitation guidance).

Tools in the Toolkit:
- Stakeholder Ecosystem
- Dimensions of Practice
- Agency & Power
- MLP-Action Ecosystem
- X-curve Transition Progress
- MLP-Problem Evolution
- Possible Futures
- MLP-Transition Pathways

Stakeholder Ecosystem

Stakeholders related to a unit (team or department).
Type of relation.

Dimensions of Practice

Climate dimensions of work practices, culture and norms in a unit.

Agency & Power

Agency held within a unit.

MLP-Action Ecosystem

Contributions of unit to regeneration Contributing actions and ideas in relation to multiple levels.

X-curve Transition Progress

Stage and progress of identified actions and initiatives.

Unit experts & stakeholders

MLP-Problem evolution

Influences on sustainable development, climate action and justice in the UK, HE and UAL Relate to multiple levels and in time.

WHAT IS...?

HE & Climate Experts

Contributions of UAL to extraction. Contributing practices and actions in relation to multiple levels and in time.

Dimensions of Extraction

Students & staff (UAL community)

HE/HEIs and UAL within multiple possible futures

WHAT IF...?

UAL's current trajectory in relation to such futures

Contributions of UAL to regeneration. Contributing actions and ideas in terms of multiple levels

MLP-Action-Ecosystem

Unit, HE & Climate Experts

Possible Futures

HE/HEIs and UAL within multiple possible futures

Pathways and actions toward a regenerative climate future UAL

Characteristics of a regenerative future HE, HEIs and UAL

Regenerative HE/UAL

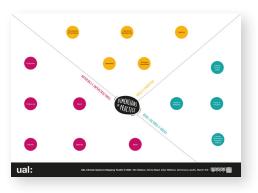**MLP-Transition-Pathways**
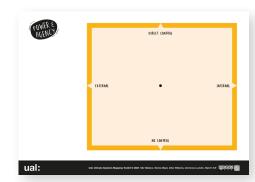
TOOLS IN THE TOOLKIT

STAKEHOLDER ECOSYSTEM

DIMENSIONS OF PRACTICE

AGENCY & POWER

MLP-ACTION ECOSYSTEM

X-CURVE TRANSITION PROGRESS

MLP-PROBLEM EVOLUTION

POSSIBLE FUTURES

MLP-TRANSITION PATHWAYS

Wallace, N., Mazé, R., Williams, D., Landin, D., Tuft, N., and Ng, N. (2024) UAL Climate Systems Mapping: Facilitation guide and toolkit. University of the Arts London.

⬇ DOWNLOAD THE FACILITATION GUIDE

⬇ DOWNLOAD A0 SIZE PRINTABLE TOOLS

⬈ VIEW A SAMPLE MIRO SPACE
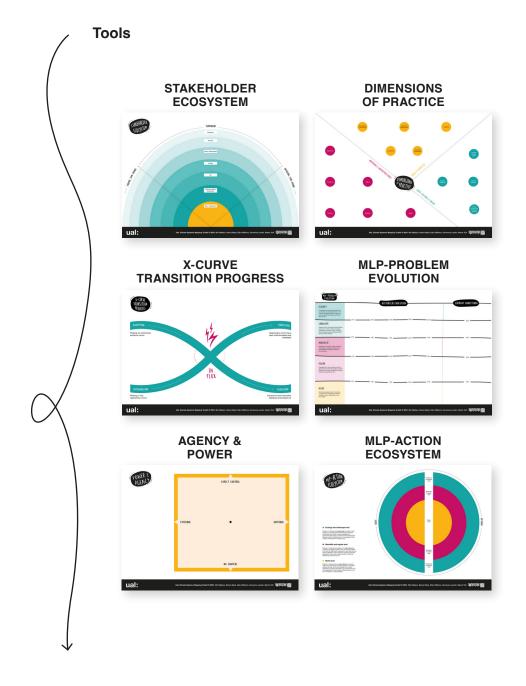
Session Overview

This type of PAR session and set of tools enabled a 'unit' (e.g. an established team or department at UAL) to systematically explore the climate dimensions of their work practices, their concrete current actions toward regeneration, their perceived agency to affect change internal to and beyond the unit, and their ideas for further future action.

Three units participated through this type of PAR that involved, for each unit, a first intensive mapping session and a second follow-up and sensemaking session. Representatives of each unit included unit leaders, staff and stakeholders (e.g. service beneficiaries such as other staff and students).

Participating Units

■   Library Services

■   Research Management & Administration

■   Student Marketing, Recruitment & Admissions

Tools

STAKEHOLDER ECOSYSTEM

DIMENSIONS OF PRACTICE

X-CURVE TRANSITION PROGRESS

MLP-PROBLEM EVOLUTION

AGENCY & POWER

MLP-ACTION ECOSYSTEM

Session Overview
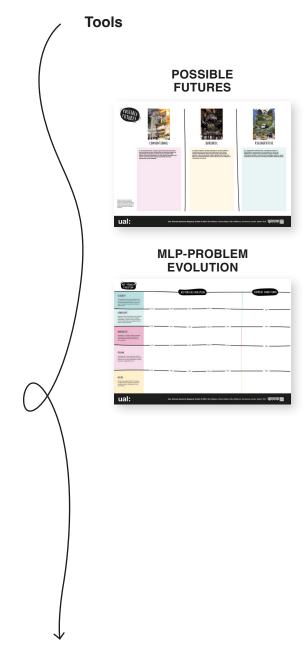
This session type engaged UAL staff with deep knowledge and expertise in HE and/or climate. There were five small focus group sessions of this type.

These sessions clarified key external and internal influences (e.g. declarations, decisions, drivers, etc.) on UAL's climate action. To cover the basics, the 'MLP-Problem evolution' tool was pre-populated with a number of data points from our targeted literature review. Experts then systematically mapped UAL's contributions to extraction and regeneration from a multi-level perspective (MLP), and from the 1970s through to the present. Experts also then also engaged in speculation about the HE sector and UAL within three possible futures (using the Tellus Institute scenarios as a baseline).

Participants

■ 4 x anonymous groups of 1-3.

Tools

POSSIBLE FUTURES

MLP-PROBLEM EVOLUTION

SESSION TYPE 3

Session Overview
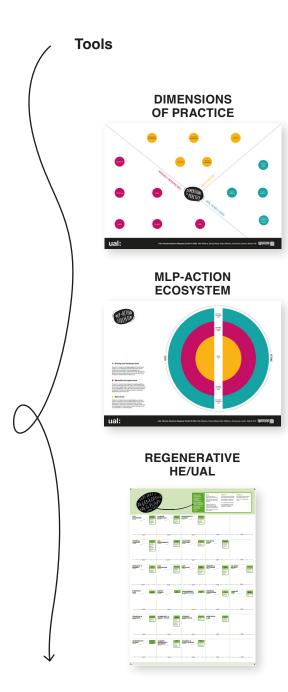
This session type engaged – by open invitation – a broad and diverse range of students and staff in one large 'UAL community' gathering. Participants came from nearly all our campuses, and staff represented a multitude 'job families' centrally and within colleges.

Participants communicated their perceptions of UAL's contribution to regeneration and extraction, positive actions relevant to climate and climate justice across levels at UAL, and their ideas for future action. More specifically, one PAR tool collected participant inputs to imagining 'regenerative future' UAL, structured according to typical HEI characteristics (e.g. campus life, university ethos, knowledges, governance, daily experience, campus life, etc).

Participants

- ■ 23 staff

- ■ 17 students

Tools

DIMENSIONS OF PRACTICE

N.b. An alternative version of this tool was designed specifically for this session and is not part of the larger toolkit.

MLP-ACTION ECOSYSTEM

REGENERATIVE HE/UAL

N.b. This tool was designed specifically for this session and is not part of the larger toolkit.
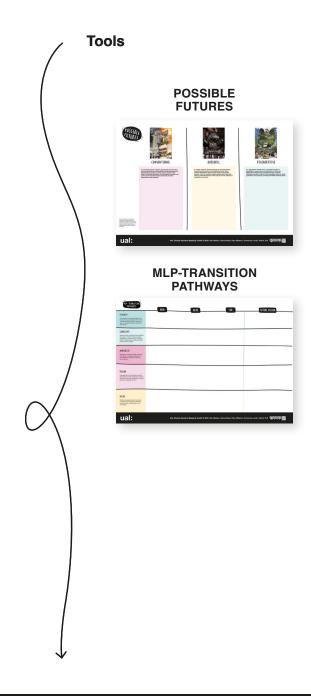
Session Overview

This session reconvened participants from session types #1 and #2. Unit, HE and climate experts sense-checked our preliminary analysis of prior sessions, then quickly shifted to focus on UAL in the future.

Participants systematically built out multiple futures of UK HE and UAL, starting from a base of scenarios and trajectories resulting from the prior PAR. Toward a 'regenerative future' UAL, participants focused on four future trajectories (drawn from analysis of session type #3 data). To specify each trajectory, participants articulated milestones and identified actions, barriers and enablers. Trajectories were thus elaborated in the form of ambitious yet practicable transition pathways.

Participants

- ■ Unit experts
  (participants from session type #1)

- ■ HE & climate experts
  (participants from session type #2)

Tools

POSSIBLE FUTURES

MLP-TRANSITION PATHWAYS

RESEARCH FINDINGS

Image: Alice Blencowe, Collaborative Mapping 2024 (Session type #3)

The findings span six key areas as follows:

| EXPERT PERCEPTIONS OF EXTRACTION & REGENERATION | COMMUNITY PERCEPTIONS OF EXTRACTION | ECOSYSTEM OF POSITIVE ACTION |

| UAL'S KEY CLIMATE COMMITMENTS | MULTIPLE POSSIBLE FUTURES | REGENERATIVE TRAJECTORIES & MILESTONES |
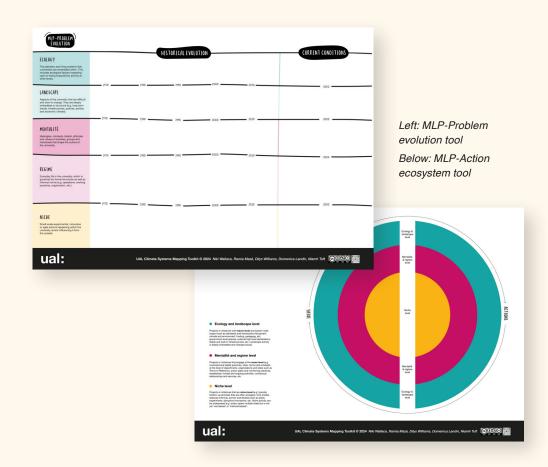
A key set of complementary findings emerged from HE and climate experts' participation (PAR type #2) and Unit participation (PAR type #1). These findings identify influences from across the system including key decisions, drivers, events, actions, both internal and external to UAL, that affect climate action at UAL and across the UK HE sector.

Data was collected using the MLP-problem evolution and MLP-action ecosystem tools and the findings reflect participants' perceptions and recollections of historical and current activity at UAL and across the HE sector in relation to extraction and regeneration.

Left: MLP-Problem evolution tool

Below: MLP-Action ecosystem tool

A holistic, grounded-theory analysis of the consolidated data surfaced four emergent themes, each represented a critical mass of contributions from participants. The four themes are: UAL & HE climate action; waste & materials; shifts in UAL's studentship, and; growthism & extraction. Each theme reflects the complexity of actions and influences that span multiple levels of the system, and how these sit in tension with one another due to their simultaneous contribution to extraction and regeneration. The findings present the themes as 'stories' that reflect these tensions and illustrative positive examples from the data are embedded in the stories (cross-referenced with data from unit experts PAR#1 and the UAL community 'PAR#3 MLP-Action Ecosystem).

UAL & HE CLIMATE ACTION

WASTE & MATERIALS

SHIFTS IN UAL'S STUDENTSHIP

GROWTHISM & EXTRACTION
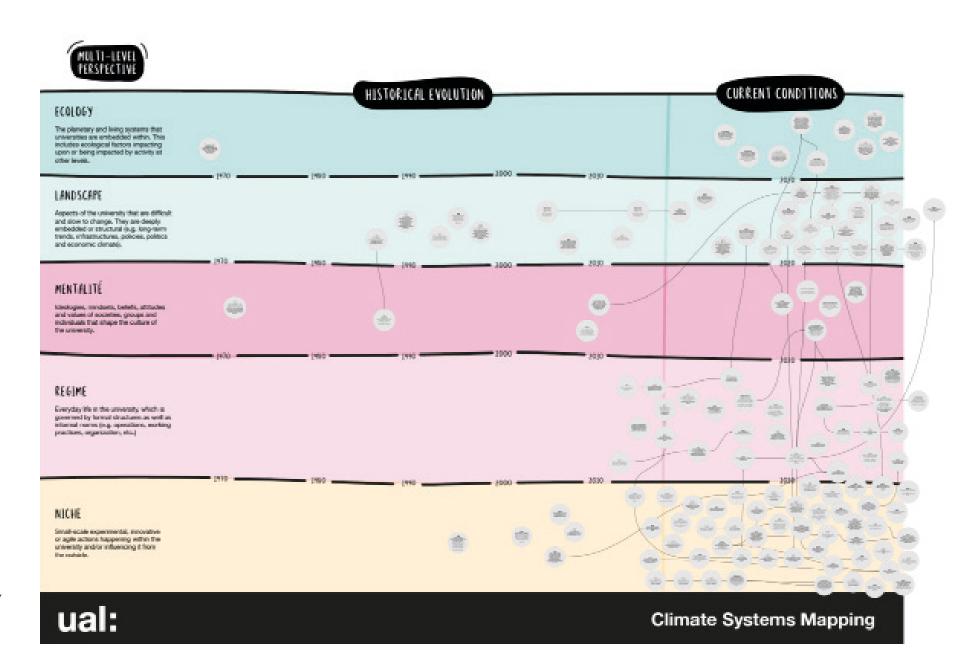
Image: Snapshot of analysis, including the data (participant inputs and secondary research) relevant to the theme UAL & HE climate action.

Participants observed that UAL has made **public declarations** that are backed by **published policies**. UAL gained accreditation for an **environmental management system**, and has committed to **net zero targets** and **social purpose**.

There's an emerging **ecosystem of action** stemming from the **coordination of efforts** across student and staff groups. From the **'Sustainability Action Group'** to **CEAG**, these groups have **accelerated climate action** with noticeable impact across UAL.

The ongoing implementation of **principles for social, racial and climate justice** in the curriculum across UAL and a suite of **new courses at each college** are centring new ways of working to amplify justice and climate action. **Carbon literacy training** for staff, and the creation of empowering new roles for students as **climate advocates** all indicate an **active hope** for justice in action.

But they also observed that UAL's **response to change is slower than necessary** and there is **blocking rather than amplification** of political voices and a **shallow rather than deep** body of knowledge about climate challenges.

UAL's declarations and policies still require **significant further action**, and communication about the actions taken misaligns with UAL's public rhetoric.

Grassroots action is precarious and reliant on individuals' goodwill. Individual's initiatives are at risk of **appropriation**, celebrated and claimed as 'UAL's' (top-down) action rather than recognised and supported from the bottom-up.

How groups (like CEAG) will transition to become pillars of continued action through the Social Purpose Lab **remains uncertain and unknown**, and bottom-up **initiatives are at risk of displacement** during processes of formalisation and integration into the university's structures.

WASTE & MATERIALS

Image: Snapshot of analysis, including the data (participant inputs and secondary research) relevant to the theme UAL & HE climate action.

MULTI-LEVEL PERSPECTIVE

HISTORICAL EVOLUTION

CURRENT CONDITIONS

ECOLOGY

The planetary and living systems that universities are embedded within. This includes ecological factors impacting upon or being impacted by activity at other levels.

LANDSCAPE

Aspects of the university that are difficult and slow to change. They are deeply embedded or structural (e.g. long-term trends, infrastructure, policies, politics and economic climate).

MENTALITÉ

Ideologies, mindsets, beliefs, attitudes and values of societies, groups and individuals that shape the culture of the university.

REGIME

Everyday life in the university, which is governed by formal structures as well as informal norms (e.g. operations, working practices, organisation, etc.)

NICHE

Small scale experimental, innovative or agile actions happening within the university and/or influencing it from the outside.

ual:

Climate Systems Mapping

Participants observed that UAL has been **rethinking creative practices** and has **led sustainability in the arts research** since the late 1990s. As this has become mainstream more initiatives have emerged to address **sustainability and circularity** in design. **Interdisciplinary research** with **public, private and international partners** has built UAL's research profile in this space and is influencing how we **relate to material culture**.

Small but measurable improvements have been made to our materials to waste through partnerships with organisations to help **reduce waste to landfill**. And frameworks such as **L.E.A.F. reduce waste produced through workshops** and creative making practices.

UAL has reported a **reduction of its supply chain carbon footprint** by 25.8%* and internally, **material and waste initiatives have emerged**. The reduce and re-use of material surplus through **sharing schemes, swap shops and material libraries** is amplified by repair cafes and repair advocates.

But they also observed that UAL's improved supply chain footprint reporting relates to **updated methods for measurement** and is **based on Scope 1 and 2 emissions***; the supply chain remains a **major contributor to Scope 3 emissions**, and in an average year UAL disposes of approximately 1000 tonnes of waste, accounting for **23 tonnes of carbon emissions**.

UAL has **declared a zero waste to landfill** approach, however the **recycling rates sit at 41%** and the **2-stream waste and recycling scheme collects non-recyclable waste.**** A lack of clarity in declarations related to waste put UAL at **risk of greenwashing**. Without **rethinking our relationships with materials** (towards circularity), this danger will remain.

The **pace of change** in relation to waste **remains slower than needed** and, despite waste being recognised in the Climate Action Plan, **UAL's response is reactive rather than proactive**.

How UAL responds to the **need for increased circularity** will also benefit from **increased transparency** in how progress is measured and reported.

*UAL (2023) Carbon Management Plan V.12, p.28

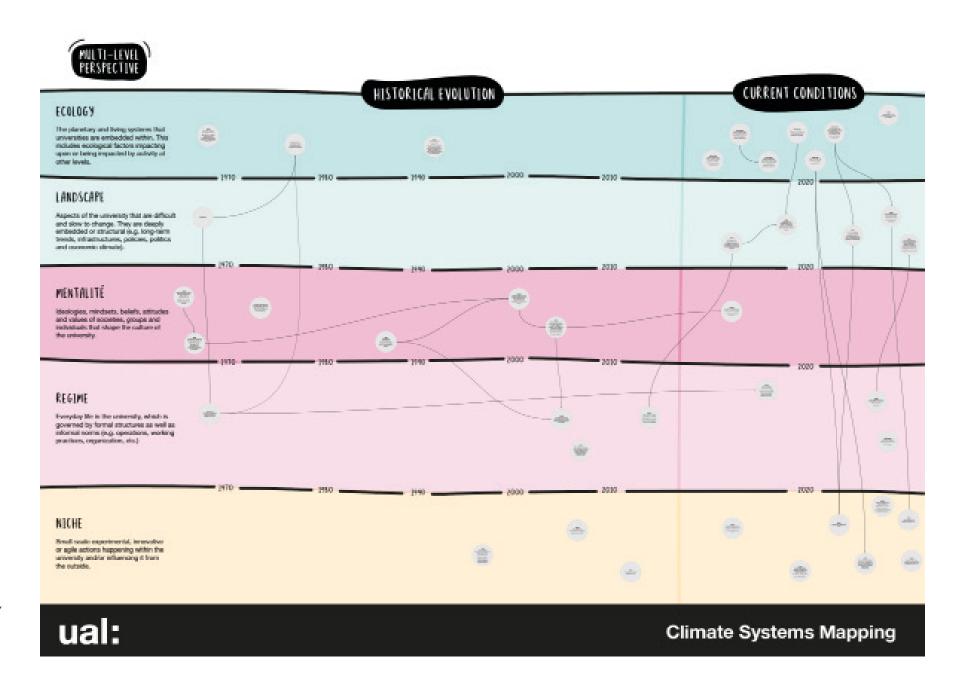** UAL (2024) Climate Action Plan 'Waste, Recycling and Sustainable Food'
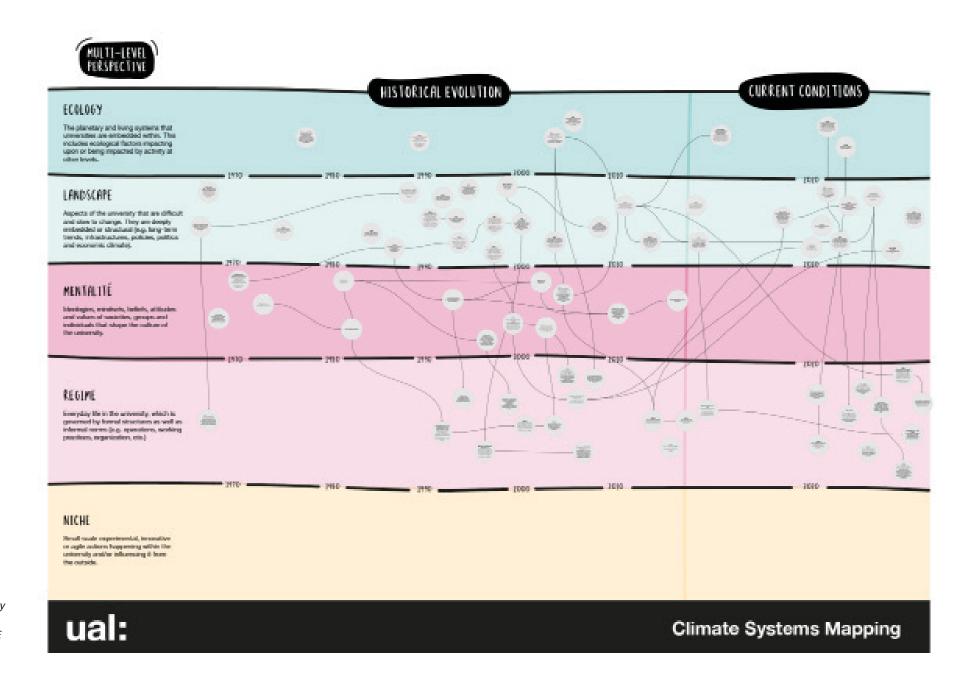
Image: Snapshot of analysis, including the data (participant inputs and secondary research) relevant to the theme UAL & HE climate action.

Participants observed that **studentship has changed at a sectoral level** in direct response to **changes in governments, politics and education policies**. Neoliberal ideologies pervade our education systems, for example in the **privatisation** of education and the **shift from free education to tuition fees**. Against a background of 'academic capitalism', **students have become consumers**.

A long-term strategy to **internationalise the curriculum** has increased the number of international students and metrics such as the QS World University Rankings are used to attract overseas students. **International fees are increasing** which has in turn, enabled **increased access for home students who pay lower fees**.

UAL now enrols **more international students than home students**, and internationalisation plays a key role in UAL's **growth strategy and financial position**. Travel associated with international studentship has impacted **UAL's Scope 3 emissions**, and **low-residency courses hold potential to reduce travel emissions**.

But they also observed that internationalisation has created a **financial dependence on overseas markets** which also poses **future risks** in relation to the impacts of the climate (and economic) crisis in countries of origin.

The pre-COVID **Scope 3 emissions** associated with student travel were estimated by one expert to contribute to **38% of UAL's scope 3 emissions**; the full impact of this travel post-COVID is yet to be determined.

Increasing student numbers place added strain on **under-resourced course teams** and **negatively impact the overall student experience** in relation to access to teaching, working and making spaces, contact time with teaching and support staff, and general access to other resources.

The **digital footprint** of low residency courses is **yet to be published** and the **high tuition fees continue to extract** from international markets and **amplify issues of affordance** in relation to privilege and access.

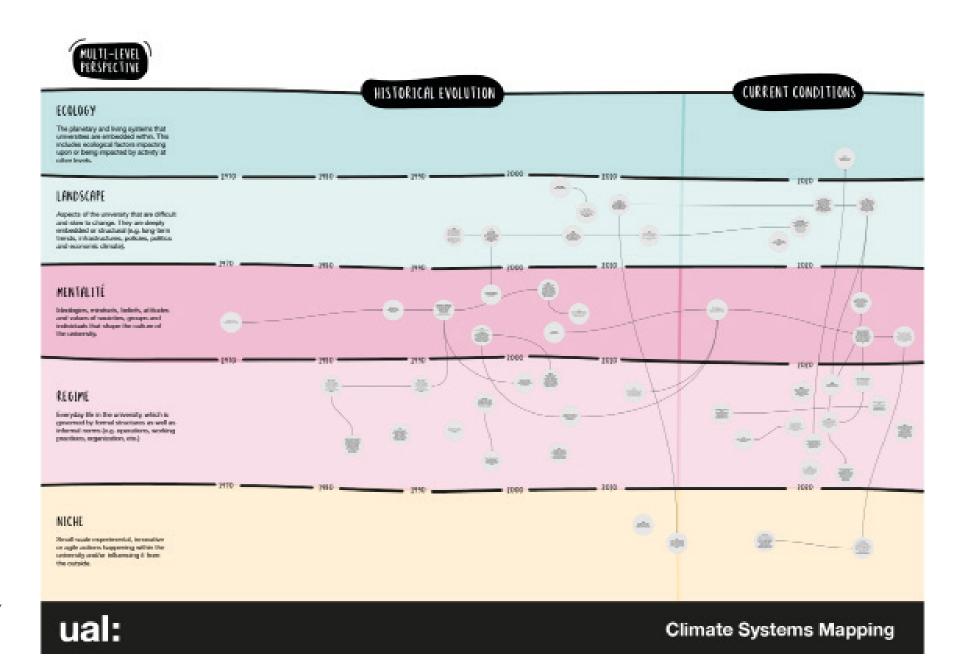*Image: Snapshot of analysis, including the data (participant inputs and secondary research) relevant to the theme UAL & HE climate action.*

ual:

Climate Systems Mapping

Participants observed that what scholars call **'academic capitalism' has become a dominant force** as governments pursue **education policies for economic growth**. This has transformed the landscape of HE and its recruitment strategies.

Sector reforms reward **entrepreneurial and market minded universities** that compete with each other for funding. A **'publish or perish'** attitude rules academia, and UAL's academic **staff are over-burdened with both more performance expectations and administrative duties**. **'Growthism'** is evident in the push to increase international student numbers and in the sale of additional services (residences, food, shops, etc.) that may also be associated with **extractivism**.

Contracting **outsourced staff** (e.g. cleaning, security) coupled with **precarious academic contracts** signal an extractivist logic in UAL's policies. Through University College Union, staff regularly **strike for better rights**. **Extraction** is also visible in UAL's decisions for **banking and investments**. Prior **staff and student campaigning for divestment from fossil fuels** led to UAL's agreement to the UN Principles for Responsible Investment.*

But they also observed that UAL's current financial statements reveal that, as of today, **UAL banks with Lloyds**, one of the world's funders of fossil fuels, indicating that **UAL's agreement to responsible investment has not been met**.
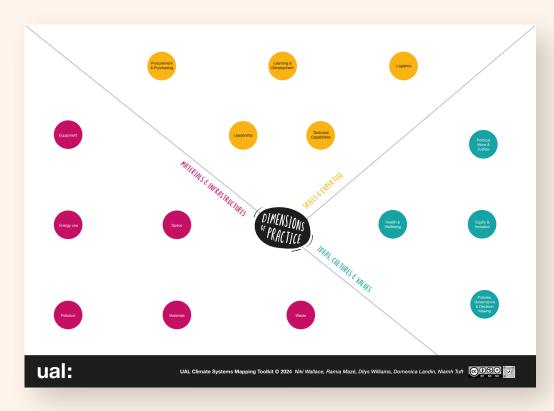
The **precarity** of staff and pressure to perform comes at an expense and **reduces the capacity for academic contributions** and **limits the sharing of deeper pedagogical insights** that improve curricula.

There are many **inconsistencies with what UAL says and does**, leaving a significant **value-action gap** that remains unaddressed. UAL's actions in relation to financial decisions and the continued pursuit of growth is **inconsistent with the pro-justice and pro-environmental PR statements** and indicates again that **UAL is at risk of greenwashing and 'socialwashing'**.

*UAL (2023) Responsible Investment Policy

Staff and student perceptions of UAL's contribution to extraction and regeneration (PAR#3) were collected and analysed in terms of (a) three categories and (b) more granular 'dimensions'. Drawn from Social Practice Theory into our research approach and this tool, the three categories are: 'ideas, cultural practices & values'; 'materials & infrastructure', and; 'skills & expertise for operations'. In order to further specify the categories and adapt these to HE and this project, each category comprises several dimensions. For example, dimensions of materials & infrastructure include 'energy use', 'equipment,' etc. The set of dimensions are findings from our secondary research analysis of frameworks from sustainability auditing, in justice, and in ethical business (e.g. ISO 14001, LEAF, SDGs, DEAL, Environmental Justice Principles, B-Corp, etc).

Above: Dimensions of Practice tool.

CATEGORY: Ideas, Cultural Practices & Values

Policies, Governance & Decision Making

Staff feel a **lack of agency and authentic participation** coupled with **opaque governance structures**.

Health & Wellbeing

There's significant pressure on academic staff in relation to **workloads** and invisibility of the labour of admin and pastoral care. Students also share heavy workloads which perpetuates an unsustainable standard. **Precarious contracts** for staff also impact workload management.

Political Voice & Justice

There are grand statements and pledges made but this can be seen as '_____**washing**' as there are **not appropriate corresponding actions**. Staff don't feel listened to and, when they are, it feels **tokenistic** and **lacks a diversity of voices.**

RESPONSES TO THIS CATEGORY:

36%
FROM STUDENTS

37%
FROM STAFF

CATEGORY: Materials & Infrastructure

Space

There's a **lack of spaces** and **poor utilisation of spaces**. It is **difficult to book rooms**, often **spaces are crowded**, and the **quality of spaces is poor** (lack of light, ventilation and green spaces). Fixing these issues through **building new sites** is an extremely extractive and **carbon-heavy solution** (and doesn't necessarily solve the issues).

Equipment

Over-dependency on digital equipment is expensive, energy consuming (typically left on 24/7), and **wasteful**, such equipment is **hard to recycle**. **Lack of visibility of UAL's policy** for re-use/recycling and lack of option for 'dumb' phones.

RESPONSES TO THIS CATEGORY:

40% FROM STUDENTS

30% FROM STAFF

CATEGORY: Skills & Expertise for Operations

Leadership

Top-down leadership styles reduce collegiality and agency among staff, there's a **desire for a more flattened hierarchy** with **participatory democracy** and **regenerative practices**.

Training & Development

There is a **need for deeper training** and development with a **focus on justice, circularity, and carbon literacy** that is properly resourced.

RESPONSES TO THIS CATEGORY:

25%
FROM STUDENTS

32%
FROM STAFF
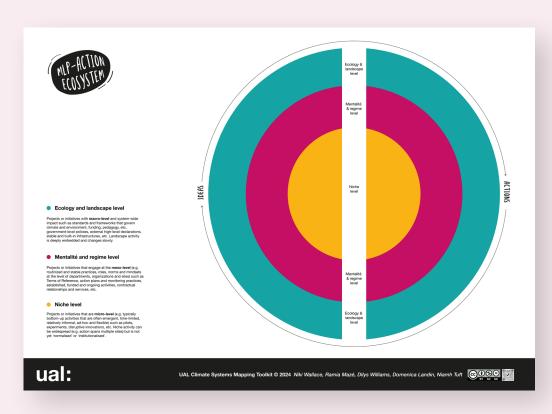
Towards mapping UAL's current positive contributions to climate action and justice, we have a great breadth and depth of participation across multiple PAR sessions (type #1 and #3).

Participants input to the 'MLP-Action ecosystem' according to multiple levels. The tool design reflects the levels – ecology and landscape, mentalité and regime, and niche – which are further defined in 'terminology' above in this report.
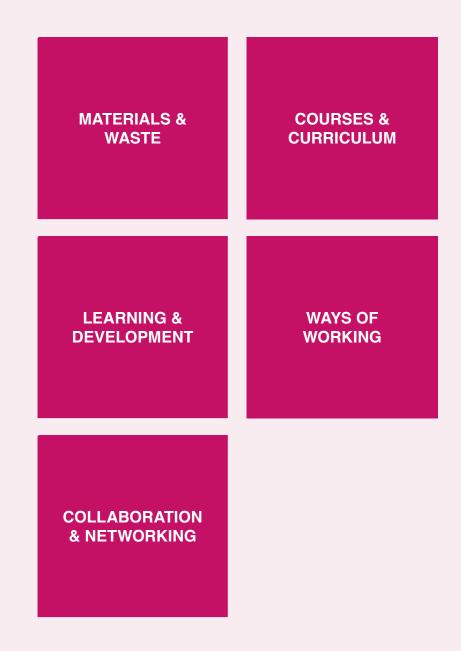
Our cluster analysis of actions per each level resulted in the identification of key themes and themes with critical mass. While some actions were generally confined to a single level, others were cross-cutting – which is particularly significant from a systems perspective.

Above: MLP-Action ecosystem tool.

Our cluster analysis of actions per each level resulted in the identification of key themes and themes with critical mass. While some actions were generally confined to a single level, others were cross-cutting – which is particularly significant from a systems perspective.

MATERIALS & WASTE

COURSES & CURRICULUM

LEARNING & DEVELOPMENT

WAYS OF WORKING

COLLABORATION & NETWORKING

MLP LEVELS WITH
CRITICAL MASS:

Niche

Regime

Mentalité

THEME: Materials & Waste

PARTICIPANT RESPONSES:

12%

OF PARTICIPANT
CONTRIBUTIONS

UAL students lead the **circularity-focused Swap Shop** at CSM, promoting material exchange. Overall responsible material and waste initiatives include **eliminating plastic book covers**, **reducing giveaways**, and **partnering with Book Rescuers** for responsible book recycling, **minimising overall print production waste**.

THEME: Courses & Curriculum

PARTICIPANT RESPONSES:

11%

OF PARTICIPANT
CONTRIBUTIONS

Climate, social and racial justice **principles are integrated into various courses** like MA Regenerative Design, MA Service Design, MA Fashion Futures and MA Social Innovation and Sustainable Futures, MA Global Collaborative Design Practice. Initiatives, including **LCC's Supra Systems Studio**, **Experimental Infrastructures Research Group** and **CSM Spatial Practices' Forest School** demonstrate a commitment to addressing complex eco-social issues.

MLP LEVELS WITH CRITICAL MASS:

Niche

Regime

Mentalité

THEME: Learning & Development

PARTICIPANT RESPONSES:

9%

OF PARTICIPANT CONTRIBUTIONS

UAL integrates climate action into academic programs and **expands climate literacy training** among staff. Other initiatives include **panel series on decolonising and regenerative practices**. UAL actively promotes carbon literacy through the **Carbon Literacy Project**, and the **Facing Climate Fears Project** addresses climate-related concerns within the UAL community.

THEME: Ways of Working

PARTICIPANT RESPONSES:

10%

OF PARTICIPANT CONTRIBUTIONS

Student-led initiatives at UAL encompass **classroom redesign**, improved researcher profiles and **micro-solidarity practices** like student-student check-ins. Librarians and tutors support **studio-oriented practices**, and **diversity and inclusivity are priorities**. The Centre for Sustainable Fashion incorporates a **glossary of terms**, and **remote working policies** vary across teams to support knowledge exchange.

THEME: Collaboration & Networking

MLP LEVELS WITH CRITICAL MASS:

Niche

Regime

Mentalité

PARTICIPANT RESPONSES:

12%

OF PARTICIPANT CONTRIBUTIONS

UAL actively engages in **communities of practice** and **external collaborations**, including the **UCL greenhouse gas removal group**. UAL staff participates in external working groups exploring topics such as **critical ecologies** and **social and environmental justice**. Local outreach, collaborative projects, staff and student-led initiatives, and cross-programme roles **contribute to UAL's climate and environmental initiatives**.

In relation to UAL's climate commitments, there has been significant work on multiple fronts, as evident in many internal and external documents. The documents are located in various places on UAL's intranet (Canvas), internal platforms (e.g. Sharepoint sites) and public website, comprising statements including strategy, policy and planning documents. Particularly relevant documents relate to UAL's Climate Action Plan, plans related to carbon management, biodiversity action and workplace travel, and two policy documents. We noted some issues with the documents that could be addressed for clarity and communicability in future documents, e.g. the need for each document to have a clear title, publication date and author/department and, where applicable, who approves or is accountable for the document.
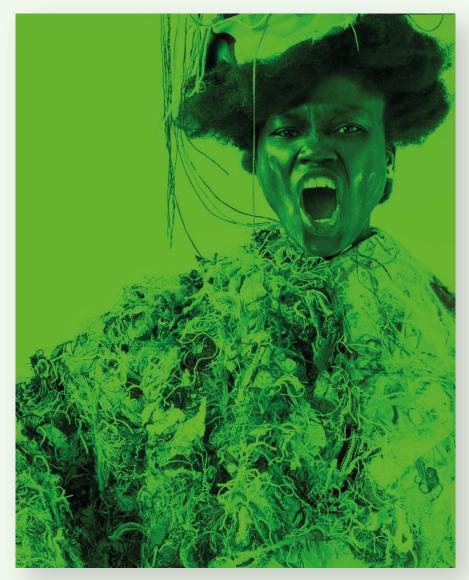
Image: Aramatou Toure, 2022 BA Textile Design, Central Saint Martins, UAL
Photograph by: George Eyo

Analysis resulted in a number of observations about the documents themselves and in relation to the nature of relevant statement. In relation to the documents, there were a number of aspects that hindered clarity and communicability such as:

■ lack of explicit references and links to directly related statements in other documents, and;

■ more explicit orientation of statements in documents and across documents to external systems such as ISO (such that it's possible to have a precise and holistic understanding of how UAL relates in terms of all relevant functions and statements).

Other observations in our analysis were to the nature of statements in the documents. For example, in terms of commitments, **there seems to be a clear agreement in terms of the high-level commitments** (e.g. stated across multiple plans): reduction of Scope 1 and 2 sources of carbon emissions in line with our Net Zero goal for 2030, and; reduction of Scope 3 sources of carbon emissions in line with our Net Zero goal for 2040. Regarding more specific actions, **some documents listed actions and others did not**. Our cross-cutting analysis identified **commitments and ideas in some documents** that **could align with corresponding actions in others**, though the links were not made in the documents themselves. Additionally, due to our other PAR data, we can say that the **documents in themselves do not provide a comprehensive overview of actions taking place** within UAL.

DOCUMENTS* ANALYSED
Environmental Policy Statement (v.10, Feb 2023)
Climate Action Plan (Nov 2022)
Climate Action Plan (Jun 2023) (internal document)
Climate Action Plan Progress Update (Dec 2023)
Biodiversity Action Plan (May 2022)
Sustainability Food Policy (v.8, May 2022)
Carbon Management Plan (v.10, June 2023)
Workplace Travel plan (v.5, Dec 2022)

* All documents were access between 26 April and 31 May 2024.

Analysis reveals action-oriented statements in the documents that were similar in nature to the "actions" and "ideas" identified and analysed from our PAR data (Ecosystem of positive action'). This required us to clearly define the 'types' of different action-oriented statement in a useful 'typology', which could be beneficial to communicate clearly and consistently going forward.

ACTION

Something done towards an aim

DOCUMENT ANALYSIS REVEALED:

57
ACTIONS

COMMITMENT

Defined as a time-bound and measurable statement that can be held accountable

DOCUMENT ANALYSIS REVEALED:

20
COMMITMENTS

IDEA

A statement of potential action that is not time-bound or measurable; For example, in the statements, there are words e.g. 'reduce', 'comply', 'work with', 'maintain' that imply action and progress, however it's unclear how these can be verified or measured. Thus, we call these *ideas* rather than *actions* or *commitments*.

DOCUMENT ANALYSIS REVEALED:

217
IDEAS

TYPE: Actions

THEMES WITH CRITICAL MASS

ecological footprint

space for climate

learning and development

Actions were **apparent in some documents** (specifically the *Carbon Management Plan* and the public *Climate Action Plan*), in which the top three themes in terms of critical mass are: 'ecological footprint', 'space for climate and ecological action' (in which **the majority of actions were produced by the Climate Emergency Network**), and 'learning and development' (e.g. **Carbon Literacy Training, relevant research, educational initiatives and T&L resources**).

TYPE: Commitments

THEMES WITH CRITICAL MASS

ecological footprint

travel

food

Statements about 'ecological footprint' are predominantly found in the *Carbon Management Plan*, which states that each area of **scope 3 emissions must be reduced** by 54% no later than 2040, from a 2018/19 baseline. However, it **does not outline a clear pathway to achieve this**.

Regarding 'travel,', the *Carbon Management Plan* **recognises travel** as a large part of our Scope 3 Emissions, and the *Workplace Travel Plan* also includes commitments to "**increase staff awareness**".

Regarding 'food,' the *Sustainable Food Plan* has **clear commitments** that are **easily actionable**.

TYPE: Ideas

THEMES WITH CRITICAL MASS

ecological footprint

travel

ways of working

There is a critical mass of ideas in terms of 'travel', 'ecological footprint' and 'ways of working', in which examples of the last two themes are **spread across multiple documents**. In terms of 'travel', the vast **majority of ideas are related to workplace travel** (e.g. local and regional, in contrast to international student travel that is the biggest travel contribution to scope 3 emissions).

Multiple methods informed research into possible futures. Targeted reviews of academic and 'grey' literature guided us, including alignment with Tellus Institute's scenarios (e.g. our 'conventional,' 'barbaric' and 'regenerative' future worlds). A set of HEI-specific characteristics developed through analysis of experts, staff and students' inputs. The three scenarios plus the HEI characteristics were a base for participatory visioning (PAR#2, #3 and #4). Findings include a set of written scenarios and graphic imaginaries (by David A. Garcia).

Above: Possible futures tool

BARBARIC

A **future 'barbaric' society** is one in which conventional and **business-as-usual has failed** as interacting crises (climate change, cultural conflict, economic instability) reinforce and amplify each other. **Society spins out of control**, leading to a **general crisis** and the **erosion of civilised norms**. In response, powerful forces in some contexts impose an **authoritarian order** with harsh environmental mandates. A kind of **apartheid emerges** globally and locally - with elites in protected enclaves and an impoverished majority outside. Patterns of **extractivism and marginalization** are exacerbated, within a **pervasive struggle for resources and survival**. Chaos may tip over into an **unmitigated collapse** of institutions and culture

CONVENTIONAL

A **'conventional future' society** is **governed by the forces that have dominated** to date. Developing countries seek to emulate richer nations, and **hierarchical and extractive logics are perpetuated**. Powerful global actors advance free market and economic expansion. **Policy attempts to align** the economy with environmental and social goals. Incremental change is achieved; **fundamental change is absent**. Conventional futures **rely on technological innovation, quantitative and carbon-based standards**, biodiversity and alternative frameworks remain marginal. Adequate global **governance needed for climate action may not be achieved and maintained** within a world of conventional values and institutions.

REGENERATIVE

In a **'regenerative climate future,'** conventional values of individualism, consumerism, and domination of nature have been replaced by **equality, solidarity, and quality of life**. Within wider society, communities organise around forms of **solidarity, participatory democracy, eco/bio-regionalism, accessible technology** and **economic/resource sufficiency**. Complementary to this, and beyond nationalism, are considerations of **global citizenship**, **plurality of cultures and knowledges**, **justice for future generations**, and living well **within planetary limits**. There's a wide recognition of an era of **Ecological Civilization**, **embracing diversity** in regional cultures, biodiverse and multi-species justice, and **multiple approaches to wellbeing**.

The macro-level scenarios are based on those of the Tellus Institute (available at https://tellus.org/global-futures, accessed Feb 15, 2024))

BARBARIC

CONVENTIONAL

REGENERATIVE

A **'barbaric' Higher Education (HE) future** reflects **widening inequalities** and **decreasing social mobility**. Business models **depend upon local and global elites**, at the expense of others. HEIs are **increasingly self-interested, protectionist, internally polarised and divided**. Campus operations and supply chains are **continually at risk**. Legal action implicates HE in **ecocide and epistemicide**. There is a **crisis in academic legitimacy and freedom**, in a **context rife with authoritarianism, misinformation, greenwashing** and narratives of false hope.

UAL in a 'barbaric' future is characterised by external and internal struggles. **External competition among universities**, changing circumstances in other countries, and **stronger national borders threaten a business model** dependent on increasing international student recruitment. **Gains in climate justice and anti-racism are threatened** by rising inequality and polarization within UAL that **widen fractures along colonial lines**. **Other disciplines may prevail** over creativity in terms of what's needed in a collapsing world, and **creativity may easily be co-opted by bad actors**. **Eco-anxiety and 'solastalgia' are common** among staff and students.

BARBARIC	CONVENTIONAL	REGENERATIVE

Current paradigms rule in a 'conventional' future Higher Education (HE). **Lock-in to structures** premised on performance measures, competitive rankings, and accountability frameworks means **continual struggle to integrate climate, biodiversity and justice**. Public and third sector **commitments of HEIs are subordinated to private interests**, including those resistant to or impeding climate action and justice. Experience of staff and students includes **job insecurity**, **limits to political and academic freedom** and **heightened visa controls**.

'Conventional' future UAL is reactive to external forces, including market priorities, government positions, and accountability frameworks. A **business model** premised on surplus and international fees **locks UAL into high carbon futures**. Calls to 'walk the talk' continue, as **climate and justice commitments are not prioritised** in decision-making and lived experiences. **Lack of integration** across hierarchies and silos **perpetuates inefficiencies** and collective action. Disciplines and knowledges key to **climate justice are slow to embed**. **Climate action/justice thrives mostly through individual** staff, students and small groups.
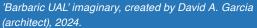
BARBARIC	CONVENTIONAL	REGENERATIVE

A **'regenerative' Higher Education (HE)** future **aligns climate, biodiversity and justice commitments and accountability** at all levels of sector and university organization. Global, interspecies, racial and class **justice principles guide governance structures, economic models** (e.g. partners and student fees), **and everyday life** on campus and within local communities. **Long-termism is embedded** within integrated university structures, adapting with experiential learning, **involvement of local knowledges**, **representative voices**, **organised action** and **research expertise**.

In a **'regenerative climate future'**, UAL leads internally and sector-wide **on the integration of climate, biodiversity and justice goals**. This is **reflected in leadership structures** and enabled through **cross-silo and participatory governance**, as well as **open data** (e.g. budgets, contracts, eco/bio monitoring, etc). Campus life features **'university citizen assemblies'**, **just resource use/reuse/production**, **(re)wilding** and **'zero carbon' commutes**. A **care-based work and study culture** nurtures grassroots initiatives, which are systematically supported and scaled up. **Carbon literacy and living systems are embedded** in research, degree and lifelong learning (including metrics).

'Barbaric UAL' imaginary, created by David A. Garcia (architect), 2024.
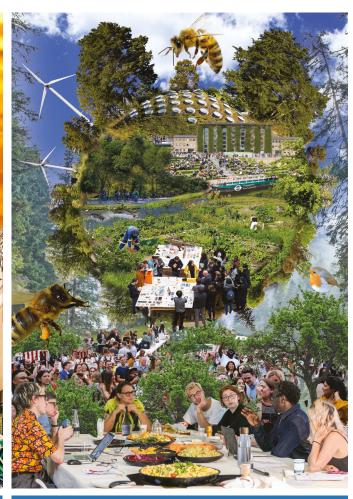
'Conventional UAL' imaginary, created by David A. Garcia (architect), 2024. The composition of the imaginary includes fragments of these photos from UAL image library (library reference number indicated): John Sturrock, the Street inside Granary Square, King's Cross building (47809), 2011; John Sturrock, Granary Square, King's Cross building (47806), 2011; Outside view, Halls of residence (43270), 2022; John Sturrock, King's Cross Campus (54603), 2017; Entrance, Halls of residence (43302), 2022; Courtyard, Halls of residence (43227).
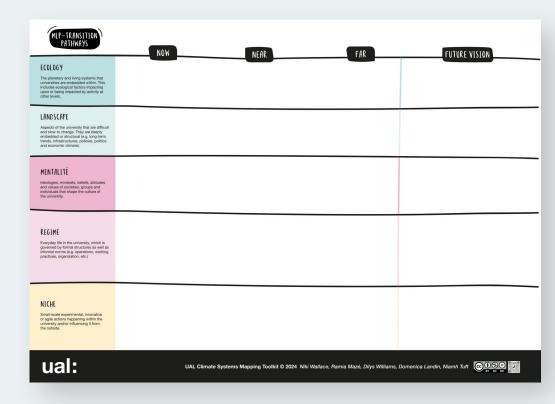
'Regenerative UAL' imaginary, created by David A. Garcia (architect), 2024. The composition of the imaginary includes fragments of these photos from UAL image library (library reference number indicated): Granary building exterior (54839), John Sturrock, 2022; Bryan Lanas, staff summer party (45420), 2022; John Sturrock, Ines Marques presenting her work in progress (48043), 2016; John Sturrock, CSM King's Cross Building (54602), 2017; Angela Tozzi, UAL, 2023; John Sturrock, Round table discussion (53932), 2017.

DOWNLOAD THE IMAGINARIES

In a back-casting activity with unit, climate and HE experts (PAR #4), milestones were identified along each trajectory spanning from now into the future. While a milestone might be anchored in a specific 'level' (e.g. regime or niche), it could also extend into other levels from a systems perspective. Further more specific and concrete pathways were developed for getting from one milestone to the next – in the graphics below, pathways are indicated as dotted lines in forward-looking directions. The milestones, pathways and actions can be seen as potential levers at specific levels in the system and/or with levers at multiple levels in the system.
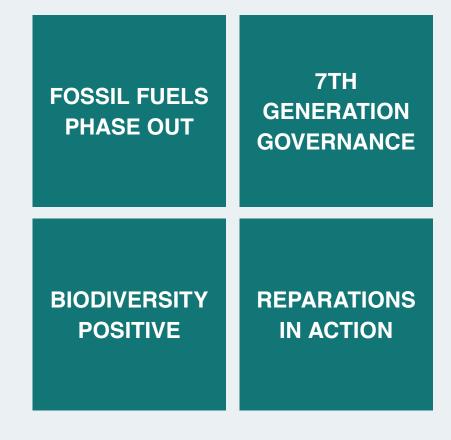
Participants collaboratively populated the trajectories, responding to pre-populated milestones and articulating pathways, actions and ideas (enablers and barriers). The four trajectories articulate insider knowledge within and across a systemic framing. The milestones, pathways and actions can be seen as potential levers at specific levels in the system and/or with levers at multiple levels in the system.

Above: MLP-Transition pathways tool
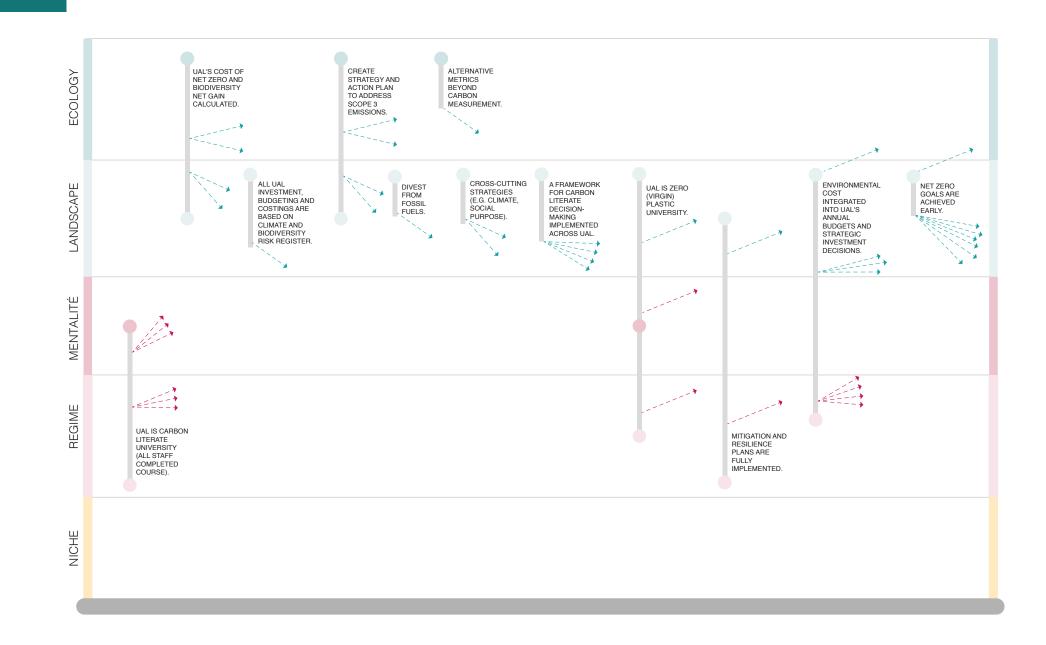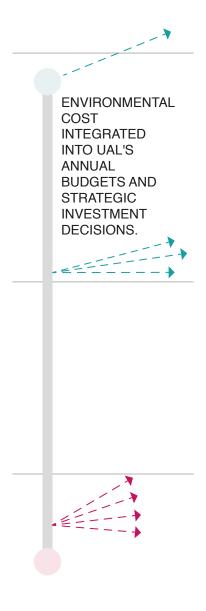
Grounded-theory analysis of staff and student inputs (PAR#3) about regeneration in HE and UAL resulted in four main thematic clusters, captured in four written summaries: 'fossil fuels phase out,' '7th generation governance,' 'biodiversity positive,' and 'reparations in action'. These were then used to further develop with experts (unit, climate and HE experts PAR #4) four 'trajectories' toward a regenerative future UAL.

FOSSIL FUELS PHASE OUT

7TH GENERATION GOVERNANCE

BIODIVERSITY POSITIVE

REPARATIONS IN ACTION

FOSSIL FUELS PHASE OUT

ECOLOGY

UAL'S COST OF NET ZERO AND BIODIVERSITY NET GAIN CALCULATED.

CREATE STRATEGY AND ACTION PLAN TO ADDRESS SCOPE 3 EMISSIONS.

ALTERNATIVE METRICS BEYOND CARBON MEASUREMENT.

LANDSCAPE

ALL UAL INVESTMENT, BUDGETING AND COSTINGS ARE BASED ON CLIMATE AND BIODIVERSITY RISK REGISTER.

DIVEST FROM FOSSIL FUELS.

CROSS-CUTTING STRATEGIES (E.G. CLIMATE, SOCIAL PURPOSE).

A FRAMEWORK FOR CARBON LITERATE DECISION-MAKING IMPLEMENTED ACROSS UAL.

UAL IS ZERO (VIRGIN) PLASTIC UNIVERSITY.

ENVIRONMENTAL COST INTEGRATED INTO UAL'S ANNUAL BUDGETS AND STRATEGIC INVESTMENT DECISIONS.

NET ZERO GOALS ARE ACHIEVED EARLY.

MENTALITÉ

REGIME

UAL IS CARBON LITERATE UNIVERSITY (ALL STAFF COMPLETED COURSE).

MITIGATION AND RESILIENCE PLANS ARE FULLY IMPLEMENTED.

NICHE

There was a great deal of data relating to our **carbon related practices**. The findings offered **clearly defined ambitions** to become a fossil-fuel free university and populated gaps in UAL's commitments, targets and **clearly defined milestones and monitoring process**. The **complexities** of becoming a post carbon university **are recognised** as requiring change & commitment across the MLP, with an **emphasis on ecology, landscape and regime levels**. Reaching milestones requires pathways informed by knowledge, risk-analysis, negotiating trade-offs – in curriculum, financial & other terms and crucially **university wide ambition**.

ENVIRONMENTAL COST INTEGRATED INTO UAL'S ANNUAL BUDGETS AND STRATEGIC INVESTMENT DECISIONS.

7TH GENERATION GOVERNANCE

ECOLOGY

LANDSCAPE

UAL ADOPTS AN INTER-GENERATIONAL COURT.

UAL ADOPTS PARTICIPATORY ACTION RESEARCH AS MODEL FOR ACADEMIC POLICY.

UAL ADOPTS A CO-OPERATIVE STRUCTURE THAT ENABLES THE REPRESENTATION OF A WIDE RANGE OF UNIVERSITY COMMUNITY MEMBERS.

UAL DEVELOPS A BROADER DEFINITION OF 'GROWTH' BEYOND ECONOMIC PARAMETERS AND ITS GOVERNANCE FOLLOWS A 'DE-GROWTH' MODEL.

MENTALITÉ

UAL ACCOUNTING INCLUDES DATA REGARDING IMPACTS FOR 'UNBORN GENERATIONS'.

UAL WORKING PROCESSES IMPLEMENT POST-CAPITALIST IDEOLOGIES.

REGIME

UAL ADOPTS A MODEL OF CO-CREATION IN BUDGETING PRACTICES.

UAL RECRUITMENT STRATEGIES IS DEVELOPED WITH REPRESENTATION TARGETS.

NICHE

This long-term view emerged from the data as a coalescing around **changing what is counted and how we count what counts** in a university that is populated by **multiple generational participants**. It recognises that **universities look out onto a horizon that is longer** than most governments or businesses. It recognises the **tension between long-termism and business-led short termism**, calling for the university to demonstrate leadership through **intergenerational accountability**, recognising the lag between cause and effect of actions taken now over the life-span of our students and the **impacts of work on future generations**. Findings cross-reference with those in other trajectories including ideas around **sufficiency and 'enoughness'** of stuff, working hours, income and size of the university.

UAL ADOPTS A CO-OPERATIVE STRUCTURE THAT ENABLES THE REPRESENTATION OF A WIDE RANGE OF UNIVERSITY COMMUNITY MEMBERS.

BIODIVERSITY POSITIVE

ECOLOGY

UAL APPLIES SCIENCE-BASED TARGETS FOR NATURE ACROSS ITS ENVIRONMENTAL MANAGEMENT SYSTEMS.

UAL COMMITS TO THE KUNMING-MONTREAL GLOBAL BIODIVERSITY FRAMEWORK (GBF).

LANDSCAPE

UAL PUTS NATURE ON THE COURT OF GOVERNORS.

UAL'S KNOWLEDGE EXCHANGE AND ENTERPRISE ONLY SUPPORTS PLANETARY HEALTH-LED INVESTMENT.

ESTATES PROTECTS UAL'S BIODIVERSITY IN EXISTING AND NEW BUILDING STOCK.

SENIOR LEVEL EXECUTIVES BUILD BIODIVERSITY INTO STRATEGIES (E.G., RESEARCH, KNOWLEDGE EXCHANGE).

STUDENTS ARE ABLE TO IMPACT GLOBAL POLICY CHANGE FOR BIODIVERSITY AND EDUCATION POLICY.

MENTALITÉ

MULTISPECIES RIGHTS RECOGNISED ACROSS UAL CURRICULUM AND RESEARCH.

REGIME

ALL INVESTMENT, BUDGETING AND COSTINGS ARE BASED ON CLIMATE AND BIODIVERSITY RISK REGISTER.

ECOLOGISTS, INDIGENOUS KNOWLEDGES AND OTHER-THAN-HUMAN SUBJECTS ARE REPRESENTED ON KEY UAL COMMITTEES.

ALL STAFF RECEIVED BIODIVERSITY TRAINING (EQUIVALENT TO CARBON TRAINING).

BIODIVERSITY LITERACY IS EMBEDDED IN THE CURRICULUM.

UAL APPOINTS SIX PROFESSORS OF ECOLOGY (ONE PER COLLEGE) TO ACCELERATE INTEGRATION OF ECOLOGY IN RESEARCH.

UAL IS CO-CREATED AS A LIVING SYSTEM.

NICHE
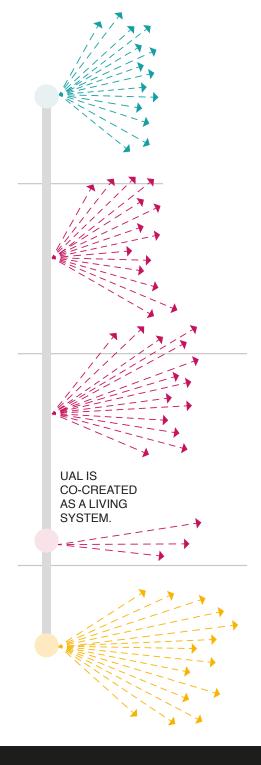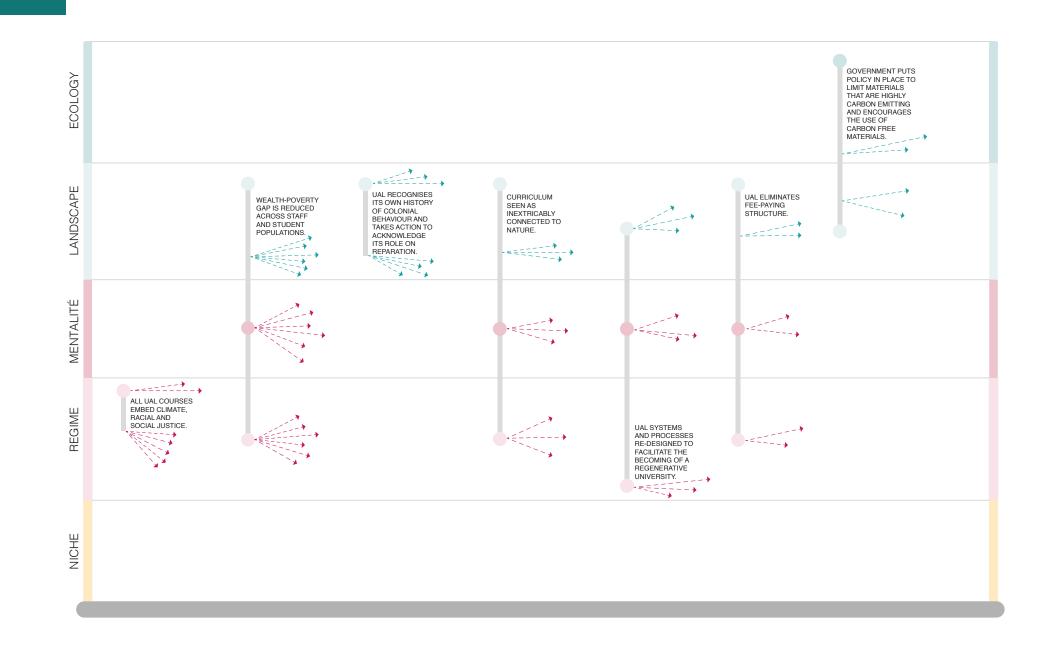
The imperatives for **regenerative practice to restore biodiversity levels** are clear. as with the consequences of carbon and other GHG emissions, the **devastating loss of biodiversity is heading us towards the 6th mass extinction**. The complexity of restoring and regenerating nature is challenging. **Global targets are in now ratified**, the loss and damage fund is in place, but **universities are slow to act** due to the **challenge of complex system adaptation** inlcuding measurement and accountability that is not yet verified and lacks landscape level commitment and relevant expertise. This trajectory **requires change across all levels of UAL** communities with a **particular emphasis on networks and partnerships** with other universities and subject experts.
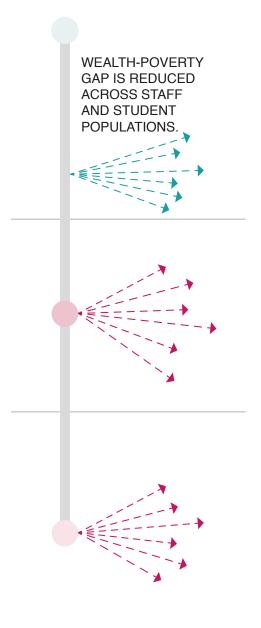
UAL IS
CO-CREATED
AS A LIVING
SYSTEM.

REPARATIONS IN ACTION

ECOLOGY

GOVERNMENT PUTS POLICY IN PLACE TO LIMIT MATERIALS THAT ARE HIGHLY CARBON EMITTING AND ENCOURAGES THE USE OF CARBON FREE MATERIALS.

LANDSCAPE

WEALTH-POVERTY GAP IS REDUCED ACROSS STAFF AND STUDENT POPULATIONS.

UAL RECOGNISES ITS OWN HISTORY OF COLONIAL BEHAVIOUR AND TAKES ACTION TO ACKNOWLEDGE ITS ROLE ON REPARATION.

CURRICULUM SEEN AS INEXTRICABLY CONNECTED TO NATURE.

UAL ELIMINATES FEE-PAYING STRUCTURE.

MENTALITÉ

REGIME

ALL UAL COURSES EMBED CLIMATE, RACIAL AND SOCIAL JUSTICE.

UAL SYSTEMS AND PROCESSES RE-DESIGNED TO FACILITATE THE BECOMING OF A REGENERATIVE UNIVERSITY.

NICHE

The data made it clear that **UAL has an ambition towards justice** – and that we need to be clear about what this means. The **anti-racism strategy**, as well as the **Climate Action Plan** and **Social Purpose Transition Plan** all **talk about equity, intersectional issues and de-colonising** the university. The **data fills gaps in these plans** and a lack of milestones and pathways which, when in place **offer a bolder set of commitments, ideas and actions**. Whilst this might be a challenging trajectory, the **evidence of colonial extraction is clear** and the route to **regeneration seen as necessary** to maintaining the university's integrity.

WEALTH-POVERTY GAP IS REDUCED ACROSS STAFF AND STUDENT POPULATIONS.

INSIGHTS ON THE FINDINGS

Participating experts, staff and students at UAL identify a variety of UAL contributions to extraction and regeneration, historically and currently and at multiple levels. There are likely many more contributions not documented, however this pilot has been limited in scope and number of participants.

A multitude of complex external and internal influences have resulted in the current situation at UAL, when analysed in terms of regeneration and extraction there are tensions relating to activity that contributes to both regeneration and extraction. This is not unexpected and presents an opportunity to work with this complexity more openly.

■ Leverage Points for Change

Through the analysis, four key leverage points for systemic change are identifiable.

■ The first relates to **information flows** (how accessible and transparent information and communication could be across UAL). This is a powerful leverage point that can empower and engage the UAL community by enabling access, dissemination and processing of information to nurture a knowledgeable and informed UAL community. When complemented by public transparency (changing 'in the open') this could further position UAL as a leader of sectoral change. Making public the tensions and 'struggles' involved in systemic change can also dissipate perceptions of '_____washing' by being open and transparent about the complex reality of 'doing the work' and demonstrating to others how to sit in the discomfort of such complexity.

■ The second relates to the **goals or purpose of the system** (how the competing goals of growth and social purpose might be reconciled or how the tension between these goals might be used strategically to catalyse a forward motion). Clearly articulated goals or purpose accompanied by transparent information and open communication flows can increase the synergy between actors in a system, allowing for a shared understanding of the 'what and why' can encourage cooperative efforts to realise the goals.

■ The third relates to **reinforcing feedback** which can be approached in a twofold manner – first by slowing down areas of growth (e.g. reliance on fossil fuels) and secondly by amplifying positive actions (e.g. those related to social purpose). This leverage point can be thought of as a kind of dance that seeks to reinforce feedback loops associated with the phasing in and phasing out of particular activities as outlined in further detail below.

■ The fourth leverage point intervenes in the **rules of the system** (how action is incentivised and desirable behaviours rewarded) and works in tandem with point three above. **How feedback is balanced** in the system to provide stability (how we balance what is introduced or phased in with what is let go or phased out) is a crucial aspect of this leverage point. Successful intervention here is highly dependent upon the agency held by those involved, particularly those with the power to influence system rules and the overarching goals and purpose for the system. It is clear from the collected data that significant top-down and bottom-up activities and strategies are already in play across UAL and initial analysis indicates varying degrees of agency are felt by those involved. Further intervention at the level of 'rules' could increase the sense of agency felt by those 'in the middle', where there is a potential for feeling a sense of 'stuckness' in actioning strategic change or a lack of agency to affect change 'from the middle'.

How we work with such leverage points is crucial in how change is experienced by the UAL community – as an exponentially growing set of contradictions, or as a consistent, measured and strategic effort that acknowledges the tensions it sits with and maintains open communication about their navigation.

From a systems perspective, the activity spanning multiple levels warrants deeper analysis to identify where such tensions might create barriers that inhibit future action.

Tensions of particular concern are those core to UAL's organisation, economic model, operations and education.

Four identifiable themes emerged from the analysis that warrant deeper analysis in relation to their cross-cutting nature (across multiple levels in the system, across multiple data sets collected as part of this research). These themes are: UAL & HE Climate Action; Waste & Materials; Shifts in Studentship; Growthism & Extraction. Analysis within and across each of these themes reveals tensions, which indicate UAL's 'position' as in flux and transition as the institution grapples with the complexities of in- and external demands and drivers.

Perceptions of extractive action

UAL's commitment and capacity to realise climate action/social purpose is hindered by a variety of **perceived and practical disconnects**. An example of a practical disconnect is the big investment in new spaces, while existing spaces could be improved and better utilised. Further aspects are evident in the findings.

Experts perceived a **strong sense of bottom-up action** and some sense of **top-down commitment** but identified a **lack of traction and evidence in 'the middle'**. Staff and senior management are caught in the bind of misalignments between top-down commitments and bottom-up actions as well as competing and not-yet unaligned environmental, social and racial justice commitments, plans and actions.

There's an **increase in support and people** working on new commitments (climate action/social purpose), but this conflicts with already heavy (and some invisible) workloads and a generalised sense of pressure and precarity. There's been a **push toward phasing in of new commitments, plans and actions**, with **little or no focus on phasing out the old**.

Ecosystem of positive action

Four themes emerged from analysis: materials and waste; courses and curriculum; learning and development; ways of working, and; collaboration and networking. There are many specific actions within the themes, the amount and coverage of which are recorded for the first time through our PAR research and findings.

Insights on the themes:
The tangibility of **materials and waste** creates a highly visible problem with a clear entry point for creative intervention. The high volume of actions focussed on materials and waste reflect this and demonstrate action that cuts across multiple levels in the system, from niche action that is student-led and precarious in nature (e.g. swap shops) through to action that is more stable and supported within the regime at a departmental level (e.g. Library Services eliminating plastic book covers, Student Marketing, Recruitment and Admissions reducing marketing giveaways). The stabilised actions in the regime indicate a desire/demand for structural change, but the precarity of some niche actions suggests that regardless of 'popularity' of an initiative, stability is not a given end-point, and a careful embedding through institutional structures is needed to stabilise niche actions in the regime.

The explicit integration of justice principles in **new courses and initiatives** provides a range of case studies that evidence how UAL's justice principles operate in the curriculum, and each cohort of students engaged in these courses and initiatives further contributes to UAL's growing regenerative culture. Such exemplars, though niche in their scale, act as 'attractors' in the system, reflecting and demonstrating possibility both internally and externally, and provide inspiration for larger cultural shifts in the higher education sector. As more courses follow suit a critical

mass will likely emerge in the regime, thereby demonstrating more tangibly, a systemic shift towards higher education that is led by principles of social, racial and climate justice.

UAL's integration of eco-literacy and justice focused training and development programmes (e.g. Carbon Literacy) takes a first step in supporting the integration of justice into the curriculum through the training and development of staff. This crucial action acknowledges that a shift towards social purpose also demands a shift in the **learning and development** of staff alongside students. Though these programmes are in their infancy, the supported nature of actions in learning and development are evident in programme funding, its implementation through HR learning systems and connection to performance reviews. Continuous and expanded actions in learning and development will help stabilise this action in the regime which could also permit a normalisation of UAL staff self-reflecting on knowledge gaps in the face of dynamically shifting crises, a process which could also permit greater psychological safety for staff in the face of continuing change within UAL and HE.

As UAL's **ways of working** continue to evolve both in response to climate crisis and in pursuit of climate justice, documentation of what's working will be key to the continuous generation of insights about what could be amplified and about else might be needed. UAL's willingness to listen and respond to staff and students' needs, to experiment with alternative support structures, and to centre diversity and inclusivity in its responses will be key to furthering positive actions in this area. Some new ways of working are more normalised and institutionalised than others (e.g. remote working policies) whereas other beneficial niche actions (e.g. microsolidarity practices) will likely remain less understood without the increased visibility that comes from open communication and sharing about new ways of working across the UAL community.

The development of meaningful relationships with longevity and integrity will be key to UAL's continued collaborative success. Partners are an extension of the institution, so the who, what, where, when and how of UAL's **collaboration and networking** is crucial to the authenticity of social purpose endeavours. Although UAL currently engages with communities of practice and collaborations that have a regenerative outlook, consistent and consolidated efforts will be needed to stabilise these relationships and shift them from the niche into the regime. Such a shift relies on a strong network of relationships between multiple individuals across the institution that is further galvanised by institutional ties.

UAL's willingness to listen and respond to staff and students' needs, to experiment with alternative support structures, and to centre diversity and inclusivity in its responses will be key...

UAL document analysis

Comparing action-oriented statements in the documents and PAR data, there are significant gaps in staff and student knowledge of UAL's stated commitments and actions. Staff and students are aware of many more actions than are reported in the documents, and they are especially aware of 'niche-level' activity.

Awareness and clarity around UAL's commitments and actions would benefit from (a) consistent terminology across the relevant internal and external statements (b) a cross-referencing system to trace commitments, actions and progress across multiple documents located across diverse online locations/platforms, (c) alignment of commitments across documents, (d) articulated timelines and terms for evaluating progress.

UAL is doing a variety of different types of relevant things, and a typology such as ours (e.g. "commitment," "action," "idea") would aid clear and consistent communication.

> *Staff and students are aware of many more actions than are reported in the documents...*

Regenerative trajectories and milestones

'Fossil fuels phase-out' - relevant pathways
'Fossil fuels phase-out', considered as a future trajectory, includes 12 of the identified milestones. These range from ecology- to regime-level with no foreseen necessity for niche-level activity. Whilst UAL has articulated ambitions relating to net zero, there is a need for HE-wide verifiable routes to the phasing out of fossil fuels and infrastructural change requiring ecology and particularly landscape level action. Changes in the regime and mentalité can motivate a shift to taking leadership in this area.

In relation to the milestones, PAR and our analysis reveal pathways that UAL can influence and apply to achieve milestones:

Ecology and Landscape level:
■ Develop approaches and methodologies to implement policy and plans

■ Degasify UAL's estate, considering specific processes currently needing gas

■ Publish evidence of UAL fossil fuels divestment.

Mentalite and Regime level:
■ Develop climate data literacy programmes.

■ Capacity training for staff, skills on data use to support UAL's decarbonisation

■ Training with specific reductions in mind

■ Develop calculation accounts for unknowns (e.g. digital, financial investments)

- Align UAL's strategies and identify synergies and trade-offs
- Create synergies and trade-offs matrix for 'grading' of proposals
- Develop methodology for mitigation plans within funded professional learning/ development project

'Biodiveristy positive' - relevant pathways

'Biodiversity positive' emerged as a highly-populated future trajectory. There are 13 identified relevant milestones, which span from ecology- to niche-level and include a multitude of proposed pathways. In contrast to more established UAL work on carbon reduction (and wider 'fossil fuels phase-out'), this trajectory is more nascent, though UAL document analysis reveals relevant commitments. Work towards this trajectory is challenging, given the complex systems adaptation needed (including measures and accountability across the sector and state), with infrastructural change requiring ecology and particularly landscape-level commitment, expertise and strategy. Regime, mentalite and niche-level pathways can act as new knowledge creators, motivators for taking a bold, sector leadership role and areas for application, requiring relational impact considerations in this perceived trajectory.

In relation to the milestones, PAR and our analysis reveal pathways that UAL can influence and apply to achieve milestones:

Cross- levels:
- UAL builds approaches to ensure that biodiversity features in RMA practices, KPIs, evaluation
- UAL promotes compassion for other species sharing the campus
- Biodiversity is recognised as part of the learning and working environment
- Amplify biodiversity awareness within curricula and projects
- UAL acts on recommendations from the biodiversity impact scoping report (2023)
- Away day for EB to help the board understand what is a regenerative UAL.
- Biodiversity goals included in PRA as part of social purpose goals
- UAL partners with other universities conducting biodiversity research and teaching to help boost awareness and knowledge exchange
- Deans support development of knowledge exchange projects with environmental partners who monitor and advocate for biodiversity
- UAL sets science-aligned targets
- UAL implements climate and biodiversity risk register
- UAL employs more ecologists within the university to teach and train staff
- Curriculum reform ensures students have better understanding and awareness of biodiversity

- UAL provides funding for biodiversity resources (e.g. journals)

- Incorporate land ethics into teaching on material culture and material choices

- UAL learns from external organisations and international students regarding local/global knowledges

- Build on curricula best practice

- Time in Nature is integrated in curricula activities

- UAL implements climate and biodiversity risk register

- UAL funds PhDs on biodiversity regeneration via creative practices

- UAL foregrounds stories about cross-college work in biodiversity

- UAL stops using the term 'climate' as an umbrella term to open conversation to nature and biodiversity

The diversity of cultures, knowledges and experiences of UAL staff and students offers insider knowledge that is distinctive...

Reparation and repair' - relevant pathways

A trajectory of 'Reparation and repair' includes 7 identified milestones. These span ecology to regime-level with a clear emphasis on regime-level in the present, and there are clusters of pathways towards these milestones that are perceived to be actionable within UAL and its networks. In contrast to 'Fossil fuels phase-out', and 'Biodiversity positive', there are fewer unknowns, and the trajectory builds solidly on actions to date, whilst underpinned by mentalite (ethos) and regime (operational practice) change. The diversity of cultures, knowledges and experiences of UAL staff and students offers insider knowledge that is distinctive, whilst the external landscape makes this trajectory challenging in relation to UAL's sector and societal-level pressures.

Key pathways are often cross-cutting and intersect with other trajectories, with a focus on accessibility and partnerships across the MLP offering practical ways to directly achieve and influence milestones:

- Climate education and carbon calculation are easily accessible for everyone, allowing people to make decisions based on proportionality

- More support on carbon calculation tools and development that can be accessed by a wider audience

- UAL understands regenerative as repair, including historical responsibility.

- Time in Nature resources made available

- Classes and classrooms are based more on ecological development and repair that allows the revival of diversity

- More scholarships for low-income countries and communities

■ Commissioning research into links with transatlantic slavery

■ UAL offers free to access continuing education (e.g., summer school) to local communities

■ The university recognises geographic specificity of Scope 3 emissions for its functioning and takes responsibility in off-setting it

■ UAL sees reparation for historical exploitation as integral to climate justice

■ Commitment to ongoing engagement with local schools in deprived areas

■ Compulsory, in-person anti-racial training for staff

■ University as a community breaks socially constructed inequity

■ Compassionate assessment practices are implemented

■ Infrastructure for local business to donate materials to students (e.g. fabric, yarns, etc.)

■ UAL understands 'life support' as a process of reciprocity and interdependence

■ Overcoming senior resistance to feedback, decisions and learning

■ Funding methodologies and tools (e.g. climate movies, games projects) to educate students how to lessen eco-anxiety and overwhelm

'7th generation governance' - relevant pathways
A trajectory towards '7th generation governance' emerged with 9 milestones identified, which span from ecology to regime level, with concentrations in the landscape, mentalite and regime-level. Pathways toward the milestones depend upon mentalité (ethos) and landscape traction as well as regime (operational and practice) commitment. With UAL already moving towards longer-term planning (e.g. a ten-year strategy in place and three-year accountability cycles), UAL is well-placed to explore the chronology of this deeper commitment to future generations. Motivations include student lifetime wellbeing and the inter- and intra-generational aspects of the university's internal and external communities and networks. The external landscape does make this trajectory challenging in relation to UAL's sector and societal-level pressures.

Key pathways are often cross-cutting and complement or apply ambitions of the other trajectories, with a focus on strategy and application to milestones across the MLP through top-down, middle-out and bottom-up approaches:

■ UAL embeds climate and ecology in all practices through the 7th generation approach

■ UAL contracts Lawyers for Nature

■ Courses consider a longitudinal understanding of graduate trajectories beyond UAL graduate destinations

■ UAL is seen as a sanctuary and safe space to share plural understanding and practices

■ UAL recognises art beyond its economic value

- UAL staff development team invests in data literacy as part of staff training

- UAL engages in a critical discourse which promotes a nuanced understanding of information sources to uncover hidden narratives

- UAL works in the open by making all data sets public

- Student projects work with UAL data to address the institution's challenges.

- UAL silos are broken enabling synergistic bottom-up and top-down relationships fostering collaborative practices across all members of staff

- UAL budgets are based on long-term over short term delivery cycle

- Colleges and courses partner with institutions in the Global South who are directly impacted by climate change (e.g. spatial practices working with Amazonian rainforest)

- UAL extends their participatory democracy to listen to local citizens (councils, communities, schools)

- UAL has a shared understanding of community organising and campaigning

- Senior leaders protect the time for all staff to participate in governance

- UAL accountability chains are clearly communicated in their governance model

- UAL recognises representation as advocacy

- UAL engages in a critical discourse which promotes a nuanced understanding of information sources to uncover hidden narratives

- UAL puts in place infrastructure for listening and collaborating with union representatives

- Academic development engages in participatory action research

- Colleges work closely with Citizens UK across research, teaching and senior management

- UAL has a shared understanding of community organising and campaigning

- Senior leaders protect the time for all staff to participate in governance

- UAL promotes creativity within policy and advocacy spaces

- UAL accountability chains are clearly communicated in their governance model

- Courses address colonial history of the arts industry

UAL is well-placed to explore the chronology of this deeper commitment to future generations

POSSIBLE FUTURE WORK

A priority for future work is development of clear and actionable recommendations from the findings and insights of this pilot research. From our multi-level systems and transitions perspective, recommendations would sit at multiple levels within and beyond UAL and span from 'now' to 'near-' and 'far-future'. Some actions will be in the direct control of units or individuals in UAL, and some will be things that those at/in UAL can influence – thus, such recommendations should be developed in collaboration.

Further, our systems approach seeks alignments of commitments, plans and actions at and across multiple levels and in terms of pathways and trajectories over time, e.g. a more strategic and 'joined-up' approach. In terms of co-development of recommendations, specific knowledge, perspective and leverage is key. Thus, we see co-development of recommendations with UAL's Social Purpose Lab as the best way to realise strategic yet actionable recommendations.

Strategic alignment within and beyond UAL

A clearer and evidence-based understanding of UAL's position in the field would result from integrating (a) a more substantial analysis of UAL documents with (b) that of further UK HE-specific 'grey literature' (public documents and webpages) and academic research.

Related to UAL's position an HEIs in UK HE and beyond, further analysis could be done in terms of related climate, sustainability and justice benchmarks (including risks and role models). This could also help to elucidate the specific demands and drivers within HE, UK HE, UK small and specialised HEIs, etc., and thus support the articulation of UAL's profile (e.g. social purpose strategy in which environmental regeneration is key) and, potentially, accelerating UAL's leadership role.

There are a number of relevant UAL documents beyond the scope of this pilot, and a larger document selection and further content analysis would more clearly establish the coverage and gaps along with (mis-)alignments among commitments, actions and ideas in university policy documents and plans.

Further interrogation is needed of alignments between climate commitments, measurable emissions and the critical mass of actions and ideas identified both in UAL documents and PAR data. Additionally, analysis of (mis-)alignments is needed in relation to other key social purpose and more general university priorities. UAL needs a process to decide and act upon a plan to identify what we can/should let go of in order to make room for highest and new priorities.

Analysis in terms of Scope 1/2/3 contributions, furthermore, will reveal whether and where critical mass of effort/energy is aligned most strategically to reduce emissions. For example, international student travel is demonstrably one of biggest sources of scope 3 emissions, however across our UAL document analysis, there are few statements related to international studies (a large contributor to scope 3), while there was a critical mass of actions and ideas focused on local, regional and national travel.

Regarding UAL's 'commitments,' 'actions' and 'ideas', routinised data capture and analysis (e.g. a 'living lab' approach) would enable an ongoing and updated complex systems view of UAL, thus supporting a more 'live' strategic positioning and reporting.

Identifying alignments between commitments, actions and ideas in UAL documents and in PAR 'Ecosystem of Positive Action' could be advantageous in terms of built in community 'buy-in' already from the start.

Comparing commitments, actions and ideas in UAL documents and in PAR 'Perceptions of extractive action' could surface insights about whether misalignments are either misperceptions (e.g. something to be addressed through better communication) or whether there are actually gaps in reported/perceived actions.

..routinised data capture and analysis (e.g. a 'living lab' approach) would enable an ongoing and updated complex systems view...

Further usability of data, analytic techniques and tools

In addition to this published report, unit-specific reports were produced and disseminated to those units (teams or departments) participating in this pilot. These 'mirror' back to units – through analytic perspectives and designed tools – perceptions and practices relevant to climate action and justice. Revisiting tools key tools would support units to progress further – e.g. 'Dimensions of Practice' tool to identify further or deeper changes within and through unit work, 'Agency & Power' tool to identify where they can influence others to act as well as directly act, 'MLP-Action Ecosystem' tool to track and add actions and ideas, and 'X-curve Transition Progress' to track progress of actions and ideas.

Several datasets key to findings reported here could be made available for others to use. Specifically, our analysis produced organised datasets (tables and/or spreadsheets) concerning 'perceptions of extractive action' and 'content analysis of selected UAL documents' as well as extensive databases about the 'ecosystem of positive actions' and 'milestones and pathways'. The data has already been anonymised (as per our ethics protocol). Making these more widely available and/or public would require work to clean, organise and format the datasets/databases for publication in a research archive (such as UAL's Figshare). While beyond the scope of this pilot, publishing and opening these would be consistent with UAL's (and UKRI's) open data and open access ethos.

The finding of multiple 'lumpy categories' (from PAR#3 analysis), later fine-tuned as categories for PAR#4 guidance, could be triangulated systematically with characteristics of HE/HEIs derived from academic literature review to produce a set of MLP-relevant analytic categories for HE-specific transition contexts.

The novel and tested 'Dimensions of Practice' tool has strong potential for future application(s) in diagnosing team/department work practices in terms of climate action and justice. The main organizing logic of the tool is known within 'design for transitions' (e.g. three categories from Social Practice Theory), however our set of dimensions for further specifying these categories is particular to climate action and justice (notably integrating across environmentally-centred frameworks e.g. ISO 14001, LEAF, DEAL, etc.; those centred on justice e.g. some SDGs and Environmental Justice Principles, and; ethical business e.g. BCorp). For our PAR purposes, the dimensions proved more effective than others (such as PESTLE) in rendering general ideas more concrete and practicable for participants.

Further analysis from a systems perspective

This research revealed many previously unrecorded actions (much less those aggregated and analysed as an 'ecosystem of postive action'), including a systematic mapping of those at the micro- or niche level. Findings reveal promising niche-regime potentials, e.g. cross-cutting actions. A further 'niche-regime' analysis could reveal niche activities that can potentially transform or be nurtured at regime level.

Identified current 'actions' and 'ideas' could be mapped to the regenerative trajectories, thus revealing strategic alignments towards regeneration that are already rooted and have momentum within UAL. An additional phase of interpretive analysis would roughly involve: (a) careful and comprehensive identification of relevant actions/ideas in our 'Action Ecosystem Database,' (b) labeling with tags to become visible within our 'Transitions Pathways Database," and (c) locating these in relation to one or more relevant pathways, milestones and trajectories. In addition to strategic alignment, this could address the "action-perception" gap by showing where participant perceptions and experiences already prefigure a 'regenerative future' UAL (e.g. validation of existing actions/ideas in relation to more far-reaching and systemic trajectories).

Commitments, actions, and ideas resulting from UAL document analysis could further be integrated along the lines of (a), (b) and (c) above. This would allow compare/contrast between actual and perceived ideas and actions from multiple standpoints (e.g. high-level UAL statements and community perceptions) within a MLP and future orientation. Alignments between high-level commitments and niche-level actions/ideas could suggest specific leverage points that have potential to cross-cut the system and to amplify action as well as to address the "action-perception" gap.

Alignments between high-level commitments and niche-level actions/ ideas could suggest specific leverage points that have potential to cross-cut the system...

Barriers and enablers to milestones and pathways were identified (PAR#4 expert inputs and our analysis), however it hasn't been possible to analyse these within the pilot scope. Further analysis would support implementation plans.

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