Design Ecosystems Fellowship Report 2022
A Co-Creative Climate: Participatory design's emerging role for Glasgow's sustainable development

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FUTURE OBSERVATORY

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Overview

This Design Ecosystem Fellowship, awarded £19,600 and delivered between July 2022 and Feb 2023, focused on mapping the emerging role of participatory design in Glasgow's sustainable development. Glasgow hosted COP26 in November 2021, which stimulated support for net zero and nature-based enterprise (NBE) initiatives in the city's local enterprise ecosystem across private, public and third sector projects and collaborations. The enquiry focus for such an ecosystem mapping was to capture not just the role of participatory design work, but how value was created, developed and distributed throughout such networks in relation to sustainable development targets and outcomes.

Research objectives

The main objectives of the research were:

- To identify key design-led projects either directly or indirectly linked to COP26
- To capture them as mapped ecosystems using a design-based relational mapping method based on the author's Creative Growth Model
- To analyse and synthesise these individual mapped projects as a collective ecosystem in Glasgow's sustainable development
- To disseminate these insights and co-design strategic sustainable development proposals inclusive of the identified co-creation values
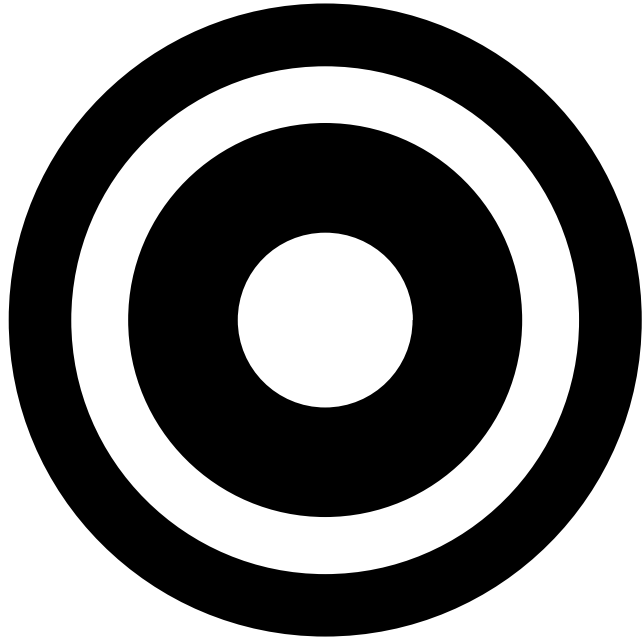
Research activity
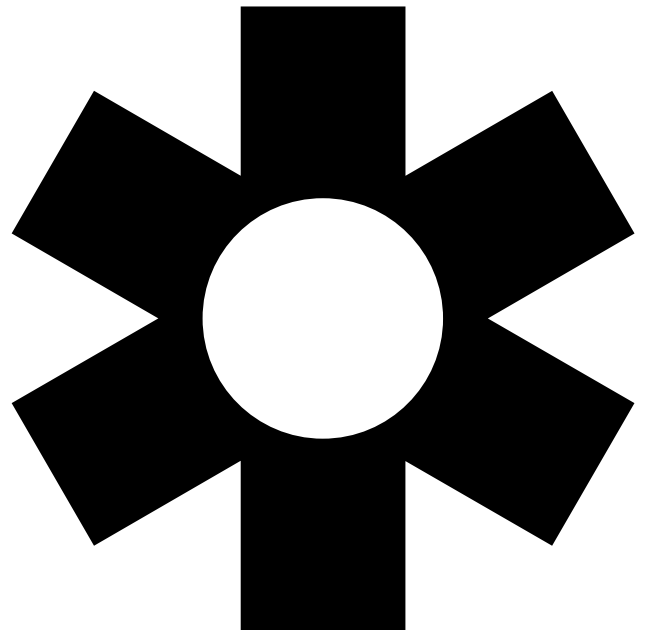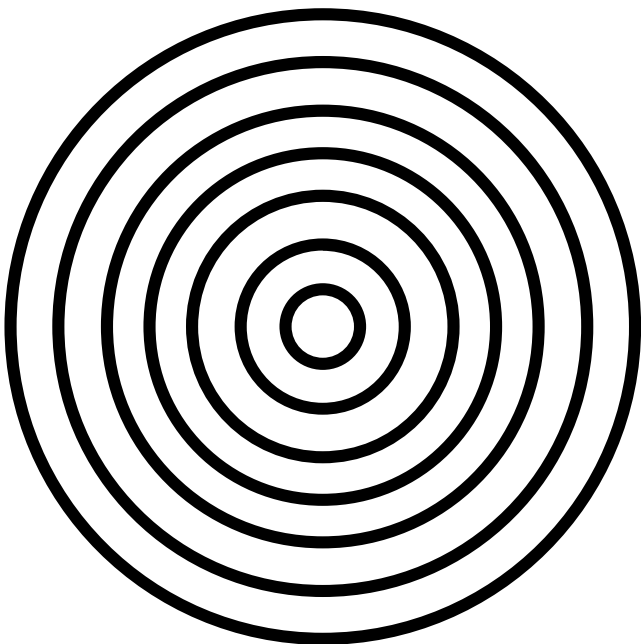
An extensive scoping process was undertaken to identify some of the key design projects and agencies involved in collaborations and initiatives that are advancing Glasgow's sustainable development. COP26 had a major influence in focusing Glasgow's efforts on achieving key sustainable development goals, such as reaching net zero by 2030, and so projects and design agencies were selected for the research based on their direct or indirect links to opportunities enabled by the city hosting this global event. This scoping stage included identifying the key stakeholders and strategies framing Glasgow's wider ecosystem for sustainable development. This process sought to understand the existing relationships and understanding of design in achieving their objectives, which informed how best to position the insights and evidence to emerge from this research.

The key methodology for this research aimed to establish *developmental evaluation*[1] processes using design-based relational mapping methods, which adapted the author's Creative Growth Model[2] and Kate Raworth's Doughnut Economics model[3] to document, evaluate and connect Glasgow's sustainable development ecosystem. The Creative Growth Model applies a "practice of cultural ecology"[4,5] by framing relational forms of growth – network growth, knowledge growth, value growth and market growth – through creative work. This process used surveys, reviewed documentation, and performed Miro-mediated relational mapping interviews to capture the relevant progress and barriers of launched NBEs and selected participatory design projects. The research mapped the relational networks of eleven participatory design projects in this way. The maps were then co-analysed to produce a rich ecosystem map and identify emerging values within the sustainable development ecosystem. This is informing the co-production of strategic proposals inclusive of NBEs and participatory design and their role in Glasgow's sustainable development.

Originally, the plan was to deliver themed co-analysis workshops, or roundtables, to support the validation of findings and the co-development of strategic projects and actions aligned with the development proposals. However, the short timeframe and limited availability of participants operating intensely busy micro or small enterprises meant such a process was not feasible in the latter stages of the research. As such, a website was commissioned for presenting the results which would be used to continue the dissemination and co-development of the proposals asynchronously, as part of ongoing ecosystem development with key stakeholders and the relationships developed through the project. This is expected to continue to inform new research proposals or project partnerships, alongside enhancing opportunities for citizen and interdisciplinary expert engagement over the next year and beyond.

Proposed design ecosystem
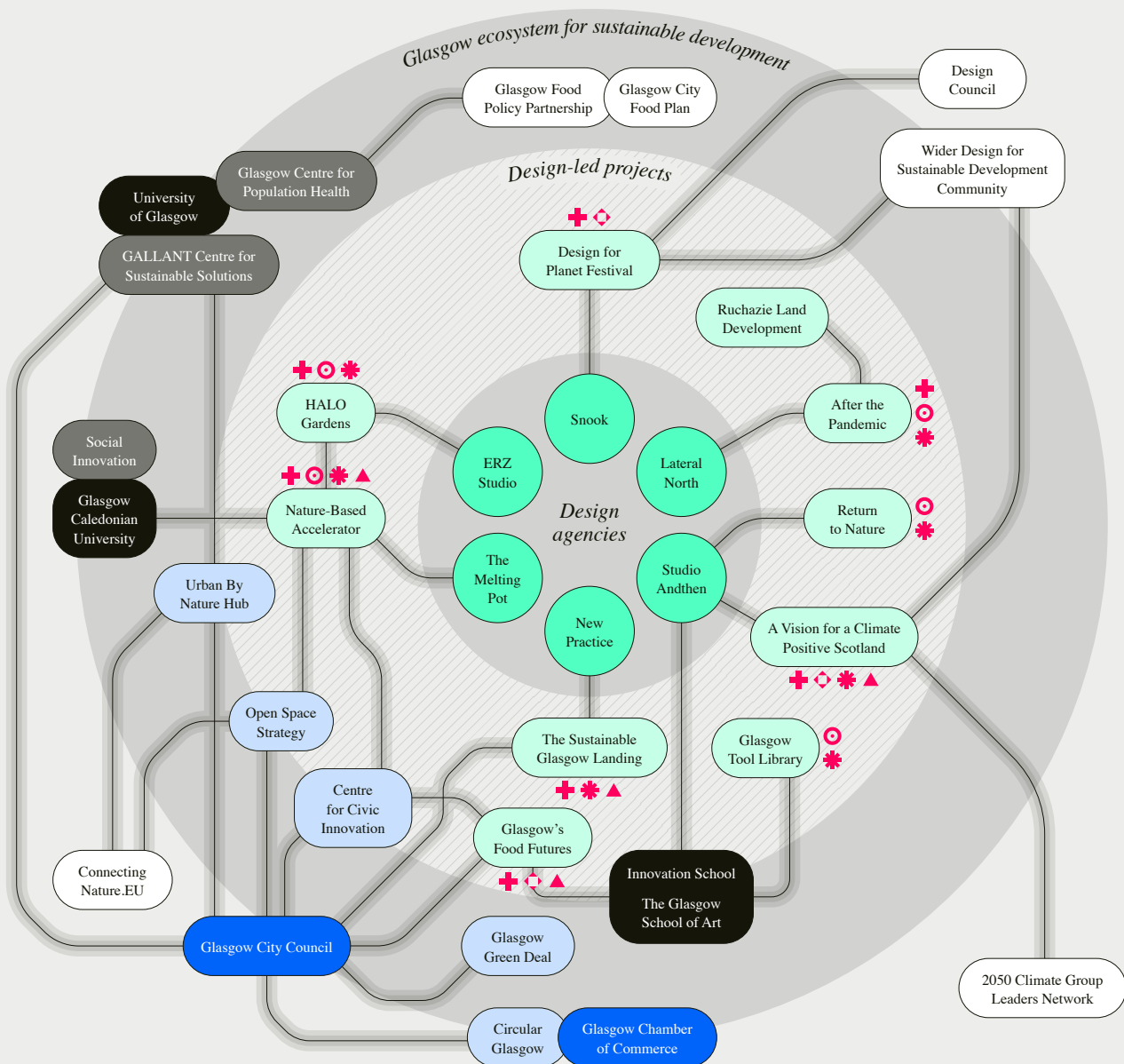# A Co-Creative Climate
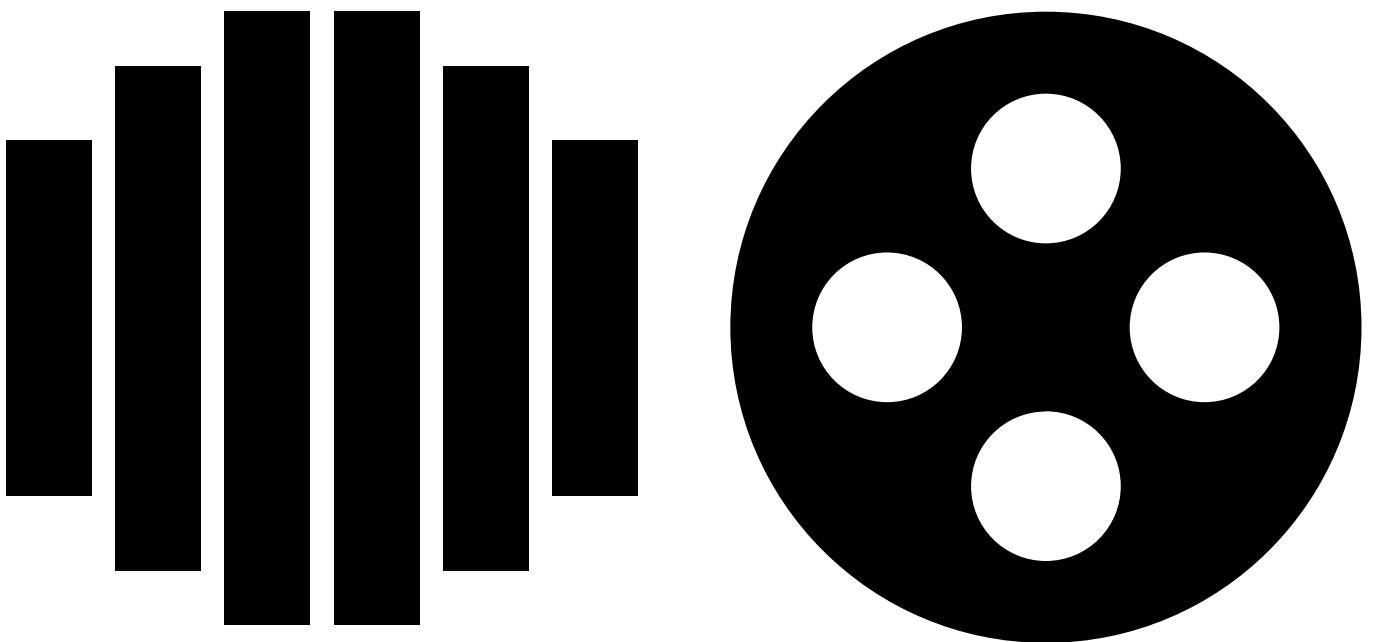
A Co-Creative Climate

Participatory design's emerging role for Glasgow's sustainable development.

Legend

- ✚ Design-facilitated communities of practice for sustainable development
- ◉ Design-led entrepreneurship for sustainable development
- ◈ Design-informed leadership for sustainable development
- ✳ Need for knowledge exchange in design for sustainable development
- ▲ Need for co-designing transitions for sustainable development

Beyond Glasgow

Glasgow ecosystem for sustainable development

Design-led projects

Design agencies

- Glasgow Food Policy Partnership
- Glasgow City Food Plan
- Design Council
- Wider Design for Sustainable Development Community
- Glasgow Centre for Population Health
- University of Glasgow
- GALLANT Centre for Sustainable Solutions
- Design for Planet Festival ✚ ◈
- Ruchazie Land Development
- HALO Gardens ✚ ◉ ✳
- Snook
- After the Pandemic ✚ ◉ ✳
- ERZ Studio
- Lateral North
- Nature-Based Accelerator ✚ ◉ ✳ ▲
- Social Innovation
- Glasgow Caledonian University
- Return to Nature ◉ ✳
- Urban By Nature Hub
- The Melting Pot
- Studio Andthen
- New Practice
- A Vision for a Climate Positive Scotland ✚ ◈ ✳ ▲
- Open Space Strategy
- The Sustainable Glasgow Landing
- Glasgow Tool Library ◉ ✳
- Centre for Civic Innovation
- Glasgow's Food Futures ✚ ✳ ▲
- Innovation School / The Glasgow School of Art
- Connecting Nature.EU
- Glasgow City Council ✚ ◈ ▲
- Glasgow Green Deal
- 2050 Climate Group Leaders Network
- Circular Glasgow
- Glasgow Chamber of Commerce

Source: The Role of Design in Glasgow's Sustainable Development, Jan 2023, Dr Michael Pierre Johnson, AHRC Design Ecosystem Future Observatory Fellow. This publication is intended for general information purposes. The author does not accept any liability to any person for the information (or the use of the information) which is provided in this publication or referred to in the report.

The primary actors are the design agencies engaged in participatory design as part of projects contributing towards sustainable development in Glasgow. The secondary stakeholder groups are those organisations or departments who have collaborated in these design projects across higher education institutes, Glasgow City Council, leadership networks and external leadership organisations and funders. The third and final group were emerging beneficiaries or audiences for this work who were engaging with outcomes or insights from these projects, which included non-design related sustainable development research projects and collaborations, as well as wider networks engaging with sustainable development challenges and goals.

The ecosystem highlights three key categories of design-related value creation from the project and two areas in need of further development. These are presented in the legend as magenta icons, distributed across the identified projects.The projects are then positioned between the design agencies and wider network for sustainable development as work that is, or could be, bridging the gap and enhancing design's role and value in achieving Glasgow's sustainable development goals:

i) Design-facilitated communities of practice highlights where diverse actors (across communities, citizens, professionals, experts and indeed design disciplines) were brought together to collaborate in projects or discourse through design-led processes and methods
ii) Design-led entrepreneurship highlights those enterprises that were set up and led by designers to respond directly to key sustainable development challenges
iii) Design-informed leadership highlights projects where design actively facilitated discourse and co-development of refined language, visions and frameworks to support leadership for key decision-making stakeholders
iv) Need for knowledge exchange in design identifies where participatory design efforts hit limitations due to a lack of access to the constituent experts and governance structures in the city's sustainable development ecosystem
v) Need for co-designing green transitions identifies where sectoral and regional leaders and decision makers have explicitly identified a need to better engage and collaborate with citizens, experts, HEIs and a range of local enterprise agencies across private and third sector in their strategies and activities for green-positive sustainable development

The mapped ecosystem (with web-presented case studies) enables rich insights of case examples within a diverse network of interactions with design processes, competencies and outcomes as part of Glasgow's ecosystem of nature-based enterprise and net-zero projects. The identified projects highlight where design was responding to identified unmet needs through collaboratively designed products, processes, enterprises and frameworks. The key emerging role for participatory forms of design was in how they made sustainable and regenerative concepts, such as enterprises, products, services and circular processes, tangible, accessible and valuable to wider stakeholders. For example, HALO gardens provided a participatory process for garden development skills, biodiversity cultivation and mixed usage for the wellbeing of hospital staff and volunteers. This was based around the core value proposition of providing higher quality outdoor spaces for visitors and staff during the pandemic.

The key barriers were in the systemic complexities that can easily overwhelm at the micro or small

enterprise level. Return to Nature developed a service proposition for people to return their remains to the soil as part of efforts to rewild woodland ecosystems. Access to land challenges emerged due to land ownership within Scotland proving highly restrictive. Meanwhile, investment sought from venture capital revealed deep conflicts around the valuation of regenerative solutions, found to promote high growth as a condition of investment.

For circular and nature-based solutions to become established features of local and regional enterprise ecosystems, this requires expansion of strategic policy, investment and cross-sector support systems (such as enterprise acceleration or incubator programmes) that value and seek to share in learning about the opportunities and challenges for such an ecosystem. After the Pandemic ran summer schools for developing sustainable solutions, while Design for Planet brought leading designers across the UK together to better position themselves and understand their roles. Going forward, such activities must be strategically positioned as part of existing projects and programmes, coordinating faster support and knowledge exchange where it is needed.

The participatory design projects and processes captured in this DEF highlight the existing value being offered. Targeting a systemic coordination of circular and nature-based solution development, as outlined above, would include investment in embedding and developing design competencies across such an ecosystem of exchange. The structure, inclusivity, creativity and tangibility that design skills and processes offer are here positioned as highly valuable to accelerating the collective sustainable development efforts identified. This includes developing easier access to national and local development strategies through co-designed roadmaps and strategic frameworks (such as in the Glasgow's Food Futures collaboration), which can offer shared perspective, language and ownership of future development. However, this also, crucially, includes investment in wider access (across local communities and expert communities) to the design and development of circular and nature-based solutions to help evidence the wider forms of value reducing ecological impacts and increasing access to social foundations, as outlined by doughnut economics.[3]

Target outcomes and priority action areas

For Glasgow to achieve "equitable, net zero carbon, climate-resilient living by 2030", as outlined in the Glasgow Green Deal, requires pan-city collaboration, which encounters challenges in cultivating multiple actors, communities, industries and public sector projects in complex ways.

The long-term aim for this research is to develop a leading design ecosystem within this rich Glasgow-based ecosystem for sustainable development, enabling connections with disparate communities, expertise and human capital. The research also aims to further establish developmental evaluation processes that can enhance collaboration, capacity and resilience in Glasgow's sustainable development projects, such as H2020 Connecting Nature, Glasgow Food Policy Partnership, Circular Glasgow and the Centre for Sustainable Solutions' GALLANT research programme.

Outcomes would take the form of circular and nature-based ecosystems, validated through a series of strategic pilots (such as through food or land use), to identify best practices, evidence and co-design roadmaps that can embed environmental sustainability at strategic, socio-technical and product/service innovation levels.

Suggested actions

Develop Shared Strategic Narratives
Collaboratively identify strategic circular and nature-based ecosystems that recognise and connect existing efforts, while acknowledging the systemic challenges shared across such an ecosystem (e.g. how making access to land easier can enable a range of circular and nature-based growing initiatives). Such a process would seek to build shared frameworks and a shared language for identifying positive outcomes and impacts that maximise alignment and cooperation.

Platforms for Knowledge Assembly
Developing circular and nature-based solutions requires continuous research, testing and development, often in response to unanticipated complexities with bespoke needs. In these moments of developmental need, current systems of support and the required expert knowledge can be challenging to access. Accelerators, incubators and KE programmes targeting identified strategic ecosystems need to be a cornerstone of the development of sustainable solutions.

(Co) Design Investment
Co-design methodologies and competencies have been identified in this research as offering tangibility and viability for circular and nature-based solutions. Design agencies and designers are an important part of this capacity in Glasgow, but it is also in the development of design competencies with enterprises, citizens, development projects and research collaborations. Targeted ecosystem development programmes can offer design skills, alongside core competencies in research and management.

Citizen Investment through Open Innovation
All citizens of a region share a stake in how sustainable development is enacted. It is not enough to identify wider forms of environmental or social value; these need to become implicit forms of cultural value to be sustainable. An open innovation ecosystem should develop a strong, public-facing identity and green education programme for communities to discover their role in positive climate action.

Brokering New Value Systems
Perhaps the biggest challenge of all is learning how to rebalance traditional economic models driven by financial value to better incorporate the desired social-environmental impacts. Cooperative models have been sought to address this for some concepts, but they still struggle to compete and attract investment without a high-profit, high-growth strategy. Knowledge and evidence of value towards sustainable development goals should be a currency that is better recognised and rewarded. While financial rewards and protections can be levered, new forms of value system linked to behaviour and systems change need to be pursued as a collective, long-term research goal.

Conclusions
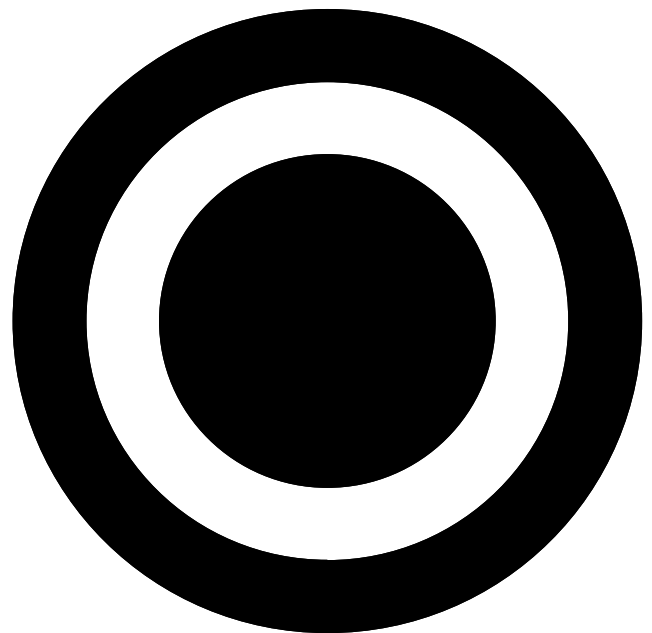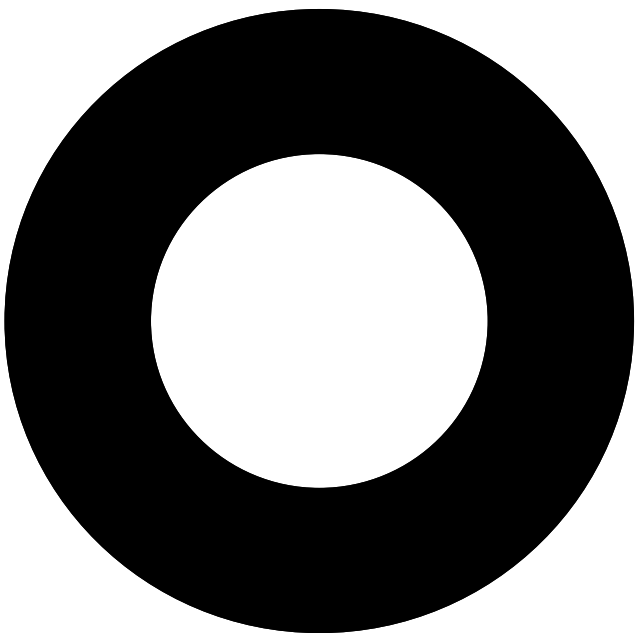
Conclusions and achievements

The research was successful in identifying design-led projects either directly or indirectly linked to COP26, and captured them as mapped ecosystems using a design-based relational mapping method based on the author's Creative Growth Model. This revealed a rich variety of benefits to sustainable development efforts through design, and barriers to greater impact through analysis and synthesis as a collective ecosystem in Glasgow's sustainable development.

The significance of this research is in its design-led approach to developmental evaluation, using mapping and modelling methods to make development more explicit relationally at an ecosystem level. This develops on the concept of a 'practice of cultural ecology'[4,5] and understanding value as emergent properties co-produced by network agents rather than a linear value chain.[2,6,7] This also recognises the challenge for constituent actors and enterprises being 'able to identify and understand their position and impact' within networks of creative production.[4]

Principal Investigator's personal evaluation

The research underwent challenges in early stages, requiring an extensive scoping stage. The identification and selection of design-based projects for sustainable development required careful categorisation of which initiatives could collectively represent a cohesive ecosystem (for example, design engineering for circular solutions felt distinct from co-design processes in local development). This led to a focus on participatory design projects, as design's capacity to connect disparate stakeholders emerged as the important story to tell, alongside Glasgow's range of sustainable development initiatives.

The dissemination of these insights and co-design of strategic sustainable development proposals is still ongoing, due to the short timeframe and limited availability across the participant group. As micro and small enterprises, multiple points of engagement with the research proved difficult to coordinate and so roundtable events that were originally intended as part of the original research design were not able to be delivered. Nonetheless, the insights from this research are being presented on a public-facing website to support the dissemination and co-design of strategic development proposals beyond the end of the research timeline.

Other outputs based on the research

The research insights will be made available through a website in May 2023, sharing the mapped case studies and process for co-designing strategic sustainable development proposals.

There will be a 'library of development tools' based on the frameworks and mapping methods applied for developmental evaluation, made available either through the website or existing and pre-identified sustainable development resources.

A journal paper will be produced combining the author's Design Exchange Partnership on The Value of Nature-Based Enterprise and this Design Ecosystem Fellowship research, positioning design-led development evaluation as a process to help connect parallel efforts in sustainable development projects.

Future research plans

The long term aims of this research are retained by the author and the multiple stakeholders engaged through the research, and multiple collaborative design research projects are intended to be developed from this work.
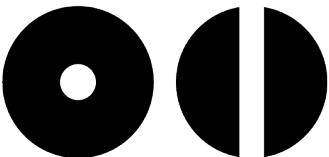
A Green Transitions Ecosystem bid for circular and nature-based enterprise development will be explored for Glasgow, building on this mapped ecosystem.

New partnerships and research collaborations will be developed between identified stakeholders, bringing design process and competencies into existing and new green transition efforts in the city.

The co-design of strategic sustainable development proposals, inclusive of design, are anticipated to lead to targeted ecosystems for support development, such as through food with the newly established Scottish Alliance for Food, or trees, alongside Glasgow City Council's Open Space strategy and upcoming Trees and Woodlands Strategy.

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