DEPARTMENT OF PRODUCT DESIGN
PROJECT BRIEF

Project Name/Theme

Regenerative Futures: From Global to Local Development in 2032

Year: BDes Product Design, Year 4 (Final Year)
Duration: 8 weeks in total: Part One (3 weeks) and Part Two (5 weeks)
Academic Lead: Kirsty Ross

Space10, 'Climate Layers', 2021.

Contents

About the Project Brief

The Future Experiences project is an integral component of the final year curriculum of the BDes degree course in Product Design. It is run by the Glasgow School of Art.

The topic of the 2022-2023 academic year project was '**Regenerative Futures: From Global to Local Development in 2032'.**

The Project Brief is developed as rationale, context and a guide to the project. It is made available to the students, staff and expert partners involved in the project.

Research topics are chosen that are real-world relevant and timely. They address issues that people care about but are complex to address. They are challenging and designed to be speculative. They challenge the students to think about preferable futures and the roles designers can proactively play in this.

Regenerative Design is about designing for people and the planet from a socio-ecological perspective. It seeks not merely to do less harm, but rather catalyses a positive force that restores, renews or revitalises products, services and systems to foster resilient and equitable futures for people and the planet.

The Regenerative Futures project asked the BDes Product Design cohort to consider what happens in this landscape ten years from now, where Global Development has evolved to the extent that new forms of regenerative experiences of health, economies and citizenship transform how we interact with each other, with local and global communities, and the world around us.

Working with an expert community of practice from the University of Glasgow's Advanced Research Centre (the project's partner) and a wider expert group of academic and professional stakeholders, the students, faculty, and experts co-researched, explored and designed speculative future worlds and experiences of regenerative global and local communities and systems leading towards equitable health, economies and citizenship in ten year's time.

The exhibition includes the products, services and experiences designed for the people who might live and work within these future contexts, each 'future world' situated within a discrete design domain: Health (Global + Local), Economies (Global + Local) and Citizenship (Global + Local).

Project Introduction

Exploring speculative future worlds & experiences of regenerative communities

In this project you will explore and design speculative future worlds and experiences of regenerative global and local communities and systems leading towards equitable health, economies and citizenship in ten years time.

We are living through a period of time that will likely be viewed as a watershed, a turning point that created lasting change in society. Poverty, a global pandemic, the breakdown of democracy, climate change – the world is facing a convergence of crises. Collectively, we should recognise the possibilities of this moment and seize the opportunity to build towards the *Symbiocene*, an age which holds the potential to re-root our relationships with the systems which surround us.
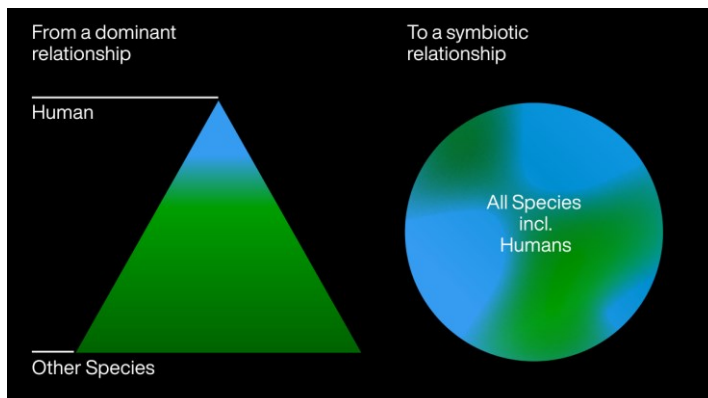
Space10, 'Regenerative by Design', 2021.

Romy Snijders, Symbiotic Futures, 2021.

In navigating the Anthropocene – the notional current geologic era in which human impact on the earth becomes dominant – it is clear that the extractive ways people live and work are shaping not just the trajectory of life on the planet, but the future of the planet itself. The encircling and interconnected nature of the ever-present, always-on social and technological systems we engage with means that we are shaping a society in which every single interaction with the physical and digital world is fair game for exploitation.

1760 – 1987	1987 – 2020	2020+
Extract	**Sustain**	**Regenerate**
Deplete | deforest | degrade	Reduce | Reuse | Re-cycle	Rethink | Restore | Replenish

Royal Society of Arts, 'Regenerative Futures Programme', 2022.

A conscious shift is required from a human-centred perspective to life-centred worldviews that are plural, adaptable *and regenerative* - views that recognise the values of social, technological and living systems co-existing in ways that reciprocal and mutually beneficial in nature. If we want to play a part in the mutual development and evolution of ourselves, our neighbourhoods and workplaces, as well as contribute to equality of life for communities around the world, new forms of regenerative, democratic future experiences need to be designed into existence.

Thinking Global, Acting Local
Global Development is a systems approach to growth and development that aims to manage natural, produced and social capital for the welfare of present and future generations.

Accountability, transparency and mandate are key terms within a more equitable approach to global development, which advocates for pro-poor policies, marginalised communities, fairer international economic relations, and sustainable poverty reduction challenging globalisation and free-market capitalism for a greater sharing of the development agenda.

In 2015, the United Nations established the 2030 Agenda for Sustainable Development, a set of 17 Sustainable Development Goals (SDGs) which are intended to be implemented and achieved by every country from the year 2016 to 2030. The SDGs are an international attempt to draw up strategies for moving towards a more sustainable pattern of development globally, and provide a shared 'blueprint' and call for action by all countries - developed and developing – to work in global partnership. The terms *Global* and *Local* can be used not only geographically, but also conceptually; 'local' can also describe places and peoples marginalised by economic, environmental, social, racial or political factors. A lot of the issues addressed within the SDGs as global challenges are in fact shared across many geographies - in every place, in the poorest of African countries there are people living in extreme wealth and comfort, with capitalist and normative views and practices, and in Glasgow there are people living in multi-generational cycles of poverty and hardship.

Globalisation is the interaction of people, governments, and companies around the world, and whilst this has enabled the circulation of people, goods, services, ideas, languages, information, and commodities to flow across national borders, it is becoming increasingly apparent that countries' dependency on globalised systems is becoming unsustainable. We are currently witnessing the effects of the international conflict and war in Ukraine on global supply and demand, creating ripple effects on food prices and food security as supply chain disruptions prevent producers of grain, and many other commodities, from delivering their products to market, and countries from obtaining foods and other necessities, which highlights the fragile balance and precarity of global systems in times when countries depend on imported goods to meet basic needs.

Conversely, the concept of *Localisation* is about bringing the economy back to a human scale and involves the process of building systems that allow the goods and services a country needs to be produced locally and regionally, which in turn strengthens community cohesion and leads to greater human health and material well-being, all while reducing pollution and degradation of the natural world. Localisation is not about ending all trade – surpluses can be exported once local needs are

met, and goods can still be imported that cannot be produced locally, but it allows local, regional, and even national self-reliance to replace dependence on distant, global systems. In fact, localisation requires international cooperation and collaboration to scale back the power of global corporations and address the inequities within global problems like climate change.

We now understand only too well how contingent global and local development is on the health of the Earth's systems.

At its heart, climate change raises a series of human rights issues known collectively as *climate justice,* including an intimate interconnection with the *right to fair sharing and equitable distribution* of the benefits and burdens of climate change and the responsibilities to deal with it.
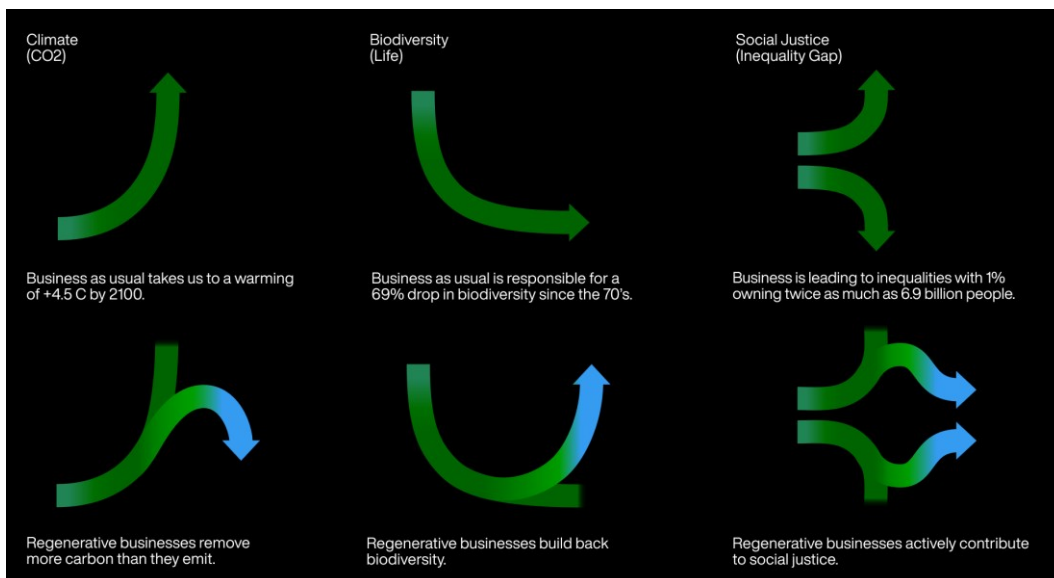
Space10, 'Regenerative by Design', 2021.

There is a clear correlation between those countries facing the most severe climate threats with those needing to make the most progress towards *universal health coverage*. Indeed, unmitigated climate change will severely hinder these countries' ability to achieve their health goals and may well reverse the progress achieved over many decades, adding to the burden of disease. Looking ahead, there is an opportunity to re-address the precarity of present times and foster *global and local systems that collectively contribute* to the global health of people and the planet based on policies which focus on *equity rather than equality*, improved population resilience, and broader climate mitigation.

Over the next ten years, if global development focuses on *equity for all rather than equality for everyone*, might this shift what global 'experts' assume 'development' is towards what the people seeking 'development' on a local level actually need it be? This new dynamic holds the potential to transform the traditional 'expert-recipient' model of development towards reciprocal acts of care within partnerships and communities, and collaboration between researchers, practitioners, citizens, and designers capable of giving form to the future – holding the potential for plural and diverse forms of regeneration to co-exist across the world and deliver the promise of more equitable lives for everyone.

Regenerative Futures: *More Than Sustainable* (Eco)Systems

A regenerative culture or community is grounded in a living systems view of the world, recognising the need to go beyond sustaining our current systems and re-evaluate our relationships with one another and the world we are a part of. A concept that's inherent in nature, regeneration should be the approach for how we interact with the planet – it is a way of living and working that's focused on giving back much more than we take.

Earth Overshoot Day calculates the date when humanity's demand for ecological resources in a given year exceeds what the Earth can regenerate in the year. In 1970 it was 29th December; in 2022 it fell on 28th July. Although it is tempting to think of human beings are the dominant species on earth, many others play important roles too.

We are the only species which systematically takes out more than it puts back, conversely nature, over countless millennia, has evolved circular systems that invigorate the planet at micro to macro levels.

From single-celled organisms to the complex, diverse ecosystems of rainforests and oceans, living organisms take nourishment, use energy and return it in equal measure; there is no waste as eventually everything re-joins the circle – truly regenerative by nature.
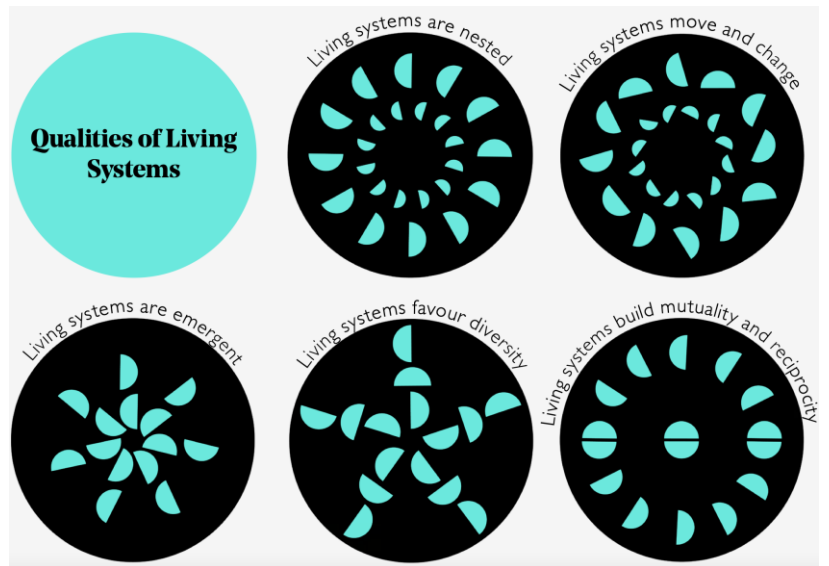
Royal Society of Arts, 'Regenerative Futures: From Sustaining to Thriving Together', 2021.

Whilst sustainability is an important concept in a time of widespread environmental destruction and helped us to envisage practices to sustain our current resources, on its own it does not fix what is broken, or restore what has been extracted – we need to shift from unsustainable 'business as usual' approaches. From a human perspective, rather than thinking of 'doing less harm' *to the environment* as an approach to navigating the Anthropocene, it is becoming necessary for us to consider how we can *participate with the environment* – focusing on the multiple, the plural and the relational - designing *with, and for, collective health* rather than isolated individuals; from neighbourhoods, to societies, to ecological systems, as the basis for designing tomorrow's futures today.

Recent times have highlighted the need to evolve beyond exploitative and unsustainable global systems of production and consumption towards regenerative practices that address expanding, and increasingly culturally nuanced population and environmental needs, to recalibrate and renew how local communities and economies are co-created, interacted with, and evaluated for success.

Indeed, success is increasingly viewed through the shared experiences and interactions of stakeholders, user communities and the environments that surround them. This establishes the conditions for co-creation with citizens to occur, and civic engagement to develop the public's role beyond once passive end-users of services into stakeholders valued for their lived experiences and participation in clinical trials, citizen panels, and contributions towards policy-making,

Superflux, 'Server Pack Frame' part of Resurgent Tools Generated from Waste of the Anthropocene, 2021.

changing what it means to be a citizen and a professional working within the contexts of global and local development.

A *more-than-sustainable perspective* on global and local systems of development allows us to consider how we are ecologically entangled with all communities on the planet, foregrounding the notion that we are all part of a larger ecology rather than masters of nature. Living systems (e.g. a forest) are as complex, networked, and connected as our own social systems (e.g. a local community), and even the technological systems we engage with through connected products and services – all of which have a dynamism and an agenda of their own, separate from the human perspective. Within regenerative ecosystems which create the conditions for the interdependence and evolution of ourselves with other species and the environment, we all might play a part in creating regenerative futures which cultivate systemic health and resilience at local, regional and global levels – without it, we cease to exist.

The Design Brief

Designing Regenerative Futures: Global – Local Perspectives

Regenerative Design is about designing for people and the planet from a socio-ecological perspective. It seeks not merely to do less harm, but rather catalyses a positive force that restores, renews or revitalises products, services and systems to foster resilient and equitable futures for people and the planet.

This project asks you to consider what happens in this landscape ten years from now where Global Development has evolved to the extent that new forms of *regenerative experiences* of health, economies and citizenship transform how we interact with each other, with local and global communities, and the world around us. This brief gives you the opportunity to reflect on the underlying complexities regarding the future systems of health, economies and citizenship, technological acceleration, human agency, and equality of life, to envision a future world context, develop it as an experiential exhibit and create the designed products, services and system experiences for the people and places associated to it. By a applying a *regenerative design approach,* you will be able to recognise the innovation embedded within your design by communicating the *value it creates for the intended recipients* and its *impact on wider communities or ecologies.*

Systems thinking is about living and working with a holistic approach, enabling us to embrace the complexity of the world and its systems, and recognise relationships, interconnections and patterns of change. *Systems-conscious design* recognises that the interactions and dynamics between people, products and places are just as much the 'material' of systems as the 'material things' that are designed. With this approach designers can have a *regenerative impact* on the surrounding system as well as benefit to the people involved, visualising this tacit knowledge and designing interactions and tangible products to mediate those dynamics, without letting go of the value that designed products embody in their own right.

Human-Centred Design has, in the pursuit of seamless user experience, prioritised usability over everything else – including our health, and the well-being of the planet. Thinking about digital products, services and technologies, the addictive relationships between people and their devices accelerating consumption, or the rise of gig economy delivery services during the pandemic, all of these experiences have had unintended consequences for the environment and wider societal impacts.

Contemporary product design is not only an industrial or production-focused occupation; rather, it is becoming an *epistemological practice*, which explores the future, generates new knowledge and formulates hypotheses about how people may live or work in the years to come.

In order to do this effectively, a *Regenerative Design* approach can reveal new human and non-human perspectives, and unlock the complexities of the context *systemically*. From the exploration of multiple societal dimensions such as the social, cultural, and ecological, to considering what the intended and unintended consequences and impacts of a future product might be – thinking about how it might 'live' beyond its inception, and 'co-exist' or 'evolve' through its use and lifecycle within the

Space10, 'Regenerative by Design', 2021.

proposed ecosystem opens up the opportunity to '*design in*' the ability to replenish, restore and regenerate locally and globally.
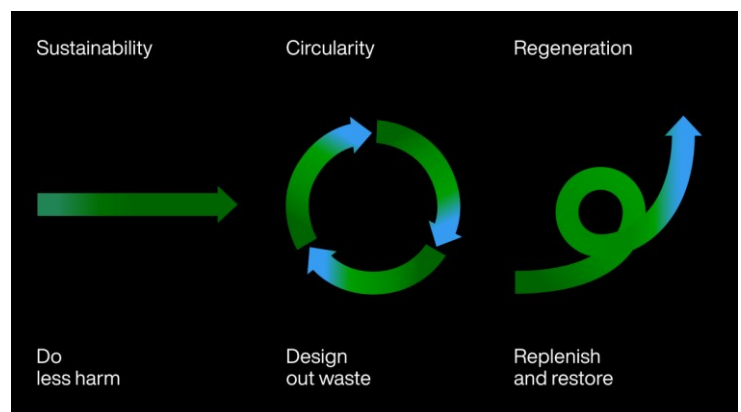
This project is not about learning how to design a more sustainable version of something that already exists, or 'fixing' a singular problem, rather it asks you to look beyond current issues to ten years' time from now – to speculate on what new *regenerative forms of local and global development* might enable and afford in terms of future experiences for people and the planet.

Collaborative Design Innovation

In the first part of the project, you will work collaboratively to engage with the future; creating a Future World exhibit that represents shifts in *one domain* within the wider project brief; *either in* Health, Economies *or* Citizenship. As a small group of four or five students, your research will be paired with an equivalent group – one focusing on *Globally-Centred research* and the other on *Locally-Centred* – as two complementary research groups you will co-explore and peer-critique the two aspects of your assigned domain. *Locally-centred* is associated with a scale from the individual person, their family, friends and colleagues, to the neighbourhood, places and spaces they inhabit - in ten years time 'local' could also relate to multiple place-based interventions that exist across different locations. Whilst *Globally-centred* refers to a person's wider locality and identity within a

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country of residence, and the communities they're a part of, it could also relate to future forms of global citizenship - individuals as members of multiple, diverse, local and non-local networks and connected communities.

These group pairings, repeated across each of the three domains, are intended to afford you, as a cohort, opportunities to identify causal links, commonalities and connections, as well as distinctions, between your focused researches, allowing you to traverse the domains of health, economies and citizenship, sharing knowledge with each other through peer discussions and reviews to develop a broader understanding of how these domains might relate to each other in ten years' time, create a collective understanding, and future blueprint of preferable regenerative experiences across global and local development.
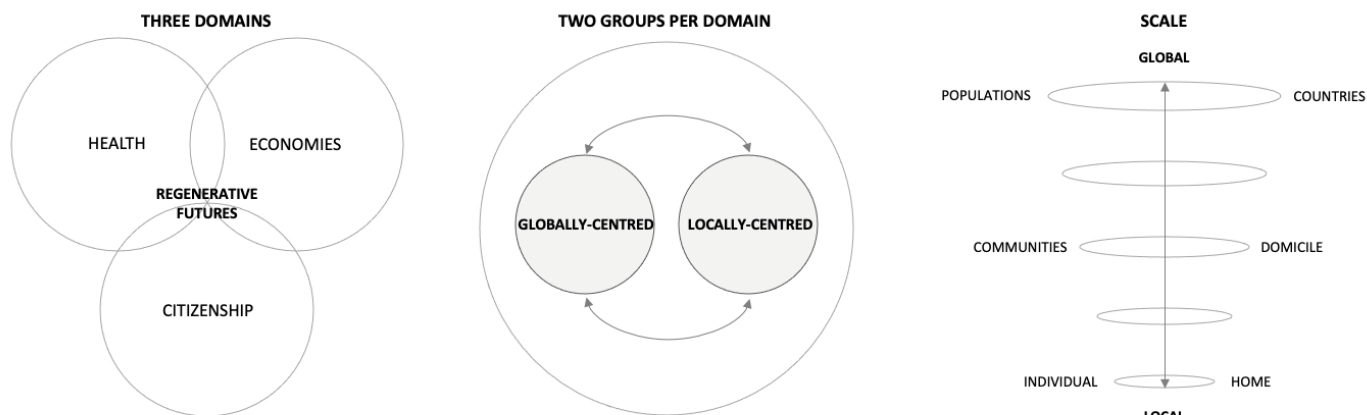
Expert Community of Practice

Your research and design work will be supported by an expert community of practice which encompasses the knowledge and expertise of academics and practitioners working across Global Development and within the domains of health, economies and citizenship. The community of experts are primarily based at the University of Glasgow (UoG), working across the university's new Mazumdar-Shaw Advanced Research Centre. Additionally, you will have access to the Innovation School's design faculty – working with the Product Design staff and from the wider post-graduate and research teams, who will contribute their collective expertise as design academics and researchers working at the intersection between health + economies + citizenship and design-led innovation. The experts from the University of Glasgow, the Innovation School faculty and the Product Design teaching team will contribute to the project launch and continue to work with you throughout the duration of the project, to develop a rich, evidence-based, *multi-perspective community of practice* within the project itself.

In order for the knowledge embedded within your group research to be accessed, understood and engaged with by peers, faculty, experts and the public, each student group will design and curate a Future World exhibit that manifests key insights as touch-points using various methods of making and media to bring the insights and future vision to life. At the end of the first part of the project you will have the opportunity to curate and display your prototype Future World exhibit alongside that of your paired group in the context of a formative review, to allow for peer and staff constructive critique and a review of *your intended design entry-point* for the individual part of the project.

The individual element of the project follows this stage, giving you each, as individual designers, the opportunity to select an aspect of your Future World research to develop as a design direction, from which you will prototype and produce the product(s), service, system – *and related narrative* – to communicate a *highly resolved and refined future experience*. The final outcome of the individual part of the project should demonstrate a proficient understanding and application of the collaborative, evidence-based and speculative design practice introduced in the project.

As your studio practice this semester will be *collaborative in nature*, it will be necessary for you give consideration as to how you approach team-work to ensure you work successfully together, in your groups and as a cohort, and with the experts and project faculty – building on your experiences of studio-based culture and group-work, *to design how to work, learn and interact in person, and in the studio*. Similarly, the project will also challenge you to apply your design repertoire of skills and competencies across both the group research stage, and the individual design stage; encouraging you to research, prototype and design across two- three- and four- dimensions *(visualising and simulating experiences)* and realise your ideas using physical, digital – *even 'phygital'* – multi-media approaches – to communicate your design process, and most importantly, make your designed outcomes *(the Future World exhibit and the designed product, service or system)* accessible and *understandable experientially* - to each other, to the experts and faculty, and to wider audiences.

On completion of this project, you will have demonstrated the skills, methods and competencies used to engage with, design for and envision the future in relation to a complex, thematic context and expert community of practice. With this learning experience comes an approach to *designing for people and the planet*; a contemporary creative practice equipping you with the analytical, strategic, collaborative and creative skills and competencies valued by the design industry and organisations involved in the future of areas such as policy and government, social innovation and healthcare, and in design jobs within fields such as social design, service design, experience design and innovation design.

As an exploration of *regenerative futures + global-local development + design*, the project requires that you embrace a level of mobility and flexibility of approach in *how you design*, and *who you design for, and with*; through the *lenses of global and local* you will gain real experience of the practice involved in regenerative design, and the professional practice involved in interacting and learning from, and with, professionals out with design and experts across disciplines, sectors, and countries – a mindset and competencies which are of great value within the design industry and contemporary design practice.

Arup, 'Abundance: A Day in the Life of a Regenerative Designer', London Design Festival, 2022.

Important Project Information

- Health Domain
- Economy Domain
- Citizenship Domain
- Project Structure and Timing
- Intended Learning Outcomes
- Assessment Criteria
- Formative Reviews & Summative Assessment
- Deliverables for Assessment
- Glossary of Keywords
- Key Reading
- Design References

Health Domain

Health is the ability to adapt and self-manage in the face of social, physical, emotional and environmental challenges.

Health includes the animate and inanimate environment, as well as the physical, mental, and social dimensions of human life. It is not a fixed entity; varying for every individual depending on their circumstances, and reflecting a shift in the perception of health as a static formulation towards a more dynamic, *even regenerative, living system* which surrounds each of us every day and integrates health into the *'operating system'* of our daily lives. It is possible to imagine experiences in the near future where people don't have to think consciously about being healthy, but rather, being healthy is a natural consequence of going about your day.

The biggest effect of climate change is going to be on our health. Yes, sea levels will rise, temperatures will increase, but where we will feel it most in our lives is in our own personal health, our family's health and in the health of our communities. In particular, biodiversity – the diversity within species, between species and of ecosystems – is critically important to human health, economies and livelihoods. But it is declining globally, faster than at any other time in human history. While the exact origin of the virus causing Covid-19 is still unknown, 60% of infectious diseases originate from animals and 70% of emerging infectious diseases originate from wildlife. As human activities encroach upon the natural world, through deforestation and urbanisation, we reduce the size and number of ecosystems. As a result, animals live in closer quarters with one another and with humans, creating ideal conditions for the spread of zoonotic diseases.

Superflux, 'The Vault of Life', 2022.

Center for One Health Research, 'What is One Health?', 2022.

Universal Health Coverage (UHC) means that all individuals and communities receive the health services they need without suffering financial hardship. It includes the full spectrum of essential, quality health services, from health promotion to prevention, treatment, rehabilitation, and palliative care across the life course. Reducing health inequalities is a neglected yet fundamental component of enabling more sustainable, resilient and healthy communities. Supporting community health education, strengthening local healing systems, supporting healthy food cultures, and addressing the needs of marginalised groups can all support community resilience.

Ecosystems, therefore, must be protected and restored – not only for the good of nature but also for the communities that depend on them. As part of achieving UHC, the political, social, economic *and ecological factors* that govern how health or illnesses *move through our communities* must be recognised. As many around the world rise up against systemic racism and discrimination, we must also forge a broad, interconnected agenda for change that fosters health equity, ecological sustainability, and social justice.

As mass vaccination, herd immunity and vaccine passports offers us glimpses of our own post-pandemic futures, we need to apply our learnings from this crisis to other pressing challenges; protecting, preserving and caring for the health of *ourselves and the environment* to enter into new synergies which create the conditions for a future ecology founded on *interdependence and reciprocity* - to support thriving, healthy and caring communities that cultivate our own health futures and the health of the *more-than-human* world, too.

If the ways in which our health is monitored become something we *feel rather than see*, all around us and part of the environment – even invisible to the eye – what might the globally oriented and/or locally situated products, services and systems be for sensing changes in 'healthiness'? How might 'glocal' data experiences manifest as public indicators of health? Could these in turn influence or translate into shared communication tools across professionals and patients, even a 'living language' co-created by multiple communities across the world? How might shared experiences across people, and the places they live and work, help to renew, restore *or even regenerate* future communities of health?


Starting Points for Research

- Behavioral Health Hospital
- Blockchain and Supply chains
- Co-living as Collective Health
- Community Health Toolkit
- Degenerative to Regenerative
- Healthcare you do not see
- Global Health
- One Health
- One Ocean Hub
- Nutrition Science

- Planetary Health
- Planetary Health and Cities
- Regenerative Agriculture
- Reminiscence therapy
- Traditional Dream Factory Impact Map
- The Regenaissance
- The Way Life Works
- Universal Health Coverage
- Why Biodiversity Matters

Economy Domain

A regenerative economy means moving away from extractive models of continual growth towards unlocking the potential for positive contributions for people and the planet.

Economic growth has raised living standards around the world. However, modern economies have lost sight of the fact that the standard metric of economic growth, gross domestic product (GDP), merely measures the size of a nation's economy and doesn't reflect a nation's welfare or the well-being of its citizens. Yet policymakers and economists often treat GDP as an all-encompassing unit to signify a nation's development, confusing its economic prosperity with societal well-being.

Looking beyond the growing inequalities exacerbated by the pandemic towards the human impacts on the environment, of increasing automation, and an ageing population, the case for a richer definition of what it means to be a successful and thriving economy is compelling. Right now, our economies aggravate the climate and ecological crises, and they perpetuate vastly unequal distributions of power and wealth. Conversely, the concept of a *well-being economy*, in the service of human and ecological well-being, *aims to meet the needs of all, rather than the wants of a few*, holding the potential to create a collective wellbeing which places both people and the environment *in balance with each other.* So, moving forwards, how might *a thriving economy* be measured in the future – by how happy and healthy a population is?
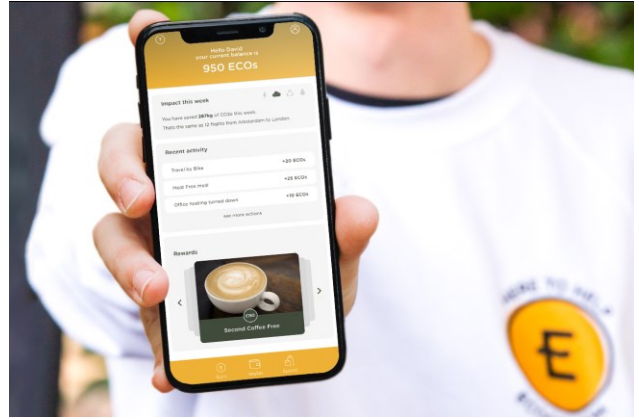
Next Nature Network, 'ECO Coin', 2020.

The global economy is designed to foster constant growth.
In the 21st century, the idea that economic development is linked to constant growth is outdated and impossible on a finite planet under the multiple existential threats of climate change, biodiversity collapse, food system fracturing, deforestation, ocean acidification – all of which are driven by the consumption that is required for the economic model of constant growth – is under question. However, there are many models emerging that offer light at the end of this dark tunnel. Pioneering approaches in which the global economy might evolve hold the potential to halt the extractive and divisive economies which offer opportunities of exponential wealth and power to so few, and leave the rest of the world struggling to get by. These range from upgrading the limitations of sustainability to a circular economy; to smart cities with better relationships to their rural surroundings; to the wellbeing economy and the doughnut economy.
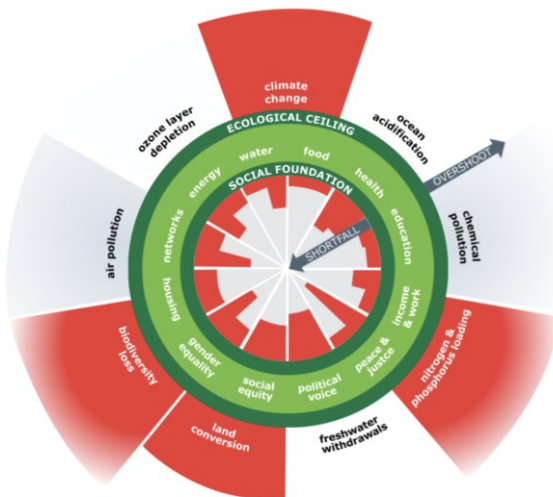
Kate Raworth, 'The Doughnut of Social and Planetary Boundaries', 2017.

Doughnut economics, is a visual framework for regenerative global development – shaped like a doughnut – combining the concept of planetary boundaries with the complementary concept of social boundaries. The model consists of two concentric rings: a social foundation, to ensure that no one is left falling short on life's essentials, and an ecological ceiling, to ensure that humanity does not collectively overshoot the planetary boundaries that protect Earth's life-supporting systems. Between these two sets of boundaries lies a doughnut-shaped space that is both ecologically safe and socially just: a space in which humanity can thrive.

Currently being put into practice in education and in communities, in business and in government, in towns, cities and nations worldwide, this model recognises that economies are complex, interdependent systems that are best understood through the lens of systems thinking. It calls for turning today's *degenerative economies into regenerative ones*, and *divisive economies into far more distributive ones*. Doughnut Economics recognises that growth may be a healthy phase of life, but nothing grows forever: things that succeed do so by growing until it is time to grow up and thrive instead.

In ten year's time, if healthy economies should be designed to *thrive rather than grow*, what if we had alternative metrics to complement GDP – to measure a how a community thrives, considers society holistically, and represents the viewpoints, needs and beliefs of people and the places they inhabit? If regenerative development is viewed as the ultimate goal of economic policy-making in the future, could there be new forms of local and global markets, exchanges and transactions, currencies and

commodities, made available to us through the experiences of engaging with connected and distributed products, services and systems which actively regenerate, evolve, and adapt through use, time, and the environments they exist within?

Starting Points for Research

- Circular BioEconomy Alliance
- Circular Economy
- Degrowth Vs Green Growth
- Doughnut Economics
- Gross Domestic Wellbeing (GDWe)
- Indigenous Investing
- Indigenous Regenerative Economic Principles

- Principles for a Regenerative Economy
- Seaweed Academy
- Sustainable Development Goals - Economy
- Sustainable Development Finance
- Timebank Intergenerational Care
- Well-being Economy Alliance

Citizenship Domain

Citizenship refers to individuals' relations to the state and to each other. As well as a person's legal status and political participation, citizenship can also indicate a subjective feeling of identity and social relations of reciprocity and responsibility.

Now, in the Fourth Industrial Revolution, we are living in an era of technological progress and scientific advancements, made available to us through the experiences of engaging with the connected products and services that are fast becoming indispensable to our modern social and work life. Present-day systems such as ingestibles, wearables, embeddables; smart homes and peer-to-peer surveillance; the Internet of Things (IoT); smart cities; facial recognition, temperature checking pandemic drones, and satellite imagery, are all built on exploitative histories, further amplifying inequality and injustice. As a result, our lives are becoming increasingly surveilled, monitored and tracked, with the blurring of boundaries between the physical and digital worlds.
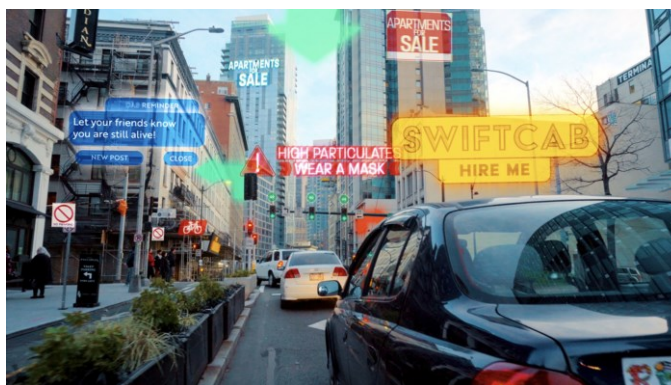
Superflux, 'The Intersection', 2021.

Today in China, the *Social Credit System* is a national reputation system being developed by the Chinese Government to standardise the assessment of its 1.3 billion citizens' and businesses' economic and social reputation (or 'social credit'). Pilot projects have been ongoing in China for the past decade and the government intends to build a 'culture of trust' by implementing the policy for social credit across the country. The system expands on familiar processes such as credit checks, to assess all aspects of public life by means of various surveillance technologies, facilitated v ia a citizen's mobile phone. Depending on the criteria of the particular region, credit will be given or taken away, judging a citizen's behaviour and trustworthiness accordingly. Everything from a person's shopping habits, to paying a bill on time, to playing music too loud, to driving through a red light will become a measure of 'good' or 'bad' citizenship. By judging a person for the types of products they buy, or the kinds of activities they spend time on, *the system not only investigates behaviour – it shapes it* – nudging citizens away from purchases and behaviours the government does not like. If the social credit system, which is part of a global trend, became the norm worldwide, what criteria might a citizen be rated upon locally, or globally, how could this data be curated and categorised, and in turn, how might this assessment be used to determine the kind of citizen you are and experiences you have access to?

In recent times, *Digital Democracy* has emerged – for some this refers to the use of digital tools to provide more accessible information, promote transparency and deepen civic engagement, whilst for others this relates to the empowerment of citizens to make decisions directly through online platforms and communities. The concept of *Open Government* has come to include a range of initiatives and policies, from improving internet connectivity, or access to institutional data, to new ways for citizens and governments to interact to achieve preferable outcomes together. Open forms of *Data Democracy* can involve activities like participatory budgeting, citizen panels, and citizen involvement in policy labs. The question remains as to whether these emerging forms of open governance actually empower citizens to co-create and co-produce their own public services and systems, or if these are just a more in-depth form of consultation. Looking ahead across the next ten years, beyond current notions of participatory democracy and open governance models, might new forms of *open citizenship* co-exist locally and globally, affording people the agency and mobility to access and utilise data in multiple ways, interact or play with it, or even co-

design their own civic experiences? All of which act as a catalyst for new forms of citizenship which open up greater possibilities to collaborate and work closer together with governments locally and globally.

Often thought of as a rich nation's issue, sustainability is increasingly linked to citizenship, and in particular, to personal health and local indigenous knowledges and day-to-day living practices in some of the poorest and most environmentally challenged places on the planet. Already, 1 billion people around the world are slum dwellers, and by 2050, the number is likely to reach one-third of the world's population. This has created a global social class, permanently disconnected from the formal world economy.

Julia Watson, 'Living Root Bridge', in Lo-TEK Design for Radical Indigenism, 2020.

Within these communities, people are engaged in some of the boldest experiments in regenerative futures - economic, environmental and social - initiating local commercial innovation, using ancient technologies, indigenous ways of working in symbiosis with the environment, and cultivating cooperative strategies to build resilient and regenerative local infrastructure and development as a basic survival strategy. Innovative approaches like these are giving birth to new forms of citizenship, invoked in a renewed commitment to local and global regenerative experiences which just might begin to define new civic behaviours that enable people to enhance their own future and everyone else's, too.

By empowering marginalised communities, acknowledging ancient wisdom, and advocating for the recognition of indigenous technologies, new questions can be asked of development partnerships and organisations, new ways of working can be considered, and new products, services and interactions might emerge to serve citizens and their communities, local businesses, enterprises and development workers to support local and global citizenship and value planetary relationships.

Starting Points for Research
- A Laboratory of Public Transformation
- Centre for Urban Pedagogy
- Centre for Global Indigenous Futures
- Digital Democracy
- Ecological Citizenship
- Global Citizen Festival
- Institute for Ecological Civilisation

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