What ideological, social, and biophysical factors precipitate the current environmental crises? What agency is available for transformative practices and imaginaries to redefine how we satisfy our energy and material requirements and avert large scale ecosystemic breakdown?

Post Growth invites us to challenge the dominant narratives about growth and
progress, and explore the radical implications of various artistic prototypes, like an economic model based on energy emitted by the Sun. This speculative research provides perspectives for a shift away from the overexploitation of fossil fuels on which the reproduction of our societies mainly depends today.

Post Growth re-envisions social metabolism through an understanding of the energy it requires, it aims to reconsider the critical dimension of living and material activities of the biosphere, drawing on ecofeminism, indigenous knowledge, environmental accounting and historical materialism.

Post Growth is an invitation to a collective and practical examination of our shared future, examining the notion of growth, in its many facets and implications, testing the limits of technology, of politics and of our imaginations.

ARTISTS’ BIO

DISNOVATION.ORG is a research collective set up in Paris in 2012, whose core members include Maria Roszkowska (PL), Nicolas Maigret (FR), and Baruch Gottlieb (CA). They work at the interface between contemporary art, research and hacking, and compose tailor-made teams for each investigation together with academics, activists, engineers, and designers. More specifically their recent artistic provocations seek to empower Post Growth imaginaries and practises by challenging the widespread faith that ‘economic growth’ and ‘technological fixes’ will solve the ecosystemic disruptions they produced in the first place. They recently co-edited A Bestiary of the Anthropocene with Nicolas Nova, an atlas of anthropic hybrid creatures, and The Pirate Book, an anthology on media piracy.

DISNOVATION.ORG’s works have been exhibited, performed, published and reviewed worldwide, including at the Centre Pompidou (Paris), transmediale (Berlin), the Museum of Art and Design (New York), Palais de Tokyo (Paris), FILE (Sao Paulo), ZKM (Karlsruhe), Strelka Institute (Moscow), ISEA (Hong Kong), Elektra (Montreal), China Museum of Digital Arts (Beijing), and the Chaos Computer Congress (Hamburg). Their work has been featured in Forbes, Vice, Wired, Motherboard, Libération, Die Zeit, Arte TV, Next Nature, Hyperallergic, Le Temps, Neural.it, Digicult, Gizmodo, Seattle Weekly, torrentfreak.com, and Filmmaker Magazine among others.

Artists’ Website: https://disnovation.org
This artistic provocation seeks to estimate the orders of magnitude of critical ecosystem services, which are fundamental to all planetary life processes. It is common to describe our relationships with society, the world, and the biosphere with metaphors from economics, which has specific understandings of value. Today’s prevailing economics conventions are unable to recognize intrinsic value of the ecosystems on which all life depends. In cultures overdetermined by concepts from economics, we are left without adequate discursive instruments to socially or politically address the importance of ecosystem contributions to life on Earth.

This experiment consists of one square metre of wheat, cultivated in a closed environment. Critical inputs such as water, light, heat, and nutrients are measured, monitored and displayed for the public. This procedure makes palpable the immense scale of ecosystem contributions, and provides a speculative reference for a reckoning of the undervalued and over-exploited ‘work of the biosphere.’
"All models are wrong, but some are useful."— George Box. *Post Growth Prototypes* invites us to question dominant narratives of growth and progress, and to explore speculative environmental accounting models at the limits of the quantifiable. *Post Growth Prototypes* is a series of critical case studies, which puts provocative academic models to work. This video essay addresses biosphere work, solar income and energy transition in the Anthropocene. Over nine chapters, we will attempt to highlight, through the necessarily distorting lens of scientific models, some of the facets of our contemporary environmental condition which are often obscured, unquantifiable, imperceptible, entangled complexities, and known unknowns.
In 1940, Richard Buckminster Fuller introduced the term “energy slave” to describe the energy required to power the modern lifestyle. The concept “energy slave” refers to the technological or mechanical energy equivalent to the physical working capacity of a human adult. The energy requirements for any lifestyle can be calculated as a number of ‘energy slaves’ equivalent to the number of human labourers which otherwise would be needed to produce the same amount of energy. In 2013, it has been estimated that the average European employs the equivalent of 400-500 “energy slaves” 24 hours a day.

The Energy Slave Tokens consists of a series of weights made of bitumen, which are the energy equivalents to specific quantities of physical human labour time, namely 1 hour, 1 day, 1 week, 1 month, 1 year and 1 life). This series of weights is designed to
present the orders of magnitude that separate the labour power generated by our human bodies from the energy exploited mostly from fossil fuels which powers the technosphere. These open source tokens are designed to be easily replicated, used and distributed without restriction.

Credits:
Conception: DISNOVATION.ORG, Baruch Gottlieb
Contributors: Clément Gasque, Raphaël Rubbens, Macha Savykine
Production: iMAL (BE)
Coproduction: Biennale Chroniques (FR)

POST GROWTH TOOLKIT (THE INTERVIEWS)
[INTERVIEWS ON THE FRICTIONS BETWEEN ECONOMIC GROWTH AND ENVIRONMENTAL CRISES]

In order to better understand the foundations of today’s political and ecological crises, the artist collective set out to meet researchers, theoreticians and activists, and
collected a number of stories and operational concepts in the form of video interviews. Focusing on notions such as planetary limits, the rebound effect, ecosystem services and the seventh-generation principle, these videos are published online to help cultivate a community and a set of theoretical and narrative tools that re-examine the utilitarian vision of nature conceived merely as a standing reserve for human industry, delegitimizing the logic of resource optimization, and technological solutionism. These proposals seek to encourage the prototyping and envisioning of radically different modes of living in relation with our environment.

SELECTED NOTIONS

1:53 COLLAPSE INFORMATICS — BILL TOMLINSON
4:49 DOWNGRADING — GEOFFREY BOWKER
4:07 ECOSYSTEM SERVICES — GEOFFREY BOWKER
2:19 GEODIVERSITY — GEOFFREY BOWKER
3:42 IDEOLOGY OF GROWTH — VALERIE OLSON
1:43 INDIGENOUS ECONOMICS — ROSE O'LEARY
1:48 INTERNAL GROWTH — VALERIE OLSON
3:22 INTERSPECIES WEALTH TRANSFER — BILL TOMLINSON
2:10 NEGATECHNOLOGY — BILL TOMLINSON
3:41 OBJECT OF NECESSITY — ERNESTO OROZA
4:12 REDUCTION OF COMPLEXITY — BILL TOMLINSON
2:32 SMART CITIZEN — S NAM KOFFI AGBODJINOU
1:42 THE 7TH GENERATION PRINCIPLE — ROSE O'LEARY

Interviewees: Sénamé Koffi Agbodjinou, independent researcher in architecture and anthropology, Geoffrey Bowker, Science and technology studies, University of California Irvine, Rose O’Leary, PhD candidate, University of California, Irvine, Valerie Olson, Environmental Anthropologist, University of California, Irvine, Ernesto Oroza, Cuban artist and designer, Bill Tomlinson, Professor of Informatics, University of California Irvine

POST GROWTH TOOLKIT (THE GAME)
[A GAME TO REPROGRAM OURSELVES OUT OF THE ECONOMIC GROWTH ORTHODOXY]
The Earth’s ecosystems are undergoing irremediable changes as a result of human development, the source of a number of crises whose consequences can be measured on the scale of the planet. Rethinking our way of coexisting with our environment requires us to reevaluate the continuous growth of our energy footprints. The Post Growth Toolkit game is an invitation to reprogram ourselves out of the economic growth orthodoxy. This critical game series highlights the material conditions necessary to maintain our current standard of living in order to better understand how we may reproduce these differently. At the intersection of science and speculative fiction, the Post Growth Toolkit game proposes to literally reshuffle our world-views and to share stories, concepts and objects to re-examine how we are programmed and to stimulate new modes of understanding. It takes the form of a tactical card game: where small groups of players are invited to explore a number of key notions. The game becomes a means of transmission and collective debate intended to help participants find their bearings in a period of radical change.

Credits:
Conception: DISNOVATION.ORG, Julien Maudet, Baruch Gottlieb, Pauline Briand And Clémence Seurat
Production: iMAL (BE)
Coproduction: Biennale Chroniques (FR)
**About the Gallery**

*Telematic Media Arts* is a gallery and production company in San Francisco’s SOMA District, which exhibits and supports time-based arts with particular attention to screen culture, and art’s intersection with contemporary information and telecommunications technologies.

Gallery Website: [https://www.ttlematiccc.com/](https://www.ttlematiccc.com/)