

Textile Transitions – More than Human Perspectives

Svenja Keune

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TRANSITIONS LAB - HIGHER EDUCATION PATHWAY - BIELLA

9:30 - 10:30

TEXTILE TRANSITIONS

MORE-THAN-HUMAN PERSPECTIVES

Svenja Keune, PhD

SVENJA KEUNE, PHD - RESEARCHER AT THE UNIVERSITY OF BORÅS, SWEDEN



2010 BA HAW HAMBURG



2018 LICENTIATE
UNIVERSITY OF BORÅS



2012 MA HAW HAMBURG



2019 PHD UNIVERSITY OF BORÅS

ON TEXTILE FARMING:
LIVING INDOORS



2020-2023 INTERNATIONAL POSTDOC GRANT



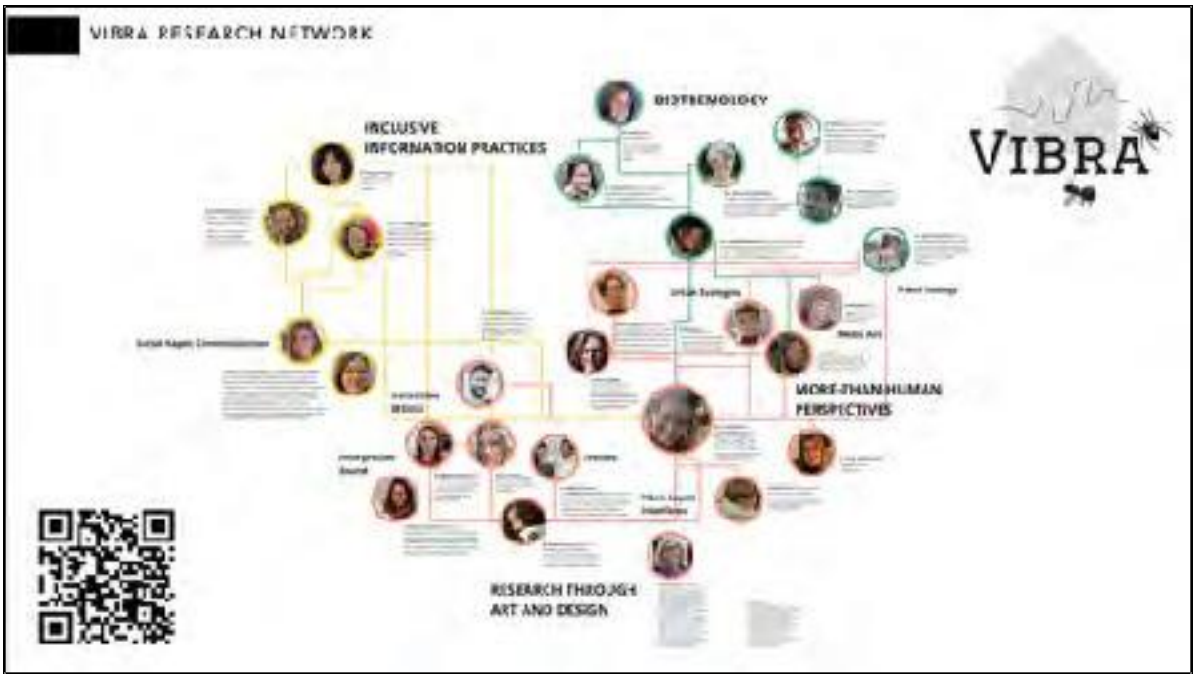
SINCE 2022 I.N.S.E.C.T.
SUMMERCAMPS



2023-2025 RESEARCH PROJECT (FORMAS)

HOLDING SURPLUS
HOUSE (HSH)

HOLDING
SURPLUS
HOUSE



VIBRA RESEARCH NETWORK



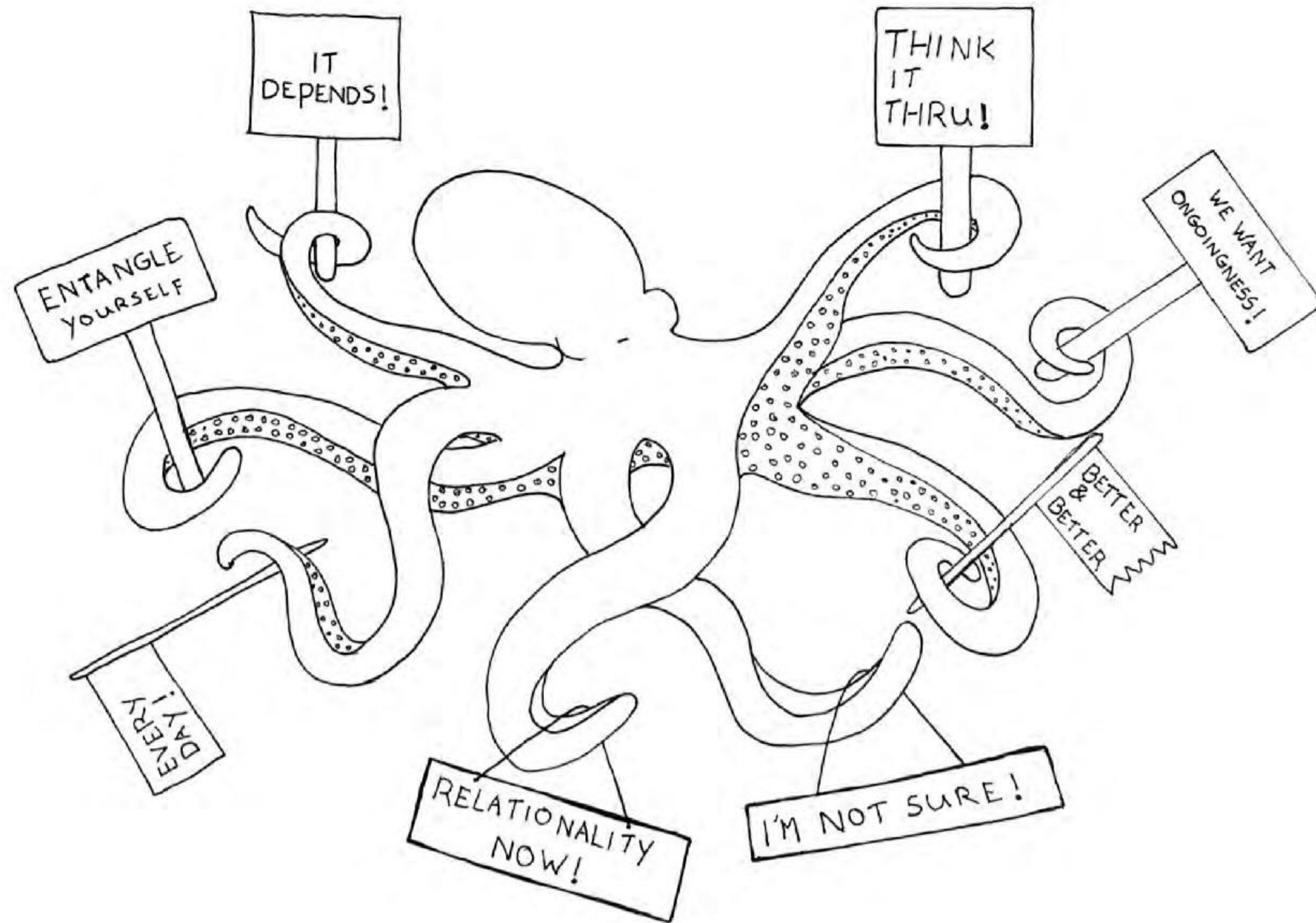
2024-2027 WEAVING
WITH EARTH BEINGS
(WEB)



2024-2025 MUSEIT -
SUBJECTIVE LAYERS

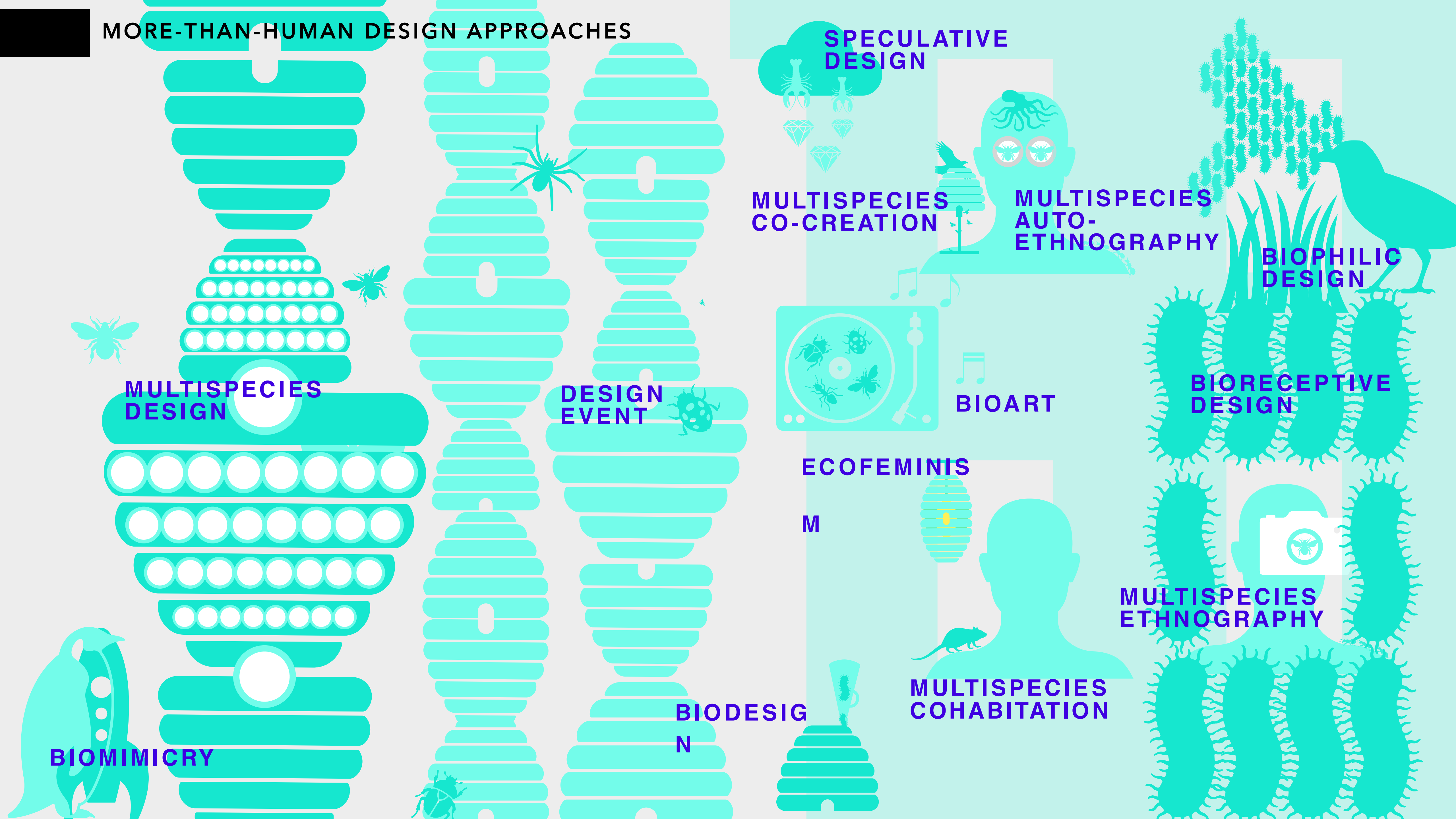
WHAT IS MORE-THAN-HUMAN DESIGN?

There are quite many different ways in which designers approach the more-than-human. For example, one can get inspired by how Octopus can change colour and adapt to their surroundings (Biomimicry) and represent this phenomenon with textiles that are dyed or stiffened by bacteria (Biodesign). One can design artificial habitats for Octopus (Multispecies Design), provide them with a prototype to observe and learn from their reactions and interactions (Design Event), or spend time to engage in each other's worlds as yet another approach (Multispecies Autoethnography).



Westerlaken, M. (2021). The telltale worlds of the octopus, *e-flux Architecture*, a collaboration with the Solomon R. Guggenheim Museum. Available via <https://www.e-flux.com/architecture/survivance/379308/the-telltale-worlds-of-the-octopus/>

MORE-THAN-HUMAN DESIGN APPROACHES



BIOMIMICRY

MULTISPECIES
DESIGN

DESIGN
EVENT

SPECULATIVE
DESIGN

MULTISPECIES
CO-CREATION

MULTISPECIES
AUTO-
ETHNOGRAPHY

BIOPHILIC
DESIGN

BIORECEPTIVE
DESIGN

MULTISPECIES
ETHNOGRAPHY

MULTISPECIES
COHABITATION

BIODESIGN

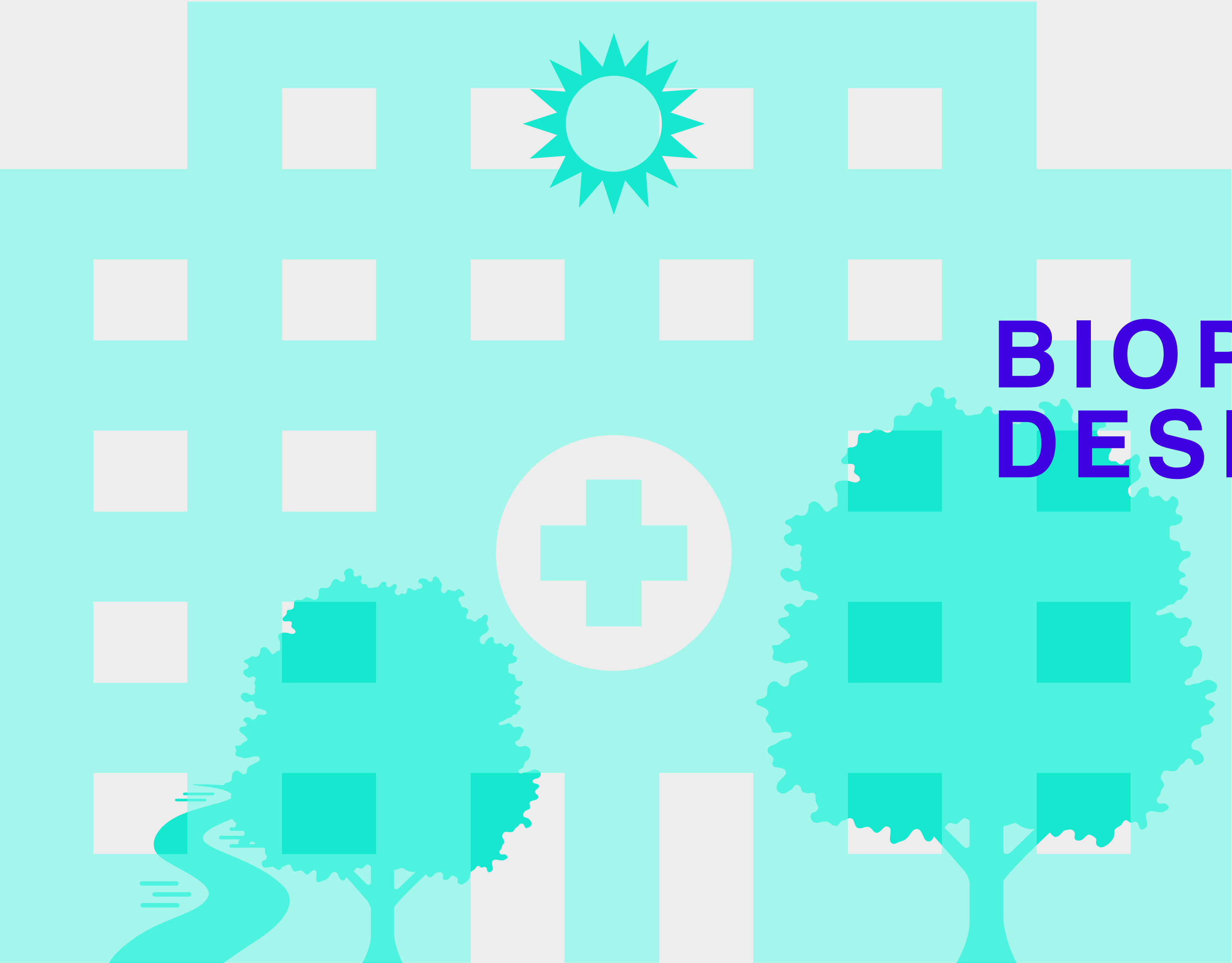
ECOFEMINIS
M

BIOART



BIOMIMICRY

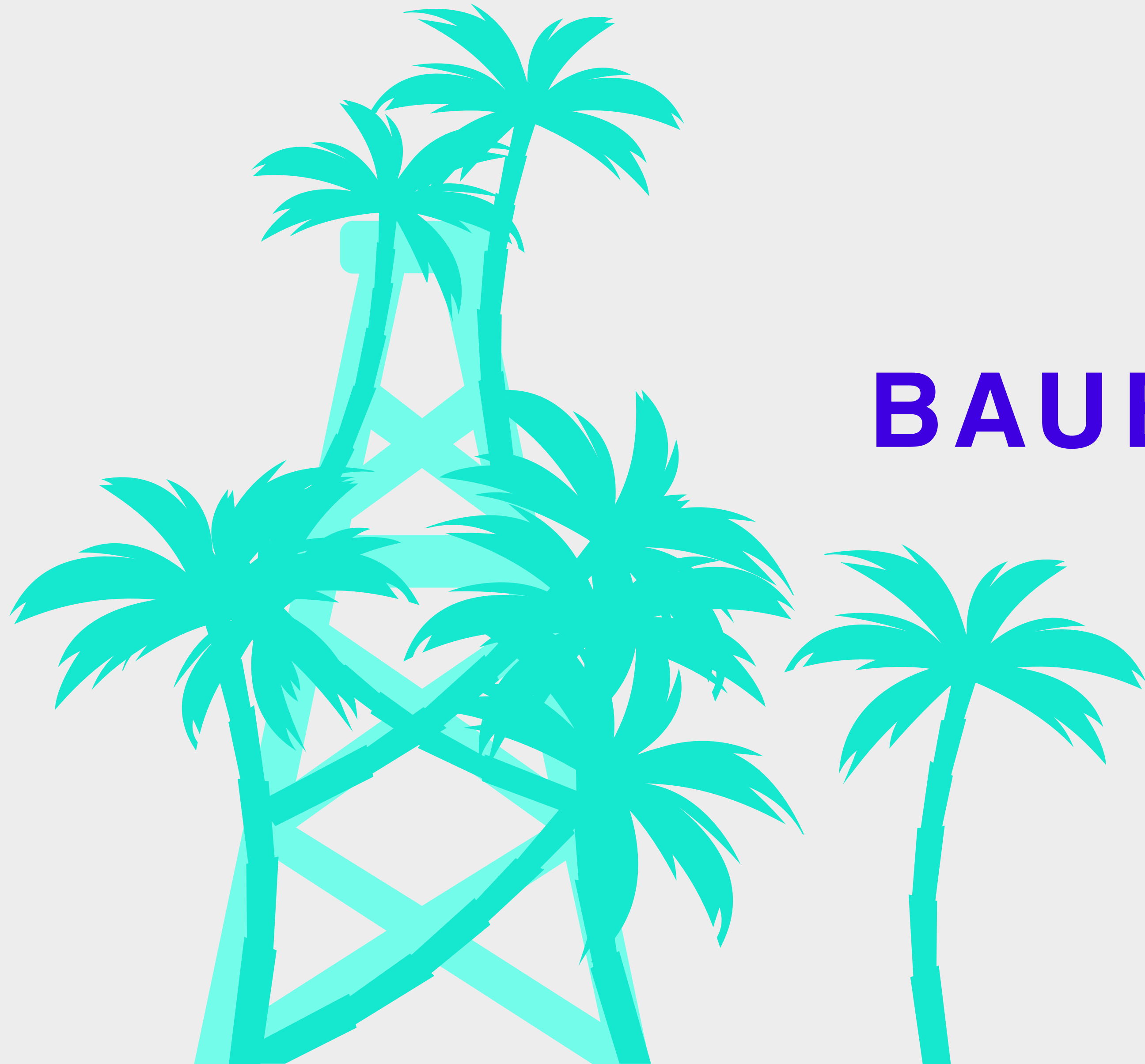
PROVIDING DIRECT AND INDIRECT NATURE EXPERIENCES



BIOPHILIC DESIGN

GROWING ARCHITECTURE FROM TREES

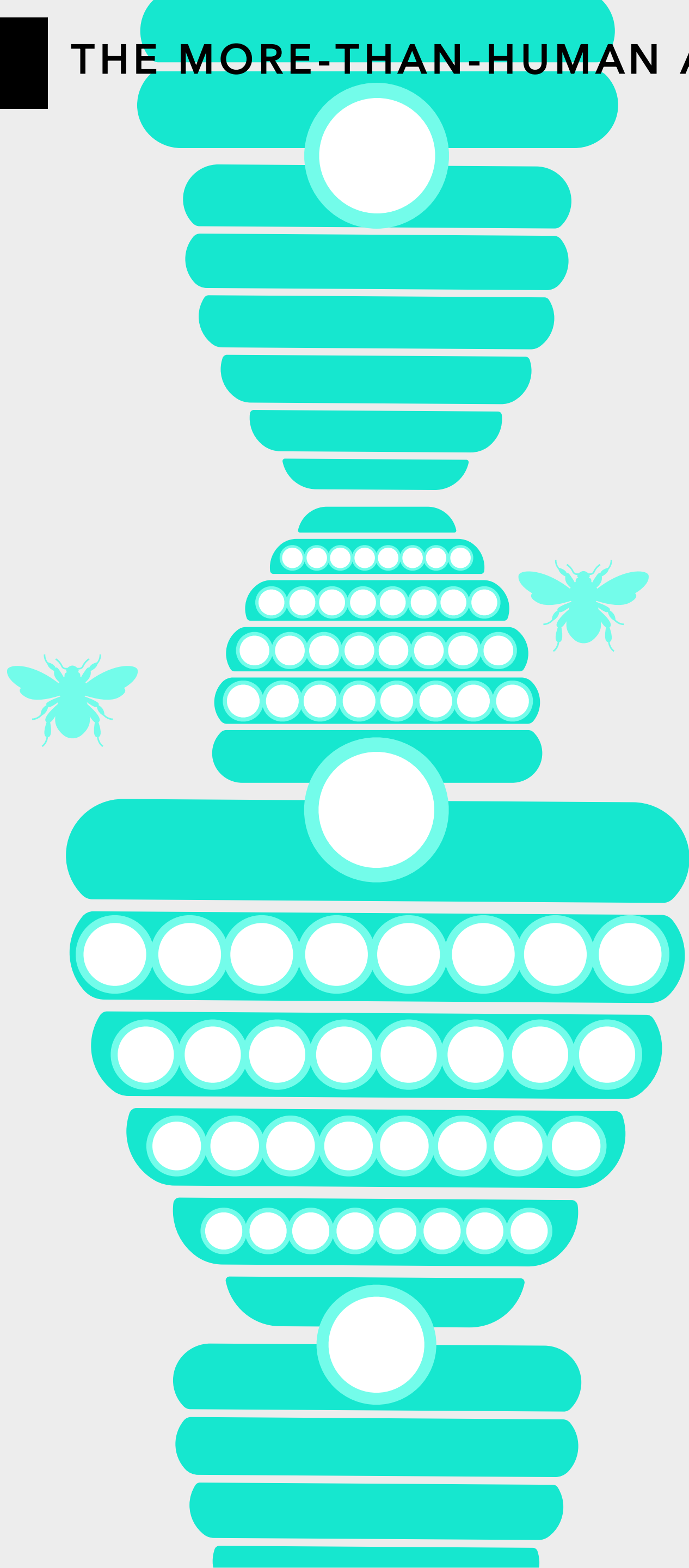
BAUBOTANIK



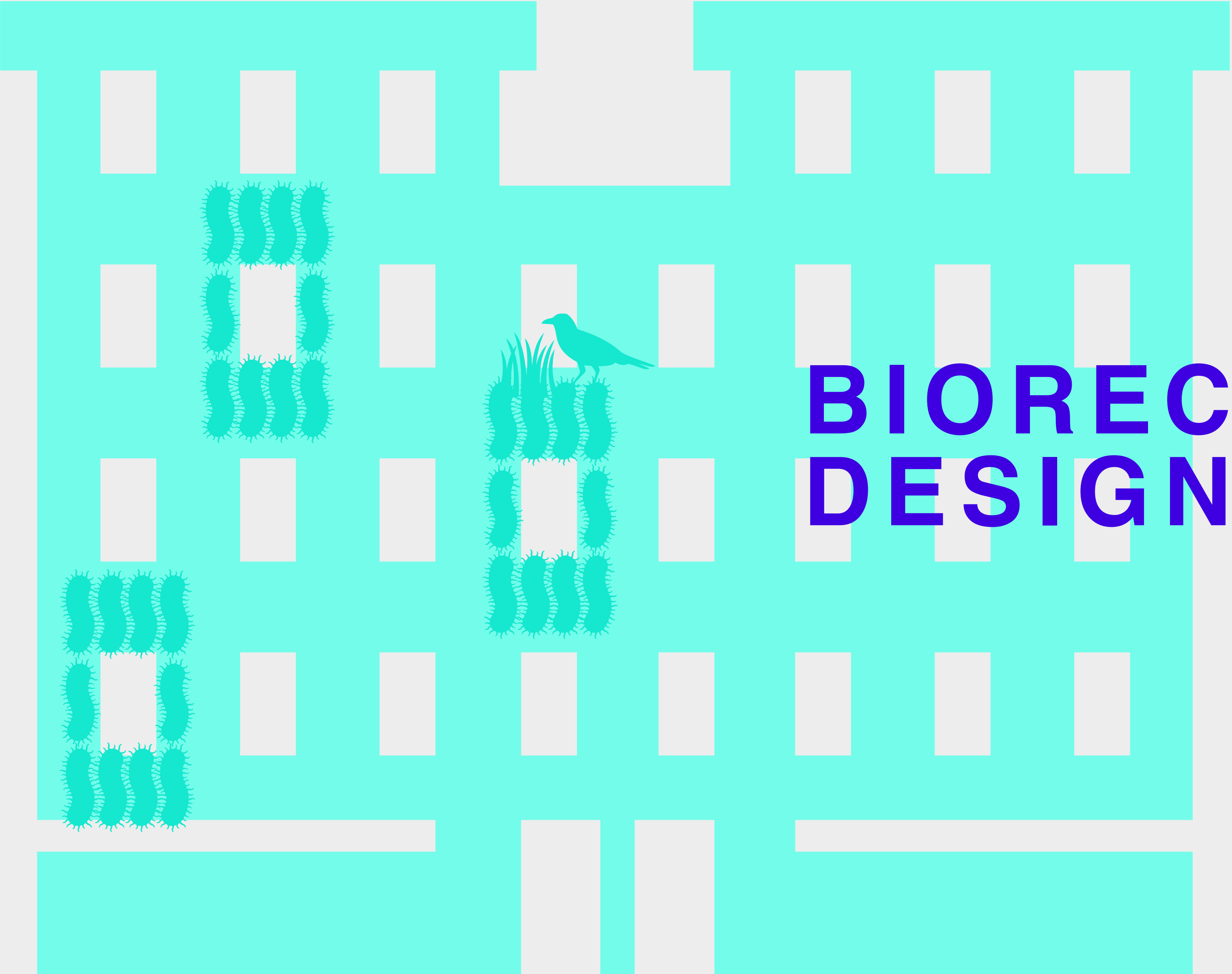


GROWING MATERIALS

BIODESIG
N



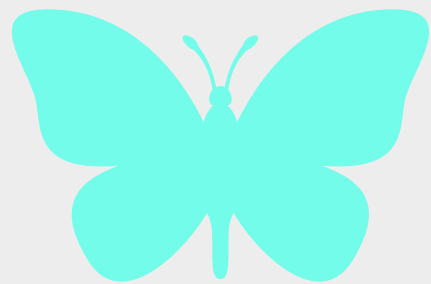
MULTISPECIES DESIGN



**BIORECEPTIVE
DESIGN**

INVITING OTHERS INTO PARTICIPATION

DESIGN EVENT





MULTISPECIES ETHNOGRAPHY

CHANGING AND BEING CHANGED



MULTISPECIES AUTO- ETHNOGRAPHY

CARE AND ACTIVISM



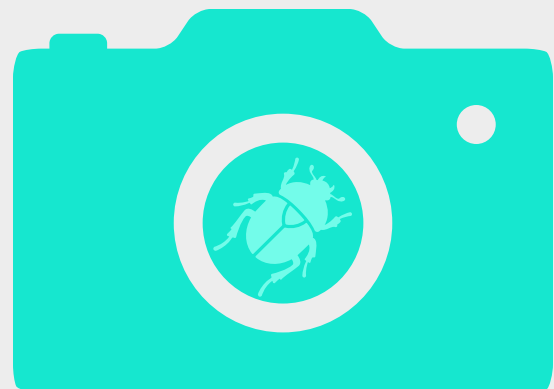
**ECOFEMINIS
M**

ENVISIONING AN ALTERNATIVE REALITY / A POSSIBLE FUTURE

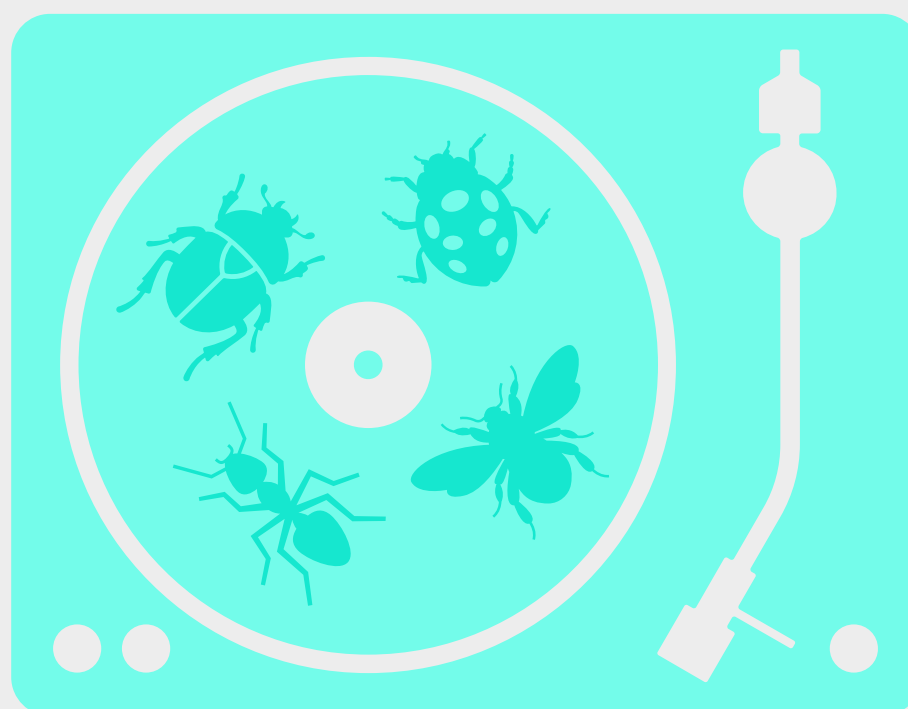
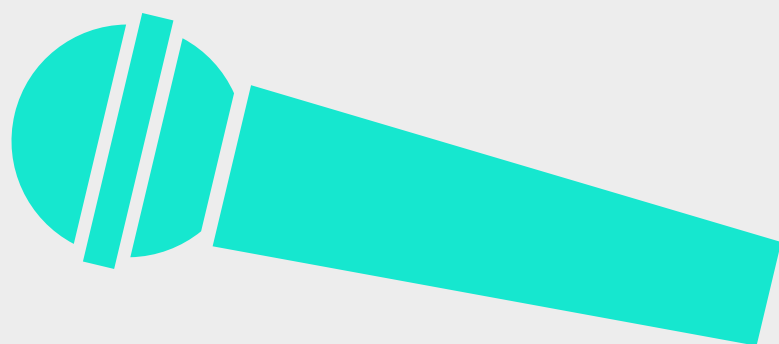


**SPECULATIVE
DESIGN**

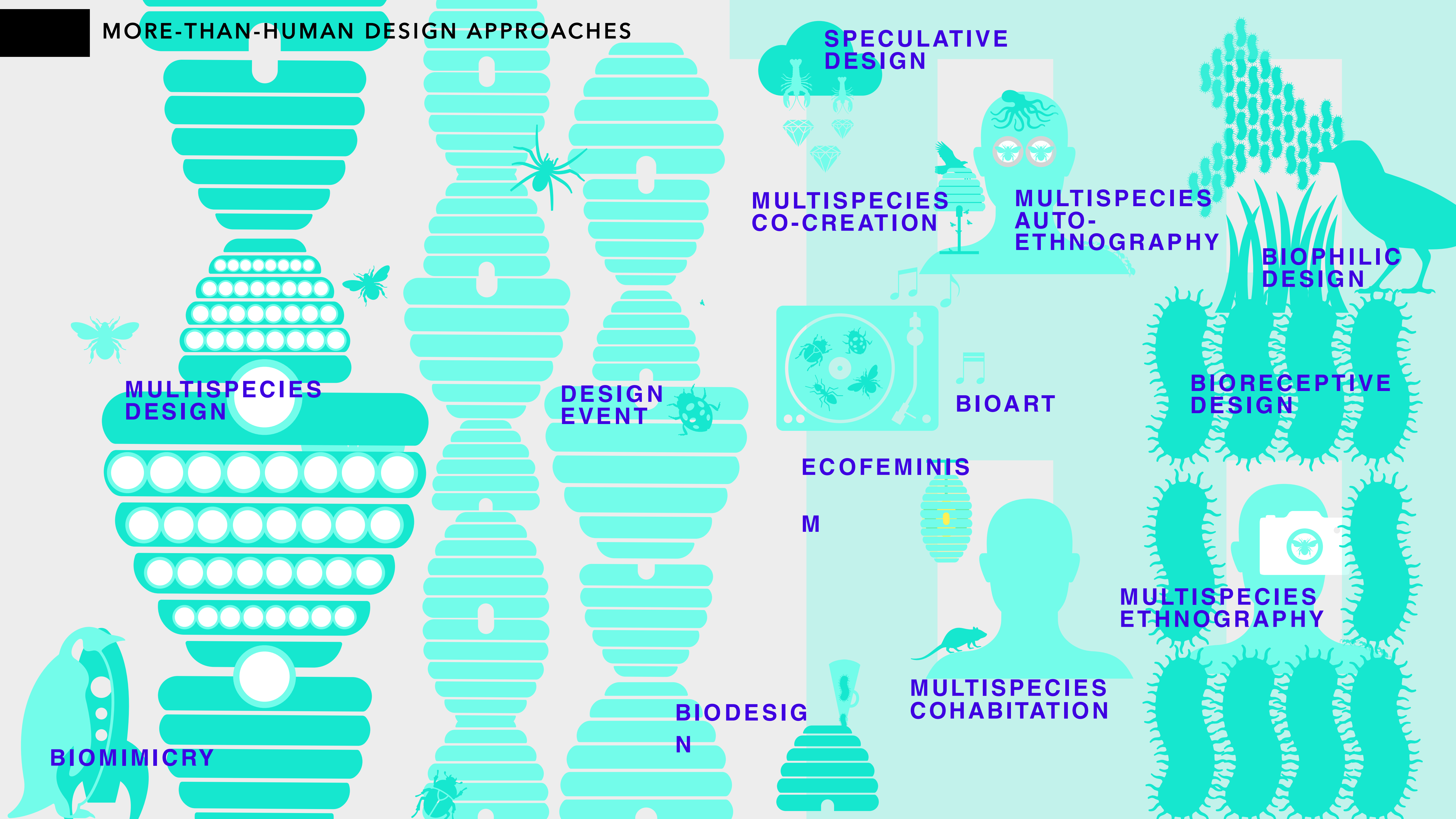
METHODS TO MEASURE, RELATE, AND CREATE



DESIGN METHOD S



MORE-THAN-HUMAN DESIGN APPROACHES





earthscan
from Routledge

MORE-THAN-HUMAN DESIGN IN PRACTICE

EDITED BY

Anton Poikolainen Rosén, Antti Salovaara
Andrea Botero and Marie Louise Juul Søndergaard



Chapter

Design by/for/with/about/without Animals

Tactics for Animal Liberation

By *Michelle Westerlaken, Erik Sandelin*

Book [More-Than-Human Design in Practice](#)

Edition	1st Edition
First Published	2024
Imprint	Routledge
Pages	13
eBook ISBN	9781003467731



Share

ABSTRACT

As part of a larger 'animal turn' in the arts and humanities, the field of design research has increasingly oriented itself towards multispecies efforts. However, explicit references to Critical Animal Studies or animal liberation are still rare in design. This raises a fundamental concern about how more-than-human design may inadvertently perpetuate animal oppression by creating technologies, systems and artefacts that ultimately reinforce the exploitation of animals. In this chapter, we sketch the landscape of design research that is first-and-foremost driven by a critique of animal oppression. Through a mapping and discussion of existing design projects in relation to Critical Animal Studies literature, this text assembles a repertoire of tactics, questions and examples that can be of practical use for design scholar-activists interested in crafting proposals towards living with animals in ways that involve multispecies justice. We thereby argue that part of being a designer requires us to become aware of the dilemmas, of problematic norms, of uncomfortable spaces, and

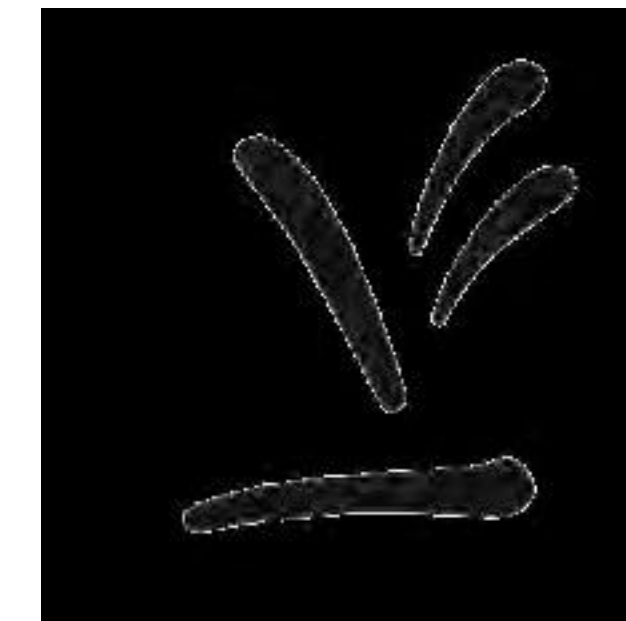
2020 - 2023

DESIGNING AND LIVING WITH ORGANISMS

DESIGNING AND LIVING WITH ORGANISMS

(DLO) 2020-2023

DLO is a postdoctoral project financed by the Swedish Research Council, and involved the Centre for Information Technology and Architecture (CITA) at The Royal Danish Academy of Fine Arts Schools of Architecture, Design and Conservation (KADK) and the Smart Textile Design Lab at the Swedish School of Textiles, University of Borås.



Reference number 2020-00459



CITA

3 SERIES OF EPISTEMIC ARTEFACTS



SHEARING LAYERS
OF COHABITATION

202
1



I.N.S.E.C.T. WALL TWIN

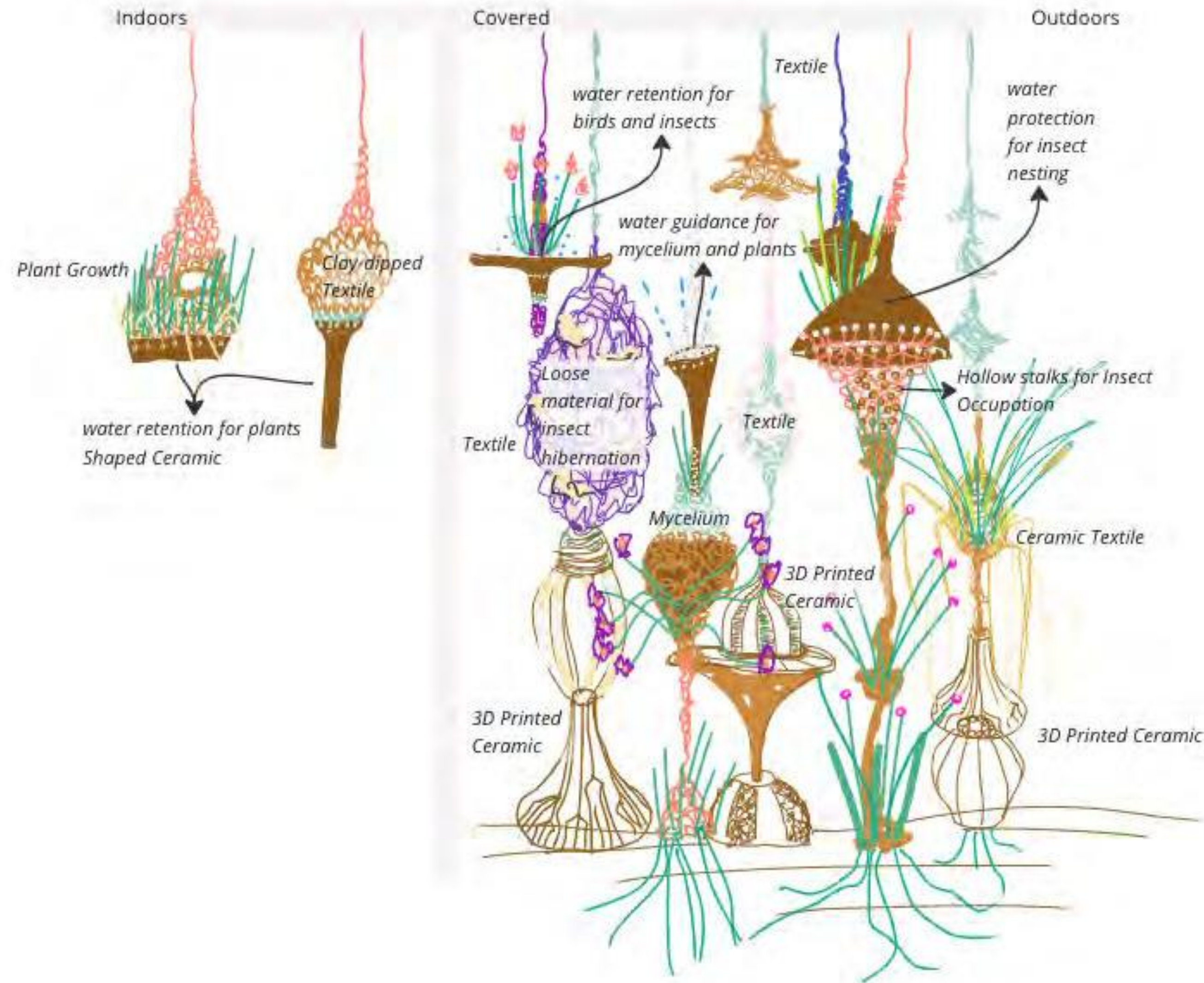
202
2



MULTISPECITY

202
3

MULTISPECITY



This installation explores the potential of
POROSITY AND TEMPORALITY
in crocheted textiles, ceramic textiles, and 3d printed ceramic
IN REGARD TO MULTISPECIES.
arthropods, plants, birds, fungi, microorganisms
THE INSTALLATION IS AN
EVENT SPACE
that is simultaneously the researchers living space
AND INVITES FOR ALL KINDS
OF INTERACTIONS BY
PROVIDING A DIVERSE SET OF
MATERIAL QUALITIES,
SURFACES, ENCLOSURES, AND
MICROCLIMATES.



SUMMER 2024



Vespula vulgaris
(the common
wasp)





Check for updates

Textile design events:
An investigation into
textile entanglements
with insects and
other living organisms

Svenja Keune  and Ariel Cheng Sin Lim

Svenja Keune, PhD, is a researcher focusing on multispecies perspectives to design by employing multispecies auto-ethnography and practice-based artistic research. As a passionate weaver, Svenja co-founded and facilitates the I.N.S.E.C.T. Summercamps and initiated the VIBRA Research Network. svenja.keune@ho.se

Ariel Cheng Sin Lim, Architect and researcher with an MA in Computation in Architecture. Her work engages digital modelling and fabrication to create new architectural possibilities and forms of expressions. Current specialisation in 3D printing with and for living or biomaterials.

ABSTRACT This paper investigates textile-based artefacts as a starting point to engage in more-than-human entangled design processes. Instead of catering designs towards targeted species, the focus was on generating a palette of expressions that might inspire more-than-human interactions through the integrated diverse shapes, surfaces and materials. Drawing from design approaches that seek to re-center the more-than-human in human interventions, we understand other organisms as clients of design, active participants in the design process, and as co-inhabitants. Complementing freeform crocheted textiles with ceramics and 3D printing, we created a series of artefacts with a multitude of textures, porosities, permeabilities and flexibilities. The variation was extended by further explorations in biomaterial coating and integrating substrates. From this range of experimental work, we present three selected *Textile Events*. These textile-based Design Events were gradually set up in the spring of 2022 around the Tiny House on Wheels (THoW) of one of the authors. Embedded in the local

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DOI: 10.1080/20511787.2024.2392346

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Journal of Textile Design Research and Practice



Keune, S., & Lim, A. C. S. (2024). Textile design events: An investigation into textile entanglements with insects and other living organisms. *Journal of Textile Design Research and Practice*, 1-22. <https://doi.org/10.1080/20511787.2024.2392346>

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Keune, Svenja. "Designing and Living with Organisms Weaving Entangled Worlds as Doing Multispecies Philosophy." **Journal of Textile Design Research and Practice** 9, no. 1 (January 2, 2021): 9-30. <https://doi.org/10.1080/20511787.2021.1912897>.

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Parker, Dan, Asya Ilgün, Ariel Cheng Sin Lim, Hana Vašatko, Dan Vy Vu, Natalia Piórecka, and Svenja Keune. "I.N.S.E.C.T. Wall Twin: Designing for and with Insects, Fungi, and Humans." **Temes de Disseny**, no. 39 (July 27, 2023): 228-47. <https://doi.org/10.46467/TdD39.2023.228-247>.

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Tomico, Oscar, Anton Poikolainen Rosén, Svenja Keune, Ferran Altarriba Bertran, Danielle Wilde, Daniel Fernández Galeote, Tau Ulv Lenskjold, Ruut Tikkanen, Oğuz 'Oz Buruk, and Velvet Spors. "Seeding a Repository of Methods-To-Be for Nature-Entangled Design Research." In **Designing Interactive Systems Conference, 1101-15**. IT University of Copenhagen Denmark: ACM, 2024. <https://doi.org/10.1145/3643834.3660745>.

Keune, Svenja, and Ariel Cheng Sin Lim. "Textile Design Events: An Investigation into Textile Entanglements with Insects and Other Living Organisms." **Journal of Textile Design Research and Practice**, September 23, 2024, 1-22. <https://doi.org/10.1080/20511787.2024.2392346>.

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Keune, Svenja, Colleen Ludwig, Katka Černá, Anneke ter Schure, and Julia Tabet. "Staying with Complexity through Multispecies Companionship at the I.N.S.E.C.T. Summercamp 2023." In **More-than-Human Design in Practice**, edited by Anton Poikolainen Rosén, Antti Salovaara, Andrea Botero, and Marie Louise Juul Søndergaard. Abingdon, Oxon ; New York, NY: Routledge, 2025.

The background image shows a person's shadow cast onto a light-colored wall. The person is standing with their arms raised, and their shadow is clearly visible. Several pieces of paper are pinned to the wall, some with text and diagrams. A fern frond is also visible, casting its shadow on the wall. The overall scene suggests a creative or research environment.

SINCE 2022

I.N.S.E.C.T. SUMMERCAMPS

Co-initiator and facilitator: Svenja Keune, PhD Members are ca. 50
researchers and practitioners from various disciplines

The I.N.S.E.C.T. Summercamp is an annual get-together of researchers, artists, and designers involved in or interested in more-than-human perspectives to design. Besides a focus on human co-creation, the camp methodology is continuously evolving and adjusting to the yearly theme of the camp and the co-created activities.



**PART 1: INTERSPECIES EXPLORATION BY
BIODIGITAL MANUFACTURING
TECHNOLOGIES**



**PART 2: TOWARDS
MULTISPECIES WORLDINGS AS
AN EVERYDAY DESIGN
PRACTICE**



2023 I.N.S.E.C.T. SUMMERCAMP



**2024 I.N.S.E.C.T. SUMMERCAMP
EXPLORING VIBRATION AS A SENSORY
MULTISPECIES PERSPECTIVE**

2022 I.N.S.E.C.T. SUMMERCAMP



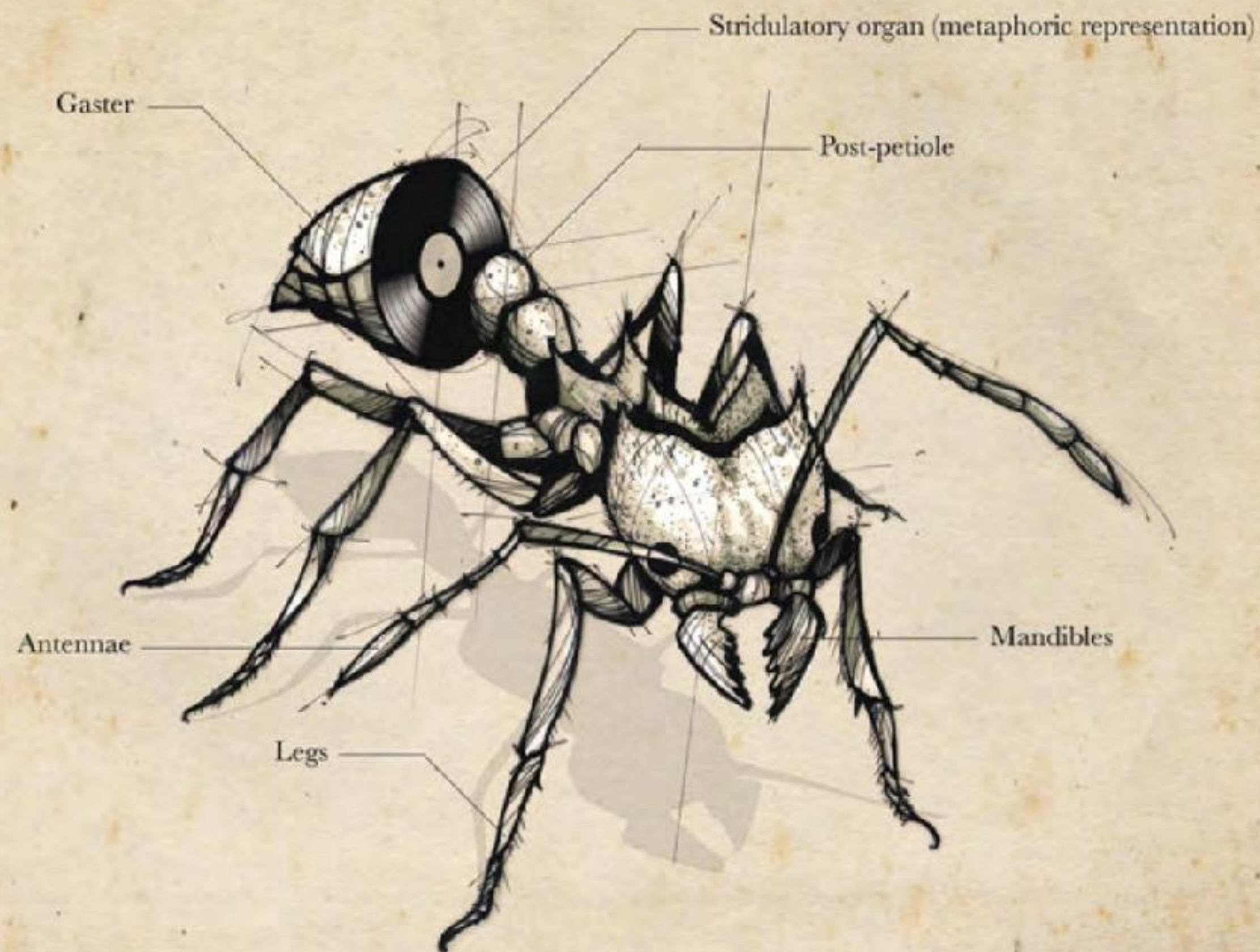
SINCE 2023



VIBRA RESEARCH NETWORK



**WHAT HAPPENS WHEN
BIOTREMOLOGY,
INCLUSIVE
INFORMATION
PRACTICES, AND
RESEARCH THROUGH ART
AND DESIGN MEET?**



Stridulation Amplified

Compositions with the stridulatory organ of *Atta cephalotes*

KUAI SHEN



2023 I.N.S.E.C.T. SUMMERCAMP

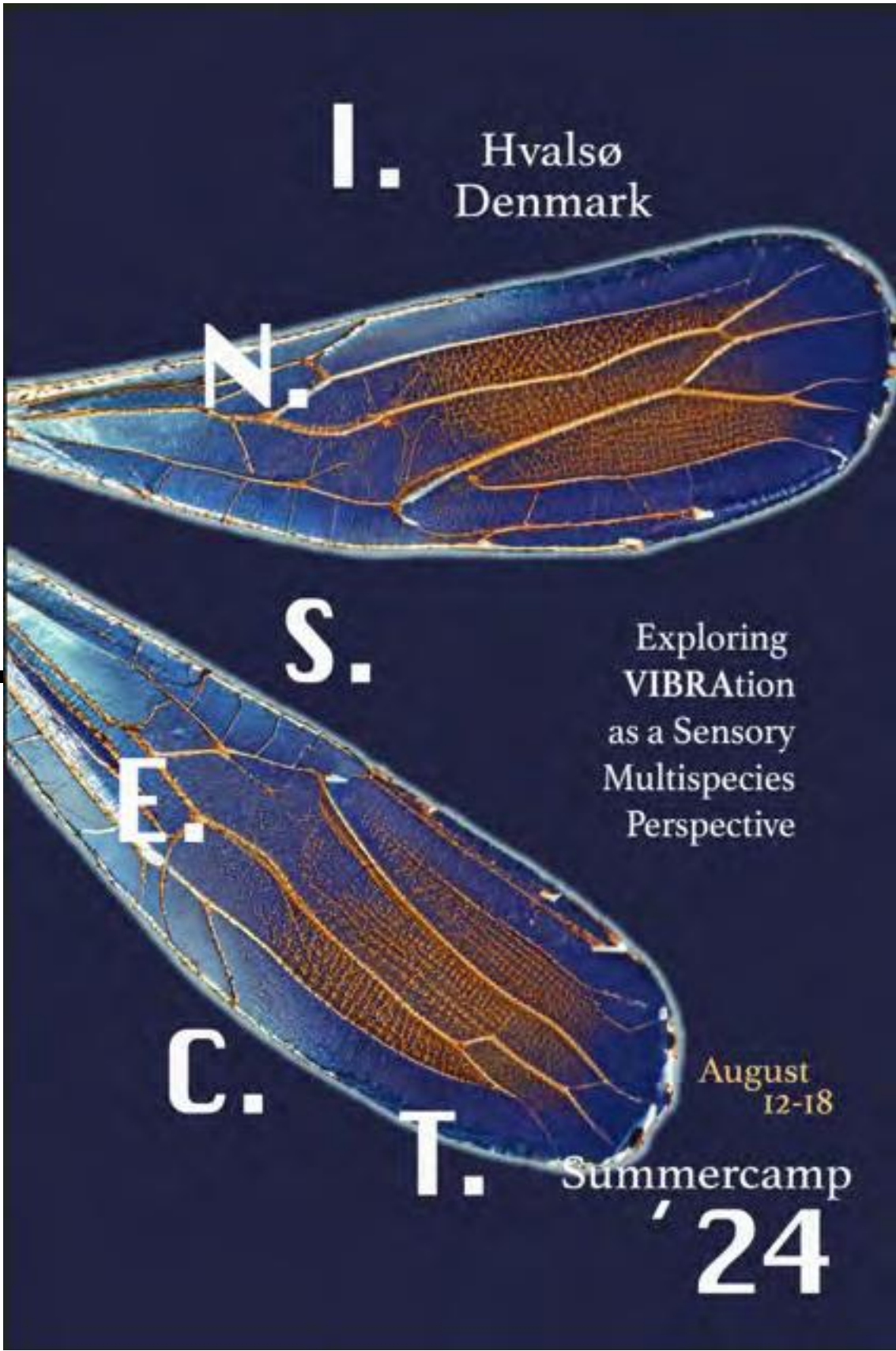


PART 1

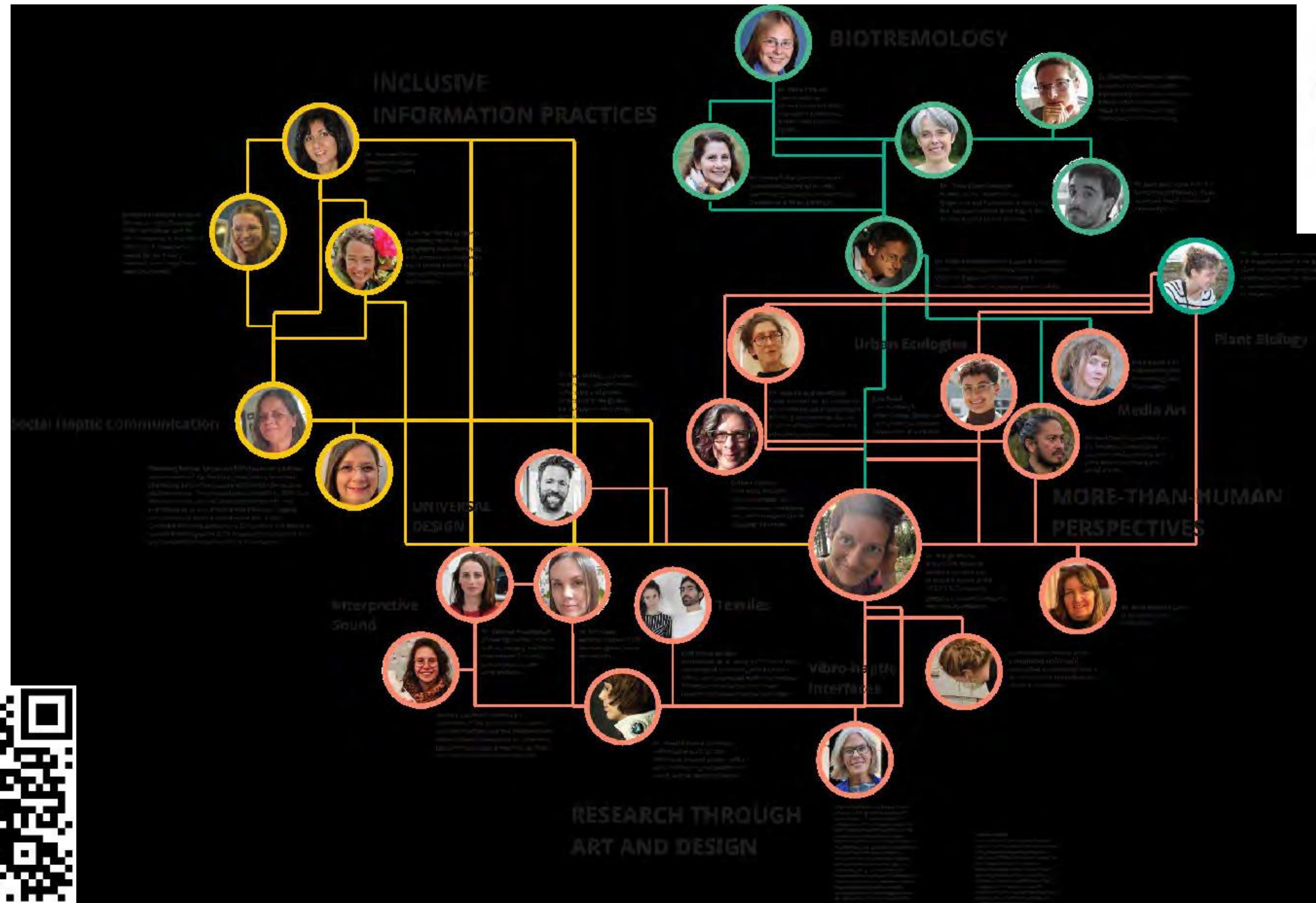


PART 2

2022 I.N.S.E.C.T. SUMMERCAMP



2024 I.N.S.E.C.T. SUMMERCAMP





Day 1

5th August 16:00 - 18:00 CEST

How are multispecies perspectives integrated in practices usually not working with multispecies?

This first day of the online festival is setting the scene. We are introducing the purpose of the network and its activities, providing an overview of how multispecies perspectives are integrated in practices usually not working with multispecies, e.g. design, architecture, urban development and more.

MORE-THAN-HUMAN PERSPECTIVES



Dr. Lotte Nystrup Lund
is expert in Ideas of Biodiversity. She is an action researcher working with people engaged in biodiversity issues in e.g. architecture, activism and agro-ecology



Julia Tabet
is an Architect & Urban Ecology Researcher, representing Multispecies Perspectives at Gehl R&D



Colleen Ludwig
is an artist, educator, environmentalist and activist whose installations, and performances focus on engaging the senses.



Dr. Svenja Keune
is the VIBRA Research Network manager and founding member of the I.N.S.E.C.T. Community



DAY 1: HOW ARE MULTISPECIES PERSPECTIVES INTEGRATED IN PRACTICES USUALLY NOT WORKING WITH MULTISPECIES?

Day2

6th August 16:00 - 18:00 CEST

Introduction to Biotremology

The second day focuses on Biotremology, the study of insect vibration communication. It offers an overview of plant bioacoustics and insect vibration mechanisms, providing basic knowledge and audible examples that inspire future conceptual and practical work within the VIBRA Research Network.

1. Overview of Insect vibration mechanisms (Meta)
2. Vibrational communication in bees and beetles (Taina)
3. Vibration in plants/plant bioacoustics (Sole)

BIOTREMOLOGY



Dr. Taina Conrad concentrates on communication in insect interactions (vibrational, acoustic, and chemical signals).



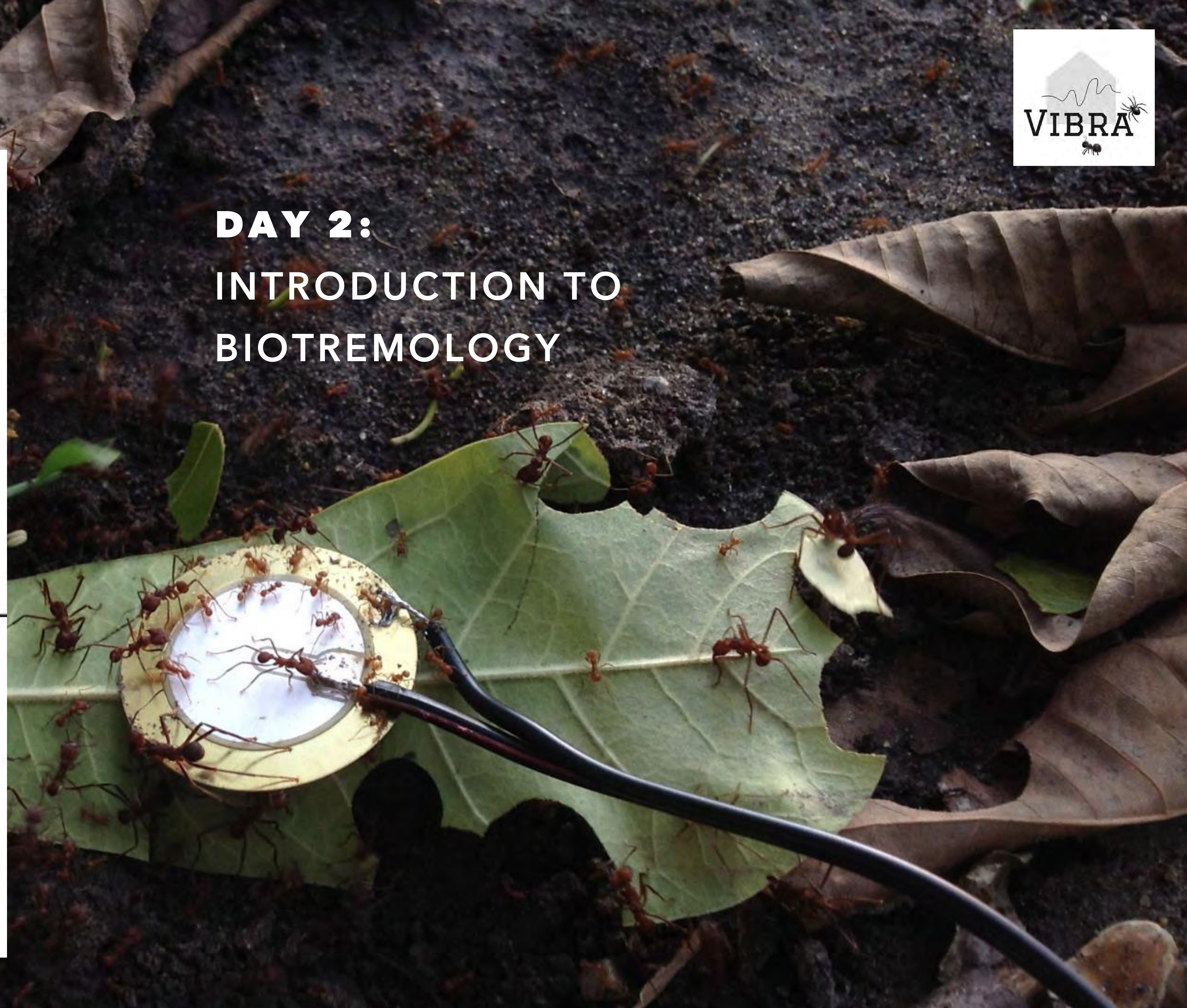
Dr. Meta Virant-Doberlet is Head of the Department of Organisms and Ecosystems Research at the National Institute of Biology at the University of Ljubljana, Slovenia.



Dr. Mariasole Calbi interests are the patterns and drivers of plant communities' composition and structure and the response of vegetation to human disturbance.

Plant Biology

DAY 2: INTRODUCTION TO BIOTREMOLOGY



Day 3

7th August 16:00 - 18:00 CEST

Haptic Communication for and with people with deaf-blindness

The third day focuses on inclusive information practices, i.e. vibrational communication, social haptic communication, and an overview of cutting edge haptic assistive technologies.

INCLUSIVE INFORMATION PRACTICES

Vibro-haptic Interfaces



Dr. Nasrine Ohlson Focuses on issues of inclusion, accessibility, participation, and equal opportunities for all. Head of INCLUDE Centre for Inclusive Studies at the University of Borås.

Hildebjørg Karlsen Bjørge and **Kathrine Goborg Rehder**, both professional sign language interpreters, have been interpreting for deaf and people with deafblindness, since mid/late nineties. They co-established Hapti-Co in 2008. Both have been teaching social haptic signals nationally and internationally. In 2015 they published the book 'Haptisk kommunikasjon' and the American version, 'Haptic Communication' was published in 2015. Hapti-Co launched an app with haptic signals in 2020: 'Haptics: pocket edition'. The app is available in English as well as in Norwegian.

DAY 3: HAPTIC COMMUNICATION FOR AND WITH PEOPLE WITH DEAF-BLINDNESS





Day 4
8th August 16:00 - 18:00 CEST

**What happens when
Biotremology, Inclusive
Information Practices,
and Research through
Art and Design meet?**

**Soft Interfaces
and Interpretive Sound**

The fourth day includes an introduction into how to record insect vibration with a self setup and provides examples how data can be expressed artistically via media art and smart textiles.

Media Art

**Interpretive
Sound**



Dr. Afroditi Psarra is crafting technological artifacts that interweave arts and science, with a focus on the energetic qualities of sound, and the tactility of textiles.



Dr. Kuai Shen is specialised on ant behaviour, repurposing computer media, sensors, and electronics to represent the world of ants.



**Soft
Interfaces**

Dr. Judit Eszter Kárpáti and **Esteban de la Torre**, researchers at Moholy-Nagy University of Art and Design, founders of EJTECH work with hyperphysical interfaces, programmable matter, and augmented textiles as media to investigate sensorial and conceptual relationships between subject and object.



BIOTREMOLGY

Dr. Roland Mühlethaler is expert in entomology (insect sciences) i.e. vibrational communication in insects and spiders with experience in communication and engaging a general public.

**RESEARCH
THROUGH ART AND
DESIGN**

**DAY 4: SOFT
INTERFACES AND
INTERPRETIVE SOUND**





Day 5

9th August 16:00 - 18:00 CEST

*Internal session!
Open to VIBRA and I.N.S.E.C.T.
members only. Contact the
network manager if you want to
join. svenja.keune@hb.se*

On the last day we integrate the knowledge and experiences of the past days and brainstorm about the networks potential, and our concrete next steps regarding funding, network meetings, focus groups, and other initiatives.

**DAY 5: WHAT IF WE
COULD GET FUNDING
FOR US ALTOGETHER?**

9 MONTH PROGRAM TO ENGAGE WITH TACTILE TECHNOLOGIES ACROSS DISCIPLINES AND COMMUNITIES



The image shows Kristina presenting the Tactile Stories Toolkit at the I.N.S.E.C.T. Summercamp 2024 in Šibenik, Croatia.

Tactile Stories Project

February - October 2025



Kristina Diekmann is a media artist and educator. As an educator, she facilitates "Biotremology" workshops in digital storytelling and physical computing that use prototyping through writing, craft, computing, and sound production to create interactive tactile audio interfaces to tell their stories.

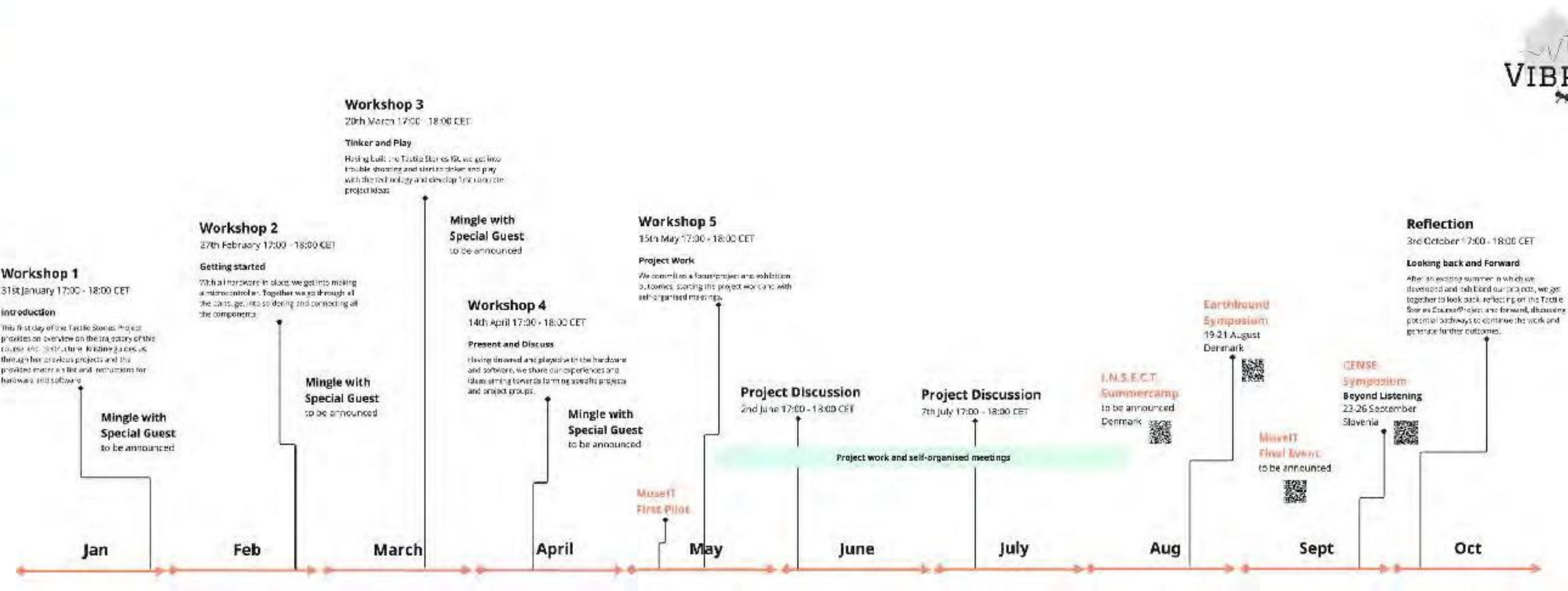


Dr. Svanja Keune is the VIBRA Research Network manager and focuses on the Tactile Stories Community and summer camp coordination. She is a researcher, storyteller, and now a facilitator in between materials, practices, people, and fields of research.

The Tactile Stories Project invites you to tinker and play with vibro-haptic and tactile technologies and concepts. In a series of online workshops, we will develop and co-create interactive tactile sonic installations that we explore during the I.N.S.E.C.T. Summercamp 2025 and exhibit at the Earthbound Symposium, the MuseIT Final Event, and the 2025 CENSE Symposium.

In addition to workshops, included in the program is online mingling with special guests in the fields of Social Haptic Communication and Biotremology (TBA).

This is an initiative by the VIBRA Research Network, which aims to explore the potentials of Biotremology, Inclusive Information Practices, and Research through Art and Design meeting.



MuseIT

Multisensory, User-centred, Shared cultural Experiences
through Interactive Technologies
2022 - 2025



WWW.MUSE-IT.EU



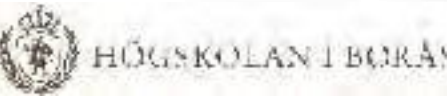
Funded by the European Union under the grant agreement No 101061441. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.

PARTNERS



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UNIVERSITY (SU) KING'S COLLEGE LONDON (KCL)



STAKEHOLDERS – ART AND DISABILITY

SHAREMUSIC & PERFORMING ARTS (SHMU)



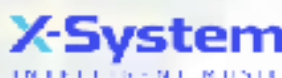
STAKEHOLDERS – CULTURAL INSTITUTIONS

MICHAEL CULTURE ASSOCIATION (MCA)
MINISTERO DELLA CULTURA (MIC)



TECHNICAL PARTNERS / SMES

CATALINK LIMITED (CTL) EXUS SOFTWARE
MONOPROSOPI (EXUS) ACTRONIKA SAS
(ACTRO) X-SYSTEM (XSL)



DATA ARCHIVING AND NETWORK SERVICES

ROYAL NETHERLANDS ACADEMY OF ARTS AND
SCIENCES/ DATA ARCHIVING AND NETWORKED
SERVICES (KNAW-DANS)



CHALLENGES - The focus in MuseIT is on Cultural Institutions and People with Disability



ACCESSIBLE TO ALL

ACCESSIBILITY OF CULTURAL ASSETS

by development of **multisensory representations** and **alternative expressions** to **enable engagement** by the public **regardless of functional or sensory impairments**

CONTENTS BY ALL

BROADER ENGAGEMENT WITH CULTURAL ASSETS AND CULTURAL CO-CREATION

achieved through development of **remote inclusive co-creation services** for multi-modal born-digital cultural assets, and cultural engagements by a broader public regardless of variations in abilities and perceptual modalities

INTEGRATION OF MULTILAYERED CONTENTS

METHODOLOGIES FOR PRESERVATION AND SAFEGUARDING OF CULTURAL HERITAGE WITH INCLUSION AT ITS CORE

PRESERVATION OF MULTISENSORY CONTENTS

achieved through formal specification and novel **methodologies** **for multisensory, layered repository** towards (long-term) preservation of cultural assets



Home

About

Outcomes

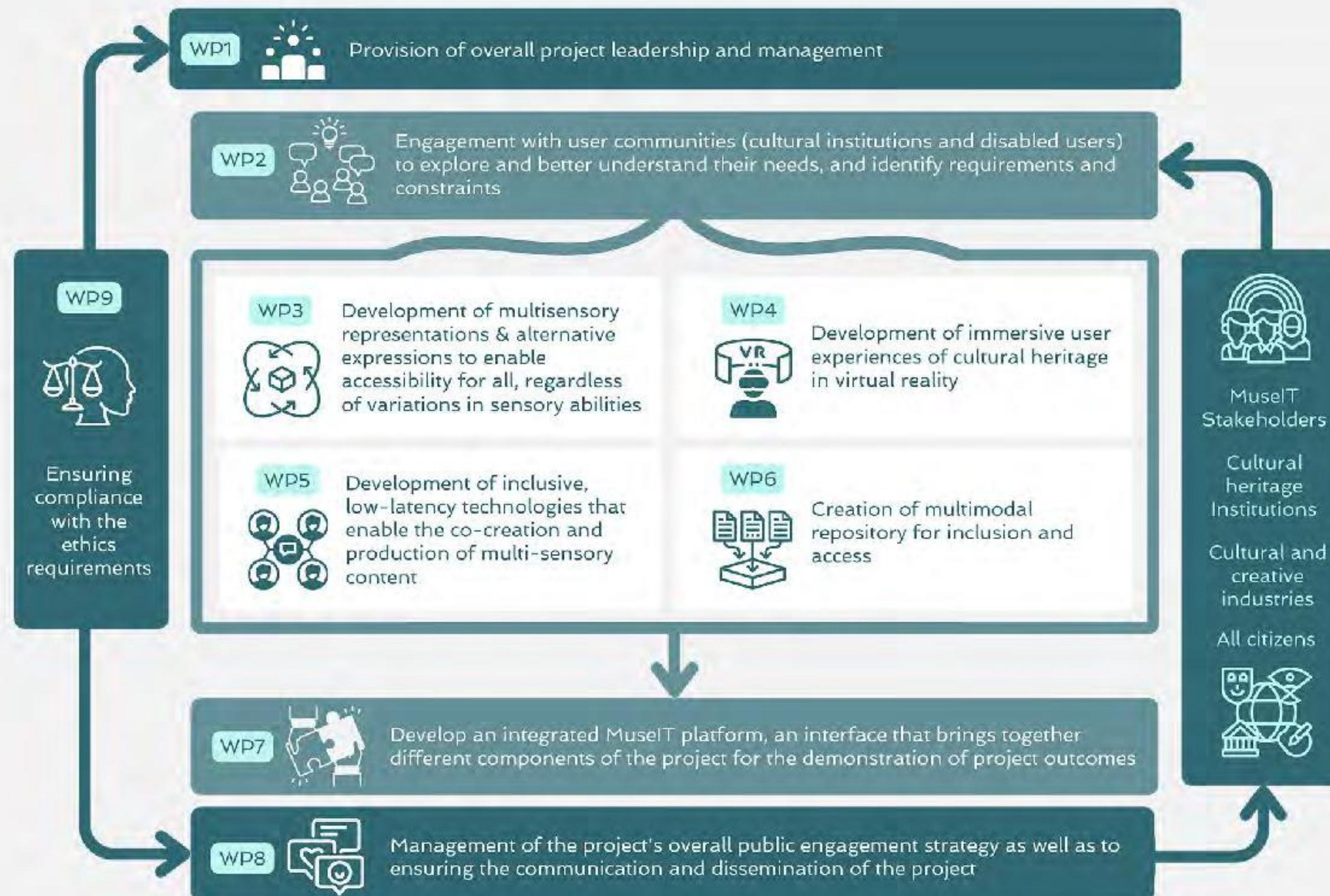
Network

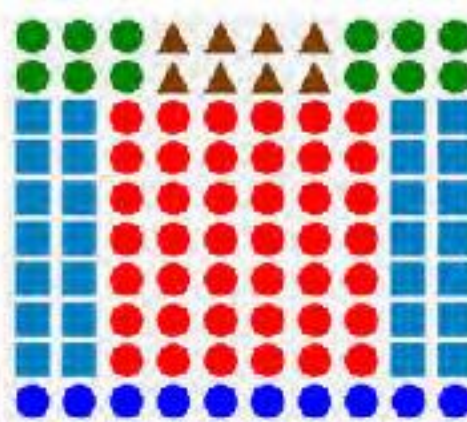
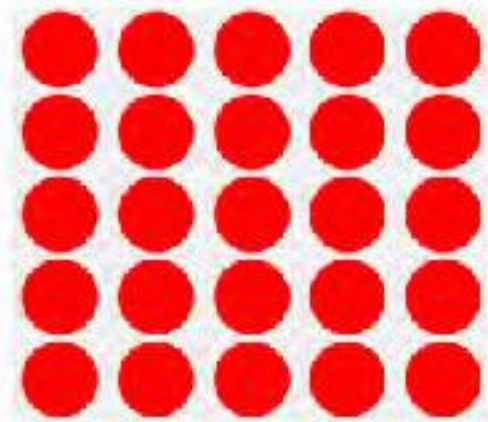
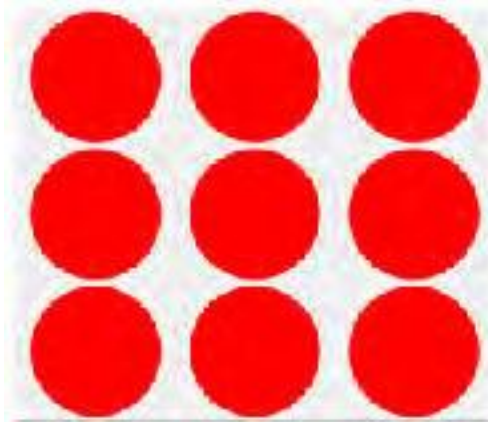
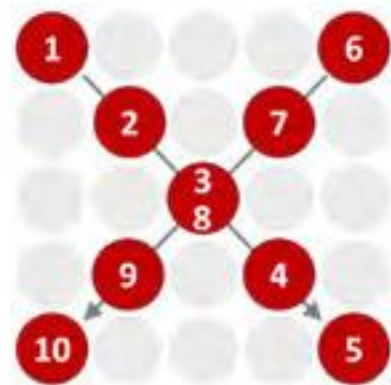
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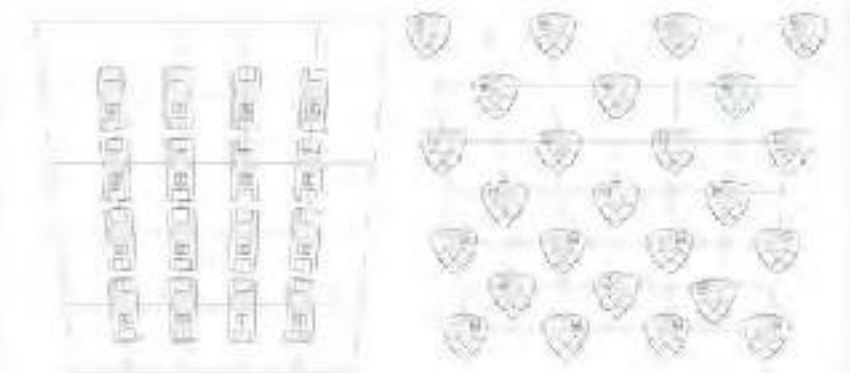


HAPTIWEAR - ON-BODY PROPORTIONS AND CURVES

Visualising design via human body sizing, form and curves
- to inform layout, density and how best to optimise panels

average human across back
[seam to seam]:
female = [12"] 28cm
Male = [14"] 38cm

4x4 modules
with spacing of:
4cm = 7-10 modules
5cm = 5-8 modules
2.5cm = 11-15 modules
2cm = 14-19cm



average human across back
[seam to seam]:
female = [12"] 28cm
Male = [14"] 38cm

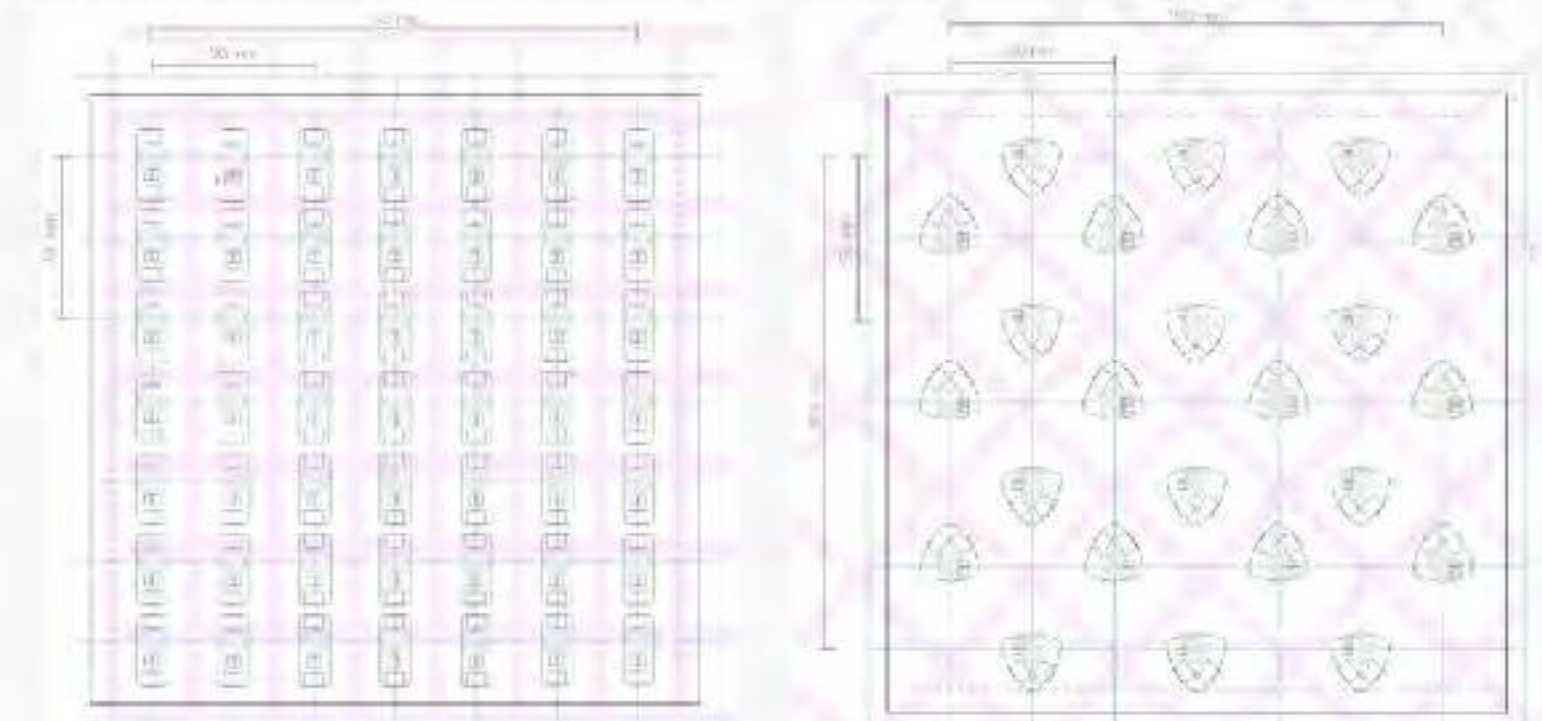


board shape informs both density of the array as well as ability to fold around the body. Different shapes and layouts affect how easily the boards will connect with complex surfaces, illustrated below

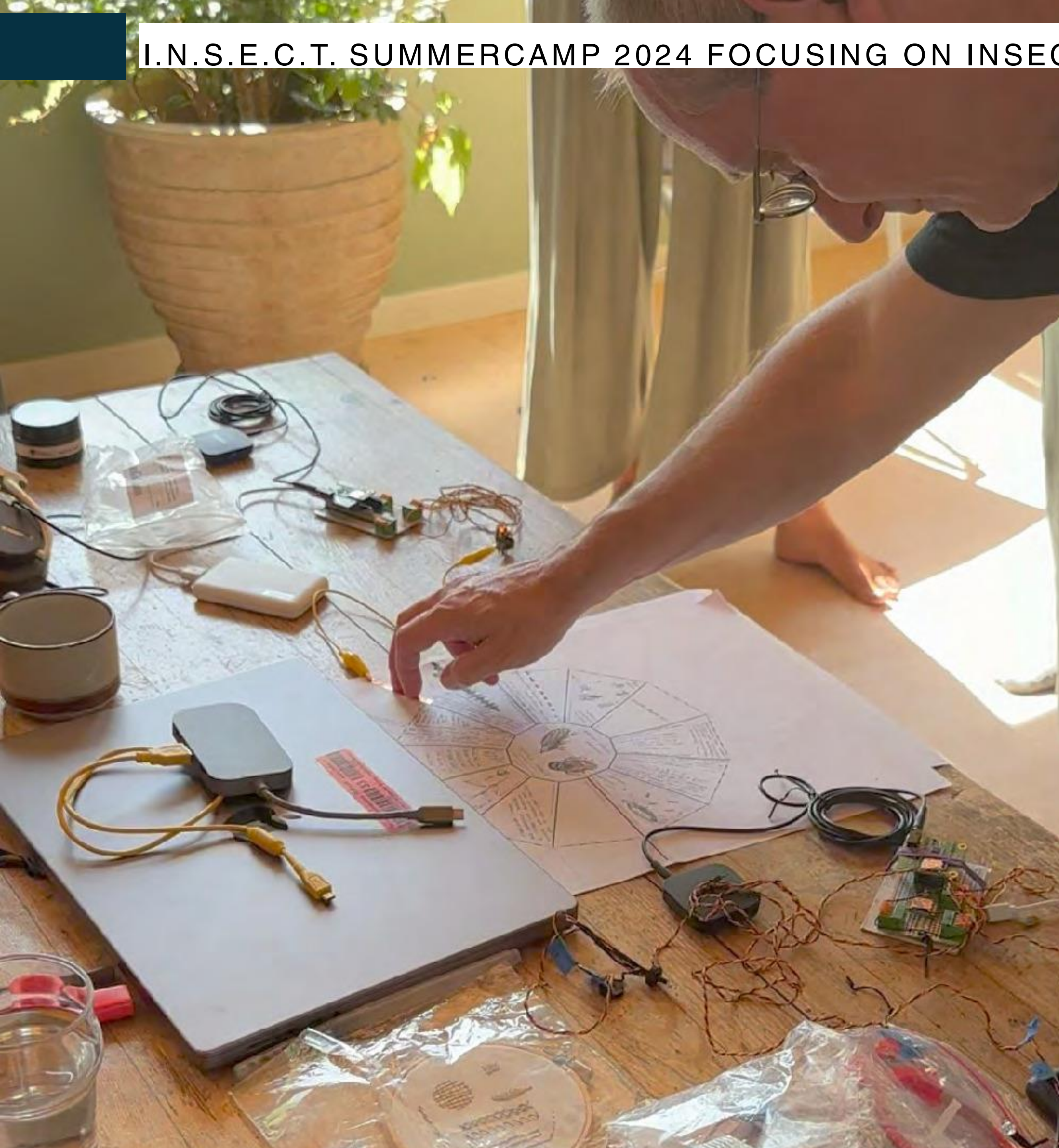
Below **(left)** shows the maximum density and **best** orientation for current boards (providing there are connectors this short). This example rolls around the trunk of the body, but needs design provisions for how it may encounter problems at places like: shoulders, shoulder blades, waist convex, where body curves are tight and vary across bodies.

Below **(right)** shows an alternative shape which is designed for wearables. The PCB footprint allows for curvature in more directions, to fit closer to the body.

PINK INDICATES FOLDS AND POTENTIAL TO CONFORM TO THE BODY [OR OTHER SURFACES].



I.N.S.E.C.T. SUMMERCAMP 2024 FOCUSING ON INSECT VIBRATION COMMUNICATION





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