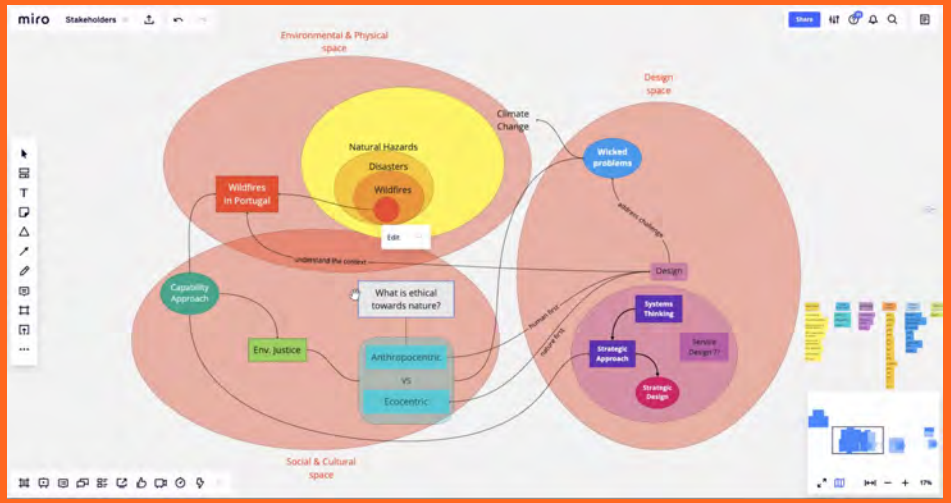
Participatory Workshop 2: Mapping Ecologies of Crisis using Design Thinking

Prof. Nitin Sawhney
Department of Computer Science, Aalto University
André Santos, *PdP Course Coordinator, Aalto Design Factory, Aalto University*

Friday, July 3, 10:00 - 12:00

CS-E4002: Human-Centred Research and Design in Crisis

Aalto University



Workshop Outcomes

Reveal methods to enhance collaboration in research and devise a design strategy with multiple stakeholders in disaster prevention.

1. Presentation on Design as Strategic Tool in Disaster Prevention in the Context of Wildfires in Portugal by André Santos

2. Presentation on Ecologies of Contestation in Participatory Design by Prof. Nitin Sawhney

3.Stakeholder analysis and ecological mapping for design strategy in a crisis case study Working in groups to conduct stakeholder analysis and ecological mapping using Miro

Workshop Schedule

Mapping Ecologies of Crisis using Design Thinking

Introduction (10:00 - 10:10)
Role of Design as Strategic Tool in Disaster Prevention (15 min)
Open Discussion (10 min)
Ecologies of Contestation in Participatory Design (10 min)
Open Discussion (10 min)
Stakeholder analysis and ecological mapping for design strategy in a crisis case study (45 min)
Share reflections and workshop wrap-up (15 min)

Human-Centred Research and Design in Crisis
3rd July, 2020

Design as a strategic tool in disaster prevention:
A case study of wildfires in Portugal

by André Santos
MA student in Collaborative and Industrial Design

Aalto University

Creative Sustainability
(minor)

CoID
(major)

Aalto Design Factory

Portugal

Wildfires

China

Dhungentar

Nepal

Bhutan

India

Kathmandu

Bangladesh

Disasters

\+

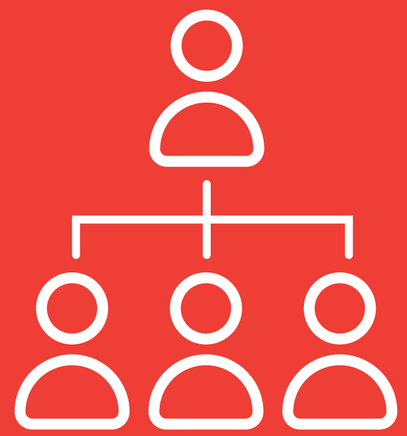
\+

Design

Portugal

Wildfires in Portugal

Portugal is the European country that **most suffers of wildfires**, both in number of fires and burnt area



Disaster Prevention

Despite national strategies,
the area burnt in Portugal
has continued to increase

Multi-Stakeholder

Climate change, lack of forest management, and unrealistic policies are recognised as some of the causes of wildfires, however **no actor recognises their direct responsibility** towards the problem.

As fires become **more intense, and faster spreading**, firefighting forces become **less effective.**

In this new era of severe burning conditions, future investments should be made that **promote a more strategic, less reactive approach.**

?

How can design be used as a **strategic tool** in the development of strategies for **multi-stakeholder collaboration**?

(tentative research question)

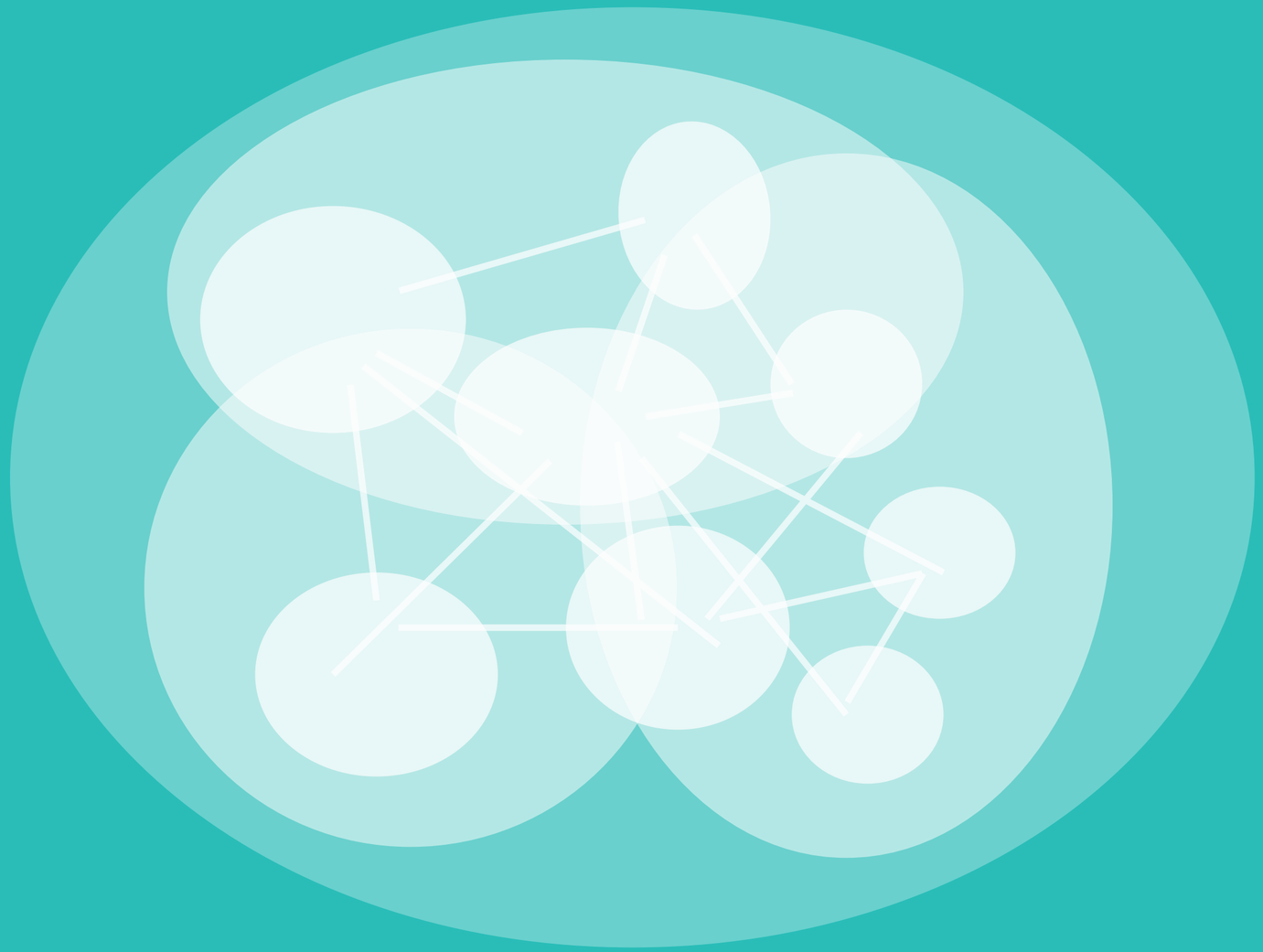
Methodology

Systems Thinking

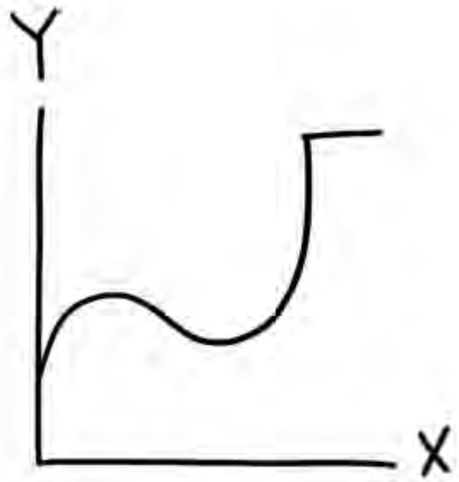
Qualitative Research

Strategic Thinking

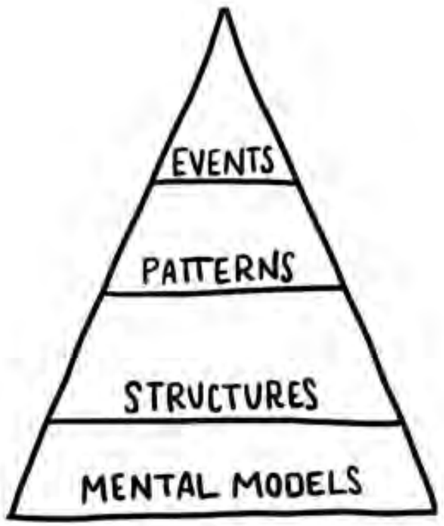
Systems Thinking



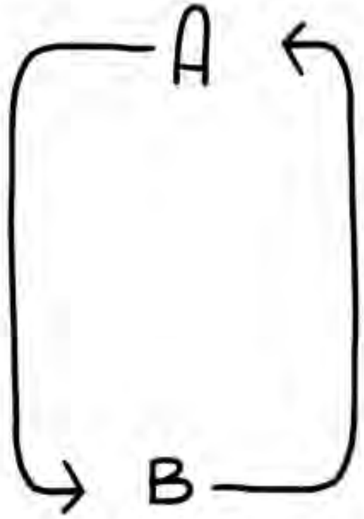
TYPES OF SYSTEM MAPPING



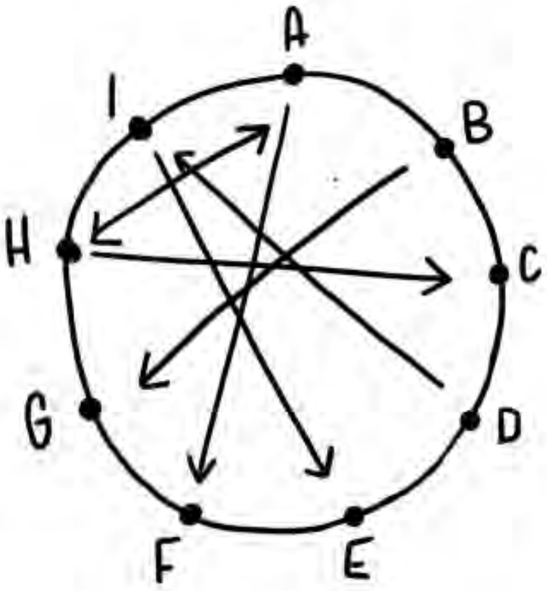
BEHAVIOUR OVER TIME GRAPHS



ICEBERG MODEL



CAUSAL LOOP DIAGRAMS



CONNECTED CIRCLES

DISRUPT DESIGN

METHODOLOGY

Systems Thinking

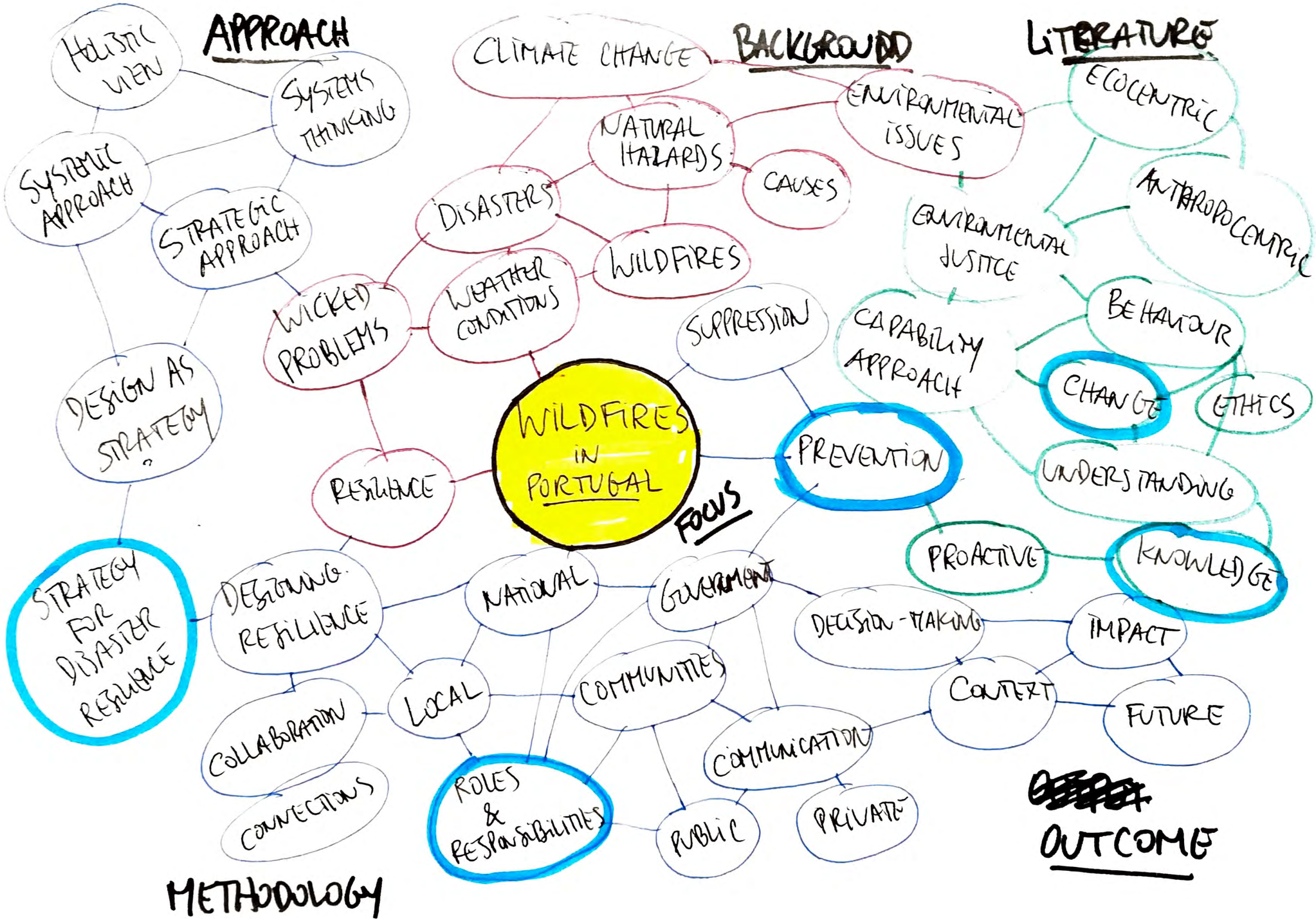
- big picture
- interconnections
- interdependences

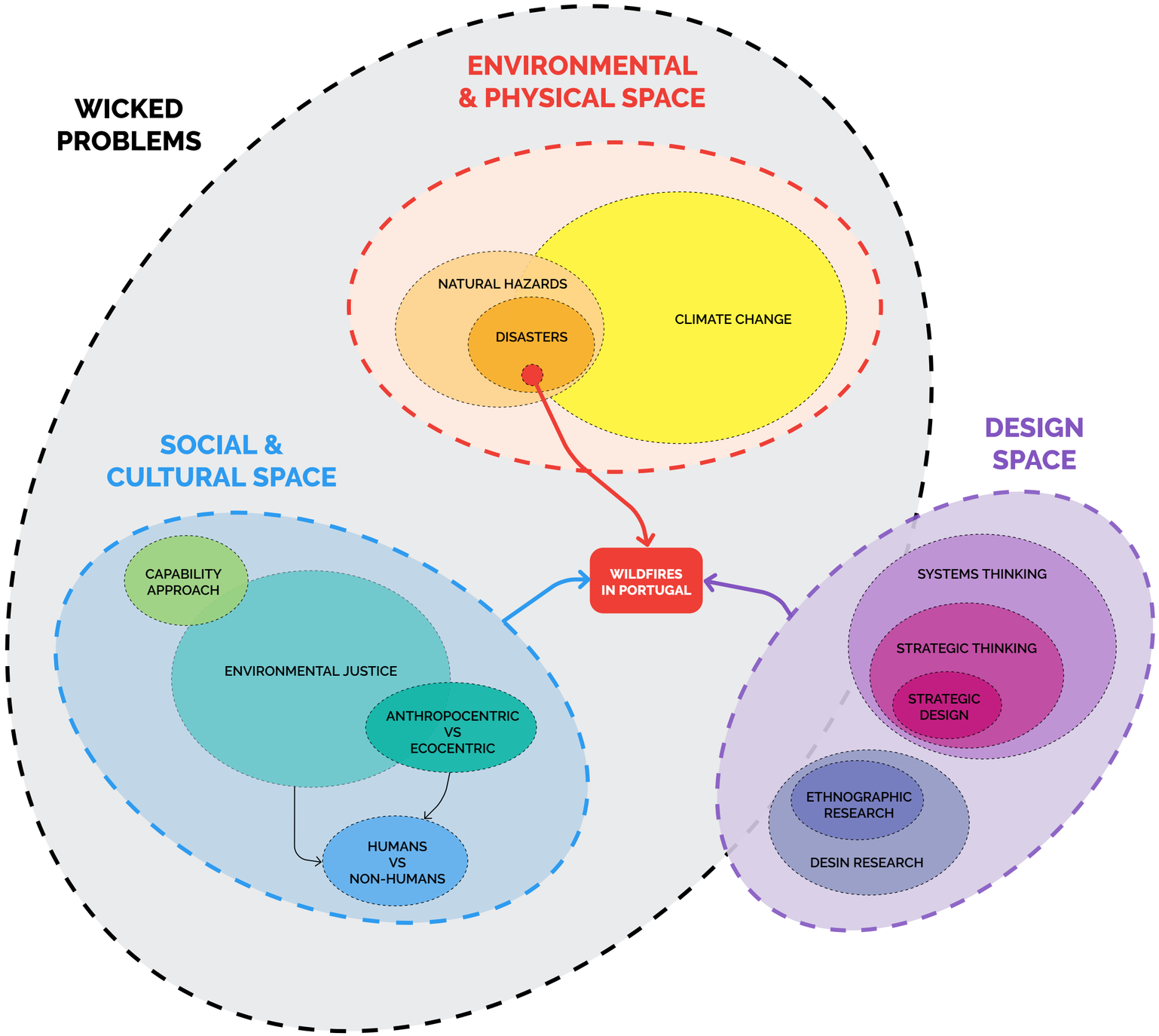
Qualitative Research

- ethnographic
- interviews
- behaviour
- context

Strategic Thinking

- focus
- meaning
- intervention
- outcome


APPROACH
HOLISTIC VIEW
SYSTEMS THINKING
SYSTEMIC APPROACH
STRATEGIC APPROACH
DESIGN AS STRATEGY
STRATEGY FOR DISASTER RESILIENCE
BACKGROUND
CLIMATE CHANGE
ENVIRONMENTAL ISSUES
NATURAL HAZARDS
CAUSES
DISASTERS
WILDFIRES
WEATHER CONDITIONS
WICKED PROBLEMS
RESILIENCE
WILDFIRES IN PORTUGAL
FOCUS
SUPPRESSION
PREVENTION
LITERATURE
ECOCENTRIC
ANTHROPOCENTRIC
ENVIRONMENTAL JUSTICE
CAPABILITY APPROACH
BEHAVIOUR
CHANGE
ETHICS
UNDERSTANDING
PROACTIVE
KNOWLEDGE
DESIGNING RESILIENCE
NATIONAL
GOVERNMENT
LOCAL
COMMUNITIES
COLLABORATION
CONNECTIONS
ROLES & RESPONSIBILITIES
COMMUNICATION
PUBLIC
PRIVATE
DECISION-MAKING
IMPACT
CONTEXT
FUTURE
OUTCOME
METHODOLOGY


WICKED PROBLEMS
ENVIRONMENTAL & PHYSICAL SPACE
NATURAL HAZARDS
DISASTERS
CLIMATE CHANGE
SOCIAL & CULTURAL SPACE
CAPABILITY APPROACH
ENVIRONMENTAL JUSTICE
ANTHROPOCENTRIC VS ECOCENTRIC
HUMANS VS NON-HUMANS
WILDFIRES IN PORTUGAL
DESIGN SPACE
SYSTEMS THINKING
STRATEGIC THINKING
STRATEGIC DESIGN
ETHNOGRAPHIC RESEARCH
DESIN RESEARCH

Stakeholders/Actors

Roles

Responsibilities

Relationships

Impact

What about the non-human actors?

GOVERNMENT

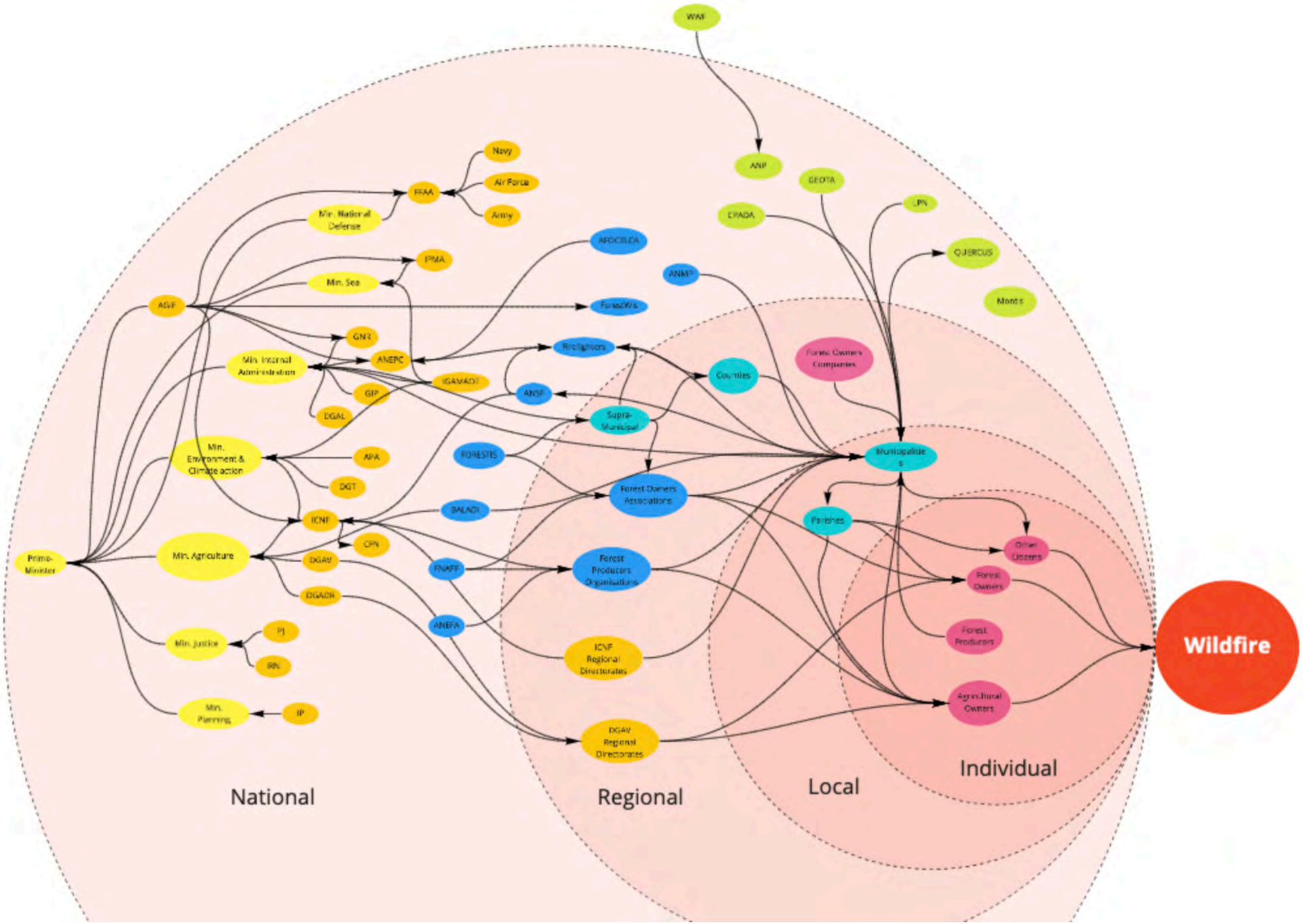
PUBLIC ENTITIES/ AGENCIES

PRIVATE ENTITIES/ ASSOCIATIONS

LOCAL GOVERNMENTS

NGOs

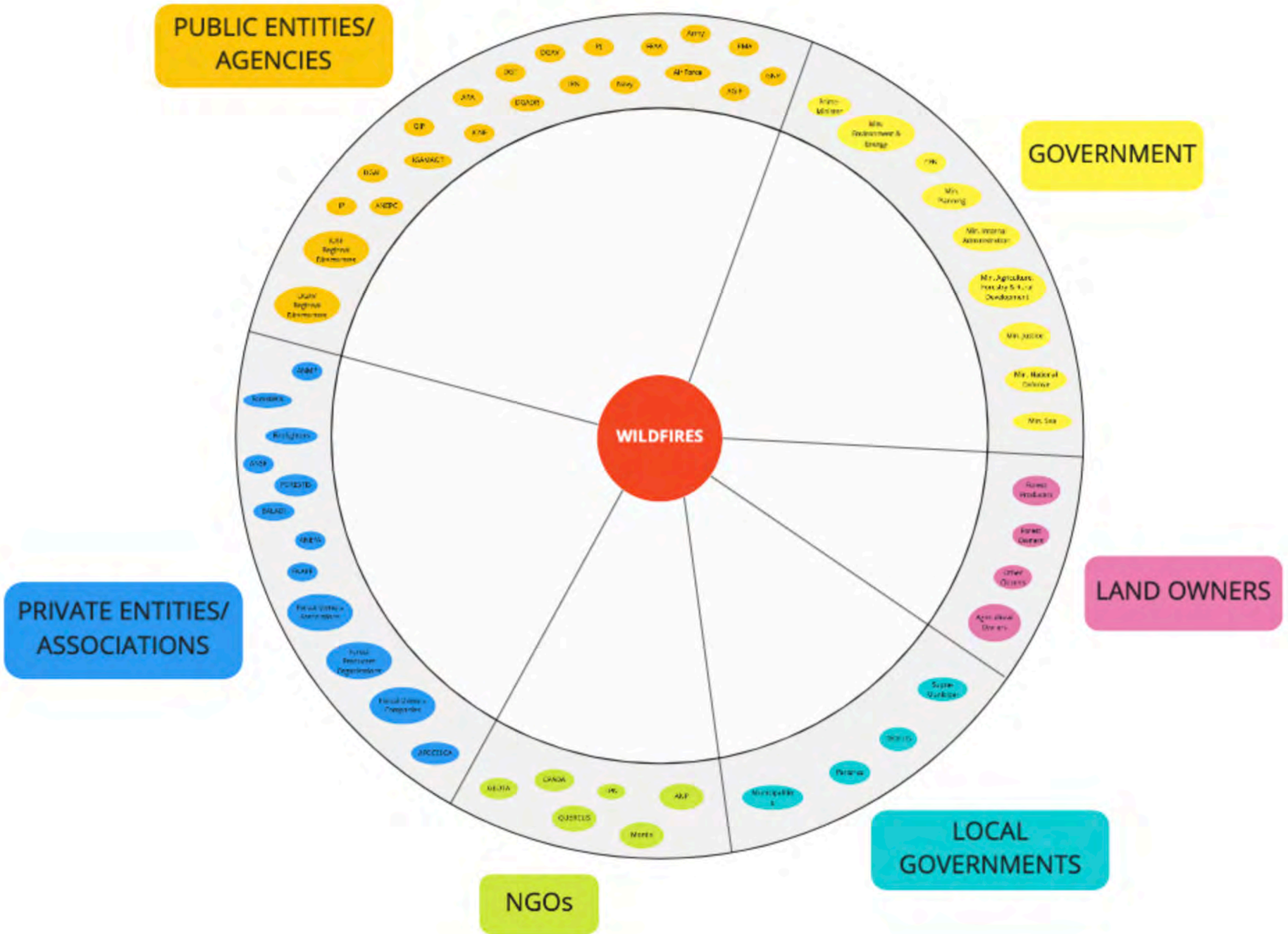
LAND OWNERS



miro

It’s Miro time!

What are the roles/responsibilities of
the different stakeholders?


PUBLIC ENTITIES/
AGENCIES
GOVERNMENT
WILDFIRES
PRIVATE ENTITIES/
ASSOCIATIONS
LAND OWNERS
LOCAL
GOVERNMENTS
NGOs

Food for thought

What is the **cause-effect of stakeholders decisions** in disaster prevention in the context ~~of wildfires~~?

What are the **challenges of a multi-stakeholder collaboration** in the development of strategies ~~for wildfires~~?

What are the **strategic opportunities** for a multi-stakeholder collaborative approach ~~in wildfire prevention in Portugal~~?

Feel free contact me:
André Santos
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References

Systems Thinking:
- “Unlocking the power of Systems Thinking” by Leyla Acaroglu (https://medium.com/disruptive-design/unlocking-the-power-of-systems-thinking-b3809eaab519)
- “Tools for Systems Thinkers: Systems Mapping” by Leyla Acaroglu (https://medium.com/disruptive-design/tools-for-systems-thinkers-systems-mapping-2db5cf30ab3a)
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Strategic Design:
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- Ryan, A. (2014). A Framework for Systemic Design. FormAkademisk - Forskningstidsskrift for Design Og Designdidaktikk, 7(4).
- Hill, D. (2014). Dark matter and trojan horses a strategic design vocabulary. Strelka Press, 18.
- Jones, P. (2014). Design Research Methods in Systemic Design.

Stakeholders:
- “Stakeholder Engagement in Environmental Decision-Making Processes” by Nataša Lovrić
- “Stakeholder Analysis for (Mediterranean) Wetland Governance: The Case of Ljubljansko Barje Nature Park, Slovenia” by Aleš Smrekar, Katarina Polajnar Horvat and Daniela Ribeiro
- Latour, B. (2005). Reassembling the social: An introduction to actor-network-theory. Oxford University Press.
- Colarič-Jakše, L.-M. (2015). Actor-Network Theory and Stakeholder Collaboration: The Case of Slovenia. Mediterranean Journal of Social Sciences.

THANK YOU!

ECOLOGIES OF CONTESTATION IN PARTICIPATORY DESIGN

Nitin Sawhney, Aalto University
Anh-Ton Tran, Georgia Institute of Technology

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Exemplary Process

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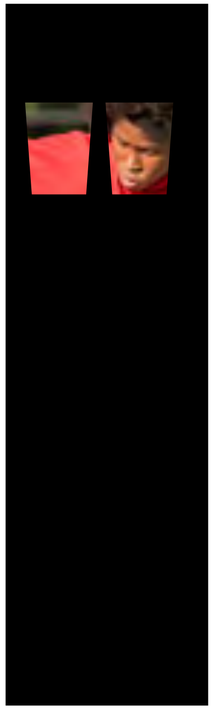

Seyla Benhabib: the idealized social conditions of deliberative democracy rarely exist in most public spheres.

Chantal Mouffe: for democracy “agonistic confrontation” is in fact its very condition of existence.

DRAWING ON PAR TO INFORM PD PRACTICE

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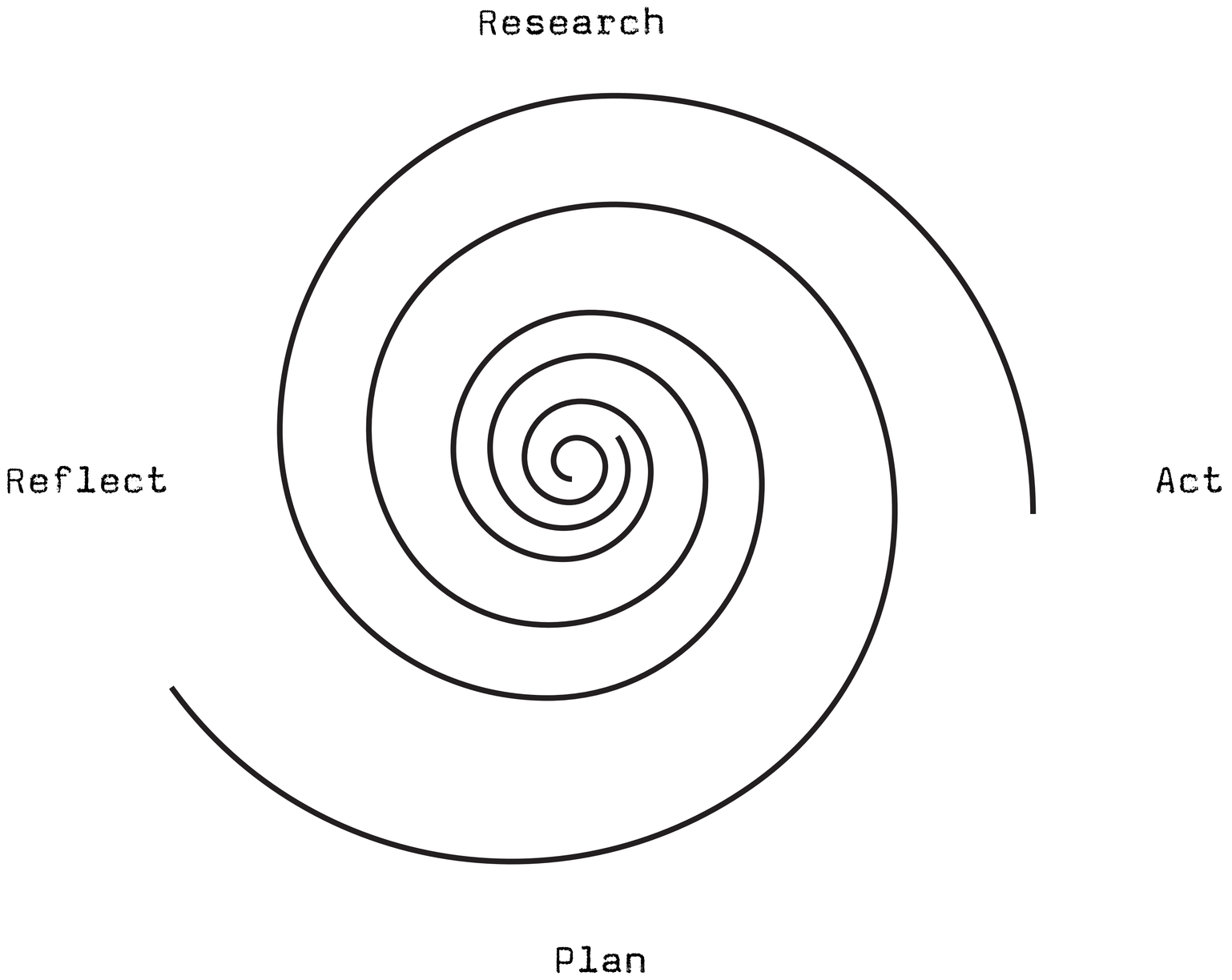
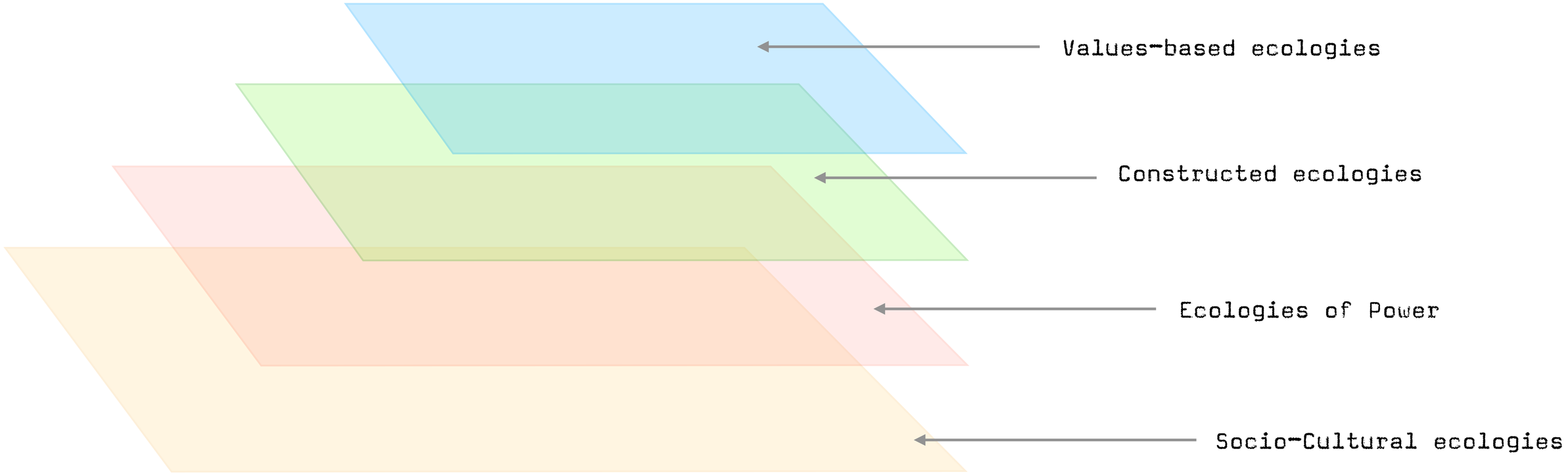
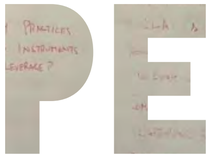
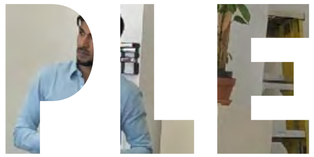


PARTICIPATORY ACTION RESERACH



ECOLOGIES OF CONTESTATION: A FRAMEWORK

THE PEOPLE'S CULTURAL PLAN

CO-OPTING PARTICIPATION

CreateNYC (2017)
https://createnyc.cityofnewyork.us/

PEOPLE'S CULTURAL PLAN: PLURALISTIC AGONISM EMERGES

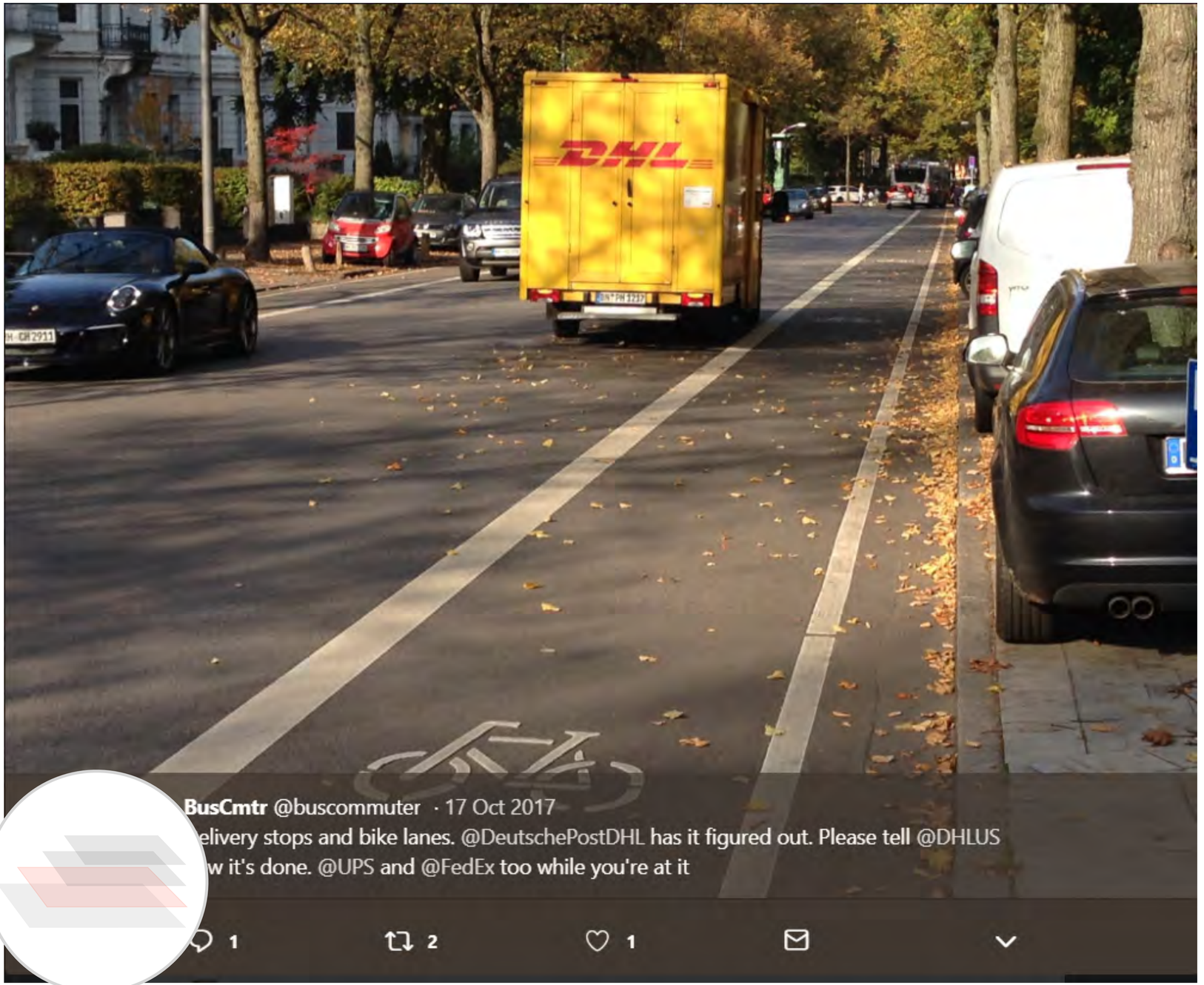
www.peoplesculturalplan.org

ADVOCATING FOR RADICAL EQUITY AND CIVIC AGENCY

https://www.facebook.com/pg/peoplesculturalplan/

URBAN MOBILITY

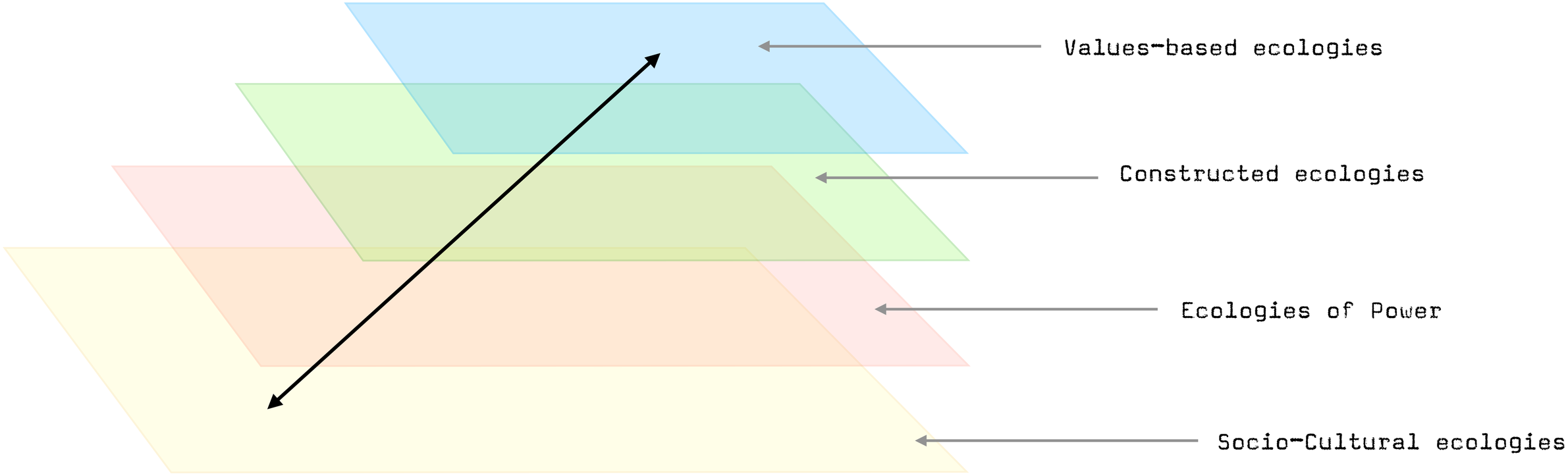
DATA WITH STAE



Urban Mobility Data:
Contested Bike Lanes

In Theory vs. In Practice

THE DESIGN OF THE ARTIFACT REFLECTED THE ISSUES OF POWER



HOW DO DESIGNERS RECONCILE THESE DIFFERENT ECOLOGIES TO TRANSFORM EMERGENT ANTAGONISM INTO AGONISM?

KEEPING THE STREET PLAYFUL

CONTESTATION EMERGES FROM SKATEBOARDING

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RECLAIMING AGENCY TO STAY TRUE TO ONE'S VALUES

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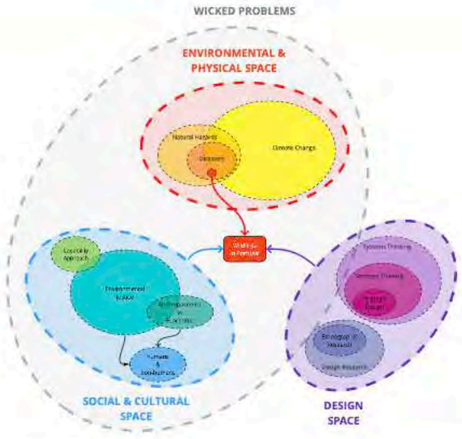
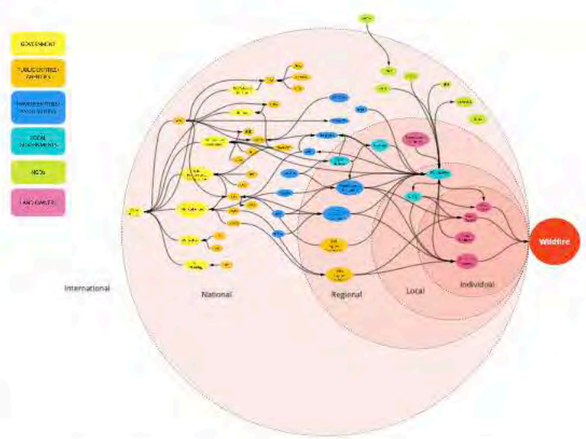
HOW DO WE CULTIVATE A CULTURE THAT EMBRACES CONTESTATION AND DISSENSUS IN PARTICIPATORY DESIGN?

Design as strategic tool in disaster prevention: case study of wildfires in Portugal

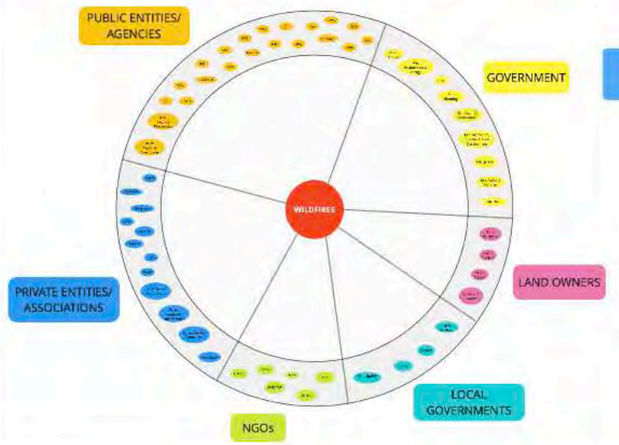
THESIS STRUCTURE
(SANTOS, 2020)



STAKEHOLDER MAP
(SANTOS, 2020)



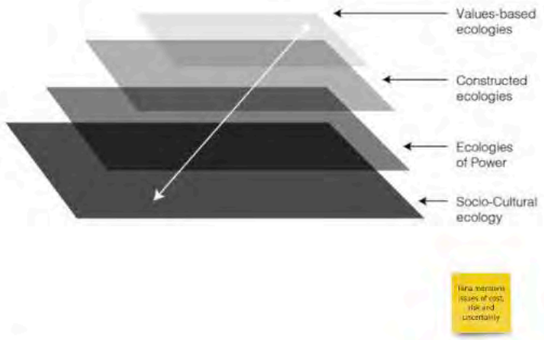
ROLES AND RESPONSIBILITIES MAP
EXERCISE - MAP THE ROLES/RESPONSIBILITIES OF THE DIFFERENT STAKEHOLDERS



Triin

kiko chen

Ecologies of Contestation in Participatory Design
FEEL FREE TO COMMENT FOR DISCUSSION AND REFLECTION

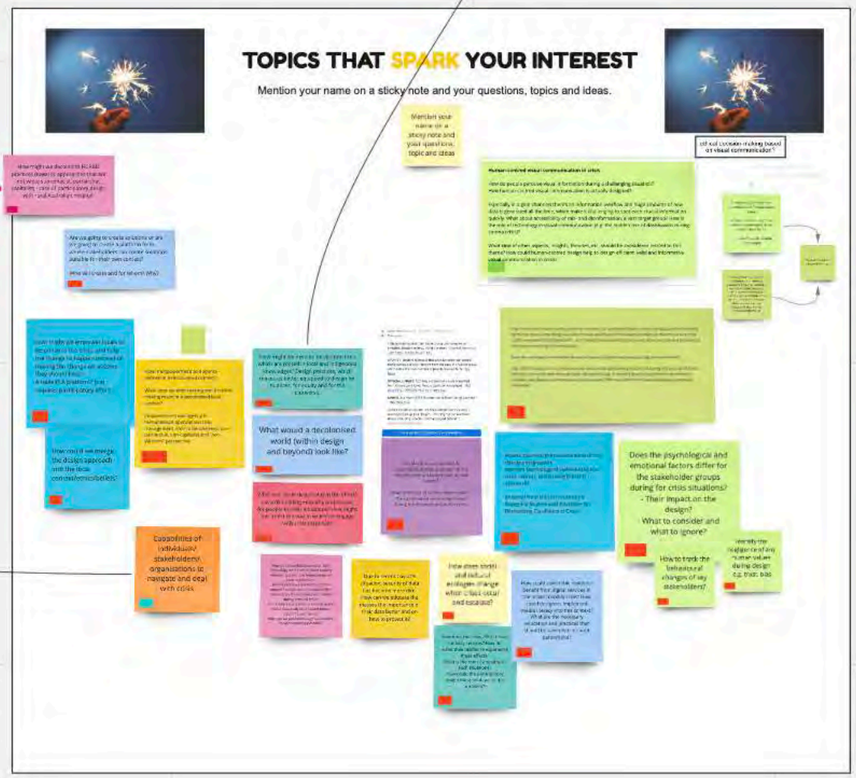


André Goncalves dos Santos
REFLECTION

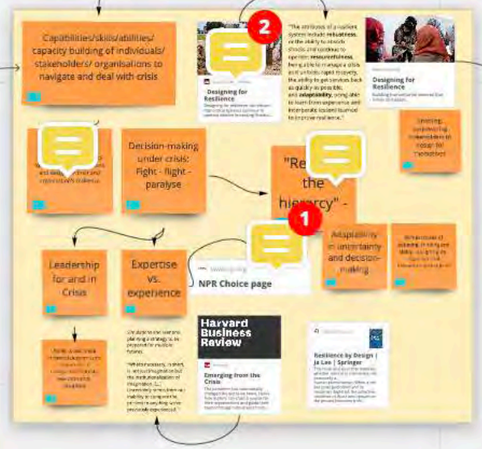
15%

Critique on design through humor / flipped views

Floris' Resources



Tiina's resources



kiko chen

Why do people respond so differently, even in the same culture?

André Goncalves dos Santos

28%

Next Tuesday: How do Health Agencies use Instagram for Crisis and Emergency Communication?

Aqdas Malik
Post-Doctoral Researcher, Department of Computer Science, Aalto University
July 07, 2020

CS-E4002: Human-Centred Research and Design in Crisis

Aalto University