The Impetus4Change Adaptalab 2023

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What is an Adaptalab?

The Impetus4Change (I4C) Adaptalab is an important part of the process of I4C developing climate services with a real impact. At the first Adaptalab in Paris from 29th November – 1st December, participants from different disciplines and sectors collaborated to develop innovative solutions for a specific problem.

The work process at the Adaptalab was based on (and adapted from) a hackathon. A hackathon is a collaborative workshop which brings together people from different backgrounds and disciplines to work together towards solving a problem and developing a solution/product.

The main aim for the first I4C Adaptalab was to get researchers and stakeholders to collaborate to develop ideas about new climate services. These ideas would act as a foundation for the mock-ups that I4C will subsequently develop.

Here, we explain some of the details about what happened at Adaptalab, what the results were, who attended and the way ahead.

What happened at the event?

The focus of Adaptalab is to get participants to collaborate and develop ideas. However, that collaboration needs to be grounded in a context. With this in mind, the first session of the event was focused on providing information about the I4C itself, what a climate service is and what kind of climate issues that Demonstrator cities are dealing with. These presentations are available via the following link:

We particularly thank the stakeholders from Paris and Bergen who presented during the session: Erwan Cordeau from Paris Region Institute, Silje Lund Sørland and Carina Knudsen from Sweco Bergen, and Thea Aske Haugen from Bergen municipality.

Once we had developed a common understanding about what I4C is aiming to do and the climate issues in the Demonstrator cities, then it was time to get into groups and start to collaborate. The main problem the groups worked on was the following:

The members of each working group were pre-defined and interdisciplinary. One person in each group was also invited to act as a coordinator for their group. These folks had previously attended an information session where we went through the task, the Adaptalab program, and the work process.

This work process was also presented at the beginning of the Adaptalab and was as follows:

1. **Getting to know one another.**

2. **Exploring the climate situation in the cities represented in each group.**

3. **Defining the aim of the climate service they would develop.**

4. **Innovating and designing the details around their climate service.**

5. **Communicating their climate service to the rest of Adaptalab (via a self-designed poster).**

Over the course of the three days, the groups designed a variety of innovative and insightful project ideas for new climate services. You can find the results further on in this report. Furthermore, networking was very important as Adaptalab also offered an opportunity for participants to connect with new collaborators within their own cities and across the I4C community. To facilitate networking, we included various activities to foster meaningful interactions between working groups.

One of the main networking activities happened on the second day. We adapted the speed-dating method to get the participants to meet new people and to develop ideas about how the project could be co-evaluated. There were 3 rounds of discussions based on three different elements of co-evaluation: Process, outcome, and impact. The whole activity got people talking across the working groups and gave insightful ideas about how the co-evaluation process in I4C can be further developed.

Who was at the Adaptalab?

The participants at the first Adaptalab spanned many sectors and many locations. There were natural and social scientists from the different work packages in the I4C project itself. There were also many stakeholders who took part and made this first Adaptalab a truly interdisciplinary co-production event.

Here is an overview of the sectors and cities that were represented. Here we define stakeholders as folks outside the main research core of the project and those interested in having a say in the services developed and potentially using them.

Stakeholders

- Paris
- Barcelona
- Bergen
- Prague
- Newcastle

Work packages

WP4 1
WP6 18
WP2 1
WP3 6
WP1 7
WP7
WP8 2
3
WP5 1

Sectors

- Natural science (21)
- Social science (8)
- Humanities (1)
- Public sector (14)
- Private sector and NGO (5)
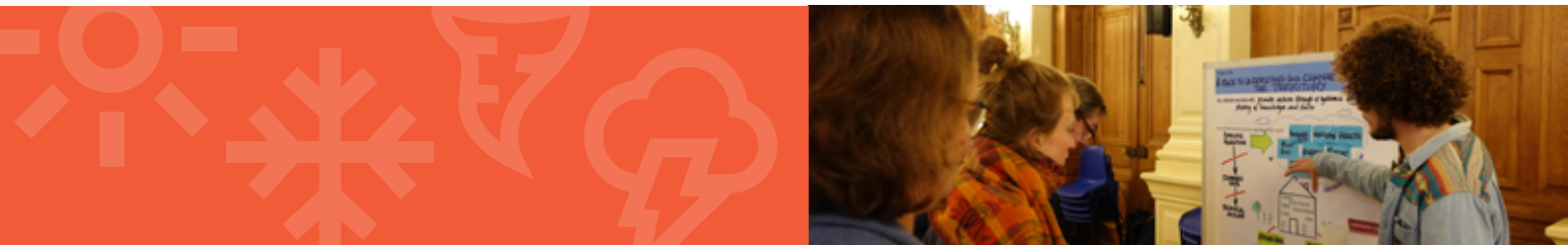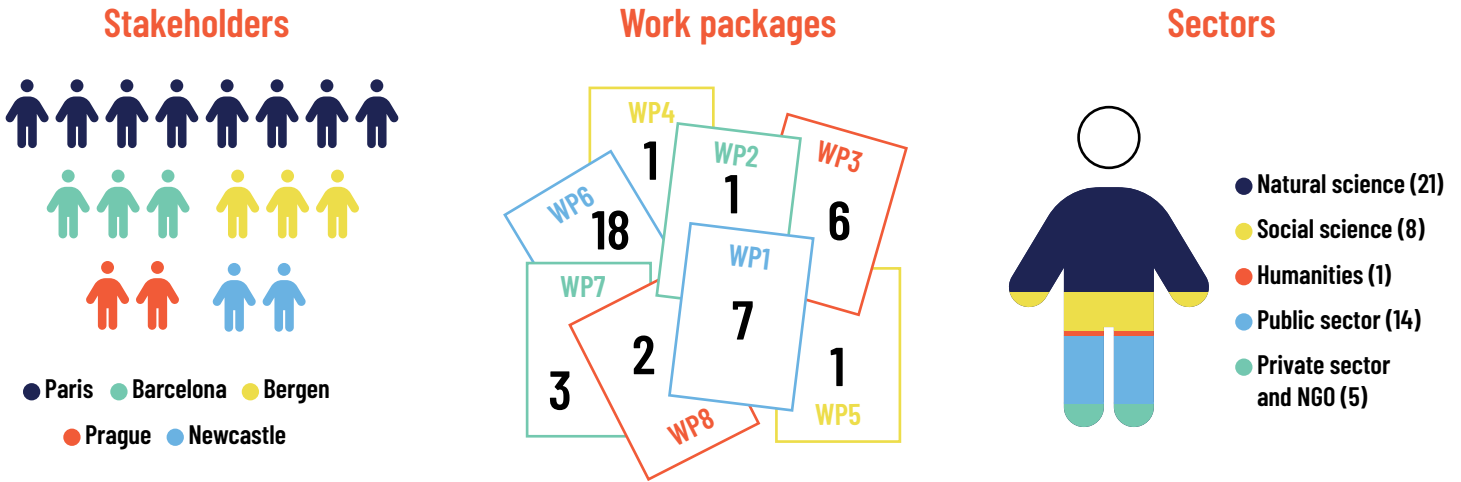
The Results

The climate services that they groups developed were presented on posters. The groups could fill out the pre-defined A0 sized templates with the ideas they had developed. Here you will find the posters from the 8 groups. These posters are being analyzed to find similarities and innovative ideas that I4C can integrate into the climate service mock-ups that the project will develop.

Takeaways from Adaptalab and the way forward

We feel that the structure of the event worked well and the location at L'Academie du Climat offered the right atmosphere to frame our discussions about climate adaptation.

We hope the participants agree that Day 1 served to provide context whereas day 2 and 3 were the key 'action days' where participants worked closely together on their solutions. Even if time was of the essence towards the end, based on the standard of the results, participants had sufficient time to prepare something adequately complex and thought through.

Now, the I4C multi-disciplinary researchers will go through all the results from Adaptalab and design the first iteration of the climate service mock up that I4C will focus on. This process will be published in a separate report and shared with all the Adaptalab participants. It will also be accessible via the I4C website.

Over the course of the 4-year project, there will be a total of 3 Adaptalab events hosted in different cities across Europe. The overall aim of the events is to ensure that local challenges and opportunities are considered when re-imagining climate services and feeding this information back into the work of the Demonstrator cities. This first Adaptalab was focused on co-design, and the subsequent two events will focus on co-development and co-evaluation. These themes were chosen since they relate closely with the co-production process which is essential to the Demonstrator cities. The next Adaptalab are currently estimated to take place in Bergen, Norway in 2025.

Thanks to everyone who contributed to making Adaptalab a success.

A PLACE TO UNDERSTAND AND CHANGE THE TERRITORY

I4C Climate Adaptalab

Our climate service will... promote actions through a systemic analysis, sharing of knowledge and data

How will the climate service operate and be used?

SPECIFIC QUESTION →

BIODIVER SITY · AGRICULTURE · HEALTH ✓

BUILT ENV. · ENERGY · ECONOMY

JUSTICE · URBAN PLANNING

SYSTEMIC APPROACH ✓

DONNEES DATA

TECHNICAL ANSWER

Justice
Science-based
Open Accountable
Local   free
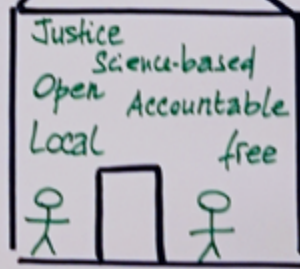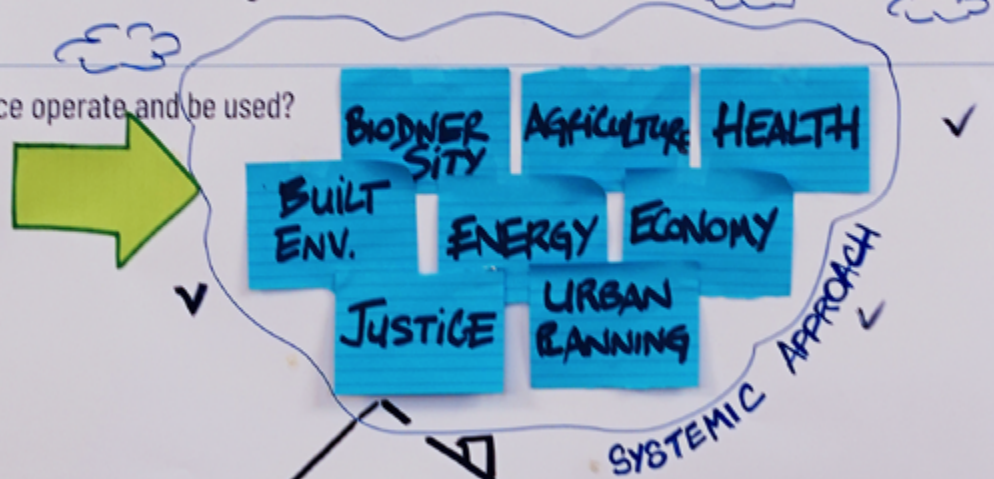
communication dissemination

climate data
· ref climate data
· xtreme events
· worst case scen.

support
· advices
· case studies
· user network

interdisciplinary

dialogues

possible actions

Thematic databases

What are the steps to make this climate service a reality?

1. Find a hosting institution
2. Recruit a coordination team
3. TRY

Group members: Remy, Mathilde, Antoine, Sabine, Thierry & Aude

Project title

PARIS BRÛLE-T-IL ELLE?

I4C Climate Adaptalab

Our climate service will... provide an iterative kit on heat-drought systemic crisis to define stress-tests & preventive action

How will the climate service operate and be used?

RANDOM JOKER

plausible
event-based storylines
(2022 - 2030)

heat wave   drought   forest fire

TERRITORY INFORMATION

ISSUES
SENSITIVITY
COPING ABILITY
PREPARDNESS

ITERATIVE KIT

CRISIS ROOM

1-year cycle

Operational Stress Test

Transformative
- changes in the city

Actions
- Regulation
- Preventive Plans

4 PM
250k€

What are the steps to make this climate service a reality?

- Prepare the storyline
  · define indexes
  · define plausibility
  · data narrative
  · visualization

- Prepare Actor Network
  · identification
  · mobilisation
  · co-construction
  · long-term implication
  · Draft/test/ordinary improve

- Prepare the territory info
  · define layers list
  · data collection
  · interactions with data producer
  · visualization

Group members: Erwan, Eulalia, Nicolas, Valery, San

Project title

CLIMATE MAP

I4C Climate Adaptalab

Our climate service will... IMPROVE THE COMMUNICATION OF PHYSICAL CLIMATE RISK ON THE LOCAL SCALE FOR URBAN PLANNING.*

*ADDITIONAL SECTORS TO BE INCLUDED: HEALTH, ENERGY, NATURAL RESOURCES MANAGEMENT

How will the climate service operate and be used?

SNOW & ICE MELT
HEAVY RAINFALL
INCREASE IN TEMPERATURE
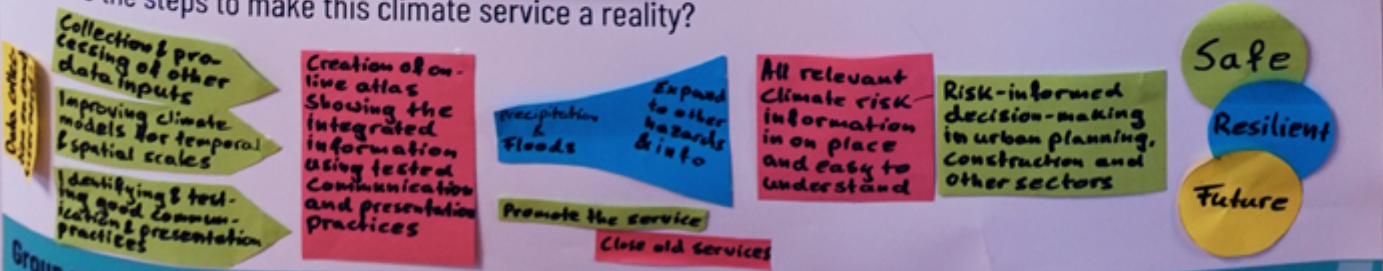INCREASE IN OCEAN TEMP
STRONG WINDS
SEA LEVEL RISE

CLIMATE DATA

Land use

IMPACT DATA

INFRASTRUCTURE DATA — Eco-data

RESPONSE-DATA — GREEN ROOFS

CURRENT & FUTURE BUILDING PLANS

NATUREBASED SOLUTIONS   TREES

AVALANCHES
FOREST FIRE
URBAN FLOODING
STORM SURGES
DROUGHTS
FLOODS
COSTAL EROSION
SOIL QUALITY CHANGES
WATER QUALITY CHANGES

INTERFACE: MAP/ATLAS

Climate Impacts
☐ Floods (river)
☐ Avalanches
☐ SLR
☐ Floods (urban)
↓
TICK ALL YOU USED
TIME PERIOD
from   to

AMOUNT OF PRECIPITATION
DECREASING IMPACT
TIME SERIES
PARA
TIME
FLOOD

TEMPORLA SCALE
CURRENT & FUTURE SITUATION
Timeseries

Where to build?
How to build?
Existing buildings?
Whether to retreat?
Protective measure?

URBAN PLANNING DECISIONS

TARGET GROUP
People working in urban planning (future: to be expanded to other sectors)

What are the steps to make this climate service a reality?

Collection & processing of other data inputs

Improving climate models for temporal & spatial scales

Identifying & testing the good communication & presentation practices

Creation of online atlas showing the integrated information using tested communication and presentation practices

precipitation & Floods

Expand to other hazards & info

All relevant climate risk information in on place and easy to understand

Risk-informed decision-making in urban planning, construction and other sectors

Promote the service

Close old services

Safe
Resilient
Future

Group members: ASTRID, JONATHAN, SILJE, THEA, AMY, VASSILIS

6

Project title

I4C²
INFLUENCERS FOR CLIMATE CHANGE

I4C Climate Adaptalab

Our climate service will... EMPOWER INDIVIDUALS AND COMMUNITIES to BECOME CLIMATE INFLUENCERS USING ACCURATE AND RELATABLE SCIENTIFIC INFORMATION.

BACKGROUND

A NUMBER OF
POLITICAL FAIL
NEWS HINDER
WE NEED to I
CHANGE THROU
OF THE RISKS
BETWEEN POLIT
COMMUNITIES
LARGE.

EVERYONE CAN
INFLUENCER.
RIGHT INFORM
INFLUENCES t
— i4C

How will the climate service operate and be used?

CITY MAP

KEY

— DROUGHT
— HEAT SPOTS
— FLOOD RISK

THIS IS WHERE YOU LIVE

CLIMATE RISKS

WITH ADAPTATION

WITHOUT ADAPTATION

PRESENT
T
2023

WORLD@2°C
T

WORLD@4°C
T

CLI
SC

POLITICS ←

WHAT'S BEING DONE?
☐ ...... ✳ ✳ ✳
☐ ...... ✳ ✳ ✳

WHAT CAN I DO?
☐ ...... ORGANIZATIONS
☐ ...... MEASURES
☐ ...... INITIATIVES

WHOM CAN I CONTACT?
☐ ......
☐ ......

WHAT AM I DOING?
(PERSONAL STORIES)
TEXT
VIDEO

FEEDBACK
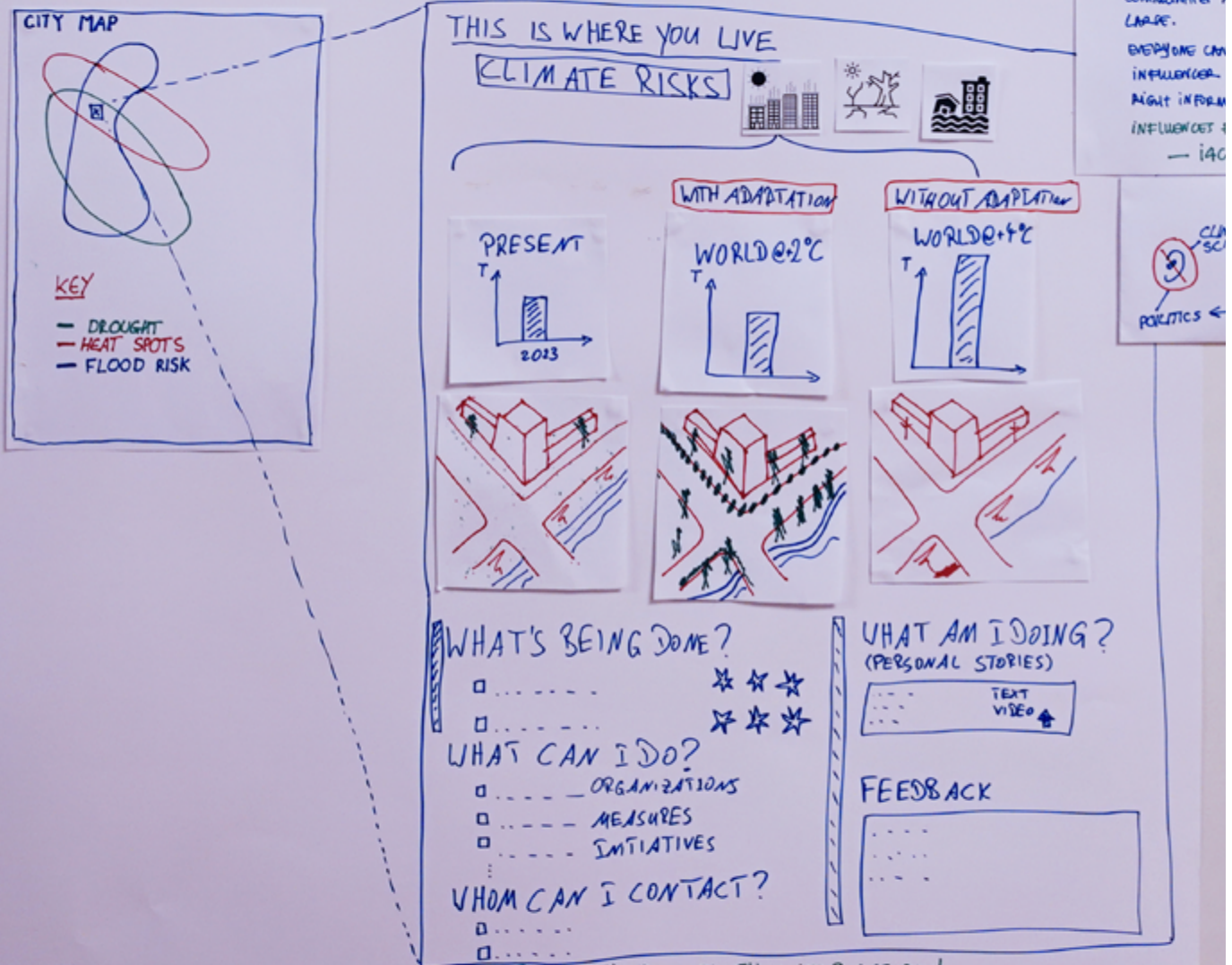
'EVERYONE CAN BE A CLIMATE INFLUENCER... WITH THE RIGTH INFORMATION'

What are the steps to make this climate service a reality?

· ONLINE PLATFORM AND APP

· VIDEO AND VISUAL CONTENT

· MULTIPLE CHANNELS : LINKEDIN, TICTOK, INSTAGRAM. FACEBOOK, ...

Group members: MINERVA, DARREN, MARTA, FRÉDÉRIC, CLAAS, CARL.

Project title S⁴c HADE

Scenario for Heatwave Adaptation

I4C Climate Adaptalab

Our climate service will... help localize and prioritize heatwave adaptation measures in metropolitan areas.

How will the climate service operate and be used?

High-resolution climate modelling:

- high-temporal resolutions (day/night, month-to-month)
- different climate scenarios

GHG emissions

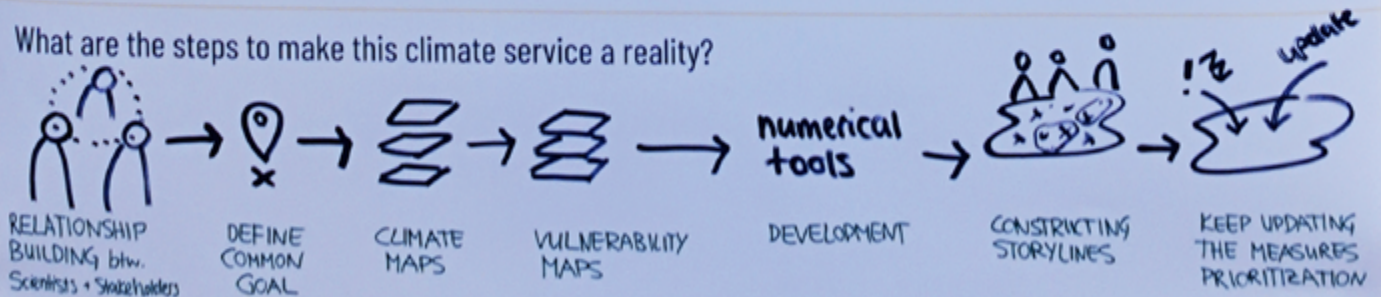① VULNERABILITY TO HEAT

— EXTREME HEAT MAP

VULNERABILITY — low income
= elderly
= unadapted buildings
= (...)

② WHERE TO ADAPT FIRST?

INTERACTIVE MAP → PARTICIPATORY STORYLINES

Priority List

IMMEDIATE   LONG-TERM
[NOW!]   [   ]
ADAPTATION-MAPS

WHAT?

③ KEEP IT FRESH

- updating priority measures w. multi-annual climate information
- informing preparedness measures for actions w. seasonal climate information
- broaden stakeholder-engagement

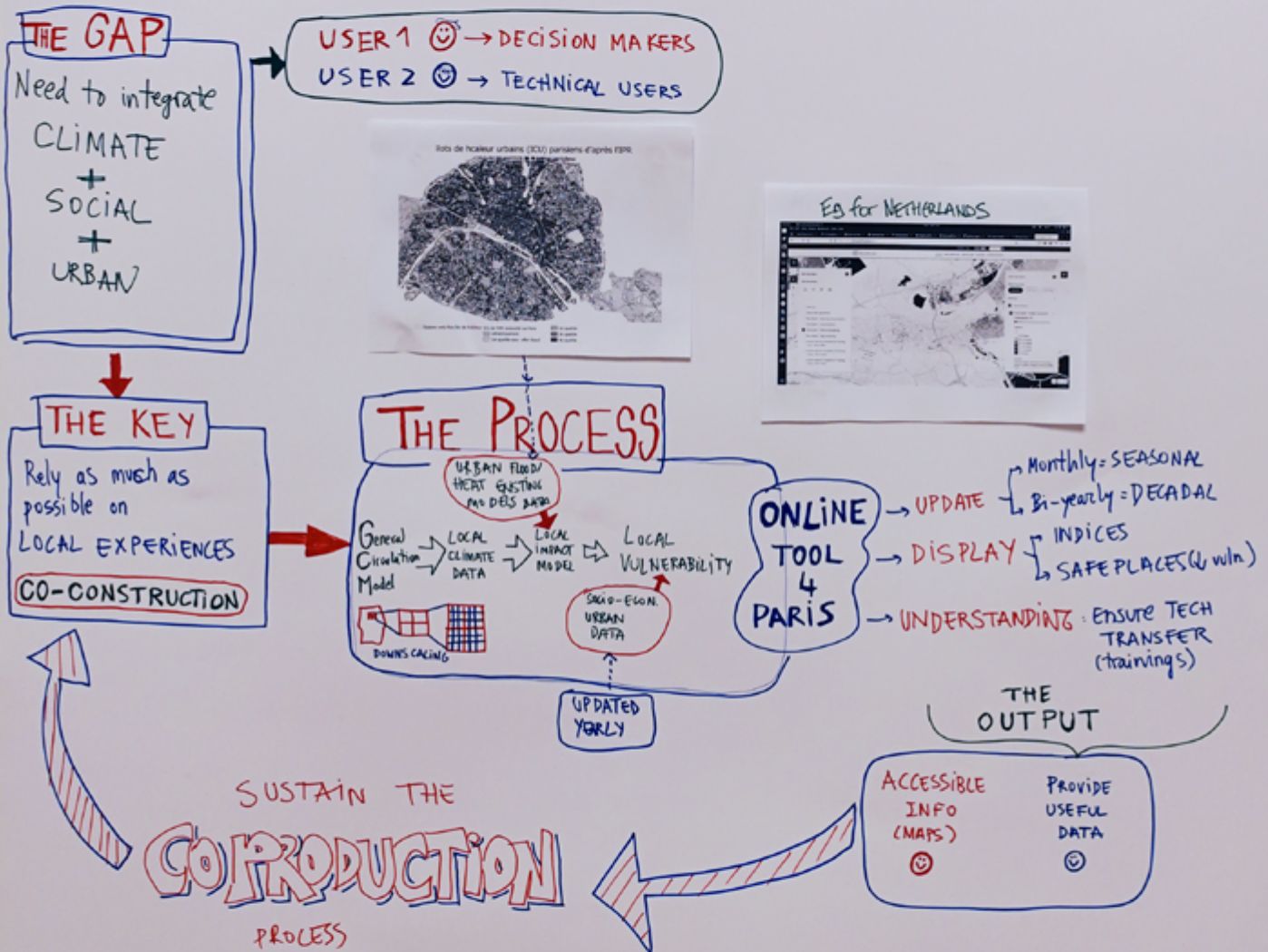---

What are the steps to make this climate service a reality?

numerical tools

update

RELATIONSHIP BUILDING btw. Scientists + Stakeholders → DEFINE COMMON GOAL → CLIMATE MAPS → VULNERABILITY MAPS → DEVELOPMENT → CONSTRUCTING STORYLINES → KEEP UPDATING THE MEASURES PRIORITIZATION

Group members: Dragana, Lea, Jules, Julien and Léa
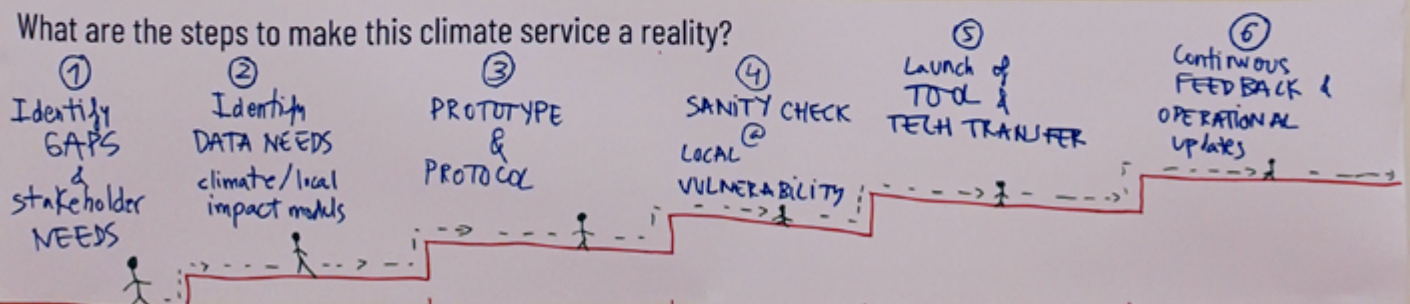
PARIS K

I4C Climate Adaptalab

Our climate service will... Provide the Ville de Paris Climate Office with a map tool to identify the most at-risk and resilient neighbourhoods to help support decision-making across the municipality for heat and droughts in the short and near term.

How will the climate service operate and be used?

THE GAP
Need to integrate
CLIMATE
+
SOCIAL
+
URBAN

USER 1 😊 → DECISION MAKERS
USER 2 ☺ → TECHNICAL USERS

Ilots de chaleur urbains (ICU) parisiens d'après ISPE

EB for NETHERLANDS

THE KEY
Rely as much as possible on
LOCAL EXPERIENCES
CO-CONSTRUCTION

THE PROCESS
URBAN FLOOD/ HEAT EXISTING MODELS DATA
General Circulation Model → LOCAL CLIMATE DATA → LOCAL IMPACT MODEL ⇒ LOCAL VULNERABILITY
DOWNSCALING
SOCIO-ECON. URBAN DATA
UPDATED YEARLY

ONLINE TOOL 4 PARIS
→ UPDATE ⎰ Monthly = SEASONAL ⎱ Bi-yearly = DECADAL
→ DISPLAY ⎰ INDICES ⎱ SAFE PLACES (& vuln)
→ UNDERSTANDING : Ensure TECH TRANSFER (trainings)

THE OUTPUT
ACCESSIBLE INFO (MAPS) 😊
PROVIDE USEFUL DATA ☺

SUSTAIN THE
COPRODUCTION
PROCESS

What are the steps to make this climate service a reality?

① Identify GAPS & stakeholder NEEDS

② Identify DATA NEEDS climate/local impact models

③ PROTOTYPE & PROTOCOL

④ SANITY CHECK @ LOCAL VULNERABILITY

⑤ Launch of TOOL & TECH TRANSFER

⑥ Continuous FEEDBACK & OPERATIONAL updates

Group members: PALOMA MARIE ANTHONY EREN SAM
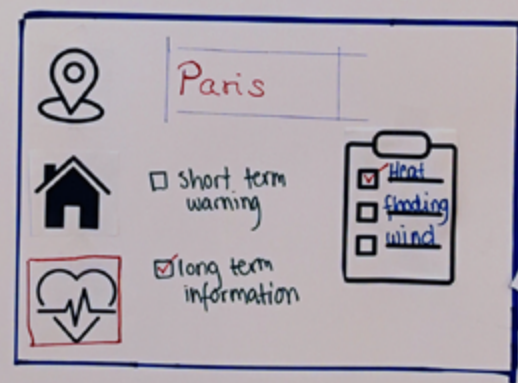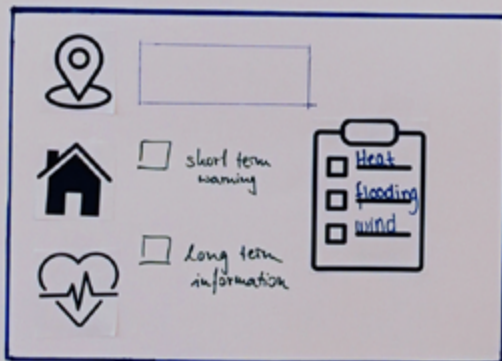
impACT

I4C Climate Adaptalab

Our climate service will... develope understandable impact warning and information system for climate events

How will the climate service operate and be used?

BACKGROUND DATA

- seasonal & interannual predictions
- confidence levels
- physical climate risks
- health information
- urban planning
- materials, construction

all information & recommendations in one place.

short term warning

long term information

Heat
flooding
wind

Paris

☐ short term warning

☑ long term information

Heat
flooding
wind

meteo. statement — high risk for unnormally high temperatures

recommendation — stay in shadow, drink water reduce physical activity ...

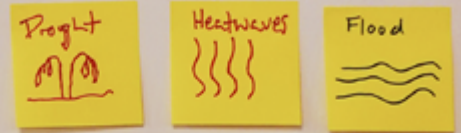## What are the steps to make this climate service a reality?

Step 1: Stakeholder Engagement
- Intrawares
- Met and climate service
- Urban planners
- Ministry of climate
- Ministry of Health

Step 2: Funding Sources

Step 3: Workshop with Stakeholders

Step 4: Develope Prototype

Step 5: Test group + feedback

Step 6: FINAL PRODUCT

Group members: Stephanie Mayer, Carina Knudsen, Helena Kazmazová, Ivan Poga-Gonzalez, Kun Xie

I4C Climate Adaptalab

Our climate service will... provide a flexiable, modular architecture anchored by an interdisciplinary development team

How will the climate service operate and be used?

Droght

Heatwaves

Flood

Target Group
- High level officials
- Policy maker
- Dept. Heads
- civil Groups

hierarchical consistency

Muni Adapt Core

Health
- heatwaves
- air quality
- water quality

Infr.
- flooding
- damage loss
- building

Energy
- draught
- heat waves
- Cooling demands

?

Target Groups:
- Depts.
- Offices
- Businesses
- NGO's

X-Sectoral consistency
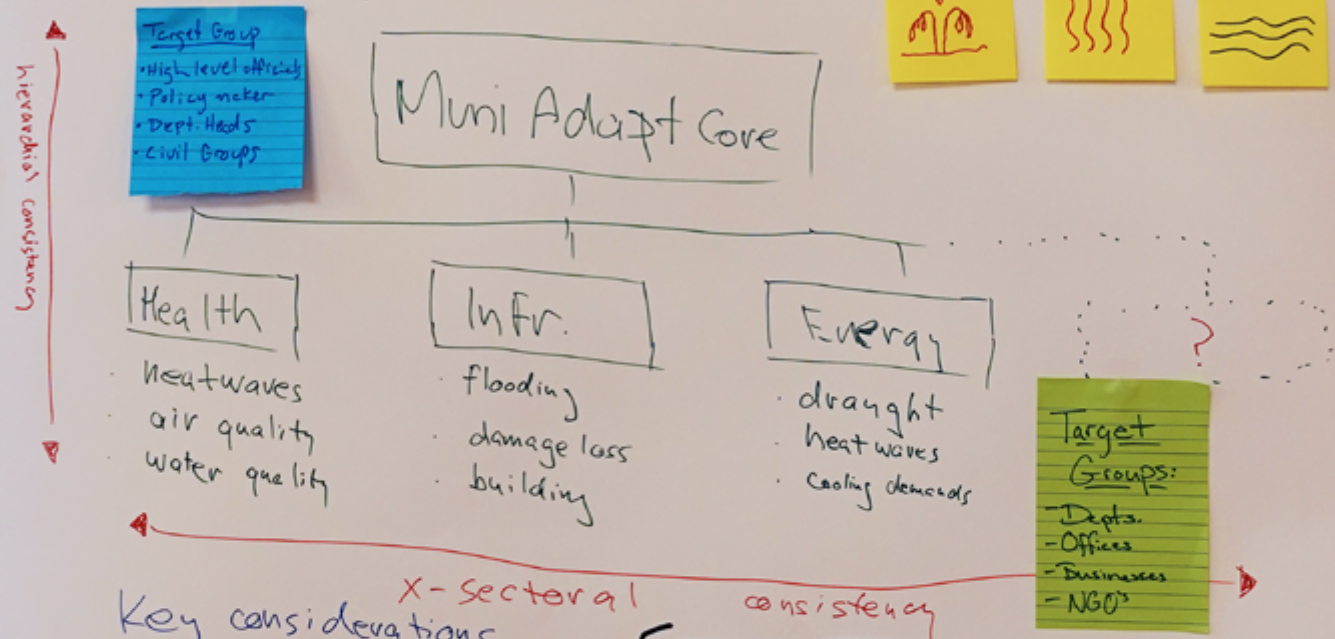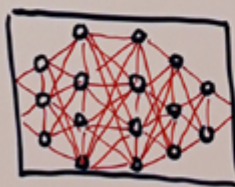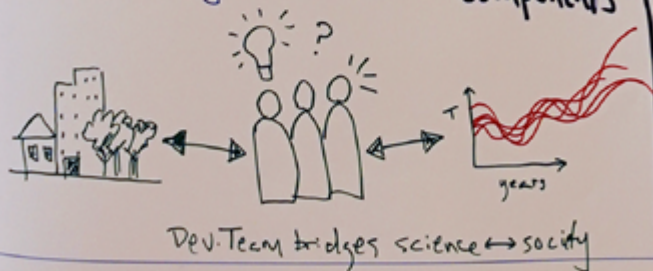
Key considerations
- consistency of information
- mediation
- dedicated development team
- continuity in provision
- periodic evaluation
- training

Additional Components

- Cultivate Community engagement/Citizen Sci.
- Adaptationincubators
- Mental mapping

=

- integrate emerging cutting edge devs.

=

years

Dev. Team bridges science ↔ society

What are the steps to make this climate service a reality?

1. Find Funding
2. Find a home (regional, city, university...)
3. Establish a team (Key muni. actors, soc. sci., phys. sci., soft dev, UI/UX,...)
4. GO!!!

Group members: Tomáš Halenka, Lu Li, Gavin Lamb, Stefan S., Aleš Urban, Marie Kazmukova