



Delft University of Technology

Citizen Voices in Climate Action

The role of interface design in digital engagement

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Citizen Voices in Climate Action

The role of interface
design in digital
engagement


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Delft University of Technology, Rotterdam University of Applied Sciences & Erasmus University

AGENDA

- Motivation & Background
- Methodology
- Prototypes
 - CmC platform
 - BIO-CiVo platform
- Results
- Conclusions & Outlook

Make cities
healthier, more
sustainable,
climate-resilient, ...

An aerial photograph of a densely packed urban environment, likely in a Mediterranean or European city. The image shows a grid-like pattern of streets and buildings. Most buildings are multi-story, with light-colored facades and prominent red-tiled roofs. There are some taller, modern buildings interspersed among the older structures. The overall impression is one of high population density and a well-established built environment.

A large part of the built environment is
privately owned



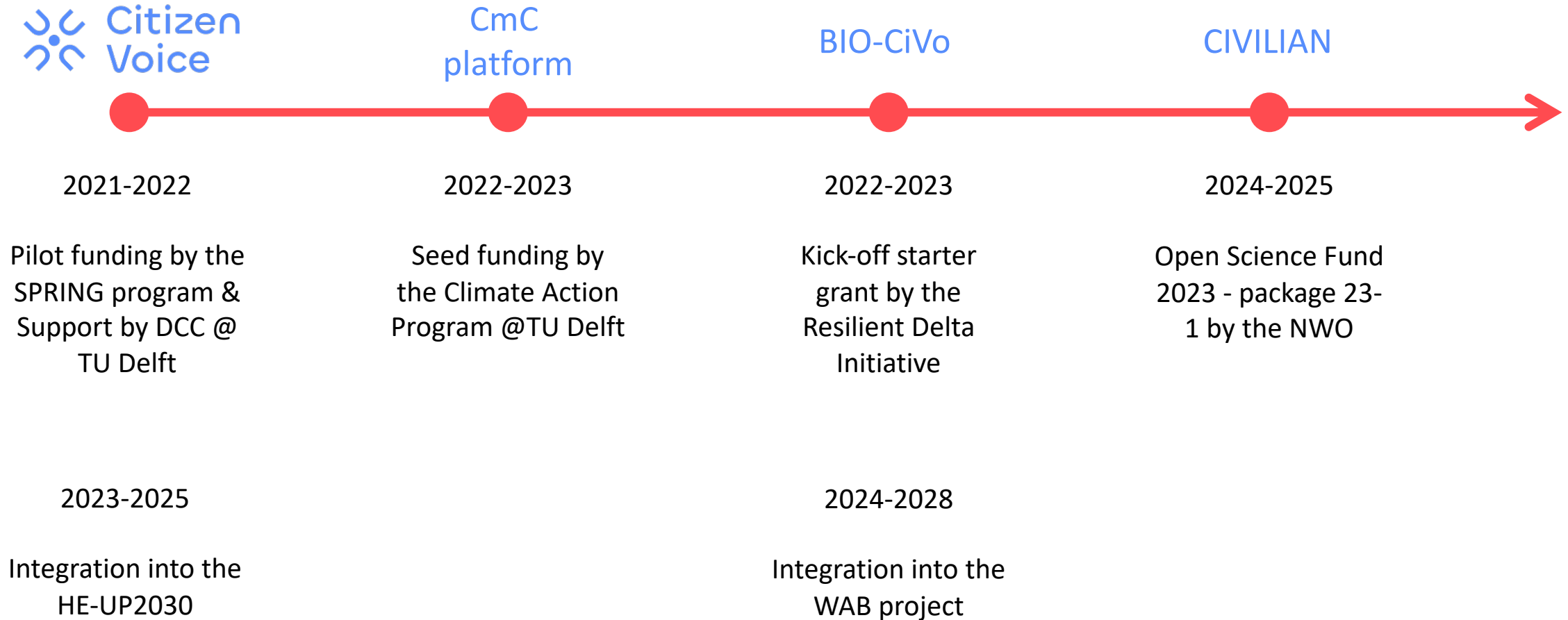




Make cities healthier,
more sustainable,
climate-resilient, ...

Requires the engagement of citizens!

Our journey



Today





SeeClickFix
Officials and neighbors have come together on SeeClickFix to resolve millions of issues. Let's get to work!



www.fixmystreet.com

FixMyStreet
Report, view, and discuss local street-related problems.

www.ichangemy...



I Change my City

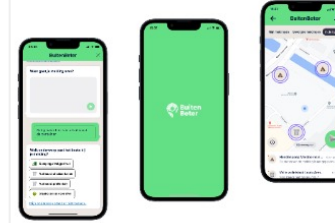
Start with your neighbourhood to bring the change. Improve your city and its quality of life.

consulproject.nl



CONSUL

Free software for citizen participation



www.buitenbeter.nl

BuitenBeter - Snel en makkelijk melden met je Smartphone. Werkt in heel Nederland!

BuitenBeter heeft een mega update gekregen. Niet alleen het uiterlijk van de app is erop vooruitgegaan. Zo zijn er ook enorm veel nieuwe functionaliteiten bijgekomen die het maken van meldingen voor jou nog eenvoudiger maakt. Met elke melding, komen wij...

www.transformc...



Transformcity

Urban development around the world is shifting from greenfield to transforming and densifying existing areas. How do you realise your goals and tackle all the different local challenges and transitions when you are dealing with fragmented ownership and ...



citizenos.com

Home - CitizenOS

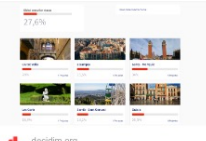
Let's decide together! Want a more participatory society? So do we! We're a civic tech non-profit, here to help you engage in more inclusive decision-making. Explore our training, projects, and free open-source participation platform. View Projects Use ...



betrireykjavik.is

Betri Reykjavík - Samráðsvefur Reykjavíkurborgar

Velkomin á samráðsvef Reykjavíkurborgar. Vefurinn er notaður til þess að kalla eftir afstöðu og áliti borgarbúa við hin ýmsu verkefni Reykjavíkurborgar auk þess sem hér er kallað eftir hugmyndum í verkefni Hverfið mitt.



decidim.org

Decidim

The Decide Mérida digital platform was an opportunity that opened as never before the mechanisms of citizen participation for the elaboration of the Municipal Development Plan of Mérida 2018-2021. We had more than 3,000 citizen interactions including pr...



dipas.org

DIPAS.org | DIPAS

DIPAS verbindet das Hamburger Online-Beteiligungstool mit digitalen Planungstischen zu einem integrierten digitalen System zur Bürgerbeteiligung. Mit DIPAS können Bürgerinnen und Bürger von zu...

chilecracia.org

Plataforma de participación ciudadana

¿Qué fue Chilecracia? Chilecracia permitió que miles de personas colaboraran en la priorización de propuestas de política pública. Chilecracia presentó una experiencia de participación experimental en democracia digital. ¿Quiénes crearon

Digital platforms

www.citylab010.nl

Home

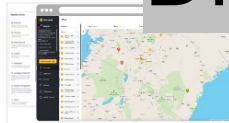
test4



voorjebuurt.nl

Voor je Buurt | Samen voor sociale en groene buurten

Bij Voor je Buurt geloven we in de kracht van crowdfunding om maatschappelijke en groene buurtinitiatieven een podium te geven en een stap verder te brengen.



www.ushahidi.com

Crowdsourcing Solutions to Empower Communities

Ushahidi is an open source software application which utilises user-generated reports to collate and map data.

adhocracy.plus



adhocracy+/Best Practice

adhocracy+ makes digital democracy easy - for everyone no matter where.



App de participación ciudadana, gestión de incidencias y consultas sobre medio ambiente para tu ayuntamiento - Línea Verde

Línea Verde es una aplicación multiplataforma que pone la tecnología al servicio de la gestión, comunicación y cuidado medioambiental de su municipio. Permite notificar incidencias al ciudadano y gestionarias desde el ayuntamiento con eficacia y sencill...



maptionnaire.com

Maptionnaire | Community Engagement Platform

Maptionnaire is the digital heart for building cities together!

debatomap.fr

Debatomap 2022

Debato en vuejs

crowdgauged.org



CrowdGauge.org

CrowdGauge is an open-source framework for creating educational online games. It first asks users to rank a set of priorities, then demonstrates how a series of actions and policies might impact those priorities. The third part of the sequence gives use...



felt.com

Felt - The best way to work with maps on the internet

Felt lets you create maps collaboratively, using world-class data, and share them in a single click. For team projects or epic adventure with friends.



www.tudeft.nl

Participatory Value Evaluation (PVE)

Participatory Value Evaluation (PVE) is a new method for evaluating policy options, and to facilitate the participation of large groups of citizens. The essence of PVE is that citizens are able to give advice about a government choice, in an easy-to-ace...



Join the Digital Movement Now

www.citizenlab.co

Community Engagement Platform: Online Software | CitizenLab

CitizenLab is an online community engagement platform for local governments. Engage more people, manage input easily and drive better decisions. Discover it now!



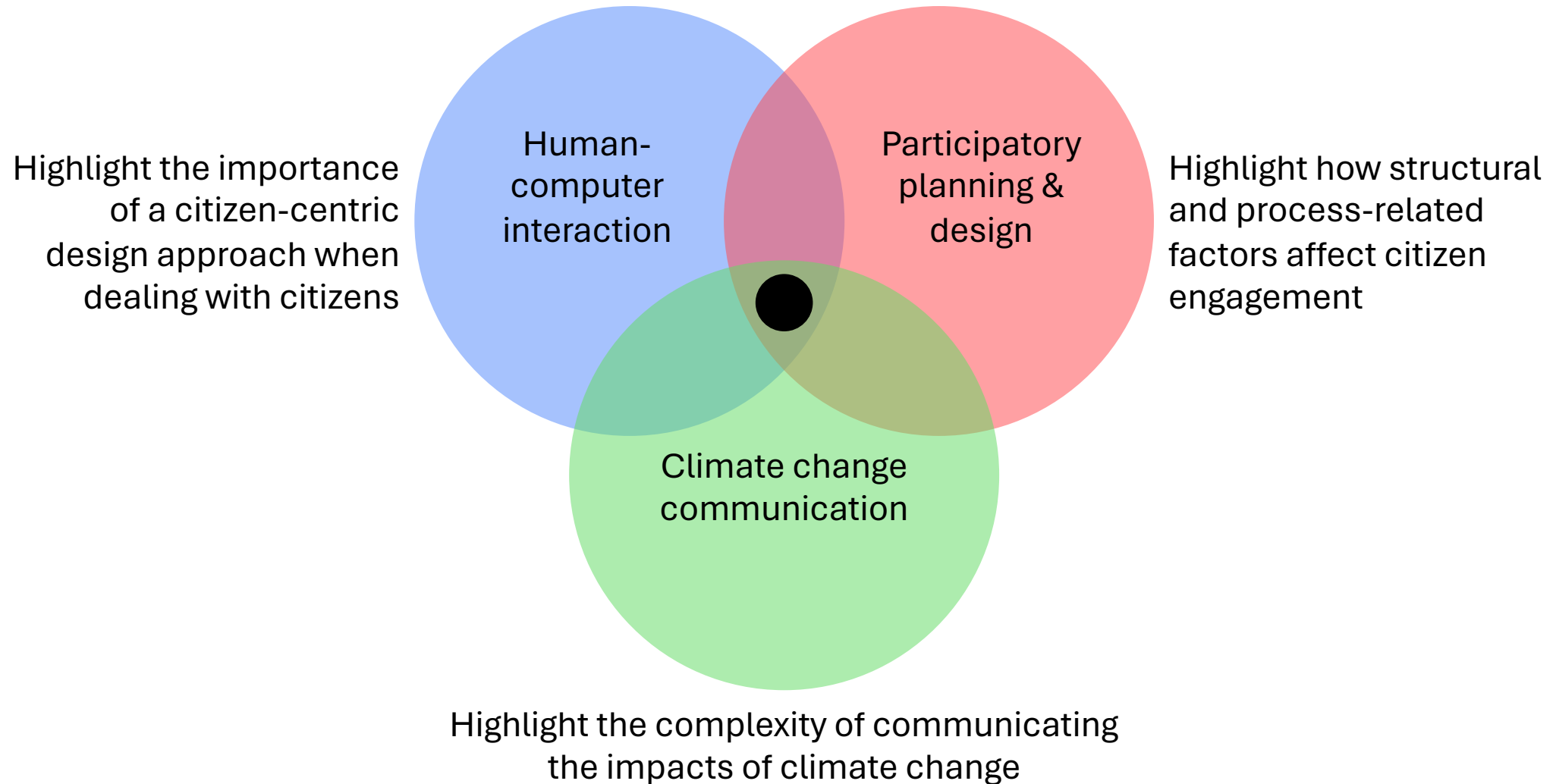
KlimaatEffectAtlas

www.klimaatEffectAtlas.nl

Kaartviewer

De KlimaatEffectAtlas geeft een eerste indruk van hoe kwetsbaar verschillende gebieden in Nederland zijn voor wateroverlast, droogte, hitte en overstroming.

Background



GOAL

Design citizen-centric
digital platforms that
address the complexity
of climate change and
ensure engagement



Literature review + platform analysis =
design guidelines for climate action

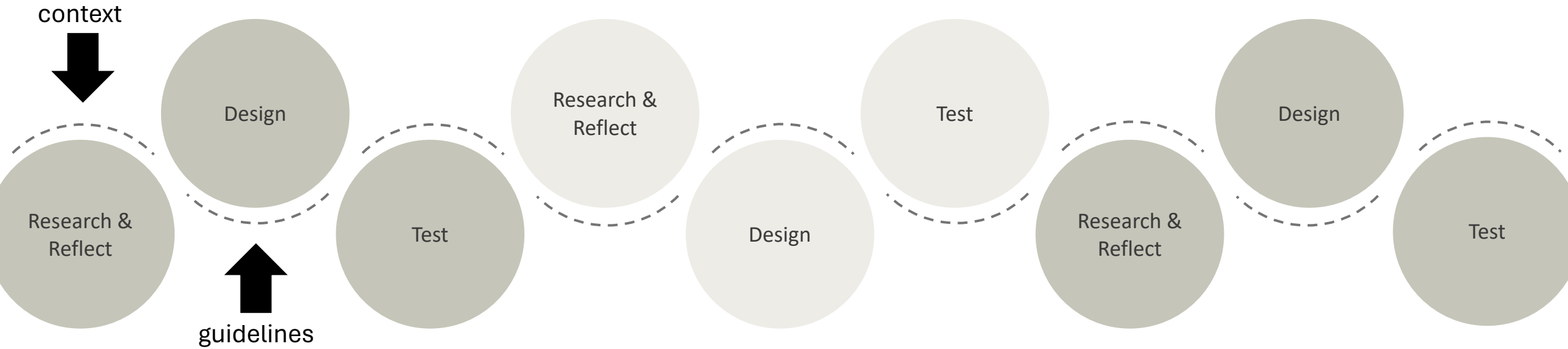
Design guidelines

- **Awareness and framing**
 - Balance between positive and negative framing
 - Personalisation and connection to daily concerns
- **Individual and collective action**
 - Tailored information and tools are necessary
 - Use of metrics/monitoring
 - Connection to existing initiatives
- **Use of scientific data**
 - Visualise data in different ways (maps, scenarios, stories)
 - Complexity vs. oversimplification
- **Navigation and visuals**
 - Self-navigation
 - Creative visuals

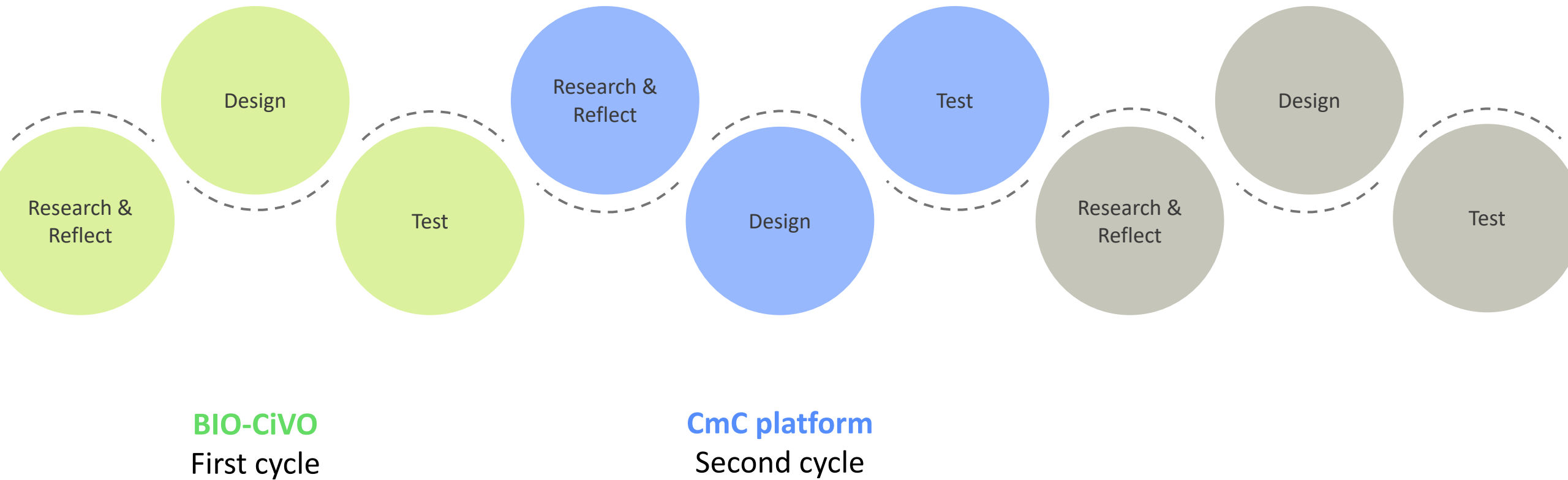
Context analysis

- **CmC platform** → City-level
 - Rotterdam, Amsterdam, Delft
- **BIO-CiVo** → Neighbourhood-level
 - Oud-Mathenesse, Rotterdam

Our design approach: Cycles R-D-T



Our design approach: Cycles R-D-T



Prototype 1: CmC platform

- Climate risk awareness
- Scope of citizen action
- Counter climate anxiety

CITIZENS meet CLIMATE A DIGITAL PLATFORM FOR CLIMATE ACTION

Choose the character that represents you the best!



LOCAL CLIMATE DATA

Through the everyday experiences of the persona, users discover and understand climate change data and local climate risks

Tell us your opinion!



FUTURE SCENARIOS

Through the life journey of the persona, users explore both dramatic and optimistic future scenarios of the city with respect to climate change

Would you like to make Amsterdam a better place?



OR

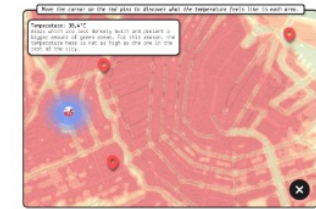
Start your own initiative!

Join those existing

PERSONALIZATION

Users navigate through the platform following the journey of a persona that relates the most to them

Urban Heat Island effect



SHARING OPINIONS

Users are invited to share with other users their opinions and perceptions about the city, climate change, and climate adaptation




CALL TO ACTION

Users are informed and connected to a range of local individual and collection initiatives for climate action that are tailored to the users' profile

Personalisation & Storytelling

Choose the character that represents you the best!


Alex



Alex is a young adult who studies part time and has a side job.

Choose Alex


De Jong family



The De Jong family is a nice family with young kid(s). They enjoy doing fun activities together, when they have time.

Choose the De Jongs

Robin



Robin is a middle-aged worker who spends a lot of time at work.

Choose Robin

Would you like to make Amsterdam a better place?

Based on your profile, these are climate initiatives and opportunities that you might like!

Learn and discover



If you don't know where to start, you don't have time or you just need inspiration, this section is for you!

See more

Communities



There are a lot of online and offline communities that focus on climate action for improving the area!

See more

Building and DIY



If you like DIY, here you can find different projects with different prices and levels of effort!

See more

OR

Go back

Start your own initiative!

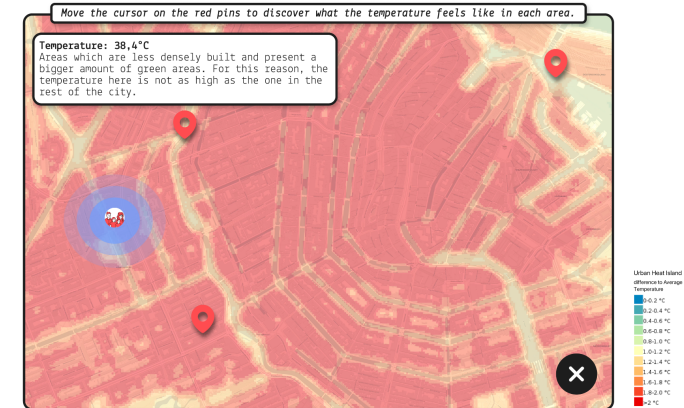
I am done exploring

Tailored options for action + Existing initiatives

Climate data at local level

Urban Heat Island effect

This map shows the urban heat island effect (UHI) in °C. This is the average air temperature difference between the urban and surrounding rural areas.



Amsterdam Centraal in 2085

The renovation of the Amsterdam Centraal took a while. A lot of construction had to be postponed due to extreme heatwaves in summer or heavy storms in winter. The De Jong children didn't get the chance anymore to visit their parents in Iceland before they died of old age. However the station is now finished. Through collective efforts between experts and citizens, the surroundings offer shade from a variety of trees and canopies.

Future scenarios

Prototype 2: BIO-CiVo platform

- Biodiversity evaluation
- Biodiversity design

BIO-CiVo: Citizen Voices in Biodiversity

A digital platform to support citizens in improving neighbourhood biodiversity



1
Users take a test to find out which animal or plant matches their personality



2
Users navigate through the platform accompany by their personality species



3
Users explore and understand the threats to biodiversity in their neighbourhood



4
Users are invited to explore design options and build their own biodiversity scenario

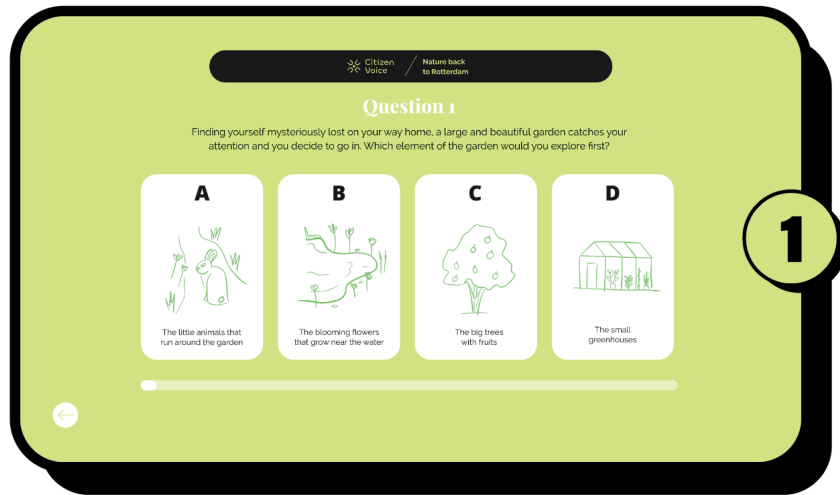


5
Users are invited to contribute more by exploring existing local initiatives for biodiversity, by assessing other biodiversity scenarios, or by creating their own scenario



6
Users create their own biodiversity scenario which is then open to other users to explore

Personalisation & Storytelling



Biodiversity data at local level

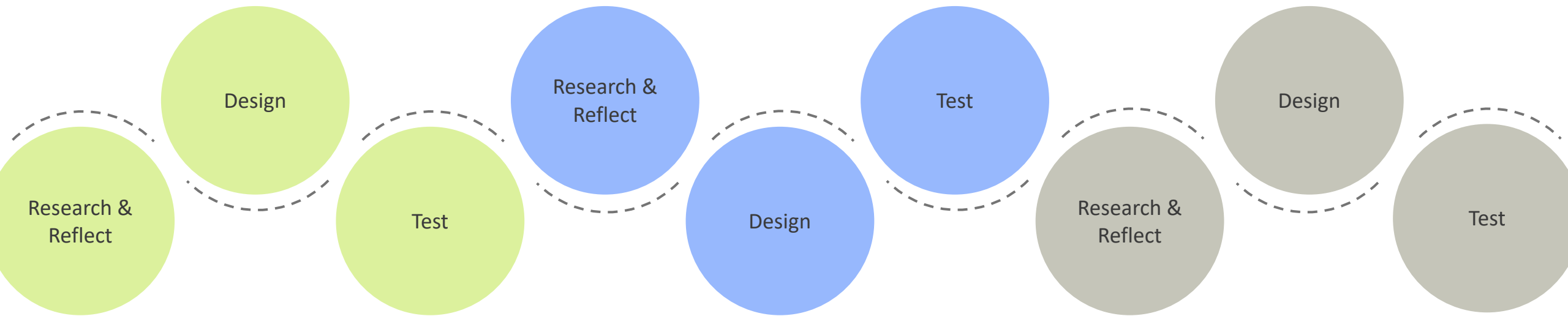


Creative visuals (layers) and metrics (thermometer)



Providing tools to facilitate citizen action

Testing: Workshops



BIO-CiVO

Paper prototype

CmC platform

Paper & Digital prototype

Test results

- ✓ Storytelling & personalisation
- ✓ Future scenarios
- ✓ Sharing opinions
- ✓ Layers approach
- ✓ Thermometer

Open questions

- 🔍 Platform purpose: Who owns and maintains the platform?
- 🔍 Physical vs. digital: Going out of the digital environment!

Conclusion & Outlook

- **Contributions**

- Defined guidelines for citizen engagement in climate action
- Implemented and tested these guidelines in two prototypes with overall positive user feedback
- Identified design elements that foster citizen engagement through digital tools

- **Limitations & Future Work**

- Address open questions
- Participants were mainly students and academics (a few civic actors)
- Broaden the range of participants
- Community festival in May

I'm not a human sensor! Engaging residents in biodiversity scenario evaluation and design



AMS - Shanghai



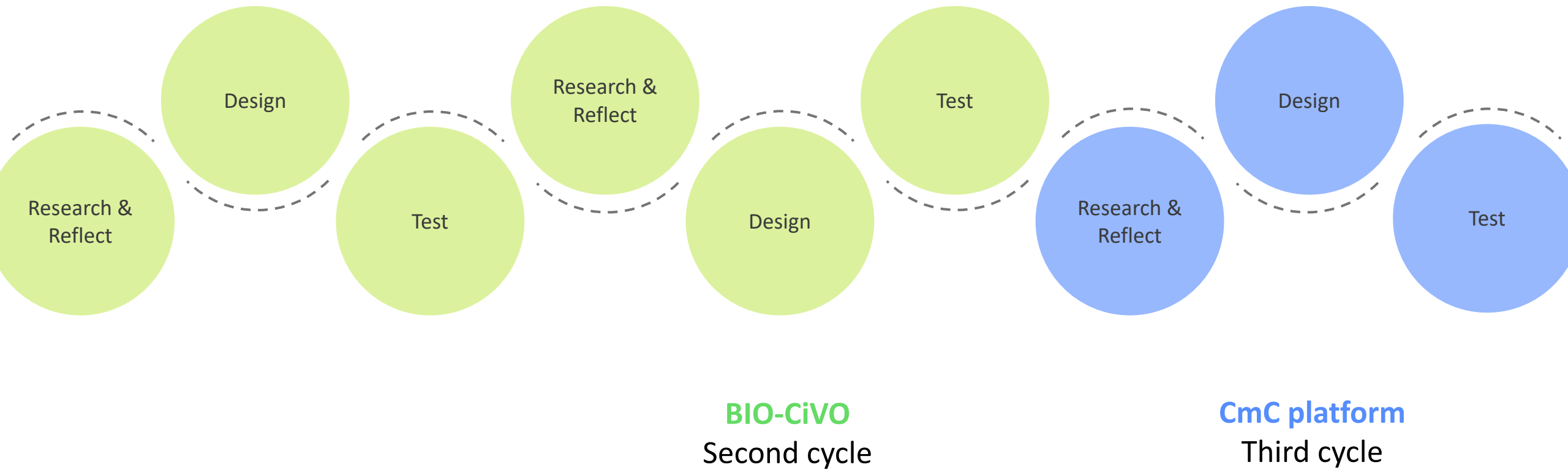
Workshop



Available Seats : 25

🕒 Apr 25, 2024 15:30 - 17:00 (Europe/Amsterdam) ⌚

You have the opportunity to contribute to our research!



Our team



Ioannis Ioannou, Johannes Ijpma, Sombutta Sinha, Marc Haan, Yaren Aslan, Gerdus van der Laarse, Manuel Garcia Alvares, Claudiu Forgaci, Trivik Verma, Carissa Champlin, Geertje Slingerland, Johanna Zehntner, Virginia Facciotto, Maria Gil Falcon, Jing Spaaij, Isabella Jaramillo Diaz.

Thank you!



Stay in touch

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