

DAT157

DESIGNING
USER
EXPERIENCES

2
0
2
1



current

AMOS CAPPELLARO

PRESENTATION_ 31 05 2021

1

DESIGN
PROCESS

2

DESIGN
GOAL

3

FINAL
DESIGN

4

DESIGN
RATIONALE

5

REFLECTION

A G E N D A

An aerial photograph of a coastline, showing a mix of dark, forested land and lighter, sandy or rocky areas. A large, white, serif number '1' is overlaid on the left side of the image. To the right of the number, the words 'DESIGN' and 'PROCESS' are written in a white, sans-serif font, stacked vertically.

1

DESIGN
PROCESS

DESIGN PROCESS

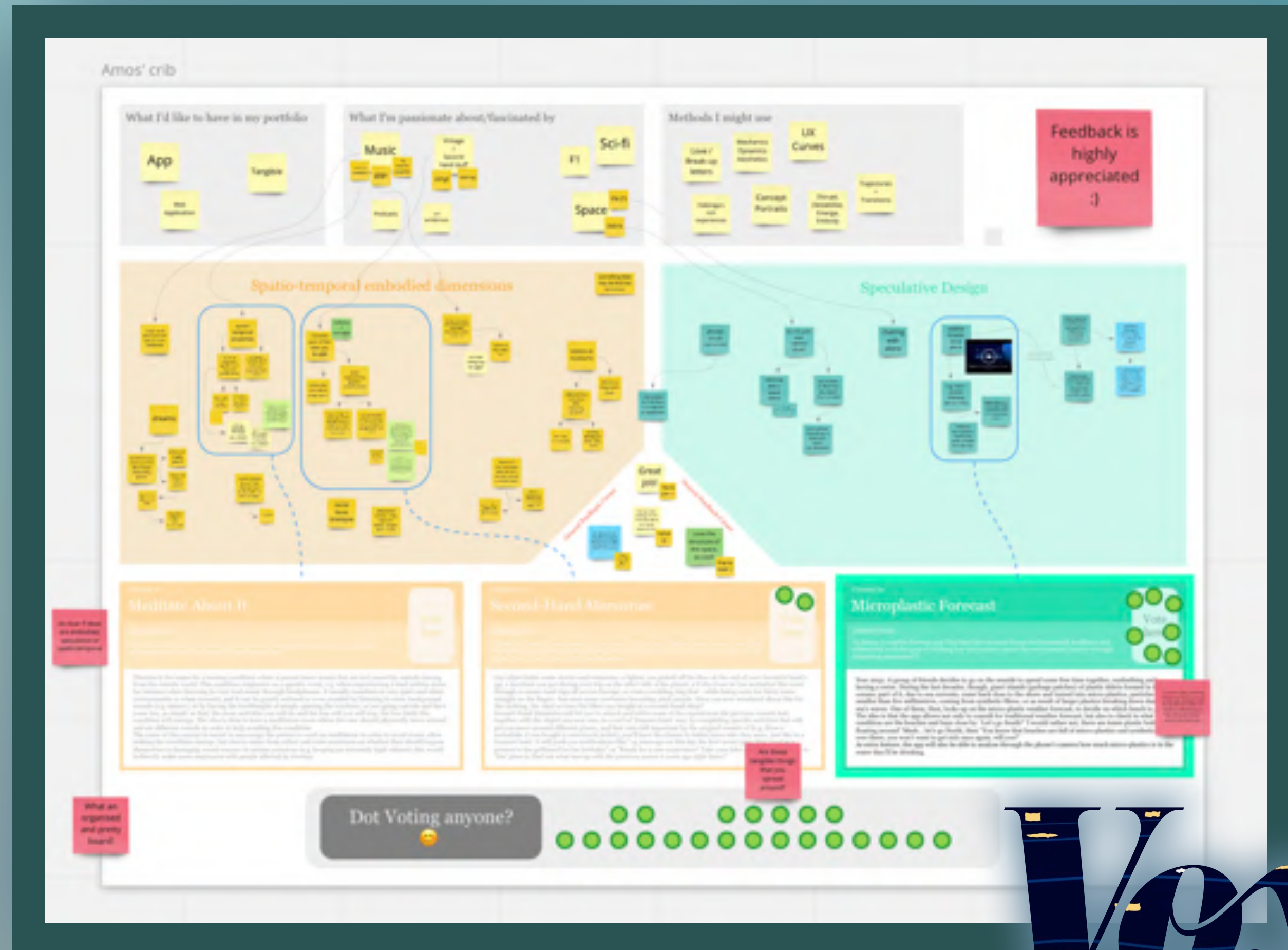


IDEA GENERATION

1

DESIGN PROCESS

- *Dreams collector*
- *Songs recalling memories*
- *Tinnitus relief meditation app*
- *Word of mouth letters*
- *Second-hand memories, discover past of the items you own*
- *Rating app for gigs, connect people*
- *Weather aquarium*
- *Immersed visitors at museum*
- ***Microplastic forecast/report***
- *Chat with aliens*
- *Launch own satellite objects*
- *Future world with rationed water and food*



A STORYBOARD

1

DESIGN PROCESS



1 John invites his friends Emma and Jack to his house. They think about what to do the whole afternoon, until Emma suggests to go to a beach and hang out over there.



2 John, Emma and Jack decide to go to Nüset-badet, so they go to the closest bus stop. John thinks they should check Current to see how are the conditions, so he takes his phone out.



3 John notices that the conditions are good: the microplastics are not hitting the place so bad, and swimming is allowed, but it looks like it is very busy at the moment.



4 John tells his friends about this. So Emma says: "I got one! Should we check out Askimobadet?" Jack: "Yeah, there's no way! I'll check on Current but it's always so polluted over there..."



5 Jack: "See? There's like no one over there, but here's the reason why... I don't wanna take the risk to swim over there to then get sick... again!"



6 Emma: "C'mon guys, whatever! We're gonna figure it out, I'm getting in the water today." Jack: "You know what? Let's go to my place, you remember I have a swimming pool!"



7 Finally, the three friends are now able to have a swim together in Jack's safe, water-purified and microplastics-free swimming pool! John: "It was actually a great idea to come here!"

FEAR

fear [*fɪr*] (noun) a feeling of concern about somebody's safety or about something bad that might happen

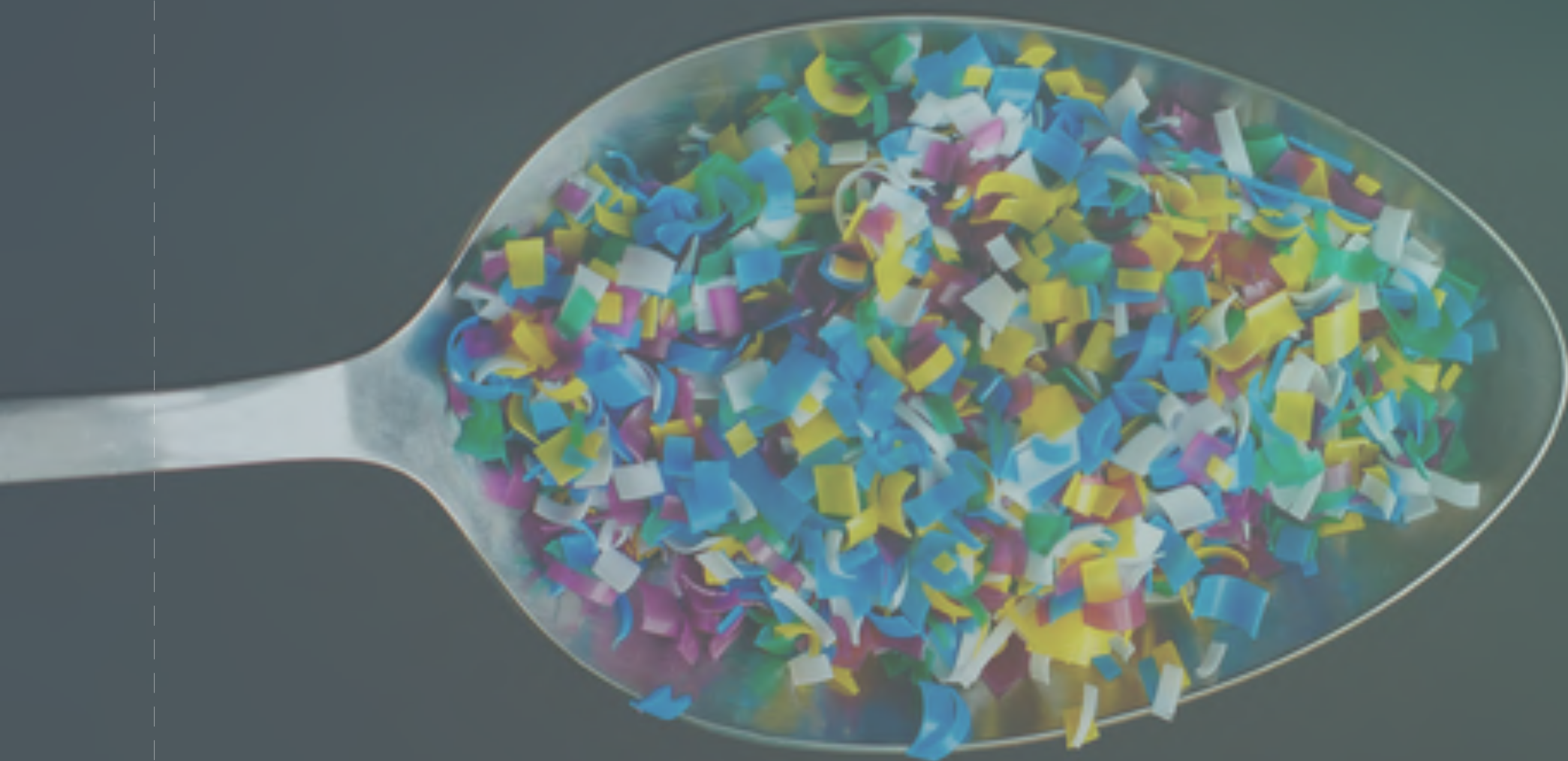


Oxford Learner's Dictionary (www.oxfordlearnersdictionaries.com)

CONCEPT PORTRAIT · FEAR

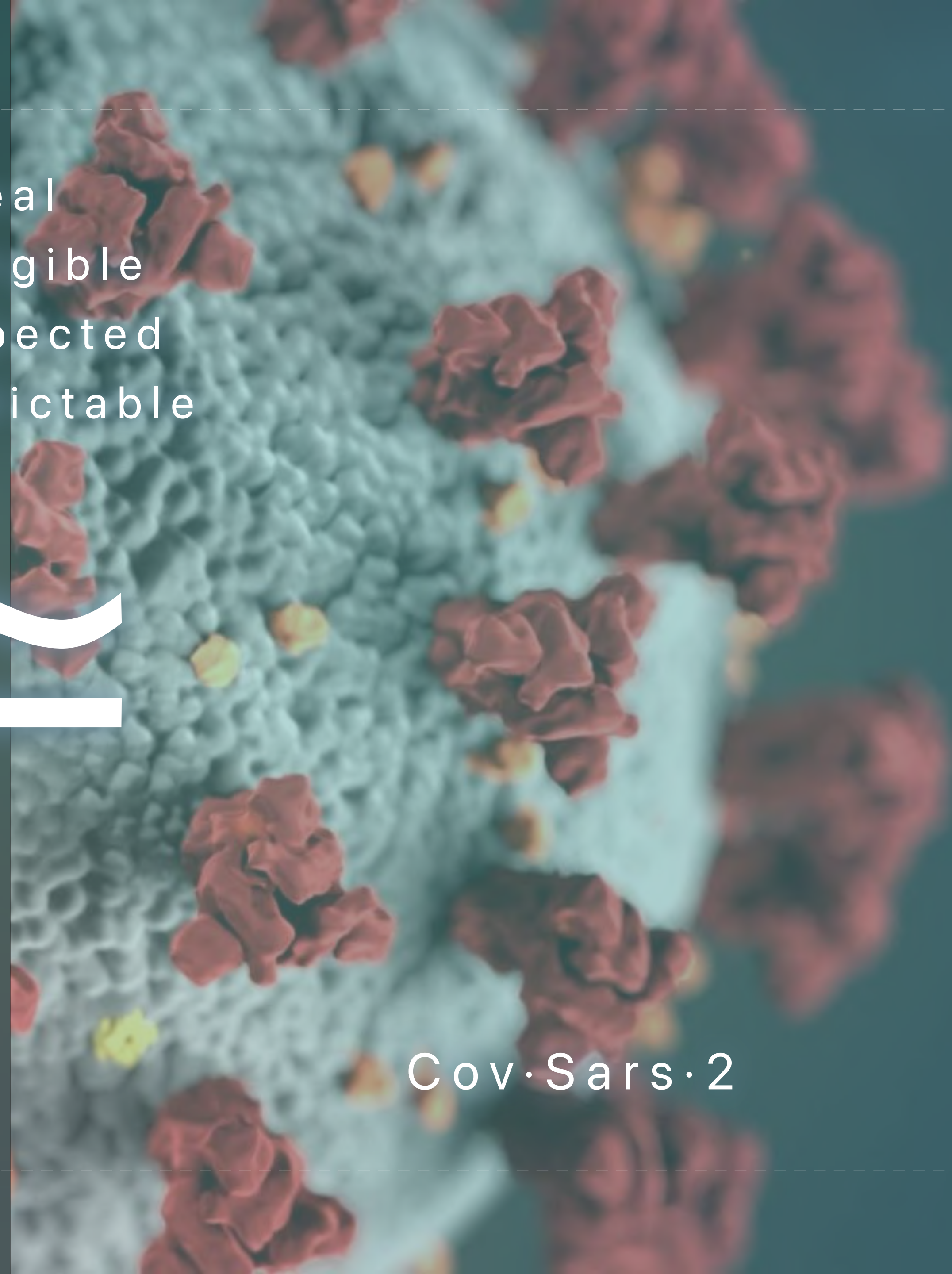
1
DESIGN
PROCESS





Microplastics

real
intangible
unexpected
unpredictable



Cov·Sars·2

BREAK-UP / LOVE LETTERS · WEATHER APPS

1

DESIGN PROCESS

what is good

what is bad

Dear Google Weather,

we started our relationship **by accident**, it wasn't love at first sight we could say... but a slow falling in love.

Initially I was **forced** by the operating system to use you and so like all things imposed I **tried to avoid** you, shut you down and not listen to you.

Slowly, overcoming your **intrusive** way, I surrendered to your presence.

Now you are always there to keep me **company** when I am managing outings, holidays or outdoor appointments.

One thing I appreciate about our relationship is that it **doesn't require constant**, daily **attendance**, but even if for a while we don't hear from each other often, every time I ask you for help you answer **promptly**, like a true friend with a big heart.

You shouldn't have anything to reproach yourself with when comparing it to other weather apps, I think the information you offer is **consistent** but of all of them you are the coolest, with the most **appealing** graphics, you are like the most popular student at school.

xx
Teresa

Dear Accuweather,

I have had enough of all these **barriers** that you put between us. My Android OS introduced us and on a surface level everything clicked. You had told me what I wanted to hear at that time and we were off to a good start.

It was only later that I started to realize how you really are. You **pretend to care** about me but any time something other than the bare minimum is asked of you, you shut me out.

You **redirect any inquiry** to your website, as if it would be too much effort to just tell me the **details** of tomorrow's weather. And the website isn't much better: nothing is ever simple!

I know you know what I want to know but every time I'm **forced to click and click** to actually get to it. Why can you not just be more mature and stop playing these games?

This is it, already for a long time I've **given up on asking** you and I began use other services.

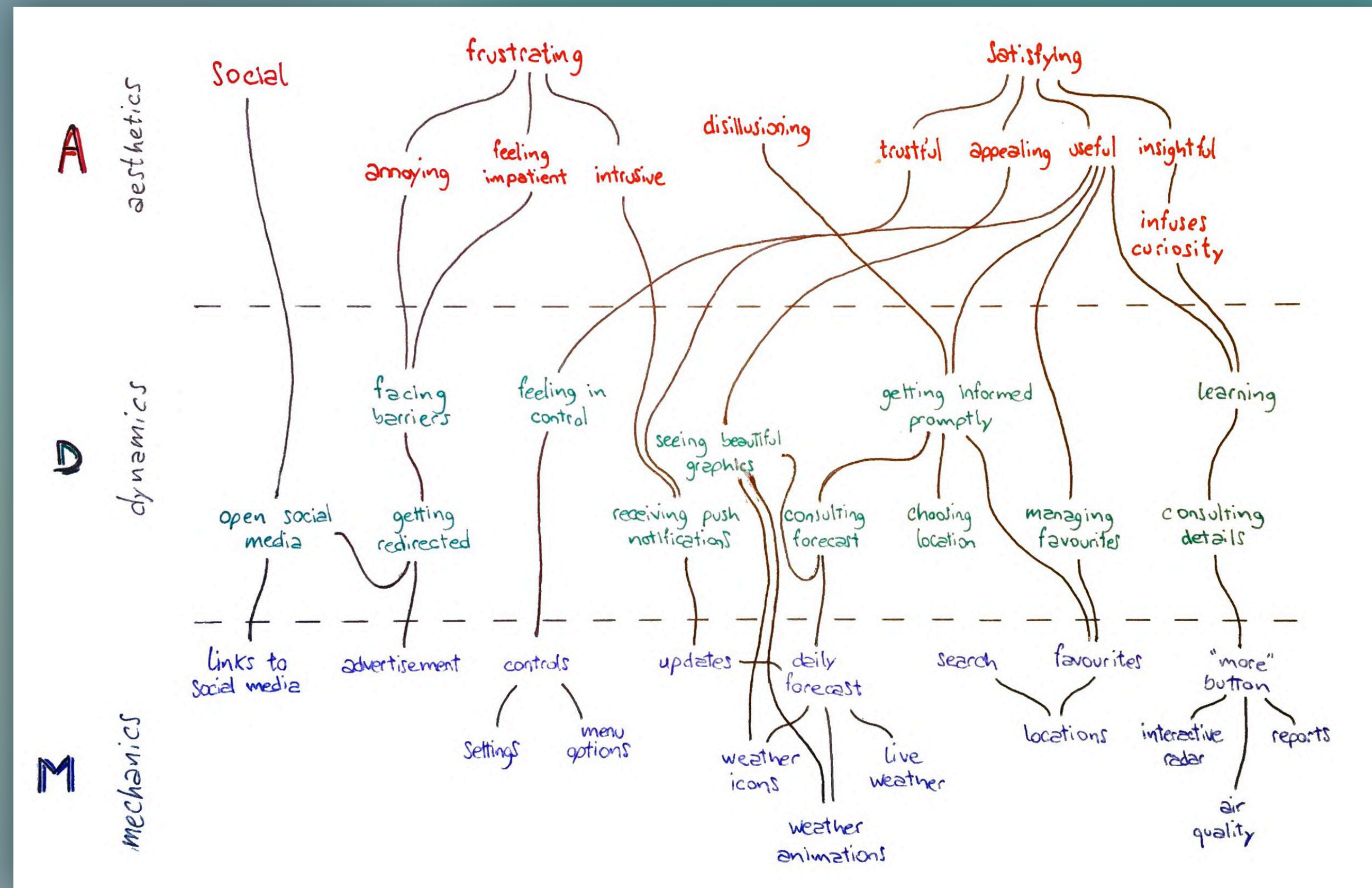
Kindly
Francesco



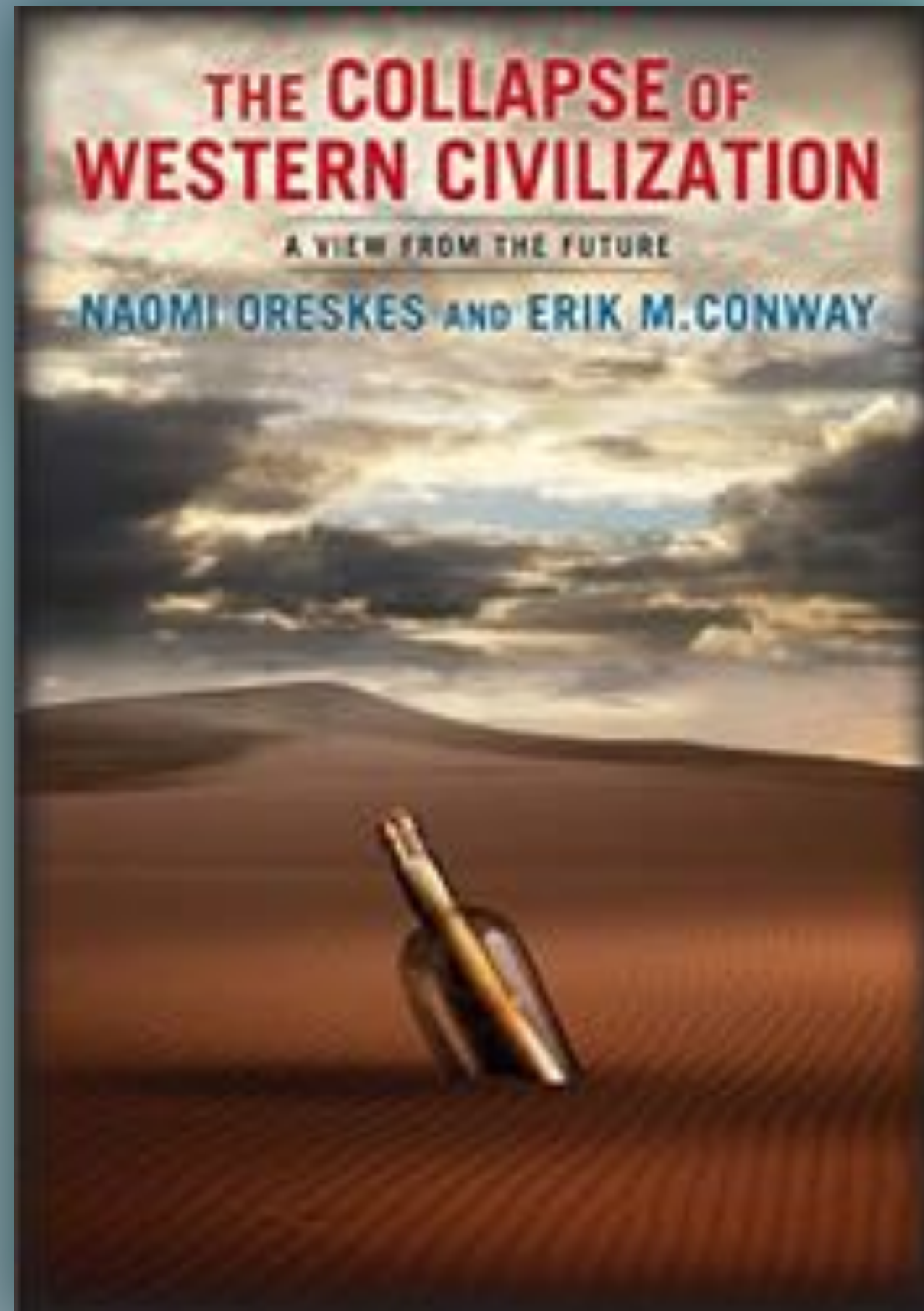
MDA FRAMEWORK · WEATHER APPS

1

DESIGN PROCESS



THE FICTION · INSPIRATION



 Oreskes, N., & Conway, E. M. (2014). The Collapse of Western Civilization

2043



 SOM · What Should Cities Be Like in 2050? (som.medium.com)

1
DESIGN
PROCESS

THE FICTION

1

DESIGN
PROCESS

 Markussen, T., & Knutz, E. (2013). **The poetics of design fiction**. Proceedings of the 6th International Conference on Designing Pleasurable Products and Interfaces - DPPI '13.

© 2006 Pearson Education, Inc.

DESIGN
PROCESS



Presidential Documents

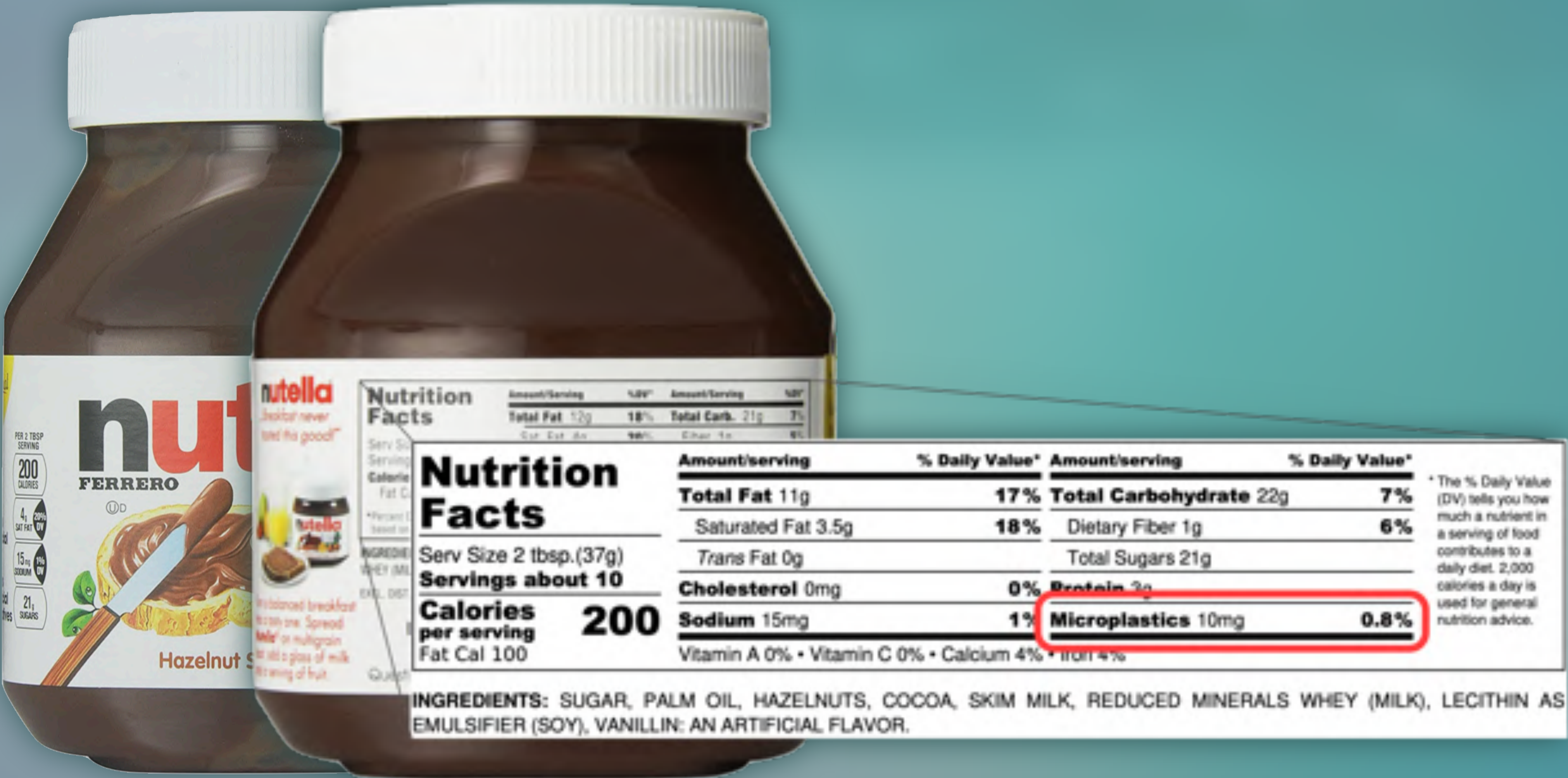
Executive Order 18362 of January 26, 2017

Mandatory implementation of last-generation HVAC cleaning and purifying systems for indoor public spaces and businesses

Indoor air contains pollutants that can affect human health. Some of these pollutants come from outdoors, and others come from indoor sources and activities, such as cooking, cleaning, secondhand smoke, building materials, consumer products, and home furnishings. These indoor air pollutants can be particles or gases, including volatile organic compounds (VOCs). Common contaminants that can be found indoors include particulate matter (including PM_{2.5} [fine] and PM₁₀ [coarse]), formaldehyde, mold, and pollen. Indoor air quality will vary from home to home and over the course of a day within a home. Since most people spend about 90% of their time indoors, mostly in their homes, much of their exposures to airborne pollutants will happen in the home.

The most effective ways to improve your indoor air are to reduce or remove the sources of pollutants and to ventilate with clean outdoor air. In addition, research shows that filtration can be an effective supplement to source control and ventilation. Using a portable air cleaner and/or upgrading the air filter in your furnace or central heating, ventilation, and air-conditioning (HVAC) system can help to improve indoor air quality. Portable air cleaners, also known as air purifiers or air sanitizers, are designed to filter the air in a single room or area. Central furnace or HVAC filters are designed to filter air throughout a home. Portable air cleaners and HVAC filters can reduce indoor air pollution; however, they cannot remove all pollutants from the air.

THE WHITE HOUSE,
January 30, 2017





THE FICTION

1

DESIGN
PROCESS



A large, stylized white number '2' is positioned on the left side of the image. The background is a teal color with a faint, dashed white grid pattern. The number '2' is composed of a thick, curved top and a straight, horizontal base.

2

DESIGN
GOAL

01 DESIGN GOAL

Design a weather forecast app that takes into account future environmental problems caused by microplastics, with the goal of eliciting **fear and concern** about the **environment** and our **daily lives**.

02 DESIGN THEME

Speculative Design

03 DESIGN MEDIUM

App*

*with support of public digital billboards



04 DESIRED EMOTIONS

Fear and Concern

The background is a solid teal color with a subtle, faint grid pattern. A large, white, stylized number '3' is positioned on the left side of the image.

3

FINAL
DESIGN

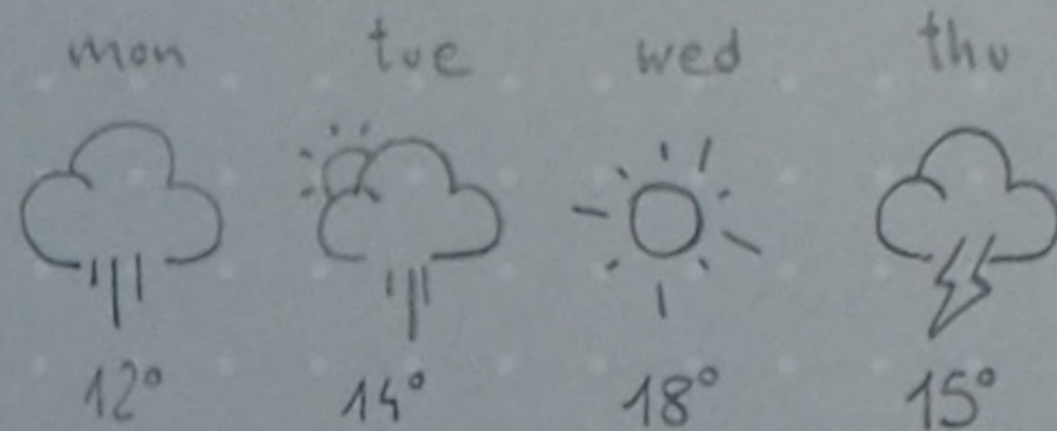


12°

light rain

Sunday, sep 15

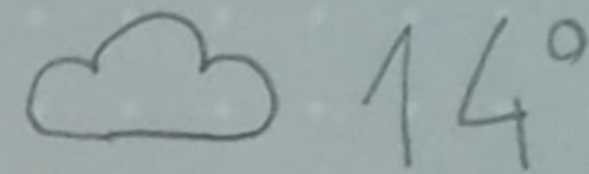
Göteborg, SE



Locations Q :

📍 Göteborg

Mon 24 May - 4:20pm



14°

8°/16° Feels like 17°

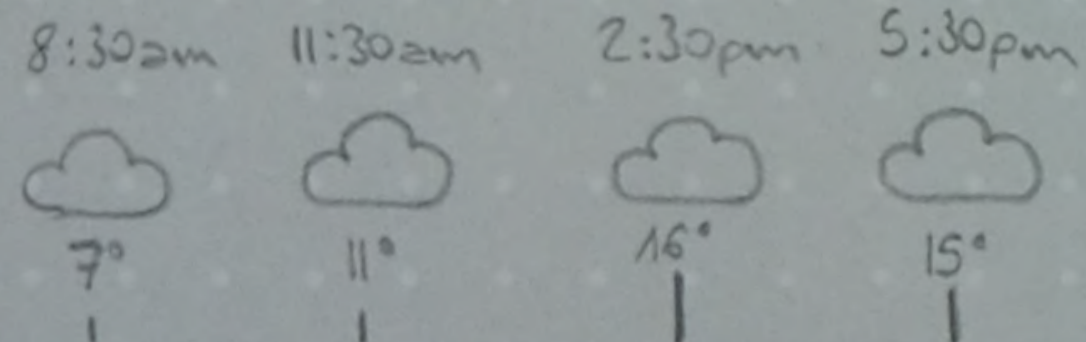
Cloudy

yesterday: 16°/8°

🌧 Precipitation.
20%

☀ UV index
low

Hourly



Göteborg
Partly cloudy

17°

Monday TODAY

17 9

Now	6PM	7PM	8PM	9PM	9:47PM
17°	17°	16°	16°	14°	Sunset

Tuesday		14	7
Wednesday		13	7
Thursday		13	6
Friday		14	7
Saturday		17	7
Sunday		18	8
Monday		18	9
Tuesday		17	10

1

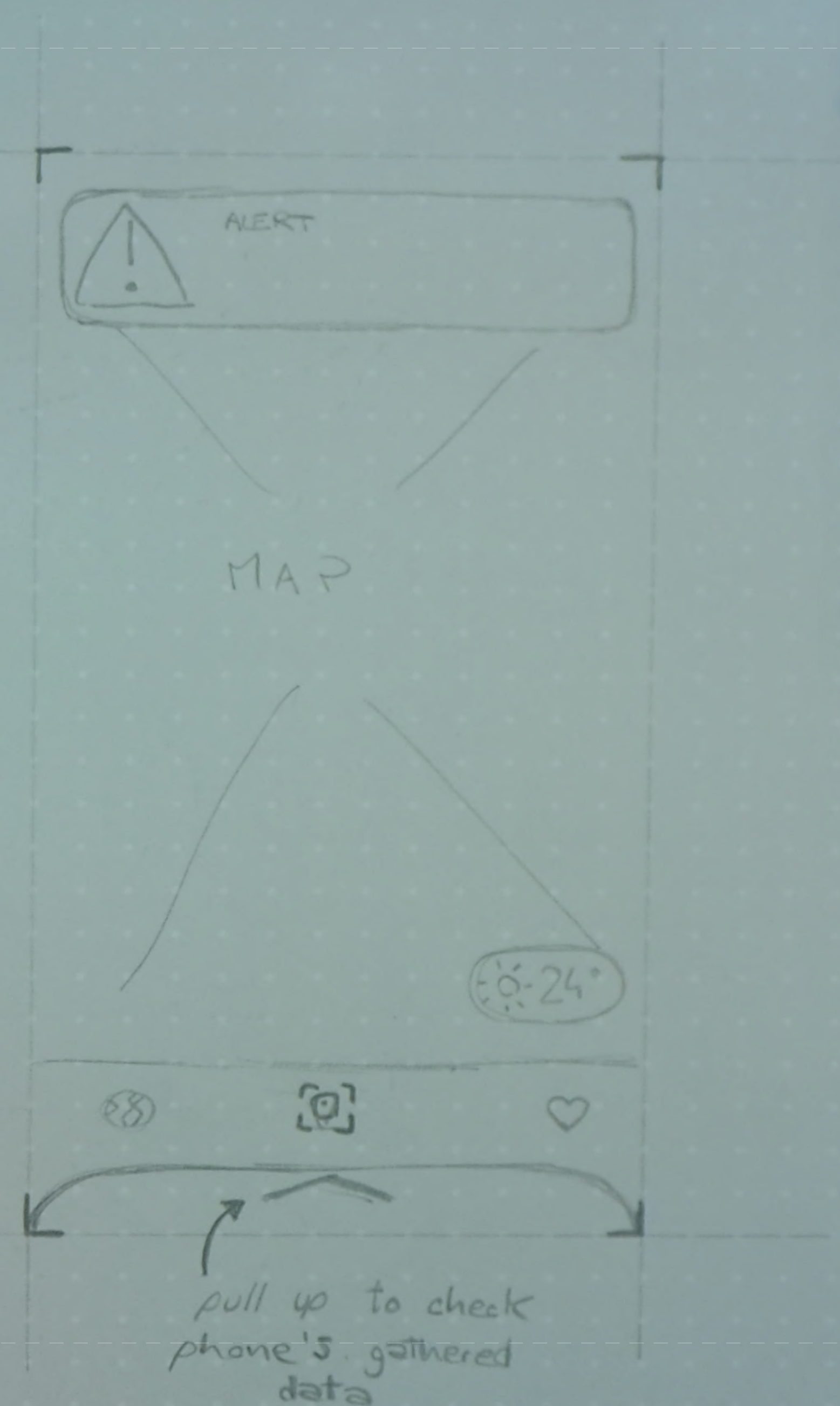
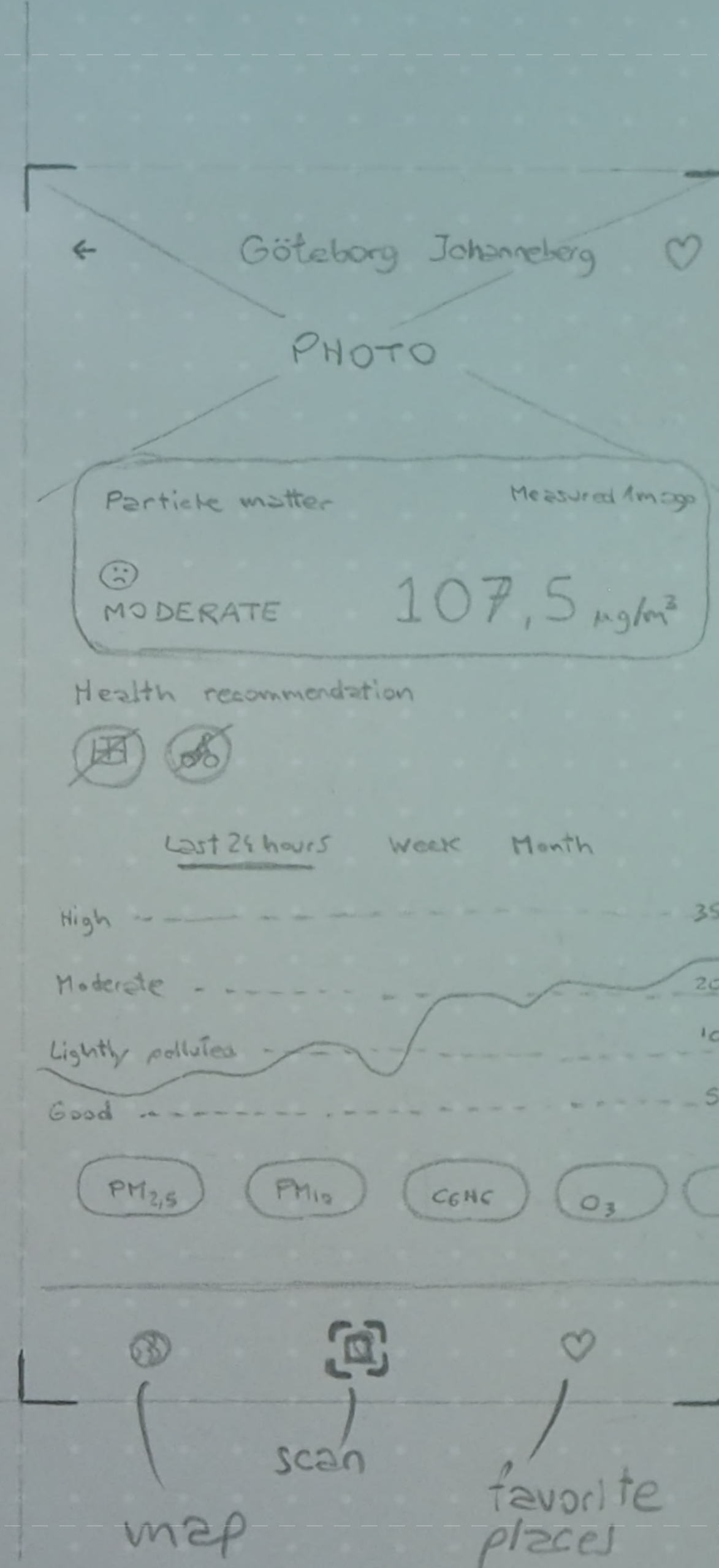
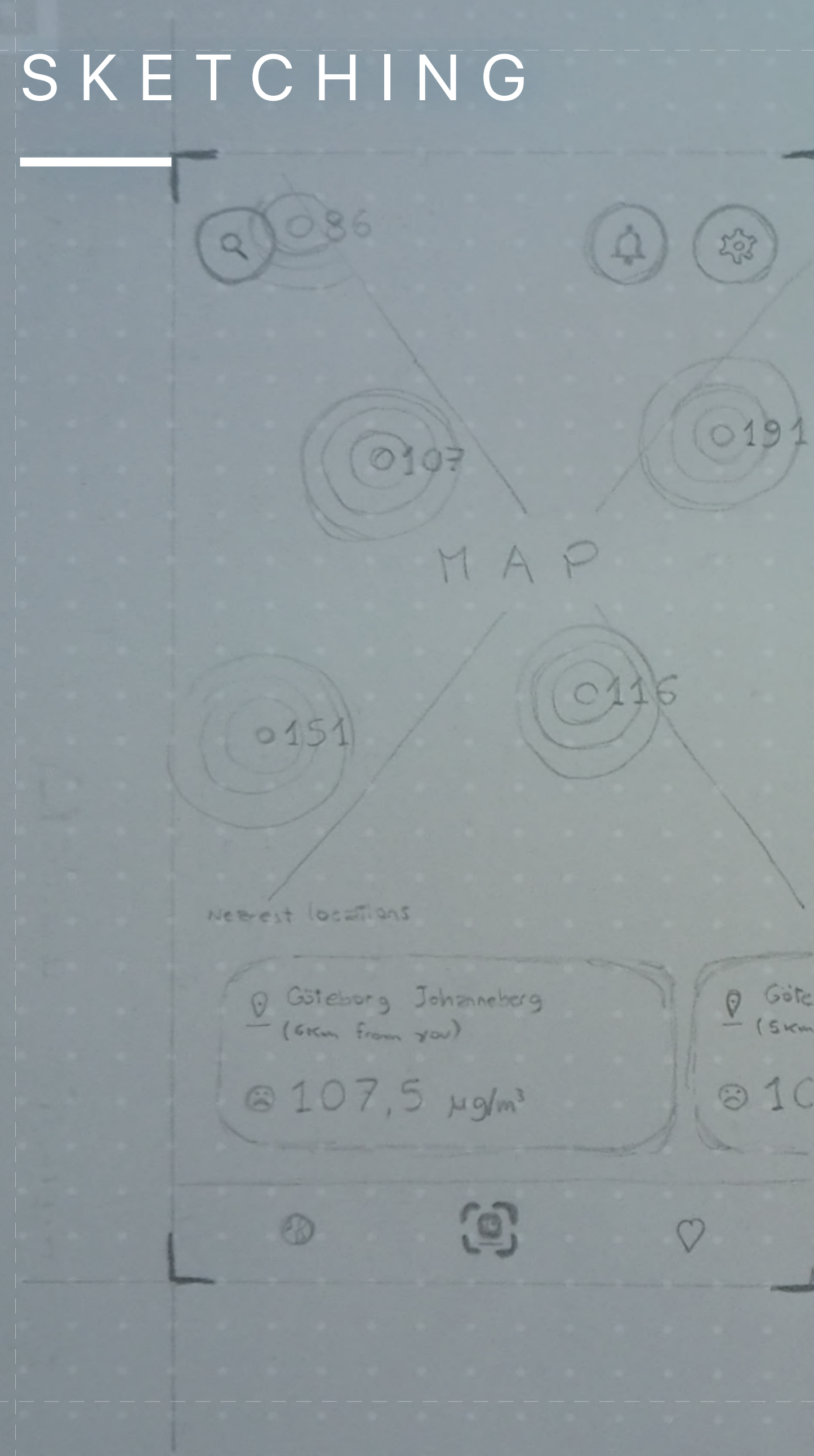
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SKETCHING

3

FINAL DESIGN

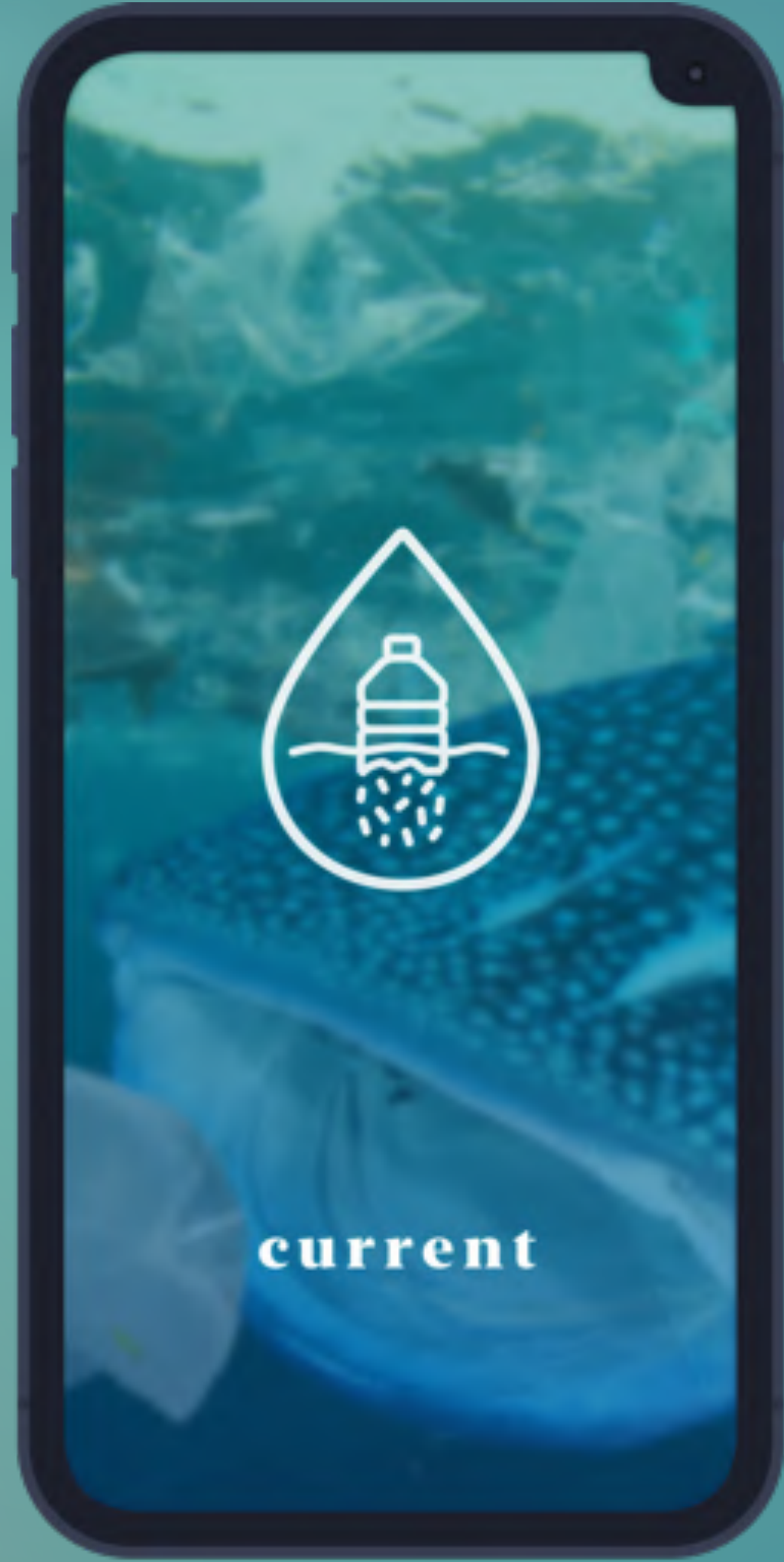
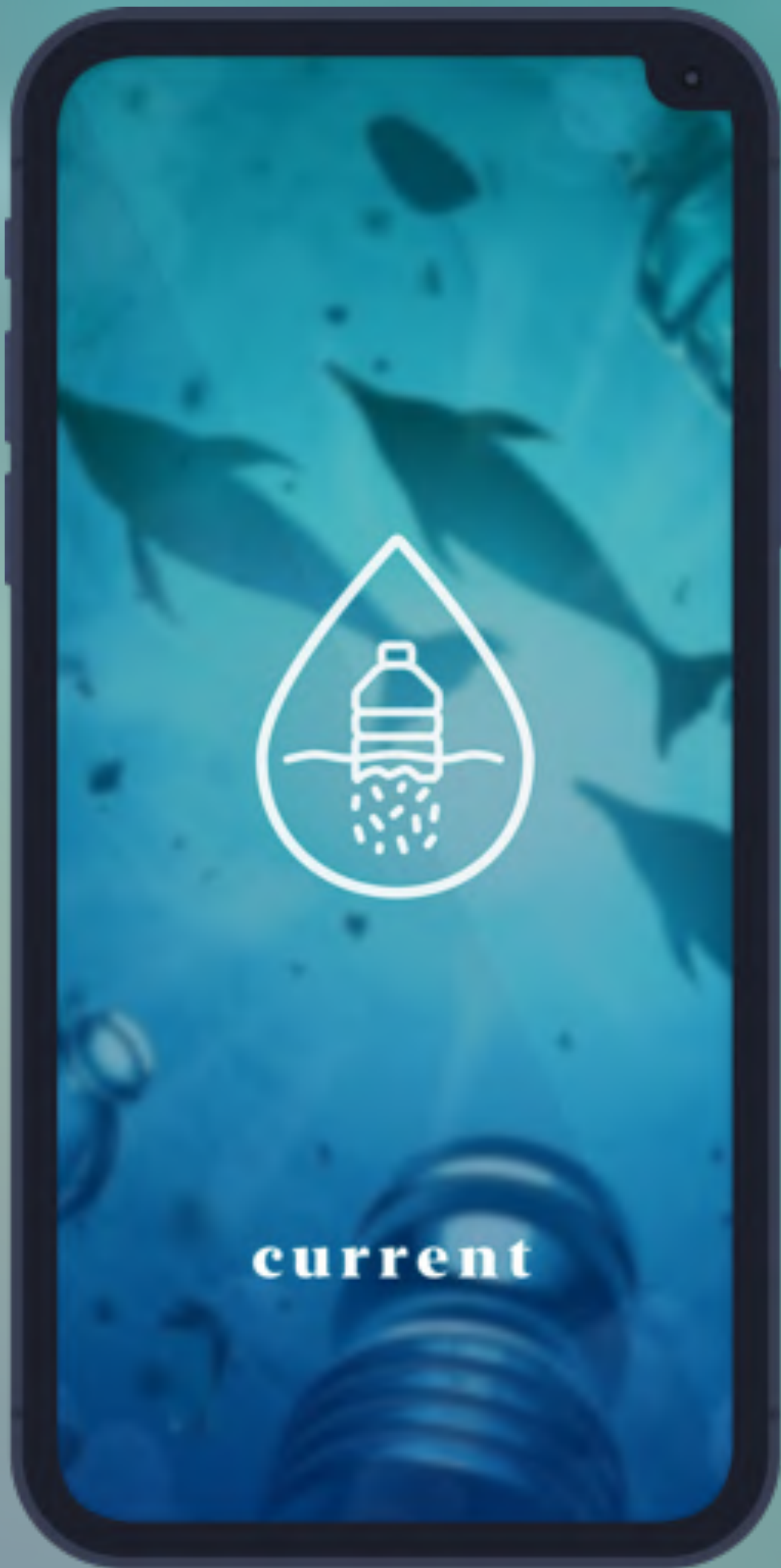
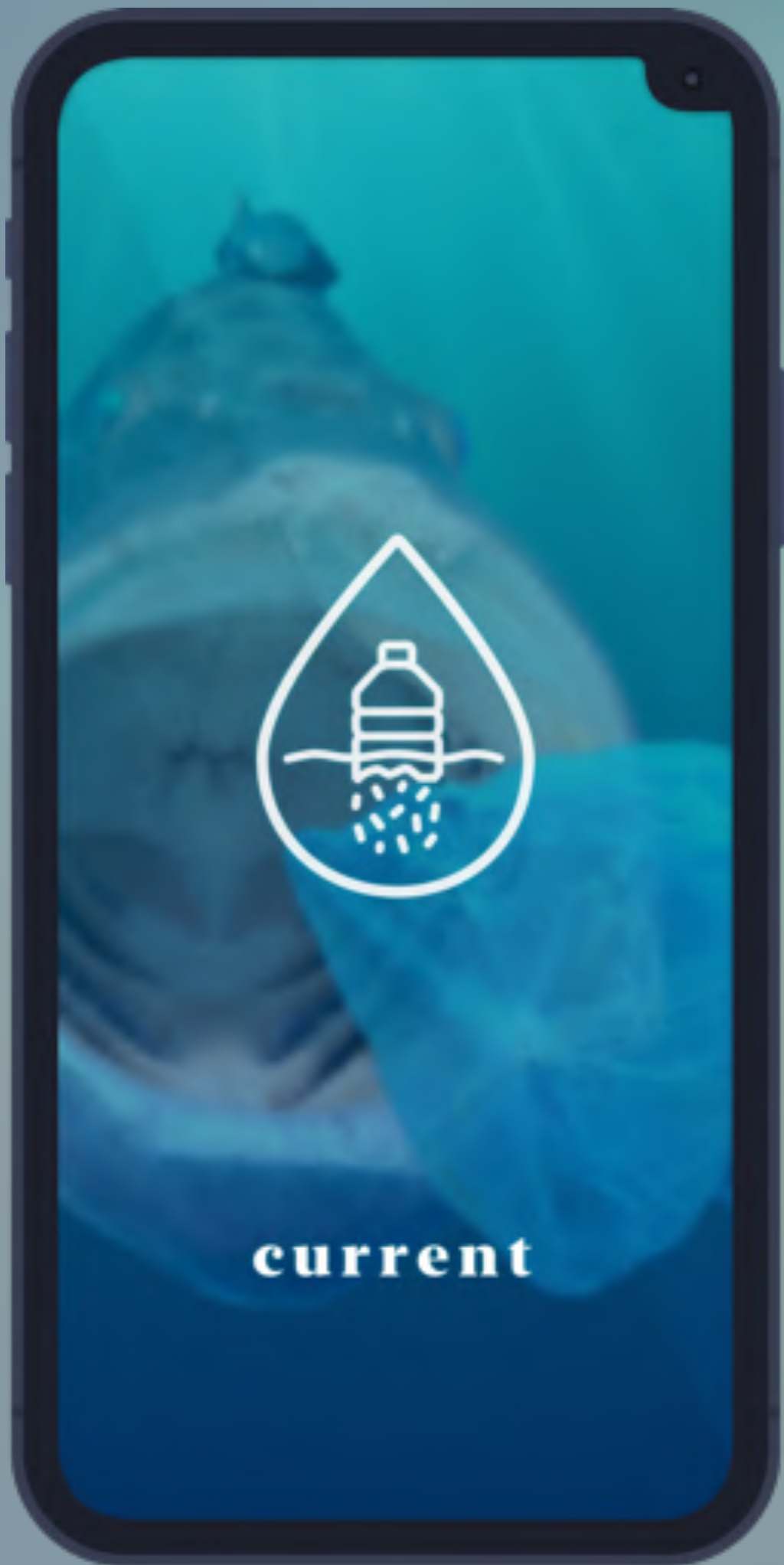
WHITELINES

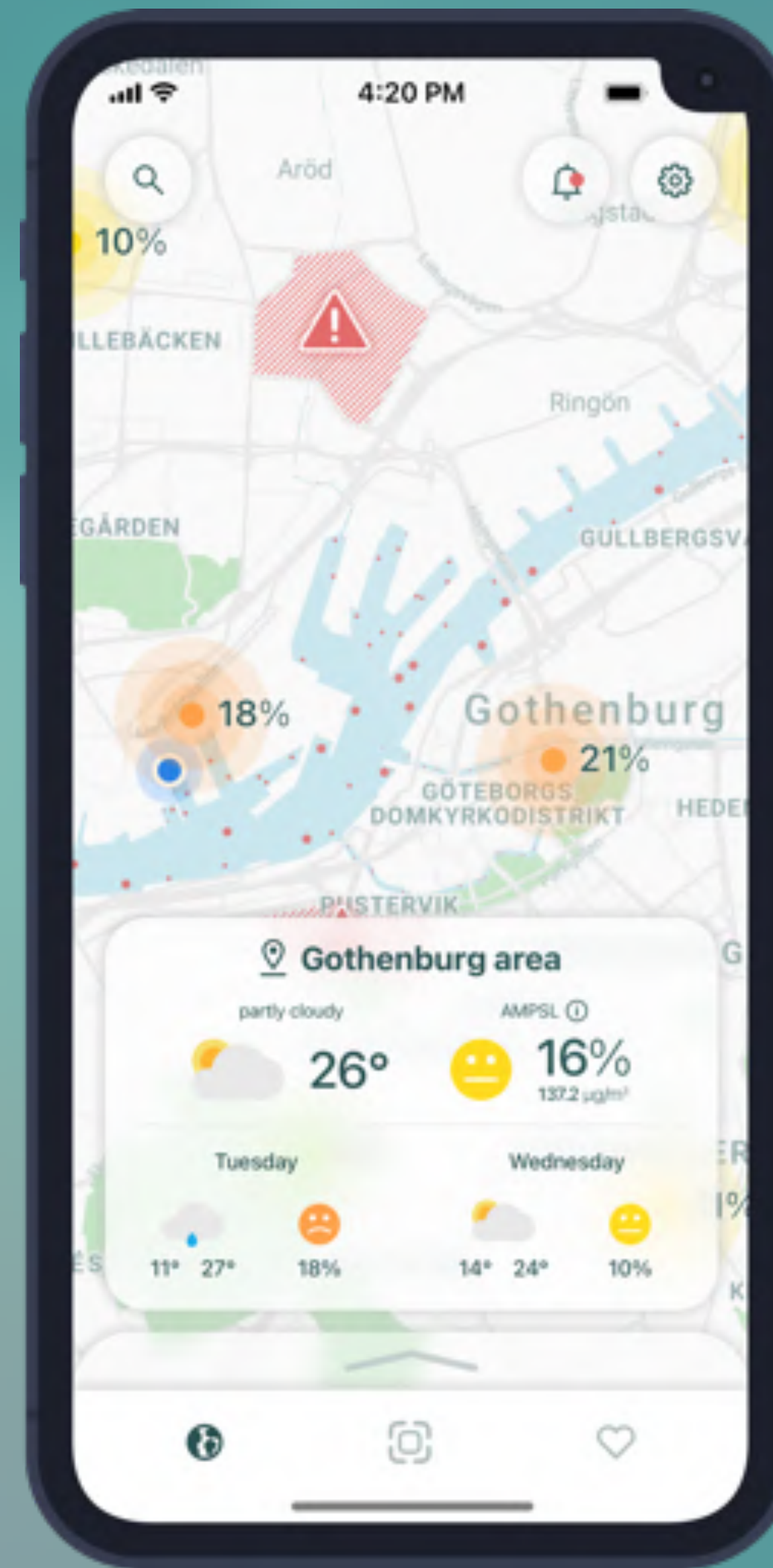
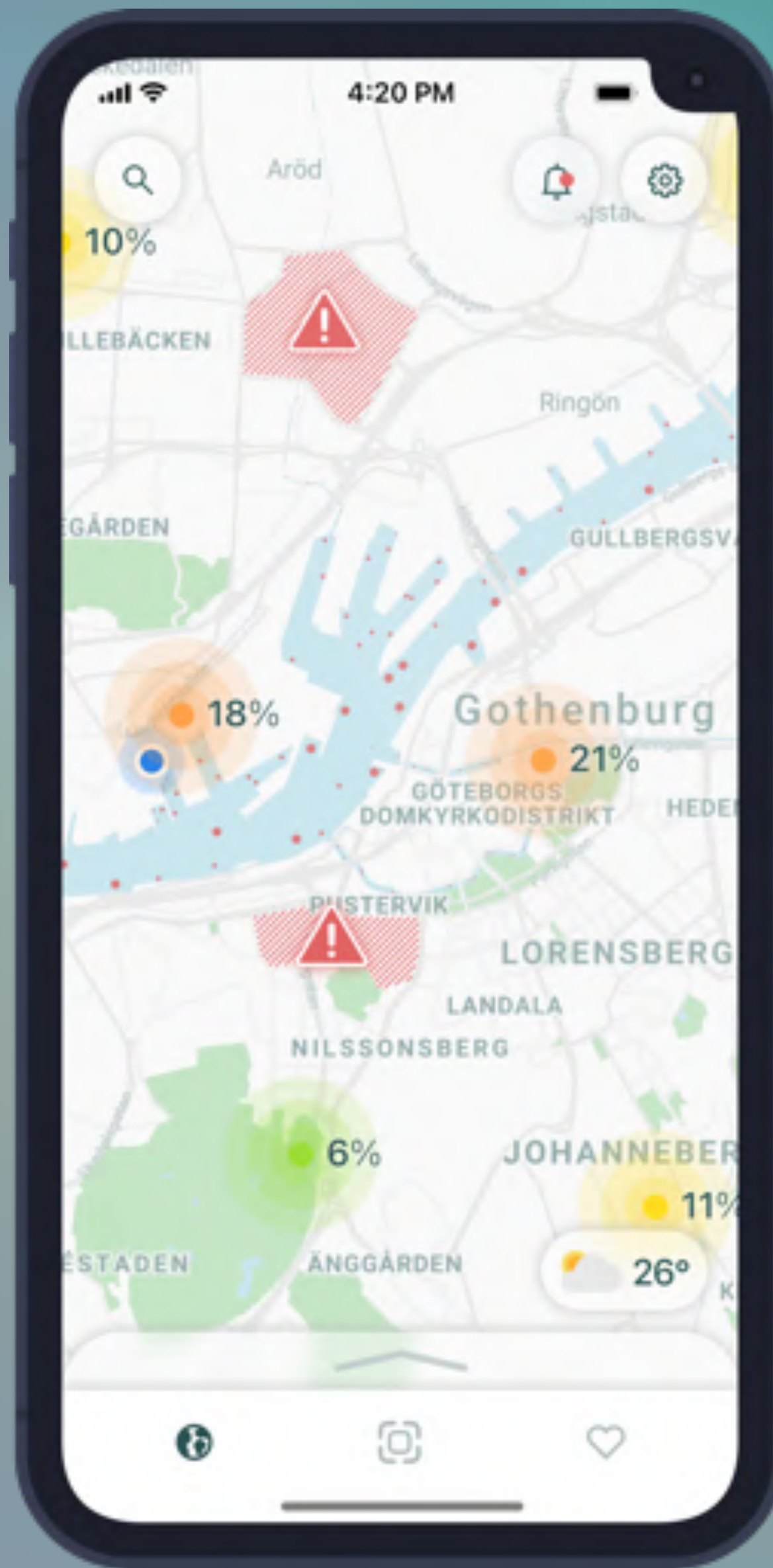


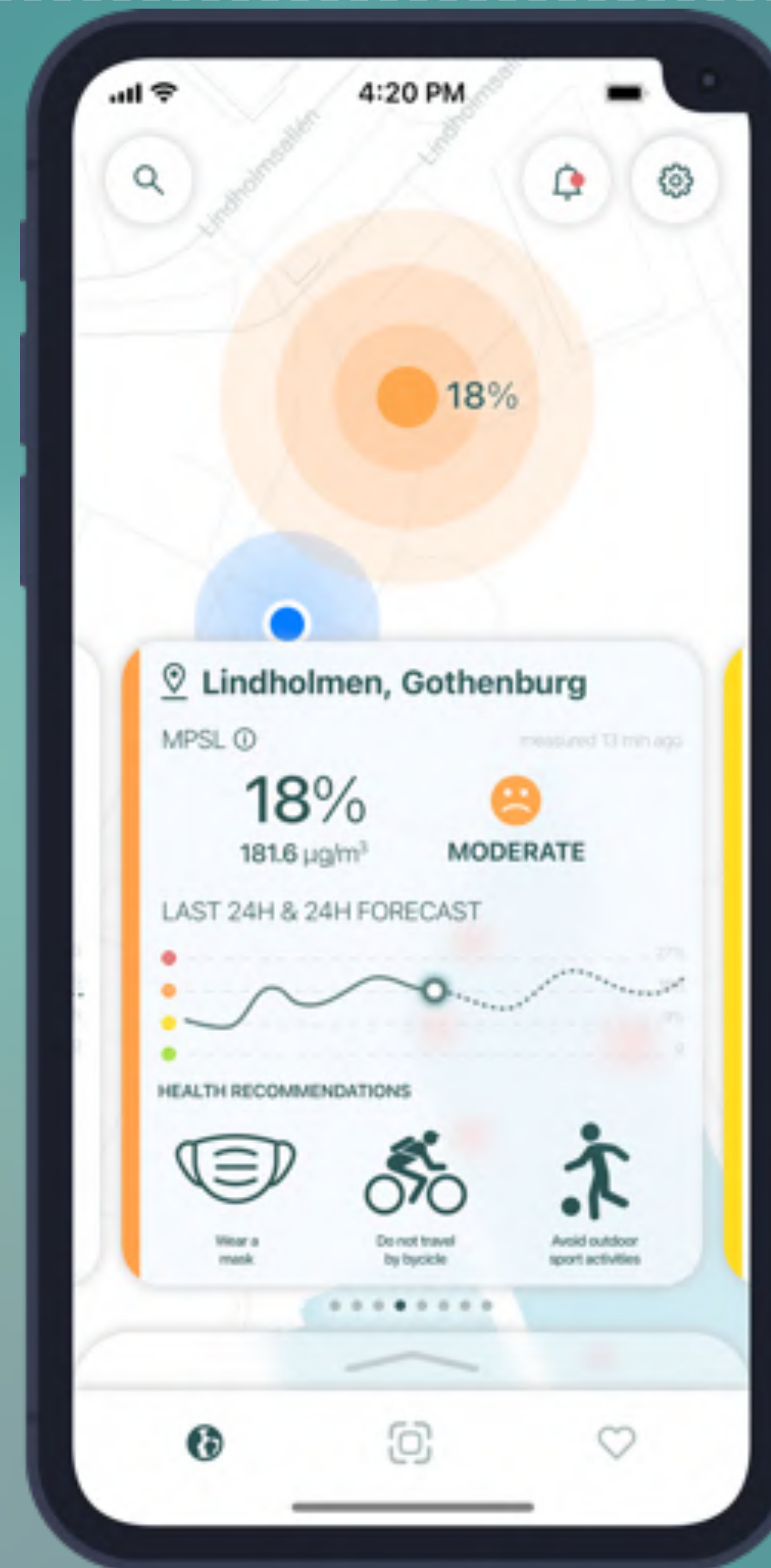
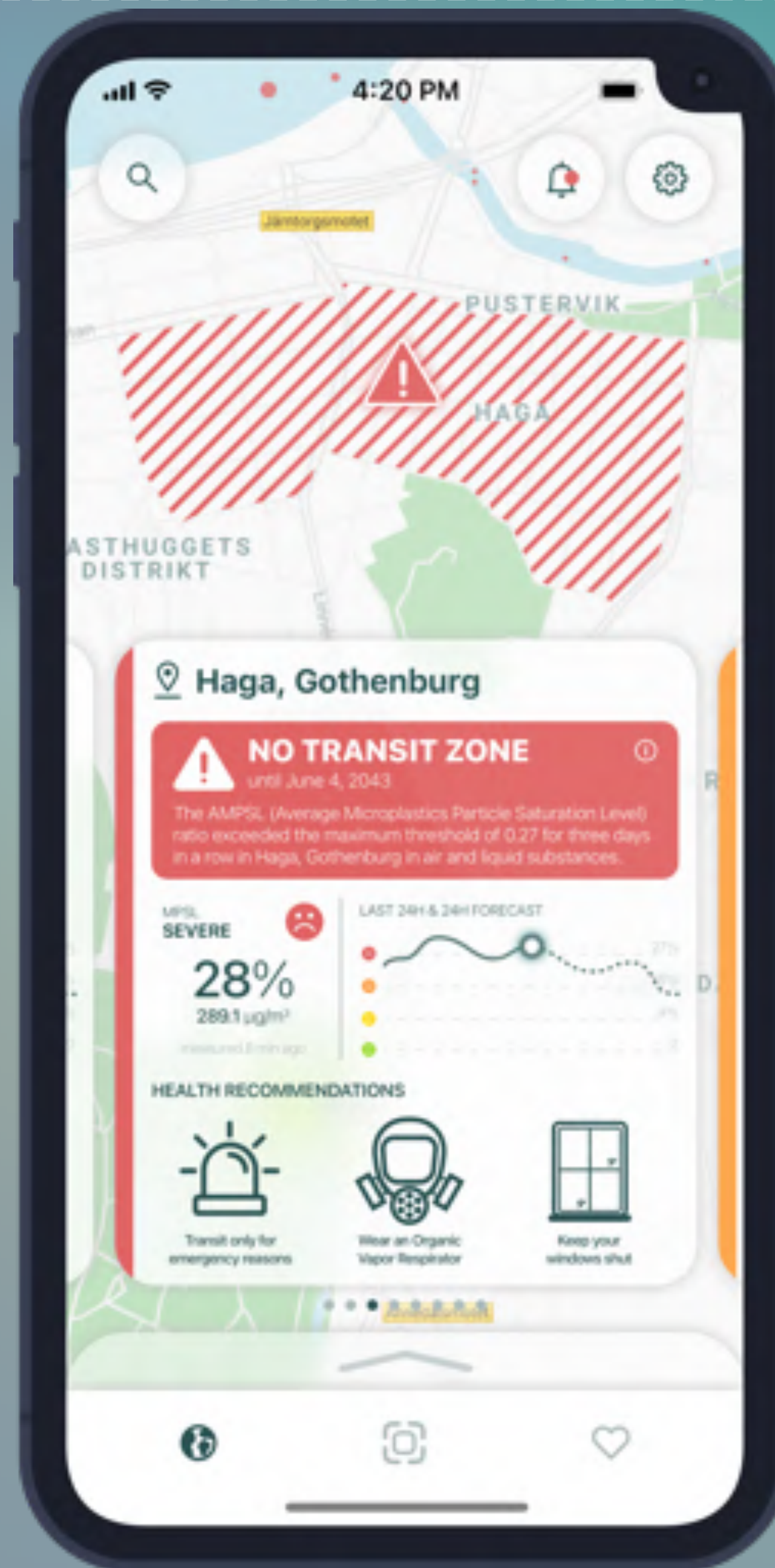


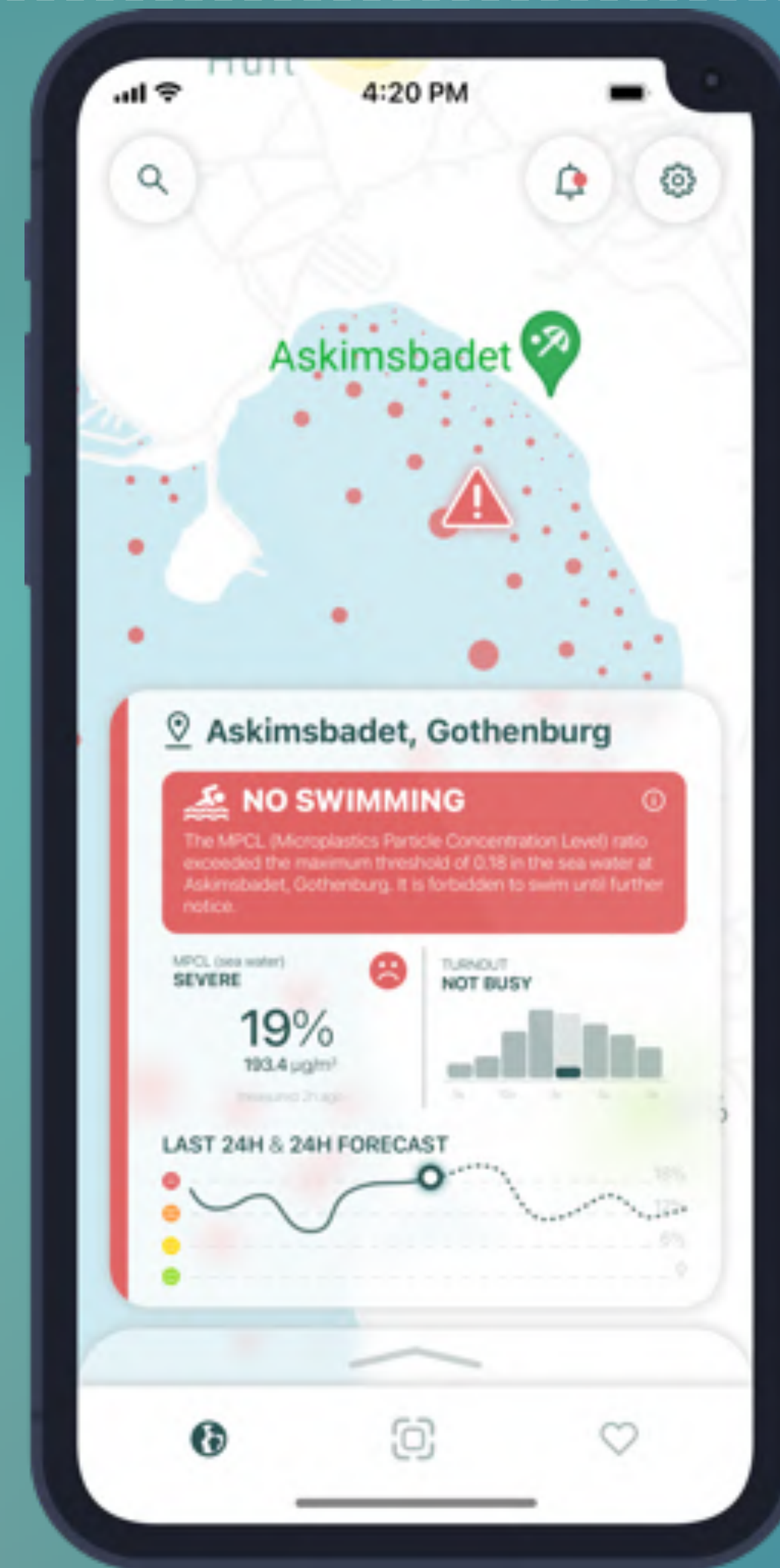
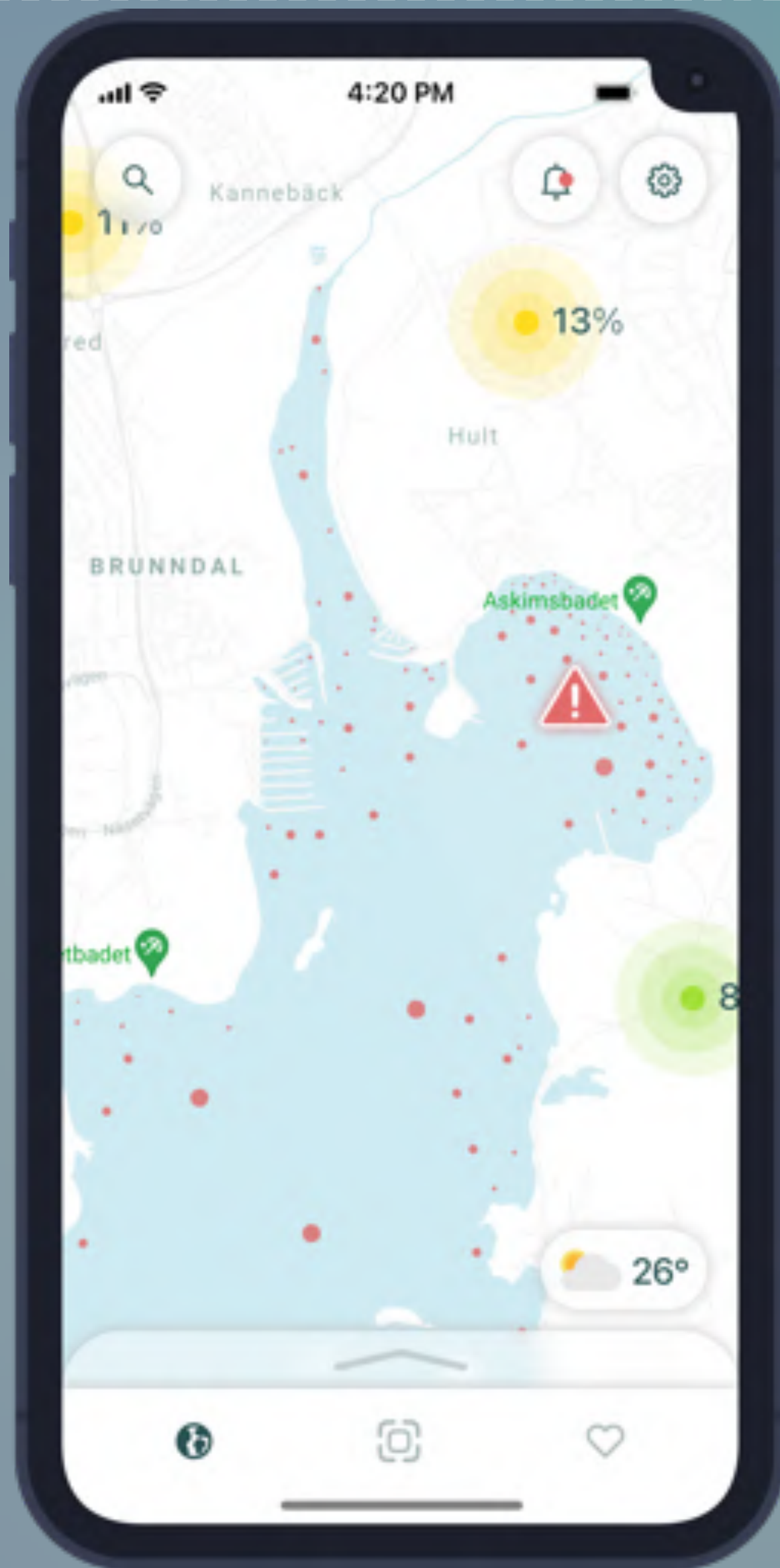
current

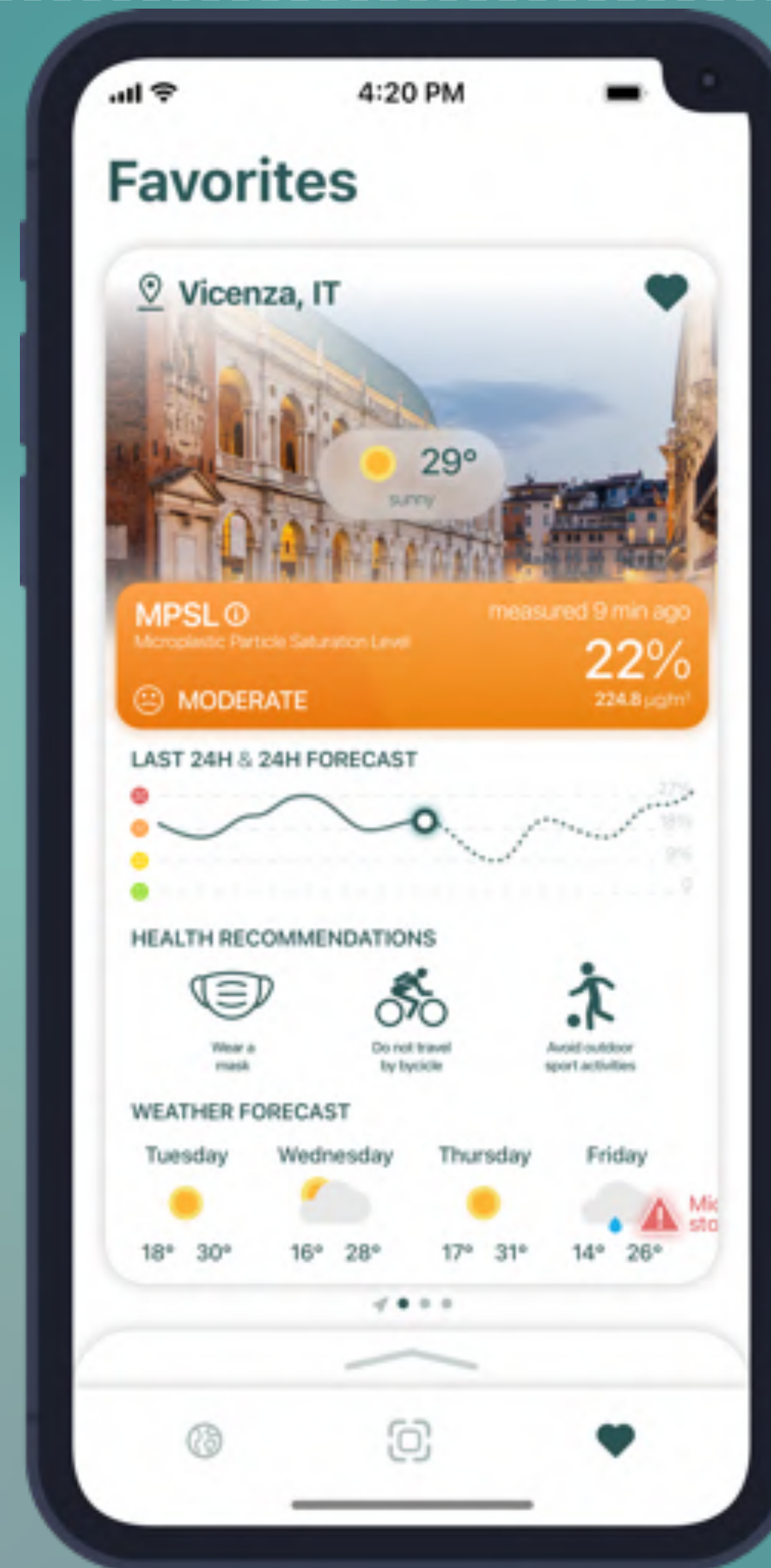
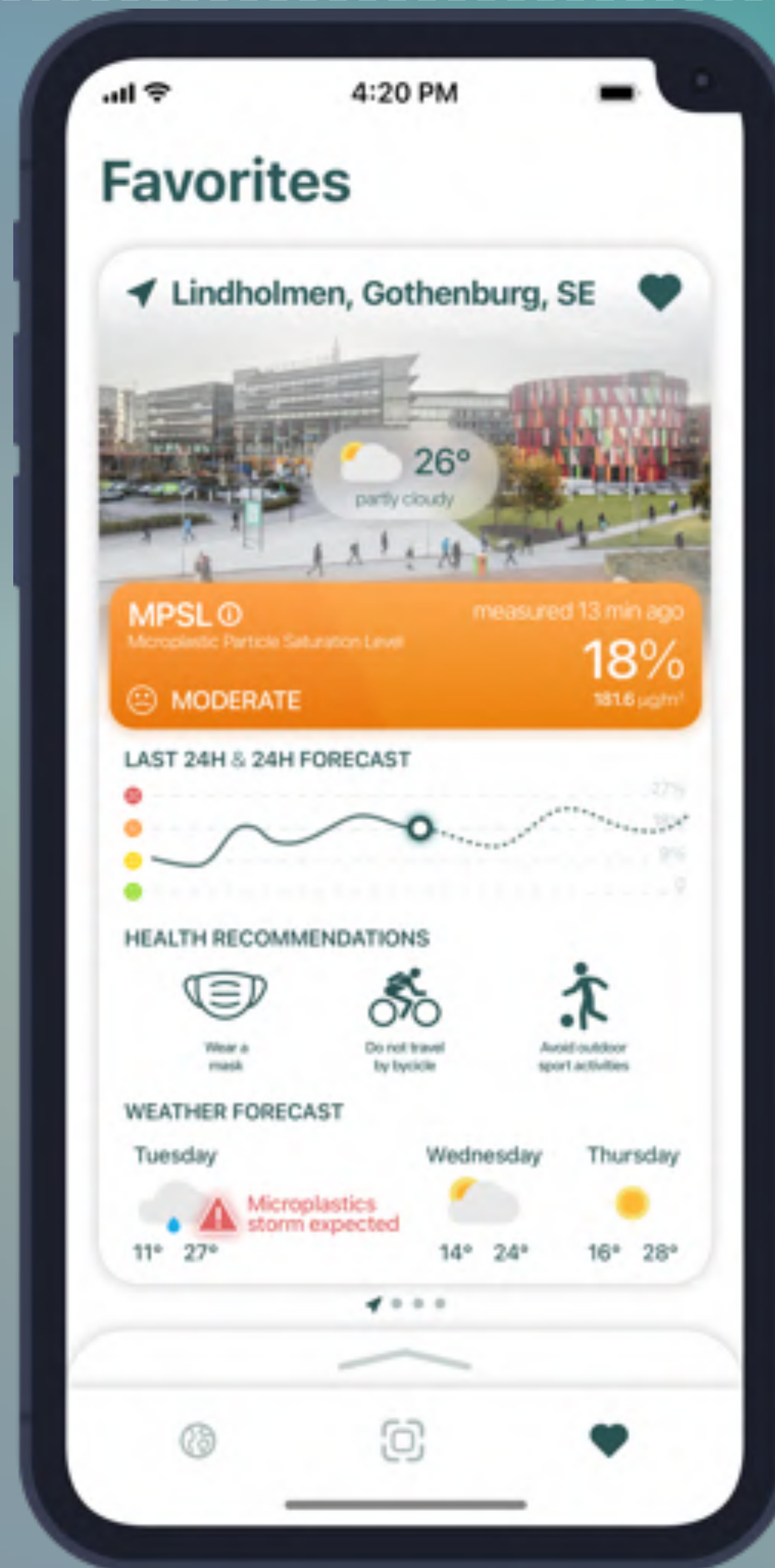


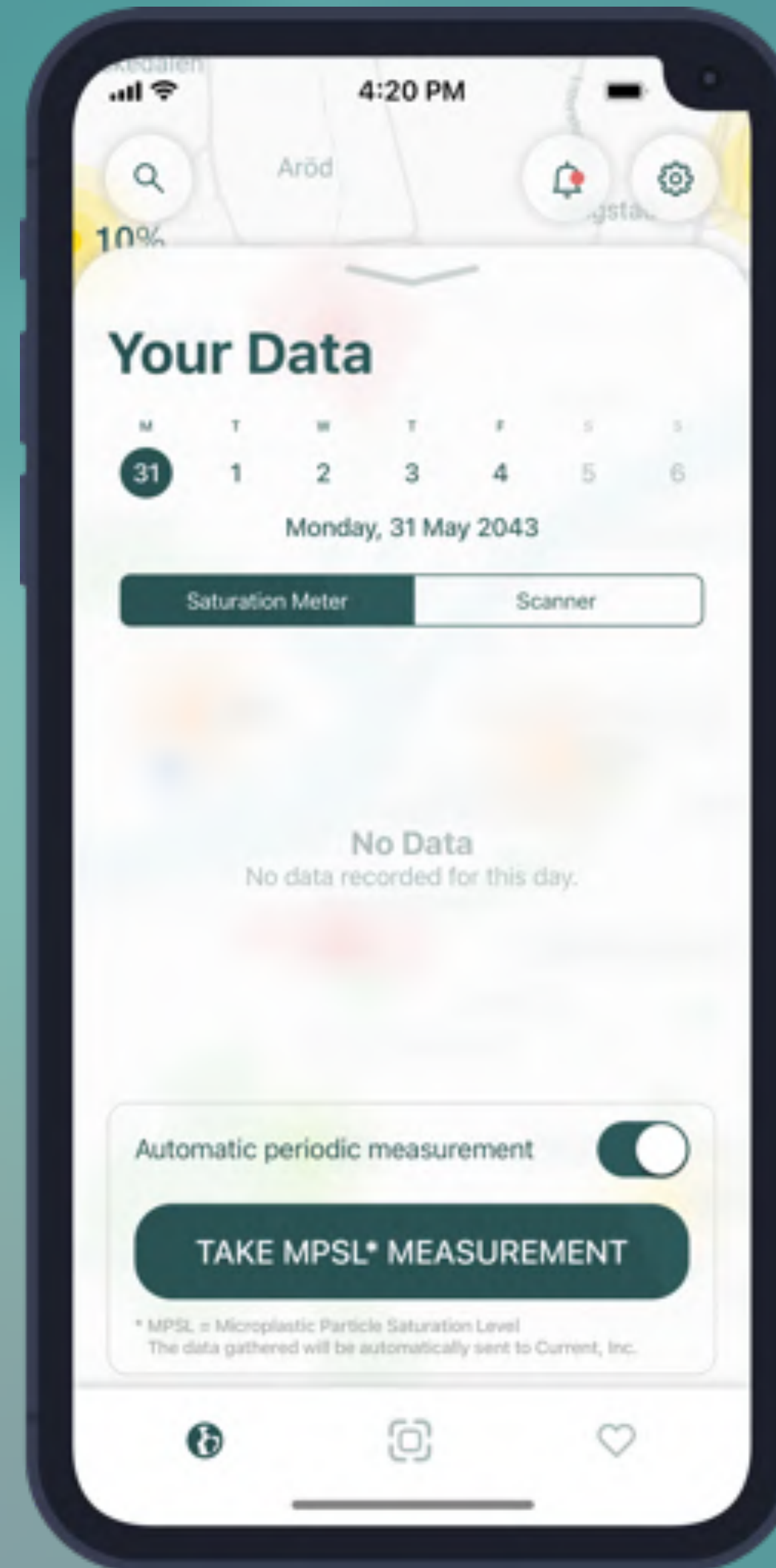
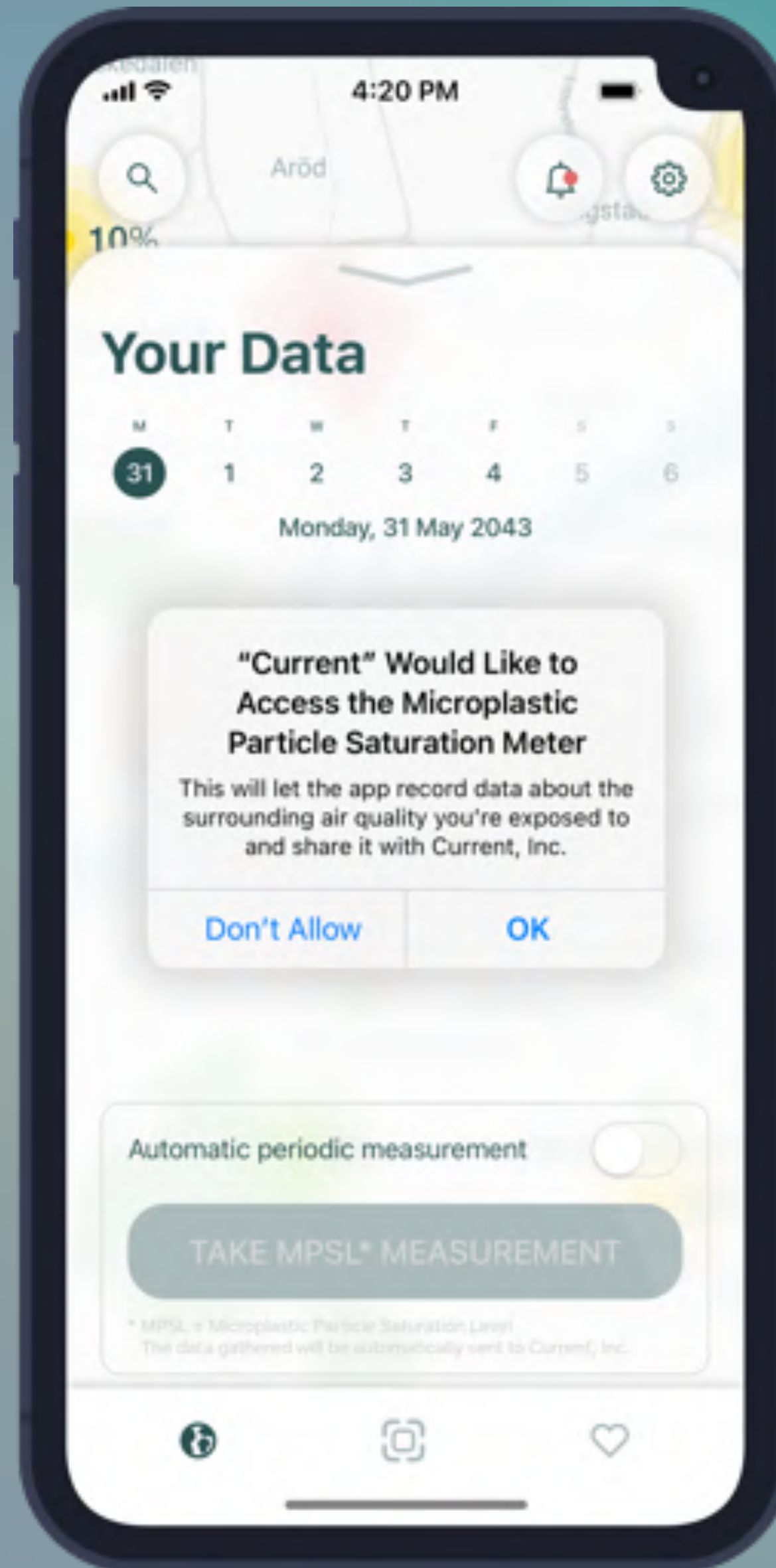












Today's AIMPSL*

Average Indoor Microplastics Particle Saturation Level

23%

about 234,7 $\mu\text{g}/\text{m}^3$

* The "Today's AIMPSL" parameter is calculated by collecting daily measurements from our customers' devices. Thank you for sharing your data with us!

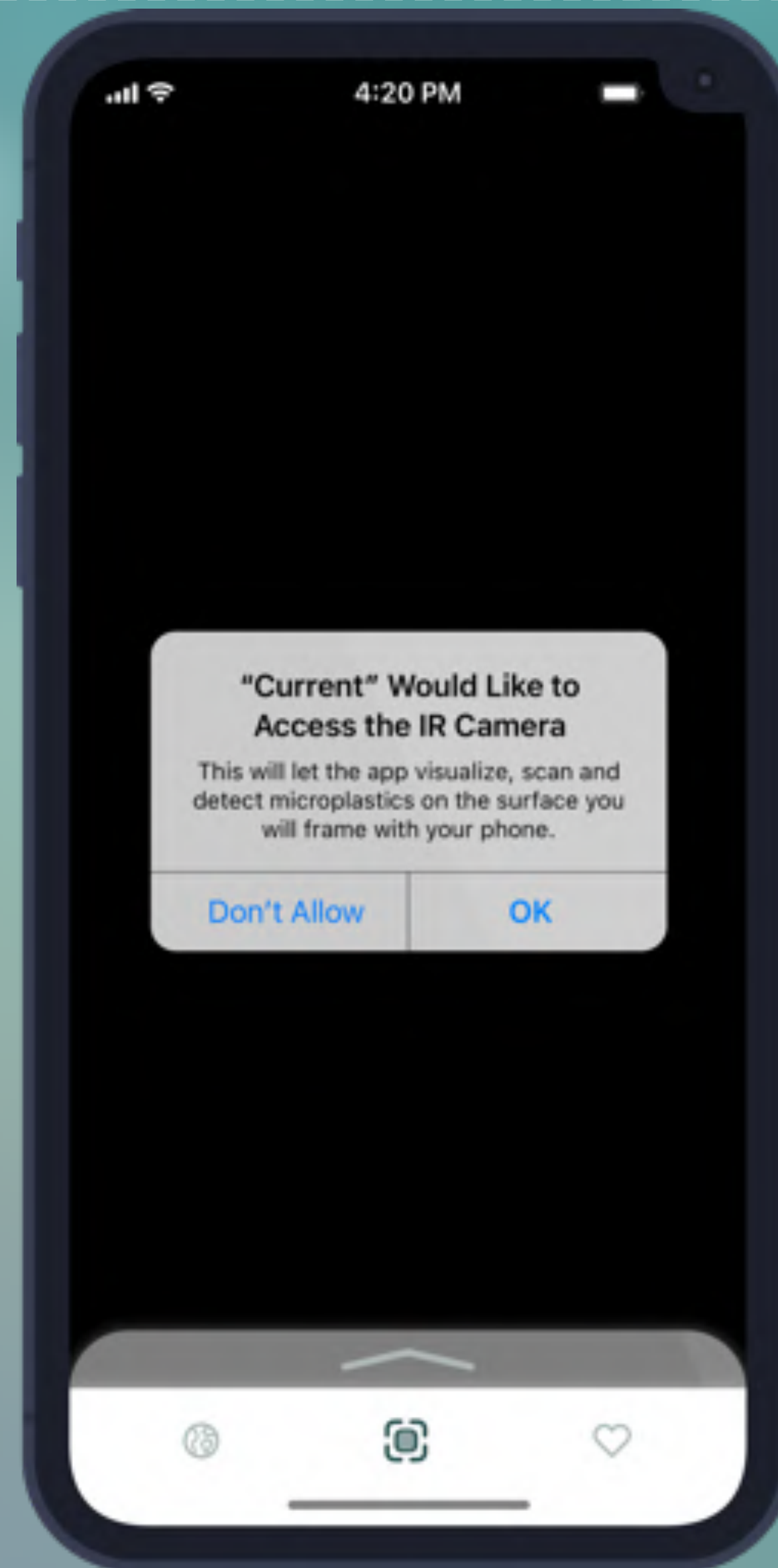
ALERT! NO TRANSIT ZONE SET IN HAGA UNTIL JUNE 4, 2043

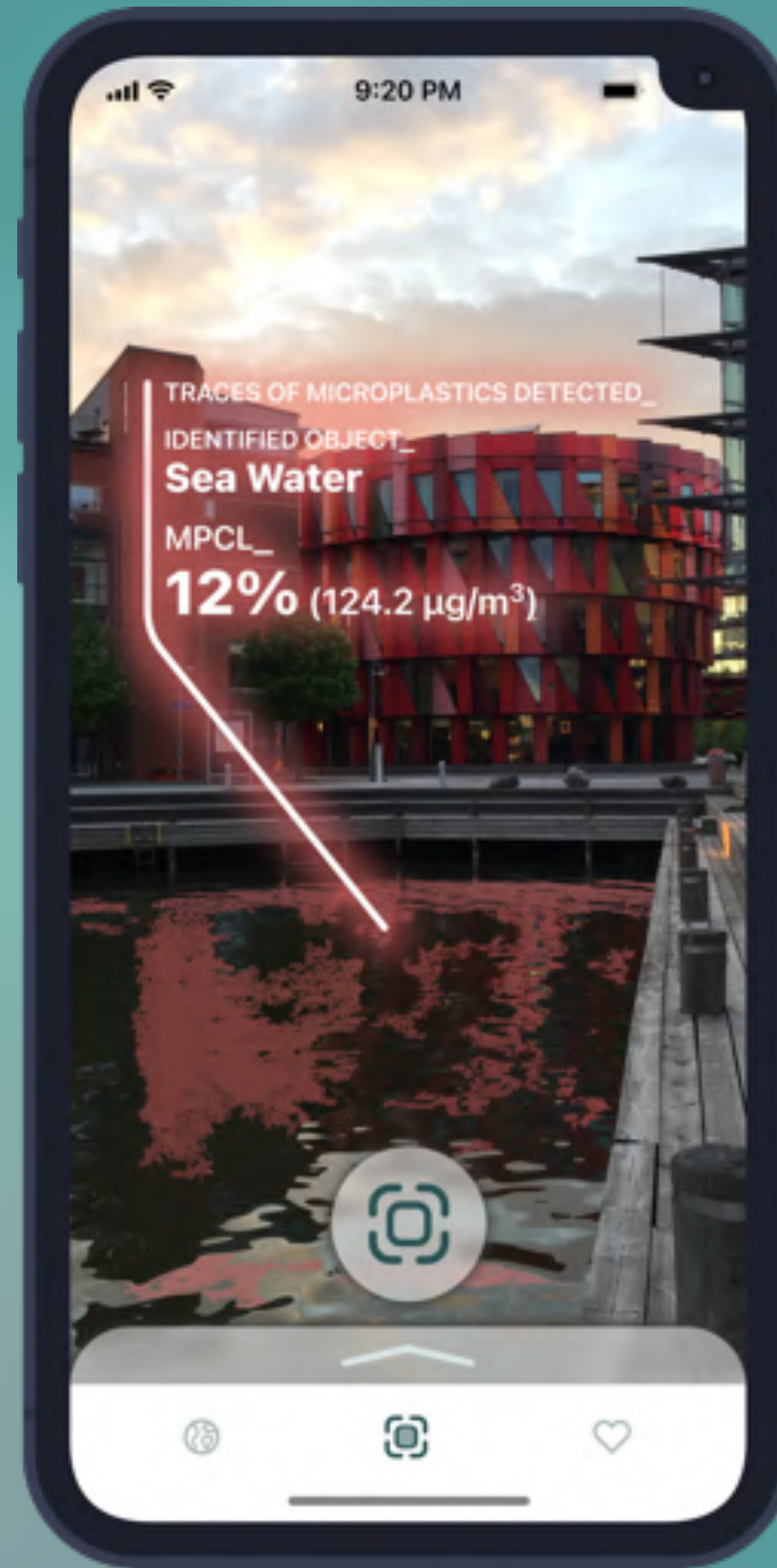
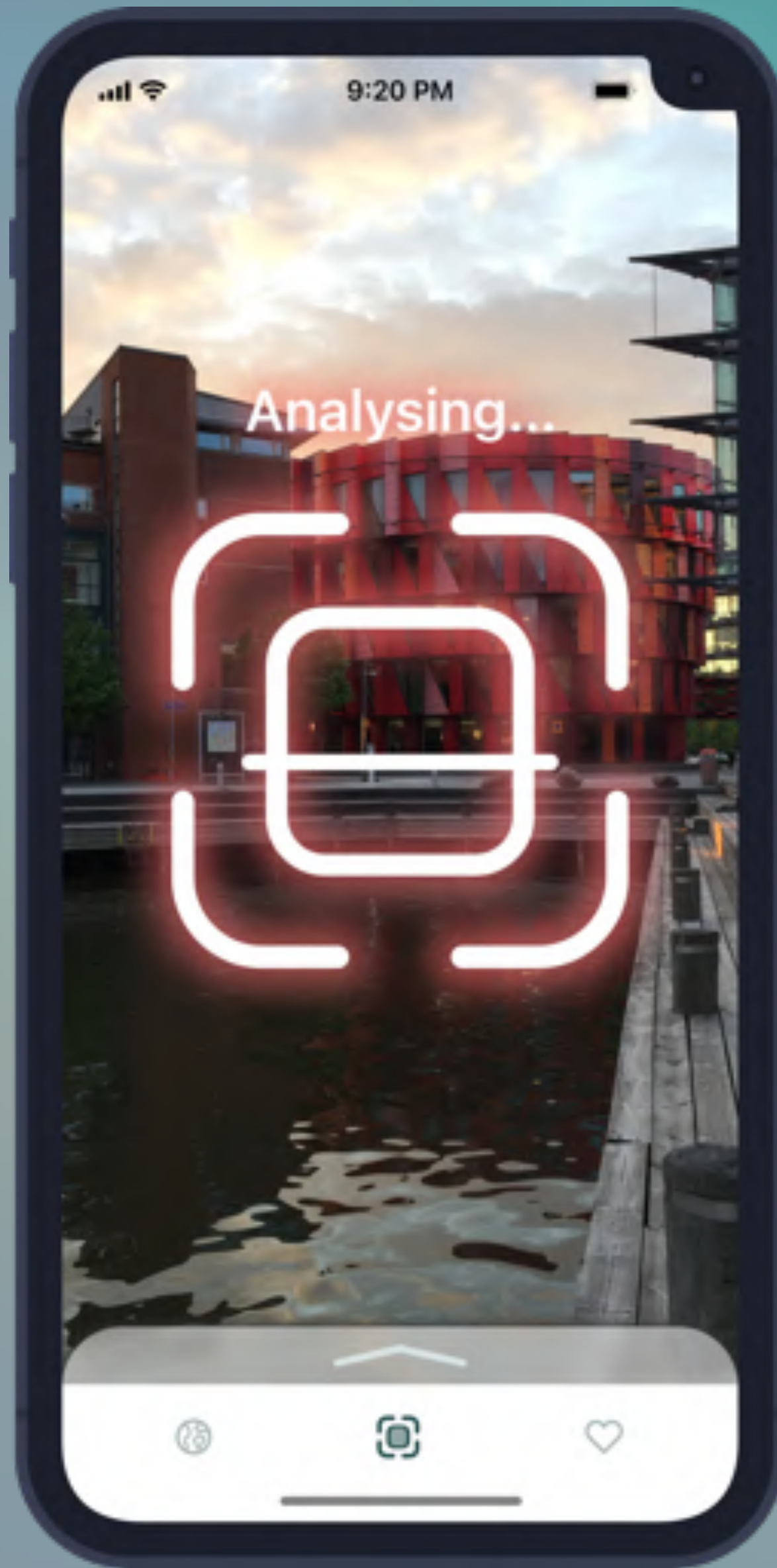
The AIMPSL (Average Microplastics Particle Saturation Level) ratio exceeded the maximum threshold of 0.27 for three days in a row in Haga, Gothenburg. As safety measure, the area is set to No Transit Zone until June 4, 2043. Transit is only allowed for emergency reasons; it is strongly recommend to wear Organic Vapor Respirators in the area.

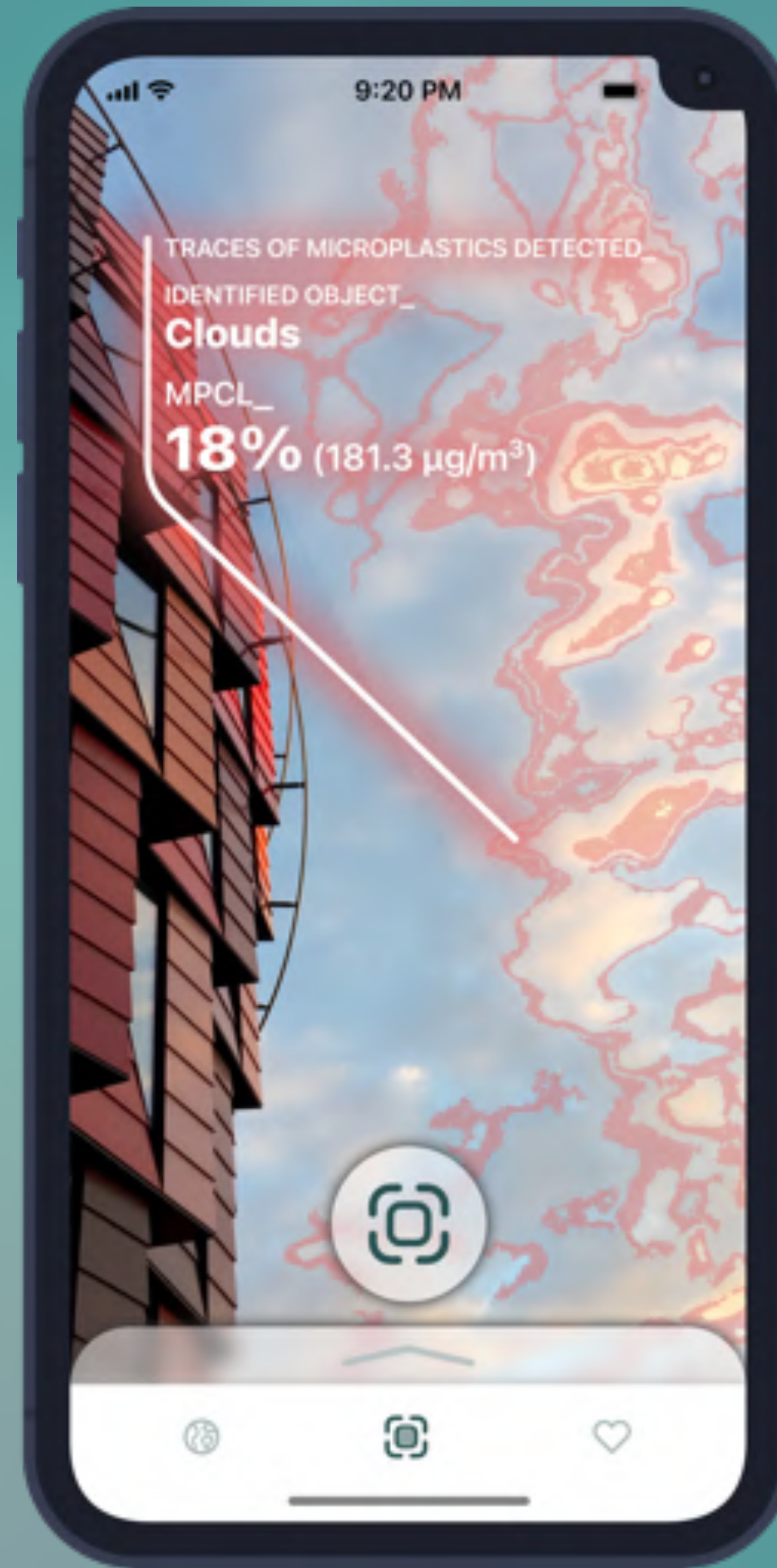
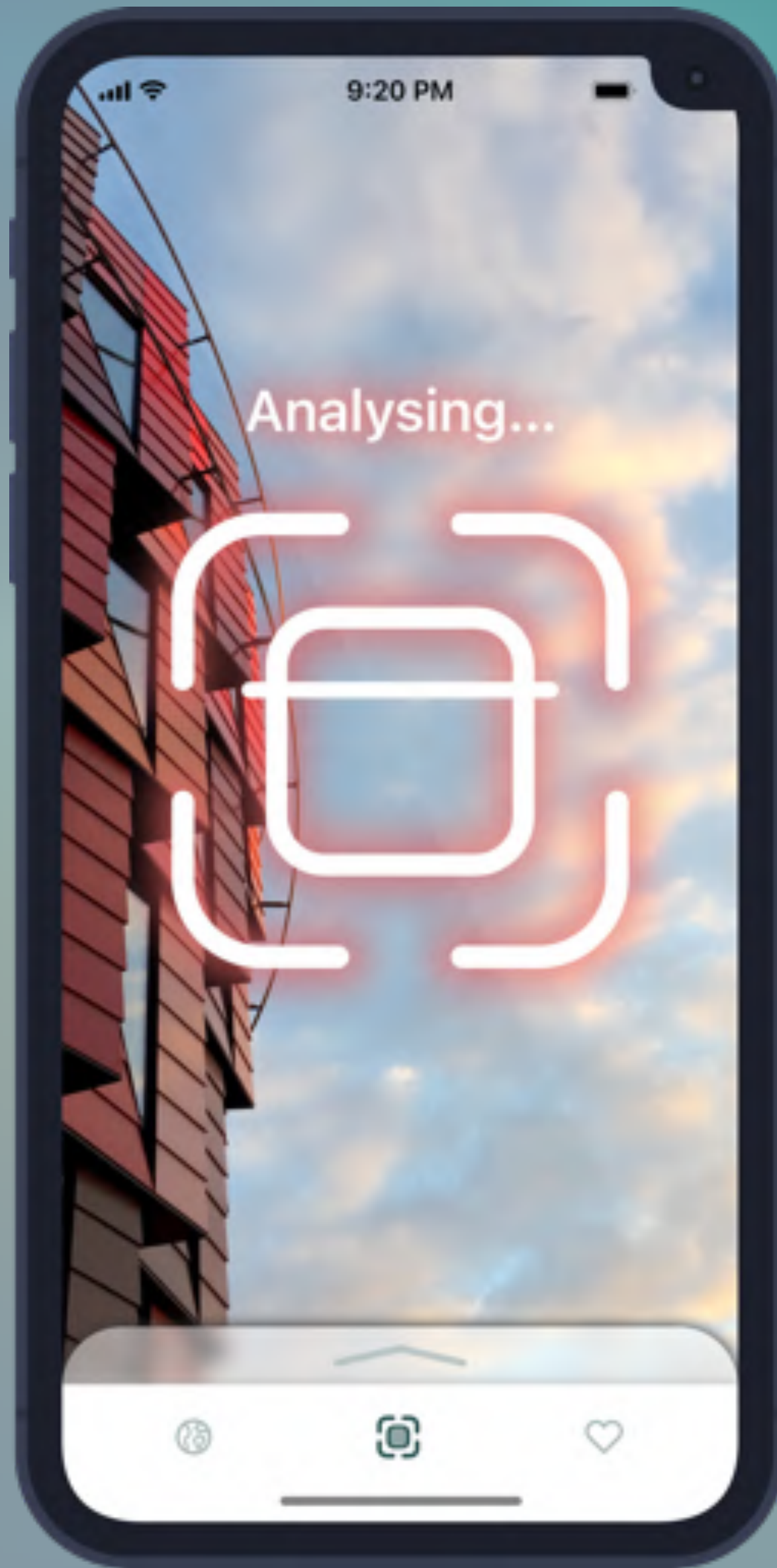
Powered by

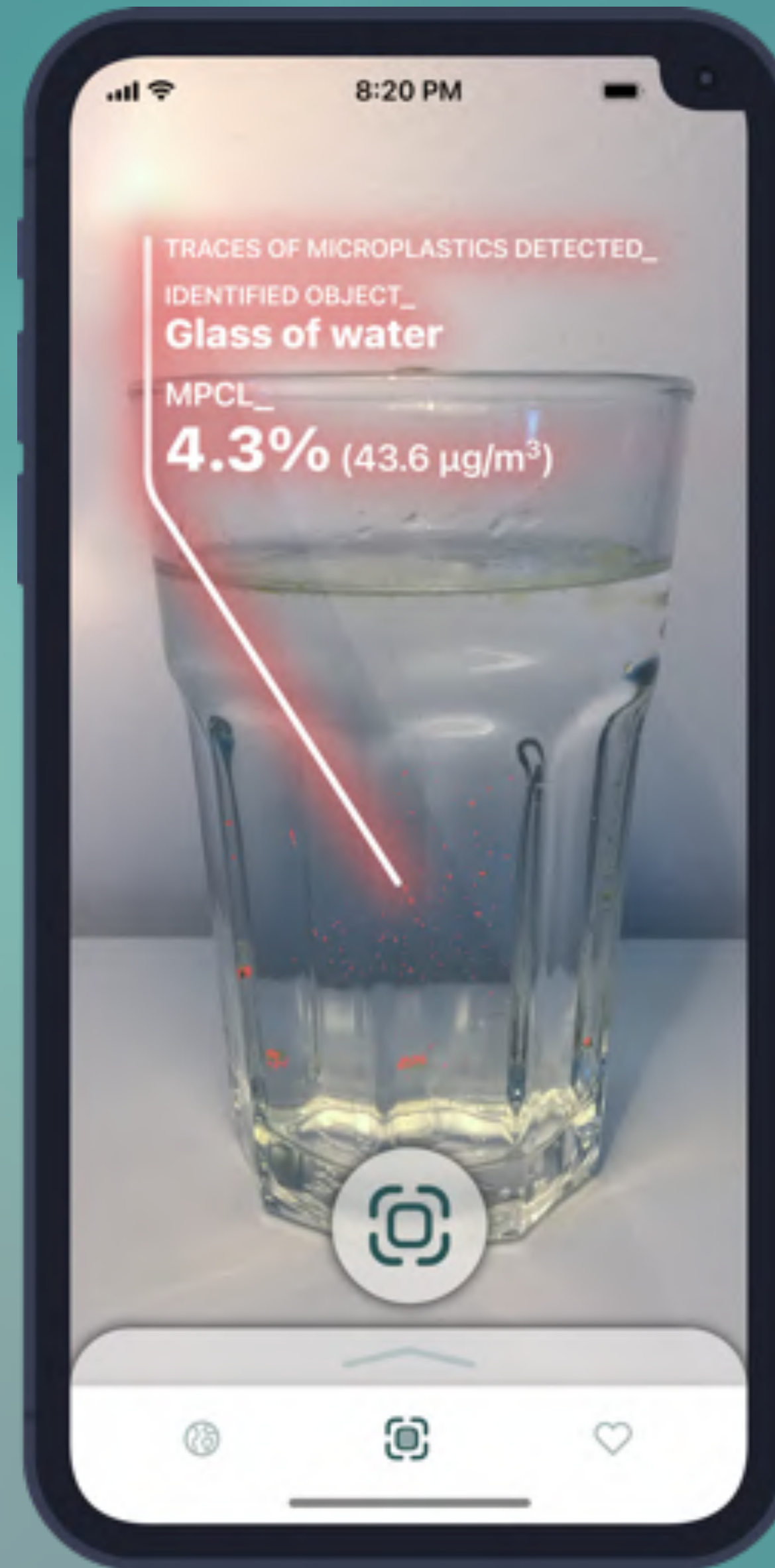
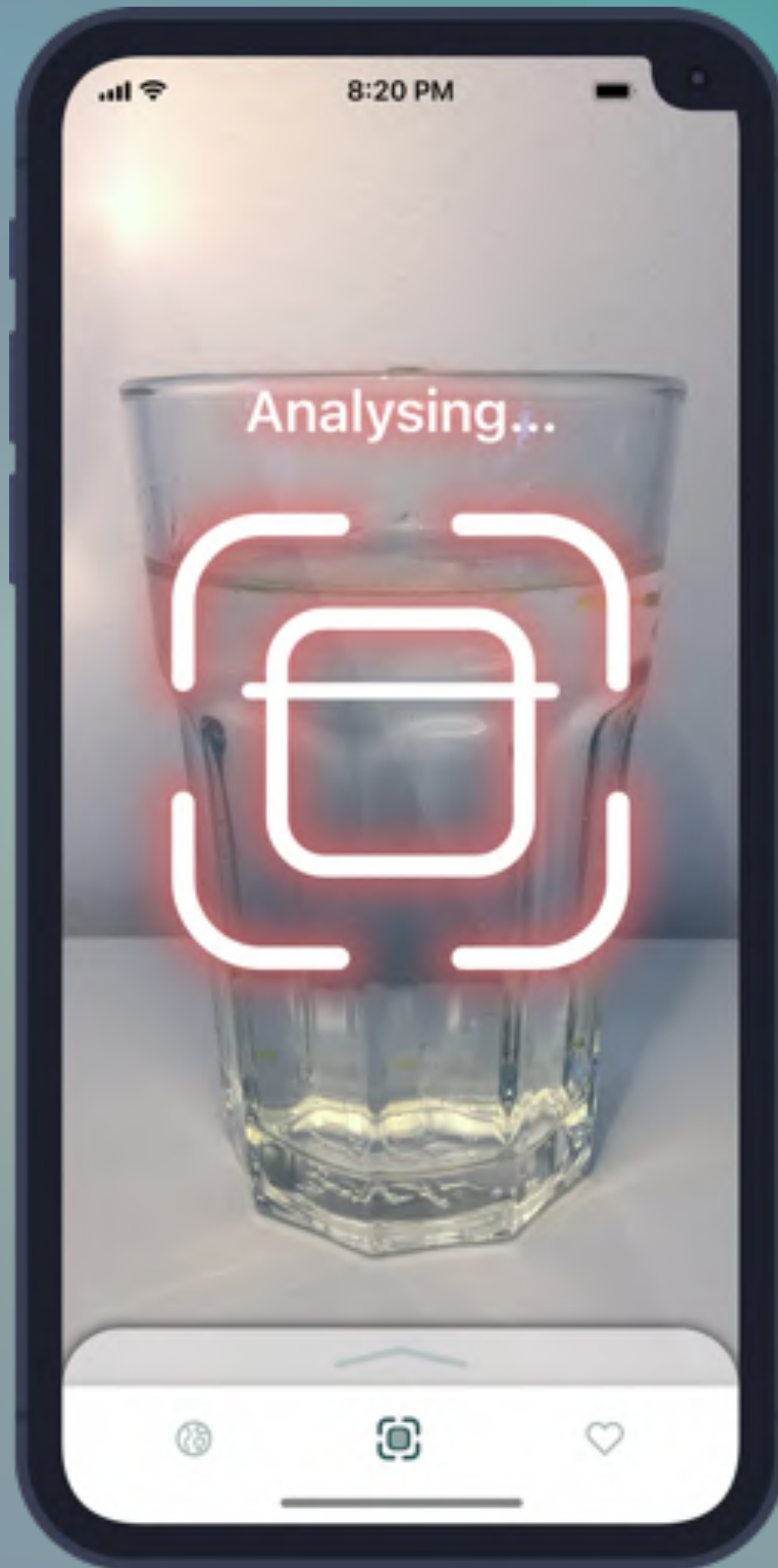


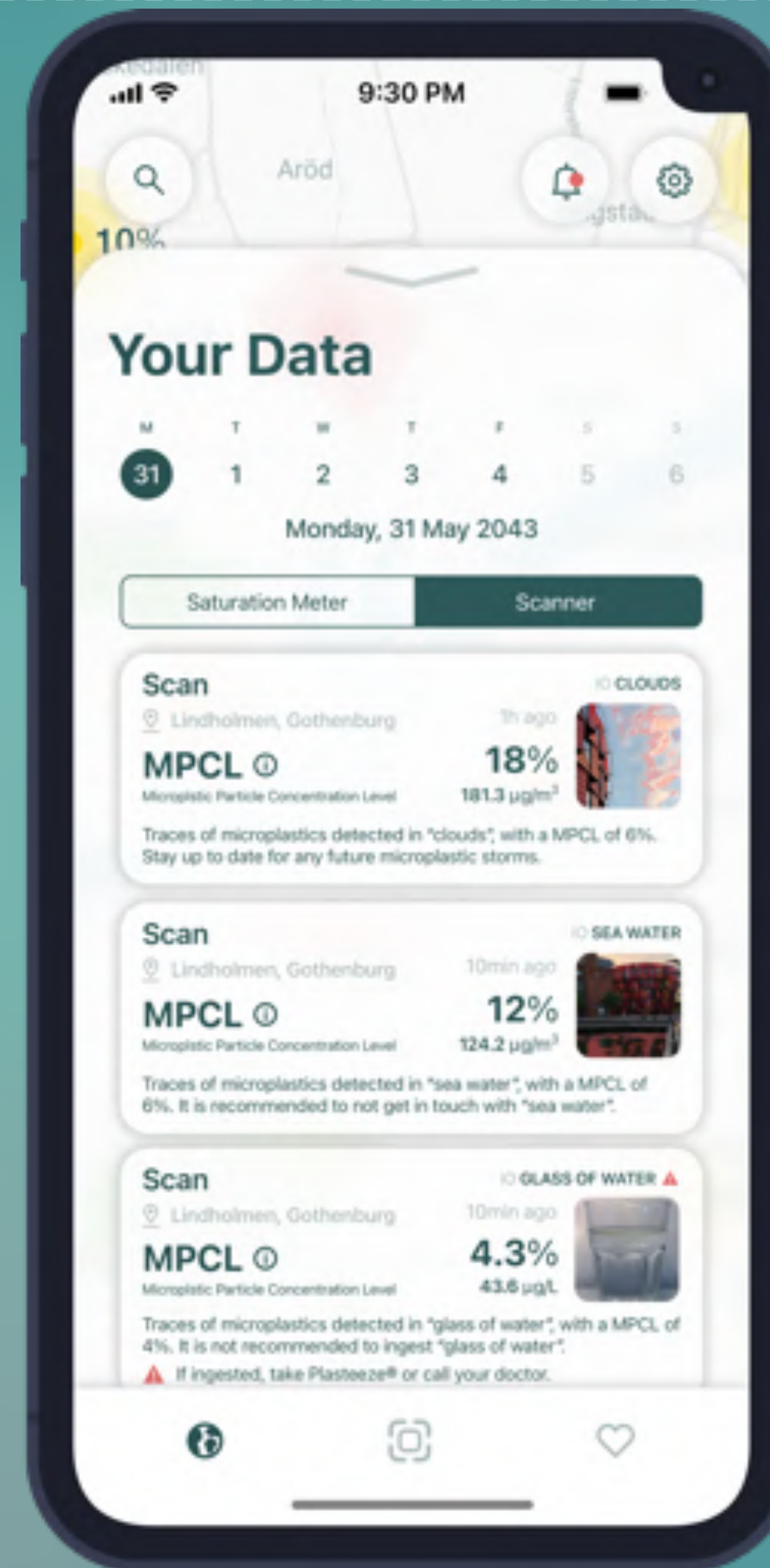
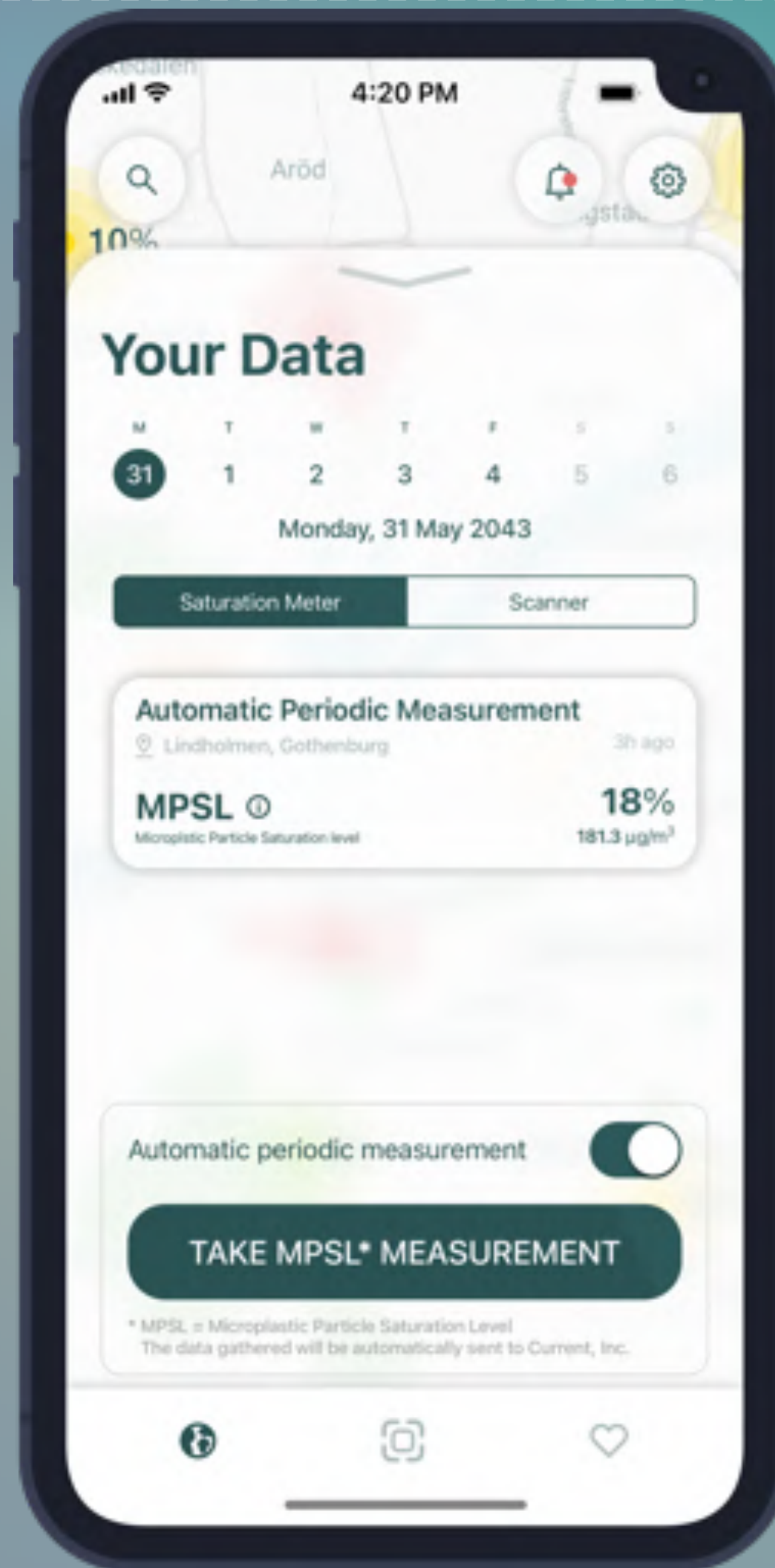
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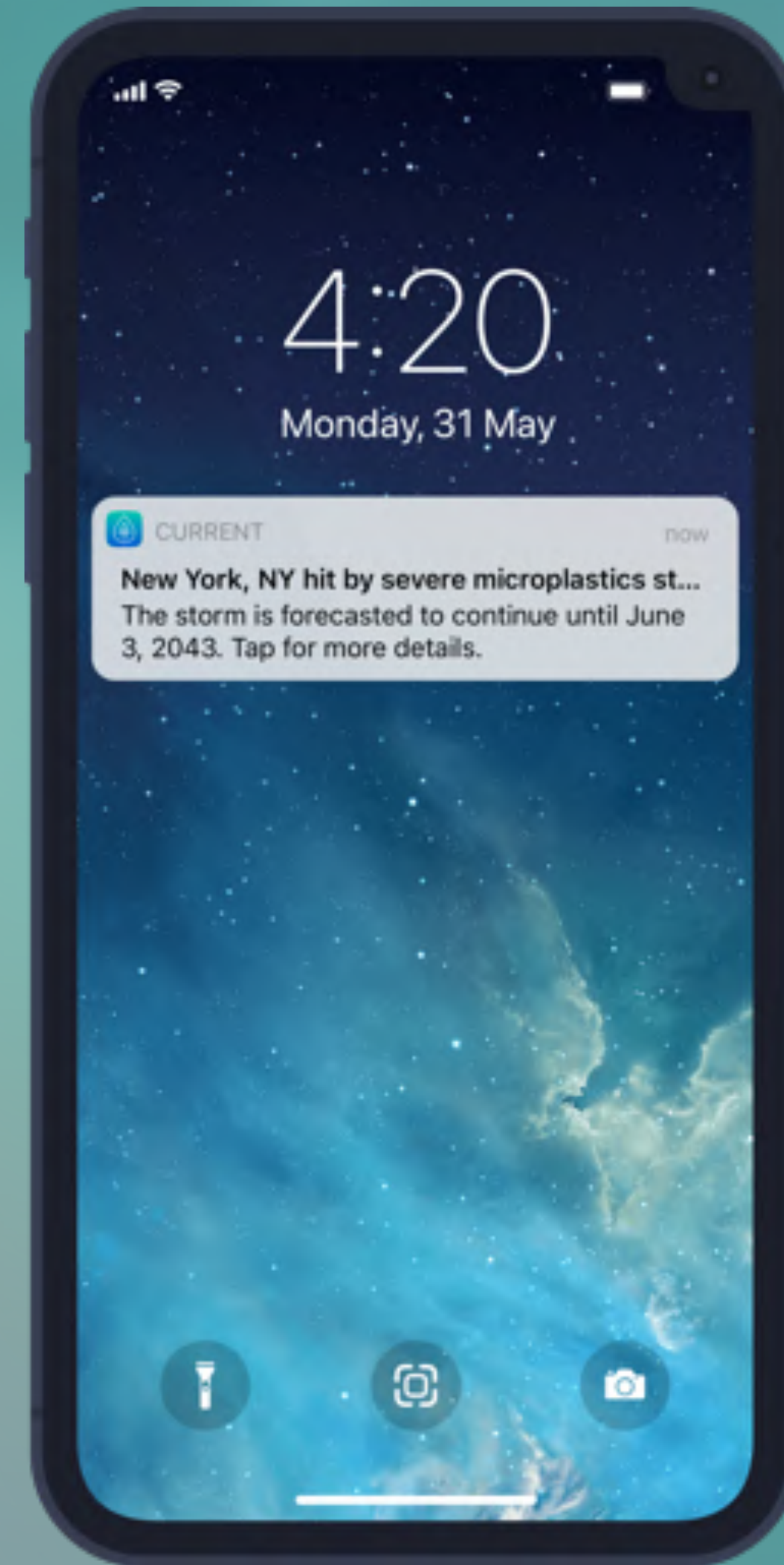
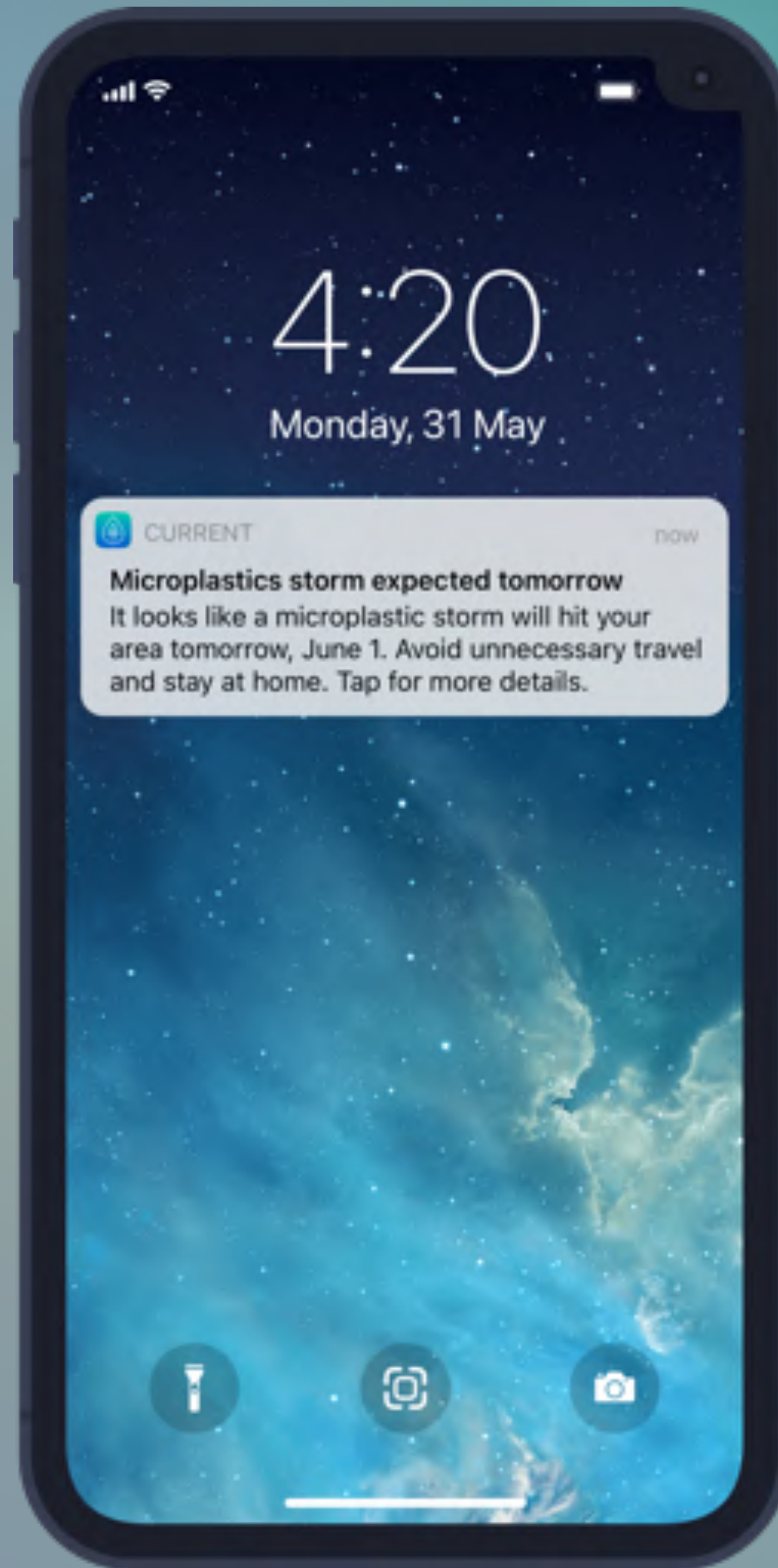


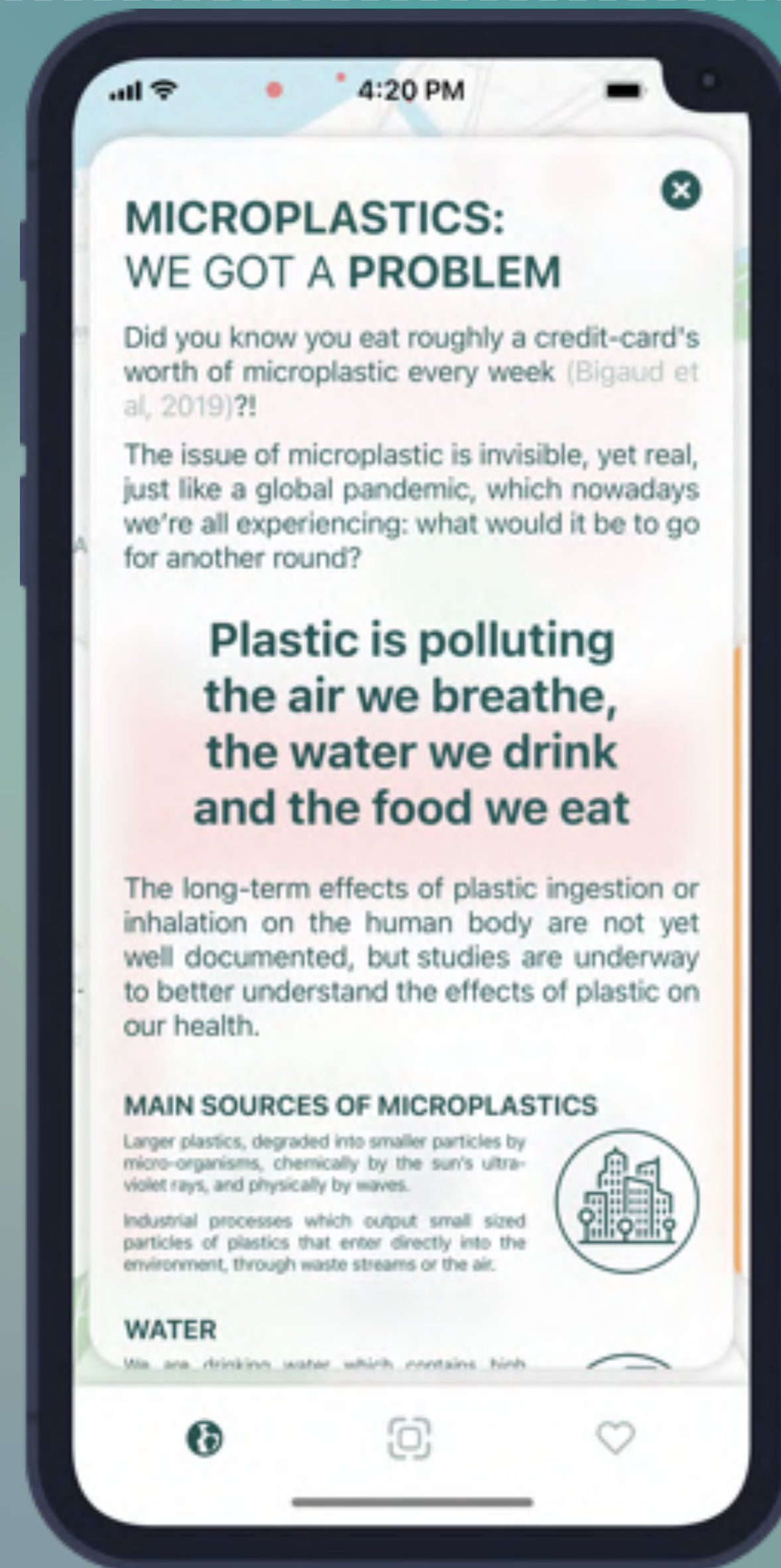












The background is a solid teal color with a subtle, faint grid pattern. A large, bold, white number '4' is positioned on the left side of the image.

4

DESIGN
RATIONALE

A SPECULATIVE DESIGN

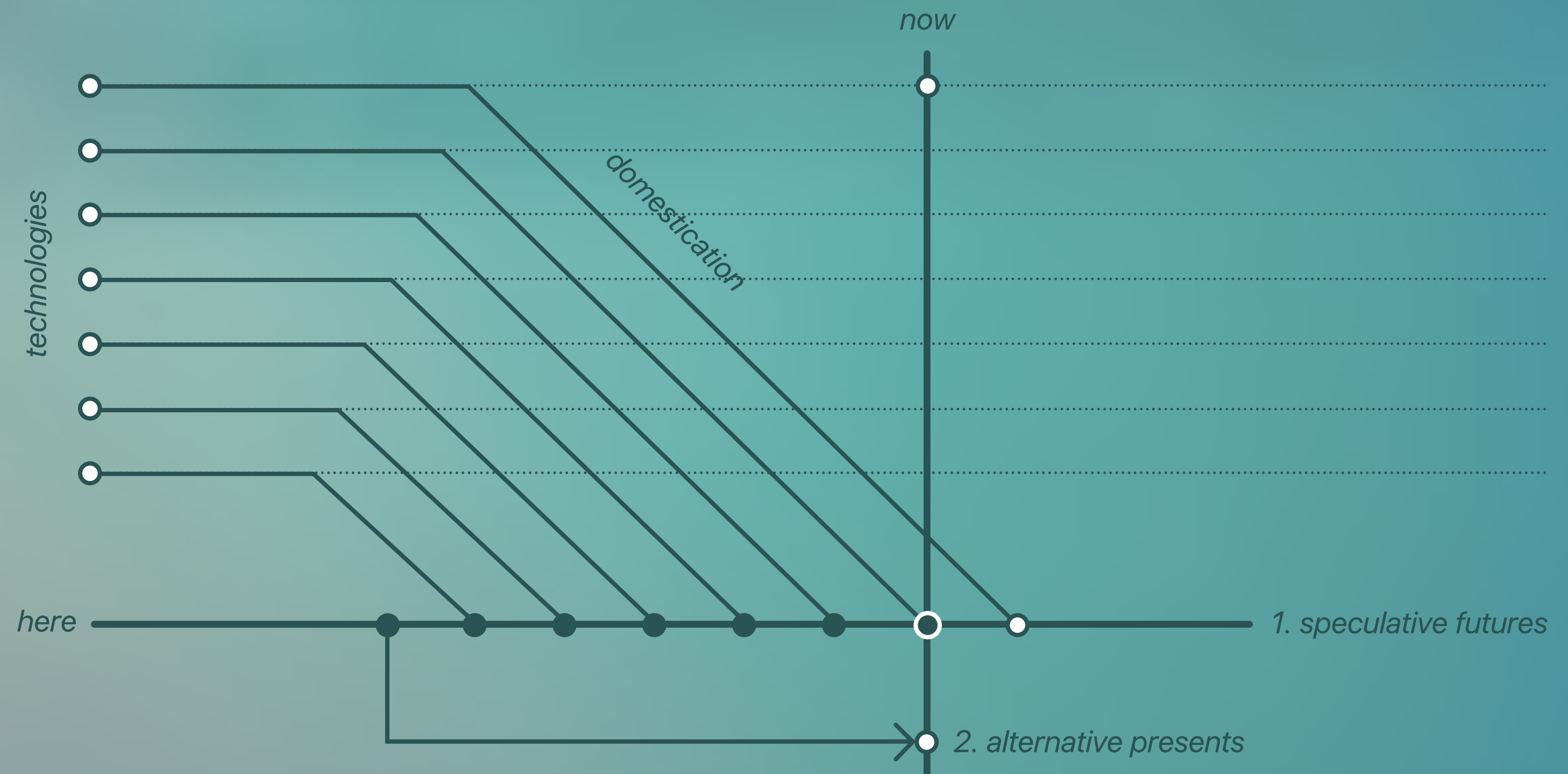
4

DESIGN RATIONALE

THE UNCANNY

"in order to elicit audience engagement and contemplation on a subject it is sometimes helpful for a speculation to provoke"

"the design solution is complex and contradictory: provocative whilst at the same time familiar"



 Mitrović, I. (2016). Introduction to Speculative Design Practice. (speculative.hr/en/)

 Auger, J. (2013). Speculative Design: Crafting the Speculation. Digital Creativity, 24(1), 11–35.

A SPECULATIVE DESIGN

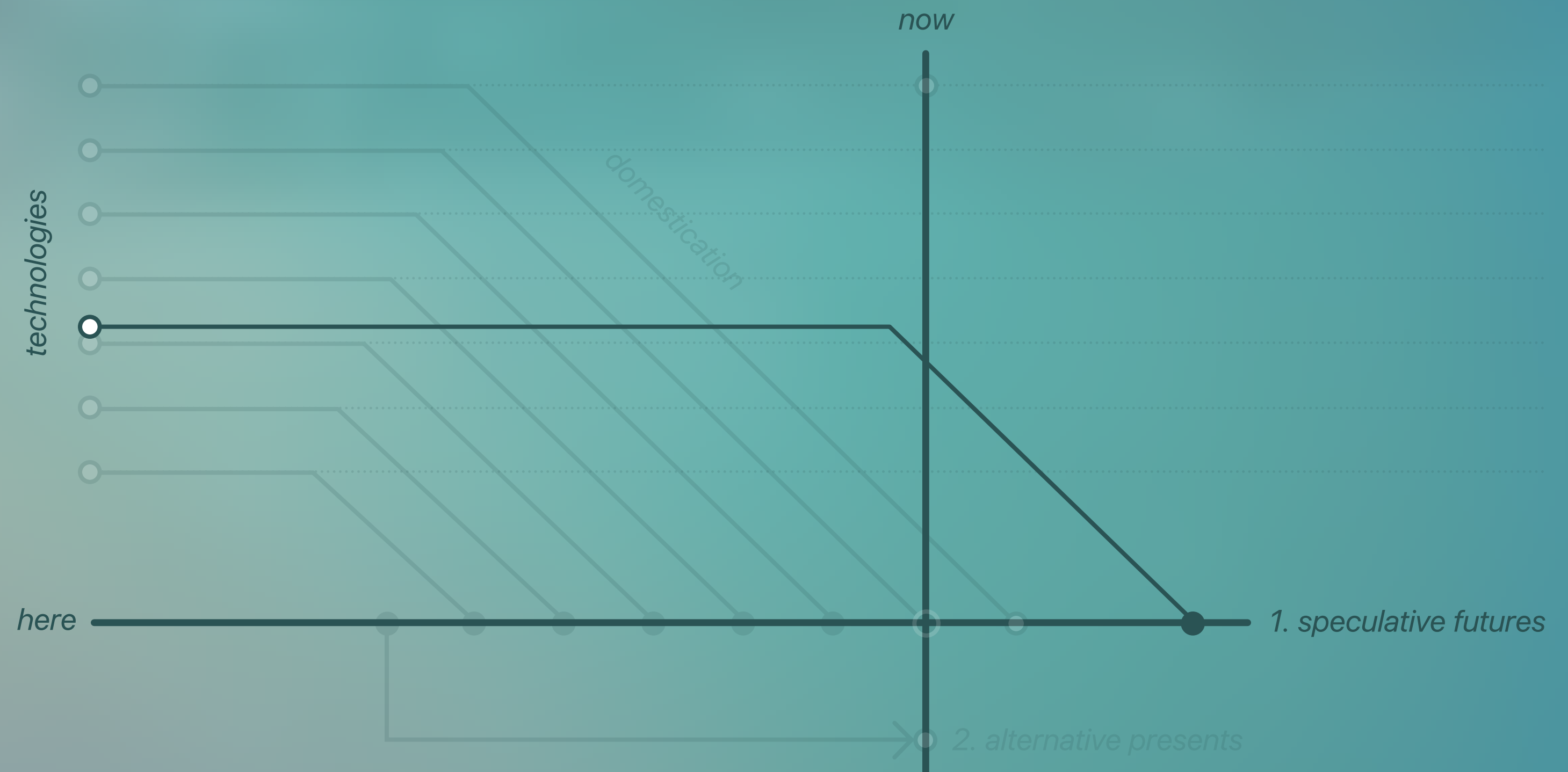
4

DESIGN RATIONALE

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📄 Mitrović, I. (2016). Introduction to Speculative Design Practice. (speculative.hr/en/)

📄 Auger, J. (2013). Speculative Design: Crafting the Speculation. Digital Creativity, 24(1), 11–35.

Gaver et al. (2003)

“By impelling people to interpret situations for themselves, it encourages them to start grappling conceptually with systems and their contexts, and thus to establish deeper and more personal relations with the meanings offered by those systems”

Eventually *“Breaking the fourth wall”* to eliminate ambiguity



ACT OVER SELF

Hassenzahl (2003)

"a product may be perceived as pragmatic because it provides effective and efficient means to manipulate the environment"

"a product may be perceived as hedonic because it provides stimulation, identification or provokes memories"

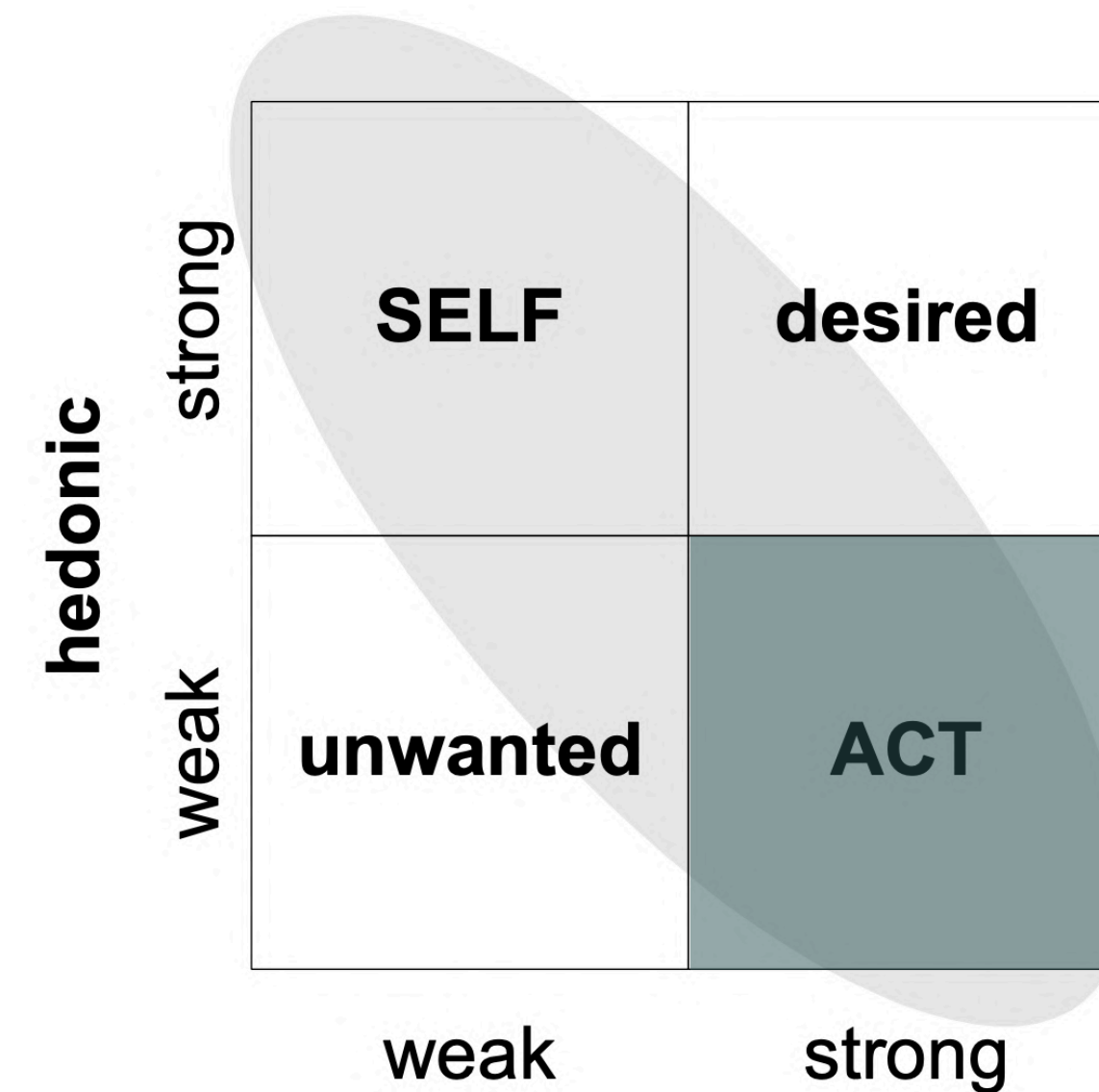
Frijda's Law of Concern and Apparent Reality (1988)

"the more you care about something, the more you will feel"

"the more real [...], the more you will feel"

 Frijda, N. H. (1988). **The Laws of Emotion**. *American Psychologist*, 43(5), 349–358.

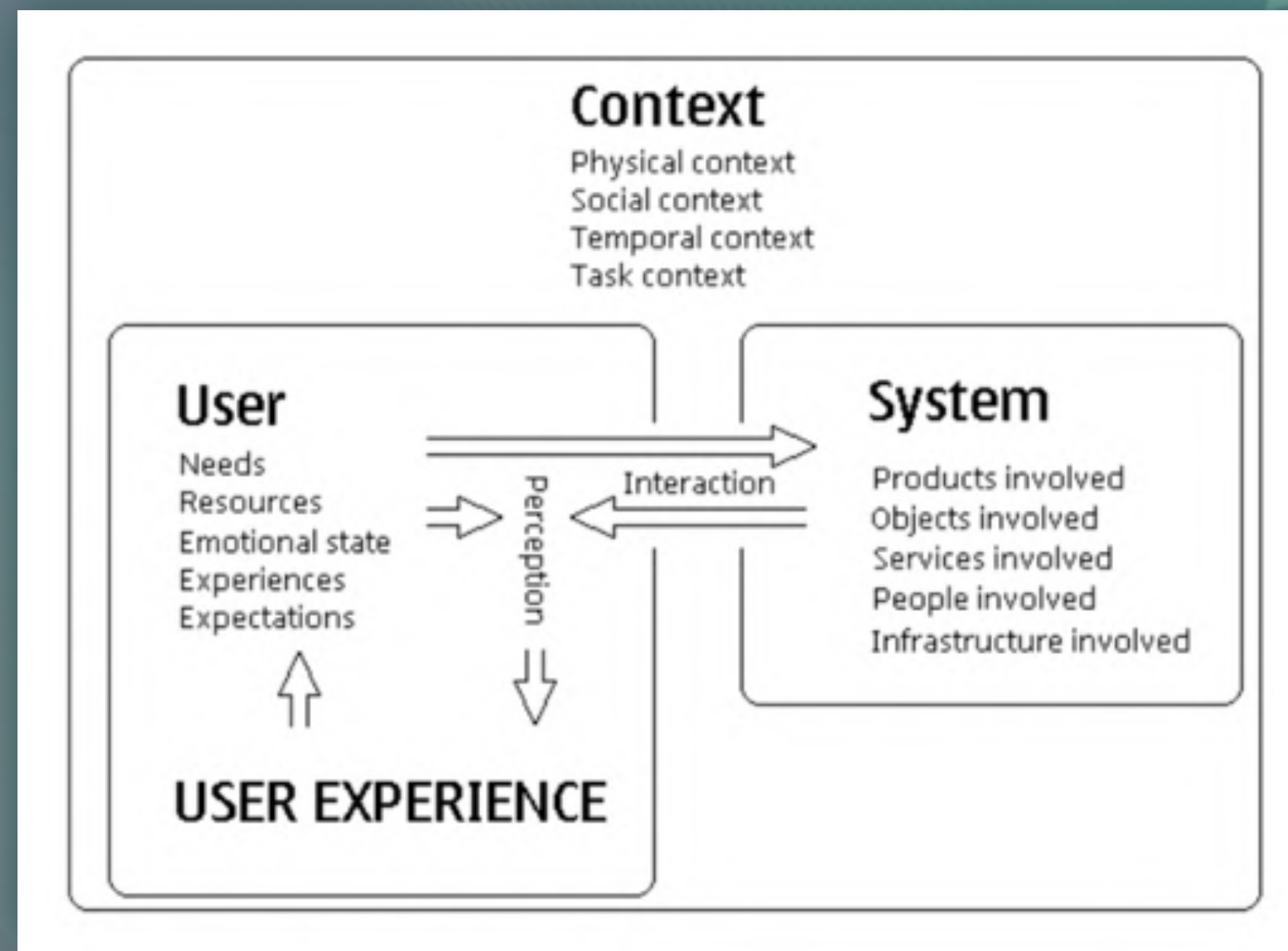
 Hassenzahl, M. (2003). **The Thing and I: Understanding the Relationship Between User and Product**. *Human-Computer Interaction Series*, 31–42.



THE BUILDING BLOCKS

4

DESIGN RATIONALE



ALERT! NO TRANSIT ZONE SET IN HAGA UNTIL JUNE 4, 2043

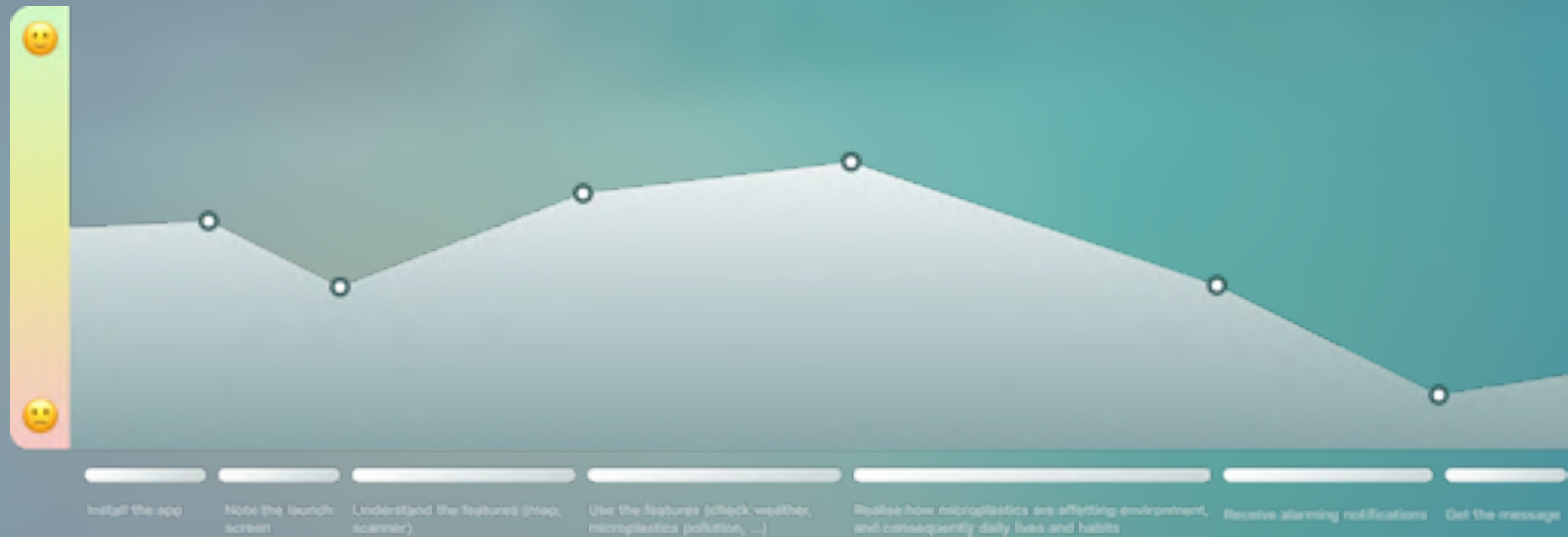
The AMPSL (Average Microplastics Particle Saturation Level) ratio exceeded the maximum threshold of 0.27 for three days in a row in Haga, Gothenburg. As safety measure, the area is set to No Transit Zone until June 4, 2043. Transit is only allowed for emergency reasons; it is strongly recommend to wear Organic Vapor Respirators in the area.

Roto, V. (2006). User Experience Building Blocks.

UX CURVE

4

DESIGN RATIONALE



Kujala, S. et al. (2011). UX Curve: A method for evaluating long-term user experience. Interacting with Computers, 23(5), 473–483.

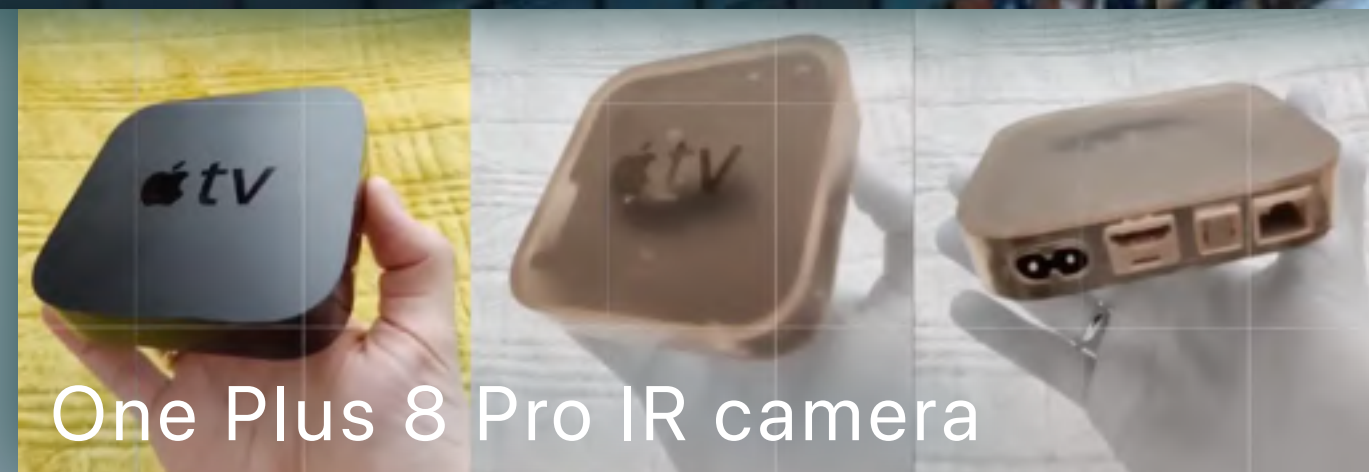
RELATED DESIGNS

4

DESIGN RATIONALE



Climate Clock



One Plus 8 Pro IR camera



Cigarette Packages



Plasticful Foods

 [Climateclock \(climateclock.world\)](https://climateclock.world/)

 [Plasticful Foods: a Case Study \(speculativeedu.eu/case-study-plasticful-foods\)](https://speculativeedu.eu/case-study-plasticful-foods/)

A large, stylized white number 5 is positioned on the left side of the image. The background is a teal color with a faint, dashed white grid pattern. The number 5 is composed of a thick vertical stroke and a curved bottom stroke that ends in a small circle.

5

REFLECTION

Raise people's awareness about the specific problem of microplastics

People would start discussing around the topic, reflecting about it

People might still not get what they could/should do to tackle the problem

Risk of not finding out the informative pop-up explaining the problem around microplastics, if the user doesn't explore well the app

Risk of losing users who might get annoyed by the app over time

RANKING OF PAPERS · COURSE LITERATURE

1

Speculative Design: Crafting the Speculation

Auger, J. (2013). Digital Creativity, 24(1), 11–35. DOI: 10.1080/14626268.2013.767276

2

Introduction to Speculative Design Practice

Mitrović, I. (2016) URL: <http://speculative.hr/en/>

3

The Thing and I: Understanding the Relationship Between User and Product

Hassenzahl, M. (2003). Human-Computer Interaction Series, 31–42. DOI: 10.1007/1-4020-2967-5_4

4

Exploring the Reflective Potentialities of Personal Data with Different Temporal Modalities: A Field Study of Olo Radio

Odom, W., Yoo, M., Lin, H., Duel, T., Amram, T., & Chen, A. Y. S. (2020). In Proceedings of the ACM Designing Interactive Systems Conference (DIS '20), 283–295. DOI: 10.1145/3357236.3395438

5

Uncomfortable Interactions

Benford, S., Greenhalgh, C., Giannachi, G., Walker, B., Marshall, J., & Rodden, T. (2012). In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '12), 2005–2014. DOI: 10.1145/2207676.2208347

6

23 Ways to Nudge: A Review of Technology-Mediated Nudging in Human-Computer Interaction

Caraban, A., Karapanos, E., Gonçalves, D., & Campos, P. (2019). In Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI '19). Paper 503, 1–15. DOI: 10.1145/3290605.3300733

7

Ten Ways to Design for Disgust, Sadness, and Other Enjoyments: A Design Approach to Enrich Product Experiences with Negative Emotions

Fokkinga, S. F., & Desmet, P. M. A. (2013). International Journal of Design, 7(1), 19–36.

8

Our Symbiotic Life: An Exploration of Interspecies Relations

Budinger, K., & Heidmann, F. (2019). In Proceedings of the Designing Interactive Systems Conference (DIS '19), 1349–1362. DOI: 10.1145/3322276.3323698

9

“Annoying, but in a Nice Way”: An Inquiry into the Experience of Frictional Feedback

Laschke, M., Diefenbach, S. & Hassenzahl, M. (2015). In International Journal of Design, 9(2), 129–140.

10

From interaction to trajectories: designing coherent journeys through user experiences

Benford, S., Giannachi, G., Koleva, B., & Rodden, T. (2009). In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '09), 709–718. DOI: 10.1145/1518701.1518812

DAT157

DESIGNING
USER
EXPERIENCES

-

2
0
2
1

thank you

AMOS CAPPELLARO

PRESENTATION_ 31 05 2021