GREEN SCENT

SMART CITIZEN EDUCATION
FOR A GREEN FUTURE

GreenAir

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BARCELONA SUPERCOMPUTING CENTER

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99% OF PEOPLE BREATHE POLLUTED AIR

World Health Organisation

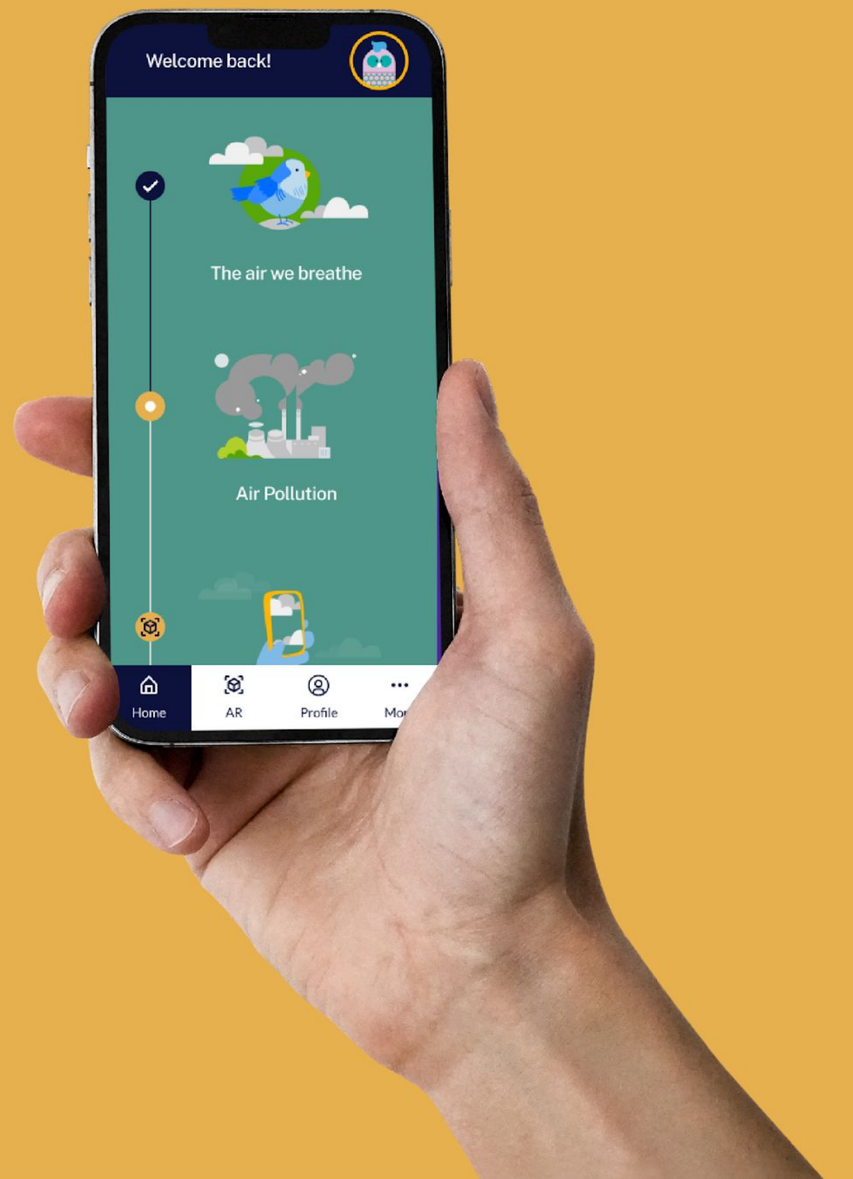
Air pollution kills 6.7 million people every year. World Health Organisation

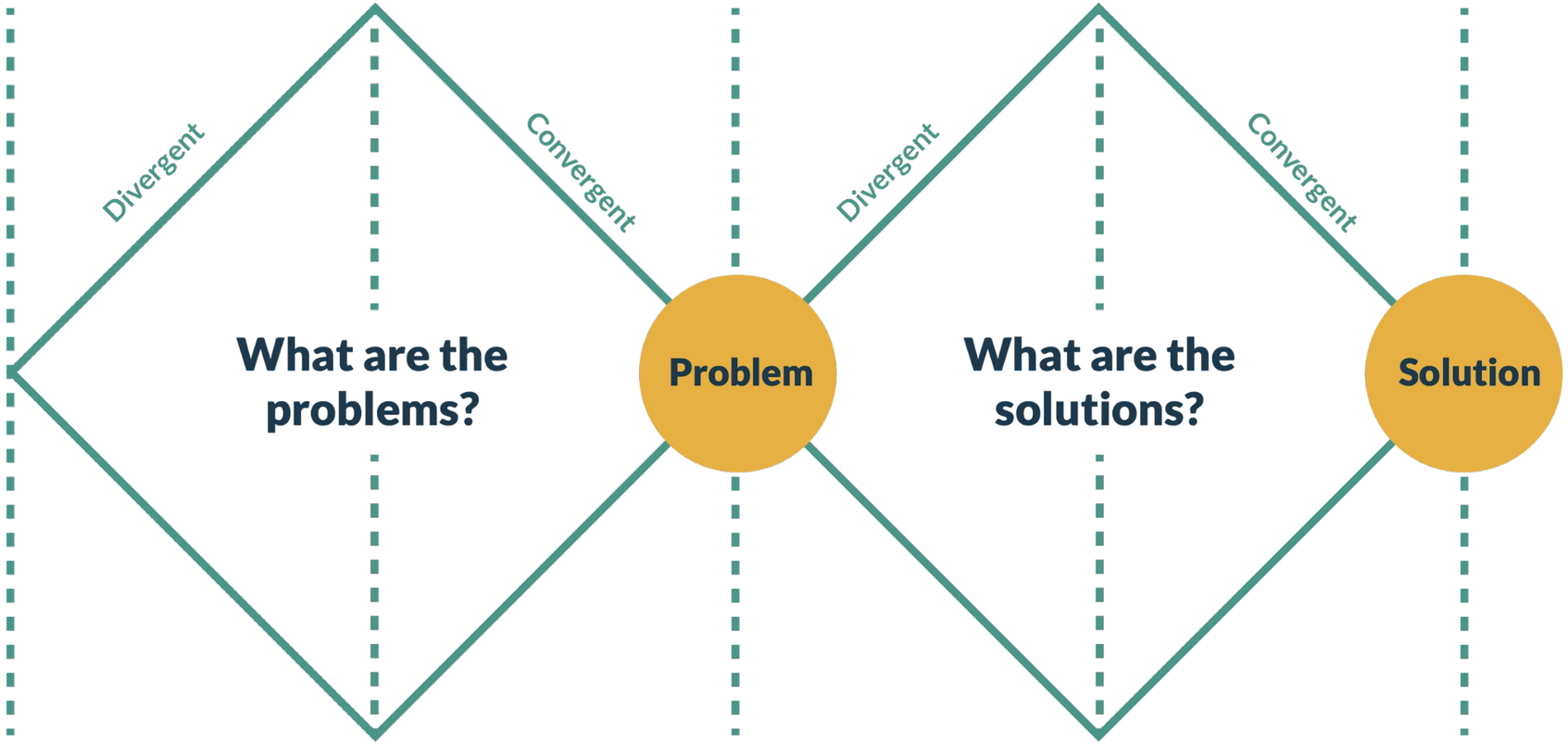
Discover
Explore the lesson, swipe or click on the arrows to learn more about the air we breathe
Tiny particles floating in the air are known as particulate matter (or aerosols). They are released from human activities (e.g. cars) or natural sources (e.g. deserts). These particles include smoke, desert dust, acid droplets, and pollen.
The air we breathe Challenge
START
Home
AR exploration
My profile
Accesibility
Change Language
Help

Objectives

The BSC goal was to design an application that aims to inform, educate and promote behavioural changes related to air quality topics.

Aimed primarily at children aged 10-15 years old, the app involves a series of lessons, games and challenges on the basics of air quality and air pollution.





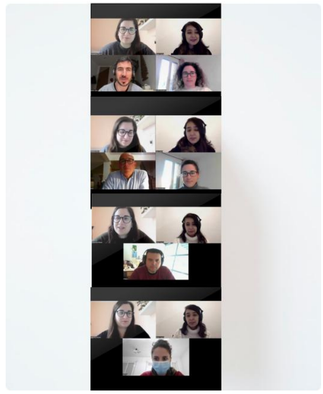
Problem exploration
Foundational research
- Stakeholder interviews
- User interviews
- Bench marketing
- Contextual inquiry

Synthesising research
- Affinity mapping
- Statements
- Personas
- Storyboards

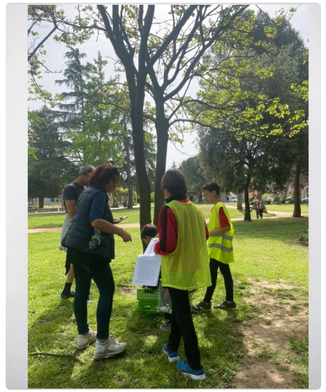
Design ideation
Concept exploration
- Task flows
- User flows
- Usability concept test
- Information Architechture
- Lo-Fi Prototyping

Design ideation
Concept exploration
- Hi-Fidelity design
- User stories
- Design Crits
- Branding
- Usability tests
- Asset creation for handoff
- Documentation
- Design Quality Assessment (Q

Interviews



Guerrilla interviews



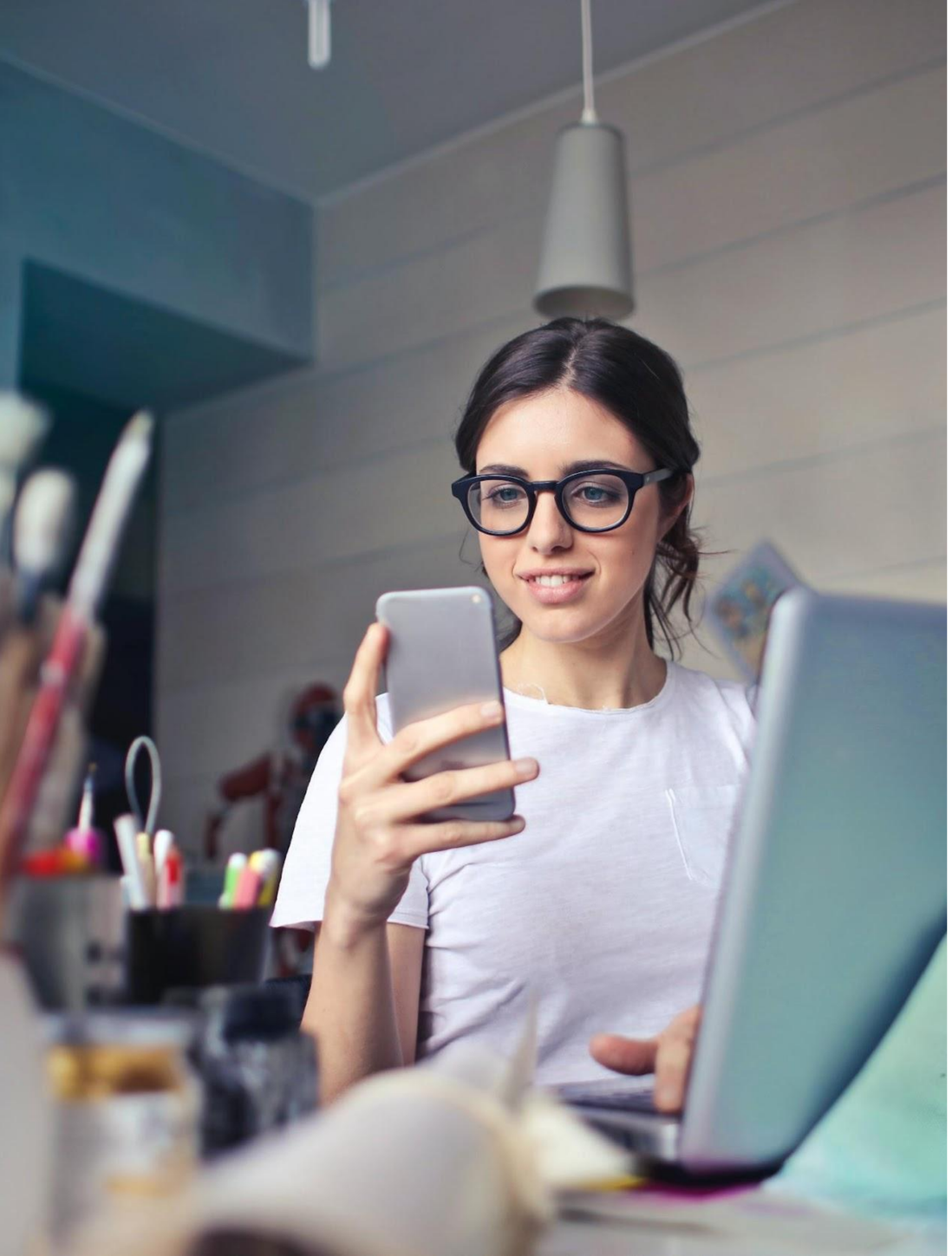
Co-creation workshops

Drawing from the valuable insights obtained through user experience research, we arrived at a strategic design choice to develop an application that could effectively impart **fundamental air quality concepts** within a short span of a few lessons.

Breathe easy

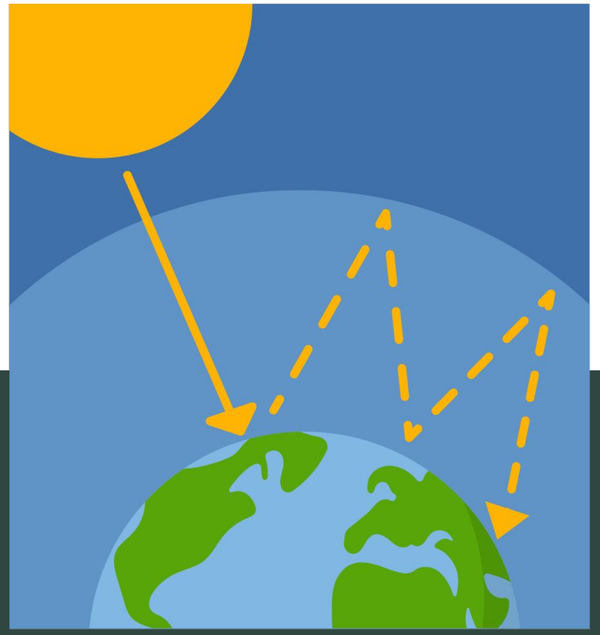
Learn easier

Bird's-Eye Lessons on Air Quality: **Flock Together for Change!**

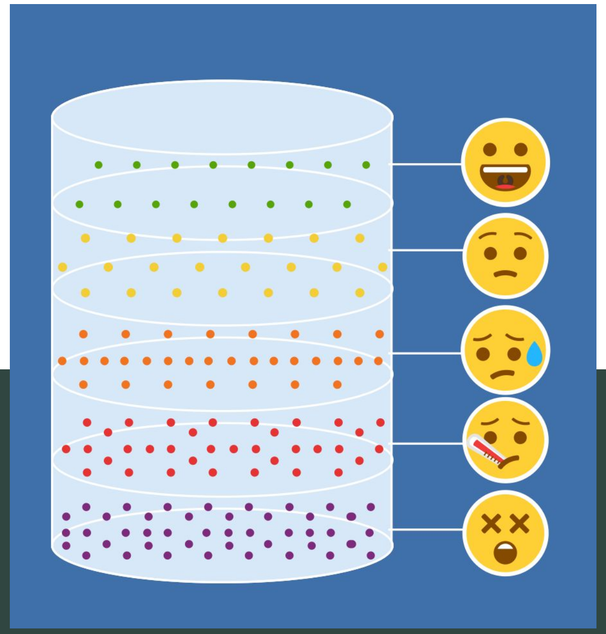


To enhance student involvement, we integrated **gamification elements**, a method proven to captivate students, making the learning process more interactive and enjoyable.

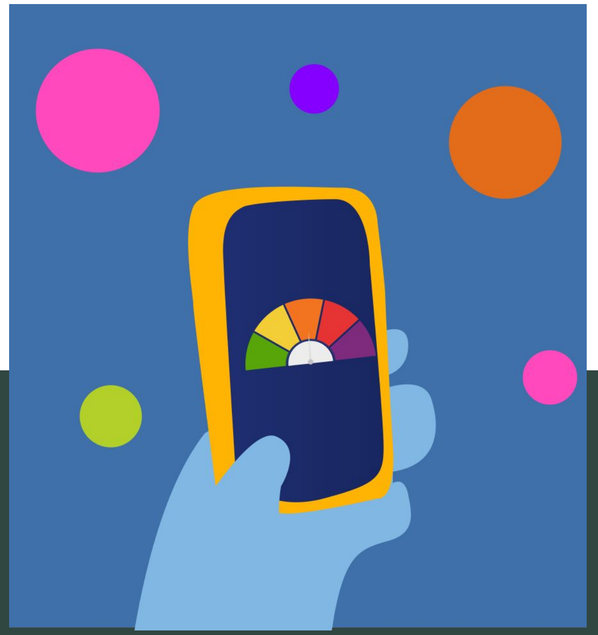
Some of the topics covered include:



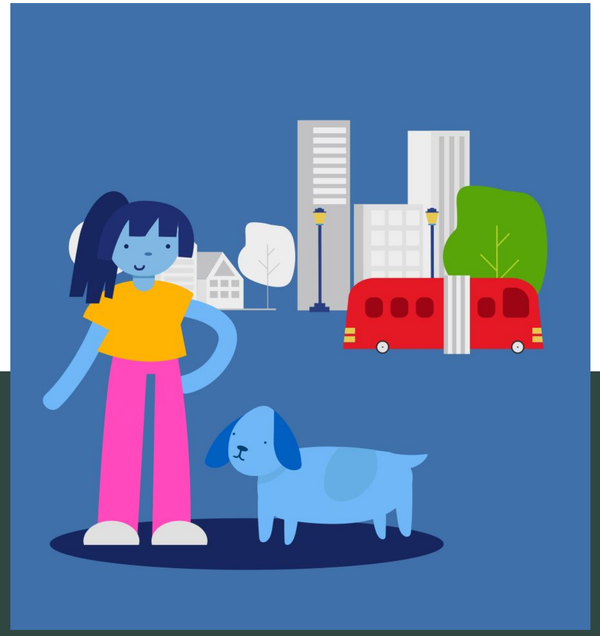
The difference between greenhouse gases and air pollutants



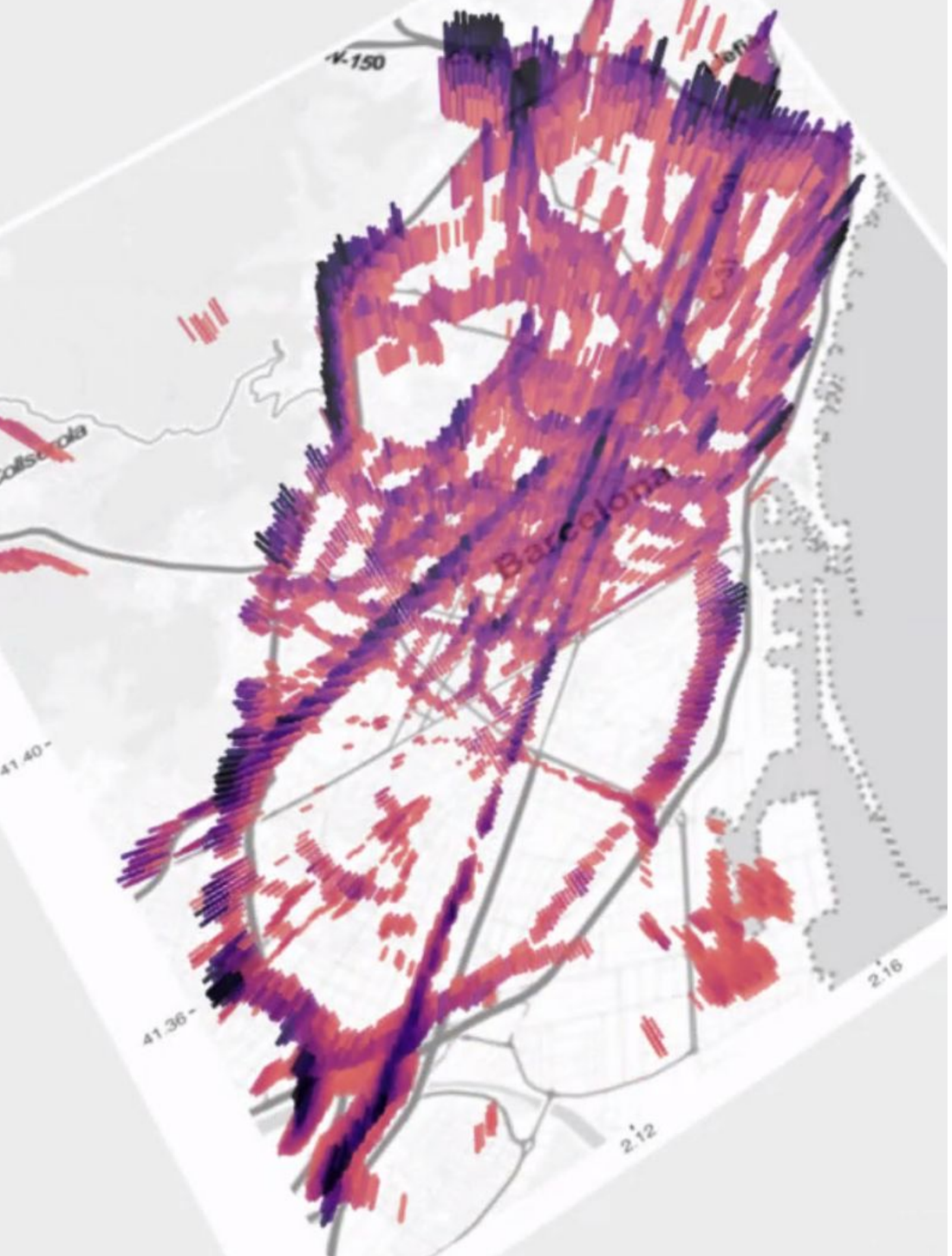
The different pollutants and how we measure how good or bad the air quality is



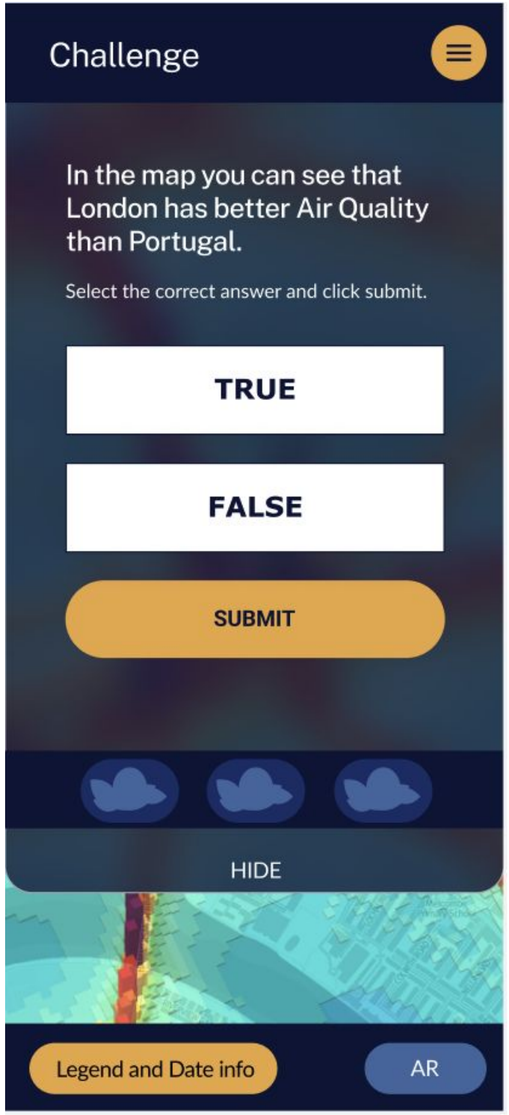
Using Air Quality Index (AQI) to read maps and reduce my exposure to pollutants in my everyday activities

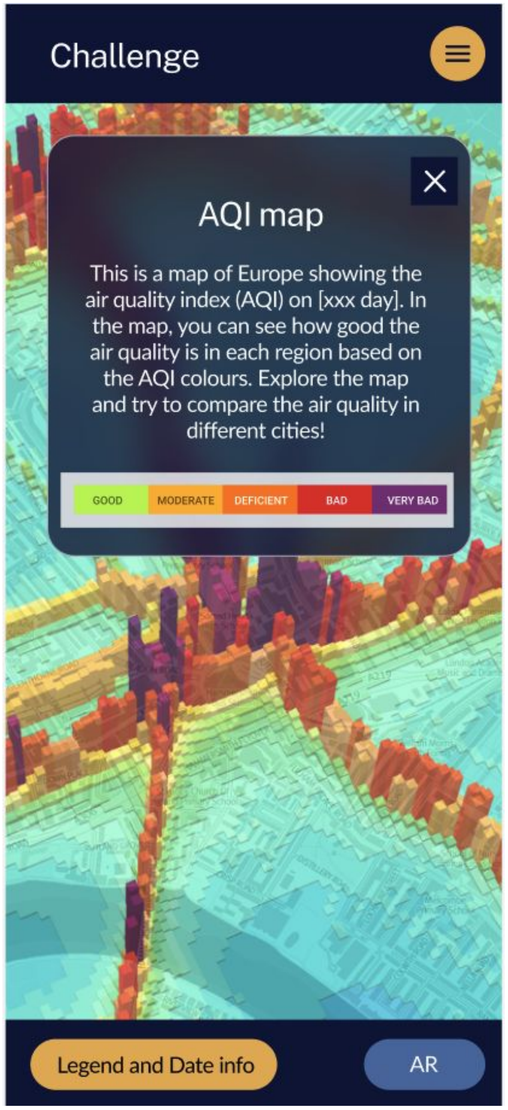


Things we can do to have a better air quality



We opted to incorporate **augmented reality technology** into some lessons to enable students to interact with air quality maps directly, fostering a more engaging learning experience. Our intention was to not only teach students how to interpret these maps effectively but also to **cultivate the necessary skills** and awareness for a more environmentally conscious world.





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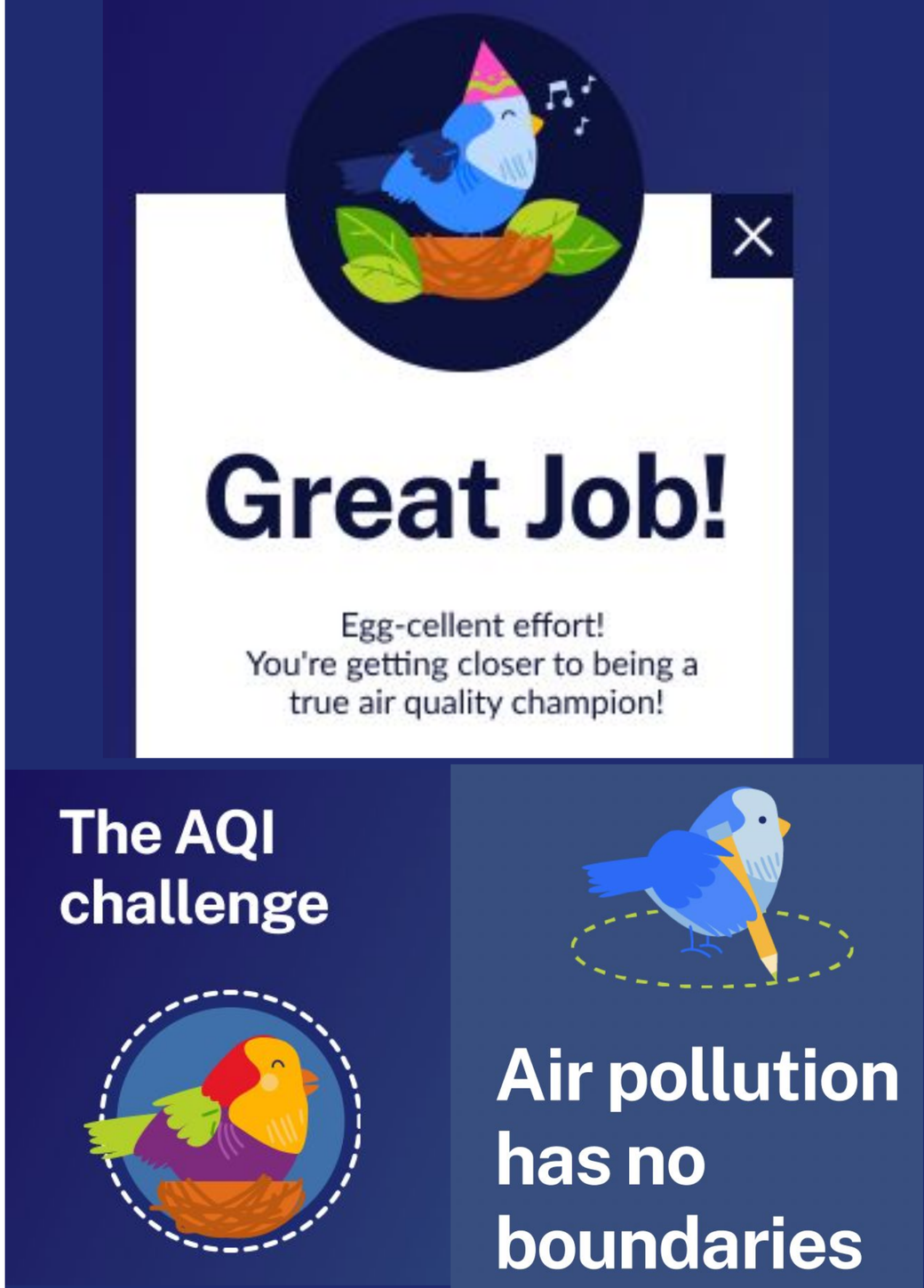
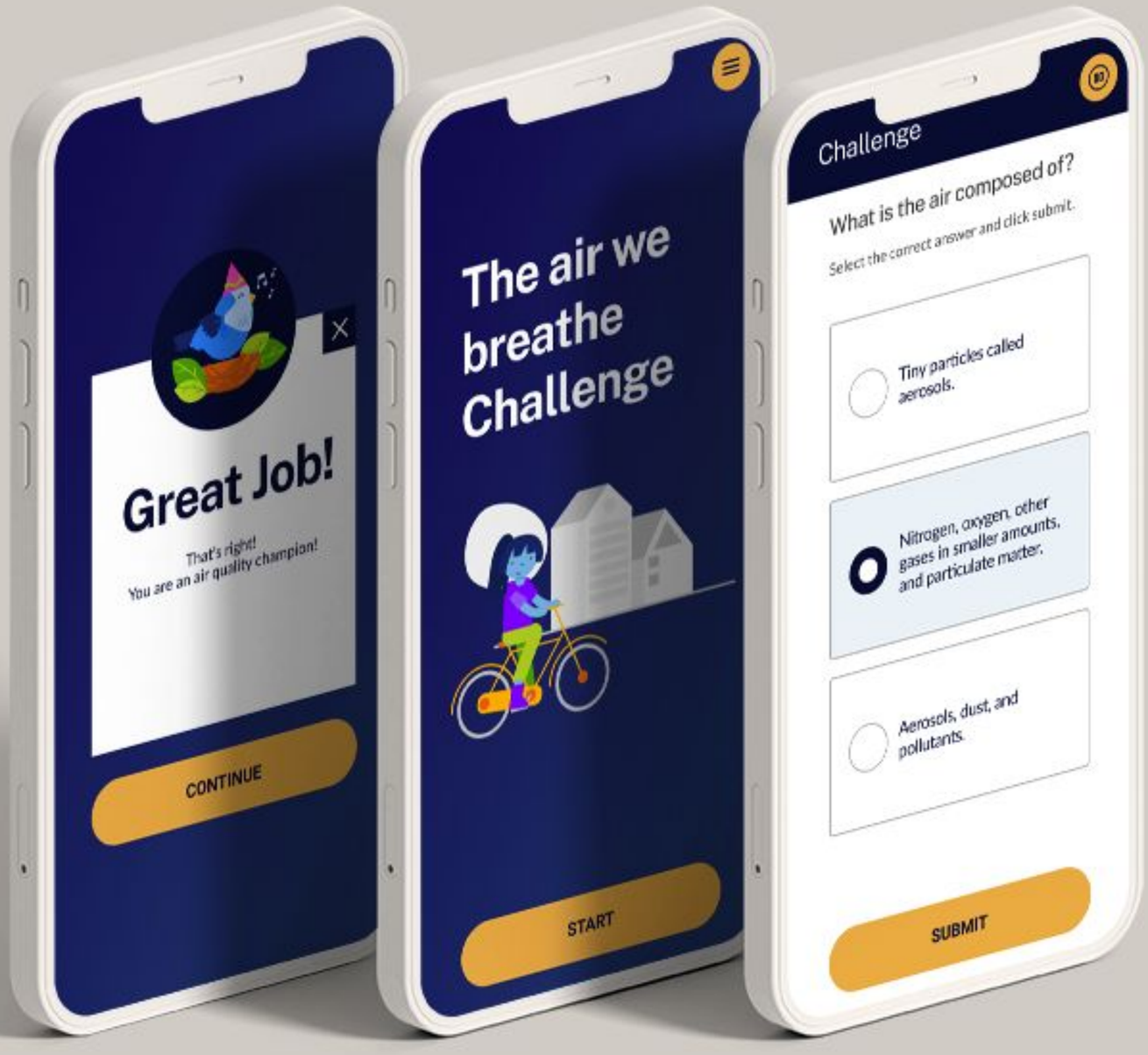
Avatar

As an integral component of the narrative structure employed in the app, we made a deliberate choice to introduce an avatar.

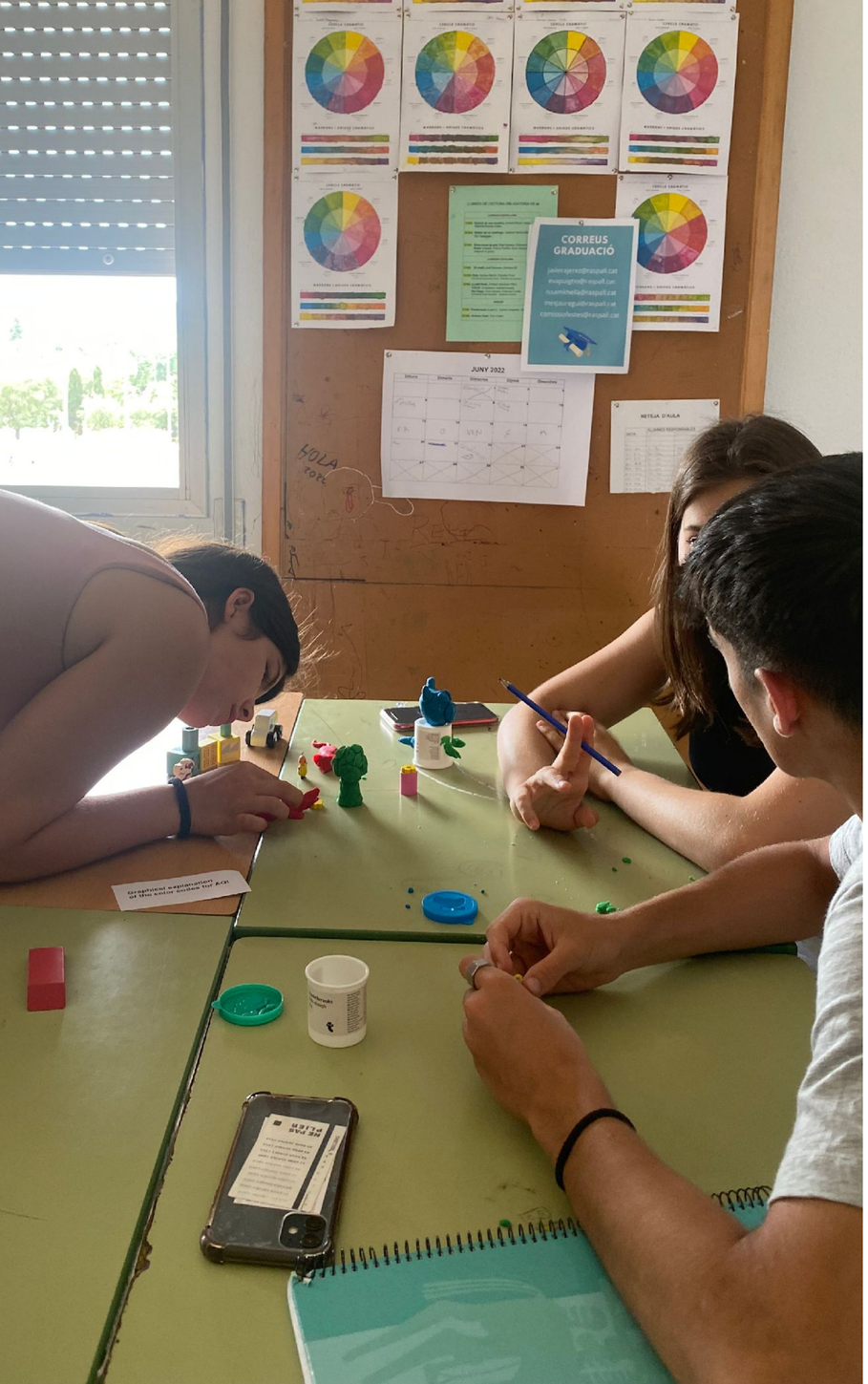
This avatar was created with the intention of allowing a warm and engaging way to exploring air quality themes.

This bird-avatar combination serves as your companion throughout the learning journey, offering guidance during lessons and challenges.




Great Job!
That's right!
You are an air quality champion!
CONTINUE
The air we breathe Challenge
START
Challenge
What is the air composed of?
Select the correct answer and click submit.
Tiny particles called aerosols.
Nitrogen, oxygen, other gases in smaller amounts, and particulate matter.
Aerosols, dust, and pollutants.
SUBMIT

PLAY
Assess your knowledge and win trophies



Human Centred Design

The **active participation of students** in the design process results in a more significant and useful learning tool that really connects with the intended audience.

While the application was originally envisioned to only include augmented reality features, the **interactions with students provided insights into the real needs and challenges** of the different contexts revolving around air quality, thus changing and shaping a new vision for the app.

This new vision involves a digital product that encompasses the students' inputs, ideas and feedback, integrated into all parts of the design process.

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Thank you!

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