

LEARN

**Development of novel assessments
for indoor air quality monitoring
and impact on children's health**



**Novel technologies
able to better detect
harmful air pollutants**

**Optimised remediation
strategies to improve
indoor air quality**

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THE PROJECT

LEARN is a European project meant to **monitor and evaluate the indoor air quality (IAQ)** and its **impact on children's health**. Its cornerstone is to learn about the state of indoor air quality in schools around Europe and its cognition impact on children doing compulsory education.



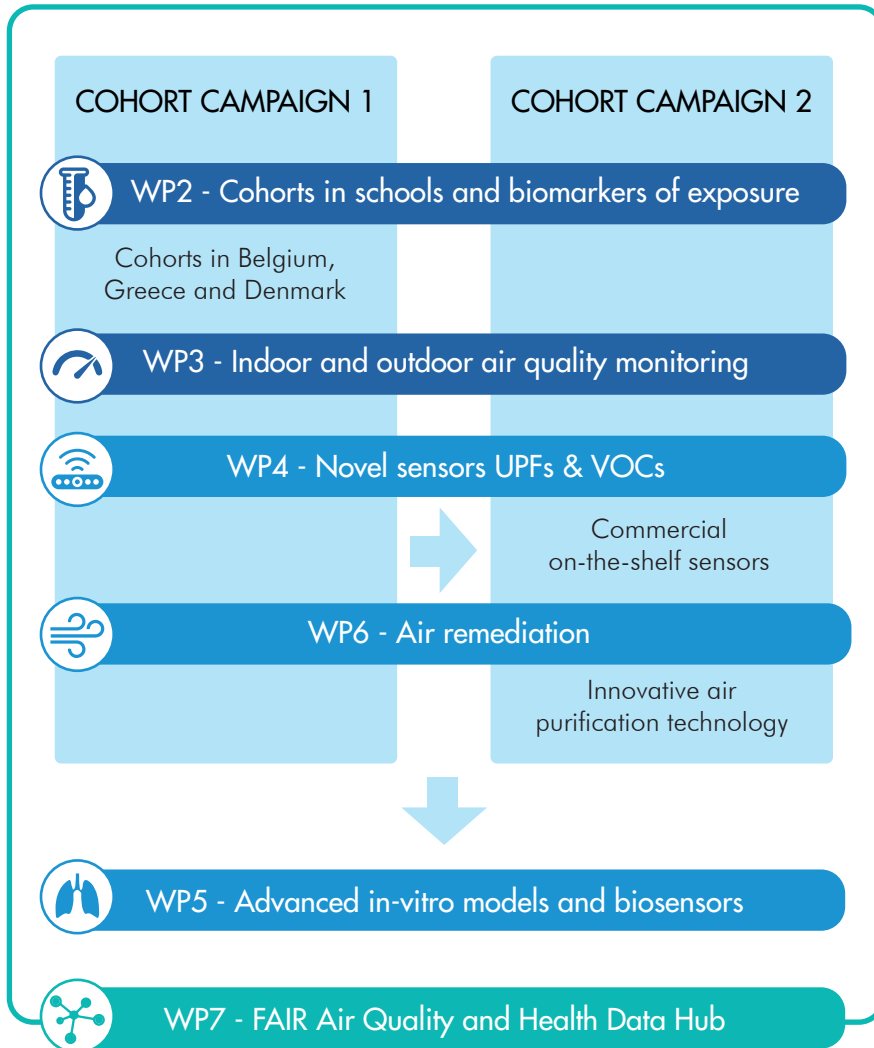
Our main goal is to develop and deploy **novel sensors** that can detect possibly harmful air pollutants, such as ultrafine particles (UFPs) and volatile organic compounds (VOCs). We will overcome the barriers of the currently existing technologies and use **new scientific methods** and state of the art equipment.

HOW WILL WE ACHIEVE SO?

- 1** We will measure and characterize indoor and outdoor **air pollutants** by evaluating the presence of **biomarkers of exposure** and their effect on **children's cognition**.
- 2** We will use advanced human-based **in-vitro models of lung and skin**, coupled with a **revolutionary multi-sensing device** that will allow us to investigate their mechanisms of toxicity in real-time.
- 3** We will explore **novel remediation strategies** to improve air quality and promote children's quality of life and life expectancy. For that, we will mobilize **twelve leading research teams** coming from different fields.
- 4** Based on the collected findings, we will prepare **guidelines** for the implementation of **actions and policies** to improve the overall IAQ at schools. A **toolkit** will be distributed to raise awareness.

LEARN's scientific achievements will unlock the potential of technological innovation for characterising indoor air quality. This will lead to disruptive societal and political impacts for the **improvement of children's quality of life in Europe**.

WORK PACKAGES



- WP1 - Management and coordination** (Icon: Briefcase)
- WP8 - Communication, dissemination and exploitation** (Icon: Speaker)

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