



An affordable, miniaturised, cloud-connected system powered by deep learning algorithms for comprehensive air quality measurements based on highly integrated mid-IR photonic

# AEOLUS

## Project Overview



# PROJECT OVERVIEW

## Concept

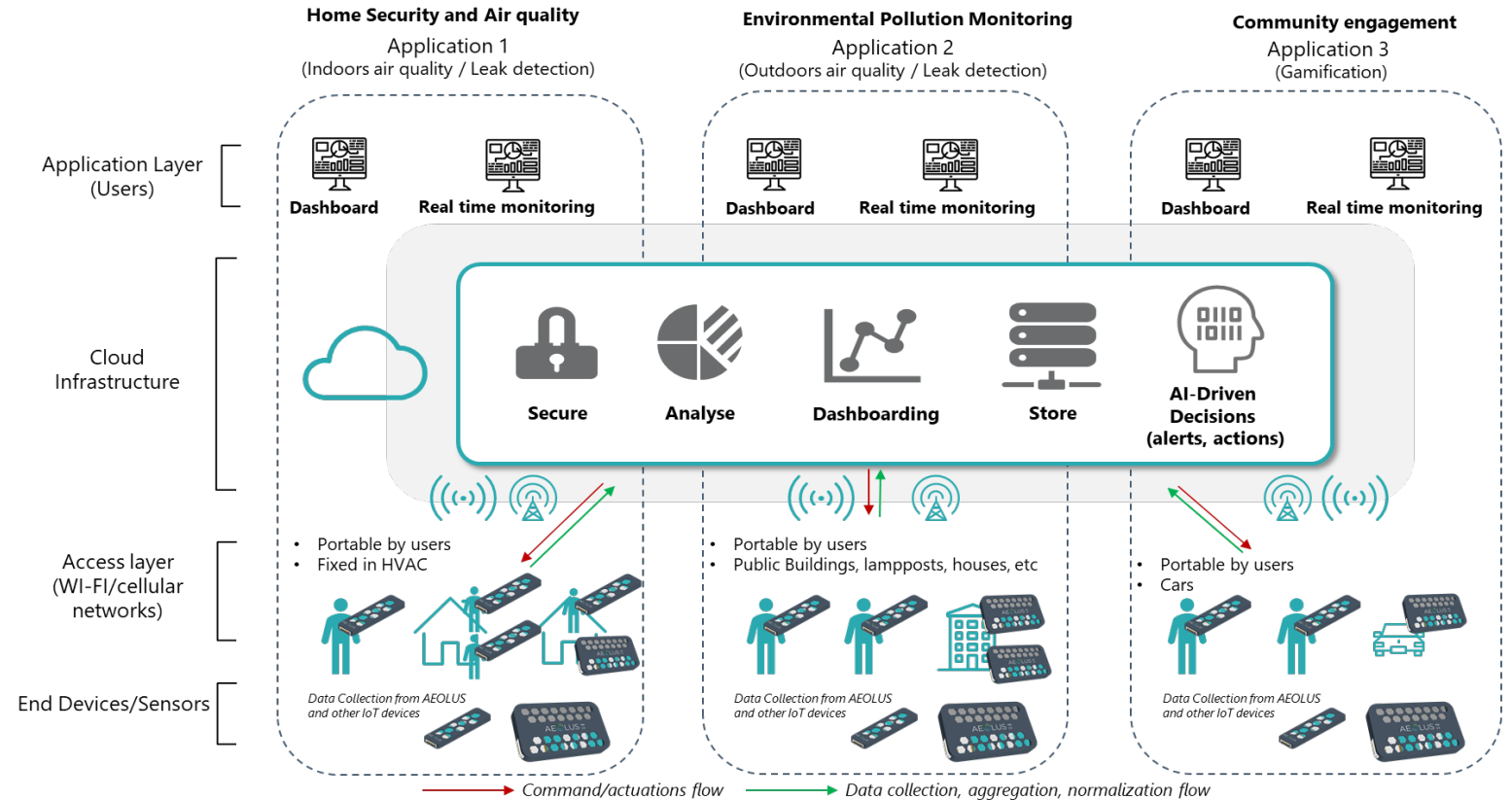
- › AEOLUS aims to be the first to provide a field-tested holistic air quality solution that is:
  - › *Low cost (affordable) photonic gas sensing SoC*
  - › *Small form factor SoC – Portable photonic sensing system*
  - › *Cloud connectivity – AI/ML data analytics*
  - › *AI driven decisions – Citizen alerts*
  - › *Large scale adoption - Time to market*



# PROJECT OVERVIEW

## Objectives

- › Capitalise on the well-established Silicon (Si) platform to develop low cost and miniaturised components, allowing for high integration sensing elements with enhanced performance.
- › Demonstration of a SoC integrated photonic sensor for multiple gases that can be mass manufactured.
- › Develop Deep learning models that will provide accurate chemometric analysis and predictions, made available to policy-makers and end users.
- › Demonstrate IoT services, including air quality visualisation, real time health and safety security alerts, real time commands execution, gamification.



# PROJECT OVERVIEW

## General Information

- › Short name: AEOLUS
- › Project type: IA
- › Duration: 36 Months
  - › Start date: **1<sup>st</sup> of January 2021**
- › Coordinator: Prof. Hercules Avramopoulos (ICCS/NTUA)
- › Website:  
<https://www.aeolusproject.eu>



General Info

