## **RE-SAMPLE**

REAL-TIME DATA MONITORING FOR SHARED, ADAPTIVE,
MULTI-DOMAIN AND PERSONALISED PREDICTION AND DECISION
MAKING FOR LONG-TERM PULMONARY CARE ECOSYSTEMS



## WHY

It is estimated that **4 to 10%** of the population suffers from Chronic Obstructive Pulmonary Disease (COPD) in Europe.

**COPD** is a progressive lung condition that significantly impacts patients' quality of life and life expectancy.

**Patients** often require various treatment approaches to relieve their

- respiratory symptoms (e.g., shortness of breath or coughing);
- non-respiratory symptoms such as fatigue; and
- other accompanying conditions like diabetes, cardiovascular diseases, or mental health issues.

## WHAT

Over the course of four years (2021-2025), RE-SAMPLE will work to transform the healthcare journey of COPD patients. We will use **Real-world data (RWD)** to:

- monitor COPD symptoms beyond scheduled medical check-ups;
- give doctors, caregivers and patients a unique insight into common, day-today triggers that can lead to health complications; and
- support personalised treatment and develop a virtual companionship programme.

Our hope is that RE-SAMPLE's approach to integrated care will help patients feel safer in-between medical visits, and equally, that patients are involved meaningfully in the management of their care.

## HOW

RE---SAMPLE

Using Artificial Intelligence, RE-SAMPLE hopes to gain unique insights into the complex relationships between patients' clinical and non-clinical characteristics, and how these impact disease progression, mental wellbeing, and physical health.

The data and analyses will also serve as a basis for predictive models that could help patients and their doctors make treatment and lifestyle changes in time to reduce serious complications. To ensure that we can gather quality data and that our system truly fits the needs of patients, we will rely on inclusive design and a citizen science approach.

Such collaboration with citizens cannot be achieved without trust. One of our project's hallmarks is the early integration of security and privacy settings across all technical (the system itself will be designed from this perspective) and non-technical (the project will adhere to rigorous ethical and data protection standards) aspects of RE-SAMPLE.