Eupnoos

Breath Taking AI

Arshia Gratiot
Founder & CEO
arshia@eupnoos.com

Air pollution is *the* global pandemic playing out in slow motion, but with a disproportionate gender impact

Today, 90% of the world's population will each breath about 10,000 litres of air defined as toxic by the W.H.O

Poor lung function impacts vital organ systems and disproportionately affects women in terms of disease onset

Impaired lung function is associated with nearly two-fold higher risk of cardiovascular mortality

Lung health is a long-term indicator of general well-being and long term disease yet there isn't a reliable way to monitor lung health outside of a doctor's office

Chronic Lung Disease Prevalence by Sex and Age

WOMEN

MEN

15

10

5

0

45-64   65+

AGE GROUP

CDC. BRFSS, 2011.
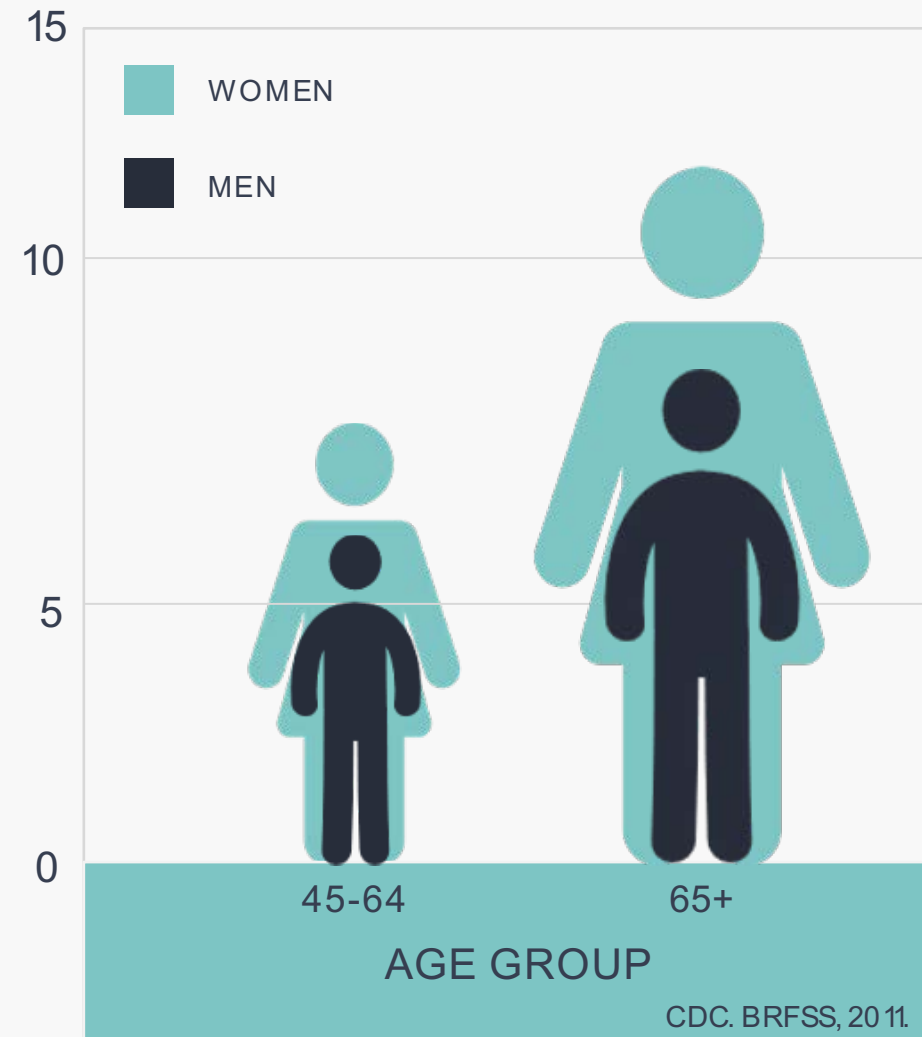
37% higher incidence of Chronic Obstructive Pulmonary Disease (COPD) amongst women

Why Our Solution Now?

There are nearly 4 billion women in the world, and most are exposed to toxic air without any way to monitor its impact on their health.

Eupnoos enables women to identify potential health conditions as early as possible, and so prevent long term chronic diseases – **one breath at a time.**

The Eupnoos Solution And Mission

We will enable every person on the planet to use a smartphone, voice and breath to understand their own lung health, identify early disease symptoms and access the right clinical support faster.

We anticipate integrating with low cost indoor /outdoor sensors and other connected devices to amass global-scale lung health data to our platform.

Biomarkers relating to the impact of individual toxins will be made available to license through our cloud platform
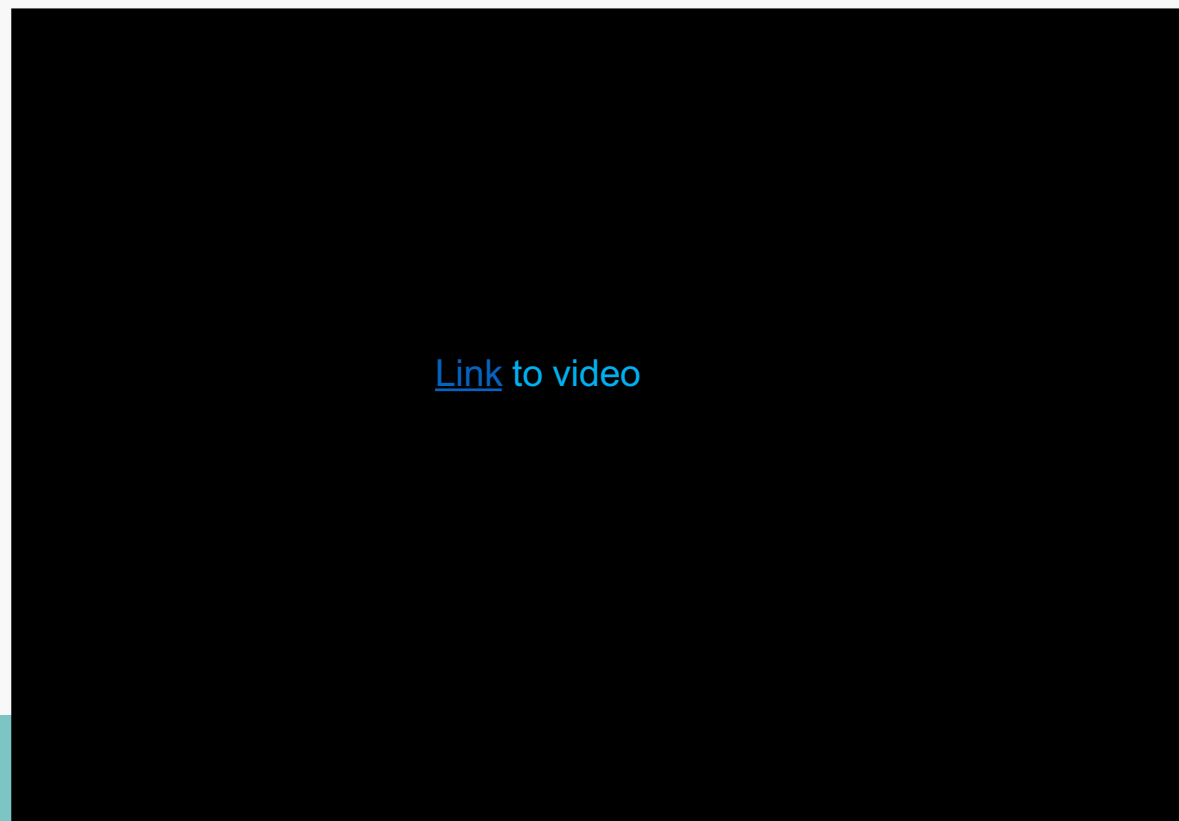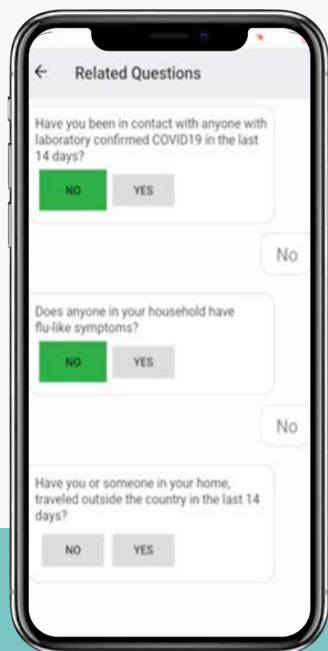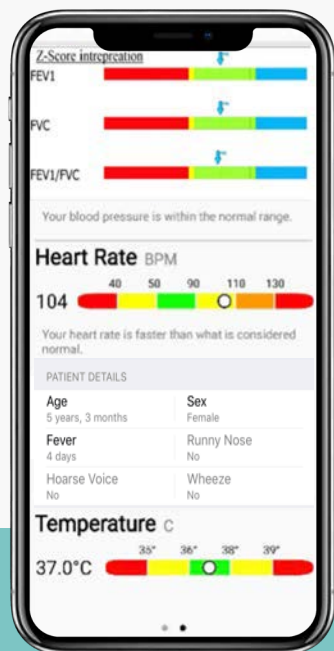
By monitoring and analyzing longitudinal data, we will identify causes of lung diseases on everyone thereby enabling personalized interventions and recommendations.

Minimum Viable Product Demo :

Link to video

Link to video

Our Technology Model

Eupnoos is a smartphone first application that is designed to work on any connected device with a high-performance microphone array.

Amassed user-generated data will be analysed via our proprietary algorithms to create personalised lung health scores and assessments.

Our cloud platform can also aggregate data from connected biometric devices and sensors against each user's health score profile to enable deeper insights into their lung health.

Consistent, diverse and growing data sets are collected on our Platform, then analyzed for general lung health and digital indicators of disease symptoms – for most users this will be their first-ever insight as to their own lung health.

Our user experience ensures consistent accuracy whilst encouraging repeated visits compellingbenefit and can be aligned to enhance the Operator's own branding as it is the enabling provider.
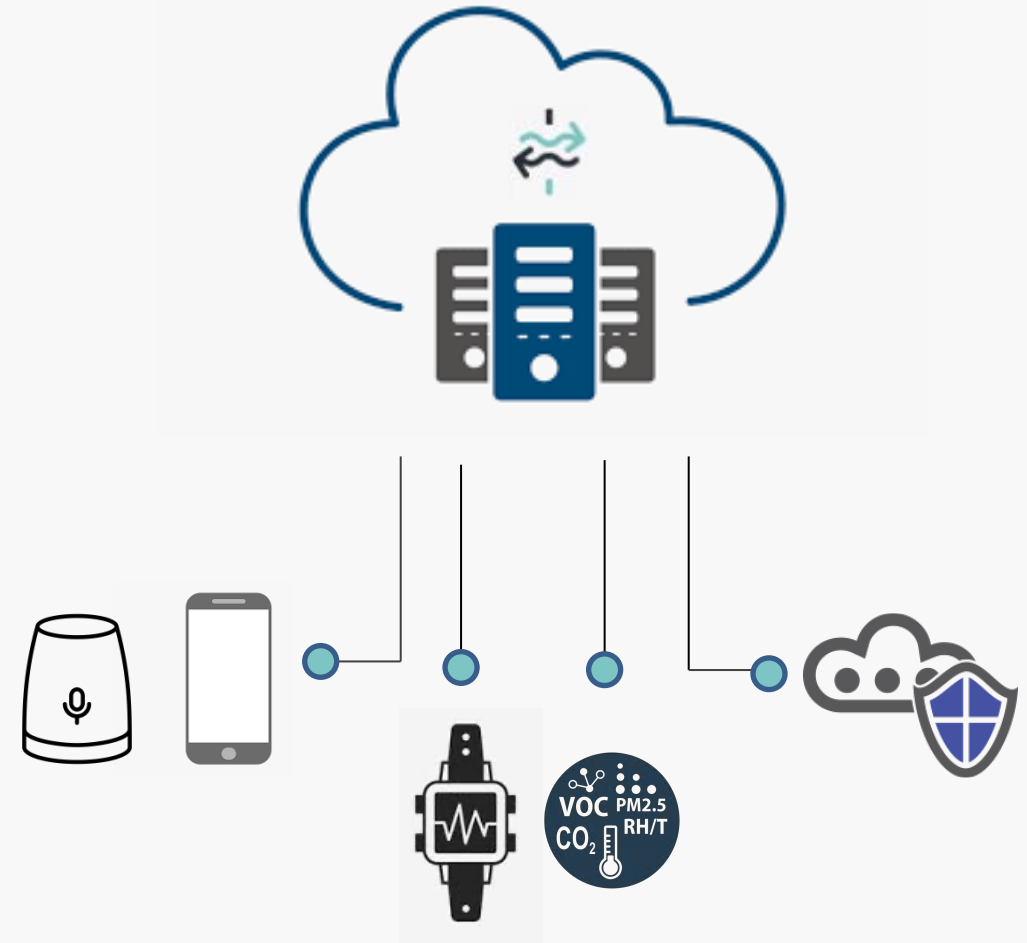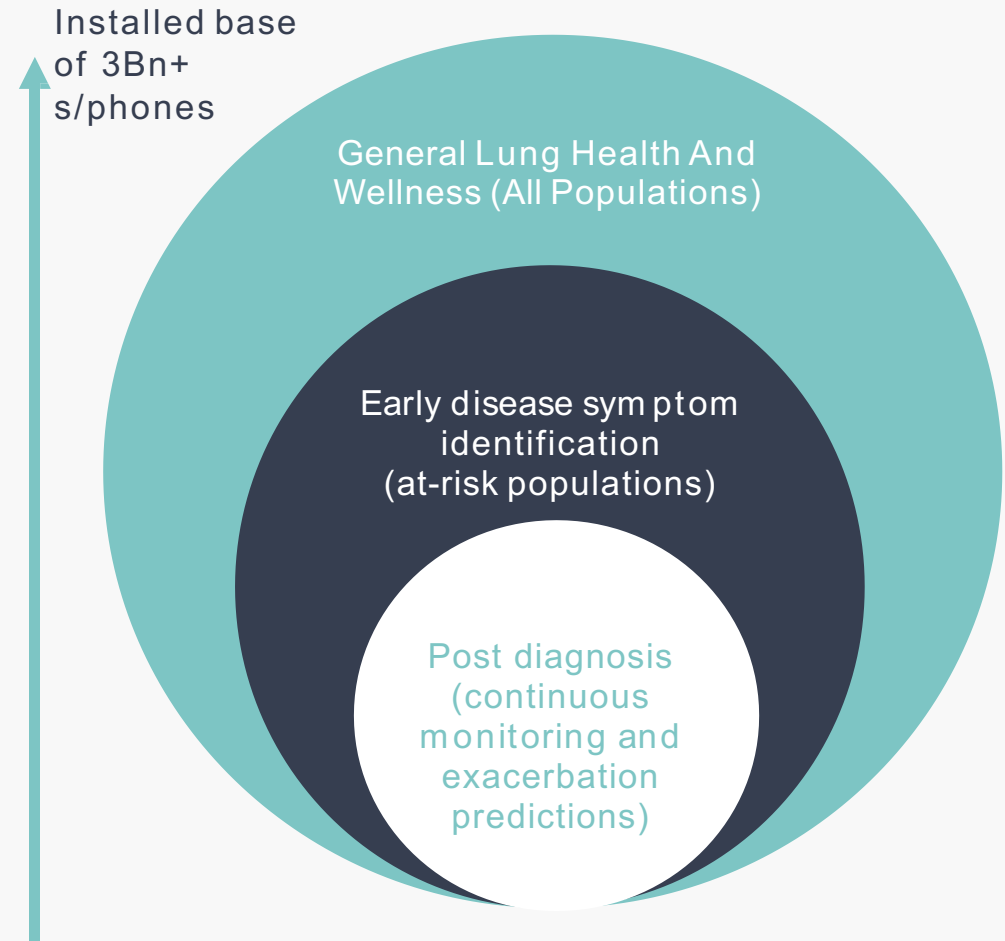
Our Business Model for Mobile Operators

Eupnoos enables mobile operators access to a new health-centric revenue stream using a novel technology that has the power to democratize women's respiratory health.

Our model offers 3 stages for brand enhancement / revenue:

1. A 'Freemium' app enabling the Operator to brand / affiliate with Eupnoos: we anticipate 85-90% of all downloads are this model.

2. We anticipate 10-12% of users upgrade to the 'Premium' offering (more functionality / analysis of data etc) at £10 / €12 /$15 revenue per annum . We anticipate revenue-share at 2:1 Operator: Eupnoos

3. A super-premium (name to be decided) offer will achieve CE Class II (medical device) and available at 5-8x the Premium offer price. We intend this product to be enterprise-enabled.

Installed base of 3Bn+ s/phones

General Lung Health And Wellness (All Populations)

Early disease symptom identification (at-risk populations)

Post diagnosis (continuous monitoring and exacerbation predictions)

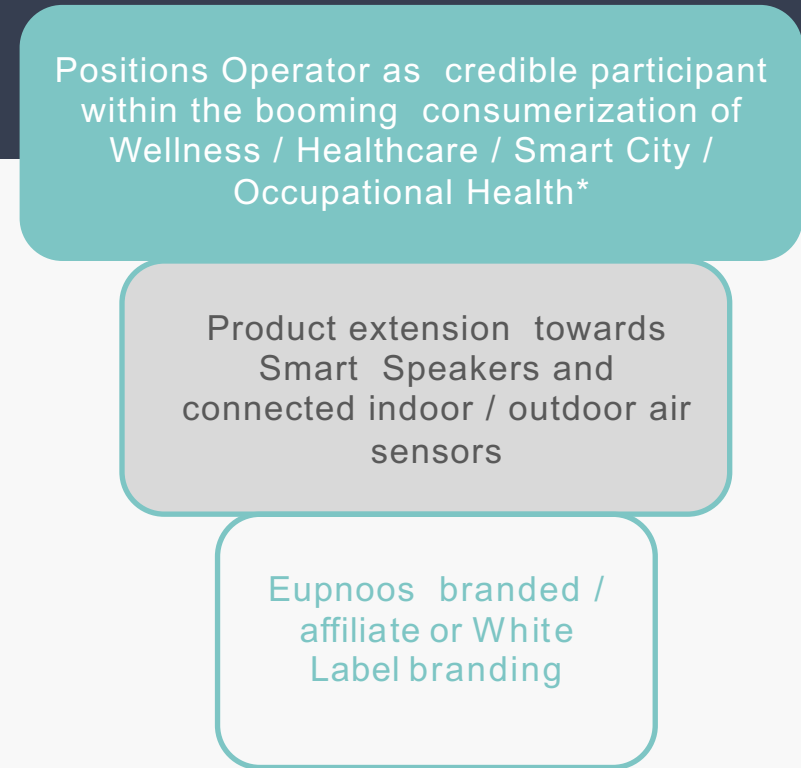Direction Of Market Scope And Opportunity

5

Positioning Opportunity for Mobile Operators

Once downloaded, our app delivers data (via our own Cloud) to meet an in-demand health benefit and address what is usually defined as 'global unmet medical need'.

Our technology front-end can be configured by the Operator, enabling them to differentiate themselves from their competitors whilst creating 'stickiness' in retaining that user to the Operator's Platform.

There's no need for the Operator to sell in or maintain / refresh additional specialist 'kit' – you've already supplied the kit (the smartphone!), so we are both leveraging already-installed 'real estate' with an incremental revenue stream.

Eupnoos' primary focus is women: a poorly served health demographic in many territories. Here is an opportunity for the Operator to participate in a soon-to-be global initiative: The Billion Lung Challenge.

Positions Operator as credible participant within the booming consumerization of Wellness / Healthcare / Smart City / Occupational Health*

Product extension towards Smart Speakers and connected indoor / outdoor air sensors

Eupnoos branded / affiliate or White Label branding

Incremental revenue and differentiated offering

* Smart City and Occupational health – 'Breath state' data about the lung health of local communities and workers (construction sites, factories and other high exposure areas

A big vision demands a visionary team with deep rooted expertise in mobile technology, user experience and pulmonary medicine

Operational Team

Arshia Gratiot,
Founder & CEO
10 years in the mobile devices and high-tech industry , serial founder

Des Beattie,
CCO
Seasoned sales and business development in clinical systems and digital health

Anand Bora
CTO
10 years in software development

Hina Radia
Chief Medical Officer
20 years working for UK National Health service as a clinical pharmacist specialized in oncology

Dr. Athanasios Papaioannou
Product Leader
Phd in acoustic engineering and advanced signal processing

Tomas Abadi
Data scientists

Dr. Nikolas Kournoutos
Phd in acoustic engineering and advanced signal processing

NOKIA

Microsoft

NHS

Roche

EMIS

MC MASSCHALLENGE

P4 Precision Medicine Accelerator Programme

Clinical and academic advisors

Dr. Sergio Chiarella MD
Clinical Advisor
Mayo Clinic
Allergic Diseases

Dr. Patrcia Silveyra
Clinical Advisor
Associate Professor at Indiana
University, School of Public
Health

Dr. Michelle Bashir
Clinical Advisor
Respiratory physiologist and
with the National Health
Service

Hina Mir
Clinical Advisor
Senior Respiratory physiologist
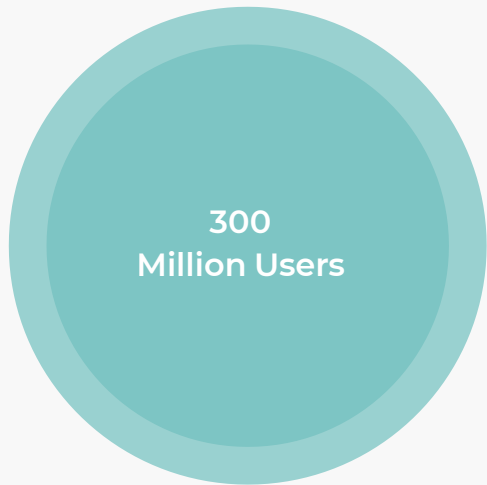and rea-searcher with the
National Health Service

Prof Nicholas Rattray
Scientific Advisor
Strathclyde Chancellor's
Fellow. Strathclyde Institute
of Pharmacy and
Biomedical Sciences.

MAYO CLINIC

INDIANA UNIVERSITY
SCHOOL OF PUBLIC HEALTH
BLOOMINGTON

NHS
Portsmouth Hospitals
University
NHS Trust

NHS
Barts Health
NHS Trust

University of
Strathclyde
Glasgow

Growth + Exit

We are engineering Eupnoos to be highly scalable.
By 2024 we anticipate:

**300
Million Users**

**8+
Regions**

Expand to include cardiovascular conditions caused by air pollution

Create the largest global platform of licensable lung health digital data

Eupnoos is still at the PoC stage of its development.

· We anticipate having an MVP available for Q321

· We will become first-of-kind smartphone exploitation and first global digital respiratory Platform

· We are seeking partners in health tech, Pharma, hospital software providers, wellness tech, and local / national government who share our ambition to tackle this 'pandemic in slow-motion'.

· We anticipate improving the lung health of 300 million global users in 5 years

· But we can't do this on our own...

www.eupnoos.com

Arshia Gratiot, Founder & CEO

arshia@eupnoos.com

Des Beattie, Chief Commercial Officer

des@eupnoos.com

Scientific References

- Pulmonary Health Effects of Air Pollution **LINK**

- Residential exposure to volatile organic compounds and lung function: Results from a population-based cross-sectional survey **LINK**

- Indoor air pollution and respiratory health in the elderly **LINK**

- Diagnosis and treatment considerations for women with COPD **LINK**

- Chronic obstructive pulmonary disease: are women more susceptible than men? **LINK**

- Early diagnosis of COPD: myth or a true perspective **LINK**

- Study estimates exposure to air pollution increases COVID-19 deaths by 15% worldwide **LINK**

- Air pollution and chronic airway diseases: what should people know and do? **LINK**

- Women and Lung Disease. Sex Differences and Global Health Disparities **LINK**

- Disease severity assessment **LINK**

- Call to action: improving primary care for women with COPD **LINK**

- Under- and over-diagnosis of COPD: a global perspective **LINK**

- Spirometry is not enough to diagnose COPD in epidemiological studies: a follow-up study **LINK**

- What factors influence an early COPD diagnosis in primary care? **LINK**

- Using mobiles to monitor respiratory diseases **LINK**

- Improving the management of COPD in women **LINK**