

# SpaceScope

Your doctor, everywhere,  
anywhere!



CASSINI Hackathon winner Spring 2025

# Background

- First hackathon for most of us
- Diverse and motivated team
- Steep learning curve, but strong motivation to try and learn.
- **Hackathons =**

A chance to try, fail, learn, reshape ideas, and make them real.



## OUR TEAM



 Thumula Patabendige  
Space Mechanical engineer



 Ayush Pradhan  
Space Connectivity Developer



 Jonathan Obredor  
Space Mechatronics Engineer



 Cynthia Jimenez  
Satellite Regulation



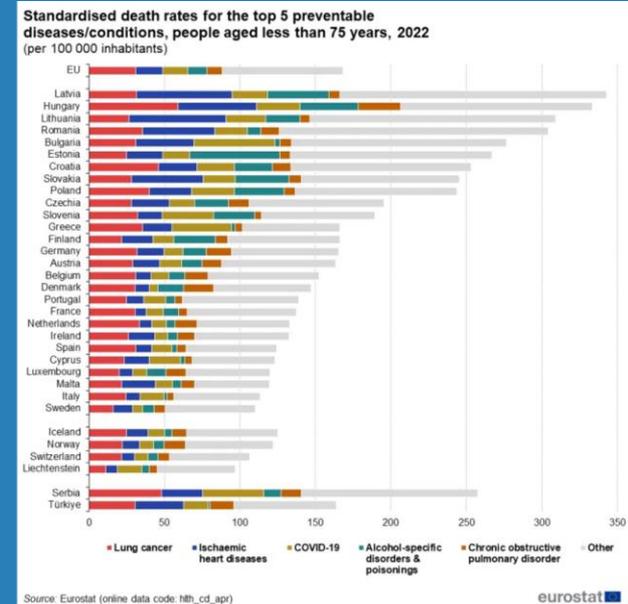
 Chaitanya Kasambe  
Space Systems Engineer



 Katri Rynty  
Communications & PR

# The Initial Spark

- Inspired by Eurostat data: preventable cardiovascular deaths
- Our "what if": Could space connectivity reduce this?
- Mentors gave us confidence → validated medical aspects
- Data showed clear need for remote healthcare solutions
- Early detection and monitoring could save thousands of lives annually



What if space could reduce this?

Source: Eurostat data on preventable cardiovascular deaths in Europe

# The Human Story

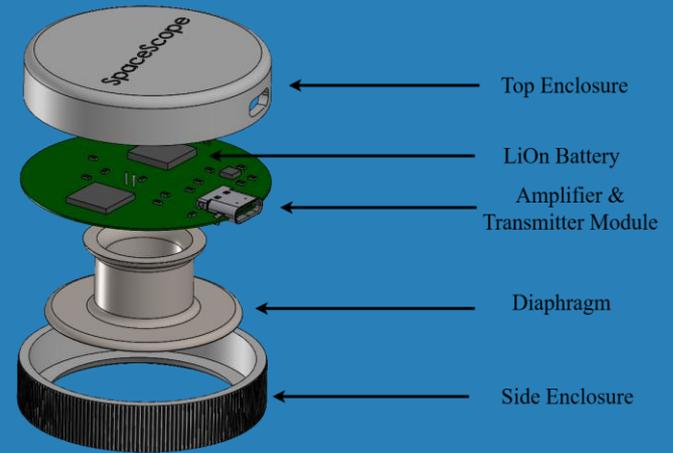
- We began with a simple story
- Realized too niche → broadened to:
  - Sailors & oil rig workers offshore
  - Hikers & travelers with CVD risk
  - Remote villages worldwide
- Connectivity-enabled healthcare = universal human need.



# Our Solution: SpaceScope

*"Your doctor, everywhere, anywhere."*

- ♥ Enables remote doctors to monitor patients (heart/lung sounds)
- ✈ Tech: Kinéis module secure satellite link
- 🌐 Connects isolated locations to medical expertise
- € Affordable, accessible, life-saving healthcare
- 🛡 Secure transmission of sensitive medical data

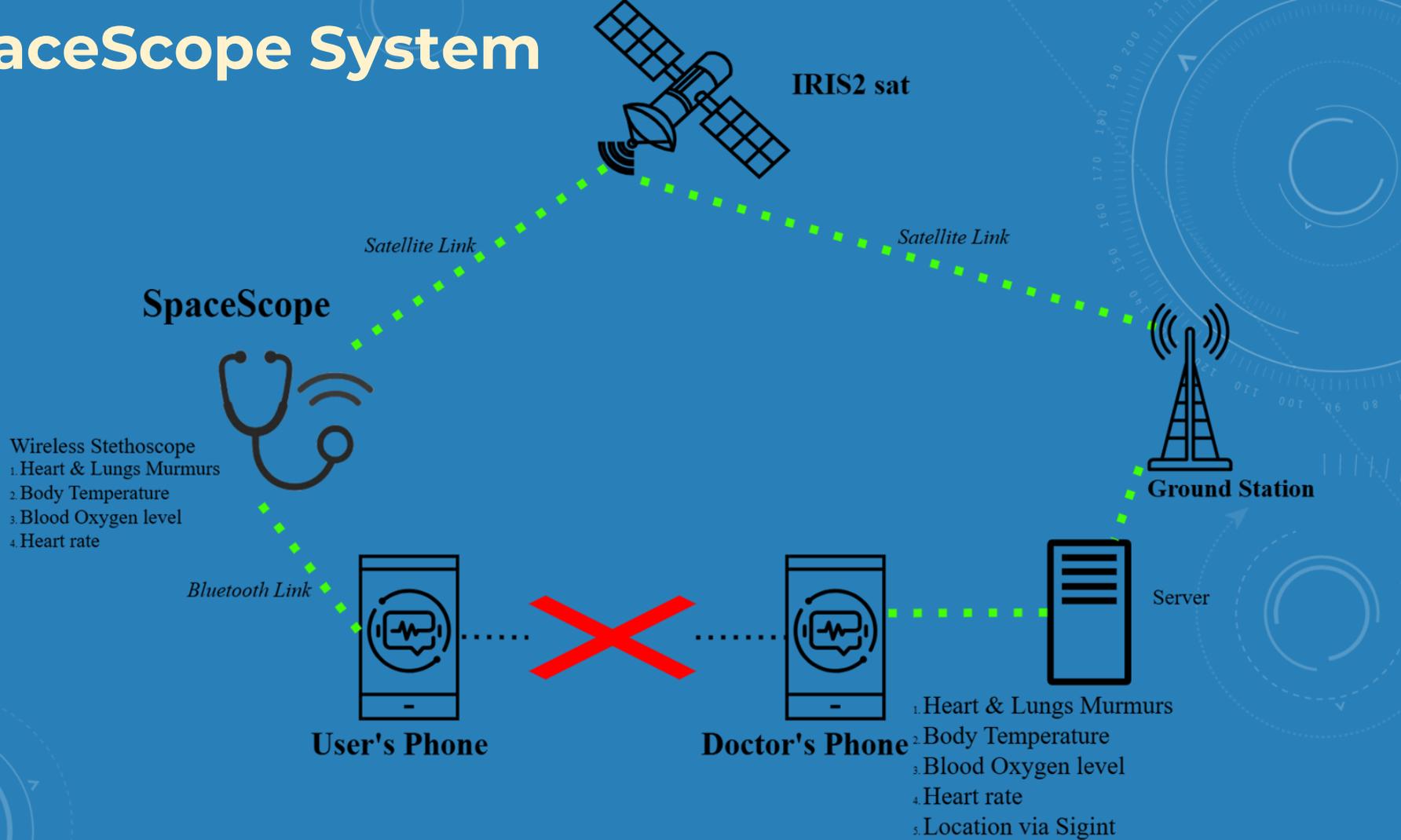


- Enables sounds)
- Tech: Ki
- Connect
- Affordabl
- Secure t



- Enclosure
- Battery
- Amplifier & Speaker Module
- Diaphragm
- Enclosure

# SpaceScope System



# SpaceScope Sys

## SpaceScope



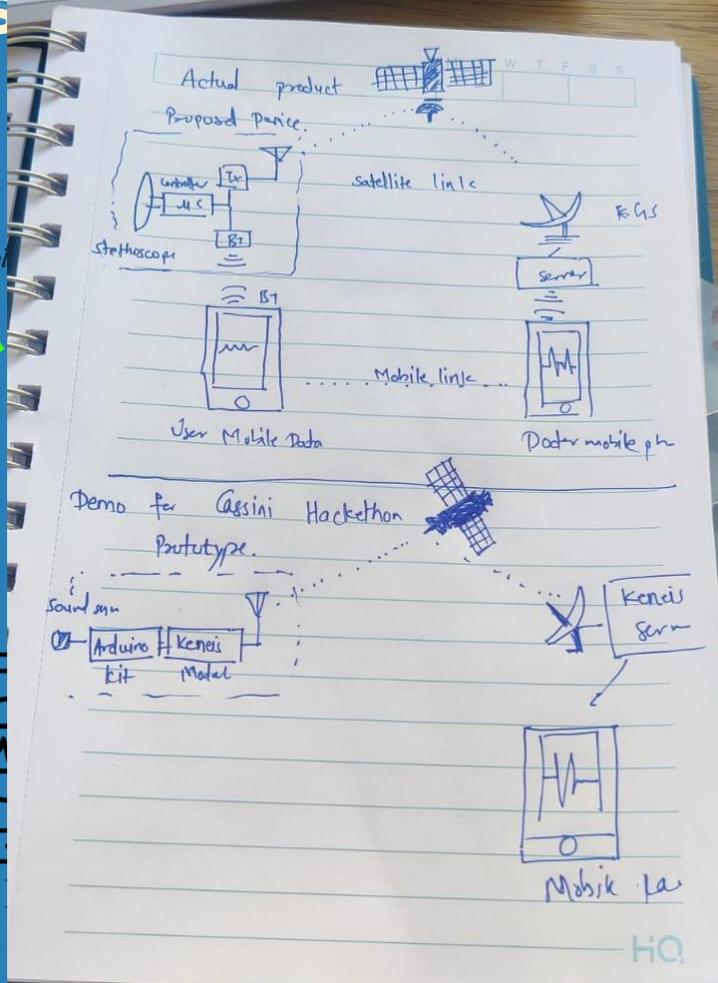
- Wireless Stethoscope
- 1 Heart & Lungs Murmurs
  - 2 Body Temperature
  - 3 Blood Oxygen level
  - 4 Heart rate

Bluetooth Link



User's

Satel



Link



Ground Station



Server

Heart & Lungs Murmurs  
Body Temperature  
Blood Oxygen level  
Heart rate  
Data transmission via Sigint

HQ

# Business Model



## Started with B2C:

- Individuals with CVDs
- Vulnerable individuals in remote locations
- Hikers

## Pivoted to B2B:

- Healthcare providers (e.g. Mehiläinen)
- Governments & insurers
- Remote medical kits & services

## Why?

Broader reach, bigger impact.



# Hackathon Journey & Lessons

- From idea → prototype in 48 hours
- Hardest part: shaping a convincing story and the business model
- **Team** was our strength, motivation and different perspectives led to better solutions
- **Guidance** from mentors was crucial



*"Your doctor, everywhere, anywhere."*



**Thank you!**



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