Siba
Sensor IoT Box for Air

Applications in Industry, Health and market entry.

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What is Siba

Highly reliable monitoring of air quality at the fraction of the price, using low-cost sensors and IoT

Low cost sensors: specialised knowledge about sensing, careful design of electronics, calibration, complex processing, continuous monitoring and adaptive control

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Problem

- *4,3 mil. Premature deaths per year due to air pollution*
- *Indoor air is 2 to 5 and often 100 times more polluted ***
- Pollutants : Fine particles (PM 10, PM2.5, PM1), Combustion products (BC, CO, SO_2), Ozone (O_3), Nitrogen Oxides (No_x), CO_2, carcinogen VOCs, humidity
- Existing network of stations: Expensive, low spatial resolution (but certified) no ability of estimation of exposure
- Low cost sensors: specialised knowledge about sensing, careful design of electronics, calibration, complex processing, continuous monitoring and adaptive control

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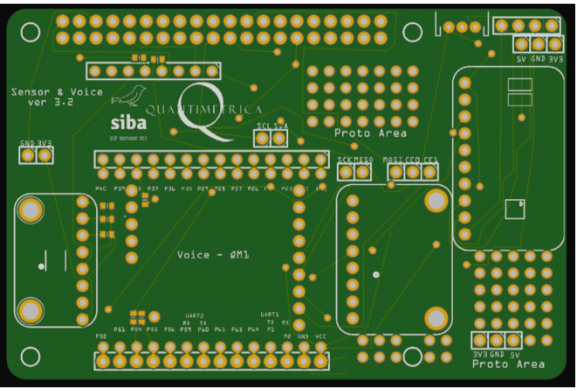
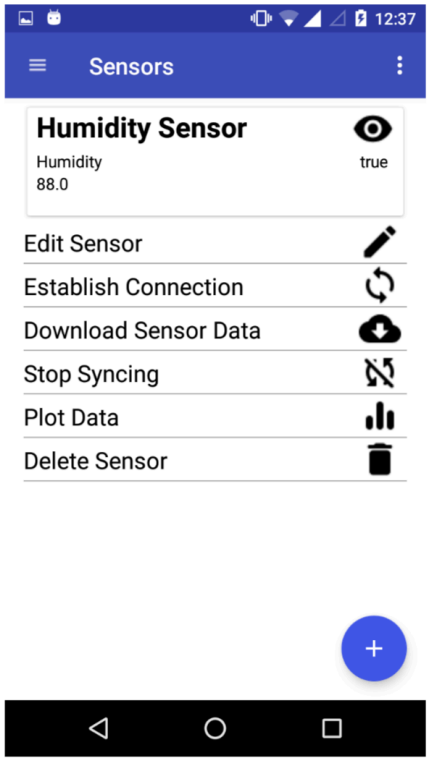
Products - Services

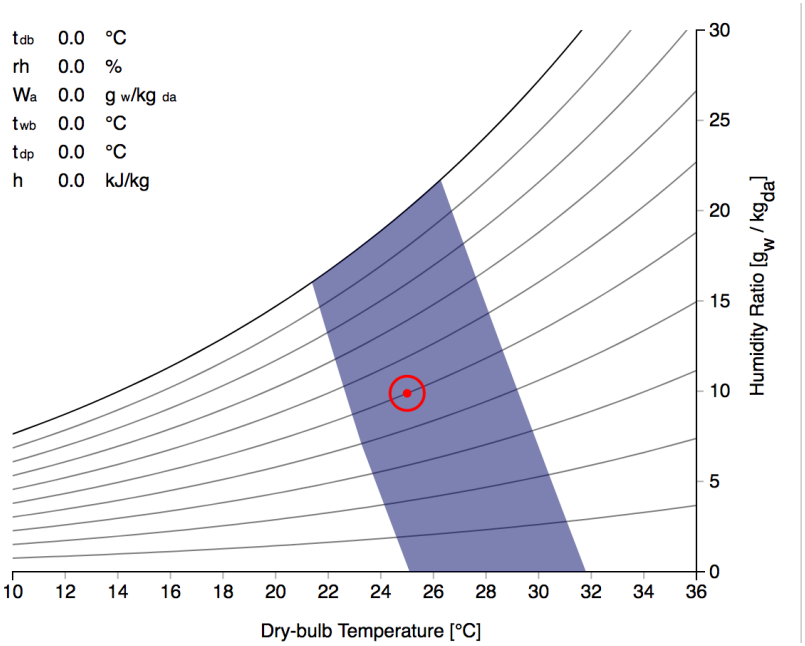
Hardware: indoor, outdoor and wearable devices

Embedded Software: reliability, novel indices (thermal, air quality, energy) learning, automatic control

Cloud Services: analytics, management, energy efficiency, thermal comfort, prediction







Accomplishments

BOOTCAMP
MARKETENTRY

Friesland Campina

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NouNou Idea Challenge Competition

Pilot Prize

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NouNou Idea Challenge Competition

Pilot Prize

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Benefits: NOYNOY

Although having a very modern fully automated plant with state-of-the-art monitoring systems, there is clear need for additional, flexible coverage with reliable low-cost IoT sensors.

- Existing industrial systems are very expensive, proprietary, have long life-cycles and do not always offer a comprehensive list of sensors nor can these shared between different locations.
- High temporal and spatial view of various air pollutants relevant to production and personnel
- Corellate production status with external weather conditions (e.g. Arican dust)

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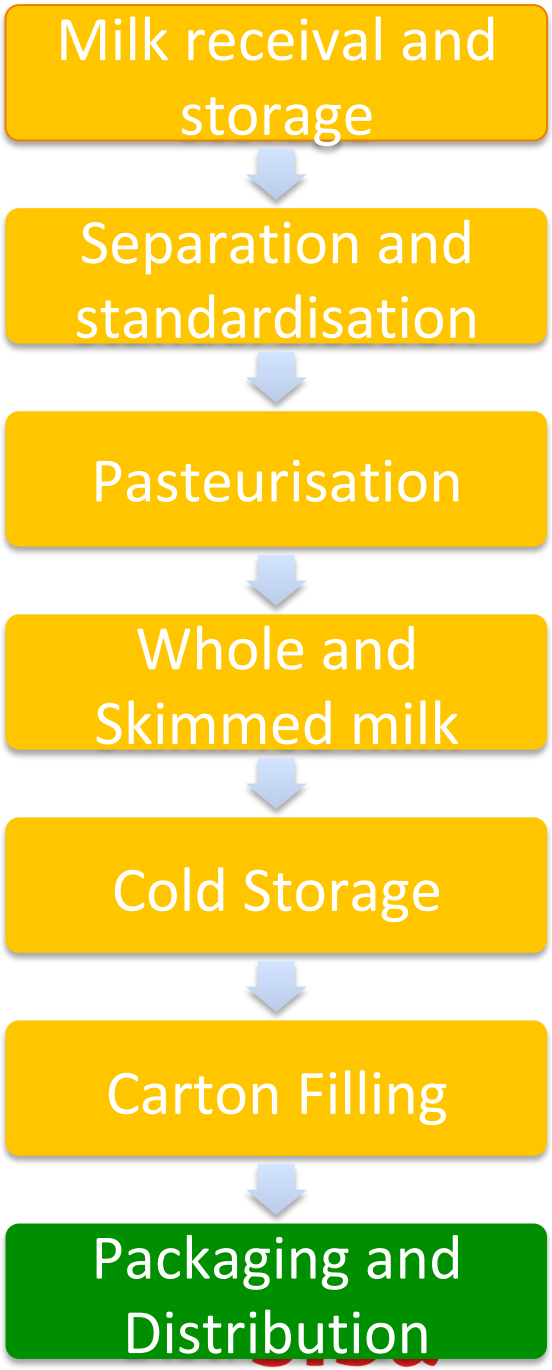
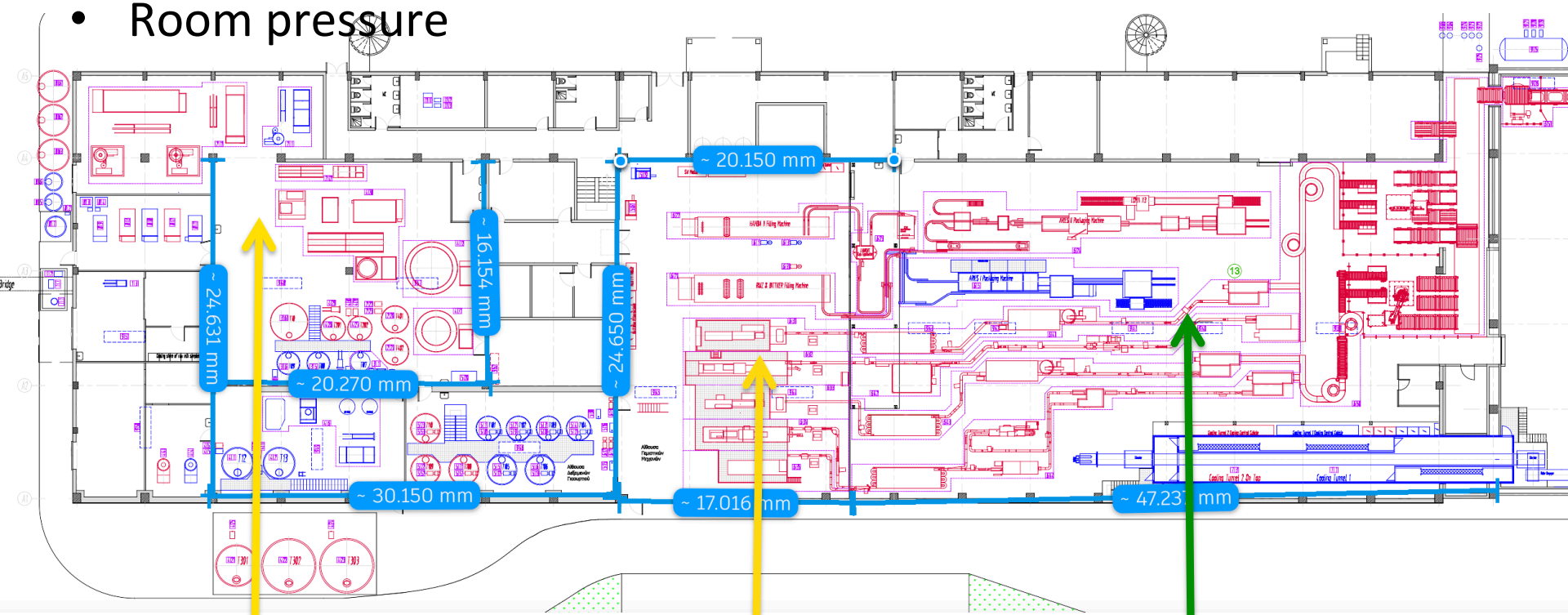
Yellow area

Green area



Monitoring

- Relative humidity, temperature, particles (indoors/outdoors)
- H2O2
- Room pressure



Milk storage area

Asceptic filling area

Packaging area

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Benefits: Siba

Our first-important customer!

- Improvement of existing products and creation of new products tailored to the dairy industry
- Evaluation of value proposition and creation of possible success story
- Business plan development

Maybe the first-willing-to-pay customer!

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Proof of Concept

- Hardware Services
- Software Services
- Operation and maintenance
- 33 weeks (18 July to 31 December 2019)
- 5 team members

Cross4Health

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Healthier Home

Cross4Health

Healthier Home

TechApps Healthier – Health (leader)

Siba - Energy (beneficiary)

Quantimetrica (technology partner)

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Cross4Health

- is a 2,5-year, €5 million Horizon 2020 project.
  - Norway Health Tech (coordinator), EuroB Creative, Health Cluster Net, Aerospace Valley, Innovation Skåne, Cluster de Salud de Castilla y Leòn and Zenit
- Create crossover value - chains
- €3,5 million invested directly in SMEs
  - Aerospace, Energy and Creative Industries
  - Biotechnology, ICT and Medical Devices
- 2nd Acceleration program
- 20 teams receive support up to 55K euro

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Challenge

- An ageing population needs to be able to stay in their homes with an increased degree of autonomy and safety
- Mismanagement of personal health (eg. 1 out of 2 people do not adhere to medication and doctor's orders)
- Air pollution the 2nd most important cause of death and its worse indoors (5 to 100 times worse)

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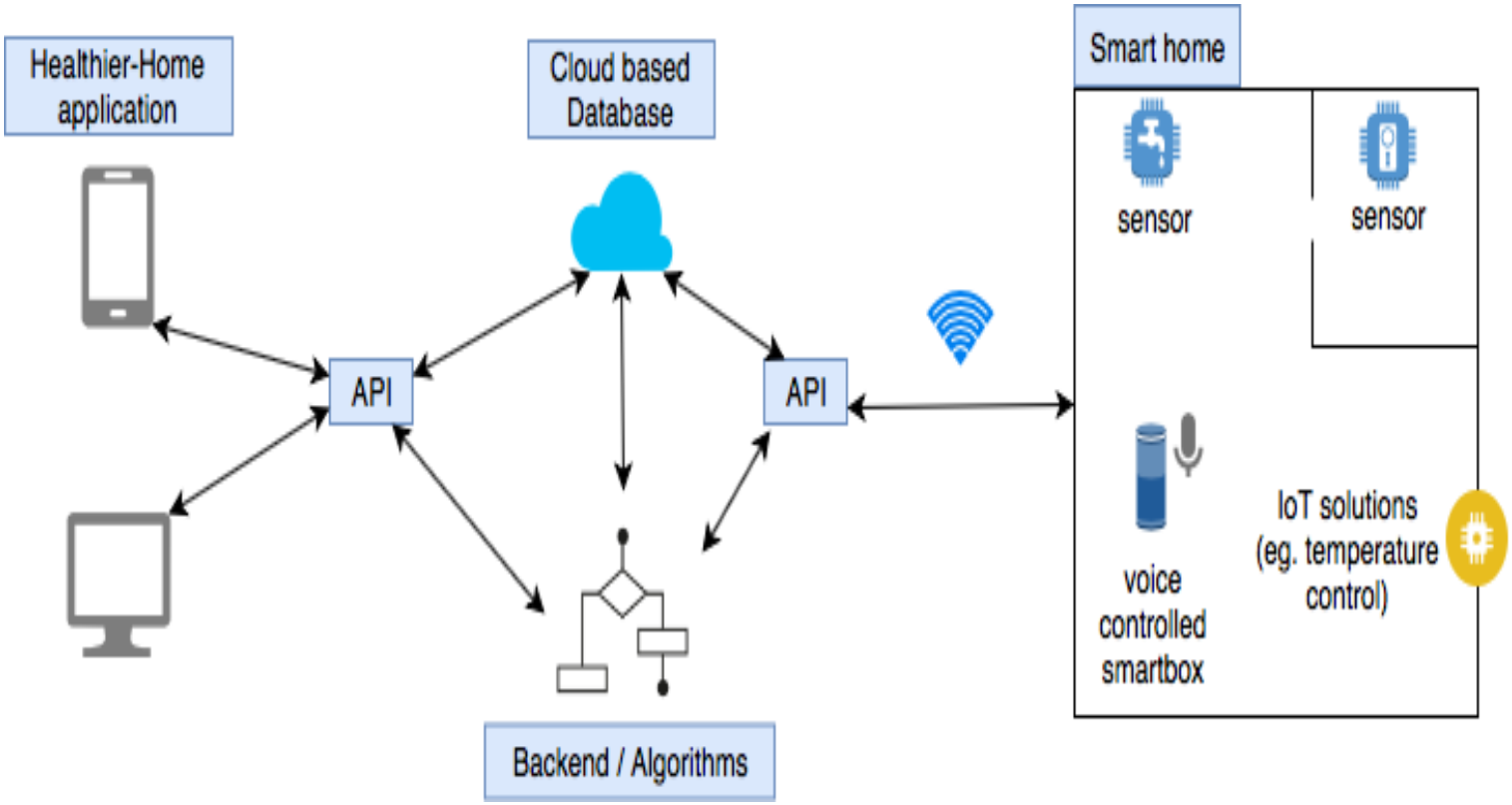
Healthier Home Care Platform



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Features

- Personal health e-record management
- Medication management using voice alerts and detecting events (e.g., smart pillbox)
- Reliable, “precision” indoor air quality management saving energy
- Detection of potential health hazards e.g., fall, distress, alerting family and carer

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Solution (System)

- Health Management Assistant
- Siba IoT Air Sensor Box - Smart Gateway
- Smart Pillbox (client)
- Voice Interface

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Benefits

- Reduced insurance premiums
- Quality of living
- Energy savings
- Privacy

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Healthier Home

- 9 months (1 month pilot)
- 25K cash
- 15K consortium services
  - market analysis, regulation, software development
- 14K third party services
  - IP, design

Common (shared) product !

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Go to Market

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Actions

- Health & Safety market
  - Regulated, policy making, policy enforcing, Activism
  - feedback from stakeholders (public and private sector)
- Facility managers of CSR corporations
- Private healthcare market
- Market analysis & sizing
- Branding
  - New website, feedback capturing, pilot results
- Research papers, ΕΚΔ

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Strategy

- Understand market need for our products
  - Market analysis (size, characteristics)
  - Personal contacts with key stakeholders
- Understand regulation
  - policy making, policy enforcement
  - ecological organisations, activism, unions
- Establising value using PoC results
  - Benchmarking

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Other

- Markets
  - Health&Safety (promishing initial discussions!)
  - Facility management of CSR Cooperations
  - Private healthcare institutions
- Branding
  - New web site!
  - Product design services
  - Marketing

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