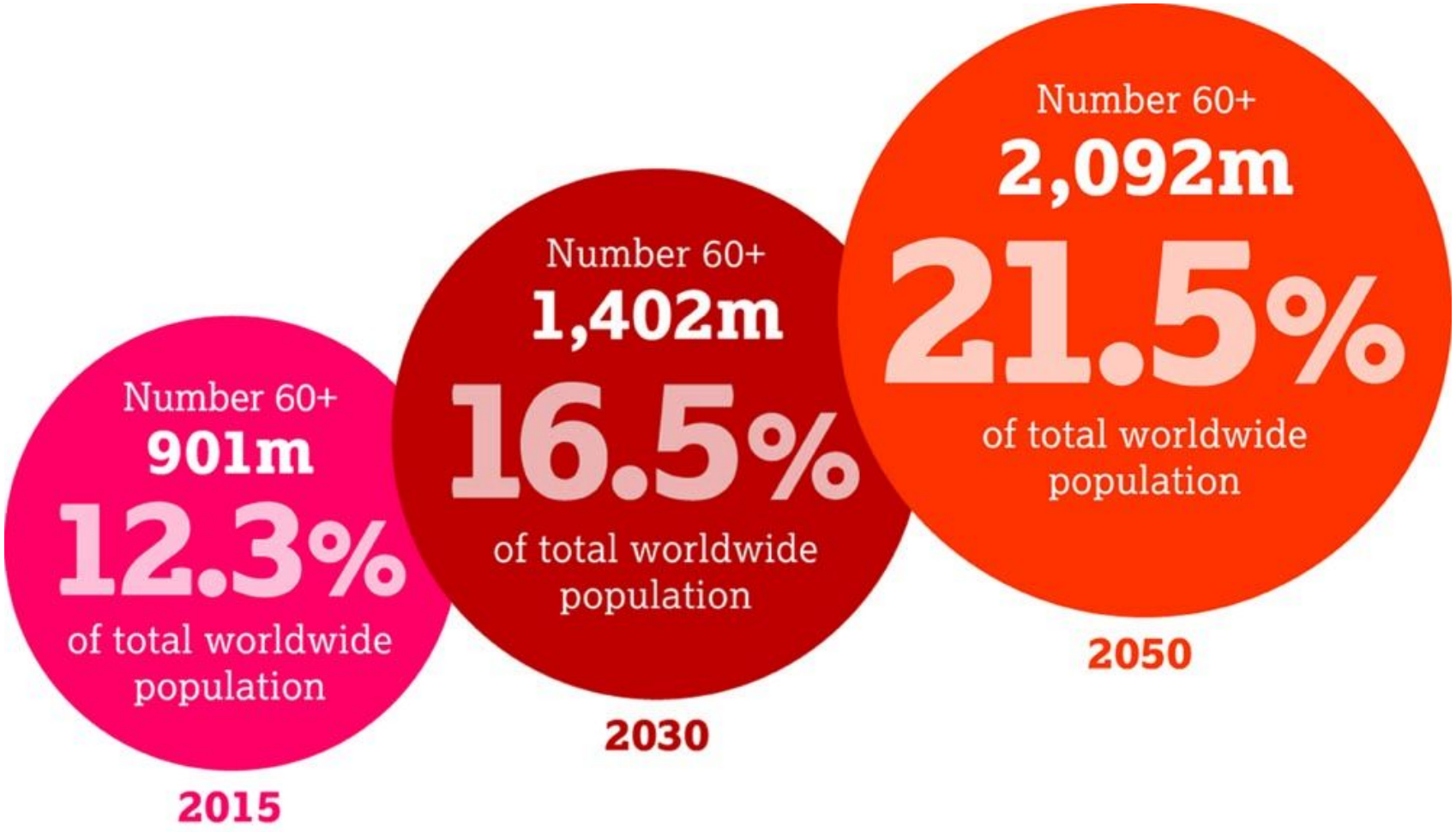
DomoPrev

A Smart House for Elderly Assistance

Berthe, Mamadou
Fahmi, Sofia
Gautier, Renaud
Persand, Kaveena

MS Innovative Smart Systems
Class of 2016 - 2017

Needs


Number 60+
901m
12.3%
of total worldwide population
2015
Number 60+
1,402m
16.5%
of total worldwide population
2030
Number 60+
2,092m
21.5%
of total worldwide population
2050

Needs

- Transition in self-sustainability capacity
- Isolated elderly people
- Prevention is better

Overview


1
Elderly person in need of assistance
Take a specific drug to the patient
6
Sensors (Heart rate, temperature, motion)
2
Check diagnosis-> Command Robot
5
Collect data from sensors
Diagnosis -> Send alert to doctor
3
OM2M
Connecting things
4

Context

- Achieve our MVP (Minimal Viable Product) by end of January
- Pursue the project's advancement: LAAS CNRS.
- Development of disease detection models in collaboration with medical researchers
    - Simple model 1-2 years
    - Complex model 3 years
- Refine interaction with the robot within 3-4 years.

Technological analysis

Partial solutions

Health monitoring bracelets

Body Temperature Bracelets

Competition

No direct competitor

Solution

Prognosis

Alert System

First Aid with Robot

Targets

Elderly people and their family

Private Insurances

Channels

Private insurances

Associations for elderly people

Values

Easy use

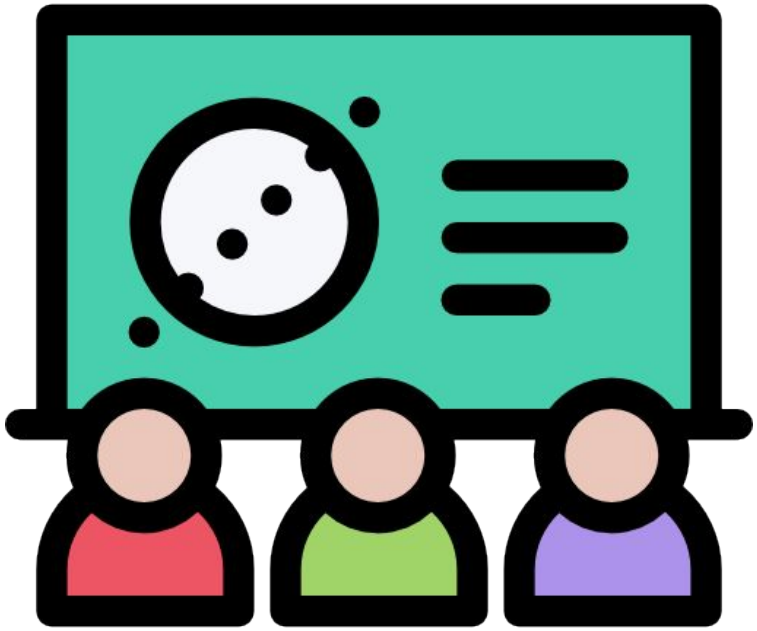
Reliability

Adaptability

Human interaction

Security

Relationship



Organization

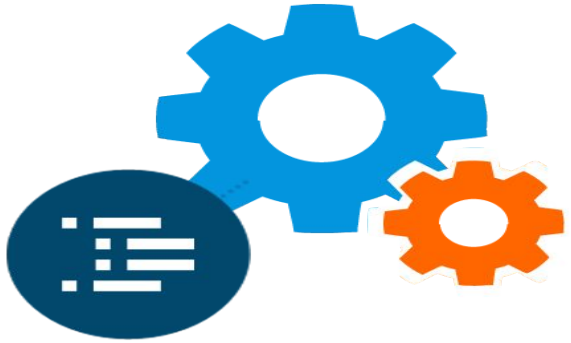
Internal

Key activities

- System development
- Maintenance
- Generation of detection models
- Analysis of needs
- Installation
- Central server

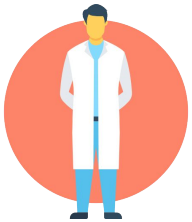
External

- Medic al researcher
- IoT industry



Cost

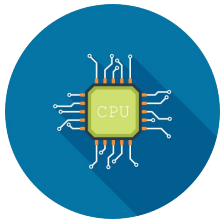
Development cost



Detection model
→ unsupervised learning

Supervision application

Additional cost

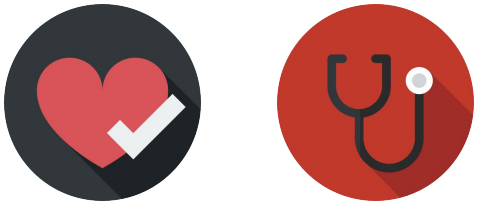


Hardware acquisition

Maintenance

Revenue

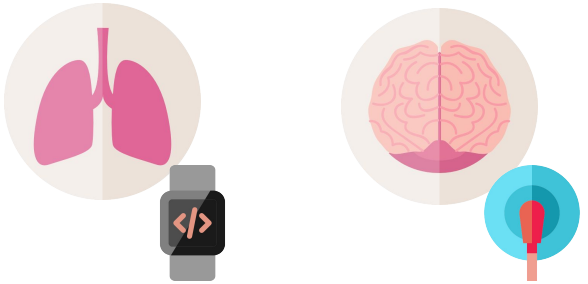
Basic bundle

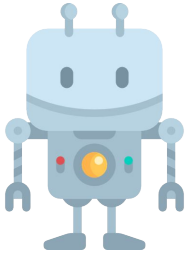


~2000€

+

Custom extensions





variable cost

Acceptability

Easy to use

Reassured children

Prevention for lesser expenses

Conclusion