# FARASHA **ECOSYSTEM**

Revolutionize the cardiovascular disease monitoring and prevention

# Company Overview

Farasha is a France based healthcare technology company, providing **smart solutions to prevent cardiovascular diseases (CVDs)**.

The company has developed Smart Medical Devices (SMDs) and **Artificial Intelligence (AI) algorithms** to address the first cause of death in the world*.

The team includes engineers, cardiologists and athletes.

**The company has already designed, tested & produced** a smart watch – Care Up - and a connected glove – Heart Up.

Important **partnerships** have been completed with Institut Coeur Paris, RATP (French public transport operator) and Société Générale.
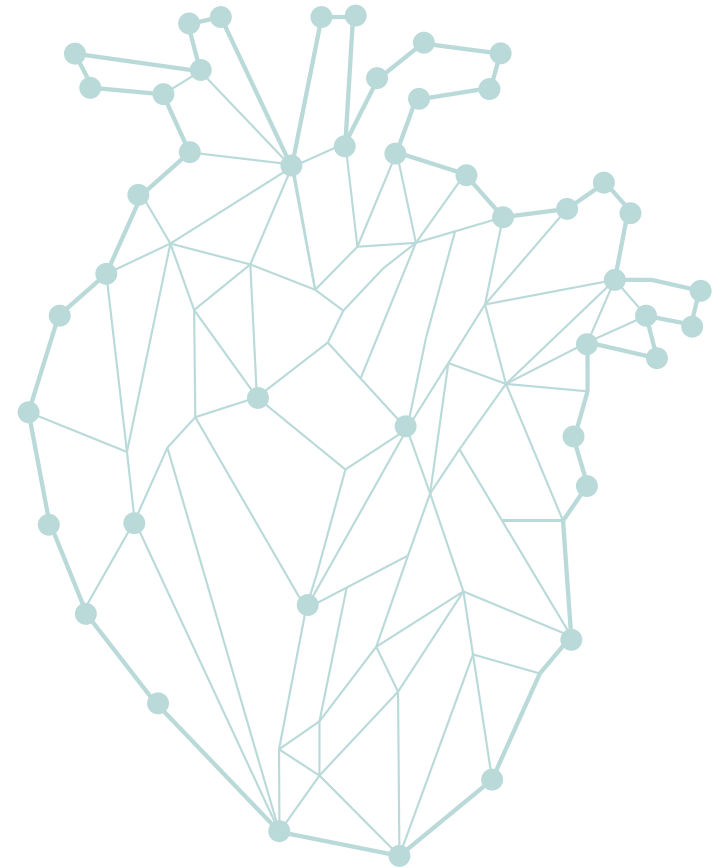
# Overview

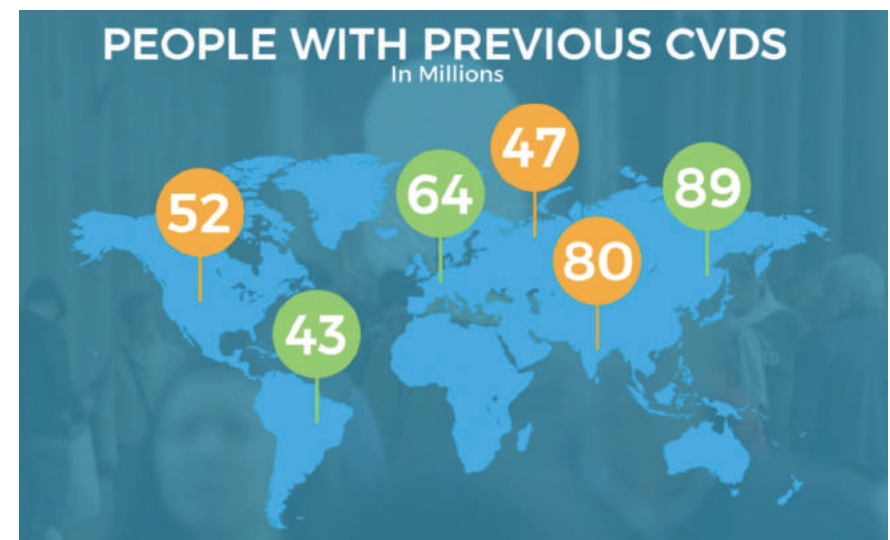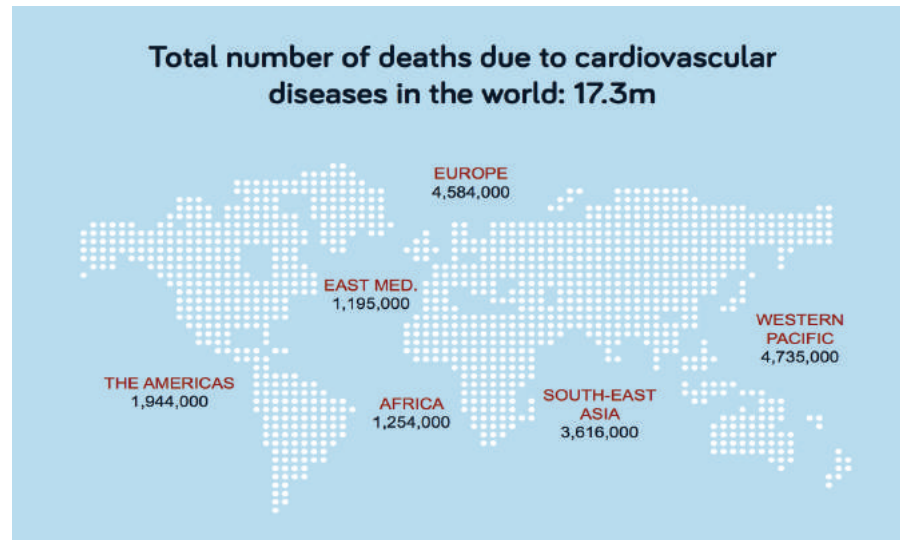- The Problem

- FARASHA Solution

- Products & Services

- Benefits

- Market & Financial projections

# CVDs Problem
## A global major economic burden

- CVD (Cardiovascular diseases) is the first killer in the world (**17 millions every year**) The risk of developing a CVD by the age of 24 is 20%, at the age of 45 is 50% and at the age of 80 it increases to 90%

- Cardiologists are **overloaded** and can not handle everything (+ 55H / week)

- Cardiovascular patients are **counted in millions** (52M in the USA, 80M in India, 64M in Europe)

- It will take an average of **3 months** to take appointment with a cardiologist (+6 months) in some countries.



Total number of deaths due to cardiovascular diseases in the world: 17.3m

EUROPE 4,584,000
EAST MED. 1,195,000
WESTERN PACIFIC 4,735,000
THE AMERICAS 1,944,000
AFRICA 1,254,000
SOUTH-EAST ASIA 3,616,000



PEOPLE WITH PREVIOUS CVDS
In Millions

52  43  64  47  80  89

# FARASHA SOLUTION
Farasha adapts to the growing need for prevention and monitoring

## Two-level solution to compensate for scarcity and absorb demand

| Virtual cardiologist | Physical cardiologist |
|---|---|
| • Virtual assistant available 24/7 on the FARASHA CARE app, in pharmacies or hospitals<br>• Use AI FARASHA + its IoT<br>• Take routine check-ups and send to cardiologist doubtful or risky cases | • Teleconsultation with independent cardiologists being part of the FARASHA CARE network<br>• In Different countries and speaking different languages |

## A value proposition based on reliable technology

A free web and mobile application accessible 24/7

- Smart Medical Devices (SMDs): Developed by FARASHA for cardiovascular monitoring.
- Deep learning allowing the identification and prediction of cardiovascular pathologies
- Anonymity and data security for any exchange or transfer between users and cardiologist.

care.up



heart.up

ACAP



### TOP FEATURES

The **first watch in the world** able to capture **Systolic and Diastolic blood pressure**

- Heart Rate
- Heart Rate variability
- Oxygen saturation level
- Sleep cycles and Apnea
- Arrhythmia alerts
- GPS built in
- Physical activity

www.care-up.com

### TOP FEATURES

The **first glove in the world** able to detect **Tachycardia** and **Bradycardia** in real time and **analyse a full night activity**

- Heart Rate
- Respiration
- Heart Rate variability
- Oxygen saturation level
- Sleep cycles and Apnea
- Arrhythmia alerts

www.heartup.eu

### TOP FEATURES

**E-SIM buildin Card**
Records and send **ECG until 48h**
Able to detect more than 30 pathologies

- Heart Rate
- Respiration
- Heart Rate variability
- Oxygen saturation level
- Sleep cycles and Apnea
- Arrhythmia alerts

Available in 2019

-frequent
-Risky

+frequent
+Risky

# FARASHA
## Products & Services

### TELE-MEDICINE

FARASHA is building the largest cardiologists network in the world allowing patients to have a faster and easy access to specialists.

### FARASHA SMDs - Smart Medical Devices:

**- HEART UP**: the first glove to detect Arrhythmia including tachycardia and bradycardia www.heartup.eu

**- CARE UP**: the first watch to capture Blood pressure www.care-up.com
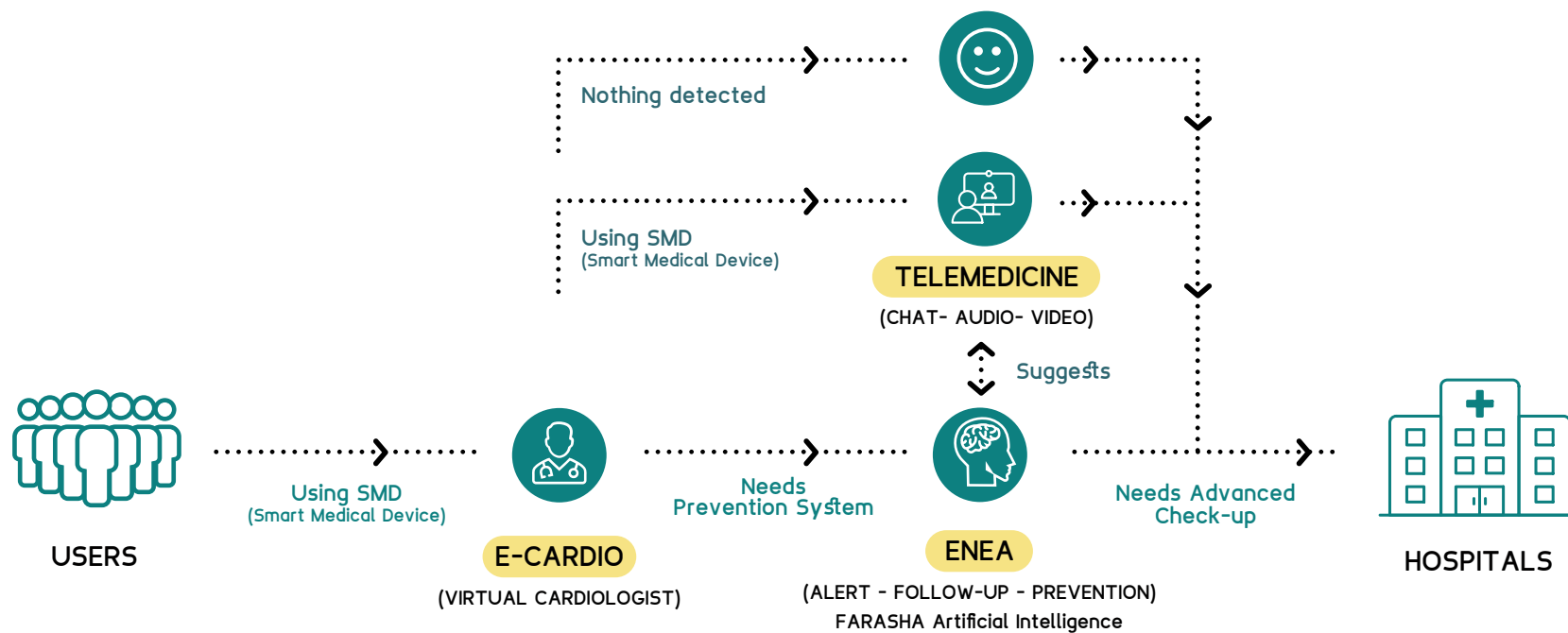
### E-CARDIO

A Virtual Cardiologist available 24/7 powered by Machine Learning technology. Get online cardiovascular analysis.

### ENEA

The first AI in the world dedicated to Cardiovascular pathologies

# How it does work ?

FARASHA ECOSYSTEM

Nothing detected

Using SMD
(Smart Medical Device)

**TELEMEDICINE**

(CHAT- AUDIO- VIDEO)

Suggests

USERS

Using SMD
(Smart Medical Device)

**E-CARDIO**

(VIRTUAL CARDIOLOGIST)

Needs
Prevention System

**ENEA**

(ALERT - FOLLOW-UP - PREVENTION)
FARASHA Artificial Intelligence

Needs Advanced
Check-up

HOSPITALS

Available in Pharmacies & Hospitals     **E-CARDIO**

Available on FARASHA CARE APP     **E-CARDIO**    **ENEA**    **TELEMEDICINE**

# Benefits for users and cardiologists

All-in-one solution to fight against cardiovascular diseases

## USER

- Quick diagnosis available 24/7 with a virtual or physical cardiologist

- Access to a cardiologist in 24h instead of several weeks

- Monitoring and real-time alert

- Cost accessible

- Second medical opinion in the day

- Avoid traveling and working time

- Access to an international qualified cardiologist (medical travel costs internationally)

## Cardiologist

- Monetize each action (chat, audio, video, delayed diagnosis)

- Reduce diagnostic time (10 min instead of 40 min in the office)      -> earn more

- Offer a nomadic diagnostic solution -> flexibility of working time

- To be assisted by the AI -> Algorithms available to target pathologies

- Geographic expansion of the patients' base -> earn more

# The Technology

## Hardware & IoT

- Design and production of IoT for cardiovascular follow-up

- SMD: Smart medical devices

## Storage & data management

- High data management capacity:
  - Large volume of data captured with the FARASHA SMDs
  - Arrival of data in high speed
  - Progressive update of data sent to FARASHA apps

## +40 Machine Learning algorithms for individuals and populations.

- ENEA will be responsible for the prediction and monitoring of cardiovascular diseases thanks to learning models and data captured from SMDs.
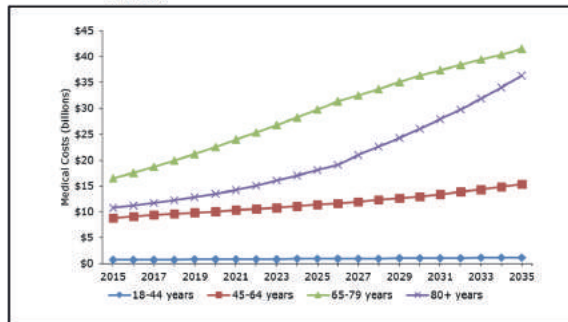
## Artificial inteligence

- Using advanced models (Neural network, Prophet ... ) for the prediction of pathologies.
- Predictive projection to highlight the prevention model to follow

# The market USA case

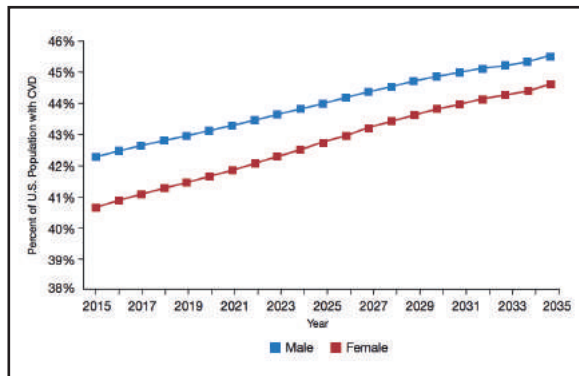**Projected Medical Costs of Stroke by Age, 2015-2035. (2015$ in billions)**



**Projections – CVD Indirect Costs Through 2035**

|  | Current | 2035 |
|---|---|---|
| High Blood Pressure | $42 billion | $67 billion |
| CHD | $99 billion | $151 billion |
| CHF | $11 billion | $19 billion |
| Stroke | $30 billion | $49 billion |
| AFib | $7 billion | $11 billion |
| Other | $48 billion | $71 billion |
| **TOTAL COSTS** | **$237 billion** | **$368 billion** |

**Projections – CVD Medical Costs Through 2035**

|  | Current | 2035 |
|---|---|---|
| High Blood Pressure | $68 billion | $154 billion |
| CHD | $89 billion | $215 billion |
| CHF | $18 billion | $45 billion |
| Stroke | $37 billion | $94 billion |
| AFib | $24 billion | $55 billion |
| Other | $83 billion | $187 billion |
| **TOTAL MEDICAL COSTS** | **$318 billion** | **$749 billion** |

**Projected Prevalence of CVDs by Sex (2015-2035)**



**Projected Total (Direct+Indirect) Costs of CVD by Age (2015-2035)**
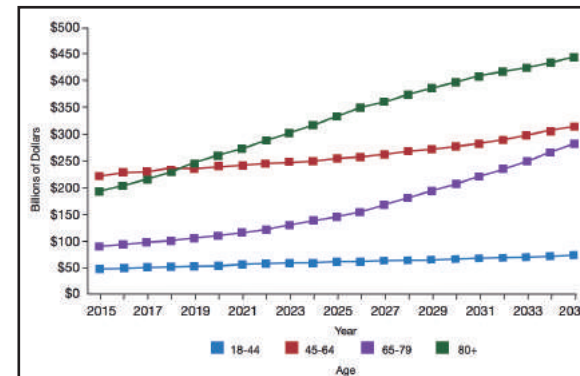


**Medical Costs of CVD, compared to others diseases (2015)**
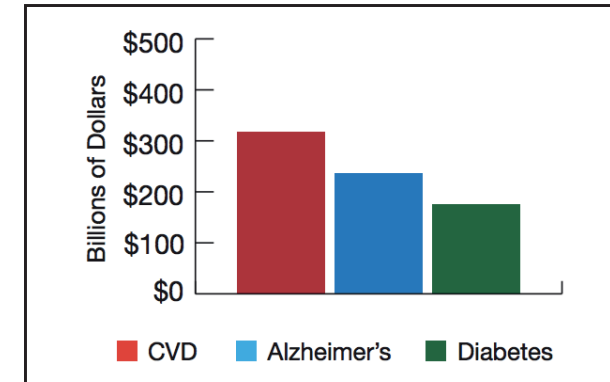
# The competition
## Scattered and meets specific need

**Unsuitable teleconsultation solutions** ▶ These solutions do not offer a possibility of diagnosis in real time with IoT objects | Several teleconsultation solutions exist but they are not adapted to cardiovascular monitoring.

**AI very enlarged or dealing rather with peculiarities** ▶

**Cardiologs**: Interpret ECGs with AI
**KenSci**: uses Learning Machine for risk prediction
**Zebra medical**: develops a cardiovascular scoring based on AI. It calculates the level of calcium in the body allowing identification of the risk level.
**IBM**: General AI for General Practice

**Thanks to its AI and its IoT, FARASHA offers a complete and unique solution, acting as a filter to separate machine-readable routine check-ups from the most serious cases to be addressed directly to a cardiologists network**

# Market Penetration
## Uberize cardiologists and attract Millennials (Generation Y)

**It's about convincing cardiologists to include nomadic consultations and persuade athletes for a regular cardiovascular check-up**

### Cardiologists & customers target

| North Africa | France | India | USA |
|---|---|---|---|
| Middle class is ready to pay dearly for a consultation with a French cardiologist | We have a first network of French and Moroccan cardiologists. | Indian doctors already care for American patients | Americans have already adopted teleconsultation solutions. We have a first network. |

### How ?

By convincing cardiologists and trainees to use FARASHA solution, patients will do the same to send their diagnostic request or to use a FARASHA product.
By installing the terminals in pharmacies, we will attract another user base that will use FARASHA services or will buy our products.

### Sale of products

- In Pharmacies
- Prescriptions
- On the websites of FARASHA products
- Health & Sports magazines.

# Financial projection
A return on investment from the second year

**FARASHA has successfully launched its first application and product in 2018**
**In 2019 Farasha will release the rest of the services to consolidate its turnover**

In **2018** FARASHA achieved a **Turnover of 550K €**, sold **+4300 watches** and a **+ 5K users** on its FARASHA CARE applcation

| | 2019 | 2020 | 2021 |
|---|---|---|---|
| Users | 40 000 € | 275 000 € | 1 500 000 € |
| Sales of products | 1 150000 € | 3 090 000 € | 8 190 000 € |
| Sales of services | 221 000 € | 970 000 € | 7 430 000 € |
| Projected Turnover | 1 336 000 € | 4 060 000 € | 15 620 000 € |
| Profit in % | 2.21% | 16.21% | 47.07% |

**It is imperative to strengthen our technical team and have a commercial force to conquer the market**

# FARASHA TEAM

## Main Team

**S.CRIER**
Executive assistant

**Y.BELHAJ**
CEO

**I. LARAJ**
IT Manager

**F.LEMOINE**
Hardware Architect

**R.ROLLAND**
Mob App Architect

**H.BEUCHER**
IT Software Architect

**R.LAZAZZERA**
PHD Signal Processing

**F.PRAUD**
Embedded System Expert

**S.PREDOUR**
Stylist designer

**A.MEJIA**
Sales Manager

**Y.ROUSSANGE**
Sales Manager

**Y.ALIOUAT**
Marketing Designer

## Medical & Sport

**Dr MALOU**
Cardiologist

**Dr DRISSI**
Cardiologist

**Dr MERCADET**
Cardiologist

**Mehdi BAALA**
Olympic Athlete

**GHANI YALLOUZ**
Head of Technical French athletic Federation

**Dr MABO**
Cardiologist

## PI & LEGAL Advisors

**B.GALIC**
GBA Avocats- Lawyer Contractual & PI Strategy

**K.LACHHEB**
Accurancy Legal & Compliance

**A.THOMANN**
GBA Avocats- Lawyer- Legal & trademarks

# FARASHA Partners

For any question please contact FARASHA CARE Managers at :

contact@farasha.care

ANDRES
MEJIA

YOUSRI
ROUSSANGE

# PREVENTION 3.0

made by

## WITHOUT FARASHA

**30 days**
to get an appointment

**+10 days**
to get a full diagnosis

**No prevention**

**400$**
for a first full diagnosis

Risk of losing confidential documents or difficulty to share them with other health provider for additional expertise

EKG only available in clinique or in hospitals

## WITH FARASHA

**<30 Min**
to get an appointment

**- 10 Min**
to get a full diagnosis

**Ecardiologist & AI** available at any time

**Free Ecardio (virtual cardiologist** in pharmacies to help CVDs prevention

**Start from 60$**
for a first full diagnosis

Payment in **2 minutes**

**100%** confidential, anonymous, secure and sharable anytime

**Accurate diagnosis** with Farasha SMDs anytime & anywhere

FLβ

# USE Case
## Developing Country : India

## WITHOUT FARASHA

**65 days**
to get an appointment

**+90 days**
to get a full diagnosis

**No prevention system**
1 cardiologist/10000 people

## WITH FARASHA

**<30 Min**
to get an appointment

**– 10 Min**
to get a full diagnosis

**Ediagnosis** available anytime anywhere (using Farasha SMDs)

**Ecardio - Virtual cardiologist** available in hospitals & pharmacies

Cardiovascular risk analysis/area (to support prevention politics)

**SMDs** available in pharmacies, hospitals & insurers

**Reward** schema for insurers to improve active prevention system