AI-PERIO:

Integration of gum health perception and periodontitis prevention on an Artificially Intelligence-based mobile application for tackling low-grade chronic systemic inflammation

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in collaboration with
The Anti-Inflammaging Company**

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1. Company background

The present project starts from an already existing collaboration between the Postgraduate Program in **Periodontology at the University of Turin**, Italy, and **The Anti-Inflammaging Company**, Switzerland.

Who we are:

The Anti-Inflammaging Company is the first enterprise to fight Low-Grade Chronic Inflammation — "the Secret Killer" — through a patented AI-based ecosystem (called AI-Air) powered by a digital platform for the prevention of chronic Non-Communicable Diseases.

PROBLEM
Low-Grade Chronic Inflammation:
the "Secret Killer"
the major cause of premature deaths globally*

What we do:

The Company developed a scoring system for determining the inflammaging status of the user through a questionnaire that provides a patented Inflammation Index (AI Index).

SOLUTION
Anti-Inflammaging® Platform

1. Company background

How it works:

On the basis of user's feedbacks, the system delivers personalized tips for healthier lifestyle habits and "healthy aging" promotion. Tips are associated to published papers with the highest available scientific evidence.

Current state:

At the moment, the system includes 4 main areas of intervention (**Cognition, Movement, Nutrition, Ambience**).

Gap:

There is a strong interest in developing new contents related to the contribution of specific body systems physiopathology (such as the oral cavity) on general inflammation status.

AI−AIR

For healthy people who want lower inflammation

Nutrition

Movement

Cognition

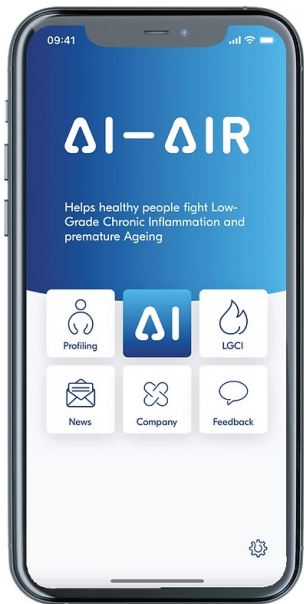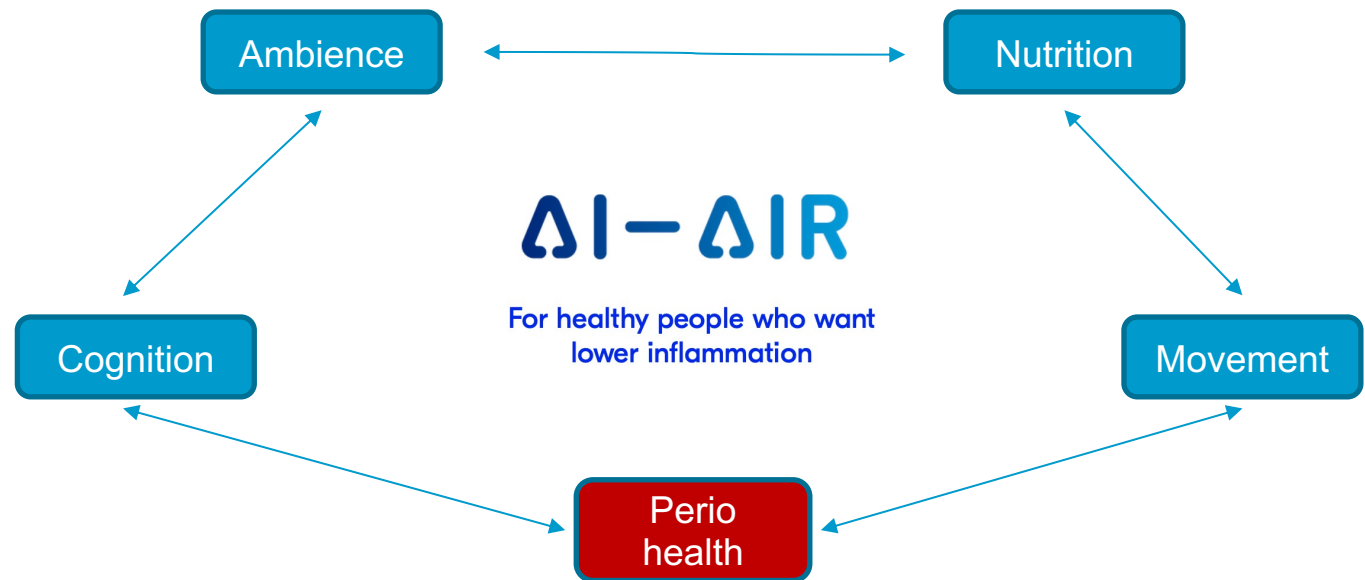Ambience

Innovation for the public via a mobile-health App

To implement the Anti-Inflammaging platform (AI-Air)
through a new area related to gum health perception
and periodontitis prevention (AI-Perio)

3. Unmet need

❑ Oral health is an intrinsic constituent of general health and wellbeing; however, oral health is **largely overlooked on the global health agenda** (*Oral Health Series 2019, The Lancet*)

❑ There is an **urgent need to globally implement population-based preventive strategies** to reduce the burden of oral diseases, especially periodontitis which is significantly associated with the risk of NCDs via systemic inflammaging (*Baima et al. 2022, JDR*)
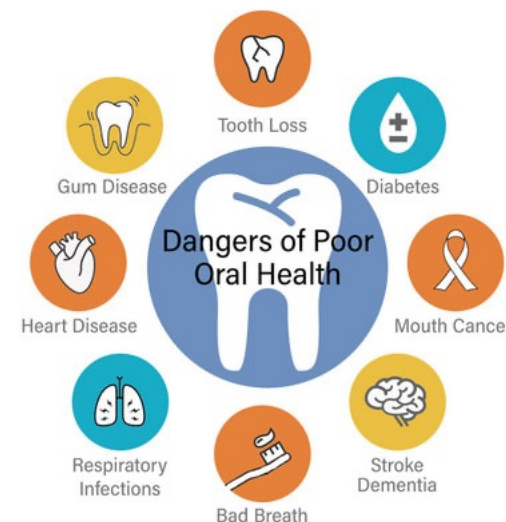
❑ There is a **scarce self-awareness about periodontal problems** within the general population worldwide (*"Self-awareness of Gum Disease Among US Adults" 2017*)

❑ Therefore, promotion of the perception of gum diseases should be compellingly addressed by daily used **user-friendly tools**, such as mobile apps (*"Health at a Glance" 2020, EU*)

4. The Market: opportunities

❑ A number of competitor apps are already available, but they suffer from being **too sector specific** and therefore most of the people ignore about their existence

❑ In order to reach a broader number of users, gum-health tools should be integrated within a **potentially more largely widespread mobile app**

❑ Recently, self-awareness about the importance of keeping a low **level of chronic inflammation** has acquired a crucial importance, also owed to COVID-19 pandemics

❑ As a consequence, an app which can monitor the gum condition together with the **holistic inflammatory status** of the user can a have a broader **health preventive and socio-economic impact**
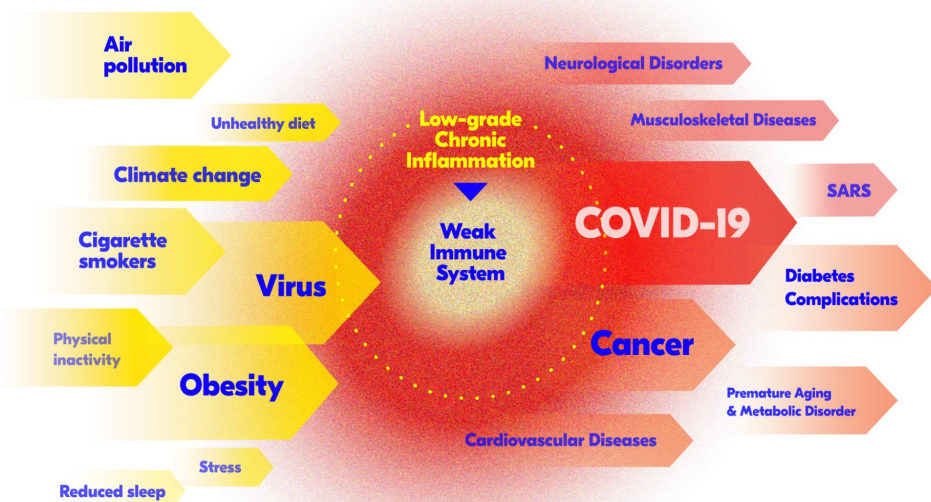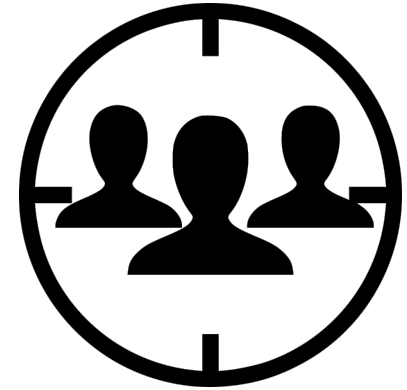
4. The Market: analysis

A. Target Group

- ❑ **In-shape customers** which pay particular attention to staying healthy
- ❑ **Segmentation**:
- ✓ Healthy users of every age *(primary prevention)*
- ✓ Users potentially at risk *(diagnosis/secondary prevention)*
- ✓ Patients with periodontitis *(tertiary prevention)*
- ❑ **Business:** B2C
- ❑ **e-health industry** with a global-scale market
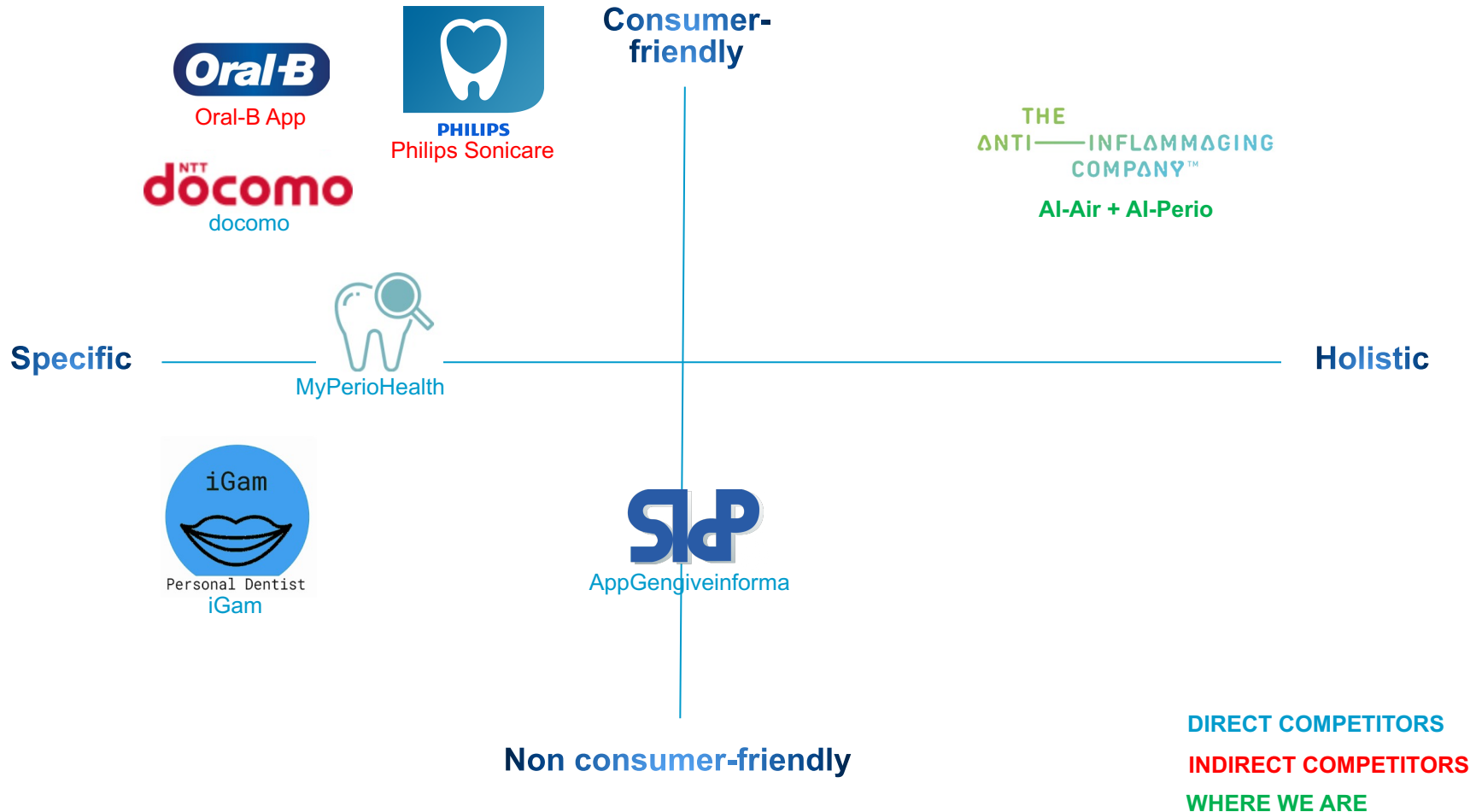
B. Market potential

- ❑ How big is **the market potential** today? All users having access to a mobile device/smartphone
- ❑ How is it going to develop over the next few years? Due to the increasing self-awareness about inflammation-related complications/disfunctions, this market is expected to **increase**
- ❑ **Market entry:** every person who cares about his/her health status

Competitivity matrix

Oral-B App

Philips Sonicare

docomo

AI-Air + AI-Perio

MyPerioHealth

Consumer-friendly

Specific

Holistic

iGam

AppGengiveinforma

Non consumer-friendly

DIRECT COMPETITORS
**INDIRECT COMPETITORS**
WHERE WE ARE

5. Presentation of the idea

STEP 1: User Profiling

- **User profiling through a questionnaire on lifestyle behaviors (AI-Air)**

- **Assessment of oral-health habits, periodontitis risk profile and oral health-related quality of life through an implemented questionnaire (AI-Perio)**

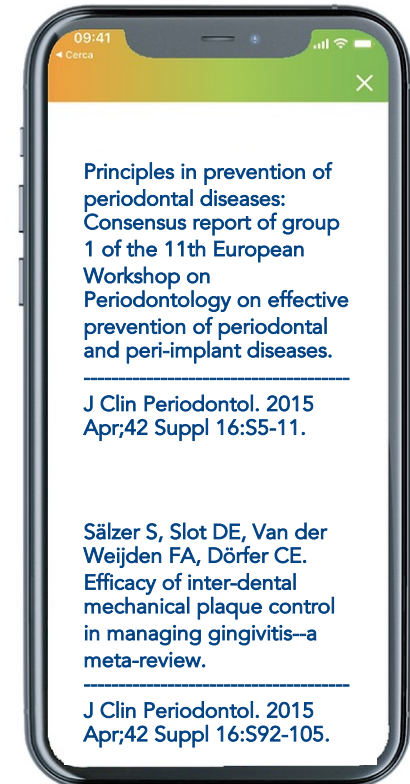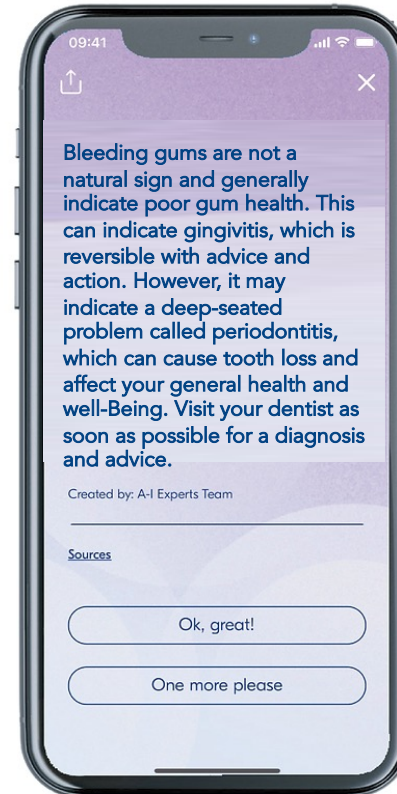- **Calculation of the initial overall Inflammation Index (AI Index®)**
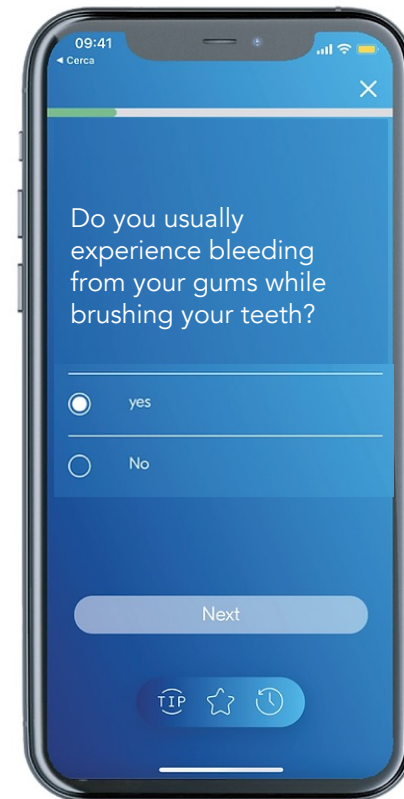
5. Presentation of the idea

STEP 2: Personalized Tips

❑ **Providing personalized tips for improving their inflammation status and oral health based on the highest available scientific evidence (including EFP guidelines)**

❑ **Media support to help explaining the tip (images, videos, cited bibliography)**
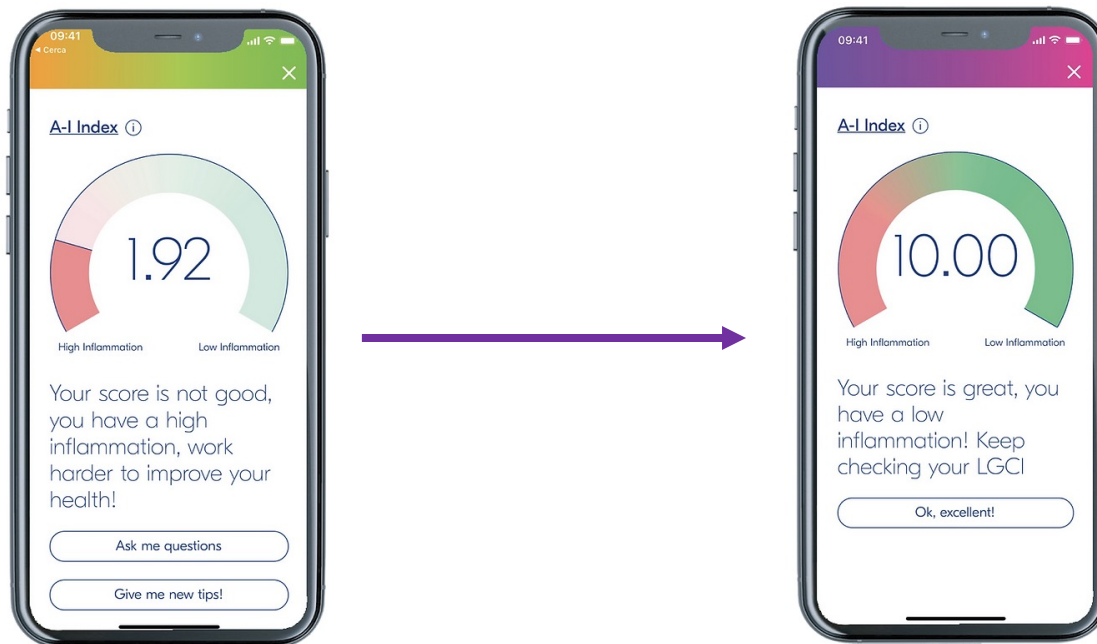
5. Presentation of the idea

STEP 3: Monitoring of the Inflammation Score

❑ **Monitoring and testing the implemented AI score® in clinical trials to evaluate the effect of periodontal preventive/treatment strategies on its longitudinal variation**

6. Business Model

Cost for production

- ❑ Operative cost for implementing the AI Perio on the AI Air platform (5.000,00 €)
- ❑ Scientific expert consultant (receives royalties whenever his/her content is delivered to the users)
- ❑ Clinical trials insurance (10.000,00 €)
- ❑ Marketing (the amount will be calculated on the basis of company's strategies)

Cost for customers

- ❑ Freemium app model (the app is provided free of charge but money is charged for additional premium contents – 2,99 €/month estimated)

6. Business Model Canvas

Sources

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