

## Storytelling



My name is **Claire Bigot**, I am currently studying **periodontology** through a **University Degree** from **Paris Cité**, France. Initially researcher in biomedical sciences (background + master), I have then studied dental medicine and specialized in Periodontology. **Innovation** has always been one of my concerns. After an **Erasmus** internship in Norway where I have learned the **Scandinavian Approach** regarding **prevention**, I have been involved in a mission back in France during **Covid crisis** in 2020 to help the **monitoring** of patients with a **e-health** solution. These two experiences were the **trigger** of the digital innovation for gum health presented below. I worked for my **practical thesis** on the "interest of a digital tool for prevention and supportive periodontal care: example of diabetic patients". Once the interest demonstrated, I studied **entrepreneurship** (University Degree) to understand how building such a e-health project. I am now working on **My PerioCare digital technology to optimize the periodontal care**, considering the overall actual background.

### 1) Unmet need

**Periodontal diseases** are **chronic** diseases affecting more and more people throughout the world. According to **WHO** (World Health Organization), over 30 years, periodontal diseases have **increased by 24 %**, particularly in poorest countries (+ 35 %). In the world, **severe forms affect** around 19 % which represent **1 billion cases**. Until now, the periodontal diseases care was mainly focused on curative treatment. However, we still discover, periodontal diseases involve different **factors** which leads to a more **personalized** approach with more education of the patient (who most of the time do not know the existence of theses oral diseases). The **prevention** is thus more and more considered, but we lack tools to put into practice and to solve this **health issue** in an **effective** way.

The actual **background** is then characterized by the **third area of periodontal medicine**, and by two other streams which are the m-health and the 4P medicine. Nowadays, the Web is more and more used on our mobile devices and the number of App has increased dramatically, specifically since the Covid crisis in the medical sector (*Doctolib* for example). The e-health is then becoming the **m-health**. It is the second stream. The third one is named the **4P medicine**, for Predictive, Preventive, Personalized and Participatory medicine, which is more and more used throughout the world. Considering this overall background, we notice an **unmet link between those three streams**. Thus, an **unmet need**.

Here is an illustration to sum up the background:

## Background

### 1. The 3rd area of periodontal medicine

Etiopathogenic

Risk factors

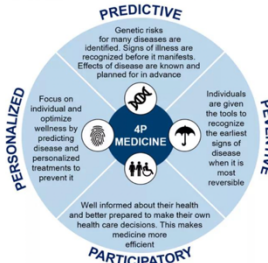
Systemic diseases  
& comorbidities

### 2. The m-health : the use of mobile communications for public health & medical purposes



### 3. The 4 P Medicine : from CURATIVE medicine

Gao Feng Analysis Providence St Joseph Health



Furthermore, the **consumptions trends** and the **expectations** of both **patients** and **health care professionals** noticed throughout the literature, combined with the answers of a **quiz** made for my practice thesis reveal the results below:

## Results

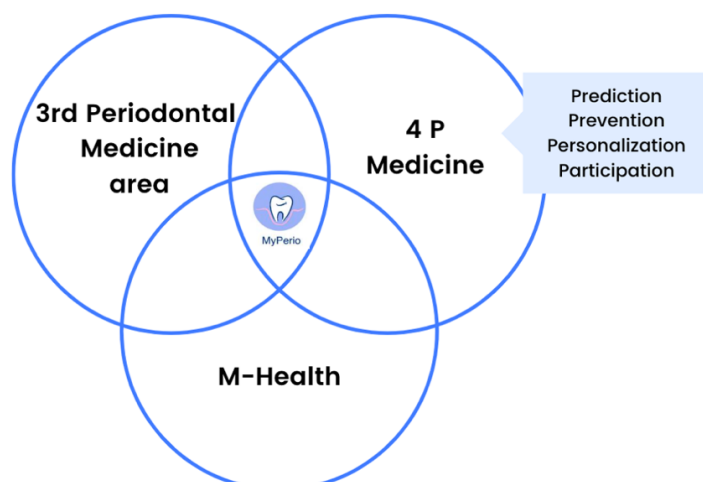
✓ **Patients** : more **personalized information** and more **self monitoring** (diabetic patients)



✓ **Health care professionals**

- Confident in using **tools** to **optimize** their **practice**
- Need a **scoring** of the different devices
- **Covid** crisis emphasizes the **need** of e-health solutions

In conclusion, a **digital innovation** that would be at the **crossroads** of the current **background**, and that would cope with both the **public** and the **dentist's unmet needs** might be an interesting **solution**. In that context, the **application** named **My PerioCare** has been thinking as a **digital partner for both patient and dentist to deal with periodontal diseases** and to improve gum health from the primary to the third prevention.



## 2) The Market

There are two main markets, which are the e-health and the dental ones.

- **The e-health market** is increasing dramatically, specifically since the Covid crisis:
  - In **2023** the market would be about **230 billion dollars** throughout the **world**. An increase of 160 % compared to 2019.
  - For instance, **Dental Monitoring** with its digital solution to optimize orthodontic care has **raised 150 million dollars** in September 2021. It is one of the recent success stories placed in between the e-health and the dental markets.
- **The dental market** is a strong one too. In **2022** it was about **500 billion dollars** throughout the **world**. In France, at the beginning of 2022, there were 43 948 dentists, all involving in a way in this market.

More and more digital solutions appear within the dental market, specifically since the Covid crisis. However still a few exist to cope with periodontal diseases. Here are the different competitors of My PerioCare:

### ➤ Indirect ones

- **Paro App and Preventeeth**
  - ⇒ They are applications that everybody can use, and support only primary or secondary prevention. Paro App offers mainly periodontal diseases sensibilization and therapeutic education, whereas Preventeeth is introduced as a daily partner for oral hygiene.
  - ⇒ The business model is not clear (possible in-app purchases), and the companies are not yet created.
  - ➔ These solutions are exclusively for patients and are mainly focused on primary or secondary prevention, without any personalized services for Paro App. The **advantage of My PerioCare** consists in a solution **for both patients and dentists from the primary to the third prevention** in a **personalized** way.
- **Paro First:** is an application for the dentist to help her/him in the diagnosing. However, it does not seem correctly developed, and not as clear as Periotoools website. This **diagnosing help is one of the functions of My PerioCare solution** proposed to the dentist. The business model nor the company seem created.
- **Dental Monitoring:**
  - ⇒ It is a solution for monitoring **orthodontic care** with a scan box the patient can fix on his/her phone to take pictures at specific times indicated by the orthodontist. It helps the dentist to follow the evolution of the treatment and to avoid any relapse/accident or waste of time.
  - ⇒ Until now the solution is dedicated for orthodontic care, but it could be proposed to periodontal care. The **scan box** could be used to take **pictures** of the gum for improving the prevention of gum inflammation and/or the monitoring of the periodontal treatment.
  - ⇒ Thus, it is considered as an indirect competitor, but it could be considered too as a **potential partner** if the solution is extended to periodontal care.

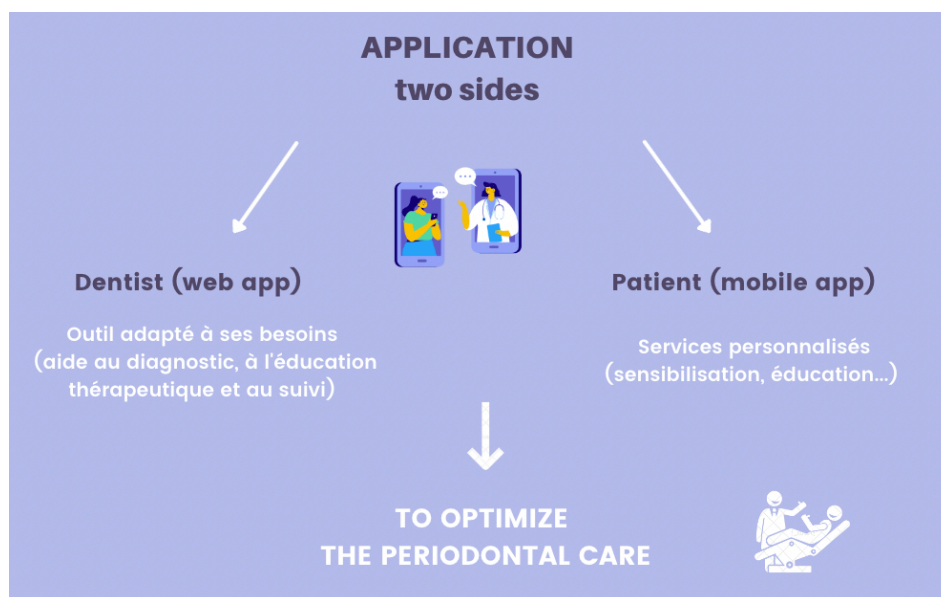
### ➤ Direct ones

- **My Perio Health** is born in USA, with the **OraPharma** company. The objectives seem to be the same but the **solution** itself is **not clear**. There is one website, which seems dedicated to dentists and patients...
- **Lovis** is born in France. In the future they want to be the leader of **tele-dental care**. Mainly focused on **geriatric**, the solution offers pre-diagnostic for anyone (everybody can use it). The solution is organized into two sides as My PerioCare, one for the dentist and another one for the patient with diseases sensibilization, therapeutic education and tele consultations. They already intend to enlarge their offer with dermatologic and periodontal services; however, **their functions and objectives are not clear**.

To sum up, here is a map of the different competitors:



➔ Objectives of My PerioCare are clear: the solution's goal is to improve the periodontal care at each step of the treatment, as a partner of both the dentist and the patient from the primary to the third prevention. The application is prescribed by the dentist to the patient, in a professional way.



### 3) Presentation of the idea

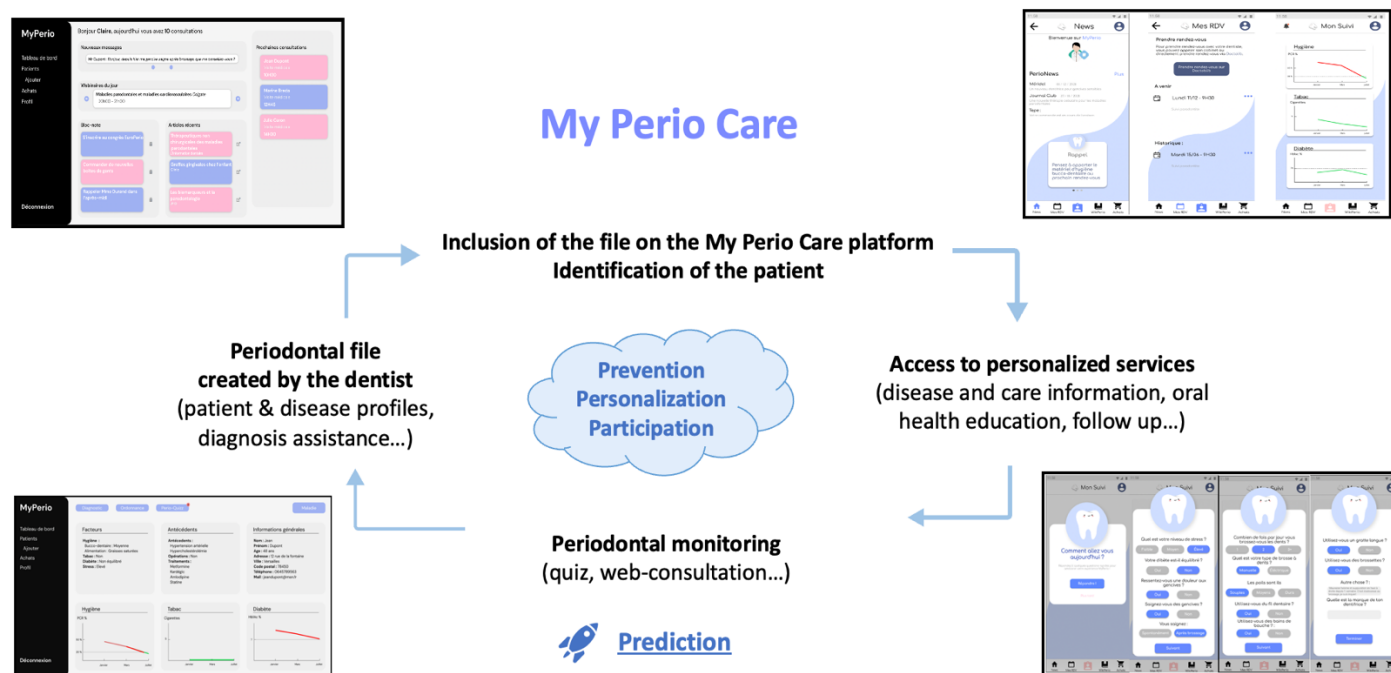
**My PerioCare** is an **application** with **two sides**. It is a **tool** for the **dentist** to help her/him in the **periodontal practice**, as well as a **service** with different **functions** for the **patient** in a **personalized** way. The objective is to **optimize the periodontal care** at each step of the treatment from the primary to the third prevention.

In details:

1) During the first appointment, the dentist registers different periodontal parameters specific to the patient and to the disease (the patient can answer questions in the waiting room on an iPad, depending on the office's equipment, and the dentist will complete in the office). For example, risk factors, age, pregnancy etc. Regarding identification of the disease, the dentist is helped in diagnosing with the new Chicago classification depending on different parameters (in the future artificial intelligence will be included in this assistance through the analysis of x-rays and charting). The dentist's account functions are suggested depending on her/his practice: from just swiping periodontal documents on the platform and/or registering main parameters, to the more specific diagnosis assistance for exclusive periodontist.

2) Once the periodontal file completed, it is included on the My PerioCare platform. The dentist then prescribes the application to the patient, who receives an identification to access to all personalized services such as periodontal diseases and care's information (WikiPerio), oral health education, follow-up of her/his periodontal parameters...

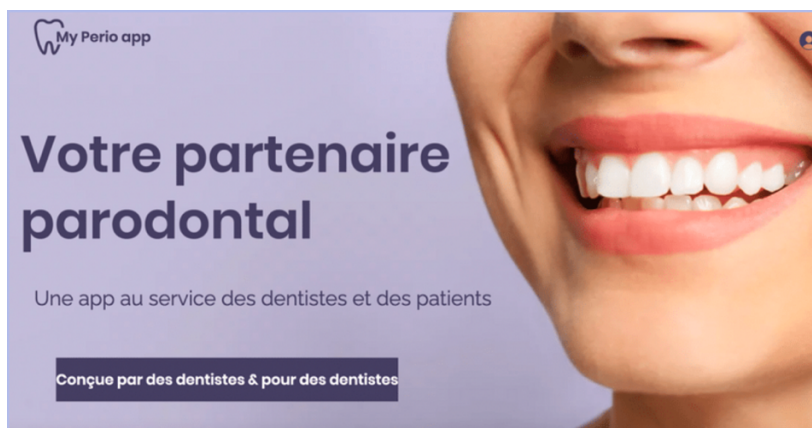
3) Throughout all the treatment, the monitoring is personalized and non-intrusive. Quiz can be sent automatically on mobile application depending on the patient's level of risk; tele-consultation is possible if necessary and other services.



In conclusion, **My PerioCare** offers a **4P medicine** with more **prevention**, for a more **personalized treatment**, to get more **participation** of the patient in a "mobile" and professional way (avoiding medical fake news and disagreement). In the future, we hope to be able to **predict** more specifically the evolution of periodontal diseases and to prevent the best possible any relapse. My PerioCare could be as well a technology used by **researchers** in **epidemiology** to enhance the quality of studies regarding gum health.

Up to now, I have worked with engineers on the development of the prototype which has been presented at the EuroPerio 2022 at Copenhagen during an oral presentation. **Explanations of the main interfaces**, as well for the dentist account (web app) as for the patient account (mobile app), are in the **PowerPoint** attached to the mail.

**NB:** I followed a University Degree in entrepreneurship one year ago to understand the challenges linked to the development of that kind of project, such as raising fundings. I am now working with a colleague, the Doctor Elise Sorel passionate with periodontology too. She has worked since 2020 on popularization of oral diseases in a professional way with her *les.maux.de.la.bouche* website (Instagram, Facebook, LinkedIn). Currently working on the WikiPerio service of the patient's account, she will be responsible of the communication and marketing part. We intend to pursue the development of the application with our group of three engineers, by optimizing functions, adding some UI/UX/design, developing the website etc. Below is an example of the landing page which is currently developed.



Thus, we need **fundings** to really make this **project alive** and **partnerships** are in process.  
We hope to bring the My PerioCare innovation into market in **2023**, with a strong Business Plan.

## 4) Business Plan

I am now going to introduce you the financial part, with first the **business model**, and second the **financial forecast**.

### Business Model

#### Cost for customers:

- The main customers are the **dentists** (office, clinic, hospital...). They can **subscribe** depending on their **periodontal activity**, in other words depending on the number of periodontal **patients**. From 150 to 200 patients the subscription is about 89 to 129 €, over 200 patients it is more than 129 € in a **degressive** way.
- A **freemium** is offered to the **patients**, then specific functions are chargeable such as tele-consultation.
- Plus, there are commissions on **in-app purchases**. This financial flow will be developed later, probably from the second or the third year.

### Financial forecast

The My PerioCare project won several **prices**, such as the **Académie Nationale de Chirurgie Dentaire** one and the **Innovation and Educational Minister** of France one, plus different entrepreneurship prices. Nevertheless, the project needs **fundings** estimated at **80 000 €** approximately (named "total des besoins" in the table below). The **resources** are based on different flows, such as love money, public subsidies, and prices (named "total des ressources" in the table below) which are currently in process. Here are the tables:

	Lancement	2023	2024	2025
	Dém.	Année 1	Année 2	Année 3
<b>BESOINS HT</b>				
<i>Immobilisations Incorporelles</i>				
Frais d'établissement	417 €			
Dépôt de marque/ logo	325 €			
Frais juridiques/comptables	5 833 €			
Publicité / marketing / Merchandising	4 167 €			
Design app mobile & site web	0 €			
Développement app mobile complexe & site web	40 000 €			
Autre ? (préciser)	0 €			
<i>Immobilisations Corporelles</i>				
Véhicule professionnel	0 €			
Matériel informatique	0 €			
Autres matériels (préciser lesquels)	0 €			
Mobilier (préciser lesquels)	0 €			
<i>Immobilisations financières</i>				
Dépôt de garantie	0 €			
<b>TOTAL DES BESOINS PERMANENTS</b>	50 742 €	0 €	0 €	0 €
<i>Besoin en fonds de roulement</i>	18 644 €	0 €	0 €	0 €
Créances clients (déduire le crédit fournisseur)				
Autres créances (TVA à récupérer)	10 148 €			
<b>TOTAL DES BESOINS CIRCULANTS</b>	28 792 €	0 €	0 €	0 €
<b>REBOURS. DU CAPITAL DES EMPRUNTS</b>		5 000 €	5 000 €	5 000 €
<b>TOTAL DES BESOINS</b>	79 534 €	5 000 €	5 000 €	5 000 €

RESSOURCES				
<b>Capitaux propres</b>				
Apport personnel au capital en numéraire	10 000 €			
Compte courant d'associés (CCA)	5 000 €			
Levée de fonds	0 €			
Autres (à préciser)	0 €			
<b>Subventions</b>				
Bourse French Tech BPI France	30 000 €			
Prix EFP	10 000 €			
Prix Petit Poucet	10 000 €			
Bourse Nudge + Chèque Conseil Région IDF + SOP	5 000 €			
<b>Capitaux empruntés</b>				
Prêt 1 - Prêt bancaire	0 €			
Prêt 2 - Prêt d'honneur à taux 0% Incub'USPN	20 000 €			
Prêt 3 -				
Autres:				
<b>TOTAL DES RESSOURCES STABLES</b>	<b>90 000 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>
<b>CAPACITE D'AUTOFINANCEMENT</b>		<b>20 843 €</b>	<b>72 418 €</b>	<b>132 757 €</b>
<b>TOTAL DES RESSOURCES</b>	<b>90 000 €</b>	<b>20 843 €</b>	<b>72 418 €</b>	<b>132 757 €</b>

Plus, here is the table with the **income statement** for the first three years:

	Année 1	Année 2	Année 3
PRODUITS HT	2023	2024	2025
<b>Chiffre d'affaires</b>			
Offre 1 : Abonnement Dentiste	51 963€	416 035€	655 463€
Offre 2 : Commission sur achat matériel dentaire Prof	0€	12 356€	27 540€
Offre 4 : Publicité Compte dentiste	0€	10 000€	30 000€
Offre 5 : Commission sur achat matériel dentaire Patient	0€	15 569€	34 701€
<b>TOTAL DES PRODUITS</b>	<b>51 963€</b>	<b>428 391€</b>	<b>683 004€</b>
<b>CHARGES HT</b>			
<b>Achats</b>			
Matières premières	0€	0€	0€
Sous traitance (commercial VRP)	0€	8 378€	18 672€
Sous traitance (partenaires ex. Paroclap)	2 598€	21 420€	34 150€
Fournitures diverses (emballages, fournitures bureau...)	1 200€	2 400€	4 800€
<b>Charges externes</b>			
Frais IT (serveurs, hébergement...)	4 000€	12 000€	24 000€
Loyer + charges + fluides (eau, edf, ...)	0€	0€	0€
Abonnement divers et acquisition de data & techno	1 200€	3 600€	7 200€
Entretien locaux et matériel	0€	3 600€	7 200€
Assurances	750€	2 250€	4 500€
Honoraires (comptables, avocats)	2 400€	7 200€	14 400€
Publicité/marketing	2 598€	10 393€	20 785€
Frais bancaires	1 200€	3 600€	7 200€
Frais de déplacements, missions	1 920€	5 760€	11 520€
Frais postaux, téléphone	720€	2 160€	4 320€
<b>Impôts et taxes</b>	<b>2 500€</b>	<b>5 000€</b>	<b>7 500€</b>
(Contribution foncière des entreprises ou autres)			
<b>Charges de personnel</b>			
Rémunération brute des salariés	6 880€	126 000€	178 800€
Cotisations patronales	0€	44 991€	63 754€
Rémunération du/des dirigeant(s)	0€	51 000€	60 000€
Cotisations sociales du/des dirigeant(s)	0€	21 196€	24 875€
<b>Charges financières</b>	<b>0€</b>	<b>0€</b>	<b>0€</b>
(Intérêts des emprunts, agios, frais d'escompte)			
<b>Autres charges</b>			
Dotation aux amortissements et provisions	3 581€	3 581€	3 581€
<b>TOTAL DES CHARGES</b>	<b>31 546€</b>	<b>334 527€</b>	<b>497 257€</b>
<b>RESULTAT AVANT IMPÔTS</b>	<b>20 417€</b>	<b>93 864€</b>	<b>185 746€</b>
Impôt sur les sociétés	3 154€	25 027€	56 570€
<b>RESULTAT NET</b>	<b>17 262€</b>	<b>68 838€</b>	<b>129 176€</b>



**The EFP Innovation Award for Digital Solutions for Gum Health  
(Supported by Haleon)**

**Thank you for reading!**

**Hope the project will suit you.**

**Available for any further information**

**[dr.claire.bigot@gmail.com](mailto:dr.claire.bigot@gmail.com)**