

# PickABite

**The app that combines gaming, food education, and monitoring to tackle childhood obesity**

**Kids and parents explore recipes, interact with a virtual character, and receive personalized AI-driven tips**

**Gamification and fun for a healthier diet!**

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# PROBLEM STATEMENT

As of 2022, UNICEF reports that **37 million children** under the age of 5 are classified as **overweight**—5.6% of the world's youngest population.

**Childhood obesity** is a rising global issue, negatively impacting the physical and emotional health of millions of children

Parents often find it challenging to **monitor** their children's eating habits and provide **engaging**, effective tools to instill healthy behaviors



# TARGET AUDIENCE

**Children aged 6–13** facing weight challenges or requiring special dietary regimes, such as vegetarian or diabetes-friendly plans



**Parents** who seek effective, user-friendly tools to improve dietary habits and overall health



# SOLUTION



**PickABite** is an innovative app that merges gamification, food education, and AI-driven insights to encourage healthy eating habits

## Children

**Play** educational games, and receive **fun**, non-judgmental feedback on their **food choices**

## Parents

Benefit from **personalized meal recommendations** and easy **monitoring** tools, ensuring a seamless blend of education and actionable support



Design of the  
solution

# UNIQUE FEATURES

**For Children:** Gamified experiences **through AI**, virtual rewards, and interactive challenges tied to real-life eating habits

**For parents:** **AI-powered** meal suggestions, dietary tracking, and recipes linked to the child's gaming experience

**Long-term Impact:** Combats obesity through playful learning, fostering sustainable healthy habits

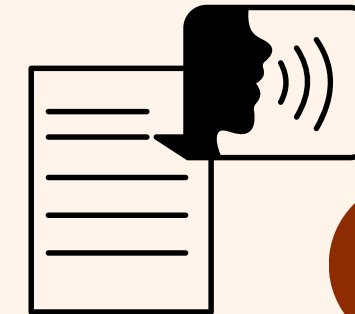


Design of the  
solution

# ACCESSIBILITY AND USABILITY

## Accessibility:

AI enables **children and parents with visual impairments** to use the PickABite



Text-to-speech

## Usability:

AI allows **young children** to use PickABite through voice



Speech-to-text



Design of the  
solution

# AI ROLE

## Personalization

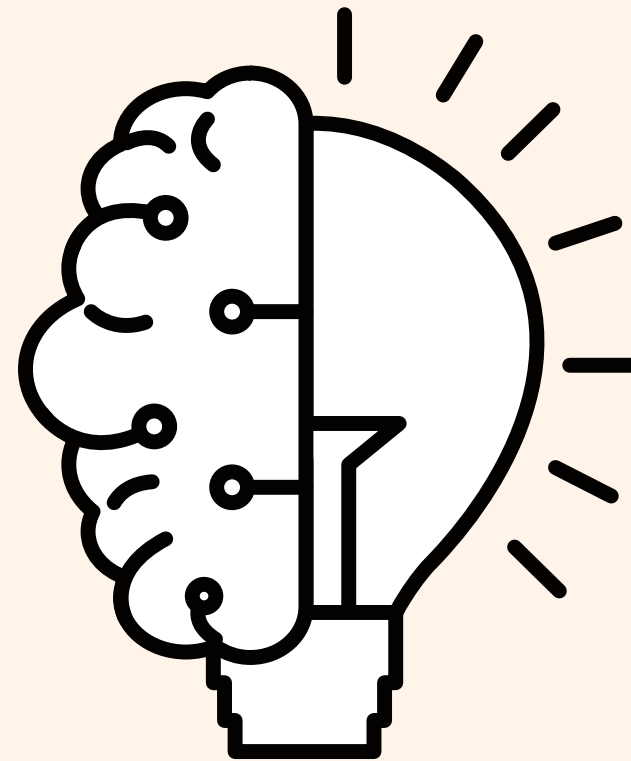


Analyzes children's eating habits and provides tailored dietary advice

## Efficiency

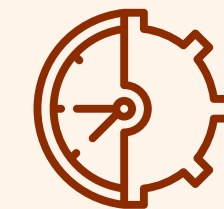


Monitors the child's dietary progress in a non-intrusive way, periodic but not constant



## Natural Interaction

Responds in an engaging and friendly way, keeping children interested















## Adaptability

Evolves over time, adapting to user behavior and improving recommendations



Design of the solution

# TECHNOLOGY

	 Meta					
LLM API calls						
Mongo DB tool						
LLM (LLama 3.1)						
Front End						



Design of the  
solution

# PRIVACY AND SECURITY

**Parental Consent:** AI use by under-14s requires explicit parental consent

**Account Ownership:** Parent retains account ownership and can monitor **AI chats** via their account. No digital identity or child's name is stored

**Data Hosting:** Servers hosted in the EU, compliant with GDPR, data are encrypted



Design of the  
solution

# BENEFITS

## Children

- **Nutrition education** in a playful context
- Increased **awareness** of what they eat and the importance of a balanced diet
- Improvement of eating habits through active involvement

## Parents

- Easy and intuitive child diet **monitoring tool**
- Practical tips for a balanced diet
- **Time saved in meal planning** thanks to predefined and personalized recipes

## Society

- Potential **reduction of childhood obesity** incidence through early education
- Promotion of a **healthy and conscious lifestyle**



Design of the  
solution

# RISKS

- **Screen Addiction:** Risk of excessive time spent on devices if not properly managed
- **Engagement Challenges:** Requires highly engaging and interactive design to sustain long-term interest
- **Building Empathy:** Ensuring the experience fosters genuine understanding and care



Design of the  
solution

# DESIGN OF THE SERVICE

## *Responsive Design for All Ages*



# DESIGN OF THE SERVICE: CHILD USER

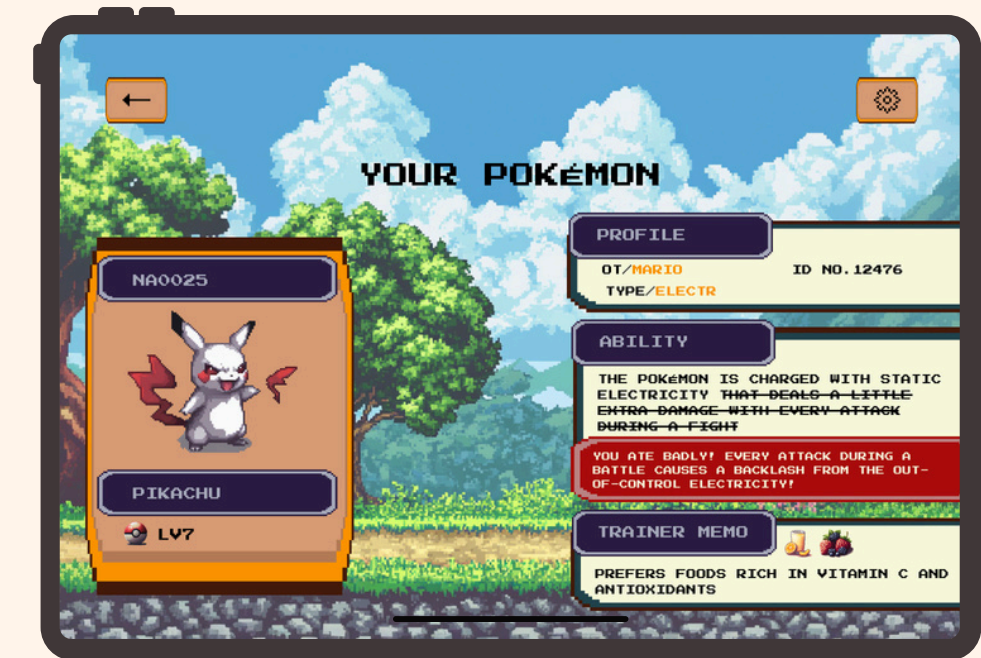


**AI** generated games:

- **Cook With Me**, kids virtually prepare recipes
- **Sprint Game**, a fast-paced challenge
- Memory Game, a **card-matching** activity with the ingredients of the **recipes** of the meal plan



**Non-intrusive AI monitoring** through gamification, with Pikachu playfully asking the child what they ate.

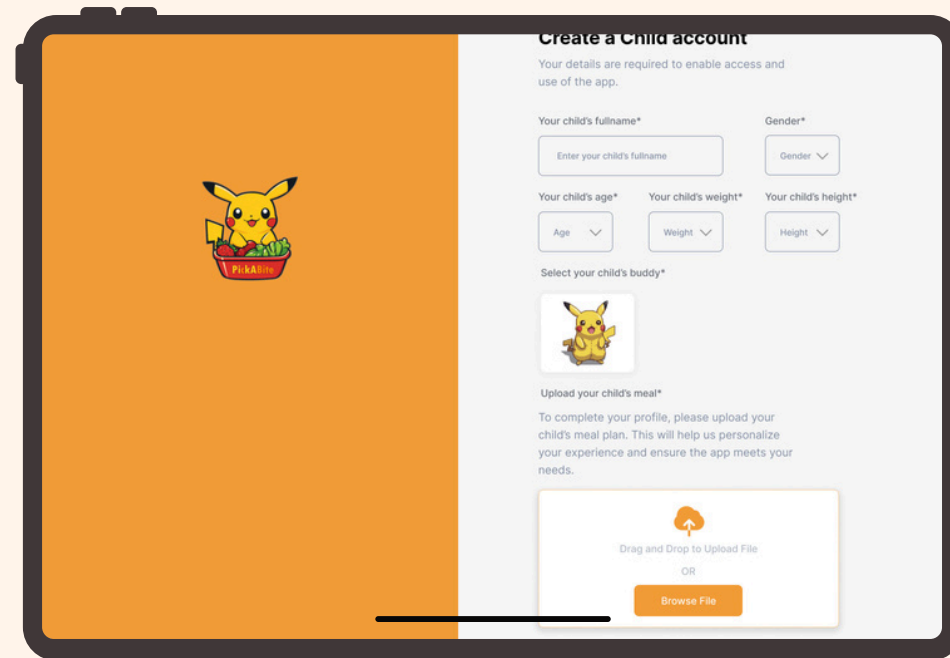


**Pokémon-style profile** with the avatar's current status, influenced by the child's eating habits and in-game behavior, alongside rewards earned through positive choices

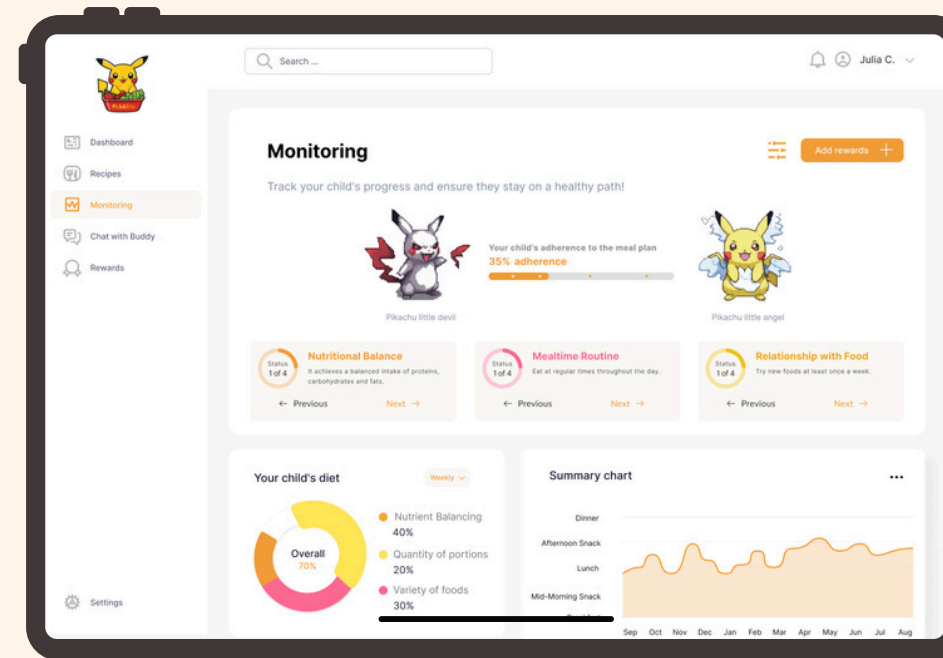


Design of the  
solution

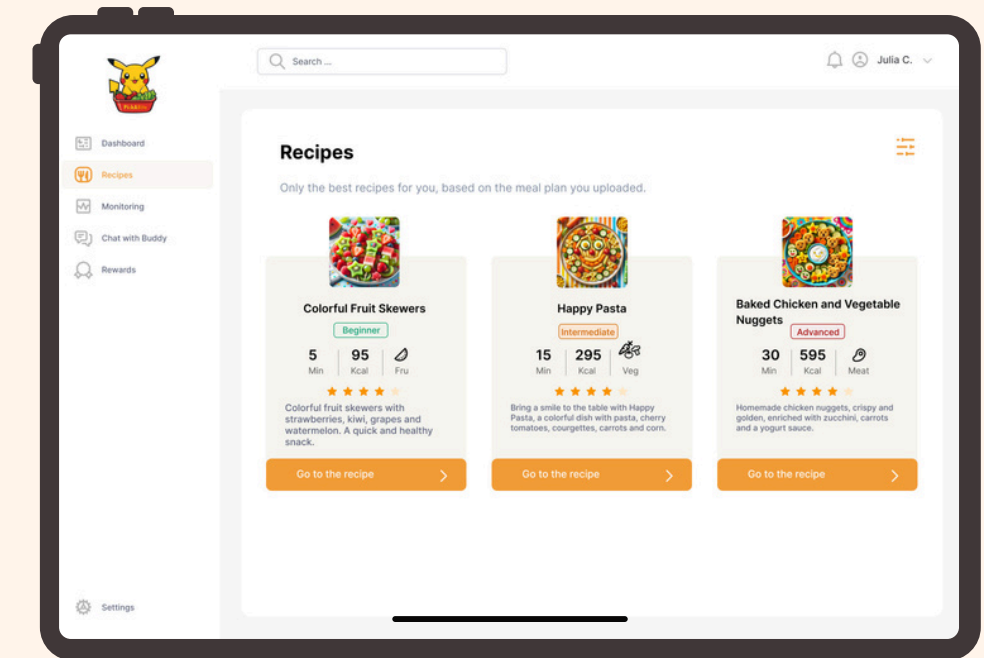
# DESIGN OF THE SERVICE: PARENT USER



- User Registration
- Child Profile Setup
- **Dietary Plan Upload** for personalized recipes



- Diet adherence monitoring
- **AI-Driven Progress Metrics**

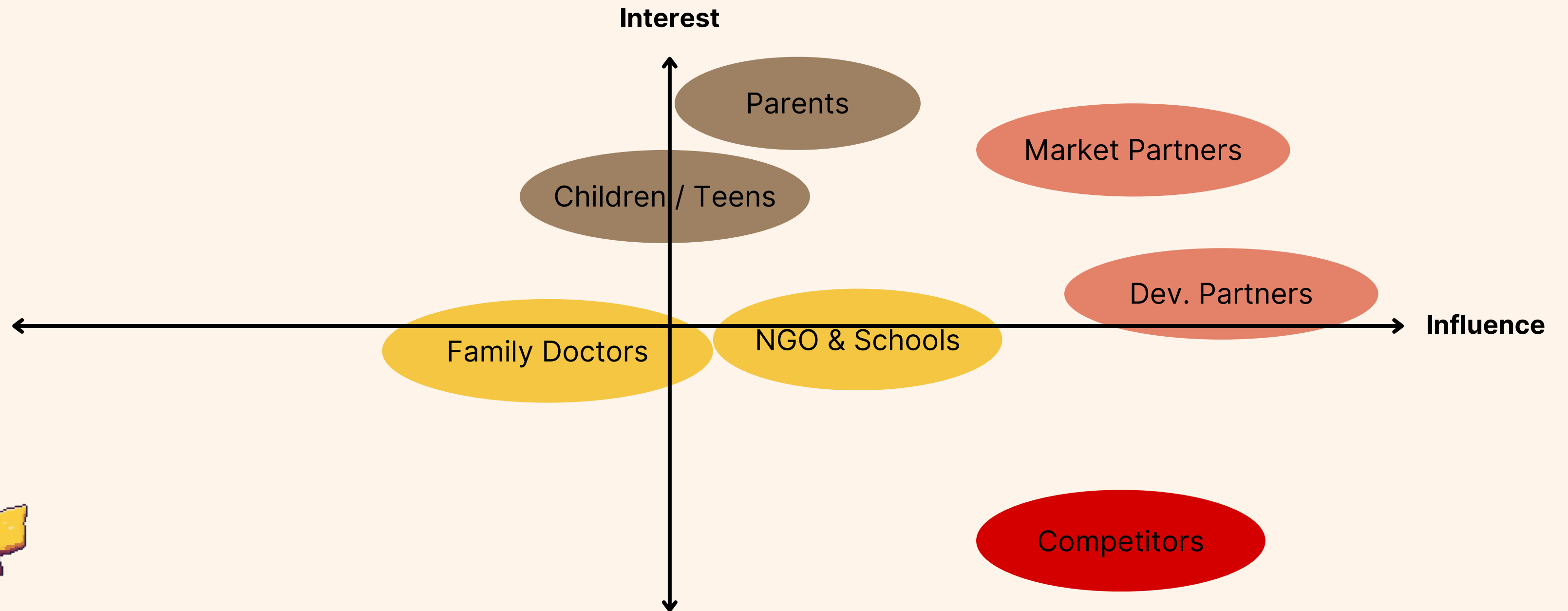


- **Personalized recipes by AI**
- **AI reward system** and customized rewards by parents to motivate the child
- AI Chat Support



Design of the  
solution

# STAKEHOLDERS



Economic  
aspects

# PRIMARY STAKEHOLDERS

- **Parents:** Primary users who decide to purchase and monitor the app's implementation
- **Children/Teens (ages 6 - 13):** Secondary users, encouraged by parents to actively use the app to address the mentioned issues



Economic  
aspects



# KEY STAKEHOLDER

- **Development Partners:** Provide expertise to design, launch and improve the app

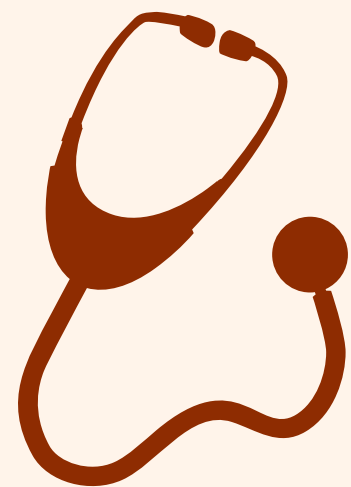
**Examples:** Academic & Scientific actors like Universities and research institutes.

- **Market Partners,** who contribute to the outreach within the target audience.

**Examples:** other *franchises* like *LEGO*



Economic  
aspects



# SECONDARY STAKEHOLDER

- **Doctors:** Can **recommend** the app to patients and, in use, provide expert advice on the validity of the AI-generated meal plan in relation to the child's situation
- **Non-Profit Partners (e.g., NGOs, schools):** Help **promote** the app to vulnerable families, supporting the social goal of improving nutrition education and preventing eating-related issues



Economic  
aspects

*They are especially important during the testing phase before the market launch*

# ANALYZE COMPETITORS



YAZIO

Lifesum Apps



- Personalized nutrition and lifestyle support
- Intuitive interfaces & continuous monitoring (diet & physical activity)
- Integration with external devices (e.g., smartwatches, fitness trackers)

They were created following the completion PROTEIN project, funded by the EU H2020 program (DOI 10.3030/817732). The project ran from December 2019 to November 2022



Economic  
aspects

# ORIGINALITY

## Key Features

- **AI-driven system** for personalized user tracking
- **Reward system** to encourage **long-term use**

## Primary Goal

- Focused on the **prevention** and management of eating disorders



## Target Audience & Engagement

- Target **Children aged 6-13 and parents**
- Uses the **Pokémon brand** for engagement



Economic  
aspects

# DISCUSS MARKET SCOPE

## TAM

4.130.527 children

In **Italy**, out of **4.130.527** children aged 6 to 13, the 39% of them are **overweight\***

The PikcABuddy app **could potentially reach 1,5 millions** of them, focusing mainly on the 17% affected by obesity



Economic  
aspects

## SAM

20% and 40% of overweight  
minors in the 6 -13 age

Considering the success of **Pokemon Go**, we estimate that the app could reach a similar user base in the 6 -13 age group who own a smartphone

Therefore, the success of the App is based on its ability to **keep users engaged** over time through frequent updates and collaborations with popular brands



\*WHO European Childhood Obesity Surveillance Initiative (COSI) report for the 2018–2020 period.

# REVENUE STREAMS

## Free Version

- **Basic Features:** Access to the main features, but with limitations on advanced options.
- **Advertisement from Partners:** Users see ads from partners that support the free version.
- **Specific Advertising for Creating Recipes:** Targeted ads suggesting ingredients, tools, or items for creating personalized recipes
- **Limited Recipe Access:** Only a selection of basic recipes is available to free users
- **Limited Support:** basic customer support



Economic  
aspects

# REVENUE STREAMS

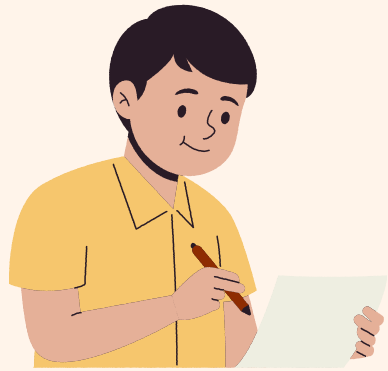
## Premium Version

- **Advanced recipes:** Access to exclusive and advanced recipes, with detailed instructions and special ingredients
- **No partner ads**
- **Additional games:** additional gamification features to make the app more fun
- **Extra skins and recipes:** Unlockable skins and enhancements to personalize the interface and user experience. New and complex recipes not available to free users
- **Specific advertising for creating recipes:** More sophisticated, tailored ads for premium users with personalized recipe suggestions
- **Early access to new features:** Premium users may get early access to new features and app updates
- **Priority support:** Access to priority customer support, such as real-time chat or quick email responses



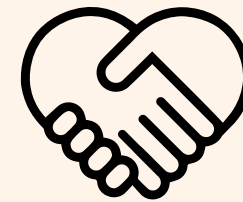
Economic  
aspects

# FUTURE DEVELOPMENTS



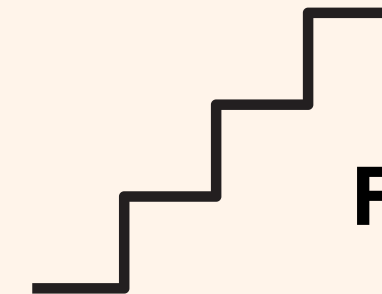
## Testing phases

Initial **testing** with **schools** and **NGOs** for data and feedback



## Potential impact

**PickABite** could be used to address **diabetes prevention** and other **pathologies** and integrating physical activity monitoring



## Funding

The PickABite project, like PROTEIN in 2019 - 2021, can enter **development with EU funding** like Eu4Health or Horizon



## Instagram channel

Share your favourite recipes on **Instagram** with video tutorial

## Collaborations

Potential collaborations with **popular franchises** (example: Pokémon) to make the game more appealing.



Economic aspects

# OUR TEAM



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# SOURCES

WHO European Childhood Obesity Surveillance Initiative (COSI) **report** for the 2018–2020 period.

**I disturbi della nutrizione e dell'alimentazione: un'epidemia nascosta** - Laura Dalla Ragione et. al.

**Piano Nazionale della Cronicità 2016** - Ministero della Salute Italia, spec. parte E, la cronicità in età evolutiva

**Piano Nazionale della Prevenzione 2020 - 2025** - Ministero della Salute Italia, spec. obiettivo

M01, Malattie Croniche non trasmissibili

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