



**happiness** *Mental Health:*

a way to improve quality of life for all those suffering  
from Schizophrenia disease

Maria Revythi



# Schizophrenia



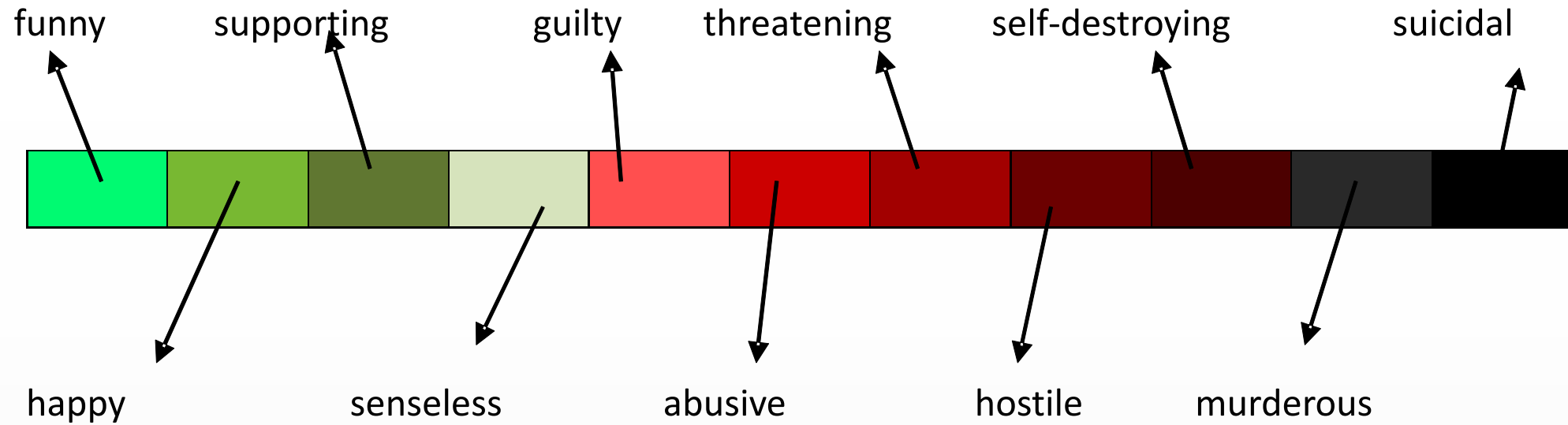
- ❑ *serious disease which provokes thought, speech as well as feeling confuse*
- ❑ *affects 1 out of 100 people globally*
- ❑ *augmentative inclination*

## Patients suffer from *Relapses*

**A Relapse** is the *worsening of situation* to the level at which self-survival becomes impossible, quitting is a permanent situation and patient lives under **threatening, very frightening voices** spurring him to commit *suicide* or/and –more rarely- murder.

# Gradation of Voices

Different voice forms :



# Ambition

Better quality of life for all those suffering → security feeling + less anxiety

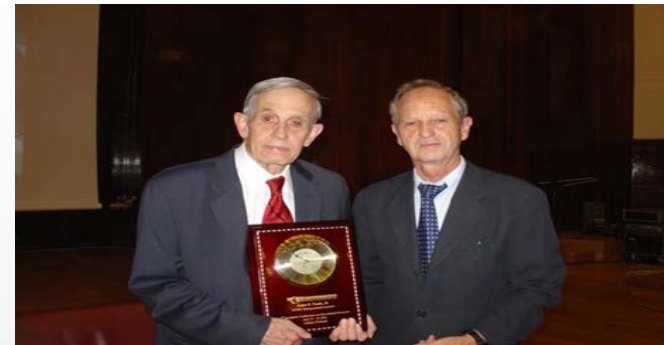
•*How?*

**Relapse prevention or/and avoidance** via timely medication

•future goal **suicide prevention** and, consequently, less suicide incidents

Realistic goal since...

✓ *Many patients, with the **appropriate medication and medical care**, follow a successful career or/and live a balanced personal life*



*John Nash, "Beautiful mind"*

# happiness Mental Health

Problem to solve

*medication + medical care*



**Relapse** (*crisis*) detection, management and prevention

## SERVICES

1. **happiness Mental Health App**: mobile application for smartphones

- I. *Communication among patient, relative and doctor the exact time at which **crisis** begins*
- II. *Very important briefing and reminders such as **on time medication taking***

2. **happiness Mental Health program**:

Integrated program with advance of the already existing code

# Innovation

*service development **with the target group***

Planning and algorithm optimization **with:**

- 30 patients
- 20 relatives-caregivers
- 40 psychiatrists

} first **target group** existing already

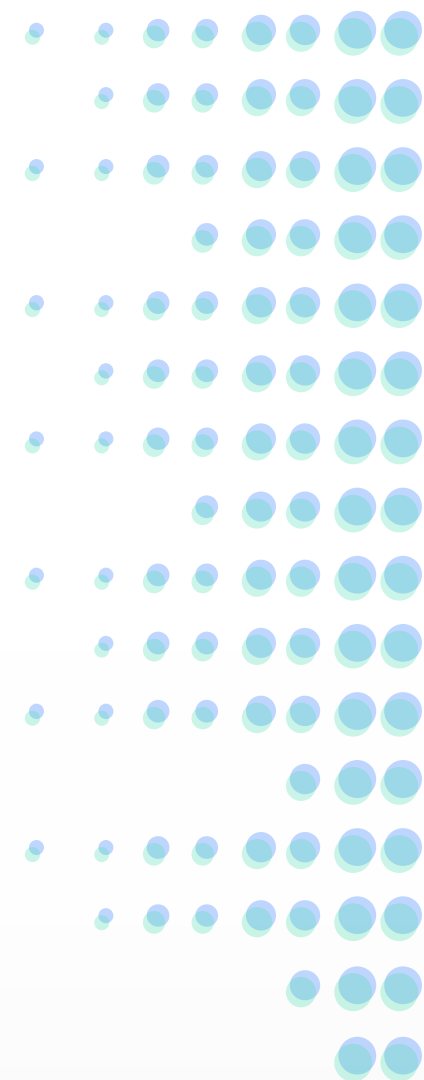
And Aiginition Psychiatric Hospital

**Mentor** *Dr. G. Papadimitriou,*

*Psychiatry Professor and Head of Aiginition Hospital*

## Lack of Competition

- similar applications → in research and development stage (R&D)
- **Not yet launched**



# Services of the supporting platform

*Maximization of quality-cost equation*

*steps already achieved*

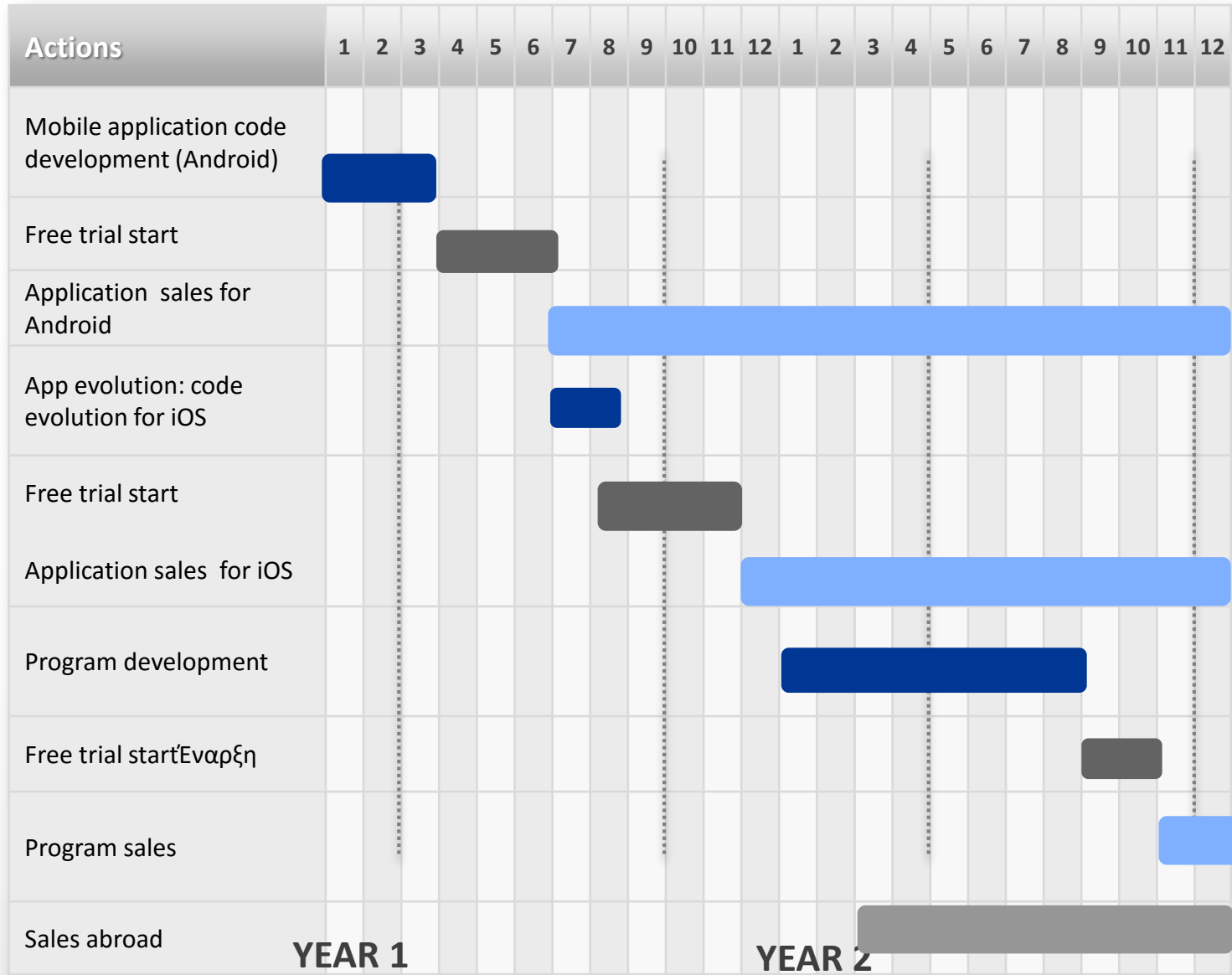
As far as **huppiness** *Mental Health app* is concerned:

- Complete and careful study of Schizophrenia disease
- Algorithm planning
- Algorithm optimization through meetings with the patients themselves**
- Mobile devices' screen drawing** as far as the mobiles of patients, relative-caregivers and psychiatrists are concerned

Software implementation → *service ready to be launched*

# Action Plan

## Production and sales per month



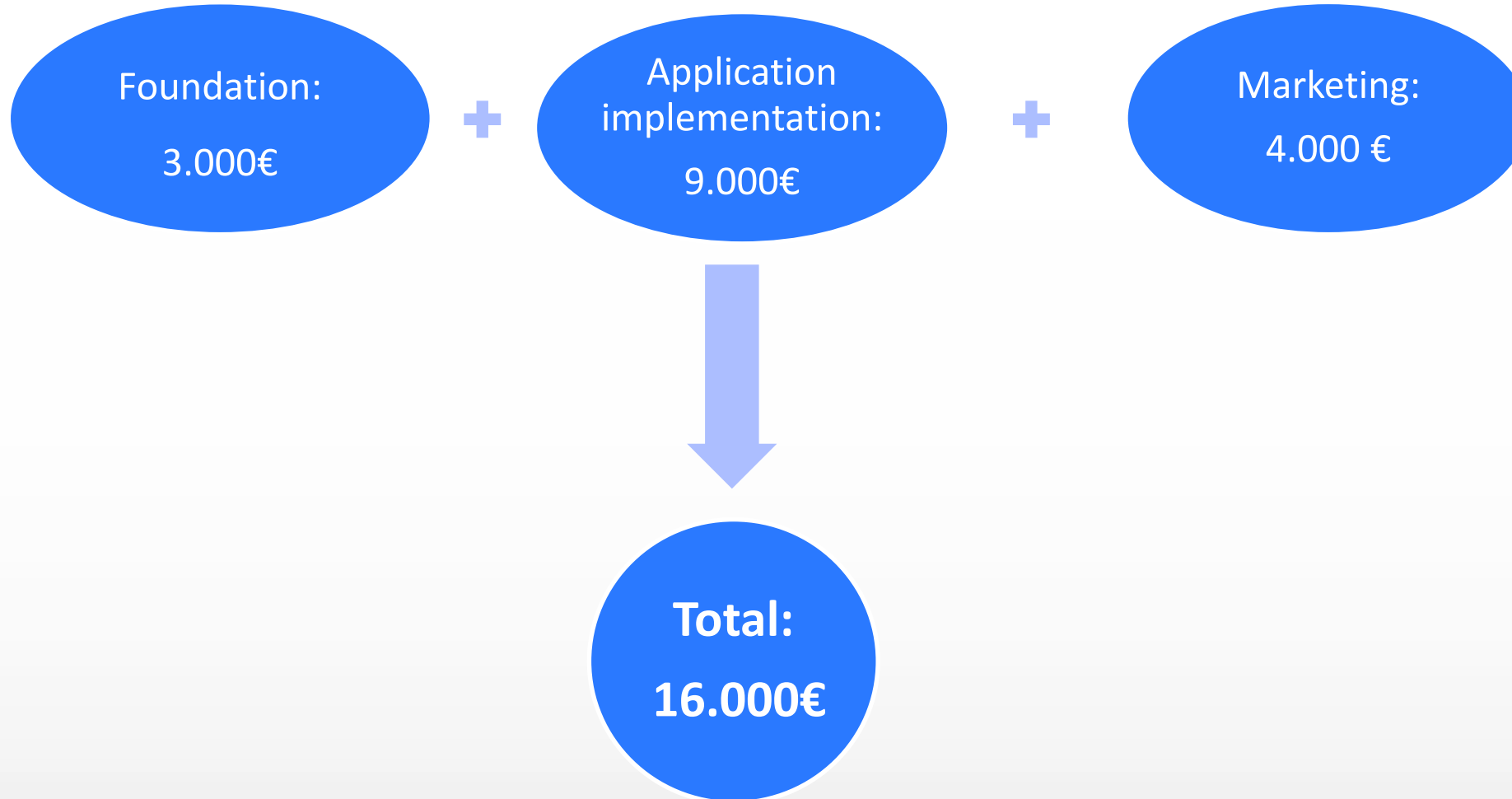
- █ Development/Application evolution
- █ Free trial
- █ Incoming from Sales
- █ International Sales





# 1<sup>st</sup> service minimum value cost evaluation

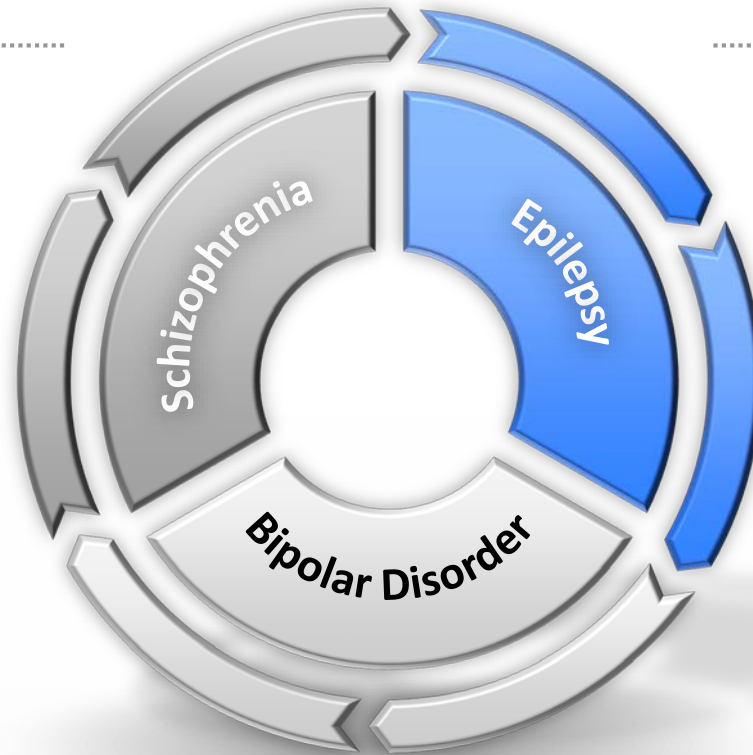
*The cost is segmented into the following sub-costs:*



# Future steps

## Relevant Diseases

- μοντέλο επαγόμενων κρίσεων Σχιζοφρένειας και σε Διπολική διαταραχή και Επιληψία
- platform extension
- final goal → **suicide prevention**



## Scientific Background

**2013 – Today:**

- **detailed research** conducted by Maria Revythi in Psychiatry/Neurology fields
- scientific cooperation with the **Epilepsy** study group at Biomedical Research Foundation of the Academy of Athens (BRFAA)

## Easy extension

New applications development **soon and with low cost** because:

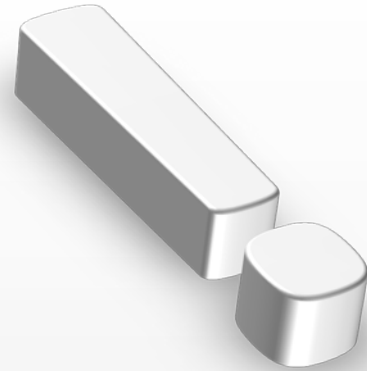
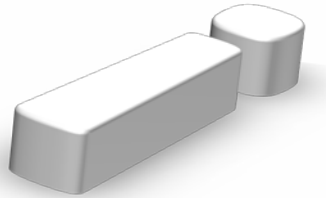
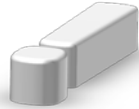
- common algorithm base, few code changes needed
- common target group existing already: patients have the same attending physicians, psychiatrists

Maria Revythi

Researcher, Electrical Engineer & Computer Scientist

*PhD Candidate*

- *Dec 2014 – present:* Researcher, National Technical University of Athens: **Electronics** in Biology and Medicine
- *Dec 2014 – present:* Researcher, National and Kapodistrian University of Athens: **Mobile app** algorithm development in order to prevent and manage Schizophrenic Crisis
- *May 2014 – :* Researcher, Biomedical Research Foundation of the Academy of Athens: Processing of **Signals** coming from in vitro experiments on mice: a. Study of Electrical brain activity analysis. b. Compare with the **Epilepsy** brain activity



Questions?

Thank you

# Competition

Everything is in R&D stage till now

1 Zur institute → program Web App (CBT) for Schizophrenia and Psychosis

2 FOCUS app: mobile app in progress by Researchers at Dartmouth Psychiatric Research Center in Libanon

3 Sleep Sight : research project for Schizophrenia

4 Cross Check app: combines data coming from patient's surveillance

5 Ginger.io app: watches patients daily and records their activities-where they go, how often they communicate (**no privacy**)