### "Moving Mate"

"addressing inclusive social mobility of visually impaired people for wellbeing in green spaces"

Year 4
Inclusive mobility solutions to expand access to green space to advance wellbeing

1st High School of Iraklion in Athens with the collaboration of OTIS Greece

07 March, 2024



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#### **AGENDA**

- 1. Introduction
  - Our School
  - Team
- 2. Problem Analysis (Inclusion)
  - Current situation
  - Target group
  - Our Process/Research
- 3. Solution (Mobility & Wellbeing)
- 4. Next steps/Improvements



#### 1.1. Our School





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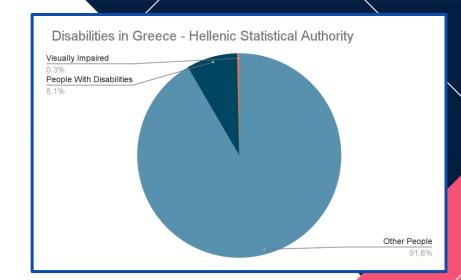
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1.2. Our team



#### 2.1. Current Situation

- Disability stereotypes and the distance between disabled and non-disabled people create barriers.
- Access to green spaces in our city for people with disabilities is limited.
- Overcoming limitations and addressing exclusion are essential challenges.





### DIFFERENT TYPES OF DISABILITIES











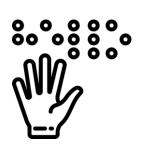






2.2. Target Group
VISUALLY IMPAIRED PEOPLE











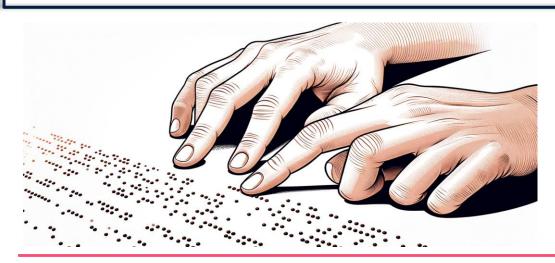






#### 2.3. Process/Research

#### **CENTER FOR EDUCATION & REHABILITATION FOR THE BLIND**











#### 2.3. Process/Research

Visit to "CENTER FOR EDUCATION & REHABILITATION FOR

**BLIND**" What we learned:

- 1. How they overcome daily problems
- 2. How they create relationships
- 3. What kind of hobbies they can have
- 4. How they learn to read
- 5. How they perform daily tasks





#### 2.3. Process/Research



Teams Meeting with Mr Vaggelis Avgoulas leader of Visit to "Me Alla Matia" What we learned:









- 1. Blind people are not incapable of achieving great things
- 2. They are not appreciated and treated as deserved by the society
- It is crucial for them to develop Emotional Resilience and Coping Mechanisms to overcome the difficulties of daily life and move around.





### **GETTING IN THEIR "SHOES"**









### WHAT WE REALIZED

- 1. A common cane is not enough
- 2. The majority of the parks are not "friendly"
- It is not considered a good experience for a blind person to just make it to the park and back
- Other people are not sensitized or aware of the problem











#### 3. Our Solution



**Inspired by** WeWalk Smart Cane





#### **OUR SOLUTION – ARDUINO SMART STICK**





ultrasonic



buzzer



Arduino board



battery



Our solution is equipped with:

- Arduino (board)
- •Ultrasonic sensors
- •Buzzer
- Battery





### **WORKING WITH OUR MENTOR**





### MOVING AROUND A PARK WITH







#### 4. Next Step



- 1. Vibration pattern for obstacle types.
- 2.Directional Feedback.
- 3. Voice feedback system.
- 4. Feedback for battery status.
- 5. Weather-Resistant Build.

To be more user-friendly, intuitive





"Our vision is through this idea is that blind people can go out and walk in the parks without fear and can navigate completely autonomously having an enjoyable experience."

