



INNOVATION

Our journey to develop Pop2See Smart Class has many interesting aspects.

- Our solution was developed taking into account the feedback we collected from: 5 blind students, 4 parents, 9 teachers, 7 relevant organizations (incl. the Greek National Federation of the Blind), and our findings on the internet.
- We met Anna Balan, a blind influencer, who tested our solution extensively and later joined our team as an Ambassador.
- Through our Tik Tok video with her, 51,000 people were informed about the Pop2See Smart Class.
- Our solution combines modern technological means to solve cost-effectively a problem of modern education, achieving social impact (~4,000 students in Greece, ~197,000 in the EU) in alignment with UN's SDGs goals: 4, 7, 8, and 17.
- It contributes to the autonomy and gradual independence of blind students, as well as to the enhancement of the interaction with the teachers, while at the same time it helps them to integrate into the classes of the General Schools.

Our product consists of two devices.

The main device supports the following functionalities:

- The Braille keyboard allows a student to write notes, assignments, and tests in Braille, convert them automatically into English, and deliver them directly to their teacher.
- The Braille reading system is used by students to read through touch-reading and can support notes and texts of the student or the teacher.

The second device is a web camera that is connected to a MicroComputer, supporting the following conversions: Image to Text, Text to Speech, and Speech to Text. As a result, the user will be able to scan the notes from the class blackboard, a document, or a book, and then listen to them by connecting a speaker or headphones. They will be also able to voice-record texts to the device.

Everything works through Bluetooth, WiFi, or SD cards, as well as through our App. The cases have been 3D printed, while our software is in C/C++, Python, and Lua.

