For visually impaired people it is difficult to digitally get graphical contents increasingly conveyed through sight. The sense of touch can potentially bridge the gap, as it is crucial – in absence of vision – for understanding abstract concepts and acquiring information about the surroundings. Examples are learning at school and developing mental maps in orientation and mobility daily tasks. However, available touch screens have limited or no tactile feedback at all. The potential and the market of tactile displays is largely unexploited, although there is a clear demand from users: these devices need to become more versatile, cheaper, portable and socially acceptable.

**Objective**

To make graphical content accessible to visually impaired subjects

**How**

Building and field-testing together with end-users (youngsters and adults) a graphical tactile tablet with new generation materials

**Why**

Because learning mathematics and maps of surroundings are paramount activities in developmental and adult age, which are discriminant factors for social inclusion

**Who cares**

People with recent or early visual impairment, rehabilitation institutes for disabled people, schools, healthcare systems

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The objective of the project is to make graphical contents accessible through touch by building and field-testing a Personal Assistive Device for BLIND and visually impaired people (BLINDPAD). The device will use smart materials as actuators and will be connected to state-of-art mobile devices. BLINDPAD will put veridical touch-based information into the hands of users, exploiting and enhancing their residual sensory abilities. BLINDPAD will be a personal, portable and cheap solution to improve knowledge and independence, thus increasing chances of employment, of social inclusion and, ultimately, of a better quality of life.