# BACHELOR'S THESIS

# Inclusive Ideation Methods for Effective Participation of Blind Individuals In Design Thinking Process
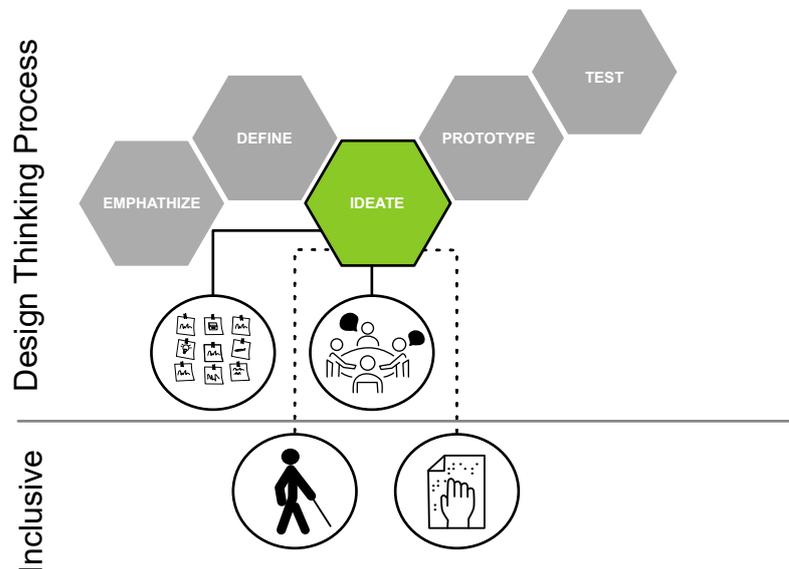


**Background:** Design thinking is a problem-solving process that focuses on the human-centered aspect. In its five-stage process, various design methods are employed to gather user insights and translate them into prototypes. However, many of these methods, particularly in the ideation phase, lack accessibility for blind individuals. For instance, commonly used methods like affinity diagramming or card sorting rely on physical materials such as paper sketches and sticky notes, presenting barriers to equal participation for blind participants.

**Objectives:** In this work, we would like to examine typical ideation methods and explore opportunities for their digitalization and customization to enable blind individuals to participate more effectively. This involves creating a new tool (web- or smartphone) application that allows blind individuals to both contribute and access handwritten notes used in indeation sessions.

## TASKS:

- Analysing existing design methods commonly used in the ideation phase of the design thinking process.
- Implementing a web- or smartphone application that allows blind users to participate in ideation design sessions relying on visual elements, such as affinity diagraming.
- Evaluating the developed application in a formal user study.

## REQUIREMENTS:

- Programming knowledge (web development, python).

- Interest in computer vision and machine learning algorithms.

- Interest in accessibility, usability, and UI/UX design.

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