



TransiTEA-360: Participatory Methodology for Designing a 360 Video-Based Virtual Reality Tool to Empower Adolescents with ASD to Face Transitions

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TransiTEA-360 is a collaborative, co-creative research initiative carried out at Badalona Serveis Assistencials (a public healthcare center in Badalona, Catalonia), involving educational and mental health professionals, adolescents with autism spectrum disorder (ASD), and their families.

The project seeks to assist **adolescents with ASD, between 11 and 17 years old**, in managing common transitions, particularly in educational and community settings, through the development of a virtual reality (VR) support tool using 360° videos.

INTRODUCTION & OBJECTIVE

There is growing evidence indicating that user involvement in design of new immersive technology increases its acceptability and usability for youngsters with ASD, while reinforcing their self-reliance and social rights (Newbutt et al., 2023).

Our aim is to describe the stages and collaborative dynamics of the participatory process and participants' subjective reports.

METHODOLOGY

The collaborative research process was determined using participatory action research and design thinking methods, which involve a human-centered, iterative approach that focuses on understanding user needs to develop innovative solutions, involving several stages from defining needs to prototyping, and testing (Amering et al., 2009; Iparraguirre-Villanueva et al., 2023).

Since now, various **participatory actions** have been conducted:

Starting Call & Coordinating Team
Oct-Dec 2024

- The project was presented to the associative network in the region.
- Under a collaboration agreement, a coordinating group to leader the overall research process was created, which is composed of mental health and patient experience professionals, and representatives of a local ASD association.

Necessities Detection Survey
Jan-Apr 2025

- A survey was launched by sms to current mental health service users and association members (ASD adolescents and relatives).
- To prioritize challenging transitions and identify modulating factors (such as noise, unexpected changes, crowded contexts, etc)
- The survey results were discussed in the coordinating group to orient the following stages of the process.

Focus Groups
May 2025-Jan 2026

- Group sessions: 2 with ASD adolescents, 1 with parents, 1 with mental health professionals, 1 with educational professionals.
- 4 selected educational transitions were discussed, eliciting scenes, characters, dialogues for filming.
- Transcriptions of focus group sessions were analyzed to summarize RV tool design and video content suggestions.

SCRUM Method
May-Jun 2026

- Adapted SCRUM method was applied to develop video scripts.
- Content and design suggestions from focus group were synthesized in lists of product requirements.
- 2 groups of clinical professionals worked on the scripts in several sprints in one day, applying stepwise assessment of adjustment to product criteria.

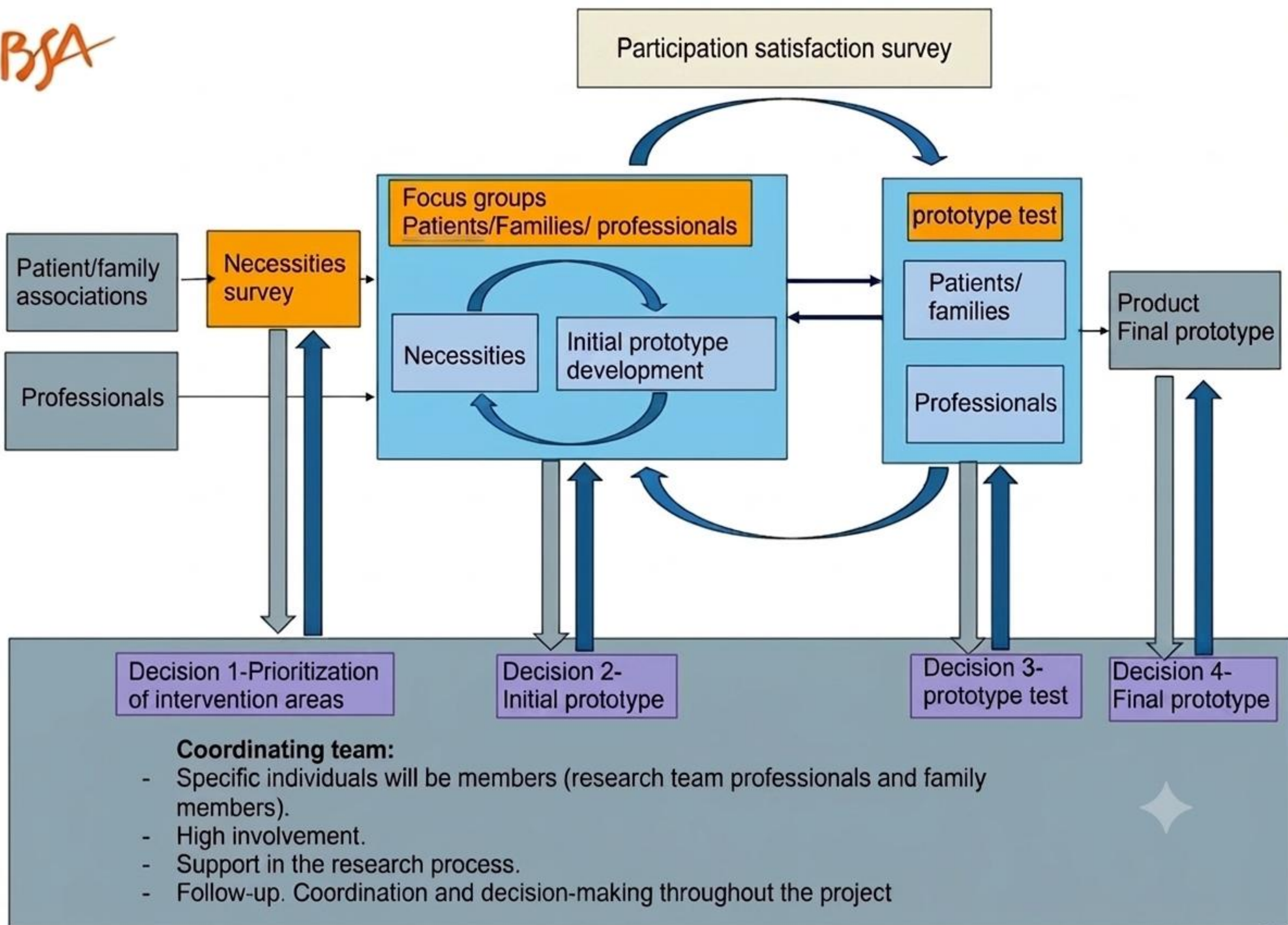


Figure 1. Participatory design process

RESULTS

The co-creative process is still ongoing. The subjective experience of stakeholders and professional researchers regarding the application of participatory methods is being collected by qualitative procedures and a **satisfaction survey**:



5 ASD Adolescents
7 Parents
In focus groups & coordinating team

7'3

Satisfaction Level
(0-10)



4 Clinical Prof.
6 Educational Prof.
In focus groups

8'6

Satisfaction Level
(0-10)

TransiTEA-360
Promotional video



SCAN ME

DISCUSSION

Co-creative methodology and patient-centered participation for the development of a 360 video-based RV tool are demonstrating good acceptance among adolescents with ASD and their relatives and high satisfaction of the collaborators involved.

Bibliography

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