

# DESIGNING A TOOLKIT THAT SUPPORTS AUTISTIC YOUNG ADULTS IN CREATING A PERSONALIZED CONTRIBUTION TO THEIR INDEPENDENCE

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Autistic adults often rely on others for support in employment, living, and relationships. They generally struggle to be self-sufficient once the professional support disappears and independent use of skills is expected (Hume, Loftin, & Lantz, 2009). Therefore, healthcare organization's policies are increasingly focussed on 'empowerment', enabling autistic clients to have as much control over their own lives as possible. This goes along with a growing interest in the possibilities of assistive technology that aims to improve self-sufficiency. However, existing assistive technologies are not optimally used due to the large range of options and the lack of user input into the selection and design to fit personal needs. This is because they are usually designed for autism as a general disorder, even though autistic individuals show a huge diversity of issues, talents and abilities (Lectoraat Levensloopbegeleiding bij autisme, 2018).

Therefore, in the project "Design Your Life", researchers from the University of Twente and HAN University of Applied Sciences are developing a method that enables healthcare professionals and their organizations to support autistic young adults in creating a personalized, technological home environment that contributes to their independence (Lectoraat Levensloopbegeleiding bij autisme, 2018).

This bachelor's assignment deals with designing a prototype toolkit that functions as a first, simple version of the "Design Your Life" method and can serve as an example during the remaining co-design case-studies that will be performed by the project team. Therefore, the main question for this thesis is: How can a toolkit enable caregivers to support autistic young adults in creating a personalized, technological home environment that contributes to their independence?

The toolkit is designed over five design phases: orientation, ideation, concept generation, prototyping and generalization. In order to make sure the toolkit fits individual needs and to get a realistic impression of how it may be used, an online co-design case-study is performed to completely focus on one autistic individual in the first four design phases. In addition, reflecting on the co-design assignments and the design process of the toolkit gives insights into the integration of these aspects within the toolkit itself. In the fifth phase, all aspects of the toolkit that are specifically designed for the co-design participant were generalized in order to fit the needs of autistic young adults more generally.

Eventually, this bachelor's assignment resulted in the design of a prototype toolkit made in PowerPoint, which allows the co-design participant to go through an iterative design process based on the phases of design thinking. Figures 1, 2 and 3 show a small part of the prototype toolkit. With help from a caregiver, the toolkit supports the co-design participant in creating



Figure 1: Prototype Toolkit, Home Screen

his own assistive product that helps to solve challenges in his daily life. Small steps and clear instructions are valuable while guiding an autistic user through the process and examples and guiding questions serve as a basis for creative ideas. The toolkit also proved to be useful as a conversation-starter about challenges, solutions, and different perspectives.



Figure 2: Prototype Toolkit, Phase Overview



Figure 3: Prototype Toolkit, Assignment

Figure 4 shows an overview of all phases and steps in the prototype toolkit. The second, third and fourth phase end with an assignment in which you can go back to all prior phases to apply new insights. The last phase consists of four assignments corresponding to the four prior phases. In each of these assignments all insights of using the self-made product are applied on the prior phases to evaluate the product.

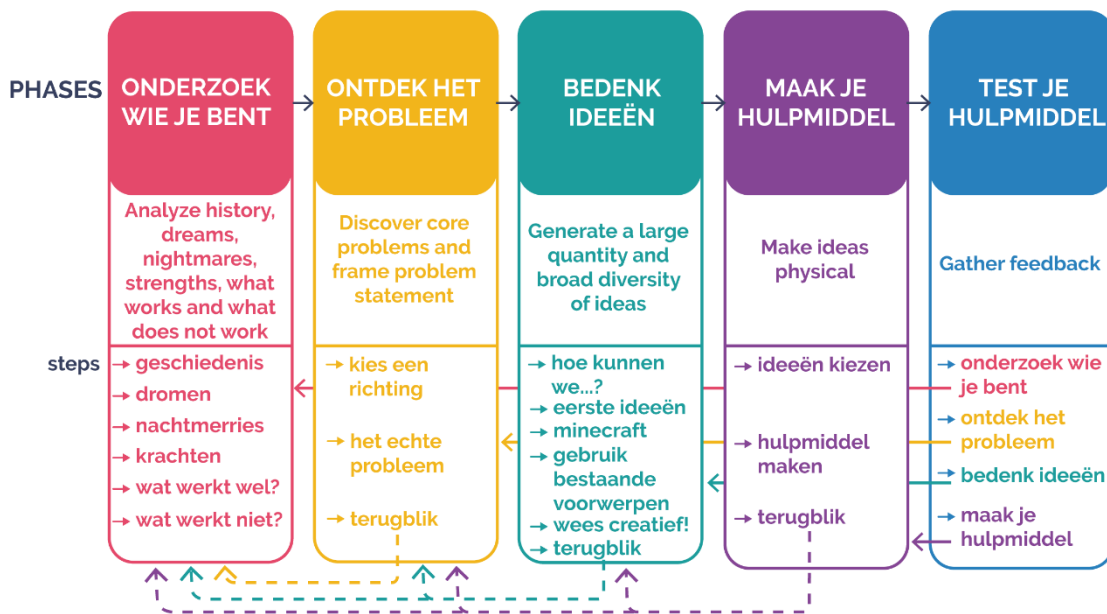


Figure 4: Overview of all phases and steps in the prototype

The prototype toolkit is an example of a personalized version of the generic toolkit, proposed in a fifth design phase. The wide variety of challenges, skills and interests among autistic individuals influence personal preferences and outcomes of the toolkit. Therefore, the generic toolkit should be personalized in terms of form (digital or physical), assignment methods (e.g. writing, drawing, typing, etc.), and appearance. The use of own talents, skills and resources is implemented in the toolkit by integrating Person Driven Planning, a planning method that aims to improve self-direction (Magnée

& Teunisse, 2015). Talents, skills and resources that the user is familiar with in other areas may be used to express creativity and to design their own assistive product, contributing to a sense of ownership and independence. Furthermore, the context of use heavily affects the outcome of the toolkit. The ideal circumstances include strong internal motivation to tackle a specific challenge, a time planning and enough guidance to be able complete the process.

Further steps for this project would be to execute a use evaluation for the generic toolkit among autistic young adults. Additionally, the results and insights are valuable in the remainder of the development of the “Design Your Life” method.

## REFERENCES

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