Direct communication tool for mental disabilities

How to design a tool that contributes to the autonomy of the clients of 's Heerenloo concerning activity management?

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Mental disabilities come hand in hand with obstacles in daily life. The physical, but most of all, the cognitive disabilities come with a lot of challenges and adaptations to the way of living. The clients of 's Heerenloo suffer from (multiple) disabilities and live either in living groups or individually with guidance.

The specific problem that is given is the fact that care employees are now responsible for the admittance of the clients to activities and often forget to inform the clients about it. This results in disappointment of the clients when they find out that they missed out on an activity and extremely saying, reduce the quality of life of the clients. Attending activities functions as socializing, entertainment and relaxation. Three aspects that are important for those people since they live most of the time in social isolation and do not get a lot of completion out of other things. It is important that the care system provides space for personal development and expression (Engels & Van der Lelie, 2010).

This thesis provides a thorough analysis of the client where most of the information comes from interviews with professionals. This analysis results in a clear overview of the characteristics of the clients and design suggestions. From this point, together with the results from a short market research, the requirements were set. The most important aspect that needs consideration is the fact that every client should function on his own cognitive level to improve the effectiveness and satisfaction of the use of the product.

Ideation

The first ideation was primarily based on the functionality. The baselines of the functions were set (figure 1) and from there the functionalities and the physical product were elaborated.

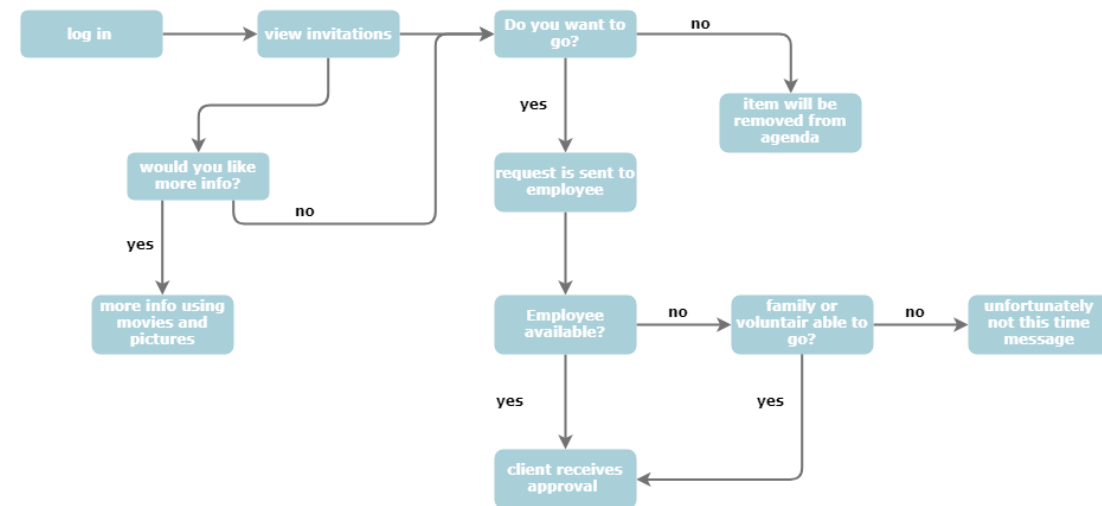Different physical products were discussed (e.g. a big communal touchscreen,

Figure 1- flowchart primary functionality

personal tablets or a communal tablet). The latter was chosen because it fits the requirements the best and is financially the most interesting solution (figure 2).

Figure 2- physical product placement

In the conceptualization phase, the User experience and User Interface design were elaborated. The wireframe of the product is set up in the online wireframe designer FIgma.com. Different iterations result in the final wireframe of the product (figure 3). A style analysis of 's Heerenloo was conducted to match the looks of the app to their style (figure 4).
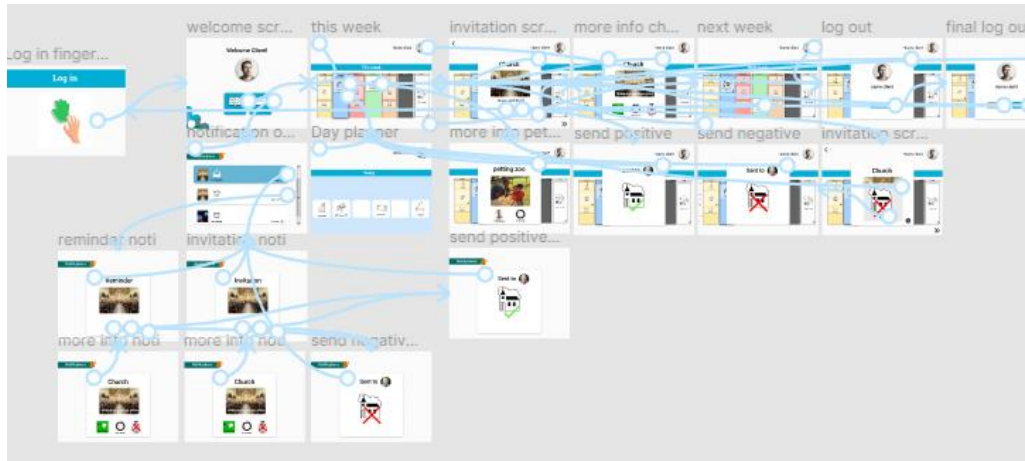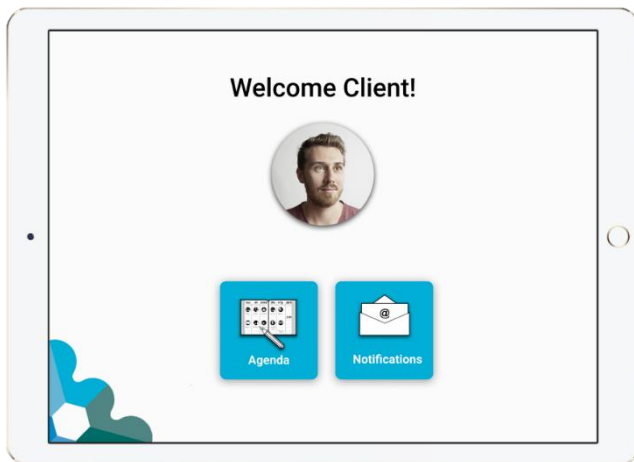

Figure 3- wireframe client pictobased

Figure 4- UI design application

Results

At the end of this process a concept for the system of applications for the clients of 's Heerenloo is presented. The living groups will receive one tablet which will be mounted to a wall at a central place. Every client will be able to log in to the application and answer to invites or view his daily planning. The accounts for the clients will be on their own level which are configured by the employees.

The employees function as background for the clients and will respond to the client's requests. The first action therefore is for the client instead of the employee which was the case before this product came into the picture. The activity organization will be able to make new invites which are matched and send to the right clients.

The interface, as well for the client as for the employees is evaluated by using the guidelines of Nielsen (1990) where intuitively of use is one of the main focus points. The interaction matches as much as possible the real world to ease the navigation, which is especially important for the clients to increase the effectiveness of use and autonomy. The design of the interface matches the style of 's Heerenloo to make it truly *their* product and make it familiar to the clients and employees.

This system of applications provides the client more freedom of choice and gives them more responsibility concerning the activity management. The application will function as communication tool between client, employee and activity organization where every person can function at his own level. This product will contribute to the empowering of the clients and therefore matches the vision of 's Heerenloo. This product provides a solution to the multidimensional problem. The clients get more freedom and responsibility and will be able to attend more suiting activities while the employees do not have to read through all the emails to invite the clients.

Recommendations

This thesis ends with future steps and recommendations. These recommendations include minor changes or additions to the system to optimize the functionality as well as recommendations for testing the system. This will all be used in the near future when this system is realized.

References

Engels, J. & Van der Lelie, J. (2010). De bijdrage van empowerment in de zorgverlening: Eigen kracht, een gezamenlijk process. Tijdschrift voor Verpleegkundigen, 2010 (2), pp. 30-32.

Nielsen, J., & Molich, R. (1990, March). Heuristic evaluation of user interfaces. In *Proceedings of the SIGCHI conference on Human factors in computing systems* (pp. 249-256). ACM.