

Designing an entertainment cabinet for the living room

Public Summary

Mas Apotheker - s2179687
Department of Industrial Design Engineering
University of Twente
The Netherlands

Background information

This bachelor assignment is about designing an entertainment cabinet for the living room of the client's future home, as can be seen in figure 1. The assignment is given by Hans Witte, an independent architect who in recent years mainly designed and executed the construction of his client's home. Currently, Hans Witte is working on the creation of a new house for his current client. The living room, which floor map can be seen in figure 2, will feature an entertainment cabinet which is an important eye-catcher in the living room. However, it is important that the design of the entertainment is in line with the needs of the client, therefore leading to the main research question:

How does the design of an entertainment cabinet for the living room fulfil the needs of the client?

With the main research question, the aim of this assignment is to understand the wishes and requirements of the client and based on the research findings and interaction with the client come up with a design for an entertainment cabinet in the living room of the client's future home. If carried out successfully, this assignment could result in the production of the entertainment cabinet for the client's future living room. The assignment mainly focuses on the scopes of *Design & Styling* as well as *Human Interaction & Ergonomics* and takes place in both the *Exploration phase* and *Conceptualization phase* of the design process, acting as a precursor to the Production phase of the design process.



Figure 1 Initial render images of the client's future home

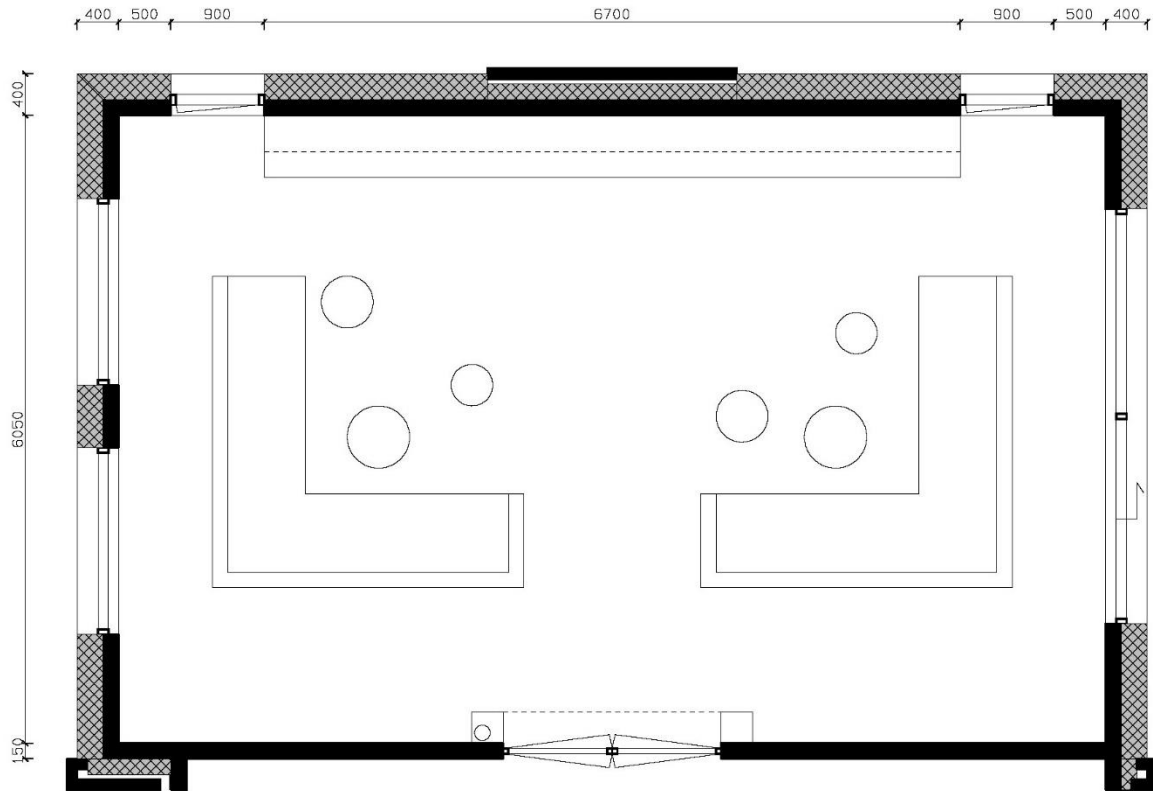


Figure 2 Floor plan of the client's future living room

Approach

To answer the research question, a backward design approach was conducted, splitting the main research question into four phases. The first phase focuses on conducting a user analysis in order to determine the user's style and determining the factors that could lead to a successful design for the user of the entertainment cabinet, resulting in a list of requirements. These requirements form a blueprint for the second phase, which focuses on how the previously identified requirements can be implemented into a feasible design of the entertainment cabinet in the living room. The second phase results in choosing one concept to be further developed in the third phase. In the third phase, the final concept is further polished based on the received feedback from the client, experts regarding important elements of the entertainment cabinet, such as the television and the surround sound system are consulted to receive tailored advice on the recommended implementation of products. As well as, material and production suggestions from a cabinetmaker. The final concept was thereafter finalised and turned into an actual-sized 3D CAD model, with corresponding dimensions and a technical drawing for future production.

Results & Limitations

From the user and design analysis conducted for this assignment, it was found that the factors, such as the ergonomics of the entertainment cabinet, choice of material, functional features and design play a key role in the development of a successful entertainment cabinet for the client's future living room. Keeping these factors in mind, the final design was modelled and rendered, which can be seen in figure 3.

The final design was presented to the client and the architect, and a variation of the final design renders was shown, each having either a different marble pattern or a different type of wood. The

design was received positively and no further comments were made by the client on the lack of needs or features of the entertainment cabinet. Although the design was received successfully, some features such as a soundbar integration have not yet been solved. Therefore, further research should be conducted before moving into the production phase of the assignment, by consulting with experts and most likely making small iterations to the current final design.



Figure 3 Final Design: Designed in SketchUp & rendered with V-Ray® for SketchUp

Conclusion & Recommendations

In conclusion, the main research question has been answered to the extent that the factors, such as the ergonomics of the entertainment cabinet, choice of material, functional features, and design have been identified and the entertainment cabinet design is received positively by the client and the architect. Both in regard to the aesthetics and the needs of the client. The next step is meeting with the client to further discuss the specifications of the entertainment cabinet and consult with a cabinetmaker moving onward into the production phase of this assignment.