

## Public Summary

The bachelor assignment focused on continuing the development of a modular shelving unit for Van der Jeugd Architecten, an architectural firm based in Enschede. The objective of Van der Jeugd Architecten was to expand its presence and market reach in the semi-customizable furniture market while upholding its core principles of sustainable beauty, human-centred design, simplicity, and sustainability.

Extensive research was conducted to explore the vision of Van der Jeugd Architecten and build upon the findings and conceptualization done by Tirsia van der Ouw. The research provided valuable insights that paved the way for further development, including the exploration of different material options and the possible integration of modularity. As a result, a series of modular shelving units was developed completely made from Hi-macs, a solid surface material.

The shelving unit comprises four different-sized modules that offer consumers the flexibility to configure and customise according to their preferences and intended space. Additionally, the product can be fitted with doors and shelves, enhancing its functionality and versatility. The chosen material, 12 mm Hi-macs available in a broad range of colours, not only exhibits a minimalistic aesthetic but also ensures durability and longevity.

After completing the concept, attention was shifted to the design and implementation of additional components such as doors and hinges, ensuring both functional and aesthetic coherence. As no suitable hinge designs were available due to the thin material used and the objective to maintain an aesthetic minimalism, a set of specialized pivot hinges were designed. These hinges seamlessly integrate within the overall aesthetics of the shelving unit, further enhancing its visual appeal.

To ensure the structural integrity of the shelving unit, simulations were conducted to assess its reliability and durability. Subsequently, meetings were held with production companies to identify suitable manufacturing partners. Two production companies were selected, and a prototype was requested for testing. However, before the prototype could be made, several design optimisations had to be done to enable efficient production. Based on the prototype and production possibilities, a cost estimation was made to determine a rough price for the shelving unit.

To maximize market share and drive sales, a marketing strategy was developed. The strategy focused on effectively promoting the shelving unit and creating awareness among the target audience. The specialized hinge design and the use of 12 mm Hi-macs material contributed to the unit's distinctive visual appeal, aligning perfectly with Van der Jeugd Architecten's design vision. The sleek and seamless surface of Hi-macs material added a modern, soft, and refined look, elevating the overall aesthetic impact of the shelving unit. Moreover, the wide range of available colours offered customers the opportunity to customize the unit to harmonize effortlessly with their specific design preferences.

In conclusion, the bachelor assignment successfully finished the design of the modular shelving unit for Van der Jeugd Architecten. Through extensive research, material exploration, and design refinements, a visually appealing and functional product was created. The combination of specialized hinges, 12 mm Hi-macs material, and the integration of modularity showcase vision to sustainable beauty, human-centred design, simplicity, and sustainability.