

# Design of a Modular Sofa: Design Proposal for GUBI

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**Topic:** Designing a Modular Sofa that can adapt to different living rooms, focusing on user needs and evoking a calm, Scandinavian design aesthetics.

## Project Background

This project focuses on designing a modular sofa proposal for GUBI, a Danish furniture company known for its timeless design and fine craftsmanship. The objective was to create an innovative addition to GUBI's furniture collection that embodies the calm aesthetic of the Scandinavian design style. The project explores adaptability features that meet the user needs.

The challenge was framed by the research question: How can a modular sofa be developed to seamlessly adapt to diverse living spaces, focusing on the adaptability regarding user needs, while embodying the Scandinavian style and giving a sense of peace?"

## Approach

The project began with a comprehensive literature review, exploring aspects such as modularity, structure, attachment mechanisms, ergonomics, and Scandinavian design principles. This was followed by a detailed analysis of GUBI's brand identity and target market, along with identifying user requirements through surveys and interviews, focusing on users' needs and preferences. In the ideation and concept development phase, multiple design concepts were generated through brainstorming, and creating collages and sketches, which were then evaluated and refined based on the results from the survey.

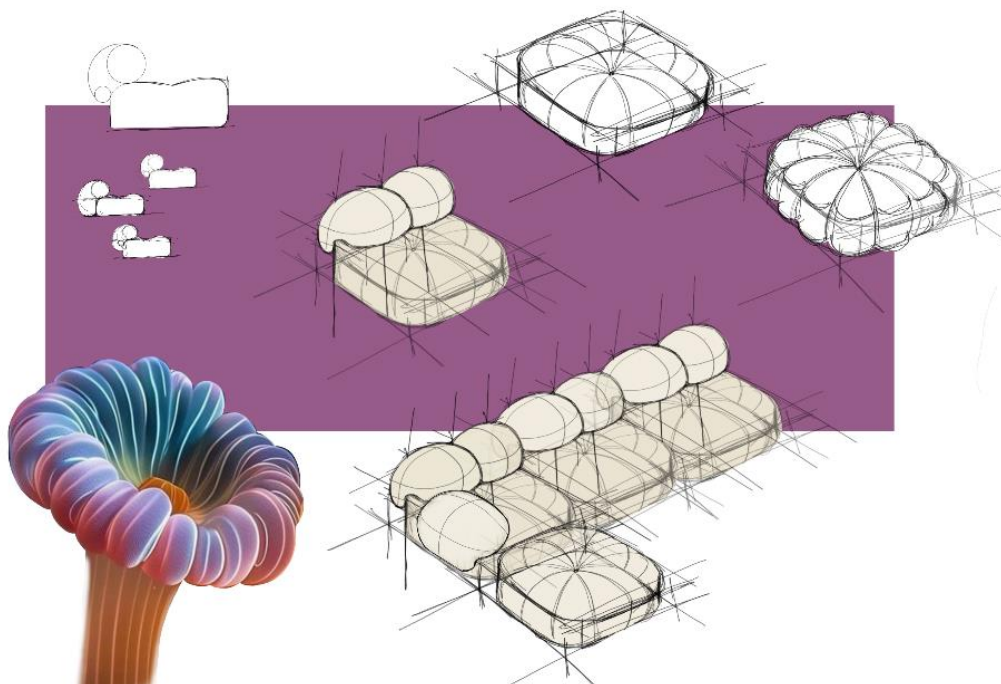


Figure 1. Ideation inspired by a coral reef.

## Results

Inspired by the calming, silent atmosphere beneath the sea, free from distractions The Coral Modular Sofa brings a sense of tranquillity to the space where you can let your body float and relax. The sofa captures this calming experience with its nature-inspired design, providing an adaptable and peaceful seating solution. The modular system allows users to expand their seating by adding additional units or enhance comfort by repositioning the backrest. To adjust the backrest a circular ratchet mechanism is used. Removable armrests can be attached to any module, granting further customisation options.



Figure 2. The Coral Reef Sofa

The final design offers various configurations to ensure adaptability to different room layouts. The concept revolves around a basic modular unit that can be expanded by adding further modules and adapted by moving the backrest of the module, enhancing both functionality and user comfort. All modules can attach removable armrests on the sides, giving the users more freedom and customisation. A calm floating coral reef inspires the sofa's aesthetic in the sea's tranquil silence and entails the minimalist Scandinavian design style.



Figure 1. Parts of one module of a sofa.

The backrest is attached to a circular ratchet mechanism, where the user can adapt the height to the most comfortable option.

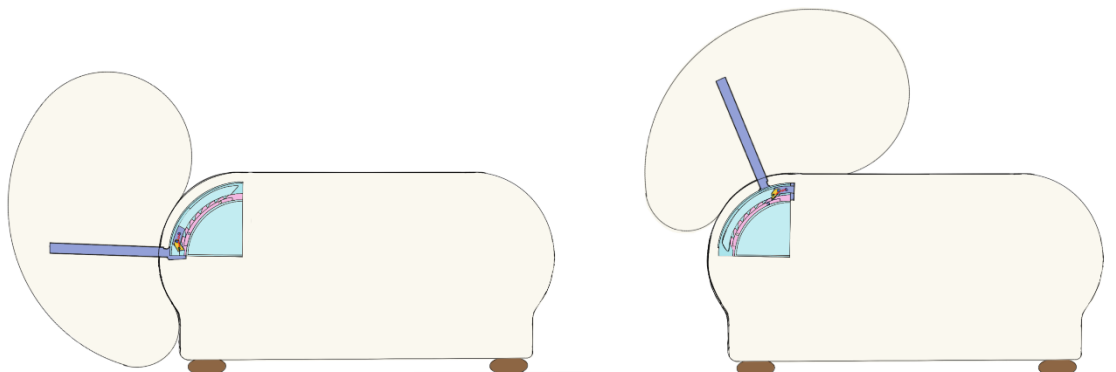


Figure 2. Circular ratchet mechanism of the backrest.

The sofa has wooden legs, ideally made of teak due to its durability and moisture resistance, with oak as a cost-effective alternative. Felt pads under the legs prevent floor damage. The frame is made from oak, or as a moisture resistance alternative maple hardwood. The structure includes webbing and zigzag springs for flexible, comfortable seating, protected by a felt pad. The core consists of high-resilience polyurethane foam (30kg/cm<sup>3</sup>) for a cushioned feel, with the alternative of using a coil spring core. A softer foam layer is added for extra comfort, on top a polyester cushioning layer is added to provide a soft feel below the fabric. Cotton could be a sustainable alternative but is less durable.

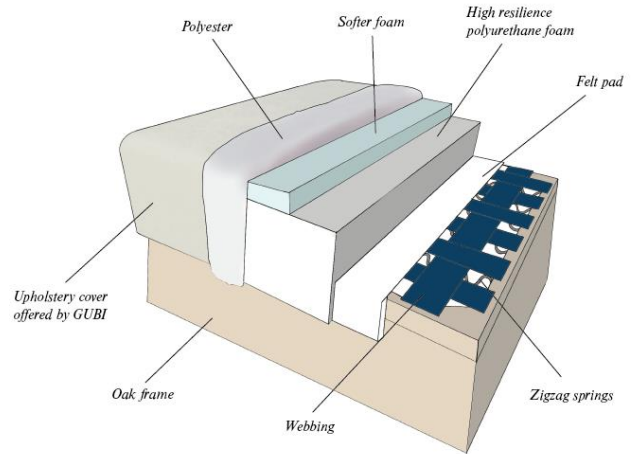


Figure 3. Materials and structure of the sofa.

The sofa design offers several adaptable configurations to enhance user comfort and experience in all activities engaged in the sofa. The following figures demonstrate some examples.



Figure 5. User lying down with the backrest at the lowest position.



Figure 6. Users socializing in the sofa.



Figure 7. Users watching a movie in a cosy environment.

## Conclusion

The research question was effectively addressed, achieving the project's objective of designing a modular sofa that is both functional and aesthetically aligned with Scandinavian design principles. The project results in a design proposal that meets users' needs and fits seamlessly within GUBI's product range. Recommendations for future work include further material testing to enhance durability and cost-effectiveness, exploring different module sizes and functionalities if the brand is interested, and collaborating with manufacturers to refine the production process and ensure quality.



*Figure 4: Collage with Coral Sofa and other GUBI sofas.*