

RE-USING TAMBOUR DOOR CABINETS FOR LOCKERS: SUMMARY

Currently there are a lot of tambour door cabinets in offices. These cabinets are primarily intended for files, but due to digitization, this application is rarely used. Ahrend wants to give these cabinets a new function as locker cabinets. The assignment is to design modular lockers that can be placed in old tambour door cabinets of different sizes and use as many recycled materials as possible in the construction of these cabinets.

Various components are important for a successful design that do not follow directly from the design assignment. To gather more knowledge about these components, a preliminary research was needed. Requirements for smart lockers were based on a previous report, and was extended with a market research on current office lockers. A second market research was done to find out how other companies re-use tambour door cabinets. For the final construction of the locker cabinet, Ahrend stated the requirement to use of the Threespine joint, a new kind of furniture joinery.

The first ideas that spawned from the research and were written down, and elaborated upon during the ideation phase. The sketches touched upon several aspects of the locker cabinet but were ultimately divided among three topics that are of importance: Interaction, construction and design. Several models were made to test out different interaction scenarios that served as the basis for the final locker size design. Different ideas for the construction were drawn and tested in 3d models, the same was done for different visual designs of the locker door.

The ideas from ideation phase have been incorporated three different concepts that are further developed. To be able to judge the value of each idea on the full context of a product. The three concepts include two locker cabinets where the cabinet is vertical and one concept in which the cabinet is horizontal and placed on a raised base, each of the concepts has a different construction to find the most suitable one.

The third horizontally oriented concept was ultimately chosen, the orientation gives the tambour door cabinets a whole new appearance. The tambour door cabinets are optimally re-used by placing the electronics for the locks in the former bottom. Lockers are part of individual columns placed in the cabinet that is mounted on the base to bring the lockers to eye level. The many possibilities that the combination with at the base offers, make it that the locker cabinet can fit anywhere.

Detailed elaboration of the concept into a prototype is done for the production and assembly; but for the design and interaction, not only the lockers were looked at, but also a base. The final design can be arranged modularly by combining different locker columns, in this design all aspects of the tambour door cabinets are reused. However, the design is not applicable to the smallest variants of tambour door cabinets. Despite that not all parts are made from recycled material, it is still possible. The ultimate goal of the assignment was to reuse a tambour door cabinet as a locker cabinet, so although not all aspects of the design assignment are met in the final concept, it can nevertheless be concluded that the objective has been achieved.