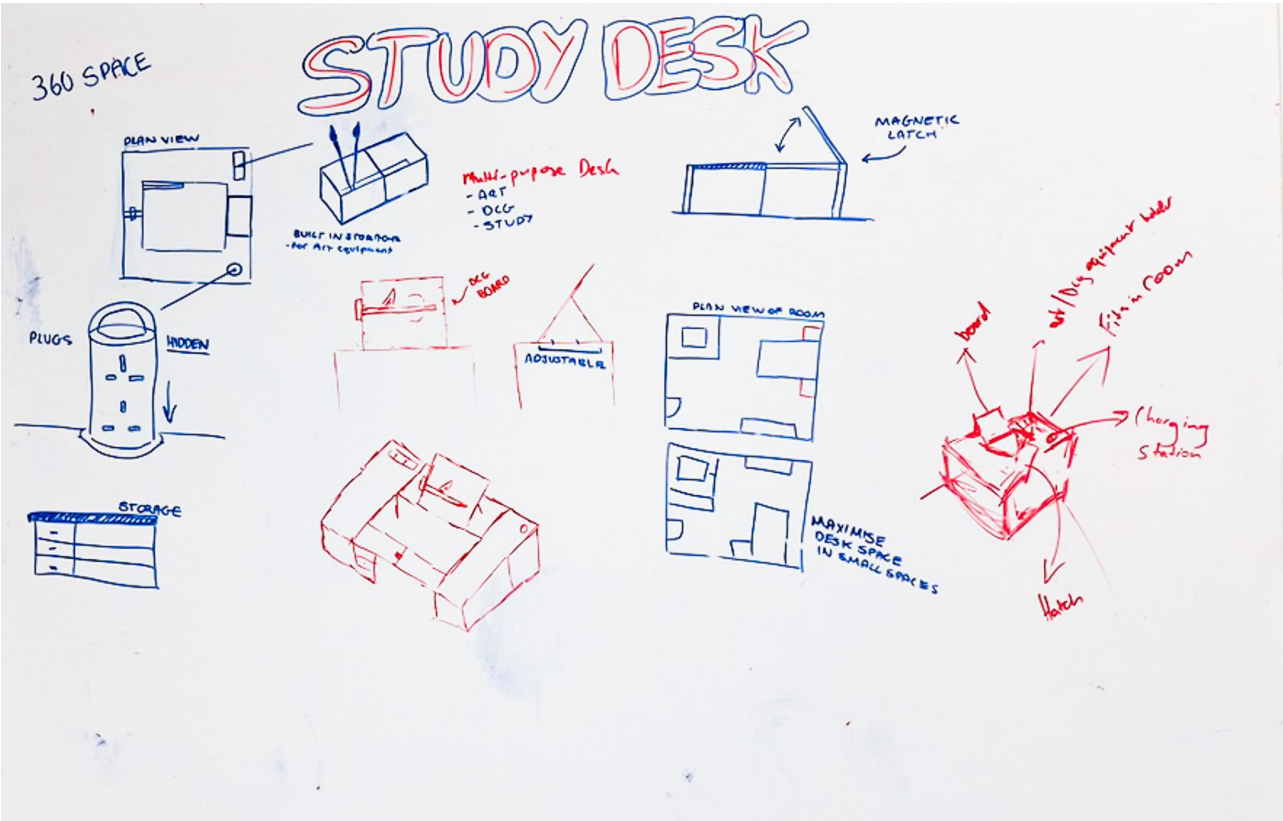
Project 2
Concept Development

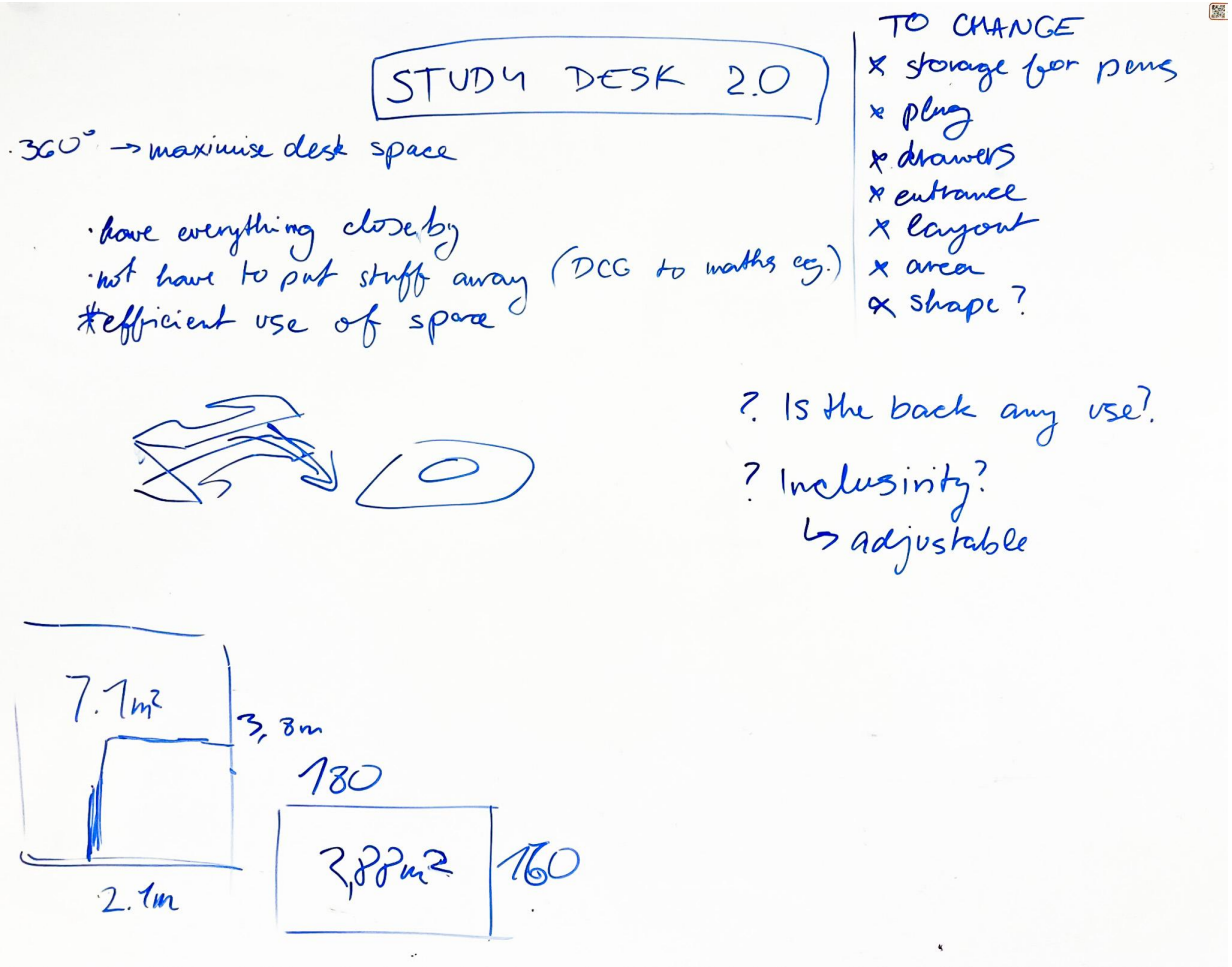
Julia Dluzniewska, Lenka Ondrovičová

Concept Analysis



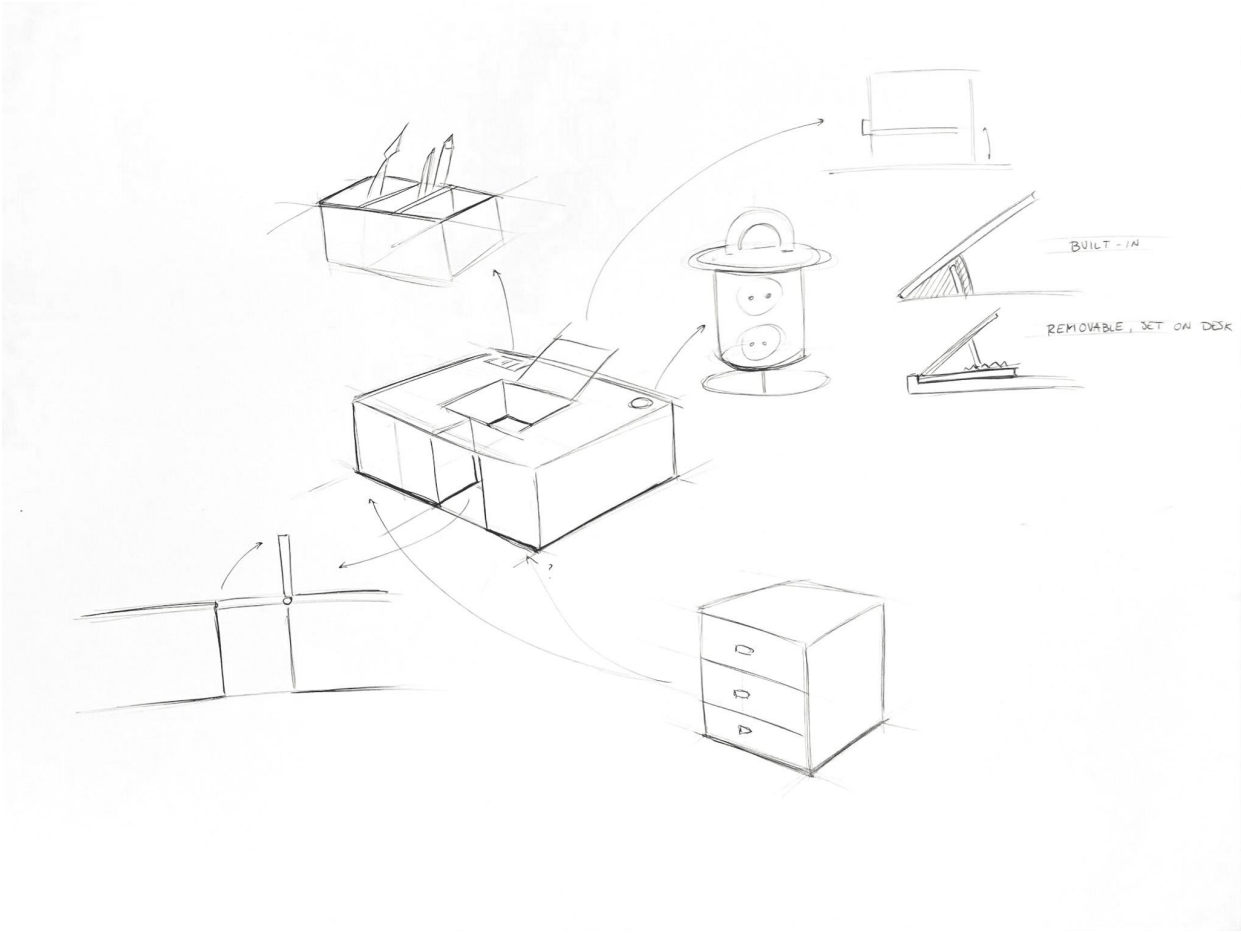
This was the initial concept of the study desk made by the previous group. Under our judgement we have agreed that the idea had many parts that could be developed.

For example, the desk had a rectangular center which only allows four angles to work at comfortably. Also, the general layout of the desk was far from reach or impossible to access.



We made a list highlighting all the features we would like to change and adjust to fit a more user friendly model.

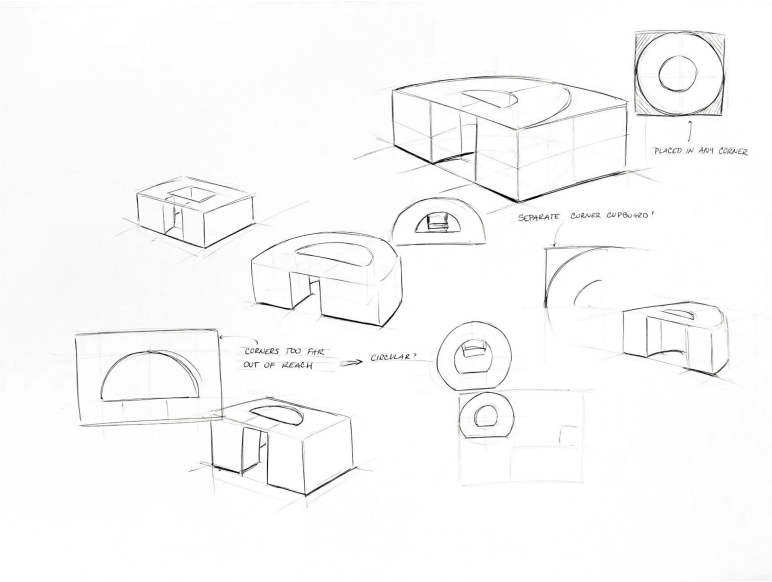
Upon further inspection we learned the desk could not possibly fit into an average room. The brief sketches portray size analysis and possible solutions.



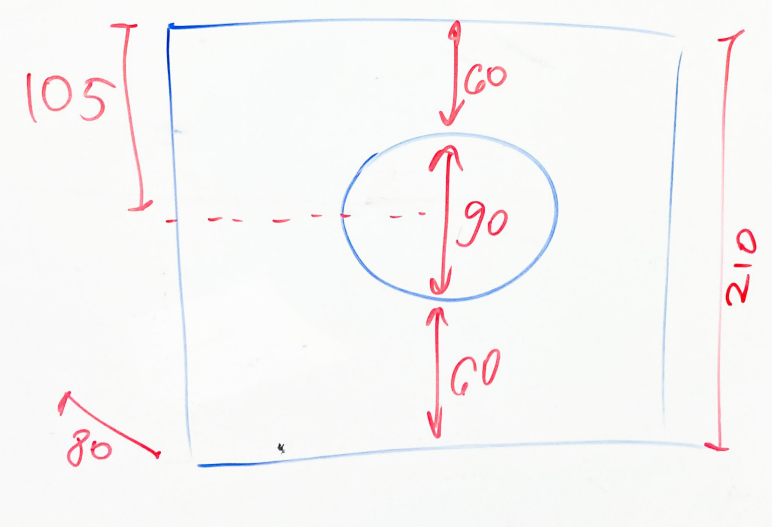
This sketch explores the already made product and its features. This provided deeper understanding and helped make improvement to the final product.

We managed to notice how the access to the plug is far away from the place of access, uncomfortable while being used as it would roll over or not close and the general idea felt unfit for this specific desk.

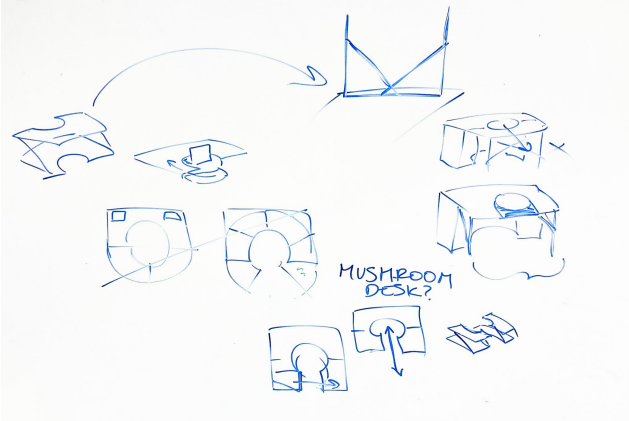
Concept Development



Here we tried to improve the overall shape of the desk on the inside and outside. The sketches show that space was a huge consideration to make the desk available to a wider user base. The curved edges of the desk could have been a solution however it would slightly limit the general space available.

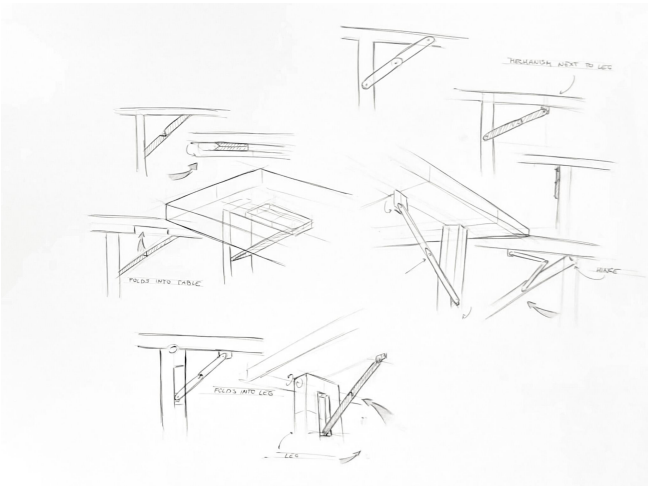


On this sketch we decided upon the measurements of the desk. Considering we have made a decision to make the desk foldable we decided this size should be just right. The desk was also designed to be a square with a circular inside to provide more space and not limit movability.



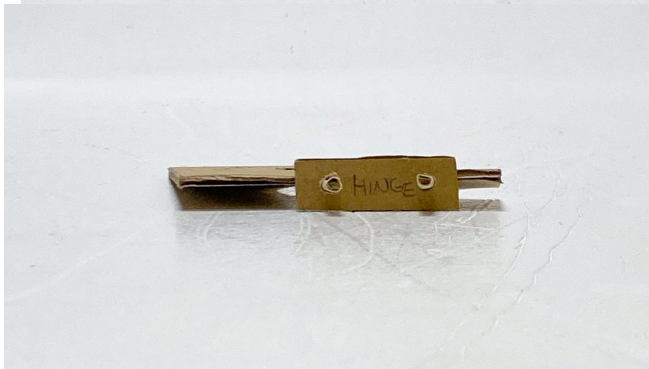
The hinges and the folding of the desk was a great focus of this project. The prototypes helped us understand how the desk would fold and how the desk would be entered once unfolded.

It’s also important to point out we have considered the motion of folding and decided that , as shown on the model, the desk would be folded with one of it’s halves raised on top to let the user leave any items remain on the desk once it’s not being used.



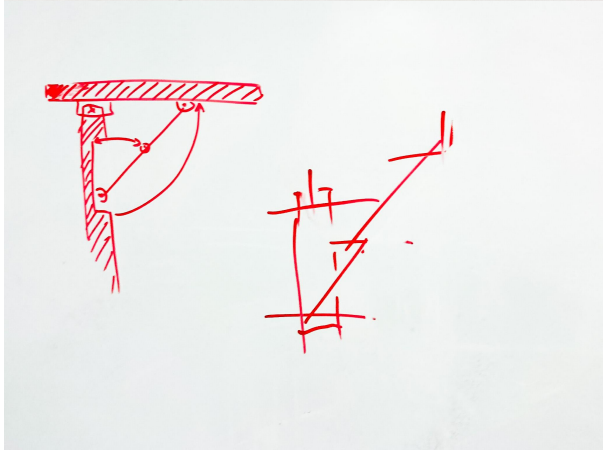






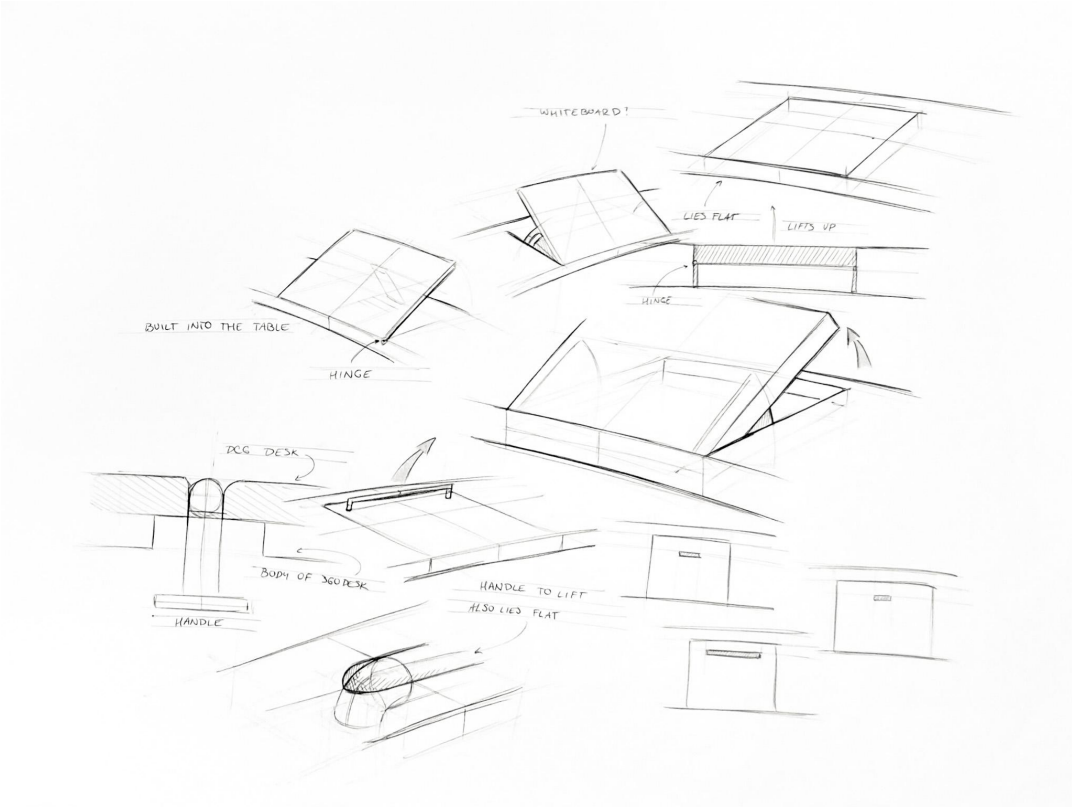




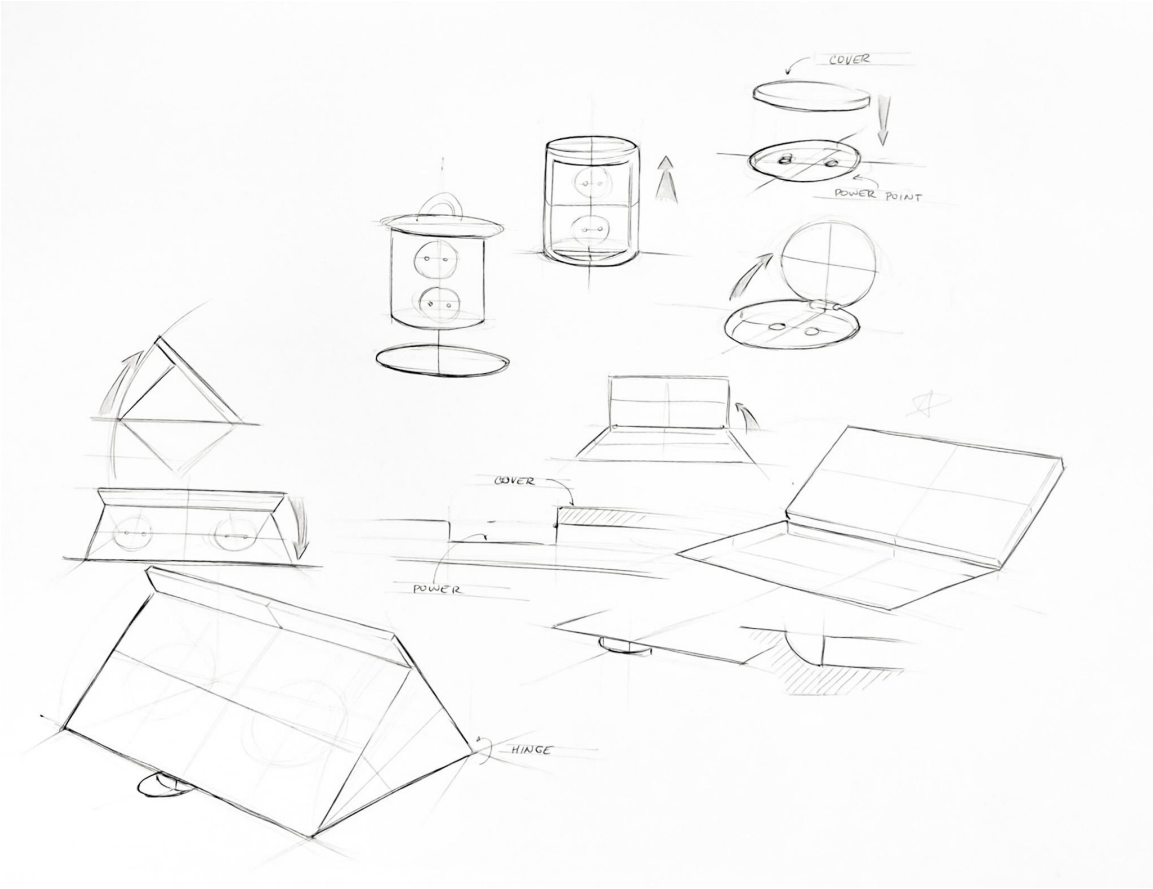


This prototype and sketch affirmed our possible mechanics of the desk and became a quite simple solution. At one point of our development process we considered that there would be no leg at all but this solution is much better as it provides extra balance and does not become a problem when being folded up through the mechanism specified.

9



These sketches provide an alternative on the DCG board in the initial design. This design allows the board to be folded into the desk and shown a space efficient mechanism where only the handle that lifts the board up is peering up from the desk.

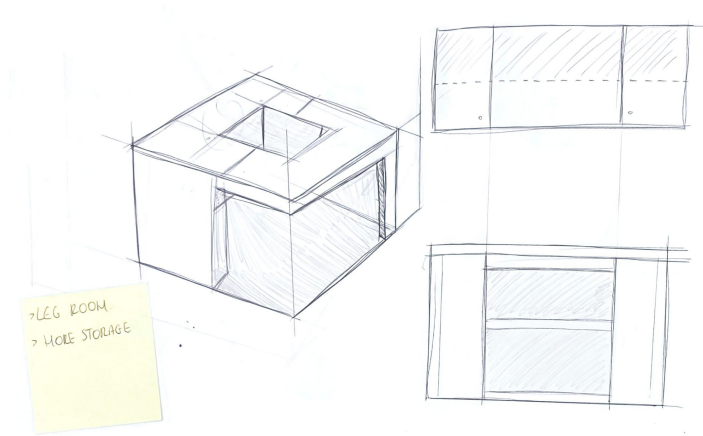


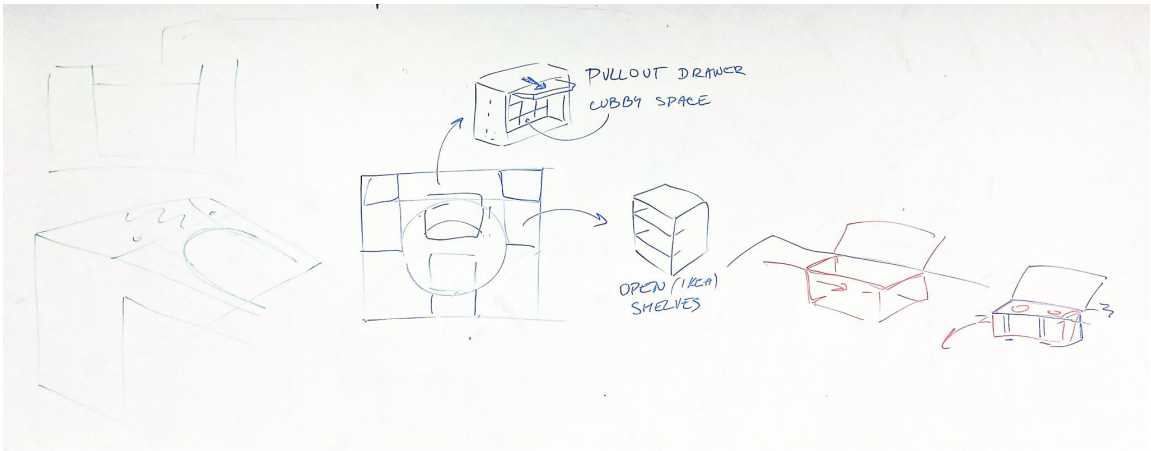
The initial design of the electrical outlets has been developed into three of the following solutions. This includes a pyramid like structure with the outlets facing the user and their capability to fold down when not used.

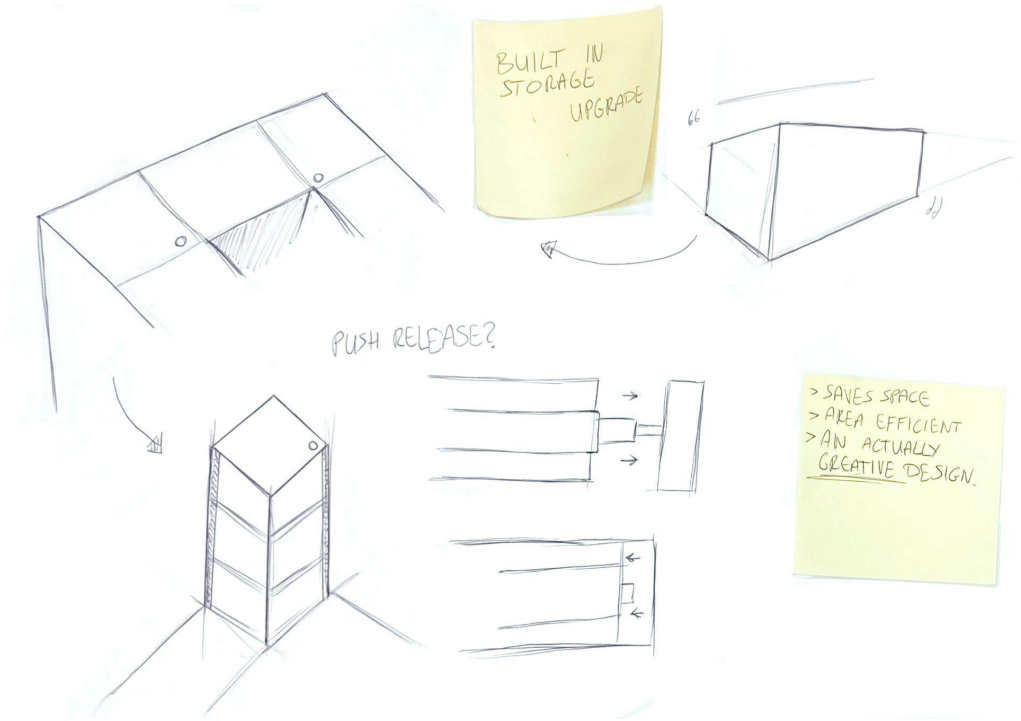
Another design was to simply place a singular outlet onto the top of the desk. However the last design has proven to be the most user friendly and allows a larger amount or variety of outlet.

In these sketches we analysed the storage and shape of the desk. The initial design did not provide much information or storage hence we decided upon cubby shelves under the desk that could be used for boxes full of stuff that is not used as often.

The shape was an issue as the square shape was not accessible enough so we decided upon a circular chair space for easy access to the workspace.



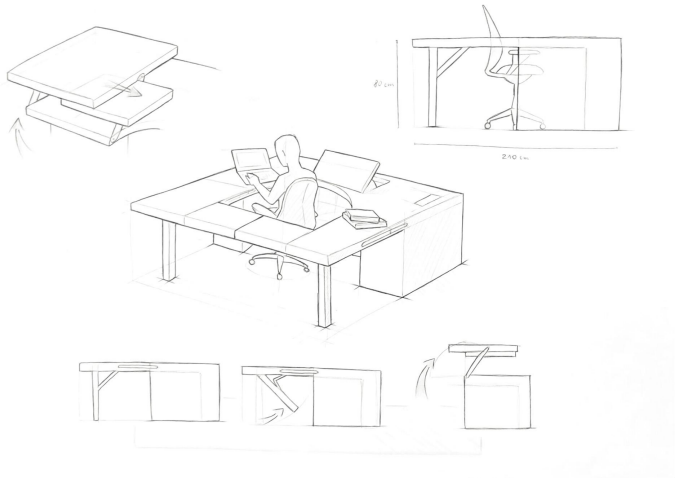




These cabinets were made to replace the stationary holder in the initial design. Releasing the pencil holders were strictly made for small stationary we decided upon a different kind of mechanism such as push release cabinets made to fit books, pencil cases, rulers, etc.

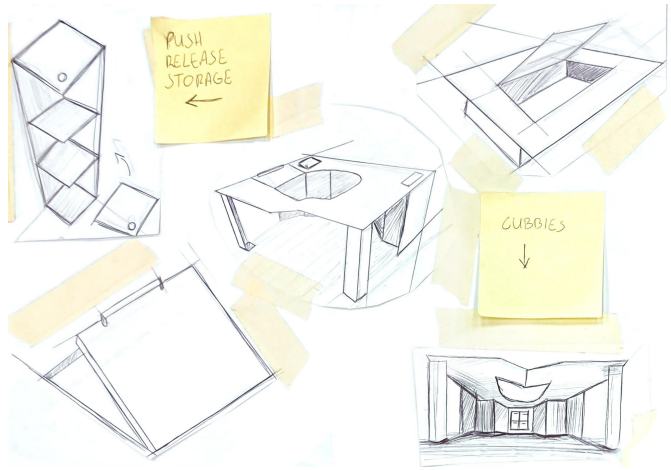
Provided the user does not need to access the stationary all the time the cabinet can be pushed down and allow for the surrounding space to be still used.

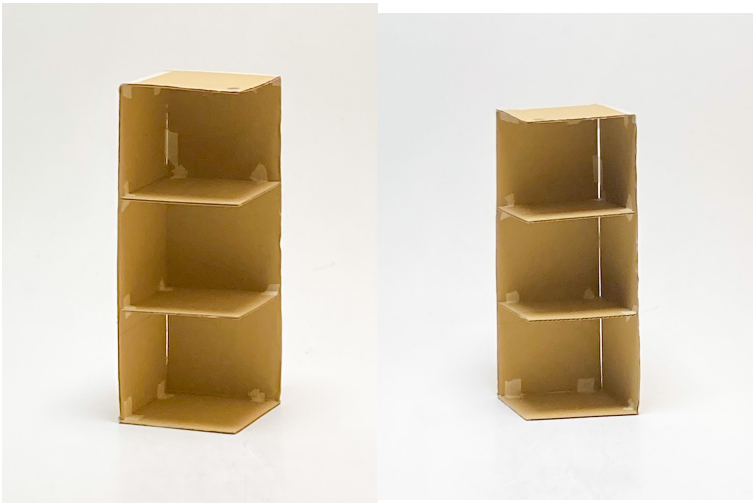
Design Presentation



This final sketch presents the product in context of use and provides a clear image of mechanism and space management. With a storyboard illustration at the bottom presenting how the table folds once it is no longer in use. In addition to that, the entrance which had to undergo modification is well draw and shows how it would look next to a working person.

These sketches show the different features and their developments made to the initial design. With the consideration of ergonomics and space efficiency, the sketches show the placement and appearance of these features.

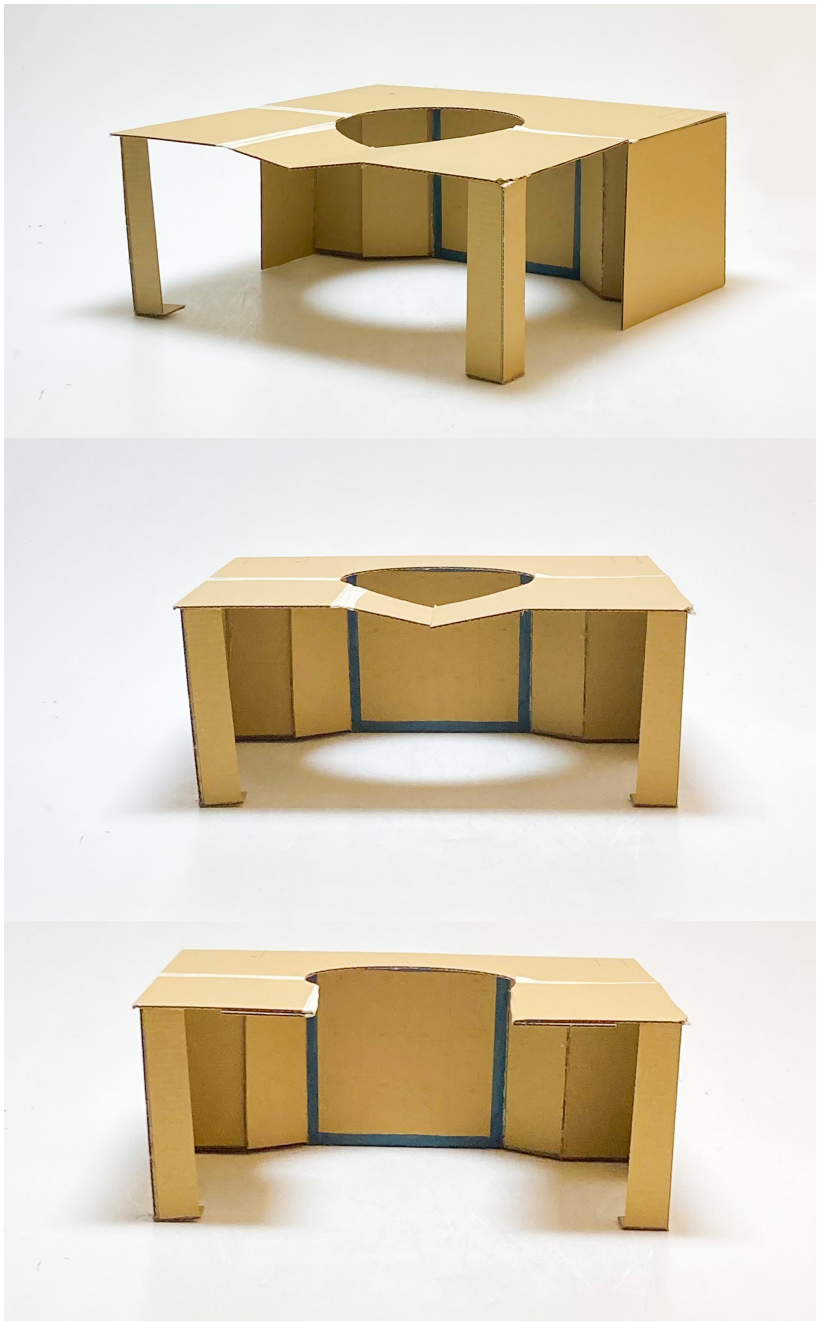




This is a half scale model of the push release cabinet. It clearly shows the space available and the general idea of the concept.

This model is also made in half scale and gives the simple idea of the inbuilt extension cord holder. There is an entrance at the side of the box and it would be build into the topside of the desk. This allows a variety of outlets to be used and has a more space efficient design. The flap on top provides the user with the option to simply close the lid so it would not get in the way while its not being used.





This final prototype shows the basic shape and layout of the final design. This shows the shape of the inside which has been highlighted throughout our process to be highly significant to the consumer. The storage unit has a very clear but simple form which shows consideration for leg room and overall storage space.

There was a significant effort put into the structure of the legs and the shape of the entrance that helps folding the desk when not used. The mechanisms have been prototyped separately as they were important to analyse and prototype as their own piece.

Reflection

Julia

At the very beginning of this project I believed it would take an immense amount of time and effort to come up with something productive and efficient given the development made by the previous group wasn't ideal. Seemingly, the starting point wasn't very easy however it became much easier as time went by. Parts of the desk didn't make much sense such as the storage space or the general size however, working with another person made the process much easier. A teammate to come up with ideas with and share perspectives made the development faster and more efficient. A smaller group is much easier to work with and it's simpler to keep a coherent conversation.

Whiteboards have been another majorly useful resource as it doesn't take a lot of effort to portray ideas on and it's easier to modify if needed. Prototyping and sketches definitely helped to understand and come up with better solutions to the already given project. A challenge we experienced was deciding upon the correct dimensions and scales. The realistic dimensions would be way too big to fit in a presentation and many of the mechanisms would be harder to fit in and make at a smaller scale so we decided the best solution is to make the parts separately and work with a half and quarter scale for the final pieces. Our final presentation was quite rushed and the overall time management wasn't the best but we managed to work around it. If i were to do this project again i would definitely make a more productive use of our time. Regardless I am happy with the final product and the presentation ,even if it was slightly rushed.

In conclusion I enjoyed the process. In the end the idea wasn’t terrible and became something that would definitely come useful in daily life. I would happily work with a person like Lenka again. Coming up with problems and solutions was great fun and the final prototype looks good for the time provided to finish it. I have managed to grasp onto some concepts and different outlook onto future projects thanks to Lenka. Different perspectives and different daily routines have been very practical.

Lenka

Before developing the idea, it was crucial to understand it, which proved slightly difficult, as it was someone else's idea. The explanation video definitely helped, however during the analysis we still had to keep assumptions of what the idea is at bay and stay true to what the idea actually is. This also meant keeping the core idea, regardless of whether we liked it or not, which was definitely a learning experience. Working together was a big benefit in this, as either one of us would steer the discussion back to the core idea before we got too off track - something that might be difficult when working alone. In that case I would consider writing it out in bold so it's always in my line of sight, or simply discussing the idea with a third party.

The concept development itself went smoothly, alternating between sketching and prototyping. However, it was more a division of work, where we decided which parts and mechanisms each would work on and developed them on our own. Although I don't mind that too much, it was sometimes detrimental in making the project feel shared - more that Julia worked on her parts, I worked on mine. I think it would have been better to meet up more often and discuss the ideas along the way, not just the development process after it had finished - something that I would like to strive for in future projects, especially in smaller groups.

In regards to the presentation, I think we were both a bit unprepared when it came to the presentation, the video. Two minutes before the actual presentation we decided who would say what, but not exactly how we would say it. This made the video run for longer than necessary and doing a mock presentation beforehand, where we would think about how to say everything we need to in a concise and precise manner would have definitely been beneficial. However it is something that has to be given its own time, which means better time management in the future.

Overall, I enjoyed the project immensely. It was wonderful being able to shoot ideas off of each other, playing devil's advocate at times. This went especially well, since our outlooks on the entire project varied quite a bit at the start, which meant compromising on occasion, being questioned at all times and having to constantly come up with new solutions. In the future I would hope to have a partner similar to Julia, as she has a critical mind and is great to work with and I'm glad to have learned from her during this project as well.