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Engineering Design & Development

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Product Improvement & Design Documentation

**Function:** To help people work more efficiently while working on the go with a briefcase that will hold all the essential gear needed to complete one’s daily tasks. This product is as simple as we can make it at the moment. We are designing an original briefcase that will encompass a simple and original design. The briefcase will contain two fold out platforms that will allow the user to have a solid writing surface or a space for the user to control a mouse for their laptop.

**Aesthetics:** There are some wants of something being fashionable but a simple design is more important. There will be lightweight materials so it’s more portable, neutral colors such as black and grey. We may also have a traditional leather color way for the old fashioned enthusiasts.

**Ergonomics:** This is a key point because if someone is in a bad position working, then while working overtime they won’t be very productive because they will be in pain. Therefore, we have to make something that is functional and safe for the body to endure. This product is not the most ergonomic device but it will have to make due because it excels in every other component.

**Safety:** The only safety issues with this design is the accidental slamming on your fingers. There will be no serious injuries unless someone decides to use our briefcase as a weapon. The only legal issue with this project is trouble with patents and the only safety issues is if someone hurts themselves trying to lift a heavy container.

**Cost:** $70+; minimum $70; max $150. This product will be market alongside traditional travel bags and other briefcases. This will also allow users to not have to pay rent for office spaces. This will allow them to take their work straight from home to their client’s office or any location of their choosing.

**Standardization:** There will be no need for custom or standard tools because there will be no parts needing repair.

Quality Control: There should be no parts that will be problematic during the manufacturing of this product. All components of this design are going to be permanently attached to the briefcase itself therefore, there will be no need for production of additional parts. With that being said there is no reason to believe there will be any components that we fear we will have troubles producing.

**Ease of Maintenance:** The product wouldn’t need to any routine maintenance during the life span. The goal is to make the product as durable as possible with minimal moving parts to enhance the life expectancy and reduce wear and tear on parts.

**Durability:** There are no specific materials required but will be using something that will be durable and also lightweight. We want something that will last long, be weather resistant, and durable so it doesn’t break. The product wouldn’t need to any routine maintenance during the life span. The goal is to make the product as durable as possible with minimal moving parts to enhance the life expectancy and reduce wear and tear on parts.

**Environment:** Our product will be used in all kinds of atmospheres but mainly in the back of people’s cars, in and out of office buildings, in and out of schools, etc. Constant dropping, mechanisms failing will be more due to use rather than environmental conditions. This product does not contain any type of toxic or dangerous material that will endanger anyone.