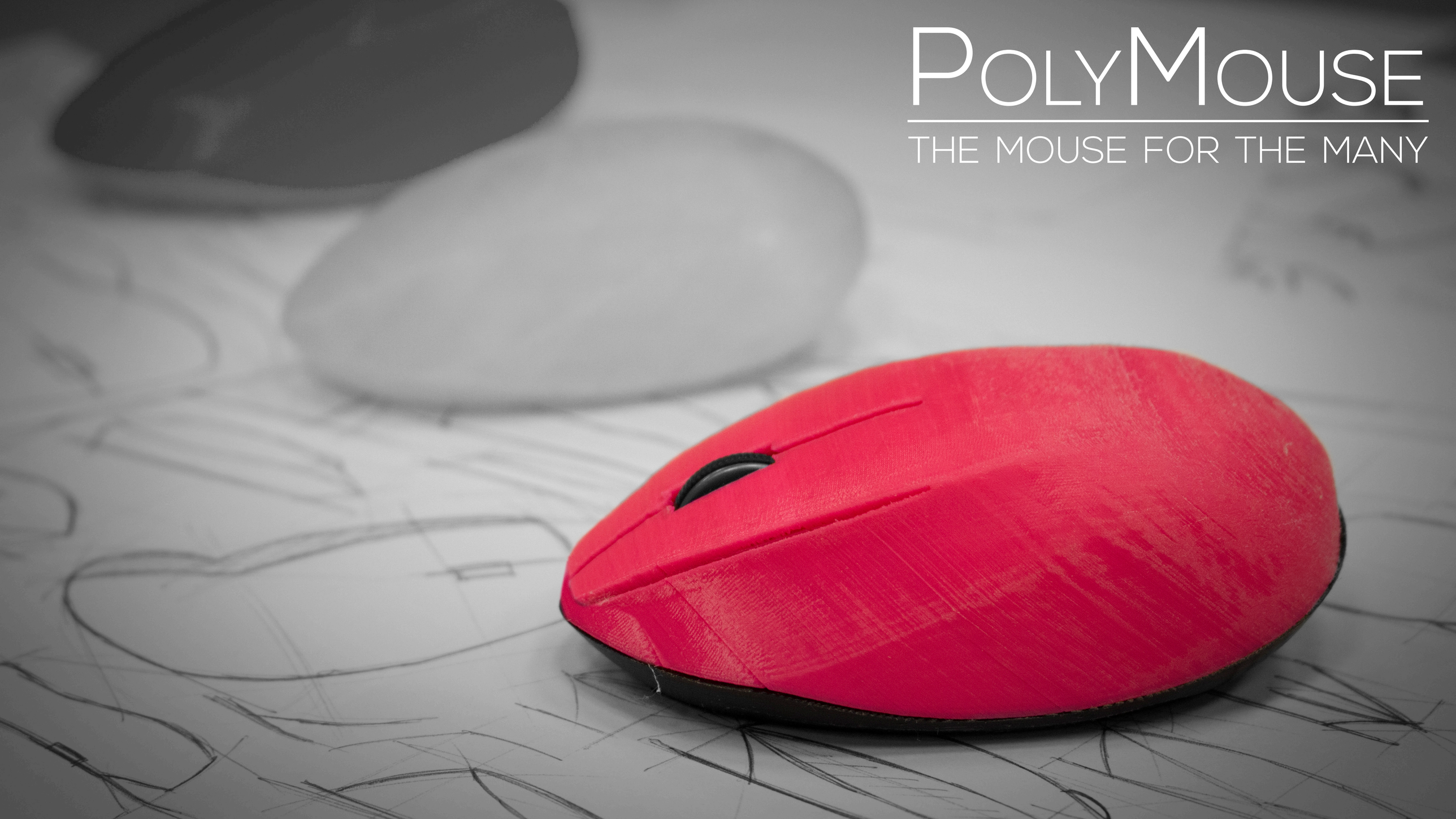
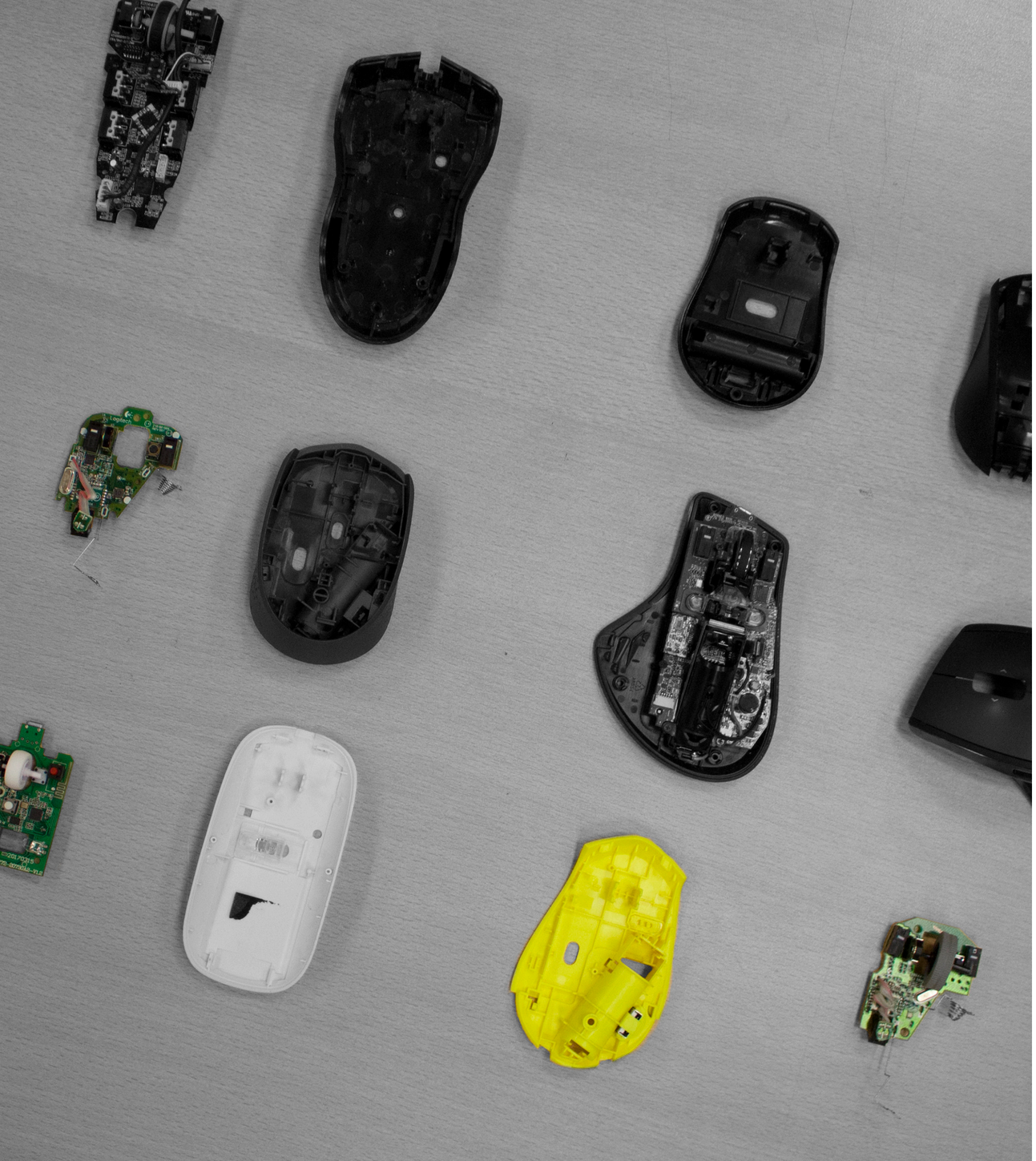

PolyMouse
THE MOUSE FOR THE MANY



MARKET RESEARCH

At present, there are no computer mice on the market which are customisable based on multiple physical parameters of an individual's hand. While there are 3D printed mice available as well as mice for different sized hands, but they are not produced on demand.

A key factor in choosing this product was recognising that there are a number of similar products currently on the market like custom 3D printed insoles and 3D printed glasses the success of these products gave us confidence in our idea.

While some preferred models that did not relate to their hand size, opting for a larger size of mouse, we found these users had been using a larger size of mouse, and they stated that stepping down a size felt a little strange to them.

We felt that this helped justify the products aims and that our reasoning was sound. By conducting a thorough Voice of Customer analysis allowed us to understand exactly what the consumers would want in the final mouse.

CONCEPT DEVELOPMENT

It was necessary to compile the research findings into what the final concept required. Through a Kano Model and a Buy a Feature analysis, we were able to note what features would be necessary on the final mouse. These features included Bluetooth connectivity, a rechargeable battery via USB cable, and overall product comfort.

These features were then used to carry out a concept development process of both form and function. One of the greatest issues during this phase of the project was the size of the PCB board, and how to create a model that could use one single, universal PCB board.

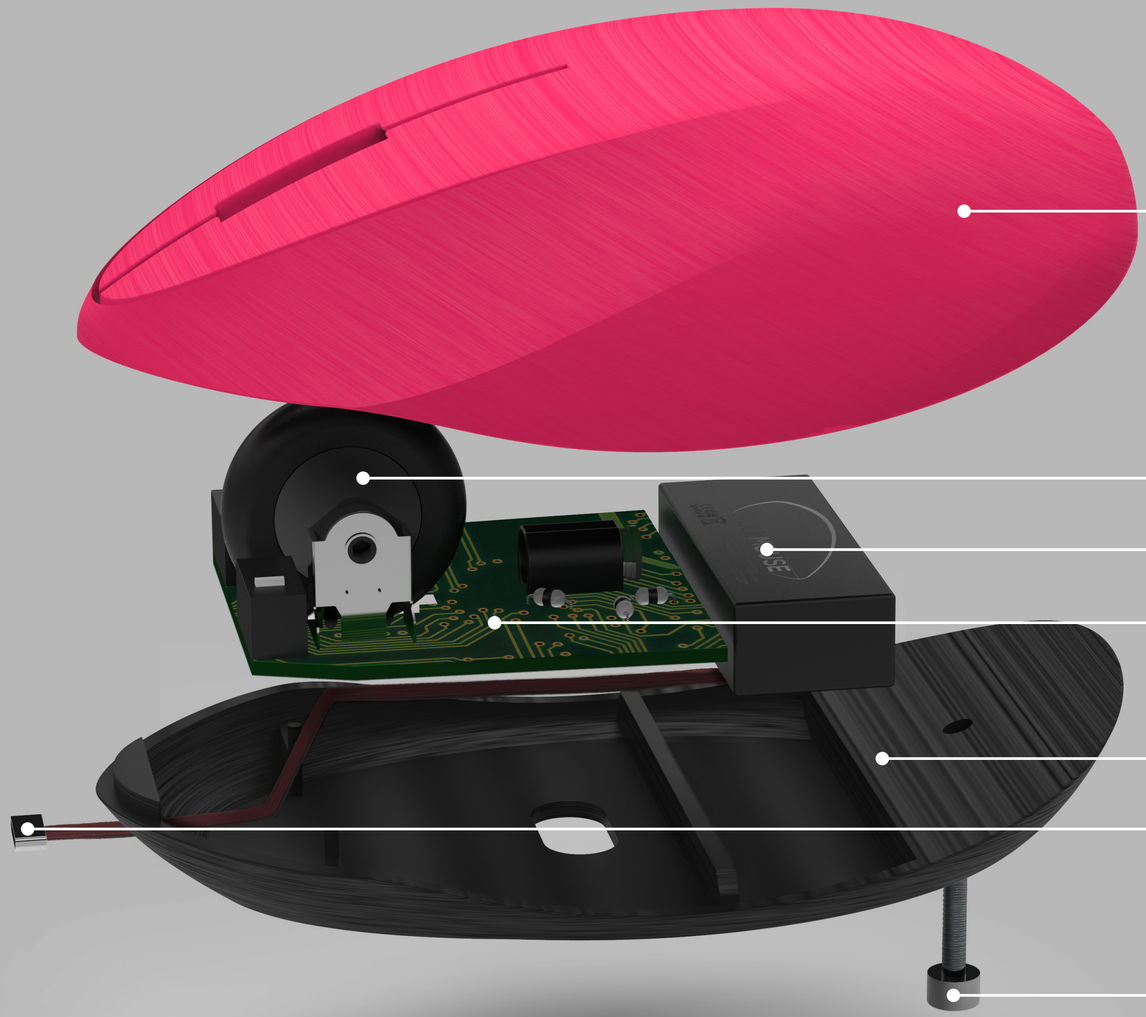
3D PRINTING AND PROTOTYPING

It was necessary to understand how the final model was to go together in order to ensure all repeatability issues that would usually be seen in a 3D printed product could be avoided.

With the lead time in mind the Polymouse is designed to be incredibly easy to assemble. The choice to manufacture the mouse in two components instead of the conventional three was heavily influenced by the need to make the Polymouse easy to assemble.

The PCB snaps in place into the base of the mouse and requires no additional fasteners. By using only one screw at the back and one assembly feature at the tip the mouse shell is easy assembled by anyone. With only three components; the top, base and PCB, the mouse is ideal for fast paced production.

FINAL DESIGN



Upper Chassis and Clickers

Scroll Wheel

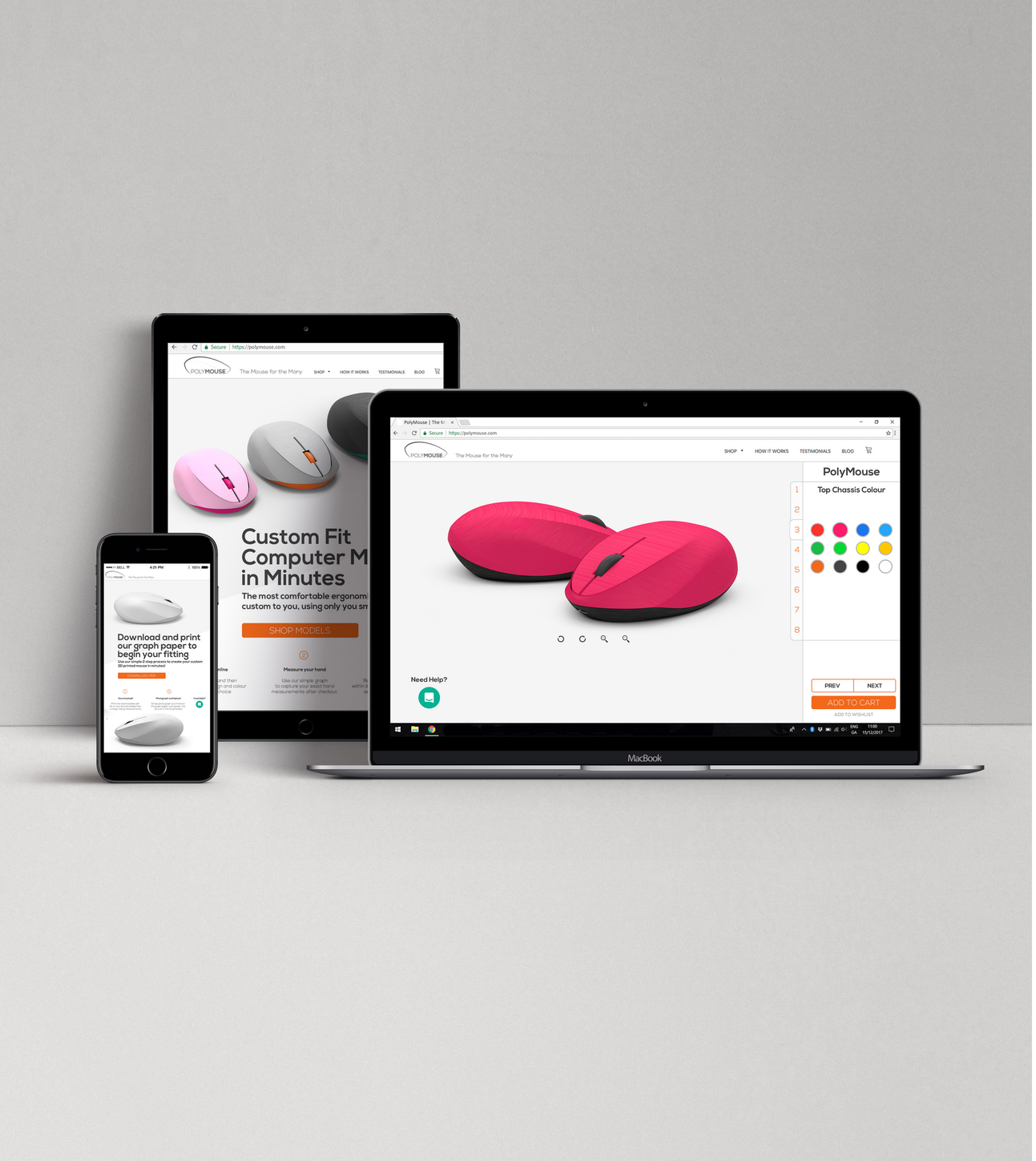
Rechargeable Battery

Universal PCB

Lower Chassis

USB Charging Port

Single Screw Fastener



HOW IT WORKS

The user must first measure their hand using a printable template which can be downloaded for free from our website and printed on A4 paper.

We would then need to decide on what would be the ideal mouse model for them, going off the information given and select that model for printing.

The user would be linked to a page on the website that would allow them to choose the colour, give delivery information and to pay. We would then need to send the customer an email showing our choice of mouse and request payment.

Once the user received their product by post or courier, they would then unbox the product to find;

- **The mouse**
- **Charging cable**
- **Documentation**
- **A thank you message from the company**