



# DESIGN FOR SUSTAINABILITY

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Apr 2024



What would you suggest

Make the company more sustainable

What would you suggest

Office air conditioning

Employee airmiles

Canteen food waste

Warehouse refrigeration

Product life cycles

What would you suggest

Office air conditioning

Employee airmiles

Canteen food waste

Warehouse refrigeration

Product life cycles

based on almost any measure of  
environmental impact



Sustainable Products

I've got the answer!

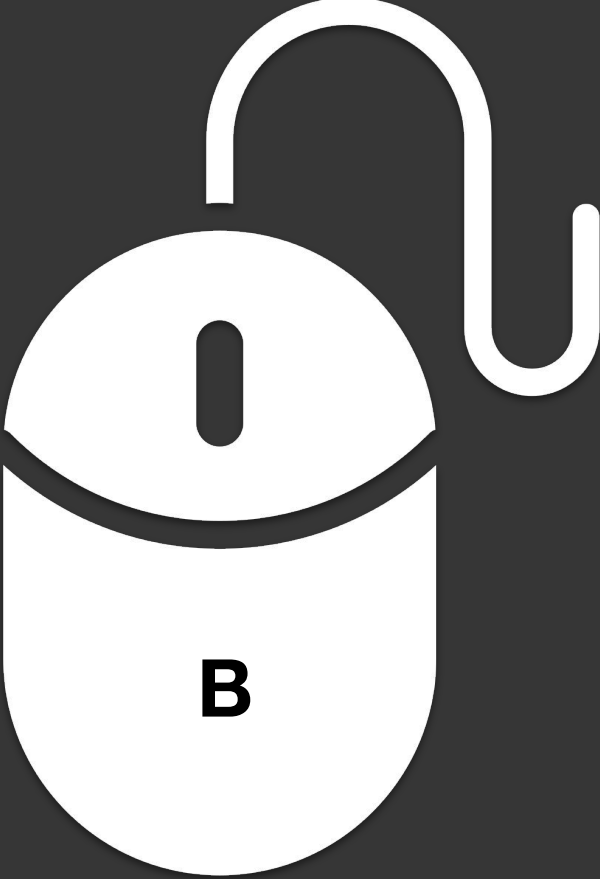
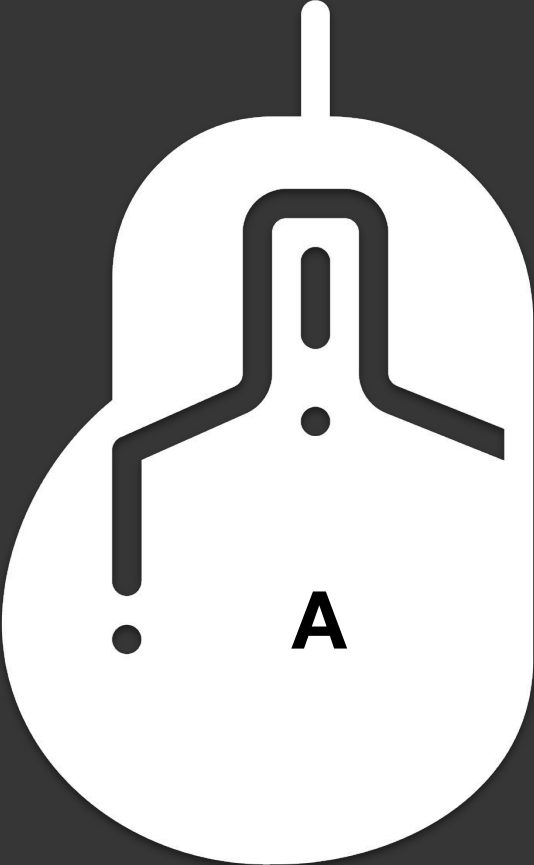
*You might think that's the hard part done*

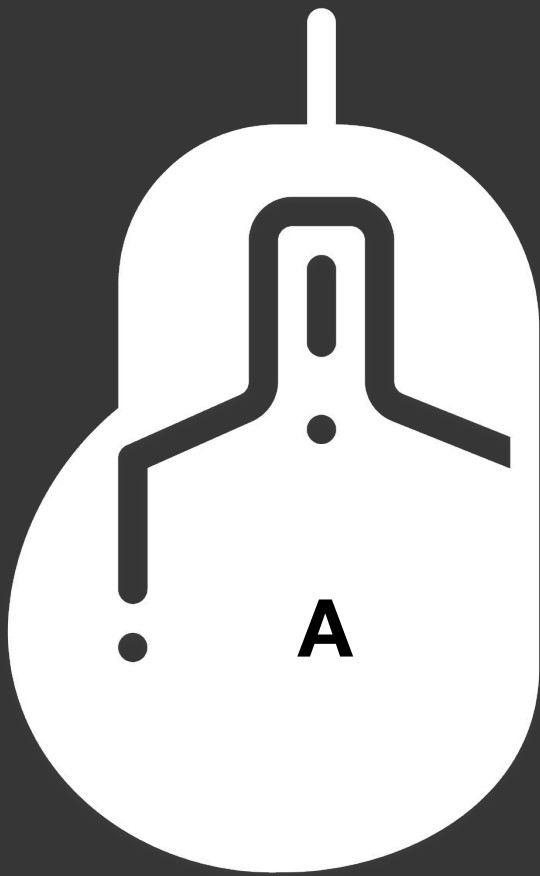
We know what it takes for a product to be desired.

We take cost very seriously.

We track and measure schedules very accurately.

How should we define a product's sustainability?





Carbon Footprint 8 kgCO<sub>2</sub>e

Virgin aluminium Chassis

300 grams in weight

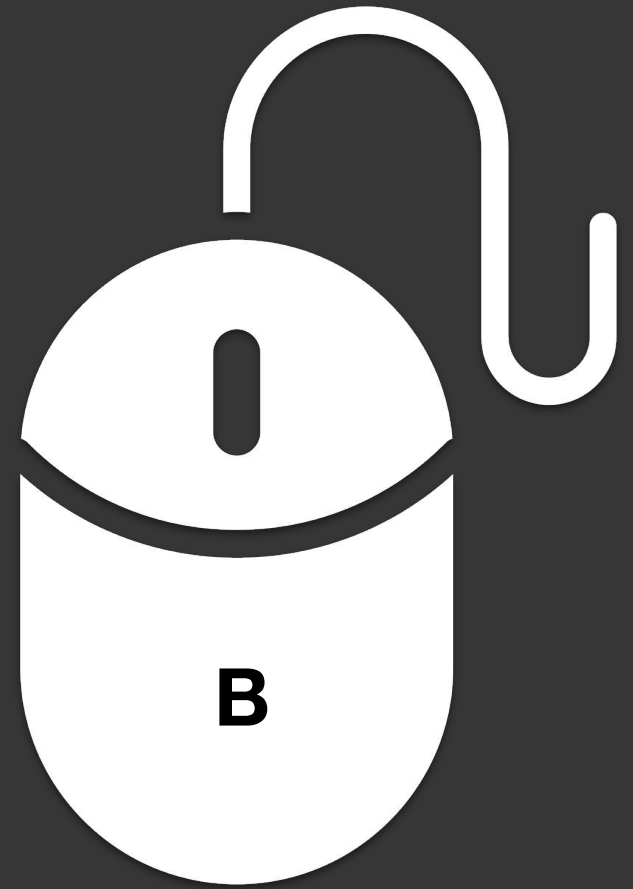
Two week battery life

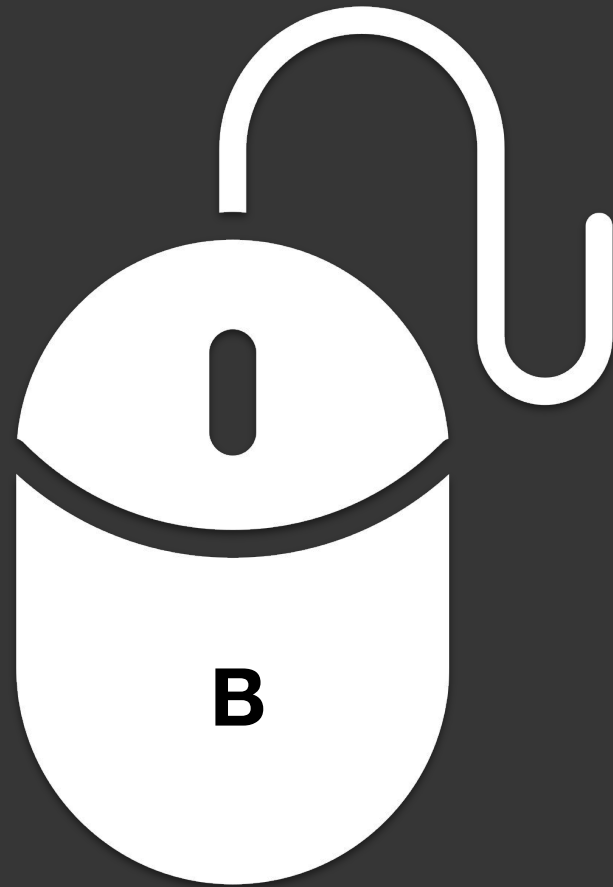
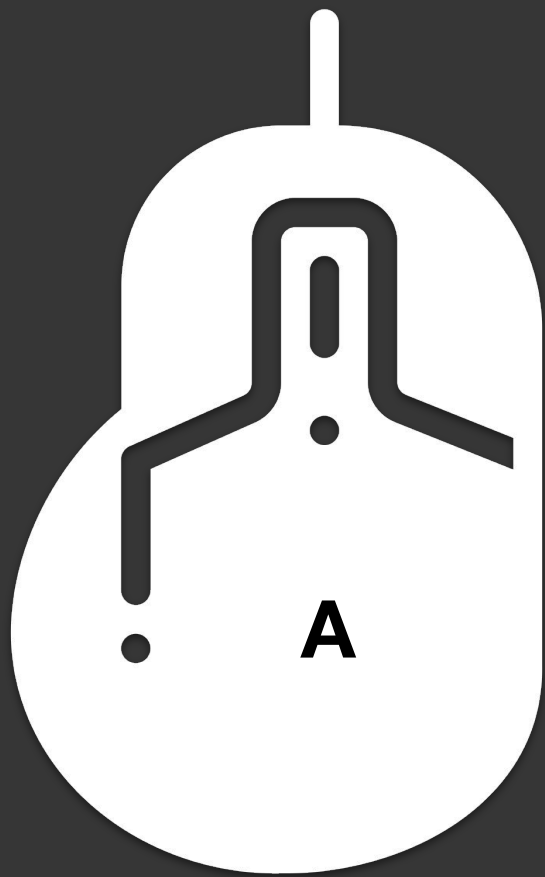
Complex electronics

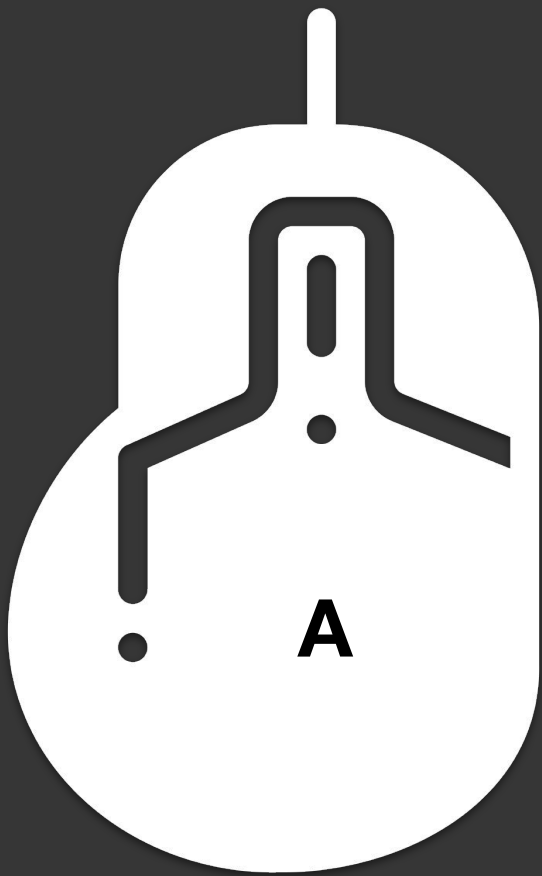
Upgradable & Repairable



Carbon Footprint 3.97 kg/CO<sub>2</sub>e  
Glass fibre reinforced plastic  
150 grams in weight  
Two month battery life  
Simple electronics



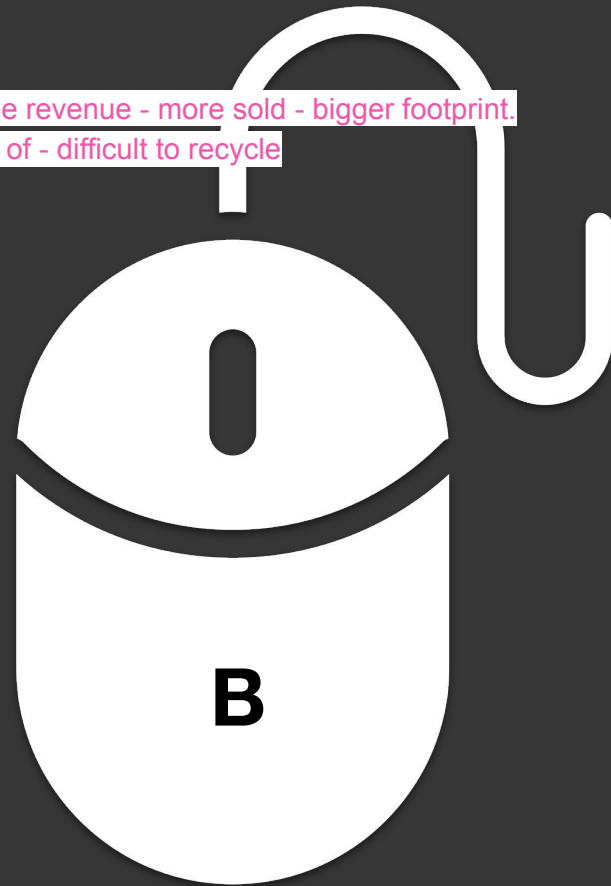




very efficient

low cost - same revenue - more sold - bigger footprint.

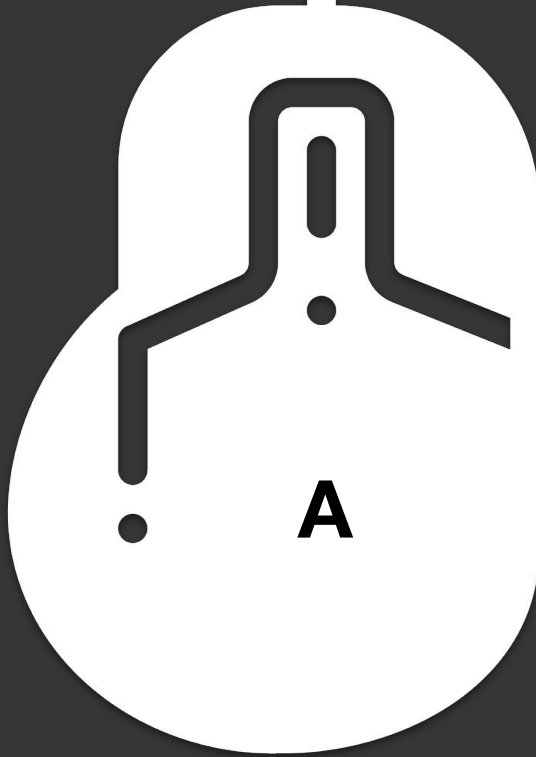
More disposed of - difficult to recycle



high energy intensity - a higher carbon footprint,

Longevity - slower refresh - less products are made

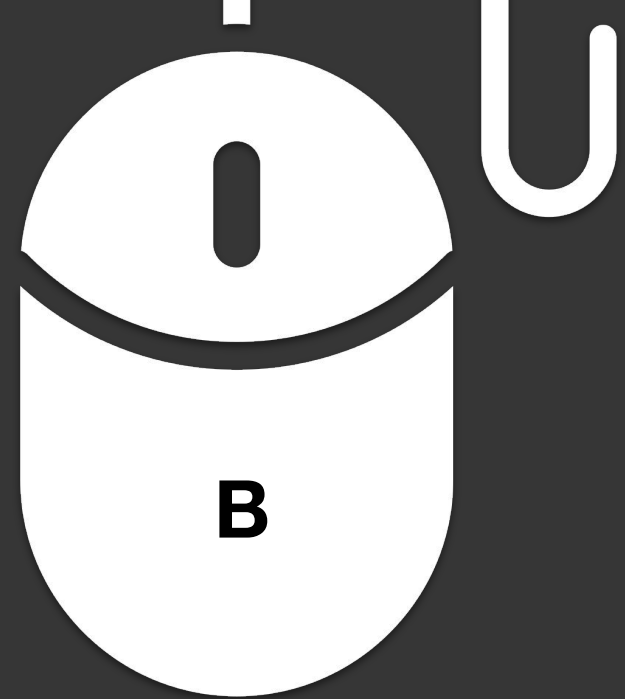
If replaced without reuse - highly inefficient



very efficient

low cost - same revenue - more sold - bigger footprint.

More disposed of - difficult to recycle



The answer bosses hate

It depends

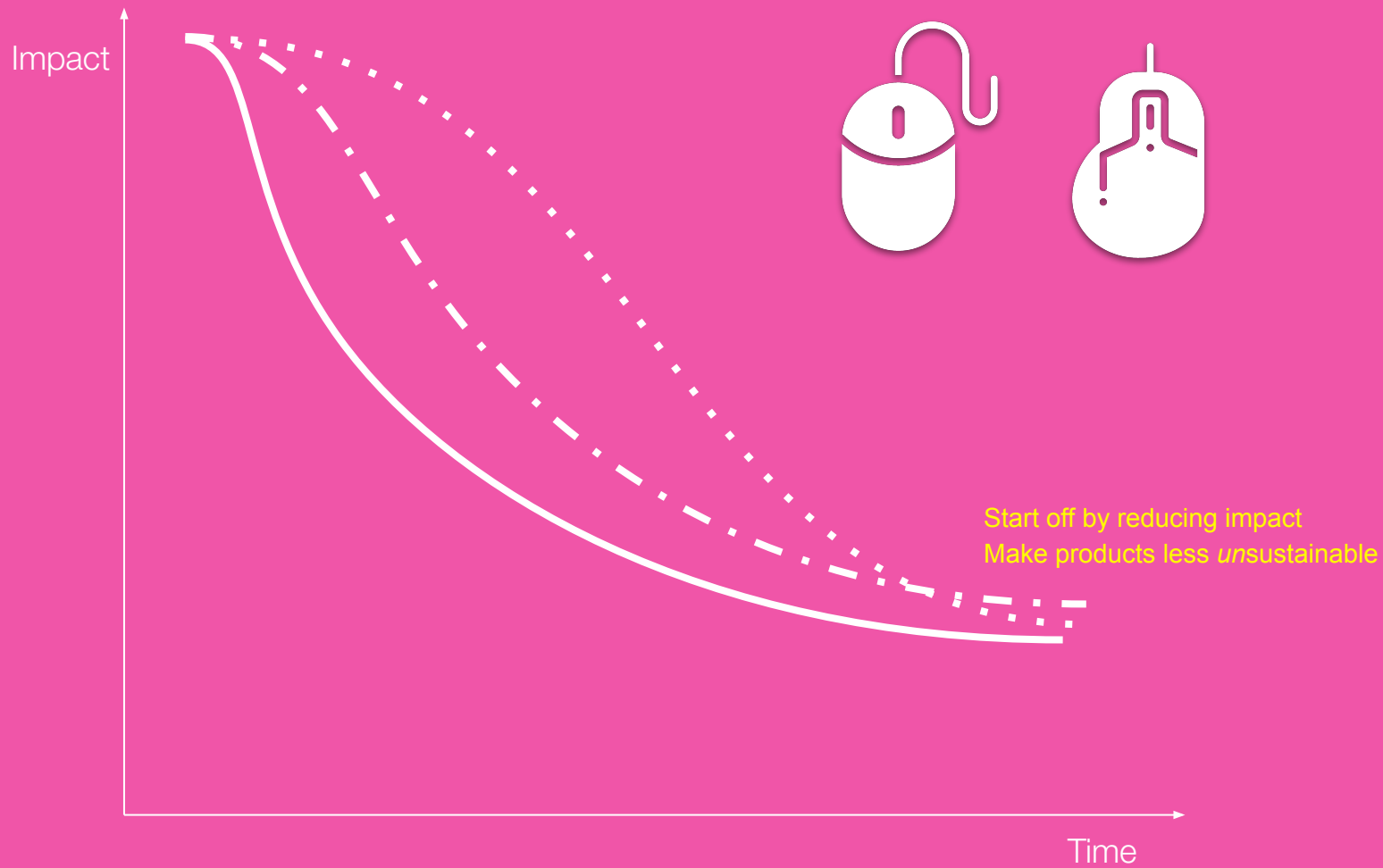
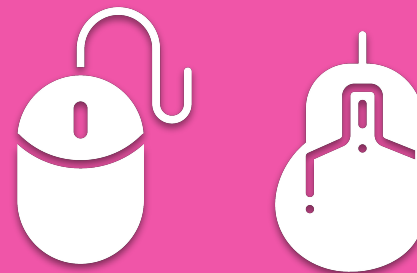
We need to be careful talking about sustainable consumer electronics products

Product System

Its an ethical framework



*“Meet the needs of the present  
without compromising  
the ability of future generations  
to meet their own needs.”*





# Logitech FY23 Sustainability Impact Report

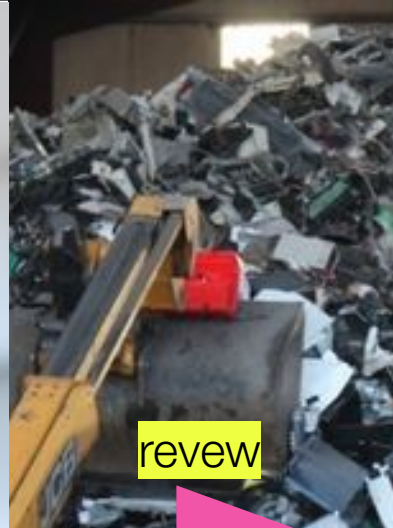
set targets and track progress transparently

13 x sustainability reports



We still want this

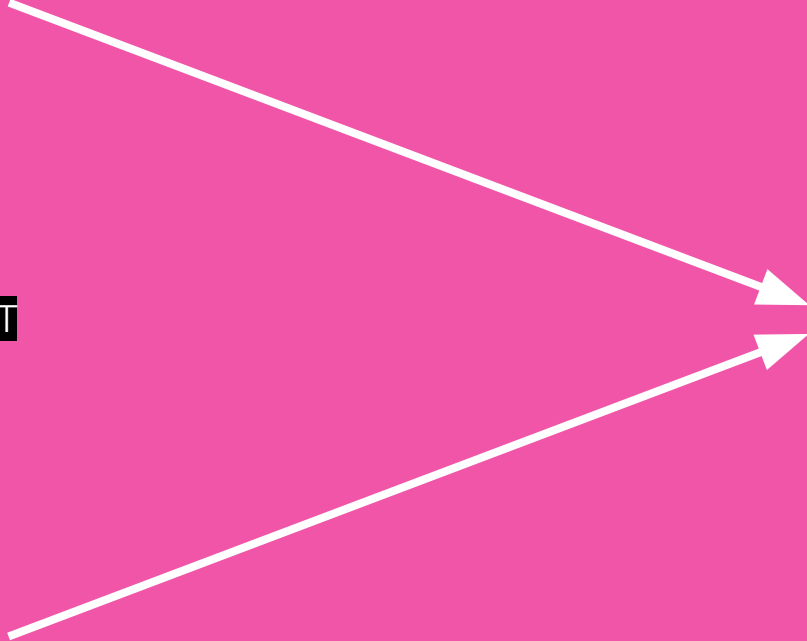
HELP ALL PEOPLE PURSUE THEIR PASSIONS...  
IN A WAY THAT IS GOOD FOR THE PLANET

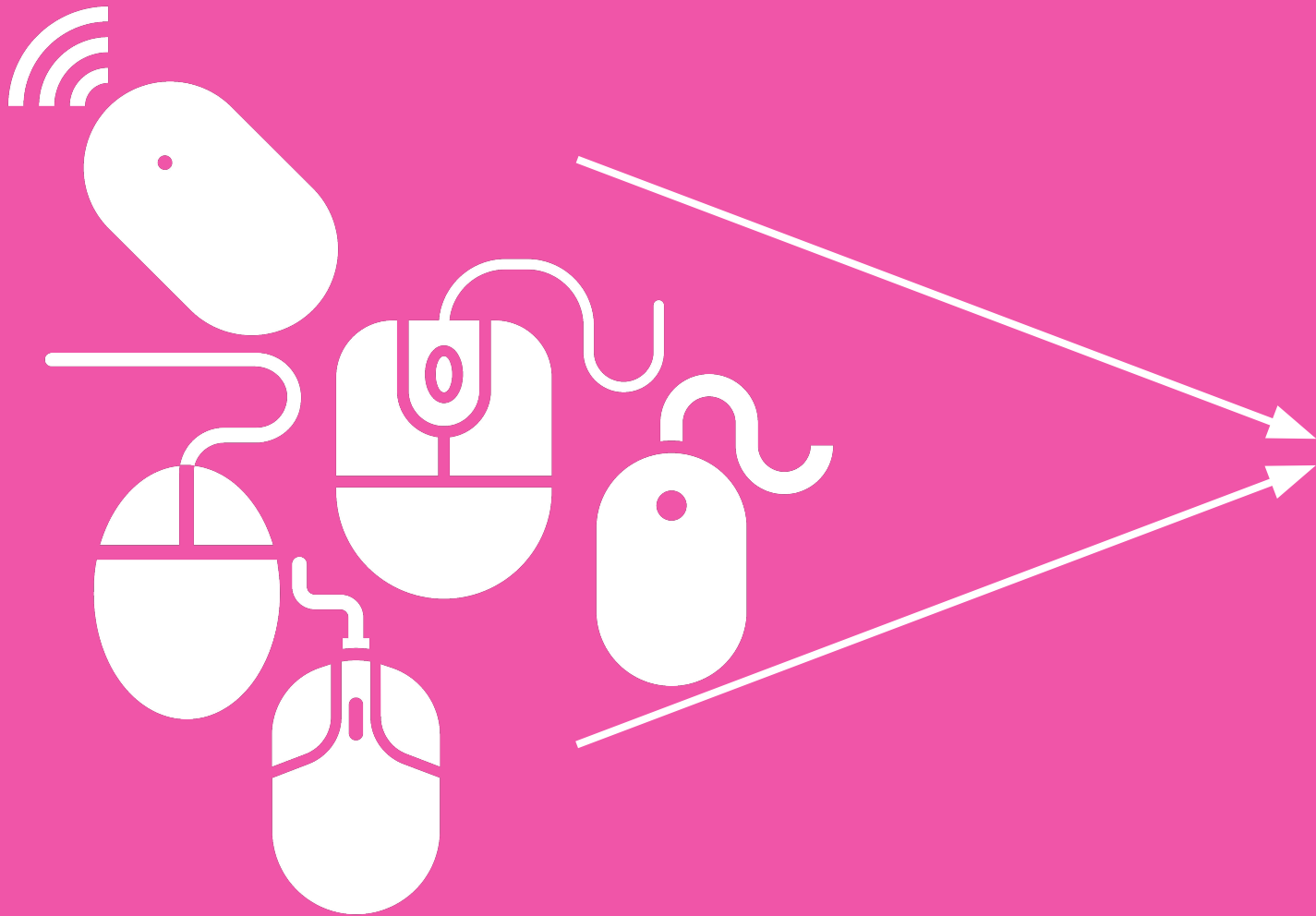


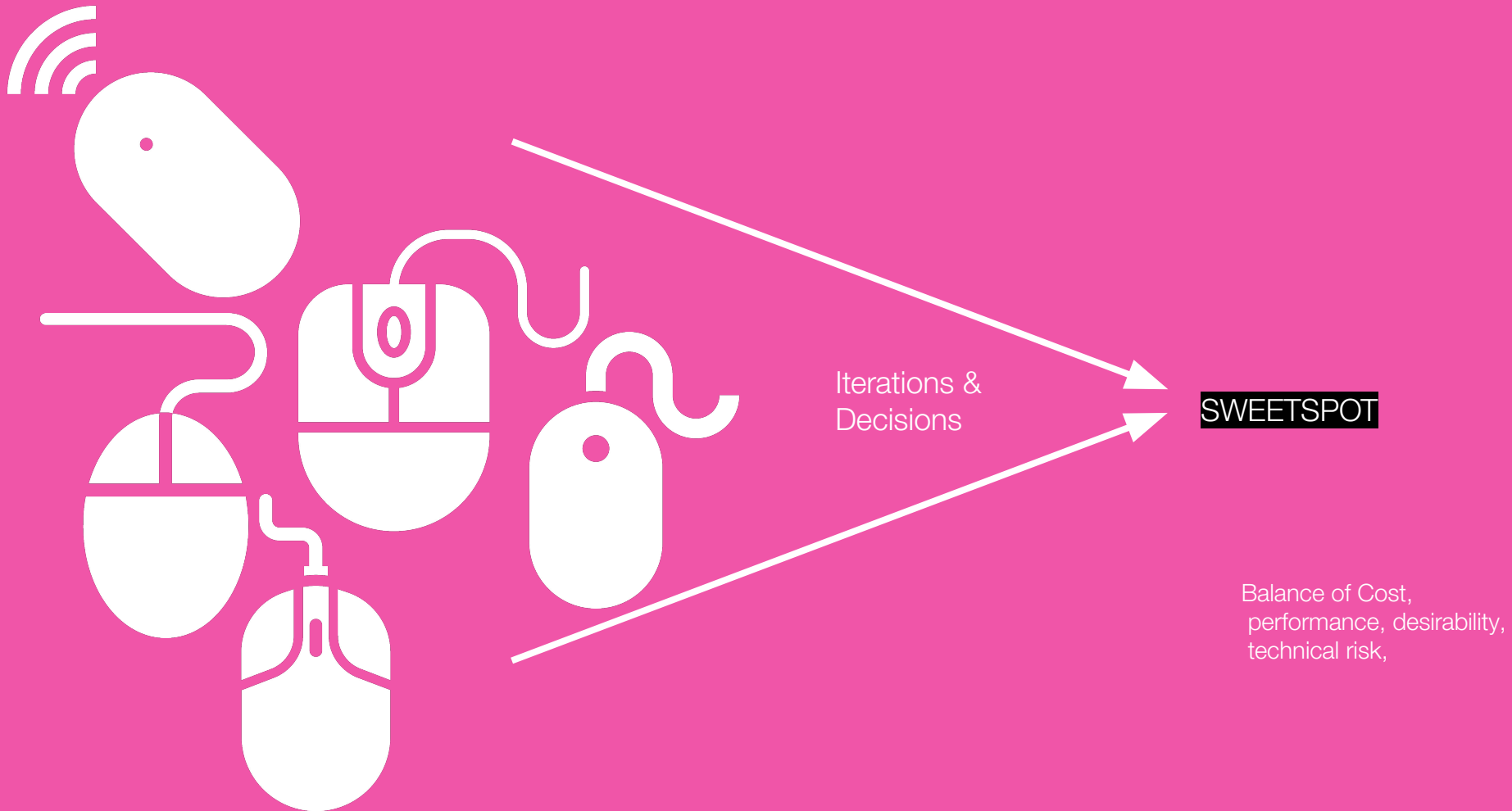
Any questions so far?.....

START

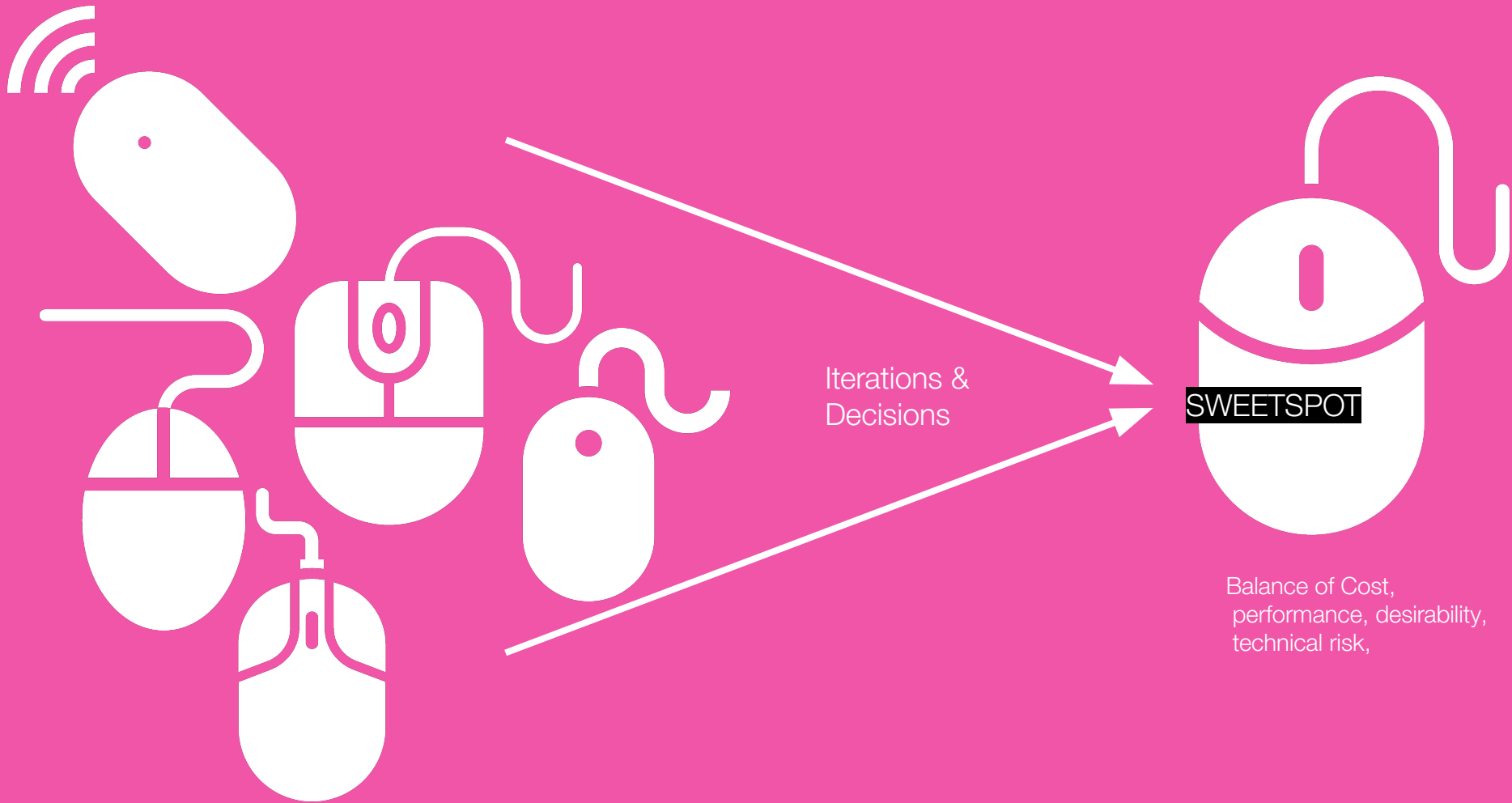
END



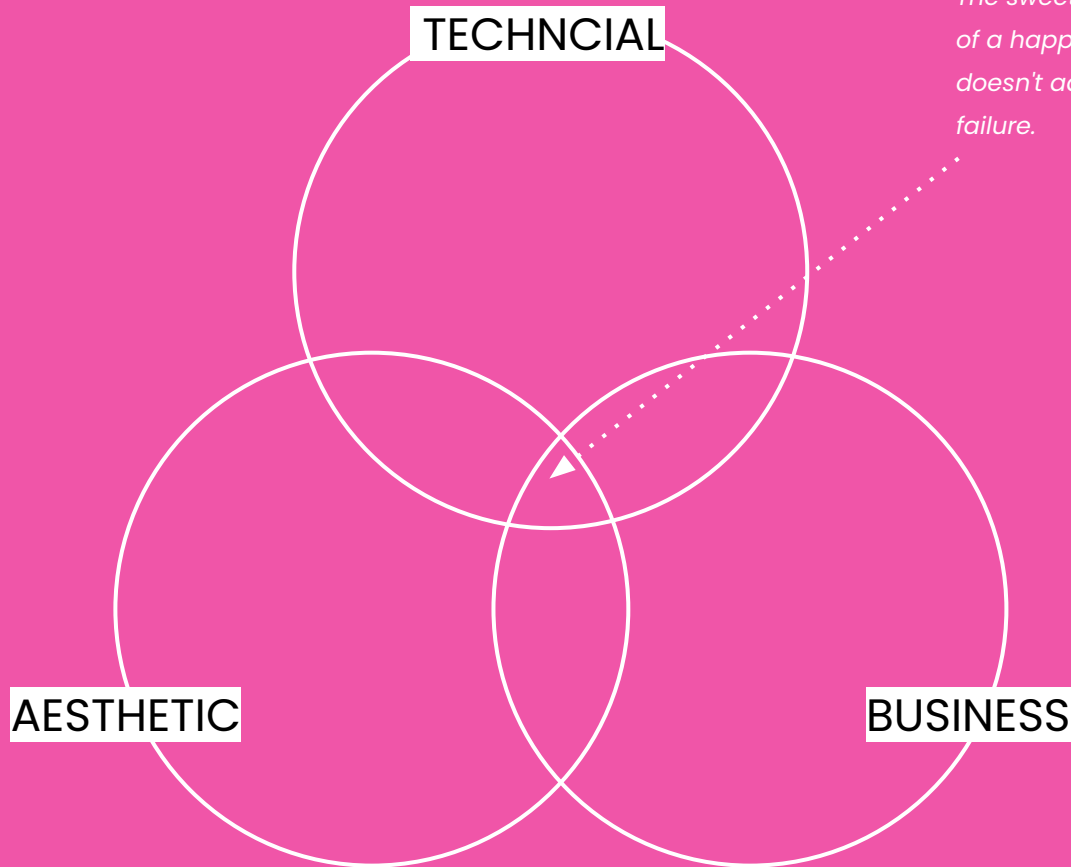




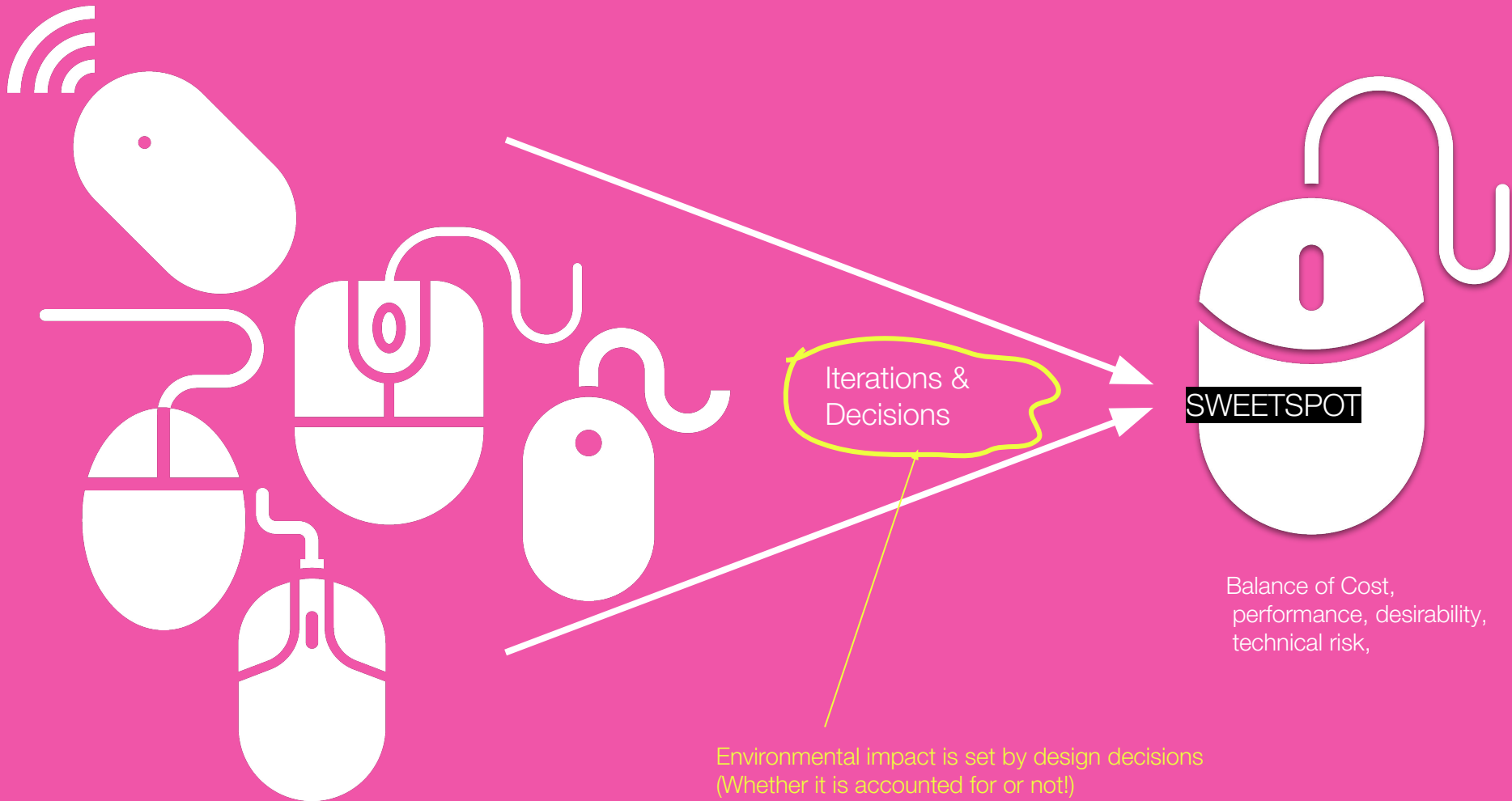


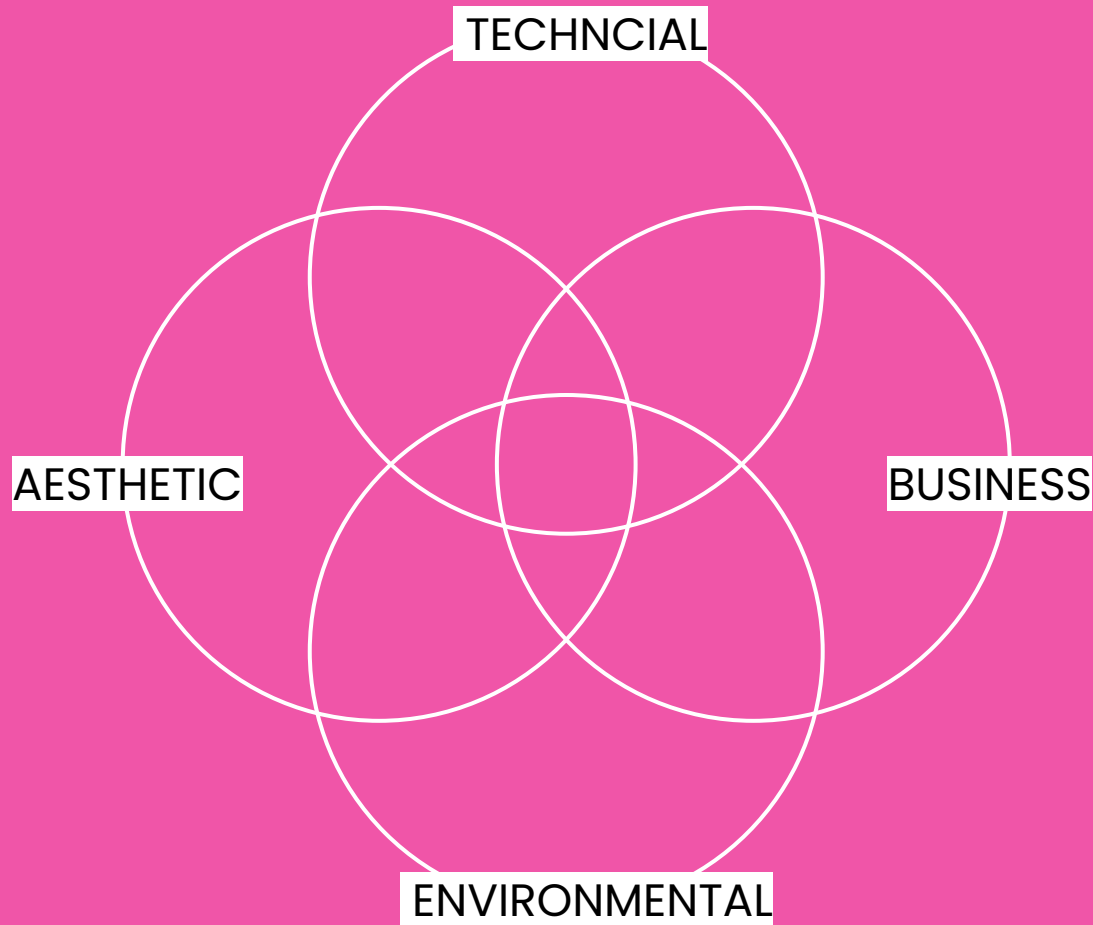






*The sweet spot is often represented by the idea of a happy user in the centre - if the product doesn't address user needs everything else is a failure.*





What are you actually doing when you design?





Recycling is more efficient than making new material,  
but it still produces CO<sub>2</sub>



The amount of CO<sub>2</sub> produced by using our products is very small



Shipping from the factory to the user  
is a major source of CO<sub>2</sub>



Most of our CO<sub>2</sub> comes from  
material sourcing and part manufacture

logitech

produces enough

CO<sub>2</sub>

to fill

this stairwell

every

13

seconds

...that is about the  
amount of time it  
will take you to get  
to the top...





Windows 95 4.00.05  
 Winsock version 1.10  
 Winsock 2.00.02  
 The network is not installed.  
 Registered  
 (32) ports open: 135, 136, 139, 445  
 10/10/1998 21:30:20

Duration:  
Survey (at) Survey site/other class  
0.10 hour (14-45 min)  
Survey (15)  
T-shirt (lighting) (15)  
No lighting (15)

Physical Specifications  
Height: 6'2" (188cm)  
Weight: 160lbs (72kg)  
Depth: 4'10" (147cm)  
Waist: 30" (76cm)

Spécialisation technique  
Méthode magique  
Système de direction  
Appareil à 4/5 et 6/6 pour les enfants  
Appareil à 6/6

240  
 Copier: 11.07  
 Twain file: 02-00000000  
 Sequence num: 100  
 Username: -4111

[illegible][illegible]

Crystallites: 15 nm  
Diameter: 20 nm  
Length: 10 nm  
Volume: 10<sup>3</sup> nm<sup>3</sup>



POWERPLAY<sup>®</sup>



For further info  
logitech.com  
Four plus d  
logitech



How do I design for sustainability ?

Make better design decisions!





## Indicators

Carbon

Toxicity

Circularity

Water

Social

Biodiversity

What are you actually doing when you design?

ID

CMF DESIGN

UX

CMF ENGINEERING

DfS

ME /OST

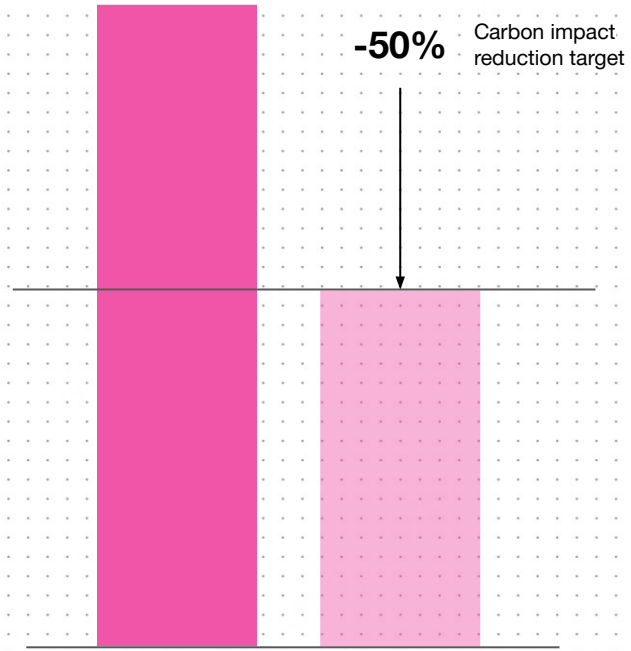
EE /AE

SOFTWARE

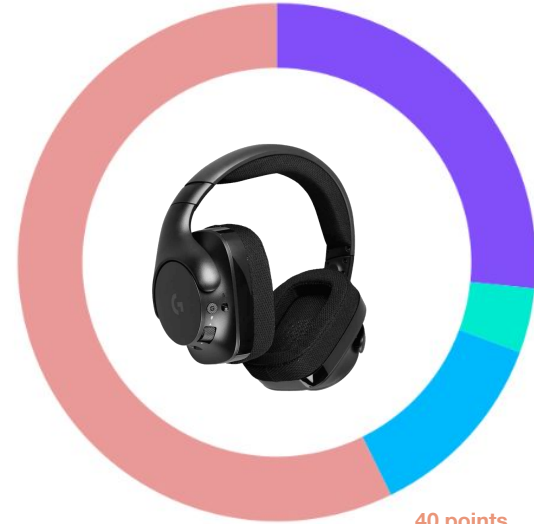
PACKAGING

MARKETING /CI

## CARBON



## CIRCULARITY



- Design for Longevity
- Design for Reuse
- Design for Recycling
- Remaining Circularity Potential



Impact estimate must be at least **50% lower** than the G553 baseline proxy model.



Must have a **Circularity Index** of at least **0.45**.

Setting targets

BETTER MATERIALS  
EFFICIENT DISTRIBUTION  
LOW IMPACT PACKAGING  
OPTIMISED ARCHITECTURE  
EFFICIENT MANUFACTURING  
LOW IMPACT COMPONENTS  
MINIMISE USE PHASE ENERGY

RECYCLABILITY  
RIGHT TO REPAIR  
CLOSE THE LOOP  
BEYOND HARDWARE  
PRODUCTS THAT LAST  
EMOTIONAL DURABILITY  
SOURCING TRANSPARENCY

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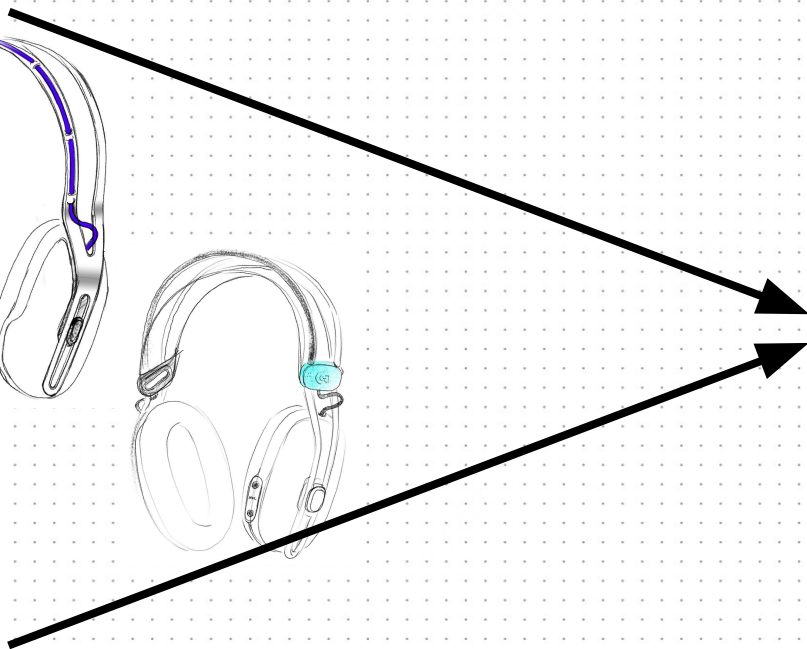
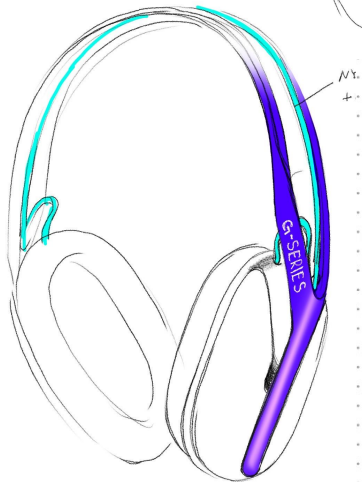
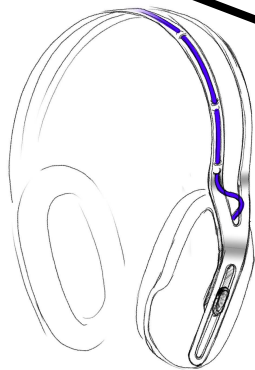
CLOSE THE LOOP

BEYOND HARDWARE

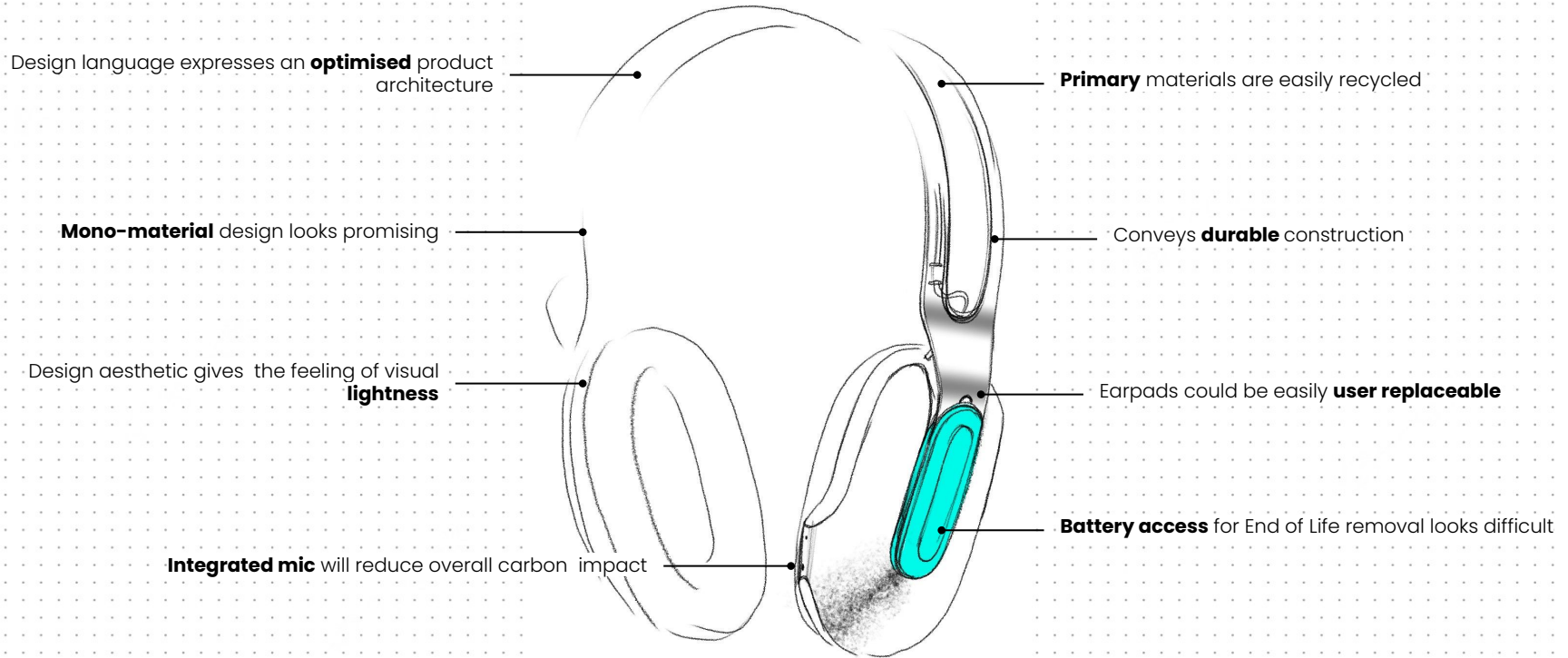
PRODUCTS THAT LAST

EMOTIONAL DURABILITY

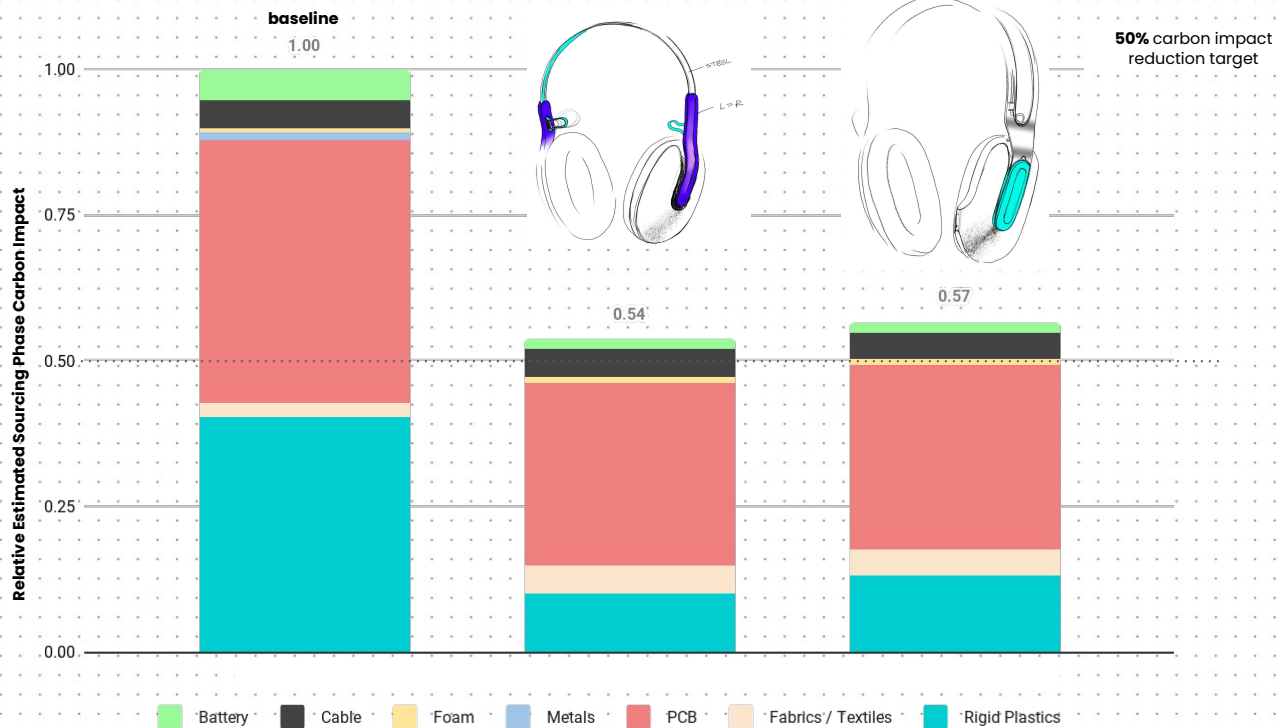
SOURCING TRANSPARENCY



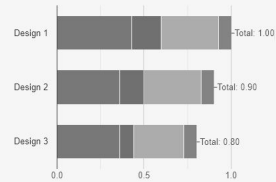




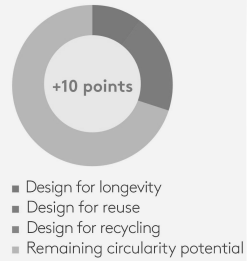




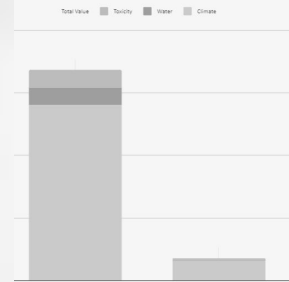
## CARBON IMPACT ASSESSMENT TOOL



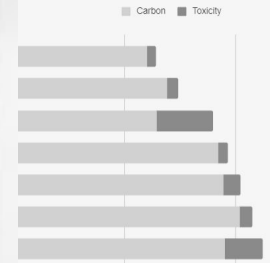
## CIRCULARITY ASSESSMENT TOOL

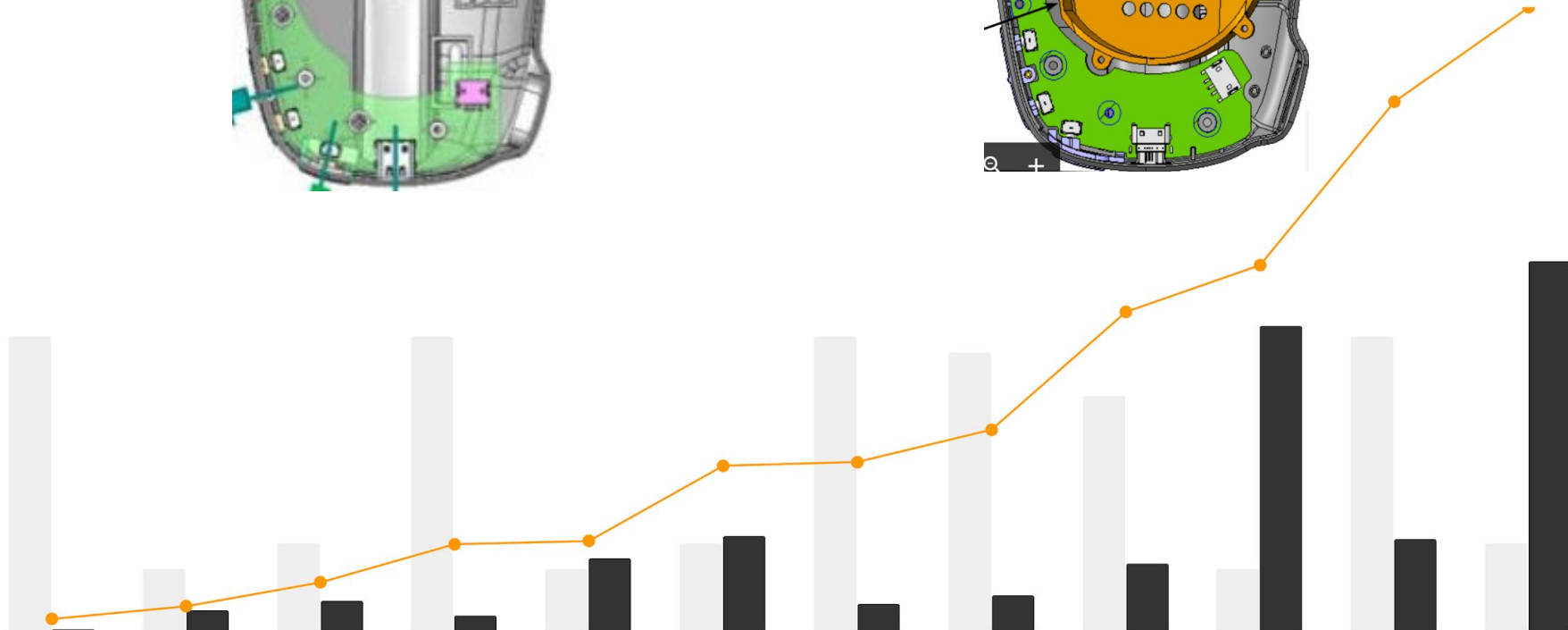
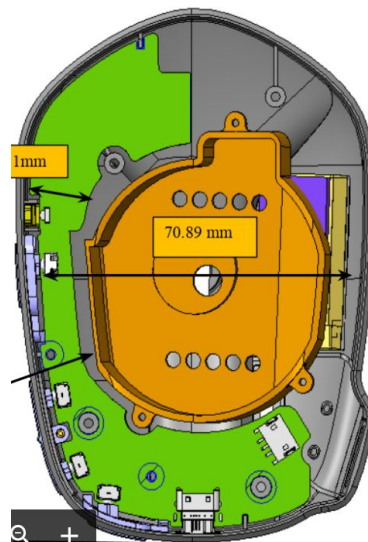
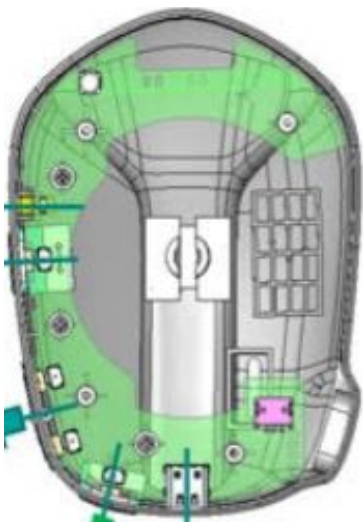


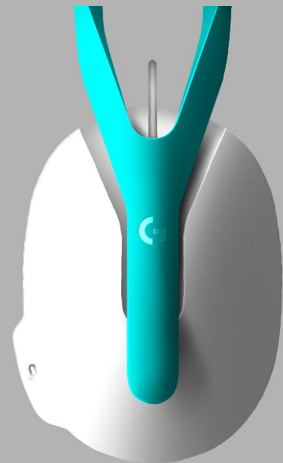
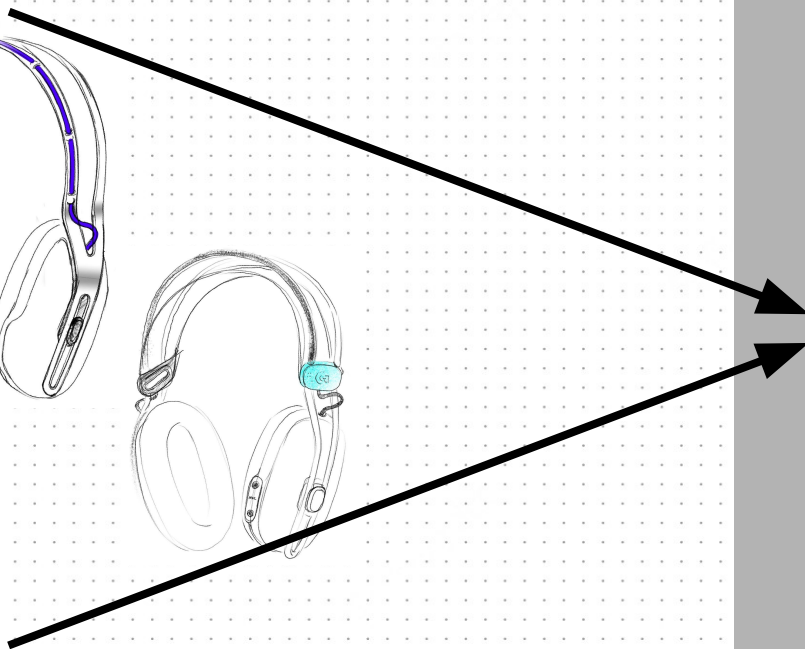
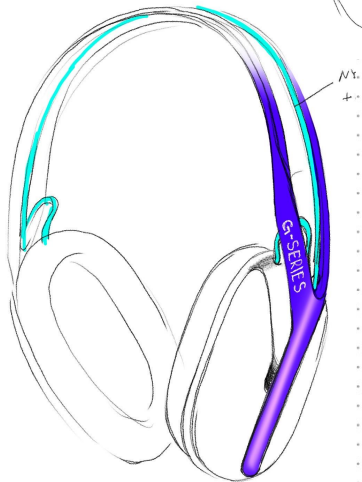
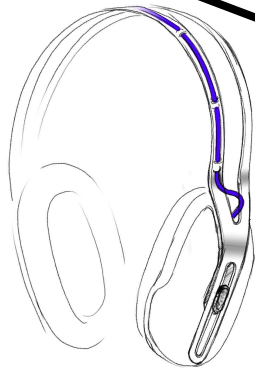
## PACKAGING ASSESSMENT TOOL



## MATERIAL IMPACT DATABASE







# 40%

Lower carbon impact than  
Carmen (G533)



# >240 tCO<sub>2</sub>e

Reduction per 100,000 units sold

### **OPTIMISED ARCHITECTURE**

lightest ever gaming headset (at the time of launch), using less material and fewer components than almost any other Logitech headset. This 'optimised architecture' approach is central to the G435's significantly reduced carbon footprint compared to the G533. The reduced weight also helps to ensure a more comfortable gaming experience for the user.





**BETTER MATERIALS**

The G435 is built using recycled materials wherever possible, helping to significantly reduce the product's carbon footprint and giving the materials of older consumer electronics a second life. The G435 uses a minimum of 22% certified post-consumer recycled plastic by weight, leading to the avoidance of an estimated 8 tCO<sub>2</sub>e per 100,000 units (compared to the use of virgin ABS plastic).



**LOWER IMPACT COMPONENTS**

**EFFICIENT PCB DESIGN**

The earcup of the G345 has been designed to ensure that less material is wasted in the production of the product's printed circuit board.

**VIRTUAL BOOM ARM**

The G345 features built-in dual beamforming mics with several benefits over a traditional boom mic including reduced weight, improved reliability and reduced material consumption of both product and packaging.





**RECYCLABILITY**

The G435 is built using fewer *types* of materials and fewer different components than other headsets, significantly improving the end-of-life recyclability of the product compared to the G533



**LOW IMPACT PACKAGING**

The G435's packaging has been designed to minimise weight by reducing the overall size of the box and by printing the user manual directly on the box to save paper.



**POSITIVE CONTRIBUTION**

**BRILLE MARKINGS**

The G435 features braille markings to indicate left and right ear cup.

**INCLUSIVE HEADBAND FIT**

The headband design of the G435 has been designed for the widest possible range of head sizes.



