

## Design Process – Dyson

What is involved in the journey towards the finished Dyson product that you can find for sale in the shops?

The Dyson team work through a series of steps: Specify, Plan, Design, Build, Test, Analyse.

All of their products start with a problem, for example, a vacuum cleaner that loses suction, or an unhygienic hand dryer.

### Specify

<b>Aesthetics</b>	What will the product look, feel or sound like?
<b>Cost</b>	What is the estimated manufacturing cost of the, and how much will it be sold for?
<b>Customer</b>	Who is product aimed at?
<b>Environment</b>	What impact does this product have on the environment?
<b>Safety</b>	Is the product safe?
<b>Size</b>	Are the proportions of the product appropriate?
<b>Function</b>	Does the product work well - and is it easy to use?
<b>Materials</b>	What is the product made from, and what does this mean for manufacturing?

You can remember this with the acronym “ACCESS FM”.

### Plan

Each Dyson project has milestones to keep the engineers on track

### Build

<https://www.youtube.com/watch?v=2pwIU-wGF9I>

### Design

James Dyson took 5,127 prototypes to get his first cyclonic vacuum. The engineers work in teams and they go from brainstorming to sketching out ideas - every idea is recorded.

### Test

The testing is what makes or breaks a product. They do so many tests to make sure that the product lasts.

The process of test, redesign, rebuild and test again will happen many times.

<https://www.youtube.com/watch?v=aF9ON-eAYMU>

### Analyse

When a final design has been decided, it goes on to be manufactured for the first time. This manufacturing run is called EB1 (Engineering Build 1) and will go through many tests to make sure that all the materials and moulding work meet design specifications. At this stage, engineers can face some tough challenges when a product fails in some areas.

