

Making Data delicious with 3D printing, FormBox and chocolate



Small Multiples Case Study

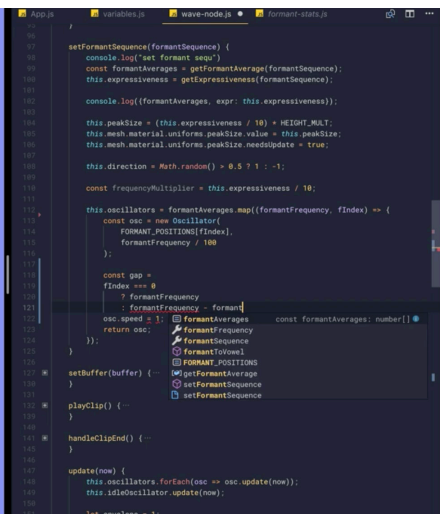
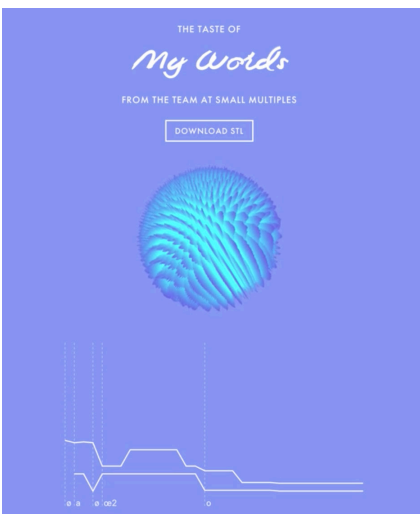
- Up to **6 month reduction** in prototyping time
- **£2.7k saved** per project

Introduction

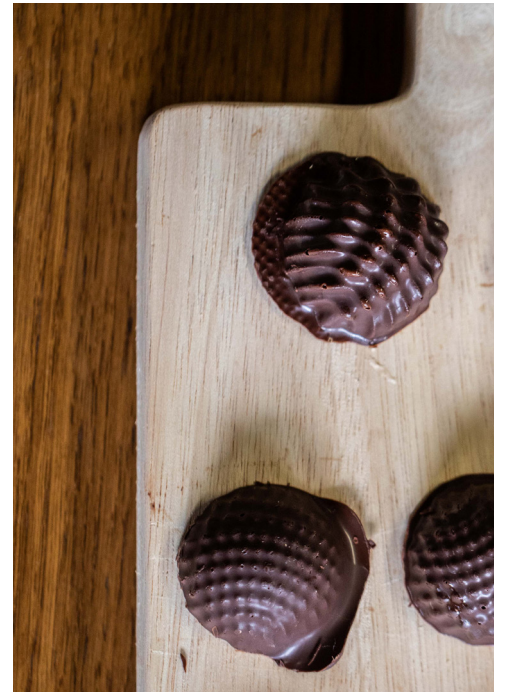
[Small Multiples](#) is a data visualisation agency based in Sydney, Australia. It works with corporate and government clients to make data more understandable to people through design.

When not working with clients, the team at Small Multiples takes on side projects intended to push the boundaries of the data visualisation field. These range from working with Sydney Design Festival to collaborating with local chocolatiers — bringing a new sensory dimension to the world of data.

One of these projects “The Taste of my Words” involves translating the sound of a user’s voice into a 3D volumetric form which is then 3D printed, formed with the FormBox and cast into edible chocolates.



“The FormBox enabled us to turn our 3D printed data visualisations into food safe chocolate molds in next to no time.” — [Small Multiples](#)



Challenges

Time

Getting Polycarbonate molds made is a very time consuming process. Small Multiples is based in Sydney, Australia and the company that makes its Polycarbonate chocolate molds is in Belgium. Not only is the time difference an issue in the design phase, but the actual lead time of making the chocolate mold can be anywhere between three to six months, massively impacting the development time of a project. As an agency working to tight deadlines, speed to execution is vital.

Traditional mold making is expensive

Getting a polycarbonate mold made in Belgium is very costly. It is also difficult to create an initial prototype before seeing the final molded form, making mistakes time and cost sensitive.

Minimum order quantities

Each new mold requires a minimum order quantity. Therefore you need to be making a significant number of chocolates in order to justify getting your own set of polycarbonate molds.



Solutions

Time

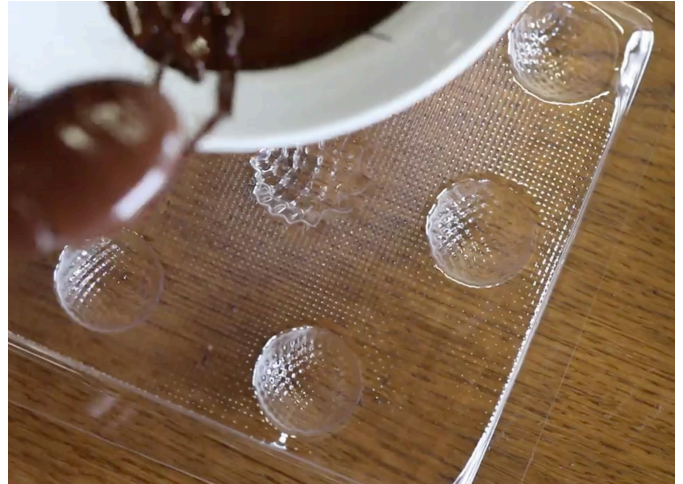
Using a combination of 3D printing and the Mayku FormBox allowed Small Multiples to go from initial idea to castable mold in a matter of hours, rather than months. This rapidly reduced the R+D phase and got them to proof of concept much quicker.

Expense

At £1 per mold, the financial saving of using the FormBox vastly outweighed the option of getting a mold made for over £3,000.

No minimum order quantities

Small Multiples did not want to make thousands of units without testing them first. Instead of investing large sums in Polycarbonate molds and making thousands of final units, the FormBox enabled the company to initially test its designs in small batches of 20-30.



Results

1. Mold making time reduced from six months to a few days
2. Significantly reduced financial expenditure
3. Reduction of waste incurred producing units in smaller batches first

Cost Comparison

	External Vendor	Mayku FormBox
Setup cost	£3.5k per project	£599
Part cost	£3.5k	£1
Prototyping time	3-6 months	1.5 days

