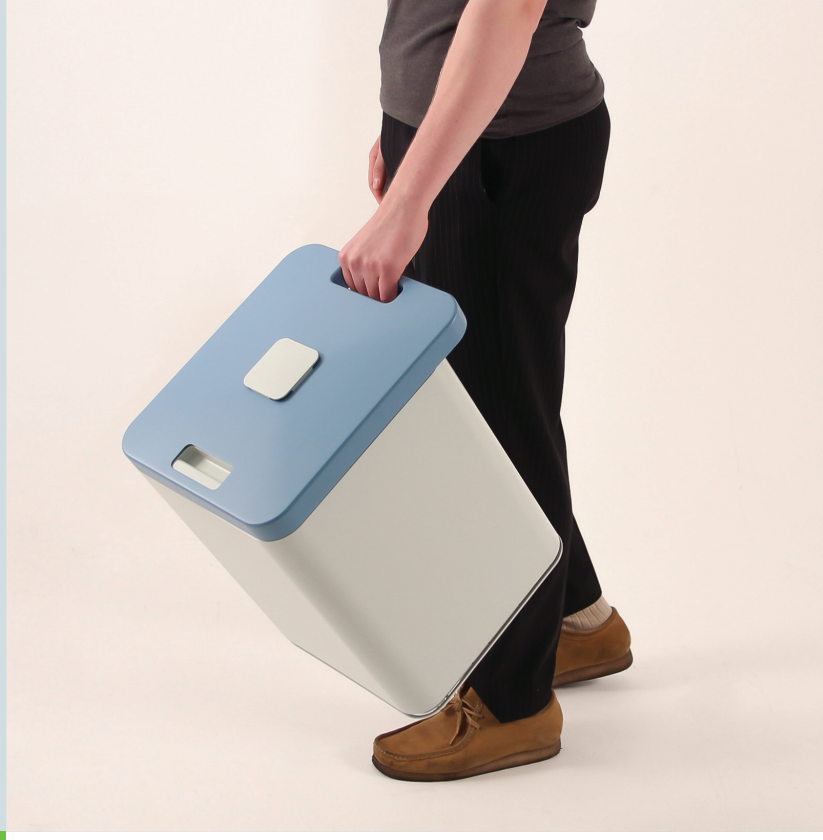
Intelligent Food Waste Container



Case Study

Client: Daniel By Design
Sector: Renewables
Purpose: Gaining investment
Process: SLA, Paint and Finishing

In the UK, it is estimated that over eight million tonnes of food are wasted annually. This can occur through the supply chain, however, 85 per cent of food waste post-manufacture comes from households; this equates to £20 billion per year and an average of £810 per family per year.

ogle
models+prototypes

www.oglemodels.com
info@oglemodels.com
+44 (0)1462 682 661

The World Food Programme predict that by 2030 there will be 66 tonnes of food waste per second. The statistics are endless and all stress a very important message. As one third of the food produced globally is wasted, surely, it's time for change.

Daniel By Design is a start-up design consultancy that has created a series of waste management products to fight against this burgeoning issue.

Background

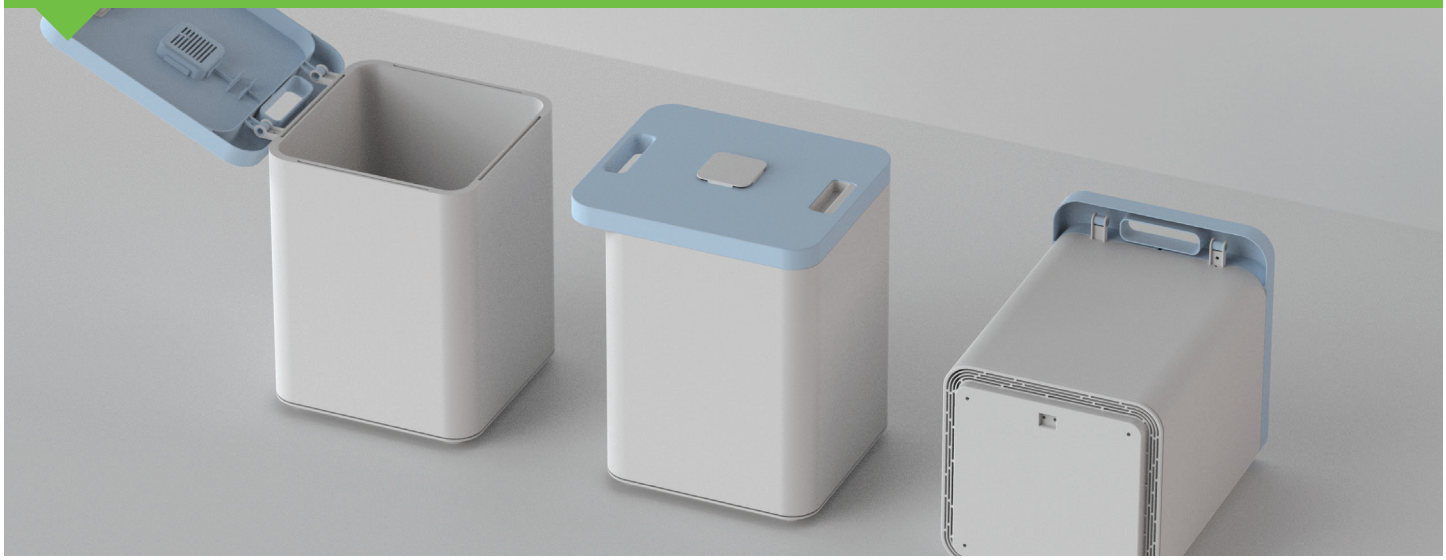
Daniel Lloyd is a product designer who graduated in Product Design Engineering from Liverpool John Moores University in 2017. Having taken part in the 'IDEALAB' incubator at Sensor City, Dan secured funding for his waste management project as part of an Out Bright Future programme, The Environment Now.

When the design was finalised, Dan approached Ogle to consult on, and complete the final semi-functional prototype.

The project

Daniel had designed a domestic waste system that works by using technology enabling four outside waste containers to report daily on volume and mass of waste. The purpose of the containers is to make council and private waste collections intelligent to reduce wastage overall. Home owners would also be encouraged to download an app to stay informed on their own wastage.

The bins are also set to feature ventilation units and carbon filters to ensure that, if the containers are not due to be collected for a month, odours are reduced.



The challenge

As a first-time design, Daniel was keen to use Ogle's consultation services, from the start of the project, to enhance the final part. This initially mean modifications to the CAD files to ensure, for example, wall thickness was modified to avoid breaking due to excessive deflecting under load.

The project required precise finishing as well as functionality within the lid movements, both within a tight timescale. However, working closely with Daniel, Ogle were able to work from preliminary CAD and renders to get ahead of the deadline to accurately advise on timescales and costs.

The solution

The entire project was built using the SLA Ipro 8000 as the bed size (650 x 750 x 550) allowed for all parts to be built at once, reducing lead times. SLA was also the preferred process due to the relative ease of finishing and the ability to print crisp lines and the specific features required for the project.

The skilled model making team at Ogle ensured a great surface finish by smoothing the surfaces ready for the paint process. As movement was required in the lid, the team had to be careful when rubbing down to maintain the crisp edges and make sure it was a good fit for assembled components.

From the client's RAL reference, Ogle's paint team began the custom paint project by consulting on the colour references. It was important that the finishing looked exactly like the production part.

Conclusion

Following completion of the project, the innovative design start-up was invited to display the Food Waste Container at One Year In, New Designers 2018. And the project has continued to get significant interest from both public and private sector organisation.

For more information about Daniel By Design, visit www.danielbydesign.co.uk.

Daniel Lloyd, Managing Director at Daniel By Design, said: **"I'd been recommended to Ogle by a friend and looked at their work online; it's impressive. I then met Matt White and could see the quality of the samples he had. The team at Ogle were great.**

"They offered loads of support to a first-time designer who wanted to get to know everything. I'm working towards developing a company that specialises in sustainable and social-impact projects. Ogle were an exceptional first-time partner."

www.oglemodels.com | +44 (0)1462 682 661