

DOGBANE DESIGN LTD

THE BRIEF

Dogbane Design Ltd is a start-up engaged in industrial design for the circular economy. The company has focussed on the development of a CIVI-AID First Aid Kit - an intuitive and practical first aid kit to be deployed to civilians in the event of a humanitarian disaster. The kit will provide timely action, reducing response times for medical intervention.

Whilst Dogbane Design had developed an initial 3D CAD file for CIVI-AID, the company required 3D printing capabilities to produce a prototype. Without a prototype, the company could not progress with customer engagement and assess manufacturing options.

THE APPROACH

Advanced Manufacturing Engineers at STFC's Campus Technology Hub worked collaboratively with Dogbane Design to understand how different components in the design would need to perform and how the product would be used.

Initial prototypes were produced and then the team worked with the designers to improve operation and strength in specific areas. The CAD was optimized for production using additive manufacturing to enable a functional and durable prototype to be created at this early stage of product development. A section of the device was initially prototyped to enable Dogbane Design to assess how components would be stored internally. This led to design changes which ultimately improved the performance of the prototype.

The team in STFC's Campus Technology Hub then prototyped a complete version of the design using a range of additive manufacturing processes to achieve specific mechanical properties for individual parts within the assembly.

THE BENEFITS

Dogbane Design were able to access a range of prototyping equipment which enabled them to have a working prototype for their design, and through the course of the project, they also identified a preferred process for volume manufacturing.

They have taken their new product forward from design concept to product testing and user engagement, moving a significant step closer to the final product design and production.

"C&W4.0 was crucial in securing funding for prototyping and product testing with the team at STFC Campus Technology Hub. This has been a great opportunity for Dogbane Design LTD. to form new relationships, and discover the range of advanced and helpful businesses in the area."

- Sean McCarthy, Director, Dogbane

