AIMS CASE STUDY

RADISOFT LTD
BOILER ANALYSIS IOT STARTUP

AIMS
Advancing Innovative Manufacturing in the south of Scotland

SOUTH of SCOTLAND ENTERPRISE

EUROPE & SCOTLAND
European Regional Development Fund
Investing in a Smart, Sustainable and Inclusive Future

Radisoft is an IoT startup based in Glasgow.
The sole Director, Scott Davidson, develops IoT Smart Sensors which can be implemented into all heating systems across the UK. The sensors monitor heating system performance, which allows Radisoft to help their clients to improve the energy efficiency of their heating systems. Radisoft assists their clients in decarbonising their systems, which enables them to achieve their net zero targets.

PROJECT OVERVIEW

MICROCONTROLLER HOUSING

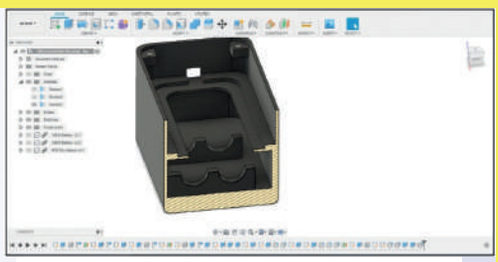
Scott came to us interested in how we could help his business in its initial stages. He had already sourced the sensors and was in need of a housing structure for the microcontroller (MC) that would process the data from the sensors. The processed data would then be accessible to the customer on a device that runs apps, for ease of use.

A design was needed that would hold the MC, and a power supply to run the MC and sensors. A physical prototype would also be needed for initial runs of the sensor service.

METHOD & APPROACH

CAD DESIGN

Measurements of the MC and power supply were used to inform the dimensional requirements for the housing. A rough design was created to field out any issues that may occur with the functionality of the structure, and a back-and-forth dialogue was created between Scott and AIMS to ensure that the MC housing would be exactly what Radisoft needed.



The housing was modelled in Autodesk Fusion 360. An overhanging shelf was envisioned for the MC, which would sit above the power supply. The power supply itself was given a cradle to sit beneath the MC, and specific locations along the shelf were chosen for gaps which would allow the cabling from the power supply to reach the MC without complications.

A port on the side of the structure was made so that any external devices could easily be connected to the MC without removal of the controller being necessary.

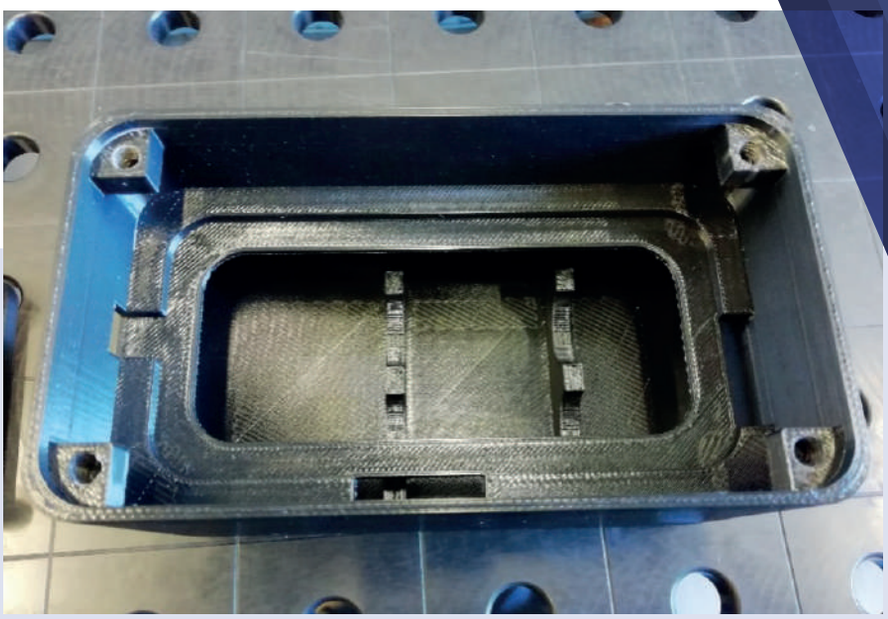
To add a personal touch to the housing, the intended name of this future product line was engraved onto the lid, as per the clients request. With the use of 3D printing, this engravement was built straight into the design so that no further operations would be necessary to achieve the engraving.

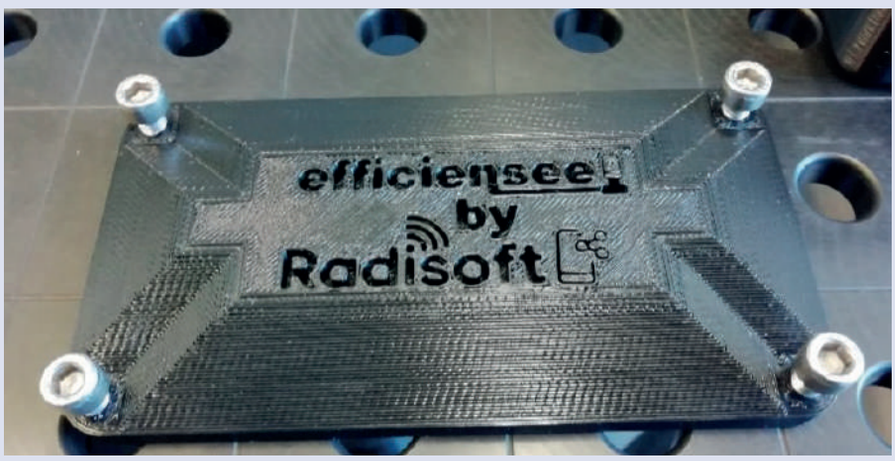
THE RESULTS

FINISHED HOUSING

After the parts had been removed from the printer, they required minimal post-processing to be made fit for purpose. The parts needed to undergo a cleaning treatment to remove any support material that had been built up within internal areas of the housing. The parts were placed in a solvent bath to achieve this.

The final post-processing step was to manually tap the 4 holes used to fasten the lid to the main body. Once tapped, the housing was ready for use by Radisoft.





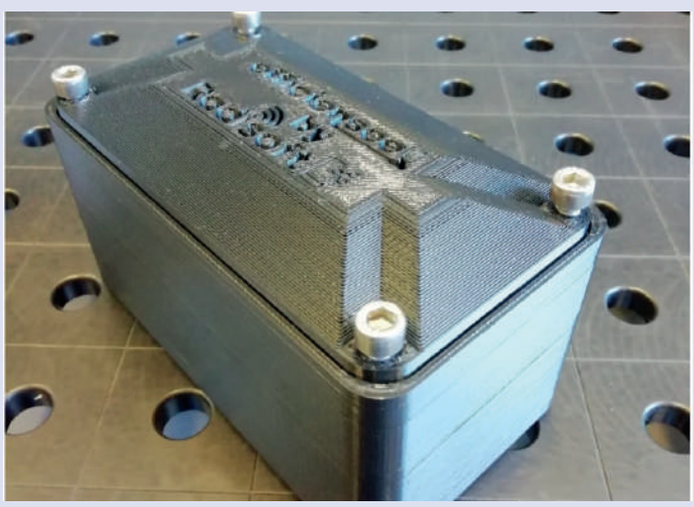
CLIENT TESTIMONIAL

SCOTT DAVIDSON
FOUNDER AND CEO
RADISOFT LTD

"The support from AIMS was a key part of our product development phase. Without this support Radisoft would have had to source the sensor housing development from another manufacturer which would have taken significant time and cost to Radisoft. AIMS has assisted Radisoft in a quick turnaround time."

OUTCOMES

The housing created for Radisoft was now able to be used as a working model, allowing the company to use it in live runs of the Efficiensee service. The support provided by AIMS allows Radisoft to prove out the benefits of their service before committing to batch production of their final product, saving on cost and time and eliminating potential risk factors for the company.



"The impact from AIMS has been fantastic. We me in D&G College where we all agreed on a project scope which was carried out much quicker than I expected. The quality of workmanship and experience from AIMS is excellent. I would use AIMS again in the near future for other support that will be required."

"I fully recommend AIMS to other innovators and businesses."

PROJECT PARTNERS

South of Scotland Enterprise · Skills Development Scotland · European Union gov.scot · Dumfries & Galloway Council · Scottish Borders Council · DGC Dumfries and Galloway College · Borders College · DGEM · Border Engineering Training Association