

## Helping Mimi to breathe!

A case example from Adaptive Engineering Solutions Ltd.

**As engineers, we usually only receive feedback about our work when things go wrong!**

So, it has been refreshing to find that we recently did make a real difference to a life through providing an adaptive engineering solution.

Adaptive Engineering Solutions Ltd were recently contacted by a gentleman whose dog has a unique medical issue with life and death implications. Bruno, the Founder of Dog Training for Humans, is the proud owner of Mimi, a Petit Basset Griffon Vendeen.

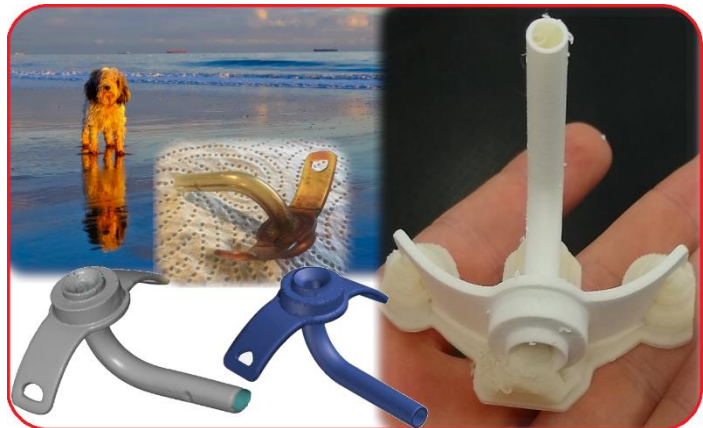
### Mimi's Troubles

After a traumatic birth, heart murmur and overbite she was then attacked by another dog at only five months old! The attack led to a punctured windpipe (trachea). Mimi survived against the odds, with MRSA and two throat operations.

At one point she was only given a 10% chance of living.

Her owner was as determined as she was to live a full life despite a permanent tracheostomy. This has left a six centimetres long hole in her neck which takes her 'tracky tube' and allows her to breathe. It requires cleaning 3 or 4 times a day!

There is always the fear that she could suffocate by falling asleep and covering the tracheostomy with a toy or bedding. Or she could pick up an infection from ingress of water, sand, wind or rain which might create a blockage preventing breathing.



### Life-saving Equipment

Bruno wanted to obtain more breathing tubes and contacted AES in the hope that we could help. His current tube had broken and was repaired with glue! He needed spares.

As dog owners ourselves, we were motivated to take on the project so Bruno and Mimi visited our offices. One of our engineers, Gordon Mucklow, was able to take a 3D scan of the 'old' breathing tube and create a CAD file ready for printing, all within 24 hours.

The Faculty of Technology at University of Portsmouth have provided a 3D printed sample for Bruno to trial with Mimi to refine the design. They also looked for a more suitable medical grade material from which to print the finalised parts.

### Successful Results

The 3D printed trachea tube has significantly improved Mimi's - quality of life and her life expectancy.

In her situation it is no overstatement that having a comfortable breathing aid is imperative. Bruno, her owner (a writer by night, dog trainer by day) is currently working on his new, inspirational book

about the adventures of this wondrous dog. He hopes to raise the interest of a mainstream publisher.

"It is indeed refreshing to meet a business that goes out of its way to help its customers. Mimi and I are extremely grateful for their assistance, and do not hesitate to recommend their services."

This project highlights our ability to diversify between huge, long-term engineering projects and smaller, more immediate high-impact activities like helping Mimi breathe!

Editor's note:

Adaptive Engineering Solutions Ltd. Started business in 2012, and were based in the Innovation Centre, in Newport, IOW. Supporting local businesses, as well as some more established international clients, with engineering analysis and design activities.

In 2015 they received Solent LEP grant funding to purchase 3D scanning equipment to support their engineering activities.

November 2019 saw the business move to premises on the outskirts of Newport to allow for their planned growth and dedicated scanning facilities.

High resolution images concerning this press release, and previous press releases, are available should they be required. Please don't hesitate to get in touch to request these.