

Exploring the impact that PAS 440 has on responsible innovation.

Working in industrial biotechnology with MiAlgae Ltd



In 2020, BSI published PAS 440 – a guide to responsible innovation. It helps companies structure their thinking and processes in respect of new products or services. The goal is to help ensure that the resulting innovation will benefit society with no adverse impacts. But we needed to know: does the PAS work?

To find out, Professor Joyce Tait suggested that two of her students could conduct research into PAS 440 for their MSc theses. Joyce is a co-Director at the Innogen Institute, a collaboration between the Open University and the University of Edinburgh that researches the implications of emerging technologies. She also teaches at the University of Edinburgh and is the technical author of PAS 440.

Alex Brown was one of Joyce's students who'd become very interested in responsible innovation. Her MSc research subsequently investigated the implementation of PAS 440 within an industrial biotechnology company called MiAlgae Ltd, which is developing an Omega-3 oil product from algae. The project was accepted into BSI's Student Research Programme and ran from June to August 2020. As Dan Barlow, Head of Innovation Policy at BSI, puts it: "We want to understand the real-world implications of standards, the operational impact and the costs of implementation."

The research project

Alex's research measured the benefits that a well-documented responsible innovation framework could yield. She concluded that use of PAS 440 could have substantial benefits for MiAlgae, including increased societal trust and improved relationships with stakeholders.

Throughout the project BSI held regular update meetings with Alex, making some useful introductions and connections for her. We also gave her help with her interview questions and gave feedback on her draft thesis.

The results

Alex was motivated by doing work with a real-world outcome. She also says she gained increasing confidence from the realization that, particularly with her degree in biology, she was bringing a unique perspective and making a contribution that was valued by BSI and the other key stakeholders.

Alex also learned a lot about SMEs, how they make certain decisions and the constraints they work under. Through the connection with BSI she gained a deeper understanding of the role standards can play. The association with us has also raised the profile of Alex's work, for example, resulting in her presenting her case study at BSI's Net Zero Week event in 2021.

For its part, BSI gained valuable insights that will inform the further development of PAS 440. We also got a fresh angle on the role we can play in helping smaller companies bridge the gulf between having an idea and getting it to market. Alex's verdict on the SRP is that it provided a great opportunity to forge useful connections and develop thinking that will be very useful in her future career.

About BSI's student research programme

BSI's Student Research Programme exists to match postgraduate students with a BSI research need. We gain valuable information about an area of interest to our standardization work, while the students benefit from business mentorship and the chance to gain knowledge and exposure that may increase their future employability.

"It was good to talk to BSI. They gave me suggestions and ideas. My thinking was challenged and it was good to gain experience dealing with relatively senior people."



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