

# CASE STUDY

## EMMA SAMUEL

### A STUDENT'S PERSPECTIVE



## INDUSTRY COLLABORATION

My journey to the KESS 2 PhD Scholarship proceeded my studies in Environmental Health as an undergraduate, where my passion for food safety and behaviour change was sparked. The scholarship was an opportunity to not only work with the academic expertise at the ZERO2FIVE Food Industry Centre based at Cardiff Metropolitan University, but also the technical functions of an operational food manufacturing and processing business.

KESS 2 projects immerse the student in the business for the entire project duration, which for me, has meant developing a new skill set in an industry I had no prior experience of, and enabled first-hand experience of a range of complex food safety management systems in real time. By working collaboratively between academia and the business, the studentship ensures that the KESS 2 projects provide the business with a bespoke solution to an operational problem that is designed to be sustainable beyond the lifetime of the project.

Food businesses have a duty to assure the food they prepare for people to consume is safe. One of the simplest and most effective ways to achieve this is by maintaining excellent hand hygiene practices during food production. However, research indicates that, for a host of reasons, food handler hand hygiene compliance in the food sector is poor, and so there is a need to understand more about what triggers and influences successful hand washing action. For food manufacturing in particular, where product output and distribution is potentially greater than in independent food business operations, excellent hand hygiene standards are key to protecting consumer health.

How food safety culture impacts food safety behaviours – such as hand hygiene – is a subject field still in its infancy and the robust design, implementation and evaluation of intervention effectiveness is key to progressing this particular field of science. In my PhD research, entitled “Assessing hand hygiene compliance and food safety culture in food manufacturing”, I’m using a range of research methods, including in-depth management interviews, environmental microbiological assessments, intensive behavioural observations, an all staff survey and a review of company procedures and protocol to indicate the level of hand hygiene compliance and maturity of the food safety culture at the business.

To support the project design, the KESS 2 scholarship has facilitated access to a range of training opportunities at the University, through the KESS 2 programme directly as well as with reputable external sources. Notably, the residential KESS 2 graduate school is one training aspect that students participate in on their PhD journey which helps to build skills necessary to navigate the business and academic relationship successfully. Participating in training opportunities such as these not only continues my development, but also ensures that my project design going forward is credible and will culminate in a postgraduate skills development award at the end of the project.

For me, the KESS 2 projects epitomise the Sustainable Development principle of the Well-being of Future Generations (Wales) Act 2015 in that they are designed as innovative partnerships which are working towards long-term, positive changes for our communities in Wales. I am fortunate to be part of such a novel approach to higher academic learning and the opportunities it has afforded me so far; and I hope – the ones it will be building for my future career.

# IMPACT



The food safety culture of an organisation (e.g. those characteristics that are intangible like values, attitudes, food safety expectations, group dynamics and integrity) is known to shape and direct behaviour in work situations. This project therefore seeks to establish current hand hygiene compliance in a multi-site food manufacturing and processing business alongside an analysis of the food safety culture dimensions thought to be influencing the same. The findings will be used to inform the design - and subsequent implementation - of hand hygiene interventions that are developed to meet the business' specific needs. Evaluating effectiveness post intervention will not only benefit the business greatly but also progress this novel research field.

## EMMA'S HIGHLIGHTS:

As a result of my KESS 2 project I have so far...

Joined the ZERO2FIVE Food Industry Centre Food Safety Culture Research team who are exploring food safety culture on many different platforms (from a small business perspectives right through to regulatory aspects);

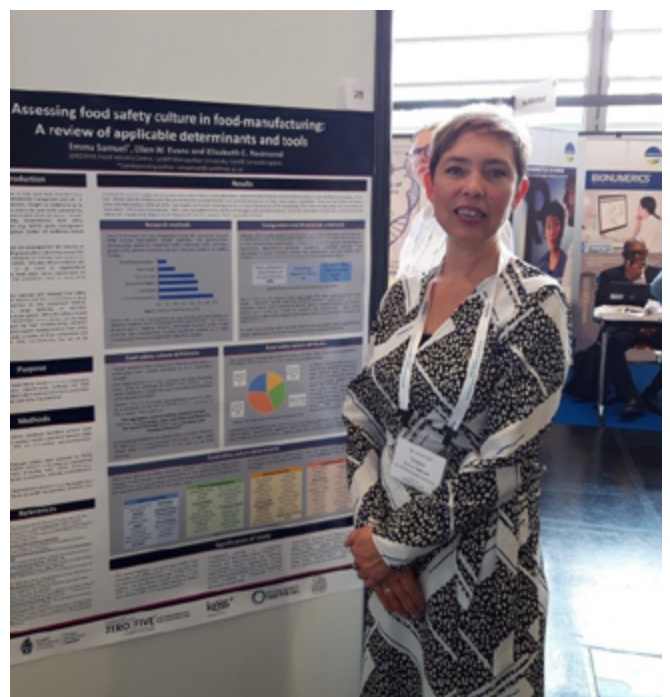
Become a member of the SALUS Food Safety Culture Science Group which brings international experts from industry and academia together to work on progressing food safety culture through science and best-practice;

Represented the ZERO2FIVE Food Industry Centre at Campden BRI's Culture Excellence Seminar in December 2019, gave a presentation about my project to a large audience of food industry professionals and wrote a review of the programme which formed part of their White Paper series on food safety culture;

Been invited to present some early findings from my research to food industry professionals, regulators and academics from all over the world in a virtual webinar organised by the International Association for Food Protection during the COVID-19 lockdown;

Worked with my academic supervisory team as a co-contributor to three academic manuscripts; one of which has been accepted for publication and two of which are being prepared for submission. Personally, this has been a really important part of my PhD learning process; invaluable, informative and for me, an incredibly proud achievement.

*KESS 2 scholarships offer students countless opportunities that would otherwise be inaccessible. Personally, I think the KESS 2 scholarships give doctoral students the edge - and a glimpse at a potentially very bright and promising future!*



(Above) In April 2019 Emma attended a food science symposia in France, the International Association for Food Protection European Symposium, to present two of her research posters.

Knowledge Economy Skills Scholarships (KESS 2) is a pan-Wales higher-level skills initiative led by Bangor University on behalf of the HE sector in Wales. It is part-funded by the Welsh Government's European Social Fund (ESF) convergence programme for West Wales and the Valleys. For further information about how your organisation could benefit from participating in KESS 2, please contact the KESS 2 Central team at Bangor at: [kess2@bangor.ac.uk](mailto:kess2@bangor.ac.uk)



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Food Industry Centre  
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**ZERO2FIVE** Food & Drink Research Unit  
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