Creating a step-change in dairy cattle innovation through collaboration

Kingshay are a research-based consultancy that support a large number (>2,000) of dairy farmers in the UK. With KTN help they have established new cross sector collaborations to substantially boost their innovation capacity, and strengthen their business.

KTN introduced Kingshay to the Centre for Machine Vision in the Bristol Robotics Lab (BRL) and supported a successful Innovate UK funding application for a £700k project to develop a new 3D imaging technology and web-based management tool to accurately monitor body condition, mobility and live weight in dairy cows. The new partnership was further strengthened through Kingshay collaborating in linked PhD and Masters projects with BRL. The collaboration has led to cutting edge ‘machine vision’ imaging technology (more routinely used in other industries, such as defence) to be used in agricultural innovation.

Once fully developed, Kingshay anticipate the potential for multi-million pound sales for the technology, whilst opening up new market opportunities, and providing opportunity for economic and employment growth.

The need

Effective monitoring of the health and welfare of cows is a key component of successful dairy herd management. Traditionally, monitoring has been largely based on visual inspections by farm staff, which has a high labour and training requirement. Failure to do so effectively can also have a high economic and welfare cost, with lameness alone estimated to cost UK dairy farming over £54 million/annum.

Kingshay had identified a market opportunity for an unobtrusive measurement and decision support tool for cow condition and lameness monitoring in dairy cattle that could reduce costs whilst boosting health, welfare and productivity. They were looking to develop an automated technology solution, but did not have the full range of technical skills to develop this ‘in-house’, and turned to the KTN for help.

The results

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Step-change in innovation

Following on from the success of their first project, Kingshay have capitalised on other opportunities, to further boost their innovation capacity.

KTN subsequently helped Kingshay to join another consortium that were successful in gaining Innovate UK funding for a £2.2m project to develop sensor-based technology that also measures cow health and welfare.

KTN also assisted Kingshay to become a key partner in a consortium that has successfully obtained £17.7 million government funding to establish a new Agricultural Engineering Precision Innovation Centre. Kingshay are one of six core partners, with a further 69 companies supporting the Centre, including farmers, processors,
supermarkets and technology businesses, further strengthening innovation and business opportunities for Kingshay. As part of this consortium, Kingshay is developing a state of the art dairy unit using current and emerging technologies to exploit the welfare and economic benefits of combining robotic milking with precision grazing management.

**Kingshay join Origin group**

In addition to all their new projects and collaborative activity, Kingshay also became part of the Origin group in October 2015. The Origin group also includes some of the UK’s leading farm veterinary businesses, and offers new synergistic opportunities and areas for growth for Kingshay and other group members.

**New sector benefits for Bristol Robotics Lab**

Prior to working with Kingshay, BRL had not worked with companies in the Agriculture sector. The introduction by KTN and the success of the collaboration, as well as additional interaction with KTN, has helped them identify new opportunities, and has since led to a number of other collaborations being developed.

“The team at KTN have been incredibly helpful to our business. David Telford took the trouble to understand our business and used his wide network of contacts to hook us up with some very talented guys at BRL. Without KTN, there’s no way we would have made the connection. It has been a real game changer for our business, opening doors to some very exciting new opportunities.”

- Duncan Forbes, Managing Director, Kingshay

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