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CURRENT TRL
& TARGET TRL

**ANIMAL
WELFARE**

IMPROVED

**PRODUCTION
EFFICIENCY**

INCREASED

ENGAGEMENT

GROWTH OF
YOUNG FARMER
ENGAGEMENT

2.3 UNIVERSITY OF STRATHCLYDE

This Use Case aims to implement, validate and showcase the use of real-time data primarily derived from a neck mounted collar together with other relevant data to create information of value to the dairy supply chain from 'grass to glass'. This will result in more efficient use of resources and production of quality foods, combined with a better animal health, welfare and environment implementation. The focus is on feeding and reproduction of cows through early warning systems and quality data that can be used for remote calibration and validation of sensors.



The platform has the potential to bring impact throughout the value chain as the information can be disseminated through the most appropriate channels to stakeholders providing services from on-farm to consumers; farming > processing > logistics > consumers. The information can be used to optimise on-farm operations and at the other end of the value chain provides consumers with provenance data on the products being purchased.

HOW IT WORKS

COUNTRY



PARTNERS



- Multiple log-in capability so that members of the supply chain can remotely access to the information e.g. vets, AI (7)
- e.g. fertility and health service (6)
- Visualisation of the key conditions of individual animals (5)
- Data accumulation either at an on-farm PC or the Cloud (4)
- e.g. on collar processing based on artificial intelligence software that reduces the volume of data that requires to be transmitted (3)
- Low power wireless connectivity (2)
- e.g. accelerometer based neck mounted sensor is the measurement engine (1)

THE IMPACT

OUR OBJECTIVES

The integration and analysis of data from a number of measurement sources such as neck mounted accelerometer sensors, milk constituent sensors and feed to monitor animals and the production environment in order to generate actionable information and feedback that optimises welfare/production.

ON ECONOMY

- Improved animal welfare (reduction in illness through negative energy balance).
- Increased production efficiency and consequently.
- Better resource management (feed optimisation) Increased adoption of IoT in dairy.
- Growth of young farmer engagement.

OTHER IMPACT

- Environmental benefits through reduced production losses (due to early intervention).
- Reduced greenhouse gas output per unit of product (milk).
- Reduced use of veterinary intervention/medication.