



Centre for Digital Innovation Applied to Livestock (C-DIAL)





Dedicated to the development and use of the latest sensor-based and automated technologies to support precision livestock farming and enhance the performance, health and welfare of livestock

C-DIAL research is:

- Improving animal performance and health with digital technologies
- Detecting early signs of disease in animals
- Developing early warning systems for targeted, selective treatment
- Providing a gold standard for validating new livestock technologies for use on commercial farms
- Innovating and validating new digital livestock technologies for the future of farming



Contact

E: nu.farms@newcastle.ac.uk
www: www.ncl.ac.uk

C-DIAL capability enables the automated measurement of animal performance and detection of certain animal behaviours that are early signs of health or welfare compromise. By identifying the probability of disease, animals that require treatment can be targeted for treatment. This can result in more efficient use of antibiotics and faster recovery.

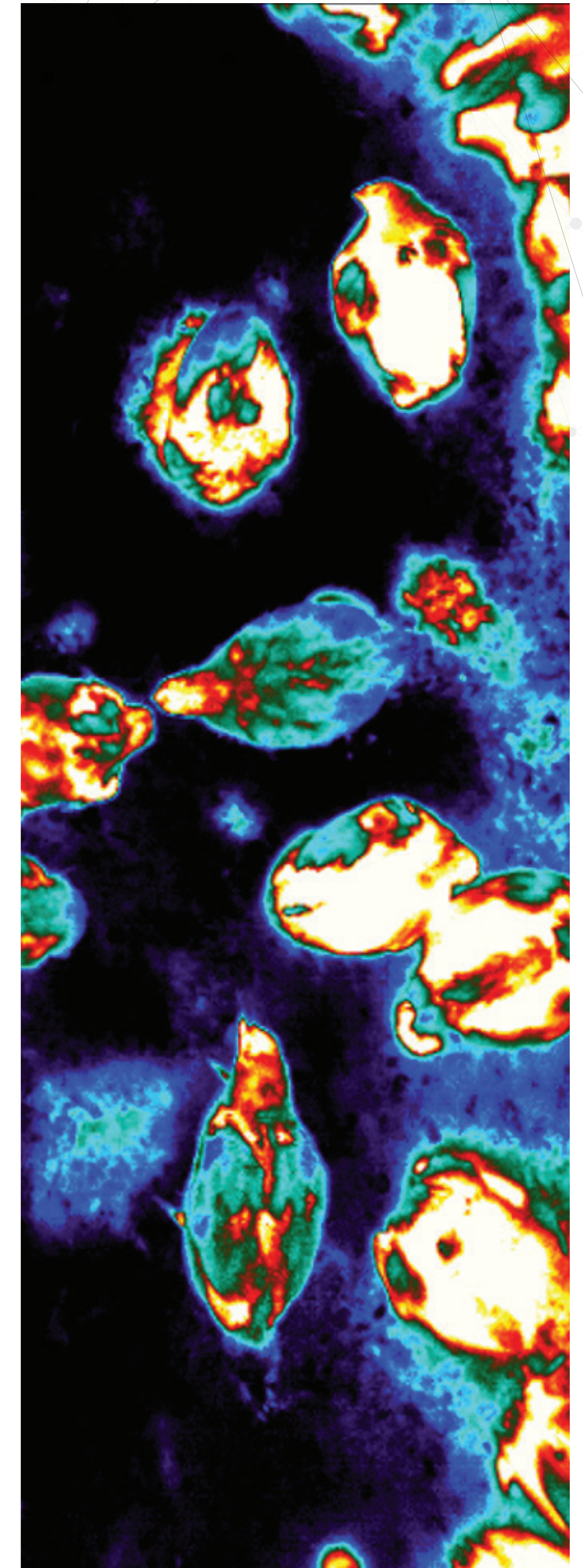
Digital imaging enables remote visualisation of behaviour and physiology, requiring minimal physical interaction with the animals. Automation enables tailor-made management and continuous monitoring of performance.

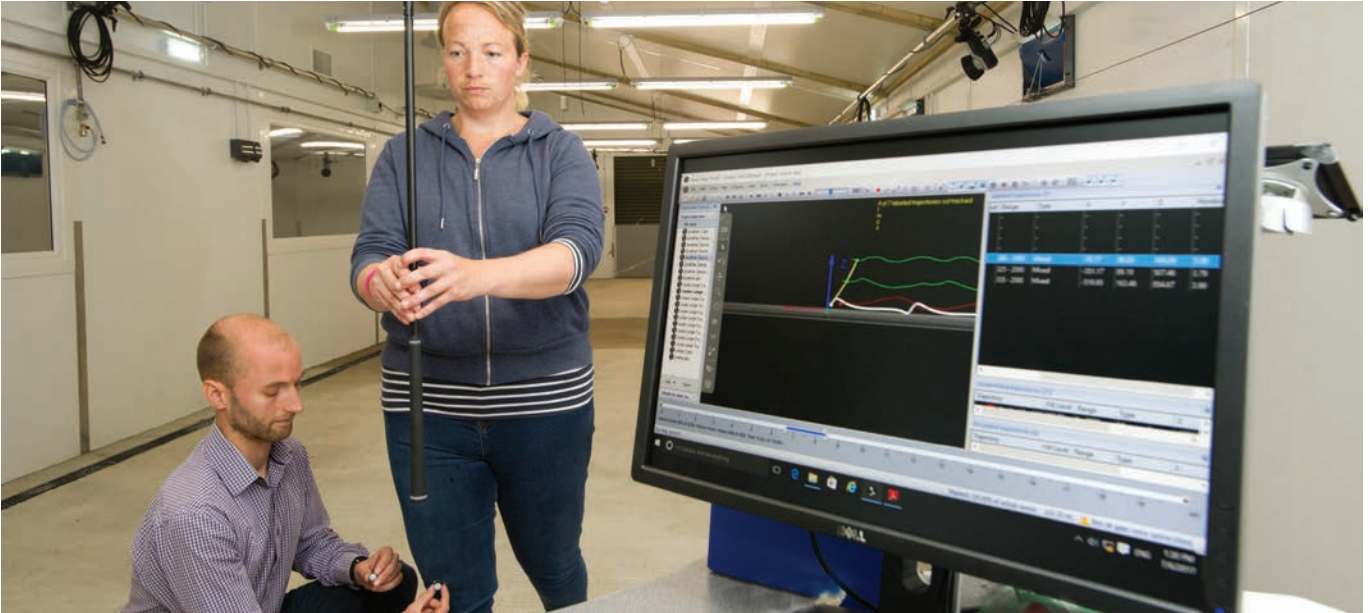
Studies offer numerous benefits such as:

- ✓ Detailed behaviour phenotyping of characteristics and traits of animals can be measured.
- ✓ Rapid methods for quantifying the consequences of farm management practices on animal health & welfare.
- ✓ Accurate measurement and analysis of both large and subtle changes in an animal's gait, diagnosing the first signs of lameness.
- ✓ Understand development of behaviour over the lifetime of an animal and what constitute changes to normal behaviour.

Facilities and equipment include

- ▶ High definition networked digital cameras and depth perception cameras for behaviour observations
- ▶ State-of-the-art, 18m length gait analysis laboratory and associated equipment for tracking movement of any point on the body in 3D & high definition
- ▶ Farmex BarnReport® remote monitoring system to monitor and record environmental conditions
- ▶ Advanced thermal and hyperspectral imaging and flexibility to accommodate a wide range of sensors
- ▶ A Bluetooth weighing system and Nedap feeders to monitor individual animal performance

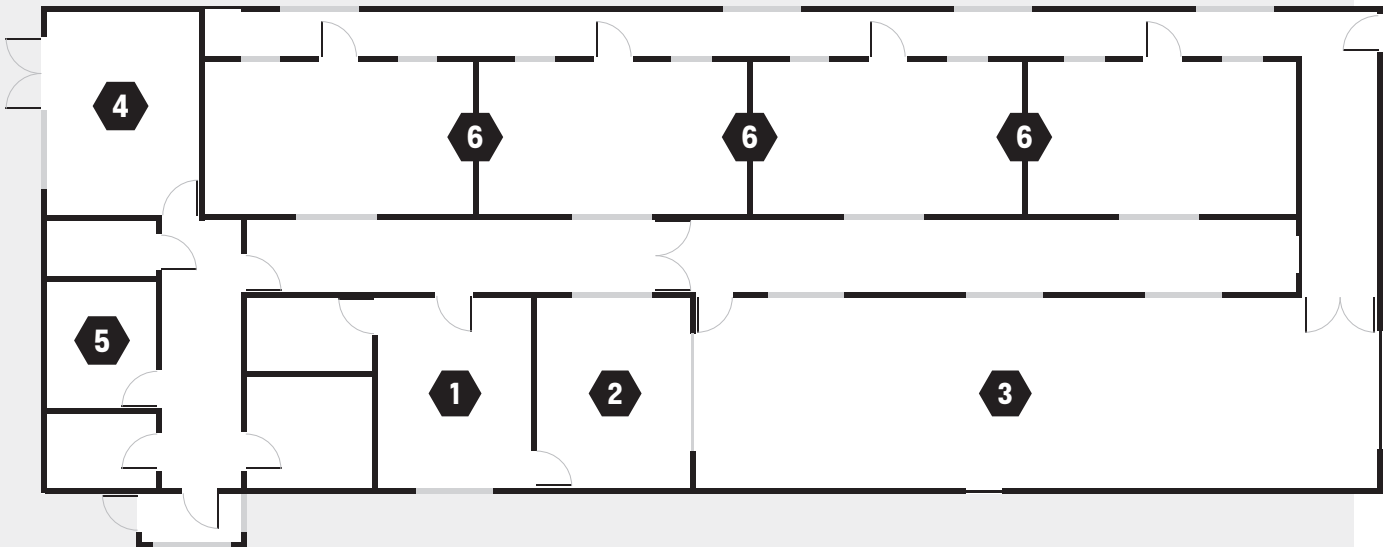




Schematic layout

> Centre for Digital Innovation Applied to Livestock (C-DIAL)

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|--------------------------|---------------------|--|
| 1 Development Lab | 2 Test Room | 3 Gait Analysis Laboratory |
| 4 Meeting Room | 5 Plant Room | 6 Configurable Experimental Rooms |



Plan for illustrative purposes only



CIEL, Innovation Centre, York Science Park
 Heslington, York YO10 5DG
 T: 01904 567716 / E: enquiries@cielivestock.co.uk
 www.CIELivestock.co.uk

