

Exploring the Potential for Digital Agriculture with Hartpury and Harper Adams Universities

As part of the RSPWAIR project, the rural industries/agri-tech project team is engaging farmers, suppliers and mobile network operators through various events and technology demonstration days. These interactions will allow rural businesses to understand and see advanced wireless technologies in action, connect with suppliers and developers and learn from experts, including access to the Hartpury Agri-Tech Centre and Digital Farming Network – a free and impartial advice, guidance and digital training service for farmers and agri-businesses that are dependent on agriculture-based technologies.

FREE HARTPURY DEMONSTRATION EVENTS

- 15th October 2024
- 12th November 2024
- 11th December 2024
- 22nd January 2025
- 12th February 2025
- 12th March 2025

Rural Connectivity Survey

Help us help you. Scan the QR code to complete Hartpury University's rural connectivity survey.



Get in Touch

To find out more about the project and how you or your business can get involved, including participating in the demonstration events, contact **Claire Edwards, Rural Industries Project Manager** by email - claire.edwards@hartpury.ac.uk and/or www.hartpury.ac.uk/for-business/hartpury-agri-tech-centre for information about the Hartpury Agri-Tech Centre and Digital Farming Network.

For more information about the River Severn Partnership go to www.riversevernpartnership.org.uk



Department for
Science, Innovation
& Technology



Advanced
Wireless
Innovation
Region

Advanced Wireless Innovation Region

The River Severn Partnership Advanced Wireless Innovation Region (RSPAIR) is a £3.75m initiative, wholly funded by the Department for Science, Innovation & Technology and managed by Shropshire Council.

The RSPAIR brings together stakeholders with an interest in accelerating the use of technologies enabled by Advanced Wireless Connectivity to create opportunities for economic growth, environmental enhancement and social benefit.

The RSPAIR is promoting the adoption of advanced wireless enabled technologies across three sectors which have particularly strong roots in the River Severn catchment area:

- Water Management
- Rural Industries (Agri-Tech)
- Public Sector

The RSPAIR is investing in Use Cases that exploit market ready technology.



Agri-Tech and Advancing Connectivity in Agriculture

The **River Severn Partnership Advanced Wireless Innovation Region** project is an exciting initiative set to strengthen and elevate farming practices by showcasing the transformative potential of 5G and other advanced wireless technologies, aiming to boost efficiency, support sustainability and set new standards in modern agriculture and land-based industries. Delivery partners such as **Hartpury** and **Harper Adams Universities** are collaborating to better understand how the landscape is changing for farming and agriculture and the wireless communication challenges affecting your business.

Reliable and consistent connectivity, particularly through technologies such as 5G, has the potential to revolutionise agriculture and transform farming practices.

Working with **Hartpury** and **Harper Adams Universities** and their associate farmers and landowners in the River Severn catchment, the **RSPAWIR** has allocated £1m to initiatives aimed at optimising the utilisation of current and emerging digital innovations to enable improved data collection and processing (precision farming), asset security and management and environmental monitoring.



ASSET TAGGING

- Track assets
- Recover stolen property
- Manage remote deployment
- Understand asset utilisation



VIDEO MONITORING

- Monitor activity from anywhere
- Know who enters/exits
- Record evidence of activity
- Status check on animals/workers
- Reduce insurance costs



MOTION DETECTION

- Trigger alerts for security
- Trigger welfare alerts (no activity detected)
- Monitor safe zones around hazards
- Reduce insurance costs



GAS DETECTION

- Alerts for gas build-up
- Reduced insurance costs
- Alerts for oxygen depletion in CO2 enriched protected cropping
- Alerts for toxic gas in silos/waste handling areas



AUGMENTED REALITY

- Field technicians benefit from experienced staff
- De-mystify technology
- Increase adoption
- Minimise down time
- Allows vets to share experience
- Improved animal welfare
- Optimise production



OPEN/CLOSED STATUS

- Monitor remote gates and access points
- Keep equipment, livestock and roads safe
- Understand use of permissive paths
- Reduced insurance costs



ELECTRIC FENCE MONITORING

- Keep livestock safe
- Monitor voltage in fence
- Reduce energy consumption
- Increased battery life in remote installations



FIRE SAFETY

- Trigger alerts for fires
- Integrated with security systems
- Reduce insurance costs



ENVIRONMENTAL SENSORS

- Maintain appropriate environment for plants/animals
- Maximise yield/live weight gain
- Alerts for suboptimal conditions
- Reduced plant/animal health issues



REMOTE LEVEL MONITORING

- Monitor water or fuel
- Manage flood risk
- Detect fuel theft
- Manage water or fuel as an asset



PRESSURE SENSORS

- Detect presence of people in specific locations
- Not triggered by birds/small animals
- Protect assets/monitor safe zones
- Reduce insurance costs



MONITORING IRRIGATION

- Sensors for nutrient monitoring
- Alerts for irrigation water being out of specified range
- Maximise yield from high value crops