Alliot Technologies

Real Life Case Study: **LIVESTOCK WATER SUPPLIES**

MONITORING LIVESTOCK WATER SUPPLIES

CHALLENGES

- Connectivity
- Maintaining a water supply to livestock
- Supplying easy to use equipment that is simple to set up and maintain

SOLUTIONS

With the Adeunis Double level sensor, SmartRural will be able to delpoy a reliable, low cost solution which successfully addresses their main concerns, helping to save time and money for livestock farmers.

The Customer

SmartRural are a user owned, agriculture focused cooperative, applying Smart City technology to rural applications throughout Scotland and Northern England. Their aim is to deliver improvements for residents and businesses in rural settings while reflecting the interests of their members.

As in many rural locations, connectivity can often be an issue. High speed internet and cellular connections are hard to come by. LoRaWAN® provides a great solution for rural areas with the simplicity and low-costs involved it enables SmartRural's applications to come to life.

Business Challenges

SmartRural set out to create a smart solution which would alert farm workers to failures to water supplies.

Maintaining a water supply to livestock is vital to productivity. Without sufficient drinking water, the daily weight gain, milk yield and general health of livestock can be negatively impacted. Issues with water troughs can also cause flooding which can incur additional costs and time being wasted.

Checking systems are working and that water levels meet the required standards are an important daily task on a farm. Combine these with the need to maintain consistent records to meet standards and market outlet requirements and it soon becomes an onerous task.

SmartRural approached Alliot Technologies for assistance in creating a smart solution which would:

- Alert farm workers to any potential failures of the water trough feed system
- Provide automated record keeping of responding to such welfare conditions.

Creating an automated system to address this helps to maintain regular records as well as helping to quickly identify any potential issues all while saving time and providing a positive ROI.

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The Solution

Alliot worked with SmartRural to develop the ideal solution to address their application. Alliot's recommended solution uses the Adeunis double level sensor to monitor SmartRural's water troughs. The double level sensor features 2 floats to monitor the water levels, when the level falls below a set parameter an alert will be raised to signify a drop in the level or that something is wrong.

Through the recorded data, records will show when the system is operating normally and provide evidence when levels are low and then rectified.

But it doesn't stop there, SmartRural were also looking for a solution that would be simple for its users to implement to their applications.

Thanks to Alliot's in-house provisioning services, its expert team are able to pre-configure all devices so that they are shipped ready to plug and play.

The provisioned sensors will be shipped with all the required settings added to them. Such information includes the intervals at which the data is to be reported, pairing to the gateway and all boxes will be clearly labelled making it easy to identify where they need to be installed.

How it works

The Adeunis double level sensor will be affixed to the top of the water troughs to provide accurate level monitoring. With two floats, the Adeunis double level sensor is able to alert users when the water level falls below a minimum measurement which can be set by the user.

Once deployed, the water level sensor transmits recorded data to the LoRaWAN® gateway which is then tranferred to SmartRural's chosen dashboard for visualisation. The data that is recorded then becomes accessible to form reports to demonstrate compliance and to also identify potential failures.

Any potential issues which are reported by the solution will automatically raise alerts which can be configured to notify users on their personal devices enabling them to act quickly.

The Results

SmartRural are looking forward to beginning to deploy Alliot's recommended solution soon. Through the implementation of the Adeunis Double Level Sensor, SmartRural expect to see the following results:

- Improved financial results in terms of maintaining the Daily Weight Gain of livestock and yield.

- Time - peace of mind meaning SmartRural's partners don't need to divert away from other tasks to check water trough levels.

- Animal Welfare - Reduced risk of loss of water or flooding.

- Environmental - Avoiding wasted water through overflowing troughs.

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