

A blue livestock weighing scale is the central focus, with several black cows standing around it. The cows have white identification tags on their ears, with numbers like 0037 and 0059 visible. The background shows a green field with scattered trees under a blue sky with light clouds. The 'inmarsat' logo is positioned at the top of the scale's frame.

inmarsat

SMARTWEIGHING OF

LIVESTOCK

ISATDATAPRO CASE STUDY

OPTIWEIGH AND INMARSAT SUPPORT AUSTRALIAN FARMERS

KEY BENEFITS OF ISATDATA PRO

- Global: highly reliable global coverage with one device
- Low cost: affordable technology optimised for industrial IoT/M2M
- Ease of use: easy to install, with low power consumption for long-term operation
- Flexible: users have a range of device options for software and system integrators
- Complements mobile wireless at low incremental cost including hybrid multi-network devices

COMPANY BACKGROUND

Optiweigh is a reliable, automated in-paddock weighing system that provides livestock farmers with a smart, fast and cost-effective way to remotely monitor and measure the weight of the livestock in their herds. The product was officially launched in 2019 and is now available across every state in Australia.

THE CHALLENGE

In commercial cattle operations, monitoring the weight of animals regularly is crucial to optimising profitability and costs. A 2009 study estimated the cost to Australian livestock farmers of failing to meet weight targets (which are a key element of the market specification) to be approximately AUS\$8.50 per head for cattle coming out of feedlots¹. The problem is estimated to cost Australian farmers hundreds of millions of dollars each year.

Regular weighing helps the farmer decide when to sell the cattle to achieve the target weight and avoid penalties, as well as optimise the feeding regime, which is a major cost of the operation. Traditionally, weighing cattle is a manual and time-consuming process, which involves manually gathering the herd in. In Australia, where farming is often carried out over huge areas of remote land, the process can take days and incur significant costs – at the most extreme, some farmers even have to use helicopters to locate and muster cattle. Ultimately, this also means there is a limit to how regularly data can be gathered, which limits the ability for farmers to accurately optimise their feeding regimes and the timing of sale to hit market targets for carcass weight.

THE SOLUTION

The Optiweigh remote weighing system enables farmers to obtain accurate weight readings at regular intervals without the cost, time and live-weight loss associated with manually weighing cattle. Optiweigh's self-powered system weighs the front two feet of the animal and uses highly accurate algorithms to generate whole body weights which are sent to the farmer in real-time to view on their smartphone or laptop. The system is highly portable and can be towed from one paddock to another with ease.

Within 2-3 days of deploying the device, the farmer can receive an accurate snapshot of the weight of individual animals and the entire herd, without the need to spend hours of time travelling between enclosures to manually herd and weigh cattle. This also saves fuel and reduces vehicle maintenance costs. Additionally, remote weighing can increase productivity, as the cattle can continue to graze without needing to be placed in a holding pen whilst waiting to be weighed.



¹ Australasian Agribusiness Review - Vol17 - 2009 Paper 9 ISSN 1883-5675 The Cost of Non-Compliance to Beef Market Specifications Andrew Slack-Smith, Garry Griffith and John Thompson Andrew Slack-Smith Cooperative Research Centre for Beef Genetic Technologies, UNE, Armidale School of Environmental and Rural Science, UNE, Armidale Garry Griffith Cooperative Research Centre for Beef Genetic Technologies, UNE, Armidale School of Business, Economics and Public Policy, UNE, Armidale Department of Primary Industries, Armidale John Thompson Cooperative Research Centre for Beef Genetic Technologies, UNE School of Environmental and Rural Science, UNE, Armidale



The system depends on reliable 24/7 internet connectivity so that data can be continually collected, analysed and transmitted to farmers. However, with many farms in Australia located in remote rural areas, a lack of reliable cellular internet coverage such as 3G/4G is a common problem. This limited the extent to which the system could be deployed effectively, and Optiweigh needed an alternative solution to ensure the system can be used by customers wherever they are located.

This is where Inmarsat and in-country service provider, Design9, came in. By leveraging Inmarsat's global satellite network the Optiweigh solution is able to operate in any remote location effectively. Optiweigh has integrated Inmarsat's IsatData Pro (IDP) service, which is purpose built for IoT devices and uses a cost-effective approach to send low-data-rate messaging from the device to software platform. The system enables bi-directional communications and has a low power requirement which make them perfect for deploying to remote agricultural environments. The small form factor and robust design of the IDP satellite terminal fits neatly on top of the Optiweigh system and can be retrofitted without changing the design.

RESULTS

Optiweigh was launched in early 2019 and now has 24 units placed across every state in Australia. The system is enabling farmers across the country to save significant time and cost weighing cattle manually, and the resulting data is game changing in its ability to enable more precise management, and thus profitability of the whole operation.

As Bill Mitchell, Founder and CEO of Optiweigh explained: "We are getting fantastic feedback from our customers. One farm in Queensland, had a weighing program for 2000 cattle previously that took three days from start-to-finish. They now weigh the herd remotely with data automatically transmitted directly to their laptops or mobile phones. The high accuracy of this data has meant customers are able to sell cattle at the right time with higher returns, and these savings mean they have more money to invest back in their farms.

The partnership with Inmarsat has enabled us to ensure our customers will be able to obtain critical real-time data wherever their Optiweigh system is on their farm. The integration of the IDP device from

Inmarsat means we can focus on maximising the value of the solution without having to worry about providing connectivity to the site."

In addition to the benefits outlined above, the Optiweigh system and the objective data it generates has huge potential to enable the industry to become more environmentally friendly. For the first time, farmers can prove the live weight gain of their cattle and the time to market which could help to lower 'greenhouse gas' emissions (in terms of methane from cattle and the extra fossil fuels used in the day to day operation) for each Kg of beef produced. This creates the possibility of using collected data for assurance schemes or even carbon credits, improving the sustainability of farming operations across the country.

ABOUT DESIGN 9

Design9 is 100% Australian owned company formed in 2009 from existing SPs combining to form a M2M business. Our focus is on maintaining our reputation as the specialist for Inmarsat M2M services in the region. Contact us at sales@design9.com.au.

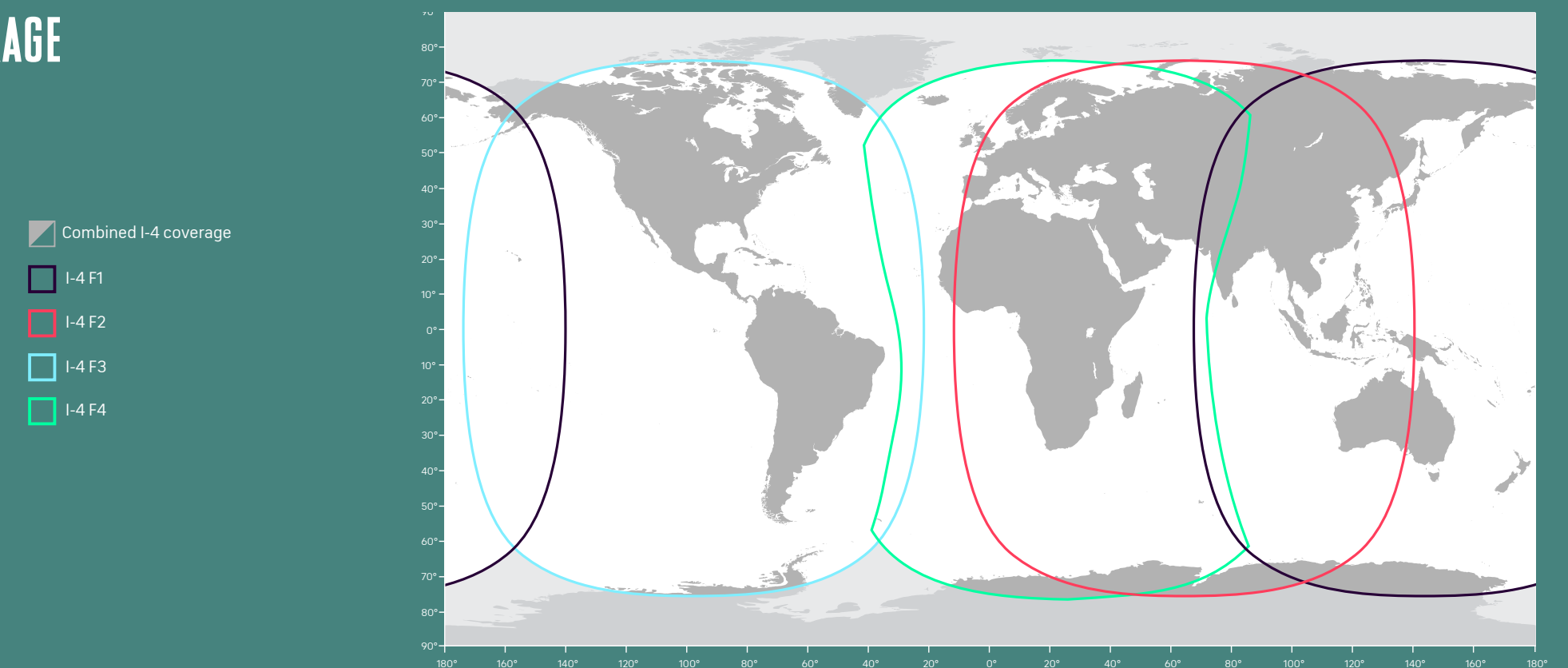
ABOUT INMARSAT

Inmarsat is the world leader in global, mobile satellite communications. It owns and operates the world's most diverse global portfolio of mobile telecommunications satellite networks, sustaining business

and mission critical safety & operational applications for more than 40 years. It is also a major driving force behind technological innovation in mobile satellite communications, sustaining its leadership through a substantial investment and a powerful network of technology and manufacturing

partners. Inmarsat operates across a diversified portfolio of sectors and holds leading positions in the Maritime, Government, Aviation and Enterprise satcoms markets, operating consistently as a trusted, responsive and high-quality partner to its customers across the globe.

I-4 COVERAGE





CONTACTS

E enterprisemarketing@inmarsat.com
W inmarsat.com/enterprise/agriculture

While the information in this document has been prepared in good faith, no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability (howsoever arising) is or will be accepted by the Inmarsat group or any of its officers, employees or agents in relation to the adequacy, accuracy, completeness, reasonableness or fitness for purpose of the information in this document. All and any such responsibility and liability is expressly disclaimed and excluded to the maximum extent permitted by applicable law. Coverage as shown on maps is subject to change at any time. INMARSAT is a trademark owned by the International Mobile Satellite Organization, licensed to Inmarsat Global Limited. The Inmarsat LOGO and all other Inmarsat trademarks in this document are owned by Inmarsat Global Limited. © Inmarsat Global Limited. All rights reserved. Optiweigh case study June 2020.