

## Development of technology for an animal health monitoring system

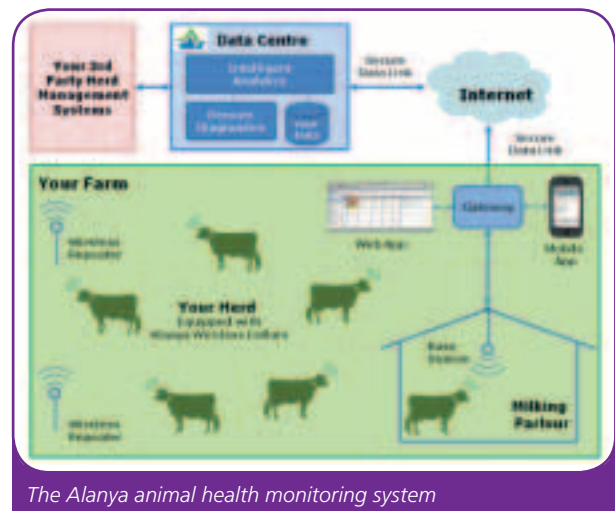
Alanya operates in the animal health monitoring market. Alanya utilises world-class advanced technologies in the development of its animal health monitoring systems. These systems provide a comprehensive real-time view of the health and reproductive status of animals which enables the owners to maximise their outputs, performance and profitability.

Failure to detect three common occurrences in cows has huge (annual) cost implications on US farmers:

1. Estrus \$300m (when female is 'in heat')
2. Lameness \$850m
3. Heat stress \$900m (elevated body temp)

Alanya needed a real-time health monitoring device that would communicate data (raw data packages transmitted every 100th of a second) from the host animal to a cloud application for analysis. Alerts sent from the cloud application to farm management highlighted optimum breeding time, heat stress, lameness and other health problems.

The Nimbus Centre at CIT developed a proof of concept product for Alanya which it then used as the backbone for development of a commercial product. The Centre is home to 60+ researchers and houses the TEC Technology Gateway. As a result there is a broad range of research expertise including radio frequency, programming, user interface design, mechanical and biomechanical engineering.



Alanya were able to dip into this wide range of resources as and when required. As Alanya is based in the Rubicon Incubation Centre, which is co-located with Nimbus, on-going dialogue was possible. In addition to access to Nimbus staff, Alanya utilized lab space, rapid prototypers, environmental chambers and pressure plates for product prototyping and commercial product testing. ➔

•→ The project with Nimbus was successful and a prototype animal health monitoring device was produced which comprised of an electronic unit on a collar fitted to a cow. This device collected a variety of information markers including movement and temperature. This was tested on a local farm. The data was communicated wirelessly or by 3G to a base station and then forwarded to a cloud application where it was analysed. Real-time alerts were then sent to the appropriate farm management outlining necessary actions to be taken. The commercial product was then developed based on the specifications from the prototype designed by Nimbus.

Nimbus personnel attended presentations to potential distributors (as far afield as USA) showing the depth of the partnership between the company and the research centre. Attending these presentations ensured that any technical questions posed were answered effectively and added considerable weight to the overall Alanya proposition.

This work with the Nimbus Centre enabled Alanya to bring a project from concept stage to working prototype through to a fully functional commercial product with a worldwide partner distribution network.

In addition to this support from Nimbus, Alanya also benefited from a range of other assistance from CIT. As a start-up business in the Rubicon Centre the two co-founders were on the Genesis programme (now New Frontiers) accessing training, space, mentoring, networking and other start-up supports. Access to the CIT Entrepreneur in Residence has enabled Alanya to raise funding and this help is on-going. The CIT Technology Transfer Office assisted with patent searches.

Alanya recently won the it@cork "High Potential Start-Up" award in recognition for their progress to date and Alanya's future potential. From a start-up with just two employees when Alanya first entered the Rubicon Centre there are now an additional 8 full-time people on the payroll. ■

## TESTIMONIAL

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**Donald Cronin**  
CEO, Alanya

*"It was a pleasure working with Nimbus to develop a proof of concept animal health monitoring device. As a start-up, we had limited finance available and lacked the necessary skillset to develop a product of this magnitude. Having a demonstrable proof of concept product enabled Alanya to attract significant private investment, grow our in-house team and ultimately develop a world-class, cutting edge animal health monitoring product"*

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