



Devices

Changes in physiology, feeding and activity can provide early indications of many health problems. Devices that measure vital parameters, such as heart- and respiratory rates, activity- and rest levels and count the number of calories burned can provide important information to pet owners and veterinarians, helping them to spot deviations early, diagnose and treat developing health conditions. Other devices support implementation of health regimes, such as controlled feeding and weight reduction.

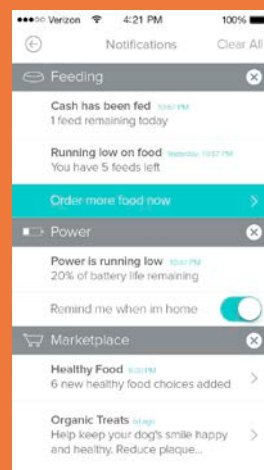
Products for veterinary- and production animal monitoring have been around for years, but largely assess specific parameters, such as heart rhythms in pets, and heat detection and feeding in cows. So far, the first devices introduced for general health monitoring in pets are for dogs and cats, but there is potential for adaptation to other pet species.

Measuring vitals

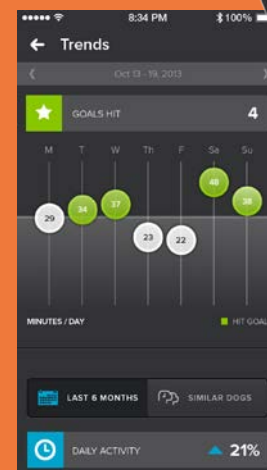
Introduced in June 2013 by a US-based company, Whistle was the first wireless device launched commercially to monitor dogs' activities, including walks, play and rest, and provide insight into daily behaviour, as well as long term health trends. The device is small. It resembles an ID tag and attaches directly to the dog's collar.



Voyce software (online)



Smart Feeder notifications (app)



Whistle (app)

Health

By: Sara Sharpe

Smart, wearable health and fitness monitoring devices are growing in popularity, as more people proactively integrate preventative healthcare into their daily lives. Systems developed specifically for pets have been recently introduced. We take a look at some new products and the potential of this emerging market segment.

Using powerful motion detection technology, it analyses activity and transfers this information to an app accessible by owners. Whistle's manufacturers have developed a database that helps provide owners (and veterinarians) with recommendations based on the dog's breed, age, size, and the baseline of that individual dog's previous behaviour patterns.

Voyce is a smart collar for dogs manufactured by US-based i4C Innovations. It utilizes non-invasive, radio frequency based technology and special algorithms to collect and analyse data and provide owners with information about their dog's health and fitness via an app that is accessible with

all major smartphones, tablets and computer browsers.

The system was developed in conjunction with biomedical engineers, dog experts and researchers at Cornell University, Ithaca, New York, US. Lightweight (170g) and available in a range of sizes, Voyce is durable, dust-proof and waterproof to one metre. The collar unit is powered by a rechargeable battery. The system requires internet access and WiFi.

"We have had a tremendous response," said Jeff Noce, President of i4C Innovations. "Unveiled at the Consumer Electronics Show (CES) in Las Vegas in October 2013, Voyce



was also showcased at the North American Veterinarian Conference, where veterinarians, veterinary students, and other animal healthcare providers, were impressed. The national response has been exceptional and the public is eagerly anticipating availability in mid-summer 2014."

Smart feeding

The SmartFeeder™ from US-based, Petnet™, was developed to improve pet health, increase pet owners' peace of mind, and

Challenges

There are opportunities in this market segment, but also challenges – the initial technological complexity of products and development costs, the development of products that interact with pets and humans that requires an interface for both, and meeting rigorous safety requirements. Products must be robust, reliable, non invasive, comfortable and safe for the pet to



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ongoing challenge is to educate pet owners about the prevalence and dangers of pet obesity. To address this, they have employed a pet nutritionist to provide his informed opinion to the general public via various media channels.

Opportunities

While the long term potential of pet health monitoring is not yet evident, it appears to

monitoring

save costs. Featuring customizable, automated, pet food portioning, it sends alerts and notifications directly to pet owners' smartphones, computers and tablets when their pet needs feeding, has been fed and has finished eating. It requires WiFi access.

"Considering the central role that feeding plays in pet care, it seemed to be the most important aspect to influence when trying to improve their health," said Petnet's CEO, Carlos Herrera. "There are numerous health problems associated with over-feeding and nutrition. We wanted to take a step beyond offering a food dispenser, and develop a device that controls portion size, offers healthier food alternatives and allows owners to create a feeding regimen that works for their pet – all while providing pet owners peace of mind."

Available in 2014 with several language options, the SmartFeeder has already proved successful. Petnet has already received more than 10,000 pre-orders for the product from 88 countries worldwide.

wear and easy-to-use. They must be compatible with a range of technological platforms and applications. Manufacturers also need to stay abreast of the rapidly changing technological landscape to provide customers with viable compatibility, updates and upgrades.

"One of our biggest challenges was creating a platform that combined wearable technology that was durable, comfortable and able to withstand daily activity of dogs. Unlike developing monitors for humans that have the luxury of skin contact, we had to create a functional design that works without skin contact," explained Jeff Noce from i4C Innovations. "We also had to ensure that the data collected was linked to relevant content and could be easily understood and usable by the consumer to provide a more complete picture of a dog's health."

Specific marketing issues affect some types of products. In the case of the SmartFeeder, for example, Petnet finds their biggest

be a promising emerging market segment. With burgeoning interest in preventative healthcare in both humans and animals, it is likely to grow rapidly. Devices enable pet owners to oversee their pets' care when they are not present and also provide potential solutions for significant current concerns in pet health, such as obesity. Products developed for this segment could also have wider applications in animal sectors outside the pet industry, such as zoos and conservation programmes, where 'remote' smart access to data on individual animals could be particularly advantageous in monitoring the health of essentially wild animal species. Newcomers to this segment should reckon with the high quality innovation already seen, which sets a high bar for the introduction of further new products. ■

For further information:
www.mydogsvoice.com
www.whistle.com
www.petnet.io