



Monitoring free-roaming horses across the vast Central Asian region

The Challenge

Horse ownership is deeply rooted in the Central Asian region. Equines have played a huge part in Mongolian, Kazakh and Kyrgyz history and culture for millennia. The prized animals – numbering about four million in Mongolia, three million in neighbouring Kazakhstan, and 0.5 million in Kyrgyzstan – range free and fenceless across the vast steppe grasslands.

Herd owners across the region need a way to keep tabs on where the animals range. This is important to help owners understand where their herds are finding good grazing, and to help ensure their security, health and well-being.

The vast expanses of the Central Asian region are very sparsely populated, with rugged terrain and very little telecom infrastructure. Relying on terrestrial telecommunications technology to reliably deliver tracking information is simply impossible.



To add to the challenge, winters in the region have become longer and more severe in recent years due to global warming, with temperatures dropping as low as $-40^{\circ}\text{C}/\text{F}$. As a result, the horses often need to travel much further than usual to find grassland to graze on.

The Solution

Founded in 2014, Mongolia-based Value Added Reseller [Spotter](#) has developed highly innovative solutions to satisfy the region's unrelenting demand for capable, reliable and far-reaching technology solutions that can monitor the location of millions of horses. The company created an animal-tracking collar based on Globalstar technology.

Each Spotter collar is fitted with Globalstar's [SmartOne C satellite IoT transmitter](#), so the solution helps herd owners keep tabs on their valued equines wherever they travel in this desolate region, even when well beyond the reach of GSM mobile signals.

With SmartOne C's small size, versatility, and low price, Spotter is seeing rapid uptake of its lightweight, rugged, and economical tracking collars.

The horses typically roam in herds of around 30-50, with one lead stallion keeping the animals together and providing protection. As a result, the group can be effectively monitored with just one collar.

Thanks to Spotter, and the enabling power of Globalstar's Low Earth Orbit satellite network, over a million animals are now being reliably tracked.

There's a growing understanding among the horse owning community of the value and reliability of the satellite IoT technology solution, according to Spotter Co-Founder Tsogbadrakh Surenjargal. "People are becoming aware that terrestrial telecoms infrastructure like mobile networks are simply unable to provide the ubiquitous and always-on tracking capability of satellite."

SmartOne C: long battery life for minimal maintenance

A further key differentiator of the solution is its low maintenance, and the long battery life, thanks to SmartOne C and Globalstar's Low Earth Orbit satellite architecture. With alternative GSM based systems, batteries need changing every two months, on average, and may require use of a hefty power bank. Globalstar-enabled Spotter, on the other hand, can continuously monitor the animals for up to one year or even more without the need to replace batteries.

Expansion of Eurasian Gateway

Spotter's customers are further benefiting from recent expansion of Globalstar's Eurasian ground station gateway network, now providing even greater reach and network resilience.

Outcomes

Customer trust and satisfaction

The Spotter system's reliability and robustness have particularly demonstrated their worth during the extraordinarily harsh 2023-24 winter. Extreme weather and inaccessibility did not impede Spotter's capability to keep concerned herd owners updated on the animals' whereabouts, which can be monitored on users' smartphones.

The principals of Spotter often hear from the herd owners themselves about how much they value the system's accurate tracking, particularly when climatic conditions have been extreme. This Facebook post from one Mongolian herd owner was typical of many others: "My horses usually graze in the Southern Gobi, but because of the extreme snow, they migrated over 1,000km eastward to find grazing. The inaccessible location and frequent storms meant I wasn't able to check on them until Spring, but I trusted Spotter Horse Tracker to monitor my herd. Just yesterday I travelled to the horses' location, indicated by the system, and I'm so overjoyed to say that all my horses are well and healthy. I greatly appreciate Spotter Horse Tracker and its excellent support."

Accelerated take-up

Spotter has seen sales of its satellite IoT-enabled horse tracking collar **more than double in 24 months**. Spotter has reached a milestone of over 31,000 animal collars deployed, enabling the reliable monitoring of free-roaming horses across Mongolia and Kazakhstan. Describing sales uptick of nearly 160% since October 2022, Spotter Co-Founder Tsogbadrakh Surenjargal says "the growth has been phenomenal."



About Spotter

[Spotter LLC](#) was established in 2014 to provide its customised solution for horse tracking using the Globalstar satellite network and devices. Since then, it has specialised in various tracking solutions to suit customer needs in Central Asian countries such as Kazakhstan, Mongolia and Kyrgyzstan.

About Globalstar

Globalstar helps people connect, communicate, and transmit data in smarter ways.

As a next-generation mobile satellite and communications services provider, we offer reliable satellite and terrestrial connectivity that's simple, fast, secure, and affordable. With our low-earth orbit (LEO) satellite network providing coverage to more than 120 countries, we connect and protect assets, transmit key operational data, and save lives – from any location – for consumers, businesses, and government agencies around the globe.

Globalstar's terrestrial spectrum, [Band 53/n53](#), offers carriers, cable companies, and system integrators a versatile, fully licensed channel with a growing ecosystem to improve customer wireless connectivity, while Globalstar's [XCOM RAN](#) technology offers significant capacity gains in dense wireless deployments.

In addition to [SPOT GPS messengers](#) that connect people in remote environments, Globalstar offers next-generation IoT hardware and software products that efficiently track and monitor assets, process smart data at the edge with AI-enabled applications and manage analytics with cloud-based telematics solutions — all of which drive safety, productivity, and profitability.

We transform smart ideas into smarter solutions.

