

North Star Systems Inc.

North Star Systems of Saskatoon, Saskatchewan turned to TELUS to deliver cellular connectivity for their unique Tattle Systems, together with IoT expertise to help support and grow their business. The Tattle all-in-one remote monitoring solution can connect to more than 30 different sensors for over 100 applications, including location, volume level, temperature, fire and smoke sensing, and more. These capabilities provide agriculture clients with vital information from tanks, containers and even rivers or creeks, almost anywhere.

With dependable high speed wireless networks across Canada, together with reach across North America and the globe through partners, TELUS has the capability to help North Star Systems securely and reliably power their solutions wirelessly and enable their customers to connect in real-time to their assets and equipment, wherever crops are grown.

The situation.

When their Tattle monitoring solution gained widespread interest, North Star Systems found that they needed to source IoT SIM cards from a provider with excellent coverage, support and capabilities, as well as a technology vision that would match their own growth and success.

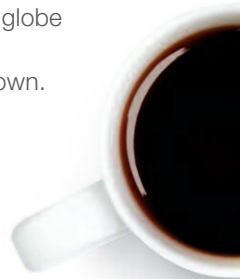
“ **When the Internet of Things emerged, we realized we could make a cost-effective tank monitoring system that would help reduce fertilizer delivery logistics costs by over 25%.**”

Curtis Kolibab

General Manager, North Star Systems Inc.

After selling seeds, chemicals and fertilizers to farmers on the Canadian prairies for more than 30 years, North Star Systems knows that growers cannot afford to run out of anhydrous ammonia fertilizer during the short growing season. They count on their fertilizer providers to help ensure that they always have the quantities they need. The owners of North Star Systems decided to leverage Internet of Things (IoT) technology to develop a system capable of monitoring the level of fertilizer in farmers' tanks in real-time. With this information, fertilizer suppliers would be able to time their deliveries to perfection and significantly reduce costs.

- North Star Systems devoted their R&D resources to developing a complete end-to-end solution, compatible with a wide variety of existing gauges and sensors and able to withstand extreme temperatures and temperature changes
- From the beginning, the company's managers insisted on the solution being capable of operating anywhere, even on tanks of fertilizer being pulled by tractors in the field
- To make this possible, they considered a number of different wireless connectivity options, before concluding that cellular was the most efficient and cost-effective choice
- As demand for Tattle Systems began growing from other provinces and countries, North Star Systems needed a partner that could deliver reliable, dependable connectivity everywhere business takes them



The solution.

TELUS operates Canada's only network built exclusively for IoT, enabling clients like North Star to implement quickly and customize with ease, based on their requirements and unique business needs.

“ **After considering a number of options, we finally decided that the best solution was to partner with TELUS because they had already built the network we needed. TELUS knows IoT and was ready to work with us to ensure everything operates properly.**”

Denis Levi

IT Manager, North Star Systems Inc.

- North Star Systems had designed their own solution to manage the SIM cards used by Tattle Systems and worked with TELUS to integrate this solution into the TELUS offering
- The company also used a Virtual Private Network (VPN) to ensure added security
- This approach gives North Star Systems complete control over every Tattle solution they sell and support
- North Star can now scale their business quickly and easily and reduce their cost and time to market



The outcome.

After launching Tattle Systems at a trade show in Banff, AB, North Star Systems has created different versions to meet demand for a wide range of monitoring applications, including the level of water in northern Saskatchewan creeks for the province's 911 emergency service. When using Tattle Systems, clients' operations benefit from increased efficiencies, improved profitability, enhanced safety, sustainability and compliance. Interest from the Oil and Gas sector has broadened market development opportunities for North Star Systems. The company has also expanded to some US states and received a number of international enquiries.

- Tattle Systems can connect to more than 30 different sensors and over 100 applications such as temperature control, fire/smoke sensors, liquid and septic tanks, pressure vessels, Rochester Gauges and more
- It can measure liquids or solids
- It can be set to provide measurements whenever the customer requires, from as often as every second to as infrequently as once per day
- Working with TELUS, North Star is able to order SIM cards on demand, and has full control over activating and deactivating them
- Tattle Systems are already available across Canada and in many Midwestern US States, and the company is currently responding to enquiries from other countries

“**From our very first contact, TELUS has been working hard for us. They know what they sell and they work to understand what we need. That's what drew us to them.**”

Denis Levi

IT Manager, North Star Systems Inc.

North Star Systems began operations in Hudson Bay, Saskatchewan more than 30 years ago, selling seeds, chemicals and fertilizer. In 2015, they switched focus to Internet of Things solutions like their highly successful end-to-end Tattle remote monitoring and sensing system. The company moved to Saskatoon soon after introducing Tattle Systems and North Star now markets their technology across Canada and the US and are working on expanding internationally.

Connect today.

For more information about TELUS solutions for your business, visit telus.com/iot