



# Delivering and deciphering the data through IoT

## Business needs

- A way to connect Internet of Things innovations to a highly reliable network.

## Networking solution

- AT&T Global SIMs deliver reliable, end-to-end connectivity to devices in remote locations.

## Business value

- Dependability, ease of provisioning, and control.

## Industry focus

- IoT tracking solutions provider

## Size

- Startup

## About Tyrion Integration

Tyrion Integration enables its global partners to achieve their goals by increasing visibility into business assets and processes. As a leader in Industry 4.0, Tyrion understands the vulnerability of internet-integrative systems and designed its unique platform to provide the most robust security.

## The situation

The industry-leading company needed a telecommunications provider that could deliver reliable network connectivity and support planned international expansion.

## Solution

Tyrion equips its sensors with AT&T Global SIM cards that automatically and remotely connect to the network. The AT&T Control Center SIM management platform makes it easy to deploy new devices through a flexible, easy-to-use platform.

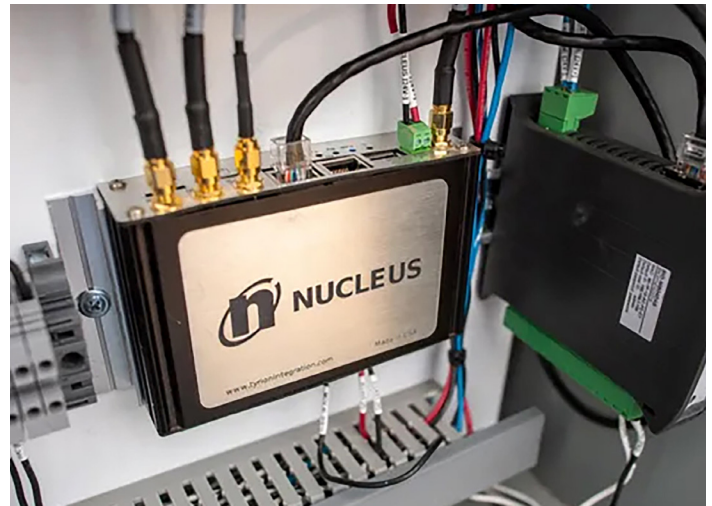
**A secure, simple solution.** Tyrion was founded in 2015 to help businesses secure sensitive data and devices in remote locations. Its initial offering was a mechanical lock, which has evolved into the NUCLEUS, the most secure industrial Internet of Things (IoT) protection available. With applications in many of the world's industrial commodity sectors, NUCLEUS offers a secure, simple solution for monitoring industrial processes.

Co-Founder and General Manager Mark Goehring, who has decades of experience in the oil and gas industry, started Tyrion in 2015 to develop solutions that address gaps in the industry. He brought in David Pitzer as the lead engineer to help develop electronic locks to protect assets in the field. "We created a cutting-edge electronic lock that would provide an audit trail, because nobody else was doing that," Goehring said.

The lock mechanism was so sophisticated that Goehring and Pitzer soon found additional uses for it. "A customer came to us for help with mobile data monitoring because the existing system was clunky," Goehring said. "We used the brains and inputs of our locking mechanism in the customer's application and it turned out the benefit was much bigger."

The industrial Internet of Things (IIoT) device they created and patented is called NUCLEUS. It delivers visibility that enables customers to make data-driven decisions. Today, Tyrion cloud leads the way in the next industrial revolution with an innovative and secure approach to controls automation. They offer a simple solution to the challenges of traditional supervisory control and data acquisition systems.

**A breadth of knowledge and services.** Many of Tyrion's customers have been able to upgrade from expensive and time-consuming permanent communications infrastructures that relied on networks or radio communications. "Our solution, combined with the Tyrion cloud, can save them an enormous amount of money compared to traditional systems," Goehring said. "And that becomes very attractive, especially in the oil and gas industry where our customers have disparate properties that could be five to 50 miles away from each other."



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**Mark Goehring,**  
Founder and General Manager, Tyrion Integration

"Using the AT&T network, coupled with our device, lets us gather customer information that is spread between miles, or even between states, and push it to one location in our cloud," Goehring said. Tyrion clients get a homogeneous package that enables them to view all their data and monitor their systems in one place.

Tyrion's newest product, Redeye, leverages NUCLEUS technology and the Tyrion cloud to monitor wellheads, eliminating the need for operators to manually survey sites for leaks. "If our Redeye product discovers a leak, it sends the client a picture so they can react and make an informed decision on how to prevent further environmental damage," Goehring said.



Pitzer added, “The quick response and the ability to detect trends at specific locations are valuable to customers, proactivity fostering sustainability. For instance, clients are able to monitor how much hydrogen sulfide they’re reducing in their system through their various processes. That’s a measurable value that helps them quantify their sustainability efforts.”

The company also understands that many of the industries it serves are in transition. “We can help to bridge the gaps and offer a completely fresh solution to existing companies and those that are just getting started,” Pitzer said. “We offer a breadth of knowledge and services that can span that whole transition for our customers.”

**Data access sparks innovation.** Tyrion’s industrial automation solutions serve global partners in many industries. The oil and gas industry makes up about 80% of its current business, but sales are growing in the agriculture and mining industries. “We also have installations in the space industry that remotely measure rocket fuel control,” Goehring said.

Customers are using Tyrion data in innovative ways. “When farmers see the availability of data, they find ways to use it to solve feeding issues or improve the way they track the herd,” Goehring said. Tyrion solutions also help the dairy industry continuously monitor milk chillers. “Milk has to be kept at a certain temperature and continuously monitored,” he said. “If a chiller is not functioning properly, it could spoil a whole tank of milk.”

Pitzer said the ability to view actionable data from Tyrion is valuable to all customers. “When they see data coming in as it’s happening, it sparks all kinds of innovation,” he said. “They get excited and suddenly start dreaming up new things they could do or ways they could improve their industry. It’s great to see that.”

One client recently approached Tyrion with a third-party solution designed to reduce the release of hazardous chemicals. Tyrion enabled access to the client’s data to feed the third party’s algorithm to improve outcomes. “They saw the opportunity once they started using our system,” Goehring said. The solution now saves the client \$250,000 a month.



**Flexibility to manage and track devices.** Choosing a networking provider for its groundbreaking solutions was an important decision, but not a difficult one, Pitzer said. “The list was short,” he said. “We knew many of the locations where our solutions would be used had no physical infrastructure. There wouldn’t be a local Wi-Fi network or internet connection for our servers, and probably not even any power infrastructure.”

After researching cellular and satellite technology, Tyrion chose to use AT&T Global SIMs to deliver the data its clients rely on. “We have worked with some other carriers and have found that to be an awful experience,” Goehring said.

AT&T Business’s leadership in industrial IoT solutions and its streamlined means of deploying devices makes it easy for Tyrion to deliver value to its clients. “We don’t have to redesign the internet connection at every site,” Pitzer said. “We put in the SIM, send it where it has to go, and we have a connection to a network. The deployment is easy; it’s not even a factor or consideration.”

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**David Pitzer,**  
PE, Director of Engineering, Tyrion Integration

“I really felt AT&T Business understood what we needed to support our customers,” Pitzer continued. “They have given us the flexibility to manage and track the devices and use the AT&T Control Center tools.” He also appreciates the knowledge and assistance of his AT&T Business account representative. “It’s the expertise. Many times, he has jumped in to help direct me, answer

questions, and get us going in the right direction. That’s been huge. With AT&T Business, we can focus on serving the customers and getting the job done, and not wrestling with the technology and the details behind it.”

Goehring concurred. “The uptime has been fantastic,” he said. With some early locations, Tyrion deployed a radio network as a backup in case the cellular connectivity was unavailable. “As time went on, we discovered our cellular connectivity through AT&T was reliable.”

**Support for continuing growth.** It’s easy for Tyrion to deploy its IoT solutions thanks to the cloud-based AT&T Control Center, an automated connectivity management platform that delivers visibility and agility. Pitzer is pleased with the platform’s simplicity. “If there’s something I can’t do in the Control Center, I use the Control Center to get help, so that’s everything we need,” he said. “I’m excited about the API [application programming interface] access to take it to the next level with our management and even automate some of our own internal processes. It does everything we need.”

Goehring also finds the platform useful. “I have used the APIs, and it was very easy to pull data,” he said. “We use AT&T Control Center extensively, and even keep track of some of our customers and locations there, so it’s been a blessing.”

Tyrion staff appreciate the assistance they receive from AT&T Business. “Every time we’ve had a business challenge, as far as optimizing the way we use our data or how we can best provide service at an affordable price to our customers, our AT&T Business rep was right there to work with us,” Goehring said.

AT&T has helped Tyrion plan for continuing growth. “I reach out to AT&T Business and say, ‘Here’s what we’re going to be facing; what can we do to optimize things?’” Goehring said. “I’m really excited about the relationship. It’s not just, ‘Here’s our price, figure it out’. They really want to work with us, so we’re very excited about that.”

Pitzer is counting on AT&T expertise as Tyrion expands internationally. “That is something that’s definitely in our future, but I have faith that even international deployments are going to be just as easy,” he said.