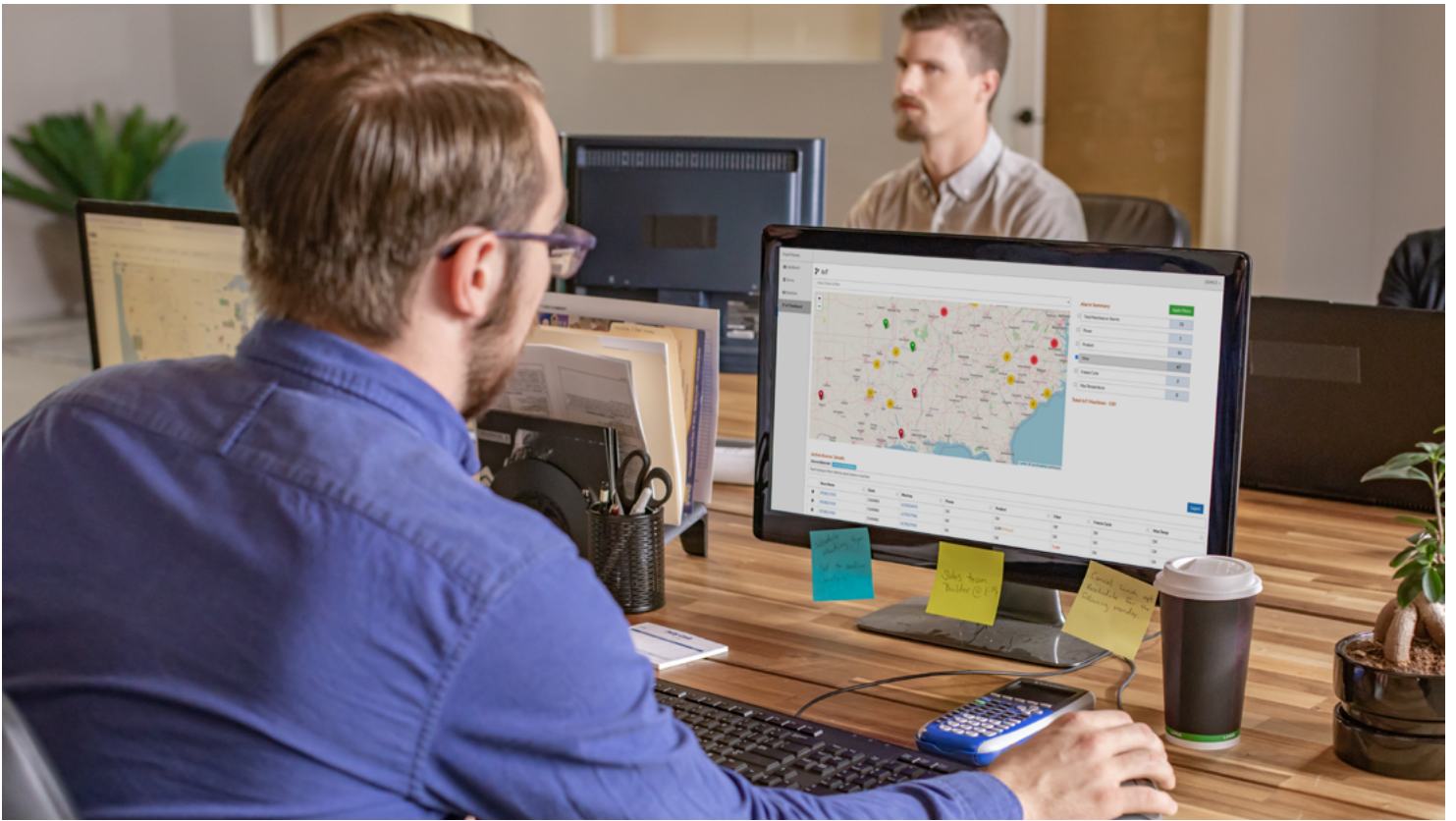




# Frazil transforms the retailer experience with IoT Solutions

Case study

verizon<sup>v</sup>



When a retail or convenience store manager isn't seeing the revenue returns they expected when they installed slush machines for customers craving tasty frozen beverages, they require quick action. Maybe the machine isn't full. Maybe it's broken or has been out of order for weeks. Maybe it needs its filter cleaned.

Issues like these are damaging for the retailer, and they also create bad customer experiences. Frazil knows that and has responded by taking an innovative approach to maintenance and monitoring, developing a condition-based monitoring technology that connects to the Internet of Things (IoT).

The work that the company is doing could reshape how slush programs are managed across the United States. It's also opening a window into store operations that hasn't existed before. As a result, more consumers will get the slushy drinks they want, and retailers will see slush as not only a delicious drink but also a revenue generator.

## The customer

Founded in 2004, Frazil is the largest frozen, non-carbonated beverage brand in the U.S., based on the number of machines it has in retailers across the country.

Its name is derived from a scientific term for ice crystals that form naturally in turbulent waters. But Frazil is focused on reducing the turbulence that can happen when you're trying to offer slushy drinks.

Traditionally, for example, a convenience store or chain that wanted to get into the frozen beverage category would buy a machine from a provider, and then buy the slush mix or concentrate from a manufacturer. As the machine broke down over time, it was up to the retailer to hire a third-party service provider to come and fix it.

"It's actually a pretty horrible experience for the store manager," says Kyle Freebairn, Frazil's CEO. "Frazil was built on this hypothesis that we should combine these things into one cohesive experience that we manage on behalf of retailers."

Working with Frazil means retailers can get slushy drink machines for their stores at no cost – stores get the machine and maintenance for free. The only cost for retailers is the slush product itself. While retailers continue to buy product to put into the machine, Frazil covers all service and repair issues, dispatching technicians that manage it on their behalf.

"It's really helping the retailer hit the 'Easy' button on getting in and winning in the slush category," Freebairn says.

# The challenge

Frazil has learned over time that providing slush drinks is just one aspect of managing a convenience store. Chains need to oversee locations spread over a large geographic area, plus they need to deal with supplying thousands of products to stores and tackling staffing and turnover issues. That means they may not be as vigilant in reporting issues that come up with Frazil's machines.

"We had a number of stores that wouldn't call when the machine would break," Freebairn recalled. Or, in some cases, a technician would go out and fix a machine, but the problem wouldn't be fully addressed and then the retailer wouldn't follow up with Frazil.

This was creating friction between Frazil and its retail customers, but it also meant lost sales for those convenience stores. "I heard enough instances in the market where equipment was down and no one called and it just drove me crazy," he said.

Essentially, Frazil realized that a successful slush beverage program meant that a store manager needed to be able to answer three questions:

1. Is the machine on?
2. Is it working?
3. Is it full?

Too often, the answer to at least one of those questions was "no," and Frazil lacked visibility into which stores were impacted.

# The solution

Freebairn says he and his team realized they needed to take the next step in the development of Frazil's business model and actually monitor the slush drink machines on behalf of its retail customers.

**Verizon's ThingSpace allows Frazil to automate connectivity management and device management through its portal.**



Unfortunately, the company didn't find any available solutions in the market that would offer remote refrigeration monitoring capabilities. However, the team was aware that technologies such as the [IoT](#) could allow Frazil to develop a module to put on drink machines that could offer condition-based monitoring.

Working with a third-party technology firm based out of Norway, Frazil was able to make a condition-based monitoring kit to retrofit its existing inventory of machines or embed onto newer models. Getting them online was another matter, though. Most convenience stores use their Wi-Fi networks to share confidential or sensitive store information, so Frazil needed to connect to the IoT independently.

"Some of the solutions we looked at were tied to these antiquated systems that were drawing on different bands of spectrum that would have made this solution completely impossible and financially unfeasible," Freebairn says.

Frazil chose to partner with Verizon, which assisted in helping to certify its new condition-based monitoring module and provide connectivity between Frazilnet (its category management platform offered to retailers) and slush drink machines in the field.

Meanwhile, Verizon's ThingSpace allows Frazil to automate connectivity management and device management through its portal. This includes the ability to activate devices, receive notifications when a connectivity failure occurs and improve signal strength as needed.

# The results

Frazil has since rolled out more than 2,500 slush drink machines in the field that are connected to its condition-based monitoring solution.

“Thankfully, the Verizon network and the band of spectrum they have allocated to the Internet of Things was a very cost-effective way of connecting these machines,” says Freebairn. “Convenience stores can be a tricky place to get coverage, but Verizon has allowed us to have significant levels of success in having this IoT spectrum reach into these stores, which are spread across the United States.”

According to J.R. Frisby, Frazil’s Director of Technology, ThingSpace is allowing him to see right away if a board is not communicating with the network and to check whether or not a SIM is active.

“What’s great about ThingSpace is now that these things have been released and all of the IoT devices are out in the wild, it allows us to monitor those devices and get their location,” he says. “Having that accessibility at a really micro level to see how the SIMs are communicating from the Verizon side really helps us understand what’s

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**Kyle Freebairn**  
CEO

going on when it comes to the information that we’re getting into our system.”

From a customer experience perspective, Frazil has been able to stay on top of service issues and even get ahead of problems a retailer might face.

“Oftentimes, before the clerk even calls, we’re proactively calling the store to make sure we can take care of these issues,” Frisby says.



# A window into the business

Having more data about the uptime of its machines and service time turnaround has led to more insights about running a successful slush beverage program.

Frazil has determined, for instance, a machine that's full only 50%-75% of the time saw 15% lower sales performance on average than stores that keep their machines full between 90%-100% of the time. And for stores that keep their machine full less than 50% of the time, that sales difference drops to about 20% as compared to the full machine baseline. Sales drop the more often a machine isn't full.

"A full machine sells more than a half-empty machine," Freebairn says. "It looks better, it's more appealing, there's more confidence in the consumer that it is a well-managed program."

Frazil is also able to use the condition-based monitoring technology to monitor for optimal environmental conditions within the machine and any changes in customer demand. Freebairn explains that retailers can use a machine's dashboard and gain insights that make it much easier to determine if the slush program is successful. The detail can be granular, as in whether or not a machine's filter has been cleaned or whether settings have been adjusted appropriately.

"They get a report to say, 'Store 857 never cleans their filter,' or systemically keeps their machine lower on product,"

he says, adding that a store that drops the ball in providing slush drinks might be experiencing challenges in other programs, such as offering pizzas or burritos.

Looking at the data provided by Frazil, retailers will have a better insight into where they might need to focus their training investments, Freebairn adds.

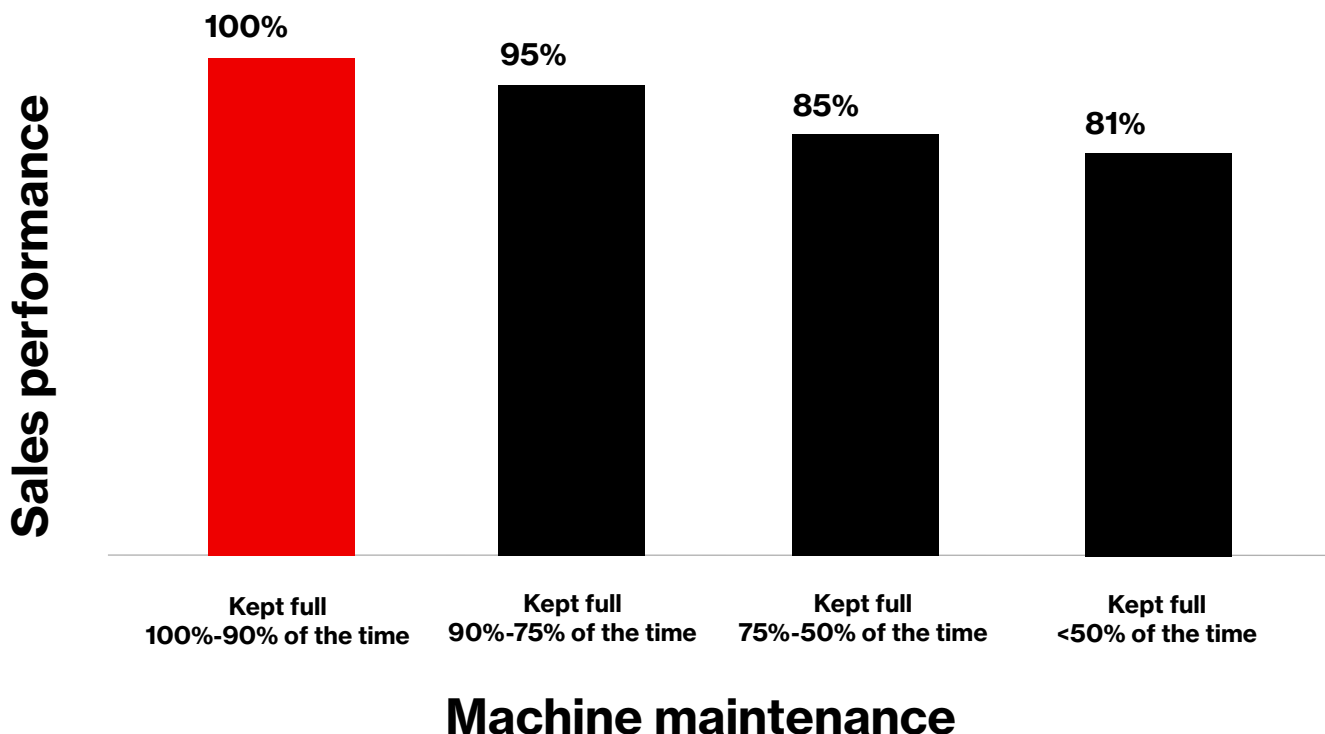
"As we aggregate the findings on what it means to run a world-class slush program, we're able to offer insights that others can't even pretend to know," he says.

## Easy to manage and scale

Frisby notes that Verizon's ThingSpace APIs provide access to data that helped to make its solution possible. And managing the system is simple and fluid. If Frazil needs to order new SIMs, for instance, it can activate them one by one or put them in groups, even if that means activating a thousand at once. It's also easy to "snooze" a SIM or deactivate it as required.

Of course, the modules Frazil created for its machines wouldn't amount to much without reliable connectivity, Frisby says.

"I've been very impressed. You're talking about locations back East that are old brownstone buildings that have been converted to convenience stores, but we're still getting reliable signals out of those locations," he says. "Even though we are a smaller company that isn't a technology company per se, Verizon has bent over backwards to support us."



# Next steps

Frazil is by no means done. Freebairn says the team will continue to work on algorithms for its refrigeration remote monitoring solution that offer more data and bring value to retailers. The guiding principle is that any information collected through the IoT should be displayed in a way that is easy to consume for those looking for insight, and that the insights are somehow actionable. This includes additional chores that Frazil can take off its retailer customers' plates.

"Knowing what the issues are is one thing – and it's a huge thing – but knowing what to do about them and having someone say, 'Let me take care of that for you' – that's program nirvana," he says.

Meanwhile, Frisby says he has weekly meetings with the Verizon team to discuss ongoing improvements. Keeping firmware on the devices up-to-date is critical to efficient operation.



"ThingSpace Software Management allows us to push new software and not have it become a big charge on our data bill," he says.

Freebairn believes that the condition-based monitoring capabilities Frazil has developed and brought to market with help from Verizon will set a new standard for quality control and an enhanced customer experience. He's already started to see the signs firsthand. For example, during a sales meeting with a client, Freebairn was able to show that one of the machines in a store was low on slush product. He was able to give the store a call and ask if it was true that the bowl on the left side of the machine was being depleted.

"It turned out the store was in the process of swapping out flavors," he says. "But you could hear the amazement over the phone."

The math is pretty simple: If a store hasn't cleaned their filters within six months, the machines will likely stop working within the next two months. Frazil is about to use its refrigeration remote monitoring solution to spot those risks and get in touch with a retailer's operations staff to intervene.

"It's very tangible. The stores that win are the ones that recognize that this is the future and who are learning how to operate and use this information to their advantage," he said.

Frazil might not seem like the obvious candidate to become an early adopter of ThingSpace, but to Freebairn, it speaks to the ubiquity of opportunity that the technology represents to organizations of all kinds.

"It doesn't have to be some big, massive multi-billion dollar company that taps into this technology. It can be a slush company that's connecting machines on the counters of convenience stores across America," he says. "It's been phenomenal and fantastic and transformative for us and for our customers. Verizon's been a key partner, and we've been really impressed with the level of attention and dedication they've given us along this journey."

[Learn more about ThingSpace IoT Solutions >](#)