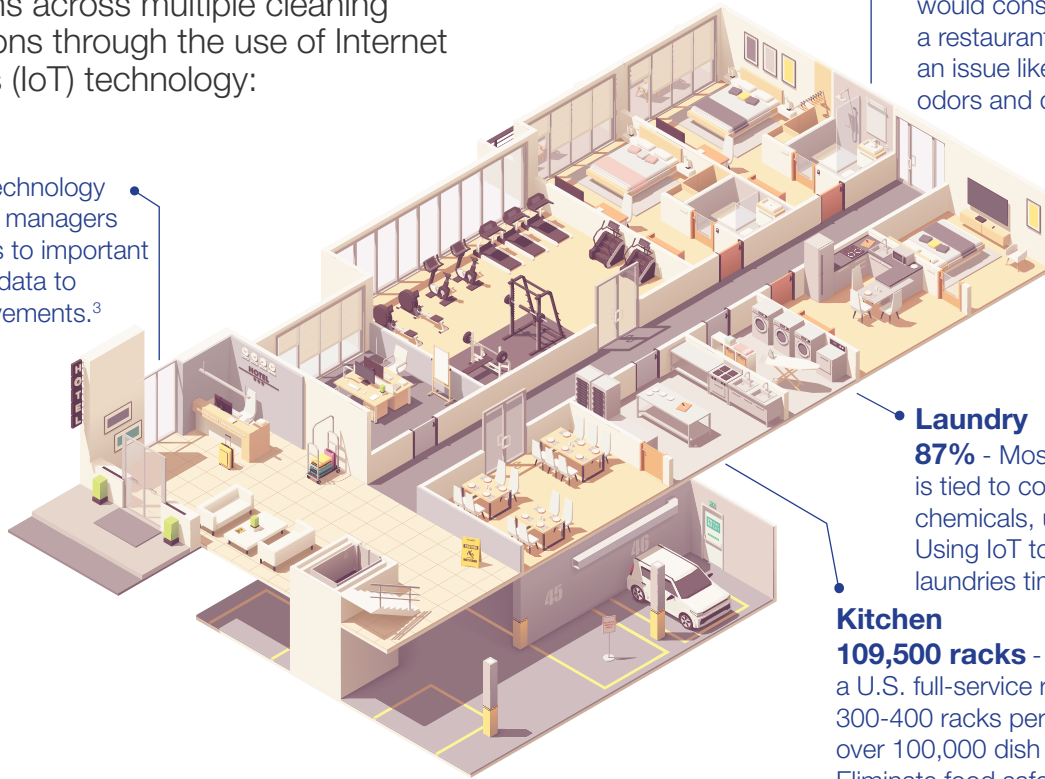# Connecting the Dots in your Chemical Program:
Cellular Connectivity and IoT

Smart Cleaning Environments

Visibility of data in facilities can improve operations across multiple cleaning applications through the use of Internet of Things (IoT) technology:

24/7 - IoT technology gives facility managers 24/7 access to important operational data to drive improvements.[3]

Facility
97% - According to a 2016 Harris Poll, 97% of U.S. consumers would consider not returning to a restaurant if they experienced an issue like dirty surfaces, bad odors and dirty restrooms.[2]

Laundry
87% - Most of a laundry's budget is tied to consumption of water, chemicals, utilities and labor. Using IoT to reduce rewash saves laundries time and money.[1]

Kitchen
109,500 racks - It's estimated that a U.S. full-service restaurant runs 300-400 racks per day, resulting in over 100,000 dish racks each year. Eliminate food safety concerns with the use of IoT.

When connected to Wi-Fi vs. cellular, IoT devices are more vulnerable to cyber-attacks that lead to stolen or destroyed data and impact functionality.

34.3 million
The number of IoT malware attacks in 2019.[4]

48%
Nearly half of businesses can't detect if an IoT device has been breached.[5]

Using cellular-connected IoT devices ensures:

- **Security -** Cellular is always encrypted and maintained by a global network provider with a dedicated cyber-security staff.
- **Reliability -** Once established, a cellular connection rarely drops, unlike Wi-Fi.
- **Practicality -** Easy to set up, cellular works in most locations and functions independent of the state of the local site network.
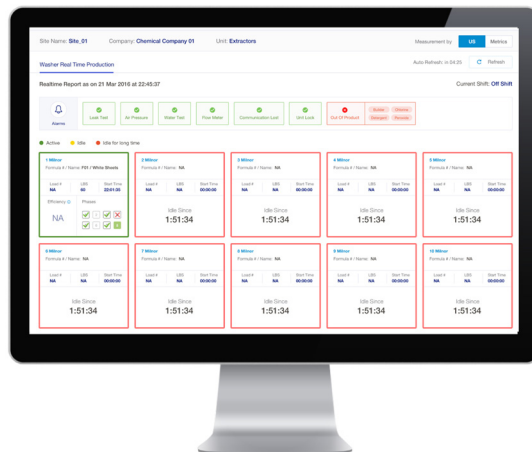
Compared to Wi-Fi, cellular connectivity offers additional advantages:

	CELLULAR	WI-FI
Consistent geographic coverege	✓	✓
Simple installation	✓	
Immediate use	✓	
High bandwidth	✓	✓
Remote access	✓	✓
Firmware updates	✓	✓
Network availability monitoring	✓	

Connecting the Dots in your Chemical Program:
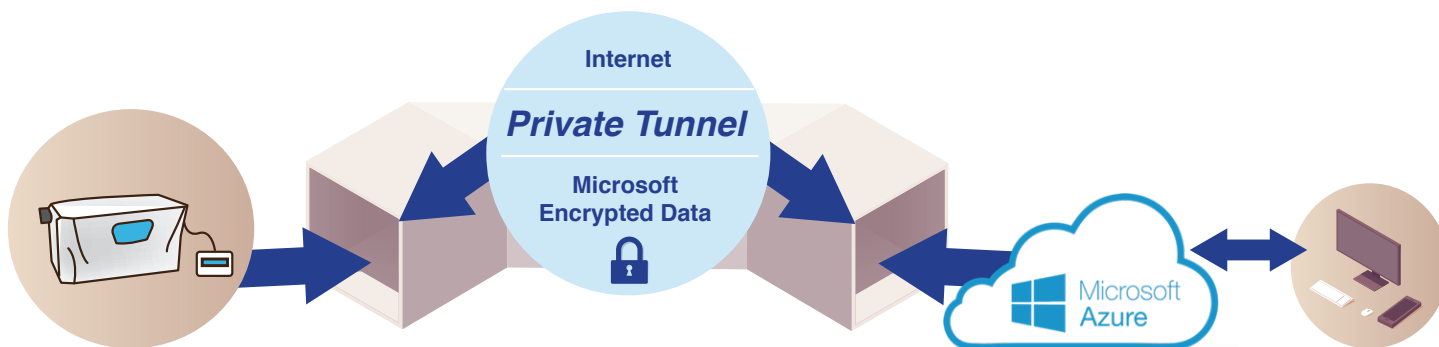# Cellular Connectivity and IoT

Hydro Connect

Hydro Connect is Hydro Systems' cloud-based Internet of Things (IoT) platform. This end-to-end IoT solution gives chemical providers and their end users increased visibility into their operations with actionable insights.

How does it work?

Data transmits from the unit to the Hydro Connect system, which requires a cellular data plan. The cellular network allows users to access data from anywhere at any time, without compromising cyber security. With a secure secure private tunnel, data is encrypted end to end and cannot be seen or intercepted by intruders easily. Built on the Microsoft Azure platform, Hydro Connect populates data generated directly from the chemical dispenser.

Internet

Private Tunnel

Microsoft
Encrypted Data

Microsoft Azure

Hydro Connect advantages:

✓ A proven, reliable and secure platform
✓ Remote configuration
✓ Alarm reporting
✓ Real-time dashboard

✓ Scalable solutions
✓ Optimized production
✓ Reduced costs
✓ Improved customer satisfaction

Learn more at hydrosystemsco.com/hydroconnect

1 https://www.greenlodgingnews.com/leveraging-technology-to-reduce-laundry-costs-and-optimize-labor/
2 https://www.businesswire.com/news/home/20160907006232/en/Study-Identifies-Restaurant-Flaws-That-Leave-a-Bad-Taste-in-Diners%E2%80%99-Mouths
3 https://hydrosystemsco.com/product/hydroconnect/
4 https://safety4sea.com/infographic-iot-attacks-rose-in-2019/
5 https://behrtech.com/blog/infographic-10-must-know-iot-cybersecurity-stats/
6 https://www.firstpoint-mg.com/blog/who-needs-cellular-iot/#:~:text=In%202019%2C%20there%20were%20an,20%25%20of%20global%20IoT%20connections.