

Reliable and high-quality control of temperature and humidity with constant access to monitoring data is an important condition for storing of thermosensitive drug and raw materials for medicines. The Vypin team has implemented a solution for a global pharmaceutical company. The IoT app has helped to optimize processes and costs.

CLIENT
Pharmaceutical company

MAIN REQUEST
24/7 access to the monitoring data, and notifications

MUST-HAVE REQUIREMENT
Data loss is unacceptable and critical

Outcomes

+36%
energy efficiency

+24%
profit

-12%
transaction costs

Problem

The Food & Drug Administration (The FDA) has strict requirements and recommendations for pharmaceutical manufacturers, in particular regarding the storage conditions and the control system to comply with those restrictions. [More about FDA regulations](#)

The customer asked Vypin to replace the current system. The previous one doesn't meet the FDA standards, which leads to fines and the potential risk of drug or components damage. As they say in the medical field, the patient had certain complaints. First of all, the one related to the data loss. The existing devices could go offline for various reasons (from network issues to power outage). Respectively, the transmission or recording of telemetry was not happening, while the client knew nothing about these losses. And this was the second complaint.

The current system has not been providing a notification mechanism. In addition, monitoring data was not accessible remotely. Therefore, in the scheduled environmental monitoring reports there were gaps in the tables and graphs. The FDA to fine for such violations. And round-the-clock rotation of operators to control the temperature and humidity in the warehouse is not the best solution, agree?

The ThingsBoard platform has, within a short space of time, easily fulfilled our requirements. It is easy to adapt, has highly flexible implementation options and includes a broad suite of integration and visualization capabilities out of the box.

Mark Hunt
CTO of smart energy management platform
Oneserve Limited

Solution

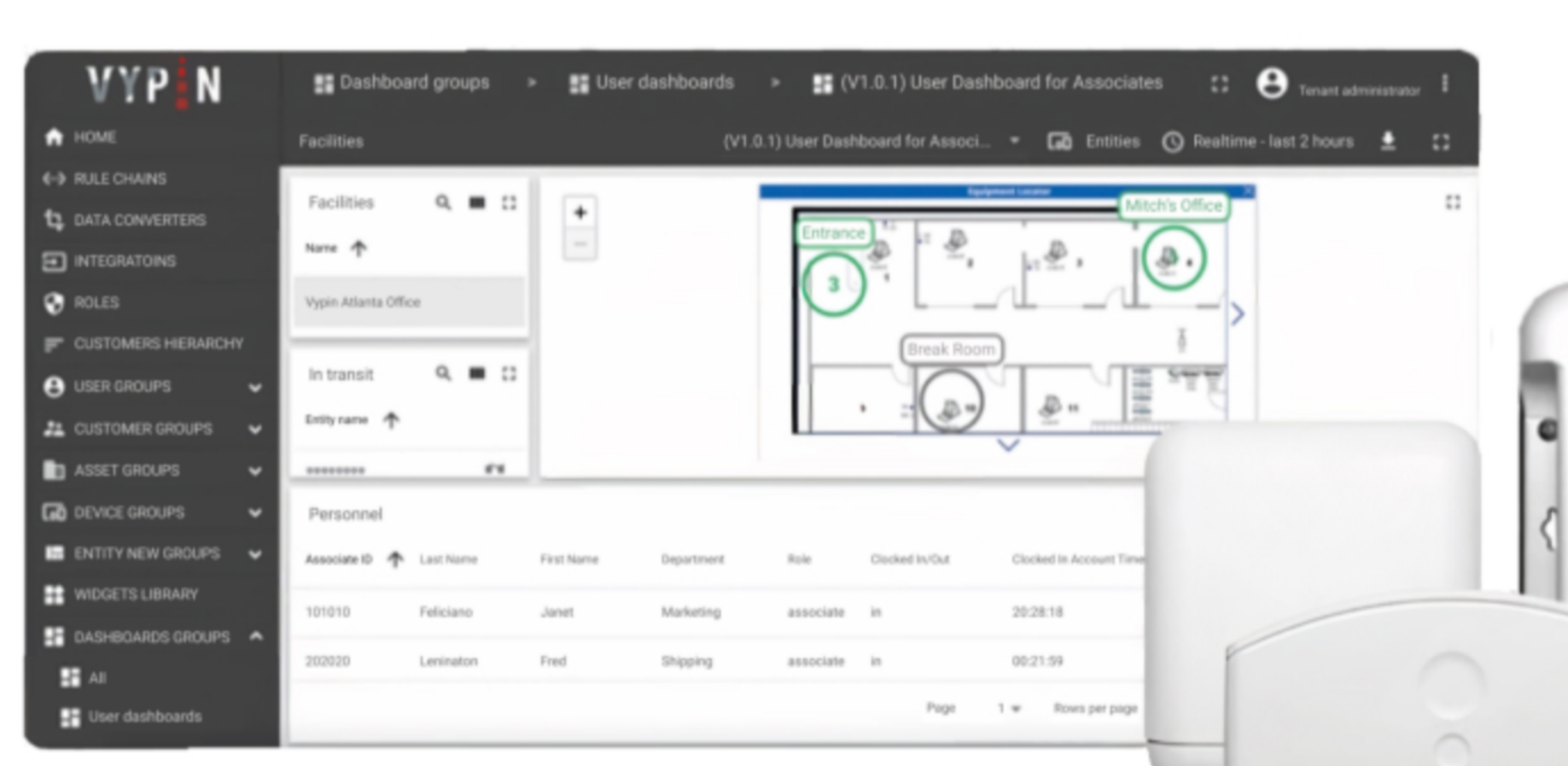


Installed sensors and gateways throughout the warehouse

Diagnosis has shown that the existing solution of the client doesn't meet the basic criteria: it is not reliable and not always user friendly. To solve the problem, the Vypin team proposed an integrated Vypin-Whereview system (powered by ThingsBoard). The company built a wireless network, installed sensors and gateways.

No data loss

If we recall the initial issue (data loss), with new sensors (persistent storage enabled) the problem has been solved. New things store the history of readings on the device itself. Now with the gateway connection error, the data loss doesn't occur. When online again, the gateway fetches the accumulated telemetry and sends it to Whereview.



Fixed issues quickly

The application, built on ThingsBoard platform, solved the remaining customer's problems. First of all, the responsible employee of the client got access to the monitoring data at any time. Managers also received the required access.

To see the Dashboard with graphs and tables, it is enough just to open the corresponding tab in your own browser and log in. It makes sense to highlight that based on the [Rule engine](#) and [Device profiles](#) Vypin set up a notification system. In case of violations of the specified conditions (for example, exceeding the temperature thresholds), those who should be aware of these violations were received notifications. This allows you to respond instantly and even take preventive measures.

v1.0 Alarms (v1.0.1) Current Alarms | allPersons | Realtime - last 7 days

Person Alarms

Created time	Type	Severity	Status	Last Name	First Name	Current Role	Current DE	Count	Assigned ID
2020-03-16 12:30:15	Stationary Too Long	Warning	Active	Hughes	John	Vypin Office	7049	5290187	
2020-03-16 12:42:20	Off site	Warning	Active	Ushakovskiy	Phel	Vypin Office	290	5290183	
2020-03-16 12:51:15	Off site	Warning	Active	Moran	Shawn	Vypin Office	290	5290158	

Device Alarms

Created time	Originator	Type	Last Name	First Name	Device	Gateway	Count	Status
2020-03-16 12:30:15	5290187	Stationary Too Long	Hughes	John	Vypin Office	7049	1	Active
2020-03-16 12:42:20	5290183	Off site	Phel	Eric	PowerCell 290	Vypin Office	290	Active

Conclusion

Everyone understands that it's better (easier, cheaper, less time consuming) to prevent a disease than to treat it. With the new warehouse monitoring system, the client (patient) has the opportunity for prevention.

"With the help of Vypin's sensors and Whereview backend software, any abnormalities in the temperature or humidity in the environment were instantly highlighted and alerts were sent to our customer's personnel to immediately address the problem."