

From compressors to generators: Smart monitoring of industrial rental equipment in Mexico

THE WINNER

IOT PROJECT OF THE YEAR 2024

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Challenge

[NG Renta](#), based in Mexico, manages a fleet of 400 specialized units, including compressors, industrial pumps, generators, and other equipment. These assets are rented out to clients across a wide range of industries — from oil and gas, mining, and manufacturing to maritime operations, and even large-scale events such as concerts, festivals, as well as film and TV productions.



NG Renta offers specialized equipment across Mexico

To operate more efficiently and deliver exceptional service, NG Renta needed a comprehensive equipment monitoring system tailored to the demands of their business. Their fleet includes assets often used as a primary power source or critical backup during costly operations, especially in cases of main grid failure, making real-time oversight essential.

- Operators needed real-time data on up to 60 parameters from the equipment controllers, as well as dashboards to monitor and manage the tracked units and their performance. In other words, the solution had to act as a full-featured equipment monitoring system for rental use.
- The system had to be capable of collecting data from equipment in any location, including remote sites such as mines or offshore platforms — an important requirement in fleet management in Mexico.
- Additionally, NG Renta required the ability to remotely shut down equipment under various conditions, whether at the end of a rental contract or in response to technical alerts.

And that wasn't all. The project came with a broad set of additional requirements — from tracking engine hours for timely maintenance, to ensuring power backup availability during grid outages, and enabling remote diagnostics to reduce on-site visits.

Solution

[Safetrack](#), a trusted Wialon partner, stepped in to help NG Renta enhance its operations. They developed a comprehensive, multi-component solution — built with Wialon at its core — that gives the company complete visibility into its rented equipment fleet.

Software

The [GPS tracking solution](#) for rental equipment is powered by a well-integrated software stack, where each component plays a specific role — from data collection and processing to real-time tracking and reporting.

- **Wialon** collects data from each unit and provides real-time visibility into equipment status, performance, and location — all through an interactive map that makes fleet oversight simple and effective. NG Renta's team can monitor up to 60 sensor parameters per unit, receive alerts, and generate detailed reports to support daily operations and long-term planning.
- Acting as a data hub, [flespi](#) — an API-first telematics and IoT backend platform by Gurtam, the developer of Wialon — collects and normalizes data from all connected devices before forwarding it to an integrated third-party system. It ensures smooth and reliable data flow across the entire solution.
- To complement Wialon's built-in tools, a third-party solution was integrated to provide **client-specific dashboards**. Tailored to NG Renta's operational needs, these dashboards present performance data, offering both NG Renta's employees and clients instant insights into equipment status and usage.

Together, these elements formed the core of a flexible and scalable rental equipment tracking software tailored to NG Renta's needs.

Hardware

Two types of tracking devices were selected for the project: the [HCV5](#) from Ruptela — a GPS tracker designed for monitoring heavy vehicles and machinery — and the ST9101 from ORBCOMM, a compact satellite terminal suited for remote and off-grid environments. This hardware combination enabled powerful generator and compressor monitoring, even under challenging conditions.

To enable connectivity in areas without cellular or satellite coverage, a small single-board computer Raspberry Pi was used to establish a local Wi-Fi connection for the ST9101, ensuring uninterrupted data transmission.

The partner went above and beyond to develop a tailored solution capable of collecting data from the existing controllers, as no ready-made integration was available on the market.

This complex task took six months to complete due to its technical challenges and stands as a testament to both the flexibility of Wialon-powered projects and the critical role of having a trusted, skilled Wialon partner.

Additional services

Such an ambitious project would not have happened without extended support from the solution provider.

Safetrack maintained daily communication with their client as the devices were gradually added to Wialon and installed on available equipment. The six-month integration involved numerous virtual meetings and on-site visits to support the equipment installation.

The solution has already been rolled out to over 120 units, with the rest of the 400-unit fleet scheduled to be gradually equipped in the future. The solution provider continues to work closely with NG Renta, offering ongoing support as they complete installations on the remaining units.

Results

The successful implementation of this equipment monitoring system brought tangible improvements to NG Renta's operations. By combining advanced tracking, real-time data, and user-friendly tools, the project delivered both immediate and long-term benefits across key areas of their business.

Alejandro Guerrero Gonzalez

CEO of Safetrack

We'd like to extend our thanks to Wialon for their invaluable support throughout this project's implementation. Their expertise was key in seamlessly integrating all the solution's components.

We also thank Wialon for fostering such a strong and connected community. It was during a partner meeting that I met the developer behind the exact solution we needed to meet our client's full set of requirements — a connection that proved critical to the project's success.

Below are some of the most impactful results:

✓ Full fleet visibility

NG Renta now has complete oversight of assets, including real-time monitoring of up to 60 sensor parameters per unit. This level of insight is critical for optimizing operations and increasing accountability.

✓ Reduced downtime

By tracking engine hours in real time, the company can now schedule maintenance precisely when it's needed. This not only prevents unexpected breakdowns but also improves equipment lifespan and operational reliability.

✓ Improved client experience

Customized dashboards allow NG Renta's clients to see equipment operating in real time at their own sites. This transparency strengthens trust and enhances the overall perception of NG Renta's professionalism and service quality.

✓ Operational safety

With the ability to shut down equipment remotely in response to contract completions or technical alerts, NG Renta ensures higher safety standards and faster incident response even in remote locations.

✓ Reliable operation in any location

Thanks to the carefully chosen hardware and system architecture, the solution performs seamlessly even in remote or harsh environments, from offshore platforms to isolated mining sites, ensuring uninterrupted data flow and equipment control regardless of location — supporting everything from generator to compressor monitoring.

Company profile

IoT project of the year nomination: Growing fleets

Country: Mexico

Industry: Rental

Website: ngrenta.com

Solutions

Wialon

flespi

Hardware

Ruptela HCV5

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