

# Fleet digitalization as a path to safer cargo and driver operations in South Africa

## THE WINNER

IOT PROJECT OF THE YEAR 2024

This project is one of the winners of the IoT project of the year 2024 contest. Explore the article and [learn more about all the winners](#).

### Challenge

[Jacobs Transport](#) began in 1999 as a small family operation run by two brothers. Over the years, it's grown into a well-known name in South Africa's transport sector, working with clients in mining, construction, and other demanding industries.

The company's fleet is built to handle all sorts of jobs, from sidelifers and forklifts to step decks and other specialist equipment. Among these, the side tipper trucks used for bulk haulage demand the greatest attention — they carry high-value loads and face the highest security risks.

In South Africa, those risks are amplified. Cargo theft is an ongoing threat in sectors such as mining, where bulk loads are tempting targets, and keeping drivers on the right route and schedule is just as critical to safety and efficiency.

To keep their service standards high and protect the bottom line, Jacobs Transport decided it was time to step up their use of technology. They turned to a Wialon partner to address three critical challenges: keeping valuable loads safe from theft, ensuring drivers stayed safe and on the right route, and making sure tipper trucks only unloaded in authorized locations.

Let's see how they did it.

### Solution

[GotYou Telematics](#), part of the Wialon partner community since 2017 and the company behind [Wialon's four-millionth connected vehicle](#), developed a comprehensive solution tailored to Jacobs Transport's needs.

At its core, the system brings together GPS tracking, geofencing, and remote immobilization capabilities, supported by a range of extra safety tools. Each truck is fitted with a wireless panic button so drivers can send an instant distress alert, Bluetooth beacons to ensure only authorized drivers can operate the vehicle, and high-precision location tracking that continues to work even in remote areas with poor connectivity.

One of the key elements is the GPS tip lock, which automatically blocks the tipping mechanism outside authorised zones. At the same time, the system sends an alert to managers, giving them full visibility into any attempted violations.

Beyond security, the solution also improves day-to-day fleet control. Managers can see exactly where vehicles are, monitor driver behaviour, and receive alerts if routes or schedules aren't followed. All of this is managed centrally through Wialon, which integrates seamlessly with Jacobs Transport's existing fuel and tyre management systems.

Today, 149 vehicles operate within this connected network, giving the company a clear, real-time view of its operations and the ability to respond quickly to any issue.

Now, let's take a look at how the software, hardware, and integrations work together to make that possible.

#### Software

Wialon is the fleet digitalization software powering the project. By collecting data from all connected devices and transforming it into actionable insights, Wialon gives Jacobs Transport the visibility and control it needs to run safely and efficiently.

The platform delivers a set of core functions that support both fleet security and day-to-day management:

- **Real-time tracking.** Managers see a truck's location, speed, and route history at a glance — so if something looks wrong, they can act immediately.
- **Geofencing.** Virtual zones define exactly where tipping is allowed. If a truck tries to unload outside those areas, the device automatically blocks the mechanism and the system alerts managers, ensuring protection even in areas with limited or no network coverage.
- **Driver behavior monitoring.** Wialon records instances of speeding, harsh braking, and idling, giving managers the data they need to encourage safer driving and cut down on fuel use and maintenance costs.

GotYou Telematics also configured Wialon to deliver automated reports, instant alerts, and remote hardware commands. To connect fleet data with the company's wider business processes, they carried out an API integration with Jacobs Transport's fuel and tire management systems. This brought all critical operational data together in one place, making oversight simpler and speeding up decision-making.

#### Hardware

To meet Jacobs Transport's complex requirements, GotYou Telematics sourced a tracking device capable of supporting all the features needed for the project (*the partner preferred not to disclose the specific model*).

One of its key capabilities is **storing geofence files directly on the device**. In high-risk or remote areas where mobile coverage is unreliable, this ensures that safety functions, such as restricting where tipping can occur, continue to work even without a server connection.

The device also supports **multi-IMSI SIM cards, automatically switching between mobile carriers to maintain connectivity across regions**. This adds an extra layer of reliability for trucks that travel long distances or cross network boundaries.

To safeguard tipping operations, GotYou implemented a custom control algorithm directly on the hardware. **If a truck attempts to tip outside an authorized area, the device blocks the mechanism** on its own and immediately notifies managers, regardless of network availability or driver input.

For broader compatibility, the unit includes dual CANBus interfaces, enabling integration with different truck models and access to detailed vehicle data through J1939 scanning.

Additional safety and monitoring tools round out the setup:

- **Bluetooth beacons**, which broadcast unique signals that nearby devices can detect, making it possible to track when and where a truck passes specific points. These beacons are highly energy-efficient and can run for long periods on minimal power.
- **A wireless panic button**, giving drivers the ability to send an instant emergency alert.
- **Hikvision onboard cameras**, already installed in part of the fleet, with further rollout planned as the system expands.

### Ongoing support

Jacobs Transport also benefits from continuous after-sales support tailored to its evolving needs.

- GotYou Telematics provides **regular system adjustments**, from setting up custom reports and automated job scheduling to fine-tuning real-time notifications as requirements change.
- Hardware performance and system functionality are actively monitored to ensure **long-term reliability**.
- **Training has been a central part of the rollout.** All relevant staff took part in onboarding sessions, and key team members received one-on-one training to manage the system at a higher level. One Jacobs Transport employee was even upskilled to provide first-line support on site, ensuring fast response times when issues arise.
- Additionally, internal WhatsApp groups were established to **facilitate direct communication** between Jacobs Transport and the service provider team, enabling the quick resolution of issues and collaborative problem-solving.

### Results

The solution delivered by GotYou Telematics has helped Jacobs Transport address its biggest risks — cargo theft, driver safety, and tipping control — while improving the efficiency of day-to-day operations.

The project sets a strong example for side tipper fleet management, demonstrating how digital tools can protect high-value cargo, safeguard drivers, and keep fleets running reliably in a high-risk environment.

#### ✓ Better cargo protection

The GPS tip lock, geofencing, and live tracking make it far harder for thieves to target loads. Unauthorized tipping is physically blocked, and managers can act on any suspicious movement straight away.

#### ✓ Enhanced driver safety

Panic buttons and driver monitoring give drivers extra protection on the road, while managers can step in quickly if routes aren't followed or risky behavior is detected.

#### ✓ Improved operational efficiency

Smarter routing and visibility into driving habits help cut fuel use, reduce wear on vehicles, and improve overall fleet performance.

#### ✓ Higher revenue security

Accurate load verification prevents losses from underloading or discrepancies, protecting the company's bottom line.

#### ✓ Stronger customer trust

Reliable, on-time deliveries and transparent load data have boosted customer satisfaction.

#### Company profile

 **IoT project of the year nomination:** Substantial fleets

**Country:** South Africa

**Industry:** Long-haul transportation

#### Solutions

 Wialon

 Driver behavior monitoring

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