BOX ID and Sigfox Poland improved ZING's supply chain operations and cut costs with on-demand visibility into transport trolleys connected to the 0G Network

The Challenge

ZING needed on-demand visibility to the location of its specialised paper transport trolleys to improve supply chain continuity for customers and reduce logistics costs.

The Solution

Partnering with BOX ID, ZING attached IoT devices connected to the Sigfox Poland 0G Network to hundreds of its transport trolleys to better track the location of its fleet.

The Results

BOX ID's IoT asset tracking solution connected to the 0G Network rapidly delivered significant benefits for ZING including:

- Improved visibility to trolley locations
- Reduced trolleys required from 500 to 300
- Optimised supply chain processes
- Decreased operating costs
- Employee time savings (1 man-day/ month)
- Reduced carbon footprint

0G Network Operator

sigfox poland

Sigfox Poland is the exclusive operator of the Polish 0G Network, the first open public LPWAN network enabling the secure connection of ultra- energy-efficient Internet of Things (IoT) devices.

Solution Partner

BOX ID

BOX ID Systems designs and delivers fit-for-purpose IoT solutions for location monitoring to cost-effectively track millions of logistical assets in the global industrial supply chain.

Customer

ZING

ZING is Poland's largest distributor of paper and substrates for printing, large-format advertising media and packaging materials.

For over 30 years, ZING has supplied paper across Poland for all types of printing. Secrets to the company's long-term success include refined logistics methods and strategically placed warehouses and trans-shipment platforms nationwide.

ZING's customers value the company's commitment to provide door-to-door deliveries in under 24 hours. To manage its wide range of delivery requirements, ZING developed a fleet of specialised trolleys to safely transport paper products and materials up to four meters long. The trolleys on wheels are lightweight and quick to set up.

OG Case Study

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ZING promises customers delivery within a window of

24 hours

The efficiency of ZING's supply chain relies on the return of its trolleys to the designated regional warehouse within 24 hours of a customer's delivery.

Any longer than 24 hours and the company incurs costs from sourcing replacement trolleys and risks delays in delivering new customer orders.

In the past, many ZING customers found the wheeled trolleys useful for their own needs and delayed returns to ZING. ZING's employees manually searched for the trolleys at customer sites in a time-consuming, cumbersome process that absorbed hours every week.

To ensure timely order fulfillment, reduce logistics and trolley replacement costs, and save employees time, ZING wanted a solution to deliver on-demand visibility into the location of each transport trolley.

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Our aim is to provide high-quality media to the print sector with a 24 hour delivery service door to door.

Andrzej Kościelniak, Visual Communications Director at Zing

How BOX ID and Sigfox Poland created an IoT asset tracking solution to modernise ZING's supply chain

ZING partnered with BOX ID, an innovative Internet of Things (IoT) solution provider, to develop an asset tracking solution to monitor its transport trolleys' location remotely.

The solution involves attaching a compact IoT-enabled BOX ID tracking sensor to each trolley. The sensors weigh less than 100 grams each, and run on low-power, long-life batteries, requiring no maintenance for up to five years. A robust design, BOX ID sensors operate equally well in outdoor and indoor environments, in temperatures ranging from -20° to 60° C.

Each sensor connects to the Sigfox Poland 0G Network, a global low-power, long-range network enabling low-cost, low-energy device connectivity for massive IoT. Sensor connection to the 0G Network is straightforward and completed in minutes.

The 0G Network is available and performs reliably in all areas, particularly environments challenged by traditional networks, such as underground locations and inside warehouses and storage facilities.

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We see all our transport trolleys on the BOX-ID platform. When our marked equipment doesn't return within 24-hours of the order completion, we receive an alert that we send to the customer, who now knows they need to return it immediately.

The psychological aspect is crucial - since we started tracking our trolleys, most drivers and customers have made timely returns. This saved us time and money, while enhancing our supply chain process and operational efficiency.

Grzegorz Mazur, Transport coordinator at Zing

The sensors capture and share location information based on trolley movement over the 0G Network to a central data management platform at set intervals. If the sensor detects no trolley movement, location information is shared every 24 hours.

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5,000
Messages over its

5 Years of Battery Life

If the sensor detects trolley movement exceeding 40 km/h, location information is shared every 2 to 4 hours. The IoT asset tracking solution can send 5,000 messages over 5 years, providing ZING's team on-demand visibility to the location of every transport trolley in its fleet. When customers fail to return tagged trolleys to designated warehouses within 24 hours of order fulfilment, an alert is sent to the ZING team, who proactively contact customers to arrange returns.

Within months of deployment, BOX ID connected several hundred ZING transport trolleys to the IoT asset tracking solution. ZING gained superior visibility to its transport trolley fleet, allowing it to enhance its supply chain operation efficiency.

The time, cost, and process value ZING unlocked with IoT asset tracking on 0G Network
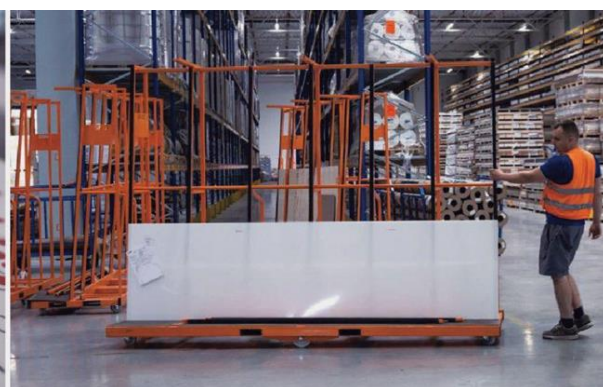
Today, the company transports trolleys less frequently, but every trolley is fully loaded, reducing logistics costs and time. Other benefits to ZING's operation include:

- Extending carrier utilisation cycles and optimising end-to-end customer service
- Removing hidden handling costs by freeing up staff time from chasing trolley locations manually, and taking **1 day for inventory reconciliation per month**
- Reducing purchases of new trolleys by improving fleet utilisation and enabling proactive repairs **- ZING only requires 300 trolleys to operate instead of 500**
- Decreasing carbon footprint from trolley load optimisation and efficient transport.

40%
Reduction in number of trolleys required to operate

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We're pleased that our IoT implementation created such noticeable gains for our customer. With precise information about the location of its transport trolleys, ZING can more efficiently fulfill customer orders and avoid costly, time-sensitive misunderstandings around returns.

Matthias Piekarczyk, Chief Sales Officer (CSO) at Box ID Systems

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Saving time across supply chain operations almost always results in cost savings. Fit-for-purpose IoT asset tracking solutions delivering data-driven insights into simple information, such as location data, are attractive use-case to help logistics organisations better automate and optimise processes to reduce spending and minimising carbon footprints. We're proud the low-cost, long-range connectivity of the 0G Network enables more efficient, commercially viable supply chain operations while supporting ZING's sustainability agenda.

Michał Kowalski, Partner at Sigfox Poland