

# Case Study

## Gates and doors

### Transportation



A company producing industrial gates and doors is experiencing huge financial losses due to poor quality transportation and goods handling. Damaged products are discovered as they are unpacked at the customer's premises.

## Challenge

Currently there is no solution in use by the company for monitoring conditions during transportation (preparation, loading, transport, unloading). They cannot identify whether the damages are caused by ignoring the transport rules or aggressive driving, e. g. abrupt braking, very sharp cornering, etc. The goods being transported weigh several hundred kilograms; therefore, any impact can cause damage.

## Needs

- ▶ The door supplier wishes to identify the quality of the logistics chain components to the point where the goods are handed over to the end customer, including:
- ▶ Impact during transportation – measurement of any impact exceeding 3G with exact data on where, when, and exact impact in Gs
- ▶ Temperature – reporting when the goods are subjected to thermal impact in cases where temperatures exceed 40°C
- ▶ Transport mode – measurement of when very rapid braking or very sharp turning impacts placement of the goods by shifting them and causing damage.



## Request

- ▶ Online data analysis, up to 5 minutes from an event, all over Europe without any sent data limitations
- ▶ Remote configuration (OTA) of sensor settings
- ▶ Non-disposable sensors or units
- ▶ A multiple-language system for all European branches



## Solutions and Results

The deployment of the entire Trexee ecosystem supplied important data on goods handling and shipping to the door supplier. These facts have been identified:

- ▶ Incorrect goods handling on the company's premises resulted in screw loosening since goods were not placed on the semi-trailer continuously but were released from a specific height. As a result, the measured impact upon contact with the semi-trailer exceeded 7Gs.
- ▶ The temperature measurement has shown that goods were placed incorrectly on the company's premises. They were exposed to direct sunlight resulting in the temperature inside the package exceeding 40°C.
- ▶ During transport, the carrier met all requirements. Lorries drove over rail crossings at the specified speed as well.



## Summary

The special sensor modules provided valid data which helped improve the internal processes, simplified the external process monitoring, and made the entire process more effective. Thanks to the accurate measuring of values working together with event GPS data, it was possible to supply findings and quickly apply necessary improvements. The Trexee system features 16 language versions, so all European branches can access their data in their mother languages without placing any unnecessary burden on the operator.

