SEQUANTA

Monitoring of driving conditions for buses & coaches

In passenger and public **transport activities**, the level of strain supported by buses and coaches' fleets requires efficient and responsive maintenance. Vehicles must be available and reliable during service hours to ensure the highest level of service and **safety for travelers.**

Due to the driving style, the state of the roads, works, traffic jams, troublesome parking and traffic incidents, **many critical elements** (engine, gearbox, axle, axles, braking, pneumatic circuits...) are subject to stress and or events that could damage them and have a direct impact on the **reliability** and **quality** of the service to users. An incident on a vehicle causing a service outage, event of very **short duration**, has important consequences on the operation of the network and the level of service.

Monitoring the reality of the operating and **driving conditions of vehicles** is a key success factor. It enables on the one hand, to understand how and under what conditions they are actually used to anticipate the **maintenance of the critical elements** as soon as possible, but also to act on the level of service by reducing avoidable outage; and finally, to characterize **abnormal events impacting safety.**

For public transport network operators and passenger transport operators, increasing the availability rate of vehicles is the number one objective of buses and coach's maintenance. But beyond that, vehicle maintenance can also become a strong lever to strive for total operational excellence. The sine qua non condition for making it a powerful axis is to feed it with a detailed vision and knowledge of the driving conditions and the use of the vehicles. This precise knowledge of the field enriches the processes and aligns them with the requirements of performance and safety.

What could be consequences of emergency brakings ?

An emergency braking happens when an unexpected situation suddenly appears on the vehicle journey. In urban area many of these obstacles can impact the vehicle and its components with a possible quicker damaging of the vehicle.

SEQUANTA **Smart Data solutions**

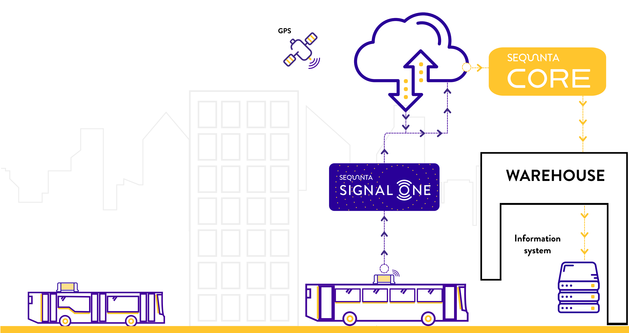
SEQUANTA low-power and wireless smart data solutions provide crucial information on the health and **conditions of use of buses and coaches** for **greater control of safety** and the proper functioning of the operations. They also inform the **real-time management of critical events** for greater control over safety (e.g. repeated emergency braking situations). The analysis of this information is a **strong level** for improving the **quality** and **performance** of the service.

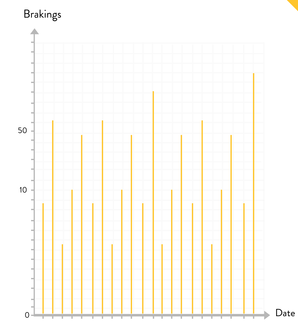
SEQUANTA SIGNAL ONE

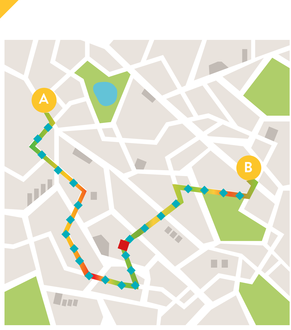
SEQUANTA Signal One has been designed for the **IIoT** to take all its meaning in complex and demanding environments. In the field, closer to objects, **SEQUANTA Signal One** transforms data captured by its own internal sensors or connected wireless sensors.

SEQUANTA CORE

SEQUANTA Signal One data are continuously stored and consolidated at the **SEQUANTA Core** software platform level in the cloud. Powerful tools for data filtering, visualization and exploration to take **informed decisions.**







Monitoring of driving conditions by SEQUANTA

Detect, characterize and geolocate data as close as possible to the critical elements to monitor the parameters (vibrations, shots, accelerations, pitch, roll, etc.) necessary to characterize the real conditions of transport.

Feed operations and maintenance process with Smart Data (speed, acceleration, use of brakes, engine speed, idle time...)

Benefits

- Build a precise knowledge of the driving conditions of vehicles.
- Obtain a clear vision of the type of road covered.
- Objectify the comfort of journeys.
- Complete programming models of preventive maintenance
- Guide the improvement of travel times and service comfort and safety.