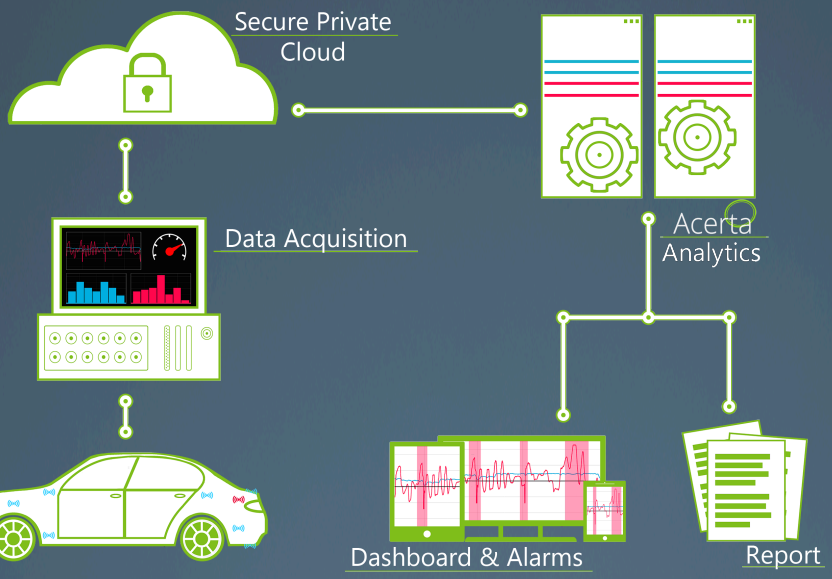
Acerta

Acerta CHECK: Data-driven Diagnostics & Predictive Maintenance

Acerta's analytics service turns raw data collected by your assets into powerful new insight. The analysis is available over any web capable device, or through generated reports.



Anomaly Detection

Acerta's technology uses state-of-the-art statistical analysis and machine learning techniques to reduce the time spent diagnosing vehicle failures.

Acerta leverages data assets you already collect, automatically learning the target's normal behavior. It flags anomalies in the machine under test by comparing it to the learnt normal profile. Acerta easily identifies emerging issues including irregularities and trends in system as well as degrading sensor performance.

Predictive Maintenance

Acerta optimizes remote asset monitoring by detecting failures early. Vehicle downtime is an expensive problem leading to delayed cargo and cost of lost opportunity. Predictive maintenance will help you improve the effectiveness of your fleet. Use Acerta to detect emerging vehicle issues before they become acute, to react fast, and to reduce downtime and costs.

Our partners and customers include

QNX™ FCA FIAT CHRYSLER AUTOMOBILES MAGNA BOMBARDIER

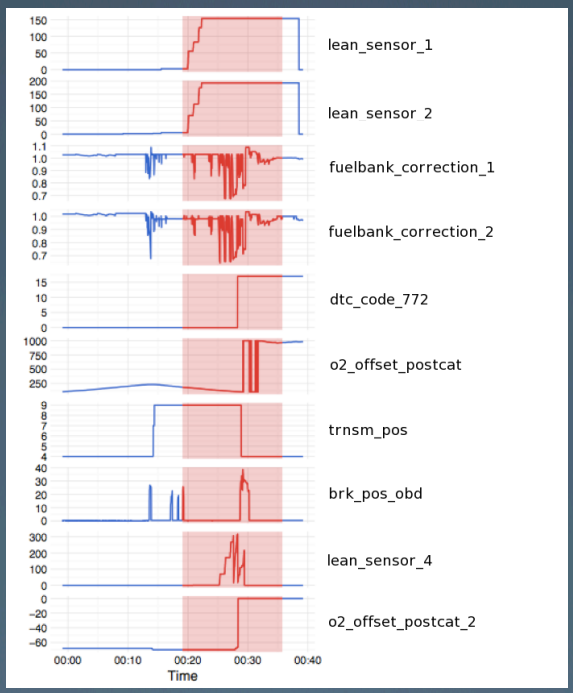
Case Study: Fuel System

Acerta's technology optimizes and streamlines fleet monitoring. During the 3.2 days that a monitored vehicle was on the road it developed an issue causing deteriorated performance. By the end of the trip the problem was so severe that the driver had to shut down the vehicle.

Tracking down the cause of an issue from sensor readings can be a challenging task. Searching for the root-cause among the hundreds of signals tracked by the car is like *"finding a needle in a haystack"*, and costs many valuable engineering hours. Two teams tracked down the problem to the fueling subsystem, but the one using Acerta analytics found it 100 times faster.

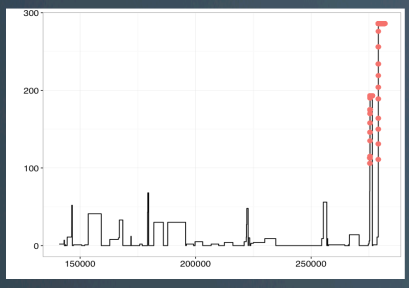
Root Cause

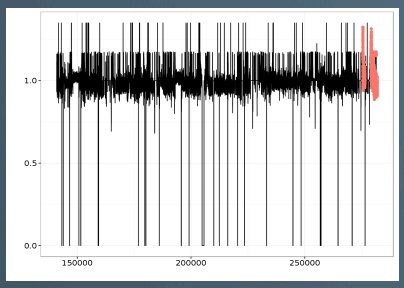
As a result of an air leak in the exhaust system, the vehicle ran continuously in a lean condition. The graph on the left depicts the behavior of a fault counter for an O2 sensor that monitors airflow. Acerta automatically picked out and labeled the spike in the reading at the end of the trip, right before the vehicle was shut down. Although the trend on the left is easy to spot, the anomalous area in the fuel bank correction values on the right is indistinguishable to the human eye. Yet, the algorithms were picking up the disturbance in the signal nonetheless.



Many monitored parameters are typically affected when a vehicle issue starts to develop. In the case of the air leak, this includes other fuel system parameters. To help diagnose the issue, Acerta extracts a subset of signals that are most indicative of the anomaly.

The report above combines the 10 signals deemed responsible for the problem. The anomalous regions are highlighted in red and surrounded by context for review by engineers or technicians.





Acerta

Turn raw data into informed decisions

info@acerta.ca
www.acerta.ca
+1 (519) 729 – 5543
Waterloo, Ontario, Canada