SOLUTIONS FLYER

# ANALYZE PERFORMANCE AND OPERATIONS OF TRUCK FLEETS IN REAL TIME

Altair's event processing and data visualization tools enable fleet operators to analyze critical data streaming in from sensors and other sources. This real-time visibility into vehicle and driver performance helps reduce operating costs, improve driver safety, and increase fleet productivity. Analysts can display maps showing the current position of all assets, examine route deviations, program alerts on any set of parameters, and compare drivers' behavior. Analysts can design and modify analytical dashboards as needed without writing a single line of code.

## Analytics Challenges for Fleet Operators

Trucks are now capable of streaming vast quantities of data from the field to headquarters. Large numbers of sensors send telemetry on engine performance, fuel consumption, and driver behavior that can be combined with GPS and third-party data sources like weather condition providers, police, and/or public services to develop an understanding of road conditions, construction zones, traffic flow, and other parameters. Using this data effectively can have a significant positive impact on the profitability and service quality for a fleet operation, but the volume and velocity of the data make it difficult to understand what the data is showing unless managers are equipped with the right analytics tools.

## Amplify Real-Time Visibility with Artificial Intelligence

An operational view of truck and driver performance offers numerous obvious benefits, but those benefits can be maximized by leveraging artificial intelligence (AI). AI tools that allow business users to create new programs using drag and drop interfaces are necessary to fully exploit the fleet's data resources.

**Use cases for AI in this environment include:**

- Predictive and preventative maintenance
- Remaining useful life (RUL) calculations
- Pro-active alerts for driver fatigue, delays, and potential mechanical failures
- Cost per engine hour and cost per distance traveled projections
- Profitability per journey
- Incorporation of weather data into route planning and management

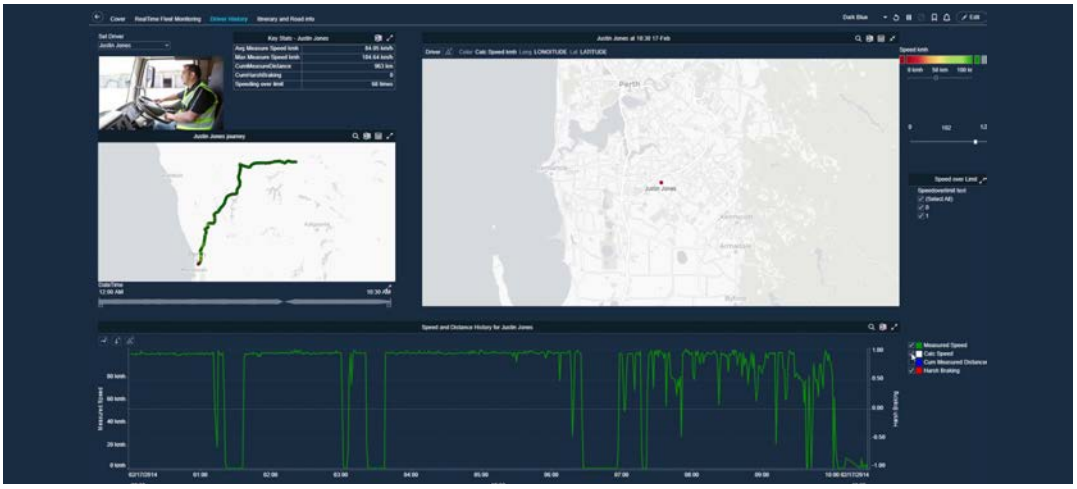
## Flexible, Code-Free Analytics Solutions for Decisionmakers

Fleet operations are inherently a real-time business. The people responsible for smooth operations must be able to analyze information and respond quickly. Rigid analytics applications that require custom coding or third-party consulting expertise to modify them can create barriers that prevent decision-makers from identifying and mitigating small issues before they evolve into much larger, more expensive problems.

IMPROVE FLEET PROFITABILITY BY LEVERAGING TELEMETRY AND OTHER DATA SOURCES EFFECTIVELY

AI AND REAL-TIME VISIBILITY DELIVER COMPLETE OPERATIONAL VIEW

CODE-FREE SOLUTIONS DEMOCRATIZE DATA ANALYTICS



A real-time dashboard like this can process and display telemetry, GPS, and image data for individual vehicles and drivers as well as aggregate and filter data for the entire fleet. Data sets typically include speed, engine RPM, oil pressure, tire pressure, fuel consumption, harsh braking occurrences, actual speed compared with posted speed limits, location, traffic data, weather and road conditions, and much more.

Click here to watch a demo.

Business users need analytics platforms that enable them to modify their applications quickly, develop new dashboards, and create new data processing algorithms. People who understand the questions that must be answered and the nature of the source data are best positioned to design and update analytics systems. The clear need is for tools that require no coding to connect to new data sources, build and modify dashboards, and implement complex event processing algorithms.

### Altair Data Analytics for Truck Fleet Monitoring

Altair enables fleet operators to develop, manage, and deploy stream processing applications and dashboards that provide detailed views into the real-time performance of individual trucks and drivers as well as aggregated views of groups of vehicles and drivers. Altair's web-based, cloud-ready tools can federate real-time data collected from individual truck gateways into a single data stream and analyze historical data with granular detail.

**Data Preparation:** Access, cleanse, and format data from a wide variety of sources – including Excel, CSV, PDF, TXT, JSON, XML, HTML, SQL databases, big data like Hadoop, and more – without any manual data entry or coding.

**Stream Processing:** Connect directly to real-time sensor data being streamed over MQTT, Kafka, Solace, and other message queues and build complex stream processing applications with a full drag-and-drop interface.

**Data Visualization:** Connect to live and historical data sources and build and publish sophisticated real-time dashboards without writing any code. Solve difficult problems quickly, understand complex relationships in seconds, and identify issues requiring further investigation with just a few clicks.

**Artificial Intelligence and Machine Learning:** Altair's industry-leading visual approach to analytic modeling enables business users to minimize repetitive takes related to creating curated and governed data sets, share knowledge across the enterprise, and reuse steps within connected model workflows for faster analysis and sharing of insight.

> Fleet managers must leverage all the data available on vehicle performance, driver behavior, traffic, weather, and more so they can respond in real time to changing conditions. They need agile analytics solutions that enable them to adapt to new challenges immediately.
>
> Sam Mahalingam
> CTO, Altair

## Fleet operations is a real-time business. Decision-makers must have real-time views of driver and vehicle performance at the individual and aggregate levels.

Learn more about Altair Data Analytics at **altair.com/data-analytics**