

**Customer:**  
Major US Truck Manufacturer

**Application Area:**  
Digital Engineering

## Challenge

The customer had siloed databases with limited contextual information about test data, such as configurations of an engine or a test vehicle. The inflexibility of the systems and sheer volume of data made analyzing all the data difficult within time constraints. These inefficiencies resulted in higher costs and longer product cycle times.

## Solution

Viviota Time-to-Insight Edge

- Automates and operationalizes data ingestion and implements a flexible dynamic metadata schema
- Delivers universal access to sensor data through a single, Time-to-Insight (TTI) user interface
- Provides easy integration with existing engineering analysis tools and corporate systems
- Accelerates analysis at the edge to handle even the largest analysis workloads

NI PRODUCTS USED:

- SystemLink
- DIAdem

# Automotive Digital Transformation Using SystemLink and Viviota Time-to-Insight

In a rapidly evolving marketplace, automotive manufacturers need to design, develop, and deliver their products to market as soon as possible by optimizing the iterative design process. This way, they can help lower costs, gain efficiencies, increase performance, and improve product time to market.

## Challenge: Siloed Engineering Data in an Aging Infrastructure

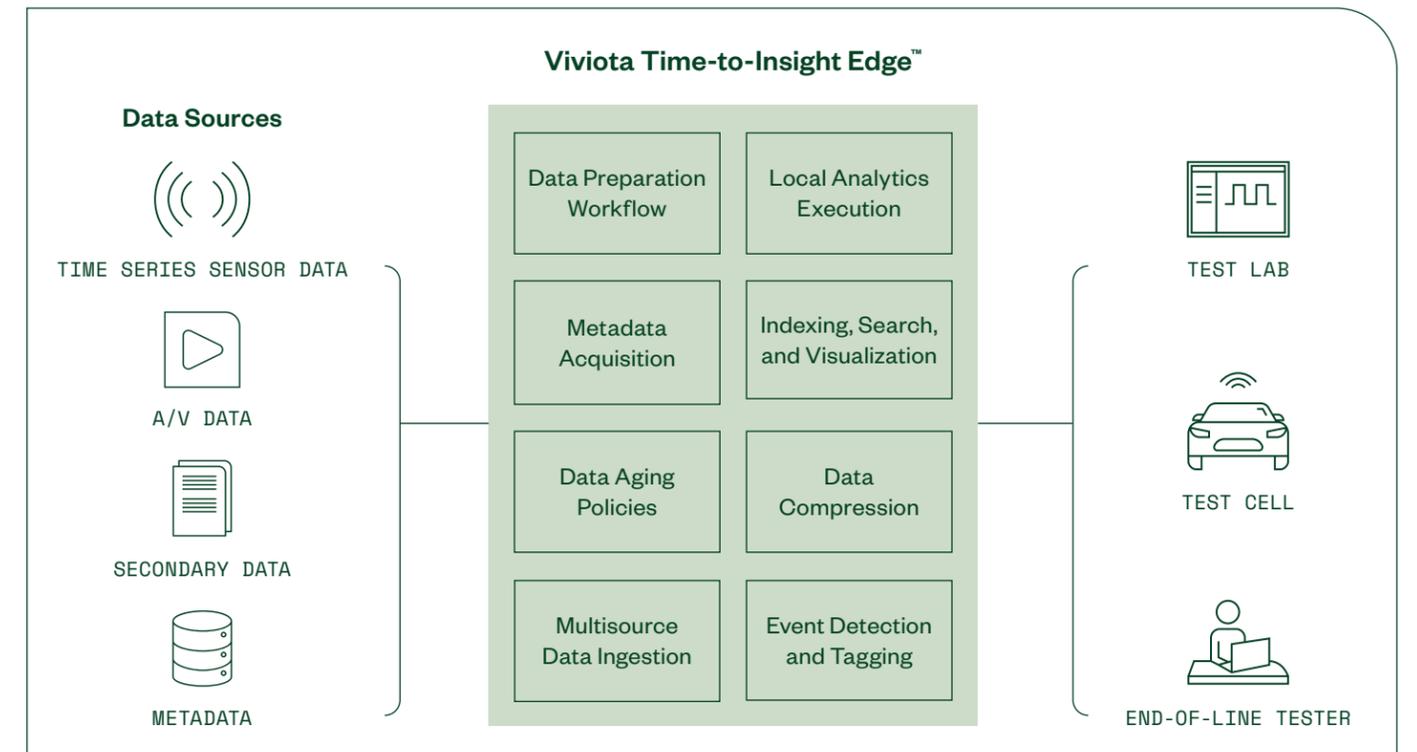
A major North American truck manufacturer selected Viviota Time-to-Insight (TTI) Edge software for enhanced engineering data management and accelerated analysis. Viviota TTI software works with SystemLink data modules and DIAdem to automate data and analytics management.

The truck manufacturer's typical engineering workflow was supported by the analysis of engine test data acquired in several environments, including multiple test cells and in-vehicle test facilities. This arrangement had siloed test data and limited contextual information (metadata), such as configurations of an engine or a test vehicle, or the setup of the test cell and the type of test performed. Finding test data and related contextual data involved looking up information in disparate databases and directories to understand details about the test and the acquired test data. Consequently, the ability to gather all the required information to perform an analysis resulted in hours of preparation time.

The inflexibility of the systems and sheer volume of data made analyzing the data difficult within time constraints. The inability to find data easily led to expensive retesting, which slowed down the development process.

## Objective: A Single, Open, and Scalable System for Engineering Data Management

The customer's team members wanted a software platform capable of automating all aspects of their sensor data consumption and sharing. The team required well-documented and validated data for reliable and faster analytics and reporting. Removing



Viviota Time-to-Insight Edge Software

manual processes and providing universal access to better quality data would give engineers the freedom to focus on higher value-add activities for product design, prototyping, and testing. This would lead to shorter product time to market.

## Solution: Viviota Time-to-Insight Edge Software with SystemLink Data Modules and DIAdem

Viviota provided a complete, end-to-end data management and analytics solution. TTI Edge was implemented in multiple edge computing environments including test cell, lab, and test track. The solution united data from these edge environments along with centrally available data so the user has a single window for all sources. The solution platform also included an HPE Moonshot server, a powerful server-class system that can effectively scale for data management, analysis, and reporting. TTI offered a better user experience by providing a single point of access to engineering data from any data source. The flexible, dynamic metadata schema provided by TTI gave engineers the rich data context they needed to access all relevant data and reach reliable conclusions more quickly. It also provided a single interface and the ability to run analytics using their current set of engineering tools.

The fundamental processing components of TTI Edge were able to distribute storage and processing across all available server cartridges, helping to optimize data management, searching, and analysis. Viviota's TTI software also used the HPE Moonshot platform to increase I/O scalability.

These data management improvements shortened product time to market. The digital transformation team estimates a system payback period of one year and expects continued savings.

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