

# Member Profile: Real-Time Innovations (RTI)



With Pedro Lopez Estepa, Director of Automotive, RTI

## What does your company do? What services, or products, do you provide?

[Real-Time Innovations](#) (RTI) is the largest software framework company for autonomous systems. RTI Connex<sup>®</sup> software is the world's leading architecture for developing intelligent distributed systems from autonomous vehicles to medical robotics to unmanned aerial vehicles to sophisticated defense systems. Headquartered in Silicon Valley, RTI is the leading vendor of products compliant with the OMG<sup>®</sup> Data Distribution Service (DDS<sup>™</sup>) standard.

RTI Connex Drive<sup>®</sup> is the automotive-grade connectivity software framework that delivers the automotive software components, development tools and runtime applications to accelerate the development and deployment of autonomous vehicles, including ISO 26262 safety and ISO 21434 cybersecurity designs. It accelerates direct integrations into AUTOSAR Classic and ROS 2 which minimizes overall system complexity and cost, while providing scalability and flexibility to build a future-proof, evolving system that doesn't compromise performance.

Connex Drive is certified to ISO 26262 ASIL-D, offering an accelerated path to building safety-critical systems for electric and autonomous vehicles.

## Why did you join COVESA and how long has your company been a member?

RTI joined COVESA in late 2022. We joined at the request of several COVESA members, who requested our help as the organization explored the role of DDS in its current recommendations on communications interoperability and standards (specifically [VSS](#) and the cooperation with AUTOSAR). Over the past few years, OEM interest in DDS has risen sharply. As the global leader in DDS technology for automotive (and other industries), RTI engineers are experienced at integrating DDS with other standards such as SOME/IP, FRANCA IDL and AUTOSAR data serialization. So we're here to help, and to listen, learn and actively participate in the work of this consortium.

## What benefits does your participation in COVESA bring to your company and business?

COVESA is a thriving community that is working towards open, collaborative and impactful technology for connected vehicles. Like COVESA, RTI too is at the forefront of technology innovations that will enable the next generation of automobiles. In particular, we are interested in next-generation communications. The new software architectures provide major benefits to enable key functionalities, but if it goes in the wrong direction, it could result in large increases to the cost of integration. It's therefore critical for auto companies to have access to a common architecture with standard communication models that can be shared across platforms and suppliers, in order to accelerate the development and cost optimization for the complete supply chain. VSS aims to solve this problem, and its impact will go beyond development. For organizations such as RTI, this will bring the focus on enhancing functionalities and not contextualizing on custom vehicle signal specifications.

## Which COVESA collaborative project(s) or Birds of a Feather (BoF) is your company engaged in and why is that beneficial to your business?

As a leader in DDS technology, RTI is interested in participating in the [Vehicle Signal Specification \(VSS\)](#), which defines a common approach for describing vehicle data. We believe that DDS could enhance the performance of the widely-adopted VSS data model, and we're here to help with some of the integration modeling work to make this happen. In addition, RTI plans to be a key contributor on the interoperability tasks with AUTOSAR. RTI has been a key member in AUTOSAR, defining the integration of DDS in both Autosar Adaptive and Classic.