

## ● 발표 주제

# ADAS Test Strategies and Platform-based Testing Methods of Global Automotive OEM & Tier 1



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## ● 발표초록

The main trends these days are megatrends fundamentally transforming industries, product testing, and the business models for companies trying to monetize it. The Industrial IoT, 5G design and prototyping, and the trio of vehicle electrification, ADAS, V2X converging for autonomous driving are all creating the same fundamental challenges for companies. The DUT is getting more complex, the innovation cycle is driving down test times, and teams and budgets are getting smaller.

The natural consequence of this is test complexity. More diversified measurements means more test equipment is needed. But we're actually hearing about the people element just as much. You may be sweating the need to scale equipment, but test managers are sweating the need to scale people to use or program that equipment. In fact, Best-in-class test companies now rank development time as the #2 most critical factor in selecting a test platform - only after the long-standing critical nature of throughput time. That's a critical development because the traditional solution has been a closed, fixed-functionality system. Fundamental to this approach is the assumption that the vendor knows best how to solve the application. With this shift, 72% of test engineers expect to participate in the design of their tester, eschewing the spirits of the older days to the past. Customization is no longer the key, it's now critical, an undeniable requirement. Fortunately for NI, we're already primed for this with our open, software-centric platform that our customers are using to solve the same challenges, but with flexibility and openness that sets them up for future changes while driving down test times now.

ADAS is introducing new technologies into vehicles. While they are new to automotive, radar and camera technologies have been used in other industries for years, another example of why staying involved in multiple industries can benefit your test systems. All of these types of testing are facing the same sets of challenges. First of all, regulatory uncertainty as governments try to determine the best way to regulate ADAS and autonomous vehicles while not restricting innovation. Second, the sheer volume of testing that is required to prove these systems are safe (140M km roughly to prove they are as safe as a human driver). Third, as systems become interconnected they need to be tested together, creating more testing and more test system complexity. At the last, as new technologies continue to emerge in vehicles, they need to be integrated into existing test systems.

This presentation introduces examples of companies that have solved the challenges they face on an open platform basis provided by NI. The success stories of the ADAS HIL of Valeo and Audi radar test case from ADAS iIT global partnership of NI, the Mazda integrated test automation for electronic component, and the Volvo fully Integrated HIL will show us how can they solve their challenges.

