

HYUNDAI AUTOEVER: EN ROUTE TO WORLD-CLASS AUTOMOTIVE INNOVATIONS WITH MAAZ



HIGHLIGHTS

World-class certifications achieved – AUTOSAR, ASIL-D, and ASPICE.



Rapid development with high quality despite time pressure - 76 modules need to be developed with ASPICE level 2 compliance within 12 months.



Reduced time-to-market with next-gen technology adoption – Jenkin for 24/7 continuous bug detection and automation for reducing 90% of the required workload.



OUR CLIENT

The future of the automotive industry lies in in-vehicle software innovations. Indeed, a 2010 study estimates a car to be made up of 2,000 functional components, 30,000 parts, and 10 million lines of code. The increasing complexity of automaking has undoubtedly presented several challenges and driven global auto manufacturers into a quest for more cogent software capability and independence, more efficient vendors with world-class standard compliance, and highly-skilled automotive software engineers.

To solve these issues, our client – Hyundai AutoEver, has turned to FPT Software's AUTOSAR solution – MaaZ. Hyundai AutoEver is a "mobility software provider" and is a member of the South Korean-based multinational automotive manufacturer – Hyundai Motor Group. With a mission of actualizing the Hyundai Motor Group's mobility vision, Hyundai AutoEver provides an AUTOMOTIVE development platform (BSW Classic and Adaptive) to all ECU applications for the OEM to be applied in current and new model cars. Since the cooperation, Hyundai AutoEver has become one of FPT Software's strategic clients in developing and implementing AUTOSAR technology.

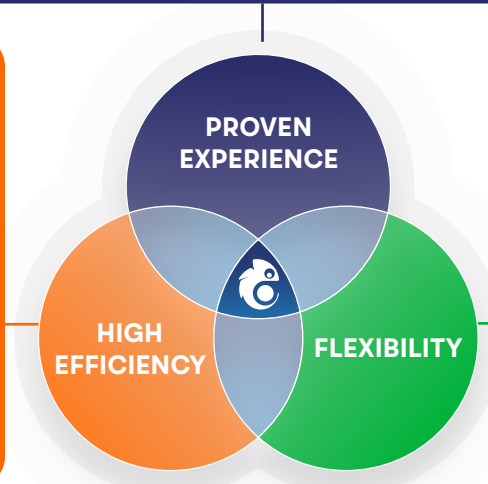
THE BUSINESS NEEDS

Hyundai AutoEver needed to develop AUTOSAR BSW SRS/SWS List for 4.4.0 and HMC ES SRS on target board Aurix TC3xx, as well as safety modules with ASIL-D and ASPICE Level 1. And MaaZ was proudly trusted to accompany Hyundai AutoEver on this mission for exhibiting solid capabilities, with proven experiences, high efficiency, and flexibility to complete this important task:

- **12+ years** of experience in Platform (MCAL, BSW, SWC, Microcontrollers), Tools, Safety, R&D, etc, which comply with ISO26262 A-SIL A/B/C/D and A-SPICE Level 3.
- **End-to-End Turnkey Solution** with ready-made platforms, tools, and services accelerating the AUTOSAR transformation.
- **CI/CD/DevOps** as the de facto standard.
- **500+** AUTOSAR experts.

Efficiency =
Time to market x Cost x Quality

- **Big pool of software engineers** working in parallel (5,000 automotive software engineers) for shorter time-to-market
- **Optimal cost competitiveness** with offshoring to Vietnam & presence in 27 countries.
- **Secure and high-quality software services** based on experiences with the world's top chipmakers, tier-1 automotive suppliers, and OEMs.



- **Adaptive** to frequent changes in requirements.
- **Flexible & scalable working model:** on-site, offshore & dual shore.
- **Flexible business models:** onshore, offshore, hybrid & even BOT (Build-Operate-Transfer).

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THE CHALLENGES

Time pressure was a significant issue for our software engineers – they were required to develop 76 modules with ASPICE Level 2 compliance within 12 months. At the peak, 180 engineers worked in parallel with only 8 hardware/licenses. Besides, four different test levels were applied: Static check, Unit test (100% coverage), Integration (100% coverage), and System Test. ASPICE processes are a MUST, and Safety (ASIL-D) certification needs to be achieved.

SOLUTION

To ensure a high-quality service delivery within the time pressure, two solutions were adopted:

01 Utilize advanced technology and method for speed-up development:

Jenkins was applied by Hyundai AutoEver and FPT Software to run 24/7 for early bug detection automatically. And automation was strictly applied to reduce 90% of the required workload for development and Integration. Besides, CT was utilized to optimize the use of hardware and licenses, and the x86 framework was developed to solve module dependency constraints.

02 Quick resource ramp-up:

With FPT Software's presence in 27 countries and 22 development centers, MaaZ's 5,000 automotive software engineers, and 500 AUTOSAR experts readily available, the workforce was accessible and easily scaled up to accelerate the development process.

VALUES

The results are tangible and long-lasting:

World-class certifications achieved: our solution has successfully helped Hyundai AutoEver achieve the necessary credentials (AUTOSAR, ASIL-D, and ASPICE) before the committed deadline.

Highly efficient development: Despite the time pressure, our engineers have dedicated their hearts and mind to delivering a high quality service for our client. Defects were found before the formal validation phase with CT, and the process was sped up thanks to the simulation test applications that allow engineers to self-test at their desks.

ABOUT US

FPT Software is a global technology and IT services provider headquartered in Vietnam, recording more than USD 803 million in revenue in 2022 and over 27,000 employees in 27 countries. As a pioneer in digital transformation, the company delivers world-class services in Smart factory, Digital platforms, RPA, AI, IoT, Cloud, AR/VR, BPO, and more. It has served 1000+ customers worldwide, a hundred of which are Fortune Global 500 companies in the industries of Automotive, Banking and Finance, Logistics & Transportation, Utilities, and more.