

## Testing for the Mobility of the Future

*Functional safety is at the heart of the development of Arnold NextG's unique central control unit NX NextMotion. For this reason, the company relies on Softing's testing and telematics portfolio.*



*Kevin Arnold (left), CEO and founder of Arnold NextG, relies on Softing's Hardware in the Loop solutions to develop the unique NX NextMotion control unit.. Source: Arnold NextG*

Arnold NextG, through its employees, has over 20 years of experience in the field of road-approved drive-by-wire technology and thus a unique competence to develop retrofit solutions for all by-wire applications. Because neither the real ECU environment nor corresponding vehicles are available for testing in the current phase of system development, Arnold NextG relies on a so-called hardware in the loop (HIL) solution from Softing, which can be set up with simulated and partially real vehicle components. In this way, practically all expected scenarios can be simulated, the reaction of the ECU can be tested, and the effect on the vehicle can be recorded and documented.

The HIL system used by Arnold NextG allows fully automatic fault simulation. In the process, the requirements from system engineering are tested according to ISO 26262 ASIL D for the entire system - from the input devices to the pins of the control unit connections to the actuator technology. Such extreme fault scenarios are realistic in the harsh vehicle environment. Metallic foreign objects can be thrown up from the road and potentially cause significant disruptions, which must be entirely safeguarded, especially for safety-critical control units like NX NextMotion, which directly controls the steering and braking systems.

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Modern vehicles are becoming more powerful, safer, and environmentally friendly thanks to new software developments. To cope with the increasing complexity of control units, a deep understanding of communication processes and contents is essential. Direct access to control units and precise evaluation of control unit information, even in the installed state, are therefore core tasks in the development, testing, production, and service diagnostic processes.

To address this, Arnold NextG also relies on Softing's modular telematics system provided by their subsidiary Globalmatix. With the Car2Cloud2Company principle, direct communication can be established between the vehicle and the company's infrastructure.

Kevin Arnold, CEO of ArnoldNextG, looks forward to further collaboration: "With our Safety by Wire technology, we provide the foundation for safe autonomous driving in the future. We are pleased to have Softing as a strong partner by our side, supporting us in the development of our unique technology and through all subsequent processes, from production to after-sales service!"

Armin Baumann, CEO at Softing, is enthusiastic about winning ArnoldNextG as a new customer: "In addition to our well-established premium customers in the automotive field, we are very excited to collaborate with ArnoldNextG. This technology forge will change worldwide mobility with its Safety-by-Wire technology. We are delighted to accompany this process with our expertise."



*Kevin Arnold (left), CEO and founder of Arnold NextG with Softing Managing Director Armin Baumann  
Source: Arnold NextG*

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*The flexible modular system of NX NextMotion enables the implementation of any drive, steer or brake-by-wire requirements up to revolutionary system-on-chip (SoC) solutions. Thanks to the modular and scalable system architecture of NX NextMotion, we are already meeting the requirements of future mobility scenarios today.*  
Source: Arnold NextG



## Contact

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## About Arnold NextG GmbH

Arnold NextG realizes the Safety-by-Wire® technology of tomorrow – whether on land, water, or in the air. They offer the globally unique and multi-redundant central control unit NX NextMotion, enabling fail-safe and individual implementation. As an independent advanced developer, incubator, and system supplier, Arnold NextG takes care of planning and implementation – from vision to road approval.  
Website: [www.arnoldnextg.com](http://www.arnoldnextg.com)

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## **About Softing Automotive**

Softing Automotive focuses on diagnosis, measurement, and testing, representing key technologies in automotive electronics and related areas of the vehicle industry (e.g., commercial vehicles or agricultural machinery). The Automotive segment is a specialist for the entire lifecycle of electronic control units and complete systems, from development through production to service. Their offerings include hardware and software products, tailored solutions, as well as consulting and engineering services. Softing actively participates in the major standardization committees of automotive electronics, such as ASAM and ISO, providing customers direct benefits from standardization results. Website: <https://automotive.softing.com>.

## **About Globalmatix AG**

Globalmatix is a specialized M2M/IoT mobile and telematics operator based in Vaduz (Liechtenstein). They supply vehicle manufacturers and telematics providers worldwide with an innovative 4G telematics gateway with an integrated CAN data logger of the next generation for GPS tracking and remote vehicle diagnostics. This is essential for applications in "Connected Car," autonomous driving, predictive vehicle diagnostics, or fleet management of all sizes, brands, and models. The smart Car2Cloud service is secured against external interference through patented security procedures and is certified according to the highest OEM requirements. Website: <https://www.globalmatix.com>.