Impulse for Future Challenges
The next Generation of Mobility starts with a Safe & Secure Operating System
Complexity is a grave Enemy

Safe and secure embedded computing is a key for future-orientated cross-platforms in modern cars. The growing connectivity demand along with the increasing protocol complexity is the thread of safe and secure systems.

Do not compromise on your safety and security goals. Find a way to reduce complexity.

- 200,000,000 Connected Cars in 2021
- More than 100 million lines of code in a modern car
- 1GB/sec Data-Traffic per Car
- > 200 sensors and 80 ECUs
- 250 kilograms of electronics
How to increase Efficiency and Flexibility

The “hardware” in modern cars must be reduced significantly. At the same time performance requirements increase. Multi-core-Systems satisfy the hunger for performance.

- SWaP-C (acronym for size, weight, power and cost) is driving the ECU consolidation. Dedicated safety and security systems maintaining flexibility with increased certification demand in a consolidating market.
- Fewer components means less power consumption and less weight. New communication structures in the car will slim down the vehicle’s wiring system architecture.
- Sustainable means to cope with increase of operating data, connected sensors, V2x-Communication
Autonomous driving needs Safety and Cyber Security

Modern cars are Internet-connected data centers on wheels. Leverage the experience from other markets like Aerospace and Defense. Connectivity shall not compromise safety and security. Embrace the new …

• Minimize accidents by 100% Cyber-Security and follow the Vision ZERO Concept
• Achieve 100% safe- and 0% error propagation due to „Security by DESIGN“ concepts in production
• Achieve 100% stability through the use of independent applications and reuse of existing code
Safety & Security from the first line of code!

With SYSGO & PikeOS®: Focused, Flexible, Reliable and Innovative!

- 26 years SYSGO and 11 years PikeOS®
- Expert in development and certification support
- Agile & strong European engineering
- Independent Thales entity
- 1st Hypervisor in Automotive-Series-Production
- 1st certified embedded virtualization RTOS
- 1st certified Hypervisor on Multi-Core

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SYSGO has more than 25 years of expertise in certifiable software, agile and responsive, with long term support for all of our OS products. PikeOS is a Hypervisor based separation microkernel. This unique software development platform is designed for the highest levels of safety and security. PikeOS Hypervisor technology has been certified on a wide range of projects using various certification standards.