F⊕S

Fleckner und Simon
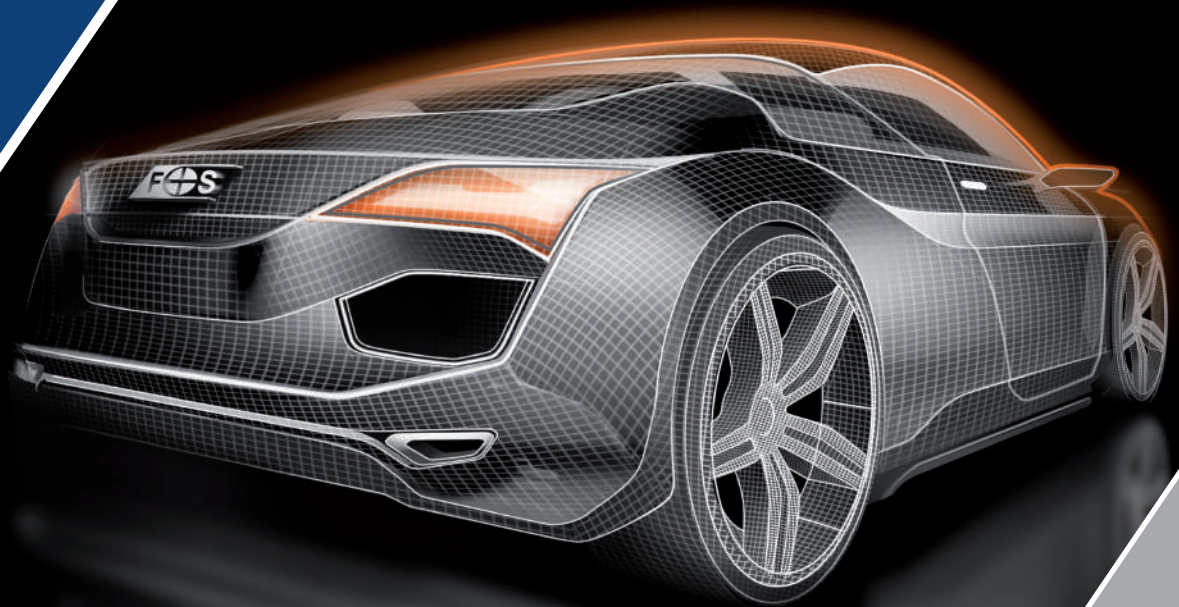**Informationstechnik GmbH**

Automotive Embedded Software

Consulting // Development // Functional Safety // Cybersecurity

F+S GmbH is an independent company in the field of automotive embedded software – specialized as a developer of software modules for complex technical systems and as a consultant in all aspects of process optimization. You benefit from our wide and long-term experience and expertise in the field of functional safety, in artificial intelligence, in Level 3/4 autonomous driving systems, as well as in cybersecurity.

Experts for strong results…

We reliably fulfill the high quality requirements of our customers. To achieve this we orient our processes on standards such as *ISO 26262* for maximum functional safety, in terms of process quality on the industry standard *„Automotive SPICE"* and on the IT-Security standard *ISO 21434*.

We uncompromisingly pursue the values of our company philosophy: *quality, efficiency, customer orientation* and *competence*. And we bundle expertise with effective and efficient implementation. That is why we are listed as *"recommended consultants"* by leading automotive companies and receive excellent evaluations as a supplier.

COMPLEX PROJECTS ARE IN GOOD HANDS WITH US.

1ˢᵗ tier suppliers have to overcome complex challenges. They cannot always be up-to-date on the latest developments – with the risk of falling behind the state of the art and losing competitive potential. Our customers know that we always stay *at the top of developments.* So they can benefit from our experience.

Experience leads to success…

Competent consulting is complex; it creates high added value, although not without its price. But anyone who runs into a dead-end due to the lack of profound knowledge will have to invest more time and money in the long run.
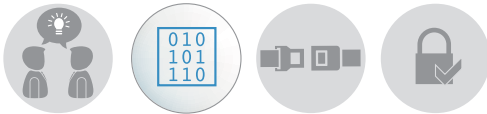
We have many years of experience in assisting customers with complex development projects. And our consultants know what they are talking about because they have successfully developed automotive software themselves. That is why we can recommend *pragmatic solutions* in response to your individual challenges.

We also have the necessary expertise, problem awareness and experience for the complex, responsible tasks of functional safety up to Level 4 systems and cybersecurity in the automotive sector. All these tasks are in good hands with us.

CONSULTING: Development projects require expertise – with understanding of the details and the big picture. We make our knowledge productive for you.

Our services:
- Management consulting
- Assessments
- Process improvements
- Quality assurance
- Project managemet (traditional + agil)

Secure the essential resources! Because development projects are becoming more and more complex and demanding. And they have to be implemented "just in time". That requires that you have *special knowledge* and a *highly efficient team*. We offer both.

At the junction of effectiveness and efficiency…

DEVELOPMENT: You have a goal: outstanding software solutions. We provide effective and efficient assistance in all phases to help you achieving that goal.

Our services:

- Requirements engineering
- System and software design
- Module development
- Tests at multiple levels
- Technical management and integration
- Interface tools
- Data analysis and test support

Our development engineers work closely with our consultants and profit from their know-how whenever new tools shall be used efficiently or new methods are being developed and implemented. Since competence is crucial, many of our developers are *Certified Professionals for Requirements Engineering* (IREB®), *SW Architecture* (iSAQB®) or *Certified Testers* (ISTQB®).
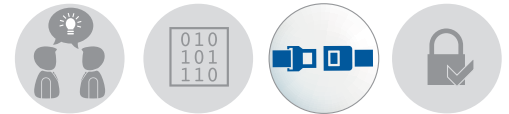
At the end of the day, the result is what counts. That is why we provide exactly the services that are required *in all development stages* – from the specification of your requirements through the development of customized solutions all the way to managing and integrating them.

With specially adapted tools for your project needs, we relieve your employees of routine tasks and manual administrative work.

ALL OUR SERVICES MAKE YOUR SOFTWARE SAFE.

Customers expect safe vehicles. For good reason! Therefore new driver assistance systems are supposed to prevent accidents and not cause them as a result of technical defects. With the development of functionally safe systems up to Level 4, also with artificial intelligence, and compliance with ISO standard 26262 we have a lot of experience.
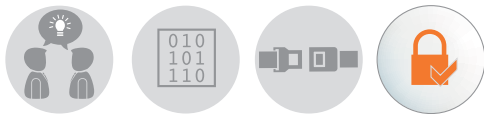
Better safe than sorry…

Many of our employees are SGS-TÜV-certified *Automotive Functional Safety Professionals/Experts* and VDA QMC-certified *Automotive SPICE® Assessors* of all levels (Provisional, Competent, Principal) with a solid background in development technology. Our engineers are familiar with methods for detecting **hardware errors** and for avoiding **software errors**. In addition, our tools are qualified for safe applications, if required.

Often we provide project support from several directions: We create **guidelines** in order to pragmatically cover the requirements of the safety standards. We support your engineers in the **implementation** or perform the **development work** for you.

SAFETY: Automotive software has to function reliably. Our efficiency, competence and high quality standards ensure that it does.

Our services:

- Safety consulting
- Safety management
- Safety engineering

Hackers break the weakest link in the chain. To enable that **your software** can **withstand** all attacks, we secure every component with the necessary problem awareness, full expertise and high quality standards.

Successfully ward off attacks …

CYBERSECURITY: Withstand external software attacks. We know the attack scenarios and the successful preventive measures.

Our services:

- Secure system architecture
- Careful implementation
- Adaptation of development processes

The future of the automotive sector will include self-driving cars. This requires Car-to-X communication, which can be implemented only with reliable security measures. Therefore cybersecurity is an issue that affects more and more control devices.

Encryption is required by the manufacturers and by the standards. Errors in design and in the implementation of the software open up back doors and even gateways for attackers.

Specific design expertise, careful implementation and rigorous tests prevent these weak spots. Furthermore the issue of cybersecurity places new demands on the software development processes. Our consultants can offer you pragmatic solutions for these processes.

The bottom line is that a comprehensive perspective is necessary – which is how we approach "cybersecurity" as consulting experts.

AUTOMOTIVE EMBEDDED SOFTWARE IS OUR BUSINESS.

The automotive sector is an innovative and dynamic industry, in which complex software solutions are becoming increasingly important. Development of these solutions requires special competences. Because it is necessary to achieve *high quality* both *cost-effectively* and *on schedule*.

Systematic software development

As experts for automotive embedded software, we take a closer look at the development process from all relevant perspectives. Dependent on requirements, we combine our experience in the fields of „development", „consulting" with the challenges „safety" and „cybersecurity". Therefore you can rely on theoretically solid and technologically perfect solutions.

Since our company was founded in 2000 we have grown continuously – also on the basis of our *certified quality management* system. Our *team* of experienced employees and young colleagues with fresh ideas strives to constantly become a little bit better for our customers.

Fleckner und Simon
Informationstechnik GmbH