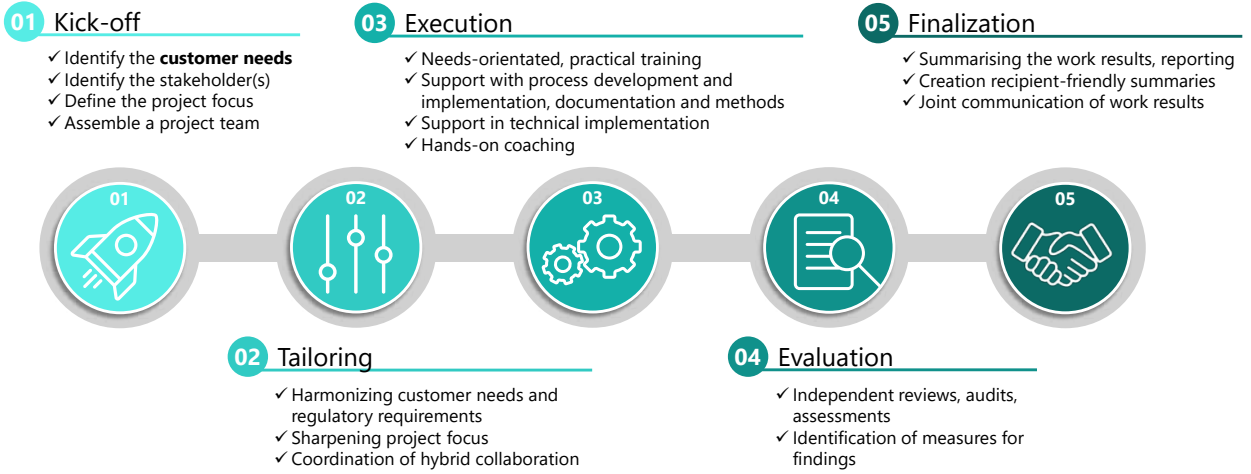


# Cyber Security

Expert Protection: Systematic Hacking Defense with Process & Tech



- » Holistic safety as a corporate culture and technological task
- » Together from the idea to homologation
- » Coaching and sparring: benefit from many years of expertise and synergies
- » Using customized tools to minimize costs and ensure compliance



**Security is our passion:** cyber security is not created by regulations and standards, but by their professional application. Our customized solutions help you to identify security gaps, meet legal requirements and sensitize your employees to cyber threats.

Although online connectivity provides convenient new functions in the vehicle, it also harbours additional risks with consequences that are difficult to predict. From data theft and manipulation of driving behavior to property offences, hacking opens up a wide range of possibilities that are both theoretically conceivable and practically feasible - unless appropriate measures are taken.

**ISO/SAE 21434, Automotive SPICE® for Cyber Security** and **UN ECE R155/156** provide normative and legal frameworks to minimise the risks of hacking in a structured manner.

Our goal is to integrate the requirements of these standards into your existing processes, documentation and work results so that cyber security becomes a process and product improvement rather than a disruptive factor. To achieve this, we utilize our extensive knowledge from numerous customer projects in the field of ECU validation for automotive manufacturers and suppliers.



# Services at a glance

MicroNova supports automotive manufacturers and suppliers in implementing the required processes and in creating and maintaining the necessary documents. Existing processes are adapted to the requirements of the standards as efficiently and with as little disruption as possible. We also maintain an overview of processes that affect several standards and minimize the effort involved.

We also support the technical implementation of cyber security solutions in the product. This includes not only optimizing the hardware and software architecture, but also analyzing and, if necessary, adapting existing toolchains through to verification and validation (V&V).

## Risk assessment and management

We analyze and assess potential risks to your IT infrastructure and develop strategies to effectively manage and minimize them.

## Compliance and regulation

Our team supports you in complying with legal requirements and industry standards and guides you through the homologation process. We use standards and laws such as ISO/SAE 21434 and UN ECE R155/156 to minimize hacking risks in a structured manner.

## Vulnerability analysis and penetration tests

Using suitable methods, we systematically identify, document and analyze potential vulnerabilities in your systems and help you to eliminate them before they can be exploited.

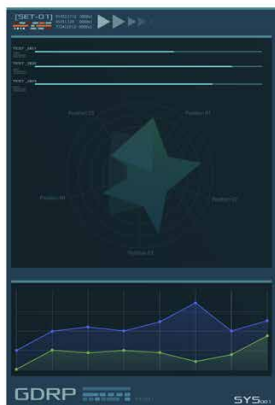
## Awareness and training programmes

We offer customized training and programmes to raise your employees' awareness of cyber threats. In this way, we ensure that they are up to date with the latest security technologies for their respective products. Customized training based on your established processes, existing knowledge and technical background is a matter of course for us.

## Coaching and sparring for:

- » Application and tailoring of standards and associated argumentation
- » Implementation of new and optimization of existing processes
- » Documentation relevant to homologation
- » Analyses and application of methods
- » Technical implementation of suitable solutions
- » Tool selection (including tool creation if necessary)
- » Assessments

MicroNova offers comprehensive support across the entire V-model. If required, we integrate our network of competent partners.



# Our experience - your advantage

As MicroNova consultants, we have many years of practical experience in our respective areas of expertise and are proficient in the specific standards and methods. We have access to an interdisciplinary team with experience from a wide range of projects and technologies.

Furthermore, as consultants, we are in direct contact with our experts in hardware and software development as well as in the areas of Testing Solutions and Enterprise Solutions. Benefit from our knowledge and experience from over 35 years of automotive engineering.



Contact us and together we will find out how we can support you with your individual challenges!

## **MicroNova**

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