

Automotive OEMs

Design and Product Development



Getting it right, from the Start

DEKRA has been active in product development and testing from the very earliest days of the automotive industry. We are now a world-leading independent expert organization with expertise in product validation, type testing and accreditation. We can work with you throughout your product development value chain, from the very earliest design stages and prototyping right through to type approvals and series production. You can rely on DEKRA as your specialist partner, globally.

CASE Mobility – achieving digital transformation and a sustainable long-term business

Our wide range of services in support of meeting the challenges of connected, autonomous, shared, and electric (CASE) mobility help you build a strong business model for the future. Benefit from our consultancy, testing, accreditation and training expertise and from value-added competitive advantage.

ADAS Testing

Manufacturers are obligated to test the functional safety and confirm the performance of driver assistant technology in line with various safety standards (ADAS tests). Our experts analyze the impact of all assistance systems, from electronic stability programs (ESP) to adaptive cruise control, Lane Departure Warning, Brake Assist, Emergency Braking Assist, and Turning Assist. To test the systems, our engineers work with R&D departments and co-define profiles for public road data collection as well as performance scenarios, for example in the area of pedestrian safety, and provide special test facilities at the DEKRA Automotive Test Centers in Germany, Spain and China to reconstruct all sorts of different real-life situations. DEKRA can certify ADAS components in more than 220 countries. That ensures global market access.

Automotive Type Approval and Homologation

When selling your vehicles or parts in different international markets, you need to obtain the relevant approvals according to the legal requirements of your target markets. Our multiply designated technical services provide a full range performance testing portfolio for the whole vehicle and component homologation process. We cover e/E-mark testing and compliance reports to EU and UNECE regulations and tests conducted according to national regulations. Conformity tests can be performed in our own testing locations. Furthermore, can we provide conformity testing reports globally through witness testing in accredited or qualified manufacturer laboratories.

Chief Information Security Officer (CISO) Training

This course provides a well-founded overview of the various information security standards needed to make tactical and operational decisions as Chief Information Security Officer (CISO). It provides insights into legal and personnel aspects and how to safely deal with outsourcing projects.

Connected Vehicle Testing

DEKRA offers a complete portfolio of testing services for connected vehicles, including wireless connections and interoperability. In addition, we provide any type of certification you may need to market your connected car components, systems, and vehicles around the world, from Bluetooth and Wi-Fi to PTCRB and AirFuel in a wide range of technologies for V2X communication.

Durability Testing

Thorough durability and endurance testing of the whole vehicle, vehicle components and its driving dynamics are crucial to confirm the performance and reliability of components in their real environment. By testing life-cycle profiles of whole vehicles or just the evaluation of a specific single design feature, we identify potential defects that might endanger road traffic safety. With decades of experience, DEKRA focuses on testing the complete vehicle, its integrated sub-systems and vehicle components.

Electric Vehicle (EV) Testing

DEKRA provides a broad service portfolio for e-mobility, which includes a range of testing solutions from cables, inverters and charging station infrastructure to individual battery cells and modules.

Electromagnetic Compatibility (EMC) and Radio-frequency (RF) Testing

Current regulations require all electric and electronic components, devices, systems and even whole vehicles and their components to feature a certain degree of electromagnetic compatibility in order to ensure proper operation in their intended environment as well as user safety. This prevents malfunctions, unsafe operation and accidents caused by electromagnetic interference with the on-board electronics (all driver assistance systems such as Brake or Distance Assist, ABS, airbags, etc.). The more automated and connected vehicles become in the future, the more important it is to conduct EMC and RF testing.

High-voltage Vehicle Training via Digital Learning Tools

DEKRA e-mobility training is a digital response to the increasing use of electric vehicles around the world. Technicians working with electric vehicles require new sets of skills and knowledge to ensure safe and effective operation. Using digital learning tools, we will train your technicians in the safety and protection measures they need to use to stay safe when working on high-voltage systems.

Material Testing of Vehicle Parts and Interior Materials

Vehicle parts must fulfill specific safety and material resistance requirements, both for the vehicle interior as well as its structure. DEKRA can test your components for harmful substances and durability – giving you the benefits of our decades of leading expertise. Use our wide spectrum of services to reliably check your individual requirements. Our testing and analysis services cover emissions behavior of materials and components, harmful substances (GADSL, PAH, REACH, RoHS), corrosion tests and aging tests (for example salt spray tests), environmental simulation tests (temperature change tests), light resistance tests (hot light aging, xeno-test), flammability/combustibility, fit for use testing, material tests and damage assessments. Test chamber measurements, odor measurements, and pollutant analyses can be used to test automotive interior parts and evaluate outgassing behavior. The DEKRA test laboratory offers comprehensive measurement and analysis procedures for test chamber measurements, VOC screenings, and single substance analyses.

Strategy and Operations Consultancy for Future Mobility Concepts

DEKRA helps the autonomous mobility and logistics sector facilitate the transition to new forms of mobility, enabling them to operate safely and reliably. As established safety experts with many years of experience, objectivity and resources, DEKRA knows what to do – even if a legal framework does not exist yet. Safety begins with a healthy awareness of risks, which must be embedded in IT systems, fleet management centers, cyber security measures and operational processes. This ranges from strategies and processes to organization, personnel and management.

Sustainability Advisory, Coordination and Services

Our experts show you how to maximize sustainability with solutions that respond to your company's needs. We specialize in assessing existing structures and plans to maintain or implement sustainability criteria for organizations. Our consultants are also experienced in carrying out critical reviews of data related to Carbon Footprint and Life Cycle Assessments (LCAs), promoting transparency and responsibility in the development, use and recycling of a wide range of products.

Technical Advisory for EV Charging Stations

DEKRA specialists can provide you with comprehensive technical support during all phases of the design process. We keep you informed about potential problems you may face in future inspections or with the intended use of any industrial machinery and equipment. We are also experts in the testing and certification of all types of electric vehicle supply equipment (EVSE), including home and industrial charging solutions (including for e-buses and e-trucks), fast-chargers, vehicle-to-grid chargers and inductive charging systems.

Technical Advisory for New Manufacturing Processes

We provide a wide range of technical support, advice, training and quality assurance services related to new manufacturing processes and new technologies. DEKRA's inspection experts are highly experienced in identifying potential problems vs the proposed manufacturing process. We can support you through the design phase to validate plans or calculation notes, helping you to identify the best technical and financial balance. Our experts can also be present for technical meetings to validate technical solutions.

Testing of Vehicle Operating Fluids

The choice of operating fluids used can have a significant influence on the function and service life of a vehicle. DEKRA offers various options for examining and testing the quality of these fluids.

In addition to chemical-physical analysis to determine the contents, material characteristics, and detect impurities, we also perform material compatibility testing and performance tests. We carry out special expert analyses to determine the cause of damage on behalf of surveyors, insurance companies and authorities. Our testing and analysis services cover: coolants, brake fluids, fuels, engine oils and lubricant, as well as damage analysis/residue analysis.

Wireless Devices and Networks

Complying with regulatory requirements does not always mean that a product is functioning properly or that it is interoperable with other devices it needs to connect to. DEKRA wireless testing specialists will ensure that your wireless products connect properly and use their radio capabilities appropriately. This enables you to confidently market your products as 'compatible devices', anywhere in the world.



Regulatory Compliance and Safety Performance – meeting the challenges of an ever-changing ecosystem

Change is happening today at a faster pace than ever before. Disruptive technologies and evolving consumer expectations are driving new demands from automotive manufacturers. With our specialist expertise in all aspects of safety and compliance, we keep you ahead of the game.

Automotive Type Approval and Homologation

When selling your vehicles or parts in different international markets, you need to obtain the relevant approvals according to the legal requirements of your target markets. Our multiply designated technical services provide a full range testing portfolio for the whole vehicle and component homologation process. We cover approval testing and technical reports to EU and UNECE directives and tests conducted according to national regulations. Conformity tests can be performed in our own testing locations. Furthermore, we can provide conformity testing reports globally through witness testing in accredited or qualified manufacturer laboratories.

Chemical Safety Advisory

Maintaining compliance with testing and reporting obligations, product labeling and documentation and legislative initiatives such as REACH can be an overwhelming task for manufacturers and importers. Our chemical safety advisory team specializes in supporting companies seeking to comply with the hazardous substances regulatory framework with testing, classification, management services, and more.

Crash Testing

Our crash testing specialists carry out tests on behalf of authorities and vehicle manufacturers worldwide. We ensure that all vehicles are put through comprehensive and highly detailed crash tests, recording the collision process with high-speed cameras and analyzing data from numerous sensors. In this way, we ensure the deformation behavior of the vehicle and its safety can be determined as accurately and realistically as possible.

Design Verification (DV) and Product Validation (PV) Testing

Material testing provides accurate and reliable information for manufacturers on the properties of the components and materials they are using or producing. In many cases, testing is also used to confirm that the material properties are consistent with the documentation and can be safely used in engineering applications or supplied to end users. Alongside our proven expertise in this area, DEKRA also provides services to ensure a sustainable supply chain that is balanced against the safety needs.

Electromagnetic Compatibility (EMC) and Radio-frequency (RF) Testing

Current regulations require all electric and electronic components, devices, systems and even whole vehicles and their components to feature a certain degree of electromagnetic compatibility in order to ensure proper operation in their intended environment as well as user safety. This prevents malfunctions, unsafe operation and accidents caused by electromagnetic interference with the on-board electronics (all driver assistance systems such as Brake or Distance Assist, ABS, airbags, etc.). The more automated and connected vehicles become in the future, the more important it is to conduct EMC and RF testing.

Examination of Experts for Energy and Environment

Validation by an objective third party gives employees confidence in their skills especially when it comes to the quality of your processes and the ability to meet modern requirements for a clean environment and saving energy. With our examination services you can be sure that your in-house experts can prove their expertise.

Health, Safety and Environment (HSE) Management Systems

Maintaining strong HSE management is the most efficient way to ensure the wellbeing of your staff and, by extension, the continued existence of your business. Our HSE strategy consultants can help you define a comprehensive HSE policy that leads to improved safety outcomes through reduced hazard exposures, accident-free work, a healthy workspace, and employee protection. In addition to addressing compliance issues, our experts assist you in reducing environmental impact, creating a supportive culture, and promoting performance improvements.

High-voltage Vehicle Training for Production and Development

The use of voltages above 25 V AC and 60 DC poses a hazard of electrical arcs and electric shock. For this reason, employees need to be trained in assessing electrical work, recognizing possible hazards and taking suitable protective measures. This seminar teaches both the theoretical basics and how to safely handle the respective HV vehicle and its components.

Passive and Active Safety Endurance

DEKRA services cover validation of passive safety (e.g. child safety, pedestrian protection, secure cargo) and active safety (e.g. advanced driver assistance systems, ABS, brake systems, steering, glazing) performed at our own crash-testing site and our endurance / functional performance proving grounds.

Process Safety Consulting

Whether you are carrying out a safety review, implementing safety audits or ensuring compliance with standards or regulations, we can help. For the risk identification, analysis, prevention and management of fires, explosions and accidental chemical releases, we provide impartial advice and recommendations whenever you need it.

Sustainability Advisory, Coordination and Services

Our experts show you how to maximize sustainability with solutions that respond to your company's needs. We specialize in assessing existing structures and plans to maintain or implement sustainability criteria for organizations. Our consultants are also experienced in carrying out critical reviews of data related to Carbon Footprint and Life Cycle Assessments (LCAs), promoting transparency and responsibility in the development, use and recycling of a wide range of products.

Technical Advisory for EV Charging Stations

DEKRA specialists can provide you with comprehensive technical support during all phases of the design and development process: that involves technical advisory on EV infrastructure, analysis and evaluation of the status quo or the development of customized solutions. We keep you informed about potential problems you may face in future inspections or with the intended use of EV infrastructure.

Global Quality Standards – securing your global market presence

In all areas of OEM, quality is crucial. With vast pressure on cost and competitiveness, automotive manufacturers need to know that they can rely on the products and services you supply. DEKRA will work with you to achieve the level of reliability and excellence your customers demand from you.

Automotive Management System

The International Automotive Task Force has expanded the former ISO/TS 16949 standard into the uniform IATF 16949 standard with the aim to assist suppliers in serving OEMs and Tier 1 automotive suppliers. IATF 16949 covers common customer-specific requirements, such as traceability to support current regulatory changes, safety-related parts and processes, and warranty management processes including NTF (No Trouble Found).

Business Continuity Management

Business Continuity Management (BCM) according to ISO 22301 enables you to quickly resume your business activities after critical events. The international standard provides the appropriate framework and bundles the requirements for robust, effective business continuity management.

Business Resilience Impact Assessment (BRIA)

We help you identify concerns and implement solutions to improve the systems and processes you rely on to continue operations in the aftermath of unforeseeable events not under your control. It is now vital that every business, regardless of industry, location or size be able to reassure stakeholders of their proven resilience and continuity capabilities. Our multilevel approach assists you in developing and maintaining effective resilience strategies in three levels.

Chief Information Security Officer (CISO) Training

This course provides a well-founded overview of the various information security standards needed to make tactical and operational decisions as Chief Information Security Officer (CISO). It provides insights into legal and personnel aspects and how to safely deal with outsourcing projects.

Connected, Autonomous, Shared, Electric (CASE) Mobility Training

Connected, autonomous, shared and electric (CASE) mobility is causing radical change in every part of the mobility value chain, and each of these requires new, innovative training concepts. From manufacturing to aftersales, mechanics or roadside assistance, we have the expertise and training programs you need to ensure that your employees will be safe and effective in this new environment.



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Energy and Environment Management System

ISO 50001 is based on the quality standard ISO 9001 and the environmental standard ISO 14001. This enables organizations to convert their existing energy and environmental management systems into a systematic energy management system. Key features include developing a company policy for the more efficient use of energy, data analysis of energy consumption in all major areas and continuous monitoring of measures. ISO 14001 focuses on the systematic development of a continuous improvement process. Companies and organizations of all sizes are able to boost environmental protection and bolster profitability at both the operational and product levels.

Examination of Experts for Health, Safety and Environment

Validation by an objective third party gives employees confidence in their skills especially when it comes to the quality of your processes and the ability to meet modern requirements for a clean environment and saving energy. With our examination services you can be sure that your in-house experts can prove their expertise.

Examination of Experts for IT and Cyber Security

To inspire trust in existing customers and attract potential clients, it is essential to ensure information security – including IT systems, components and processes. Our personnel certification services span a wide range of requirements generally recognized on the international stage and the validation by an objective third party gives employees confidence in their skills and customers confidence they have chosen the right partner.

Expediting, Shop and Vendor Inspections of the Supply Chain

Acquiring new equipment and machinery can be timely, costly and risky. We carry out inspection and expediting services on your supplier's premises, verifying the quality of manufactured products or equipment and the reliability of delivery times.

Information Security Management System (ISMS)

We can help you to protect sensitive data and secure your IT systems, components, and processes to meet today's cyber security challenges. Our ISO 27001 certification will put you in a position to comply with legal requirements and meet the needs of your customers. In addition to technical measures, ISO 27001 certification recognizes the importance of documentation associated with high-level information security management. Recognized by participants across the global automotive industry supply chain, the Trusted Information Security Exchange (TISAX®) has established a uniform level of information security to boost confidence in audited companies. Standardized TISAX® assessment eliminates superfluous "double auditing" - saving you both time and money.

Quality Management System

Reliable quality management based on ISO 9001 ensures high quality processes, products and services. A central feature is its risk-based approach, which identifies opportunities and risks, derives appropriate measures and evaluates their effectiveness. This ensures that the quality management system and the accompanying processes in your organization achieve the desired results.

Second-Party Audits

Experienced auditors provide fast and efficient audits to help you in approving new suppliers, addressing quality issues, confirming corrective actions, or performing reviews or maintenance as part of a supplier management process.

Supply Chain Audits

Our comprehensive audits let you evaluate and ensure ethical, environmental and social compliance as well as process integrity and security throughout the entire supply chain. Our services include initial supplier audits and continuous monitoring, as well as helping you to decipher international, national and local regulatory requirements.

Technical Advisory for EV Charging Stations

DEKRA specialists can provide you with comprehensive technical support during all phases of the construction process, whether that involves technical advisory on buildings and road infrastructure, analysis and evaluation of the status quo or the development of customized solutions. We keep you informed about potential problems you may face in future inspections or with the intended use of any industrial machinery and equipment. We are also experts in the testing and certification of all types of electric vehicle supply equipment (EVSE), including home and industrial charging solutions (including for e-buses and e-trucks), fast-chargers, vehicle-to-grid chargers and inductive charging systems.

Work Safety Management

ISO 45001 has been in force since March 2018 and is the only international and independent standard for operational health and safety management systems. Our experts certify your occupational health and safety management system according to ISO 45001 and consider all aspects of occupational safety – both those related to operational processes as well as those arising from work-related stress that can trigger mental illness.

Due to impartiality and independence requirements of regulatory authorities, services may have to be performed by different, mutually independently operating DEKRA units.

DEKRA

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On the safe side.