

Add value. Inspire trust.

TOMORROW

IT'S IN OUR HANDS

C O N T E N T S

Visions for the world of tomorrow: Six selected topics show where TÜV SÜD is actively making a contribution – for the benefit of its customers, for the good of society as a whole, and very specifically in our own company. You can find more to read and watch in the online Annual Report.

www.annualreport uvsud.com

Innovations that affect us

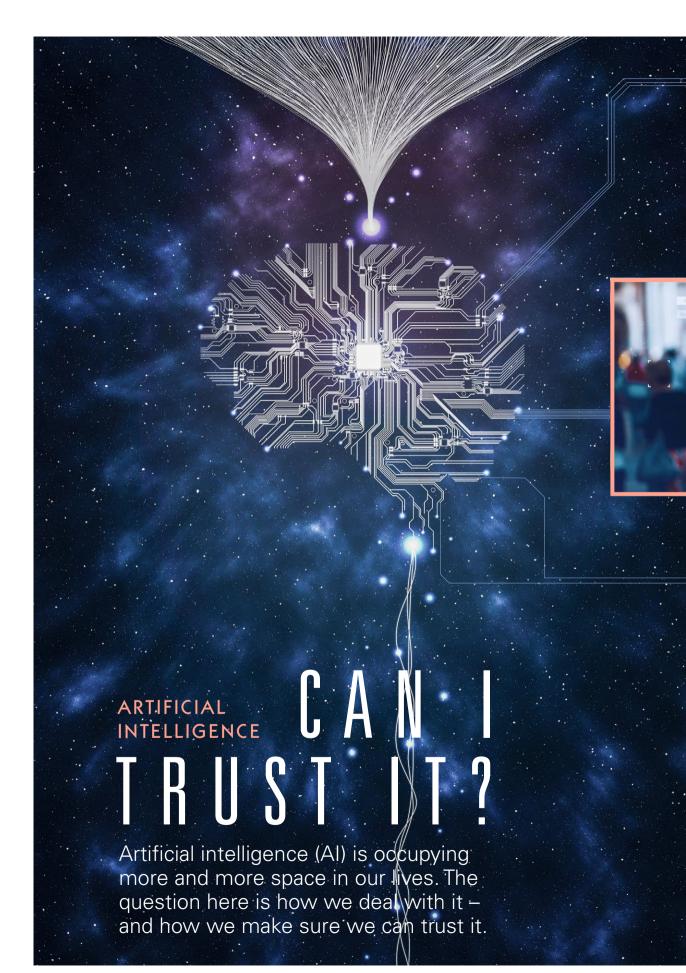
- **O4** ARTIFICIAL INTELLIGENCE
- **O6** CIRCULAR ECONOMY
- **10** RENEWABLE ENERGIES
- **14** MEDICAL DEVICES

How we stand behind our values

- **O8** HEALTHY EMPLOYEES
- **O9** GOOD CORPORATE GOVERNANCE



The future is in our own hands: We are actively shaping the world of tomorrow with confidence and optimism, despite all the current crises, with people all over the world working on solutions to global challenges. Sustainable energy supplies, properly functioning circular economies, and the possibilities provided by artificial intelligence offer great opportunities for a better future. TÜV SÜD is playing its part!



O4

MAGAZINE 2022

TÜV SÜD AG

Having the right AI in the background provides for smart online shopping experiences.



Facial recognition using a smartphone is a typical and routine application of AI.





Whether we are getting just the products we want to see in online store search results, interacting with intelligent speakers, or using automatic image recognition on our smartphones, most of us are already using smart applications with AI on a daily basis.

At the same time, it is necessary to keep in mind that the technology behind AI is based on complex algorithms that process very large amounts of data and achieve results that are difficult for humans to comprehend. And as with any new technology that affects our lives, this eventually raises the question of standards for quality and safety. The clear implication here is that we will need more independently certified AI in the future.

In many countries, corresponding initiatives to define minimum standards are already in the works. For example, the European Union is planning a regulation called the EU AI Act, which is slated to go into effect in 2025. Al will thus become a test object and a focus of attention for TÜV SÜD.

Who controls the data from voice assistants that we use every day? Learn more about Al and its certification in our video with Dr. Martin Saerbeck, CTO TÜV SÜD Digital Services:

annualreport. tuvsud.com/ai

CIRCULAR ECONOMY

WHAT GOES AROUND COMES AROUND

Transitioning from a throwaway society to a circular economy: If mankind wants to preserve life on Earth over the long term, it needs to rethink how it does things. We also need to follow nature's example by integrating more closed-loop systems for materials and products into the economy.

#1 The water cycle

go round:

annualreport. tuvsud.com/circle

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Everyone is familiar with the natural water cycle: Water evaporates and falls to the earth as rain over and over again. But how can this principle be applied to business?

#2 Circular material systems

Closed-loop systems are also familiar in the business

world. Such systems involve the reuse of materials and Our video shows how products as often as possible recycling and reuse with the ultimate goal of can make the world creating a circular system for materials.



06

#4 TÜV SÜD's role

TÜV SÜD supports the circular economy with some 20 testing and certification methods for materials, products, and technical systems.

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#3 Closed-loop packaging systems

To bring about a circular economy, packaging is an important place to start. The problem is that packaging is often made of several materials, complicating the reuse of the individual components. For this reason, more needs to be done specifically in regard to composite packaging.



ONE TOMORROW

HOWWE AND Actively shaping the future also means correctly positioning yourself as a company. TÜV SÜD takes the long view here, such as when it comes to key issues like integrity, legality, and trust, as well as caring for employees.

HEALTHY EMPLOYEES

Motivated and healthy employees are key to any company's success. Good occupational health management should not only be part of a company's strategy but also be fully embraced as is the case at TÜV SÜD. Throughout the world, the company creates a framework to foster the physical and mental health as well as the wellbeing of its employees. Health is not a subject that should only come up when staff members fall ill. Instead, TÜV SÜD focuses on prevention, including regular campaigns to promote good health, workplaces tailored to the needs of the employees, advice and specific assistance in crisis situations, and a pleasant environment that makes employees feel comfortable at work.

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GOOD CORPORATE GOVERNANCE

It's a crucial contribution made by each individual as well as a component of the overall mission of any organization: The importance of compliance, which means abiding by laws and engaging with integrity, has risen in recent years. At TÜV SÜD, a detailed and easyto-understand Code of Conduct governs how employees and managers are to behave in everyday situations as well as in special circumstances. A focus is increasingly being placed on how to prevent negative impacts of business activities throughout the supply chain. And with the TÜV SÜD Trust Channel, we provide a whistleblower system that allows people to report possible misconduct, if they wish anonymously.

> Learn more about our health management and understanding of compliance in our videos:

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RENEWABLE ENERGIES

With photovoltaics, wind power, geothermal energy, and hydrogen as new energy providers, there are enough natural energy sources, instances of potential, and technologies available for the complete conversion of our energy supply to renewables everywhere in the world. The

provides enough energy in **A SINGLE HOUR** to supply the entire earth with electricity for an entire year.

> The wind power capacity installed worldwide up to **2021** amounted to **830,000**

MEGAWATTS, which corresponds to the output of more than **200** coal-fired power plants.

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Almost **1**/5 of the power generated worldwide in **2019** already came from renewable sources.

Many more facts and circumstances suggest that we will be able to meet our energy needs largely from renewable sources in the future – provided that the quality safety, and transparency of our energy production take the right form.

TÜV SÜD is ready to assist with this transition. Get an impression yourself by watching our video:

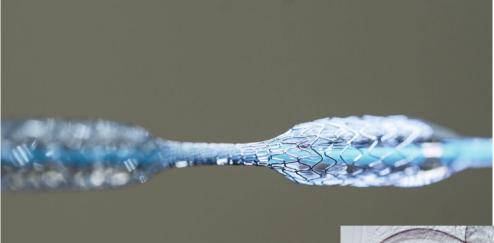
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REDICAL DEVICES READY FOR A LONG LIFE

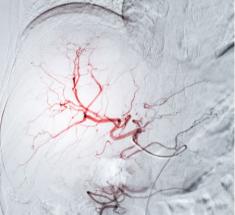
Modern medicine promises to provide us with long lives as well as relief from many physical ailments. From simple syringes to high-tech implants, we need to be able to rely on the tools of medical intervention working properly and without harmful side effects.



Every prosthesis needs to perfectly fit the body and appropriately integrate into the body's systems as required.



For example, stents (small metal implants) keep arteries open after a heart attack, so it is necessary that their biocompatibility can be completely relied upon.



Patients must be able to rely on the safety of prostheses, stents, or even simple syringes – and on the fact that the manufacturers' promises can actually be trusted. That is why the prescribed test procedures for medical devices are so extensive.

It is necessary to meet a very clear requirement that only appears simple at first glance: the medical device should consistently fulfill its intended function without harming the patient. It is therefore a matter of ensuring biocompatibility, which in turn requires several biological as well as chemical testing procedures. These procedures include assessing the risk of cell damage or other negative biological effects due to the use of a device. Only if a medical device meets all the criteria own to the very last detail will it ultimately receive approval. It is important that independent auditors like TÜV SÜD are involved in these processes. The company supports approval procedures as an expert organization with proven test methods, expertise gained over many years of relevant experience, and a worldwide network of accredited testing labs.

One of the testing labs is located in Italy. We present its service portfolio in our video:

annualreport. tuvsud.com/ medicaldevices

MORE INFORMATION AND VIDEOS RELATING TO "ONE TOMORROW" ARE AVAILABLE ONLINE





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