

Position Paper: How Germany Can Become a Leader in Neurotechnologies

Germany has the potential to become a world-leading hub for neurotechnologies. In a new policy paper, the VDE DGBMT outlines ten concrete measures that policymakers, researchers, and industry can take to more quickly translate this potential into marketable innovations and improved patient care.

(Frankfurt am Main/Augsburg, October 6, 2026) In recent years, Germany has developed into a major hub for neurotechnologies. In a recent position paper, the German Society for Biomedical Engineering within VDE (VDE DGBMT) offers ten recommendations on how to secure and expand this position. The global market for neurotechnologies is growing rapidly and could rise from approximately 15 billion euros in 2024 to about 45 billion euros in 2034.

Neurotechnologies are already part of everyday medical practice. Cochlear implants demonstrate how lost sensory functions can be partially restored through neurotechnologies. The further development of deep brain stimulation for Parkinson's disease also promises more precise and effective therapies in the future. Neurotechnologies also help with epilepsy, chronic pain, and high blood pressure—about 10 percent of patients have resistant hypertension and no longer respond to antihypertensive medications.

Neurotechnologies as a Strategic Area of Development

Looking ahead, however, they have even greater potential: "Neurotechnological methods could help to specifically identify pathological signals and modulate them through electrical stimulation," explains Prof. Dr. Thomas Stieglitz, Professor of Biomedical Microtechnology at the University of Freiburg and co-author of the paper. "Of particular note here are applications involving the vagus nerve, which could also become relevant in the future for conditions such as obesity, COPD, rheumatoid arthritis, or Crohn's disease."

However, in Germany to date, there are only a limited number of large technology companies that are pursuing neurotechnologies as a strategic area of development with significant resource investment. Instead, innovative momentum is driven primarily by close collaboration between research institutions, startups, and established companies. From the VDE DGBMT's perspective, this model offers great opportunities but requires targeted coordination and support.

Although Germany has a strong research landscape, the authors assess that the transfer to marketable products often proceeds too slowly. Among the key influencing factors, they cite, among other things, the handling of regulatory requirements and challenges in clinical trials. However, the framework conditions for reimbursement in the healthcare system, insufficient integration of the individual stages of the innovation chain, and the increasingly strategic industrial and innovation policies of international competitors—particularly China—also hinder development.

This is where the VDE DGBMT's position paper comes in. It is primarily aimed at policymakers and offers suggestions on how to accelerate development and approval in neurotechnology without compromising safety or evidence.

Specifically, the 10 recommendations are:

1. Vision: Develop a shared vision and underpin it with roadmaps
2. Ecosystem: Expand the ecosystem and infrastructure
3. Public Funding: Design research and innovation funding efficiently
4. Talent: Bring together the best minds
5. Product Financing: Enable financing for product development
6. Medical Device Regulation (MDR): Improve the regulatory framework for the MDR
7. AI Act and Data Act: Provide clear guidance on the application of the AI Act and Data Act
8. Ethics: Addressing Ethical Issues Early On
9. Culture of Error: Establish an active culture of error
10. European Market: Create a unified European market

Several of her suggestions focus on collaboration among the various stakeholders. The process should begin with a shared vision, bring together the best minds, and expand the ecosystem and research infrastructure. “If we succeed in bringing all stakeholders together quickly and purposefully in national projects, then neurotechnology offers fantastic potential for development,” says Prof. Dr. Steffen Rosahl, Chief Physician of the Department of Neurosurgery and Director of the Neurofibromatosis Center at Helios Klinikum Erfurt, who is also a co-author of the position paper. “It can become a core technology for economic revitalization.”

The insights from experts across various disciplines are backed by concrete recommendations for action. Under the heading of a shared vision, they propose developing a vision for high-tech medical technology that is supported by science, industry, politics (up to the leadership level), and society. The aim is to strengthen a human-centered approach to neurotechnology as a European hallmark, one that combines the protection of autonomy, mental privacy, and mental integrity with the active promotion of health, communication, and social participation. In addition, they propose an innovation pipeline for neurotechnologies developed by experts, which would serve as a roadmap with measurable goals and milestones. However, this would require corresponding funding programs from the Federal Ministry of Research and the Federal Ministry of Economics, as well as a provisional reimbursement commitment from the Federal Ministry of Health.

VDE DGBMT Annual Conference in Augsburg

The VDE DGBMT position paper is being released just in time for the professional society's 60th annual conference. BMT 2026 will take place in Augsburg starting October 6, 2026. It will offer experts from various subfields of biomedical engineering exciting keynote addresses, a wide range of technical presentations, interactive poster sessions, and hands-on workshops.

The position paper is available for download [here](#) (in German).

About the German Society for Biomedical Engineering within VDE (VDE DGBMT):

The German Society for Biomedical Engineering within VDE (VDE DGBMT) is the scientific and technical society for medical technology in Germany. It was founded in Frankfurt am Main in 1961.

The VDE DGBMT brings together experts from all areas of technology applications in medicine and deals with the entire range of topics in biomedical technology. It organizes conferences and workshops for expert audiences and is the sponsor of two international scientific journals: Biomedical Engineering and Current Directions in Biomedical Engineering published by De Gruyter Brill. Position papers, statements and expert contributions discuss current topics

independently and neutrally. In addition, the DGBMT awards promotional prizes for young scientists, for scientific excellence and innovation, and for patient safety in biomedical engineering. Last but not least, it represents German biomedical engineering in international bodies.

For more information, visit www.vde.com/dgbmt

About VDE:

VDE, one of the largest technology organizations in Europe, has been regarded as a synonym for innovation and technological progress for more than 130 years. VDE is the only organization in the world that combines science, standardization, testing, certification, and application consulting under one umbrella. The VDE mark has been synonymous with the highest safety standards and consumer protection for more than 100 years.

Our passion is the advancement of technology, the next generation of engineers and technologists, and lifelong learning and career development “on the job”. Within the VDE network more than 2,000 employees at over 60 locations worldwide, more than 100,000 honorary experts, and around 1,500 companies are dedicated to ensuring a future worth living: networked, digital, electrical. Shaping the e-dialistic future.

The VDE (VDE Association for Electrical, Electronic & Information Technologies) is headquartered in Frankfurt am Main. For more information, visit www.vde.com

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