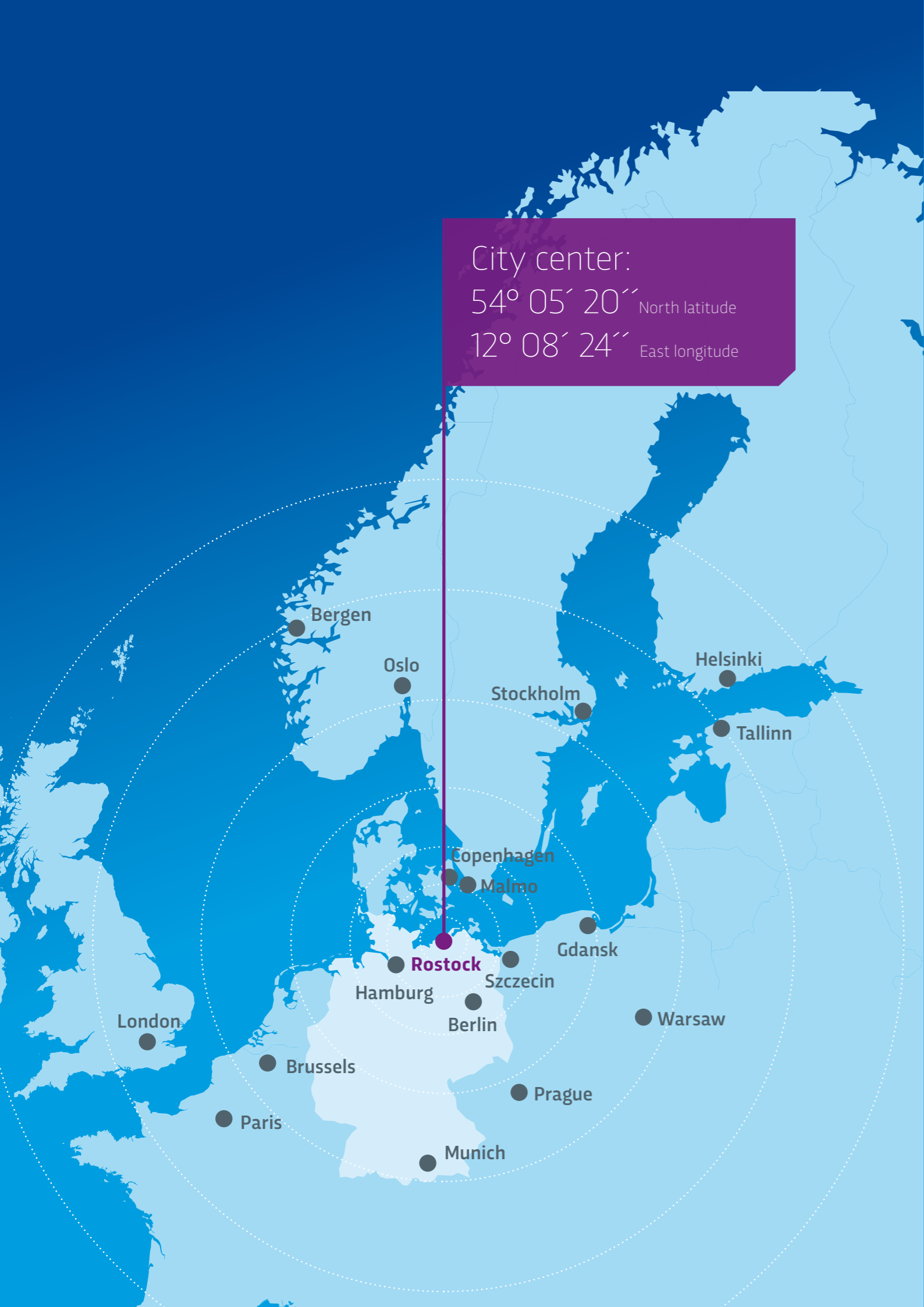




# LIFE SCIENCE & HEALTH ECONOMY

Rostock - Center for Research,  
Medicine and Innovative Health Concepts



City center:  
 54° 05' 20'' North latitude  
 12° 08' 24'' East longitude

## The healthcare industry in Mecklenburg-Vorpommern: Facts & Figures



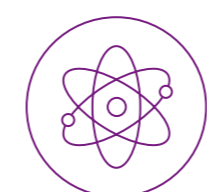
**160.600**  
 EMPLOYEES  
 This corresponds to around every 5th job.

**13** research institutions



**14,6 %**  
 share of gross value added of the health economy in the overall economy.

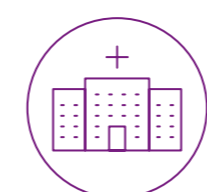
**20** technology centers



**300**  
 COMPANIES  
 in the healthcare industry

**44** percent of the industrial health economy is located in the Greater Rostock region

## The Hanseatic and University City of Rostock: Facts & Figures



**Faculty of Medicine since 1419**

**5** hospitals and day clinics

(including prevention and rehabilitation facilities)

- 4.300 employees .....
- 2.238 students .....
- 1.000 researchers .....
- 250 trainees .....

**4** seaside resorts in the city area



The Hanseatic and University City of Rostock is part of the Healthy Cities Network „Growing up healthy - getting older healthy - promoting self-help“.



Hanseatic and University City of Rostock

## Industry focus at the Rostock location

Various competencies in the field of health industry are bundled together in the Hanseatic and University city of Rostock.

To find out more:  
[www.rostock-business.com](http://www.rostock-business.com)



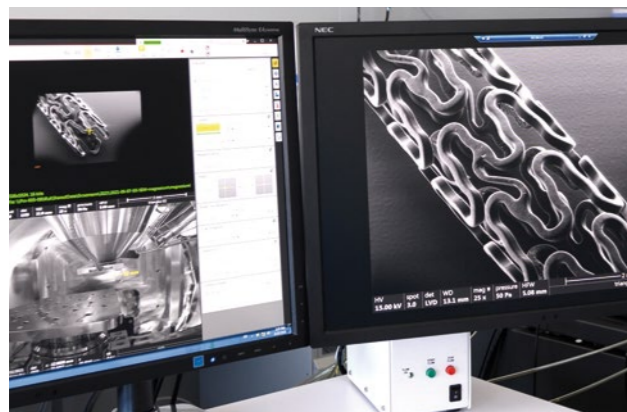
**HEALTH ECONOMY**  
*Health tourism, healthy ageing, nutrition industry, healthcare services*



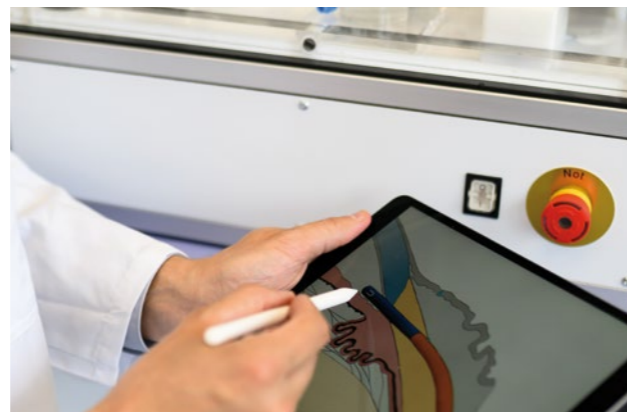
**REGENERATIVE MEDICINE**  
*Bioimplants, stem cell therapy, cell transplantation, tissue engineering*



**LIFE SCIENCE**  
*Diagnostic procedures and products, bioinformatics, biotechnology and active ingredients, biosystems technology*



**DIGITAL TRANSFORMATION**  
*Telemedicine, smart personalized health technology, AI-based health assistants*



**AUTOMATION**  
*High-end system solutions*

## Networks & clusters: Drivers of innovation in the healthcare industry

### BIOCON VALLEY® GMBH

BioCon Valley® GmbH is the healthcare industry network for Mecklenburg-Vorpommern. The state company is the central point of contact and engine of the industry. It strengthens employment, growth and competitiveness on a national and international scale. Together with the players in the industry, the cluster generates the cross-generation health state Mecklenburg-Vorpommern out of healthy nature and innovative companies.

**BioCon Valley®**  
Mecklenburg-Vorpommern's network of health industry

### DIGITAL SME CENTER ROSTOCK

The Mittelstand-Digital Zentrum Rostock offers small and medium-sized enterprises in Mecklenburg-Vorpommern professional support and tailor-made solutions to help companies benefit from digitalization. Free events, presentations on practical solutions, certified training courses, individual digital projects, competent contacts and an extensive network offer support on the way to a digital working life. The Rostock SME Digital Center focuses in particular on companies from the healthcare industry, medical technology, tourism and health tourism.



Deutsche Med building in the center of Rostock



Medical Department of the University of Rostock, Campus Schillingallee

## Research facilities in Rostock: Centers of scientific excellence

Rostock is home to important research institutions that are recognized nationally and internationally. The University of Rostock, the Medical Department of the University and the renowned Institute for Implant Technology and Biomaterials form the scientific backbone of the region. By focusing on diverse areas of research and development, they make a significant contribution to the advancement of science, medicine and technology.



University of Rostock - Institute of Anatomy and Physiology

### UNIVERSITY OF ROSTOCK

The traditional university in the Hanseatic and University city of Rostock was founded in 1419 is renowned as the oldest university in the entire Baltic region. With a diverse study landscape it currently offers 12,879 students the opportunity to study at nine faculties and one interdisciplinary faculty, to deepen their knowledge and develop their talents. The university plays a particularly important role in health economy. Study programs such as human medicine, medical biotechnology, medical information technology and dentistry are represented here. In addition the university also offers courses such as electrical engineering, information technology/technical computer science and Computational Science and Engineering.

### UNIVERSITY MEDICINE ROSTOCK

The main areas of research at the University Medical Center can be main categories. The first focus is in the field of biomedical technology and biomaterials. This area focuses on the research and realization of novel implant systems, combination points and biomaterials as well as on the research and development of medical of therapy and diagnostic systems.

The neurosciences form a further focus. Research into resilience factors in neurodegeneration with the aim of implementing innovative therapeutic concepts for neurodegenerative diseases, is the focus of this area of research.

Finally, oncology is researched in all its facets. The Comprehensive Cancer Center M-V (CCC-MV) has emerged from this area of research at the University Medical Center. The state-funded CCC-MV is the first joint oncology center of excellence in Mecklenburg-Vorpommern, formed by the University Medical Centers of Rostock and Greifswald. This structure combines patient care, research and teaching at a high level under one roof. The aim of the CCC-MV is to provide patients with individualized, state-of-the-art treatment from prevention to aftercare. The networking of existing oncological structures at the university hospitals, such as oncology centers, interdisciplinary tumor conferences and special consultation hours, strengthen the interdisciplinary care of patients.



Medical Department of the University of Rostock

### INSTITUTE FOR IMPLANT TECHNOLOGY AND BIOMATERIALS

The Institute for Implant Technology and Biomaterials (IIB), based in the Warnemünde Technology Park, conducts business-oriented research and development in the fields of biomaterial testing, implant development, biomechanics and sensor technology. This leads to the continuous development of creative, technology-intensive solutions for industrial practice.

The institute has modern and extensive equipment with a clean room laboratory, a GLP test laboratory for biomaterials, a micro- and nanostructure analytics, chemical and biological analytics, biomechanical and chemical materials testing and implant technology.



Institute for Implant Technology and Biomaterials

*The main areas of research at Rostock University Medicine include biomedical technology and biomaterials, neurosciences and oncology. They concentrate on the development of implant systems, innovative neurodegeneration treatments and a comprehensive cancer center (CCC-MV) for high-quality patient care, research and teaching.*



Biomedical Research Center Rostock

## Infrastructure and competence centers for research and innovation

The Hanseatic and University City of Rostock has a large number of competence centers that offer a wide range of expertise and support. These include the Biomedical Research Center Rostock (BMFZ), the Biomedicum, the Teaching and Research Center for Medicine and Biotechnology, the Warnemünde Research Center, the Rostock Innovation and Start-up Center (RIGZ) and the Warnemünde Technology Park.

### BMFZ - BIOMEDICAL RESEARCH CENTER ROSTOCK

The BMFZ offers state-of-the-art research and production facilities for both, university research groups and up-and-coming companies in the fields of biomedicine and biotechnology. The core idea of the concept is: „Business and science door to door“.

There are 2,393 square meters of space for university research and 8,107 square meters of space for production and research by companies. The center includes safety level two laboratory space, clean room space in three laboratory modules, office space, storage space and special areas (meeting rooms and lounges). This creates ideal conditions for cooperation and exchange between research institutions and companies.



Biomedical Research Center Rostock

### BIOMEDICUM TEACHING AND RESEARCH CENTER FOR MEDICINE AND BIOTECHNOLOGY

The Biomedicum offers 2,385 square meters of usable space for corporate research activities. Key objective is to combine clinical research and medical teaching under one roof. A particular highlight of the new building, which was completed in 2021, is the simulation arena on the ground floor, where realistic and lifelike medical scenarios can be simulated. The four-storey building has a central atrium that provides sufficient daylight, while the upper floors house offices, seminar rooms and laboratories. There are also communal areas that promote personal interaction between users.



Biomedicum

### WARNEMÜNDE RESEARCH CENTER

The center offers optimum research and working conditions for scientists as well as for companies. It concentrates on business-oriented research and development activities in the key areas of medical device construction, biotechnology and medicine, laser and measurement technology as well as cell and implant technology. The center hosts a close interdisciplinary network of biologists, physicians, physicists and engineers who work together in the field of microphysiological and bioelectronic cell analysis and sensor technology as well as the technical use of biosystems. This promotes cooperation and knowledge exchange between different specialist areas and contributes to the development of innovative solutions.



Warnemünde Research Center

### ROSTOCK INNOVATION AND START-UP CENTER (RIGZ)

The Rostock Innovation and Start-up Center (RIGZ) offers young, innovative companies a solid basis for setting up and developing their business. The RIGZ is located close to the city center in Rostock's Südstadt district and is well connected to the Hanseatic and University City's public transport network. The RIGZ provides companies with office, laboratory, workshop and storage space as well as various meeting rooms.



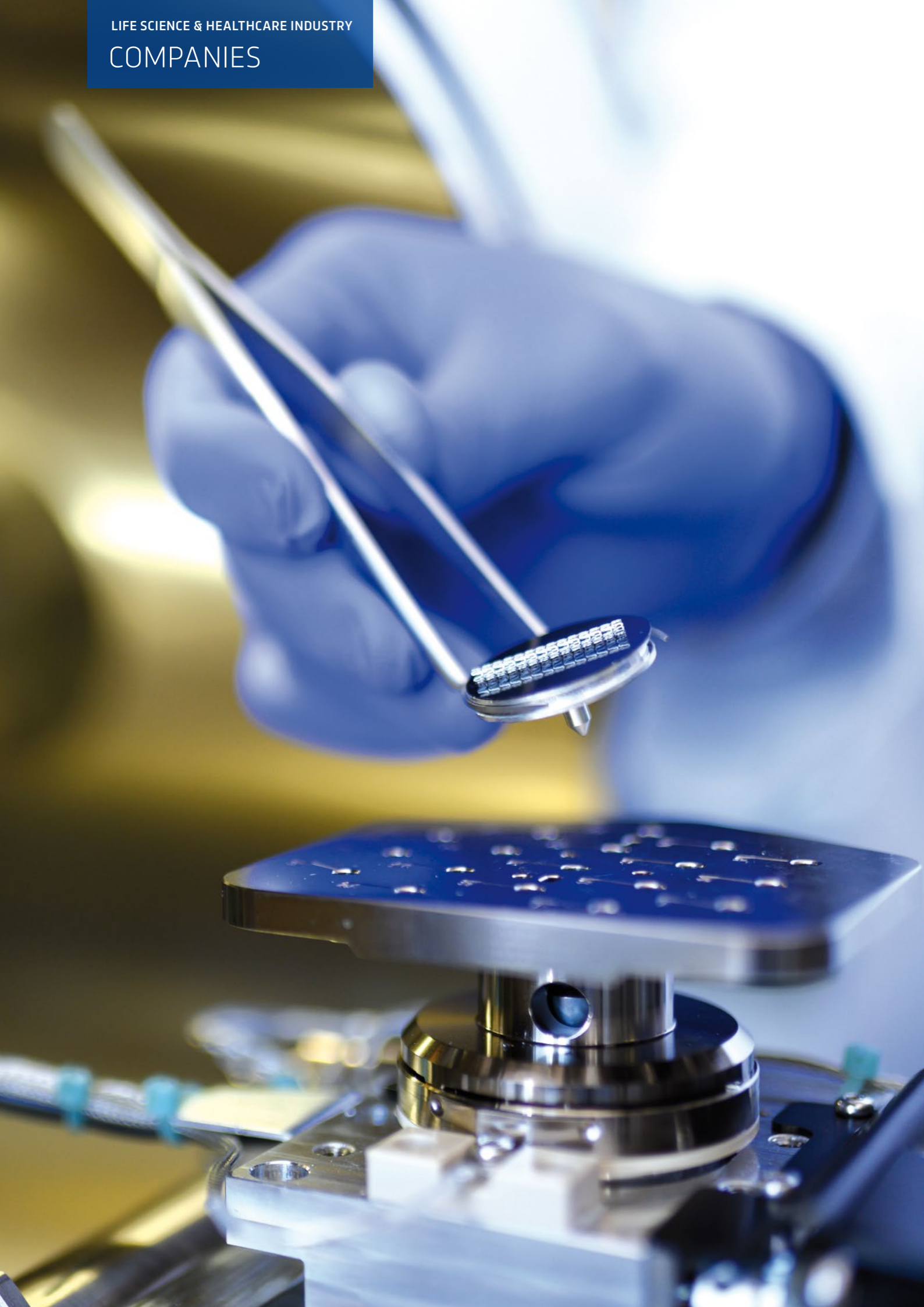
Rostock Innovation and Start-up Center (RIGZ)

### TECHNOLOGY PARK WARNEMÜNDE

The Warnemünde Technology Park (TPW) is a future-oriented hub with more than 80 innovative companies and technology-oriented start-ups that, in total, employ more than 850 people. It is a service-oriented research and technology park with an intelligent infrastructure. Institutes of the University of Rostock, Wismar University of Applied Sciences, the Research Center for Biosystems Technology and Biomaterials and the Competence Center for Life Science Automation are in the immediate vicinity.



Warnemünde Technology Park



## Rostock's business landscape: Pioneers in the industry

Rostock has turned into a center for pioneering companies in the life sciences and healthcare industry. With its focus on innovative biomedical research and technologies, the city offers a dynamic platform for companies. Companies specializing in the development and production of cutting-edge medical technology, diagnostics and therapeutics can be found here. The close partnerships between academic institutions and companies foster an environment of knowledge sharing and collaboration that leads to the rapid development of new medical solutions.

### BIOCOMPOSITES GMBH

Biocomposites GmbH develops, produces and markets biomaterials for bone augmentation. This is done on the basis of NanoBone® technology, which uses biomaterials for bone regeneration that are based on the natural processes in the human body.

In 2003, Prof. Dr. Thomas Gerber and Dr. Walter Gerike decided to spin off the NanoBone® idea as a project at the University of Rostock and launch the innovative product on the market in their own company.



Insights into the production of Biocomposites GmbH

### CENTOGENE GMBH

Centogene GmbH was founded in 2006 and employs 330 people. It specializes in genetic analysis and operates molecular biology and gene therapy laboratories.

Centogene supports medical institutions and doctors in the genetic and biochemical analysis of rare diseases. Beyond, the company developed a rapid medical PCR test during the coronavirus pandemic.



Company headquarters of Centogene GmbH in Rostock  
Picture on the left: Visual inspection of a stent

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*Rostock is considered a pioneer in the healthcare industry with companies such as Biocomposites GmbH and Centogene GmbH developing innovative medical solutions and making significant progress through close cooperation with academic institutions.*

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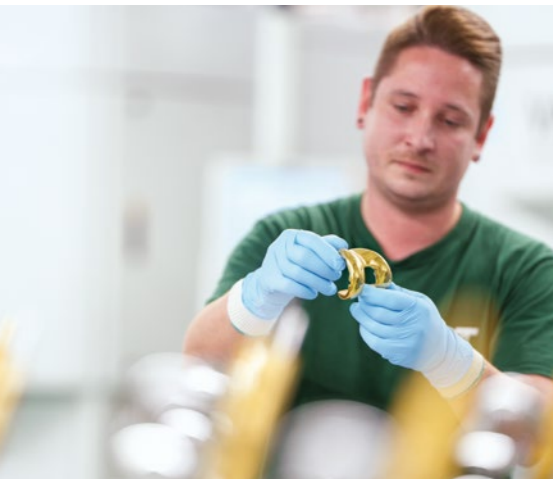


Stent from CORTRONIK GmbH

#### CORTRONIK GMBH

CORTRONIK GmbH is part of the BIOTRONIK Group. In close cooperation with BIOTRONIK AG in Bülach, more than 250 employees work at the Rostock-Warnemünde site on the development and production of vascular implants (stents).

CORTRONIK was founded in Warnemünde in 1998 and has been working closely with the University of Rostock ever since. Due to the wide range of activities - from research and development to testing of the implants and production of the stent components - CORTRONIK GmbH represents the metal competence center within the BIOTRONIK Group.



Visual inspection of the implant marking

#### DOT GMBH

The company was founded in 1992 and employs about 460 people. DOT GMBH is one of the leading companies in the field of medical coating technology for implants and instruments as well as their cleanroom packaging. Made by DOT stands for innovative surfaces and medical technology excellence from Rostock - for the benefit of patients worldwide.

The key areas include the finishing of implants made of titanium and cobalt chrome alloys, medical steel, ceramics or PEEK as well as instruments from the dental industry. Colour anodizing and laser engraving for clear product identification are just as much a part of the product portfolio as cleanroom packaging.



Digital X-ray system Amadeo M-mini  
Picture on the right: Implants after the coating process

#### OEHM UND REHBEIN GMBH

Oehm und Rehbein GmbH has been developing sophisticated and customized system solutions in the medical and industrial sectors for the international market since 1991. The company supplies complex systems for conventional and digital X-ray systems in hospitals, clinics and specialist practices, as well as for the NDT sector and the security sector.

Oehm und Rehbein's know-how is based on decades of experience in the development of software for digital image processing, coupled with specialized expertise in X-ray technology. The close dialog with medical professionals, universities and engineers is an integral part of the company's innovation activities. This enables the company to offer its partners sophisticated and individually tailored system solutions. All development processes take place in-house at the Rostock site.

Today, Oehm und Rehbein GmbH is a leading provider of customized system solutions for human and veterinary medicine as well as for industry and security authorities.





Research and development in the healthcare industry | Picture on the right: Optical quality assurance of the coated implants

## Development of pioneering health technologies

Mecklenburg-Vorpommern is the health state in which health in all phases of life is of great importance. As a crisis-proof sector, the healthcare industry forms an essential basis for the growing prosperity of the entire state. The importance of the industry in its various areas is also reflected in the state's funding strategy.

Lighthouse projects such as the Medical Technology Competence Center and the further education study course „Biomedical Engineering and Entrepreneurship“ were successfully implemented. With the Mecklenburg-Vorpommern Healthcare Industry Masterplan 2030, the state has created the basis for profiling Rostock as a location for innovative companies in the field of intelligent digital healthcare technologies.

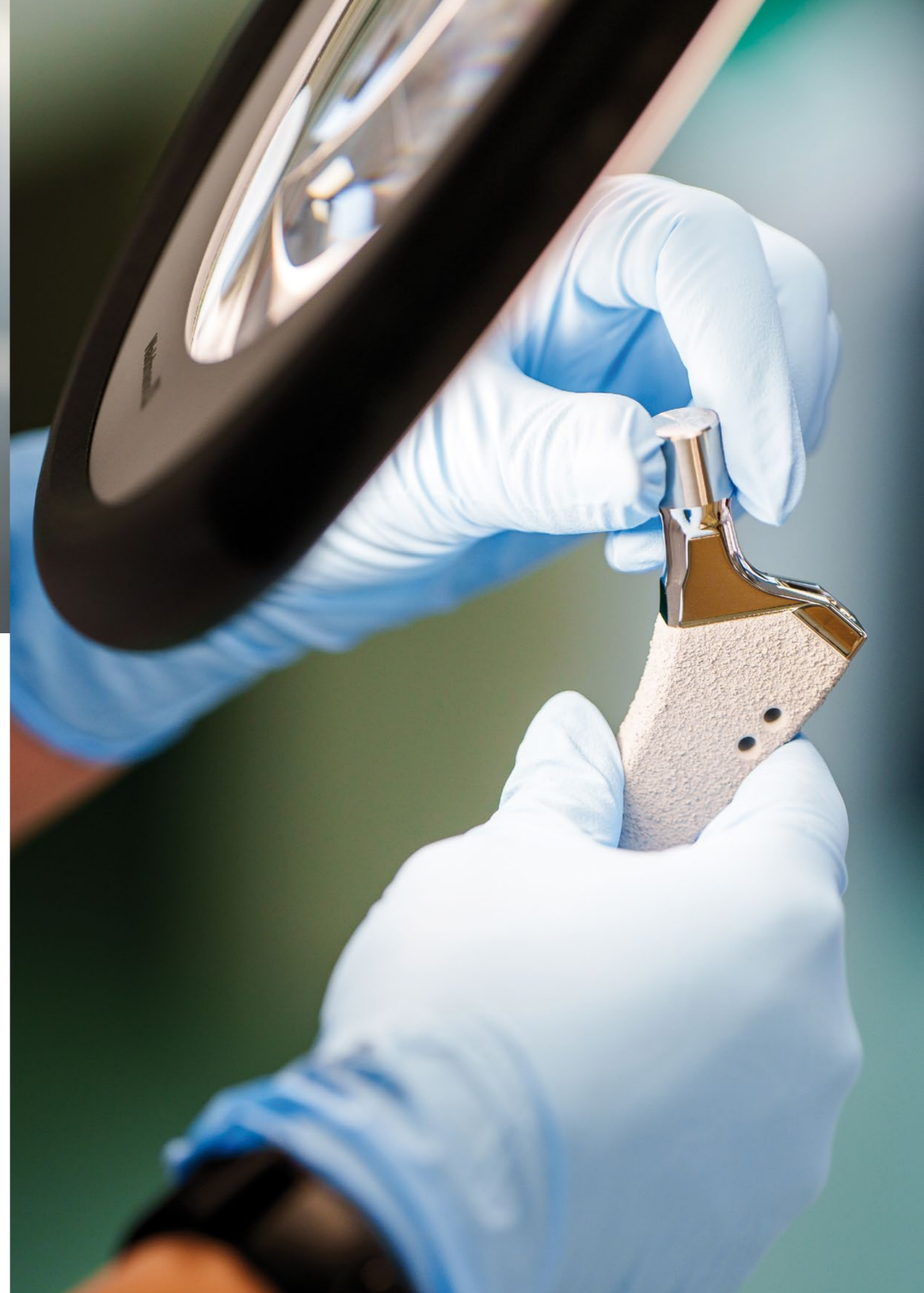
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***Mecklenburg-Vorpommern is positioning itself as a leading location for the healthcare industry and technology development, supported by targeted promotion and innovative qualification programs in Rostock.***

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Rostock has a very basis for the development of AI-based technologies for the healthcare industry in the fields of AI-supported data analysis, visual data analysis, personalized healthcare assistance and telemedicine.

Targeted qualification programs such as the bachelor's degree course in intensive care with an admission examination for prospective students without a high school diploma as well as partnership and exchange programs at Rostock University's medical department create good conditions for recruiting and securing skilled workers.







## IMPRINT

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