

SECTOR'S POSITIONING IN BAVARIA

OPTICS AND PHOTONICS

German production volume 2014



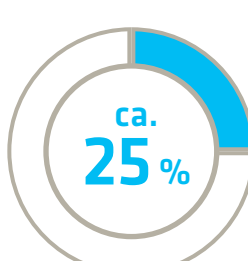
29.4 billion euro

Bavarian Share



Lighting technology, information and communication technology

Medical technology and life sciences



Regional centres



Area of Munich-Augsburg, Erlangen-Nuremberg and Regensburg

Source: Invest in Bavaria

SENSOR TECHNOLOGY

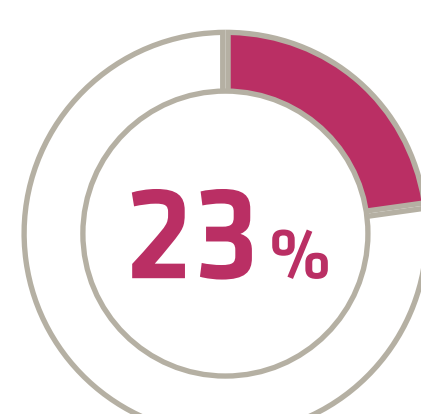
German sensor technology-manufacturers dominate the **global market**



Bavaria takes leadership role

70%

rising sales in the SME-oriented sector in the last 10 years



of German sensor technology-manufacturers are **located** in Bavaria

Sources: Cluster Initiative Bavaria, Strategische Partnerschaft Sensorik e.V.

IMPORTANT ENTERPRISES AND INTERNATIONAL PLAYERS



Ficosa with ADASENS Automotive GmbH



OSRAM Opto Semiconductors GmbH



Infineon Technologies AG



Topptica Photonics AG



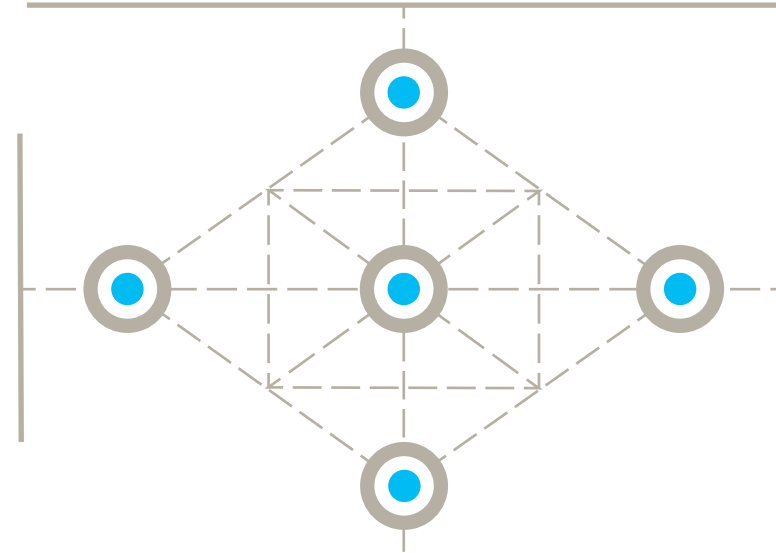
Knorr-Bremse AG

Sources: Invest in Bavaria, Strategische Partnerschaft Sensorik e.V.

PROMISING NETWORKING OPPORTUNITIES

European Optical Society

Offers networking on the European scale



OptecNet

Deutschland e.V.:

association of "bayern photonics" with eight further expert networks in optical technologies

Strategische Partnerschaft Sensorik e.V.:

more than 60 members and 200 stakeholders for corporate networking, product innovation and capacity building

Photonics cluster bayern photonics:

main contact and coordination platform since 2000

Sources: Invest in Bavaria, Strategische Partnerschaft Sensorik e.V., bayern photonics, OptecNet

RESEARCH & DEVELOPMENT

UNIVERSITIES AND UNIVERSITIES OF APPLIED SCIENCES

BAVARIA OWNS WORLD LEADING POSITION IN BASIC AND APPLIED RESEARCH FOR OPTICAL TECHNOLOGIES

9

photonics-relevant universities



17

universities of applied sciences



8

research institutes



Source: bayern photonics

REGIONAL STUDY PROGRAMMES



Mechanical Engineering-Laser Technology

Amberg-Weiden

Mechatronic-Optical Engineering

Deggendorf

Electronic and Mechatronic Systems

Nuremberg

RESEARCH-BASED INSTITUTES



German Aerospace Center

Oberpfaffenhofen

Fraunhofer Institute for Silicate Research ISC

Würzburg

Fraunhofer Institute for Integrated Circuits IIS

Erlangen

Source: Invest in Bavaria

PROMOTION OF TALENTS

SUCCESSFUL START-UPS FROM BAVARIA



Cosinuss GmbH, Munich
Sensors for body data

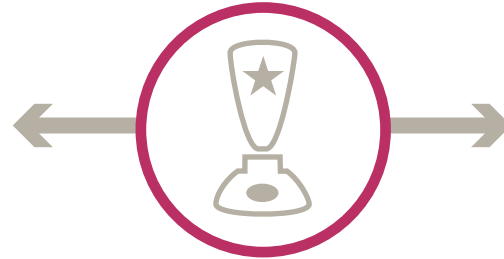


iNDTact GmbH, Würzburg
Highly sensitive sensor systems for cars, aircraft parts or wind wheels. Winner of start-up founder award in 2015 and 2016

Sources: Impulse, Elektronik Praxis, Gründerszene

START-UP CHALLENGES

Start-Up World & Photonics Award Contest



Contest CODE_n to the digital future

Roboception GmbH, Munich amongst the best photonics start-ups 2016

Sources: OptecNet, Photonics Research Germany



TAP INTO NEW BUSINESS OPPORTUNITIES

www.invest-in-bavaria.com