

SAXONY!

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WEST

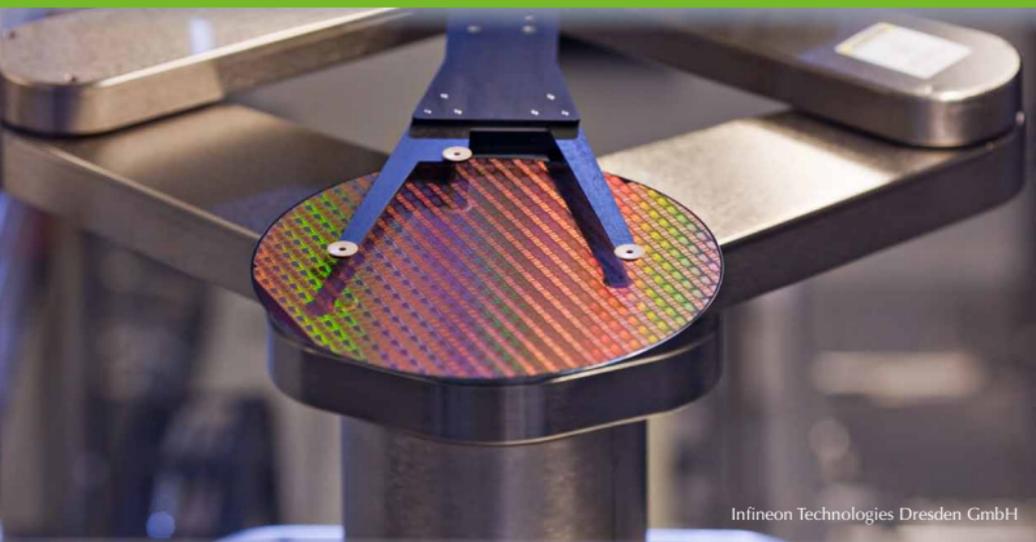
COMPANIES FROM SAXONY

JULY 12 - 14, 2016

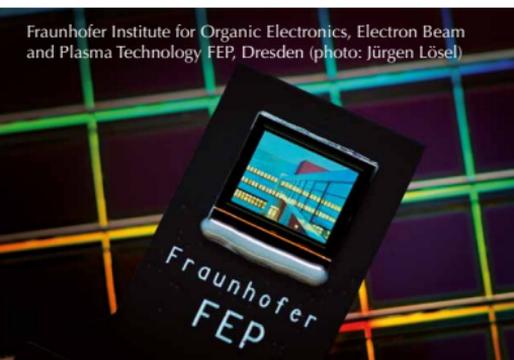
SAN FRANCISCO, CALIFORNIA, USA

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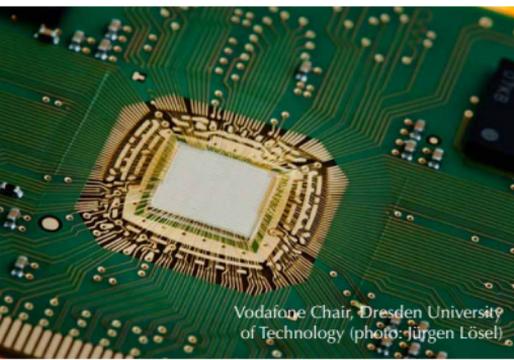




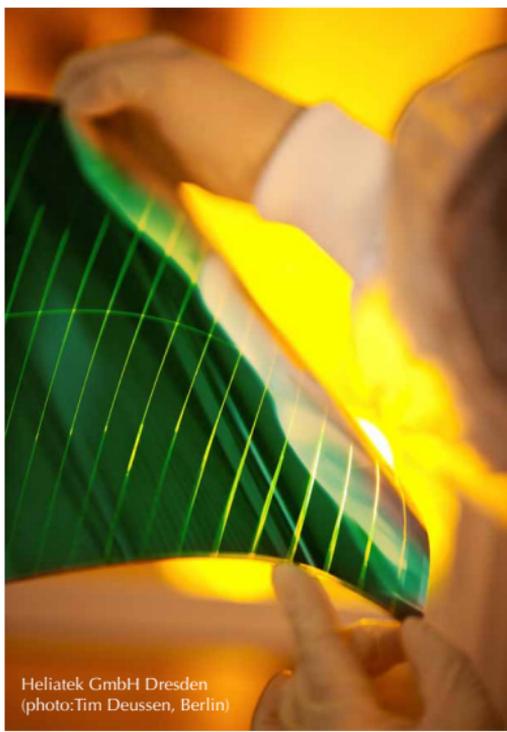
Infineon Technologies Dresden GmbH



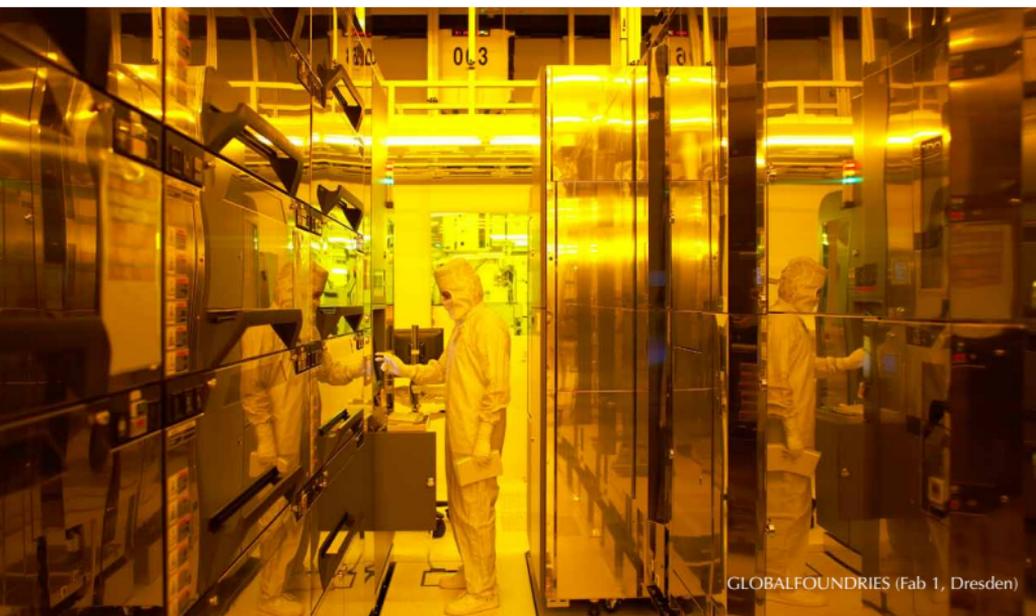
Fraunhofer Institute for Organic Electronics, Electron Beam and Plasma Technology FEP, Dresden (photo: Jürgen Lösel)



Vodafone Chair, Dresden University of Technology (photo: Jürgen Lösel)



Heliatek GmbH Dresden (photo: Tim Deussen, Berlin)



GLOBALFOUNDRIES (Fab 1, Dresden)

SAXONY!

A Place in Motion

MICROELECTRONICS / ICT IN SAXONY

"Silicon Saxony" is Europe's largest microelectronics cluster and the fifth largest worldwide. A unique concentration of companies providing extensive knowledge and expertise in the sectors microelectronics and nanoelectronics, organic & flexible electronics, energy-efficient IT systems, tactile internet / 5G, MEMS / sensors, and automation technology is found in the region between Dresden, Freiberg and Chemnitz.

In Saxony, approx. 2,200 companies with a total of 58,000 employees are active along all steps of the ICT value creation chain: They develop, manufacture, and promote integrated circuits, or serve as materials and equipment suppliers to the chip industry, produce and distribute electronic products and systems based on integrated circuits, or develop and promote software.

Every second chip produced in Europe bears the label "Made in Saxony".

In Dresden, GLOBALFOUNDRIES and Infineon Technologies operate two of the most modern semiconductor production sites to be found anywhere on the globe.

"Silicon Saxony" demonstrates its innovative power in various fields: Dresden's Novaled GmbH is the technology leader when it comes to highly efficient and durable OLEDs. The partners of the Cluster of Excellence »cfaed« at Dresden University of Technology are developing innovative materials, technologies, and systems for tomorrow's IT. And under the leadership of Infineon Technologies Dresden, 33 companies and institutions from six European countries are working together in a pilot line project for innovative sensors and sensor systems within the cross-border project »IoSense«.

www.invest-in-saxony.com



SAXONY
IN GERMANY

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Contact Mr. Frank Geissler

For 25 years, AIS is a global system provider for innovative software solutions for factory automation, system integration and process control for semiconductor, photovoltaic and LED industry. With regard to factory automation, this comprises the complete range of production IT: Production planning (APS), Production control (FabEagle®MES – Manufacturing Execution System), Process data analysis (FabEagle®framework für APC, SPC, FDC...) and Equipment integration.

In the field of process control and host interfaces we provide equipment control (Cluster Tool Controller, Process Module Controller...), host interfaces (SECS/GEM, PV02, InterfaceA and custom interfaces) as well as refurbishment.

We have extensive experiences in the field of state-of-the-art control systems for process equipment in thin-film & plasma technology and for special equipment. Over 150 customers working in the SEMI & PV industry worldwide use software solutions by AIS for added transparency and efficiency in their production lines.



AIS AUTOMATION
SOFTWARE SYSTEMS



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Contact Mr. Markus Kindler

Thermal precision from -70°C to +450°C

With more than 10 years of experience in developing thermal chuck systems for wafer prober we seek answers required to develop top of the line solutions. Thermal chuck systems that combine uncompromising performance with exceptional specifications.

By focusing on customer satisfaction and technology innovation our products are designed to be the highest quality in their class and revolutionary in their effect.

Our vigorous pursuit of technology is the base of ATT Systems GmbH. But technology for its own sake has no place in our products. Our development of innovative systems and materials is fueled by one goal - to create the best att-chuck systems for a competitive price.



CAMLINER DRESDEN GMBH

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Contact Mr. Frank Böstler

camLine provides and markets own software to support high-tech manufacturing excellence. LineWorks is a suite of powerful MES modules that are tailored to meet demands of flexible, high-volume productions. LineWorks SPACE is known as the leading SPC system in semiconductor, electronics, PV, and medical industries with several add-ons and new plug-ins. Recipe Management and Supplier Quality Management offer capabilities to improve process integrity inside manufacturing and quality data management incl. traceability on the entire value chain. For small and medium enterprises, camLine offers Manufacturing Execution Systems (MES) as all-in-one solutions with InFrame Synapse. The product line includes an equipment connector and a MES mini for an effective entry into IT-based manufacturing. XperiDesk allows to streamline technology development. Cornerstone enables engineers to explore and analyze data and to design experiments (DoE). camLine as a solution partner, has been offering its software and services globally for more than 25 years.



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Contact Mr. Dr. Robert Franke

The Marketplace for Microelectronics Innovation

Dresden is home to the entire microelectronics value-added chain, from microchip design, high-volume wafer production and processing to a wide range of companies in the supply and service sectors and the end-user industry. Half of all microchips made in Europe come from Dresden, which enjoys a worldwide reputation as the largest, most innovative microelectronics location on the continent. 1,500 businesses with over 48,000 workers make up Dresden's microelectronics cluster. Players from the worlds of business and science count on leading-edge technology to tap new markets:

- Industry 4.0 & Energy efficiency
- Organic & flexible electronics
- Nanoelectronics
- 3D system integration

The Office of Economic Development of the City of Dresden is your contact and partner as investor or entrepreneur. Our Service ensures that your investment in Dresden can be realized without delay.

Welcome to Dresden!



FRAUNHOFER IPMS

Institute for Photonic Microsystems

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Contact Dr. Michael Scholles

The Fraunhofer IPMS is dedicated to applied research and development in the fields of microsystems technologies, nanoelectronic technologies and wireless microsystems. For photonic microsystems Fraunhofer IPMS offers complete solutions from conception to component right up to complete systems. This includes sample and pilot production in a 1500 m² (15,000 ft²) clean room (ISO 14644-1 class 4). Additionally, the new business unit Center Nanoelectronic Technologies CNT provides services in the field of nano and microelectronics with functional electronic materials, processes and systems, device and integration, maskless lithography and analytics. Another 800 m² of clean room space (ISO 14644-1 class 6) is available for this purpose, along with analysis and metrology processes with atomic resolution and high sensitivity. Direct commissions from industry contribute 50 percent to the annual research budget of 30 million euros. The Institute is certified according to the standard DIN EN 9001:2008.



FRAUNHOFER IZM-ASSID

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Contact Mr. M. Juergen Wolf

The Fraunhofer Institute for Reliability and Microintegration (IZM) covers together with its center "All Silicon System Integration Dresden – ASSID" all the competencies needed for advanced wafer level packaging, 3D IC and heterogeneous system integration. It operates a leading-edge 300/200 mm process line for 3D wafer level system integration which enables industry compatible processing focused on process development, material and equipment evaluation as well as qualified prototyping & low volume manufacturing.

Technologies & services include:

- TSV Process Integration: via middle, via last, backside via last
- Cu-TSV Interposer with multi-layer RDL
- Integration of passive devices (R, L, C)
- Embedding of active and passive circuits
- Micro-Interconnect formation (e.g. Cu-Pillar, SnAg, AuSn)
- Wafer level assembly & 3D stack formation
- 3D Wafer level system-in-package (SiP) approach



ASSID – All Silicon System Integration Dresden

HAP GMBH DRESDEN

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Contact Mr. Burkhard Stegemann

HAP GmbH Dresden is a German medium-sized company, founded in 1991 and based in Dresden, the heart of Europe's most active semiconductor region. With our 70 employees we mainly offer solutions for hardware automation with a big focus on the semiconductor industry. Our main products are:

- Mask handling solutions from modules to complete systems, including a Mini-Reticle-Sorter for EUV masks (<ISO 1 environment)
- Robots for automated cassette/ carrier handling
 - LUNA with stationary robot in a cell,
 - HERO with rail-based robot vehicle as RGV,
 - HERO FAB as fully free travelling AGV with on-board 6-axes robot
- Test wafer logistic station TWK for composing and de-composing of test wafer lots, wafer sorting and test wafer storage
- Wafer handling solutions for wafer sizes from 100mm (4") to 450mm

Since September 2015, HAP GmbH and Roth & Rau - Ortner operate as full subsidiaries of HAP Holding GmbH.



HIGHQ-FACTORY GMBH

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Contact Mr. Joost Klerks

HighQ-Factory GmbH (member of FaethGroup) offers a slurry recycling system, which will bring you savings up to 80% in your CMP production cost. Our slurry recycling modules are used especially in the semiconductor industry but are also applicable in the area of Grinding and Dicing as well as general waste water treatment. The use of the recycling system contributes significantly to the reduction of production costs as well as environmental protection.

Our Product portfolio includes systems for Slurry recovery and recycling (oxide, tungsten, ceria as well as copper), Water Recycling and Filter Systems, which allows reuse of expensive rare earth solids as well as reuse of large volumes of DI Water. HighQ-Factory core competences include Filtrations techniques using proprietary back-washing, Complete Monitoring, Analytics and Closed Loop Quality Control of the recycled material, Engineering and system know how etc.

HIGH  **FACTORY**

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Contact Mr. Markus Keil

HSEB Dresden is a leading supplier of optical inspection systems for the semiconductor and MEMS industry. We develop, design and manufacture automated optical inspection systems (AOI), inspection and review tools, stand-alone microscopes and OEM components.

Our systems allow you to inspect the front and back side and the edge of patterned and unpatterned wafers in all diameters and materials available on the market. Advanced metrology options for CD, OVL, VIA and film thickness measurement as well as the use of visible, infrared and UV light allow you to detect and image every defect, every feature, every process deviation you can imagine.

All our tools feature a modular design so that you can tailor them precisely to your needs, including the option for upgrades if your processes get more demanding over the time. "Made in Germany" and "Optics by Carl Zeiss" are your guarantee for maximum performance, quality and support.



HTT HIGH TECH TRADE GMBH

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Mr. Christian Noglik

htt Munich/Dresden is a privately owned company founded in 1988, putting its main focus on the Semiconductor industry. Additionally to that, htt works in the Photovoltaic & NanoTechnology, Medical Technology, Pharma Industry, Aerospace and other new areas of high tech industry. htt offers sales, service, maintenance, application, CE-EMC conformity and its own manufactured Cantilever Probecards.

Flagship is the WID110 Wafer ID Reader, a new designed RGB-Wafer ID Reader for OCR, Barcode, DataMatrix Codes designed and built by IOSS in Germany.

Due to its RGB-lighting it is possible to decode even damaged codes from the wafer surface. The systems have a self-lern-modus, the integration into production equipment and for OEMs is easy.

htt also offers Reader-systems for Reticles, Glas, medical surgery application.



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Mr. Stan Rosenlof

Founded in 1998, Roth & Rau - Ortner specializes in factory automation solutions for high-tech industries, especially the semiconductor industry. The company develops and implements custom-tailored automation solutions for material handling and production logistics applications in semiconductor manufacturing plants, even at positions where automation previously seemed impossible. Together with its associate company HAP, Roth & Rau - Ortner provides systems for:

- Cassette Transportation (Conveyors, AGVs)
- Cassette Storage (Zero Footprint Solutions, Racks)
- Carrier and Wafer Handling (Robot Cells, Rail Guided and Autonomous Mobile Robots)
- Lot Identification and Localization (RFID, FAB-LIPS)
- Nitrogen FOUP Purging

As a global company, Roth & Rau - Ortner employs 110 people at its sites in Dresden, Germany, and Salt Lake City, Utah. Since September 2015, Ortner operates as a full subsidiary of HAP Holding GmbH.

Factory
Automation
Solutions

ORTNER

SEMSYSCO GMBH

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Contact Mr. Moritz Drechsel

SEMSYSCO is the Semiconductor Equipment Manufacturer specializing in all things involving wet or vapor chemical processes used for semiconductor and similar processes. Our staff have been working in the semi-industry for over 25 years and have been responsible for much of the wet process innovations seen in leading Fabs. The product range includes solutions for both batch and single wafer processing covering etching, cleaning, electroless & ECD plating, and PR Stripping. Our technical partners include IME, Fraunhofer, Atotech and Ancosys.

The SEMSYSCO Application Portfolio covers:

Advanced Packaging: UBM Etch, PR Strip, Cu Pillar & TSV ECD Plating, ENEPIG, and an all Wet TSV approach.

FEOL: Ozone Post Ash Clean, Oxide & Metal Etch, PR Strip.

BEOL: Metal Etch, Barrier Etch, PR Strip, ECD.

MEMS: Porous Silicon Etch, HF Etch, PR Strip, ECD, Oxide Etch, Metal Etch.

SEMSYSCO has sales and field service support centers in Europe, Asia and the USA.



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Contact Mrs. Gitta Haupold

SILICON SAXONY: THE HIGH-TECH NETWORK

Silicon Saxony is Europe's most successful trade association for the micro- and nano-electronic, software, smart system, application and energy system industries. We are connecting 320 commercial enterprises, research institutes, universities and public institutions. The competencies of our members represent the entire value creation chain of the microelectronics industry.

As a continuously growing and vital high-tech network, we understand ourselves as a communication and cooperation platform for our members. This promotes and stabilizes the economic development of our member companies. Intelligent partnerships among them enable knowledge transfer, synergies, business relationships and promote innovative power. Silicon Saxony is open for welcoming members from any other high-tech fields.



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Mr. Travis Stevens

Automation for Semiconductor Manufacturing

SYSTEMA is a global specialist in business process automation and integration of High-Tech Manufacturing IT Landscapes. Our mission is to enable technology as an asset to semiconductor manufacturers through increased productivity, yield, reliability and overall efficiency.

Solutions for Semiconductor Manufacturing:

- Equipment Integration with SYSTEMA E1 Suite
- MES Consulting, Migration & Extension
- Wafer Signature Detection
- Event Driven Dispatching



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Contact Mrs. Ines Stolberg

Mr. Kevin Grens

Vistec Electron Beam is providing electron-beam lithography equipment based on Variable Shaped Beam technology, which is used by leading semiconductor manufacturers and many research institutes around the world. Their innovative electron beam systems are utilized for microchip production and integrated optics as well as for advanced research.

At this year's SEMICON WEST we are presenting Vistec SB3055 and Vistec SB254.



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Contact Mr. Hans Mayer

Mr. Gerald Rampf

As a global technology company and system integrator with more than 25 years experience, znt-Richter group ranks among the pioneers of technologically advanced IT systems for the optimization of production processes.

Our offerings help customers to advance their manufacturing processes & product quality by optimizing valuable resources, providing benefits in reducing operating costs, increasing production throughput, improving first pass yields and accelerating innovation.

znt-Richter group represents a single source provider, offering a full range of products and services including comprehensive consulting, solution design, software development for: **Production Automation | Vertical Integration | Manufacturing Execution System (MES) | Equipment Integration | Real-Time Dispatching & Scheduling | Advanced Planning | ERP/SAP Integration | SPC.**



znt - Richter
Innovative Software Solutions

WE BUILD BRIDGES



WIRTSCHAFTSFÖRDERUNG
SACHSEN



The Saxony Economic Development Corporation (SEDC) promotes Saxony as a business location and advises potential investors on relocation projects. Furthermore, the SEDC supports Saxon companies in their export efforts and initiates cooperation with partners outside Saxony.

WE OFFER

- the latest data on Saxony's economy and business environment,
- customized business site location services,
- procurement of contacts with regional decision makers,
- information on opportunities for financial support and subsidy programs,
- access to branch networks in Saxony,
- assistance in opening up new markets, and
- in initiating cooperative partnerships.

WHAT CAN WE DO FOR YOU?

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FURTHER COMPANIES FROM SAXONY

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PEER GROUP GMBH

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STAATSMINISTERIUM
FÜR WIRTSCHAFT
ARBEIT UND VERKEHR



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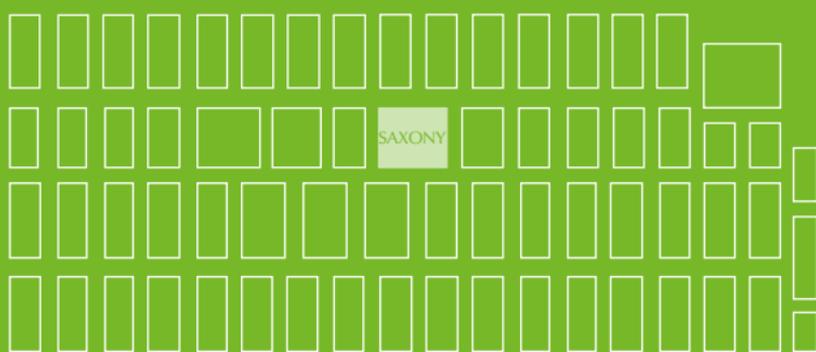
Founded by the State of Saxony, one of the federal states of Germany, the Saxony Economic Development Corporation builds bridges for Saxon companies on their way to the world's markets and for investors on their way to Saxony. Successfully.

www.wfs.saxony.de

SAXONY JOINT STAND

South Hall, Booth 1829

FOLSOM STREET



FOURTH STREET

HOWARD STREET



European Union
European Regional
Development Fund
European
Social Fund

Europe funds Saxony.



NOTES

A series of horizontal dotted lines for writing notes.



MORE INFORMATION:

www.invest-in-saxony.com/semiconwest