

FACT SHEET

The Semiconductor Industry in Germany

ISSUE 2023

The United States and Asia have dominated semiconductor production for decades. However, Germany is now seeking to become one of the leading chipmakers in Europe and the world. The country is the beating heart of the European semiconductor industry – ranking among the world’s top semiconductor production locations.

Germany boasts an unparalleled density of world-leading device manufacturers and suppliers for materials, components, and equipment across the entire value chain. Demand for microchips and nanochips will grow exponentially as the transition to green energy and electric mobility progresses and as big data and artificial intelligence become increasingly important.

Germany is investing significantly in its microelectronics sector to establish the country as an international semiconductor production force. The ambitious deployment and development of semiconductor-based applications in the automotive, energy and manufacturing sectors is critical to the country meeting its climate goals. The EU and Germany have reacted with rapid measures to boost domestic chip production capacity and develop supply and value chain resilience. The European Chips Act, announced in February 2022, sets the target of increasing EU production capacity to 20 percent of the global market by 2030.

This would require quadrupling current production capacity. The European Commission has earmarked EUR 43 billion for this purpose. This helps make Germany even more attractive as an expansion location for multinational tech companies. Germany’s climate neutrality targets are creating attractive business opportunities and favorable market conditions for international companies.

→ For more information, please visit our website
www.gtai.com/semiconductors

The Semiconductor Industry in Numbers

1 in 3

chips produced in Europe is made in Germany

20 percent

of global semiconductor production from the EU by 2030

USD 583.5 billion

worldwide semiconductor industry revenue in 2021

USD 48 billion

European semiconductor industry turnover in 2021

EUR 50 billion

investment to secure Germany’s position as Europe’s leading semiconductor production location

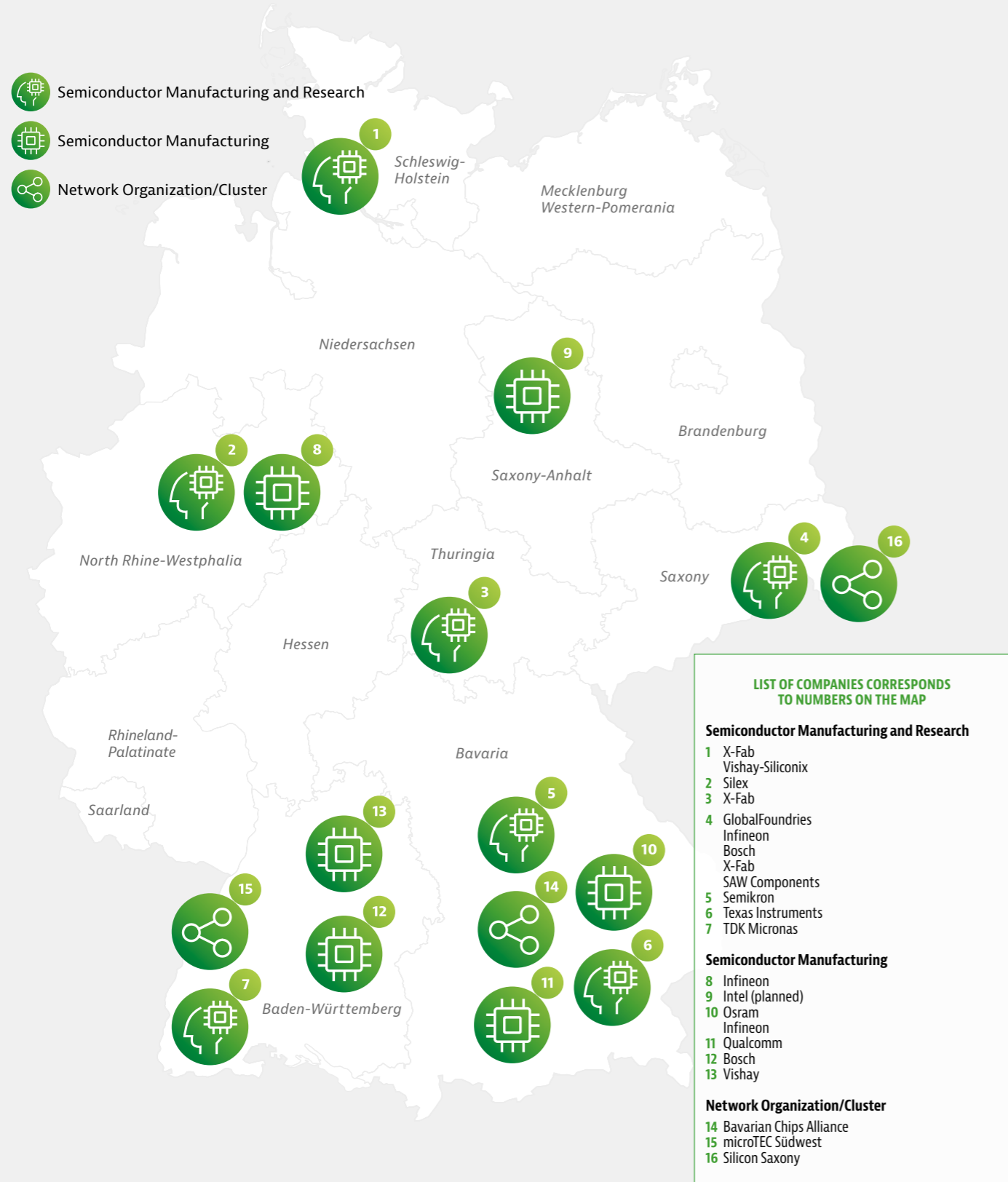
EUR 43 billion

European Chips Act funding to establish Europe as major semiconductor production hub by 2030

German Semiconductor Landscape

Germany's microelectronics sector forms a complete ecosystem representing the entire industry value chain network responsible for developing the smart, integrated systems required to meet industry's changing

needs. Internationally active companies, re-nowned research institutions, small and medium-sized enterprises, and start-ups are all at home in different industry clusters across the country.



Germany's Semiconductor Clusters

Germany is already home to a number of strong semiconductor and microelectronics sites including the states of Saxony, Bavaria and Baden-Württemberg. Here, companies and research institutions – specialists in areas including sensor technology, interconnection technology and system integration – find the ideal conditions to develop systems and technologies for tomorrow's needs.

Silicon Saxony

Silicon Saxony is a network for the microelectronics, smart systems, photovoltaic, and software sectors. The Cool Silicon cluster focuses on developing energy-efficient solutions in computing, broadband wireless and sensor networks. Saxony is Europe's biggest microelectronics location, home to companies including GlobalFoundries, Infineon and Bosch.

microTEC Südwest

The microTEC Südwest cluster in the southwestern regional state of Baden-Württemberg is a major European expertise and cooperation network for intelligent microsystem technology solutions in manufacturing and health. With its Dutch partner ASML, Oberkochen-based Zeiss is the world's only manufacturer of extreme ultraviolet lithography machines for chip production.

Bavarian Chips Alliance

Bavaria is home to some of the world's leading semiconductor producers, including Infineon Technologies and Siltronic, as well as the Bavarian Chips Alliance. As the site of many leading actors in electrical engineering and electronics, the southern state plays a big role in the development of technologies for Industrie 4.0, big data solutions and the Internet of Things.

Fraunhofer Group for Microelectronics

A number of institutes within the Fraunhofer Group for Microelectronics and the Leibniz Association are also playing a decisive role in consolidating Germany's role as a major international semiconductor and electronics research location. The Fraunhofer Group for Microelectronics is a research and development service provider in the areas of microelectronics and smart systems integration. Part of the Fraunhofer-Gesellschaft, Europe's largest application-oriented research organization, the group seeks to bridge the gap between fundamental research and product development in the fields of microelectronics/nanoelectronics and microsystem & communication technology in order to strengthen German innovativeness.



→ Find more information about the clusters, sites, and companies on our website.

Semiconductor Success Stories in Germany

Germany's chip production ambitions are helping attract more and larger investment projects as the continent seeks to establish security of supply and technological sovereignty into the future. Intel, Apple, and GlobalFoundries are among the international companies investing in facilities in the Federal Republic of Germany.

Intel

US-based semiconductor manufacturer Intel officially announced Magdeburg as the location for its new European semiconductor production facilities in March 2022. Intel estimates its "Silicon Junction" site in Magdeburg will create 3,000 permanent high-tech jobs for producing next-generation, two-nanometer-wide chips, and will initially spend EUR 17 billion on its new location – making it the largest-ever foreign direct business investment in the country and in Europe as a whole. The "multifabs" are scheduled to start operations in 2027.

Apple

Meanwhile, Apple is investing more than EUR 1 billion in its European Silicon Design Center in Munich. The 30,000-square-meter facility, which will focus on mobile wireless semiconductors, is one step in Apple's efforts to build a world-class team of engineers in Munich and across Germany.

GlobalFoundries

US chip manufacturer GlobalFoundries has announced plans to more than double capacity at its Dresden site – increasing production from 400,000 wafers to more than one million wafers annually. This represents an investment of more than EUR 1 billion.

Reasons to set up production in Germany

- Strongest semiconductor ecosystems in Saxony, Bavaria and Baden Württemberg – biggest in Europe
- EU & Germany enabling large investments through European Chips Act and related funding programs
- Growing annual semiconductor turnover in Germany, with key customers & partners in chip design, 5G, automotive, industry throughout Germany and the EU
- Germany and EU are prepared to make speedy permits and grants available
- Germany Trade & Invest ensures support on all stages of the settlement process, contact research@gtai.com

Our Support for Your Business in Germany

Germany Trade & Invest (GTAI) is the foreign trade and inward investment agency of the Federal Republic of Germany. We advise and support foreign companies planning to expand into the German market and assist German companies seeking to enter global markets.

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Our Investor Consulting division of specialist industry teams provide international investors in all sectors with comprehensive consultancy services specific to each individual investment project. Services include:

- Market and industry reports
- Market entry analysis
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