The country’s plastics industry includes polymer manufacturers, converters and machine manufacturers alike. And with sales of over EUR 90 billion, the domestic plastics industry counts as one of Germany’s most important industry sectors.

The industry plays a major role in providing new and innovative products and solutions to a number of key industries including the automotive, mechanical engineering, packaging, electrical engineering, and construction industries.

Germany is setting the international standard as a plastics industry location, with the country’s leading-edge network of chemical parks and unique cluster concept providing industry actors with swift and easy access to all parts of the plastics industry value chain.
THE INDUSTRY IN NUMBERS

INTERNATIONAL MARKET DEMAND AND PRODUCTION
The global plastics industry has recorded average annual growth of nine percent since 1950 (CAGR 8.7 percent). In the past 30 years alone, international plastics production has grown by more than 500 percent. World plastics production ramped up from 1.5 million tons in 1950 to 288 million tons in 2012.

Global plastics materials demand is forecast to grow 3.7 percent per annum for the period 2012 to 2017. Current forecasts issued by the PlasticsEurope Market Research Group (PEMRG) see plastics material demand rising to around 290 million tons by 2017.

EUROPEAN MARKET DEMAND AND PRODUCTION
The European plastics industry generated total annual sales of around EUR 300 billion in the last three years. Europe accounts for around 21 percent of global plastics production (58 million tons in 2012). To provide some perspective, China and the NAFTA trade bloc are responsible for 23 percent and 20 percent of global plastics production respectively. As Europe’s number one plastics location, Germany enjoys a global plastic production share of around seven percent.

As a major plastics production site, Europe attracts significant foreign direct investment (FDI) from globally active industry players. In global plastics and rubber FDI rankings, Germany occupies fifth spot. Within Europe, Germany has been continuously ranked the number one FDI destination country over the last decade.

GERMAN MARKET DEMAND AND PRODUCTION
The German plastics industry generates sales in the region of EUR 90 billion each year. The industry, as a whole, is made up of approximately 7,090 companies. These companies employ a workforce of around 375,000 people.

The German plastics production market, with its 240 companies and 37,000 employees, generated sales of EUR 24 billion in 2012. Germany is home to more than 6,600 companies active in plastics processing. They can call upon a workforce of around 375,000 people. In 2012, plastic processing company sales topped EUR 60 billion.

Germany’s plastics and rubber machinery builders are world leaders. In 2012, they employed a labor force of 27,000 people in 250 companies, generating sales of EUR 6 billion.

HOME MARKET EUROPE
Around 12 million and 8 million tons from Germany’s plastics production go to export and import markets respectively. Around 11 million tons of plastics are processed in Germany. Seventy-six percent of plastics produced in Germany are intended for the European plastics market; 72 percent of this volume remains in the European single market with the remaining four percent ending up in other European countries in 2012.

Within Europe, the main importers of German plastics are Italy, France, Poland, Belgium, and the Netherlands. Germany is also one of the largest importers and processors of plastics materials - over 90 percent of all plastics imported in 2012 came from EU-27 countries.
INCREASED GLOBAL PLASTICS DEMAND

Global plastics demand is forecast to grow five percent annually through to 2015 as a result of global megatrends including urbanization, energy demand, climate change, and new technology developments. The different megatrends driving growth are closely linked to industry sectors including construction, energy efficiency and housing; areas in which plastics are playing an ever-increasing role.

According to research conducted by PlasticsEurope Market Research Group (PEMRG), per capita plastic materials consumption has reached the 100 kg level in western Europe and the NAFTA region. This figure is expected to grow to around 140 kg by 2015. Internationally, the greatest growth is predicted in the developing Asian nations (current per capita consumption of just 20 kg). Within Europe, the developing economies of central and eastern Europe that constitute the new EU member states are expected to record the highest increase levels.

PRODUCTION AND DEMAND IN EUROPE

Centrally situated in Europe, Germany is optimally located to meet the new business opportunities presented by market developments. At present, Europe accounts for just over one fifth of total global plastics consumption. It is forecast to maintain current consumption levels in global comparison through to 2015.

Germany is a major FDI destination country for companies in the whole plastics industry value chain in both international and European comparison. Germany occupies fifth place in terms of international plastics FDI attractiveness, and is Europe’s leading plastics FDI nation. The German plastics industry produces for the international market with the added advantage of the European market as its home market.

Within Europe, Germany is the undisputed leader in terms of both plastics manufacturing production and sales. It comes as little surprise then, that Germany is also Europe’s best-served country in terms of available plastic production facilities. It also records the highest level of plastics demand by converters (i.e. demand expressed as tonnage of virgin resin).
THE PLASTICS VALUE CHAIN

As a cross-sectional material, plastics are vital to technological innovation: without them the basic materials required to make and realize new innovations simply would not be available. The plastics industry in Germany operates from a position of strength. Innovative plastics-production and processing companies (i.e. plastics compounders and plastics converters) located in Germany play a significant role in shaping the global plastics market; that they are able to do so is testimony to the country’s highly developed plastics industry value chain infrastructure.

Networks within the value chain encompass the different steps of the value chain (vertical networking) as well as those of the different sectors and disciplines (horizontal networking).

As a result, innovations with a particularly high value chain potential are created. These are accordingly transformed into marketable products and services.

WORLD INNOVATION LEADER
Complete industry value chain presence ensures that new and innovative products are made to the highest possible technological standards. More than 2,800 chemistry-related patents granted at the European Patent Office in 2012 make Germany the third largest inventor of chemicals after the US and Japan.

VALUE CHAIN BENEFITS
Germany’s unique industry value chain infrastructure secures the country’s position as Europe’s leading “value added at factor cost” and “gross investment in fixed assets” plastics processing nation. As well as benefiting from the highest standards and industry leadership, investors in Germany’s thriving plastics sector are able to take advantage of excellent partnership and synergy opportunities. New investors are provided with unparalleled access to local enterprise partners; domestic, regional, and international markets; state-of-the-art chemical “competence center” and “cluster” infrastructure; and a truly world-class R&D network.

SUSTAINABLE SOLUTIONS AND MARKET GROWTH
Germany’s unique value-chain system recognizes the fact that plastics not only make sustainable solutions a reality, but that they are also a long-term driver of market growth. For that reason, innovative networks and chemical-plastics industry clusters are present along the whole value chain of raw materials suppliers, plastics manufacturers, plastics processors, plastics machinery manufacturers, product distributors, and plastics end-of-life businesses.

The Plastics Value Chain in Germany

The entire value chain is available – with the highest integration and based on state-of-the-art technologies and infrastructure.

RAW MATERIAL SUPPLIERS
- RAW MATERIAL SUPPLIERS
  - Plastics Producers
    (manufacturing different types of plastics resins)
  - Plastics Compounders
    (plastic formulations mixing blending polymers and additives)
  - Plastics End-of-Life Business
    (Waste management companies/recyclers and energy from waste operators)

Plastics Machinery Manufacturers
- Plastics Machinery Manufacturers

Plastics Converters
- Plastics Converters
  (form the plastic resins and compounds into finished products)

National and international chemicals and plastics cluster and innovative networks along the entire value chain.

Source: PlasticsEurope.org, Germany Trade & Invest 2013
MARKET APPLICATIONS AND SEGMENTS

Germany can look back on more than a century of industrial plastic production. Plastics continue to play a defining role in finding innovative and forward-looking solutions to the way we live. Whether in the automotive sector, construction, packaging, or even in the field of health care products, the plastics industry is creating new and profitable business opportunities in numerous applications markets.

PACKAGING MARKET

Within Europe, more than 50 percent of all goods are packaged in plastics. According to PlasticsEurope, major efficiencies achieved in plastics packaging mean that, by weight, plastics account for only 17 percent of all packaging. Packaging is the largest plastics applications market segment, with around 35 percent of total plastics processing finding its way into the packaging sector. According to the Industrievereinigung Kunststoffverpackungen (IK - “The Plastics Packaging Industry Association”), the industry sector in Germany had a production capacity of over 4 million tons and sales of more than EUR 13 billion in 2011. The share of plastics packaging in the whole packaging market has been growing constantly in recent years, currently standing at 41.2 percent in production value terms. Plastics packaging is, as such, the best-selling material in the packaging market. New technologies and improved processes are creating greater efficiencies which are making plastic packaging more attractive. Plastics also provide a ready solution to environmental challenges, with growing public and political awareness of the significant role plastics have to play in terms of properly using energy resources and safeguarding the climate. Moreover, plastics provide construction and infrastructure solutions to address the growth of cities as well as ensuring the safe and hygienic transportation of water, food, and other consumer goods in an increasingly urbanized world. The family of bio-based plastics (“bioplastics”) is also gaining in terms of market attractiveness thanks to increased functionality factors.

OPPORTUNITIES

Major opportunities abound in Germany for companies active in the packaging sector. In 2011, over 18 million tons of packaging materials from glass, metals, paper, and plastics were produced. Plastics accordingly enjoy, with 41.2 percent of the German packaging market by sales, a significant share of the packaging materials market (paper 33.6 %, glass 7.4 %, and metals 17.8 %). Although Germany can proudly boast a plastics recycling level above the 2011 packaging directive target of more than 22 percent, a number of its near neighbors in western and central Europe are still some considerable way off meeting this target. Increased demand is forecast for packaging films, hollow bodies, closures, cups, and cans. Within Europe, the packaging recovery trend is also contributing to healthy prospects in the packaging sector. Forty percent of bottles and industrial films are currently recycled Europe-wide.

BUILDING & CONSTRUCTION MARKET

Construction is the second largest plastics end-user application industry with 23.4 percent of plastics production. Plastics are indispensable to modern building construction. Windows, doors, façade and energy-efficient insulation elements are but a few of the more obvious examples from the long list of potential plastics construction applications.

OPPORTUNITIES

Current trends and major growth opportunities in the construction industry can be found in the energy-efficient construction materials segment. Energy-efficient technologies help reduce energy consumption levels by more than 70 percent. Around 60 percent of these energy savings are realized through the use of plastic-derived thermal insulation materials.

![Plastics Consumption in Germany by Segment 2012](image-url)
ELECTRICAL & ELECTRONIC

MARKET
With more than 840,000 employees and sales of EUR 170 billion according to the Zentralverband Elektrotechnik- und Elektronikindustrie (ZVEI – “Central Association of the Electrical Engineering and Electronics Industry”), the electrical and electronics (E&E) industry counts as one of the biggest industry sectors in Germany. The rise of the E&E industry would not have been possible without plastics. Affordable and durable plastics are all around us, having helped revolutionize the way we live today. The average plastic content in E&E devices is around 20 percent of weight. Plastics’ excellent insulating properties and flexibility are ideal for use in the electrical goods and electronics sector. Germany’s E&E sector accounts for over six percent of the total plastics consumption market.

OPPORTUNITIES
The global E&E industry is the world’s fastest-growing industry sector, and the third largest in Germany by revenue. Plastics are also playing an important role in global efforts to develop novel electronic devices using organic functional layers suited to simple and low-cost products. The first organic electronics (also “printed electronics”) products have already hit the market in the guise of OLED displays and polymer solar cells. German research institutes like the Fraunhofer Institute for Applied Polymer Research are making exciting research advances in polymers with electrical and optical characteristics for high-technology applications.

AUTOMOTIVE

MARKET
Germany occupies a unique position in the international automotive industry. German automobile manufacturers produced 13.6 million cars in 2012 – equivalent to more than 17 percent of worldwide production. Domestically, the auto sector remains the country’s most important economic industry sector, and boasts the largest concentration of OEM plants in Europe. According to the Verband der Automobilindustrie (VDA – “German Association of the Automotive Industry”) 2013 report, the German automotive industry generated sales of EUR 357 billion in 2012 (more than 2/3 in the foreign markets). Around ten percent of plastics consumption is generated in the auto sector. Plastics contribute up to 15 percent of the body weight of new cars. Lightweight plastics are contributing to make cars more eco-friendly, safer, and comfortable.

OPPORTUNITIES
Worldwide, there are currently more than one billion vehicles in use today. This figure is expected to double to more than 2 billion vehicles by 2030. Polymer properties and relatively simple processing at low temperatures promote use in many areas of modern car engineering. Increasingly more auto manufacturers are turning to plastics and composites in order to achieve better fuel efficiency levels in accordance with CO₂ emission reduction requirements. As well as improved fuel economies and lower greenhouse gas emission levels, plastics allow multiple auto parts to be consolidated; creating real cost savings for the auto industry.

High R&D investment levels are one of the German automotive industry’s most important success factors, with research in new and advanced materials (e.g. for lightweight construction) an important component.

MEDICAL

MARKET
Germany is Europe’s largest market for medical devices and the world’s third largest. With overall turnover in the region of more than EUR 22 billion and a hundred thousand strong workforce, the medical technology sector is a cornerstone of the German economy. According to SPECTARIS (“German High-Tech Industry Association”), companies in the medical devices sector recorded a 6.7 percent increase (EUR 15.1 billion) in international turnover. Medical use of plastics accounts for 2.2 percent of the plastics market.

OPPORTUNITIES
Modern medicine depends on an array of plastics-based probes, syringes, tubing, and thermometers in general practice. The high acceptance afforded German medical technologies, both at home and abroad, is a clear indicator of the innovative strength of an industry exemplified by its above-average R&D expenditure levels [around nine percent of total turnover]. But it is not just in general medical practice that plastics are making their presence felt, state-of-the-art orthopedic prostheses and even artificial organs are increasingly being manufactured from plastics.
INNOVATIVE CLUSTER CONCEPT – WORLD-CLASS KNOWLEDGE TRANSFER

Germany’s unique industry “cluster” concept has created an environment in which operators from all sectors are able to flourish in close proximity with other industry actors and investors, academic institutions, and research centers. The German federal government’s cluster strategy encompasses the following activities:

- Competition to promote exchange processes between universities and companies
- Region-specified measures to foster the development of clusters
- Measures to foster the development of clusters in individual fields of technology
- Cross-industry competence creation
- Cutting-edge cluster competition

INNOVATIVE PLASTICS INDUSTRY NETWORKS

Clusters in the plastics industry are typically integrated in multi-producer sites overseen by a third-party management company responsible for the efficient running of all on-site services and utilities. There are over 40 regional clusters, innovative networks, and competence centers in plastics and material sciences in Germany. The chemical and plastics cluster and their innovative networks and competence centers span the entire value chain of the plastics industry, providing unparalleled knowledge transfer opportunities and market impulse. Effectively building a partnership bridge between academia, commerce, and industry, clusters promote shared dialogue and innovative technology partnerships between science and industry.

Selected Plastics Industry Clusters, Innovative Networks, Centers of Excellence, and Pilot Plants

“Industrial clusters and a strong research base are major success factors in the German plastics industry. The fact that Germany can successfully conduct research, development and production for the world market is due in part to the classic benefits Germany offers as a business location: well-trained, highly-qualified and motivated employees, political stability and the ability to make long-term plans, as well as a long-standing tradition of good labor relations, decent infrastructure and a strong focus on quality.”

Dr. Josef Ertl, President, Wirtschaftsvereinigung Kunststoff (Plastics Trade Association)

SPECIALIZED CHEMICAL PARKS

There are currently around 60 chemical sites in Germany, of which around 40 are organized as so-called “Chemical Parks.” Of these, 28 specialize in polymer manufacturing and plastics processing.

The chemical parks and sites concept allows investors to easily “plug into” and access all of the necessary infrastructure resources they require – and all without the financial costs of a greenfield investment.
INTERNATIONAL R&D LEADERSHIP

Germany is Europe’s leading R&D investment nation. Internationally, only the US, Japan, and China have higher domestic R&D budgets. Germany is also a leader in terms of R&D investment as share of GDP: with a figure of 2.8 percent above the 2011 OECD average of 2.3 percent.

According to the European Innovation Union Scoreboard 2013, Germany is one of the fastest growing of Europe’s leading innovation nations. The report also singled out Germany as being particularly strong in terms of the number of “innovators” (innovative products).

PUBLIC-PRIVATE PARTNERSHIP - GERMANY’S HIGH-TECH STRATEGY

Launched in August 2006, the “High-Tech Strategy” represents the first national concept to bring key innovation and technology stakeholders together in a common purpose of advancing new technologies. The initiative combines the resources of all government ministries, committing approximately EUR 4 billion annually to the development of cutting-edge technologies (R&D projects can accordingly count on generous financial support in the form of R&D grants).

R&D INFRASTRUCTURE AND COMPETENCE IN THE PLASTICS INDUSTRY

The chemical industry is by far the most important source for new materials. As such, it supplies a large number of industrial sectors with new material innovations. Sixty percent of all R&D expenditure targeted at industrial intermediaries takes place in chemical enterprises. As well as plastics processing, almost all industry sectors benefit from preliminary innovation work carried out by the chemical sector. In 2010, the German chemicals industry spent EUR 3.5 billion on R&D – equivalent to six percent of total German industry R&D expenditure. R&D activities located in Germany are international in nature, playing a key role in the global research program activities of international chemical industry operators. Plastics and rubber processors have consolidated R&D spending in the last ten years, helping establish Germany’s processing sector (with R&D expenditure of about EUR 800 million) as the undisputed European number one. Non-university based applied research institutions, competence centers and pilot projects provide mainly small and medium-sized plastics processors with unparalleled access to cutting-edge research infrastructure and expertise. This allows international investors to profit from highly scalable R&D potential. Germany’s world-class research landscape includes a significant number of polymer and materials science research institutes. Based on the BMBF research and innovation study 2012 and Germany Trade & Invest research, this impressive list includes:

- 33 university institutes
- 12 university of applied science institutes
- 2 Max-Planck Society (MPG) institutes
- 10 Fraunhofer Association (FG) institutes
- 3 institutes of the Helmholtz Association of German Research Centres (HGF)
- 4 Leibniz Association (WGL) institutes
- 10 federal and national R&D institutes

Academics and scientists have formed the Plastics Technology Scientific Working Group (WAK) for the further promotion and development of plastics technology in Germany.

Innovation Performance of European Countries 2013

<table>
<thead>
<tr>
<th>Country</th>
<th>0</th>
<th>0.2</th>
<th>0.4</th>
<th>0.6</th>
<th>0.8</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.84</td>
</tr>
<tr>
<td>Sweden</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td></td>
<td></td>
<td></td>
<td>0.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td></td>
<td></td>
<td></td>
<td>0.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
<td></td>
<td></td>
<td>0.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td></td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td></td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.57</td>
<td></td>
</tr>
<tr>
<td>EU-27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>0.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td>0.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The “innovation index” is a composite of 25 indicators measuring innovation, such as public and business R&D expenditures, educational background, international patent applications.

Source: PRO INNO Europe 2013
DYNAMIC LABOR MARKET

WORLD CLASS ENGINEERS
Germany’s chemical and plastics sector is internationally admired for the quality of its workforce. Over 30 percent of German university graduates have an applied sciences or engineering degree background (2011).

EXEMPLARY ACADEMIC NETWORK
Germany provides access to an excellent research landscape and advanced network of universities highly active in the field of polymer and material sciences. With strong connections to industry, 33 universities and 12 universities of applied sciences offer a number of plastics processing-related study programs (e.g. polymer and material sciences). More than 115,000 students matriculated on engineering, polymer and material sciences study programs in winter 2011/12. There are currently more than 235,000 students in plastics processing-related study programs in Germany. More than 37,000 students graduated in this field of study in 2011/12. Chemicals and plastics companies, R&D institutes and the industry cluster provide numerous new technology training programs for SMEs – providing companies with an extra competitive edge.

COMPETITIVE LABOR COSTS
High productivity rates and steady wage levels make Germany an attractive investment location. Since 2002, wages have risen in most European countries (EU-27). While some countries – particularly those in eastern Europe – experienced a rise of five to six percent, Germany recorded the lowest labor cost growth with-in the EU at just 1.6 percent. Highly flexible working practices such as fixed-term contracts, shift systems, and 24/7 operating permits contribute to enhance Germany’s international competitiveness as a suitable investment location for internationally active businesses.

INVESTMENT STABILITY

COMPETITIVE INFRASTRUCTURE AND LOGISTICS EDGE
Germany’s infrastructural excellence is confirmed by a number of recent studies including the Swiss IMD’s World Competitiveness Yearbook and various investor surveys conducted by institutions including UNCTAD and Ernst & Young. The 2012-2013 Global Competitiveness Report of the World Economic Forum (WEF) ranked Germany first in Europe and third worldwide for infrastructure; singling out Germany’s extensive infrastructure for highly efficient transportation of goods and passengers for special praise. Germany’s highly developed pipeline system guarantees stable oil supply from the Mediterranean, the North Sea, and from Russia. Ethylene and propylene pipelines complement the country’s unique chemical park delivery infrastructure, with chemical parks connected to an advanced pipeline network for natural gas, naphtha, hydrogen, carbon monoxide, and technical gases. This provides unparalleled access to secure supply of raw materials to the plastics and related industries, and represents a major competitive infrastructure advantage.

BUSINESS-FRIENDLY TAX CONDITIONS
Germany offers one of the most competitive tax systems of the big industrialized countries. The average overall tax burden for corporations is just below 30 percent. Significantly lower rates are available in certain German municipalities – up to eight percentage points less – with the overall corporate tax burden as low as 22.8 percent in some cases. Moreover, Germany provides an extensive network of double taxation agreements (DTAs) ensuring that double taxation is ruled out, e.g. when dividends are transferred from a German subsidiary company to the foreign parent company.

---

University Students in Maths, Sciences, IT, and Engineering Programs 2011

<table>
<thead>
<tr>
<th>Location</th>
<th>Students %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>34.1%</td>
</tr>
<tr>
<td>Germany</td>
<td>32.1%</td>
</tr>
<tr>
<td>Portugal</td>
<td>28.9%</td>
</tr>
<tr>
<td>Spain</td>
<td>27.5%</td>
</tr>
<tr>
<td>France</td>
<td>25.4%</td>
</tr>
<tr>
<td>Austria</td>
<td>25.4%</td>
</tr>
<tr>
<td>Czech Rep.</td>
<td>25.0%</td>
</tr>
<tr>
<td>Slovak Rep.</td>
<td>23.7%</td>
</tr>
<tr>
<td>UK</td>
<td>22.0%</td>
</tr>
<tr>
<td>Poland</td>
<td>21.9%</td>
</tr>
<tr>
<td>Japan</td>
<td>18.1%</td>
</tr>
<tr>
<td>USA</td>
<td>15.8%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>13.9%</td>
</tr>
</tbody>
</table>

Source: Eurostat 2013
FINANCING & INCENTIVES IN GERMANY

In Germany, investment projects can receive financial assistance through a number of different instruments. These instruments may come from private sources or consist of public incentives programs available to all companies—regardless of country of provenance. They fit the needs of diverse economic activities at different stages of the investment process.

EARLY STAGE INVESTMENT PROJECT FINANCING

Technologically innovative startups in particular have to rely solely on financing through equity such as venture capital (VC). In Germany, appropriate VC partners can be found through the Bundesverband Deutscher Kapitalbeteiligungsgesellschaften e.V. (BVK – “German Private Equity and Venture Capital Association”). Special conferences and events like the Deutsches Eigenkapitalforum (“German Equity Forum”) provide another opportunity for young enterprises to come into direct contact with potential VC partners. Public institutions such as development banks (publicly owned and organized banks which exist at the national and state level) and public VC companies may also offer partnership programs at this development stage.

LATER STAGE INVESTMENT PROJECT FINANCING

Debt financing is a central financing resource and the classic supplement to equity financing in Germany. It is available to established companies with a continuous cash flow. Loans can be borrowed for day-to-day business (working capital loans), can help bridge temporary financial gaps (bridge loans) or finance long-term investments (investment loans). Besides offers from commercial banks, investors can access publicly subsidized loan programs in Germany. These programs usually offer loans at attractive interest rates in combination with repayment-free start-up years, in particular for small and medium-sized companies. These loans are provided by the state-owned KfW development bank and also by regional development banks.

CASH INCENTIVES FOR INVESTMENT PROJECTS

When it comes to setting up production or service facilities, investors can count on a number of different public funding programs. These programs complement the financing of an investment project. Most important are cash incentives provided in the form of non-repayable grants applicable to co-finance investment-related expenditures such as new buildings, equipment or machinery.

LABOR-RELATED INCENTIVES AND R&D PROJECT GRANTS

After the location-based investment has been initiated, companies can receive further subsidies for building up a workforce or the implementation of R&D projects. Labor-related incentives play a significant role in reducing the operational costs incurred by new businesses. The range of programs offered can be classified into three main groups: programs focusing on recruitment support, training support, and wage subsidies respectively. R&D project funding is made available through a number of different incentives programs targeted at reducing the operating costs of R&D projects. Programs operate at the regional, national, and European level and are wholly independent from investment incentives. At the national level, all R&D project funding has been concentrated in the so-called High-Tech-Strategy to push the development of cutting-edge technologies. Substantial annual funding budgets are available for diverse R&D projects.
**MANULI STRETCH S.P.A. (ITALY)**

Manuli Stretch, one of the world’s leading manufacturers of stretch films has realized total investments in Germany of EUR 80 million at its plant in the Dow ValuePark® in Schkopau, Saxony-Anhalt. Continuous investment from 1998 to 2012 has seen two new facilities and a production center with 140,000 tons per annum capacity being built. The company’s workforce has also increased to around 200 as a result. Fifteen subsidiaries with five production sites in North and South America as well as Europe belong to Manuli Stretch’s international distribution network. The company has an annual production capacity of more than 200,000 tons and delivers to more than 12,000 customers worldwide. The company was first attracted to Germany by the presence of Dow, whose polyethylene provides the raw material for stretch film production.

“Our positive experiences with the local workforce and specialized suppliers in the immediate vicinity played a major role in our decision to continue sustainably investing in our plants at the ValuePark® Schkopau.”

Manuli Stretch S.p.A.
Sandro Manuli, President

---

**Milestones of a Successful and Continuous Investment in Germany**

<table>
<thead>
<tr>
<th>Phase I</th>
<th>1998 - 1999</th>
<th>Manuli Stretch establishes new plant for the production of stretch films – EUR 25 million investment supported by the federal state of Saxony-Anhalt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Manuli Stretch plant in Schkopau Total investment volume: EUR 55 million, 144 employees, Annual production capacity: 100 thousand tons, annual sales (2008) EUR 122 million (Manuli Stretch Group: annual sales in total EUR 319.5 million, production in six plants in Europe and in Latin America with a total annual capacity of 270 thousand tons.)</td>
<td></td>
</tr>
<tr>
<td>Outcome</td>
<td>The Manuli Stretch plant in Schkopau has has become the group’s most important production plant with 37 percent share of annual production and 38 percent share of annual sales.</td>
<td></td>
</tr>
<tr>
<td>Phase III</td>
<td>2010</td>
<td>Investment to create two new facilities and a production building in Schkopau with a capacity of 40 thousand tons and a further 31 employees – EUR 21 million investment.</td>
</tr>
<tr>
<td>2011</td>
<td>Start-up of cast polypropylene line</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>Start-up of 2 blown lines for the manufacture of stretch hood and other converting films</td>
<td></td>
</tr>
<tr>
<td><strong>Outcome of Manuli Stretch continuous investment at the Schkopau site in Germany</strong></td>
<td>Total investment volume: EUR 76 million, 175 employees Annual production capacity: 140 thousand tons</td>
<td></td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>Manuli Stretch consolidates its leading position in the European market and expands market share approximates 20 percent level.</td>
<td></td>
</tr>
</tbody>
</table>

*) LLDPE - linear low-density polyethylene

## OUR SERVICES

### GERMANY TRADE & INVEST HELPS YOU

Germany Trade & Invest’s teams of industry experts will assist you in setting up your operations in Germany. We support your project management activities from the earliest stages of your expansion strategy.

We provide you with all of the industry information you need – covering everything from key markets and related supply and application sectors to the R&D landscape. Foreign companies profit from our rich experience in identifying the business locations which best meet their specific investment criteria. We help turn your requirements into concrete investment site proposals; providing consulting services to ensure you make the right location decision. We coordinate site visits, meetings with potential partners, universities, and other institutes active in the industry.

Our team of consultants is at hand to provide you with the relevant background information on Germany’s tax and legal system, industry regulations, and the domestic labor market. Germany Trade & Invest’s experts help you create the appropriate financial package for your investment and put you in contact with suitable financial partners. Incentives specialists provide you with detailed information about available incentives, support you with the application process, and arrange contacts with local economic development corporations.

All of our investor-related services are treated with the utmost confidentiality and provided free of charge.

### STRATEGY

- Business opportunity analysis and market research
- Market entry strategy support
- Project partner identification and contact
- Joint project management with regional development agency
- Coordination and support of negotiations with local authorities

### EVALUATION

- Identification of project-specific location factors
- Cost factor analysis
- Site preselection
- Site visit organization
- Final site decision support

### DECISION & INVESTMENT

- Identification of relevant tax and legal issues
- Project-related financing and incentives consultancy
- Organization of meetings with legal advisors and financial partners
- Administrative affairs support
- Accompanying incentives application and establishment formalities
THE INDUSTRY ASSOCIATION OF THE GERMAN PLASTICS INDUSTRY

Germany Trade & Invest works closely with the respective German industry associations to provide support to foreign plastics companies seeking to settle in Germany. As a result, these companies are able to benefit from the competencies of the different professional associations.

The Wirtschaftsvereinigung Kunststoff (WVK – “Plastic Industry Association”) is the German body representing the interests of members drawn from all corners of the value chain within the German plastics industry. These include plastics producers, plastics compounders and converters and the plastics machinery manufacturers.

One of the most important industry sectors in Germany, the plastics industry generates annual sales in the region of around EUR 90 billion, and provides employment to some 375,000 workers in 7,090 companies. The industry enjoys more than six percent share of domestic industrial production. WVK is a member of the Bundesverband der Deutschen Industrie (BDI – “Federation of German Industries”) and enjoys the support of a number of other associations active in the plastics industry.

PLASTICSEUROPE DEUTSCHLAND E.V.
PlasticsEurope is a pan-European trade association of plastics manufacturers. The association represents more than 100 companies in 31 European countries. PlasticsEurope Deutschland e.V. is the association of plastics manufacturers in Germany (54 members).

GENERAL ASSOCIATION OF GERMAN PLASTICS PROCESSING INDUSTRY (GKV)
The GKV is the umbrella organization of the German plastics processing industry. It represents the shared interests of its carrier associations (plastics packaging, plastics end-consumer, performance plastics, and reinforced plastics industries).

VDMA – “GERMAN ENGINEERING FEDERATION”
The plastics and rubber machinery division within the VDMA represents the interests of over 200 member companies in Germany. Members receive, among other services, support in the form of global market information in the mechanical engineering and client industry sectors.

The Industry Association of the German Plastics Industry

*Founding members
Source: Individual association websites
About Us

Germany Trade & Invest is the foreign trade and inward investment agency of the Federal Republic of Germany. The organization advises and supports foreign companies seeking to expand into the German market, and assists companies established in Germany looking to enter foreign markets.

All inquiries relating to Germany as a business location are treated confidentially. All investment services and related publications are free of charge.


www.gtai.com