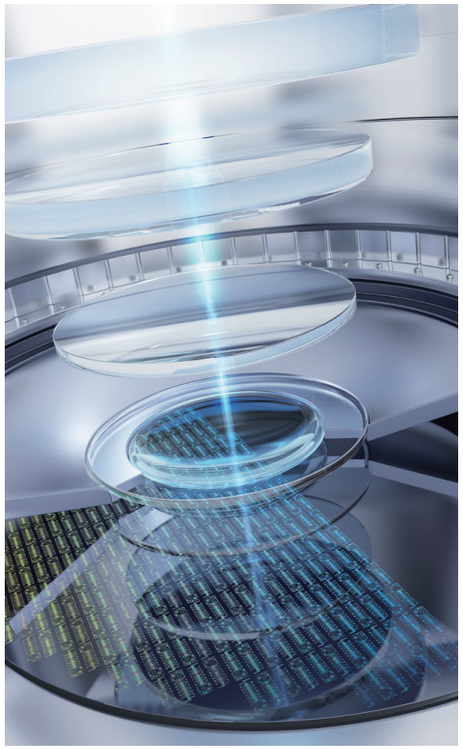
The Dutch high-tech sector is vital to meeting the global challenges of today!

The Netherlands' centuries-old tradition of creativity, pragmatism, entrepreneurship, openness and collaboration forms a perfect fit for the high-tech systems and materials (HTSM) sector. Examples of Dutch ingenuity range from the sawmill through to the screw pump, from the microscope through to the submarine, from the 6-cylinder engine through to the Variomatic and from navigation systems through to systems that transform waste and food crops into energy. These qualities make the Netherlands the perfect place to find solutions to the challenges society is facing today in the areas of health and wellness, security, renewable energy, mobility and the climate. Solutions that, due to the complexity of the challenge, are primarily found by cross-overs in technology and collaboration.

The high-tech sector includes a number of closely related industries including: the high-tech systems industries, automotive, aerospace and materials including steel. Dutch companies and knowledge institutes in the HTSM sector are renowned for their technological excellence and have become leaders in their market segments. Rapid innovation and collaboration across the value chain is imperative in this highly competitive and highly complex sector.

A well functioning network ('ecosystem') of specialized companies and institutions is crucial for this. An example, where much of the high-tech sector is concentrated, is Brainport region Eindhoven in the Southeast of the Netherlands. But in other parts of the Netherlands, such as around Twente and Delft, there are also strong concentrations of high-tech companies and universities (Knowledge park Twente and Yes!Delft).



Source: ASML Netherlands B.V.

Websites
www.hollandhightech.nl – International promotional website of the Dutch High Tech Sector
www.utwente.nl/en - University of Twente - www.utwente.nl/mesaplus - MESA+ Research Institute
http://tudelft.nl/en/ - Delft University of Technology http://kavli.tudelft.nl/ - Kavli Institute TU Delft
www.tue.nl/en/ - Eindhoven University of Technology
www.holstcentre.com - Holst Centre open innovation R&D centre, High Tech Campus, Brainport
www.differ.nl/en - Dutch Institute for Fundamental Research
www.esa.int/esaMI/ESTEC/index.html - European Space Research and Technology Centre
www.esi.nl/ - Embedded Systems Institute
www.tno.nl/index.cfm?Taal=2 - TNO, Dutch Applied Research institute
www.brainport.nl/en - Brainport region Eindhoven, 'the world's smartest region' in 2011.
www.brainportindustries.com/en - Brainport Industries

Key aspects and strengths

- The Netherlands is a frontrunner in both pubic-private research and 'open innovation', with its Brainport region Eindhoven named 'the world's smartest region' in 2011. It is an excellent example of how companies, research institutions and government can collaborate to foster knowledge and create innovative technology that sets standards across the globe. It has resulted in an intensive collaboration between OEMs, specialized suppliers and knowledge institutions.
- Holland's high-tech sector is a world leader in the development of new technologies and materials for use in the communication systems of the future, the most economical and safest aircraft, hybrid and electric cars, the large-scale generation and storage of solar energy, but also advanced medical devices that can detect and treat diseases earlier and more effectively.
- The Netherlands is also world leader in designing, developing and making high-tech equipment and micro/nano components. Characteristic features of this equipment are:
  - highly intelligent (embedded systems, software, sensors);
  - very precise (nano-electronics, high precision manufacturing), and
  - highly efficient (mechatronics and smart electronics)
- The Dutch high-tech sector is all about 'high value, high mix and high complexity.' It generally focuses on niche markets, usually with small batch sizes, and differentiates itself on technological excellence.
- A Dutch multinational is the world's leading provider of lithography machines for the semiconductor industry.
- In the field of nano science the Netherlands belongs to the top three worldwide, together with Switzerland and USA. MESA+, the institute for technology located at the University of Twente, is one of the largest nanotechnology research institutes in the world.
- There are some 60 nationalities working and studying in the Netherlands in the field of High Tech Systems and Materials, proving the attractiveness of the Netherlands for foreign knowledge workers

Facts and figures

- In 2009 (last available data), the export value from the HTSM sector was € 32 billion, the production value € 73 billion, and the added value € 23 billion.
- About 400,000 people are employed in HTSM industry and knowledge institutes.
- The high-tech industry is capital intensive, and collectively invests over € 2.3 billion per year to house research and development, almost 50 percent of all private R&D in the Netherlands and 10 percent of the sector's added value.
- Some companies export more than 90 percent of their production, others invest up to 20 percent of their turnover on R&D.
- Dutch companies invented WiFi, the CD and the DVD. Bluetooth was invented by Dutchman Jaap Haartsen. And high-tech equipment from Dutch companies are used in 90% of all silicon chips produced worldwide.

Holland
Pioneers in international business