

Overview of the Dutch High Tech Sector

2021

Summary

- The high tech sector is an important and growing contributor to the Dutch economy, employing some 490,000 people, and accounting for €139 billion in production and €49 billion in exports annually.
- It is one of the country's nine "top sectors" and has received significant support from the Dutch National Growth Fund.
- Close cooperation between the government, business and research institutions, which has characterised the success of the Dutch agri-food industry, is also well embedded in the high tech sector.
- The presence of a range of market leaders, an innovative start-up culture, extensive government support and world-leading research institutions combine to make the Netherlands an option worth investigating for New Zealand high tech companies looking to expand into Europe, either through the establishment of a local presence or partnership with a local company.

Report

- The high tech sector is playing an increasingly important role in the Dutch economy and has continued to grow strongly through the COVID-19 pandemic. The sector employs 490,000 people, and accounts for €139 billion in production and €49 billion in exports annually. It is one of nine "top sectors" the Dutch Government has selected for targeted "triple helix" (i.e. government, business and research) cooperation. Of the €4 billion the industry invests in R&D annually, over €500 million goes towards these collaborative, triple helix programmes, both inside and outside the Netherlands. Top sector organisation High Tech NL has identified five key themes for innovation: climate, sustainability, health, security and mobility.
- The Netherlands is also prominent in the development of quantum technologies. It is home to one of the largest research clusters in quantum hardware and software. It also fulfils a pioneering role in the field of quantum internet and functions as a coordinator within the European Union (EU). Public funding from the National Growth Fund, combined with a high level of ambition from the sector, positions the Netherlands well to compete with the largest quantum ecosystems in the world.
- The Dutch National Growth Fund recently announced a €1.35 billion investment in innovation. This includes €615 million funding for <u>Quantum Delta Nederland</u>, a sector organisation working with a coalition of Dutch companies with expertise in quantum technologies. Quantum Delta Nederland has established a "House of Quantum" in Delft. When completed in 2024, it will function as the centre of a national and European ecosystem for scientists, entrepreneurs, students, financiers and companies to work together to accelerate technology development and its applications, while maintaining the Netherlands' scientific advantage. It is working quickly to build its international networks, and has identified a range of priority countries both within the EU (Germany, France and the Nordics) and further afield (US, Japan and the UK). Canada, Switzerland and Australia have been identified as additional focus countries for targeted cooperation.

- Another winner from the disbursement of National Growth Fund resources is the artificial intelligence (AI) sector. The <u>Netherlands AI Coalition</u>, a public-private partnership with more than 250 participants – spanning (among others) IT companies, local and central government agencies, museums, the national postal service and Port of Rotterdam – received €276 million to deliver on a plan to position the Netherlands as a world leader in the field of AI. The Coalition plans to use the funds to address key bottlenecks in innovation, knowledge base, the employment market, public confidence, and data sharing.
- Both Quantum Delta Nederland and Netherlands AI Coalition follow the triple helix approach which the Dutch have successfully deployed in other areas, notably the agri-food industry (centred on the <u>Foodvalley</u> in Wageningen). Another example of triple helix support for the high tech sector is the <u>Brainport Eindhoven</u> initiative which provides a supportive ecosystem of suppliers, manufacturers and advisers in the Eindhoven region close to Eindhoven University of Technology.
- Holland High Tech, together with the top sector organisations for energy and the chemical sector, has also been given €338 million from the National Growth Fund for fundamental pre-competitive research into the energy transition. While primarily the responsibility of the energy sector, Holland High Tech will be closely involved in the project, which will investigate the role hydrogen can play in the Dutch transition to a low carbon economy.
- The Netherlands is also home to a number of successful, and global, high tech companies. Of particular note is ASML, a Dutch multinational that produces the photolithography machines required to manufacture computer chips. ASML has a two thirds share of global lithography machines and generated revenue of €13.9 billion in 2020, almost entirely from exports. The economic impact is massive: ASML generates around twice as much export revenue for the Netherlands as its entire flower sector. The success of companies like ASML has resulted in a blooming semiconductor industry, with 65 companies cooperating under the <u>Holland Semiconductors</u> network.

Conclusion

The Netherlands is host to a large and growing agglomeration of high tech companies, and the sector has been identified by the Dutch Government as key to the future of the economy. Accordingly, the Government has been investing heavily in providing an environment in which such companies can thrive. The support for high tech industries, the excellent facilities and the close relationship between business, government and research institutions in this sector combine to make the Netherlands worth investigating for New Zealand high tech businesses looking to expand into Europe, either through establishment of a local presence or partnership with a Dutch company.

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