Denmark
- the Key to World Class Life Science
Denmark is a life science nation

The Danish life sciences industry is one of the most important sectors in the Danish economy. Recognised internationally for innovative products and services, Danish companies are global leaders in the treatment of diseases such as diabetes, mood disorders, skin diseases and allergies as well as in medtech areas such as hearing aids, disposable medical devices, and innovative medtech supplies and products.

Denmark has a long-standing tradition for research-based industry that goes back more than 150 years. Strong private and public research combined with an impressive technological legacy has led to a world class life science cluster that represents more than 17% of Denmark’s total export of goods. The life science industry’s ambition is to double that export by 2025.

Export of goods from the life science industry

Note: Numbers in current prices.
Source: The Economic Footprint of the Danish Life Science Industry (Damvad), Statistic Denmark.
Long-standing tradition for public-private partnership

Nordic Insulin Laboratory (now Novo Nordisk) was established in 1923. As early as 1932, the company established the first Nordic Diabetes Hospital to treat diabetics, and the public healthcare system soon realised the potential for collaboration. A formalised public-private collaboration with the name ‘Steno Diabetes Center’ was established during the 70s. The Steno Diabetes Center is now nationwide in all 5 Danish regions. This has inspired a Danish culture of public-private cooperation and research, which is one of the secrets behind the strong life science cluster.

Strong foundation for digital innovation

The culture for strong public-private cooperation is also stimulated by the unique research opportunities available in the Danish healthcare system. Denmark has electronic healthcare data which goes back more than 40 years in time with 170 clinical databases and the Danish Biobank Register, which connects 25 million biological samples.

Denmark’s social security number system (a unique patient identifier called CPR) makes it possible to combine specific patient data for research with data from a vast database of 5.8 million Danes.

Denmark is also the most digitalised country in the EU,¹ which is only possible due to the high trust Danish citizens have in the public authorities. This has contributed to making Denmark the no. 1 country in Europe for clinical trials,² measured by trials conducted per capita.
Synergy between public healthcare and life science

Denmark is facing the same challenges as most countries: An aging population with more and more life-style related and chronic diseases resulting in enormous pressure on public spending. As a response to these challenges, Denmark is transforming the healthcare system with focus on stronger primary care, elderly care and population health. Future patients will rely more on healthcare services from primary care and outpatient clinics and will only be treated in hospitals when a more comprehensive or specialised treatment is needed.

The large-scale transformation of the Danish healthcare system creates a high degree of synergy with the life science industry, because it relies on innovation and fast access to new treatments and medicine. The focus on creating a patient-centred healthcare system based on strong primary care increases the demand for new pharmaceuticals and innovation from the industry. Public-private cooperation is therefore crucial for both public healthcare authorities and for the life science industry.

2 Danish Association of the Pharmaceutical Industry (LIF), www.clinicaltrials.gov.
Unique ownership model contributes to society

- Many large Danish companies are foundation-controlled – a unique ownership model: The company’s founder irrevocably donates the majority of shares in the company to an independent legal entity, a foundation, with certain rights and responsibilities. No person or legal entity will thereafter own the foundation’s assets and the foundation needs to have a non-selfish purpose.

The foundation typically maintains control over the company. 2/3rds of all listed companies in terms of value on the Danish Stock Exchange are of this type, including the 4 biggest life science companies: Novo Nordisk A/S, LEO Pharma A/S, Lundbeck A/S, and Coloplast A/S. Donations from the foundations are long-term investments, which make a huge difference to Danish society, especially within science and research.

New Centre for Skin Research
At the University of Copenhagen, a new Skin Immunology Research Centre was established with the financial support of the LEO Foundation.

The ‘Technology Pact’
The ‘Technology Pact’ is an initiative to address the shortage of employees with digital and technical skills, and to encourage young people to pursue a career in life science. It was generously supported by the Novo Nordisk and Lundbeck Foundations and launched in 2018.
Public-private advances in personalised medicine

The Danish Personalised Medicine Strategy will contribute substantially to make the Danish healthcare system sustainable for years to come by supporting the use of genomic data to offer patients more targeted and efficient medicine. One of the first initiatives in the Danish Personalised Medicine Strategy was the establishment of a National Genome Center in May 2018. The Novo Nordisk Foundation has supported this initiative with a considerable grant to help establishment of the centre.

These initiatives are examples of a win-win situation, where public healthcare authorities receive important contributions from the owners of life science companies to address essential healthcare challenges, giving the industry the opportunity to progress innovation and research.

Danish healthcare initiatives also benefit other countries. The global program ‘Cities Changing Diabetes’ is an initiative from Novo Nordisk A/S as a response to the dramatic rise in urban diabetes across the world. It offers a partnership platform for cross-disciplinary, cross-sector collaboration against the pandemic growth of diabetes and obesity, an area in which the industry needs to support the limitation of future costs. So far, 19 cities across the world are participating in ‘Cities Changing Diabetes’.
The Danish Government and Parliament want to make Denmark the leading life science nation in Europe, because of the sector’s importance to the Danish economy and to Danish healthcare. The government therefore proposed a Growth Plan for Life Science with 36 policy initiatives in the spring of 2018. With the support of Parliament, the initiatives were adopted and are now being implemented.

The Growth Plan will help ensure safe and efficient medical products and high quality devices, along with helping to establish better framework conditions for life science companies in Denmark.

The newly established Trial Nation organisation is one of these initiatives. Trial Nation is a public-private partnership between the industry and all Danish hospitals with the purpose of increasing research and clinical trials in Denmark. It reflects the interest of public healthcare authorities in stimulating stronger research in Denmark and supporting shorter time to market for new pharmaceuticals and medico technology.
The Trial Nation initiative builds on established success with attracting foreign investments in clinical trials to Denmark. The Danish life science ecosystem benefits greatly from investment made by foreign-owned life science companies, which join forces with local companies and help strengthen Denmark as an international hub for life science.

Another initiative is the increased focus on high quality approval processes for new pharmaceuticals at the Danish Medicines Agency (DKMA). Furthermore, in order to support faster introduction of new pharmaceuticals and patient access to new treatments, DKMA is set to conduct a risk-sharing pilot project. The industry will get reimbursement for their products, if they share the economic risk related to the reimbursement.

Over the last few years, the DKMA has increased its staff specifically for the approval of new pharmaceuticals. One of the results is the launch of a new concept for National Scientific Advice for the industry. Over the next few years, the DKMA will further increase its staff with more scientific advisors, especially within the field of data analytics, and strengthen international cooperation even further. The DKMA’s initiatives will mean faster introduction of new products for the industry, due to the possibility of early submission with Real World Data in a high-quality approval and services process, which is well connected to medical agencies in other countries.

The big Danish pharmaceutical and medico companies are well-known, as they contribute to healthcare progress across the world. More than 200 SMEs are also part of the Danish life science cluster, as well as some of the biggest global life science companies, many of whom have local affiliates in Denmark. This is partly due to the fact that Denmark is recognised as the easiest country in Europe in which to do business.

The Growth Plan will further stimulate the establishment and growth of new life science companies, with initiatives including establishing a strengthened investment culture with easier access to funding, supported by new investor tax deductions. More agile regulation and better conditions for compensating employees with warrants are other initiatives that will support life science companies in Denmark.

Highly skilled employees – the key to continued cluster growth

Because of the strong life science cluster, Denmark has the third highest rate of life science employees per capita in Europe. With initiatives like a new tax scheme for foreign researchers, the ‘Technology Pact’ with the industry and the stimulation of student enrolment in higher education programs, the life science Growth Plan initiatives will help ensure future availability of highly skilled researchers and life science workers in Denmark.

Trends in full-time employees in life science compared to other industries, Denmark 2001-2015

Source: The Economic Footprint of the Danish Life Science Industry (Damvad), Statistic Denmark.

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Healthcare DENMARK is the international gateway to Danish healthcare and life science expertise and innovation.

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