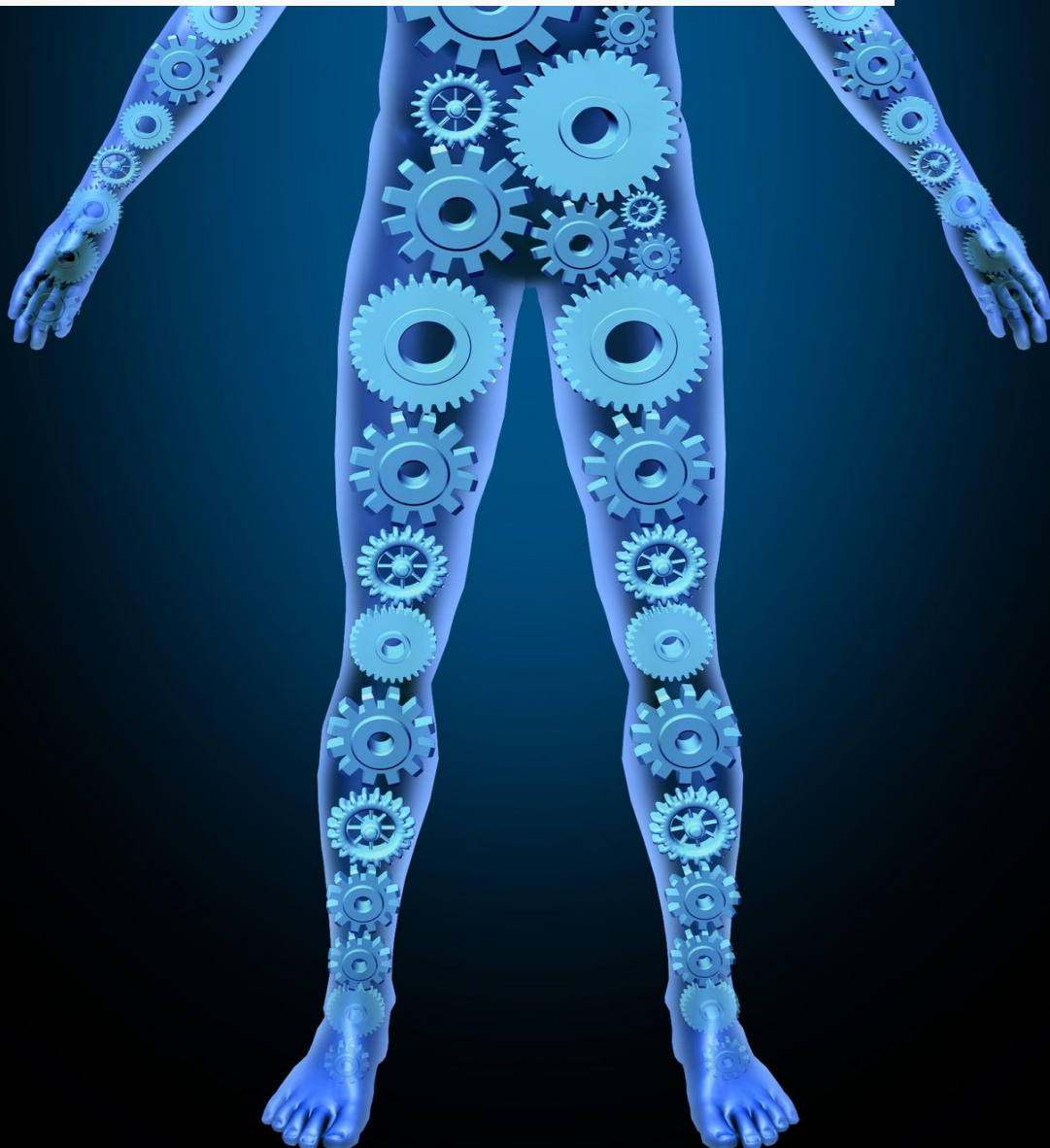




Report

Nordic Medtech:

Clusters, Industry and Financing
in Norway and Sweden



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Business Economics

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For more information; <http://www.oslomedtech.no> (under projects)



Executive Summary

The global Medtech market totaled USD 327 billion in 2010, with a predicted annual grow rate of 5.4% annually. Such figures illustrate that the highly globalized market for medical technology is large, providing enormous opportunities for competitive Medtech firms, also those located in the Nordic region.

According to Vinnova (2011), Swedish Medtech companies exported for 19 bn SEK in 2010, amounting to slightly less than 1 percent of the global market. In Norway, there are no similar figures available, yet according to Menon (2012) the life science sector exported for 9 bn NOK in total in 2009. Consequently, one should not expect more than 5 bn NOK in exports, representing around half a percent of the global Medtech market.

In this report, we identify 846 Medtech companies in Sweden (629) and Norway (227) exporting for approximately EUR 2 bn from Sweden and 700 mill. from Norway. All together the industry provides 25.000 jobs in Sweden and 5.000 in Norway.

The companies can be divided into sub segments of the Medtech industry, and in the table below, we distribute the number of firms according to sub segments:

	Sweden	Norway
Medical Devices	279	85
Welfare technological equipment	102	12
Diagnostics and Surveillance	104	72
eHealth	65	26
Bioinformation	9	13
Other	61	19
TOTAL	629	227

Clearly, the Swedish Medtech industry is much larger than the Norwegian, representing almost three times the number of companies in Norway. The sub group medical devices is the largest group in both countries, covering active implantable devices, hospital hardware, dental devices, electro mechanical medical devices, non-active implantable devices, ophthalmic and optical devices, wound care, and anesthetics and respiratory devices.

2/3 of the med tech companies are in a start-up or growth phase, and most of them face significant problems when it comes to financing. Both Sweden and Norway rank low in terms of access to risk capital. This report contains a detailed mapping of financial resources and investors in the region.

Medtech clusters in Sweden and Norway are becoming attractive hubs for creating knowledge and skill networks across companies, opening for access to customer's through test bed and commercial platform network and activities, and counseling on financing, working for increased funding opportunities for the industry. They appear to be especially important for SMEs in Medtech.

The report covers 18 cluster organizations in the Sweden and Norway and describe their activities, members, location and priorities. It is important to notice that although the clusters cover an increasing number of companies in the industry, there is still a large number of Medtech firms that do not engage in cluster cooperation. There is a large potential for improving industry performance through wider cluster coverage.

1. A roadmap to Medtech clusters in Sweden and Norway

Medical technology is becoming ever more important in the world of life sciences. The Medtech segment is partly growing fast on its own, and partly being more tightly integrated in the market for pharmaceuticals, biotechnology and other related products and services. With a global market reaching more than 300 bn USD, and a growth rate surpassing 5 percent annually, there is a strong potential for industrial growth based on innovative and globally competitive Medtech firms. The Medtech industry in the Nordic countries is also thriving, yet growth is by all means dampened due to shortages in capital supply in the risk capital market.

In markets with large growth opportunities and strong limitations in the supply of capital, it becomes gradually more important to establish arenas where firms, R&D institutions, investors and government agencies can meet and network, reducing information barriers and improving the search for the best technologies and ideas. Cluster organizations play a pivotal role in this field, bringing such players together in more or less formal settings.

In this report we focus on the presence of Medtech related clusters in Sweden and Norway. The objective of this report is to give some answers to the following questions:

Where do we find the clusters?

Which firms and players do they connect and organize?

What is their main business focus or business area?

How do the cluster members finance their activities?

In addition to our focus on clusters, we also frame this discussion, presenting information on the Medtech industry in general, a brief presentation of the most well-known test beds for medical technology in the countries, an introduction to investors with an interest for this sector and some central sources of R&D financing directed towards the Medtech sector. The report is structured the following way according to chapters:

2. The Medtech industry in Sweden and Norway: An overview
3. Clusters and cluster organizations in Sweden and Norway
4. A brief note on test beds in Sweden and Norway
5. Mapping of investors focusing on Medtech
6. R&D financing relevant for Medtech projects

2. The Medtech industry in Norway and Sweden

The medical technology industry is not an easily defined group of firms and activities. A widely used definition takes the following form:

Medical technologies (Medtech) are defined as any healthcare product that is used to diagnose, prevent, monitor, treat or alleviate disease or injury. This excludes devices whose principal intended action in, or on, the human body is by pharmacological means. (Health Research International, 2011)

Based on this rather wide definition, Health Research International estimates the global Medtech market to a total of USD 327 billion in 2010, with a predicted annual grow rate of 5.4% annually, to reach \$424.5 billion in 2015. Such figures illustrate that the highly globalized market for medical technology is large, providing enormous opportunities for competitive Medtech firms, also those located in the Nordic region. According to Vinnova (2011), Swedish Medtech companies exported for 19 bn SEK in 2010, amounting to slightly less than 1 percent of the global market. In Norway, there are no similar figures available, yet according to Menon (2012) the life science sector exported for 9 bn NOK in total in 2009. Consequently, one should not expect more than 5 bn NOK in exports, representing around half a percent of the global Medtech market.

Historically the major markets in the US and Europe have represented more than 80% of global demand. However, during the last decade, markets like China, South East Asia and Brazil have mushroomed, giving rise to high expectations for future global growth in demand. According to this study (HR 2011), the top 4 subsectors within Medtech (by market size) are in vitro diagnostics (IVD), diagnostic imaging, cardiovascular interventions, and orthopaedic and spine. Together, these segments represent 50 percent of the global Medtech market. Consequently, if the firm population in Norway and Sweden are concentrated in these 4 segments, the exporting potential is large.

2.1. 6 Medtech Categories

Clearly, the wide definition of the Medtech industry opens up for a population of highly heterogeneous firms. Hence, it is necessary to introduce some form of more refined classification of the Medtech industry. Today, there exists a wide range of typologies and categorization systems in the literature, yet some have received more attention than others.

The Scandinavian Life Science database organizes firms according to the Bio Gate classification structure, which is widely used by the industry. Notice though, that the classification is highly detailed. With a high detail level, the risk of entering firms into the wrong bag becomes imminent. Moreover, even though the classification system is detailed, it has apparently not included eHealth companies. This is a type of companies that grow fast, both in terms of number, size and technological importance. We have chosen to introduce a more aggregate classification system in order to enhance the reader friendliness and usability. In addition, our classification introduces a new group covering eHealth companies.

In the table below we present our six categories of Medtech firms:

Table 1: 6 Medtech categories

6 Medtech Categories:		
	Scandinavian Life Science Database and Bio Gate groups	Life Science Industry (Vinnova 2011) groups
Medical Devices	Active implantable devices, hospital hardware, dental devices, electro mechanical medical devices, non-active implantable devices, ophthalmic and optical devices, wound care, Anaesthetic and respiratory devices	Healthcare facility products and adaptations, Reusable and single-use devices, Ophthalmic and optical products, dental devices, Electromechanical medical devices, Anaesthetic and respiratory devices, Implantable devices - active and non-active
Welfare technological equipment	Technical aids for disabled persons	Assistive products for disabled people
Diagnostics and Surveillance	Biomaterials, Anaesthetic and respiratory devices, delivery devices, imaging, in vito diagnostic devices, diagnostic and therapeutic radiation devices,	Reusable and single-use devices, Electromechanical medical devices, Anaesthetic and respiratory devices
eHealth Software and computerbased applications for health surveillance and planning:	Not covered	Information and communication tools
Bioinformation Bio databases, genetic information bio-information	Not covered	Not covered
Other	Coating, reusable instruments, single use devices,	Reusable and single-use devices

To identify all the companies in the Nordic Medtech industry, we use several sources. For Sweden the main sources are the Scandinavian Life Science Database (covering information from Medicon Valley, Copenhagen Capasity, Invest in Skåne, Stockholm-Uppsala Life Science and Sweden Bio)¹, the member lists from Swedish Medtech, Hälsoteknik Alliansen, New Tools for Health, MedCoast Scandinavia, plus all portfolio companies with private equity backed capital over the last years that fall into the category Medtech defined by the industry.

¹ Scandinavian Life Science Database is part of the Biotech gate-database which is a database for Life Science and biotech companies in many European countries. Scandinavian sponsoring partners and contributors are Medicon Valley, Copenhagen Capasity, Invest in Skåne, Stockholm-Uppsala Life Science and Sweden Bio. Venture Valuation has established and maintain the database.

In Norway, the Scandinavian Life Science Database is more obsolete, mainly since the database has no Norwegian sponsors and contributors. Consequently, our main sources for mapping the Norwegian market are member lists from organizations like Oslo Medtech, Oslo Cancer Cluster and MedITNor, in addition to the existing database NorBioBase. This information has previously been processed in the report “Life Science Rapporten 2012” (Menon, 2012b) covering all life science segments in Norway.

In the table below, we report the number of firms identified in total for each country, as well as the number of firms in each category. The companies are divided into the six groups:

Table 2: Size of Medtech industry in Sweden and Norway in terms of number of firms

	Sweden	Norway
Medical Devices	279	85
Welfare technological equipment	102	12
Diagnostics and Surveillance	104	72
eHealth	65	26
Bioinformation	9	13
Other	61	19
TOTAL	629	227

Attached to this report, the reader finds an appendix excel-sheet with a complete list of all the companies that are identified.

Clearly, the Swedish Medtech industry is much larger than the Norwegian, representing almost three times the number of companies in Norway. The sub group medical devices is the largest group in both countries, covering active implantable devices, hospital hardware, dental devices, electro mechanical medical devices, non-active implantable devices, ophthalmic and optical devices, wound care, and anesthetics and respiratory devices.

It is not only the number of firms that is larger in Sweden, but also the number of employees. According to Vinnova (2011), the total number of employees in Swedish Medtech amounts to 14 500, yet the number is probably conservative as a new publication from Swedish Medtech (Wadell, 2011) calculates the number of employees to 20 500. As compared to our mapping, Wadell identifies 480 Medtech companies in Sweden, significantly less than in our mapping. Hence there is reason to believe that the right figure lies closer to 20 000 employees than 14 000. The largest employment groups are within implantable devices (medical devices) with about 2500 employed (VINNOVA 2011, p. 60).

In Norway the number of employees is approximately 5 200 and only ten companies have more than 100 employees. GE Healthcare is the largest Medtech company in Norway with almost 900 employees. There are also companies as Telenor and HP which both have some eHealth-activities, but they are left out of the analysis because eHealth is a small part of their business activity.

Table 3: Distribution of Medtech employment in Norway

Norway	Employees
Other	229
Welfare technology	279
Bioinformation	303
eHealth	792
Medical Devices	1721
Diagnostics and Surveillance	1881
Total	5205

2.2. Medtech company size and age distribution

In a recent mapping of Norwegian life science enterprises (Menon 2012) the population of firms was split according to their life cycle phase, from early stage start-ups to large multinational companies. As compared to Pharma, the number of early start ups is high, yet compared to e.g. the ICT industry the proportion of early stage companies is rather low.

Table 4: Companies within Medtech divided into groups based on development phase
Source: Menon 2012 – Life Science Rapporten 2012 - Norway

	Early start up	Growth	Medium sized	Large or part of an international company
Bioinformation	50 %	25 %	17 %	8 %
Diagnostics and Surveillance	46 %	24 %	12 %	18 %
eHealth	33 %	29 %	33 %	5 %
Medical Devices	38 %	18 %	24 %	20 %
Other	17 %	11 %	61 %	11 %
Welfare technological equipment	42 %	17 %	17 %	25 %

With few large companies, the industry is highly sensitive to structural or strategic changes in the large multinationals, both in Norway and Sweden. This is what recently happened to the region of Lund where AstraZeneca is located, and the Oslo region where the down scaling of GE Healthcare activities affected the local industry severely.

On the other hand, the Medtech industry in Norway, and most likely in Sweden too, has a high proportion of mid-sized companies, at least compared to what we find in the segments of Pharma and Biomaterials. In the figures below, we have illustrated this pattern by a selection of medical devices, diagnostics and surveillance and welfare technological equipment companies that we found in Norway. Clearly, there is a strong overweight of medical devices, diagnostics and surveillance and welfare technological equipment companies in this mid-size population.

Mid-sized companies run into challenges that often differ substantially from those of small or large companies. They have a strong focus on bottom line figures, often suppressing continuous innovation and R&D investments. Their challenges are more often related to how to expand to new markets, either in other countries, or within related fields. Cluster organizations should be aware of this difference in life cycle challenges and problems when designing strategies for Medtech companies.

Table 5. Selection of medium sized companies within the three groups: medical devices, diagnostics and surveillance and welfare technological equipment in Norway



Table 6 Selection of medium sized companies within pharma and bio materiales in Norway



The Swedish medical technology industry is also dominated by small and mid-sized companies, as in Norway, but the largest companies are systematically much larger in Sweden, yet few of them have more than 500 employees. Within Diagnostics and Surveillance, you find large companies like Gambro (dialysis), Maquet Critical Care (critical care systems, e.g. respiratory systems) and St. Jude Medical Systems (coronary diagnostics, interventional cardiology and hemostasis management). Larger companies within medical technology are Becton Dickinson and Mölnlycke Health Care, each with between 300 and 400 employees. Except for the group Diagnostics and Surveillance, more than 80 percent of the companies have less than 10 employees (see the table below).

Tabel 6: Companies divided into groups based on number of employees. Source: Vinnova 2011

	Less than 10	Less than 50	More than 50
Medical devices	83 %	10 %	7 %
Diagnostics and Surveillance	52 %	32 %	16 %
Ehealth	80 %	14 %	6 %
Welfare technological equipment	84 %	14 %	2 %

Notice that these figures are based on revenue data from Vinnova (2011). Since we are not able to provide such size data in this project, we cannot split Medtech companies into 6 groups, only four.

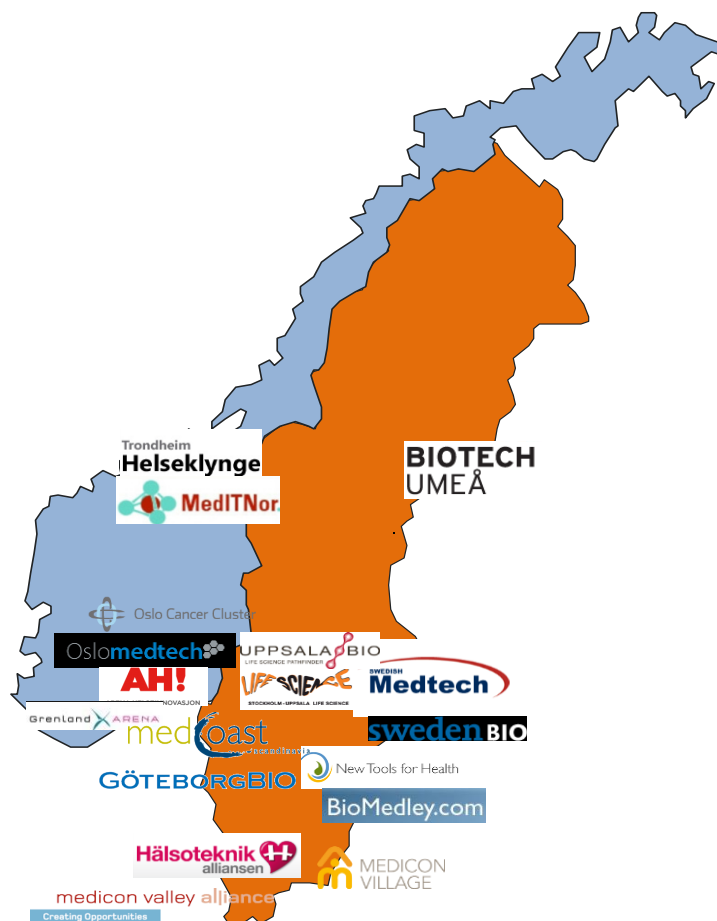
3. Cluster organizations for Medtech in Sweden and Norway

In the Life Science industry, public policy plays a pivotal role for industrial development. R&D policy, educational policy, the regulation of Life Science products and services, and IPR-policy all determine the industrial development in this sector. Recently, many governments have realized that the industry also thrive from strong clusters of companies and R&D-institutions that locate together in knowledge intensive locations. The successful development of the Pharma sector in the Boston area, and the Medtech sector in the larger Minneapolis area are popular examples for European countries and regions that want to facilitate Medtech industry growth.

As a consequence, the number of regional and national cluster organizations focusing on Medtech in the Nordic regions is now growing fast. Notice though, that only a few of them are cluster organizations focusing purely on Medtech. Most of them focus on the Life Science industry in general. Some of the organizations define themselves as clusters, while others use the label network or member organizations. They have different focus areas and serve their networks and members with a large variety of cluster services.

We have identified the most important cluster organizations in Sweden and Norway, and briefly describe them below.

Figure 1: Map of central Medtech clusters in Norway and Sweden



In total we have mapped 11 clusters in Sweden and 7 in Norway. All together, they represent a large majority of the Medtech population of firms in each country. However, if we for a minute disregard members of the large membership organization Swedish Medtech, only 300 of the Swedish companies are organized as members in the clusters. The remaining close to 340 companies are not part of a geographically defined cluster organization. This finding reveals a large potential for increased span and coverage of Medtech clusters in Sweden. In Norway the representation is higher, yet also here there is a large proportion of firms that is not organized.

Cluster organizations need resources in order to fill their functions efficiently. In the list of cluster organizations below, we are faced with relatively ambitious objectives and goals. In order to meet these goals, cluster organizations need size, they need voice and they have to avoid rivalry amongst them. So far, relatively few companies are members of several cluster organizations, yet, there is a tendency of increasing multiple memberships and overlapping interests. To a certain extent, overlap is nice as it promotes cross cluster cooperation, yet too much overlap may cause rivalry and counter-productive activity from a national and Nordic perspective.

3.1. Clusters in Sweden

We have identified 11 clusters in Sweden. The largest Medtech organization is Swedish Medtech. Other large life science organizations with Medtech companies as there members are Stockholm-Uppsala Life Science and Sweden Bio.

Swedish Medtech²

Swedish Medtech was founded in 1970 and is the largest medical technology association in Sweden with 170 members. The members represent a wide variety of medical technology firms from all parts of the industry. This includes x-ray equipment, orthodontic implants, stents, minimal invasive surgery products, pacemakers, equipment for physically disabled, hemodialysis as well as disposables. Swedish Medtech's member companies consist of both manufacturers and distributors.

Swedish Medtech's goals are

- To position medical technology as a prerequisite for an effective health care
- To strengthen the premises of the medical technology field in order to attain the best possible climate for research, innovation, investment, production and enhanced know-how in Sweden.
- To improve business conditions for the medical technology field on the global market.
- To create the best conditions for our members to interact with healthcare institutions.

Swedish Medtech has chosen several focus areas for their work; economic affairs, innovation and growth and regulatory affairs. The association works for improved business condition for their members. This implies close collaboration with the public health sector when it comes to topics such as public procurement and structural collaboration within healthcare and other institutions to improve the healthcare system for the society as a whole.

Through the history, Swedish companies have come up with several central innovations within Medtech. E.g. the pacemaker, stereotactic radiosurgery, the ultrasound, the incubator and the haemodialysis. Swedish Medtech works for the continuation of this innovation path into the future. Swedish Medtech also continually

² <http://www.swedishMedtech.se/>

works to influence the lawmaking process and to make sure the laws in Sweden are in conformity with the regulations and precedents of the European Union.

Swedish Medtech is the leading organization within medical technology in Sweden. Their member's within medical devices amount to 82 and more than 36 businesses focus on e-health solutions.

Table 7: Identified members within the Medtech industry

Swedish Medech	Members
Bioinformation	0
Diagnostics and Surveillance	8
Ehealth	36
Medical devices	82
Other	7
Welfare technological equipment	20
Total	152

Healthcare Technology Alliance³

The Healthcare Technology Alliance is a non-profit organization. Their goal is for southwest Sweden to become a leading region for the development of products and services in healthcare technology. The members consist of companies, universities, municipalities and organizations. The Healthcare Technology Alliance has approx. 60 members, of which about 50 are companies. Their main focus is care, nursing, rehabilitation and health services.

The alliance's vision is to contribute to growth in new and existing companies and act as a spokesperson for members on issues of healthcare technology. They will achieve this through active networking and cooperation projects within research and development. Moreover the alliance involves in healthcare technology issues concerning their members.

Among the members of the “healthcare technology alliance” welfare technology equipment producers is the most numerous member group.

Table 8: Identified members within the Medtech industry

Healthcare Technology Alliance	Members
Bioinformation	0
Diagnostics and Surveillance	2
Ehealth	2
Medical devices	6
Other	8
Welfare technological equipment	12
Sum	30

³ www.halsoteknik.com

New Tools for Health⁴

New tools for health is an innovation cluster based in East Sweden. Their aim is to create new products and services that result in more efficient healthcare and increased independence – with the home as a base.

New tools for health support development of new products and services that can meet the increasing healthcare needs of the future. They focus their investment on effective care, healthcare and increased independence with the home as a base, within four areas of activity: diabetes and heart failure, as well as fall prevention and increased security for the elderly.

The cluster supports need-motivated research in care and healthcare by creating the right conditions for cooperation between business, research and care providers to stimulate new processes, products and services. They support the entire process; from needs, via ideas, pre studies and development to the commercialization of products and services that may eventually reach an international market.

New tools for health has a smaller number of members and the relevant members within the field of medical technology and diagnostics are therefore lower. Ehealth and welfare technology companies do, not surprisingly, dominate their members.

Table 9: Identified members within the Medtech industry

New Tools for Health	Relevant members
Bioinformation	0
Diagnostics and Surveillance	1
Ehealth	6
Medical devices	4
Other	3
Welfare technological equipment	4
Total	18

⁴ <http://www.newtoolsforhealth.com/>

Stockholm-Uppsala Life Science⁵

Stockholm-Uppsala Life Science is a cluster assigned to promote the region's capabilities within life science and opportunities for collaboration with scientists and companies, investing in technologies and establishing a business or research career. The cluster has a mission to make the region more lucrative for the global life-science industry.

SULS has a large number of members and 90 out of the medical device businesses identified in the population in Sweden are members in SULS. 39 companies are identified within diagnostics and surveillance.

Table 10: Identified members within the Medtech industry

Stockholm-Uppsala Life Science	Members within medical technology
Bioinformation	1
Diagnostics and Surveillance	39
Ehealth	8
Medical devices	90
Other	9
Welfare technological equipment	18
Total	165

Göteborg Bio

Göteborg Bio⁶ is a joint project between national and regional players. It aims to create a solid base for long-term growth within biomedical. They want to reinforce the commercial turnover as a result of R&D within the focus areas: biomaterials, cardiovascular and metabolic diseases and health technology. Develop and reinforce the infrastructure for the commercial development of projects within biomedicine. Educate and train future leaders in business creation and entrepreneurship through practical work with real life projects. Attract both expertise and capital to the biomedical field within the region. In addition, they also want to create network and communication areas.

Göteborg Bio does not announce member companies but stat that more than 170 companies within the Life Sciences are located in Western Sweden.

Uppsala Bio⁷

Uppsala BIO is an independent and not-for-profit actor working to stimulate growth in the life science sector. They want to bring together universities, companies, healthcare and society to blaze new paths that increase the sector's international competitiveness.

Uppsala BIO has a diversified group of members. The member consists of investors, entrepreneurs, established enterprises, researchers and public sector. They work to ensure a holistic perspective and offer natural meeting

⁵ www.suls.se

⁶ <http://www.goteborgbio.se>

⁷ <http://www.uppsalabio.com>

place in addition to implement programs that improves the life science sector's conditions for growth. They offer programs and activities to strengthen the long term competitiveness of life science in Uppsala.

Uppsala BIO organize a highly limited number of members and only a few of them work directly with medical technology.

Medicon Valley Alliance⁸

Medicon Valley is a life science hub, which includes business from eastern part of Denmark to the south-western part of Sweden. The Medicon Valley Alliance is a Danish-Swedish network organization representing human life sciences in Medicon Valley.

Medicon Valley Alliance (MVA) is a non-profit member organization. MVA carries out initiatives on behalf of the life science community and are committed to facilitate economic growth, increased competitiveness and employment in Medicon Valley. Furthermore, the organization is committed to raise the international recognition of Medicon Valley with the aim of attracting labor, investments, and partners.

MVA's member base comprises biotech, Medtech and Pharma companies of all sizes, CRO's and CMO's, as well as public organizations, universities, science parks, investors, and various business service providers.

Table 11: Identified members within the Medtech industry

Medicon Valley's Swedish members	Number of members
Bioinformation	2
Diagnostics and Surveillance	21
Ehealth	4
Medical devices	48
Other	6
Welfare technological equipment	5
Total	86

Medicon Village⁹

Medicon Village was established in 2011 after AstraZeneca decided to move their research facility from Lund. The Skåne Research and Innovation Council took the opportunity to make something good out of a bad situation and developed a plan for how AstraZeneca's former research facility in Lund could become the base of a wide-ranging regional collaboration initiative within Life Science. The main founder of establishing Medicon Village was Mats Paulsson.

Medicon Village wants to create an environment where research, innovation and entrepreneurship work together to create value for people's health and wellbeing. Together with the medical research centres Biomedical Centre (BMC) in Lund and the Clinical Research Centre (CRC) in Malmö, as well as the developing research facilities ESS and the MAX IV laboratory, Medicon Village is establishing an infrastructure of world class and thus providing a huge lift to, and enhancing the attractiveness of, the entire region.

⁸ <http://www.mva.org/>

⁹ <http://www.mediconvillage.se>

(A highly limited number of companies are working directly with medical technology)

Biotek Umeå¹⁰

Biotech Umeå is a cluster of life science companies and academic research groups in Northern Sweden. Over 3000 people are employed in life science companies and academia in the region.

Umeå region has a main focus within infectious disease research, diagnostics and medical technology, plant and forest biotechnology at Umeå Plant Science Centre, neurological diseases and metabolic disease research.

(Few member companies are working directly with medical technology)

BioMedley¹¹

Bio Medley is a network of entrepreneurs and researchers within life science technologies and biomedicine in East Sweden. The main activities are creating arenas to meet and spread information about what is happening in life science industry in the area.

The network consists of researchers and enterprises within pharma, biotech, Medtech, care and ehealth.

(Few member companies are working directly with medical technology)

Sweden Bio¹²

Sweden Bio is a trade organization for the Life Science industry. The organization consists of more than 200 members. Their members comes from pharmaceutical industry, biotech and Medtech in addition to diagnostic actors. The members employ 15000 and the industry export 20 percent of Sweden's net export.

Sweden Bio works to gain better conditions for the industry in Sweden. As a Sweden Bio-member they get access to a large network within life science, events, information and reduced prices on conferences.

Table 12: Identified members within the Medtech industry

Sweden Bio	Number of members
Bioinformation	0
Welfare technological equipment	0
Ehealth	0
Diagnostics and Surveillance	10
Medical devices	8
Other	2
Total	20

Compare IT¹³

¹⁰ <http://www.biotechumea.se/>

¹¹ <http://www.biomedley.com/>

¹² <http://www.swedenbio.se/>

¹³ <http://www.compare.se/>

Compare Karlstad is a joint organization for ICT companies in the region. Compare has now almost 100 members with a total of around 3.000 engineers and technicians in the region. Their goal is to form innovative interaction with players from trade and industry, research and society. They also work to develop medical technology devices and ehealth-solutions.

(Few of the member companies are working directly with medical technology)

3.2. Clusters in Norway

There are fewer organizations that work in the field of Life Science in Norway than in Sweden. The largest cluster within medical technology is Oslo Medtech. Below, we report for the 7 largest cluster organizations.

Oslo Medtech¹⁴

Oslo Medtech is a cluster of companies, hospitals, finance-, knowledge and research institutions focusing on medical technology and eHealth. Oslo Medtech generates innovation and facilitates development of Medtech and eHealth products and services. With more than 140 members Oslo Medtech covers a large part of the medical technology and eHealth industry in Norway.

The ambition of Oslo Medtech is to support and nourish the business development of superior medical research, and stimulating the development of an internationally competitive Norwegian Medtech and eHealth industry. Their main goals are:

- Facilitate cooperation between research, the health sector and industry – that increases the R&D and innovation activity and the quality and efficiency in the health sector
- Stimulate and facilitate market driven innovation and procurement processes and projects
- Facilitate clinical trials and testing
- Help the companies professionalize and develop internationally oriented business plans and strategies
- Enhance the knowledge of International markets and help companies to reach the global market
- To help increase the knowledge and skills of Norwegian Medtech companies in terms of their ability to attract capital to finance their activity.
- Increase the competitiveness of the industry by creating a tightly coupled cluster of players from all parts of the Medtech market value chains.

Table 13: Identified members within the Medtech industry

Oslo Medtech	Number of members
Bioinformation	0
Diagnostics and Surveillance	11
eHealth	15
Medical Devices	20
Other	1
Welfare technological equipment	2
Total	49

¹⁴ <http://www.osloMedtech.no/>

Arena Helseinnovasjon¹⁵

Arena Helseinnovasjon is a network within health and technology with partners from R&D-institutions, private and public sector. The aim is to develop new technology which can solve the futures challenges, for health care solutions used in private homes.

The network works towards new solutions within healthcare and technology, to meet the challenges in an aging population. The network covers a large range of technologies and creates new application areas for already existing technology to create new products.

The network consists of 11 commercial companies. About half of these have main activity within medical technology, eHealth or diagnostics.

MedITNor¹⁶

MedITNor is a Medtech and ICT-network with an informal structure without fees or other form of commitments to become a member.

Their aim is to increase the survival and economics growth in businesses within the field through networking between companies and R&D-institutions. The network consists of businesses from all over the country. The focus areas are within eHealth and health technology.

The network was established in 2007 as a network with 30 companies, R&D-institutions and St.Olavs University Hospital. For three years MedITNor was part of a public funded cluster development program, Arena-Program. It is unclear to what extent the network organization is still operating as an active cluster agent.

MedITNor arrange conferences and meetings in addition to support to enterprises who develops new products within the field of healthcare and ICT.

14 of MedITNor members are identified within the field of this report, most of them within medical technology.

Table 14: Identified members within the Medtech industry

MedITNor	Members
Bioinformation	0
Diagnostics and Surveillance	4
eHealth	2
Medical Devices	5
Other	2
Welfare technological equipment	1
Total	14

¹⁵ <http://www.arenahelseinnovasjon.no/>

¹⁶ <http://www.meditnor.net/>

Trondheim Helseklynge ¹⁷

Trondheim helseklynge was established in the fall of 2009. It is a collaboration project between the regional university hospital, local public sector, R&D-institutions and Trondheim industry chamber.

The goal for the network is to achieve added value for each participant and for society. Helseklyngen aims to establish strong networks regionally, nationally and internationally to achieve their goals and that this new knowledge will give value to more than just the participants.

The members are dominated by Public funded organizations and universities. There is still relatively few companies working commercially in the field of medical technology.

Oslo Cancer Cluster¹⁸

Oslo Cancer Cluster is an oncology research cluster and a non-profit member organization, with members from the whole oncology value chain, also outside of Norway. It was established in 2006 and has more than 60 members from all over Scandinavia. The members stretch from small biotechnology companies, large pharmaceutical companies, university hospitals, bio banks and registries, technology transfer offices, academic research institutions and patient groups.

The cluster is dedicated to accelerate the development of new cancer diagnostics and medicines. This will be achieved through local collaboration and international partnership, increasing members companies' ability to attract capital, creating an efficient clinical trials network to shorten development timelines. The cluster is also building Oslo Cancer Cluster Innovation Park where the plan is to bring together research, biopharma and education.

Oslo Cancer Cluster's vision is to improve the lives of cancer patients by accelerating the development of new cancer treatment. Today OCC has more than 60 members. About 10 of Oslo Cancer Cluster's members are within the field of medical technology, diagnostics or surveillance.

Table 15: Identified members within the Medtech industry

Oslo Cancer Cluster	Members
Bioinformation	1
Diagnostics and Surveillance	8
eHealth	0
Medical Devices	4
Other	0
Welfare technological equipment	0
Total	13

¹⁷ <https://www.ntnu.no/wiki/display/helseklyngen/Home>

¹⁸ <http://www.oslocancercluster.no/>

MedCoast Scandinavia¹⁹

MedCoast Scandinavia is a Norwegian and Swedish network organization with the aim to strengthen and develop the biomedical sector in the Göteborg-Oslo region.

Med Coast Scandinavia has a total of 15 commercial enterprises listed as members. Several are within medical medical technology, diagnostics or surveillance.

IKT-Grenland

IKT Grenland is an ICT cluster started in 2007. Their health related ICT-activities have been ongoing since the beginning with business development, consulting and system integration. In 2012 a new network/business development project was established to help smaller health related ICT-businesses strengthen their innovations collaboration with the local public sector and the local hospital.

The main business activity related to ICT and health has been conducted by GatSoft AS and Imatis AS within this cluster.

¹⁹ <http://www.medcoast.org/>

4. Testbeds for Medtech

An innovation based Medtech industry is vitally dependent on a research infrastructure that is easily available for firms running R&D projects. A core part of this infrastructure is the access to well-functioning test beds, serving as platforms for experimentation, testing and verification of development projects. Such beds must allow for rigorous, transparent, and replicable testing of theories, computational tools, and new technologies and solutions. Test beds with relevance for Medtech may span all the way from computer software test facilities on the internet to highly advanced intervention centers in hospitals.

The definition of a test bed is as follows:

“A test-bed is a physical or virtual environment where enterprises together with stakeholders within health care providers, i.e. hospitals, primary and elderly care can test, develop and implement new products, services, processes and organizational solutions” (Vinnova, 2012)

Due to the wide variety in relevant test beds, it is hard to map test beds in Sweden and Norway in a broad manner. To our knowledge, there does not exist any suitable mapping of test beds with relevance for Medtech in these countries, hence, our listing below should be considered as a first step towards such a mapping.

According to the industry, there is a strong demand for information about available test beds and what they are designed for. National organizations such as Vinnova in Sweden are now taking steps towards strengthening the concept. In October 2012, Vinnova of Sweden launched a test-bed program with the purpose to establish and expand test-beds within healthcare institutions in Sweden.

The program is funded with SEK 20 million and will run for three years. Five test-bed organizations have been funded and a number of kick-off projects have also received funding.

The initiative is carried out together with Tilväxtverket and the Regions of Sweden to make sure the project is anchored within the local community.

This test-bed program highlights Sweden’s increased emphasis on innovation and a desire to see policies and funding turned into activities and results.

The 10 innovation hubs/test beds below perform test bed activities on a regular basis with the major specialties and categories including traditional Medtech as well as eHealth, including telemedicine. They cooperate with external companies; large as well as smaller entities and they have established formal procedures guiding such cooperation.

These testbeds are typically so-called in-hospital structures.

Table 16: Medtech testbeds in Norway and Sweden

Name	Region	Contact	E mail	Web
1 SSL Innovation "Nationell testbädd för innovativ st "Karolinska Testbädd, rålbehandling"	Stockholm	Olle Hillborg	olof.hillborg@ds.se	www.webbhotell.sll.se/SLLInnovation/
2 Innovator "testbed HoS skåne"	Skåne	Fred Kjellson	fred.kjellson@skane.se	www.innovatorskane.com
Compære "Testbädd för IT inom hälso- och sjukvård"	Värmland	Göran Österman	goran.osterman@compare.se	www.compare.se
3 Innovationsluss	Västra Götaland	Marika Hellqvist Greberg	marika.hellqvist.greberg@vgrregion.se	www.vgregion.se/innovationslussen
4 Innovationsluss " Testbädd LIÖ"	Östergötland	Pernilla Bergström	pernilla.bergstrom@lio.se	www.lio.se/Verksamheter/Landstingsdirektor/Ledningsstaben/Innovationslussen/Foretagare/
5 Innovationssluss	Västerbotten	Pernilla Abrahamsson	pernilla.abrahamsson@regionvasterbotten.se	www.innovationssluss.se
6 Innovationssluss	Norbotten	Linnea Grundström	linnea.grundstrom@nll.se	www.innovationssluss.se
7 Health Technology Centre Halland	Halland	Magnus Hållander	Magnus.Hallander@hh.se	www.hh.se/hch
8 Intervensjonssenteret/ Oslo Universitetssykehus	Oslo	Erik Fosse	erik.fosse@medisin.uio.no	www.ivs.no
9 Fremtidens Operasjonsrom/ St Olav Hospital	Trondheim	Jan Gunnar Skogås	jan.gunnar.skogas@stolav.no	www.stolav.no/no/Om-oss/Avdelinger/Fremtidens-operasjonsrom

In addition to this list there are a substantial number of test bed projects underway in Sweden and Norway – however currently less formalized.

Test facilities for welfare technologies

There are a number of welfare technology test facilities in Sweden and Norway. Some can be quite small in size, for example "future's apartments", settings in which new technology can be tested. The list below is not comprehensive, but based on test bed activities around major welfare technology clusters within welfare technologies.

Name	Region	Contact	E mail	Web
1 Telemark	IKT/Grenland	Dag Gulliksen	daggulliksen@hotmail.no	www.iktgrenland.no
3 Test beds Trondheim - DemoSteinkjer - Wireless Living Lab - Unimed Innovation A	Trondheim	Havard Belbo Thomas Jelle Else Thurmman	havard.belbo@nte.no thomas@tradlosetrondheim.no Else.Thurmman-Nielsen@sintef.no	www.demosteinkjer.no www.tradlosetrondheim.no www.sintef.no/Teknologi-og-samfunn/Medisinskteknologi/Kliniske-utprovinger/
2 Linköping	Linköping	Anders Carlsson	Anders.carlsson@halsansnyaverktvg.se	www.halsansnyaverktvg.se

Open living labs

A living lab is a user-focused, open-innovation ecosystem, often operating in a territorial context (e.g. city, agglomeration, region), integrating concurrent research and innovation processes within a public-private-people partnership.

The concept is based on a systematic user approach integrating research and innovation processes. A living lab is not similar to a testbed as its philosophy is to turn users, from being traditionally considered as observed subjects for testing modules against requirements, into value creation in contributing to the co-creation and exploration of emerging ideas, breakthrough scenarios, innovative concepts and related artefacts.

Below, we present a list of open living labs in Norway and Sweden with relevance for Medtech activities:

Borg Innovation Living Lab

Borg Innovation Living Lab's (BILL) focus area is disruptive health care innovation. We are seeking new solutions within technology, other products, services and business models, which increase independent living and quality of life for elderly people. Our mission is to involve the real users and study their daily life, for designing and creating user-driven innovation processes.

Far North Living Lab

Far North Living Lab has a main focus on digital media and distribution to reflect the very creative environment found in the North of Norway. The lab will provide basic services to all projects using it, like high speed network connectivity, data storage, P2P distribution technology and so on. It will also provide infrastructure to share knowledge, announce events or projects and communicate with interested parties.

Wireless Trondheim Living Lab

Wireless Trondheim Living Lab The Wireless Trondheim Living Lab has been established as a local arena in Trondheim for open and user driven innovation related to mobile services and technology. By being member of the wider network of European network of living labs (ENOLL), we aim to extend and improve the development of own services through increased influx of ideas and resources (by involving users, in particular students and school children, and also from other living labs)

Botnia Living Lab

Sweden's first and largest open Living Lab for human-centric ICT development

Karolinska Living Lab

The main resources in the Karolinska Living Lab are the care chains, from the referral of the patient to the specific health care until the patient leaves. Potential stakeholders in a care chain are, for example, the patient, clinically working health care personnel, hospital administrators, county council representatives and even tax payers. Presently the care chain for upper abdominal surgery has been used as a resource in several projects, but in a recently started project the care chain for neonatal home care is also used.

Stockholm Living Lab

Stockholm Living Lab works in collaboration with companies, universities, the public sector and user groups, forming a triple-helix. Stockholm Living Lab executes projects based on user involvement and user innovation.

Areas of focus:

Homecare and elderly care. A crucial area to cope with demographic change.

Digital Natives, teenager entering the workforce.

New Tools for Health

No New Tools for Health is a regional innovation and growth initiative based in eastern Sweden that focuses on home-based healthcare. It was selected as the right living lab to assess the feasibility of the Cardiac Power Monitoring idea. This was also the start of a fruitful dialogue between the living lab and Kreative Technologie LWU.

SOFTEC

SOFTEC is the Swedish Open Facility for Technology in Elderly Care. Its goal is to provide a shared facility where Swedish and European researchers can jointly study, develop and evaluate technological solutions aimed at increasing the independence and quality of life of elderly people. SOFTEC is hosted by the School of Science and Technology of Örebro University, but it includes partners from other disciplines and geographic areas.

Living Labs Øresund

Living Labs Øresund aims to create an environment that operates as a central hub for user-driven projects within mobile and wireless technology in the Øresund Region, also highly relevant for the eHealth segment. Living Labs is an open expertise forum where users, private companies, governmental institutions and public sector organizations compose the physical and virtual innovation infrastructure to create targeted solutions and services for relevant user communities.

Halmstad Living Lab

Halmstad Living Lab's main application field is health technology aimed at empowering elderly people. The Living Lab supports IT-innovation processes of products and services that increase independent living for elderly as well as their quality of life.

5. Investors focusing on Medtech in Sweden and Norway

Partly due to the financial crisis and partly due to a structural change in the pharma and Medtech industry, small and mid-sized Medtech companies experience a severe shortage of capital both in Norway and Sweden. In periods of economic downturn and financial turmoil, investors avoid risk, leaving segments like Life Science where product development has a high degree of risk. Clearly, this affects the innovative capacity, eventually reducing the well-being of the population as medical innovation suffers.

There are several sources of financial funding for firms within the Medtech sector. In the earliest stages, capital provided by the entrepreneurs themselves, by research councils and other public funding agencies play a pivotal role in Sweden and Norway. Passing the initial stages of the firm's lifecycle, capital from venture funds, corporate venture and private investor/business angels becomes more relevant. In the later stages, capital is normally provided through acquisitions by larger companies or through public listing.

Notice that as compared to larger countries like the US and UK, there are very few corporations that run systematic venture activity in Sweden and Norway. No larger life science players like the Danish companies Novo Nordisk and Lundbeck have taken such a role in Sweden and Norway, and there is reason to claim that lack of such dedicated and long term capital undermines the innovative capacity in these two countries.

Venture capital and private equity investments in Medtech companies are still higher in Sweden than in Norway, but many of the PE-funds in Sweden have also had a hard time through the financial crises. Very few new fundraisings have taken place during the last couple of years, resulting in a sharp drop in initial as well as follow-on investments within this industry.

5.1. Venture Capital and Private Equity

Venture capital in Sweden and Norway has grown substantially over the last 10 years with a peak before the financial downturn in 2008. The activity in Norway and Sweden are more limited the last couple of years.

There are several PE funds that invest in medical technology and eHealth, but most do only a few investments each in the industry. Some important PE funds within Life Science in Sweden are HealthCap and Industrifonden. Some smaller actors are STING and Nxt2B. The last one is an important new comer to the venture fund market, and was started by Bengt Ågerup in 2011. In Norway Sarsia Seed has the highest number of seed stage investments in this sector during the last couple of years. Birk Venture in Norway is also a recently established fund committed to the life science sector. NeoMed Management is clearly an important Norwegian fund committed to the Life Science industry with a strong focus on Medtech, but Neomed have so far had their main focus on investments outside the Nordic countries.

Both in Norway and Sweden there are funds that have invested a fair amount in venture capital earlier, but they are now in a period with lower investment activity and focus on divestments. For the moment, it does not look like this situation will turn in the near future since fundraising activity is low in general.

Below follows a list of venture and PE fund managers that have some investments within Life Science or have defined themselves within Life Science industry. All together, we have identified 43 investors, but evidently, some of them have a highly mixed investment strategy where medical technology receives less attention:

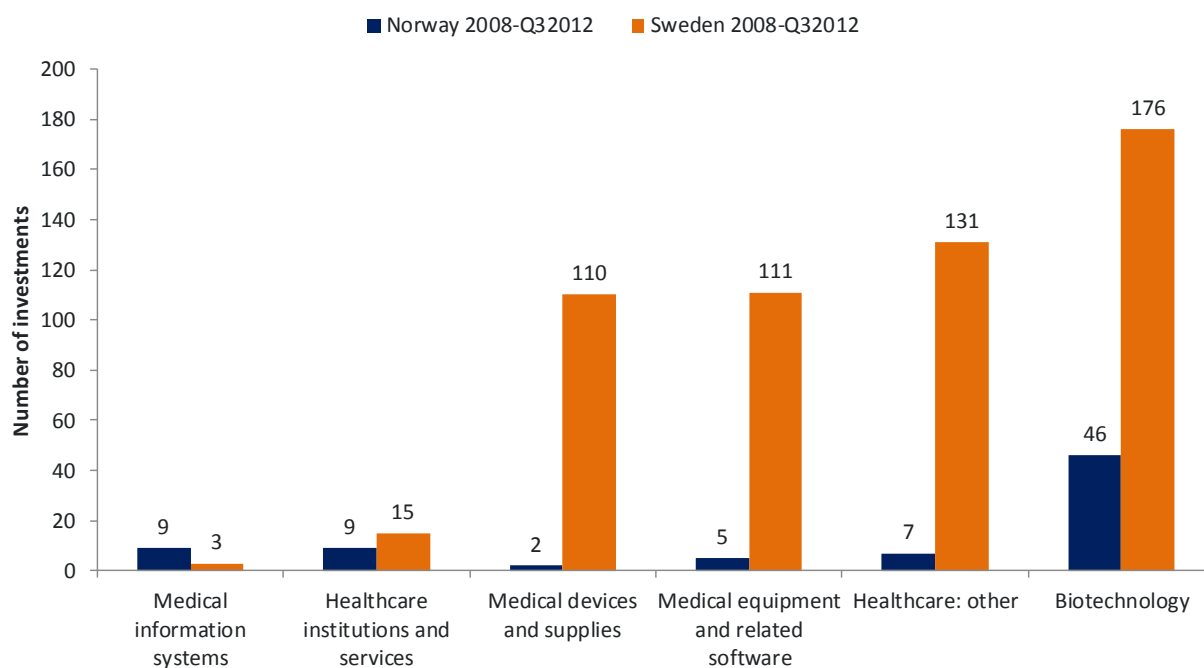
Table 17: Private Equity firms within Life Science in Norway and Sweden²⁰

Private Equity firm	Country	Public/Private	Private Equity Firm	Country	Public/Private
HealthCap	Sweden	Private	Sarsia Seed Management	Norway	Private/Public
AB Chalmersinvest	Sweden	Public	Verdane Capital	Norway	Private
Karolinska Development	Sweden	Private /Listed	Såkorn Invest	Norway	Private/Public
Bridgepoint Capital	Sweden	Private	Norinnova	Norway	Private/Public
SLS Invest	Sweden	Private	Convexa	Norway	Private/Public
Första Entreprenörsfonden	Sweden	Private	Sarsia Management	Norway	Private
FSN Capital Partners	Sweden	Private	Pronord	Norway	Private/Public
GU Holding – Holdingbolaget via Göteborgs universitet	Sweden	Public	Investinor	Norway	Public
Industrifonden	Sweden	Public	Teknoinvest	Norway	Private
Innovationskapital	Sweden	Private	Maturo Kapital	Norway	Private
Ratos	Sweden	Private	NeoMed Kapital	Norway	Private
Riverside Europe Partners	Sweden	Private	Birk Venture	Norway	Private
Segulah Advisor	Sweden	Private	ProVenture	Norway	Private/Public
Sjätte AP fonden	Sweden	Public/Private	Viking Venture	Norway	Private
Almi Invest	Sweden	Public	Argentum	Norway	Public
Innovationsbron	Sweden	Public			
STING Capital	Sweden	Private/Public			
Teknoseed AB	Sweden	Public			

During the last four years, the investment level in Sweden was over six times larger than in Norway. The categories ‘Medical devices and supply’ and ‘Medical equipment and related software’ receive most of the investments, yet notice that there has been over 220 investments in Sweden but only 7 in Norwegian enterprises. In the figure below, we report early stage investments made by seed and venture funds during the period 2008 to Q3 2012. Although the Swedish venture capital industry is more severely hit by the financial crisis as compared to the Norwegian, the life science industry in Sweden clearly receives significantly more attention than it does in Norway.

²⁰ Sweden: Based on SVCAs homepage - member search, Norway: Venture/Seed PE firms with more than 3 Life Science investments in addition to information from cluster organisations involved in this project.

Figur 2: Investments in Norwegian and Swedish enterprises from 2008 to Q3 2012 within venture and seed Source: NVCA/PEREP/MENON



The two lists below illustrate the large number of investments made in Swedish enterprises, compared to the investments in the Norwegian enterprises.

Table 18: Swedish PE-invested companies 2010-2011 from Swedish PE-firms – The list is not complete

Company	Firm	Country
AbSorber AB	LinkMed AB (publ)	Sweden
Affibody AB	Investor Growth Capital AB	Sweden
Airsonett AB	Industrifonden	Sweden
AlphaHelix Molecular Diagnostics AB	Affarsstrategerna AB	Sweden
Antrad Medical AB	STING Stockholm Innovation & Growth AB	Sweden
Appeartex AB	AB Chalmersinvest	Sweden
Arterion AB	AB Chalmersinvest	Sweden
Athera Biotechnologies	Karolinska Development	Sweden
Atos Medical	EQT Partners	Sweden
Avaris AB	Karolinska Development	Sweden
Axelar AB	Karolinska Development	Sweden
Axongen AB	Uminova Invest	Sweden
Bioresonator AB	LinkMed AB (publ)	Sweden
Bioservo Technologies	STING Stockholm Innovation & Growth AB	Sweden
Biovator	LinkMed AB (publ)	Sweden
Bonesupport AB	TeknoSeed Portfolio Management	Sweden
Boule Diagn Intl	Industrifonden	Sweden
Cardoz AB-L	Industrifonden	Sweden

CCS/Opus/Antibac	Segulah Advisor AB	Sweden
Celletricon AB	AB Chalmersinvest	Sweden
Celltrix AB	Malmohus Invest	Sweden
CMA Microdialysis AB	Investor Growth Capital AB	Sweden
CMTF affärsutveckling AB	Uminova Invest	Sweden
Cunctus AB	Sparbanksstiftelsen Skånes Riskkapitalstiftelse	Sweden
Cybergene	STING Stockholm Innovation & Growth AB	Sweden
Dilafor AB	Karolinska Development	Sweden
Dilanest AB	Karolinska Development	Sweden
EMERS Holding AB	Industrifonden	Sweden
EnCare	STING Stockholm Innovation & Growth AB	Sweden
Eribis Pharmaceuticals AB	Karolinska Development	Sweden
Gyros AB	Industrifonden	Sweden
Halo Genomics AB	ALMI Invest AB	Sweden
IMED	Karolinska Development	Sweden
IMED AB	LinkMed AB (publ)	Sweden
Isconova AB	InnovationsKapital	Sweden
Jump and Joy AB	Innovationsbron AB	Sweden
Likvor AB	LinkMed AB (publ)	Sweden
Mediplast	Priveq Investment	Sweden
Medtentia AB	Industrifonden	Sweden
Metpro Ronneby	Sydsvensk Entreprenörsfond	Sweden
Micus AB	Uminova Invest	Sweden
MIP Technologies	TeknoSeed Portfolio Management	Sweden
Nanoxis AB	AB Chalmersinvest	Sweden
Neoventa Holding AB	Investor Growth Capital AB	Sweden
NeuroNova AB	Investor Growth Capital AB	Sweden
New_Innovationsbron AB_150	Innovationsbron AB	Sweden
New_Innovationsbron AB_151	Innovationsbron AB	Sweden
Novahep AB	LinkMed AB (publ)	Sweden
Obstecare	STING Stockholm Innovation & Growth AB	Sweden
Olerup International AB	LinkMed AB (publ)	Sweden
ONCOlog Medical QA AB	LinkMed AB (publ)	Sweden
Oncopeptides AB	Industrifonden	Sweden
Orexplora AB	Innovationsbron AB	Sweden
OrtoWay AB	LinkMed AB (publ)	Sweden
OxThera AB	Industrifonden	Sweden
Phase Holographic Imaging AB	TeknoSeed Portfolio Management	Sweden
Probac AB	Uminova Invest	Sweden
Promimic AB	ALMI Invest AB	Sweden
Quickcool	TeknoSeed Portfolio Management	Sweden
Quickcool AB	SEB Venture Capital	Sweden

Recopharma AB	LinkMed AB (publ)	Sweden
Redsense Medical AB	TeknoSeed Portfolio Management	Sweden
RollerMate AB	Almi Invest AB	Sweden
Samba Sensors AB	Affarsstrategerna AB	Sweden
SciBase AB	Investor Growth Capital AB	Sweden
Scint-X	STING Stockholm Innovation & Growth AB	Sweden
Sprint Bioscience	Foersta Entreprenorsfonden	Sweden
SPRINT Bioscience AB	ALMI Invest AB	Sweden
STT Condigi Holding	Sjätte AP fonden	Sweden
Synsam Service AB	Alipes AB	Sweden
Team Ortopedteknik AB	Volati	Sweden
Uman Diagnostics AB	Uminova Invest	Sweden
UmBio AB	ALMI Invest AB	Sweden
Vårdapoteket	Priveq Investment	Sweden

Table 19: Norwegian PE-invested companies 2010-2011 from Norwegian PE-firms – The list is not complete

COMPANY	Firm	Country
ISentio AS	Sarsia Seed Management	Norway
Prophylix pharma AS	Sarsia Seed Management	Norway
C-10 Pharma AS	Sarsia Seed Management	Norway
Affitech AS	Ferd Capital	Norway
Volusense AS	Sarsia Seed Management	Norway
Advanced Biopolymers AS	Norinnova Forvaltning AS	Norway
SantoSolve AS	Teknoinvest AS	Norway
BerGen Bio AS	Sarsia Seed Management	Norway
Kappa Bioscience AS	Springfondet Management AS	Norway
APIM Therapeutics	Sarsia Seed Management	Norway
Omegatri AS	Procom Venture AS (Såkorinvest funds)	Norway
CellCura AS	Maturo Kapital AS	Norway
Smartfish AS	Investinor	Norway
Geneseque AS	Sarsia Seed Management	Norway
Pharma Marine AS	Midvestor Management AS	Norway
Hjelp24	Herkules Capital	Norway
BerGen Bio	Investinor	Norway

5.2. Corporate investors, corporate venture and private investors

Private funding from corporate investors and venture is a scarce resource of capital in Norway and in Sweden. Some business angels are identified within life science, but not many. Based on our studies of the ownership structure of all firms in the Medtech sector in Norway, most companies are actually owned by the

entrepreneur. There are only a handful of companies that have received equity financed funding from large industrial players or foreign investors and firms.

The market for business angel and private investor capital is small both in Norway and Sweden. In Norway, there exists a full mapping of all business angels. In Sweden however, such a mapping is not made thus far.

Important investors in Sweden are Investmentbolaget Alfvén & Didrikson Invest and Bo Håkansson med Farstorp Invest AB.

Other private funded initiatives in Sweden are foundations and incubators. Examples are Puls Invest, Mats Paulsson Foundation, Knut och Wallenbergs (KAW) Foundation and Novo. Mats Paulsson Foundation invested 100 million SEK to buy AstraZenecas research facility in Lund in South Sweden. Novo A/S is a Danish private limited liability owned by Novo Nordic Foundation who invests in medical and scientific research in Scandinavia. Knut och Wallenbergs (KAW) Foundation²¹ – private R&D funding partner, invested large amounts in life science in Sweden. At last, Puls Invest acts as an incubator and investor for early projects within life science.

In Norway, there are literally no national corporations that invest substantially in early stage Medtech companies. Some private investors like Bjørn Rune Gjelsten, Per Ansgar Benjaminsen, Trond Mohn and Eirik Næss Ulseth and Morten Eriksen have a systematic focus on investing in early stage Medtech companies.

Some larger world wide companies that lately have engaged in M&As in the Nordic Countries are St. Jude Medical and Johnson&Johnson Development Corporation. One example on corporate acquisitions is St. Jude Medical buying Radi Medical Systems in 2008.

5.3. Public investment vehicles

There are several public investment vehicles that invest or give funding to Swedish and Norwegian enterprises. These are Innovationsbron, Almi, Seed funds with government capital in Norway, Investinor and Argentum, among others.

Innovationsbron

In 2011 Innvationsbron financed 46 incubators around Sweden for 56, 4 million SEK, in addition to 3.2 million SEK in project funding.

Life Science and Medtech in Innovationsbron is an important part of their investment portfolio. They have made a fair number of investments within medical technology and eHealth. Examples of invested companies are Antrad Medical, Minovi and Pampett.

Almi Företagspartner and Almi Invest

Almi Företagspartner AB is owned by the state and is the parent company of a group of 16 subsidiaries, which are 51 per cent owned by the parent company. Other owners are county councils, regional authorities and municipal cooperative bodies. Almi's task is to promote the development of competitive small and medium-sized businesses as well as to stimulate new enterprises with the aim of creating growth and innovation in Swedish businesses. Its activity covers the whole process from ideas to successful businesses.

Almi Invest is a private equity company investing in Swedish companies. They invest in several industries. Almi invest to secure regional growth and increase the access of private equity investments in early expansion

²¹ (Vinnova 2012, p.80)

phase. Examples on Almi-invested companies within Medtech and welfare equipment are OSS-Q and RollarMat.

Seed funds with government capital in Norway

The Norwegian government has established and invested in several regional and national seed funds in Norway to increase the available investment capital within this investment phase. Out of the six funds, Sarsia Seed has invested the most. With a total capital under management on 333.5 million NOK they have made many investments in early stage life science since 2007.

Investinor

Investinor is a government funded investment company. They invest venture capital into highly competitive and promising Norwegian companies aiming for international growth and expansion. Investinor manages NOK 3.7 billion (mEuro 460) under a mandate from the Norwegian Parliament (Stortinget) and invests on the same terms and conditions as private investors, with a clear exit strategy for all investments.

Investinor has not yet made any investments in medical technology or ehealth companies, but with their new mandate, spring 2012, they have the opportunity to invest within Life Science. The only investment within Life Science so far is in BerGenBio AS in January 2012.

Argentum

Argentum is an investment company established in 2001 by the Norwegian Ministry of Trade and Industry, solely focusing on investments in Nordic private equity funds. Argentum currently has NOK 10 billion (approximately EUR 1.3 billion) under management, whereof two thirds are managed on behalf of the Norwegian Government and one third through their investment programs.

Argentum's market database shows that Argentum invested funds have invested in 16 life science companies in Sweden and Norway since 2007. The invested companies are mainly within the buyout phase.

Other state funded initiatives in Sweden

Nova Med Tech will support development within medical technology products and services in Sweden. They are sponsored by Tilvextverket and The European Union. Their assignment is to create network and help to develop ideas into products. They also have some funds to invest in start-ups.

6. Financing

6.1. Relevant EU financing framework

Up to today the main program for funding in the EU has been 7th Framework Program, CIP and Structural Funds/Cohesion Fund. From 2014 the Horizon 2020 combines several of today's programs, the 7th Framework Program (FP7), innovation aspects of Competitiveness and Innovation Framework Program (CIP) and EU contribution to the European Institute of Innovation and Technology (EIT). Health is prioritised in Horizon 2020.

There is another upcoming important program from 2014-2020. This is the Health for Growth with a proposed budget of EUR 446 million. The Health for Growth program will give greater support to Member States to help them achieve innovative and sustainable health systems than the previous health program. As such, it will promote the uptake of innovation for health systems' reform, for example, through Health Technology Assessment (HTA) and eHealth solutions.

Today the most important program within medical technology and diagnostics are the FP7, Eureka and Eurostars and the Structural Fund. The 7th Framework Program has one of its main focus areas within health. Out of EUR 54 billion in funding EUR 6.1 billion are earmarked to health related research projects²². The health-program is further separated into six subsectors, which one is *biotechnology, tools and technologies*²³.

Other programs are Competitiveness and Innovation Framework Program (CIP) and European Joint Program. The Eurostars Program is one of the joint programs and dedicated to R&D performing SMEs. The projects are co-funded by the European Communities and 33 EUREKA member countries²⁴ an important program for the businesses within medical technology and diagnostics. Read more about the joint programs and particularly Ambient Assisted Living Program in the table 18.

EUREKA is an intergovernmental network launched in 1985, to support market-oriented R&D and innovation projects by industry, research centers and universities across all technological sectors. It is composed of 41 members, including the European Community. With its flexible and decentralized network, EUREKA offers project partners rapid access to skills and expertise across Europe and national public and private funding schemes²⁵.

Sweden has also eight regional structural fund programs for regional competitiveness and employment. Project funding is subject to national public co-financing with the co-funding amount normally matching the EU funding.

EUs Public Health program are relevant for public cluster-members. Other EU-projects that different EU-members have participated in are projects like CASA, Stardust and Engaged.

²² http://cordis.europa.eu/fp7/health/home_en.html

²³ http://ec.europa.eu/research/health/index_en.html

²⁴ <http://www.eurostars-eureka.eu/what.do>

²⁵ <http://www.eurekanetwork.org/faqs>

Table 20: EU Joint programs within Medtech

AAL - Ambient Assisted Living Program²⁶	The AAL JP is a funding activity that aims to create better condition of life for the older adults and to strengthen the industrial opportunities in Europe through the use of information and communication technology (ICT). It carries out its mandate through the funding of across-national projects (at least three countries involved) that involves small and medium enterprises (SME), research bodies and user's organizations (representing the older adults).
EU Joint Program A Healthy Diet for a Healthy Life (JPI HDHL)²⁷	JPI HDHL is one of ten Joint Programming Initiatives (JPI). The goals for the program are: Determinants of diet and physical behavior Roadmap initiative for biomarkers for nutritional/health claims European nutrition phenotype data sharing initiative
EU Joint Program Neurodegenerative Disease Research (JPND)²⁸	The ultimate goal of the EU Joint Program - Neurodegenerative Disease Research (JPND) initiative is to find cures for neurodegenerative diseases and to enable early diagnosis for early targeted treatments. However, it is not possible to give definitive predictions on how long this might take to happen. There is 3 main components to this work: Improve the scientific understanding of the disease, Improve the medical tools available to doctors to identify and treat the disease and Improve the social care and structures available to assist patients, their families, and health service providers so that patients can receive optimum care at all stages of their illness.

Table: 11 Ongoing EUREKA/EUROSTAR projects with Norwegian or Swedish enterprises involved Source: EUREKA/EUROSTAR project database

Name of activity	Business partners	Country	Country 2	Status	Industry
Pain Detector	Med-Storm Innovation, Hot Swap Stockholm	Sweden	Norway	Running	Diagnostic and Surveillance
Fistula Catheter	Nordic Medcom	Sweden		Running	Medical devices technology
Geneselect	Helo Genomics	Sweden		Running	Bioinformatics - Genome Research
NICDIT - A non-invasive expert system for diagnosis of intracocular tumours	Lund University - no Swedish business partner	Sweden		Running	ehealth
Rapid Disk . Rapid Determination of Bacterial Drug Resistance by Automated Disk Diffusion	Central Hospital Vaxjo (Clinical Microbiology) - no business partner	Sweden		Running	Diagnostic and Surveillance
Wommi - Workbench for micro-scale molecular imaging	BioInvent International, Biomolex	Sweden	Norway	Running	Diagnostic and Surveillance

²⁶ <http://www.aal-europe.eu/>

²⁷ <http://www.healthydietforhealthylife.eu/>

²⁸ <http://www.neurodegenerationresearch.eu/about/>

RDT REAG - Rapid Diagnostics of Tick-borne diseases	Karolinske Instituttt - no Swedish business partner	Sweden		Running	Medical devices technology
NOTED - Non-invasive Tests for Endometrial Dysfunction – NOVEL CLINICAL PERSPECTIVES FOR INFERTILITY AND ENDOMETRIOSIS DIAGNOSTICS	Uppsala Universitet - no Swedish business partner	Sweden		Running	Diagnostic and Surveillance
HEPA-TOX (Standardized 3D liver toxicity model: Combining unique hESC derived hepatocytes and scaffold technology)	Cellartis	Sweden		Running	Medical devices technology
SIV - A sensor system for in-vivo detection of clinically important substrates	Nanexa , St. Judes Medical	Sweden		Running	Medical devices technology
NEXTGENECG - Next Generation ECG Monitoring System	Novelda, Novosense	Sweden	Norway	Running	Medical devices technology
Medical Imaging	ContextVision	Sweden		Running	Diagnostic and Surveillance
SOLBIO - Development of Checkpoint Kinase 1 Inhibitors and Novel Diagnostics for the Treatment of Acute Myeloid Leukemia in Humans	Biovica International AB	Sweden		Running	Diagnostic and Surveillance
VASCULAR IMPLANT - A vascular implant that simplifies anastomosis of blood vessels	Vascuring AB, Sigolis AB	Sweden		Running	Medical devices technology
NEEDLEINTHEHAYSTACK - Find The Needle In The Haystack instrumentation for Mass Spectrometry	Biomotif AB	Sweden		Running	Medical devices technology
VIDP - Visual Impaired Digital Platform	ProVista		Norway	Running	ehealth
WI-FI ULTRASOUND ID - Development of an ID-tag with Wi-Fi and ultrasound for accurate indoor positioning	Sonitor Technologies AS		Norway	Running	ehealth
MUCOMPO - Development of the Mucosal Patch Technology as a diagnostic test for detecting	Smerud Medical Research International AS, Alimenta Medical AB,	Sweden	Norway	Running	Diagnostic and Surveillance

inflammation in the bowel of IBS patients	Diagnostics Development, P&M Venge AB				
Plama air -Air purification through combining a novel atmospheric pressure plasma with advanced nanocatalysts	KeraNor AS	Norway	Running	Medical devices technology	
MWB - Medical White Board - an interactive software solution for planning and follow-up of patient treatments in hospitals	Vivit AS, Hospital Organiser	Norway	Running	ehealth	
PEPSPEX - Absolute Quantification of Proteins in Mass Spectrometers for Diagnostic Use	Pubgene AS	Norway	Running	Diagnostic and Surveillance	
AMC - Antimicrobial coating for peripheral venous catheters	Nanexa	Sweden	Running	Other	
MINITEM - Development of benchtop equipment for automated characterization of viruses and other biological nanoparticles	Vironova AB	Sweden	Running	Medical devices technology	
"NIOX PAED" based on the VARIO PLATFORM – an innovative diagnostic device for NO measurement in children	AEROCRINE AB	Sweden	Running	Diagnostic and Surveillance	

There are only a few projects concerning development of medical devices in FP7 and private enterprises involved in FP7 projects. The identified projects are listed in the table below.

Table 22: Ongoing FP7-projects within diagnostic and medical technology²⁹

Project	Participants	Sector
MEGMRI	Elektra AB and Chalmers University of Technology (Sweden)	Diagnostic and Surveillance
DIGITAL SEQUENCING	Karolinska Institute, KTH Kungliga Tekniska högskolan (Sweden) and LingVitae (Norway)	Medical devices
LUPAS	Linköping University (Sweden), Norwegian University of Science and Technology (Norway), and Genovis AB (Sweden)	Diagnostic and Surveillance
CEED3	Lund University Hospital, (Sweden)	Diagnostic and Surveillance
FLUODIAMON	KUNGLIGA TEKNISKA HOEGSKOLAN, Karolinske Institute (Sweden)	Diagnostic and Surveillance
MONITORING MEDICINES	STIFTELSEN WHO COLLABORATING CENTRE FOR INTERNATIONAL DRUG MONITORING, MEDICAL PRODUCTS AGENCY (Sweden),	Diagnostic and Surveillance
AHEAD III	LINKOPINGS UNIVERSITET, OREBRO UNIVERSITY (Sweden)	Welfare technological equipment
NANOTEST	NORSK INSTITUTT FOR LUFTFORSKNING (Norway)	Diagnostic and Surveillance
IACOBUS	NORSK ELEKTRO OPTIKK AS, NTNU (Norway)	Diagnostic and Surveillance
BIOSHARE-EU	NASJONALT FOLKEHELSEINSTITUTT, NTNU, KAROLINSKA INSTITUTET, (Sweden and Norway)	Bioinformatics
CHD PLATFORM	FORENINGEN FOR HJERTESYKE BARN, HJAERTEBARNESFOERENINGEN (Norway)	ehealth
INTEGRATE-HTA	UNIVERSITETET I OSLO (Norway)	Medical devices
VASCUBONE	KUNGLIGA TEKNISKA HOEGSKOLAN, Uppsala Universitet, UNIVERSITETET I BERGEN, PP-POLYMER AB (Sweden and Norway)	Diagnostic and Surveillance
SPIDIA	TATAA BIOCENTER AB, DIAGENIC ASA (Norway)	Diagnostic and Surveillance

²⁹ http://cordis.europa.eu/projects/home_en.html

6.2. Cross national and national program in the Nordic Area:

Cross national health program

Nordic Innovation and Nordforsk finance many cross national health program which are relevant for Norwegian and Swedish medical technology companies and R&D-institutions.

Nordforsk's Nordic Program comprises research-, research-driven innovation- and policy activities carefully bridged in order to generate synergies between different Program components. The ambition is also to ensure the international dimension (i.e. to EU Horizon 2020). The first Program activities are proposed to target the following prioritized thematic fields: 1) Distribution of health and welfare 2) Research infrastructures 3) Nordic pilots 4) Research-driven innovation. These themes are based on Nordic research strengths and opportunities outlined in several Nordic reports. The intention is however to expand activities both within and beyond these areas.

There are several ongoing joint Nordic research projects within health and welfare co-funded by NordForsk. One is Nordic Trial Alliance³⁰ research infrastructure will be designed to support clinical multi-centre trials that will help attracting multinational studies to an area with 27 million inhabitants, a well-regulated and transparent health sector and with a seamless access to frontline research and. Other projects are Joint Nordic Biobank Research Infrastructure (BBMRI)³¹. The project will enable researchers to create a common Nordic database of standardised information. A pilotstudy was also conducted where joint biobank registry was used to ground-breaking Nordic study of colorectal cancer³².

There are several ongoing and not yet started programs which support Nordic collaboration within health research:

1. Nordforsk is working on developing a new program within health and welfare -"Nordic Joint Program within Health and Welfare" where the first call is planned to be conducted in 2013. The final budget is not yet finalised.
2. Programt eScience Globalisation³³ is a large Nordic research and educational initiative, to promote Nordic collaboration on eScience. There will be a new call on eHealth around Christmas. Projects start next year.
3. NordForsk will take on the secretariat function for the Joint Committee for the Nordic Medical Research Councils. The Joint Committee of the Nordic Medical Research Councils (NOS-M) is a collaborating body for the Nordic research councils that finance medical research. NOS-M aims to coordinate and promote medical research in the Nordic countries, to monitor its progress, and to facilitate information exchange among the countries. The Committee also aims to promote and initiate collaborative Nordic projects in medical research.
4. Education for Tomorrow-program: Within this Program there is a smaller thematic funding scheme (4 MNOK) within Business, learning and health³⁴
5. Nordic Program – Public Procurement and Innovation: Nordic Innovation in collaboration with national funding offices have just started a new Program on innovation through public procurement within the Nordic Health Sector³⁵. The first call in this Program was related to increase market knowledge and dialogue between procurers and suppliers and creating a Nordic competence network for innovation procurement within health.

Programs finalized this year:

³⁰ <http://www.nordforsk.org/no/programs/nordic-trial-alliance-nta>

³¹ <http://www.nordforsk.org/no/programs/prosjekter/joint-nordic-biobank-research-infrastructure>

³² <http://www.nordforsk.org/no/news/unik-nordisk-studie-av-tarmkreft-ved-hjelp-av-felles-biobankregister>

³³ <http://www.nordforsk.org/en/programs/Programr/escience/escience-globaliseringsinitiativ>

³⁴ <http://www.nordforsk.org/no/programs/Programr/education-for-tomorrow>

³⁵ <http://nordicinnovation.org/en-GB/projects/public-procurement-and-innovation-within-the-nordic-health-sector/>

6. Nordic Centers of Excellence Program on Food, Nutrition and health 2007-2012. Final evaluation next year³⁶
7. Nordic Centers of Excellence Program on Welfare Research 2007-2012. Final evaluation next year³⁷.

Other programs that are mentioned are INTEREG programs within this field.

Swedish health Programs

Sweden has several national health Programs to promote work within health-related issues. Both Vinnova and Tillväxtverket give funding to enterprises and researchers through health related Programs or more general Programs which also support health related activities.

Vinnova has health as a strategic focus area. There are several Programs within the field for eHealth, medical technology and diagnostics. Vinnova has supported several projects within e-health as Ambient Assisted Living (AAL) Joint Program (read more over) and Sweden eHealth. Maybe more important Programs are more general project as Forska&Väx, VINN NU, VINN-Verifiering, SMINT, Utmaningsdriven Innovation, Testbäddsutlysning. There are also several Medtech/health related projects within VINN Excellence Center³⁸ and VINNVÄXT³⁹.

Examples: VINNOVA financed projects

Innovations for Future Health⁴⁰ - VINNOVA

The purpose of the Program is to utilise high-quality Swedish research by funding innovative ideas. Estimated to run until 2013, with regular calls for proposals each year. Funding 72 million SEK in 2011.

Sweden E-health⁴¹ - VINNOVA

Sweden eHealth has a goal to increase export, markets and turnover for Swedish companies who develops eHealth-applications, products and services. Increased innovation activity, collaboration between businesses and R&D-institutions and knowledge about commercializing and internationalisation of applications.

Swedish Agency for Economic and Regional Growth – Tillväxtverket has health-related Programs. Tillväxtverket aims for the Swedish health industry is that there exist functional markets, a competitive and innovative industry. Several Programs within health and healthcare are established

1. Entrepreneurship within healthcare and welfare education
2. Increased knowledge about entrepreneurship within healthcare and welfare
3. Development checks to SMB's within healthcare and welfare – The Program gives SMB the possibility to establish a new or improved service or product with healthcare.

There also exists more general Program which gives funding if businesses meet specific criteria's like location like the regional investments funds.

³⁶ <http://www.nordforsk.org/en/programs/Programr/tncoe-Programt-om-mat-ernaering-og-helse>

³⁷ <http://www.nordforsk.org/no/programs/Programr/ncoe-Programt-om-velferdsforskning>

³⁸ <http://www.vinnova.se/en/Results/Starka-forsknings-och-innovationsmiljoer/Strong-research-and-innovation-milieus---VINN-Excellence-Center/>

³⁹ <http://www.vinnova.se/vinnvaxt>

⁴⁰ <http://www.vinnova.se/en/Our-activities/Health-and-healthcare/Innovations-for-Future-Health/>

⁴¹ <http://www.vinnova.se/sv/Var-verksamhet/Halsa/E-halsa/Projekt-inom-e-halsa/>

The Swedish Research Council was given 1007 million SEK to award research within health and medicine in 2010. The Research Council supports everything from research at molecular and cellular level and research involving animal experimentation and patients to epidemiological studies of groups of people⁴². As it is stated are much of the R&D outside medical technology and diagnostics. The Swedish Research Council requires that the applicants hold a PhD and that the research work is at least an 20 % of an fulltime position.

Swedish Foundations for strategic research funds research partnership from the industry and R&D-institutions. Life Science amounts to 200 out of near 600 million SEK in 2011.

Norwegian health Programs

In Norway there are to main providers to public funding. Innovation Norway and The Research Council of Norway.

The Research Council of Norway (RCN) has several programs related to research within health. One of RCN large scale initiatives within the field is Biotechnology for Innovation (BIOTEK2021⁴³) where health sectors/medical biotechnology is one out of four focuses areas. More drugs and diagnostic equipment are developed and produced with use of methods and knowledge from biotechnology. Biobanks to increased knowledge is one important effect of use of biotechnology.

Other relevant Programs within RCN with a health focus are Nanotechnology and Advanced Materials (NANO2021) and Human Biobanks and health data (BIOBANK)⁴⁴. More general research Programs are User-driven Research base Innovation (BIA), Commercializing R&D results (FORNY2020), SkatteFunn, and The Independent projects Scheme (FRIPRO).

Other Programs that are mentioned by the cluster members are VERDIKT (Kjernekompetanse og verdiskaping i IKT), FRIMED (Fri prosjektstøtte for klinisk medisin og folkehelse) and PraksisVEL (Praksisrettet FoU for helse- og velferdstjenester)

Innovation Norway has a focus area in health, but there are few funding schemes exclusively Life Science related innovations. Relevant funding schemes for enterprises are IFU/OFU-contracts, Innovation loans and funding for establishing new companies⁴⁵.

Other Programs that are mentioned are Cluster Programs as Norwegian Centre of Expertise and Arena-program in addition to Regionale Forskningsfond (RFF).

⁴² <http://www.vr.se/inenglish/researchsupported/medicineandhealth.4.3376a56c12918b8d17b80001209.html>

⁴³ http://www.forskningsradet.no/prognett-biotek2021/Home_page/1253970728140

⁴⁴ www.forskningsradet.no/biobank

⁴⁵ <http://www.innovasjon Norge.no/Helse/Typiske-finansieringstjenester-for-helsesektoren/>

7. Commercialization and investor meeting platforms

Below follows a list of the most important conferences, exhibitions and arenas for displaying, marketing and networking in the Medtech industry. Naturally, there is a large number of such meeting places that we have not listed here. Expanding the list in the future will be an ambition.

Name	www	Description	Type	City, country
Anglo Nordic	www.anglonord icmedtech.com	The conference provides one-stop opportunity to discover, collaborate and invest in participating companies.	Investor platform	London, England
Euro Medtech	www.ebdgroup. com/emt	The leading technology conference in Europe. 200 companies participated in 2012. More than 300 delegates. 35 company presentation. Annual. Takes place in Grenoble , Spring 2013.	Investor platforms	Grenoble, France
The Medtech Investment Europe Conference –MTI Europe	www.Medtechinvesting.com	The longest running investment conference in Europe with more than 200 participants. Annual. Takes place in Switzerland, September 2013.	Investor platforms	Switzerland
European Venture Summit	www.e-unlimited.com/ events	Takes place on an annual basis, late every year. More than 120 investors participate as well as more than 200 industry players. In Berlin, December 2012.	Investor platforms	Berlin, Germany
European Tech Tour	www.techtour. com/TechTour	Bi-annual "virtual summits" within several industries, amongst other Medtech. Participants are limited to 70-150 delegates in order to maximize interaction. Next show in November 2012.	International congresses	
Medtech Investment day Nordic	www.Medtechinvestmentday.com	An annual event. In 2012, more than 220 participants,	International	

	com	35 investors, and 29 investing companies. In 2013, the event will take place in September in Helsinki.	congresses	
The Nordic Healthcare Investment Conference	www.healthcare.management-access.com	Takes place on an annual basis, with two parallel sessions. One for established companies, the other for venture companies. In 2012 the event will take place in the month of december.	International congresses	
Medica	www.medica-tradefair.com	Probably the largest trade-fair for medical technology in the world. Takes place in Germany every year in the month of November.	International congresses	Germany
Arab Health	www.arabhealthonline.com/	An annual event, the largest health care conference in the middle-east. Has the scope of a global conference though with participating companies from all over the world. Takes place in January.	International congresses	
Advamed –The Medtech conference	www.advamed2013.com	Takes place on an annual basis. One of the largest trade fairs in North America. Will take place in September 2013 in Washington. A tradefair as well as a partnering conference.	International congresses	
Hospitalar	www.hospitalar.com	The largest trade fair in Latin America. Takes place on an annual basis, next show will be in Sao Paulo, Brazil, in may 2013.	International congresses	
CMEF – China Medical Equipment Fair	www.eventseye.com/fairs	A bi-annual event, the largest tradefair in China. Takes place in April and October. Next congress will take place in Chengdu, in April 2013.	International congresses	

Medica Asia	www.medicalfair-asia.com	Takes place every second year. Same organizer as in Europe/Germany. Location in Singapore. The next conference will take place in September 2014.	International congresses
Swedish Trade	www.swedishtrade.se/english	The Swedish trade organisation promoting exports from Sweden, having offices in more than 60 countries. They participate with so-called "pavillions" also on Medtech trade fairs.	Nordic Bodies exhibiting on the international arena
Eksportrådet (The Danish foreign ministerium)	www.um.dk/da/eksportraadet/sektorer/sundhed/	Promotes exports from Denmark and participates with "pavillions" on the larger medical technology trade fairs.	Nordic Denmark Bodies exhibiting on the
Swecare	www.swecare.se	Swecare is a member organisation organizing sales and marketing activities for its members	Nordic Bodies exhibiting on the

References

Vinnova 2012, *Life Science efter Astra Zenecas Nedskæringer*.

Different sources used in mapping Medtech and diagnostic industry in Sweden:

- Swedish Medtech <http://www.swedishMedtech.se/>
- Scandinavia Life Science database/Biotech gate
<http://www.scandinavianlifesciences.com/scan/db/index.php>
 - [Gjennomgått relevante selskaper innenfor Biotechnology - Therapeutics and Diagnostics](#)
 - [Lagt til alle selskaper innenfor Medical Technology.](#)
 - Medicon Valley <http://www.mediconvalley.com/>
 - Stockholm Uppsala Life Science <http://suls.se/>: <http://suls.se/company-database/>
 - Sweden Bio: Se medlemsliste PDF. <http://www.swedenbio.se>
 - Göteborg Bio <http://www.goteborgbio.se/>
 - Uppsala Bio <http://www.uppsalabio.se/>
 - Biotech Umeå <http://www.biotechumea.se/>
 - Skåne Invest – Skåne Life Science <http://invest.skane.com/content/life-science>
- Hälsoteknik Alliansen
- MedCoast Scandinavia – Interreg prosjekt – Kartlagt av Oxford i rapport.
 - Included Medical technology companies – Should Biotechnology also be included?
- Companies which has received private equity investments within medical technology

List of Medtech Companies in Sweden

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
AB ARDENT				1			
AB Detektor							
AB DIGITALES							
AB Henry Eriksson				1			
AB Meteve							
AB SORBINCO							
Abbott Medical Optics Norden AB				1			
Abbott Scandinavia AB							
Abena							
Abilia							
Accelerator Nordic AB				1			
ActiLeg		1					
Actimed Plast							
Active Mobility Sweden AB							
Attana	1						
AD MediCal AB							
Adapt Comfort							
AddBIO AB							1
AddXtra		1					
Adolesco AB				1			
Aerocrine AB	1			1			
AGA Gas AB/Linde Healthcare							
Agfa Healthcare Sweden AB				1			
Ago Innovator AB							
Aidera							
Aiolos Medical AB							
Airsonett	1					1	
AJ Medical				1			
Akla AB				1			
Akloma BioScience AB				1		1	
Algorithm System AB				1			
Alleato AB			1	1			
Allenex AB							
Allytec AB				1			
Almedo AB				1			
AIORO MEDICAL AB				1			
Alpha Biotech AB				1			
Alteco Medical						1	
Amdent AB				1			
Amoena Sweden AB				1			
Anatomic SITT AB							
Anatomica AB							

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
Anmedic AB				1			
Antrad Medical AB				1			
Apgar Sverige							
Apriomed AB							
Aprovix				1			
Arcam AB							
Arcoma AB							
Ardent AB				1			
ARJO SCANDINAVIA AB		1				1	
ArjoHuntleigh							
AroCell AB					1		
Artema Medical AB				1			
Arterion AB							
ArthroCare Europe AB				1			
Artimplant AB							
Ascendia MedTech AB				1			
Aspira medical AB							
Astra Tech AB							
Atos Medical						1	
Attends							
Audeq Aktiebolag				1			
Audiocare AB							
Autoadapt AB							
Avanco AB							
Axel Ericsson Medtech AB							
Axongon							
B. Braun Medical AB				1			
B3IT Management AB							
Bactiguard AB				1			
Bard Medical Systems Norden AB							
Bardexa Norden AB							
Bauerfeind Nordic AB							
Bausch & Lomb Nordic AB							
Baxter Medical AB				1			
Bayer AB							
Beampoint AB				1			
Becton Dickinson AB				1			
Beiersdorf AB							
Belas AB							
Bellman & Symfon AB							
Bestic AB							
Betagenon AB							
BetaMed AB							

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
BIMA Plastteknik AB							
BioActive Polymers						1	
BioChomics AB				1			
Bio-Hospital AB							
Biolight AB				1			
Biolin Scientific	1						
BIOMAIN AB						1	
BioMérieux AB							
BIOMET ORTHOPAEDICS AB						1	
BioOptico							1
Biora AS						1	
Bioresonator AB							
Bioservo Technologies AB				1			
Bio-Works Sweden	1						
BK Medical AB				1			
Boazul Medical AB							
BoneSupport AB	1					1	
BORNTECH AB						1	
Boston Scientific Sweden AB							
Boule Diagn Intl							
Box Play Alleato AB							
Breas Medical AB							
Breis & Company AB							
Brighter AB				1			
Brånemark Integration AB							
BSN Medical AB							
BZB CareSystems AB				1			
Bäver och Nilsson							1
Cambio Healthcare Systems							
CAMP SCANDINAVIA AB		1	1			1	
CapGemini							
CardioNord AB				1			
Care of Sweden							
CareFusion Sweden				1			
CARESIA AB						1	
CareTech AB							
CareTelCom AB							
Careva Systems AB							
Carl Zeiss AB				1			
Carlsson TL Medical AB							
Carmeda AB	1			1			
Carmel Pharma AB							
Carponovum						1	

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
CAS Clean Analytical System AB							
Cassuto Research &Development AB							
Cast Medical AB							
CathPrint AB				1			
CEFAR-COMPEX SCANDINAVIA AB						1	
Cell Matrix AB							
CellaVision	1					1	
Cellcomb AB							
Cenova AB							1
Centri AB							
Cervrite AB							
Chemotechnique Diagnostics						1	
CIBA VISION® Nordic AB							
City Röntgendiagnostik AB							
Clean Analytical System AB							
CLINICAL LASERTHERMIA SYSTEMS AB						1	
CLINOVA MEDICAL AB						1	
CMA Microdialysis AB							
CMC CONTRAST						1	
CMTF affärsutveckling AB							
Cobolt AB				1			
Cochlear Bone Anchored Solutions							
Codan Triplus							
Coloplast AB		1					
Comair AB				1			
Combimobil AB							
Comfort Audio AB		1					
Comfort Medical		1					
Compliant Logistics AB							
Compu Group Medical Sweden AB							
Conroy Medical				1			
Consol AB							
Constella Försäljning AB							
ContextVision AB				1			1
ConvaTec AB				1			
Cook Sweden AB							
Corline Systems AB				1			
Covidien Sverige AB				1			
Curictus AB							
Cybergene							
CytaCoat AB				1			
CYT0365							
DanPET	1					1	

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
Dansac and Hollister Scandinavia Inc.							
Decon Wheel AB		1					
Demetech AB				1			
Denator					1		
Dental Therapeutics AB				1			
Dentaley AB				1			
Dentalfakta AB							
Dentalmind		1					
Dentatus AB				1			
DentoSystem Scandinavia AB							
DENTSPLY Friadent Scandinavia AB							
Derma Diagnostic Development							
Dermagen AB						1	
Desmosomen XL AB							
Diabetes Tools Sweden							
Diagnostica & Analys Service, Friberger AB							
DiaSorin AB				1			
Diaspec AB							
DIGNITANA AB						1	
Dilab							
Dipylon Medical AB				1			
Directa AB				1			
DISTRIBUTED MEDICAL SVERIGE AB						1	
DJO Nordic AB						1	
Doro							
Doxa AB				1			
Drivdon AB							
Dräger Medical Sverige AB				1			
Dynamic Code			1				1
Edwards Life Sciences Nordic AB							
Eesibed			1				
Eica-Bolaget AB		1					
Electra-Box Diagnostica AB				1			
Elekta AB				1			
Elektromedicin AB							
Ellen AB							
Elos Medtech Timmersdala AB							
Elvings Otoplastik AB							
EMC Information Systems Sweden AB							
EMERS Holding AB							
Emotra			1				
Encare AB							
Encecor				1			

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
Entomed		1				1	
ENTpro AB				1			
Enurad AB							
Ephios			1				
Epiq Life Science AB				1			
Episentec AB					1		
Episurf Medical AB				1			
ErgoNordic				1			
Etac Sverige AB		1					
Euro Diagnostica						1	
Euromed Networks AB							
Eurovema AB							
ev3 Norden AB				1			
EVRY HealthCare Solutions AB							
Exaudio AB							
Excal AB							
EXINI DIAGNOSTICS AB						1	
F. AD. Müller Söhne AB							
Fagerström Industri Konsult Gbg AB							
Familjelarm			1				
Ferno Norden AB							
FindOut Diagnostic AB				1			
Finess Hygiene AB							
Flexibel TeleSystem				1			
Flexmed AB						1	
ForAxon AB							
Fresenius KABI Medical Care				1			
Frölunda Data AB							
Fujifilm							
Fujirebio Diagnostics AB	1						
Funcational Life		1					
FYZIKON AB						1	
G4 IT AB							
Gaia			1				
Gambro AB						1	
Gambro Research							
GATE Rehab Development							
GCE Equipment AB						1	
GE Healthcare Sverige AB	1			1			
Gearwheel AB							
GEMS PET Systems				1			
GERMA AB						1	
Gestenco International AB							

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
Getinge AB		1					
Gettinge Skärhamn AB							
Gewab							
Globus TT AB				1			
GLYCOREX TRANSPLANTATION AB						1	
GN ReSound AB							
Gottfries Medicinal AB							
GraftCraft	1						
Gramtec Innovation AB							
Granberg Interior AB							
Gridline AB				1			
Gripping Heart AB				1			
Guldmann AB							
Gyros AB	1						
Göteborgs Plast AB							
HAEMEDIC AB						1	
Haemonetics Scandinavia AB							
Hamerange Inrednings AB				1			
Hammarplast Medical AB							
Hamrange Inrednings AB				1			
Handfast AB				1			
Handicare AB				1			
Handitek AB							
Handverksdesign & Rehab Prod AB				1			
HANSA MEDICAL AB						1	
HARTMANN-ScandiCare AB							
HD Rehab				1			
Health Solutions AB							
Hedemora Anpassning							
HEINE Optotechnik GmbH & Co KG							
Helseplan Consulting Group AB							
HEMOCUE AB						1	
Henry Eriksson AB				1			
Heraeus Kulzer Nordic AB				1			
Hermes Medical Solutions				1			
Hewlett-Packard Sv							
Hilotherm Scandinavia				1			
Hjälpboden			1				
Hoeron AB							
HOW Solutions			1				
Hollister Sverige				1			
Hospira Nordic AB				1			
Hot Disk Medical							

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
Human Care				1		1	
Hälsoteamet Halmstad		1					
Höjmed AB				1			
Hörsam		1					
Hörseltjänst		1					
IBA Dosimetry AB				1			
IBM Svenska AB							
IDL Biotech				1			
ILAB AB							
Imego AB							
Inerventions AB							
InfoSolution Sverige AB							
Ingenjorsfirman Bjorn Bergdahl AB							
Ingenjörfirman Jan-Åke Hallén AB							
INNOVAGEN AB						1	
Innovation Team		1					
Inobiz AB							
Inoris Medical AB							
Inovacor AB							
Integrum AB							
Intel Sverige AB							
Interspiro				1			
InterSystems							
Intramedic AB				1			
Invacare				1			
Invavare				1			
Inventing		1					
Inventlab							
IoPharma Technologies AB							
Iris Hjälpmedel AB				1			
Irradia AB				1			
J.H. ORSING AB						1	
Jamaly Medical Consultants AB							
Jatab Care AB							
JCM Elektronik							
Jdome							
JOLIFE AB / PHYSIO-CONTROL						1	
Joliv AB							
Jonas Enebrand AB							
Jump and Joy AB							
KALEA Lifts AB							
KanMed AB				1			
KARL STORZ Endoskop Sverige AB				1			

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
Karlsson & novak Medical							
KaVo Scandinavia AB				1			
KCI Medical AB							
Ken Hygiene Systems							
KIBI							
KIBION AB				1			
Kiwok Nordic AB			1	1			
Komikapp-Rehatek		1					
KRUCOM AB						1	
Kruptusnai AB							
Kungshusen Medicinska AB							
Kvistberga Produkter							
L&B Medical AB							
Laerdal Medical							
LBM Elektronik						1	
Leica Microsystems AB							
Life Scintel							
LIFEASSAYS AB						1	
Lighthouse Medical AB				1			
Liko AB							
Likvor AB							
Link Sweden AB				1			
Linkura							
LJUNGBERG & KRÖGEL AB						1	
Logica AB							
Lohmann & Rauscher AB							
Lorensbergshälsan AB							
Ludesi AB						1	
LVI Low Vision International AB							
Lynn						1	
Mabs Int AB							
MacroPharma Nordic							
MAGLE AB						1	
Maiia AB	1						
Maquet Critical Care AB				1			
Mastercare							
Mawell AB							
Max Manus AB							
MDS Nordion				1			
Medcore AB							
Medela Medical AB				1			
Medendus AB							
Medexa Diagnostisk Service AB						1	

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
Medfield Diagnostics AB	1						
Medical Partner/Medpoint AB							
Medical Robotics AB				1			
Medical Vision Research & Development AB				1			
MedicPen		1					
Medicross AB							
Medicvent							
MedicWave		1					
Mediplast AB							
Meditalk AB							
MedPre							
Medrad Sweden AB							
MEDTENTIA AB						1	
Medtronic AB				1			
MEDVISO AB						1	
Megra Studio							
Melerit Medical AB							
Mellby Medical AB		1					
Mentice AB							
Mercado Medic AB		1		1			
Mercan AB						1	
Merivaara AB				1			
Meteko AB				1			
Micromy AB				1			
Microoptik							
Micropos Medical AB (publ)							
Microsoft AB							
Micus AB							
Miele AB							
Minicrosser AB							
Minovi			1				
MIS Sweden AB				1			
Mizarra Medical AB							
Molift AB							
Monomak Medical AB							
MultiD analyses AB							
Multilens AB							
Möllerström Medical AB							
Mölnlycke Health Care AB							
Nanexa AB				1			
Nanofactory Instruments AB							
Nanosep						1	
NEAT Electronics		1					

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
Necleton Scandinavia				1			
NeoDynamics AB				1			
Neovanta Medical AB							
NetWeb							
NeuroNova AB							
Nidacon International AB							
Nigaard Pharma							
Nobel Biocare Nordic AB							
NOLABS AB						1	
Nolato Cerbo AB						1	
Nolato Medical						1	
Nonin Medical AB (Publ)							
Nordic Med - com AB							
Nordic Medifield Service							
NORDISKA DENTAL AB						1	
Nordiska Handels & InnovationsRådet AB							
Nordiska Lins AB							
Nordramp AB							
NOVOSENSE AB						1	
Nucletron Scandinavia AB				1			
Nutrium							
Observe Medical						1	
Obstecare AB				1			
Occlutech AB							
Olympus Sverige AB							
Omnitor							
Ompu AB				1			
ONCOlog Medical QA AB				1			
OneMed Sverige AB							
Optima Scandinavia AB							
Orexplora AB							
Orifice Medical						1	
Orion Diagnostica AB				1			
Ortivirus AB				1			
Ortolab							
Ortoma AB							
OrtoWay AB							
Orzone AB							
Oscar Instrument AB							
Ospol AB						1	
Ossano Scandinavia AB				1			
Osseofon AB							
Osstell AB							

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
Oticon AB				1			
Otorix AB							
PharmaCell			1				
Otsuka Pharma Scandinavia AB							
Otto Bock Scandinavia AB							
Pantera Production AB							
Perimed AB				1			
Permobil AB							
Pernova Hjälpmedel AB							
Person och Organisationspoetik AB				1			
PhacoTreat AB				1			
Phadia	1						
Pharmadent Dentallaboratorium AB							
Phase Holographic Imaging (PHI)						1	
PHASE ONE UNIT						1	
Phasein AB				1			
Philips AB							
Phoniro		1	1				
Photonova of Sweden AB							
Pipinette AB				1			
Plandent Forssbergs Dental AB				1			
Plasma Surgical AB							
Posifon AB							
Preisler Instrument AB							
Pressalit Care		1					
Prevas Technology West AB							
Procter & Gamle Nordic INC							
Progressus Medica AB				1			
Prolight Diagnostics AB						1	
PROMEDVI AB						1	
Promimic AB							
Prominens Sweden AB							
ProReNata							
ProstaLund Operations AB				1			
Prostalund						1	
Proton Caretec AB							
Pulsen Application							
Qbion							
Qbtech AB				1			
Q-Med AB				1			
QUICKCOOL AB						1	
Quickels Systems AB							
RaySearch Laboratories AB				1			

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
RedHot Diagnostics AB	1						
Redsense Medical AB		1					
Rehabmodul AB				1			
Rehband							
Reison Medical AB							
Remeda AB							
Repair Technologies Sweden AB				1			
ResMed Sweden AB				1			
RGB Technologies							
Rini Ergoteknik AB				1			
RisCo AB							
Rium Medical AB				1			
RMJ Health Innov AB							
Roche Diagnostics Scandinavia AB							
RollerMate AB							
RSA Biomedical							
RTI Electronics AB							
Rubicon Lifes Science AB							
Rätt Spår i Uppsala AB							
Salubrious AB							
Samba Sensors AB							
SaniCare AB							
Sapheneia							
SCA Hygiene Products AB							
Scandinavian Medical Systems AB				1			
Scandinavian Orthopaedic Laboratory (SOL)							
Scanditronix Wellhofer AB				1			
SCANEX MEDICAL SYSTEMS AB						1	
Scanflex				1			
SciBase AB				1			
Scint-X				1			
SDD Shahnavaaz Dannert Dental AB				1			
Sectra Imtec AB							
Sedana Medical AB				1			
Semcon Medical Life Science		1					
Sensagon			1				
Sendoline AB				1			
SensAbues AB				1			
SENSODETECT LTD						1	
Senzime AB							
Sepsialinstrument i Stockholm Development				1			
SERVOTEK AB						1	
Setred AB							

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
SHL Group AB				1			
Siemens AB, sector Healthcare							
Sjöbloms Sjukvårdsutrustning AB							
Smith & Nephew AB							
SMK Skövde Maskinkonstruktioner AB							
Softronic							
Solann AB							
SOMEDIC AB						1	
Sorbent AB							
Sorin Group Scandinavia							
Spacemaker Scandinavia AB							
Spago Imaging AB						1	
Specialinstrument i Stockholm Development AB				1			
SpectraCure AB						1	
Spina Medical AB							
St. Jude Medical				1			
Stille AB				1			
STRAUMANN AB						1	
STT Condigi AB						1	
Styrker AB							
Sundstrom Safety AB				1			
Sunnex Tillquist AB							
Sunrise Medical Sweden							
Sunstar Butler							
Surgical Science Sweden AB							
Svan Care							
Swedish Dental Supplies						1	
Swemac imaging							
Swemac Ortheopaedics							
Swereco Rehab AB				1			
Sylak AB Abigo							
SymCel	1						
SynMed Medicinteknik AB							
Synsam Service AB							
Synsupport Nordic Eye							
Synthes AB							
Synthetic MR	1						
TA Contrast AB						1	
Team Ortopedteknik AB			1				
Teknikhuset Audioindex							
Telexmedica Kliniska Telemedicin							
Tempwatch							
Ten Medical Design AB							

Companies	Sweden Bio	Healthcare Technology Alliance	New Tools for Health	Stockholm - Uppsala Life Science	Uppsala Bio	Medicon Valley	BioMedley
Tendera AB							
Tentaculus			1				
TePe Munhygienprodukter AB						1	
TERUMO SWEDEN AB							
Tieto Healthcare Sweden			1				
Tigran Technologies AB						1	
TILLY MEDICAL PRODUCTS AB						1	
Topcon Scandinavia A.B.							
Toul Sweden							
TR Equipment AB							
TRIACON SCIENTIFIC AB						1	
Trident Industri AB							
Triotol AB							
Trolldental							
Trollhätteplast AB							
Twim AB							
U-Lift AB							
Ultrasonix DNT						1	
Uman Diagnostics AB							
Umbio AB							
Umecrine Cognition							
UMETRICS AB						1	
Unfors Instruments AB							
Ursus Medical AB				1			
Valkion ab							
Vascuring	1			1			
Vegoria Produktion AB							
Vetok AB				1			
VIBROSENSE DYNAMICS AB						1	
Victrix AB				1			
Vingmed							
Visumetrics and HighTech Vision							
Vitatron Sweden AB				1			
Vitrolife AB							
Vivoline Medical AB						1	
W. L. Gore & Associates Scandinavia AB							
WIESLAB AB						1	
Woodstar							
XCounter AB				1			
Yoyomotion							
Zenikor Medical Systems AB			1				
Zimmer Sverige AB							
Össur Nordic				1			

List of Medtech Companies in Norway

Company	Oslo MedTech	Oslo Cancer Cluster	MedITNor
Aamedic AS			
ABILIA AS	1		
ALCON NORGE AS			
ALERTIS MEDICAL AS			1
ALGETA		1	
ALUNA AS	1		
APEXIA AS			
AS DEN NORSKE ETERFABRIKK			
ASTI AS TRØNDELAG INDUSTRIELEKTRONIKK			
ASTRA TECH AS			
AUDIOPLUS AS			1
AUROTECH ELECTRONICS AS			
AUROTECH ULTRASOUND			
AXIS-SHIELD ASA	1		
AXIS-SHIELD POC AS			
BAKTERIEFRITT AS	1		
BALTER MEDICAL AS		1	
BAUSCH & LOMB NORDIC AB			
BEVITAL AS			
BIODETECT			
BIODETECT AS			
BIOINDEX AS			
BIOMERIEUX NORGE AS			
BIOMOLEX AS	1	1	
BIONOR PHARMA			
Bionordika (Norway) Medprobe AS			
BIOSENTRUM AS			
BIOSERGEN AS			
BRUSELL DENTAL AS	1		
CALPRO AS	1		
CARDIACCS AS	1		
CARDIALARM			
CARETECH AS			
CELLCURA ASA	1		
CERENOR AS			
CGENE AS			
CHANGETECH AS	1		
CHEMLEX AS			
CHIRON AS			
CHITINOR AS			
COMMITT AS			1
CSAM HEALTH AS			

Company	Oslo MedTech	Oslo Canser Cluster	MedITNor
CURATO AS			
D'LIVER AS			
DACO INSTRUMENT AS			
DAKO NORGE		1	
DENTAL INNOVA AS			
DIABEADS AS			
DIAG NOR AS			
DIAGENIC ASA		1	
DIAGRAPHIT AS			
DIA TEC MONOCLONALS AS			
DIGNIO(VERDIG ALDERDOM)	1		
DPCOM AS			
DRUG DISCOVERY LABORATORY AS			
DRY PRODUCTS AS			
DUAL ATTENTION AS			
EASYTRANS AS			
ELKO			
ELLAS SØM AS			
ELLIPTIC LABORATORIES AS			
EO FUNKTION AS			
ERGOMEAN			
FAGERÅSEN AS			
FIMREITE SOFTWARE AS	1		
FLUENS SYNTHESIS AS			
FORGET-ME-NOT AS	1		
FOSS VIKING AS			
FRESENIUS KABI NORGE AS			
FÜRST			
GAMMA MEDICAL			
GE HEALTHCARE AS		1	
GE VINGMED ULTRASOUND	1		
GENA AS			
GENDIA AS			
GENESEQUE AS			
GENETIC ANALYSIS AS			
GENOMICS SYSTEMS AS			
GENOVA AS			
GENTIAN AS	1		
HANDICARE			
HAPPY ENDING AS			
HEADS AS			
HEGER AS			
HJELP24			

Company	Oslo MedTech	Oslo Canser Cluster	MedITNor
HOSPITAL IT	1		
HOSPITAL TRADING AS			1
HUNT BIOSCIENCES AS		1	
IC PARTICLES			
IMATIS AS	1		
IMMUNOPHARMA AS		1	
INTERAGON AS			
INTERON AS			
INVIVOSENSE ASA			
ISENTIO AS			
JAN BYE AS			
JETRO AS			
JOHNSON&JOHNSON AB	1		
JUMO AS			
K A RASMUSSEN AS			
KEMETYL NORGE AS			
KINN THERAPEUTICS			
KITRON ASA			
LABS2 AS			
LAJOTECH			
LENSON AB			
LESS AS			
LIFE TECHNOLOGIES AS	1	1	
LINGVITAE AS			
LINUS AS			
LUMEX AS			
LÆRDAL MEDICAL	1		
MAINSANI AS			
MASCOT ELECTRONICS AS			
MAX MANUS AS	1		
MEDISTIM ASA	1		1
MEDITEST AS			
MEDSTORM INNOVATION AS			
MEDTEKWEB AS			
MEKTRON			
MELIN MEDICAL			
MEMSCAP AS			
MICREL NORWAY AS			
MICROIMPULSE AS			
MISON AS			
MOLE GENETICS AS			
MOLMINE AS			
MULTIMEDICUS AS			

Company	Oslo MedTech	Oslo Cancer Cluster	MedITNor
NEORAD AS	1		1
NEXTERA		1	
NORATEL AS			
NORCHIP AS			
NORDIAG ASA			
NORDICNEUROLAB AS			
Norgesplaster			
NORMORS AS			
NORSK SENTER FOR GASTRO INTESTINAL CANCER			
NORTHERN BIOLABS AS			
NOVEL DIAGNOSTICS ASA			
NOVELDA AS	1		
OPTINOSE AS			
ORTHOGENICS AS			
ORTODENT AS			
ORTOMEDIC AS			
OSMOLIFE AS			
OSTOMYCURE AS	1		
OTIVIO AS	1		
PATTERN SOLUTIONS			
PCI BIOTECH AS	1	1	
PLASMACUTE AS			
POLYNOR AS			
POLYPHENOLS AS			
POLYPURE AS			
POSICOM AS	1		
PREDICHEM			
PREDIMED AS			
PROFILE DIAGNOSTICS AS			
PROMAR AS			
PUBGENE AS	1	1	
QIAGEN AS			
RAYTECH AS			
REDCORD AS	1		
RPS RESEARCH NORWAY AS			
SANUM			
SCANDINAVIAN CUSTOMIZED PROSTHESIS AS			
SCREEN CANCER AS			
SERO AS			
SETRED AS	1		
Siemens			1
SIEMENS høreapparater			
SIGMA-ALDRICH NORWAY AS			

Company	Oslo MedTech	Oslo Cancer Cluster	MedITNor
SIMSURGERY	1		1
SIRNASENSE AS			
SKANNEX AS	1		
SMARTBRAIN AS	1		
SMERUD MEDICAL RESEARCH INTERNATIONAL AS			
Snøgg			
SONITOR TECHNOLOGIES AS			1
SPERMATECH AS			
ST.JUDE MEDICAL NORWAY AS			
SYNAPSE TECHNOLOGIES AS			
SYNTHEAS AS	1		
SYNTHETICA AS			
TAGARNO NORGE AS	1		
TARGOVAX AS		1	
TECHNI AS			
TERARECON INC.			
TERMAKS AS			
TEXI AS			1
THERMONOR AS			
THUNE PRODUKTER AS			
TIPOGEN AS			
TOS LAB AS			
TRIANGEL SOFTWARE AS	1		1
UNILABS TELELAB AS			
UNITARGETINGRESEARCH AS			
UROLOGICAL AS	1		
VERAX BIOMEDICAL INC			
VIREO AS			
VITACON AS			1
VITAL BASE AS			1
VITAS AS			
VOLUSENSE AS	1		
WELL DIAGNOSTICS AS			
WEYLAND AS			
YOGAPROCESS AS			