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Nordic Council of Ministers

Health Innovation in the Nordic countries

Short Version



Health Innovation in the Nordic countries – Public Private Collaboration
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ANP 2010:765

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ISBN 978-92-893-2140-2

This report has been compiled by DAMVAD, Oslo Economics and Econ Pöyry

Print: Arco Grafisk A/S, Skive

Layout: Scanad

Foto Credit: ImageSelect

Copies: 500

Printed on environmentally friendly paper

This publication can be ordered on www.norden.org/order.

Other Nordic publications are available at www.norden.org/publications

Printed in Denmark



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Nordic co-operation

Nordic cooperation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and three autonomous areas: the Faroe Islands, Greenland, and Åland.

Nordic cooperation has firm traditions in politics, the economy, and culture. It plays an important role in European and

international collaboration, and aims at creating a strong Nordic community in a strong Europe.

Nordic cooperation seeks to safeguard Nordic and regional interests and principles in the global community. Common Nordic values help the region solidify its position as one of the world's most innovative and competitive.



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1 Preface

We are witnessing a growing global demand for health care solutions. In other words, there is an important global market for Nordic companies specialized in health care solutions. How can this potential be released? And how can public-private collaboration in the health sector promote innovation and a global competitive Nordic health sector? These are two of the questions the Nordic Ministers for Business Affairs have put on the agenda.

Public-private collaboration holds great potentials for both the public and the private sector. The need for better and more efficient health care solutions is global, which is why this is an area with a substantial business potential. The public sector constitutes a large proportion of the Nordic health care services. Therefore, there are many benefits in using public-private interaction strategically to strengthen competitiveness in the private sector and develop new solutions for the public health sector.

Many of the Nordic countries have already taken important steps such as the Public Welfare Technology Foundation and the Business Innovation Fund in Denmark. The Nordic countries share many similarities and Nordic collaboration on better frameworks for public-private collaboration on innovation holds an important potential. Therefore, the Nordic Ministers for Business Affairs have put public-private collaboration on the agenda. This report presents a study on public-private collaboration in the Nordic health sector and suggests new policy recommendations for future initiatives and actions at national level and across the Nordic countries.

The report has been prepared by the Nordic consultants DAMVAD, Econ Pöyry and Oslo Economics for the meeting of the Nordic Council of Ministers in October 2010, and the conclusions are those of the authors. However, I am convinced that the study will be useful in our future work towards improving the Nordic conditions for innovation and creating better services in the health sector.



Brian Mikkelsen

Minister for Economic and Business Affairs

Copenhagen 22 September 2010

2 Introduction

In the last 50 years expenditures on health care have grown by 2 percentage points in excess of GDP growth across all OECD countries. As a result, health care has become a much bigger part of most of these economies. If this development continues, health care will consume a larger proportion of the developed nations' wealth, and most OECD countries will spend more than a fifth of GDP on health care in 2050.¹

In the Nordic countries, this development poses a challenge in terms of increasing financial pressure on the health care sector. On the other hand, it also implies that there is a growing global market for health care solutions for innovative companies. Because health care in the Nordic countries is dominated by the public sector, collaborations between the public and the private sector are needed if the business potential is to be exploited and the health care service improved.

There are different ways public and private actors can collaborate which differentiate themselves by the degree of deliverables and purpose of the collaboration. At one end of the collaboration spectrum there are public procurement and outsourcing which are characterised by specific deliverables in terms of standardised products and solutions. In the middle of the spectrum is pre-commercial procurement, where public authorities act as the demanding first buyer. Finally, there are public private partnerships and public private collaboration on innovation, which are characterized by knowledge diffusion and development of less defined deliverables. This study primarily focuses on public procurement, pre-commercial procurement and public private collaboration on innovation.

A broad definition of health care including products, services and solutions is applied in this study. This implies that health innovation covers technology, as well as new ways of delivering and organising services.

The focal point in this study is on how to promote innovation and entrepreneurship, encourage good and effective public private partnerships in the Nordic countries, and how to exploit best practice in the Nordic countries to improve innovation systems in the health sector. This study builds on a mapping of the health sector in the Nordic countries, a survey distributed among Nordic health experts and practitioners, a workshop in each of the Nordic countries with stakeholders in the health sector and industry, and case studies of best practices on health innovation in public private collaboration in each of the Nordic countries.

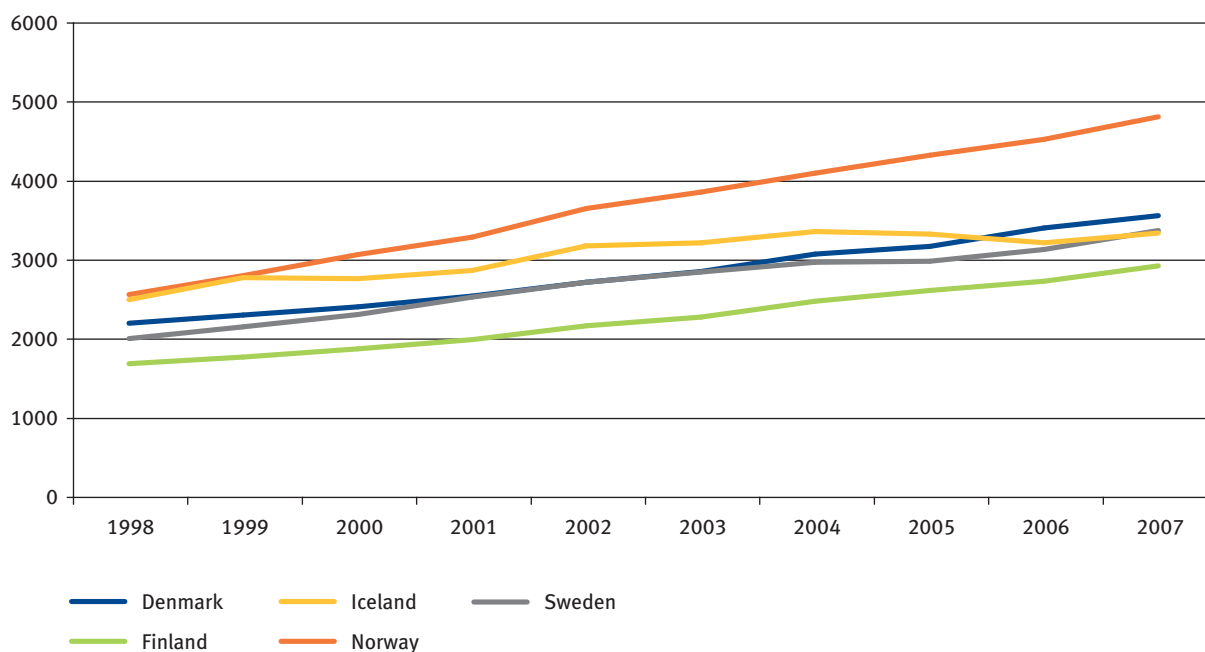
1) McKinsey (2008): "Health care cost. A market based view".

3 Mapping of the Nordic Health care sector

The Nordic countries, with the exception of Finland, have a higher health spending per capita than the OECD average, and 80 to 85 percent of health spending is funded by public sources. Just like the rest of the OECD countries, the Nordic countries have also experienced an increase in their expenditure on health per capita since the late 1990's with Norway seeing the highest increase in health spending.

According to OECD health data, the total Nordic market for health solutions amounted to USD 89 billion in 2007, including both public and private expenditures on health solutions. When development in health expenditures from 2003 to 2007 is projected for 2010, the total Nordic health market will reach USD 103 billion. This indicates the vast market opportunities that exist for companies in the Nordic health industry.

Figure 3.1 Total expenditure on health per capita in the Nordic countries, 1998–2007



Source: OECD Health Data

Note: Measured by the US\$ purchasing power parity exchange rate.

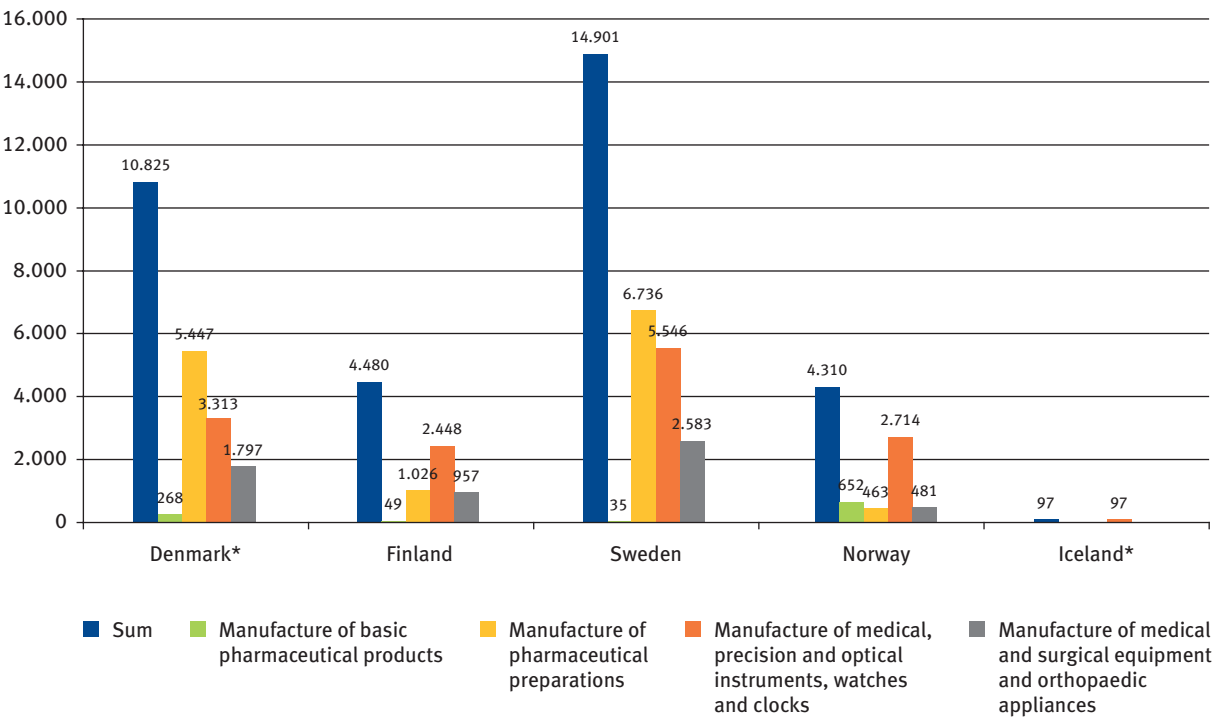
The Nordic countries have major business strongholds in the health industry. The strongest and most developed industries are to be found in the areas of pharmaceutical, biotechnological and medical technology in Denmark and Sweden. But Norway, Finland and Iceland also have interesting and growing health industry segments.

The largest turnover in the health industry in the Nordic countries is made up of Swedish enterprises with Danish enterprises coming in as a close second. This is also reflected in the employment performance of the two countries.

However, the most productive companies measured by the gross value per employee are to be found in Norway in the manufacturing of basic medicines, and in Sweden in the manufacturing of pharmaceutical products.

The mapping of the health industries in the Nordic countries focus on welfare technology, pharmaceuticals, assistive technology, medico-technical equipment and automation and tele-communication. The service industries and public private collaboration in regard to service innovation in the health care system are however part of the case studies.

Figure 3.2 Turnover in the health industry in the Nordic countries (in million €), 2007.



Source: Eurostat and Statistics Iceland

Note: For Denmark, Eurostat data are only available for 2006. There are no data for Iceland in EUROSTAT. Data are from Statistics Iceland and is therefore not fully comparable.

4 Health innovation across the Nordic countries

The study shows a high degree of similarity between the Nordic countries when it comes to public private collaboration on innovation and the experienced barriers to innovative solutions in the health care sector.

The Nordic countries have experience of different types of public private collaboration. Public procurements play a significant role in the interaction between public and private sector when it comes to procurements of standard products and solutions in all the Nordic countries. None of the Nordic countries have significant references from pre-commercial procurements. There is an increasing focus on public private collaboration on innovation.

Most of the public private collaboration projects take place on either a regional or a national level in most of the Nordic countries. The study shows that none of the countries, except from Iceland, have extensive collaboration across national borders when it comes to public private collaboration in health care innovation. In addition, the target markets for development of health products or services are mostly national markets. It is considered that health products and solutions are only relevant in a local context and to some extent that there are barriers towards entering the Nordic market.

Entrepreneurs seem to be included in public private collaboration on innovation based on skills and competence towards the project. In regards to public procurement processes entrepreneurs in all the countries experience barriers concerning their participation because of tight focus on price.

The issue of gender and its effect on health innovation is remarkably similar in all the Nordic countries. The study shows that gender is not considered an issue or a barrier to public private collaboration on innovation. Instead there is

an emphasis on selection of collaboration partners based on skills and qualifications.

Across the Nordic countries, potential of collaboration is related to the experience that the quality of products and services is improved in a way that could only be obtained through collaborating across the public and private sector. The study has also demonstrated benefits of collaborating experienced by the private actors relating to potentials in increased market share.

Barriers to innovation and public private collaboration are, to a large extent, inter-Nordic. The most common barriers are:

- Lack of flexibility in law and regulation, especially regulation of public procurements, is an important barrier in all the Nordic countries. Lack of flexibility seems to some extent to be due to inadequate knowledge on how to use the more flexible mechanisms and to a tight focus on costs in the procurement processes, rather than to actual lack of flexibility in the regulations.
- Inadequate economic conditions are also highlighted as a barrier to public private collaboration in several of the countries, e.g. lack of private venture capital, lack of policy measures to stimulate private investments in innovation and lack of support systems to enhance public private collaboration.
- There are cultural barriers between the traditional public health sector and private sector business development. Innovation practices must adapt to the cultural codes in the health sector to succeed. The study also underlines that collaboration is hindered by lack of trust between the public and private sector.

- The study also implies that lack of knowledge-sharing across the Nordic countries constitutes a barrier to further development of innovative solutions in the health care sector. A high degree of national-oriented mind-set in the Nordic countries composes a barrier to increased collaboration across the countries.

4.1 Iceland

The study on Iceland presents several examples of collaborations between the public and private sector regarding health products and solutions. In particular private and public actors collaborate through public procurement processes when standard solutions are required and price is the important parameter, and form collaborations around user needs when innovation of new products and solutions are central.

In Iceland personal relations and networks work as an informal, but strong mechanism to establish collaborations with relevant actors in the health sector. Consequently, there is a lack of formal mechanisms that support initiation of collaborations affecting projects where personal networks are inadequate. Selection on participants primarily reside on skills and competences, and not gender.

The study has emphasised the international orientation in innovation projects on Iceland, both with regards to participants in innovation projects and concerning target markets. The Nordic countries and the United States are the main areas of attention for Icelandic health innovators. It is highlighted that the Icelandic home market is considered a test market before global markets are approached.

Potential for collaborating in public private is related to synergies leading to better health products. The largest barriers in Iceland relate to lack of policy frames and support systems to enhance collaboration whereas a national-oriented mindset in the Nordic countries compose a barrier to increased collaboration across the countries.

4.2 Finland

The study on Finland shows various examples of public private collaborations. Three types have been dominant; public procurement, public private partnerships and public private innovation. Collaborations on innovation are used extensively in development projects aiming at providing inputs to new public solutions and services whereas procurement processes are applied across the public and private sector in Finland concerning new health products and solutions

Finland has a pronounced focus on including entrepreneurs in public procurements, and there is emphasis on providing smaller companies with access to the health care market. The participation of entrepreneurs is aided through special initiatives providing information and access to networks, as well as a coordinated action to get several entrepreneurs to make a bid for a tender as a group thus enabling a combined larger quantity adhering to requirements on price, which often form a barrier to entrepreneurs' participation in public tenders.

User-driven methods are widely used in innovation projects as user perceptions are considered important within the health sector, while the Finish study shows very little collaboration with Nordic partners on health innovation projects.

Potential from public private collaboration is that it made the participants more innovative and improved work processes by bringing in new ideas and technical know-how and by providing better products and services to the citizens. The most common perceived external barrier to public private collaboration is lack of flexibility in laws and regulations and contractual rules.

4.3 Sweden

The study on Sweden discusses different types of public private collaboration. The informants in the study have underlined that public private collaboration creates synergies making it possible to develop new and innovative solutions.

The public procurement processes may be adopted to include innovation but this option is rarely used. Cultural barriers seem to be more important than the legal when it comes to the strategic orientation of the processes. In general there are massive cultural barriers between the traditional public healthcare sector and private sector business development. Innovation practices must adapt to the cultural codes in the healthcare sector to succeed.

The Swedish study indicates that entrepreneurs are included in health innovation projects, however they experience different barriers in developing their innovative ideas. Public procurement requirements and the financial and time cost of participation in standardization processes have been raised as main issues.

Lack of private venture capital and lack of public measures to stimulate private investments in innovation are barriers for development of research based innovation. The study also points to limited resources and lack of incentives to stimulate user driven innovation.

There is limited experience in collaborating with Nordic partners, not necessarily because of a high cost of cooperation with Nordic partners but because the transaction costs with regional and national partners are even less.

4.4 Norway

The study on Norway discusses different types of public private collaboration, from public procurements to public private collaboration on innovation. Important positive results from public private collaboration are synergies between the fields of expertise comprised in the collaboration team.

The study indicates barriers to public collaboration on innovation related to the public procurement processes when it comes to the strategic orientation of the processes. The study further points to lack of trust between public and private partners, lack of private venture capital and lack of public measures to stimulate private investments in innovation as a barrier to development of research based innovation. The study in addition points to limited resources and lack of incentives to stimulate user-driven innovation. The newly EU-awarded public research and development contract (OFU) is an example of a successful approach to funding public private collaboration in innovation.

Entrepreneurs experience different barriers to developing their innovative ideas. Entrepreneurship arising from employees in the health sector is not always easy to develop, depending on where the innovative initiative is generated. Public procurement requirements are also difficult for an entrepreneur or a small contractor to satisfy.

The study has also identified lack of knowledge-sharing and funds to support projects that cut across the Nordic countries. There is very limited experience in collaborating with Nordic partners. None of the projects explored had co-operations with Nordic partners and the participants at the workshop also had little experience with this.

4.5 Denmark

The study on Denmark shows that private and public actors find multiple ways to collaborate within the health sector, with public procurement and public private collaboration on innovation being the most outspoken in the study. Whereas innovation projects often succeed in developing good products and solutions, there are some difficulties relating to bringing the new products to market and ensuring a proper integration of solutions in the organisation. Public procurement is an integrated form of collaborating and is primarily preferred when standardised solutions and products are required as price is the most dominating parameter in procurement processes.

Entrepreneurs are not common as partners in Danish public private collaborations on innovation, and the narrow price logic of public procurement is part of the explanation. Innovation projects however, to some degree experience entrepreneurial spin-offs. User-driven methods are considered an important part of public private collaboration on health innovation projects and thus various degrees of user involvement were detected in innovation projects. In public procurement the inclusion of users was not common however practices with the involvement of users in selection of tenders are an emerging trend.

The study indicates that despite various initiatives within health innovation in Denmark there is very limited experience in collaborating with Nordic partners and the Nordic market is often not considered in development phases of Danish health innovations. The potential of collaboration relates to the fact that better health products are developed than what could have been achieved alone. Cooperation across the Nordic countries is hindered because of lack of knowledge on Nordic markets and structural set-up and additionally Danish public innovation programs has a dominating national focus in its appropriation process which does not encourage the injection of a Nordic dimension.

5 Policy recommendations

The Nordic countries have initiated a large number of interesting initiatives, collaboration and innovation activities at all levels. There is a potential to become the attractive front-runners in the field of health innovation that we need be.

The study provides inspiration to a number of recommendations on new initiatives, which must be implemented if the Nordic countries want to exploit their future potential for innovation and entrepreneurship within health. We emphasise a need for action in areas where there is a lack of initiatives, or where the impact of initiatives can be strengthened. The connection between results and recommendations is summarized below.

National policy recommendations

There are many potential initiatives which can be taken at the national level.

Implement strategic procurement through health innovation demand

It is necessary to coordinate health innovation strategies with institutions at all levels and in the different sectors to work together to establish a demand for health innovation in the health system. On the daily operative level there is a need to integrate purchasing departments and the development departments.

Result – challenges and potentials	Recommendations
National focus	
Great potential for the health systems to drive innovation	Implement strategic procurement through health innovation demand
Public actors are uncertain about how to use pre-commercial procurement	Clarify rules on pre-commercial procurement
There is lack of finance for and focus on commercialisation and implementation	Emphasis on commercialisation and implementation
Nordic focus	
Access to the Nordic market takes a lot of time for new solutions and entrepreneurs	Simpler permission for new health solutions
There is little incentive and funds for Nordic health innovation projects	Collaboration among National and Nordic funding institutions
Potential in exploiting and cross-fertilizing competences across the Nordic countries	Link health clusters on Nordic commercial platforms
Difficult approval of research projects	Cooperation among ethical committees
Many great examples to be spread in the Nordic countries.	Best practice sharing and health innovation statistics
Lack of knowledge about the impact of organisation on health innovation level	New inspiration on international models of health innovation

Clarify rules on pre-commercial procurement

We advise the Nordic countries to clarify and communicate the rules on pre-commercial procurement. A way to do this is to make guidelines and examples of contracts which are easy to use for public buyers.

Emphasis commercialisation and implementation

We propose that the Nordic countries support the new solutions in the –pre-commercialisation and implementation phase. National and regional public innovation programmes shall require that public private collaboration on innovation projects shall document the expected outcome and how they will implement it or how it can be sold on the market. Network and knowledge diffusion units must focus on commercialisation and implementation.

Nordic initiatives

We propose that the Nordic countries make a common strategy with clear goals and specific measures to exploit the potential of health innovation.

Collaboration among national and Nordic funding institutions

We propose to open national initiatives for co-financing Nordic public-private innovation projects. Nordic projects should be eligible at the national programmes, making Nordic calls or to prioritise Nordic projects and communicate these possibilities to actors. Furthermore, the Nordic countries should explore the possibilities of using the opportunities in the European framework programmes.

Simpler permission for new health solutions

We propose to implement a simpler model for permitting new health care solutions to be used within the health sector in the Nordic countries. We propose finding out ways of standardising approval procedures and assuring that getting permission opens up a Nordic market.

Cooperation among ethical committees

We propose to make it easier to conduct Nordic health research and innovation by establishing collaboration among Nordic ethical committees for Nordic projects.

Link health clusters on Nordic commercial platforms

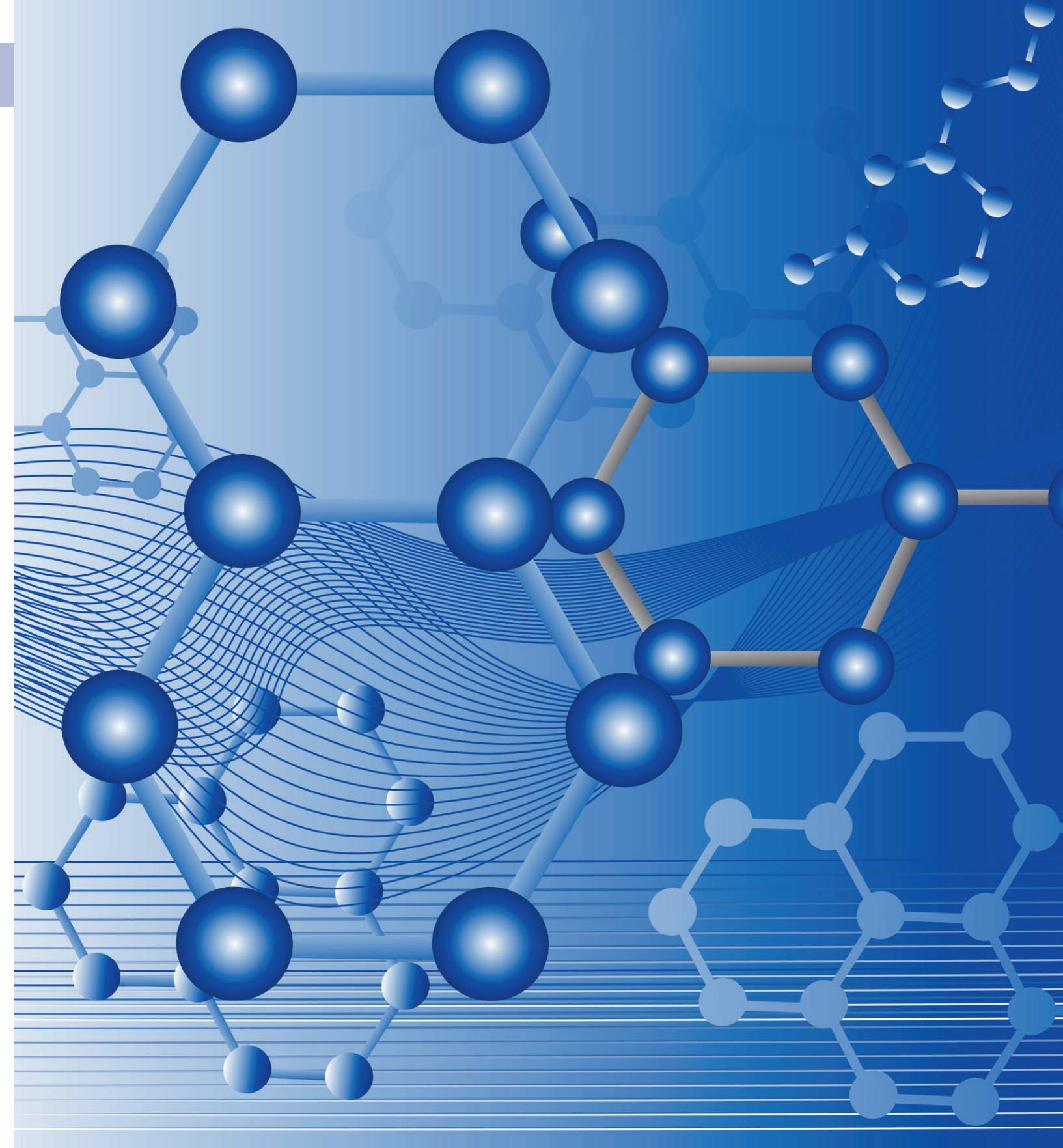
We propose to map clusters, competences and actors in the Nordic countries as a first step to link cluster organisations or other driving actors through networks and establish a set of Nordic health innovation commercialisation platforms.

Best practice sharing and health innovation statistics

We therefore propose that Nordic knowledge diffusion should be ensured between actors. In practise we propose to set up a virtual Nordic Health Innovation Centre consisting of key actors within this field, who are to develop and spread knowledge to each other and further to other actors in the individual countries.

New inspiration on international models of health innovation

We suggest that research of the international models of health innovation is initiated in order to analyse and understand the effect of different organisational models and financing schemes on health innovation outside the Nordic countries.





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ANP 2010:765
ISBN 978-92-893-2140-2