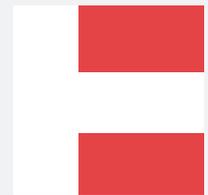
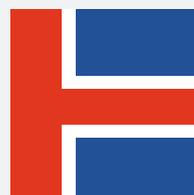
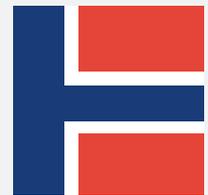




**INNOVATION NETWORK OF
ART AND DESIGN UNIVERSITIES
IN NORDIC AND BALTIC COUNTRIES**
Preliminary Survey



Hanna Heikkinen



Designium, the New Centre of Innovation in Design, is built upon close collaboration between the University of Art and Design Helsinki, the University of Lapland, Helsinki University of Technology (HUT), and the Helsinki School of Economics (HSE). The cooperation also includes other universities, polytechnics, businesses and public organisations.

The purpose of Designium is to promote the development of national design policy and the internationalisation of Finnish design. Designium also promotes the transfer of new knowledge and expertise to the business community and, thereby, the international competitiveness of Finland.

Nordic Innovation Centre was established in January 2004 as a merger of Nordic Innovation Fund and Nordtest. The function of the new institution is to develop collaboration at regional level in the Nordic business sector as well as to promote innovation and results-oriented research. Nordic Innovation Centre operates under the Nordic Council of Ministers.

The Nordic Innovation Centre works primarily for the small and medium-sized companies (SMEs) in Nordic countries. Other important partners include those most closely involved in entrepreneurial and innovation activities, such as industrial organisations and interest groups, research institutions and public authorities.

Innovation Network of Art and Design Universities in Nordic and Baltic Countries

- Preliminary Survey

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- Preliminary Survey
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Executive Summary

The importance of universities as part of national innovation systems has grown in recent years. Universities are no longer merely institutions that conduct basic research and provide higher education and training. They are increasingly seen also as producers of commercially important innovations. Moreover, the burning question in today's debate is how to include the duty to promote the utilisation of new knowledge in the Universities Act as the university's third mission.

Innovations are easily associated to patentable inventions or other technological solutions. Innovations can, however, just as well be in the field of culture, such as design, music, cinema, multimedia, or any other artistic discipline. In fact, the advent of the information society has increased the significance of such "soft" innovations. The technology is not enough anymore. People look for experiences. The rise of the creative industries and the increasing awareness of their role to the economy and the whole society have increased the importance of the so called cultural innovations.

At art and design institutions, new cultural and content-related innovations are created daily. However, a recognized problem is that inventions made as for example degree works and term projects do not find their way from students and departments to be commercialised and utilized by companies. For the successful commercialisation of research results, universities need to have systems in place for the innovation supporting services. Also, the issues related to intellectual property rights become highly important.

It seems that universities in the field of art and design are somewhat behind in the development of innovation supporting activities compared, for example,

to universities in the field of technology and medicine. Naturally, this is partly due to the different characteristics of the fields. However, the interest of developing these things does exist and many art and design universities have started to develop their activities accordingly. A clear sign of the development is also that many countries have included innovation related actions and goals in their national design policies.

The purpose of this preliminary survey is to review the current status of innovation activities of art and design institutions in the Nordic and Baltic regions. The survey aims to highlight the innovation supporting services provided by the most important art and design universities in Nordic and Baltic countries. Also, how design is integrated to the national innovation systems is analysed from each country's point of view. The focus is especially on describing different actors in the innovation systems and highlighting good practices found in different countries.

Finally, the aim of the survey is to investigate preconditions for further development of the innovation activities of art and design institutions and for the creation of Nordic and Baltic innovation network in the design field. This type of a network could create a framework and procedures for co-operation between the Nordic and Baltic art and design institutions, as well as businesses and design firms that utilise their expertise. The co-operation could also promote the production, search, development, protection and utilisation of innovations created in the art and design universities. This would also facilitate the further creation and support of new business operations based on the design innovations.

Contents

Executive Summary.....	3
Foreword	7
1. Introduction	9
1.1 Background of the study	9
1.2 Method.....	10
1.3 The structure of the report	10
2. Theoretical Background: Transfer of Innovations from Universities to Industry and Business	11
2.1 The concept of Innovation	11
2.2 National Innovation Systems	11
2.3 The transfer of innovations from universities to industry	11
2.4 Supporting structures for the knowledge transfer	13
2.5 Example of the effective university - industry relationship: Chalmers University of Technology	14
3. Art and Design Institutions in National Innovation Systems.....	15
3.1 Art and design universities as part of national innovation systems	15
3.2 The role of National Design policies.....	16
3.3 Finland.....	18
3.3.1 Universities.....	18
3.3.2 Other actors in the innovation field	20
3.4 Denmark.....	26
3.4.1 Universities.....	26
3.4.2 Other actors in the innovation field	27
3.5 Sweden.....	32
3.5.1 Universities.....	32
3.5.2 Other actors in the innovation field	35
3.6 Norway.....	38
3.6.1 Universities.....	38
3.6.2 Other actors in the innovation field	39
3.7 Iceland and Baltic Countries	43
3.7.1 Iceland.....	43
3.7.2 Estonia	44
3.7.3 Lithuania.....	45
3.7.4 Latvia	46
4. Theoretical Background: Preconditions for the Network of Art and Design Universities in Nordic and Baltic Countries	47
4.1 Background for Networking.....	47
4.2 The concept of Innovation Network.....	47
4.3 Commercialisation network.....	47
5. Analysis of the Current Situation	51
5.1 Findings of the preliminary survey	
5.1.1 Innovation supporting services in universities.....	51
5.1.2 Clusters.....	51
5.1.3 Cooperation with companies.....	52
5.1.4 Research.....	52
5.1.5 Multidisciplinary approach in education	52
5.1.6 Design consultancy services	52
5.2 Possibilities of networking	53
5.3 Existing Networks	54
6. Suggestions and Recommendations for Further Development	55
6.1 Suggestions for starting the co-operation.....	55
6.2 Recommendations: Two alternative ways to proceed	57
References	59

Foreword

COMPETITIVENESS BY DESIGN

The relationship between design and competitiveness is widely recognised today. A well-designed working environment motivates employees to be more creative, improves general well-being in the workplace, and sparks interest in the company at the recruitment stage.

The way in which customers experience the services provided by a company has a considerable impact on competitiveness and success. Our travelling experience on a train or plane, for instance, is strongly affected by design: the lightning, colours, attention to detail, tableware, graphic design of different products, the way the staff are dressed, the acoustics, and even the scents in the air, all influence the kind of experience we gain. The same is true for every environment where a company is offering its services or selling its products. The client's reaction to the overall design concept is vital. A case in point was the design brief for the new terminal at Heathrow Airport which, in its simplest terms, was "to create a unique transitional experience". An airport is not just a complex logistics network; it is also an experience that has been designed to create the maximum overall effect.

The way in which the general public perceives a company is also influenced by communication. A visually interesting and distinctive appearance helps customers recall the company more easily and makes it stand out among its competitors. The logos and other signage a company uses to identify itself tell about the quality of service and what the company has to offer in terms of know-how.

The key to any company's success is the reliability and quality of its products and services. When making a buying decision, customers evaluate the visual appearance, quality, ease of use, and also the cultural impressions conjured up by the product. In a buying situation, there are only a couple of seconds to draw the customer's attention. If the product fails to do this, the design has not achieved what it set out to do.

All these points have an effect on the company brand and the way it is evaluated by clients and customers. Design is therefore one of the key strategic issues in the innovation activities and business operations of a company. However, this is something which has not yet been fully appreciated, since design is often connected merely with

the tangible form of the end-product. If design is also seen as a tool which is integrated into the core processes of a company and as a source of continuous renewal for such processes, it may well become the key to the competitiveness of a company. In fact, the importance of design is not only limited to companies, it can also impact on the competitiveness of entire regions.

The awareness of the importance of design has led many countries to formulate their own national design strategies. Many of these aim at increasing investments via the promotion and increased use of design. Such strategies also recognise the fact that the increased use of design alone is not sufficient to guarantee enhanced competitiveness. Great emphasis should also be placed on research, on the development of the knowledge generated by it and, above all, on the application of this new knowledge. Hence, in Finland, Sweden, Denmark and Norway, a lot of effort has been made to improve research and post-graduate education. In addition to research, the development and consolidation of the innovation supporting services is particularly important in order to derive the most benefit from the acquired knowledge and innovations.

This survey, prepared at Designium, the New Centre of Innovation in Design, by researcher Hanna Heikkinen, focuses on the Nordic and Baltic art and design universities and on the innovation-supporting services provided by them. The universities have a significant role in the building of the creative information society and in the development of the competitiveness of their operational environment. The survey suggests that more effective co-operation needs to be encouraged between the Nordic and Baltic art and design universities in the field of innovation-related activities. This could be achieved by establishing a network that would operate as a forum between the different actors in the field. This would further reinforce the international competitiveness of the Baltic region, accelerate the development of design knowledge as one of its competitive factors, and facilitate the development of company operations with the aid of design.

*Rector, Professor Yrjö Sotamaa
Chairman of the Steering Group*

1. Introduction

The purpose of this preliminary survey is to review the current status of the innovation activities of art and design institutions in the Nordic and Baltic regions. First of all, the survey aims at highlighting the innovation supporting services provided by the most important art and design universities in Nordic and Baltic countries. Secondly, how design is integrated into the national innovation systems is analysed from each country's point of view. The focus is especially on describing different actors in the innovation systems and highlighting good practices found in different countries.

Furthermore, the aim of the survey is to investigate preconditions for the further development of the innovation activities of art and design institutions and for the creation of a Nordic innovation network in the design field. Such a network could create a framework and procedures for co-operation between the companies, Nordic institutions, businesses and design firms that utilise their services and expertise. The co-operation could also promote the production, search, development, protection and utilisation of innovations created at the art and design universities in Nordic and Baltic countries. This could also facilitate the further creation and support of new business operations based on the innovations.

The key element of networking would be a strong interaction between the economy and universities providing the highest education and research in this field. For researchers, teachers and students the network could offer new ways of applying their expertise in commercial assignments and in experimental business laboratories. For businesses, it could provide an opportunity to exploit the research and expert resources of the leading art and design institutions in their own product development and innovation activities.

1.1 Background of the study

The importance of universities as developers of innovations has grown in recent years. Universities are no longer merely institutions that conduct basic research and provide higher education and training. They are increasingly seen also as producers of commercially important innovations.

Innovations are typically thought of as patentable inventions or other technological solutions that permit industrial utilisation. Innovations can, however, just as well be in the field of design, music, images, cinema, theatre and drama, multimedia, or any other artistic discipline. The advent of the information society has, in fact, increased the significance of such "soft" innovations: high technology needs to be supplemented by content and form.

At art and design institutions, new content and content-related innovations are created daily – precisely the kind of things the infrastructure of the information society, from the Internet and mobile networks to digital television, all need. Innovations may be of major importance to the national economy, but their transfer from universities to companies and the rest of society is by no means automatic. Such transfer requires that universities have systems in place for the efficient search for innovations, functioning support services for innovative operations and active interaction with the business community.

Finnish art and design institutions have chosen to develop their own innovation and support activities through networking. The network covers all Finnish art and design institutions. It has been built and maintained by the University of Art and Design Helsinki and its innovation centre, Designium. The goal has been to increase the utilisation of design expertise by the innovation and product development activities of the business sector, and to produce new design innovations.

This study aims to survey whether such activities exist in other Nordic and Baltic countries, to what extent and what kind of methods and activities are found. Finally, the special interest is in seeing what could be the synergies of joining forces to develop this field further.

1.2 Method

This preliminary survey is conducted by Designium, with financial support from The Nordic Innovation Centre. The survey was conducted from 5/2003-12/2003 and this final report aims at summarising the main findings of the survey.

The preliminary survey was conducted under the supervision of a steering group consisting of the following members:

Rector, Professor Yrjö Sotamaa / University of Art and Design Helsinki, Finland (Chairman)

Professor Pete Avondoglio / Umeå Institute of Design, Sweden

Rector Ando Keskküla / Estonian Academy of Arts, Estonia

Rector Peter Butenschøn / The Oslo National College of the Arts, Norway

Rector Gøsta Knudsen / Danmarks Designskole, Denmark

The study covers all the main universities in the field of art and design in Nordic and Baltic countries. The list of the universities can be found in the country specific sections. The information was gathered by contacting relevant people at the universities involved.

Also, the researcher visited several universities and other institutions during the project period and had interviews with key people in the field. A questionnaire was also sent to some of the universities. Finally, much information was also gathered on the Internet.

1.3 The structure of the report

The report starts with a discussion of innovation as a concept and the national innovation system as a whole. Then, the transfer of the knowledge from universities to industry and the importance of the supporting structures for this transfer are highlighted. Next, the role of art and design universities as part of national innovation systems is analysed. A special attention is also given to the national design policies in this context.

This is followed by the country specific analysis where each country is studied separately. Each country analysis starts with a figure illustrating the main actors in the innovation field. The figures are based on three axes illustrating the actors in different fields in design.

Next, all the actors are described and the instruments and methods they use for the innovation facilitating services are described in more detail. The purpose of the figures is to make the different fields and actors in each country more comparable. Finland, Sweden, Norway and Denmark are studied in somewhat more detail since there is more information available concerning these countries.

Finally, there is a discussion about the synergies of networking, an analysis and recommendations for further development.

2. Theoretical Background: Transfer of Innovations from Universities to Industry and Business

2.1 The concept of Innovation

The concept of “innovation” can be looked at differently in various contexts. However, a common thread running through all the definitions is that innovation is the expression of creativity in a practical context, involving applications of new thinking to problem solving.¹

Innovation can be seen as *a new way of doing things commercially*. This definition states that *innovations must have commercial application*.² It is also useful to draw a distinction between “invention” and “innovation”. Invention is the production of new ideas, solutions and applications in the format of thought structures, models or schemes. Innovation, on the other hand, consists of making new things happen in terms of new results. Thus, innovations are new creations with significant economic benefits. The successful innovator is “therefore, a doer – someone with imagination who can visualise the possibilities of an idea and who has a strong desire and resource management skills to see it realised in a concrete form”.³

2.2 National Innovation Systems

A national innovation system can be defined as the system of organisations and actors whose activities and interaction determines the innovativeness of the national economy and society.⁴

In general, national innovation systems aim to: 1. enable nations to make efficient R&D management programmes; 2. provide effective learning and education system; and 3. produce, develop and design new innovative products and processes. National innovation systems include education, industrial, political and economic systems of nations that are interacting together.

Innovation policies in the Nordic countries are all strongly influenced by the systemic approach to innovation. According to this view, technological advance and competence building is characterised by constant interplay and mutual learning between different types of knowledge and actors, including firms, institutes, universities, sources of financing, relevant public agencies and more. According to this way of thinking, public authorities may encourage innovation by strengthening industrial learning and by developing efficient networks for the distribution of knowledge and personnel. The general framework conditions for innovation, including taxation, physical infrastructure, laws and regulations must also be taken into consideration.⁵

In all Nordic countries knowledge, new technology and innovations are currently seen as a key to competitiveness, progress and economic growth, the policy implication being that government should design policies that stimulate innovative activities.

2.3 The transfer of innovations from universities to industry

The importance of universities as part of the national innovation systems and developers of innovations has grown in recent years. Universities are no longer merely institutions that conduct basic research and provide higher education and training. They are increasingly seen also as producers of commercially important innovations. Moreover, the burning question in today’s debate is how to include the duty to promote the utilisation of new knowledge in the Universities Act as the university’s third mission.⁶

Figure 1: "Science Push" – innovation opportunities



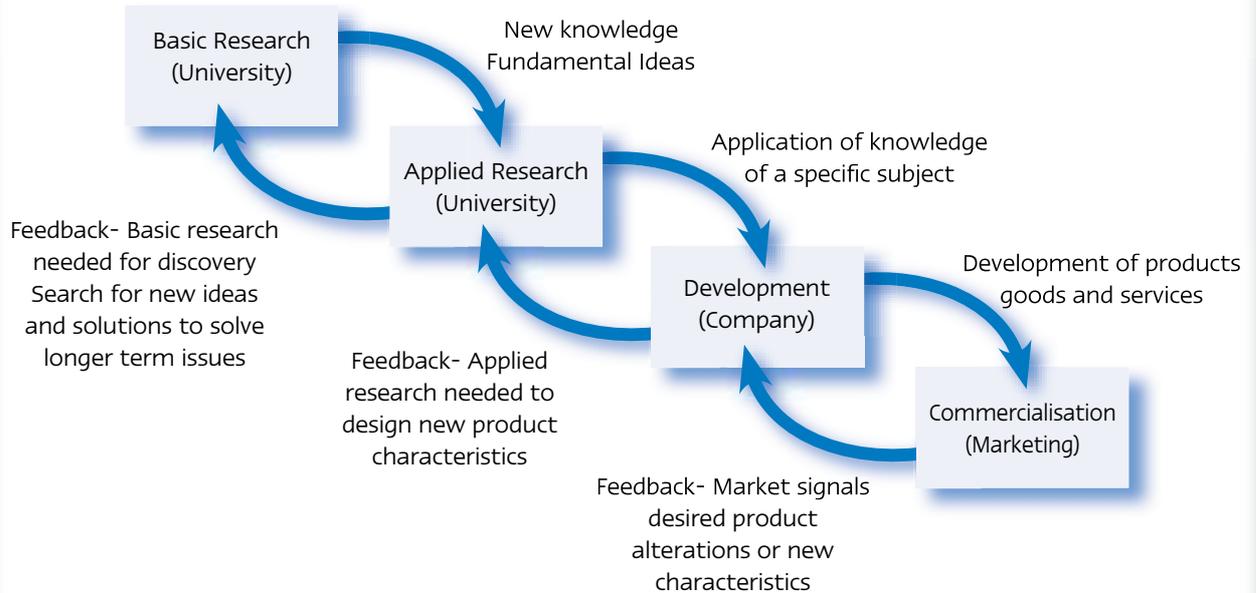
Source: Arnold and Bell, 2001; Formica & Mitra, 1996; (modified by the author)

Figure 2: "Market Pull" – innovation pressures



Source: Arnold and Bell, 2001; Formica & Mitra, 1996; (modified by the author)

Figure 3: Interactive Non-Linear Model of Innovation



Source: Arnold and Bell, 2001; Formica & Mitra, 1996, Wessner Charles, 2003 (modified by the author)

When describing the knowledge transfer from universities to business, several models of innovation can be used. The linear model of innovation is based on the “science push” thinking and it mainly deals with the explicit knowledge developed in research processes in universities. In this model, basic research made in universities is placed at the beginning of the chain. As shown in Figure 1, basic research produces theories and findings that are redefined in applied research, then tested in the development process, and then marketed as industrial innovations and taken into use.⁷

Another model, the “market pull” model refers to the dynamics of the market as the motor of technological change (See Figure 2). According to this model, markets generate demand for new products and services. Thus, the market stimulates research conducted at the universities and this way finally fulfils the needs of the market.⁸

In today’s world, the industry is coming more dependent on university research just as university research is drawing ideas from commercial trends. Regional economies need their research universities and in many cases university innovations in combination with early government funding has been a key to the growth of many successful companies. Thus, the global society is becoming increasingly aware of the importance of the interaction between innovation and academic research.

A more common view is also that this interaction is non-linear. It is increasingly about industry making use of academic research, but equally about academic research learning about problems from industry. Many university professors can teach at the universities and at the same time be successful business people, enabling the university to contribute to the development of its region through clusters of science-based new companies.⁹

This has also led to the “Interactive non-linear” model of innovation, which is characterised by feedbacks and interactive relations of science, technology, production, marketing and policy-making (See Figure 3).

Interconnection between universities and market has become a crucial factor in achieving economic and social benefits. Moreover, in today’s rapidly changing technological climate, a closer relationship between what is researched, studied, and learnt at universities and what is researched, produced, marketed and learnt in business, is needed.¹⁰

Finally, much of the knowledge produced at universities comes not in the form of written research results, but as tacit knowledge amongst the individual researchers. The flow of skilled personnel and qualified graduates with state-of-the-art knowledge from university to industry is, therefore, also an important channel for the successful transition of knowledge from universities to the commercial sector. Thus, successful commercialisation builds on excellent research results, managerial and industrial competence and financial strength.¹¹

2.4 Supporting structures for the knowledge transfer

For the successful commercialisation of research results, universities need to have systems in place for the innovation supporting services. In practice, the commercialisation process usually occurs through a complex interplay between different actors and mechanisms.

The commercialisation may not only involve an idea and the individual innovator, but also organisations like departments, incubators, innovation centres and patent offices, as well as various specialists on intellectual property rights (IPR). Additionally, if the universities’ aim is to graduate students who are motivated and prepared to start their own business, training in business administration and entrepreneurship is of great importance.¹²

It is common that universities have established units to facilitate the contact between universities and industry. An example is the Chalmers Industriteknik (CIT) at The Chalmers University of Technology, which identifies and links research needs in industry with research groups at Chalmers and take the role as project leader for these projects.¹³

An incubator facility supports entrepreneurs and aims to accelerate the development of new companies. The facilities may include subsidised office space, professional assistance, shared office services and entrepreneurship related advisory services, oriented towards building networks, for example. The term ‘innovation centre’ is often used to describe services offered to support entrepreneurs in the process of setting up and during the first phases of developing their companies.¹⁴

2.5 Example of the effective university-industry relationship: Chalmers University of Technology

The research taking place at Chalmers ranges from mathematics and natural sciences to engineering, industrial sciences and community development. At nine schools, divided into 100 departments and divisions, research and education are conducted within natural sciences and all the engineering (science) disciplines. Chalmers has some twenty scientific centres, many of which run jointly with Gothenburg University, as well as six national centres of excellence. These centres are the collaborative interface between the university and industry.¹⁵

The vision of Chalmers is that the university should be regarded as one of the ten best technical universities in Europe, and the best in industry co-operation. A vice-rector for external activity has recently been appointed.

Most collaborative projects between Chalmers and industry are initiated and run directly by research laboratories. In addition, Chalmers has an organisation of units designed to reinforce industrial collaboration and to develop different types of collaborative projects with trade and industry. The units listed below are

either departments at Chalmers, national expertise centres or separate companies or foundations which Chalmers has created.

- Corporate Relations (including the Industrial Liaison and Development Office)
- Office for Fundraising and Alumni Affairs
- Chalmers Contract Research Organization (CIT)
- CHAMPS (Chalmers Advanced Management Programs)
- Chalmers Science Park
- Chalmers Innovation (Support spin-offs, runs incubator "Stena Centre")
- Chalmersinvest Inc (seed-capital)
- Innovations Kapital Inc (venture capital)
- Technology Marketing and Licensing Partner-West Sweden Inc

Additionally, Chalmers is involved in approximately 150 industrial and educational projects within the EU.

¹ Bhushnan, Y.K. & Sunada Easwaran (1997). "Innovation: the Concept, the Process, the People". In: *Innovation and Economic Development. University-Enterprise Partnership in Action*, eds. Mitra, Jay & Formica, Piero (1997). London, Oak Tree Press. P.83-84

² Porter, M.E. (1990). "The Competitive Advantage of Nations", London: McMillan. P. 780

³ *ibid*

⁴ Schienstock, Gerd & Timo Hämäläinen (2001). "Transformation of the Finnish innovation system: A network approach." Sitra Report Series. Hakapaino Oy, Helsinki. P. 73

⁵ Koch, Per M. et al (2003). "Good-NIP, Good Practices in Nordic Innovation Policies, Part 1, Summary and Policy Recommendations." STEP, Oslo. p.1

⁶ Science and Technology Policy Council of Finland (2003). "Knowledge, innovation and internationalization", online publication, www.minedu.fi. p19

⁷ Schienstock, Gerd & Timo Hämäläinen (2001). "Transformation of the Finnish innovation system: A network approach." Sitra Report Series. Hakapaino Oy, Helsinki. p. 52-55

⁸ Schienstock, Gerd & Timo Hämäläinen (2001). "Transformation of the Finnish innovation system: A network approach." Sitra Report Series. Hakapaino Oy, Helsinki. p. 52-55

⁹ Nordfors, D, J. Sandred & C. Wessner (editors) (2003). "Commercialization of Academic Research Results" Vinnova publications. p. 9

¹⁰ Mitra, Jay & Piero Formica (1997). "University- Enterprise Partnership in Action". London, Oak Tree Press.¹¹ Nordfors, D, J. Sandred & C. Wessner (editors) (2003). "Commercialization of Academic Research Results" Vinnova publications. p. 9

¹² Waago, Sigmund J (editor) (2001). "The Role of The University in Economic Development: An Analysis of Six European Universities of Science and Technology" GREY, NTNU. p. 119-120

¹³ www.cit.chalmers.se

¹⁴ Waago, Sigmund J (editor) (2001). "The Role of The University in Economic Development: An Analysis of Six European Universities of Science and Technology" GREY, NTNU. p. 130

¹⁵ www.chalmers.se

3. Art and Design Institutions in National Innovation Systems

3.1 *Art and design universities as part of national innovation systems*

In art and design, the universities lag somewhat behind in the development of the innovation activities compared, for example, to universities in the field of technology and medicine. Naturally, the different characteristics of the fields should be taken into account. However, interest in developing these things does exist and many art and design universities have started to develop their activities accordingly.

A recognised problem is that there are many inventions made as, for example, degree work and term projects in art and design universities but they do not find their way from students and departments to be commercialised and used by companies. Usually, the knowledge generated by education moves into practice when designers become entrepreneurs or in-house designers in big companies.

However, not all the designers are willing to establish their own businesses or work as part of big companies. Additionally, many designers have focused on the product or service selection that requires finding a suitable, for instance, a small or medium-sized, business partner. Designers establishing their own company are thus required to both prepare prototypes and market material, as well as find a suitable partner to produce the product. Correspondingly, there are companies that wish to renew their product range or start producing new ones, but they do not have channels for finding the right partners (designers). Therefore, the design knowledge does not transfer to a growing business and the entrepreneurs do not get designs for developing their operations.¹⁶

To solve the problem described above, there is a need for producers and intermediates that can facilitate transfer of the design knowledge. From the university perspective this means that there is a need for a good monitoring system and forum where the ideas and innovations that emerge in the universities could be introduced to company representatives or investors. Additionally, the art and design universities should have systems in place for helping their students and researchers to develop the ideas further and finding suitable marketing channels for commercialising their ideas.

The Finnish Council of University Rectors took the initiative in May 1999 to develop the supporting services for innovative work in universities. The purpose of the project was to help universities develop their methods for commercial utilisation of the research results and research co-operation with companies. According to their proposal, every university should formulate their own innovation strategy and their own or outsourced support system for innovation services. Therefore, Finnish art and design institutions have also chosen to develop their innovation and support activities further. They decided to accomplish this through networking. The network covers all Finnish art and design institutions and it has been built and maintained by the University of Art and Design Helsinki and its innovation centre, Designium.¹⁷

3.2 The role of National Design policies

The strategic importance of design for national and industry competitiveness has recently been noted in countries around the world. Many governments have formulated design policies and programmes in close co-operation with the business sector. These policies are quite similar in many ways, emphasising design as a strategic tool for economic progress and improved competitiveness, as well as its national role in creating jobs and business opportunities.¹⁸

Also, the role of design for the national innovation systems has increasingly been taken into account. An example of this is the Finnish Design 2005! Programme, which aims to integrate design into the development of the national innovation system. Design can contribute to the innovation system by finding new modes of action, producing new research and R&D projects and training experts with a new orientation.

The main goals of the Finnish Design 2005! Programme are to create a dynamic design system which will take Finland to the forefront in the utilisation of design and to enhance competitiveness through the development of education, training and research. Thus, an essential part of the programme is the continuous creation of new knowledge through research.¹⁹

Of the Nordic and Baltic countries, design policies or promotion programmes have been formulated in Finland, Denmark, Norway, Sweden and Estonia. In

Latvia, a national programme for promoting the utilisation of design is also under development. Figure 4 indicates the relevant design policy papers considered here.

Most of these national design policy papers group their suggested activities under different headlines, such as design for national competitiveness, establishment of design infrastructure, design promotion in the public sector etc.

The activities can also be classified according to planned target groups. Mollerup Designlab A/S has made some regroupings in their Proposal for Estonian Design Policy report²⁰ and suggests that all design policy measures are targeted at one or more of the following groups:

- Industry and business
- The design community
- Education and research
- Public Sector
- General public
- International audiences

Of these categories, the most relevant concerning the innovation activities are shown in the figure 5. The figure lists examples of policy implementations and describes some actions related to the innovation supporting services.

Figure 4: National Design Policy Papers

Country	Source
Finland	Design 2005! The Government Decision-In-Principle on Finnish Design Policy, 15.06.2000
Denmark	Denmark in the Culture and Experience Economy – 5 New Steps on the Way. Published 17.11.2003 Regeringens Designredegørelse 1997 (old design policy)
Sweden	Förslag til nationellt program för design som utvecklingskraft inom näringsliv och offentlig verksamhet 2002.
Norway	Design som drivkraft for norsk næringsliv. Rapport fra Utvalget for Næringsrettet Design, 2001.
Estonia	Establishing the basis for the elaboration of the Estonian design policy measures. 2003.

¹⁶ Korvenmaa, Pekka (1998a). "Muotoiltu Etu I- muotoilu, teollisuus ja kansainvälinen kilpailukyky." Sitra, Helsinki. p. 73

¹⁷ Ilmavirta, Veijo et al. (2001). "Innovatiivisen toiminnan tukipalvelut yliopistoissa". Publications of Otaniemi International Innovation Centre. Gummerus, Jyväskylä. p. 24

¹⁸ Hytönen, Jaana & Hanna Heikkinen (2003). "Design Policy and Promotion Programmes in Selected Countries and Regions". Designium Publications. p. 2. www.uiah.fi > designium > publications

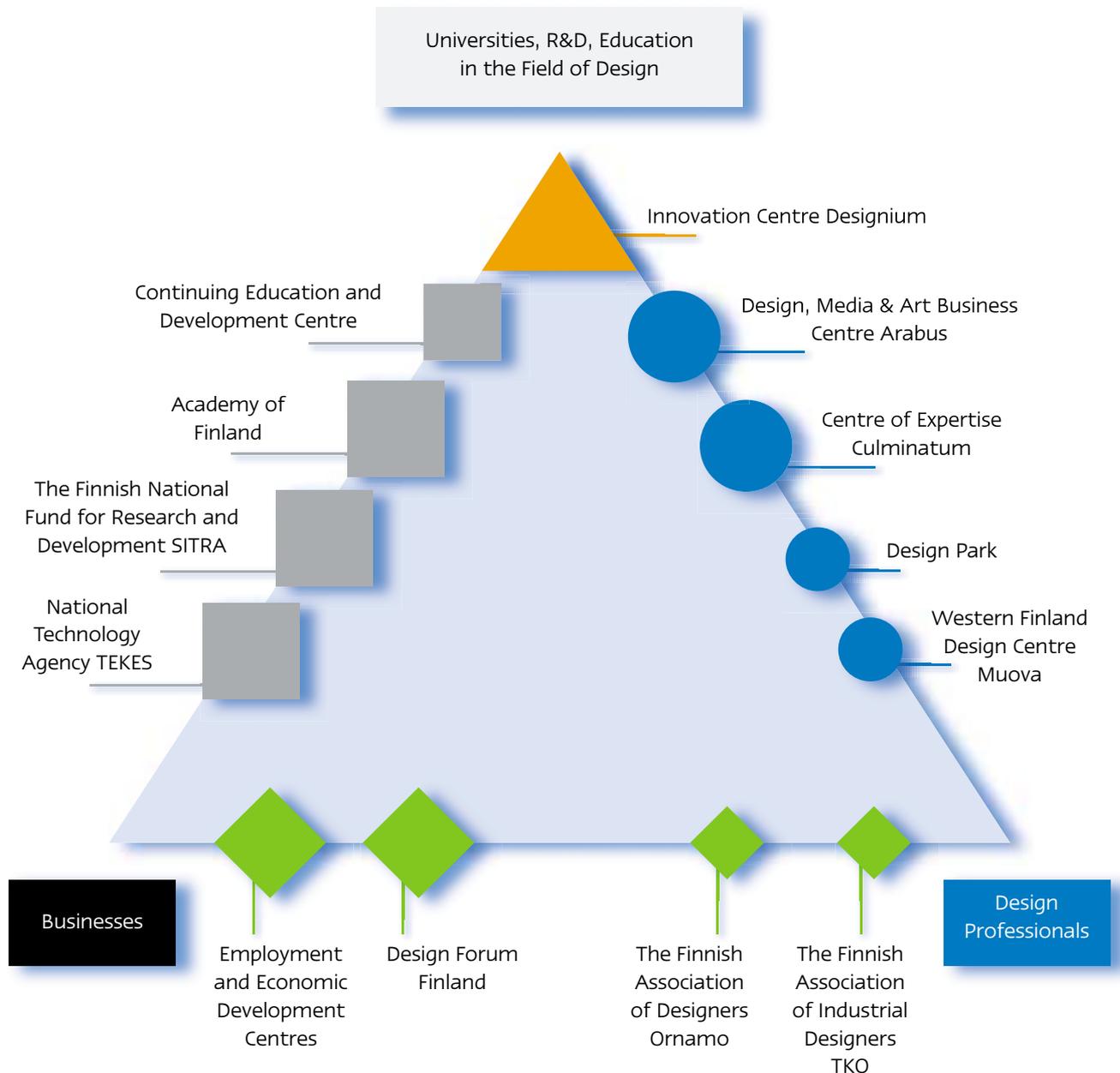
¹⁹ Korpelainen, Heini (editor). "Design 2005!, The Government Decision-In-Principle on Finnish Design Policy", Approved 15.06.2000. Arts Council of Finland and The Ministry of Education, Helsinki.

²⁰ Mollerup, Per et al (2003). "Establishing the basis for the elaboration of the Estonian design policy measures". Mollerup DesignLab A/S. p. 67

Figure 5: Examples of implementation and innovation related activities

Country	Examples of implementation	Innovation related activities
Finland	<ul style="list-style-type: none"> • Research programmes by TEKES and Academy of Finland • Designium Innovation Centre • Design education integrated in other technological and business education 	<ul style="list-style-type: none"> • Expansion of university level curricula towards innovation related issues • Continuing education with priority on business know-how • Business incubators supported by regional labour and business centres will facilitate the commercialisation of design know-how.
Denmark	<ul style="list-style-type: none"> • Research Centre Without Walls • Design promotion in industry, business and public sector • More regional promotion • The Growth Foundation financing of development projects that include design • The new strategy for Danish Design Centre 	<ul style="list-style-type: none"> • Knowledge Centre for Design • Design Research Centre • MindLab
Sweden	<ul style="list-style-type: none"> • The Innovative Caring Society • European Institute for Innovative Caring Design • National projects for design promotion 	<ul style="list-style-type: none"> • Swedish Centre for European design research: <ul style="list-style-type: none"> - National (design) research school - Basic and high school education - Strengthening master education - Continuing education for professionals with design competencies
Norway	<ul style="list-style-type: none"> • Multidisciplinary Research Centre • Good Design Label and Awards • National Design Campaign 	<ul style="list-style-type: none"> • Innovation foundation for professional design to catch new ideas, concepts and products • Integrating design into SIVA's incubator programme.
Estonia	<ul style="list-style-type: none"> • Research information Centre under development 	<ul style="list-style-type: none"> • Innovation Centre of the Estonian Academy of Arts

FINLAND - INNOVATION ENVIRONMENT IN THE FIELD OF DESIGN - ACTORS



3.3 Finland

3.3.1 Universities

University of Art and Design Helsinki, UIAH

The University of Art and Design Helsinki educates and conducts research in the fields of design, motion picture, audiovisual communication, art education and arts. There are five schools and seventeen fields of education and research.

With nearly 1,800 students, of which 14 per cent come from abroad, and 400 teachers, the University is the largest art school in Scandinavia with a strong international emphasis. The number of doctoral students amounts to 150 at the moment and 8-10 doctoral dissertations are completed yearly.

The university co-operates strongly with industry and a lot of research programmes and projects are conducted together with companies. The Research Institute of UIAH coordinates research and serves as a consulting body. It furthers cooperation with other interest groups and supports the university's departments in developing research and doctoral education. Research in UIAH is conducted in many different institutes and units. These include the Media Centre Lume, the National Research and Development Centre of audiovisual media, Media Lab, Future Home Institute, The New Centre of Innovation in Design Designium as well as The Continuing Education and Development Centre.

The predecessor of the University of Art and Design Helsinki, The School of Craft, was founded in 1871. The University has functioned in its present location in the Arabia factory since 1986.²¹

University of Lapland – The Faculty of Art and Design

The University of Lapland was founded in 1979 and has four faculties: Law, Education, Social Sciences and Art and Design. The Faculty of Art and Design was established in 1990 and it has five degree programmes: Art Education, Graphic Design, Industrial Design, Audiovisual Media Culture and Textile and Clothing Design.²²

The Academy of Fine Arts

The Academy of Fine Arts was founded in 1848 by a private foundation. At the beginning of 1993, the status of the Academy was raised to university level.

The Academy of Fine Arts provides the highest university-level theoretical and practical training in Finland in fine arts. It seeks to promote research in the fine arts and to act as a member of the international community of academic education in arts. The purpose of the Academy is to provide broad professional artistic training whilst taking into account new developments in contemporary art.

The school is divided into five departments: Painting, Drawing, Printmaking, Media Studies and General Studies.²³

The Sibelius Academy

The Sibelius Academy was established on a private initiative as the Helsinki Music Institute in 1882. It is the only music academy in Finland and one of the biggest in Europe. In addition to providing the highest

education in the field of music, it engages in performing and creative art and research and is committed to the fostering of Finland's musical culture and cultural heritage. It also seeks active collaboration with Finnish society and participates in the development of culture.²⁴

Theatre Academy

The Theatre Academy was founded in 1979 and provides the highest education in theatre and dance in Finland. It trains actors (in Finnish and Swedish), music theatre professionals, directors, dramaturges, lighting and sound designers, dance artists (choreographers and dancers), dance and theatre pedagogues. The Theatre Academy is a university of performing art acting as an arts and research centre for theatre and dance.²⁵

IDBM – International Design Business Management Programme

The International Design Business Management programme (IDBM) is a joint teaching and research programme of three Finnish universities: the Helsinki School of Economics, the University of Art and Design Helsinki and Helsinki University of Technology.

The purpose of the programme is to bring together experts in different fields within the concept of design business management. It gives students from different fields an opportunity to practice important interpersonal skills through projects and courses and to work in interdisciplinary teams.

The IDBM programme started in 1995 and is supposed to lead to the establishment of the IDBM institute in co-operation with the three universities. Between 1995 and 2002 there were around 300 students from the three universities participating in the programme.²⁶

IDBMpro

International Design Business Management for professionals is a further education programme based on the IDBM programme. The focus group of the programme is the people responsible for strategic planning, marketing and communications, design, production and product planning in a company. IDBMpro is suitable for the internal development of the companies and the best results can be achieved if a group of key people representing different operations takes part in the programme. In 2002, the programme was awarded a quality-prize for adult education by the Ministry of Education.²⁷

Scandinavian Executive

MBA in Design Strategy & Innovation

This MBA is a new MBA in Design Strategy & Innovation combining the best educational content and tools in a collaborative Nordic context. The MBA programme is a joint venture of

- International Design Business Management network (IDBM): Helsinki School of Economics, University of Art and Design, Helsinki University of Technology
- Stockholm University Business School
- Copenhagen Business School and
- BI Norwegian Management School

The aim of the MBA is to offer an educational platform and tools for renewing or revitalising a variety of business enterprises, service, financial or public sector and other organisations. The programme will give participants new design and business oriented tools that can help transform strategies into practical results and leverage personal career development. There are two target groups for the programme. It is aimed at business people such as project leaders, engineers, marketing and sales managers that seek more knowledge of the design tools. It is also targeted at design professionals that need more knowledge of business practices.

The programme is scheduled to start at or the beginning of 2005 at the latest.²⁸

3.3.2 Other actors in the innovation field

Design cluster at Arabianranta

The innovation system concept has become more important for regional development in Finland. The network of universities, companies, centres of technology and expertise has developed preconditions in regions to the extent that it is possible to talk about regional innovation systems and clusters. This development has naturally been very strong in the field of technology in Finland. However, similar trends can also be found in the field of design.

The development of the design system and the transfer of design know-how to business enterprises require a concentration of design know-how. The expertise and innovation centres have proved an effective channel for this knowledge transfer. However, to ensure the regional impact of these activities, there must be concentrations of design research and education with sufficient potential users of design in their vicinity.

The concentration of design and media know-how at Arabianranta in Helsinki provides a basis for such a design cluster. At the heart of the cluster are The University of Art and Design Helsinki; Innovation Centre Designium; Design, Media & Art Business Centre Arabus and Aralis, the Library and Information Centre, which brings together Helsinki City Library as well as three art libraries. Additionally, there is the Centre of Expertise Culminatum focusing on culture and digital media. Different research institutes and design companies also form part of the cluster.

Currently, The Art and Design City Helsinki Oy Ab is in charge of implementing the visions and goals of the Arabianranta in cooperation with the City of Helsinki and other area owners. By the beginning of the next decade, Arabianranta is planned to have grown into a community with 7000 working places in design and media related companies, 6000 students in five universities and polytechnics and with 8000 inhabitants. The region is aimed to offer an attractive living area for their inhabitants as well as to increase the creative entrepreneurship through existing infrastructure in the area. Furthermore, the purpose of Arabianranta is to serve as a "Test Bed" for new services through its advanced mobile and community based networks.

Since Helsinki as a city is also developing its own innovation strategy currently, the role of Arabianranta in that strategy will become very important. The vision is that by the end of this decade, Arabianranta and its design depot will have become a leading centre of design excellence and industry, internationally recognised and of remarkable relevance for the national economy.²⁹

Design Depot Concept

The "Design Depot" concept is part of the Arabianranta development project, which aims to integrate the research made in the university, education, innovation activities, as well as co-operation with companies. (See Figure 6) The design depot is an interactive operational concept, enabling closer co-operation between industry and university and an effective transfer of knowledge. Additionally, the design depot aims to produce new design knowledge that benefits business life through multidisciplinary research and development activities.³⁰

As illustrated in Figure 6, the Design Depot will focus on three main areas: research, innovation and companies in the region. An important part of the "Company Depot" will be the Portal Business Park, a construction of six large office buildings with room for 4,000 workers.

Figure 6: Design Depot Concept

I Research Depot

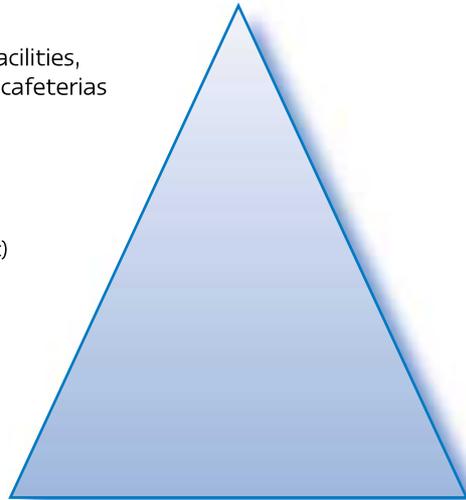
- Research, education, teaching, laboratory and exhibition facilities, international activities, seminar facilities, restaurants and cafeterias
- Innovation laboratories/Separate institutes:
 - Material Lab (new materials)
 - Living Lab (immediate surroundings)
 - Learning Lab
 - IDBM Institute (International Design Business Management)

II Innovation Depot

- Innovation Centre, Designium
- Business incubator, Arabus
- Services for companies
- Centre of expertise, Culminatium

III Company Depot

- Start-up companies, studios, design companies



Source: Nieminen et al. Presentation, Design Depot concept, UIAH, 19.12.2002

The aim is to attract companies operating in the field of information technology, art and design and media. The Portal Business Park will provide facilities, such as office rooms, conference rooms, archive and storerooms together with restaurants and other services for every company operating in the park.³¹ The other two areas, research and innovation will be described in more detail next through the presentation of different actors.

Designium

Designium, the New Centre of Innovation in Design, has been built through close collaboration between the University of Art and Design Helsinki, the University of Lapland, Helsinki University of Technology (HUT), and the Helsinki School of Economics (HSE). The cooperation also includes other universities, polytechnics, businesses and public organisations.

The mission of Designium is to promote the development of national design policy and the internationalisation of Finnish design, developing design into a major competitive factor for Finnish industry. The activities of Designium can be divided into three main areas: innovation activities, services and projects.³²

The objective of the *innovation activities* at Designium is to maximise the commercial utilisation of the results of research and development projects and degree thesis completed at UIAH. A part of the innovation services is the *TULI* programme.

TULI programme ("from research to business") is a national programme funded by The National Technology Agency of Finland and it aims to help the researchers, students and other staff in the universities to evaluate the commercial potential of innovations, inventions and business ideas with the help of experts and specialists. Since 2002, there have been eight *TULI*-projects (ongoing and completed) at UIAH.

Services that Designium provides include information, career and copyright services.

The purpose of the career services is to improve the employment of UIAH graduates and strengthen their professional awareness and abilities. An example of these activities is the *Odysseus* programme that aims to promote the internationalisation of young designers by helping them find internships in prestigious companies abroad. During and after their stay, the participants are supposed to report on their experiences.

The copyright services provided by Designium are conducted by The Copyright Service Unit. The purpose of the unit is to offer innovation protection services, with specialisation in copyright and related rights, such as design rights. The Copyright Service HelpDesk serves staff and students of all the Finnish Art and Design Universities and seeks to promote copyright expertise and help the staff and students at art and design universities resolve issues of copyright that emerge in their work.

Finally, Designium conducts market-driven and multidisciplinary research projects, such as the Preparatory Project for the Design 2005! Programme³³, and the Survey of Industrial Design in Finland³⁴.

Arabus

The Design, Media & Art Business Centre Arabus was established in autumn 1996 and is a part of the incubator-network in the Helsinki region. Arabus aims to commercialise, develop and network the know-how of start-up companies and since 1996, there have been about 120 company undertakings.

Currently, there are about 20 enterprises in Arabus whose business ideas are based on top know-how in the field of design media and art. Arabus provides framework and services for long-term development of enterprises and the main services include:

- Expert consultant services for business management
- Access to the facilities and expertise of UIAH
- Advantageous working accommodations in the Arabianranta area
- An innovative and unprejudiced environment for business

Thus, the services of Arabus range from idea development to finding funding for already established companies. The only criterion is that the candidates are from the field of design, media or arts, and they have prepared a written business plan.³⁵

The concept of Arabus has proved to be pretty successful in developing creative businesses. According to a survey made of all business incubators in the Uusimaa-region, nearly 77 per cent of the companies leaving the Arabus are still operating after two years. This percentage is relatively high since only the incubator at Otaniemi Science Park, in the field of technology, has performed better.

Continuing Education and Development Centre

The Continuing education and development centre is an adult education centre at the University of Art and Design Helsinki. It offers professional continuing education courses in the fields on media, design and cultural production. It also offers Open University courses as well as provides education and development services for companies. The aim of the centre is to transfer the most current information and knowledge, generated in the university, into the society and business life.³⁶ They also conduct practical surveys concerning creative industries as a base for planning new training- and education programs.³⁷

Centre of Expertise Culminatum

Culminatum Ltd. is a development company owned by the Uusimaa Regional Council, the cities of Helsinki, Espoo and Vantaa, and the universities, polytechnics, research institutes and business community of the Helsinki region. Its main function is to manage the National Centre of Expertise Program within the Helsinki region and to promote utilisation of the highest international standard of knowledge and expertise in business, job creation and regional development.

One focus area of Culminatum is Digital Media, Content Production and Learning Services. This area is based on the innovative co-operation with companies, universities, polytechnics and public administration and aims to assist the creation and development of new entrepreneurship in the field.³⁸

Culminatum has been one of the promoters of the business plan competition, Venture Cup, in Finland. Venture Cup is a competition that helps students, researchers and others to take their business idea from concept to actual start up. McKinsey&Company, one of the main sponsors of the competition, has run business plan competitions for many years internationally. In Scandinavia, Venture Cup has now been operating for a few years.

Venture Cup is a three-stage business plan competition for aspiring growth companies that brings together the best business ideas from universities and polytechnics. During the three stages of the competition, participating teams go through a process of education, coaching and screening, developing their business ideas into complete business plans with a clear focus. There are four distinct elements that complement the competition itself: knowledge building, coaching, feedback and facilitating network building.³⁹

In the Finnish Venture Cup 2002-2003, additional prizes were granted for the first time for ideas in the field of culture and industrial arts. In other Scandinavian countries somewhat similar prizes related to participant/product/service have also been granted earlier.

The idea for the additional prize came from Culminatum, which wanted to support the culture and art sector, in particular. In 2002-2003, three prizes with a total value of 26, 000 € were granted. In 2003-2004, the additional prize of 13, 000 € is financed by Iitala, and the cities of Helsinki, Espoo and Vantaa. In addition, The Design, Media & Art Business Centre Arabus will grant an extra prize by offering premises in their incubator for a start-up business with a good business idea.

The Employment and Economic Development Centres (T&E Centres)

The Employment and Economic Development Centres (T&E centres) are a joint effort of several ministries in Finland. Fifteen centres countrywide provide a comprehensive range of advisory and development services for businesses, entrepreneurs and private individuals. T&E Centres offer, for example, a variety of courses in how to establish a company or to improve the competitiveness of existing small and medium-sized enterprises.⁴⁰

The Ministry of Trade and Industry, together with the Employment and Economic Development Centre, has launched various programmes, such as ProStart, Design Start and Taitava. These programmes are consultancy and expert services tailored to the different phases the life cycle of SMEs.

ProStart – programme for evaluation and development of business ideas

ProStart development and evaluation programme for business ideas helps a potential entrepreneur assess the viability of his business idea and the possibility of his becoming an entrepreneur.

DesignStart – programme for the development of design

DesignStart is intended for existing or newly established enterprises. DesignStart is appropriate for developing the functional characteristics and appearance of products, as well as designing the various elements of the company's graphic image such as logos, brand names, packaging and promotional material. Service-oriented enterprises can benefit from the programme in the development and actualisation of their graphic profiles. DesignStart is carried out in the form of company-specific consultations between the DesignStart specialist and company management.

Taitava – development programme for craft enterprises

Taitava is a development programme intended for full-time craft entrepreneurs or enterprises that manufacture small series or products of a unique nature. The object of the programme is to improve the competitiveness and the profitability of the craft enterprise. The expert and the entrepreneur together consider the business idea, the competitive environment, the enterprises current financial standing and prospects for the future. As a result, a development programme based on the company's current status, development needs and available resources will be drawn up.

Ornamo

Ornamo, The Finnish Association of Designers, is an ideological organisation attending to the interests of its member organisations in the developing field of design, as well as providing them with expertise. The Association functions as a liaison between the municipalities and the member organisations, which have a membership of about 1490 designers. It has an important role as an initiator of diverse projects both in Finland and abroad.⁴¹ One of the "sub-organisations" of Ornamo is TKO, The Finnish Association of Industrial Designers, which annually awards "The industrial designer of the year" prize.

Design Forum Finland

Design Forum Finland works as the national design promotion and information centre. It is maintained by the Finnish Society for Crafts and Design and aims to gather and disseminate information about the role of design in business and promote the utilisation of design and design services in business and industry.⁴²

The main activities of Design Forum Finland include:

- Active information and communications
- A wide range of electronic services
- High-standard exhibitions
- Topical and up-to-date publications
- Expert co-operation and development work with firms and companies.

Throughout its history, the society has received support from the state. First this came from the Ministry of Trade and Industry, later from the Ministry of Education, and now once again the support comes from the Ministry of Trade and Industry. However, the society has always retained its independence and its core mission.

The backbone of the Design Forum Finland's activities is its own exhibition facility including a small gallery and Design Forum Shop. In addition to exhibitions in Finland, Design Forum also has a wide circulation of international exhibitions.

Special forms of activity have also been explored for young designers. A series of exhibitions entitled *Young Forum* was started in the mid-1990s and is a yearly exhibition series presenting young designers with changing themes. *The Young Designer of the Year award* is also presented annually. The goal is to spotlight young designers of exceptionally original and high-standard skills and ability in the fields of crafts, applied art, industrial design or interior architecture.⁴³

Three strong regions of design knowledge: Helsinki, Lahti and Rovaniemi

One of the aims of the Design 2005!, The Finnish National Design Programme, is to create three strong regions focusing on design in Finland: Helsinki, Lahti and Rovaniemi. For instance, there is a regional design strategy formulated for the Lapland region, around Rovaniemi. Some of the main actors in these regions are described in more detail below.

Lahti Polytechnic- Institute of Design

Lahti Polytechnic is a large, multidisciplinary institution of higher education. It is a centre of expertise with over 5,000 enrolled students and approximately 200 full-time teaching staff.

Lahti Polytechnic offers a degree programme in design with specialization areas in Industrial Design, Furniture Design, Fashion Design, Interior Design, Package Design, Jewellery and Silverware as well as in Design and Art Pedagogy.

The degree programme in design aims to educate professionals to work in society and business with the ability to design and give concrete and visually perceivable form to objects, communication and services in our society.⁴⁴

Institute for Design Research in Lahti

The Institute for Design Research was founded in 1997. It is an independent unit which provides the business community and the public sector with services in development and research related to styling and product design. These activities have the backing of an association whose purpose is to promote the competitiveness of Finnish companies with the aid of user-oriented design.

The Institute's services are associated with developing operating models for user research, strategic planning and product design. The Institute's operating model is based on a broad network of specialists comprised of professionals from many different fields.

An important part of the activities of the Institute for Design Research development is projects targeted on individual companies or corporate groups. Part of the funding for these comes from the public sector. The Institute for Design Research also produces reports on the design sector and performs interview surveys for the public sector.⁴⁵

Design Park

Design Park provides services related to the innovative entrepreneurship in the field of design. The services are mainly directed by the University of Lapland and the companies in the region and the main activities include:

- Facilitate the commercial use of innovations from the university
- Improve the conditions for setting up new businesses
- Make the business community's expertise readily available to the university's research and training programmes

Additionally, Design Park offers a range of training services geared to the particular needs of the business community.⁴⁶

Western Finland Design Centre Muova

Western Finland Design Centre Muova is a centre of expertise in design, marketing and communications. It is a separate unit of the University of Art and Design Helsinki. Its aim is to develop design driven innovation activities of the SMEs in the region. Furthermore, it concentrates on serving companies by informing, training, developing and supplying design services.

Muova takes part in various strategy committees and thus aims to influence the development of the innovation, training and research environments of the Ostrobothnia region. Its international co-operation is continuous and consists of multiple levels. They launch international projects, participate in international co-operation projects and constantly create and maintain international contacts abroad. The closest partners in research and development are the various departments of the University of Art and Design and those of the Vaasa University. The most important sponsors are the University of Art and Design, the Ostrobothnia Employment and Economic Development Centre and the National Technology Agency of Finland.⁴⁷

Design Round Table

The aim of the Design Round Table is to support and coordinate the national design policy of Finland. It brings together different partners in industry, trade, design, the media and the public sector and consists of key decision makers from industry, design society and design education. The role of the Round Table is to evaluate the performance of the design system, to prepare immediate and long-term actions for achiev-

ing the desired state, to stimulate interaction between different partners and to monitor the impact of measures taken.⁴⁸

Research in design field

The role of research and creation of new knowledge in design has been emphasized strongly in Finland. The most important research programmes are The Industrial Design Technology Programme of The National Technology Agency Tekes and The Industrial Design Programme by the Academy of Finland. Together there are 60-100 researchers and 8 universities involved with these programmes. The research programmes also aim at enhancing the utilization of design in companies. Thus, there are about 50 companies involved with the programmes. The total financial effort put on the design research in Finland amounts to nearly EUR 30 million.

Sitra

The Finnish National Fund for Research and Development, Sitra, is an independent public foundation under the supervision of the Finnish Parliament.⁴⁹ In 1996,

Sitra took design under consideration as an element of national excellence and as part of the national innovation system. Furthermore, Sitra financed a survey on the condition and future challenges of Finnish design in 1997-98. The two-volume report *Muotoiltu Etu I-II* (The Designed Advantage) was published in autumn 1998.⁵⁰

The National Technology Agency, Tekes

The Industrial Design Technology Programme by Tekes was launched early in 2002 with the intention of making industrial design an important part of international competitiveness. The aim is to raise the standard of design research and utilise design expertise in corporate product development and business strategy, as well as to develop the services provided by design firms. The Programme forms part of the Government resolution on design policy Design 2005!⁵¹ The preparations for the preliminary survey on industrial needs⁵² were coordinated by Designium. The total funding of the programme is EUR 27 million.

The Academy of Finland

Simultaneously with The Industrial Design Technology Programme by TEKES, The Academy of Finland launched a research programme related to the national Design 2005! Programme. The Industrial Design Programme by the Academy of Finland aims to bring together research from a broad spectrum of scientific disciplines, including the study of culture, social sciences, natural sciences, as well as engineering. The total budget of the programme is EUR 2 million.⁵³

²¹ www.uiah.fi

²² www.urova.fi

²³ www.kuva.fi

²⁴ www.siba.fi

²⁵ www.teak.fi

²⁶ www.hkkk.fi/idbm

²⁷ Design 2005! - Midterm Evaluation, 30.12.2002, Memorandum of the Ministry of Education, 49:2002.

²⁸ Ranta-aho, Helena (2003). "PARTNERS IN DESIGN: A Scandinavian MBA with a Touch of Design", UIAH.fi > Designium>Newsletter

²⁹ Korpelainen, Heini (editor). "Design 2005!, The Government Decision-In-Principle on Finnish Design Policy", Approved 15.06.2000. Arts Council of Finland and The Ministry of Education, Helsinki.

³⁰ Nieminen et al. Design Depot- Concept. Presentation, UIAH, 19.12.2002

³¹ www.arabianrannanportaali.fi

³² The Annual Report of Designium 01-02, UIAH

³³ Nieminen, Eija & Juha Järvinen (2001). "Design Technology Programme Preliminary Report", TEKES Technology Review 119/2001. Helsinki.

³⁴ Järvinen, Juha & Sampsa Piira (2002). "Survey of Industrial Design in Finland", Designium Publications, Helsinki.

³⁵ www.arabus.uiah.fi

³⁶ www.uiah.fi/koulutuskeskus

³⁷ Director Pekka Saarela, Continuing Education and Development Centre, Interview 26.1.2004

³⁸ www.culminatium.fi

³⁹ www.venturecup.org

⁴⁰ www.te-keskus.fi

⁴¹ www.ornamo.fi

⁴² Korpelainen, Heini (editor). "Design 2005!, The Government Decision-In-Principle on Finnish Design Policy", Approved 15.06.2000. Arts Council of Finland and The Ministry of Education, Helsinki.

⁴³ www.designforum.fi

⁴⁴ www.lamk.fi

⁴⁵ www.muotoiluntutkimuslaitos.fi

⁴⁶ www.urova.fi

⁴⁷ www.uiah.fi/muova

⁴⁸ Korpelainen, Heini (editor). "Design 2005!, The Government Decision-In-Principle on Finnish Design Policy", Approved 15.06.2000. Arts Council of Finland and The Ministry of Education, Helsinki.

⁴⁹ www.sitra.fi

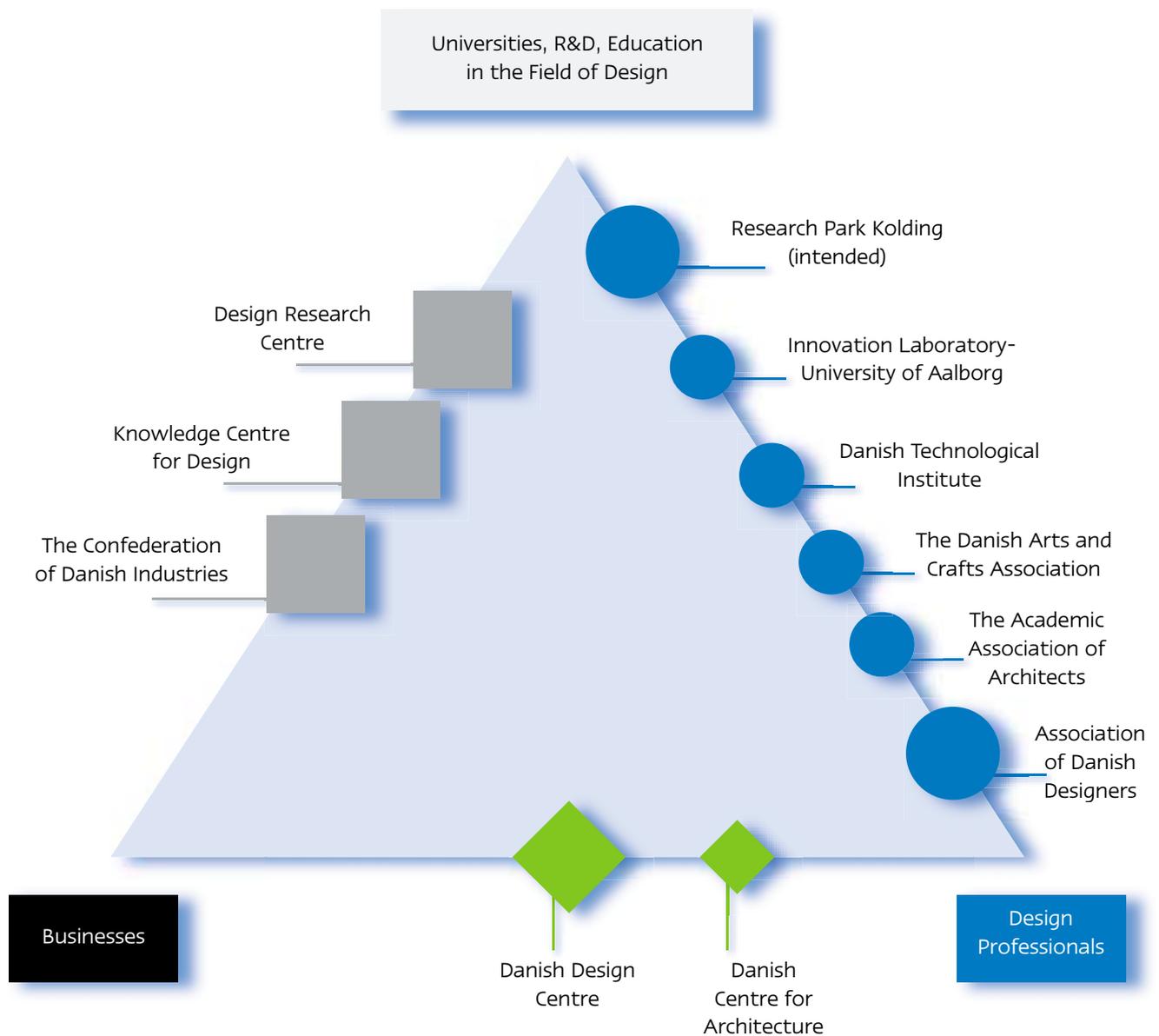
⁵⁰ Järvinen, Juha & Ilpo Koskinen (2001). "Industrial Design as a Culturally Reflexive Activity in Manufacturing". SITRA report series 15.

⁵¹ www.tekes.fi/programmes/design

⁵² Nieminen, Eija & Juha Järvinen (2001). "Design Technology Programme Preliminary Report", TEKES Technology Review 119/2001. Helsinki.

⁵³ www.aka.fi

DENMARK - INNOVATION ENVIRONMENT IN THE FIELD OF DESIGN - ACTORS



3.4 Denmark

3.4.1 Universities

Danmarks Designskole

Danmarks Designskole is an educational institution under the Ministry of Cultural Affairs. It educates both handicraft artists and designers within several areas of specialisation.

Currently, Danmarks Designskole is working to gain academic status. As a central part of the effort to become the 13th university in Denmark, Danmarks Designskole is in the process of building a research unit in close co-operation with the national Center for Design Research.⁵⁴

The school has no a separate unit for innovation activities or for copyright issues. However, there are certain rules formulated by the Ministry of Culture concerning the students' rights to the products made as a part of their studies.⁵⁵

Designskolen Kolding

Designskolen Kolding was founded in 1967. At present it has about 400 students studying in 5-year, design course that is state-recognised and grant-entitled. The

school is divided into the following departments: Ceramics, Fashion, Industrial Design, Textiles, Interactive Media, Graphic Design and Illustration.

The aim is to give students qualifications at the higher education level within the field of design and crafts design. The training is designed to give students the necessary technical, aesthetic, ethical and analytical tools to solve design projects on an artistic, scientific and humanist level.

The training is also orientated to encourage development and research within design and crafts design and is under the Danish Ministry of Culture.⁵⁶

There is no strong emphasis on innovation supporting services. The university provides no services related to copyrights either. However, the school has a co-operative network with companies. Usually, the companies offer different practical services and participate in teaching.⁵⁷

The Royal Danish Academy of Fine Arts

The School of Architecture at the Royal Danish Academy of Fine Arts is one of the world's oldest schools of architecture. Founded in 1754 as 'The Royal Danish Painting, Sculpture and Building Academy', the Academy's purpose was to educate both artists and craftsmen in the three disciplines under the same roof. In the 1960s the School became an independent unit with its own management and achieved the status of an institution of higher learning, issuing a diploma equal to a university Master's degree in architecture, while maintaining its artistic and professional status within the Royal Danish Academy of Fine Arts.

Today, the School offers education in the fields of architectural design and restoration, urban and landscape planning, and industrial, graphic and furniture design.⁵⁸

The School of Visual Arts of the Royal Danish Academy of Fine Arts combines artistic practice with theoretical education and technological training. The School of Visual Arts aims at providing instruction and stimulating research within the creative arts (painting, sculpture, graphic arts, photography, video art, etc.) and within the history and theory of art and civilisation.⁵⁹

The School of Visual Arts does not provide innovation-supporting services for the students. The Danish agency Copy-Dan Billedkunst acts on behalf of the visual artists in terms of copyrights and related rights. Co-operation with business life usually takes place through students working in private workshops or factories.⁶⁰

University of Aalborg

Architecture and Design is a relatively new education in the Faculty of Engineering and Science at the University of Aalborg. The Institute of Architecture and Design is quite unique in nature since traditionally architecture and design education have been taught in schools under the Ministry of Culture. The main focuses of the Institute are urban design, architecture, industrial design and digital design. Research within the discipline of industrial design is under development and concentrates on integrated design values and methods, universal design and environmental design. A multidisciplinary approach is an essential aspect in the research carried out by the Institute.⁶¹

There is an innovation laboratory in the Institute of Architecture and Design (See page 30)

Aarhus School of Architecture

Established in 1965, The Aarhus School of Architecture is an institution of higher education under the jurisdiction of the Danish Ministry of Culture.

The architecture studies cover considerable ground, from design to the core disciplines of the profession of architecture, and to urban architecture and town planning. Also students have been offered design education for several years.⁶²

The Technical University of Denmark

In The Technical University of Denmark (DTU) design is the area of study in two of the institutes: Department of Manufacturing Engineering and Management and Department of Mechanical Engineering.⁶³ In 2002, a new programme was started, aiming to educate design engineers, with evaluation processes, design typology, and sustainability being important areas of research. Additionally, there is a separate programme called Design & Innovation.⁶⁴

3.4.2 Other actors in the innovation field

Danish Design Centre

The Danish Design Centre (DDC) is a promotion organisation established to increase the awareness of design. DDC was originally established in close association with the private sector. In promoting the government's growth policy within the design field, the centre remains the principal actor.

DDC also constitutes a central platform for designers and design consumers, and acts as an important ex-

hibition window for Danish design. The DDC's goals are the following:

- Putting design on the agenda in industry and in society at large
- Promoting Danish design world-wide
- Stimulating the development and strengthening the dialogue between designers and businesses

DDC has divided its operations, according to its vision and mission, into four categories or profiles:

1. The corporate profile

- Design consultancy on design strategy, design competitions, contacts with designers and relevant subsidy schemes
- One focus has been to provide services for companies that already use design to further improve their performance⁶⁵

2. The designer profile

- Seeking to improve and develop Danish designers' competence so that they can provide services that companies demand and are able to communicate their ideas to the company representatives

3. The public profile

- Topical and innovative exhibitions of national and international design
- A shop with selected design and literature
- A café and a reading lounge
- *Designmatters* magazine

4. The meeting place profile

- Companies or individuals may rent the attractive conference rooms and restaurant with Danish design, room for ideas and a view of Tivoli

The Danish Design Centre is an independent institution, receiving part of its funding from the Danish state and via performance-based contracts with the Ministry of Trade and Industry. The commercial turnover comes from activities related to their building (admission fees, conferences, café & catering and the shop) and from services provided to external clients (consultancy, memberships, gross sale of books etc.).⁶⁶

Danish Design Centre, together with the Association of Danish Designers and Dansk Standard has developed a certification scheme based on ISO-9001, the Designer-ISO. The Designer-ISO is a quality assurance programme for designers and design companies,

intended to improve their business procedures. Behind the initiative stands the National Agency for Trade and Housing which has financed the programme. The certification scheme is based on a quality assurance system addressing administrative procedures, sales, marketing, documentation, business and product development. For the individual designer or design studio, the programme is a tool to develop their business. As the standard is based on ISO 9001, it is easily recognised in industry. Through working with the standard, designers will achieve the same skills and procedures as other suppliers of services, as well as the design clients themselves.⁶⁷

Knowledge Centre for Design

According to the Danish government's initiative of strengthening the Danish design field, the role of the Danish Design Centre will also be to function as a national knowledge centre within the design field. The purpose is that the DDC will develop, gather and disseminate information on the design field at a high international level and function as a sparring partner to benefit the design industry, the corporate sector and agencies active in the field.

DDC will document the economic impact of design and publish key figures, research results, best practices, development trends and research, via co-operation with the Design Research Centre and other actors in the field. The aim is also to provide tools for less experienced companies and help them to apply design in their operations, while more advanced enterprises can get advice to reinforce their role as front runners in the field.⁶⁸

Design Research Centre

The Danish government's target is to ensure education and research within the design field comparable with the highest international standards. According to the multi-year agreement with Ministry of Culture sponsored arts academies, from 2002, the research initiatives within the design field will be intensified and coordinated. Extra funding will be provided for design research and co-operation will be stepped up between the schools of design and architecture and the research field.

Due to the government's initiative, the Ministry of Culture in liaison with the research faculties from The Royal Academy of Fine Arts, Aarhus School of Architecture, Designskolen Kolding and Danmarks Designskole, will establish a Design Research Centre. With a budget of approximately DKK20 million, the

Centre will coordinate and intensify the Danish design sector, and act as a base for elevating the two design schools to high-quality, research-based institutes. The objective of the Centre is also to boost knowledge and know-how in the design field to benefit education, the design industry and other sections of the corporate sector dependent on design. The Research Centre will start operating in January 2004.⁶⁹

Danish Centre for Integrated Design Centre for Design Interaction and IT Centre of IT and Design

In 1997, the idea of a research centre “without walls” became a topic for the first time in a governmental design statement. The report proposed co-operative action between the Ministry of Research and the Ministry of Trade and Industry that resulted in DKK 15 million worth of investments in 1999-2002 to create three design centres⁷⁰:

1. Danish Centre for Integrated Design
Danish Centre for Integrated Design is a co-operation project between the architect school in Aarhus and the University of Aalborg with the goal of advancing the creation knowledge concerning design as a central dimension in modern integrated production processes.
2. Centre for Design Interaction and IT
Centre for Design Interaction and IT is a co-operation project between Copenhagen Business School and Danmarks Designskole and RUC. The intention is to cover the most essential distinctions between traditional graphical design and the design of digital interfaces. The purpose of this Centre is to contribute to the development of IT based tools and methods that can meet the users’ emerging demands for design.
3. Centre of IT and Design
The Centre is lead by the Designskolen Kolding in co-operation with two companies and designers. The aim of the design centre is to develop new digital tools for textile work based on interactivity between the designer, the tools and the product.

The Confederation of Danish Industries

The Confederation of Danish Industries (DI) is an organisation of all the competition-oriented companies in Denmark. It is financed and run by its member companies. DI works to create the best possible conditions

for knowledge-intensive companies to freely run their manufacturing and service activities in Denmark.

DI works to influence legislation and other regulations, passed or formulated by the Danish parliament, ministries, counties, local councils and other authorities, in a more business-friendly direction.⁷¹

DI has established a design network, which aims to increase the level of the utilisation of design in companies, at the political level, in educational institutions, as well as to emphasise the role of design consultancies. One of the design network’s roles is also to be an advisor to the Danish government about the importance of design. The design network is also active in co-operation with design universities. They are aiming, together with the universities, to develop the education and research activities in the field of design in order to better respond to today’s requirements in the business field.⁷²

OeO

OeO is a design and innovation company specialising in two areas:

- 1) Design agent
OeO aims to serve as a new business link in the Scandinavian design industry offering talented, young designers creative and commercial services, contacts and negotiations with leading producers worldwide.
- 2) Design and innovation consultancy
OeO helps companies create strategies and directions for the use of design and innovation. Furthermore, OeO offers creative direction in connection with product and concept development.⁷³

The Danish Centre for Architecture

The Danish Centre for Architecture is a communication and development centre for architecture and urban culture. It is the government’s prime actor in the architectural field. The Centre’s activities embrace exhibitions, a 3-D showroom, conferences, marketing of Danish architecture, education a web-guide and so forth. It is partly financed by the Ministry of Culture and the Ministry of Economic and Business Affairs.⁷⁴

Association of Danish Designers

Danish Designers was founded in 1995 as The Association of Danish Designers. Currently, it represents more than 1,000 professional and student members – with the professionals being by far the largest group.

The organisation receives no public funding and

has always been funded exclusively through membership fees. However, Danish Designers plays an active part in projects initiated and funded by the Ministry of Culture and the Ministry of Trade and Commerce, such as the design education reform, establishing a quality assurance programme for design and developing a digital network for designers, design clients and suppliers.

The activities of Danish Designers embrace internal services, that is, services designed to support the members in their professional or academic endeavours, as well as external services for the political sphere, industry, organisations, media and the public at large. Danish Designers also offers professional designers and design students a number of services as members of the organisation.

Danish Designers have initiated the establishment of a new network for people representing design education and research; designforskning.net. This means that Danish Designers has decided to play an active role in terms of shaping the future educational policies and in partnering with individual schools. The idea is to organise two events a year, where Danish educators and researchers meet and exchange knowledge and experiences, and where they can also meet representatives of the international design research community.⁷⁵

MindLab

MindLab is an internal greenhouse for creativity and innovation at the Ministry of Economic and Business Affairs in Denmark. The mission of MindLab is to create optimal conditions for renewal, creativity and good ideas. MindLab was established through the inspiration of private corporations, which have created special units for innovation and idea development. This took place after realising that a critical number of development projects were based on ideas that were insufficiently innovative. Overall, MindLab's goal is to shorten the reaction time on new projects, shorten the time from idea to implementation of the findings and develop the creative competencies in people at all levels of the Ministry.⁷⁶

MindLab engages in three kinds of working relationships with the department of the Ministry of Economic and Business Affairs and its agencies. The relationship depends on the demands, but all have one thing in common; a focus on innovation.

Firstly, MindLab works as a **project hotel**. Project groups can move into MindLab for a limited period of time. MindLab's effort is primarily focused on the start-up of a project to strengthen the vision and mis-

sion of the project and ensure high quality findings. The group has a personal coach, who helps the group develop new ideas, determine goals, test hypotheses, make outlines for the project and use professional tools to effectively lead the project in a meaningful direction. MindLab also engages in the project to create motivation, pleasure, responsibility and a work pace.

Secondly, MindLab works as a **creative service unit**. The coaches in MindLab visit the agencies and units of the ministry and carry out seminars, team-building courses, leader development, idea spinning, project management and test project ideas.

Thirdly, MindLab works as an **idea lab**. Groups can ask MindLab to develop a concrete idea or an actual product. This could be suggestions on how to publish results, develop educational courses on specific topics, come up with a new name for a product or group, develop concepts for conferences and develop political idea catalogues.

Research and Development Park Kolding

The business council and the city council of Kolding have established a Research and Development Park with a unique design profile in Kolding. The Park is meant to be a forum and power centre for companies and for knowledge institutions with an emphasis on research, development and design. Design was chosen as the overall focus for the Park because Designskolen Kolding, the Trapholt museum and several design-based companies are based in Kolding.

The Park is intended to offer a creative and productive environment, where applied research and business development may thrive and enrich each other. Overall, the purpose is to create the facilities for the development and exchange for ideas so as to promote a synergy between the companies and institutions located in the region.⁷⁷

Innovation Laboratory at the Institute for Architecture and Design, University of Aalborg

The Innovation Laboratory at the Institute for Architecture and Design in Aalborg University was established in connection with a Ph.D. project on "*Integrated design methodology in design teams*". At present, the lab is primarily used for workshops in concept development in relation to Master's studies in industrial design and a PhD course on facilitation of innovation in teams. However, the plan is to extend the activities to workshops on innovation in teams for professionals from business life.⁷⁸

Danish Technological Institute

Danish Technological Institute occupies a crucial position at the point where research, business and the community converge. The Institute's mission is to promote growth by improving interaction and encourage synergy among these three areas. Danish Technological Institute is an independent, non-profit institution approved by the Danish authorities to provide technological services to business and the community.

It provides technological services such as consultancy, tests, certification and training for companies and public-sector organisations.

One of the focus areas of the Institute is design and creativity. It serves as an advisor and partner in the innovation development process by offering the experience and knowledge of specialists in the field. Additionally, the Institute adopts an interdisciplinary approach to innovation and to the task of improving the ability of small and medium-sized companies to exploit new technologies and management tools.⁷⁹

⁵⁴ www.dk-designskole.dk

⁵⁵ Rector Gøsta Knudsen, Danmarks Designskole, 9.9.2003

⁵⁶ www.designskolenkolding.dk

⁵⁷ Vice Rector Peter Hegstrup, Designskolen Kolding, E-mail interview 6.10.2003.

⁵⁸ www.karch.dk

⁵⁹ www.kunstakademiet.dk

⁶⁰ Otto Jul Pedersen, The Royal Danish Academy of Fine Arts. E-mail interview 10.9.2003.

⁶¹ www.aod.auc.dk

⁶² www.a-aarhus.dk

⁶³ www.dtu.dk

⁶⁴ www.design-ing.dk

⁶⁵ Lotta Braagaard, DDC, Interview 11.11.2003.

⁶⁶ www.ddc.dk

⁶⁷ www.ddc.dk

⁶⁸ The Danish Ministry of Economic and Business Affairs (2003). "Denmark in the Culture and Experience Economy – 5 new steps".

⁶⁹ The Danish Ministry of Economic and Business Affairs (2003). "Denmark in the Culture and Experience Economy – 5 new steps".

⁷⁰ Dickson, Thomas (2002). "Design Research, an International Review". Summary by Kaisa Pekari, Helsinki School of Economics.

⁷¹ www.di.dk

⁷² "From Beauty to Business", Danish Industry publication, 22.9.2003

⁷³ www.oeostudio.com

⁷⁴ www.dac.dk

⁷⁵ www.danishdesigners.dk

⁷⁶ www.mind-lab.org

⁷⁷ Folkmann: "Innovation in large Danish companies" Design DK 2:2002.

⁷⁸ Marianne Stokholm, University of Aalborg. 4.9.2003. See also: www.arkitekturodesign.auc.dk

The Danish Museum of Decorative Art

The Danish Museum of Decorative Art is among Scandinavia's pre-eminent exhibition venues for Danish and international craft and design. The Museum and its collections, library and archives constitute the main establishment for studies of design history in Denmark. The Danish Museum of Decorative Art is also a contemporary museum since it collects and documents current trends within craft and design. The Design Studio of the museum appeals to schoolchildren and students of design history. There is also a research library, which serves researchers, students, designers, architects, artisans, stage designers, art dealers and private individuals.⁸⁰

The Danish Arts and Crafts Association

The Danish Arts and Crafts Association is an organisation of professional, creative craftsmen and designers. The Association's members have either graduated from a Danish institute of higher education in the field or are accepted on the basis of their merits. Their work spans everything from one-of-a-kind creations, small series, and industrial design to decorative commissions.

The Association is responsible for projects and exhibitions such as the Biennale of Crafts and Design, "The Permanent Work," and the crafts market at Copenhagen's Frue Plads. It also confers the Annual Arts and Crafts Award and coordinates participation in exhibitions and competitions in Denmark and abroad.⁸¹

The Academic Association of Architects

The Academic Association of Architects is a private non-profit organisation whose members have qualifications in architecture. The goal of the Association is the advancement of the quality in planning and design of the physical environment and the improvement of the conditions for the architectural profession. It covers nearly all graduate designers and architects and the majority of the members are architects with diplomas from either of the two architect schools, The Aarhus School of Architecture or The Royal Danish Academy of Fine Arts.⁸²

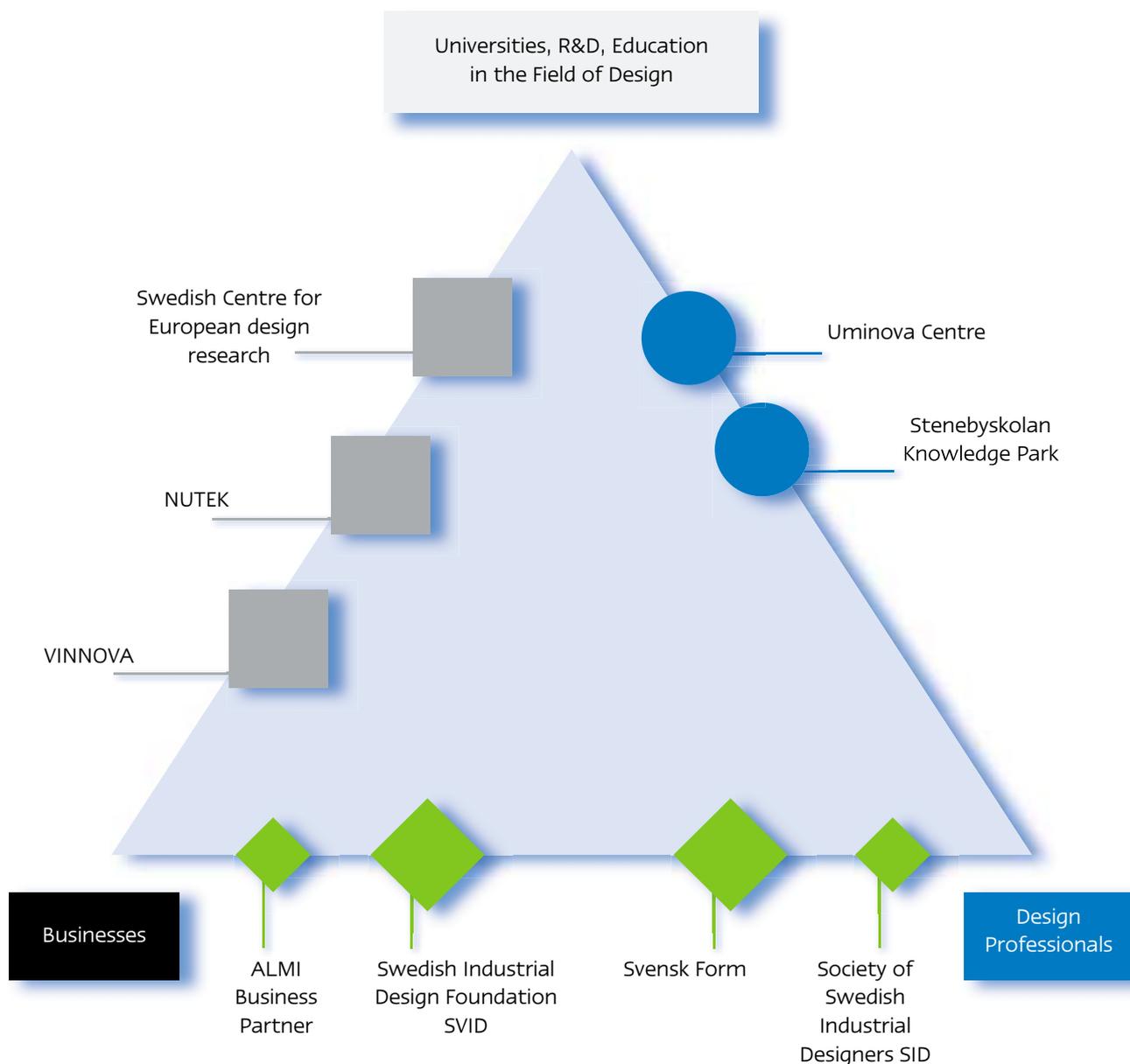
⁷⁹ www.danistechnology.dk

⁸⁰ www.kunstindustrimuseet.dk

⁸¹ www.danskekunsthaandvaerkere.dk

⁸² www.dal-aa.dk

SWEDEN - INNOVATION ENVIRONMENT IN THE FIELD OF DESIGN - ACTORS



3.5 Sweden

3.5.1 Universities

Umeå Institute of Design, Umeå University

The Umeå Institute of Design is organised and equipped solely for the education of industrial design and operates within the Faculty of Science and Technology at the University of Umeå.⁸³

The Institute offers educational programmes at Bachelor's, Master's and Doctoral levels. Specialised Master's programmes are available in Transportation Design, Advanced Product Design and Interaction Design. The Master's programmes are run in English and

are open to international students. Thus, 50 % of the students in the Master's are foreigners, representing 16 different countries.⁸⁴

The education is characterised by close co-operation with industry in student projects, as well as numerous external lecturers from the design profession, business and the University. In all programmes, the Institute co-operates regularly with a number of companies and organisations including Saab, Volvo Trucks, Volvo Cars, Ericsson, Nokia, ABB, Electrolux

and Husqvarna, several of which are also strongly involved with the Institute's research programmes.⁸⁵

The co-operation with industry has proved to be very successful and beneficial for both parties. In joint projects with companies, the students can learn from real work in industry whereas the companies get fresh ideas and contacts with possible future special-ists. However, the projects with companies are always future-oriented to avoid the use of students as consultants for the short-term problems of the companies.⁸⁶

The Institute is also carrying out research in many areas. Research undertaken is derived either from the perceived needs of the industry partners or as research funded from grants (e.g. EU Regional development funds), and is generally aimed at developing the areas of the Institute's competence.

The innovation related services are organised by the Uminova Innovation. (See page 35)

HDK, School of Design and Crafts, University of Göteborg

The School of Design and Craft (HDK) is an institution within Göteborg University combining the School of Design and the School of Applied Art and Crafts. The School has close ties with other university institutions in the city. Since HDK is part of the Faculty of Arts, it has close contact with the School of Photography and Film, the School of Music and Musicology, the School of Theatre, Opera and Musicals and the Valand School of Fine Art. The Faculty actively nurtures inter-department and interfaculty co-operation by arranging courses and joint projects.

The School of Applied Art and Crafts provides courses in three major disciplines: Ceramic Art, Jewellery Design, and Textile Art. HDK is the only Swedish university offering degree courses in these subjects.

Due to the increased demand for designers with competence in the fields of creative problem solving, strategic design and management of creative processes, the School of Design has re-structured its design course programme. The New Degree Course in Design took effect in 2001 and aims to provide designers with the skills needed for a future in design.⁸⁷

HDK has contacts with business life by connecting students with companies. The companies also contribute by granting scholarships and organising internships. However, the School aims to develop a more systematic approach to this.⁸⁸

Apart from its Göteborg campus, HDK has a Department of Craft based on the Stenebyskolan campus in Dalsland.

Stenebyskolan

Stenebyskolan is part of the Göteborg University and HDK. It is situated in Dalsland and hosts about 160 students. The specialisation areas include: Fashion and Design, Forging and Metalwork, Design and Furniture making, as well as Textile Arts and Crafts.⁸⁹

Innovation related services are offered by the Steneby Incubator (See page 35).

The School of Photography and Film at Göteborg University

The School (HFF) is a state-financed department of Art within the Fine Arts faculty of Göteborg. The general policy for the work of the School favours free, individual creativity and the aim of the School is to raise the quality and increase the breadth and diversity of photography and film in Sweden.⁹⁰

Royal University College of Fine Arts

The Royal University College of Fine Arts (KKH) is an institution for higher education with a long artistic tradition dating all the way back to the 18th century. The education offered is diverse with courses in traditional methods, as well as instruction in the most innovative and very latest techniques.

The College has about 230 students and leading Swedish and foreign artists and architects teach there. The Master's programme in fine arts includes painting, sculpture, printmaking, monumental and mural art, digital media, video and photography. Additionally, a programme for active artists, further education in Architecture or Art Restoration, as well as a course in Art and Architecture and studies in Fine Arts & New Media are offered.⁹¹

Konstfack, University College of Arts, Craft and Design, Stockholm

Konstfack, founded in 1844, is unique among Swedish art schools in offering arts, craft, design and art teacher education. Konstfack is an institute of higher education run by the Swedish state. The study programmes are between three and five years and lead to BA and MA degrees. The school has 10 departments: Animation & Animated Film, Art Teacher Training, Ceramics and Glass, Fine Arts (Photography, Painting, Sculpture, and Curator Programme), Graphic Design & Illustration, Industrial Design, Interior Architecture and Furniture Design, Metal Design, Textiles and Colour & Form. The development of the research activities is under preparation.⁹²

Konstfack is part of the Stockholm Schools of Entrepreneurship, which is described in more detail below.

SSES

The Stockholm School of Entrepreneurship (SSES) is a joint initiative of the Royal Institute of Technology (KTH), the Stockholm School of Economics (SSE), Karolinska Institute (KI) and the University College of Arts, Crafts and Design (Konstfack), and the leading universities in Technology, Economics, Medicine and Design in Stockholm.

The SSES was established originally in 1997 as a development project. In 2002, Konstfack joined SSES as a fourth member of the joint venture. The goal of SSES is to promote the Stockholm region as one of the leading innovative and entrepreneurial hot spots in the world.

The overall purpose of SSES is thus to support the development of Stockholm as an economic region for business creation, through scientific research, academic and practitioner education and business creation activities in close collaboration with universities, the business community and public agencies. SSES can be viewed as a response to the demand for a more active role for institutions of higher education in industrial and social development.

SSES is responsible for the support, development and coordination of the Business Creation activities in the member schools. This includes the creation of better conditions and opportunities for identifying business opportunities, formulating business plans and starting new companies related to the schools' educational and research activities. It also includes the involvement of the schools in the joint development of an international competitive knowledge/science based innovation system in the Stockholm region. Thus, the SSES Business Lab initiative is targeted at increasing the amount of science-based start-ups in the region, as well as building a training and support-structure that will enable the entrepreneurs to join forces with complementary disciplines, experiences and mentor structure in order to start and develop leading-edge science-based ventures. SSES is also in the process of developing a number of different incubators within the Stockholm region.

SSES is committed to research with a multi-disciplinary approach and to action-oriented research programmes. In addition to these research programmes, SSES also supports research that improves the quality and effectiveness of entrepreneurship education. Pedagogy research funds case writing and evaluation of diverse teaching processes, such as Venture Cup. Many of the Venture Cup lectures are offered in conjunction with one of the SSES' course.

SSES has, in co-operation with The Entrepreneur-

ship and Small Business Research Institute (ESBRI) and The Swedish Center for Business and Policy Studies (SNS), applied for the Vinnova programme to create a Stockholm Center of Excellence.⁹³

Lund University

The Department of Design Sciences participates in 15 undergraduate training programmes at The Lund Institute of Technology. The Department moved into a new building designed specifically for that purpose in September 2002: the Ingvar Kamprad Design Centre. It is meant to inspire faculty, students and the world outside the University to new ideas and cross-disciplinary ventures in design that would otherwise not be possible. Several new laboratories have also been established: the Reality Lab, Experimentation Hall, Usability Lab, Full Scale Modelling Lab, Low Vision Enabling Centre, as well as Aerosol and Climate Labs.

The Department of Design Sciences has seven areas of expertise: Aerosol Technology, Ergonomics, Packaging Logistics, Industrial Design, Machine Design, Rehabilitation Engineering and Innovation.⁹⁴

As a part of the Department of Design Sciences, The Division of Innovation conducts research, offers a Ph.D. programme and teaches at the undergraduate level in the field of innovation studies. This interdisciplinary field of study and research focuses upon the socioeconomic determinants and consequences of technical change and other kinds of innovations (including organisational ones and new products in the form of goods and services). They also emphasise public policies and firm strategies in the field of innovation. Further, the interaction between people, innovations, organisations and institutions is a central theme. The field includes a broad spectrum of topics from innovation systems at the macro level to innovation processes at the micro level, for example, in firms and other organisations.⁹⁵

Malmö Art Academy

Malmö Art Academy at Lund University offers a Master's Programme in Fine Art and Critical Studies. Inaugurated in 1995, it is the youngest higher education programme in the fine arts in Sweden. The programme, which covers five years, is part of Malmö Academies of Performing Arts at Lund University, which also includes Malmö Academy of Music and Malmö Theatre School.

The programme begins with an introductory block of subjects dealing primarily with different techniques and basic art theory. Malmö Art Academy has no

separate departments. Students organise their own curriculum, choosing from a wide range of technique and art theory, much of which is taught by international artists.⁹⁶

Since Malmö Art Academy is an academy with programmes only in fine arts and critical studies, they do not need to deal with innovation related rights so often. However, all students get a course in law and economics including information about copyrights etc.⁹⁷

3.5.2 Other actors in the innovation field

Uminova Innovation

Uminova innovation works to enhance the co-operation between the parties concerned in academia and industry. It operates on a non-profit basis and supports the establishment and development of new and already existing companies that are based on ideas from the Umeå University. Uminova Innovation works in close collaboration with many partners, such as Uminova, The Swedish Agency for Innovation Systems, and NUTEK, The Swedish Business Development Agency.

One of the key areas where Uminova Innovation operates is the innovation development. Uminova Innovation works with innovations and business ideas from all faculty areas, including design. They assist the students, researchers and other staff with the following matters:

- Applications for intellectual property rights
- Financial and legal guidance
- Market soundings
- Project plans
- Partner searches
- Financing alternatives
- Network building
- Developing the entrepreneurship
- Licensing
- Starting one's own business

In addition to their own experience, Uminova Innovation has several national and international co-operation partners to help develop the business ideas further. Innovation development is part of Uminova Innovation's task to develop the co-operation between university and industry in order to promote the trade and industry of the region.

If the inventor is unwilling to take his invention further, Uminova Innovation offers an alternative way to proceed. An incentive agreement means that Umi-

nova Innovation takes on the development costs and thus also the risks. Together with The Umeå Technology Bridge Foundation (TBS), Uminova Innovation assists in the work with the knowledge/experience needed for pre-studies, patent applications, pattern protection, design, marketing etc.

For the people interested in entrepreneurship, Uminova innovation offers the Entrepreneurship and New Business Programme (ENP). The programme is aimed at university-connected people with an idea and an expressed desire to start a business. The programme includes workshops, seminars, lectures, as well as a mentor as a personal supervisor. Normally, there are approximately 40-50 people applying for the programme, of whom 20 are selected. Design students have also participated.⁹⁸

Finally, Uminova Innovation organises competitions, maintains a database for job opportunities and has a student drop-in service where students and researchers can meet with an experienced innovation developer.⁹⁹

Stenebyskolan Knowledge Park

The Knowledge Park of Stenebyskolan is a platform for contacts between the education and business life. The two main actors are Steneby Incubator and Dalsland Design.¹⁰⁰

Steneby Incubator

Steneby Incubator is the only incubator in the field of design, art and animation in Sweden. Its purpose is to provide knowledge, network and office facilities for its customers who are willing to establish their own business. They serve students, as well as entrepreneurs with already established companies. They also connect and gather different business ideas and products in order to create growth companies. Therefore, the incubator provides services also for designers and artists unwilling to start their own business but who seek help with the development of their products or business ideas. Additionally, Steneby Incubator helps with finding marketing and distribution channels for products.

The operations of the incubator rely strongly on their international network. The network consists of experts in marketing, lawyers, strategists, consultants and specialists in the field of design, arts and animation. Steneby Incubator also organises seminars, lectures and workshops on current topics.¹⁰¹

Designstudio Dalsland Design

Dalsland Design, a design centre and a design studio,

will be established close to the Stenebyskolan due to the creative environment and the possibility of benefiting from the already established network of Stenebyskolan.

Dalsland Design will be a multifaceted design studio providing services for both industry and students. The services for industry will include practical assignments and information services. For students at Stenebyskolan and HDK, Dalsland Design will serve as a link between the university and business life and as a way of presenting their products and ideas.¹⁰²

The Swedish Industrial Design Foundation SVID

The Swedish Industrial Design Foundation (SVID) was founded in 1989 by the Royal Swedish Academy of Engineering Sciences, NUTEK and the Swedish Society of Crafts and Design. It is commissioned by the Ministry of Industry and Trade to help develop and deepen an understanding of industrial design in Swedish industry. The aim is to increase corporate awareness of the importance of design as a competitive tool and to encourage companies to integrate it more into their business activities.

Basically, SVID operates in two areas: Support & Industry, and Knowledge & Competence Development. The idea behind Support & Industry is to give companies practical guidance on questions of industrial design. SVID aims to bring together skilled design firms with industrial companies to help in the development of their products.

SVID has also developed a method to help designers analyse a company's need for design intervention. SVID conducts its activities through its regional offices. Additionally, it has a strong regional focus through ALMI Företagspartner offices.

The idea behind Knowledge & Competence Development is to support training and research programmes within the field of design, and to deepen the understanding of industrial design for strategic professional groups, such as technicians, economists and marketing managers. SVID also co-operates closely with design colleges and universities.

One of the largest national projects of SVID has been the En hel del . project. This project started in 1997 and has been headed since August 2000 by SVID. The idea of the project is to bring students from different design colleges and courses into contact, during their studies, with the real business world that they will meet once they have graduated. The project is also designed to increase companies' understanding of how

important design is by forging collaborative links between municipalities, companies and design students. One of the areas the project focuses on is creating regional summer design offices.¹⁰³

“Sommardesignkontoret”, Summer Design Office is a national effort of SVID to get the universities and business life closer to each other. The idea is that students can work, during the summer, in design offices in different parts of the country. In every office there are about four students who are given short creative assignments. There is also an experienced designer as a tutor or advisor for the students. In summer 2003, there were altogether 92 students working in 16 design offices around Sweden.¹⁰⁴

Society of Swedish Industrial Designers SID

SID is the Swedish professional society for industrial designers and covers the majority of the active industrial designers in Sweden. It was established in 1957 by eight designers working in Swedish industry.

SID's activities are entirely financed by members and service fees and aim to promote the title “Designer SID” internally and externally with as high a value as possible. The most important work is to constantly raise the competence of the present and future professionals of the industrial design branch. SID offers several services to their members. These include, for example, legal advice concerning agreements and immaterial property rights, newsletters, access to SID's network, Design Journal etc.¹⁰⁵

Svensk Form

Svensk Form is an ideological association that aims to influence the development of form and design. Designforum Svensk Form is a meeting-place in Stockholm for everyone interested in design where they have exhibitions, a shop, library, periodicals room and picture archive. It also offers a programme of seminars and lectures.

For many years, Svensk Form has run the Excellent Swedish Design award programme. The awards are intended to focus attention on Swedish design and stimulate ideas about it. Svensk Form also maintains a product register, which was set up to protect new designs being copied. In the event of a disagreement over who was “first on the scene”, the register can confirm when a product came into being.

Additionally, Svensk Form has established a Company pool, which serves as a base for the network between design companies. So far, about 70 companies are registered.¹⁰⁶

Swedish Centre for European design research

According to Swedish national design policy, a European centre for design research and development will be established in Sweden. The purpose of such a centre will be to consolidate and develop the knowledge and application of ground-breaking user-focused design that exist in Sweden and other European countries.¹⁰⁷

Part of the design research development is SWIDREA, a proposal for a national graduate school for industrial design, initiated by SVID and Umeå Institute of Design. It is a draft for a national research and training programme aimed at bringing together researchers and students from Swedish universities to develop and apply theories and methods for developing new products from a design perspective. The long-term goal of the network-based Graduate School is to create a new, interdisciplinary design research practices that will result in better educated and more innovative and reflective industrial designers.

The Graduate school will start by organising an education and training programme for tutors in different schools. This is intended to take place during year 2004.¹⁰⁸

⁸³ www.dh.umu.se

⁸⁴ *ibid*

⁸⁵ *ibid*

⁸⁶ Tapio Alakörkkö, Head of Department, Umeå Institute of Design. Interview 24.6.2003.

⁸⁷ www.hdk.gu.se

⁸⁸ Bo- Erik Gyberg, Director, HDK. 31.10.2003.

⁸⁹ www.stenebyskolan.se

⁹⁰ www.hff.gu.se

⁹¹ www.kkh.se

⁹² www.konstfack.se

⁹³ www.sses.se

⁹⁴ www.design.lth.se

⁹⁵ www.innovation.lth.se

⁹⁶ www.khm.lu.se

⁹⁷ Gertrud Sandqvist, Principal, Head of Department, Malmö Art Academy. 30.10.2003.

⁹⁸ Barbro Renkel, Uminova Innovation. Interview 24.6.2003.

⁹⁹ www.uminovainnovation.se

¹⁰⁰ www.stenebyskolan.se

¹⁰¹ www.stenebyinkubator.se

¹⁰² www.stenebyskolan.se/kunskapspark/designstudio

¹⁰³ www.svid.se

¹⁰⁴ www.sommardesignkontoret.se

¹⁰⁵ www.sid.se

¹⁰⁶ www.svenskform.se

¹⁰⁷ Förslag til nationellt program för design som utvecklingskraft inom näringsliv och offentlig verksamhet 2002.

¹⁰⁸ SWIDREA, Swedish Innovative Design Research and Education Agenda, 7.2.2003, SVID & Umeå Institute of Design

¹⁰⁹ www.almi.se

¹¹⁰ www.vinnova.se

¹¹¹ www.nutek.se

ALMI Business Partner

ALMI was founded in 1994 and is owned by the state. The ALMI-group consists of a parent company and 21 regional ALMI offices. ALMI's mission is to stimulate growth and development for small and medium-sized companies and innovators by offering financing and business development consultation.

ALMIS's goal is to make it easier for more innovators to reach the market, to stimulate new businesses and to promote the development of competitive companies. Depending on the company or the innovator's needs, ALMI provides expertise in different ways. They provide help during the different phases of a business, from the initial concept to a profitable company.¹⁰⁹

VINNOVA

VINNOVA, Swedish Agency for Innovation Systems, is the national government agency for promoting sustainable growth by financing R&D and developing effective innovation systems.

VINNOVA's main activities include:

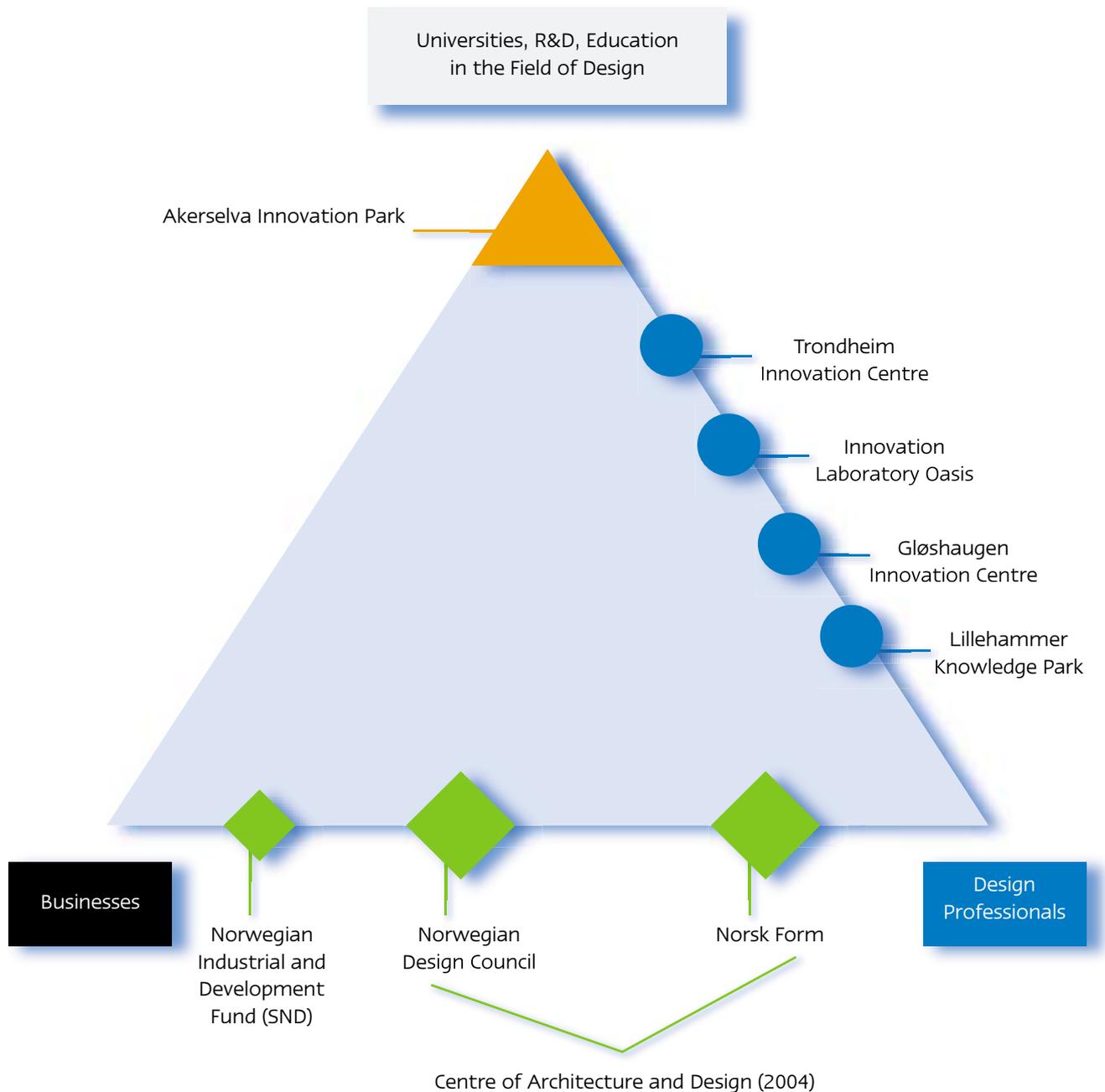
- to finance research, development and demonstration activities that meet the needs of business and the public sector
- to foster co-operation between universities, industrial research institutes and business
- to promote the diffusion of information and knowledge, especially to small and medium-sized enterprises
- to develop the role of research institutes in innovation systems¹¹⁰

The Swedish Business Development Agency NUTEK

NUTEK, The Swedish Business Development Agency, aims to further sustainable growth in Sweden. Its main focus areas are entrepreneurship and business, regional business development, business financing and analysis.

NUTEK aims to strengthen new and growing companies by giving them information and advice and by providing support through programmes and processes. It also contributes to strong Swedish regions by generating and disseminating knowledge, improving the financial support instruments, and developing forms for collaboration between various players in society. NUTEK also promotes the start-up of new companies by financing the early phase of technology-based business development projects with high technical and commercial risk. Finally, NUTEK conducts industrial policy studies and analyses, makes evaluations and develops strategic knowledge.¹¹¹

NORWAY - INNOVATION ENVIRONMENT IN THE FIELD OF DESIGN - ACTORS



3.6 Norway

3.6.1 Universities

The Oslo School of Architecture

The Oslo School of Architecture is an autonomous school within the Norwegian university system. It offers education and conducts research in the field of architecture, urbanism and industrial design.

AHO's educational programme leads to Master's degrees in the three disciplines. The teaching profile is based on an academic tradition with studio-based project work. The School also has a PhD programme and in-depth research projects are conducted within the core disciplines. In conjunction with this, AHO

is in the process of establishing a research institute that will partly work on the basis of externally funded research activities. AHO's teaching is based on a conceptual design approach. This approach is combined with an introduction to traditional subjects in architecture, urban and industrial design.

The School is divided into four departments: Architecture, Urbanism, Industrial Design and Form, Technology and History Department.

AHO moved into its current location during autumn 2001. This move led the School become far more integrated in public life in Oslo. The School hosts a number of public events directed towards various professional groups and public.¹¹²

AHO, together with The Oslo National College of the Arts is developing a design-oriented concentration in the Oslo region emphasising innovation and entrepreneurship. (See Chapter 3.6.2)

The Oslo National College of the Arts (Kunsthøgskolen i Oslo)

In 1996, six separate schools in Oslo, The National College of Art and Design, The National Academy of Fine Art, The National College of Opera, The National College of Ballet and The National College of Dramatic Arts, joined together and formed **The Oslo National College of the Arts**. Since then, the school has found a joint location and formulated a new identity and status.

Today, The Oslo National College of the Arts is united and establishing its new facilities by the Akerselva river in Oslo. They are still going through some internal restructuring, such as defining the faculties and building the school brand. "In the end, there will probably be six departments – Dramatic Art, Opera, Ballet and Dance, Design, Arts and Crafts and Fine Art".¹¹³

College of Art and Design, Bergen (Kunsthøgskolen i Bergen)

Art education has a long tradition in Bergen, as the first school of art was established there in 1772. The present college, Kunsthøgskolen in Bergen, is a new institution merging the two former institutions "Vestlandets kunstakademi" and "Statens høgskole for kunsthåndverk og design" into one.

The school is divided into three departments: Department of Design (spatial design and visual communication), Department of Specialized Art (photography, ceramics, printmaking and textiles) and Department of Fine Art.¹¹⁴

Norwegian University of Science and Technology, NTNU, Trondheim (Faculty of Architecture and Fine Art, Department of Product Design)

NTNU was established in 1996 as a further development of the University of Trondheim (UNiT). UNiT was established as a result of merger of The Norwegian Institute of Technology (NTH), The College of Arts and Sciences (AVH) and the Museum of Natural History and Archaeology (VM).

Trondheim Academy of Fine Art (KIT) has been a part of the Faculty of Architecture and Visual Art at NTNU since 1996. Other departments of the faculty include: Architectural Design, Form and Colour, Architectural Design and Management, Architectural Design, History and Technology, Urban Design and Planning. Product design is taught at the Department of Product Design under the Faculty of Engineering Science and Technology.¹¹⁵

3.6.2 Other actors in the innovation field

Akerselva Innovation Park

Akerselva Innovation Park is a 2-year project for the development of a cluster of research, education and innovations within the arts, architecture, design, and advanced ICT in Oslo. The geographical area was originally the former industrial valley along the Akerselva river in the centre of Oslo, where The Oslo School of Architecture, The Oslo National College of the Arts, The National Institute of Technology are all already located and where The Norwegian Centre for Design and Architecture will be situated in fall 2004. In addition, InterMedia at University of Oslo in the Gaustadbekk valley, is a part of the project. The city of Oslo, through Oslo Teknopol, is also a partner and leading the project in its initial phases. The aim of the project is to stimulate research and innovation by bringing together some of the most important institutions dealing with architecture, art, media and design and the business community in the Oslo region.¹¹⁶ The idea is to make a "virtual art & design lab, with university level research and education in a network, combined with an incubator and other commercialisation activities as well. Common international marketing is also an important dimension. Each institution will focus on their strongest side, and merge their advantages where synergies can be developed. It is considered "virtual" because a physical merger of institutions is not considered necessary, since the area where these

institutions are located are relatively small. Investments in common infrastructure to complete a powerful broadband network will ensure the connections and information. However, some common units and labs are likely to be established in the future. An art and design incubator will be a part of the co-operation. It is planned to be an independent business unit to help launch ideas from different institutions to the market. The incubator aims at being an accelerator designed to assist researchers to further develop their ideas into real products or into new companies. The pre-project of the Akerselva Innovation Park was funded by The National Council of Culture, The Municipality of Oslo through Oslo Teknopol and Innovation Norway. The different R&D institutions mentioned above have also contributed with time resources.¹¹⁷

The pilot project was finalised in summer 2003, and the project has now entered a preliminary stage, which will end in the spring of 2004, with the establishment of an association as the next milestone of the development.¹¹⁸

Norwegian Design Council

Norwegian Design Council – Norsk Designråd – was established in 1963 by the Confederation of Norwegian Business and Industry and the Norwegian Trade Council to promote design as a competitive tool in market-oriented product development and market communication. Its main objective nowadays is to promote the understanding and use of professional design in order to increase competitiveness and profitability for the Norwegian industry.

The Council is mainly funded by the Norwegian Department of Trade and Industry. Additional sources of income are consultancy services and design related projects. Its main services include:

- Advice and support on design issues to Norwegian companies
- Designer referrals from a database of 250 designers
- Seminars and lectures on design

NDC has an agreement with the Norwegian Industrial and Development Fund (SND) to promote design as a competitive tool through all regional SND offices. SND provides financial support to viable commercial enterprise projects in all parts of Norway. The agreement paves the way for companies throughout Norway to gain access to design and product development support. This co-operation has proved to be very successful.

Half of the staff at NDC works as consultants and the other half in promotion. One of the NDC's main promotional activities is the annual Award for Design Excellence and the Honours Award for Design Excellence given to products and corporate identity programmes. Other awards include the International Design Award, Classic Award for Design Excellence and the Young Talent Award. Additionally, NDC organises once a year a Design Day to inspire companies to strategically integrate and employ design as a competitive business tool. The Design Day also acts as a forum for designers and company representatives, as well as politicians and journalists.¹¹⁹

Norsk Form

Norsk Form is a centre for design, architecture and built environment in Oslo. It organises exhibitions, seminars, conferences and projects and acts as promoting organisation for Norwegian design and architecture.¹²⁰

In autumn 2004, Norsk Form will move into new facilities together with the Norwegian Design Council. Together they will form a Norwegian Centre of Design and Architecture and be an important actor in the Akerselva Innovation Park. The Norwegian Centre of Design and Architecture will host exhibitions and conferences, as well as provide conference facilities for 150 people. Additionally, there will be a cafeteria and a shop. The goal of Norsk Form and Norwegian Design Council is that the new centre will be the most important meeting place and resource centre for design and architecture.¹²¹

The Norwegian Industrial and Regional Development Fund SND

SND was founded in 1993 and since then it has played an important role in the value-creating process of Norwegian trade and industry. SND offers expertise and funding to companies in their early stages of development. It promotes new and innovative business development by finding, refining, funding and following up interesting projects and enterprises.

SND co-operates closely with other organisations such as Research Council of Norway, the Norwegian Trade Council, the Norwegian Design Council and SIVA (the Industrial Development Corporation of Norway). These collaborations generate synergies that greatly benefit the business environment.

All SND's regional offices have a contact person responsible for design. Communication with the Norwegian Design Council increases the probability of

companies considering design as an important part of the project or company development. Thus, collaboration between Norwegian Design Council and SND enables the customers to become more aware of the advantages inherent in design.¹²²

SND has established, together with The Research Council of Norway, a joint programme called “FORNY”. This programme is targeted to employees and students in colleges, universities and research institutions, who have good, but latent ideas for projects. FORNY is designed to encourage students, researchers and research administrators to focus more attention on the potential commercialisation of research results. This means that the inventor of the idea and other rights holders might take part in a commercial success based on the idea at hand. R&D units may apply for funding for regular measures to pave the way for new ideas, and/or to develop them. Under FORNY, these R&D units can then work with professional commercialisation units, such as research parks, to develop sound business ideas further.¹²³

Trondheim Innovation Centre

Trondheim Innovation Centre Ltd. – Teknostallen – offers an innovative environment, office space and other necessary facilities for profitable and knowledge-based businesses. One of its major areas of expertise includes industrial design.

Trondheim Innovation Centre Ltd. has about 55 companies/organisations as tenants to whom they offer favourable terms and good service functions. In addition to administering and developing the centre, it functions as a regional innovation market by arranging seminars, meetings and conferences.¹²⁴

Innovation Laboratory Oasis at NTNU

The objectives of the Oasis innovation laboratory are to help develop knowledge and skills on facilitation of creative group processes. The aim is also to transfer this knowledge to business and industry and to the university itself through courses, seminars and teamwork sessions.

Activities of the Oasis include:

Research projects: Creativity in design processes (in collaboration with Department of Product Design Engineering)
Infrastructure for enhancing creativity of the Innovation centre of NTNU

Education: sCreativsity course for research engineers
Creativity in multidisciplinary student project teams

Consulting: Process facilitation, use of specially designed rooms and equipment to support creative processes in teams.
Creative working sessions arranged at the customers site.

The Oasis is funded both by the NTNU Innovation Fund for Business and Industry and by contract projects.¹²⁵

Gløshaugen Innovation Centre

Gløshaugen Innovation Centre is the first “on campus” incubator for commercial entrepreneurship in Norway. It is a joint initiative by NTNU, SINTEF (The Foundation for Scientific and Industrial Research) and SIVA, in order to create an exciting environment and atmosphere for entrepreneurship, commercialisation and networking, with close ties to the academic and scientific world. The Innovation Centre offers services primarily for students, faculty, employees or others with ties to NTNU or SINTEF, aiming to set up businesses founded on interesting R&D-based ideas with a commercial potential.¹²⁶

Lillehammer Knowledge Park

Lillehammer Knowledge Park (Lillehammer Kunnska-pspark) is a small innovation company that opened in 1999. It operates in the following areas:

Counselling – project management
Networking – access to dynamic networks
Incubator – establishing companies

comig@ng is the incubator for Lillehammer Kunnska-pspark. They are aiming to help entrepreneurs with clever business ideas within creative businesses, which is one of the most rapid growing businesses worldwide. It involves a number of careers and professions, but can be generally described as content, art and culture.

The purpose of the incubator is to offer a concrete tool for support to new businesses in the initial phase. In order to do this, they provide office space, common areas, conference rooms and the necessary infrastructure that are needed in the initial phase of the businesses. In addition, they offer counselling and access

to eligible networks and external knowledge that is needed to realise a business idea.¹²⁷

The Industrial Development Corporation of Norway SIVA

SIVA is a public enterprise established to further the creation of business opportunities, and increased employment. Its goal is to develop strong local environments by providing investment capital, competence and networks for SMEs. SIVA actively partners individuals, companies and local communities to develop attractive business environments and profitable business growth. This contributes to the development of sustainable local communities and regions throughout the country.

SIVA acts as a catalyst and investor to develop environments fostering sustainable innovation through extensive participation in science and research parks, business gardens, incubators and industrial parks. SIVA owns 40 industrial parks and is a co-owner of ten science and “knowledge” parks.¹²⁸

According to the Norwegian Design Policy, *Design som drivkraft for norsk næringsliv* (2001)¹²⁹, integrating the operations of SIVA into the design field would

be beneficial and is recommended. Incorporating design into the SIVA’s incubator-programme more effectively could facilitate developing design into more competitive business.

Innovation Fund

The OECD report “*Education Policy Review – Lifelong Learning in Norway*” (2001)¹³⁰, proposes that the Norwegian government should establish an innovation fund for education, training and learning. Norgesuniversitetet (The Norwegian University Network for Lifelong Learning) took the initiative further to the Ministry of Education and Research in 2003.¹³¹

The Norwegian Design Policy also suggests that an innovation fund should be established in the field of design to support students and designers to develop their ideas further, for instance in terms of prototypes, and to facilitate the connection between the designers and potential producers.¹³²

¹¹² www.aho.no

¹¹³ Peter Butenschön, Rector, KHIO. Presentation 29.9.2003, Bergen; www.khio.no

¹¹⁴ www.khib.no

¹¹⁵ www.ntnu.no

¹¹⁶ Pål Steigan, Art and Media Forum. Interview on 30.9.2003, Oslo; Knut Halvorsen, Oslo Teknopol, E-mail discussion 12.2.2004

¹¹⁷ Steigan, Pål (2003). “Akerselva Innovasjonspark- forprosjektrapport” Art and Media Forum, Oslo, 2003

¹¹⁸ Knut Halvorsen, Oslo Teknopol, E-mail discussion 11.2.2004

¹¹⁹ Vilhelm Lange Larssen, Norwegian Design Council, Interview 30.9.2003, Oslo; www.norskdesign.no

¹²⁰ www.norskform.no

¹²¹ Steigan, Pål (2003). “Akerselva Innovasjonspark- forprosjektrapport” Art and Media Forum, Oslo, 2003

¹²² www.snd.no

¹²³ The Research Council of Norway, <http://www.program.forskningsradet.no/forny/en/om/>

¹²⁴ <http://fin.no/scienceparks>; <http://www.teknostallen.no/>

¹²⁵ <http://www.idefondet.ntnu.no/oasenengres.htm>

¹²⁶ <http://www.ig.ntnu.no/english.php>

¹²⁷ <http://www.lillehammer-kunnskapspark.no>

¹²⁸ www.siva.no

¹²⁹ “*Design som drivkraft for norsk næringsliv*”. Rapport fra Utvalget for Næringsrettet Design, 2001

¹³⁰ “*Education Policy Review – Lifelong Learning in Norway*” OECD report, 16.10.2001.

¹³¹ <http://www.norgesuniversitetet.no>

¹³² “*Design som drivkraft for norsk næringsliv*”, Rapport fra Utvalget for Næringsrettet Design, 2001

3.7 Iceland and Baltic Countries

3.7.1 Iceland

Iceland Academy of the Arts

The role of the Iceland Academy of the Arts is to provide higher education in the field of arts. The Academy offers degree programmes at the Bachelor of Arts level and comprises four departments: the Department of Visual Arts, the Department of Drama, the Department of Design and Architecture and the Department of Music. In addition, the Academy offers a Diploma programme in Music for young musicians and a certification programme in Art Education for artists, designers, and actors. The Academy received accreditation from the Ministry of Education in 1999.¹³³

Current situation in the design field

The situation for the most designers in Iceland is challenging. There is much creativity but only few manufacturers. To get something produced, the designers have to probably do it themselves or look abroad, both options requiring a lot of resources.

Therefore, the Iceland Academy of the Arts has established an interdisciplinary design programme, which focuses on concept more than craft, and with an emphasis on marketing and business training.¹³⁴ The innovation supporting services are not strongly emphasised, but the university plans to develop services related to copyrights and related rights. Additionally, the university co-operates a great deal with companies in terms of research projects and internships, and there are competitions held in the university twice a year in order to promote the students' ideas.¹³⁵

Another positive development is that Form Island, organised to build public awareness of design, aims to establish a permanent Reykjavík centre, similar to those in most Scandinavian capitals.¹³⁶ Additionally, Reykjavík's leading modern-design retailer, Epal, aims to promote Icelandic design and designers.¹³⁷

Other example of the promotion activities is the Crafts and Design (Handverk og Hönnun) project, which helps market crafts by professional designers and untrained women from rural areas. Crafts and Design is a long-term project established in 1994 to support the development and preservation of Icelandic crafts, to improve craftsmen's education and level of knowledge, as well as to stimulate quality awareness

in the field. Crafts and Design also provides marketing and consulting services, distributes a newsletter and organises exhibitions. The Project is now operating with financial support from several ministries.¹³⁸

Still, despite these favourable developments, many Icelandic designers support themselves only by working in several disciplines. While Scandinavians generally look on design as something to export, Icelanders see it as something for themselves. They are, however, beginning to take a broader view. Besides designing furniture for Danish and Swedish manufacturers, Icelanders are learning to market themselves more aggressively outside national borders. A show of Icelandic fantasy gift objects, for example, has been touring Europe since January 2003.¹³⁹

Actors in the Innovation Field

RANNIS

The Icelandic Centre for Research, RANNIS, was established in 1994 and replaced the previous Council of Science (basic research) and the National Research Council (applied research and development). RANNIS consists of 11 members from business, labour, industry, research organisations and universities.

RANNIS reports to the Ministry of Culture and Education and its mission is to reinforce and underpin the cultural and economic foundation of Icelandic society by promoting vigorous and well co-ordinated scientific endeavour, technical development and innovation. Its responsibility thus covers the whole spectrum of science and the humanities, as well as technology and innovation.

In order to create a continuum of support for scientific training, basic research, applied research, innovation, transfer of results and for infrastructure investments, RANNIS has established several types of grants, which include, for instance, support for Master's and Doctoral studies and grants for R&D projects. Additionally, RANNIS has a separate Graduate Training Fund to support the research training of graduates.¹⁴⁰

IceTec

IceTec is an Icelandic technological R&D and educational institution. Ice Tec's primary aim is to strengthen the Icelandic economy through development, innovation and increased productivity. IceTec promotes co-operative development work between companies, entrepreneurs, financial institutions, schools, research centres and consultants, both at home and abroad. Through research the institute develops new knowledge to help companies at home and abroad improve their competitive positions.

IceTech also evaluates business ideas and provides guidance in the development and operation of small and medium-sized enterprises. This involves basic information and knowledge sharing, education, operating an Incubator Centre and Innovation Relay Centre, and support and development work. Inventors and entrepreneurs are given support and guidance in further developing new ideas.¹⁴¹

3.7.2 Estonia

Estonian Academy of Arts

Estonian Academy of Arts (EAA) began in 1914 when The Tallinn Applied Art School was founded. Currently, Estonian Academy of Arts is the only institution in Estonia offering education at the university level in the fields of art and design. EAA consists of the faculties of Fine Arts, Design, Media Arts, Architecture and Conservation as well as the Institute of Art History. In addition, the Teachers' Training Centre at EAA provides a training programme at MA level.¹⁴²

Current situation in the design field

In 2003, a proposal for the Estonian Design Policy was made by The Mollerup Designlab A/S.¹⁴³ This proposal sets the framework and action plan for the development of the design sector in Estonia.

According to the proposal, a design information centre should be established. This information centre should have three main responsibilities: to implement design policies, to act as advisor to the government and to run a design intelligence unit. The centre also should, according to the proposal, maintain an Estonian design website, provide a monthly e-mail newsletter with Estonian and international design news, have a library, organise design awards, have contacts with international actors, as well as maintain a designers index.

Also the Estonian Academy of Arts has taken the initiative to develop its operations further and to improve its services for the students. Thus, they have established an innovation centre, which is currently under development.

Innovation Centre

The mission of the Innovation Centre is to participate in the development of Estonian design and design education within the frames of the state design programme. The overall purpose of the Centre is to work with organisations in both private and public sectors in order to promote, improve and ensure the effective use and integration of design in business, in education and in governmental actions.

The Innovation Centre is supporting innovative ideas through coordination and management. The

3.7.3 Lithuania

Vilnius Academy of Fine Arts

Vilnius Academy of Arts is a national institution of art teaching, scientific research in prehistory, art history, contemporary art and editorial activities. It began in 1793 when the Department of Architecture was established at the Vilnius University. Today, Vilnius Academy of Arts is acting under the authority of the Ministry of Education and Science.

Vilnius Academy consists of three faculties, Fine Arts (painting, print making, monumental arts, sculpture, art history and theory, as well as photography and media art), Applied Arts (architecture, design, interior design, ceramics, textiles, as well as clothing and fashion design) and the Kaunas faculty (architecture, graphic design, printmaking, glass design, ceramics, painting, sculpture, textiles and general art studies).

In 1994, the Institute of Art Research was established. It engages well-known scholars and is one of the most respected institutions on art research in Lithuania. It also helps to integrate the fields of science with studies.¹⁴⁶

development centre will help to compile funding applications for projects, find co-operation partners and involve experts for professional and successful counselling of projects. It also provides help with copyright documentation and organising legal counselling.

The Innovation Centre is responsible for organising co-operation and conducting joint projects with various international design centres, research with different institutions and universities. In addition, it will ensure the availability of design information for all target groups (website, publications, conferences, etc.). The Centre is open to co-operation with all structural units of EAA and other interested institutions.¹⁴⁴

Current situation in the innovation field

One of the key challenges facing the Estonian government today is the creation of a predictable and conducive environment for innovation, aiming at more intensive innovation activities and strategic investments in Estonia.

In co-operation with the Estonian Technology Agency (ESTAG) under the foundation Enterprise Estonia, the Ministry of Economic Affairs has launched a series of innovation studies in order to build a store of knowledge and know-how to support the decision makers.

Part of this series was a feasibility study made for the Competence Centre programme focusing on the science-industry relationship. The idea was to examine how tools like competence centres could stimulate the knowledge and technology transfer between academia and the private sector in Estonia. One of the problem areas was that in Estonian universities the basic organisational and legal frameworks are still under construction and there is a lack of result oriented planning and capabilities with regard to project management and commercialisation. However, according to the study, the establishment of competence centres in Estonia would intensify technological development and innovation and, therefore, contribute to the competitiveness of Estonian enterprises and industry through more intensive technological development and innovation.¹⁴⁵

3.7.4 Latvia

Art Academy of Latvia

The Art Academy of Latvia is a university-level higher educational institution established in 1921. It offers Bachelor's, Master's and PhD programmes in Visual and Plastic Arts (painting, graphics, sculpture, ceramics, glass art and textile art), Design (functional design, metal, fashion, visual communication, environment art and stage design), as well as in Art Science and Theory of Culture (art science and art restoration).¹⁴⁷

Current situation in the design field¹⁴⁸

The Art Academy of Latvia is currently developing a project of establishing and incubator for design related services in Riga. The project promoters are University of Latvia, Latvian Academy of Arts and Riga Technical University together with three Latvian industrial associations in the field of Furniture, Engineering/Metal processing and Textile/Clothing.

The Incubator is intended to be a place and a structure to stimulate the links between industry and academia, to encourage commercialisation of design and to promote the internationalisation of design in Latvia. The main areas of activities will include:

1. Establishing Design Information Centre, which organises regular educational and co-operative events for industry, academia and students with the participation of world-class experts. Design Information Centre is intended to be a hub for the exchange of information, knowledge and interaction of people from different disciplines. There will be a comprehensive design reference library and reading room, as well as regular newsletters published on design developments in Latvia and worldwide.
2. Education and research institutions in design-related fields, design firms and design consultants are provided access to high-quality infrastructure. The Design Incubator will provide high-quality physical space for the location of activities in design and related areas. In addition to a convenient location, the Incubator building(s) will offer an open, stimulating international environment, where academic and research institutions, design firms, design consultancies and businesses can interact, resulting in new ideas, new combinations of players and new business propositions

3. To stimulate the development of innovative educational programmes of international quality, the Incubator will provide co-financing for curriculum development and implementation to local universities. It will also provide support to a limited number of start-up design firms (studio/office space, access to research laboratories, free Incubator services) on a competitive basis.

4. The Incubator will also be the main non-governmental body responsible for coordination of Latvia's future design policy, and of measures to promote Latvia as a design-driven economy to both internal and external audiences. It will also work to attract expertise and funding by involving Latvian and international designers, design consultancies, industrialists, researchers and teachers.

All these activities are in accordance with the National Innovation Programme goals of "creating a sustainable basis for the creation and growth of innovative enterprises" and "support for the creation of a unique and competitive structure of the national economy".

¹³³ www.lhis.is

¹³⁴ Gura, Judith: "Iceland on Defrost", *Interior Design*, 6.1.2003, www.interiordesign.net

¹³⁵ Halldór Gíslason, Dean of the Department of Design and Architecture, Iceland Academy of the Arts. E-mail interview 7.11.2003.

¹³⁶ Gura, Judith: "Iceland on Defrost", *Interior Design*, 6.1.2003, www.interiordesign.net

¹³⁷ www.epal.is

¹³⁸ www.handverkoghonnun.is

¹³⁹ Gura, Judith: "Iceland on Defrost", *Interior Design*, 6.1.2003, www.interiordesign.net

¹⁴⁰ www.rannis.is

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¹⁴³ Mollerup, Per et al (2003). "Establishing the basis for the elaboration of the Estonian design policy measures". Mollerup DesignLab A/S.

¹⁴⁴ www.artun.ee/organizations

¹⁴⁵ "Competence Centre Programme Estonia", Feasibility study. Innovation studies 1/2002.

¹⁴⁶ www.vda.lt

¹⁴⁷ www.lma.lv

¹⁴⁸ Rode & Weilan Ltd (2003). "Project Application". Latvian Association of Furniture Industries.

4. Theoretical Background: Preconditions for the Network of Art and Design Universities in Nordic and Baltic Countries

4.1 Background for Networking

The importance of networking and the benefits of collaboration amongst organisations with related or overlapping missions have been widely recognised for some time. For many companies and organisations, it has become crucial to be a member of certain networks nationally and internationally.

Networks can be defined, for example, in terms of interdependencies, relationships and connections through exchange relations.¹⁴⁹

There are numerous reasons that lead companies and organisations to build up networks. Some of the common ones are:

1. To allocate risk
2. Entry into new markets
3. Need to adopt new technologies
4. Decreasing the market entry time
5. To connect complementary skills

Networks can also be classified according to their nature. The most common types of networks include¹⁵⁰:

1. Vertical value nets, including:
supplier nets; channel and customer nets; vertically integrated value-systems
2. Horizontal value nets, covering several modes:
Competition alliances; resource/capability access alliances; resource& capability development alliances; market and channel access/co-operation alliances; “networking forums” – company driven, institutionally driven
3. Multidimensional value nets, including:
“core or hollow organisations”; complex business nets; new value-system nets

4.2 The concept of Innovation Network

The traditional view of knowledge and technological development, from the company’s point of view, is many times seen as an internal problem. The company is advised to design systematic product development processes in order to develop the “right products”. From this point of view, products should be developed within the company and then introduced to the market.

However, an important part of the development process today takes place in the form of a technical exchange between different actors such as individuals, companies or other organisations. Since not all the relevant resources for innovations can be found inside the companies any more, co-operation with research institutes, universities and suppliers in innovation networks has become crucial. Thus, the interest should be focused more on the interaction between different actors and an innovation could be seen as a result of interplay between two or more actors, that is, as a product of a network of actors.

4.3 Commercialisation network

The type of network suitable for this study can be described as a commercialisation network (See Figure 7). A commercialisation network consists of actors, such as innovator, investor, intermediate and a producer.

From the university point of view, an innovator can be a student or a researcher. Investors might be external or university related companies or foundations providing financial support for the development of good and promising ideas and inventions. An intermediate can be a unit, inside or in close collaboration

with the university, such as an innovation centre or incubator, offering services and advisory help related to the innovation development etc. Finally, a company represents the party responsible for the production of the innovation.

Naturally, Figure 7 describes a commercialisation network in one university. Extending the picture to include all the countries involved in this survey gives a picture of what the networking between all the art and design universities in Nordic and Baltic countries could mean. (See Figure 8)

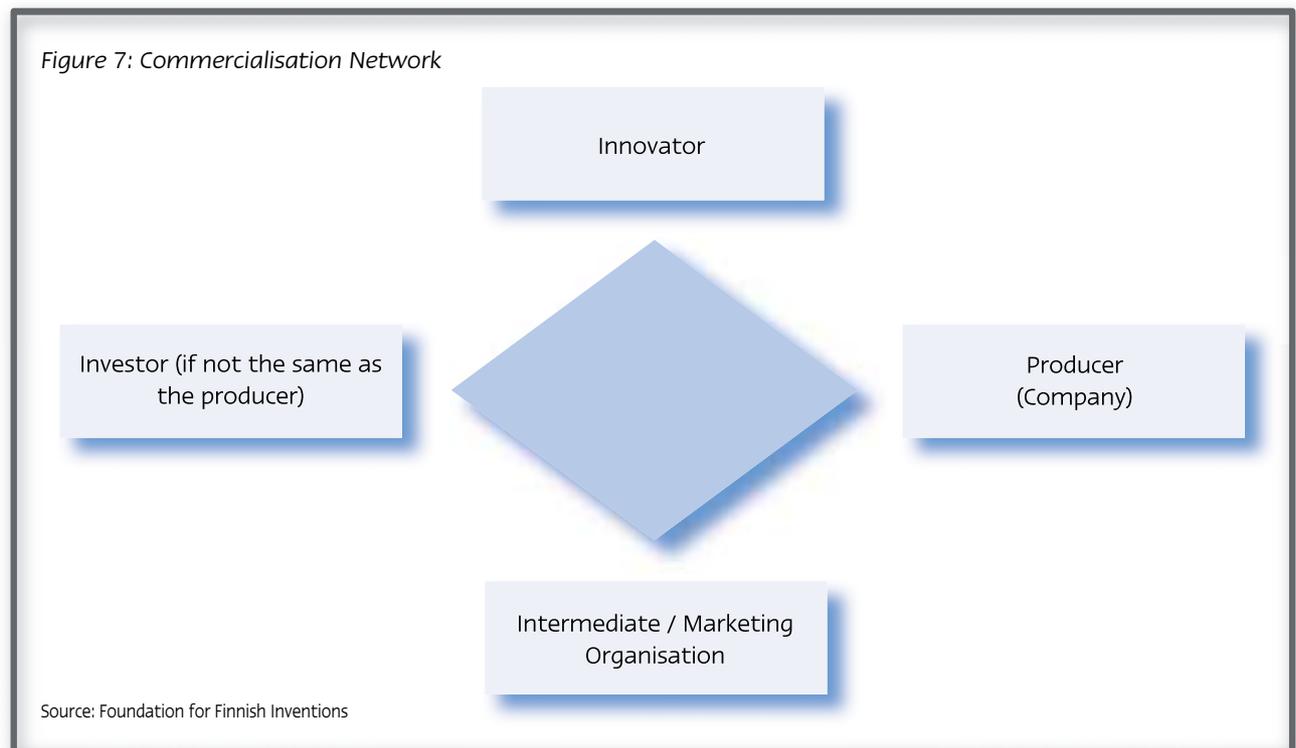
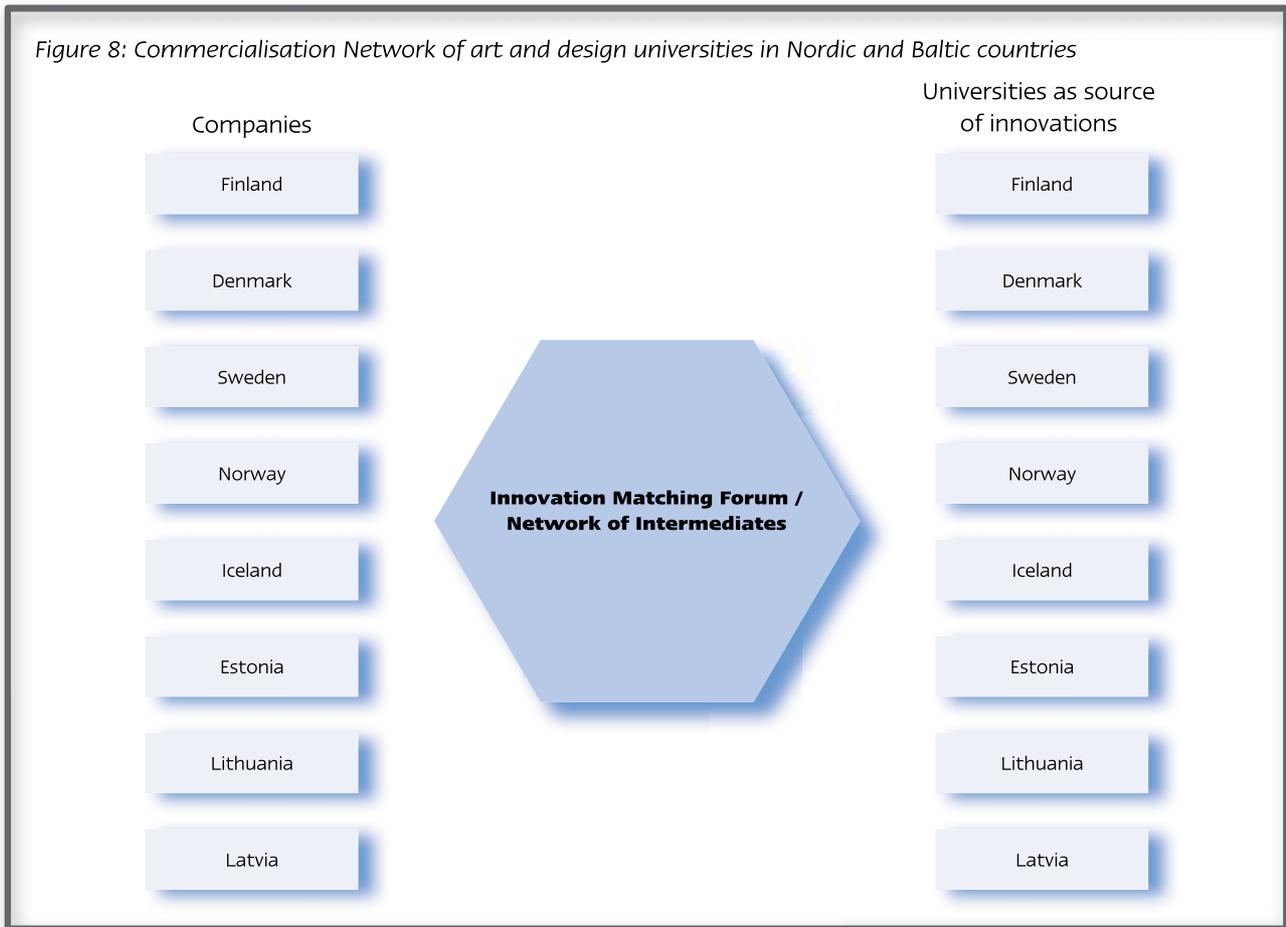


Figure 8: Commercialisation Network of art and design universities in Nordic and Baltic countries



In this Figure, universities from each country are seen as providers and sources of innovations. At the other end, there are companies from each of the countries representing the possible producers for the innovations. In the middle, there is an intermediate organisation, responsible for the innovation supporting services and providing contacts. This intermediate

organisation could consist of relevant units of all the countries involved.

The main idea of this model is the wider marketing area for all the innovations. Thus, instead of a one country as a target market, the innovations could be offered to all of the countries involved simultaneously.

5. Analysis of the Current Situation

5.1 Findings of the preliminary survey

Findings of the preliminary survey show that there is a clear need for further developing innovation supporting services in Nordic and Baltic art and design universities. It seems that universities in the field of art and design are somewhat behind in the development of the innovation supporting activities compared, for example, to universities in the field of technology and medicine.

Naturally, the different characteristics of the fields should be taken into account. There is an interest in developing these things, though, and many art and design universities have started to develop their activities accordingly.

In the following, good practices, units and methods involved in the innovation supporting activities are described using different categories. Findings are summarized in Figure 9 (see page 53).

5.1.1 Innovation supporting services in universities

To be able to provide their students and researchers with better services related to innovation development, the art and design universities have started to build up units and methods for these purposes. However, much of this development is still in a preparatory phase. Additionally, it does matter whether we talk about big universities, where art and design is just one subject among others or if the university is solely dedicated to artistic disciplines. In many cases where art and design is just one of the many focus areas, such as in Umeå University, they have systems in place and ready established instruments and methods for the innovation supporting activities.

An example of this is the Uminova Innovation at the Umeå University, which also offers services for the students and researchers in the field of design. Another example, but representing the case where the university offers education only related to arts, is the

University of Art and Design and its Innovation Centre Designium. It provides innovation supporting services in the field of art and design but also conducts multi-disciplinary research in close collaboration with the universities in the fields of technology and business.

5.1.2 Clusters

One clear sign of the development is the establishment of clusters and the creation of structures for innovative environments in the field of design in many countries.

In some cases, such as in Finland, this cluster formation is also in accordance with the objectives of the national design policies. The concentration of design and media know-how at Arabianranta in Helsinki provides a basis for such a design cluster. At the heart of the cluster are The University of Art and Design Helsinki; Innovation Centre Designium; Design, Media & Art Business Centre Arabus and the Centre of Expertise focusing on culture and digital media. Different research institutes and design companies are also part of the cluster.

Another good example can be found in Oslo, in the Akerselva region, where Oslo School of Architecture, The Oslo National College of the Arts and The National Institute of Technology have worked together to develop an innovation park and a cluster based on the combination of art, education and business. There will also be The Art & Design Lab together with an incubator to facilitate the knowledge transfer and start of new businesses in the field.

Similar development can also be found in Sweden, together with the Stenebyskolan of HDK, where they have established an incubator close to the school and placing strong emphasis on developing these things further. Finally, still another example can be found in Stockholm, where an initiative was taken to develop a regional design programme in the Stockholm region and to build a design cluster to enhance the co-opera-

tion of companies and universities and to support the establishment and operations of new design companies.¹⁵¹

5.1.3 Cooperation with companies

The findings of the survey show that most of the universities involved have cooperation with companies. This might be in form of trainees, scholarships, joined research programmes, company representatives participating the lectures, workshops in companies etc.

A well functioning example of this seems to be The Umeå Institute of Design, where the collaboration with industry is very strong. In all the programmes, the Institute co-operates regularly with a number of companies and organisations. This co-operation with industry has proved to be very successful and beneficial for both parties. At the same time when students can learn from real work in industry, the companies get new fresh ideas and contacts with possible future specialists amongst the students.

Another good example is the “Sommar-designkontoret”, Summer Design Office, a national effort by SVID. The idea is that students can work, during the summer, in design offices in different parts of the country. This offers a good way for students to gain experience in work life, while companies benefit from the assignments conducted by the students.

5.1.4 Research

The role of research and continuous creation of new knowledge in design has been emphasized strongly in Finland. The National Technology Agency TEKES, together with the Academy of Finland, has strongly invested in the research of design in its Industrial Design Technology Programme. Together there are 60-100 researchers and 8 universities involved with these programmes. The research programmes also aim at enhancing the utilization of design in companies. Thus, there are about 50 companies involved with the programmes. The total financial effort put on the design research in Finland amounts to nearly EUR 30 million.

Additionally, many initiatives have been taken to develop the research operations between art and design universities

one example is SWIDREA, the Proposal for a National Graduate School for Industrial Design in Sweden. It is initiated by SVID and Umeå Institute of Design and will be a national research and training

programme aiming at creating new, interdisciplinary design research practices that will result in better educated and more innovative and reflective industrial designers.

Another example is the establishment of Design Research Centre in Denmark to enhance the knowledge and know-how in the design field to benefit education, the design industry and other sections of the corporate sector dependent on design. It is a joint initiative by The Royal Academy of Fine Arts, Aarhus School of Architecture, Designskolen Kolding and Danmarks Designskole and it is planned to start operations in January 2004.

5.1.5 Multidisciplinary approach in education

As universities have become more aware of the fact that some business-oriented education should also be added to artistic education programmes, many joint programmes where design is integrated into business and technology have been established.

The International Design Business Management programme (IDBM) in Finland is a good example of such a programme that has proved to work well. It is a joint teaching and research programme of three Finnish universities: the Helsinki School of Economics, the University of Art and Design Helsinki and the Helsinki University of Technology. The programme started in 1995 and today also includes a further education programme for professionals. Additionally, a Scandinavian Executive MBA in design strategy and innovation, with IDBM the Finnish partner, is under preparation.

5.1.6 Design consultancy services

When looking at the innovation environment as a whole and actors other than universities involved, the design consultancy services are of great importance. An example of a very strong organisation is the Danish Design Centre aiming at stimulating the development and strengthening the dialogue between designers and businesses. It emphasises the provision of consulting services related to design for companies. It also seeks to improve and develop Danish designers' competence. One example is the Designer-ISO certificate that Danish Design Centre has developed, together with Association of Danish Designers and Dansk Standard, in order to improve the designers' business procedures. Overall, The Danish Design Centre has a very strong role in the whole Danish design system.

Figure 9: Summary of the actors in the main categories

Country	Innovation supporting services in universities	Clusters	Cooperation with companies	Research	Multidisciplinary approach in education	Design consultancy services
Finland	Designium	Arabianranta		TEKES, Academy of Finland	IDBM	
Denmark				Design Research Centre		Danish Design Centre
Sweden	Uminova Innovation	Stenebyskolans Knowledge Park	Umeå Institute of Design, SVID "Sommardesignkontoret"	SWIDREA	SSES	SVID
Norway		Akerselva Innovation Park				Norwegian Design Council

5.2 Possibilities of networking

Findings of the preliminary survey show that there would be obvious benefits from the development of an innovation network and improved co-operation between the art and design institutions in the innovation field. The findings also show that a clear willingness to develop these things further exists among the universities.

On the one hand, networking would allow the different institutions related to innovation supporting services to produce services more efficiently than if they were acting alone. On the other, it would enable them to offer the economy a natural and always accessible gateway to the advanced information and expertise of several art and design institutions regardless of their physical location.

Contacts with business incubators and other research-driven business operations further amplify the importance of the network as a link between art and design institutions that produce innovations and the businesses that utilise them. For researchers, teachers and students, this offers new ways of learning, new contacts with the business world, a channel for recruitment and commercialising their innovations, and also an opportunity to prepare for entrance into the business world.

Taking into account the fact that all the art and design universities in the Nordic and Baltic region are at least slightly different in nature, networking would allow them to adopt the good practices and methods that have been found to work well. The somewhat similar

legislation in the field of immaterial property rights in Nordic countries could also favour this.

For businesses, networking would provide an opportunity to exploit the research and expert resources of the leading art and design institutions in their own product development and innovation activities. This would imply not merely the provision of innovation support services, but also the active development of the creation of innovations.

Altogether, networking would mean a wider market area and considering the whole Nordic and Baltic region instead of one separate country. This could also lead to the strengthening of the more unified concept of “Nordic” design.

The benefits of the innovation service network of the Nordic and Baltic art and design institutions would be to make accessible to students, researchers, teachers and other staff, the expertise that is required for the commercialisation of innovations and the launching of new knowledge- and skill-intensive businesses. The benefits offered to them by the network would include administrative expertise relating to the establishment and running of business operations, expertise relating to immaterial property rights, and knowledge of different financing alternatives. Thus, the purpose of the network co-operation would be to make the best possible expertise relating to the utilisation of design or other artistic innovations available to all parties of the co-operation and, at the same time, to increase the

number of businesses that utilise design or other art-related innovations.

However, all the possibilities of co-operation described above can be considered long-term goals and an ideal situation in the future. In order to get there, all the relevant tools and structures should first be established.

Considering that the art and design universities in the Nordic and Baltic region, as well as the whole design systems of the countries, are in somewhat different stages in the development and are all focused on different fields in their national design strategies, learning from other's experiences would be highly valuable for all countries. A network that would function as an interactive forum for exchanging ideas and experiences could serve as a good starting point for that. That would also facilitate a more effective commercialisation and a wider market area for design innovations.

5.3 Existing Networks

The art and design universities in Nordic and Baltic countries have established networks and cooperate quite extensively in many different areas. The cooperation takes place, for instance, in terms of student and researcher exchanges, joint exhibitions and projects etc.

The most important existing networks of art and design universities and institutions in Nordic and Baltic region are the following:

Cumulus

Cumulus is the European Association of Universities and Colleges of Art, Design and Media. Cumulus has currently over 40 member institutions from all European countries. The aim of the Cumulus Association is to build a dynamic and flexible academic forum that would bring together top level educational institutions, predominantly from Europe, but also from other parts of the world. It has been a pioneer in developing jointly organised MA-programmes, intensive workshops and biannual conferences.¹⁵²

¹⁴⁹ Håkansson, Håkan & Jan Johansson (1992). "A Model of Industrial Networks". In: *Industrial Networks: A New View of Reality*, eds. Axelsson, Björn & Geoffrey Easton (1992). London: Routledge.

¹⁵⁰ Möller, Kristian & Arto Rajala & Senja Svahn (2002). "Strategic Business Nets- Their Types and Management". Helsingin kauppaorkeakoulu, Working papers W-326, HeSe print.

¹⁵¹ Gorpe, Peter (editor) (2003). "Design som utvecklingskraft för Stockholms regionen- En Plattform". www.svid.se > aktuellt

¹⁵² www.uiah.fi/cumulus

¹⁵³ www.uiah.fi/iac/cirrus-esite.pdf

¹⁵⁴ www.uiah.fi/designium

Cirrus

Cirrus network includes 18 art and design universities in Nordic and Baltic countries and promotes student and teacher exchange between these institutions. Cirrus aims at acting as a flagship of the Nordic design and design education and it is supported by the Nordplus programme of the Nordic council of Ministers.¹⁵³

Finnish Swedish Academy of Industrial Design

The goal of the Finnish Swedish Academy of Industrial Design is to deepen and create new knowledge on design. The goal is also to enhance the awareness of strategic importance of design and to communicate this to company executives, politicians and government decision makers. The academy consists of representatives from industry, design society and universities from Finland and Sweden and aims to strengthen contacts between different partners, spread information and make initiatives of the development and utilization of design.¹⁵⁴

Nordic Interactive

Nordic Interactive is an open group which focuses on initiating and stimulating research, development and education in the area of interactive digital technology in the Nordic countries. It is intended to be a network community, and is not intended to be performing research "itself".

Nordic interactive provides a single point of contact for researchers, business and institutions that seek information on Nordic research and education within the field of interactive digital technology.

Nordic Interactive is financially supported by the Nordic industrial Fund.¹⁵⁵

Jenka- Creative Industries Network

Jenka is a network of creative industries in Nordic region, which aims at connecting strengths and experiences in the field of knowledge, art, culture and high technology in Nordic countries. It also aims at creating a Nordic meeting place and platform for cooperation and joint interdisciplinary projects as well as developing regional developing models for creative industries. Members of the network include Musicon Valley from Denmark, Lillehammer Kunnskapsark from Norway, RockCity Hultsfred from Sweden and Design, Media & Art Business Centre Arabus from Finland.¹⁵⁶

¹⁵⁵ www.nordic-interactive.org

¹⁵⁶ www.nordicinnovation.net/projects

6. Suggestions and Recommendations for Further Development

6.1 Suggestions for starting the co-operation

The establishment of the network would require the firm involvement and commitment of all parties involved. The development should be step-by step and start by establishing the basic structures for innovation support in Nordic and Baltic art and design universities.

The goals should be set from short-term to long-term keeping mind the continuing nature of the operations.

The real setting-up process of the innovation network will require a starting project and people who will carry out the implementation in the first phase. Also, it would be necessary to investigate carefully the possible ways to start building up the network and the possible participants in each country (universities, national agencies, centres of expertise, incubators etc.). Furthermore, the co-operation should benefit all parties and thus be planned accordingly.

In other words, this means that the special areas that should be developed in each country should be defined. These areas can be classified, for example, in a similar manner to that shown in the country-specific figures (tripartite-models) describing different actors in the innovation field, that is, *university-design professionals*, *university-business*, and *design professionals-business* relationships.

According to the findings of the preliminary survey, for instance, the following focuses of each country would be in need of further development:

Finland: An area to be developed in the Finnish design system could be the more effective utilisation of design knowledge, generated by the comprehensive research activities. Especially, the cooperation with SMEs should be emphasized. The design consultancy operations should also be developed further.

Denmark: Denmark is already quite strong in design consultancy, due to the strong position of the Danish Design Centre. Also, they are putting much emphasis on developing the research activities. However, an area that could still be developed is the innovation supporting activities in art and design universities.

Norway: Norway has started to further develop the innovation supporting structures in universities. A clear example is the development project in Oslo in the Akerselva region. Also, the design consultancy services seem to be quite well developed. However, more emphasis could be put on the research efforts and, for instance, on the development of joint research projects between art and design universities and companies.

Sweden: There seems to be a long tradition of universities co-operating with companies in Sweden. There is also a large-scale development project going on for establishing the national research school in the design field. However, an area for further development could be innovation supporting services in art and design universities. Even though there are good examples, such as in Umeå University and in Stenebyskolan, this area could be developed still further.

Iceland and Baltic countries: Of the Baltic countries, Estonia has taken the strongest initiative for developing the design sector further. Also, in Latvia, they have development programmes under preparation. When it comes to Iceland and Lithuania, the whole design sectors are in need of comprehensive development programmes.

The different developing areas are summarized in the Figure 10. In conclusion, the following chapter suggests two alternative ways to proceed

Figure 10: Development Areas of Different Countries

Country	Areas of possible development
Finland	<ul style="list-style-type: none"> • Cooperation with manufacturing SMEs • Design consultancy services • More effective utilisation of new knowledge
Denmark	<ul style="list-style-type: none"> • Increased Research activities (Joint research projects between companies and universities) • Commercialisation supporting services in universities
Sweden	<ul style="list-style-type: none"> • Commercialisation supporting services in universities • Further development of research activities
Norway	<ul style="list-style-type: none"> • Increased Research activities • Commercialisation supporting services in universities
Norway	<ul style="list-style-type: none"> • Increased Research activities • Commercialisation supporting services in universities
Iceland and Baltic countries	<ul style="list-style-type: none"> • Development of the whole design field • Commercialisation supporting services in universities

6.2 Recommendations: *Two alternative ways to proceed*

Alternative 1: A research project

Establishment of a research project would mean comprehensive data gathering and deepening the knowledge of how to better integrate art and design in the innovation field.

This could be established as follows:

7. There should be a researcher or person responsible for the data gathering from each country involved in order to get all the relevant data about the actors, structures, instruments etc.
8. Researchers should meet regularly and exchange experiences and knowledge during the project period.
9. Universities from the technology field should also be included, for example, on the advisory board (for example, Chalmers University of Technology)
10. The project could start with an innovation summit in some of the participating countries, where there would be well-known keynote speakers from both the innovation field and the design field.
11. Joint research projects with companies could be established so that there would be universities and companies involved from each country participating in the project.
12. Other events could be organised during the project period.
13. A possible source of funding: The Nordic Innovation Centre.

Alternative 2: Events related to the commercialisation of innovations in the design field

Such joint collaboration would mean that there is no research conducted as such, but the collaboration takes place more in terms of joint events and seminars.

This could be established as follows:

1. An innovation summit/seminar, where all the participating universities are invited. This could be a forum for exchanging ideas, to start the discussion on how co-operation could be developed and where some keynote speakers could be invited.
2. A regular event/forum where several company representatives and students with their ideas and inventions could meet.
3. Integrating the art and design field into the business plan competition Venture Cup, which is already active in all Nordic countries.
4. Developing the “summer design school” concept further to cover all the Nordic and Baltic countries.
5. A possible source of funding: Nordic Cultural Fund

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