National SWOT's

Denmark

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IT-security in general

Strengths	Weaknesses
1. **Laws related to privacy are all in place**	1. **Lack of user-understanding** 2. Lack of transparency in dataflow 3. Software challenges related to secure clients 4. Error 40
Opportunities	**Threats**
1. Engage SME's in IT-security 2. Learn to communicate about the things that people don't see. 3. **Standardisation and certification of software** 4. Establish opportunities risk assessment for the client	1. Lack of public debate relating to access and use of citizens information. 2. **Organised crime and terror (eg. Jyllands Posten).**

IT-security, research and business

Strengths	Weaknesses
1. **The wide spread of ICT means that many are concerned with security issues** 2. **Cryptography** 3. **Digital ID** 4. **Health care and IT-security**	1. **Too strong focus on cryptography** 2. **Not much "production** 3. **Lack of knowledge sharing between universities.** 4. **Dependence on software producers.**
Opportunities	Threats
1. **Research project where universities and companies meet.** 2. **Research on the economic and strategic dimension of ICT.** 3. **Create international liaisons.** 4. **IT-security should enter the curriculum of more educations.** 5. **Public organisations must push the market.** 6. **Research on software and tools to support financial transactions.** 7. **Research on the use of ID-management** 8. **Integration of biometrics in products.**	1. **Strike the right balance between demands and opportunities for companies in relation to IT security.** 2. **Lack of international orientation.** 3. **Lack of investments.** 4. **Difficult to attract students to the subject.** 5. **Lack studies that shows benefits of IT security.**

Strengths	Weaknesses
1. User involvement in development and design processes	1. Initiatives related to prevention rehabilitation are split between two different administrative systems.
2. CPR-numbers and a well developed praxis of registration.	**2. Short term thinking.**
3. Good IT networks within healthcare (fiber-optics)	3. Sub-optimisation
4. Relatively few old and "de-functional" ICT EPJ systems.	**4. Lack of continuity and coherence in the political programmes and initiatives.**
5. Relatively strong international position on EPJ	5. Traditionally, the geographic conditions of Denmark has given very few incentives for traditional telemedicine
6. A strong focus on health care standards and terminologies (SNO-MED)	6. Lack of courage and commitment to follow the groundbreaking visions.
7. Well developed cooperation between public and private organisations.	7. Lack of education of ICT in the health care educational system.
8. Strong research competencies within CSCW	**8. Very few career incentives for doctors are related to the development of new ICT systems.**
9. The health care system is on public hands.	9. Publications are awarded but not development and implementation.
	10. The hospitals architectural choice makes implementation of ICT solutions difficult.

Possibilities	Threats
1. **Increase the speed with which successful research is implemented in practice.**	1. **Short term focus in the policies related to the area.**
2. Increase the focus on IT-systems that may reap the benefits of data that already exists digitally.	2. World wide recession.
	3. Lack of good ICT employees.
3. **Support the development and implementation of the national for EPJ (G-EPJ)**	4. Lack of public investments in education and R&D.
	5. Xenophobic development will have a bad influence on the knowledge economy.
4. Enhance possibilities for students and researchers to works across traditional professional boundaries between natural sciences, health sciences and social sciences. Promote the positive examples of this practice.	6. **Too much focus on publication from the researchers and too little focus on implementation.**
	7. Poor communication of the results of research.
5. Increase the understanding and respect between the different professional areas.	
6. Increase the central powerbase for central authorities to implement EPJ initiatives.	
7. **Develop the professional networks.**	

Strengths	Weaknesses
1. **Strong political (both government and local authorities) focus and willingness to support the building of a good ICT infrastructure. Scientific and business awareness and interest in the area.**	1. **Lack of big companies as engines of innovation and growth**
2. **High educational level and a high degree of access to ICT**	2. **The home market is small**
3. **Strong tradition for design, art and architecture.**	3. **Investments are spread and not focused**
4. **Large segment of creative people and technology freaks. Good social competencies of co-operation and project management**	4. **No clear definition of the area (the present definition is spread over 100 lines of business)**
5. **World class competencies within sound**	5. **Lack of cultural competencies among investors**
6. **Potential growth areas within film, gaming, tourism and conferences.**	6. **Lack of mobility between research and business environment**
7. **Tradition for making new combinations of old technology into new and innovative solutions**	7. **Many small firms that are not growth oriented**
8. **A national brand as a safe and sound country (pre. Jyllandsposten).**	8. **Lack of information and communication of legislative rights**
	9. **Not technology leading**
	10. **Habitual thinking within the innovation environments.**
	11. **Need of strong and charismatic leaders and professional boards.**

Opportunities	Threats
1. Denmark a competitive "brand" (pre. Jyllands Posten)	1. **Foreign companies run with the commercial successes**
2. Continue to build on the mix of public, private and civil society, as a "non-disney" business strategy.	2. Demand from Danish companies in international partnerships on total self-determination can block the way for further partnerships
3. **Potential areas of growth movies and games**	3. Threat from the eastern markets
4. **Strengthen international co-operation with technology-leaders and form partnership with world leading technology companies. We have the creative abilities, they have the technology.**	
5. A general opportunity to strengthen business and profits.	
6. Creating a market for testing (for the American market).	

Strengths	Weakness
1. Flexible industry structure with a large segment of SME´s	1. **Many SME´s with short-term investments and small investment budgets.**
2. A willingness to adapt and change in the industry, and a demand for flexible solutions among SME´s	2. Many SME´s with employees with less competencies than workers in competing countries.
3. **Strong research communities within motion-planning and flexibility-planning for robots**	3. Most research communities are leading in very narrow areas but do not all have a size to give a critical mass.
4. Strong research community within OLP-network offline programming	4. **Too few large companies and industry to drive technology**
5. General ability to think in flexible solutions and user-centred innovation	5. Make only improvements to technology and applications, but do not have strategic technology programmes.
6. **RoboCluster with a geographical concentration and competencies**	6. Lack of leadership and technical competencies in production
7. More than 20% lower cost than the average at acceptable quality level	7. Many SME´s means little risk and venture capital
8. High integration among solutions made up by different technology components	
9. High education-level e.g. within sensors and prodiction	
10. **Workers and employers unions that backs-up further use of automation and robots.**	

Opportunities	Threats
1. **The public sector as a driver**	1. **Larger robot countries with large industries will take-over developments in our small research communities and SME´s**
2. **The development of service robots gives opportunities, because technology will be available for SME within 10 years from now**	2. **Little production left in Denmark**
3. **Robots for consumers is an open market and it gives opportunities for Danish-made robots**	3. **Sparse investments in Denmark and Europe**
4. **Low-cost robots for specific uses**	4. **No focus in the Danish strategy**
5. **Further demand on industry to renew products, make smaller series and flexible production opens up opportunities for cheaper and flexible software-based robots**	5. **No larger aim, strategy and money for radical and path-breaking innovations and developments**
6. **Further aim at developing and exploit strong research positions (based on marked analysis)**	