



Future prospect for Nordic-Asian cooperation

Next step – National perspective

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Globalisation – “*new ways of doing business*”

- Towards a dynamic knowledge-based economy
- Increased competition
- Relocation of businesses: out- and insourcing, new organization- and cost structures, direct access to new markets
- Creating an attractive environment for investments for R&D and production, e.g. *BRIC, Irland and Singapore*

**Relocation of production
vs
relocation of knowledge workers**

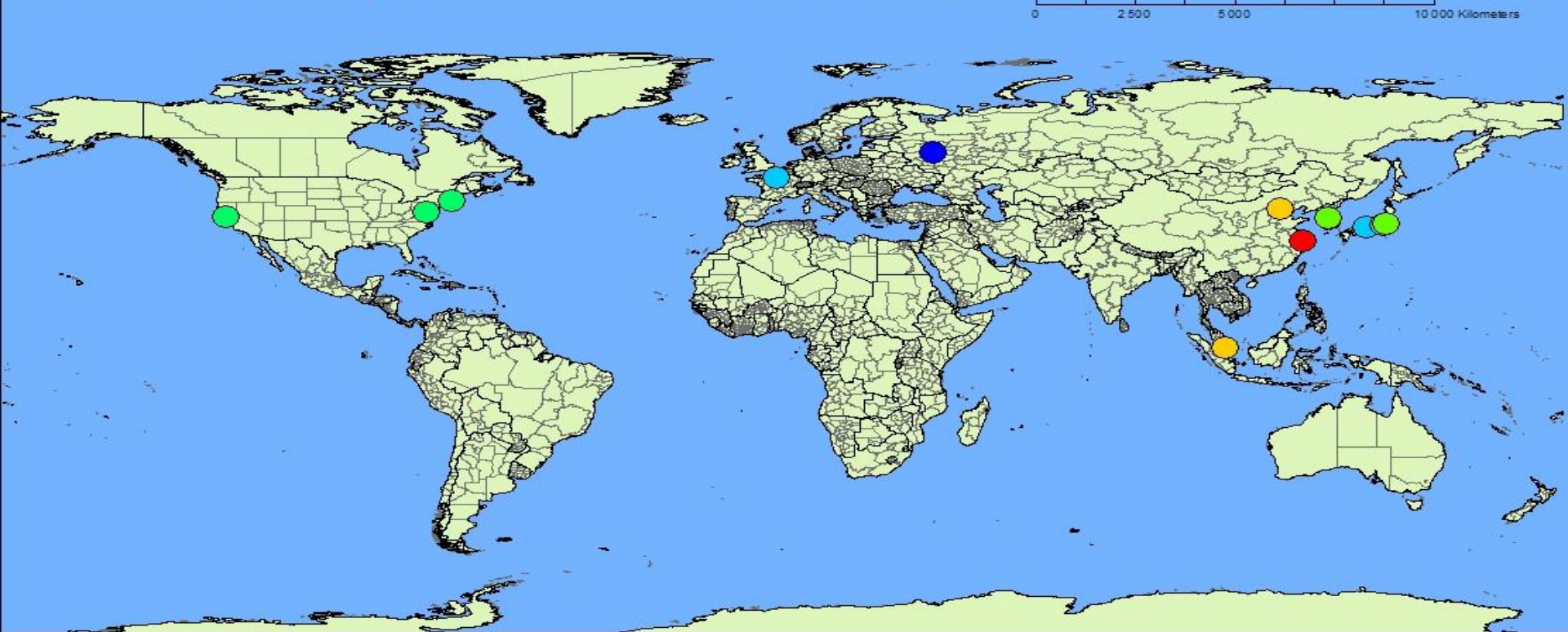


B. Kahane, A. Delemarle, L. Villard & P. Larédo:

Clusters in nanotechnology with strongest growth 1998 - 2006

Nano Publications - Evol Clusters with more than 10 000 addresses

0 2 500 5 000 10 000 Kilometers



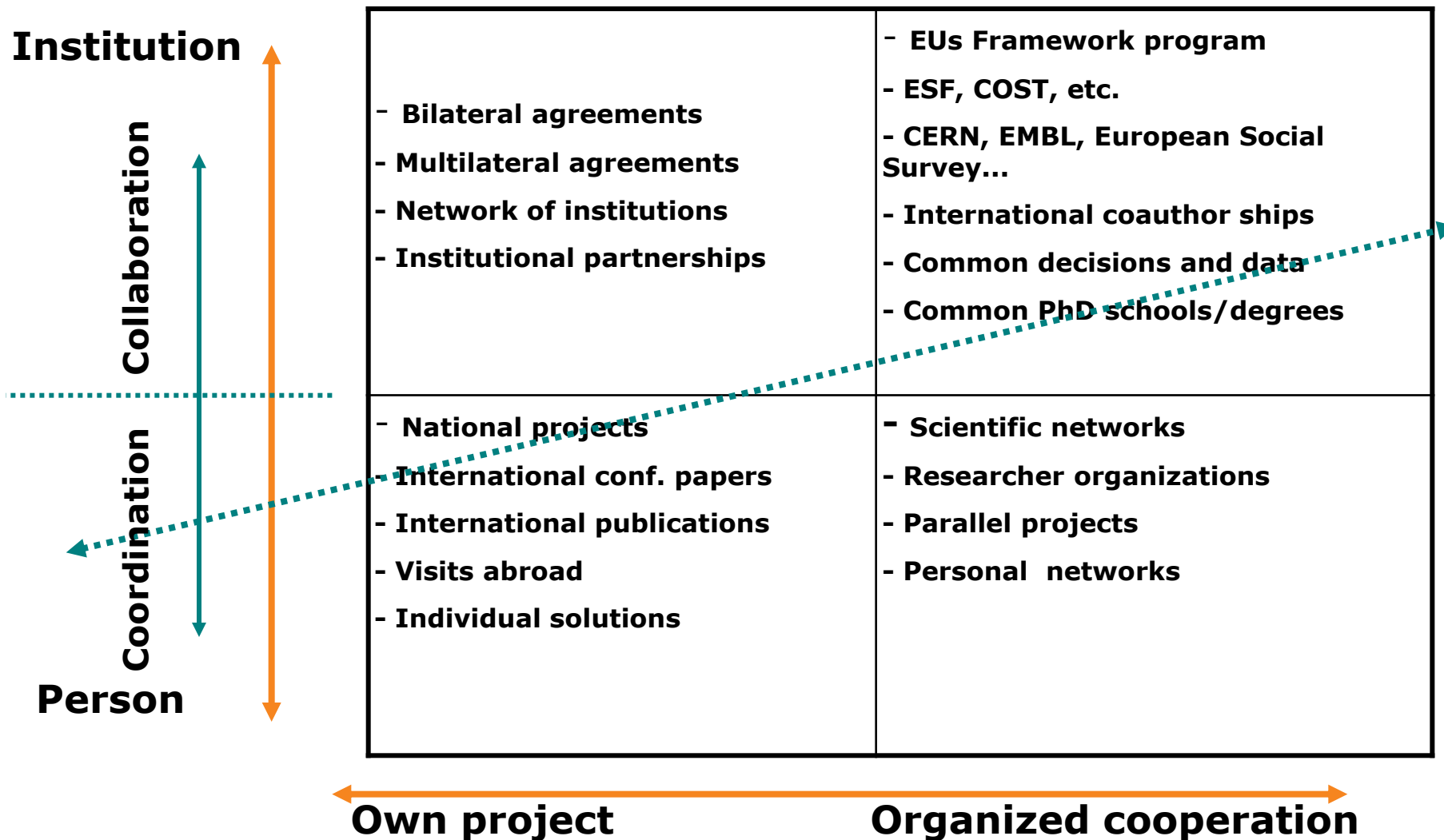
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One billion educated Chinese: competitors, partners or costumers?



The arenas for international cooperation are changing



.... **What direction to choose**

- Enhance the national research policy
- Build on the scientific traditions
- Develop national strategies towards areas of importance
 - small countries cannot be everywhere

...and what are international cooperation

- Cooperation about research policy
- Increased professionalism of agencies
- Coordination of research programs
- Establishing institutional networks
- Establishing international projects
- Mobility

...and what are the results

- **Enhanced national science policy**
- **Increased quality, innovation ability and cultural understanding**
 - At the research frontier
 - Critical mass and sharper focus
 - Technology platforms for new businesses
 - Competitive positions in recruiting talents
- **Effective use of resources**
 - Transnational programs give results for the total investment

Build on long term networks

IPR!

Code of conduct!

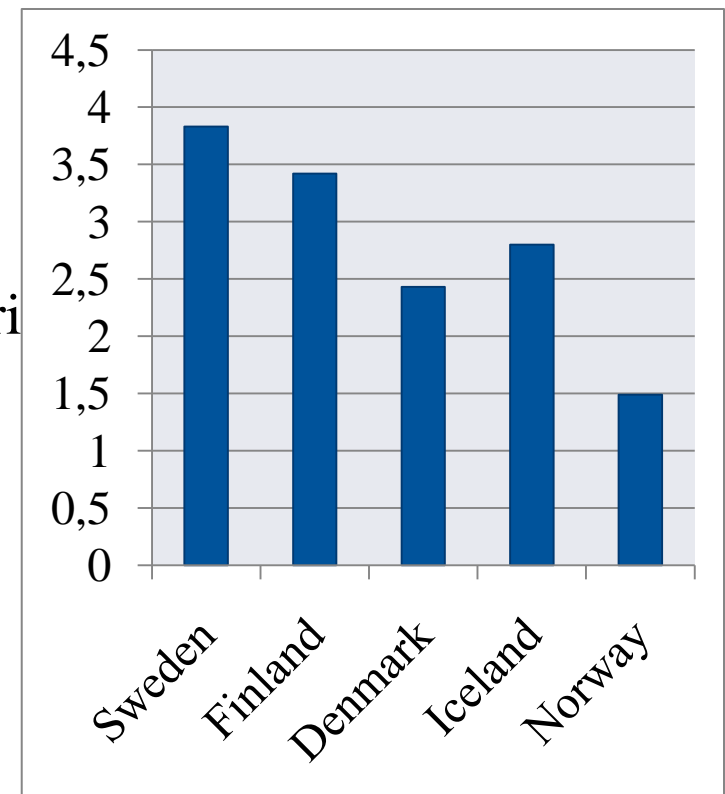
The starting point for the Nordic countries

Strengths

- Great investments in R&D (in % of GDP)
- Leading position in many fields
- Tradition of research cooperation
- University cooperation on all levels
- Cultural, social and geographic similarities

Weaknesses

- Do not always reach critical mass
- Nordic investment levels are low
- Poor visibility and attraction value



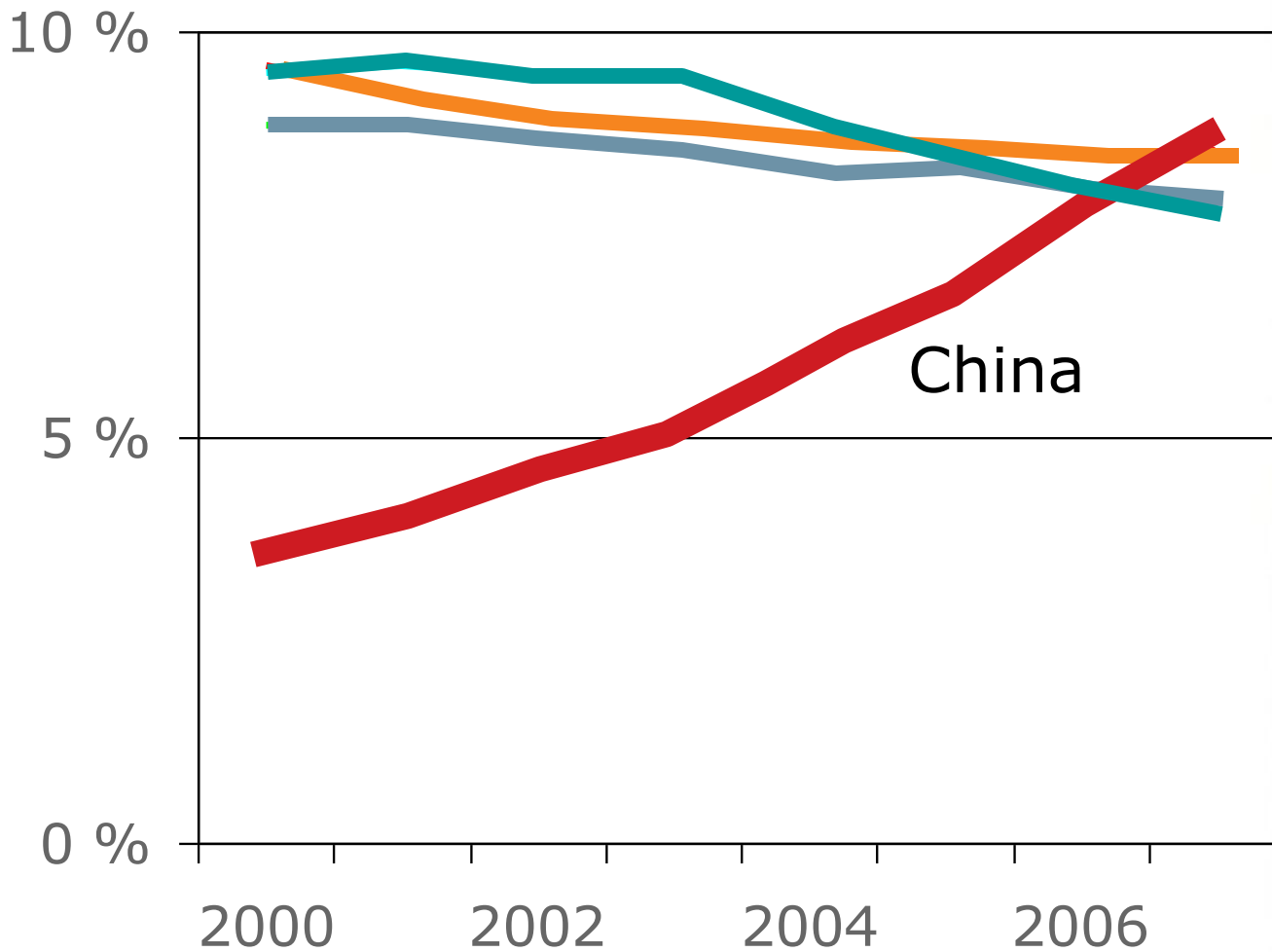
What about Norway?

Among the top 100 universities in the world, 6 are Chinese, 3 are Nordic

QS World University Rankings 2007

Rank	School name	Country
1	HARVARD University	United States
2=	University of CAMBRIDGE	United Kingdom
2=	YALE University	United States
2=	University of OXFORD	United Kingdom
5	Imperial College LONDON	United Kingdom
18	University of HONG KONG	Hong Kong
36	PEKING University	China
38=	The CHINESE University of Hong Kong	Hong Kong
40	TSINGHUA University	China
53=	HONG KONG University of Science & Technology	Hong Kong
85	FUDAN University	China

Shares of international published articles (ISI)



Great Britain
Japan
Germany

China



Case Asia



**NFR Agreements
with countries
in Asia**

The Research Council's activities to support exchange and research cooperation with China

- **Agreements:**
 - AoC signed with MOST 2008
 - MoU signed with MOE in 2008
 - Cultural agreement (China Scholarship Council)
 - 10 students/young scientists both ways (1959)
 - MoU - Exchange programme (NSFC) in 1994
 - Exchange of scientists, Project-cooperation
- **Develop contact and cooperation with:**
 - CAS - Chinese Academy of Sciences
 - CASS - Chinese Academy of Social Sciences
 - Other Academies or funding agencies
 - Norwegian/CAS centres
 - Nansen- Zho
 - SCINCIERE
- **China in Norway:**
 - Partner in EISCAT
 - Partner in SIOS
 - Has established a research station at Svalbard
 - Large contingent of students and exchange scientist

The Research Council's activities to support exchange and research cooperation with China (2)

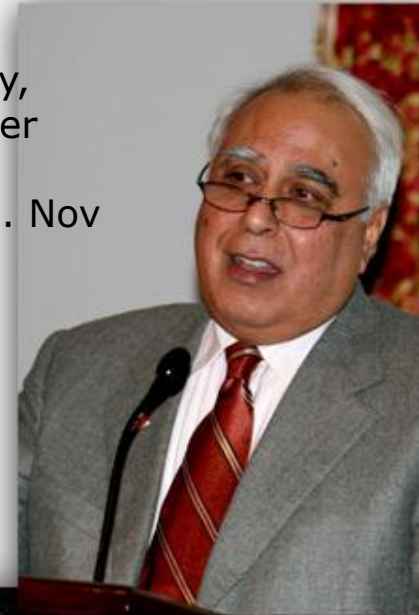
- CHINOR - Programme to support increased cooperation within environment, climate and welfare research
- Co-Reach: A joint European initiative to coordinate research cooperation with China
- NORIA-Net Asia: Nordic cooperation platform
- Good working relations to The Chinese Embassy in Oslo
- New position as Research Counselor to be established at the Norwegian Embassy
- Norway at EXPO 2010, Shanghai
- OECD project to study the national system of innovation in China (Mr. Svend Otto Remøe) (2008)
- Seminars, delegations and meetings

Cooperation in Science and Technology

India - Norway

India's Minister of Science and Technology, Kapil Sibal, signed the Agreement together with Norway's Minister for Education and Research, Øystein Djupedal in Tromsø 14. Nov 2006

- **AoC signed with DST 2006**
- Vaccines – human and animals/fish
- Geotechnology/early warning of geohazards
- Marin – bioprospectin and polar
- Nanoteknologi – related to solar energy
- Climate research – particularly related to oseanography/polar and coupled to clean energy
- Mobility
- Seminars/workshops in 2007, 2008 and 2009
- INDNOR – Programme to support increased cooperation
 - Expressions of interest



A strategy for cooperation: Strengthening partnership

Width

- All instruments – researcher driven



Strategic initiatives

- Choose suitable agreement scheme
- Promote Norwegian research- and innovation policy
 - Quality
 - critical mass, division of labour
 - utilizing common laboratories, databases, knowledge
 - Increased innovation ability
- Promote political objectives
 - Norway as global partner/aid aspects
 - The High North
 - Increased presence and positions
- Promote Norwegian foreign policy
 - Utilize research results/knowledge – climate policy
 - The Modern Norway – profiling
- Activities
 - Vertical – prioritized themes
 - Horizontal – RTD-policy issues

Identify and manage multiple objectives and multiple instruments - Clear definitions and common goals

<i>Objective</i>	RESEARCH (Just another call)		POLICY (Coordination)	
	Instrument 1	Instrument 2	Instrument 3	Instrument 4
<i>Instruments</i>				
<i>Type of action</i>				
Global issues	CALL	Knowledge	together	
Scientific excellence	CALL	Knowledge	together	
Capacity building		Knowledge	for	
Development cooperation		Knowledge	about	

Asia: Cooperation and possible framework for new initiatives

<p><i>THEME</i></p> <p>LEVEL</p>	<p>?</p>	<p><i>National perspective</i> - flexibility</p>	<p><i>Partners perspective; economy and jobcreation</i> - Do not care about the organisation ?</p>
<p>European and other international frameworks</p>	<p>ERA - EU/Crest and ESF/EUROHorcs ERA-Nets and others - Co-Reach</p>	<p>Added value</p> 	<p>Find the best actors</p>
<p>Nordic framework and initiatives</p>	<p>Nordic Centre Fudan, NORIA-Net and other Nordic Organisations</p>	<p>Added value - Pilots - Joint calls - Common knowledge - Common policy</p> 	<p>Find the best actors</p>
<p>National MoUs, links, cooperation</p>	<p>MOST, NSFC, CAS, CASS other MoUs, BILAT</p>	<p>Critical mass Low visibility Low attractivity</p>	<p>Find the best actors</p>

Why Nordic cooperation

- Meet globalization through increased recruitment critical mass and Nordic strength
- Help sort out in a complex landscape



NCoE and tfi

- A strong coordination instrument that build on National priorities and strength
- Create critical mass
- Increase the international visibility
- Increase international attractiveness

Nordic Centres of Excellence in research (NCoE)

Microcomparative syntax

Systems biology in controlled dietary interventions

Cognitive control

The Nordic welfare state

Disease genetics

Biosphere-aerosol-cloud-climate interactions

Empirical labor economics

Reassessing the Nordic welfare model

The dynamics of ecological systems

Water imbalance related disorders

Bioactive food components

Medieval expansion of Europe

Ecosystem carbon exchange

Neurodegeneration

Luminescence research

Health – Wholegrain food

Tromsø

Umeå

Kuopio

Helsinki

Bergen

Oslo

Uppsala

Århus

København

Lund

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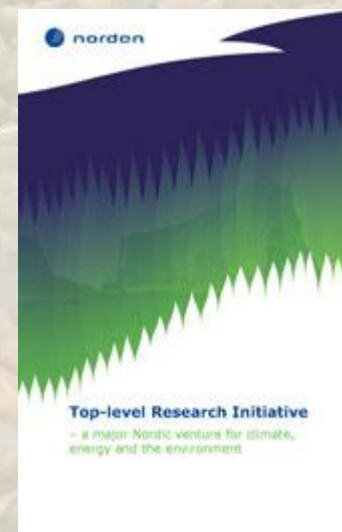
Luminescence research

Health – Wholegrain food



Top-level Research Initiative - a major Nordic venture for climate, energy and the environment

- The largest joint Nordic Research and Innovation Initiative to date
- Aim: to promote research and innovation in the Nordic region and to make a Nordic contribution towards solving the global climate challenges
- Six subprogrammes within climate, energy and environment



Recommendations

- The scientist themselves
 - financial instruments for support
 - from person based to institutional partnership
- EU will become the most important road for increased international cooperation
 - In partnership with national institutions – the big money and the legal framework
 - EU will be an important facilitator and provide a framework – multinational actions
 - Mobility, ERA-Net, Joint programming and ESFRI
- Bilateral cooperation
 - direct connections to enforce national policy and profiling
 - Long term and work intensive, based on personal networks
- Nordic/Regional cooperation
 - An important step-stone – some times

Some challenges....

- To be there
 - Make sure that the institutions have high quality – both in research and education
 - The utilization of the research results
 - Commercialization – Partnership Innovation
 - Policy - Grand Challenges
 - Develop partnership
 - on Bilateral, Nordic and International level
 - to create critical mass, increased visibility and attractivity
- 

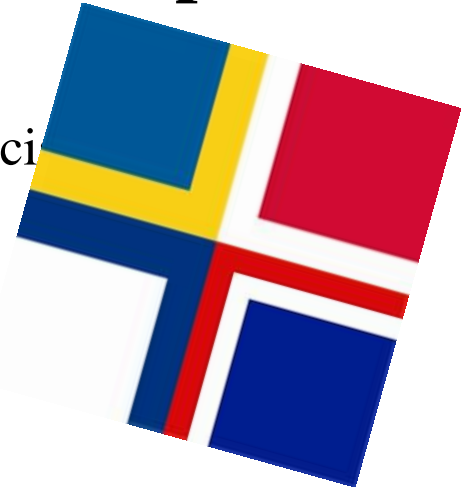
The way ahead

- opportunities and challenges

- The report an important first step
 - Many similarities
- Next step
 - Select thematic arenas – win/win, equal partnership, public acceptance
 - Joint calls – common pot
 - Sharing knowledge – seminars/workshops
 - Sharing policy
 - Establish a Nordic Forum with India and China
 - Increase mobility and attractiveness
- A Nordic Asia-program?
 - Establish partnership with stakeholders
 - Chose pilots

When selecting areas for future research cooperation

- Identify areas where knowledge are needed in policy
- Clarify the added value in the Nordic cooperation and financing
- Aim to create synergy with other national and international research activities e.g.
 - the EU framework programme
 - other international areas
- Utilize the Nordic institutions to plan new activities in cooperation with national funders- clarify their role
- Establish clear decision-making processes – involve national stakeholders



Nordic collaboration might be a step-stone to increased success in international R&D competition.

Conclusions

- EU the most important road
 - Also important for multinational contacts outside Europe
- Bilateral cooperation – for national profiling
 - Work and resource intensive
- Nordic cooperation
 - A step stone on the road