

INNOVATION CENTRE DENMARK SEOUL



INTEGRATED PART OF EMBASSY OF DENMARK IN SEOUL



Why an Innovation centre?



The Danish Government's Innovation Strategy

The Danish Government's Growth Market Strategy

"It is an illusion to think that five million Danes are the only ones in the world who think brilliant thoughts. It is therefore essential if we want to maintain our leading position that we work openly with the best in the areas that can promote our business"

Lars Frederiksen, CEO, Chr. Hansen

A **PARTNERSHIP** BETWEEN THE MINISTRY OF **SCIENCE, INNOVATION AND HIGHER EDUCATION** AND THE MINISTRY OF **FOREIGN AFFAIRS** OF DENMARK



Minister for Science,
Innovation and
Higher Education
Morten Østergaard

(RV)



Minister for
Trade and
European
affairs Nick

Haekkerup (S)



WHERE ARE WE?



a partnership between
the ministry of science, innovation and higher education and the ministry of foreign affairs of denmark

Innovation centre Denmark Seoul – who are we



**Innovation
Centre
Denmark**
(new focus)

**Trade
Council**
(existing focus
min. foreign
affairs)

Innovation guidance

Network

Knowledge

Research Institut.

Funding

Technology

Go to market

Eksport guidance

Market analysis

Market test

Partner search

Promotion

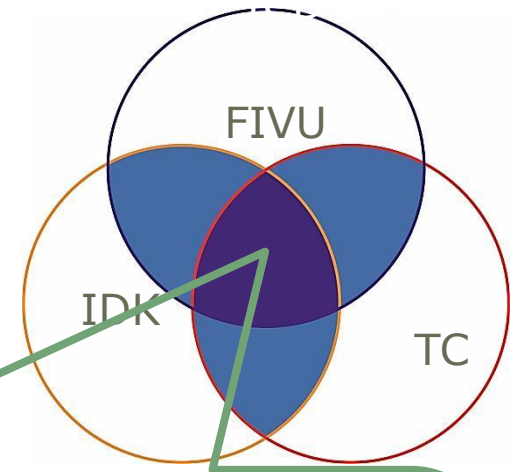
Global public aff.



NESTING BOX



- SMEs
- Large corporations
- Innovation networks (clusters)
- Researchers
- Educational institutions



"Whether you are a Danish start-up, a corporate, or a researcher, Innovation Centre Denmark is your natural partner if you want to **turn knowledge into growth**. Through international research and development or business partnerships we help you grow. **We connect you to the best and brightest partners in the innovation hotspots** of Silicon Valley, Munich, Shanghai and Hong Kong. Our strong team of consultants is ready to **open doors for you to foreign research communities, technology networks and venture capital funding**".



What Do We Offer

Introduction
to network

Talent
scouting

Access to
clusters

→ **Entrepreneurship Camp**

→ **Innovation Packages**

→ **Innovation Consulting**

Technology
scouting

R&D
partnerships

Conne-
ctions to
innova-
tion
networks

- Ensure Danish Companies and research institutions access to foreign knowledge, networks, technology, capital and markets
- Permanent local presence in international "hot spots" within R&D environments, clusters, VC, public sector R&D funders, performers and policy makers

WHY SOUTH KOREA?

- Similarities: Mindset and regional positions
- High Growth Nation
- Extensive R&D investments in technical sciences
- Strong Innovation capacity (#2 Bloomberg Global Innovation Index 2013)
- Korean industry and the Korean government have a strong focus on Global Outreach
- Next step: Creative Economy



R&D Expenditure, % of GDP



Export to South Korea

- ☯ Denmark's export to Korea in 1980: 120 mio. DKK
Denmark's export to Korea in 2012: 4,6 bio. DKK
- ☯ Growth in export in 2012: 20%
- ☯ Denmark's 3rd largest market in Asia (following China/HK and Japan)
- ☯ 60% of export: Machines/- parts, food and chemicals
- ☯ Increased diversity is foreseen in the future





Inter-state investments

- DK direct investments in south Korea in 2011:
1.8 bio. DKK
- ROK direct investments in Denmark in 2011:400
mio. DKK

CHAEBOLS



- Very large conglomerates
- "can if they want"





R&D LANDSCAPE IN KOREA

THE ROK GOVERNMENT'S TOTAL R&D SPENDING

Unit: 1 million USD					
	2008	2009	2010	2011	2012
Total Spending	9,994	11,286	12,439	13,503	14,460

IN COMPARISON, DANISH R&D SPENDING IS
9,000 MILLION USD



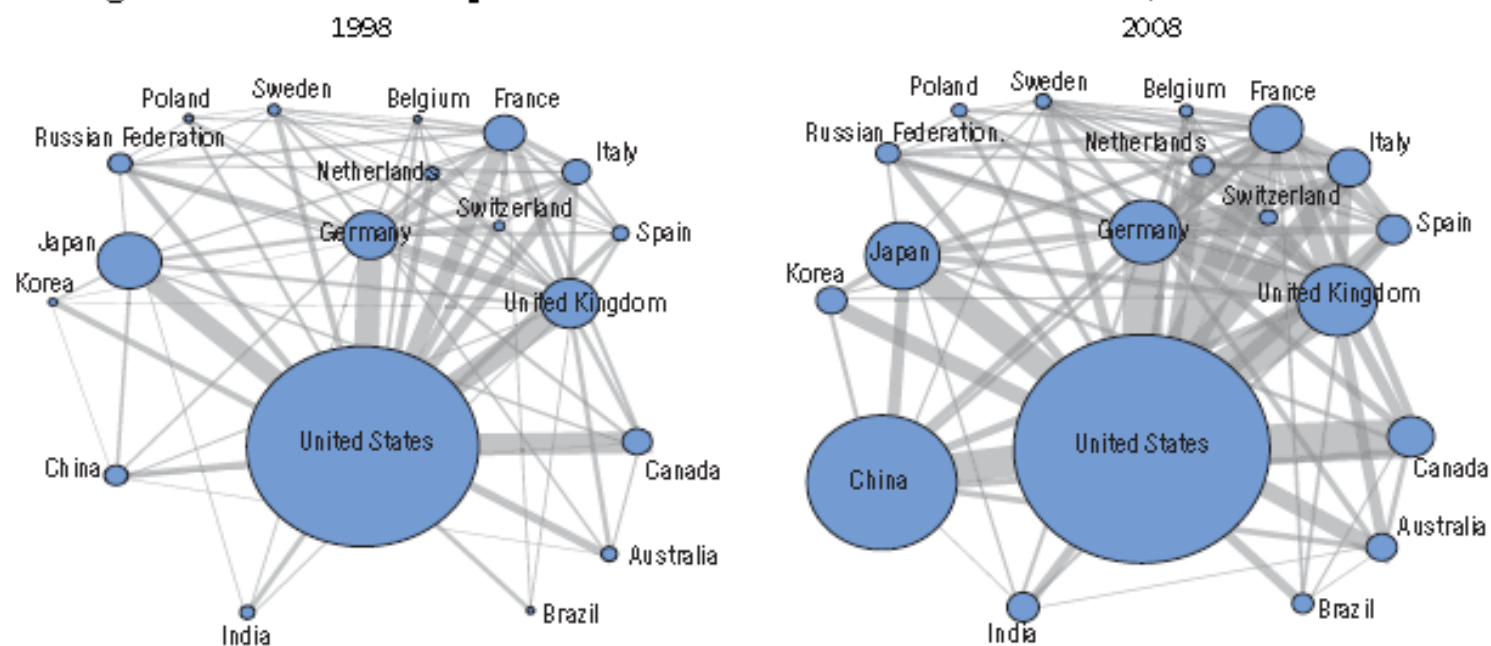
TECHNOLOGY IS THE KEYWORD

Sundhedsvidenskab			Naturvidenskab			Teknisk-videnskab			Jordbrugs- & vet.-videnskab			Samfundsvidenskab			Humaniora		
1	Singapore 2008	33.3%	1	Tjekkiet 2009	44.8%	1	Sydkorea 2008	56.3%	1	Argentina 2007	20.6%	1	Norge 2007	21.3%	1	Ungarn 2008	12.6%
2	Danmark 2008	33.1%	2	Slovenien 2008	41.1%	2	Island 2007	42.8%	2	Chile 2008	18.8%	2	Italien 2008	18.7%	2	Estland 2008	12.4%
3	Tyrkiet 2009	31.4%	3	Estland 2008	39.2%	3	Taiwan 2008	42.6%	3	Island 2007	17.5%	3	Finland 2008	18.5%	3	Østrig 2007	11.4%
4	Østrig 2007	29.5%	4	Rusland 2009	38.2%	4	Polen 2008	42.4%	4	Irland 2008	12.7%	4	Sydafrika 2007	18.1%	4	Italien 2008	11.3%
5	Australien 2008	28.7%	5	Tyskland 2008	38.0%	5	Rusland 2009	41.4%	5	Sydafrika 2007	12.1%	5	Nederlandene 2007	17.8%	5	Tyskland 2008	10.4%
6	Norge 2007	27.7%	6	Ungarn 2008	35.7%	6	Singapore 2008	41.3%	6	Ungarn 2008	11.8%	6	Portugal 2008	17.5%	6	Spanien 2008	9.5%
7	Nederlandene 2007	25.6%	7	Slovakiet 2009	34.5%	7	Rumænien 2008	39.5%	7	Taiwan 2008	10.7%	7	Tyrkiet 2009	17.2%	7	Tyrkiet 2009	9.0%
8	Spanien 2008	23.1%	8	Australien 2008	31.7%	8	Japan 2008	36.0%	8	Slovakiet 2009	10.6%	8	Danmark 2008	17.1%	8	Slovenien 2008	8.8%
9	Belgien 2007	21.2%	9	Polen 2008	31.0%	9	Belgien 2007	33.4%	9	Norge 2007	10.0%	9	Irland 2008	17.1%	9	Portugal 2008	8.2%
10	Finland 2008	20.4%	10	Italien 2008	30.2%	10	Slovakiet 2009	27.0%	10	Polen 2008	9.3%	10	Spanien 2008	16.6%	10	Island 2007	8.1%
11	Italien 2008	19.6%	11	Chile 2008	30.0%	11	Finland 2008	25.5%	11	Japan 2008	9.1%	11	Slovenien 2008	14.6%	11	Danmark 2008	7.9%
12	Japan 2008	19.0%	12	Irland 2008	29.7%	12	Portugal 2008	25.0%	12	Tyrkiet 2009	8.9%	12	Chile 2008	14.5%	12	Norge 2007	7.6%
13	Taiwan 2008	18.8%	13	Portugal 2008	29.3%	13	Slovenien 2008	24.1%	13	Belgien 2007	8.8%	13	Ungarn 2008	14.1%	13	Tjekkiet 2009	7.4%
14	Irland 2008	18.7%	14	Sydafrika 2007	28.7%	14	Spanien 2008	23.9%	14	Nederlandene 2007	8.7%	14	Australien 2008	13.9%	14	Slovakiet 2009	7.3%
15	Tyskland 2008	17.8%	15	Rumænien 2008	27.0%	15	Argentina 2007	22.8%	15	Australien 2008	8.7%	15	Østrig 2007	13.6%	15	Belgien 2007	7.2%
16	Sydafrika 2007	17.1%	16	Østrig 2007	24.0%	16	Tyskland 2008	22.4%	16	Spanien 2008	8.3%	16	Belgien 2007	12.3%	16	Rumænien 2007	7.1%
17	Estland 2008	14.7%	17	Finland 2008	22.1%	17	Tjekkiet 2009	21.4%	17	Danmark 2008	8.2%	17	Argentina 2007	11.6%	17	Argentina 2007	6.5%
18	Rumænien 2008	14.6%	18	Nederlandene 2007	22.0%	18	Tyrkiet 2009	21.1%	18	Finland 2008	7.9%	18	Slovakiet 2009	11.4%	18	Sydafrika 2007	6.4%
19	Portugal 2008	14.3%	19	Argentina 2007	21.8%	19	Nederlandene 2007	19.8%	19	Tjekkiet 2009	6.8%	19	Sydkorea 2008	10.1%	19	Irland 2008	6.2%
20	Argentina 2007	13.8%	20	Norge 2007	20.8%	20	Chile 2008	19.1%	20	Sydkorea 2008	6.7%	20	Estland 2008	9.1%	20	Nederlandene 2007	6.0%
21	Chile 2008	13.2%	21	Danmark 2008	20.2%	21	Estland 2008	19.0%	21	Italien 2008	5.9%	21	Island 2007	8.5%	21	Finland 2008	5.7%
22	Tjekkiet 2009	12.9%	22	Spanien 2008	18.7%	22	Sydafrika 2007	17.6%	22	Portugal 2008	5.6%	22	Polen 2008	7.4%	22	Chile 2008	4.3%
23	Ungarn 2008	11.7%	23	Japan 2008	18.1%	23	Irland 2008	15.7%	23	Estland 2008	5.6%	23	Tyskland 2008	7.2%	23	Polen 2008	4.2%
24	Island 2007	11.3%	24	Taiwan 2008	17.2%	24	Østrig 2007	15.6%	24	Østrig 2007	5.5%	24	Taiwan 2008	6.7%	24	Taiwan 2008	3.9%
25	Sydkorea 2008	10.3%	25	Belgien 2007	17.1%	25	Ungarn 2008	14.1%	25	Rumænien 2008	5.4%	25	Tjekkiet 2009	6.7%	25	Australien 2008	3.7%
26	Slovakiet 2009	9.2%	26	Singapore 2008	14.0%	26	Italien 2008	14.0%	26	Rusland 2009	4.7%	26	Rumænien 2008	6.5%	26	Sydkorea 2008	3.5%
27	Slovenien 2008	8.1%	27	Sydkorea 2008	13.1%	27	Danmark 2008	13.5%	27	Tyskland 2008	4.3%	27	Rusland 2009	5.4%	27	Rusland 2009	3.2%
28	Rusland 2009	7.0%	28	Tyrkiet 2009	12.4%	28	Australien 2008	13.3%	28	Slovenien 2008	3.3%	28	Japan 2008	5.0%	28	Japan 2008	3.0%
29	Polen 2008	5.7%	29	Island 2007	11.8%	29	Norge 2007	12.5%	29	Singapore 2008	0.5%	29	Singapore 2008	5.0%	29	Singapore 2008	3.0%
(Sverige* kun uni.)		32.0%	(Sverige* kun uni.)		19.0%	(Sverige* kun uni.)		22.0%	(Sverige* kun uni.)		5.0%	(Sverige* kun uni.)		14.0%	(Sverige* kun uni.)		7.0%

OECD 2010: KEY TRENDS IN SCIENCE, TECHNOLOGY AND INNOVATION



Figure 1.20. **Scientific publications and co-authored articles, 1998 and 2008**



Note: Numbers based on whole counts.

Source: OECD calculations, based on Scopus Custom Data, Elsevier, December 2009.

StatLink <http://dx.doi.org/10.1787/888932332968>



Proportion of scientific publications in journals with international cooperation (*at least* one author in at least two counties) according to countries/regions and five year periods.

(NB Different situation for smaller and larger countries)

Land/region	1984-88	Land/region	1994-98	Land/region	2004-08
1 Island	48%	1 Luxembourg	88%	1 Luxembourg	80%
2 Luxembourg	38%	2 Island	52%	2 Island	68%
3 Portugal	35%	3 Baltikum	49%	3 Schweiz	60%
4 Schweiz	28%	4 Portugal	46%	4 Belgien	55%
5 Sydkorea	27%	5 Schweiz	45%	5 Danmark	55%
6 Mexico	26%	6 Belgien	42%	6 Østrig	55%
7 Belgien	25%	7 Danmark	42%	7 Norge	52%
8 Israel	25%	8 Østrig	39%	8 Portugal	52%
9 Grækenland	24%	9 Mexico	38%	9 Sverige	51%
10 Danmark	23%	10 Norge	38%	10 Irland	50%
11 Norge	23%	11 Sverige	37%	11 Nederlandene	49%
12 Brasilien	22%	12 Irland	36%	12 New Zealand	49%
13 Sverige	22%	13 Brasilien	35%	13 Ukraine	48%
14 Tyrkiet	22%	14 Israel	35%	14 Finland	47%
15 Østrig	22%	15 Finland	34%	15 Frankrig	47%
16 Irland	20%	16 Grækenland	34%	16 Sydafrika	46%
17 Italien	20%	17 Nederlandene	34%	17 Tyskland	45%
18 Singapore	20%	18 Frankrig	32%	18 Argentina	44%
19 Nederlandene	19%	19 Argentina	31%	19 Baltikum	44%
20 Kina	19%	20 Italien	31%	20 Singapore	44%
21 Taiwan	19%	21 Tyskland	31%	21 Canada	43%
22 Finland	18%	22 New Zealand	30%	22 Mexico	43%
23 Frankrig	18%	23 Ukraine	30%	23 Storbritannien	42%
24 Canada	17%	24 Canada	29%	24 Australien	41%
25 Tyskland	16%	25 Singapore	28%	25 Israel	41%
26 New Zealand	15%	26 Spanien	28%	26 Italien	39%
27 Australien	14%	27 Australien	26%	27 Spanien	38%
28 Argentina	13%	28 Kina	25%	28 Grækenland	37%
29 Spanien	13%	29 Sydkorea	25%	29 Rusland/USSR	36%
30 Storbritannien	13%	30 Storbritannien	25%	30 Brasilien	28%
31 Sydafrika	11%	31 Sydafrika	25%	31 USA	27%
32 Ukraine	11%	32 Rusland/USSR	24%	32 Sydkorea	26%
33 USA	8%	33 Tyrkiet	19%	33 Japan	25%
34 Indien	7%	34 Taiwan	17%	34 Kina	22%
35 Japan	7%	35 USA	16%	35 Taiwan	20%
36 Rusland/USSR	3%	36 Japan	14%	36 Indien	19%
37 Baltikum	0%	37 Indien	13%	37 Tyrkiet	16%

Datakilde: International Research Cooperation in the NordForskic Countries, NordForsk 2010

DANISH RELATIONS WITH SOUTH KOREA - RESEARCH AND EDUCATION



Green Growth Alliance

Joint funding scheme: The Danish Council for Strategic Research and Green Technology Center Korea

A number of Korean/Danish university exchange agreements

Korean Advanced Institute of Science and Technology (KAIST) and Danmarks Tekniske Universitet (DTU)

- Green Technology Research Centre
- Dual Degree Programme Agreement
- Cyber Education Programmes



Danish relations with South Korea

- companies



Grundfos and Samsung

Construction & Trade:

Agreement (MoU) on Green Buildings

SK Holding and Topsøe

Fuel Cells:

Two collaboration agreements on Clean Energy of the Future





NEW GOVERNMENT – NEW INITIATIVES

- ‘Creative Economy’

On 23 October, the Korean government announced their plan to spend 8.1 billion USD on R&D in the field of information and communication technology (ICT) over the next five years. Five ICT sectors designated as new growth engines: Contents, Platform, Network, Devices and Information Security

- Strengthening of SME sector

e.g SBC initiatives with loans and incentives

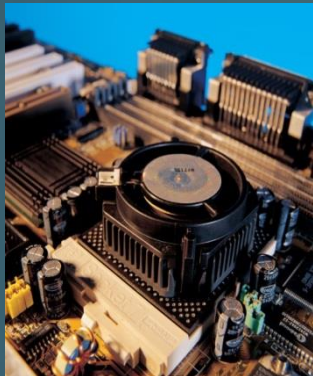


Innovation Centre focus – Innovation Projects

- IPR in Korea
- Innovation ECO-system (for startup comp.)
- Chaebols and Innovation
- Health, Medtech and Robotics

KEY MESSAGES

- Reciprocity
- South Korea is more than Samsung and LG



Sectors/areas

- Cleantech & renewables
- Life science
- Green shipping
- Wind power hub
- ICT & sound engineering

CONCLUSIONS

- Great potential in increased collaboration, in terms of:
 - Technology cooperation with conglomerates
 - SME partnerships and collaboration
 - Student and higher education programmes



a partnership between
the ministry of science, innovation and higher education and the ministry of foreign affairs of denmark

THANK YOU FOR YOUR ATTENTION

FIND US AT AMBSEOUL.UM.DK AND ICDK.UM.DK

