

Attracting Global Innovation Talent: 10 Initiatives from World Leading Countries¹

1. World Class Facilities

In 2001 the **Singaporean** government commissioned the first stage of 'one-north' a 200-hectare development located next to Singapore's acclaimed Science Parks and close to the National University of Singapore. The development brings together the best in gourmet restaurants, cultural venues, and retail outlets and sports facilities to be enjoyed by the approximated 10,000 (by 2015) scientists employed in Biopolis and Fusionopolis – two leading biomedical sciences and digital media research centres also located on the site. Companies wishing set up base at one of these centres can enjoy easy access to government agencies, venture capitalist firms and research labs.

2. A Clear Focus

The Danish government's 2005 Global Innovation Strategy aims to position **Denmark** as one of the leading knowledge-based nations in the world by 2016. Key to this strategy is concentrating their R&D funding on a handful of industries or research fields such as clean technology and wireless technology, and becoming world recognised centres for innovation in these fields; thus attracting talent and investment to their shores. The strategy seems to be working as the most recent global innovation poll placed Denmark 8th in the world.

3. Make it easy

Tax Credits/ Regulatory Relief/Training & Research Grants These are all common strategies employed by countries looking to attract leading R&D companies to invest in their economy. Notably, Singapore is currently offering up to 40% expenses on research grants. To make this possible, leading nations have large budgets for research and development, on average of about 1-3% GDP. Only **Sweden** (population 9 million) and **Israel** have over 4% GDP investment in research and development.

4. Talent Management

Outsourcing developing assignments to offshore emerging economies, therefore directly managing the talent pool of those countries, can move a nation up the innovation value chain. This is exactly what **Indian** companies are now being encouraged to do as part of their government's innovation strategy.

5. Education is the key

Creating the talent of the future is a major strategy for leading countries in the innovation space. Rather than taking a specific industry approach to funding such as Denmark, **China** has given 10 of its leading universities extra funding to encourage postgraduate research across every area of scientific specialism. The tangible result of this strategy so far is the creation of 50 car companies in China all competing for the next innovation in automobile design and business model.

6. Linking with expats

Increasingly, globally competitive nations are seeking to re-establish links with their native scientists who have been successful offshore – either encouraging them to return home with lucrative incentives or getting them to invest time, networks and resources in helping to advance their home nation's innovation agenda.

7. National Service

Providing lucrative funding schemes for international graduates is one way of attracting talent to your country. One way in which to keep that talent and IP is to include a clause in the funding which states that you must either find work, or at some point return to work in that country, in your chosen field of expertise, once you have graduated.

8. Create the environment

Governments need to create the environment to allow innovation to flourish. The EU stipulates that GDP spending on R&D should be around 3% of which 2% should come from private business and 1% from the state. Some of the leading innovation countries have set up agencies, policy councils and research institutes to help pursue aggressive growth in this area. Some of the best examples are Vinnova in Sweden and Tekes in **Finland**.

9. Vision over Scale

Ten of the current **top 20 leading innovation nations** have populations under 10 million. It has often claimed that their 'self contained environments' have significantly attributed to their success. Strong links across the public and private sectors can be forged quickly and common understandings around policy are easier to come by. Networking and building alliances within these countries is essential.

10. Become the global expert

If you have an industry specific agenda, with the resources and expertise in place then you can play a broker role in aligning companies and talent across the world, and look for different ways in which you can add value to the sector.

Table 1: GII 2008/2009 Overall Rankings

Country	2008-09	Rank
United States	5.28	1
Germany	4.99	2
Sweden	4.84	3
United Kingdom	4.82	4
Singapore	4.81	5
Korea, South	4.73	6
Switzerland	4.73	7
Denmark	4.69	8
Japan	4.65	9
Netherlands	4.64	10
Canada	4.63	11
Hong Kong	4.59	12
Finland	4.57	13
Norway	4.47	14
Austria	4.46	15
Taiwan	4.41	16
Luxembourg	4.37	17
Belgium	4.35	18
France	4.35	19
Iceland	4.34	20
New Zealand	3.97	27

¹ Sources:

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 Fishbein, J. (2008), 'Europe's Innovation Hotspots', *Business Week*, 28 April 2008
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The make-up of world leading research institutes²

Sweden

Centre for Innovation, Research and Competence in the Learning Economy (CIRCLE)

Created in 2004, this is Sweden's largest government funded research institute. The 4 core functions of the institute are: learning in innovation systems and the consequences of R&D and innovation for productivity growth; international comparison of regional innovation systems; the entrepreneurial university and the creation of research-based firms and public policy in the field of innovation, R&D and competence building in a comparative perspective. The centre Director is Charles Edquist, an economic historian who has held a number of senior research positions globally and specializes in the global innovation economy. It has an international board of 8 professors from UK, USA, Canadian and European universities with a specialism in Science & Technology, Social Science and Economics. There is one woman on the board.

Finland

VTT Technical Research Centre of Finland

Founded in 1942, VTT is the biggest multitechnological applied research organisation in Northern Europe. It's core research areas are Applied materials; Bio- and chemical processes; Energy; Information and communication technologies; Industrial systems; Microtechnologies and electronics; Technology in the community; Business Research. The CEO and President of the centre is Erkki KM Leppävuori, a former Marketing Director from the Building Products and Steel sectors. He has held senior research roles within the centre for the last 10 years. Including Erkki, the board consists of 7 members from the engineering, government, science and technology sectors including the head of technology for Nokia. Three of the board members are women, one of whom is the CEO of a leading Finnish Bio-Tech consultancy and former Dairy Technologist.

Singapore

Institute of Bioengineering & Nanotechnology (IBN)

Founded in 2003, the centre integrates research in engineering, life sciences and molecular sciences to advance scientific knowledge in Drug and Gene Delivery; Cell and Tissue Engineering; Biosensors and Biodevices and Pharmaceuticals Synthesis and Nanobiotechnology. The Executive Director is Professor Jackie Y. Ying from MIT, who was voted one of the top 100 engineers of the modern era (1950's +) by the American Institute of Chemical Engineers. She is supported by an international advisory board of 5 scientists, 4 of whom are male professors from North American Universities, and 1 female professor from the University of Zurich, Switzerland.

Ireland

Centre for Innovation and Structural Change (CISC)

The key objective of CISC is to build an internationally recognised programme of research and research training on the innovation processes and policies that are fundamental to the development of a knowledge-based economy. Specific areas include: innovations systems, industry clustering, Internationally Traded Services, Inter-Organisational Systems, High Performance Work Systems, and Research training. Director of the centre is Dr. James Cunningham an expert in strategic management and innovation. He is supported by a number of academic research fellows from Ireland as well as visiting professors from abroad. The centre does not have a board of directors.

Summary

- ④ There is no definitive leadership model for research institutes;
- ④ The examples from Ireland and Sweden show a clear commitment towards strategically realigning their economies towards innovative systems and research. This is distinctly absent in both FoRST's rhetoric as well as their objectives;
- ④ There is a clear emphasis on having an international flavor to a research institute board, with global competition to find the best candidates.