



# CAPTURING KNOWLEDGE TO BOOST PERFORMANCE

Why it should be a priority

By Professor Peter Lorange and Suzanne Rosselet-McCauley, Deputy Director of IMD's World Competitive Center - March, 2008

**IMD**

**Chemin de Bellerive 23  
PO Box 915,  
CH-1001 Lausanne  
Switzerland**

**Tel: +41 21 618 01 11  
Fax: +41 21 618 07 07  
info@imd.ch  
<http://www.imd.ch>**

## CAPTURING KNOWLEDGE TO BOOST PERFORMANCE | Why it should be a priority

It's not rocket science, but a country in which knowledge transfer is developed scores higher in overall competitiveness rankings. Knowledge is now recognized by educators, business leaders and politicians alike as being a main driver of growth, wealth creation and employment. How businesses and countries accumulate, share and diffuse knowledge can have a major impact on improving their competitiveness performance.

For starters, this is not a formula that may work in all cases, but when we look at the top 10 countries in overall competitiveness (measured by the IMD World Competitiveness Yearbook), eight of them are also ranked in the top 10 for the transfer of knowledge between their universities and companies. This correlation is even more striking for smaller countries such as Switzerland, Singapore, Iceland and Denmark that are highly successful in terms of transferring knowledge into society. Consider the following countries' rankings from the 2007 World Competitiveness Yearbook:

Country Rank	Knowledge Transfer Developed between Companies and Universities	Overall Competitiveness
Switzerland	1	6
Singapore	2	2
Iceland	3	7
Denmark	5	5
USA	6	1
Canada	8	10

*IMD World Competitiveness Yearbook 2007*

**The IMD World Competitiveness Center's** approach to competitiveness is to analyze how nations and enterprises manage the totality of their competencies to achieve increased prosperity. Knowledge transfer is only one of these competencies (over 300 criteria comprise the WCY rankings) but clearly an important one, especially for small countries that do not possess any natural resources. It is interesting to note that 14 out of the 20 best ranked nations for knowledge transfer have populations less than 20 million.

**Research and development** play a critical role in this knowledge transfer. But what is equally important is the speed and efficiency in which R&D is disseminated and shared with society. This is especially the case for the U.S. and Switzerland. For knowledge to have an impact there must be a free flow of new insights and a strong networking link between education and business. This is exemplified by the Swiss company Flisom, a spin-off of ETH Zurich, a science and technology university in Switzerland. Flisom, which has developed a lightweight solar cell device that converts light into electricity with world-record efficiency, was founded in 2005 as a limited liability company with the goal to transfer research excellence from the laboratory to industry. It is already an award-winning company contributing to sustainable business development in Switzerland and the world. Other notable start-ups supported by Swiss research laboratories include Mimotec (fine mechanics), Aleva Neurotherapeutics and Scanlight Imaging – the last two recently winning the Swiss Venture 08 award.

R & D in Switzerland is predominantly undertaken in the private sector (around 70%) as pharmaceutical companies, chemicals and fine mechanics have taken the lead in fostering innovation. France, which ranks fifth in total expenditure on R & D, conducts a significant part of its research at the public sector level but the infiltration rate into society is lower (the French are ranked 31st in knowledge transfer). It is far more effective when universities or technical institutes conduct joint research projects with companies, sometimes sharing the patent of an invention, and when their graduates (or drop-outs) start up their own companies. The roots of Google, Apple and Microsoft in the United States are cases in point.

**Investment in education**, funding for academic research and R&D investment by the private sector are among the key components that demonstrate why these countries have become “knowledge-intensive” economies.

There has to be commitment for countries to invest in education. Denmark, Iceland, Finland and Sweden are among the top five countries in the world for their expenditure on education (above 7% of GDP). Governments in the Nordic countries have placed a strong emphasis on education and innovation, helping to create an environment that supports dynamic global companies like Nokia (Finland), Ericsson (Sweden) and TDC (Denmark). In another WCY ranking, Iceland, Finland and Denmark along with Switzerland and Ireland are considered to have the best educational systems that meet the needs of a competitive economy.

Universities and technical institutes are incubators for fresh ideas that can then be harvested by the business community to develop and deploy them in the form of new, innovative goods and services. A skilled, educated workforce accustomed to working with IT will obviously have a significant impact on this knowledge transfer. A nation’s ability to

attract and retain talent (“war for the best brains”) as well as the efficient management of intellectual capital are at the heart of moving towards a “knowledge-based economy”. Not surprisingly, another of the WCY’s rankings shows that the most competitive and knowledge-intensive countries are also those that are the most successful in attracting foreign high-skilled people, led by Singapore, Switzerland, Ireland and the U.S.

**Legislation on intellectual property protection** also contributes to providing the incentives and protection to innovate. Innovative ideas alone will not drive economic growth but need a framework of institutions and policies that encourage and reward innovation and entrepreneurship. A strong emphasis on patent and copyright protection has supported the creation of knowledge-based industries like pharmaceuticals, software and information and communication technologies (represents one-fifth of American economic activity). Swiss patent protection has also been crucial in supporting the country’s high-technology and knowledge-intensive companies as well as its educational and research institutes. Prudent fiscal policies have let Nordic governments in particular invest heavily in education and infrastructure while maintaining a broad array of social services. Lastly, an efficient financial system that facilitates access to venture capital will boost the ability of entrepreneurs and start-up companies to implement their ideas.

## A Lesson for Business Schools

The importance of knowledge transfer also holds true in business education. At IMD, we aim to offer executives from the world’s leading companies “Real World. Real Learning”. By this, we mean that Faculty bring cutting-edge, practical focus on dilemmas and pertinent research into the classroom in the shortest possible time so that senior executives can then immediately influence their respective organizations efficiently with long-term sustainable strategies. This formula has been a key to IMD maintaining strong rankings in executive education consistently over the years.

The challenge ahead for the countries described above and for IMD is to continue building on this link. Countries will be scrutinized when the 2008 World Competitiveness Yearbook comes out in May, while IMD and other leading business schools are constantly under the microscope in rankings published by different media outlets and organizations. Government officials, business leaders and educators must constantly place priority on the importance of this efficient networking link in order to best address the needs of society.

Peter Lorange is the President of IMD. He covers the knowledge transfer topic in his new book “Thought Leadership Meets Business”, which comes out on March 24th. The IMD World Competitiveness Center has been a pioneer in competitiveness since 1989 and this year will publish its 20th edition of the IMD World Competitiveness Yearbook. [www.imd.ch/wcc](http://www.imd.ch/wcc)

## RELATED PROGRAMS



### **HIGH PERFORMANCE BOARDS - <http://www.imd.ch/hpb>**

#### **A Forum for Excellent Practice**

Program Director Paul Strebel

- Identify your board's power structure and decision-making freedom
- Develop insights into dealing with critical challenges in today's volatile environment
- Develop an action plan for improving your impact as a board member



### **ORCHESTRATING WINNING PERFORMANCE - <http://www.imd.ch/owp>**

#### **The 6-day global business program**

Program Director Bettina Buechel

- A unique energizer: boost your performance, broaden your perspectives and expand your global network
- Design the program that suits you