



## **2 What's up? (WORK-IN-NET internal)**

### **September 2008**

#### **European Workplace Participation Forum in Rome linked two European Networks**

From the 24th to the 26th of September 150 researchers and programme managers from projects and programmes on work-oriented innovation research met in Rome. The Fondazione Istituto per il Lavoro, Bologna (IpL) together with WORK-IN-NET organized the "European Workplace Participation Forum", where for the first time two networks met: WORK-IN-NET and RLDWL. The "Network for Regional and Local Development of Work and Labour" (short: RLDWL) is an international network of researchers and scientists and met once a year for an exchange. The second network titled "WORK-IN-NET" is composed by programme managers from Ministries and Management Agencies in Europe that support work-oriented innovation initiatives. This European network contributes in building up the European Research Area ERA.

The European Workplace Participation Forum: "New ways to effective forms of worker participation" addressed themes in the field of industrial relations that are crucial to reach the objectives set down by the Lisbon Strategy as well as for the further development of the European Social Model in general. New tendencies with regard to both the new contents and the evolving forms of participation processes were presented as well as programme approaches from different countries. Concerning the content of participation, experiences regarding company performance, work organisation, health and safety as well as vocational training seem to be of growing importance. The aim of the event was to grasp the changes taking place in labour relations and, in particular, to collect and debate innovative participation experiences at the workplace as well as the relationship between different forms of participation.

More Information: <http://www.fipl.it/progetti/rldwl/index.html>

### **September 2008**

#### **Joint activities of WORK-IN-NET planned for 2009**

Within the above mentioned European Workplace Participation Forum in Rome the European ERA-NET project WORK-IN-NET announced new project activities planned for 2009. Under the heading "The Innovative Work Organisation" a joint call will be placed. National and regional partner organisations from Italy, Finland and Germany were the first out of ten who signed a Memorandum of Understanding. Initial activities are expected for 2009. Information will be available on [www.workinnet.org](http://www.workinnet.org).

### **September 2008**

#### **WORK-IN-NET Foresight seminar in Stockholm**

During two days in September 2008, FAS organised a WORK-IN-NET seminar in Stockholm on the theme "future challenges of work life development and work-oriented innovation activities in Europe".

All WORK-IN-NET partner organisations had been invited to participate in the workshop. They were encouraged to contribute with short foresight reports about future challenges of work life development and work-oriented innovation activities, for example around the following themes:

- Who will instigate and carry out work-oriented innovation activities in your country 2020? How will new technology affect the division of labour in the future?
- How will globalisation and the integrating European labour market affect working conditions and health promotion at work in 2020?
- What has happened to corporate social responsibility in 2020?
- Describe industrial relations, job security and employment contracts in your country in 2020.
- Elaborate on equity, gender, ethnic inclusion & diversity as well as generation gaps at work in 2020.

Country specific reports were given by Tuomo Alasoini (Finland), Kenneth Abrahamsson (Sweden), and Jürgen Howaldt (Germany). In addition the following experts had been invited to make presentations and provide background papers: Raija Koivisto, VTT Technical Research Centre of Finland; Peter Docherty, Chalmers University of Technology and ATK Arbetsliv Sweden; Peter Totterdill, UK Work Organisation Network; and Jari Kaivo-oja, Finland Futures Research Centre, Turku School of Economics. The following two participants contributed with insights about the European context: Elisabeth Lagerlöf, previously at European Foundation for the improvement of Living and Working Conditions and Werner Wobbe, DG Research, European Commission.

The two days contained a broad range of thought provoking presentations and lively discussions among the 25 participants. A report from the seminar captures the essence of those presentations and discussions, as well as the submitted background papers. It will be available on [www.workinnet.org/](http://www.workinnet.org/) soon.

### 3 News from Partners

#### Germany

##### **KMU-INNOSTRAT: A new project on dissemination and implementation of research findings in the field of work oriented innovation**

“Development of Interventions to Initiate Innovation Strategies with Broad Effects to SMEs” – this is the title of a new project set up by a regional consortium in North Rhine-Westphalia, Germany, led by G.I.B. and funded by the German Federal Ministry for Education and Research.

The scientific community of researchers funded by work oriented innovation programmes have produced an enormous amount of results and developed a huge number of innovative solutions on company and workplace level.

On the other hand in European countries we have millions of companies, 99% of them are small and medium sized. The question is how to utilise the findings in the field of modern work organisation for SMEs and how to address the ideas of modern work places and innovative work organisations to a big number of companies especially to SMEs. Obviously a lack of dissemination and implementation exists (see also page 11: Why is Learning from National Working Life Programmes not a Matter of Course?). The new project “KMU-INNOSTRAT” will search for answers for questions as follows:

- Which examples of good implementation strategies of governments on national or regional level exist?
- How can intermediary and stakeholder organisations transport these ideas and support the implementation of them into SMEs?
- In which way consultants can support these dissemination and implementation strategies?

- Which other examples of good dissemination and implementation strategies of work oriented innovation into SMEs are known?

The project is at the very beginning. The project team is open for suggestions for examples of good practise. Please send your ideas to Friedhelm Keuken [f.keuken@gib.nrw.de](mailto:f.keuken@gib.nrw.de). The best ideas will be published on [www.kmu-innostrat.de](http://www.kmu-innostrat.de).

## **Finland**

### **Communication from the Finnish Work Environment Fund**

Kenneth Johansson, Licentiate of Science (Technology), will take over as Managing Director of the Finnish Work Environment Fund on 1 January 2009.

Mr Johansson, 45, will join the Fund from OP-Pohjola Group Central Cooperative where he has been employed as Corporate Safety Manager since 2007. His previous posts include Head of Occupational Safety Department and Occupational Safety Manager at Pohjola Non-Life Insurance Company (now Pohjola Insurance Ltd). He has also worked as a Scientific Expert for the Finnish Work Environment Fund and as a member of its Scientific Advisory Group.

The present Managing Director Peter Rehnström, Master of Science (Technology) and Honorary Doctor of Technology, will retire on 31 December 2008. Mr Rehnström, who is 64 years old, has served as Managing Director of the Finnish Work Environment Fund since 1996. He will continue as part-time Senior Advisor at the Fund until the end of May next year. His task will be to assist Mr Johansson in familiarising himself with the new post.

Further information:

Managing Director Peter Rehnström, [peter.rehnstrom@tsr.fi](mailto:peter.rehnstrom@tsr.fi)

Head of Communications Marja-Leena Jylhä, [marja-leena.jylha@tsr.fi](mailto:marja-leena.jylha@tsr.fi)

## **Sweden**

### **New Research and Innovation Bill from the Swedish Government**

The new bill covers the period 2009-2012 and is larger than the total sum allocated in the three most recent bills. This SEK 5 billion investment (appr. 500 million EUR) means that the Lisbon goal to allocate 1 per cent of GDP to R&D will be achieved by 2009.

Some of the important items in the Bill are:

Universities and higher education institutions to be allocated increased resources

The largest portion of central government research funds will go to academic institutions and will be distributed in accordance with a new system in which quality will determine how much each university or higher education institution will receive. Quality will be measured by means of two criteria - publications/references to publications and external research funds.

Strategic investments

Since World War II, Swedish central government-supported basic research has in principle been funded in two ways: through direct appropriations to universities (faculty funds) and through appropriations via the research councils (council appropriations). An important element of the reform of the appropriations system proposed in the Bill is that a third, major type of funding will be introduced: strategic investments. SEK 1.8 billion of the SEK 5 billion will be allocated in the Research Bill to what

is planned to be a permanent, annual increase in appropriations to research in a number of strategically important areas.

#### Innovation

In order for publicly funded research to be used extensively by the community and the business sector, an initiative is introduced to increase the commercialisation of research results. Innovation offices will be set up at a number of higher education institutions and industrial research institutes will be allocated additional funds.

#### Increased appropriations to FAS

The four research funding institutions will be allocated SEK 675 million. In the instructions to FAS, two areas are of specific relevance: funding to research about company health care and an additional 65 million SEK (over 4 years) earmarked for working life research. The additional funding will be used to finance research programmes and centres of excellence related to the improvement of work (see also FAS' Newsletter 3 2008 at [http://www.fas.se/fas\\_templates/Page\\_1355.aspx](http://www.fas.se/fas_templates/Page_1355.aspx)).

### **The Karasek-Theorell model on workplace stress is still alive**

The scientific discourse about workplace quality and the demands and control of employees has to a large extent been enriched by the so-called Karasek-Theorell demand and control model. The model has existed for more than 30 years.

At the beginning the model described the tension between working demands and the individual's capacity to cope with those demands. Later the model came to encompass the social support employees receive at work.

If demands are too high, irregular, or difficult to understand, and the employee has difficulties controlling them or lacks the supports from other people, work stress increases. If such periods of job strain persists for longer periods, it will have consequences for health.

A couple of years ago, in relation to the retirement of Professor Töres Theorell, the Institute of psychosocial medicine (IPM) held an international symposium around these questions. Documentation from the symposium is now available in a supplement to *Scandinavian Journal of Work, Environment and Health*, [\*SJWEH Supplement 6 \(2008\): After 30 years with the demand-control-support model – how is it used today?\*](#)

Behind the supplement are some twenty researchers who, in one way or another, have been inspired by the Karasek-Theorell model and developed different aspects of it.

The documentation can also be seen as a reflection of the collective memory of Swedish working life research during an era when international contacts and the dialogue between researchers were intense and creative. A part of this tradition has been transferred to the newly started Stress Research Institute at Stockholm University, who took over the activities of the now closed IPM.

## 4 Dates, Events & Activities

### Germany

#### **Announcement for 2<sup>nd</sup> and 3<sup>rd</sup> of April 2009: 2<sup>nd</sup> BMBF-Zukunftsforum "Working – learning – developing skills"**

In view of structural change and constant changes in the working environment and in view of globalization and demographic change, efforts must be made to continuously strengthen the companies' potential for innovation on a broad scale so that Germany will remain an attractive business location in the long term. This means that personnel, organization and skills development are equally important. Growth and creation of jobs will only be possible if efforts to develop the skills of individuals, staff and management are coordinated.

With its funding programme "Working – learning – developing skills – Potential for innovation in a modern working environment", the Federal Ministry of Education and Research (BMBF) will systematically address vital issues in order to develop new practical solutions by means of research and development. This BMBF research programme responds to the new requirements which have to be met in the world of work due to recent developments in industry and society. The programme, which takes the increasing interlinkage of work and learning into account, aims to ensure that

- People use their knowledge, creativity and motivation at the workplace and develop their skills (further);
- Companies create the prerequisites for successful skills development and thus become a source of new ideas, successful products and new jobs;
- Networks and cooperation are organized in a way which opens up sales and employment opportunities.

The conference "Personnel Development – Organization Development – Skills Development" will focus on these goals. It takes place on 2<sup>nd</sup> and 3<sup>rd</sup> of April 2009 in Berlin. It targets experts from industry, science and politics in Germany and Europe who have to face the radical changes in economic and social structures. All plenary session and four fora will have simultaneous translation German/English.

More information and online registration: [www.arbeiten-lernen-kompetenzen-entwickeln.de](http://www.arbeiten-lernen-kompetenzen-entwickeln.de)

### Greece

#### **September 2008 Social Dialogue & Lisbon Strategy**

"More effective public administration, more competitive enterprise, more and better places of work" - Meeting of Economic and Social Committee of Greece (ESC) in Athens



The Economic and Social Committee of Greece with the Observatory of Policies for Viable Growth, organised on the, 22nd of September 2008, a Meeting on the subject "Social Dialogue & Lisbon Strategy: More effective Public Administration, More competitive Enterprise, More and Better Workplaces". The initiative mainly aimed to substantially activate all social partners and to open a direct dialogue between the Greek society and the Government with regard to the reforming process that is underway.

The meeting was attended by:

Mr. Christos Polyzogopoulos Chairman, the Minister of Economy and Finances, the Minister of Employment

and Social Protection and representatives of all Greek political parties, the Chairman the European Economic and Social Committee Mr. Dimitris Dimitriadis, the Vice-president her. Mr EC. Ioannis Stefanou, representative of European Committee Mr Ierotheos Papadopoulos and representative of Council of Financial Experts of the Greek Ministry of Economy and Finance Mr. Dimitrios Papaoikonomou. The speakers reported the essential role social partners should have in the achievement of the Lisbon objectives. Also, realising the basic structural weaknesses of Greek economy and the imposed sectors aiming for the next Programmatic period 2008-2010, they mentioned the needs of achieving the objectives such as:

- a) Research development and innovator business dexterity,
- b) Knowledge society and full employment and
- c) Better governing.

In an open discussion with the governmental representatives, the European Committee, the social partners Institutions, as well as the public sector representatives the common conclusion was reached: There is a difficulty in connecting the Lisbon objectives with the reforming policies of the third programming period, as well as with the new National Program of Reforms. The reason is mainly the lack of setting concrete objectives with clear and realistic timetable as well as the fact that the Greek economy, in the sectors of Education and Training, the Employment, Research and Innovation, and the Environment is not adapting as fast as it is required to the Lisbon Objectives requirements.

Source: [www.oke.gr/index-en.htm](http://www.oke.gr/index-en.htm)

## **Finland**

**November 2008**

### **Workplace development sailing with a fair wind in Finland – greetings from a conference**



The Finnish Workplace Development Programme TYKES arranged its annual conference 5 November 2008 in Helsinki with a theme "At the arena of innovations – tools for

workplace development". The event gathered together 550 practitioners, consultants, researchers, labour market officials and government officials from a variety of organizations. One reason for the widespread interest in the conference was the recent transfer of the TYKES programme from the Ministry of Employment and the Economy to Tekes (Finnish Funding Agency for Technology and Innovation) and changes in legislation which make the improvement of the quality of working life as one of the statutory tasks of Tekes. In Finland, workplace development is now increasingly considered as an element of 'broad-based innovation policy', a new concept which will guide the future development of innovation policy in the country. Workplace innovation is an integrated part of the broadened view on innovation, as indicated also by the new national innovation strategy that is now at its finishing phases. In the opening speech of the conference, Mr. Pekkarinen, the Minister of Economic Affairs, showed great understanding toward the significance of workplace innovation and development as a factor for labour productivity growth and a means to help people stay on the job for longer.

## 5 New Publications

### Finland

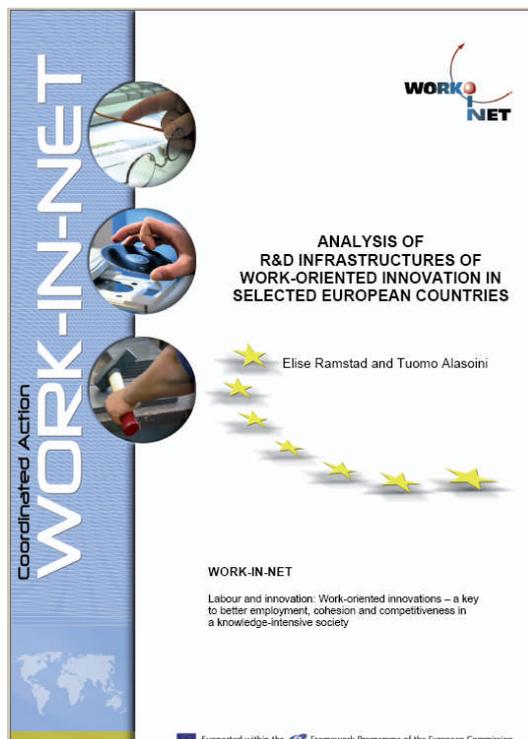
#### WORK-IN-NET Report: "Learning across boundaries"

The report entitled as "Learning across boundaries" contains the main findings of a benchmarking study on workplace development programmes in Ireland, Flanders and Singapore that was carried out as part of benchmarking line of activities of the WORK-IN-NET project. This work is a follow-up to two earlier benchmarking assignments which examined other European programmes and dialogical development methods respectively. In the new report, programmes in the three countries and regions are analysed, making use of a model developed by Frieder Naschold in the early-1990s. The report looks at the strengths, weaknesses and potentials of the programmes, raising also conclusions and recommendations for the European policy agenda. One of the key recommendations is that enhancing learning across national borders is becoming increasingly important in global economy, and for that purpose multi-national interactive forums should be created that provide common conceptual tools for making the experiences of different countries more understandable and allowing for common reflection on these experiences. The findings of the report form a sound basis for another task of the project, the establishment of European joint benchmarking board in the area of work-oriented innovation.

The report was written by Tuomo Alasoini, Elise Ramstad, Tiina Hanhike and Nuppu Rouhiainen of the Finnish Workplace Development Programme TYKES, and it is downloadable on the Internet:

[www.workinnet.org/dateien/WIN\\_Task\\_5.3.pdf](http://www.workinnet.org/dateien/WIN_Task_5.3.pdf)

#### WORK-IN-NET Report: Analysis of R&D infrastructures



As part of the WORK-IN-NET benchmarking activities a new report is being published: "Analysis of R&D infrastructures of work-oriented innovation in selected European countries". The benchmarking study covers two tasks. The first task aims to analyse the innovation infrastructures from the work-oriented innovation point of view. The analysis covers four levels: government, ministry, programme and performer levels. The analysis describes and locates the R&D units of work-oriented innovation in the broader innovation system context for each country separately. The second research task is to benchmark the resources of research and development (R&D) units working in the field of work-oriented innovation. For this purpose a framework for knowledge system measurement framework is being used (Ramstad, 2008). The data was gathered with a help of an inquiry in four countries: Finland, Germany, Norway and Sweden (N=177). The structural analysis of innovation systems indicates that the focus in many European countries is still mainly on technological innovations and the structures related to technology-oriented administrative bodies and funding institutes. The findings from the inquiry show that R&D personnel are most often employed on a project contract basis or part time and they often have other responsibilities. The challenge in the future is to build a work-oriented innovation perspective into the innovation system and

employed on a project contract basis or part time and they often have other responsibilities. The challenge in the future is to build a work-oriented innovation perspective into the innovation system and

develop broad-based innovation policies. This would enable a highly skilled labour force, long term strategic development and secure financial support of work-oriented innovations in a country. As part of the study a database of European R&D units covering information of their particular areas of interest and experts was created (<http://rdmaps.ath.cx/>).

The report was written by Elise Ramstad in collaboration with Tuomo Alasoini from the Finnish Workplace Development Programme TYKES, and it can be found in the webpage by WORK-IN-NET network:

[www.workinnet.org/dateien/WIN\\_Task\\_8.2.pdf](http://www.workinnet.org/dateien/WIN_Task_8.2.pdf)

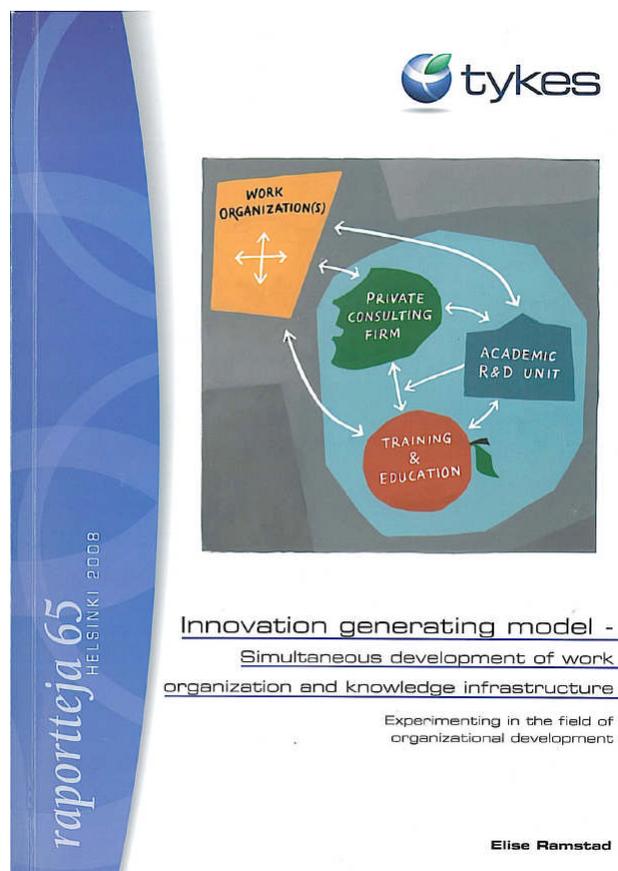
### **Simulations development of work organisation and knowledge infrastructure - a dissertation on a new innovation generating model**

Within her dissertation "Innovation generating model - Simultaneous development of work organization and knowledge infrastructure. Experimenting in the field of organizational development" Elise Ramstad introduces how work organisation and knowledge infrastructure can be developed simultaneously. Ramstad takes a highly topical question: how can order controlled requirements for innovation and random knowledge production are brought together to achieve a sustainable innovative ability? The study illustrates exemplary the dynamics how organisational development creates new knowledge through a simultaneous promotion of complementary knowledge from internal and external sources of existing knowledge. Possible knowledge-makers are located within the organization or in expert organizations with which a horizontal exchange is kept. Ramstad developed in her work a

model of innovation generation and also provides a theoretical approach and an instrument, with which the complementarity of knowledge can be analysed.

Elise Ramstad derives her findings from a thorough analysis of literature and from two interviews (223 interviews with experts in the field of organizational development and 1113 surveys of participants in projects analyzing the organisation of work). She is a researcher at the Finnish research funding organisation Tekes, which supported the study, and a founding member of the European Network of research funding organisations WORK-IN-NET.

Ramstad, Elise: "Innovation generating model - Simultaneous development of work organization and knowledge infrastructure. Experimenting in the field of organizational development", Helsinki (Tykes, Raportteja 65) (November 2008), ISBN 978-952457-436-5, 240 S.



## Sweden

### A new book: Leading Companies in a Global Age – Managing the Swedish Way



At VINNOVA, the programme "The managerial tasks - conditions, ways of working and results" is focusing on the importance of the managerial function for the efficiency and sustainable development of organisations. Eleven R&D projects have been funded for a period of 3 – 4 years. Taking the successful Swedish management tradition as a point of departure the idea is to develop knowledge, understanding and practice on how management is organised and carried out at various workplaces in Sweden. In the programme the book "Leading Companies in a Global Age – Managing the Swedish Way" has been produced. It outlines the qualities of the Swedish way of management and describes how it has evolved from the 1930's to the present days. The book is written in English and can be downloaded from the following link:

[www.vinnova.se/upload/EPiStorePDF/vr-08-14.pdf](http://www.vinnova.se/upload/EPiStorePDF/vr-08-14.pdf)

## Netherlands

### Cookbook 'Social Innovation'

In the Netherlands recently there was published a Cookbook 'Social Innovation'.

The editors of this cookbook gave the first copy to SER Chairman Alexander Rinnooy Kan at the conference of the NCSI. Two years ago, Rinnooy Kan challenged the consultancy to prove their value, knowledge and experience in the field of social innovation. This book launch makes the circle almost round.

The Cookbook gives an overview of social innovation and it includes the current developments in the field of renewal of the organization of work. The book offers a varied combination of visions and practice stories. The diversity of themes and organizations shows how applicable social innovation is.



In the book you can read the visions of various personalities from politics, science and social background, including: Professor Henk Volberda, Rotterdam School of Management, and Alexander Pechtold. Group D'66, Alexander Rinnooy Kan, chairman SER and Loek Hermans, chairman SMEs Netherlands. The practice cases are from several business organizations and the (semi-) government. The book is written in Dutch, but the concept and the lay out might inspire those who do not read Dutch.

The Cookbook 'Social innovation' was composed by seven consultants. The NCSI has con-

tributed to this book through a financial sponsoring and by giving the opportunity to the editors to make use of the network of NCSI. Furthermore the NCSI gave the consultants the opportunity to promote the book during the conference of the NCSI.

The cookbook can be ordered here:

<http://www.ncsi.nl/actueel/Gesignaleerd/Kookboek%20sociale%20innovatie.doc/>

## Germany

### Why is Learning from National Working Life Programmes not a Matter of Course?

Public policy programmes in the field of working life reforms may be needed, but they cannot do more than supplement the genuine dynamics of the working life. They can influence people's perceptions of the problems and the work forms applied in organizing development. Power relations in private and public organizations, as results of business and societal trends, are obstacles to innovative and anthropocentric oriented reforms in working life. The more participative elements funded projects have been integrated, the more robust are their outcomes. National programme structures have to strive for the establishment of persistent local-level development coalitions, and to support collaboration of all actors concerned in development processes. International networking is possibly a learning facilitator.

The implementation of, and learning from, reform programmes from the 1970s to our time is analyzed, with a focus on personal experiences from research, project management and evaluation of Scandinavian and German programmes.

The article is written by Claudius H. Riegler of PT DLR.

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[http://www.gruner-druck.de/hampp-verlag-services/get?file=/frei/IJAR\\_1%2B2\\_2008\\_90](http://www.gruner-druck.de/hampp-verlag-services/get?file=/frei/IJAR_1%2B2_2008_90)

## 6 News from Europe

### Brussels

#### The 2008 EU Industrial R&D Investment Scoreboard: European companies outpace American counterparts in R&D investment growth

For the first time in five years R&D investment by EU companies has increased by 8.8% compared to the increased R&D investment by US companies of 8.6%, according to the 2008 edition of the European Commission's annual Industrial R&D Investment Scoreboard

Three EU companies feature in the top ten: Nokia in 5th place (up from 17th), with an R&D investment of €5.3 billion, Volkswagen in 9th (up from 14th) and Daimler in 10th (down from 5th). The world's biggest investor in R&D in 2008 is Microsoft, with €5.6 billion. Trends show increased sales and profitability for EU companies and for the first time since records began in 2004, R&D investment growth in the EU companies is greater than that of their US counterparts.

"We are pleased that R&D investment growth in EU companies has increased, against the background of a slight fall in the growth rate worldwide," said European Science and Research Commissioner Janez Potočnik. "In particular, companies in the energy field are rapidly increasing their R&D investments, responding to the need to make more efficient use of limited resources. However, private sector R&D in Europe remains at 1% of GDP, amidst signs that EU companies are making an increasing



share of their R&D investments outside Europe. Therefore, we must continue our efforts to make Europe a more attractive place for business R&D, notably by creating a truly European Research Area, in order to reach the Lisbon objectives".

The EU Industrial R&D Investment Scoreboard is published annually by the European Commission as part of its Industrial Research Investment Monitoring activity. It shows that worldwide corporate R&D investment growth decreased from 10% in last year's Scoreboard to 9%, but EU corporate R&D investment growth increased by 8.8%, up from 7.4% on last year's Scoreboard. EU companies are almost closing the gap in R&D growth rate compared to all non-EU companies, and it is slightly ahead of the R&D investment growth rate in US Scoreboard companies, which has dropped sharply from 13.3% to 8.6%

#### Company trends

Three EU companies are ranked in the top ten investors in R&D: Nokia, the top EU companies, has moved from 17th position last year to 5th position this year; Volkswagen has moved up from 14th position to 9th position; and Daimler has moved down

from 5th to 10th position. Glaxo Smith Kline and Siemens dropped out of the top 10. Three US companies are in the top positions: Microsoft, General Motors and Pfizer.

The business performance of Scoreboard companies further improved in the past year. Sales of EU companies grew by 7.0% – resulting in a small increase in R&D intensity – and sales of non-EU companies grew by 9.2%. The profitability of EU companies increased to 12.2%, against 11.3% in non-EU companies. Companies from emerging economies continued to show strong R&D growth. Over the past three years, companies like Petroleo Brasileiro, Petro China and Tata Motors had an annual R&D investment growth rate of 52.6 %, 22.2 % and 42.6 % respectively.

#### Sector trends

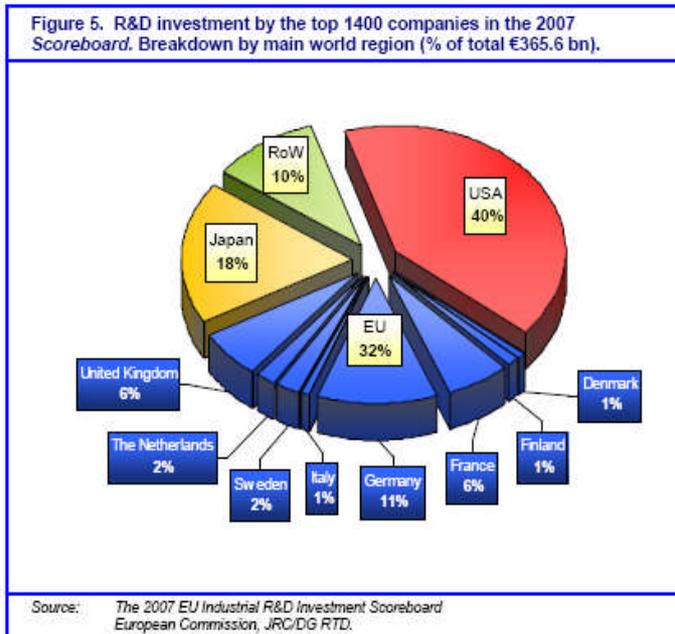
##### Pharmaceuticals & biotechnology:

This sector, which includes many EU and Swiss companies, reinforced its top position, accounting for more than 19 % of the R&D investments made by all Scoreboard companies together. Several pharmaceutical companies showed a particularly strong increase in R&D investment (partly due to acquisitions): e.g. Schering-Plough (+33.7%), AstraZeneca (+29.8%), Roche (+25.9%) and Novartis (+21.1%).

##### Automobiles & parts:

In this sector – the EU's biggest in terms of R&D investment – R&D investment growth (6.9%) was considerably above the three year average annual growth rate (4.9 %). Whereas Volkswagen and Toyota Motor raised substantially their R&D (by 16.1% and 9.6%, respectively), General Motors had the biggest increase in R&D (22.7%). Energy field: Some large European companies showed high annual R&D growth rates over the past three years. For example, Royal Dutch Shell increased R&D by 2.2 times and AREVA by 1.7 times over this period. Even higher growth rates are found amongst some companies in the field of alternative energies. In wind technology, Vestas Wind Systems increased R&D by a factor of 2.2 and Nordex by a factor of 3. In the solar

photovoltaic field, Q-Cells has entered the scoreboard in 2008 for the first time after increasing R&D by 15.4 times in three years.



[http://iri.jrc.ec.europa.eu/research/docs/2007/sb\\_2007.pdf](http://iri.jrc.ec.europa.eu/research/docs/2007/sb_2007.pdf)

## Scoreboard methods

The report looks at R&D investment data from 2000 participating companies' own accounts over the 2007/8 financial year. The sample comprises the 1000 EU companies investing the largest sums in R&D and the 1000 non-EU companies investing the largest sums in R&D.

All the data come from publicly available audited accounts. The data is based on the location of the registered office of the company conducting the R&D, and not on the location where the R&D is performed.

The 2008 EU Industrial R&D Investment Scoreboard has been prepared jointly by DG Research and the Joint Research Centre and can be downloaded from:

## 7 Important Links

### WORK-IN-NET partner organisations

#### Finland

Finnish Funding Agency for Technology and Innovation - Tekes  
[www.tekes.fi/eng/](http://www.tekes.fi/eng/)

Work Environment Fund  
[www.tsr.fi/english/](http://www.tsr.fi/english/)

#### Germany

Project Management Organisation in the DLR of the Federal Ministry of Education and Research (WORK-IN-NET Coordination)  
[www.dlr.de/pt/en/](http://www.dlr.de/pt/en/)

Ministry of Labour, Health and Social Affairs of the Land North Rhine-Westphalia, Germany  
[www.mags.nrw.de](http://www.mags.nrw.de)

G.I.B. Innovative Employment Promotion Company GmbH  
[www.gib.nrw.de/](http://www.gib.nrw.de/)

## **Greece**

Secretariat for Research and Technology, Ministry of Development  
[www.gsrt.gr/default.asp?V\\_LANG\\_ID=2](http://www.gsrt.gr/default.asp?V_LANG_ID=2)

## **Ireland**

National Centre for Partnership and Performance  
[www.ncpp.ie](http://www.ncpp.ie)

## **Netherlands**

Netherlands Centre for Social Innovation  
[www.ncsi.nl/English/](http://www.ncsi.nl/English/)

## **Poland**

National Centre for Research and Development (NCBiR)  
[www.ncbir.pl/](http://www.ncbir.pl/)

Federation of Engineering Associations  
[www.mnii.gov.pl/en](http://www.mnii.gov.pl/en)

## **Sweden**

Swedish Agency for Innovation Systems  
[www.vinnova.se/](http://www.vinnova.se/)

Swedish Council for Working Life and Social Research  
[www.fas.se/](http://www.fas.se/)

## **Associated partners**

### **Austria**

Federal Ministry of Education, Science and Culture  
[www.bmbwk.gv.at/](http://www.bmbwk.gv.at/)

### **France**

ANACT – The Agence Nationale pour l'Amélioration des Conditions de Travail  
[www.anact.fr](http://www.anact.fr)

### **Italy**

IRES Istituto Ricerche Economiche e Sociali  
[www.ireser.org/](http://www.ireser.org/)

### **Netherlands**

TNO Work and Employment  
[www.tno.nl](http://www.tno.nl)

## United Kingdom

UK WON

[www.ukwon.net](http://www.ukwon.net)

## European Institutions

European Foundation for the Improvement of Living and Working Conditions

[www.eurofound.europa.eu/](http://www.eurofound.europa.eu/)

European Agency for Safety and Health at Work

<http://osha.europa.eu/en>

## ERA-NETs

ERA-AGE

<http://era-age.group.shef.ac.uk/>

NEW OSH-ERA

[www.newoshera.eu/](http://www.newoshera.eu/)

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