

## GUEST EDITORIAL

### The coming e-skills crunch, and how we can beat it

*contribution from INSEAD professor Bruno Lanvin  
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*As global competition becomes increasingly knowledge-intensive, many warning signs tell public and private decision makers that our economies may not be generating the appropriate volumes and levels of e-skills.*

*Against the background of the parallel quest for innovation, competitiveness and employability, new research that will be published as part of the WEF-INSEAD Global Information Technology*

*Report 2007-08 tries to address three urgent questions, namely (1) why (and how fast) is the need for e-skills growing?, (2) how is the supply of such skills generated, and is it meeting current and foreseeable needs?, and (3) what are some of the main priorities which governments and business should address to solve the upcoming 'e-skills crunch'?*

*The conclusions of the paper call for urgent action by governments, business and civil society, in particular through a rapid development of multi-stakeholder partnerships.*

*On the front of e-skills needs, available evidence confirms that e-skills are pervasive, and not limited to IT specialists; they are increasingly required in all sectors and at all levels of activity in which creativity, innovation, and interdisciplinary teamwork are required as tools for competitiveness; in both the private and public sectors, leaders need not only to be e-literate, but also to display and grow the new qualities required by 'e-leadership'. Moreover, the emerging global knowledge economy will significantly increase the need for more e-skills at all levels (from un-specialized workers to corporate leaders), in all industries (not just the IT sector), as well as in the public sector. Finally, e-skills will be of central importance to determine workers' vertical and horizontal mobility, and hence of well-functioning labour markets and adequate employability and inclusion levels.*

*Faced with such needs, our economies fall short of providing the necessary volume and levels of e-skills required. The gap is growing between the ability of existing education systems to provide e-skilled workers and managers and the requirements of knowledge-intensive economies. In a number of industries and regions, this gap is particularly acute, and calls for rapid adjustments in education systems, and improvement of the image of IT jobs. Urgent efforts are required in legal and regulatory systems that underpin the well-functioning of labor markets. The mobility of e-skilled workers needs to be enhanced, and access to foreign e-skills and talents improved.*

*From a policy point of view, addressing foreseeable e-skills shortages may yield significant side benefits. With the right mix of strategies and policies, and the proper dose of engagement from all major stakeholders, the current lack of e-skills may indeed prove a major opportunity to involve larger share of the world population in the creation and benefits of a truly inclusive information society. Recent examples of successful multi-stakeholder partnerships indicate that this is feasible. They need urgent support and consolidation. The long-term commitment and engagement of the e-Skills Industry Leadership Board is therefore timely and appropriate.*

## e-Skills ILB Founding Declaration

In a world where Information and Communication Technologies (ICT) reach into every corner of human life, the competitiveness of European industry and social cohesion have increasingly become dependent on ICT-related skills and competences (e-skills) and digital literacy of Europe's workforce and citizens.

There is now a clear imperative for increased joint action and engagement of ICT industry stakeholders, and for partnership at the highest level, with the European Union (EU) institutions and with education institutions in EU Member States. Working together in a genuine spirit of dialogue and cooperation, the e-Skills ILB will help shape and implement relevant policies to foster e-skills and digital literacy of Europe's workforce and citizens for a competitive, innovative and inclusive Europe.

As industry high-level executives: Chairmen, CEOs, Presidents and Vice-Presidents of ICT companies, ICT services companies and providers of e-skills education, training and certification, we hereby express the commitment of our respective organisations to such concerted efforts.

Our work will include:

- Motivating and empowering future generations with e-skills
- Promoting ICT practitioner learning, education, competences and training
- Boosting the employability and productivity of the workforce with ICT user skills, including the deployment of multi-stakeholder partnerships
- Provide foresight and support for future skills needed in a changing environment.

For the Founding Declaration, please see:

[www.e-skills-ilb.org](http://www.e-skills-ilb.org)

## e-Skills ILB Key Governance Principles

Two elected co-chairs serving an agreed term preside over the e-Skills ILB Board of Directors which is charged with leadership and supervision to foster goals outlined in the Founding Declaration of 7 June 2007.

An Executive Committee and its two co-chairs have the overall responsibility for management of the e-Skills ILB and is entrusted with oversight of all activities related to the organisation.

The Board of Directors and Executive Committee are supported by a European Secretariat based in Brussels.

Stand-alone Initiatives such as the "European Alliance on Skills for Employability" and the "e-Skills Career Portal" project will act with full autonomy under the e-Skills ILB umbrella.

## Key Events on the e-Skills Calendar

### 2008

3 March	<b>European Alliance on Skills for Employability</b> , France Chapter Launch Meeting, with 'Force Femmes', Paris, France
4 March	<b>e-Skills ILB High Level Event</b> , Brussels, Belgium
6 March	<b>European Commission Shadowing Conference « IT Girls – Great Careers for Great Women »</b> Brussels, Belgium
7 March	<b>Global Women and Technology « a Strategy for a European Center for Women and Technology »</b> , Brussels, Belgium
9-12 April	<b>IADIS International Conference on e-Society 2008</b> , Algarve, Portugal
23-25 April	<b>6th Eastern Europe e-Government Days 2008</b> , Prague, Czech Republic
7-9 May	<b>IST Africa 2008</b> , Windhoek, Namibia
18-22 May	<b>WITSA's WCIT 2008</b> , Kuala Lumpur, Malaysia
28-30 May	<b>3rd International Conference on ICT for Development, Education and Training</b> , Accra, Ghana
7-10 September	<b>World Computer Congress 2008 – IT Professionalism and Competences Conference</b> , Milan, Italy
9-10 October	<b>European Commission e-Skills Conference 2008</b> , Thessalonica, Greece
22-24 October	<b>e-Challenges e-2008</b> , Stockholm, Sweden
25-27 November	<b>French EU Presidency Conference on ICT and IST</b> , Lyon, France
3-4 December	<b>European Commission Conference « eInclusion : be part of it »</b> , Vienna, Austria

## e-Skills Industry Leadership Board Priority Action Lines

To advance its mission of leading the ICT sector's contribution to a comprehensive and effective literacy-skills agenda in Europe, the e-Skills Industry Leadership Board (e-Skills ILB) adopted the following Priority Action Lines focused on **competitiveness and inclusion**:

- 1. Foster competitiveness, productivity and mobility of ICT practitioners:** The e-Skills ILB will take an important co-leading role, together with other stakeholders, in the development and pilot implementation of the "**European e-Skills Career Portal**". Initial outcomes of this project will be featured at the EU e-Skills Forum, 9-10 October 2008 in Thessaloniki. The e-Skills Career Portal aims to foster attractive career paths and help individuals acquire new e-skills to maintain employability and competitiveness. The portal will also provide a platform for industry and education/training organisations to improve human capital management.
- Working actively with CEN/ISSS, the ILB aims to support the development of the **European e-Competence Framework**. Closely connected with the European e-skills Career Portal described above, this initiative is working toward greater mobility and productivity of ICT practitioners.

- 3. Further the contribution of industry to promote the employability of under-served groups** through ICT skills training and technology opportunities. In this endeavour, the e-Skills ILB supports the work of the **European Alliance on Skills for Employability** and the launch of new projects in four Member States in 2008. The Alliance works in partnership with NGOs and public authorities to bring training and competences to 20 million Europeans by the end of 2010 with a particular area of focus on e-skills for SMEs.
- 4. Lead proactive engagement and outreach** to academic institutions, teachers and Ministries of Education on **Future Generations**, with the aim of raising awareness on the importance of **innovating education and learning processes through ICT and promoting multi-stakeholder partnerships with industry**.
- 5. Fostering Digital literacy and supporting e-inclusion:** the e-Skills ILB will support the work of the European Commission to deliver concrete and scalable solutions to the issue of digital literacy and competence gaps for the most disadvantaged in order to create the conditions for greater inclusion in the information society.

- 6. Map e-Skills requirements, industry-based curricula, validations, and/or certifications** and job placement initiatives to contribute to related activities of CEN/ISSS and other European organisations.
- Building upon reference **White Papers** developed by some of the members of the e-Skills ILB, the Board will contribute to present the current landscape and projected trends for e-skills supply and demand.



## Delivering e-Inclusion: the role of digital literacy

Social exclusion is a very real threat for the 40% of Europeans who have no digital literacy skills at all. With close to half of the European population at risk, e-Inclusion policies are urgently needed, especially for marginalised groups. But how do we really deliver e-Inclusion? Who are these excluded groups, why are they excluded, and what are we doing about it?

These are just some of the questions that arose during the workshop "Delivering e-Inclusion: the role of digital literacy" held by the ECDL Foundation and AGE in Brussels on October 3rd 2007. As Europe faces major demographic and socio-economic changes, the lack of digital literacy of marginalised groups represents a major challenge to becoming the most competitive knowledge-based economy in the world. Providing Europeans with the skills they need to take part in information society is key to enabling e-Inclusion.

A report, drawing together contributions from both participants and speakers, outlines

how coalitions of industry, NGOs and public authorities must do more to prevent the exclusion of marginalised groups. Participants agreed that public authorities at local and regional levels must be active in providing training, and that earmarked European and national funding for this purpose would expedite the delivery of e-inclusion. Mainstreaming accessible and affordable technologies is an important step, but equally important is the provision of training programmes that are adapted to the needs and interests of vulnerable populations.

Workshop participants included Lambert van Nistelrooij, MEP and Co-chair of the Ageing Intergroup; Susan Binns, DG Information Society and Media; Elizabeth Mestheneos, Vice President of AGE; Damien O'Sullivan, CEO of the ECDL Foundation as well as Jan-Willem Scheijgrond, Director, Government Affairs Europe, HP, Elena Bonfiglioli, Director Corporate Citizenship, Microsoft and other industry representatives from Intel, Apple and Adecco.



*Susan Binns,  
Director at DG Information Society and Media  
speaking at the digital literacy event  
held by the ECDL Foundation and AGE*

For the full report, please see:  
[www.ecdl.com](http://www.ecdl.com)

Despite technological progress and enhanced competition, more than one in three Europeans are still excluded from fully benefiting from the digital society. Benefits of €35-85 billion over five years could be generated if society would be made more inclusive, websites more accessible and broadband internet made available to all EU citizens.

European Commission,  
29 November 2007

## Toward the 2008 e-Inclusion Summit

At the end of November 2007, the European Commission presented its e-inclusion initiative to the Council, and called upon Member States to support key actions, including an awareness campaign under the banner of "e-Inclusion, be part of it!".

A highlight of the campaign will be an e-Inclusion Summit planned for the latter part of 2008 to demonstrate progress and reinforce commitments from key players at all levels.

In a 7 September 2007 Communication ("e-Skills for the 21st Century: Fostering Competitiveness, Growth and Jobs"), the Commission first announced that it would launch this initiative on e-Inclusion in 2008, linking it directly with the challenge of e-skills training and uptake. The Commission stated that Member State policies on the measurement of digital literacy would be reviewed as part of the 2006 Riga Declaration "with a view to identifying the most successful policies and proposing new initiatives if necessary."

The Commission also made the commitment in the Riga Declaration to halve the digital

divide between groups at risk of exclusion and the average population, and to achieve 100 percent accessibility of public websites, both by 2010.

In a further Communication (8 November 2007, "European i2010 initiative on e-Inclusion"), the Commission promised actions:

- Enabling the conditions for everyone to take part in the information society by bridging the accessibility, broadband and competences gaps
- Accelerating effective participation of groups at risk of inclusion and improving quality of life
- Integrating e-inclusion actions in Europe to maximize lasting impact.

As well as supporting research and pilot projects, the Commission intends to work toward a legislative approach to make the information society more accessible and to guarantee equal rights within the framework of an effective single market.



*Nikos Ioannou, ECDL Foundation; PierPaolo Maggi, AICA; David Baugh, Apple; Joe Hegarty, Intel; Jan Willem Scheijgrond, HP*

## EU could face annual shortfall in skilled IT personnel of 70,000 by 2010

Estimates of supply and demand levels indicate that the EU could run short of people with the right computer skills by 2010. By then demand is expected to reach 250,000 per year, drawing on an insufficient supply pool of just 180,000. These are the findings of a study carried out by a consortium composed of CEPIS, the Manchester Institute of Innovation Research (formerly PREST) and Eurochambres. The shortfall would cause downstream restrictions on opportunities to prosper and ultimately cause the EU to lose its competitive advantage on the world stage, shifting ICT activity to other regions.

Innovation, the economic climate and off-shoring are likely to have the greatest impact on future demand for skills within the ICT industry. Workforce inadequacies could take two forms: too few people, and not the right depth of skills. To tackle the potential shortage of skilled ICT professionals, the consortium recommends the following actions:

- Promote better understanding, within the ICT industry and public bodies, of current quantitative and qualitative skill levels in Europe
- Create awareness of the threats and opportunities in the increasing globalisation of ICT activity
- Seek public-private initiatives and investment by ICT industry players and the European Commission to predict levels of demand
- Use training more consistently, concentrating on the quality, not just the quantity aspects of skill shortages.

To get the right balance of supply and demand, policymakers in education, in regional and national governments and at EU level must address our future ICT workforce needs now.

A greater supply of ICT professionals must be stimulated by the right research and development; a pragmatic immigration policy; and cooperation between professional bodies, trade unions and policymakers. The ICT industry must play an important role in coordinating the efforts of these groups by working closely with educational institutions.

For the full report, please see:

[www.cepis.org](http://www.cepis.org)

For more detailed information go to the e-Skills Library on:

[www.e-skills-ilb.org](http://www.e-skills-ilb.org)



## CEN/ISSS workshop on e-Skills

CEN is the European Centre for Standards. One strand of its activities deals with ICT standards, and is known as CEN/ISSS. Some four years ago, the European Commission and CEDEFOP (the European centre for development of vocational education – see [www.cedefop.europa.eu](http://www.cedefop.europa.eu)) sponsored the initiation of a workshop addressing e-skills issues. It was envisaged that the workshop would define means of increasing the ease of planning and developing an individual's career in the field of ICT, largely by producing definitions that increased the ease of interoperability between individuals, employers and governments in this field. It was also foreseen that the workshop would not produce fully developed standards, but rather "Workshop Agreements (CWAs)" definitions and recommendations that make easier the path to full development of standards.

To date, the workshop has produced:

- CWA 14925: "Generic ICT Skills profiles for ICT supply industry"
- CWA 15005: "ICT curriculum development Guidelines for the ICT supply industry"
- CWA 15515: "European ICT skills meta-framework. State-of-the-art review, clarification of the realities, and recommendations for next steps".

A current project is addressing the first definition of a reference framework as base for practical use by stakeholders in this field. Delivery is expected in the autumn of 2008.

The workshop includes representatives of many members of the e-Skills ILB. It has become obvious that work to exploit the workshop's agreements will best be done by practical consortia of e-Skills ILB members working in a not for profit or even commercial environment. e-Skills ILB will actively pursue these opportunities in 2008.

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## e-Skills Industry Leadership Board

The mission of the e-Skills Industry Leadership Board (ILB) is to lead the ICT sector's contribution to the development and implementation of a long-term e-Skills and digital literacy agenda in Europe.

The e-Skills ILB works in partnership with public authorities across Europe, other industry sectors, SMEs and all relevant stakeholders, building upon European Commission recommendations and other reference initiatives on e-skills.

The e-Skills ILB will be a catalyst for action by ICT companies, providers of e-skills education, and certification organisations in Europe.

We are looking for new members who share our vision and want to help enhance European competitiveness through boosting e-skills and competences. We are open to ideas for new initiatives in line with our principles as expressed in our Founding Declaration (see page 2 of this newsletter). Contact the e-Skills Industry Leadership Board Secretariat – we are eager to hear from you!

## e-Skills Industry Leadership Board Vision

**Fostering 21st century e-skills and digital literacy of Europe's workforce and citizens for a competitive, innovative and inclusive Europe**



Advisory Committee:



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**The availability of e-skills is a key condition for successful innovation and for the competitiveness of European enterprises. We cannot afford to delay and we will only succeed if all partners join their forces.**

**European Commission  
Vice President Günter Verheugen**

## Introducing the e-Skills EU Newsbrief

Welcome to this first issue of the e-Skills EU Newsbrief, the semi-annual newsletter of the e-Skills Industry Leadership Board (ILB), designed to provide useful information for those who share our aims and to seed ideas and promote action within a European-wide community of practice.

Research shows that over one third of Europeans have no basic ICT skills, and while the demand for e-skills is growing, the supply is declining. On top of this, fewer than 20 percent of ICT practitioners in the EU are women.

The consequences not only weigh on the European economy and competitiveness but also lead to social exclusion.

To meet these challenges head-on, the ICT industry launched the e-Skills Industry Leadership Board in June 2007 in the presence of European Commission VP Günter Verheugen, underscoring the strong spirit of public/private sector co-operation.

"Widening ICT skills gaps are a threat to business and country productivity," says Yvon Le Roux, VP Public Sector, European Markets, Cisco

Systems, and co-chair of the e-Skills ILB Board of Directors. "They also place certain groups, such as the elderly and the unemployed, at a disadvantage. The work of the e-Skills ILB supports both social inclusion and economic development."

The e-Skills ILB brings together major stakeholders with SME entrepreneurs and innovators to further the development and implementation of a long-term e-skills and digital literacy agenda in Europe.

"The e-Skills ILB is committed to sustainable multi-stakeholder partnerships for ICT skills and training, in addition to co-ordinated actions by Member States and the European Commission," says Jan Muehlfeit, Chairman Microsoft Europe and co-chair of the e-Skills ILB Board of Directors. "This can best ensure the provision of education and training for real market needs."

We hope you will find the e-Skills EU Newsbrief useful and we encourage your comments and suggestions.

## e-Skills ILB Policy Declaration 2008

In 2008, the e-skills Industry Leadership Board will address the key recommendations to policy-makers and relevant stakeholders, which include:

- Enhance public support and recognition of high quality industry-based e-skills competences and certifications
- Support studies providing evidence of the "cost of ignorance" of e-skills competences
- Ensure that any European e-Competence Framework or Career Portal be built in close cooperation between public and private partners concerned to bridge formal and non-formal ICT education and training
- Provide a multitude of fiscal and financial incentives to spur the pursuit of e-skills
- Support and endorse European multi-stakeholder networking that promotes e-skills capacity-building and partnerships throughout the learning value chain

- Facilitate the evolution of the Work Force by:
  - considering continued investments in innovations in primary and secondary education
  - installing a stronger orientation toward life-long learning
  - maximizing the potential contribution of every worker through investments in digital inclusion.
- Encourage EU Member States to remove any barriers in their arrangements for funding education and training through schools, universities and commercial trainers.

All policy actions and recommendations from the Industry Leadership Board are developed and built on tested best practices and seek to highlight and promote the role of multi-stakeholder partnerships to provide sustainable ICT training and qualification schemes.



*e-Skills ILB launch June 2007*