

Strong Future and Opportunities for ICT Sector in Ireland

The ICT (information and communications technologies) sector will continue to provide job and growth opportunities for the Irish economy and workforce according to the Expert Group on Future Skills Needs (EGFSN), which today (23 June 2008) launched its latest report, *Future Requirement for High-Level ICT Skills in the ICT Sector*.

Speaking at the launch of the report Tánaiste and Minister for Enterprise, Trade and Employment, Mary Coughlan commented, "The ICT sector is of strategic importance to the Irish economy - representing one third of Ireland's total exports, sales of approximately €50 billion per annum and 70,000 skilled people employed. Ireland has proven itself as an excellent location for ICT companies with many of the world's top ICT companies already located here and taking advantage of Ireland's unique offering. This report from the Expert Group highlights clearly that the ICT sector can continue to provide opportunities and jobs for Ireland into the future. There are undoubtedly challenges for us in maximising these opportunities not least of which is ensuring that we can provide the graduate skills for the industry's development. I would like to thank the Expert Group for its recommendations on how this can be achieved".

Also speaking at the launch Minister for Education and Science, Batt O'Keeffe, T.D., commented "Education will have a critical role to play in defining whether we can take advantage of the opportunities which this sector presents. We need to focus on ensuring that those coming through education and those currently in the workforce have the right skills for this evolving sector. The report by the EGFSN is a valuable contribution to the further development of policy in this regard".

Anne Heraty, Chairperson, EGFSN said, "Our challenge is three-fold: we need to boost the supply of high level graduates, up skill those already working in the sector and continue to attract high skilled individuals through migration where necessary. The recommendations set out in this report are aimed at increasing the numbers studying in ICT related areas and attracting others to the industry with specific initiatives".

"Mathematical skill remains critical. The EGFSN report recommends that bonus points for higher level maths in the Leaving Cert should be reintroduced and that consideration should be given to introducing incentives for high performing students to enter and stay in ICT related disciplines. It is also important that a proactive approach is taken to encourage overseas ICT graduates to come to study and work in Ireland meet the expected shortfall in domestic supply."

“Implementation of recommendations outlined in this report will contribute to ensuring that the quality, quantity and diversity of skills required by the ICT industry are available in Ireland. Graduates alone will not meet the projected supply of highly skilled computer electronic engineers and we will have to work to ensure that through re-skilling and migration we meet those demands. We have an opportunity now to build on Ireland’s profile as a location for highly skilled, high value ICT activities and maintain the important role of the ICT sector in our economy,” concluded Anne Heraty.

Findings

- The Irish ICT industry has largely recovered from the global downturn experienced in 2001 and that there now is a substantial shift in the skills mix and levels.
- Projected demand for ICT skills is set to exceed domestic supply. Industry has also identified issues relating to the supply of people with high levels of technical skills due in part to the lower numbers of high performing school leavers choosing to study in computing and electronic engineering disciplines.
- A greater share of all ICT employment is now accounted for by people with high-level skills, with lower skills jobs being replaced by those with requirements for strong technical, computing and engineering based skills.
- Graduate numbers in computing and electronic engineering have declined from a peak in 2002 although overall the intake into these courses appears to have stabilised. The numbers entering computing courses have seen a small increase and the number of PhD graduates in computing and electronic engineering is expected to increase significantly over the coming years.
- Inward migration will continue to be an important source of ICT skills into the future. Ireland is seen as a location to which experienced talent can be attracted from all over Europe.

Recommendations

- **Incentives for studying higher level maths at Leaving Certificate**
A system of college entry bonus points for higher level maths should be introduced to compensate students for greater effort considered to be required for the subject.
- **Introduce bursaries to boost the numbers studying in ICT related disciplines**
These bursaries would be, partly funded by industry, valued at up to €4,000 annually, dependent on the achievement of over 500 CAO points and conditional on students maintaining acceptable grade averages and undertaking relevant industrial experience.
- **Enhance the professional mathematical development of primary and second level teachers**
The quality of teaching is central to increasing interest in maths among students and building proficiency. The professional development of both primary and second level teachers would be enhanced through the introduction of Professional Masters Degree Courses. For primary level teachers more time and resources should be given to the development of maths competences in teacher training courses. At second level consideration should be given to the introduction of a 4 year honours degree in mathematical education to provide another source of maths teachers. Interactive approaches to the teaching of maths at primary and second levels have been successful and further development of these teaching methods should take place.
- **Better communication of career opportunities and skills needs of the ICT sector**
A revitalised initiative should be launched to communicate the rewarding career opportunities that exist in the fields of computing, software and electronic engineering. Targeted at second level students, parents and teachers/guidance counsellors the scheme should address concerns relating to job security and opportunity within the industry.
The EGFSN recommends that this initiative should be led by Discover Science and Engineering given their experience in this area. Industry must demonstrate that rewarding and attractive career paths are available for young people.
- **Increase the number of graduates/postgraduates in ICT related disciplines and develop cross-disciplinary skills**
There is a need both to boost the numbers of students who choose to study computing and electronic engineering courses at undergraduate level and to develop graduates skilled for the most technically challenging work such as systems software, electronic design and complex networked applications.

More graduates are required with expertise both in computing and the business sectors in which the Irish ICT sector has a strong presence, such as telecommunications, banking and financial services.

- **Better preparing Graduates for the Workplace**
Graduate internships and placement programmes which provide practical work experience are an invaluable means of preparing students for work and helping them get a job. They should become integral parts of all computing and electronic engineering undergraduate and postgraduate courses.
- **Boost postgraduate training**
Postgraduate training should be boosted in order to upgrade the skills of both students and professionals and provide greater opportunities for specialisation in a particular technology or industry area.
- **Encourage high skilled overseas graduates to study and work in Ireland**
A new initiative should be launched aimed at attracting a greater number of overseas computing and electronic engineering graduates to come to Ireland to study and seek to retain them following graduation. Industry, the higher education system and government agencies should work to develop a package to attract students to study in Ireland which would include the certainty of internships and graduate placements. Programmes to encourage foreign recruitment and mobility between Ireland and other major ICT locations worldwide should also be considered to ensure the availability of highly skilled people for the industry in Ireland.
- **Continuing professional development**
Higher education should engage with enterprise to develop more short term and part time courses to allow those working in the ICT sector to continue their professional development and upskill, retrain or specialise in ICT related areas. Industry representative bodies should support the development and networking of professionals working in the ICT sector.