

**IMPLEMENTING THE NATIONAL eBUSINESS STRATEGY OF THE
DEPARTMENT OF ENTERPRISE, TRADE AND EMPLOYMENT**

PROGRESS REPORT

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an roinn fiontar, trádála agus fostaíochta
department of enterprise, trade and employment

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Executive Summary

The eEurope Action Plans 2002 and 2005 set out the actions and targets agreed at EU level to stimulate greater usage of Information and Communication Technologies (ICTs) and exploit the opportunities offered by the Internet. The Department of the Taoiseach has overall responsibility for coordinating Ireland's Information Society agenda. *New Connections*, the Government's second Information Society Action Plan contains a range of actions intended to bring the benefits of the Information Society to citizens and business and to ensure that Ireland becomes a global player in the Information Society. The Department of Enterprise, Trade and Employment is responsible for those aspects of the EU and national strategies related to eBusiness.

A National eBusiness strategy was devised by the Department of Enterprise, Trade and Employment, and published in December 2004, based on the outputs from a project group established in 2003. The strategy recognises that small and micro businesses make up a sizeable element of the business community within Ireland. It is accepted that for many SMEs a relatively low level of engagement with ICTs is appropriate for their business needs but, in these cases, there is often a lack of awareness relating to the importance of security and data backup. In this increasingly globalised economy, for an increasing number of enterprises a failure to engage more effectively with ICTs will result in missed opportunities for growth, and for others there is a starker imperative to increase competitiveness and efficiencies. It is vital for these companies to remain competitive and to take advantage of opportunities presented by eCommerce.

The aim of the strategy is to outline actions required to assist SMEs, including micro-enterprises, and particularly those in the non-ICT producing sectors of the economy, to use ICTs in a way that will maximise their competitive advantage.

Following its publication, a working group was established to monitor progress against the recommendations, and to undertake further research and analysis as deemed necessary.

International Benchmarking

Research by the Organisation for Economic Co-operation and Development (OECD) (2005) indicates that Ireland is amongst the better performing countries in adopting eCommerce, and performs at the average in terms of sophistication of usage.

Ireland is in first place internationally in terms of the percentage of enterprises' total turnover (in monetary terms) that results from eCommerce. However, as is the case in other countries, firm size matters, with the percentage at about 13% for SMEs compared with 26% for large companies.

Having said that, based on indications arising from the CSO survey published in March 2006, it appears that smaller companies have yet to integrate the internet into their business, and while progress has been made through the work of the development agencies, there are still some challenging issues facing SMEs.

Preliminary results also indicate that while SMEs in Ireland have good access to the Internet, broadband penetration is relatively low, with only 32% of SMEs having a broadband connection to the Internet. The only countries lagging behind are Poland (28%) Slovakia (25%) and Greece (21%).

National eBusiness Strategy - Progress to Date

This report outlines progress to date against the thirteen recommendations outlined in the National eBusiness Strategy, and has highlighted areas for continued focus and effort going forward (Appendix 1).

Overall, nine of the 13 recommendations have been addressed comprehensively to date. Appendix 1 provides a complete listing of the current status and future actions required under each of the recommendations.

The review of implementation of the national eBusiness strategy demonstrates that although significant progress is being made in terms of providing supports to SMEs, a number of key issues remain challenging to address effectively, namely:

- Awareness;
- Training; and
- eProcurement.

It is particularly important that these areas be addressed.

Areas for Future Focus

Awareness

There have been a significant number of guides, reports and documents produced with the aim of informing the business community of the advantages of ICT, and of steps to developing an eBusiness / ICT strategy. However, awareness remains relatively low amongst SMEs.

The objective going forward is to leverage work already undertaken and to ensure that there is increased coordination in the way in which state funded eBusiness related material is developed and disseminated, to make access to all related information easy and to ensure that the relevant advisory bodies are kept up-to-date with current information.

Training

A key issue relates to the dearth of training and education courses that address the needs of the non-technological manager, and that would provide the level of understanding and awareness of the strategic importance of ICTs to a company's competitiveness and productivity. Where such courses are available, their direct relevance, cost effectiveness, ease of access and time required to undertake them are

critical to their success – business managers of SMEs need to see value in taking time away from immediate business needs.

eProcurement

As Irish enterprises will be affected both by eProcurement by private sector buyers and by the public sector, eProcurement is an issue that needs to be addressed. The stage a company is at in terms of adoption of eBusiness and ICT, in terms of readiness, level of usage, sophistication and impact on productivity and sales, has a bearing on its capacity and capability to engage effectively in eProcurement.

Implications of eProcurement for SMEs include a downward pressure on prices, a shift to a smaller number of larger orders for certain categories of products and services and higher IT capability requirements for suppliers. SMEs may lose out because they do not benefit from economies of scale, are less able to compete on price and generally have smaller profit margins. Also, financial constraints limit their ability to invest in IT and they have less access to IT management skills. That said, the move toward public sector eProcurement can provide a stimulus for SMEs to adopt eCommerce technologies.

Role of the Working Group

The National eBusiness Strategy Implementation Group, chaired by the Department of Enterprise Trade and Employment, should continue to meet throughout 2006 in order to progress the recommendations that require future action, and therefore build on the progress already achieved and successfully implement a National eBusiness Strategy.

Chapter 1

Addressing the Challenges

1.1 Introduction

The Minister for Trade and Commerce, Mr. Michael Ahern, T.D., announced the publication of a new National eBusiness Strategy on 30th December 2004. The aim of this strategy is to assist and encourage Small and Medium Enterprises (SMEs) and micro-enterprises, outside of the Information and Communication Technologies (ICT) related sectors of the economy, to use ICTs in a way that will maximise their competitive advantage

Obstacles to more effective usage of ICTs by SMEs and micro-enterprises identified in the work on developing the strategy include lack of appreciation amongst owners/managers of the contribution that ICTs can make to their business, lack of ICT management skills, difficulty in accessing independent advice and the costs associated with acquiring and maintaining Information Technology (IT) systems.

Research by the Organisation for Economic Co-operation and Development (OECD) (2005) indicates that Ireland is amongst the better performing countries in adopting eCommerce. Eurostat data confirms that Irish SMEs perform well internationally in terms of online trading. Ireland consistently features in the top 7 countries (out of the EU25) with respect to the percentage of SMEs that have either purchased online or received orders online.

It is accepted that, for many SMEs, a relatively low level of engagement with ICTs is the appropriate level of engagement. For some enterprises access to spreadsheets, word processing and use of the Internet to search for or use email to contact customers/suppliers may be all the ICT that is required. However, even in such cases, basic “ICT housekeeping” such as data backup and security are still important but often neglected and/or carried out inappropriately. For enterprises in this category,

the key policy objective should be to ensure that there is sufficient competition in the market to provide a choice when purchasing ICT systems and telecom services.

To facilitate their access to published advice, an appropriate level of ICT management and user skills training and possibly independent IT advice, would also ensure that this category of enterprises gets the maximum benefit from their ICT investments. It would also increase the likelihood that such enterprises would invest in more sophisticated IT capabilities if and when this became appropriate.

For an increasing number of enterprises however, a failure to engage more effectively with ICTs will result in missed opportunities for growth. For many others, the choice may be much starker - either they can adapt to new ways of doing business, increasingly based on efficient use of ICTs and the Internet, or they will lose business to competitors who can and do adapt. Other enterprises will put themselves at increasing risk by becoming more and more dependent on ICT for their day-to-day operations, without taking appropriate measures to ensure that the security and robustness of their systems are commensurate with their degree of dependence on these systems. More targeted intervention is warranted for these categories of enterprise.

Online trading allows Irish firms to overcome the disadvantage of peripheral geographical location. Therefore, it is important that Ireland remains at the forefront of eCommerce and that the barriers to maximising the potential of online trading be identified and addressed.

1.2 Implementing the Strategy

In order to progress the National eBusiness Strategy, a working group was established by the Department of Enterprise, Trade and Employment to oversee the implementation of the recommendations. The group met 10 times throughout 2005 to progress the strategy.

The Group was led by the eBusiness Unit in the Department of Enterprise, Trade and Employment (DETE) and included representatives from Forfás, Enterprise Ireland (EI), Shannon Development, FÁS, Údarás na Gaeltachta and the County and City

Enterprise Boards (CEBs). The National eBusiness Strategy identified 13 recommendations some of which are dependent on the outcome of others before they can be addressed. As it was not possible to progress all of the recommendations at the same time, the Group identified those recommendations that were to be given priority and sub-groups were set up to progress these. Details of all recommendations and progress to date are in **Appendix 1**.

This report represents the work of the implementation group and progress made in the implementation of the recommendations. The report addresses the six broad areas covered in the National eBusiness Strategy.

- Benchmarking Ireland's position against other EU States (Rec 11, 13)¹
- Legal and Regulatory Framework (Rec 1)
- Supports by the Development Agencies (Rec 6,7, 8, 9)
- Building ICT management and user skills (Recs 3,4, 5)
- Information Channels for SMEs (Rec 10, 12)
- eProcurement (Rec 2)

Some of the recommendations stand alone but a number are intrinsically linked, in particular in the area dealing with ICT management and user skills. The chapter on Information Channels for SMEs will encapsulate all of the areas detailed in this report.

The group acknowledges that access to low cost broadband is critical for enterprises wishing to trade online. For some, however, the problems surrounding access to broadband are seen as a barrier to improving their ICT usage. Responsibility for the development and regulation of the telecommunications infrastructure and telecommunications services rests with the Department of Communications, Marine and Natural Resources (DCMNR). That Department has also undertaken initiatives, including the broadband information website, www.broadband.gov.ie to increase awareness of, and stimulate demand for, broadband services. Useful data and findings on broadband usage from the recent Central Statistics Office (CSO) 2005 Information

¹ Refers to Recommendation numbered in the National eBusiness Strategy

Society and Telecommunications survey and comments from the Communication Regulator (Comreg) are detailed in the next Chapter.

An increase in the number of Government services delivered online also provides important demonstration effects and serves as a demand driver for broadband. Prominent links to the www.broadband.gov.ie website have been established by this Department and each of the State Development Agency websites in order to highlight the benefits of broadband technologies and the opportunities associated with eBusiness functions.

Chapter 2

Performance Monitoring

Benchmarking Irelands position against other EU Countries

2.1 eBusiness Statistics

This section assesses the data needs regarding eBusiness and ICTs (Information and Communication Technologies) in an Irish context and helps develop a framework and a set of proposed metrics to monitor the adoption and usage of eBusiness/ICT by Irish enterprises and in particular, Small and Medium Enterprises (SMEs) in a way that will maximise their competitive advantage.

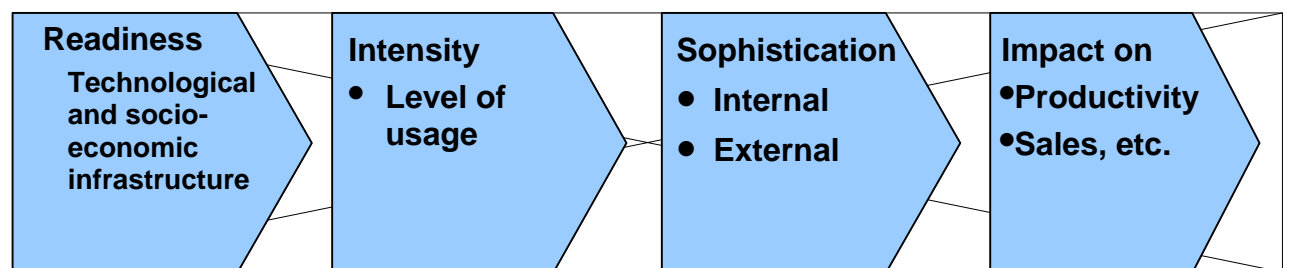
Access to reliable statistical information about the usage of ICTs by enterprises is essential to the formulation of appropriate policy responses. It is also a pre-requisite to the establishment and monitoring of targets and performance. Based on the National eBusiness Strategy, Forfás conducted statistical research in order to identify all sources of data relevant to ICT usage by SMEs; assess further data needs; monitor and provide input to national and EU developments in this area; and conduct further work with a view to establishing targets for ICT adoption by Irish enterprises and mechanisms for the monitoring of such targets.

In order to progress this recommendation, Forfás:

- identified all potential sources of data relevant to ICT usage from National, European and Organisation for Economic Co-operation and Development (OECD) sources. Methodologies of data collection were reviewed, including frequency of data collection, whether data will be collected in the future and reliability of the data source – **Appendix 2**
- assessed further data needs by reviewing literature on eBusiness adoption patterns and emerging trends.
- held a consultation with the National eBusiness Strategy Implementation Group on the results obtained.

2.2 Framework

The adoption and usage of eBusiness and ICTs by enterprises has evolved over time and a variety of models exist to incorporate these developments. Having reviewed a range of alternative frameworks from OECD, EU, Central Statistics Office (CSO), Eurostat and business sources, it is apparent that these frameworks are broadly similar in nature in that they analyse the uptake of eBusiness by firms through the identification of four distinct phases as follows:



Source: Forfás (adapted from the OECD)

As firms move to different stages in terms of adoption of ICT / eBusiness processes, policy makers and implementers need different types of information to assess performance. During the first stage, the focus is on **readiness** and policy makers need information on enabling factors and barriers to eBusiness. Relevant e-readiness indicators include whether firms have access to computers and the internet and whether firms have a website. Most firms, both internationally and within Ireland, have moved on from this stage, as access to computers and business connectivity is widespread.

During the second stage, policy makers need information on the nature and **intensity** of business use of ICTs and eBusiness in terms of sales volume, number of electronic transactions, types of product purchased electronically and differences in the speed of adoption. Many Irish firms are now in this stage of development.

During the third stage, **sophistication** of business use of ICTs and eBusiness takes centre stage and the focus is on the level of integration of eBusiness within the other business functions both at an intra-firm and inter-firm level. Relevant indicators are

whether enterprises have automatic linkages between their IT systems for managing orders or purchases and other internal Information Technology (IT) systems, and whether they have external linkages to customers/suppliers, etc. This is the stage where many firms, both within Ireland and internationally, are currently experiencing difficulties. Despite good access to computers and high levels of connectivity, there is relatively little implementation of ICT-enabled integrated business processes or adoption of more sophisticated online activities.

Finally, in the fourth stage, the focus is on the **impact** of ICT and eBusiness within the firm as well as on the economy as a whole. Relevant indicators are in terms of the impact that ICT and eBusiness have on productivity, profits and market share. However, it should be noted that measurement problems increase as one moves from one stage to the next across the framework.

2.3 Indicators

Based on the framework set out in Section 2, relevant indicators have been identified and are detailed below:

Readiness

- Percentage of enterprises that use the Internet;
- Percentage of enterprises that have broadband connection to Internet;
- Percentage of enterprises that have LAN and use intranet or extranet;
- Percentage of enterprises that have a website/home page;
- Percentage of enterprises that use at least two security facilities at the time of the survey²;
- Percentage of total number of persons employed using computers in their normal work routine (at least once a week);
- Share of ICT investment in non-residential fixed capital formation.*
- Information technology expenditure (both available as % of GDP and in million Euro). **

Source: All indicators available from CSO/Eurostat Enterprise Survey on ICT and eCommerce, except * Source: * OECD Factbook, and ** Eurostat Website. These are ongoing surveys, so the relevant data can be collected in the future.

Intensity

- Percentage of enterprises that have purchased products/services via internet, EDI³ or other network (where these are >1% of total purchases);

² Security facilities used: secure servers, firewalls, encryption for confidentiality, offsite data backup, authentication (such as digital signature), subscription to a security service (such as virus protection or intrusion alert)

³ Electronic Data Interchange: Data interchange in structured form between businesses.

- Percentage of total purchases (in monetary terms) represented by internet purchases;
- Percentage of enterprises that have received orders via internet, EDI or other network (where these are >1% of total turnover);
- Percentage of total turnover (in monetary terms) represented by internet sales;
- Percentage of enterprises that have used internet for banking and financial services.

Source: All indicators available from CSO/Eurostat Enterprise Survey on ICT and eCommerce.

Sophistication

- Percentage of enterprises that have employees who work away from premises and who use electronic networks to communicate with enterprise ICT system;
- Percentage of enterprises whose IT systems for managing orders or purchases are linked automatically with other internal IT systems;
- Percentage of enterprises whose IT systems are linked automatically to IT systems of suppliers or customers outside their enterprise group;
- Percentage of enterprises that have sold products to other enterprises via a presence on specialized Internet market places.

Source: All indicators available from CSO/Eurostat Enterprise Survey on ICT and eCommerce.

Impact

Enterprise level

- Impact of ICT on enterprise performance in terms of increasing sales and profits (*)
- Organisational changes as result of the implementation of an ICT strategy (*)

Economy-wide

- Contribution of ICT investment to GDP growth.

Source: The economy-wide indicator is available from OECD Key ICT indicators, and is drawn from databases produced by the [Directorate for Science Technology and Industry \(DSTI\)](#).⁴

2.4 Presentation of Data

For the vast majority of indicators (sourced from the CSO/Eurostat Enterprise Survey on ICT and eCommerce), the results will be presented by firm size and sector, as follows:

⁴They will be updated annually on a rolling basis, as data become available:
http://www.oecd.org/document/23/0,2340,en_2825_495656_33987543_1_1_1_1,00.html

Size ⁵	Sector
1. Micro	1. Manufacturing.
2. Mini	2. Electricity, gas and water supply.
3. Small	3. Construction.
4. Medium	4. Wholesale and retail trade.
5. Large	5. Hotels, camping sites, etc.
	6. Transport, storage and communication.
	7. Real estate, renting and business activities.
	8. Motion picture and video activities, radio and television activities.
	9. Other entertainment activities etc. news agency activities; library, archives, museums & other cultural activities; sporting activities; other recreational activities.

Note that the sectoral data are broken down into NACE codes to allow for international comparability.

2.5 Preliminary Results

Based on the framework and indicators outlined above, Ireland's performance is assessed below in the context of the EU21.⁶

Readiness

- SMEs in Ireland have good access to the Internet: 92% of enterprises have Internet access and Ireland ranks 7th on this indicator (out of 21 countries).
- However, broadband penetration is relatively low; only 32% of SMEs have a broadband connection to the Internet. The only countries lagging behind are Poland (28%), Slovakia (25%) and Greece (21%).
- SMEs lag behind in terms of access to broadband connectivity in Ireland: 79% of large enterprises have broadband, but this number falls to 40% for medium-sized enterprises and to 27% for small enterprises. This finding for Ireland confirms the international trend with regard to company size.
- Ireland comes in last place internationally (7%) in terms of the percentage of SMEs that have LAN and that use intranet/extranet. Belgium heads the table with 42%.

Intensity

- Ireland is in first place internationally in terms of the percentage of enterprises' total turnover (in monetary terms) that results from eCommerce

⁵ Sizes are defined according to number of persons employed as follows: Micro enterprises (1-4), Mini enterprises (5-9), Small enterprises (10-49), Medium enterprises (50-249), and Large enterprises (250 or more).

⁶ Figures for France, Luxembourg, Malta and Latvia are unavailable.

(20%), while the UK follows with 13.7%. Firm size matters; 26% of turnover in large enterprises results from eCommerce, while this is about 13% for SMEs.

- Enterprises in Ireland are more likely to buy online (33%) than to be selling online (19%), which confirms international trends.

Sophistication

- Ireland performs at the average both in terms of internal linkages of IT systems to other business functions and in terms of external linkages of IT systems to the IT systems of suppliers.
- Large enterprises in Ireland are much more likely (8% of enterprises) to sell products to other businesses via specialised Internet market places compared to small (1%) and medium-sized (2%) enterprises.

Impact

- ICT investment contributes to GDP growth in Ireland to the extent of 0.6% for the years 1995-2002. To put this figure in context, Sweden heads the table with 0.9% of growth due to ICT investment while France is in last place with 0.3% of growth attributable to ICT investment.

2.6 Access to Broadband

A survey of small, medium and large corporate businesses commissioned by the Communication Regulator (ComReg) found that, of the 32% of Irish SMEs which have a broadband connection, only around two-thirds (65%) of these are currently using the broadband to connect to the Internet.

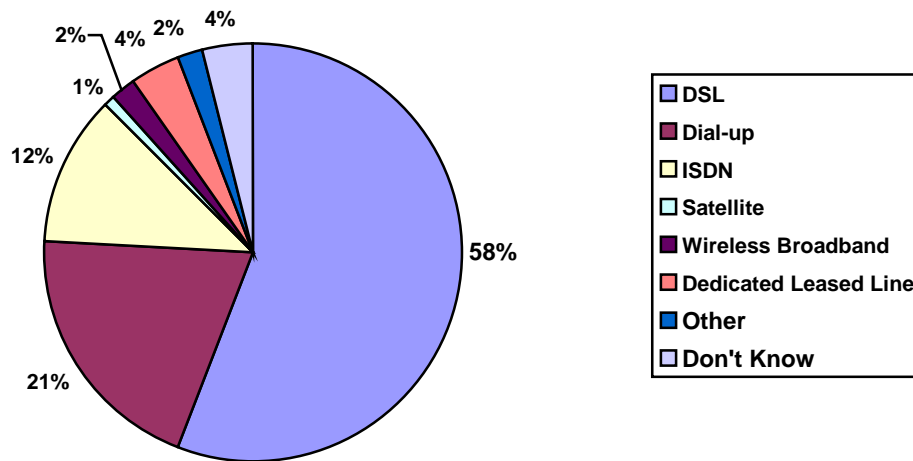


Figure 2 Internet connections of businesses in Ireland [source: Millward Brown survey for ComReg, document 06/02]

As can be seen from the chart above, one-third of businesses are still using narrowband Internet connections such as ISDN. Those surveyed who had dial-up and ISDN services were asked to state the reasons why they used these technologies instead of broadband. Among the key reasons given were:

- Lack of perceived need or business relevance for the Internet.
- The lack of availability of broadband in their area. This was particularly pronounced in those companies with less than 10 employees.

There are some specific geographic regions that are experiencing issues with supply of broadband (and of DSL in particular). Some of the challenges associated with a number of these areas may not be best addressed through existing initiatives or programs and, additional steps may need to be taken if this issue is to be resolved. Recognition however, needs also to be given to the fact that significant investment across a range of operators, from fixed line, cable and wireless is improving the overall level of supply, albeit at a slower pace than is desirable.

ComReg's view is that, in terms of Ireland remaining competitive and a leading centre for the ICT sector, future national strategies will have to marry demand and supply

initiatives. However there is substantial evidence to suggest that, once businesses embrace broadband, this enables new ways of working.

The 2005 CSO survey published in March of this year, notes that enterprises that use broadband for connecting to the internet are more than twice as likely to have employees who regularly work away from the enterprise's premises and use electronic networks to communicate with the enterprise's ICT system. Similarly, those enterprises that use broadband show greater levels of eBusiness activity and higher degrees of integration.

The results of the CSO survey showed an increased use of broadband for connecting to the internet in 2005. DSL connections rose from 18% in 2004 to 29% in 2005. These results relate to enterprises with 10 or more employees. The services sector reported a higher usage of broadband than that of the manufacturing sector. 22% of enterprises also reported using broadband connections other than DSL in 2005.

The CSO survey sampled companies with at least ten employees. Indications remain that some businesses, particularly smaller companies, have yet to integrate the internet into their business.

Progress has been made with small and medium businesses by the Development Agencies such as Enterprise Ireland, Chambers of Commerce and other regional bodies who have invested considerable time and effort in promoting and stimulating broadband take-up. There are sectors within this where take-up levels are lower than the national average and further effort may be necessary to address these.

Forfás launched its report, "Benchmarking Ireland's Broadband Performance" in December 2005. The report assesses Ireland's competitiveness in terms of broadband availability, take-up, quality and choice. Broadband is of key strategic importance to economic growth in all sectors and particularly with respect to improving Ireland's productivity performance. In light of this, continued poor broadband performance will have serious implications for our future economic success and competitiveness. In terms of broadband take-up by SMEs, out of 20 EU countries included, Ireland

ranks 17th out of 20 for take-up by companies with a workforce of between 10-49 employees and 19th out of 20 for take-up by companies employing 50-249 people.⁷

Businesses typically employing less than 10 employees make up a sizeable element of the business community. Many are in fact micro-businesses and operate outside the ICT/High-Tech Sectors. Further analysis of this segment and their needs and challenges would be valuable. In many cases the absence of skilled IT staff, lack of knowledge or perceived lack of relevance of broadband, may be significant inhibitors of broadband deployment.

2.7 Conclusion

The following chapters demonstrate how the eBusiness Strategy has been implemented with the intention of encouraging and assisting SMEs, including micro-enterprises, to use eBusiness in a way that will maximise their competitive advantage.

Based on the above details, Forfás should continue to monitor the various eBusiness statistical sources and make the information available annually to all stakeholders in an effort to help Irish SMEs and micro enterprises increase their use of ICT and eBusiness and, hopefully, this in turn would have an effect on competitiveness over time.

⁷<http://www.forfas.ie/publications/show/pub214.html>

Chapter 3

Legal and Regulatory Framework

3.1 Role of the Department and its Agencies

The Department of Enterprise, Trade and Employment and its agencies have responsibilities in relation to the development of appropriate Information and Communication Technologies (ICT) skills within the workforce. It is also responsible for legislation that is directly relevant to online trading. In that context, the Department has a role to play in ensuring that business and consumers are informed about legislation and are consulted in relation to changes to it. As was noted in the National eBusiness Strategy, uncertainty about the legal framework contributes to a lack of confidence on the part of enterprises in engaging in online trading. A number of sources of State and EU funded information are already available on the legal framework for online trading, but enterprises may not be aware of this.

Differences in legal and regulatory environments are some of the key factors limiting cross-border internet transactions. Legal uncertainties and conflicting regulatory environments for such transactions, especially Business to Consumer (B2C), are particularly relevant to Small and Medium Enterprises (SMEs) as they have difficulty keeping abreast of developments in legislation and regulation. Different sources present their information in different ways, resulting in confusion for users, and it is evident also that information gaps continue to exist. The Office of the Director of Consumer Affairs (ODCA), in conjunction with Comhairle, has developed an online consumer portal which will consist of an extensive database of new and up-to-date information on most consumer issues. This will be accessible through the internet on the Government's Citizen Information Portal OASIS⁸

As regards the general regulatory environment, the Department of Enterprise, Trade and Employment (DETE) has a role to play in ensuring that legislative proposals falling within the remit of other Departments do not adversely affect the conditions in

⁸ http://www.oasis.gov.ie/consumer_affairs/?CONTACTSID=1db18b06406d4462d021a66748964fcd

which business operates. A good telecommunications infrastructure and competitive market conditions are also essential to the creation of a supportive environment in which all business can flourish, not just eBusiness related activities. The National eBusiness Strategy recommends, “that, as a priority, action should be taken to build awareness of the legal framework for online trading”.

3.2 Outcome of Research

The Legal Framework Sub-Group of the National eBusiness Strategy Implementation group set up to address this issue of awareness, concluded its research in June 2005 with the following recommendations:

- Enterprise Ireland’s (EI) dedicated eBusiness website WWW.OPENUP.IE should be the central website for the provision of relevant information on the legal framework affecting online trading for businesses.
- EI should build on the eCommerce material already on the OPENUP website
- Sample web pages should be shown on the OPENUP website to illustrate best practice eCommerce websites.
- The OPENUP website should be advertised via links from relevant websites e.g. DETE, BASIS , the Department of Communications, Marine and Natural Resources (DCMNR) (netsecure.ie) website, the Consumer Portal website , Shannon Development website, Údarás na Gaeltachta, eTenders and the County and City Enterprise Boards (CEBs) site⁹.

3.3 The eBusiness Unit of Enterprise Ireland is responsible for the development and promotion of the electronic guide on the legal and regulatory requirements of eBusiness, which is available on the OPENUP website. Following a competitive tender, AMAS were selected to deliver the guide in online and offline formats.

⁹ <http://www.enterprise-ireland.com/ebusiness/>, <http://www.entemp.ie/>, <http://www.basis.ie> <http://www.netsecure.ie>, http://oasis.gov.ie/consumer_affairs/, <http://www.shannon-dev.ie/>, <http://www.udaras.ie/>, <http://www.etenders.gov.ie>, , <http://www.enterpriseboards.ie>

The style and language of the guide is consistent with the style and content of the other guides published on the OPENUP website. There are links for further information and legislative text to the relevant Government websites.

The project will coordinate all the information channels currently used to disseminate information on the legal and regulatory requirements of eBusiness and provide a central repository for publishing information on changes to the regulatory and legal environment.

The promotion and marketing element of the guide was launched in the first quarter of 2006 and includes:

- The guide was launched with a press release targeting the national media and EI's own hard copy publications;
- eBusiness Live will be used to promote the guide (it currently has 3500 subscribers);
- The guide is being promoted at EI eBusiness Events;
- The other members of the Legal Framework Working Group will promote the guide through their information channels.

3.4 Conclusion

The initial development work and the ongoing maintenance of OPENUP are the responsibility of Enterprise Ireland. Enterprise Ireland should establish service level agreements with Government Departments and Agencies with responsibility for related legislative measures to ensure up-to-date information is provided at all times.

CHAPTER 4

Supports by the Development Agencies

4.1 The Role of the Agencies

Enterprise Ireland, Shannon Development, the County and City Enterprise Boards (CEBs) and Údarás (in Gaeltacht areas) are responsible for assisting the development of indigenous companies in the manufacturing and internationally traded services sectors. They provide a range of financial, advisory and other supports to client companies on an individual and group basis to foster innovation, business development and the development of overseas markets. This support includes business advice, financial assistance and management training. As mentioned previously, FÁS also runs specific programmes to assist businesses by improving the skills of employees and provides a training advisory service on a regional basis.

If effective use of Information Communication Technologies (ICTs) is to become part of everyday business, then the activities directed at encouraging this must be mainstreamed. Research by the Organisation for Economic Co-operation and Development (OECD) and the Economist Intelligence Unit has found that many companies do not capture the full benefits of their investments in ICT unless they restructure their organisational structure and processes to leverage that investment. This supports a conclusion that the development agencies will increasingly be required to promote ICT and eBusiness development supports as part of an overall package to promote enterprise development, rather than addressing eBusiness as a more remote and distinct activity.

4.2 Current Programme of Supports Available for SMEs

It is essential that SMEs and micro-enterprises adapt and embrace technology. The Development Agencies are focused on raising national awareness of the benefits of ICT and are undertaking a number of initiatives to stimulate and support SMEs to maximise the potential of ICT opportunities.

There are many innovative programmes being delivered to client companies by the agencies in conjunction with other organisations and the complete suite of initiatives is outlined in **Appendix 3**

The Development Agencies have an important role to play in assisting enterprises understand the importance that ‘e’ plays in all aspects of their business in increasing competitiveness. Unless owner managers see a benefit they will not use ICT in their businesses nor encourage and facilitate staff to attend ICT training. As previously indicated, enterprise activity in eBusiness is prefaced by the need for high quality and affordable broadband connections.

4.3 Support Delivery Mechanisms

Experience would suggest that State sponsored ‘one-on-one’ advice, along the lines of the Enterprise Ireland eBIT programme¹⁰ and the Shannon Development eCluster programme¹¹ is the most effective way of building capacity in enterprises to manage ICTs, especially in the short to medium term. However, it is also the most expensive way of doing so. It is estimated that a scheme designed to provide limited direct ‘one-on-one’ advice on building more effective usage of ICTs for half of the Small and Medium Enterprise (SME) population could cost anything between €15m to €20m depending on the level of advice and support offered. Other countries are making such investments. For example, Wales is in the process of spending an estimated Stg£37m over a six year period to target SMEs in certain designated disadvantaged areas.

Agencies’ existing financial instruments can always be used on a per company basis but the effort is large and the coverage is small. It is necessary therefore for the agencies to decide what are the most appropriate delivery mechanisms and the funding levels required to deliver support into the future.

¹⁰ Enterprise Ireland initiative that provided ‘one to one’ consultancy advice to assist companies develop an eBusiness Strategy and conducted an educational awareness campaign. This project was supported by the Department of Enterprise, Trade and Employment and funded by the Information Society Action Fund. More details can be found at http://www.enterprise-ireland.com/ebusiness/ebit_ictissues.htm

¹¹ The Shannon Development e-Cluster program assisted Client Companies to create and implement an IT improvement plan that meets the needs of customers and suppliers and improves the bottom line.

In light of the above, the National eBusiness Strategy recommended that “the Development Agencies should promote ICT and eBusiness development supports as part of an overall approach to enterprise development, rather than addressing eBusiness as a more remote and distinct activity.” To address this, the State Development Agencies were asked to include ICT and eBusiness development as a key focus in the package delivered by the agencies to support and assist the development of business for SMEs. They were also asked to identify the most appropriate delivery mechanisms in their area and to investigate how progress can be made in the short to medium term.

From the responses received, it is evident that the agencies are conscious of the need to:

- continue to build awareness of the positive impact of ICT on businesses;
- promote the use of ICT as a marketing and sales channel;
- conduct ICT audits with client companies;
- provide access to ICT business consultants
- build on the success of EMPOWER
- co-ordinate the provision of training
- increase the provision of programmes and modules on ICT management skills

The implementation groups reviewed a number of different models for delivery of supports to SMEs. The Welsh Accreditation Scheme was considered (**Appendix 4**), as was the FÁS certification scheme for trainers in terms of their applicability or adaptability to ICT consultants/trainers. EI’s eBit programme was also evaluated, and is recommended as a model that could be adapted by other state development agencies. Alternative mechanisms for delivery of supports have also been identified through sectoral and network initiatives. The following sections outline the findings.

4.3 ‘One-on-One’ Advice and ICT Consultant Accreditation

The National eBusiness Strategy recommended “that further research be carried out into the ‘one-on-one’ advice programmes that are ongoing in Wales and in other Member States and seek to discover whether post/mid-project evaluations show that these programmes have produced benefits commensurate with the costs of operating

them. The feasibility of developing such a programme in Ireland should then be examined.”

4.3.2 Applying the Welsh Accreditation Scheme to Ireland

A number of factors need to be considered before applying the Welsh Accreditation Scheme to Ireland:

1. It is questionable whether such a scheme would be sustainable in Ireland given the limited number of independent ICT consultants. Even after several years, the scheme in Wales is not self-financing and would not be viable without the support of the Welsh Development Authority.
2. Qualifying for the accreditation scheme places a significant burden on the ICT consultants and without an immediate tangible benefit, such as access to a state funded consultancy programme, it is questionable whether the consultants would participate.
3. A scheme would have to recognise the existing qualifications of IT consultants and not replicate the accreditation process.
4. The research has not yielded any evidence of similar accreditation schemes for consultants in other fields that have been successfully established.

4.3.3 Certification for Trainers

Often support for ‘one-on-one’ advice programmes is provided through the use of consultants. However, feedback obtained during the course of the project suggested that the quality of ICT consultants can vary considerably. Recent research by EI also indicates significant strategy weaknesses amongst consultants used by SMEs to advise them on IT. The first task undertaken by the subgroup was to identify what accreditation models for ICT consultants existed and to learn from the experience of those who had already developed such a scheme.

FÁS/Enterprise Ireland (EI) operate a register of approved trainers/training organisations and FÁS also certifies trainers in aspects of construction skills. It should be possible to apply some features of these schemes to an ICT consultant accreditation scheme. The objective of developing such a scheme would be to ensure a certain level of ICT strategy consulting skills for consultants and possibly other

professional advisers, who normally advise SMEs in relation to IT or business issues as recommended in the National eBusiness Strategy

4.3.4 The eBit Programme

The eBit programme is an Enterprise Ireland initiative that provided ‘one to one’ consultancy advice to assist companies develop an eBusiness Strategy and also undertook an educational awareness campaign.

An independent evaluation of the eBIT programme was undertaken and concluded that:

- there was a general deficiency in the management of ICT systems with regard to security, reliability and business continuity.
- in many cases, there was a lack of understanding on the part of senior managers of the strategic opportunities and benefits available from properly integrating ICT development within the general business plans and of the use of ICT to improve the internal structure and efficiency of the Business.

The evaluation report went on to recommend that the eBIT programme be repeated and should incorporate the following improvements:

- Stimulate more investment in staff training in ICT and put emphasis on training senior managers in the strategic elements of ICT and the need for robust systems;
- Help companies in future programmes to implement ICT recommendations.
Enterprise Ireland has now developed a new eBusiness Initiative that will incorporate the key success factors from the eBIT initiative but will place more emphasis on embedding ICT management skills within the enterprise through training and ‘one-on-one’ consultancy.

Following extensive research and based on the recommendations of the independent evaluators of the Enterprise Ireland eBIT Programme, Enterprise Ireland is introducing an ICT advice and training programme in 2006. The objective of the

programme is to improve the productivity and competitiveness of SMEs through the deployment of information technologies in line with best practice.

While this programme is designed for Enterprise Ireland clients it is also recommended as a model for other state development agencies – **Appendix 5**.

4.4 Sectoral and network initiatives

When considering possible future supports it is important to note that a major influence on an SMEs level of electronic interaction with its trading partners and others is the degree to which those organisations currently conduct their business electronically. For this reason, collaboration in relation to the adoption of electronic interaction (by companies within a sector or a particular supply chain), can be a very powerful tool for driving eBusiness adoption. Examples of such collaborative groupings exist both in Ireland and elsewhere. One Irish example is the Construction Information Technology Alliance, (www.cita.ie). Many of the major Irish construction companies, architects/consulting engineering companies and suppliers to the construction industry are members of this alliance, as are a number of IT suppliers to such companies and some academics. Encouragement and support for groupings of this nature may well offer an effective and cost efficient method of advancing the eBusiness agenda. The eBusinessW@tch¹² sectoral studies referred to in the Strategy and the experience of other Member States in this area could also help inform any initiatives to be developed.

Industry led networks can be an effective way of addressing challenges that trading networks encounter when developing ICT systems. Interoperability and common standards are critical for the exchange of information and data between trading partners. Collaboration can also achieve economies of scale that companies acting independently may not achieve. State Agencies should therefore continue to encourage and support networks that seek to address these challenges. However, many networks include companies from different sectors (manufacturing and services

¹² www.eBusiness-watch.org

for example). As a result, an inter-agency initiative is required to support network activities.

Enterprise Ireland has developed an industry led network pilot initiative as recommended in the National eBusiness Strategy and by the Enterprise Strategy Group. The objectives of the programme are to promote regional economic development and to promote development at company level. Eligible networks only require a minimum of five agency clients and this facilitates wide membership of the network programme. While it is a general programme, ICT and eBusiness networks will be eligible to apply on a competitive basis. The maximum grant available is 50% of the delivery cost and shall not exceed €200,000. Administration costs will not be eligible for grant aid. The Industry Led Sectoral Initiative¹³ was launched in January 2006. The first call closed on March 3rd and the Second Call will close in June 2006

4.5 Conclusions

It is recommended that the agencies should continue to raise awareness of the opportunities derived from the implementation of ICTs and of the importance of ICT in business. To ensure the efficient and effective use of resources, the agencies should co-operate on initiatives and experiences that will underpin the adoption of best practice and lead to a standardisation of the training available. .

The State Development Agencies should consider how they could adapt the Enterprise Ireland ICT Advice and Training model for their particular clients needs.

It is recommended that all agencies encourage IT/eBusiness networks to consider the industry led network pilot initiative as a potential source of funding to support their activities.

Based on research and consultation over the last twelve months, the eBusiness Group has agreed that:

¹³ Industry Led Sectoral Initiative: More information is available at <http://www.enterprise-ireland.com/Grow/Finance/Industry+Led+Networks.htm>

1. Enterprise Ireland should explore the possibility of introducing a voluntary code of practice for ICT consultants in Ireland as a first step towards recognising the breadth of ICT and business skills that an IT consultant should possess;
2. The code of practice should incorporate best practice and consultation with relevant stakeholders on what is considered best practice;
3. Negotiations should take place with the relevant professional membership based organisations or other appropriately qualified organisations that would manage and promote the standards of conduct among industry professionals;
4. Once the code of practice had been agreed this should be promoted to SMEs as a guide for selecting and managing ICT consultants;
5. Enterprise Ireland should continue to collaborate with the WDA and to learn from the outcome of the formal review.

CHAPTER 5

Building ICT Management and User Skills

5.1 Introduction

There is a distinction between ICT management skills and ICT user skills. Both are necessary to develop and implement an ICT strategy but the priority should be to focus on developing ICT management skills. According to the Economist Intelligence Unit 2004¹⁴, the two crucial missing skills in European companies are the lack of ability of business managers to deploy technology to business advantage and the inability of Information Technology (IT) and business management to work together effectively. Nonetheless, few Irish firms indicate this concern at the top of their list. They do, however, acknowledge the importance of such skills, both at management and employee levels

The National eBusiness Strategy highlighted the fact that, within Irish companies, there is a distinct lack of engagement with ICTs. A significant majority of SMEs do not have a dedicated IT Department, or even a dedicated IT manager. The 2005 Central Statistics Office (CSO) survey¹⁵ shows that there is very little increase in enterprises having any form of written ICT strategy with only a 2% rise between 2004 and 2005 from 16% to 18%.

There is a lack of consensus between international research and firm survey results in so far as the main barriers to eCommerce are concerned. While firms perceive the main barriers to be *external* constraints, research indicates that constraints *internal* to the firm are paramount.

Main barriers identified by firms are:

- Products not suitable for sales by the internet

¹⁴ Economist Intelligence Unit report on “Reaping the benefits of ICT – Europe’s productivity Challenge” http://graphics.eiu.com/files/ad_pdfs/MICROSOFT_FINAL.pdf

¹⁵ Central Statistics Office survey on Information Society and Telecommunications 2005 <http://www.cso.ie/releasespublications/documents/industry/2005/ictireland2005.pdf>

- Security problems concerning payments

Main barriers identified by research are:

- Lack of Information and Communication Technologies (ICT) related management skills
- Monetary and resource constraints

Given the above, it is apparent that there are a number of barriers to online trading some of which were beyond the remit of the implementation of the eBusiness Strategy. Therefore, the Steering Group agreed to concentrate on the reasons behind the lack of ICT related management skills. The key challenge being addressed here is how to build ICT management skills and ICT user skills in Irish SMEs and micro-enterprises.

5.2 Difficulties for SMEs

Most SMEs operate within tight budgetary constraints and will not adopt eCommerce if the costs of developing and maintaining the system cannot be recouped in a short period of time. Some small businesses, especially micro-enterprises, may adopt a simple website without any strategic eCommerce function.

Research indicates that internal resource constraints are a significant barrier to online trading, especially for SMEs. At the same time, survey results indicate that few Irish firms consider the cost and staff time needed to implement eCommerce to be the most important barrier to online trading, although there is recognition that this factor has some importance.

The unavailability of appropriate IT strategy training for owner/managers was identified as one of the key obstacles to promoting the effective deployment of ICTs. Although there is an abundance of technical courses in Ireland there are few that focus on the management of IT. To address this issue, the strategy recommended, “that a comprehensive database of all relevant ICT management skills training courses be established to ensure that all organisations know where to access training courses in this area”.

5.3 Identifying Training Opportunities

As part of implementing the National eBusiness Strategy, FÁS commissioned McIver Consulting to prepare a comprehensive inventory of the training courses currently available throughout the system, i.e. Higher Education and private trainers etc.

Appendix 6.

The final inventory consists of 34 training organisations and 49 courses (including e-learning, distance learning and seminars), located in 12 counties across Ireland.

A review of EU and OECD best practice also formed part of this study. A selection of relevant databases was identified and the advantages of each database with reference to the Irish situation were determined. **Appendix 7.**

Resulting from the work conducted by McIver Consulting on the Training Inventory and in addressing the recommendation that a ‘comprehensive database of all relevant ICT management skills training courses’ be established, the eBusiness Implementation Group agreed that there was simply insufficient material to justify establishing the database.

5.4 Current Initiatives

There is a very limited availability of specific ICT management skills training courses for non-technical managers in the Republic of Ireland. There appears to be a general lack of awareness of the importance of this type of training and also a lack of understanding as to what exactly ICT management skills training would entail.

A large number of institutions offer the basic technical applications such as Word, PowerPoint as well as a combination of these as part of the European Computer Driving Licence (ECDL) while management training tends to focus on the various soft skills needed to manage a business effectively. Very few courses combine both management training with ICT in an effective way. Examples of those courses that do offer ICT management skills training include:

- Plugging ICT Into Your Business, Learndirect.ie;
- eBusiness Clinic, Limerick City Enterprise Board;

- Business Technology, Learn Direct Ireland;
- Profit Growth Through IT, Monaghan County Enterprise Board.

There also appears to be a lack of equality in the geographic spread of courses, with relevant courses on offer in just 12 of the 26 counties in the State.

5.5 ICT Management Training Initiatives

The term ‘ICT Management Skills’ as used in this recommendation led to some confusion in the initial stages of implementing the recommendation. The term was not intended to cover General ICT Skill Training (e.g. ECDL, etc.), ICT Management Accounting (e.g. Sage, etc.), or ICT Network Administration. It involves providing managers with the skills to make informed decisions on the ICT requirements and ICT Strategy to be deployed in their businesses. One term used to describe a basic course in this area would be ‘ICT Decision Making for the Non ICT Manager’.

The terminology ‘ICT Management Skills’ also applies to the training of ICT specialists into management and decision making roles. As long as managers are reluctant to learn about ICT and ICT specialists are reluctant to learn about management, the need for ICT management skills training will not be apparent in many enterprises. Building a greater strategic awareness of ICT among management will help to integrate eBusiness strategies into the overall Business Strategy.

This section outlines the examination of a number of existing initiatives in the areas of enterprise support networks and training initiatives in ICT management skills. While there was no single initiative that combined these two key elements there was scope within these existing initiatives to progress the recommendation significantly.

A number of organisations¹⁶ were invited to participate in the Implementation Group on this recommendation. The inventory of ICT training courses carried out by FÁS

¹⁶ The subgroup consisted of representatives from Shannon Development, D/ETE (Employment & Training Strategy Unit), D/ETE (eBusiness Unit), FÁS, County and City Enterprise Boards, and Skillnets Enterprise Ireland (HRD section)

was useful in confirming the absence of, and need for, ICT Management Skills training in Ireland.

Enterprise Ireland and FÁS have recently completed work on the SME Management Development Report on behalf of the Expert Group on Future Skills Needs (EGFSN). There is a section in this report that also refers to ICT Management. The report is due for release in the second quarter of 2006.

5.6 Opportunity for SMEs

In exploring the feasibility of developing a new network based ICT Management Skills training initiative a number of models were examined. **Appendix 8**

One such model is the Skillnets Initiative, an enterprise-led network based model of training, which receives funding from the National Training Fund to support companies and their people. Training networks allow enterprises to decide what training they need, as well as how, where and when it should be delivered, thus allowing staff to take part in relevant, flexible, and cost effective learning. Skillnets funds a percentage of the cost of running each individual network and the training provided by those networks.

The Training Networks Programme enables companies to overcome many of the barriers they have previously experienced in developing effective training for their companies and included in this is the potential to address the ICT Management Skill needs of these companies.

In each training network, companies come together to decide what training they need and how, where and when it will be delivered. This approach is particularly appropriate for small and medium sized businesses that may lack the time, expertise or money to develop training customised to their specific needs and directly relevant to their size and industry sector.

The Accel Programme is an initiative of the Department of Enterprise, Trade and Employment and is managed by Skillnets Services Ltd on its behalf. This programme is supported by the European Social Fund and the National Training Fund. It aims to

give employers and workers an opportunity to rapidly improve, realign or revise their current skills base. The Programme will support the training of people in employment (in-company Training). Private Sector companies of any size and from any sector are eligible for receipt of training under the Accel Programme. This could also be a vehicle for handling a specific initiative for this recommendation. It too is a training initiative which is group or network based and the programme managers should be encouraged to offer ICT Management skills training through the supported networks.

It is hoped that building awareness among the networks of this National eBusiness Strategy will encourage more and more networks to address the ICT management skill training need during 2006 and beyond.

5.7 Conclusions

As stated at the beginning of this chapter, there is a distinction between ICT management skills and ICT user skills. Both are necessary if an owner/manager wants to make informed decisions on how to deploy technology in order to gain competitive advantage.

While there are many other weaknesses (e.g. lack of user skills, shortage of technical skills) these are more likely to be resolved if managers: -

- acquire the skills needed to take ICT driven or accelerated changes into account when formulating business strategy,
- acquire the skills needed to focus ICT projects on areas that will give the most business benefits,
- apply conventional sound general management principles (e.g. cost benefit analysis, proper project management etc.) to the planning of IT investments and to the day-to-day management of IT operations.

Encouraging better use of ICT at this level should also, in the longer term, further the level of engagement with more advanced information technology. This is because the companies who make best use of IT are more likely to experience commercial and other benefits that should encourage more use of the

IT facilities they already have. They will also be more likely to invest further in IT when their business environment warrants such investment.

A selection of third level courses (diploma/degree/masters) has been included in the McIver report. As we have stated previously, the courses on offer in the Inventory are available in 12 of the 26 counties in the State. However, the consultants felt that short courses are more relevant to this study in the present climate, as owners/managers would rarely justify the time/funding required to complete a 1-year full-time diploma or a 3-year degree, in order to gain ICT management expertise. The Group will refer its findings to the Higher Education Authority (HEA) to explore the feasibility of mainstreaming ICT management skills into third level business/management degree courses as a module to both long and short courses.

There is a gap in the current training provision, which needs to be addressed. There is a need for further training courses in ICT management skills for non-technical managers akin to the courses provided for other business disciplines e.g. Finance For the Non-Financial Manager, Time Management for Managers, etc. Making these courses attractive to SME owners/managers is a critical success factor.

There is also a need to consider these courses/modules on the basis that, if there is insufficient demand, how should the courses/modules be reviewed and further developed. It is suggested that the Business organisations be informed of the above findings with a view to communicating this to their members and to increasing awareness amongst SME managers of ICT management skills requirements.

The EGFSN were asked by this Department in late 2005 to undertake research to underpin a National Skills Strategy. This research will look at the policy implications of skills supply based on current policies to 2020; the likely demand based on a vision of a knowledge economy in 2020 and what changes may be required to education and training objectives.

The findings of the Implementation Group will also be communicated to the EGFSN to assist in the research they are conducting for the National Skills Strategy.

Building ICT management skills is an issue for all enterprises, not just the Enterprise Ireland/Shannon Development or CEB client base of enterprises. It must be acknowledged, however, that considerable experience has been built up within these agencies in recent years on how to encourage more effective engagement with ICTs by enterprises.

Considering that the work of the Implementation Group has identified several State run initiatives on ICT training, and on the basis that content with broad applicability should be shared (the State should not pay for the same content more than once), the existing programme providers should be encouraged to further address ICT Management Skills Training rather than establishing new service providers for this purpose. Further monitoring of and contacts with these national programmes would facilitate the delivery of this recommendation. This activity should be ongoing during 2006.

Chapter 6

Information Channels for SMEs

6.1 Efficiency of Delivery

There is a strong case to be made for better co-ordination both between and within Departments and agencies in the development and dissemination of information to enterprises on eBusiness related issues. Responsibility for providing information to enterprises in this area does not fall neatly within one Development Agency, or to any individual Government Department. The often rigid delineation of responsibilities between individual State agencies and between Departments and agencies can militate against a cost effective and coherent approach to the provision of information to enterprises. The objectives should be to ensure that enterprises can readily access relevant information and avoid duplication of costs and effort in the generation of appropriate content.

By way of an example, the techniques of using the Internet to search for business information is no different for a company employing 3 people than for one employing 200 people. Enterprise Ireland has already developed a detailed guide, "Using the Internet as a Business Intelligence Tool" which is available free of charge via the OPENUP website. However, Enterprise Ireland is not an obvious point of contact for micro-enterprises.

6.2 Information available to SMEs

A significant amount of material, including guides, case studies and training material on how to develop an Information and Communication Technology strategy has also been produced over the last 4 years; some through agency own resources and some with support from the Information Society Action Fund. Information also needs to be provided through recognised channels and the fact that beneficial information is available has to be widely advertised in the most appropriate channels for business.

Among the areas that need to be highlighted and brought to the attention of enterprises are:

- Benefits of eBusiness
- Details of relevant legal requirements for engaging in eBusiness and online trading
- Details of Enterprise Ireland's OPENUP website
- Details of ICT Management skills
- Details of ICT consultants
- Details of Network based training
- List of eBusiness supports currently available by Departmental Agencies
- Any financial assistance enterprises can utilise to incorporate ICTs into their business including EU funds
- Details of relevant websites or contact details that can provide worthwhile information

6.3 EU Support to eBusiness

Ireland is not the only Member State that is trying to grapple with the challenges of getting SMEs more engaged with eBusiness. Other Member States are also in the process of developing new national strategies in this area. Facing the challenge of the economic situation and with the vision of strengthening dialogue between different eBusiness initiatives at European level, the European Commission established the European eBusiness Support Network (eBSN) for Small and Medium Enterprises (SMEs) in 2002. The main objective of eBSN is to federate eBusiness experts in Europe and to share experience and good practice in support of eBusiness for SMEs. More specifically, the objectives of the eBSN are:

- to bring together real decision makers in the field of eBusiness, to share information and to discuss strategic policy orientation;
- to provide a 'One-Stop-Shop' for information about regional, national and European initiatives and funding possibilities for SMEs;
- to organise special meetings of governmental eBusiness experts to share practical experience and to identify future challenges.

The eBSN, in accordance with its objectives, established the European eBusiness policies portal¹⁷, the backbone of the eBSN that serves as a one-stop-shop, an on-line environment for all European eBusiness initiatives launched by (or in collaboration with) public authorities at national, regional or local level, that aims at promoting the adoption of ICT and eBusiness among SMEs.

This portal provides information about eBusiness policy initiatives, statistical data about the take-up of eBusiness among European SMEs, examples of best practice, news, announcements, articles, etc. Participation by the Department of Enterprise Trade and Employment and the agencies in this network has proved invaluable.

6.4 Issues for SMEs

The Enterprise Ireland OPENUP campaign in 2003 and associated market research has shown that:

- SME managers who accessed published information generally found it useful.
- Awareness of the availability of published guidance for SMEs in relation to ICT is still relatively low.
- Advertising and active public relations measures can increase the level of usage of such educational material.

6.5 Conclusions

The Department of Enterprise, Trade and Employment should encourage better co-ordination in the way in which State funded eBusiness related material is developed/disseminated. This can be achieved by building on the support, information and resources available and displaying them in an easily identifiable, coherent and user friendly manner having regard to the following principles:

- the State should not pay for the same content more than once
- content with broad applicability should be shared;
- proposals for new content should seek to build on what has already been developed;

¹⁷ EBSN information portal can be accessed at www.e-bsn.org

In recognition of these principles and in light of all the information available to SMEs, including information on the development of the ICT skills training courses, legal requirements for trading online, etc., it has been agreed that :

- the BASIS¹⁸ website be utilised to provide links to the relevant content
- the Department of Enterprise, Trade and Employment (DETE) eBusiness Unit, in co-operation with BASIS, will establish and maintain a mailing list of all agencies and business organisations so that regular updates on current issues are provided on a timely basis to facilitate continuous awareness raising amongst SMEs.

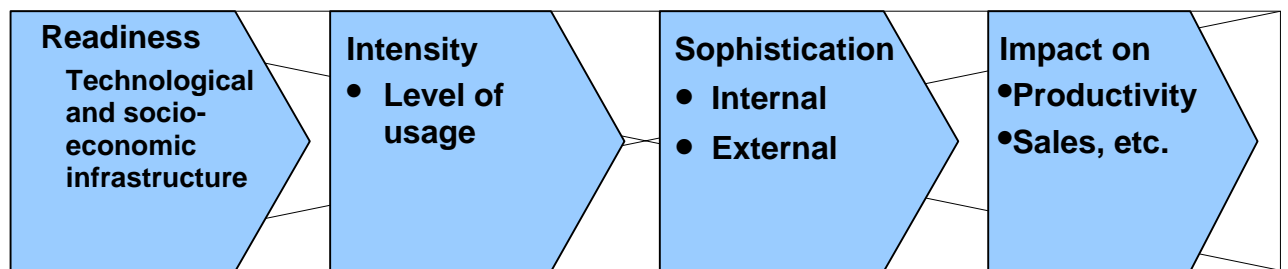
¹⁸ The BASIS website was developed to provide business with a single access point to all government information and services. www.basis.ie

Chapter 7

eProcurement

7.1

The report by Forfás on the statistical research outlined in Chapter 2 identified the four stages in the adoption of eBusiness and Information and Communication Technology (ICT) by enterprises, from early through to sophisticated usage. Barriers to online trading vary according to which stage of the adoption ladder the firm is on.



Source: Forfás (adapted from the OECD)

During the third stage, the focus is on the level of **sophistication** of eBusiness both within the firm itself and between firms. The level of sophistication refers to the extent to which eBusiness is an integrated part of overall operations including marketing and sales, internal processes, logistics and delivery, supply chain management and other business functions. B2C and B2B¹⁹ eCommer²⁰ are components of this wider National eBusiness Strategy.²¹ The level of sophistication plays an important role in ensuring long-term success in online trading. Research indicates that those Irish firms with a higher degree of eBusiness sophistication also tend to be more successful in terms of eCommer²².

The Eurostat 2004 Enterprise Survey of Irish firms confirms that many SMEs have a low level of sophistication in eBusiness use. Only 24% of small firms and 39% of medium-sized firms have Information Technology systems for managing orders that

¹⁹ B2C: Business to Consumer transactions, B2B: Business to Business transactions

²⁰ eCommer²⁰ refers specifically to commercial transactions (buying and selling): eBusiness relates to all elements of the business across the supply chain, from procurement, through operations, to sales and marketing, and across all supporting functions including accounting and administration.

²¹ Source: OECD (2004)

²² More specifically, research by Willie Golden (2003) finds that specific organizational factors, such as early adoption of web technology, internal IT expertise, having an eBusiness strategy and a person who champions the eBusiness project, result in more successful eBusiness websites.

are automatically linked to other internal IT systems, while this figure rises to 63% for large firms. In terms of percentage of enterprises whose IT systems are automatically linked to the IT systems of customers or suppliers, again SMEs lag behind. The figure is 12% for small firms, 17% for medium-sized firms and 32% for large firms.

The strategy also highlights the need to ensure that SMEs are prepared for the challenges and opportunities that will arise as significant public sector and private sector buyers move to electronic procurement. The Department of Finance is responsible for implementing Ireland's national eProcurement strategy.

As Irish enterprises will be affected by accelerating eProcurement by private and public sector buyers, this is an issue that needs to be addressed urgently. The National eBusiness Strategy recommends "that dialogue be initiated with the Department of Finance and major public sector buyers to leverage the opportunities and mitigate the threats posed by public sector eProcurement for SMEs."

Public sector eProcurement involves incorporating technologies that facilitate automation in the procurement process. The move towards eProcurement is promoted in the National Government Strategy because of its potential to bring about significantly improved value-for-money. Progress has been hampered due to budgetary constraints, but important steps undertaken to date include:

- The e-tenders website (www.etenders.gov.ie): the central government procurement portal, launched in 2003;
- The new public procurement portal (www.procurement.ie): launched in 2005 identifying all sites associated with public procurement in Ireland.

The National Public Procurement Policy Unit (NPPPU) are commencing a study on SMEs and public procurement, with a view to producing a consultation paper towards the end of 2006. eProcurement will be an element of this study. As a result of the work done by the eBusiness Strategy group this Department and Forfás have been asked to participate in the study.

7.2 Security and Trust Factors for SMEs

Unfortunately, lesser known SMEs tend to be disadvantaged in terms of buyer confidence compared to large multinationals with recognisable brand names. Online clients regard recognition of a brand or company name as an indicator of a firm's credibility and inability to verify the online seller's credentials is one of the main reasons for reluctance to buy online. A professional website can help to improve a firm's image for large B2B transactions. Consumers using credit cards for online transactions have concerns regarding security, protection of credit-related information and secure systems. However, the development of payment services such as PayPal and other systems that guarantee security of payments have helped to overcome this problem.

The Organisation for Economic Co-operation and Development (OECD) surveys show that security issues are among the most important perceived barriers to Internet use by businesses both in the context of Business-to-Business (B2B) and B2C. This is confirmed in the Eurostat data for Irish firms: security problems concerning payments are identified as a key barrier.

Key implications of eProcurement include a downward pressure on prices, a shift to a smaller number of larger orders for certain categories of products and services and higher IT capability requirements for suppliers. SMEs are at risk of losing out because they may not benefit from economies of scale, are less able to compete on price and generally have smaller profit margins. Also, financial constraints limit their ability to invest in IT and they have less access to IT management skills.

The effects of eProcurement and the associated changes in purchasing practice on suppliers and potential suppliers whose customers are adopting eProcurement will vary. However, many SMEs are likely to experience one or more of the following: -

- Increasing demands on IT capability
- Increasing competition (pressure on prices and service levels).
- Inability to manage larger orders.
- New export opportunities.

7.3 Opportunities:

The move towards public sector eProcurement should provide a stimulus for SMEs to adopt eCommerce technologies. It will provide SMEs with improved and centralised access to information on public sector contracts and it will offer opportunities to streamline procedures and reduce administrative costs.

What is required to maximise access for SMEs to eProcurement includes:

- improved feedback mechanisms to unsuccessful suppliers to improve their learning and their ability to tender more successfully;
- raising awareness through publicity campaigns and provision of workshops/seminars for SMEs on the impact of eProcurement; and
- provision of training for SMEs in eProcurement.

7.4 Conclusions

Following consideration of the various challenges and opportunities, the Implementation Group recommends the following initiatives (The group(s) at whom the recommendation is aimed is shown in brackets):

1. **Develop sector-specific standardised tender forms that can be published electronically. (Public Bodies operating eProcurement)** This will reduce the administrative burden for SMEs when they tender for public sector contracts with various procurers in the same sector.
2. **Enhance the e-tenders website to automate the full tendering cycle, including online evaluation of tenders. (National Public Procurement Policy Unit - NPPPU)** This will reduce the administrative burden for public sector buyers facing an increased number of tenders due to partial automation of the tendering process.
3. **Enhance the e-tenders site to allow for links to/deployment of electronic catalogues and to facilitate joint bids by micro and small enterprises. (NPPPU).** This presents a particular opportunity to SMEs without their own website to present their products and services to contracting entities. Both measures would counteract the potential disadvantage suffered by micro and small enterprises due to the tendency

towards larger tenders arising from consolidation of purchasing through eProcurement.

4. **Organise regular workshops and seminars to inform SMEs about opportunities in the public sector, common pitfalls for SMEs and how to participate in eCommerce.** (Enterprise Ireland/Chambers of Commerce of Ireland/ISME/IBEC/County and City Enterprise Boards)
5. **Promote networking of public sector buyers engaged in the same sector. (NPPPU)** This will accelerate the learning process and allow for the adoption of best practice.
6. **Progress the roll-out of training for public sector buyers. (NPPPU/Irish Institute for Purchasing and Materials Management)**
The effect will be to create a body of personnel capable of building a professional purchasing function within the public sector.

Acknowledgement

The Department of Enterprise, Trade and Employment wishes to thank all members of the Implementation Group who assisted in the progression of the National eBusiness Strategy recommendations to date.

Membership of Implementation Group;

Department of Enterprise, Trade & Employment (DETE)	Ronnie Sheehan, Sinéad Gilligan, Noreen Howley,
Enterprise Ireland	Karen Hynes, Eoin O'Siochru
Forfás	Els Compernelle
Shannon Development	Brendan McCormack
South Dublin County Enterprise Board	Loman O'Brien,
FÁS	Ian Hyland
Udarás Na Gaeltachta	Eamonn O'Neachtain,

Contributions were also made by Anne Forde (DETE), Eamonn Kelly (Clare CEB), Adrian Devitt and Maria Ginnity (both of Forfas).

Appendix 1

Listing of Recommendations and Summary of Progress

When the National eBusiness Strategy was launched in December 2004, it contained 13 recommendations to be progressed, some of which were dependent on the outcome of others before they can be addressed. As it was not possible to progress all of the recommendations concurrently the Group identified the recommendations to be given priority. In total, nine of the recommendations have been addressed comprehensively to date while the Implementation Group agreed, for clearly stated reasons, not to pursue the part of Recommendation 3 dealing with establishing a database of relevant training courses.

The National eBusiness Strategy Implementation Group proposes to the Minister that it should continue to meet throughout 2006 in order to progress the recommendations that require future action and therefore build on the progress already achieved in the implementation of the National eBusiness Strategy.

The following is a brief description of progress in the implementation of the individual recommendations contained in the National eBusiness Strategy:

Recommendation No 1
It is recommended that, as a priority, action should be taken to build awareness of the legal framework for online trading. Any initiatives to be undertaken should have regard to the principles outlined in Recommendation No 10 below.

Current Status:

Guide to the Legal Framework was produced and is available on the www.OPENUP.ie website. Also available in hard copy from Enterprise Ireland.

Future Action:

Promotion and marketing element of the guide is to commence early 2006. – (Ref: 3.3)

Enterprise Ireland should establish service level agreements with Government Departments and Agencies with responsibility for related legislative measures to ensure up to date information is provided at all times (Ref: 3.4)

Recommendation No 2
It is recommended that dialogue be progressed with the Department of Finance and major public sector buyers to leverage the opportunities and mitigate the threats posed by public sector eProcurement for SMEs.

Current Status:

eProcurement paper and recommendations submitted to D/Finance for consideration in National eProcurement Strategy . (Ref: 7.4)

Future Action required:

Department and Forfas representatives participate in National Public Procurement study

Recommendation No 3
It is recommended that (a) a comprehensive database of all relevant ICT management skills training courses be established. (b) An inventory to be undertaken of what training is already available in this area. Both exercises should seek to build on existing sources of information.

Current Status:

(a) As a result of the work on the Inventory of courses as identified in Chapter 4, the Implementation Group decided not to progress part of recommendation 3, involving the establishment of a Database of eBusiness consultants as there was insufficient material available to justify a database at this time. (Ref 5.3)

(b) Inventory of ICT training courses was produced – (Ref 5.3)

Future Action:

See recommendation 4 below

Recommendation No 4
Following the completion of the inventory at Recommendation 3 above, the feasibility/desirability of developing further third level courses in the area of ICT management skills should be explored.

Future Action:

- (a) Submit the McIver report on the Inventory of ICT courses to the Department of Education and the Higher Education Authority for consideration in the development of third level courses in ICT management skills. (Ref 5.7)
- (b) Input into the research being carried out by the Expert Group on Future Skills Needs on the National Skills Strategy (Ref 5.7)

Recommendation No 5
It is recommended that the feasibility of developing a network based national training initiative on ICT management skills be explored

Current Status:

As there was considerable emphasis during 2005 on the launch of significant enterprise-led, network-based training initiatives (Skillnets and Accel) it was seen as more appropriate to encourage these initiatives to address ICT Management Skills training than to develop another separate initiative to this end.

Future Action:

Monitoring of these national programmes should continue during 2006 in order to learn from their experiences and to see if a new initiative is required. (Ref 5.7)

Recommendation No 6

It is recommended that an ICT consultant accreditation scheme be established.

Future Action:

Enterprise Ireland should explore the possibility of introducing a voluntary code of practice for ICT consultants in Ireland as a first step towards recognising the breadth of ICT and business skills that an IT consultant should possess (Ref: 4.3.3)

Recommendation No 7

It is recommended that the development agencies should promote ICT and eBusiness development supports as part of an overall approach to enterprise development, rather than addressing eBusiness as a more remote and distinct activity.

Current Status

The Department wrote to the Development Agencies encouraging them to include ICT and eBusiness issues in their development and assistance for business to SME's and micro enterprises. All Agencies have been positive in their responses in this regard (Ref: 4.2.1)

Recommendation No 8

It is recommended that further research be carried out into the one-on-one advice programmes that are ongoing in Wales and in other Member States and seek to discover whether post/mid-project evaluations show that these programmes have produced benefits commensurate with the costs of operating them. The feasibility of developing such a programme in Ireland should then be examined.

Current Status

Enterprise Ireland are rolling out an ICT advice and Training Programme
(One on One Advice) (Ref: 4.3.3)

Future Action (4.5)

- It is recommended that the agencies should continue to raise awareness of the opportunities derived from the implementation of ICTs and of the importance of ICT in business. To ensure the efficient and effective use of resources, the agencies should co-operate on initiatives that will allow for the adoption of best practice and lead to a standardisation of the training available. .
- The State Development Agencies should consider how they could adapt the Enterprise Ireland ICT Advice and Training model for their individual clients needs.
- It is recommended that all agencies encourage IT/eBusiness networks to consider the industry led network pilot initiative as a potential source of funding to support their activities.

Recommendation No 9
It is recommended that industry led sectoral initiatives designed to facilitate eBusiness adoption be encouraged by the State agencies.

Current Status

It was decided that rather than establishing a specific eBusiness Industry led Network Scheme, companies should be made aware of existing Industry led Network Programmes that could fund eBusiness projects. Enterprise Ireland encouraged the Construction Information Technology Alliance to apply to Enterprise Ireland's Industry Led Network Programme and they submitted a proposal under the first call in March 2006 (Awaiting outcome)". (Ref: 4.4.1)

Recommendation No 10

It is recommended that there should be better co-ordination in the way in which State funded eBusiness related material is developed/disseminated, having regard to the following principles:

- the State should not pay for the same content more than once;
- content with broad applicability should be shared;
- proposals for new content should seek to build on what has already been developed;
- information should be channelled through recognised SME points of contact (e.g. SME EICs, Irish Internet Assoc., Reps of Business Organisations).

Future action

Develop Communications Strategy (Ref: 6.5)

- The Department of Enterprise, Trade and Employment (DETE) eBusiness Unit, in co-operation with BASIS, establish and maintain a mailing list of all agencies and business organisations so that regular updates on current issues are provided on a timely basis to facilitate continuous awareness raising amongst SMEs.

Recommendation No 11

It is recommended that a Statistical Group be established to identify all sources of data relevant to ICT usage by SMEs; assess further data needs; monitor and provide input to national and EU developments in this area; and conduct further work with a view to establishing targets for ICT adoption by Irish enterprises and mechanisms for the monitoring of such targets.

Current Status

A Statistical Group was established and targets identified (Ref:2.7)

Future Action required:

Continue assessment of Statistical information and feed into relevant stakeholders.

Participate in the Central Statistics Office bilateral meetings on ICT in conjunction with Forfas, Comreg, and DCMNR(Ref: 2.7)

Recommendation No 12
It is recommended that policies in EU Member States and other leading economies in relation to ICT adoption by SMEs be monitored, including through participation in the European eBusiness Network, with a view to ensuring that support policies for Irish enterprises are in line with international best practice.

Current Status:

Participation in European eBusiness Network and monitoring of eBusiness policies in Europe continued. (Ref: 6.3)

Future Action

The eBusiness Unit of the Department is fully briefed on developments at all European levels and disseminate the information to the State Agencies

Recommendation No 13
It is recommended that more research be conducted into the precise nature of the barriers to online trading experienced by enterprises

Current Status:

Research into the barriers to online trading was conducted and incorporated throughout the various sections in this report. (Ref: 2.7)

Future Action:

Continue monitoring various reports in order to identify barriers to online trading

Data Sources

1. CSO Enterprise survey on e-Commerce and ICT

http://www.cso.ie/surveysandmethodologies/surveyforms/indus_info_c_t.htm

General info

First collected	Frequency of collection	Size of survey
2002	Annual	8000 firms

Appropriate for our needs?

Info on firm size	Internationally comparable	Collected in the future	Reputable source
yes	yes	Yes	Yes

Harmonised surveys are done throughout EU, kept as Eurostat Enterprise Surveys:

www.europa.eu.int/comm/enterprise/ict/statistics/e-commerce.htm

2. Eurostat ICT Enterprise Survey

www.europa.eu.int/comm/enterprise/ict/statistics/e-commerce.htm

General info

First collected	Frequency of collection	Size of survey
2002	Annual	Covers EU25

Appropriate for our needs?

Info on firm size	Internationally comparable	Collected in the future	Reputable source
yes	yes	Yes	Yes

3. OECD Key ICT Indicators

Contributions of ICT investment to GDP

Source: Data obtained from STD National Accounts. 2002 data from the OECD

Productivity Database, September 2004

3. Eurostat Website

http://epp.eurostat.cec.eu.int/portal/page?_pageid=1090,30070682,1090_33076576&_dad=portal&_schema=PORTAL

Appendix 3

Current Initiatives delivered by State Agencies

There are many innovative programmes being delivered to client companies by the agencies in conjunction with other organisations and these are identified below.

FORFÁS

Forfás undertakes research and provide policy advice on the framework conditions that encourage ICT and eBusiness take-up by firms. This work has included:

1. Identifying the need for pervasive roll-out of broadband which contributed to the Government decision to invest in Metropolitan Area fibre networks;
2. An annual “Broadband Telecommunications Benchmarking Study”, benchmarking infrastructure, costs and take-up;
3. eBusiness benchmarking reports.
4. Setting out the legislative environment for eBusiness
5. Setting out a policy framework to ensure that Ireland can exploit opportunities from e-commerce (“Report on e-commerce: the policy requirements”, 1999).

ENTERPRISE IRELAND

Building Awareness of the Impact of New Technologies on Businesses

Enterprise Ireland, through its dedicated eBusiness web site (www.openup.ie) and electronic newsletter (eBusiness Live) raises awareness and disseminates knowledge about the impact of ICT developments at a business level. As part of that campaign, EI highlights security and business continuity as core issues for senior managers in the light of the potential impact of weaknesses in these areas

on core operations and customer service. EI has also recently published the guide on the Legal Framework for eBusiness.

Embedding ICT Management Skills in SMEs

An eBusiness Initiative, which builds on the success of the Acceleration and eBit Initiatives will be rolled out. The objective of the programme is to improve the productivity and competitiveness of SMEs through the absorption of appropriate Information and Communication Technologies and the development of ICT management skills.

Promoting the use of ICT as Marketing and Sales Channel

The E.I. eBusiness Unit promotes to clients both directly and through other internal departments.

Conducting ICT Reviews with Client Companies as part of Overall Business Reviews

The eBusiness Unit conducts ICT reviews with clients as part of overall business reviews. A number of tools are also available to clients to enable them to assess their own ICT capabilities and to address issues that arise.

Improving Access for SMEs to Top Class ICT Business Consultants

Enterprise Ireland has, at the request of the Department of Enterprise, Trade and Employment, taken the lead on establishing a code of conduct for ICT consultants.

Mainstreaming eBusiness within EI's Technology Offering

The role of Technologists in Enterprise Ireland is to engage with companies to ensure that they are availing of the most appropriate technology supports. One part of that role is to assist clients to use information technology to optimise their performance. To provide clarity on their role and the organisation's technology offering to clients, the organisation has developed a common, modular approach

for Technologists' engagement with clients. The modules are designed to be client focused and to fit with Enterprise Ireland's wider business development supports to client companies. Module 4 is dedicated to ICT and as part of this module Technologists will introduce a number of tools that have been developed by the eBusiness Unit including:

- IT Security Audit
- ICT Systems and Infrastructure Analysis
- eBusiness Capability Audit
- eBusiness Handbook
- Web Design Guide
- Choosing ICT and ISP Vendors.

Knowledge Events

The eBusiness Unit regularly organises knowledge events and will organise two series of events in 2006. The first will be on Growing Competitiveness through eBusiness. The second series of events will focus on on-line marketing and eMarketplaces.

eMarketplaces

Enterprise Ireland is a partner in the European initiative 'eMarketservices'. This is a web based service providing information and specialist knowledge on eMarketplaces. eMarketplaces are web based B2B trading platforms that are increasingly being used for international sourcing and sales. There are currently over 800 eMarketplaces listed on the eMarketservices website and these provide different services including directories, classifieds, RFT services, reverse Auctions, on-line ordering and on-line payments. These trading platforms can be a cost-effective and efficient way of establishing new international business relationships and can provide easy access to the technology that enables on-line trading.

SHANNON DEVELOPMENT

Shannon Development make the point that enterprise activity is prefaced by the need for high quality affordable broadband connections. Through their leadership

of Shannon Broadband Limited, Shannon Development have taken an active role in improving the availability and cost of broadband connections throughout their region.

The Shannon Development ICT eCluster Programme uses training funds to support training and consultancy projects for a group of SMEs. This combines group training on eBusiness issues with individual advice and inter-company networking.

Supply Network Shannon (SNS), which is administered by Shannon Development, is currently conducting a survey of IT requirements among SMEs in the region. SNS hope to use the buying power of the network to bring down the cost of doing business electronically, to encourage greater use of eBusiness in the region and to use the network to support their member companies to fully exploit the eBusiness opportunities in the Supply Chain Management and eProcurement sectors.

Shannon Development worked with Shannonssoft, [IT@Galway](#), the Atlantic Technology Corridor and SNS on the successful application for Skillnets funding by the Western ICT Skillnet. This network will provide eBusiness and IT related training to member companies. Training commenced in January 2006.

FÁS

FÁS Services to Business Division is placing increased emphasis on ICT management capability through its company based initiatives such as the Cluster Programme and the Company Diagnostic Programmes. Companies will be actively encouraged to seek advice and training on this topic, as well as the more sought after subjects such as marketing, production and finance.

FAS will increase its provision of programmes and modules on ICT management skills to address the expected demand from companies arising from an awareness campaign.

FAS Services to Business Division is proposing to undertake a pilot scheme that will entail supporting a combination of one to one consultancy and training inputs in 60 SMEs

The FAS board has recently approved a number of IT training programmes for IT professionals, IT trainers and employees.

City and County Enterprise Boards

It is the view of the CEB's that in order to build a sustainable eBusiness platform for the micro-enterprise sector, progress the initiatives that have taken place and to ensure that SMEs avail fully of the opportunities available in adapting ICT strategies, their role should be to;

- Create awareness of the ICT developments for small business
- Assist small businesses to assess the effects of ICT within and to their business
- Assist small business to maximise the potential of ICT opportunities
- Develop and proof ICT strategy as part of clients' wider business strategy
- Develop of ICT management and eBusiness management skills
- Identify funding mechanisms that support eBusiness/ICT investments both in isolation and in the context of wider projects
- Develop appropriate local on-line market opportunities and infrastructure.

More information on any of the supports provided by the CEB's is available on www.enterpriseboards.ie

Details of ICT training provided by the CEB's are outlined in the table on the following page.

	Carlow	Dublin City	Kerry	Kilkenny	Leitrim	Louth	Limerick City	Limerick Co	Mayo	Roscommon	Sligo	South Dublin	Waterford	Waterford City	West Cork	Westmeath	Wexford	Wicklow
Computerised accounts				*		*	*					*	*	*		*	*	*
Financial Support (est websites)		*							*	*					*	*	*	*
Mentoring programme/access to mentor	*		*		*			*	*						*			
Website Development			*			*	*											
Desktop Publishing				*							*							*
Internet & E-mail for Business/Trading on-line			*								*							*
Website Design	*								*		*			*				*
ECDL	*	*									*		*					
Information Seminars / Workshops	*		*											*				*
Introduction to computers				*									*					
Security	*															*		*
e-literacy	*			*														
Business Presentations & digital imagery												*						
Developing a sales database												*						
PC maintenance																		*
E-commerce export programme				*														
Email Marketing													*					
Promoting your website													*					
Module included in GROWING YOUR BUSINESS				*									*					
Project management (software design)													*					
digital Photo editing				*														
Making Your Website Work				*														
Adobe														*				

Appendix 4

Welsh Accreditation Scheme

Following extensive research, a UK based accreditation scheme was identified as the most appropriate accreditation model to examine in further detail. Technology Means Business²³ (TMB) was developed following a call from the Department of Trade and Industry (DTI)²⁴ and leading technology companies to improve the quality and consistency of advice received by small businesses. DTI is no longer funding the TMB initiative and it is now managed by the Interforum²⁵. The scheme has been adopted by a number of enterprise development agencies in the UK and the Welsh Development Authority (WDA) has been responsible for the accreditation of the highest number of consultants at that time.

The scheme operated by the WDA is an evidence-based assessment. There are two parts to the qualification. The first part requires the consultant to demonstrate their practical experience as Business Advisers in advising small and medium sized businesses on the use of information and communications technology to develop their business. There are five units in the first part:

1. Build effective ICT advisory relationships with clients
2. Help clients meet their ICT business needs
3. Monitor, evaluate, review and develop their own performance as an ICT adviser
4. Enable clients to plan an ICT intervention
5. Enable clients to implement an ICT intervention

The second part of the qualification requires the consultant to demonstrate their knowledge and this is assessed through evidence of their work and through a knowledge test.

²³ TMB Mission Statement <http://www.tmb.org.uk/documents/manifesto.pdf>

²⁴ DTI Competitiveness White Paper 1998 (http://www.dti.gov.uk/comp/competitive/ec_ch3.htm)

²⁵ InterForum is an independent, not-for-profit organisation that is committed to work in partnership with industry, government and other organisations to act as a catalyst in the education and awareness of methods, benefits and overall return on investment of trading electronically (<http://www.interforum.org>).

The WDA has been managing the accreditation scheme for about five years. With other partners, they have established an assessment centre in Wales. To date the WDA have accredited c. 100 consultants. Approximately 50 of these consultants are employed in a network of IT centres that are run by regional enterprise development agencies and local authorities. The WDA is also currently running SME eBusiness Programme II, a one-to-one eBusiness consultancy programme for SMEs. ICT consultants that wish to participate must be accredited. As a result there are an additional fifty accredited consultants.

The WDA are currently carrying out an extensive review of their accreditation scheme and have indicated that they are happy to continue to share information and explore the opportunity of collaborating further with Enterprise Ireland.

Enterprise Ireland ICT Advice and Training Programme

Enterprise Ireland has developed a new eBusiness Initiative that will build on the success of the previous programmes by providing:

- ICT management training for business managers and system users. The training will be delivered on a one-on-one basis with consultants working directly with managers at each different stage of the programme. Consultants will conduct a skills assessment, develop a training programme and then implement the training programme. Core transferable skills will include:
 - ICT Audit;
 - Risk Analysis and Business Continuity;
 - ICT Strategic Planning;
 - Defining the Functional Requirements of the system;
 - Vendor Selection and ICT project management.
- Support will also be provided for users to attend external, certified training programmes that are approved by Enterprise Ireland;
- Dissemination and marketing activities will be incorporated into the programme to promote lessons learned and business benefits of projects thereby providing learning collateral and also producing a multiplier effect.

The project will incorporate the key success factors from the eBIT initiative but will place more emphasis on embedding ICT management skills within the enterprise through training and one-on-one consultancy.

The programme will fund training and consultancy interventions with companies that deploy ICT to fundamentally improve business processes within the organisation and that tangibly contribute towards business growth and competitiveness. The types of projects considered for approval would include:

- Automation of document work flows;
- Procurement;
- Enterprise Resource Planning;

- Customer Relationship Management
- On-line Sales Channel Development
- EMarketing

The training and consultancy will cover the following stages of the project:

- Diagnostic Phase: identification of weaknesses and opportunities within the ICT infrastructure and a training needs analysis;
- Planning Phase: Develop an ICT strategy that assesses how ICT can support and improve core business processes;
- Implementation Plan: Develop a functional specification for solutions to meet business requirements; project budgets and cost/benefit analysis; identifying and selecting suppliers; training needs analysis for key personnel.
- Project Management: Managing the implementation of the project including third party vendors, negotiating service level agreements and post-project review.

The key outputs will be:

- Development of an ICT/eBusiness Strategy by senior management that recognises ICT as a strategic concept and not just as a technical tool and that accurately measures the benefits and costs of eBusiness projects;
- Implementation of priority eBusiness projects that will have a tangible positive impact on productivity and export sales;
- ICT management skills will be embedded in the organisation and these skills will be certified and transferable;
- Certified and transferable skills for system users.

This programme will be rolled out to Enterprise Ireland clients.

Appendix 6

Inventory of Training

Course Title:	Location of Course:	Duration of Course
Information Processing/Technology	Carlow Institute of Further Education	The course is 1 year long and classes are between 35 minutes & 70 minutes. This course can be undertaken on a full-time/part-time basis
Management and Information Systems (Module)	Cavan Innovation and Technology Centre	Courses are run continually throughout the year. Each course tends to be 3 hours duration taking place during the day and evening.
Certificate in Business Technology	CMIT (Dublin College of management and IT) Shankill, Co. Dublin	This part-time course, involving distance learning, takes 4-6 months to complete and consists of 2 main modules taking 2-3 months each
Higher Diploma in Business Studies (eBusiness)	Dublin Business School, Dublin 2	12 months for full-time participants and 16 months part-time.
Higher Diploma in Business Studies (IT)	Dublin Business School	12 months/16 months. 12 months full time; 16 months part-time
Master in Electronic Commerce	Dublin City University, Business School	This course is full-time taking place over 1 year (September to August). Each class is ½ in duration taking place during the day
Business Computing	Dublin Institute of Technology	This course is 4 years and takes place during the day. It is a full-time course.
eBusiness for International Traders	eBusiness School of Ireland, Mayo	This course is 2 months long; involving over 50 hours of CD Rom based learning. It is part-time taking place over evening and weekends
eBusiness	FAS eCollege, Wyattville Rd., Loughlinstown,	The course is accessible for 6 months and students can complete the course at their own pace within this time. The course involves elearning
eCommerce	FAS eCollege, Wyattville Rd., Loughlinstown e-learning	The course is accessible for 6 months and students can complete the course at their own pace within this time. The course involves elearning.
Diploma in Computer Networking (previously run)	Fitzwilliam Institute, Dublin	The course was 18 weeks and took place during the day. It was a full-time course.
Bachelor of Arts (Honours) in Information Systems Management)	Galway-Mayo Institute of Technology	1 year add on degree. Full time, also available through ACCS
IATI Accounting Technician: . Business Management and IT in Business	Genesis Business College (Pitman Training) Wexford	This course is a part-time course and takes place over 2 years, 2 nights a week. . Classes are approximately 3 hours duration

National Certificate in eBusiness Studies	Greendale College of Further Education, Kilbarrack, D5	The course runs from September to May, with exams in May. (adult education runs September to December and January to Easter) This course can be undertaken on both a full-time or part-time basis
Bachelor of Business Computing -Ordinary	Institute of Technology Athlone	3 Years. Full time, day
Bachelor of Business Computing - honours	Institute of Technology Athlone	1 year add on. Full time, day
Higher Diploma in Business Analysis and Information Systems	Institute of Technology Athlone	1-year conversion for non-IT graduates. Courses can be undertaken on both a full-time/part-time basis and take place during the day.
Bachelor of Science in Computer Services Management	Institute of Technology Limerick	1 year (add on degree) - each class is 1 hour. Full-time/Part-time, day classes or course over 2 days to students working in industry
BA in Technology Management	Institute of Technology Tallaght	This course is 1 year long. This course is undertaken on a part-time basis, between 6-10pm. Each class is 2 hours in duration.
BSC in Technology Management	Institute of Technology Tallaght	1 Year add on honours degree
Internet Workshop: eCommerce for Managers	Irish Academy of Computer Training IACT Dublin	The course is run over 2 days between 9:30-5:30. It is a Part-time course.
European Certification of Informatics Professionals (Core Level)	Irish Computer Society, Crescent Hall, Dublin 2 Piloting in FAS Limerick, Dundalk IT	This course is 100 hours, with each class between 2-5 hours. Classes can be held on day, evenings, or weekends (full-time or part-time).
eBusiness Seminars	Irish Internet Association Cork, Limerick, Galway, Sligo, Dublin, Belfast	Seminars run for 1 day.
Diploma in IT Leadership and Management Information Systems	Irish Management Institute, Dublin	This course takes place over 23 days and consists of 9 modules. It is a full-time course.
Business Technology	Learn Direct Ireland, ITEC Hse., Craft Centre, Dublin Distance Learning	The course involves 6 modules undertaken through distance learning.
Plugging ICT into your Business	Learndirect.ie, Unit 3D Centerpoint Business Park, Dublin 12	This course involved 31 hours online, engaged in e-learning.

	e-learning	
eBusiness Clinic	Limerick City Enterprise Board	The consultation generally lasts up to 1 Hour and takes place during the day.
Networking: Managing Small Business Computer Networks	Limerick Vocational Educational Committee and Institute of Technology Limerick Limerick Institute of Technology, Limerick	The course runs over 10 weeks and takes place on a part-time basis in the evenings.
Higher Diploma in Business Studies (IT)	Michael Smurfit Graduate School of Business,	The course runs from September to May and is a full-time course.
Master of Business Studies in eBusiness	Michael Smurfit Graduate School of Business,	It is 1 year for full-time participants and 2 years for part-time.
Diploma in Computer Studies	Mid West Business Institute Old Town Hall, Rutland St., Limerick City	The course is 1 Year in duration and is available on a full-time basis, with classes taking place during the day
Postgraduate Diploma in Strategic Business Information Technology	Mid West Business Institute Old Town Hall, Rutland St., Limerick City	The course is 1 Year. It is available on a full-time basis with classes taking place during the day. There is a minimum of 15 hours per week.
Advanced Diploma in Computer Studies	Mid West Business Institute Old Town Hall, Rutland St., Limerick City	The course is 1 Year. It is available on a full-time basis.
Profit Growth Through IT	Monaghan County Enterprise Board	The course is part-time and runs from December 2004-December 2005. Each client participates in 4 1-day workshops combined with site visits.
Msc in Technology Management	National Institute of Technology Management, UCD,	The course runs over 2yrs and is available on a part-time basis with classes taking place on a Friday afternoon and Saturday mornings
Higher Diploma in Technology Management	National Institute of Technology Management, UCD	The course runs over 1 year (2 semesters) on a part-time basis, with classes on a Friday afternoon and Saturday mornings.
Managing Information Technology for Managers: Management Development Programme	Neil Dawn & Associates, Mayo	The course takes place over 1 day (6 hours). It can be taken on a Full/Part-time basis on day or evening
Certificate in eBusiness	Rathmines Senior College	The course is for 1 year on a full-time basis.
Computer Networks: Planning and Management	ShannonSoft in conjunction with Dell Computer Corporation, Key Tech Products, Bruce College, Fitzpatrick Computer Group	The course took place on a 1/2 day evening, at 5pm.

	Limerick IT	
Adding the e to commerce	ShannonSoft in conjunction with MAC, ECAI, Piercom Ltd., Dell Computer Corporation, Kenny's Bookshop, CompuB/elive, Sykes Ltd, University of Limerick Limerick Inn Hotel	The course took place over a 1/2 day beginning at 3:15pm.
Maximising Business Advantage From the Web	Shannon Soft in conjunction with Irish Software . Association, Nua Ltd., NPi Ltd., W3 Ltd University of Limerick	The course took place over a 1/2 day, beginning in the evening at 5pm.
eBusiness Foundation	SkillSoft 7-8 Belfield Office Park, Clonskeagh, D.4 E-Learning	Each module within the course lasts from 2 hours to 2 1/2 hours. e-learning
eBusiness for CRM	SkillSoft 7-8 Belfield Office Park, Clonskeagh, D.4 E-Learning	Each module of the courses lasts between 2 and 3 hours. e-learning
eCommerce Series	SkillSoft 7-8 Belfield Office Park, Clonskeagh, D.4 E-Learning	Each module lasts between 2 and 3 hours. e-learning
Technology Forecasting	SkillSoft 7-8 Belfield Office Park, Clonskeagh, D.4 E-Learning	This course involved 3 hours of e-learning.
Management Development Using Technology for Profitability and Growth	Stirling & Associates, Dublin In house Team B.D.S., Unit 5, First Floor, Riveroaks, Claregalway, Co. Galway Various locations	The duration of the course is determined by requirements identified. The consultations take place on a part-time basis during the day. The courses take place over a 1/2 day or 1 day.
Bachelor of Science in Information and Systems Management	TQ Training, Dublin	This course is 3 years long and takes place during the day. It is a full-time course running from 9:30 to 5, Monday to Friday.
MBS in Management, Information and Managerial Accounting Systems	University College Cork Commerce Faculty	This course is 2 years and is available on a full-time basis.

Best Practice in the Development of Training Databases

The consultants were also requested to undertake a review of EU and OECD Best Practice in the area. A selection of databases that have been chosen as Best Practice, that are particularly relevant to the Irish situation, is provided.

The Databases

PLOTEUS: Portal on Learning Opportunities Throughout the European Space (www.europa.eu.int/ploteus)

PLOTEUS (a Portal on Learning Opportunities Throughout Europe) was set up in order to respond to the conclusions of the Lisbon and Stockholm European Councils (March 2000 and March 2001), in response to the invitation to the EU to create a Europe-wide service providing information on jobs and learning opportunities.

PLOTEUS provides a gateway to education in Europe by helping students, job seekers, workers, parents, guidance counsellors and teachers to find out information about studying in Europe. One particular service offered by PLOTEUS is a Learning Opportunities database of school, vocational training and adult education courses.

EADI: European Association of Development Research and Training Institutes (www.eadi.org)

EADI is an independent and non-profit making international non-governmental organisation. It is an active network of 150 organisations with 14 working groups addressing key issues in Development Research, Training and Information.

EADI aims to promote development, research and training activities in economic, social, cultural, technological, institutional and environmental areas. In order to achieve this, one of the services that EADI has developed is a Training Database on which numerous training courses throughout Europe are listed.

Germany: Multi-language database for continuing vocational and educational training (www.imove-germany.org)

In 2001, the iMOVE office at the Federal Institute for Vocational Training ("BIBB") developed Germany's first multi-language database for continuing vocational education and training - www.imove-germany.org. Using a special online access, training providers and educators input information about their company and services in up to seven different languages (German, English, French, Spanish, Chinese, Russian and Arabic).

The iMove database is essentially a go-between for those seeking training and the training providers.

Scotland: Scottish Enterprise Database (www.ecommerce-scotland.org/events)

Scottish Enterprise, the Department for Trade and Industry and other partners run a range of seminars and eBusiness workshops across Scotland. Individuals who wish to register for an event can use the Scottish Enterprise Online Events Database.

Ireland: The National Education Database (www.nightcourses.com)

The National Education Database can be accessed on nightcourses.com and is operated by Learning Ireland. It is the largest database of evening classes, adult education and further learning in Ireland and is also Ireland's only searchable online listing of education options available by night. There are currently 23,000 courses listed in the database.

The Main Insights

The main insights gained from reviewing the Best Practice databases are discussed below, with reference to the relevance and suitability to the Irish situation.

- **Updating Information:** PLOETUS is continually adapting and improving the service that it provides. Information on courses is updated to ensure that the user is receiving the most up to date information. A method of continually reviewing the accuracy of the information provided should be put in place so that all contact details and course information is current.
- **Instructions/Help:** As with the Scottish Enterprise Database, the instructions for using the database should be displayed clearly. Should the user experience any difficulties in using the database, further help should be easily accessible, such as the Search Engine Tutorial on the Irish National Education Database.
- **Search Options:** Offering the choice of either a simple/advanced search option, as per EADI database, is important. This allows the user to quickly and efficiently find a suitable course. The more information that the user has on a particular course the quicker they will be able to find what they are looking for.
- **Using Browser Windows:** The user-friendly option to allow all further information on a particular course to appear in a new browser window enables the user to easily close the browser window if the course is not suitable and the original course search page will still be visible
- **Quality Criteria:** The quality criteria adopted by the German database iMove is an effective method of reinforcing users perceptions of the quality and creditability of the database. It reassures users that only high-quality training providers are listed.

- ***Further Information Options:*** The ‘send me a brochure’ option on the Irish National Education Database would be beneficial to a user interested in finding out more information about a particular course or institution.
- ***Number of Courses:*** It is useful to indicate the number of courses held at any one time on the database. In doing so, users will be encouraged to use the database, driven by the lack of the usual ‘trawl’ through extensive lists of courses to find one relevant to them and their organisation.

www.europa.eu.int/ploteus

www.eadi.org

www.imove-germany.org

www.ecommerce-scotland.org/events

www.nightcourses.com

ICT Management Skills training programmes

1 Skillnets

The Skillnets Initiative is an enterprise-led network based model of training, which receives funds from the National Training Fund, to support companies and their people. Training networks allow enterprises to decide what training they need as well as how, where and when it should be delivered thus allowing staff to take part in relevant, flexible and cost effective learning. Skillnets Ltd. provides funding, advice and support to underpin the competitiveness of firms as well as increase the long term career opportunities and employability of employees.

Funding for Skillnets from the National Training Fund will be €8 million in 2006. This will be made available to enterprise groups on the basis of competitive calls for proposals. Applications for Skillnets support were invited in September 2005 (and will also be invited in 2006 and 2007) and funding commitments for up to 2 years will be made to approved Training Networks. All learning, skills development and networking activities are eligible for support under the Training Networks Programme.

Skillnets funds a percentage of the cost of running each individual network and the training provided by those networks. The Training Networks Programme enables companies to overcome many of the barriers they have previously experienced in developing effective training for their companies and within this it has the potential to address the ICT Management Skill needs of these companies.

In each training network, companies come together to decide what training they need, how, where and when it will be delivered. This approach is particularly appropriate for small and medium sized businesses that may lack the time, expertise or money to develop training customised to their specific needs and directly relevant to their size and industry sector.

Growing the skills base is one of the priority areas of Skillnets and the themes identified to address this area include increasing adaptability of workers to the knowledge economy, building management capacity and adopting advanced business practises. It is hoped that building awareness among the networks of this eBusiness Strategy will encourage more and more networks to address the ICT management skill training need during 2006 and beyond.

ICT management training was identified among their proposed courses by a number of these networks

2 The Accel Training Programme

Accel is an initiative of the Department of Enterprise Trade and Employment and is managed by Skillnets Services Ltd on its behalf. The programme is funded by the European Social Fund and the National Training Fund. Up to €16 million of grant funding will be allocated to approved projects for the period 2006-2008. The closing date for applications was November 5th and successful applicants were to be contacted in December 2005.

The Accel Programme will support the training of people in employment (in-company Training). It aims to give employers and workers an opportunity to rapidly improve, realign or revise their current skills base. Private Sector companies of any size and from any sector are eligible for receipt of training under the Accel Programme.

The Accel Programme complements a number of other actions and initiatives under the Employment and Human resources Development Operational Programme. The Accel initiative is available to support in-company training activities which are operated by;

- Employer bodies,
- Trade unions,
- Business associations,
- Groups of companies,
- Educational and training institutions acting in partnership with industry
- County Enterprise Boards on behalf of groups of companies

Funding is not available for proposals from individual companies.

This is another significant new network-based training initiative which could be used to address the ICT management skill training need identified in the National eBusiness Strategy. Where possible, ICT Management Skill training should be encouraged by the programme managers to support the sentiment of this recommendation, (although this does depend on the interest among the networks that apply).

3. Other Key initiatives

A number of other initiatives were explored during the year. These include the following:

The Shannon Development ICT eCluster Programme

Since 2002 Shannon Development has managed the ICT eCluster Programme which provides a diverse group of participating companies with training, consultancy and inter-company networking. The programme is effective in getting companies talking with one another and learning from each others experiences while going through a series of customised training courses and being supported by a dedicated eBusiness consultant. The programme has been most successful where participating companies are of a similar size or level of technology and less so where the group is diverse.

Specific CEB initiatives

eBusiness initiatives are ongoing in a number of County and City Enterprise Boards around the country. Since the 'Empower' initiative, (which was widely effective in supporting eBusiness among small and micro enterprises), a number of CEBs have continued to offer eBusiness courses and support to their member companies. For example Limerick City Enterprise Board ran a series of seminars on eBusiness in 2005 and Donegal CEB has used a panel of mentors to supplement its eBusiness training courses. A revival of the Empower initiative might be another possible vehicle for delivering on this recommendation and in particular to the smaller companies.

The FÁS SME Cluster Programme

Through this programme FÁS work with clusters of SMEs, identifying their needs and matching them up with consultants in the respective subject areas. The main areas where there are serious skill gaps are marketing/sales, finance, production etc. This is a fairly lengthy and thorough process with a considerable amount of one on one consultancy and training input. ICT skills needs are identified, but not as a top priority.

Through this programme, FÁS have received feedback that owner and senior managers of SMEs have a poor understanding of the potential benefits of ICT to their businesses, but do not generally perceive this currently as an imperative. FÁS advisers have been encouraged to take on board the ICT issue in future training and networks. FÁS have also indicated that they would support any awareness campaign to enlighten SME managers around the need for greater knowledge in this area where possible.