



## Maximising the Impact of ICT Infrastructure Investment

### Overview

Investment in ICT infrastructure, such as broadband rollout, is a vital step to promote economic development and social integration. The recent EU proposal to fund investment in rural broadband infrastructure is an example of this. Such investment in physical infrastructure must be complemented by initiatives to develop the skills that will be needed to extract value from this investment. Training and learning programmes, including certification schemes, must be a key component of initiatives that will assist in maximising the potential offered by enhanced broadband provision in rural areas.

### Why is ICT Infrastructure Investment Important?

High-speed Internet access is necessary to maximize effective use of ICT, which in turn is an explicit driver of productivity, innovation, and social inclusion. Therefore, investment such as that agreed by the European Council in March 2009<sup>1</sup> is important as a tool for economic development and social integration. Under this decision, the European Union will allocate approximately €1 billion to invest in broadband in rural areas of the Union. This initiative is part of the European Economic Recovery Plan which, in response to the current economic crisis, aims to inject purchasing power into the European economy and to reinforce Europe's long-term competitiveness. The latest data indicate that 30% of the rural population within the European Union does not have high-speed Internet access<sup>2</sup>. Businesses operating in these areas are unable to make use of the potential offered by broadband to enhance productivity, with opportunities to create employment in new or innovative product or service delivery being similarly restricted. In particular, an absence of broadband will inhibit the development of fast-growing, high-valued-added economic sectors<sup>3</sup>. Therefore, the twin policy goals of supporting appropriate regional development and maximizing the potential of the whole European economy is naturally supported by investment in broadband infrastructure. Similarly, social integration will also be supported by the provision of broadband services such as those relating to e-government or social networking; moreover these are particularly important in rural areas, where geographical isolation is an important consideration.

### Why Should There be a Skills Component in ICT Infrastructure Investment?

Frequently, proposals for ICT investment focus on physical infrastructure. For example, there are three types of measures that will be eligible for support under the European Commission rural broadband proposal:

- Creation of new broadband infrastructure
- Upgrade of existing broadband infrastructure
- Installation of passive broadband infrastructure, possible in tandem with other infrastructures

These measures will deliver many of the essential components of effective broadband rollout. However, if the potential of broadband is to be fully unlocked, then *physical infrastructure* needs to be complemented with a *skills infrastructure*. It is obvious that, at the level of an individual, a tool must be combined with appropriate skills and knowledge to lead to effective application. Without the relevant skills and knowledge, broadband may either not be used to its full potential ("We built it, they came, but couldn't use it") or indeed may not be used at all ("We built it and no-one came"). Therefore, a restricted focus on physical infrastructure is not sufficient. As the DG Information Society 2007 conference on "Bridging the Broadband Gap" identified in its conclusions, "ICT skills and digital literacy are critical to the effectiveness of any broadband strategy".<sup>4</sup> It is clear that any large-scale strategic initiative on broadband must encompass a skills dimension.

<sup>1</sup> <http://europa.eu/rapid/pressReleasesAction.do?reference=DOC/09/1&format=HTML&aged=0&language=EN&guiLanguage=en>

<sup>2</sup> European Commission "Commission earmarks €1bn for investment in broadband" MEMO/09/35

<sup>3</sup> M. Fornfeld, G. Delauney, and D. Elixmann, "The Impact of Broadband on Growth and Productivity" 2008: pp. 7.

<sup>4</sup> [www.broadbandforum.eu/index.nof?o=0&nyelvid=2&k2=146&k1=136](http://www.broadbandforum.eu/index.nof?o=0&nyelvid=2&k2=146&k1=136)

## What Specific Skills-Focused Initiatives Could Support Implementation?

Skills-focused initiatives complementing investment in physical ICT infrastructure could take a variety of forms. Some will focus on skills directly connected with economic development. For example, organisations and individuals, particularly in the current economic environment, are looking to move up the value chain, in particular by engaging in activities that will give them a substantial and secure economic return. ICT is one of the main facilitators of this, and effective use of these technologies is based on experience and, crucially, skills.

Other skills-focused initiatives would address social inclusion by focusing on digital literacy skills. For example, basic ICT skills that allow people to engage with e-government or e-commerce services can very easily remove existing barriers to accessing services created by rural isolation.

European and national plans should therefore contain formal and informal learning interventions such as training and certification to ensure the required ICT skills are in place to make the most of enhanced broadband infrastructure. Specific initiatives could focus on:

- Common end-user ICT skills that underpin core business activities, including e-mail and e-commerce activities;
- Specialised ICT skills that support the development of value-added activities, including Internet services and e-business activity, particularly among small- and medium-sized enterprises;
- Basic, introductory ICT skills that assist marginalised groups, including the aged and the geographically isolated, to access essential Internet services, such as e-government and distance learning, and to engage in social networking.

When implementing these programmes, tools such as certification schemes will assist in establishing a structured approach to learning that references recognised standards. In addition, certification will provide a robust benchmark for measuring the degree of skills development attained by a specific programme – an important metric that can assist in evaluating the effectiveness of a particular initiative. This can be of particular use to policy makers who wish to ensure that they have an objective means of demonstrating efficiency and value for money associated with the disbursement of public funds.

## Conclusion

Investment in ICT infrastructure, particularly the rollout of broadband, is crucial for economic and social development, but this investment must include a clear focus on skills development to ensure that the maximum potential is extracted from the infrastructure once it is put in place.

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## About ECDL Foundation

ECDL Foundation's mission is to enable proficient use of ICT that empowers individuals, organisations and society, through the development, promotion and delivery of quality certification programmes throughout the world. Further information on ECDL Foundation is available at [www.ecdl.org](http://www.ecdl.org).