The regions in the Digital Single Market – ICT and digital opportunities for regions and cities

SUMMARY

The digital economy is growing at seven times the rate of the rest of the economy. The European Commission estimates that completing a Digital Single Market could contribute €415 billion per year to Europe's economy, create 3.8 million jobs and transform public services. Local and regional authorities may well benefit from many of the opportunities which the digital era offers.

The European Commission has presented different initiatives in order to boost the use of information and communications technologies (ICT) in Europe. The Digital Agenda for Europe, which was announced in 2010 in the framework of the Europe 2020 Strategy, aimed to promote economic recovery and improve social inclusion through a more digitally proficient Europe. The Digital Single Market strategy, introduced in 2015, complements the Digital Agenda for Europe. Achieving a Digital Single Market will ensure that Europe maintains its position as a world leader in the digital economy, helping European companies to grow globally. Equally, enhanced use of digital technologies can improve citizens' access to information and culture, and can promote open government, equality and non-discrimination.

Although many of the Digital Single Market priorities are dealt with primarily at national level, various initiatives can be explored at the local and regional level, and regions and cities can become active in planning and pursuing their own digital strategies.

In this briefing:

- Introduction
- State of play
- Opportunities for the regions
- The contribution of the European Parliament
- Opinions of the Committee of the Regions
- Funding opportunities
- Outlook

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Introduction

The development of the Digital Agenda for Europe (DAE) was evidence of the EU's recognition of the importance of information and communications technology (ICT). The Agenda formed one of the seven pillars of the Europe 2020 Strategy, which set objectives for sustainable growth in the EU up to 2020. The DAE aimed at better exploiting the potential of ICT in order to foster innovation, economic growth and progress. Its main objective was the development of a digital single market in order to generate smart, sustainable and inclusive growth in Europe. In particular, the DAE pillars of Research and innovation, Enhancing digital, literacy, skills and inclusion as well as the one on the ICT-enabled benefits for EU society are those in which local and regional authorities (LRAs) could get more involved.

In 2015, the European Commission presented the Digital Single Market (DSM) strategy which it had identified as one of its 10 political priorities. The DSM complements the DAE and addresses some of the DAE areas where progress has been stalled. The Digital Single Market strategy aims to open up digital opportunities for people and business and enhance Europe's position as a world leader in the digital economy. It is built on three main pillars: (1) better access for consumers and businesses to digital goods and services across Europe; (2) creating the right conditions and a level playing field for digital networks and innovative services to flourish; (3) maximising the growth potential of the digital economy.

State of play

The Digital Agenda Scoreboard, shown in Figure 1, measures the progress of Member States under five main headings: connectivity, human capital, use of internet, integration of digital technology by businesses, and digital public services. As seen on the Scoreboard, there are considerable differences in performance from country to country.
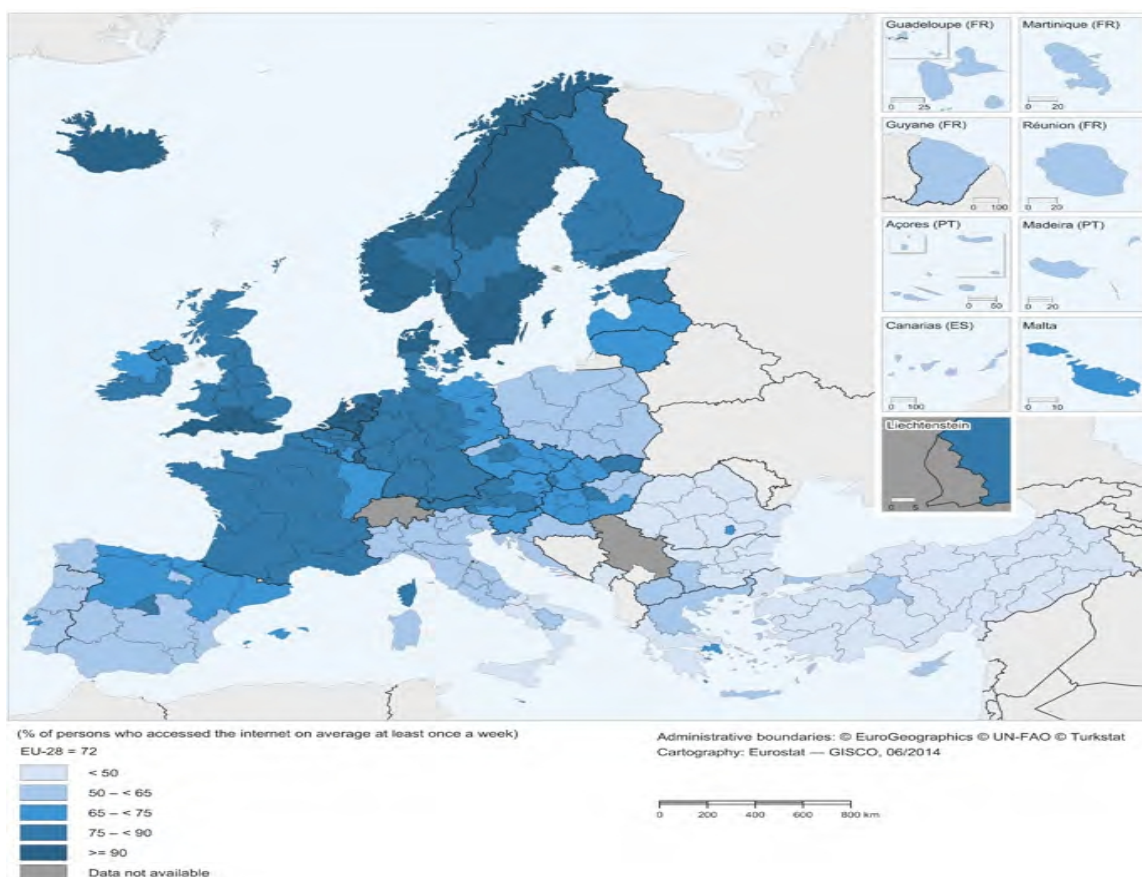
Figure 1: Digital Agenda Scoreboard
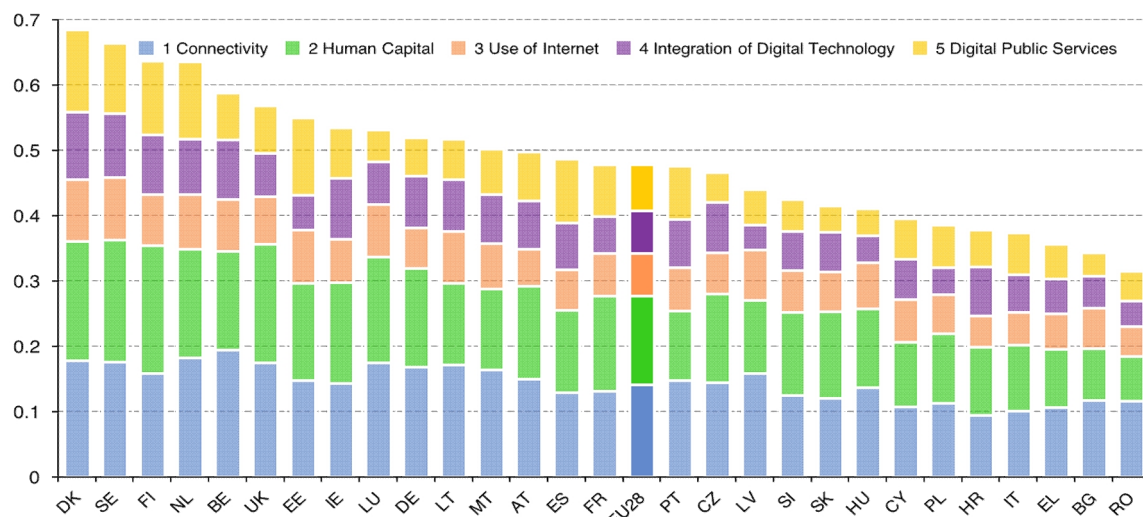
Source: European Commission, Digital Agenda Scoreboard.

For instance, according to the Eurostat regional yearbook 2014, less than half of all households in one Romanian, two Greek and three Bulgarian regions had a broadband connection. Broadband connectivity rates were particularly low in some parts of eastern and southern Europe. The divide is also evident as far as the regularity of internet use as is concerned, as seen in the map in Figure 2.

**Figure 2: Regular use of the internet, by NUTS 2 regions, 2013
(% of persons who accessed the internet on average at least once a week)**

(% of persons who accessed the internet on average at least once a week)
EU-28 = 72

< 50
50 – < 65
65 – < 75
75 – < 90
>= 90
Data not available

Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 06/2014

Source: Eurostat regional yearbook 2014.

Opportunities for regions and cities

LRAs may develop digital strategies in order to fulfil the full potential of digital opportunities. They can step up their demands for further digital services to national governments. European regions and cities may also invest in digital technologies covering a number of different fields, some of which are mentioned below.

Smart innovative cities and regions

Regions and cities can use ICT capabilities in various ways in order to establish smart innovative strategies through smart specialisation. ICT can help to make our cities better places to live, to work and do business in. In Smart Cities, ICTs are used to improve public services and quality of life, improve the use of resources and reduce environmental impact. For instance, LRAs can improve energy efficiency through the renovation of their own buildings. Reducing energy use saves money, but it also reduces the amount of CO_2 emitted into the atmosphere – a major driver of climate change. Regions and cities can also improve local transport and reduce congestion.

> **Smart specialisation**
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> Smart specialisation is a strategic approach to economic development through targeted support to research and innovation (R&I). It involves a process of developing a vision, identifying competitive advantage, setting strategic priorities, and making use of smart policies to maximise the knowledge-based development potential of any region, strong or weak, high-tech or low-tech.
>
> Source: European Commission

Promotion of digital technologies in rural and remote areas

Wide differences still exist in the availability of broadband within EU Member States and in their regions. In particular, remote, rural, mountainous/island areas where population density is low lag behind urban areas in terms of broadband infrastructure. According to Eurostat, within the EU‑28, 80% of households in densely populated areas had a broadband connection in 2013, compared with 77% in intermediate areas and 70% of households in thinly populated areas. Capital regions recorded the highest shares of regular internet users in most EU Member States. The graph below shows the differences in broadband connections in households by degree of urbanisation. LRAs in these areas have a crucial role to play in order to address the regional digital divide through the setting up of smart specialisation or ICT projects.

Figure 3: Broadband connections in households, by degree of urbanisation (2013)
(% of households with a broadband connection)
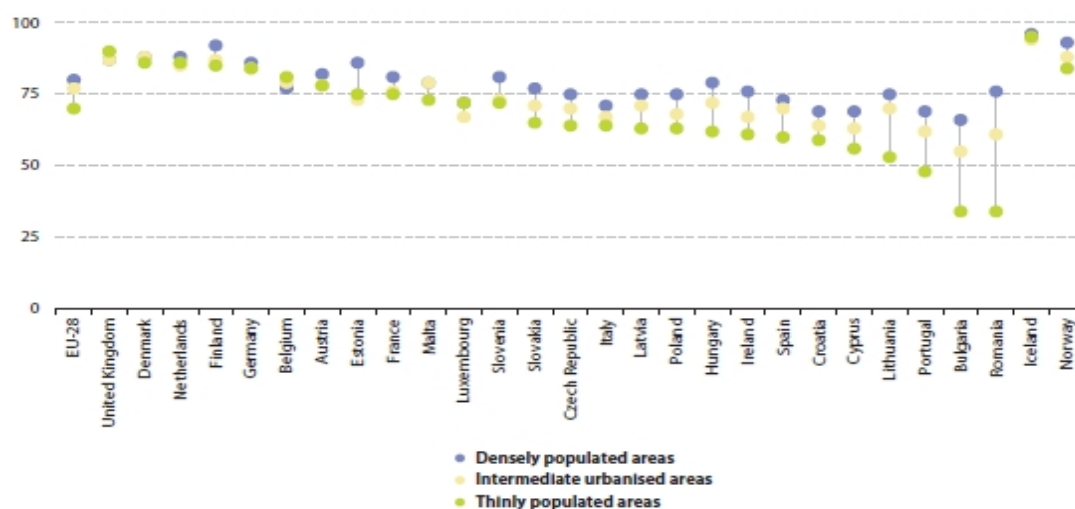
Source: Eurostat regional yearbook 2014.

Job creation

More skilled ICT professionals are needed in all sectors of the economy. According to the European Commission, it is estimated that 825 000 vacancies for ICT professionals will be unfilled by 2020. Furthermore, a wide range of ICT skills are now needed in many professions. The European Commission has established a multi-stakeholder partnership, the Grand Coalition for Digital Jobs, to tackle the lack of digital skills in Europe and the thousands of unfilled ICT-related vacancies across all industry sectors. LRAs can encourage their constituents to learn ICT skills, thus improving their employability. Digital opportunities may also be explored in order to set up regional clusters, promote local products and help to attract investors and tourism in the territory of the LRAs.

e-education

LRAs are well placed to address the needs of their constituents with suitable educational programmes. Regions and cities may offer a range of e-education and e-learning opportunities, ranging from vocational training to lifelong learning. Open education resources (OER) and massive open online courses (MOOCs) may also be explored by educational institutions run by LRAs in order to boost citizen participation. ICT may provide new cooperation opportunities between LRAs and universities thus bringing new know-how to regions and cities. Even the most remote regions can set up innovative partnerships and cooperative projects with universities aimed at promoting educational and scientific activities within their remit.

e-inclusion

Many people lack the skills, confidence or opportunities to exploit digital technologies to the full. Enhancing digital literacy, digital skills and knowledge is just as important as reading, writing and arithmetic in today's society. Those parts of society that do not have computer skills or easy, affordable access to the internet may find themselves increasingly excluded from society in the absence of programmes to help them make up for those gaps. Knowledge can become more accessible to all by lowering costs and enabling better access to digital services. Regions and cities are well positioned to know the needs of citizens and to offer high quality projects aimed at supporting the vulnerable groups within their remit. Putting emphasis on digital skills and education is also necessary in order to better balance gender participation in ICT professions, as according to the European Commission, there is an alarming drop in female ICT graduates (today only 29 in every 1 000 female graduates have a computing or related degree, and only 4 go on to work in ICT-related activities).

e-government

LRAs can invest in the digitalisation of their services. Effective e-government strategies can provide a wide variety of benefits including more efficiency and savings for governments and businesses, increased transparency, and greater participation of citizens in political life. e-government encourages new forms of participatory democracy and contributes to the spread of information on the projects that LRAs undertake. Rationalising and simplifying administrative procedures and services can reduce bureaucratic procedures and formalities, help bring down the administrative costs of doing business and facilitate relations between individuals and public administration. The European Commission regularly reports on various e-government practices in the EU Member States. Various e-participation projects also encourage people to engage in local politics and policy-making. LRAs also invest in cybersecurity strategies to increase the e-safety of their services and protect the data of their constituents.

Culture, tourism and the promotion of patrimony

Accessibility to Europe's cultural heritage is a key instrument in promoting understanding of cultural diversity, uniting people in a multilingual, multicultural Europe, and increasing economic potential in areas such as tourism. e-culture projects usually promote the digitisation of cultural content and cultural heritage, and the use of ICT for cultural production and consumption. Regions and cities can explore a number of ICT possibilities in order to promote their historic patrimony and to project cultural projects and events outside their borders. This can happen with local or transnational digital platforms such as Europeana, Europe's online library, museum and archive, which is intended to make Europe's cultural and scientific heritage accessible to all on the internet.

e-health

Digital tools allow better social care, health monitoring and recording. ICT can contribute in this field by providing European citizens with better and cheaper services for health and ageing well. The introduction of ICT in telemedicine is an example of outreach of citizens with transport difficulties that can be reached by new technologies. ICT can help older people to stay healthy, independent and active at work or in their community. ICT can be used to develop silver economy opportunities, ranging from age-friendly houses and public services as well as promoting remote care and health monitoring. The European Commission funds several research projects in this field.

Trans-border cooperation

New forms of digital cooperation may spur further interaction in the field of ICT. Various trans-border networks have been formed in order to promote inter-regional and inter-city cooperation in order to tackle ICT challenges at European level. The European Regions Network for the Application of Communications Technology (ERNACT) is one of these platforms. Another venture, the ONE project aims at improving regional capacity for planning investments in ICT through setting up a network of regional 'observatories' in Poland, Germany, Italy, the Czech Republic, the UK, France and Cyprus.

The contribution of the European Parliament

The European Parliament (EP) has been consistently supportive of efforts to foster development of broadband infrastructure and ICT. In a 2011 resolution (2010/2304(INI)) the EP underlined that the EU-wide provision of fast broadband networks is of vital importance if the objectives of the Europe 2020 Strategy are to be achieved. It stated that it is essential to facilitate access to broadband infrastructure in order to assist the take-up of broadband satellite internet services on an affordable basis in rural areas, mountainous and island regions. The extension of broadband networks, primarily in rural areas, would facilitate better communications, particularly for persons with reduced mobility or living in isolated conditions, as well as improving access to services and encouraging the development of SMEs in rural areas, thereby helping to create new jobs and develop new services in these localities. It also highlighted the need for better guidance on broadband investment for local and regional authorities in order to encourage the full absorption of EU funds.

In a 2012 resolution on completing the Digital Single Market (2012/2030(INI)), the EP declared its support for the Commission's determination to strengthen and facilitate the development of ICT infrastructure in order to bridge the digital divide. It welcomed initiatives within the framework of the programmes for regional and rural development, as well as the initiatives of the European Investment Bank (EIB) for improving the integration of rural areas in ICT infrastructure. It called on the European Commission to facilitate the integration of ICTs in SMEs, using financial instruments.

In 2013, in a resolution on the Digital Agenda, the EP welcomed the adoption of the EU-wide Youth Guarantee Scheme and called on the European Commission and Member States to maximise the effectiveness of such action by prioritising the acquisition of digital skills. It also deplored the reduction in funding that the European Commission had originally proposed for ICT investment in the Connecting Europe Facility. The EP has emphasised the importance of ICT investment in many other recent resolutions such as the June 2015 Resolution on the European Fund for Strategic Investments (EFSI) in which it suggests that EFSI should support projects for the development and deployment of information and communication technologies (ICT), including projects of common interest which aim to complete the internal market in the field of telecommunications and digital infrastructure.

Opinions of the Committee of the Regions

The CoR's 2010 Opinion on the Digital Agenda for Europe noted that LRAs can be key drivers for its implementation. It stated that the priorities of the Digital Agenda for Europe at local and regional level are prerequisites for the quality of life and social and economic activity of citizens and could stimulate more efficient and personalised public services as well as local businesses.

The 2013 Opinion on reducing the cost of deploying broadband pointed out that local and regional authorities should become involved in financing digital infrastructure in areas considered unprofitable by private operators, for example in rural areas. Europe's potential for developing ICT services could be used as a means of improving local and regional authority services in fields such as healthcare, education, public order, security and social services. LRAs, it noted, have a key role to play in coordinating demand for broadband access from public administration, law enforcement agencies, local schools and healthcare facilities, by establishing groups (of schools, communities, SMEs, etc.) at local level, developing broadband-infrastructure demonstration areas for consumers, and by providing training. However, the opinion points out that it is crucial for public institutions at regional and local level to have adequate in-house capacities and sustainable financial resources for digitisation. Other recent opinions such as in 2014 on the European single market for electronic communications also cover similar themes.

Funding

Various EU funding opportunities exist in the fields of research, broadband technology, technology and smart specialisation. European Structural and Investment Funds can be used strategically to encourage the transposition of DSM legislative initiatives, the development of administrative capacity for effective application of this legislation and the leverage of national public and private funding to enhance the positive impact of the DSM in all EU regions. The European Commission has issued a guide for local and regional entities in order to assist them in planning investments in line with relevant policy objectives and rules. It provides practical tips to support public authorities in the preparation of broadband investment projects, including those co-financed from the European Structural and Investment Funds and the Connecting Europe Facility. The European Agricultural Fund for Rural Development (EAFRD) provides opportunities for innovation and research in the field of rural development, agriculture and forestry. A practical guide for ERDF managing authorities on the promotion of smart specialisation has also been issued. The European Maritime and Fisheries Fund (EMFF) also offers funding for innovative actions in promoting sustainable and diversified local economies. Assistance is provided for digital projects too, through the provision of smart growth techniques for SMEs. Furthermore, the Digital Agenda for Europe website informs about the development of the Digital Agenda for Europe. Regions and local authorities may also benefit from the LIFE programme in order to promote ICT in the field of environmental protection. Small and medium-sized enterprises can now get EU funding and support for innovation projects that will help them grow through the COSME and Horizon 2020 programmes.

The Commission has set up a Smart Specialisation Platform to provide information, methodologies, expertise and advice to national and regional policy-makers, as well as promote mutual learning and transnational cooperation. The European Innovation Partnership on Smart Cities and Communities (EIP-SCC) is another Commission initiative which brings together cities, industry and citizens to improve urban life through more sustainable integrated solutions, including on innovation, planning, energy efficiency, transport and ICT. The European Investment Bank (EIB) may also be a lender in Broadband-ICT ventures for LRAs. LRAs may find digital data for their own countries and useful funding opportunities on the website of the European Commission on the Digital Agenda for Europe. The Committee of the Regions has also published a study to inform LRAs about the wide range of opportunities in the DSM.

Outlook

The digital era can offer opportunities for metropolitan centres, towns, villages, and rural and remote areas. LRAs may develop digital strategies in order to fulfil the full potential of the framework of digital technology. Various local and regional projects may be set up in order to provide smart innovative technologies, promote job creation, offer e-education courses and bring local government closer to citizens. Trans-border cooperation, the promotion of patrimony and tourism can be boosted through ICT broadband technologies. ICT may also contribute to the fight against social exclusion and to the support of 'third age' people.

However, although high-speed broadband infrastructure is a pillar of the Digital Single Market and a prerequisite for global competitiveness, telecommunications services and infrastructure in the EU are still highly fragmented along national borders. EU financial support can be used to encourage market players to provide broadband, particularly in rural areas where population density may not be great enough to repay deployment costs. Broadband infrastructure (especially the promotion of broadband in rural areas) is one of the priorities of the European Fund for Strategic Investments. However, it remains to be seen whether EFSI ambitions will be fully materialised as researchers suggest that, due to the low profitability of rural broadband expansion, rural communities may still remain under-supplied. New simplified financial instruments would also help LRAs to become more active in the promotion of ICT and smart specialisation.

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