

Executive Summary

The European Union is undergoing a profound transformation, in moving from an industrial to a knowledge-based society

This report aims to facilitate the debate on the best ICT policy for this future

The European Union is undergoing a profound transformation from its two-century old industrial past to a knowledge society future.

Information and communication technology (ICT) now permeates virtually all aspects of our lives. ICT is inextricably linked with our desire for a prosperous and competitive economy, a sustainable environment, and a more democratic, open, healthy society. ICT should be seen as a key positive element, empowering EU citizens, growing businesses, and helping us build an open, innovative, secure and sustainable knowledge economy. Moreover, the knowledge society envisaged here is based on respecting human rights. It is an inclusive and open society, maintained by a globally competitive, green economy of sustainable growth.

The Ministry of Enterprise, Energy and Communications commissioned this report as part of its contribution to facilitating the ongoing debate on ICT policy. The study was therefore designed to identify the most important policy questions that the EU faces with regard to ICT and the information society to around 2015. Overall the report seeks to:

- Provide a general focus for discussion of ICT policy in Europe, at a Swedish Presidency conference in November, with an analysis of the current situation, trends, developments and their potential consequences for the citizen, and for EU companies and governments, highlighting the key issues.
- Project forward the i2010 policy issues, seeking to update and identify new policy questions facing the EU up to 2015.
- Identify promotional and catalytic actions needed for delivery of a sustainable knowledge society.

A vision of a green knowledge society

In essence the report addresses the question of how we can further the development of a European knowledge society in practical terms. The report opens with a vision of the social and economic advantages to the EU of a balanced application of ICT in the long term, starting immediately and going beyond 2015. The major gains from change will come when digital technology has become almost mundane, as it is integrated into daily life. It will create new societal forms and bases for the EU economy.

But how can we manage and plan all this? Europe needs a clear, balanced ICT policy based on a full understanding of the policy issues and of the context in which they are addressed. A pragmatic strategy is needed for sustainable growth and prosperity so that Europe can respond to the main challenges ahead which include:

- Transforming Europe into the high skill/high employment economy needed in a globalised environment.
- Tackling the effects of an ageing population while improving the major services for the public.
- Doing so in a way that takes account of foreseeable public expenditure and environmental constraints.



Three themes govern ICT policy as outlined here – social impacts; the need for a economic prosperity in terms of jobs, revenues and national budgets; addressing climate change in meaningful ways

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Ten key policy areas have been identified to give Europe a clear, balanced ICT policy with a broad view of all the issues, in order to guide progress in the twenty first century

Policy themes

Three key themes run through this policy study:

First, ICT is bringing about a fundamental shift in our economic and social lives. For instance, relationships between producers and consumers in both public and private spheres become more interactive and multi-faceted, so that the consumer ceases to be just a passive recipient and becomes an active participant. There are enormous consequences for the ways in which we interact, our social organisation, the delivery of public services including how government interacts with citizens. This means we must be ever more aware of human and social aspects as they relate to ICT. The critical importance of this was recently highlighted by EU President Barroso, who recently called for ‘a Europe committed to the radical transformation towards a knowledge-based society’.

Second, we have reached a tipping point in the transition to a knowledge economy. The changes we have been experiencing can no longer be thought of as an evolution from the industrial past. Rather, the change is revolutionary. The enterprises that drive the knowledge economy and produce jobs and growth have to be more competitive, creative and innovative than ever before. It is crucial that Europe becomes a leading knowledge economy if it is to meet the social and economic aspirations of its citizens. Moreover, the current economic downturn emphasises an immediate objective for ICT policy, to be an element for economic recovery and strengthen the European economy. Commissioner Reding has highlighted this potential in recent speeches.

Third, the issue of climate change is the most important challenge of our time. ICT occupies a leading role in the fight against climate change, contributing to a sustainable low-carbon economy. Moreover a global lead in this domain could be an important new opportunity segment for Europe’s economy – a ‘Green New Deal’.

A practical plan for the green knowledge society

These three themes emerged from the study’s programme of research and interviews with experts and stakeholders. These themes underpinned the selection of ten key policy areas, which were chosen from the analysis of interviews and a creative workshop with leading thinkers. The ten policy areas, shown below, form an overall ICT policy framework for the EU over the next five to ten years:

1. The knowledge economy: driver of future wealth
2. The knowledge society: participation for all
3. Green ICT: support for an eco-efficient economy
4. Next generation infrastructure: balancing investment with competition
5. Soft infrastructure: investing in social capital
6. SMEs and ICT: supporting Europe’s small enterprises
7. A single information market: enabling cohesion and growth
8. Revolutionising eGovernment: rethinking delivery of public services
9. Online trust: a safe and secure digital world
10. Clear leadership: rethinking the EU’s policy making process

These policy areas are discussed in detail in the report. For each area, the main issues and the broad policy goals up to 2015 have been identified, together with policy actions designed to achieve them. A selection of the more important of these goals and actions for the ten policy areas is set out below:



Policy area	Policy goals for 2015	Policy actions
<i>1. The knowledge economy: driver of future wealth</i>	<ul style="list-style-type: none"> • Improved ICT training • New IPR regime for the digital era • User involvement in innovation 	<ul style="list-style-type: none"> • Facilitate new business models • Build consensus on new IPR approach • Expand concepts of end user participation and creativity
<i>2. The knowledge society: participation for all</i>	<ul style="list-style-type: none"> • Inclusion with universal access • Improve digital literacy • Better support for older people 	<ul style="list-style-type: none"> • Incentives to extend networks and take-up • Strengthen human rights in a digital world
<i>3. Green ICT: support for an eco-efficient economy</i>	<ul style="list-style-type: none"> • Create green ICT products & services markets • Understand and exploit substitution mechanisms • Harness ICT in non-ICT sectors 	<ul style="list-style-type: none"> • Explore financial incentives • Extend/use government procurement • Research into household and firm behaviour • R&D support for novel control systems
<i>4. Next generation infrastructure: balancing investment with competition</i>	<ul style="list-style-type: none"> • Maintain competition in all ICT sectors • Promote open source software and open standards • Transparent internet governance • Promote (fixed and wireless) high speed broadband networks 	<ul style="list-style-type: none"> • Vigorously deploy competition law with accelerated processes • Encourage open ICT, networks and standards • Inclusive approach to internet governance • Harmonise EU spectrum policy • Balance investment incentives and access rights for networks
<i>5. Soft infrastructure: investing in social capital</i>	<ul style="list-style-type: none"> • Set up a build-and-rollout programme for each service (ie eHealth, eEducation, etc) • Ensure investments stimulate EU economy • Use green ICT 	<ul style="list-style-type: none"> • Identify key candidates for services and create a vision for the whole soft infrastructure, Europe-wide • Develop business cases • Fund design, pilot and roll-out
<i>6. SMEs and ICT: supporting Europe's small firms</i>	<ul style="list-style-type: none"> • Expand / deepen ICT use through broadband, cloud computing, etc • Support small firms with potential for innovation and growth • More support for rural SMEs 	<ul style="list-style-type: none"> • Build competency in small firms with growth potential • Raise awareness and improve digital literacy • Grants for expert advice • Deploy rural development and other funds
<i>7. A single information market: enabling cohesion and growth</i>	<ul style="list-style-type: none"> • Demonstrate the economic gains • Harness knowledge economy and green ICT • Simplify regulation 	<ul style="list-style-type: none"> • Promote advantages • Encourage single market in public services • Prepare deregulation packages appropriate to each segment
<i>8. Revolutionising eGovernment: rethinking delivery of public services</i>	<ul style="list-style-type: none"> • Citizens as participants rather than just tax payers • Increase participation levels across Member States 	<ul style="list-style-type: none"> • Spread best practice in participatory eGovernment • Benchmark citizens' participation • Establish open platforms for developing services
<i>9. Online trust: a safe and secure digital world</i>	<ul style="list-style-type: none"> • Overcome organisational issues • Improve protection of critical ICT infrastructure • Protect individuals' rights • Safety and reliability online for all 	<ul style="list-style-type: none"> • Increase awareness • Plan for implementation • Enhance EU co-ordination • Protect the citizen online
<i>10. Clear leadership: rethinking the EU's policy making process</i>	<ul style="list-style-type: none"> • European institutions develop clear vision of role of ICT • Realistic stretch targets for key policy areas 	<ul style="list-style-type: none"> • Enhance levels of collaboration • Review institutional structures • Stronger links to other policy areas, such as the environment

