

# IS NEWS: The Information Society Newsletter



## Editor's Note

I'll start by quoting from the JRC's mission statement (see the panel below for the complete statement) which reads .... "As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support through the whole policy cycle." Clearly the relevance of our research work is determined by the degree to which we focus and align our research and analysis to the policy needs of our colleagues engaged in policy-making in our customer Directorates General in Brussels.

To help us do this, we have had (since 2009) a cooperation agreement with DG INFSO. The agreement was simple. Each spring we hold a workshop to examine priority topics for the following year (and beyond) and each autumn we hold a series of seminars to brief colleagues in Brussels on our main research findings. Although simple, this process has become key to planning our allocation of resources and to ensuring discussion, debate and wider understanding of our output beyond the formal written deliverables and our scientific publications.

Last month, we held our 2012 priority-setting workshop in Seville with senior colleagues from DG INFSO. This year, the challenge was not only to look into 2013 and beyond, but also to consider the needs of the newly-structured DG CNECT (as from 1 July 2012). As a result of this workshop, we now have confirmation of our priorities on the Digital Economy and eHealth (including our support to the European Innovation Partnership (EIP) on "Active and Healthy Ageing"). We have also identified a number of exciting new topics to further explore as we start to draft our work programme for 2013 and to set in place some of the exploratory activities that will look towards the horizon of 2020. This is an

invigorating time of the year, when we can look beyond our immediate tasks and deliverables.

Almost immediately after this workshop, we began to prepare our inputs to the Digital Agenda Assembly (21–22 June). Here, our staff played an active part in several of the workshops and a host of planned, and ad-hoc, meetings that usually surround such an event. But more on this next time.

In this issue of our newsletter, we have tried to include an interesting mix of articles taken from our research portfolio, workshops and recent publications. As I promised in the last editorial, we have also included a short article on *behavioural economics* that we hope will serve as a taster of what we believe will become a very useful new competence in our toolbox of research methods. We seek new insights into policy development: particularly since many policies involve an internet presence or consumer/user interactivity and are therefore well suited to behavioural economic study. But, behavioural economics has a much broader utility and potential in policy making processes and we expect our future expertise in this discipline to reach far beyond the margins of the internet.

Finally, if you would like to follow-up on anything in this issue, please do not hesitate to contact us. Moreover, if you would like to get actively involved in our workshops and expert meetings then we would be very happy to hear from you.

David Broster  
Head of the Information Society Unit

European Commission  
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**JRC MISSION:** "As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle. Working in close cooperation with policy Directorates-General, the JRC addresses key societal challenges while stimulating innovation through developing new methods, tools and standards, and sharing its know-how with the Member States, the scientific community and international partners. Key policy areas include: environment and climate change; energy and transport; agriculture and food security; health and consumer protection; information society and digital agenda; safety and security, including nuclear; all supported through a cross-cutting and multidisciplinary approach."

## HIGHLIGHTS EVENTS PUBLICATIONS

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## Strategic Intelligence Monitor on Personal Health Systems

The Strategic Intelligence Monitor on Personal Health Systems (SIMPHS) Project started in 2009 with an analysis of the market for Personal Health Systems (PHS). Focusing exclusively on Remote Patient Monitoring and Treatment solutions (RMT), the research showed that significant barriers made the integration of RMT into healthcare processes very difficult. To understand better how adoption processes could be facilitated, the research scope was expanded in 2010-2012 to include a demand-side analysis and investigate the role of PHS technologies in supporting integrated care. This approach helped identify successful Integrated Personal Health and care Services (IPHS) deployment cases and the key drivers behind these, and helped gain invaluable insights into what internet users in the EU actually expect from ICT for Health, how they relate to them and ultimately what policy can do to tap into the potential demand among EU citizens for ICT for Health solutions.

### Understanding user demands in a complex ecosystem

The insights into EU citizens' demand were gathered from a Citizen Panel Survey, which 14,000 internet users from 14 EU Member States responded to in the summer of 2011. The survey directly contributes to two major EC policy initiatives, the [Digital Agenda](#) and the [European Innovation Partnership on Active and Healthy Ageing](#) which both seek to tackle societal challenges and create opportunities for innovation and economic growth in Europe by taking action in the health area.

Our theoretical framework for policy-making called "**Towards Social Determinants of ICT for Health**" (see "Citizens and ICT for Health in 14 EU Countries: Results from an Online Panel" Report available on the [SIMPHS2 project webpage](#)) was used to not only design the survey and information collection but also understand the complex ICT for Health ecosystem by identifying the underlying conceptual dimensions emerging from the data and unveiling key relationships between these dimensions.

### What EU citizens do on the Internet...

Searching for information comes first (68% do so every day) followed by sending emails (41%) and using social networks (39%). Instant messaging (23%) and online banking (20%) come somewhat further behind. Internet activities are more spread among males; younger people; the university-educated; the self-employed /entrepreneurs or students; people living in densely populated areas and those in good health.

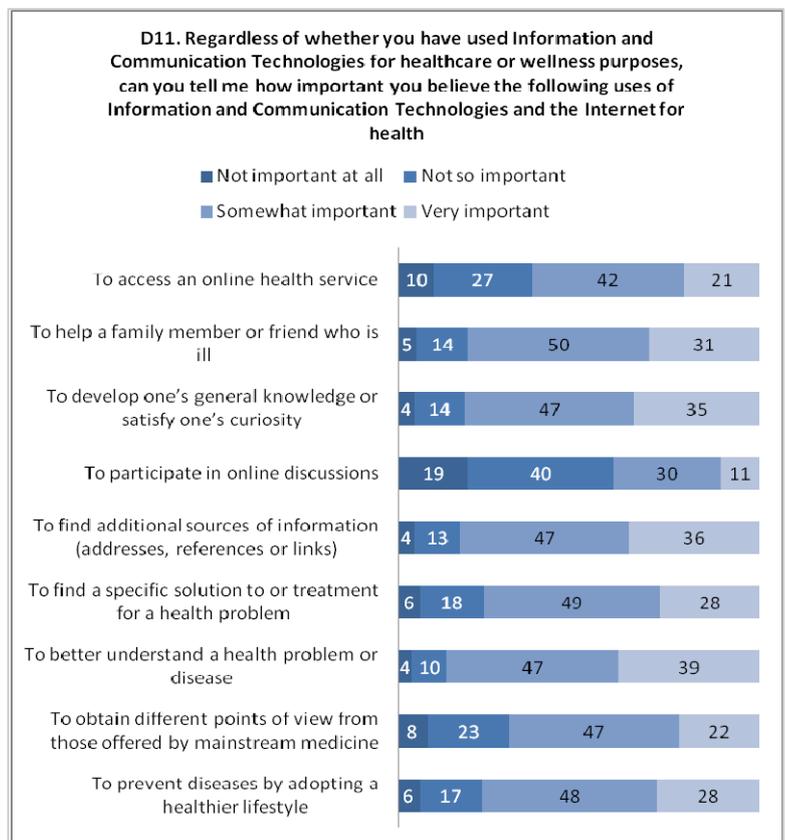
In terms of ICT readiness, our analysis framework reveals four main types of Internet activities: basic uses, individual uses, social/web 2.0 uses and tech uses, from the easiest to the most complex type of use.

### ...and what triggers them to use ICT for Health

More than a third of the sampled European population use ICT for Health to better understand a health problem or disease (39%), find additional sources of information (36%) and develop knowledge and personal satisfaction (35%). To a lesser extent, but still significant, ICTs for Health are perceived as very useful for helping a family member or a friend who is ill (31%), preventing illnesses or adopting a healthier lifestyle (28%). In contrast, only 11% of European citizens think that using ICTs for health to participate in online discussions is very important.

Internet users first perceive the use of ICT for Health as a means of actively taking control of their health. Secondly, they perceive these uses as a way to improve their aptitudes and qualities, i.e. their competence to deal with health issues.

Finally, when asked about the barriers to using ICT for Health, respondents see lack of privacy (52%), security (51%), reliability (47%) and trust (46%) as very important barriers.



## What EU citizens use ICT for Health for

The Internet is mainly used for individual health information searches, especially information on specific illnesses, rather than for sharing information, communicating or interacting about health. For example, 60% of respondents have never participated in online support groups for people with the same health issue. Looking at more advanced uses, 21% of individuals have made an online consultations through videoconferences with healthcare professionals and 25% have received medical or clinical tests online.

Two main groups of uses emerge from our analysis of ICT for Health: information and communication on the one

hand, and services and devices on the other. As regards willingness to use ICT for Health, we find three main areas of interest: use for information purposes, web2.0 use and services and devices.

## Is ICT for Health useful?

Respondents' views on the benefits of ICT for Health are positive, with over 50% agreeing that the use of these technologies makes savings (travel costs and time), helps them care for themselves and monitor their own health, leads to greater patient satisfaction and can improve quality of care. Half the respondents also agree that ICT for Health can change their behaviour in favour of a healthy lifestyle.

## So what are the social determinants of ICT for Health?

- ⇒ Social determinants of health, especially education and age, influence ICT readiness. Advanced Internet uses like Tech and Web 2.0 uses are more likely to be carried out by the young, the healthy and the well-educated while the elderly make more basic use of Internet.
- ⇒ Unequal ICT readiness generates different motivation levels. What motivates individuals to make more advanced uses is the potential of ICT to facilitate social interaction and health-related services, while individuals who make basic or individual uses are mainly motivated by Internet health information for personal purposes.
- ⇒ Both the control and competence dimensions of empowerment affect the usage of ICT for Health. More competence-oriented individuals are more inclined to use ICT for Health for information and communication purposes while individuals who are more interested in health control are more likely to use services and devices. In addition, the use of services and devices is highest among healthy people interested in maintaining a healthy lifestyle and preventing illnesses while the use of ICT for Health for information and communication is more widespread among the ill, i.e. the target group for care and cure and independent living. This is clearly related to the social determinants of health.
- ⇒ Internet users perceive lack of confidence and readiness as barriers that prevent them from fully reaping the benefits of ICT for Health. Individuals need a certain level of confidence in ICT for Health to go beyond information and communication and engage with services such as remote monitoring or video consultation.
- ⇒ Citizens who use ICT for Health services and devices perceive that they enhance access to healthcare, improve quality of care, and influence their behaviour as regards healthier lifestyles. In contrast, citizens who use ICT for Health mainly for information and communication purposes only perceive limited impact on quality of care or healthier behaviour.
- ⇒ The use of services and devices is not related to health status, while that of information and communication is slightly connected to health status. This means that those who could benefit most from services and devices because of poor health are those who tend to use ICT for Health mainly for information and communication purposes.

## Messages for policy

ICT for Health has the potential **to promote active and healthy** living and increase people's empowerment. However, new health inequalities are emerging due to the impact of "traditional determinants of health" on ICT readiness. Therefore, inclusion policies related to ICT for Health are needed to ensure that individuals with low socio-economic status and more health problems can benefit from health technologies. The elderly suffer particularly from the digital divide, though the importance of health issues in their daily lives may motivate them to engage with the Information Society through ICT for Health.

In addition, the fact that young individuals already use ICT for Health, mostly to find out about wellness and healthy lifestyles opens up huge opportunities for **health promotion and illness prevention**. Middle-aged individuals act as Internet **gatekeepers within households**, and could therefore become enablers for both the elderly and the young to engage with ICT for Health. The elderly currently use ICT for Health more for information and communication purposes than for services and devices. If their awareness of ICT for Health services and devices was raised, their ICT skills improved and their motivation fostered, they could benefit considerably from better care and treatments through ICT.

For more information and to access the respective reports, see the [SIMPHE2 webpage](#).

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## Behavioural economics - potential in policy making

Behavioural economics (or behavioural studies) within a EU policy setting refers to the application of insights from psychology to economic and policy analysis. This approach has recently received significant attention from policy-makers at EU level, due partly to the popularity of books such as *Nudge* and the application of behavioural insights to policies by the Obama Administration in the US and by the current coalition government in the UK.

In a nutshell, behavioural economics allows policy-makers to better understand and influence people's behaviour. *Nudge* refers to the idea that people's behaviour can be gently influenced in a particular direction through subtle changes in the environment in which they take their decisions. Methodologically, it obtains many of its insights through easy-to-perform, cost-effective experiments.

This field of enquiry is beginning to be applied across a wide range of policy areas in the European Commission. In some, the overarching objective is to change people's behaviour (e.g. healthier lifestyle, more recycling, greater caution with one's electronic identity). In others, the ultimate objective might not be behaviour change, but the individual response will affect the effectiveness of a given policy. It makes sense, therefore, to understand the likely consequences of policy interventions before committing to full-scale implementation.

### *Behavioural studies at the IS Unit*

The IS Unit is currently building up capacity in behavioural studies. As a first step, it will lend support to all European Commission services planning to incorporate behavioural insights into their policy-making process. But it is also looking at how behavioural studies can contribute to a more refined design of policy initiatives relying on ICT, such as eHealth. A pilot study is currently being undertaken in the area of nutrition and choice of diet among adolescents in selected European countries.

The impact of ICT developments on people's everyday decision-making constitutes a further area for investigation. Increasingly, citizens must deal with large amounts of information and increasing levels of complexity in their decisions. As this trend continues, how will they cope? What are the biases and heuristics they will resort to? Will the *default option* increasingly becoming the most likely option? And is it true that more information for citizens is necessarily a good thing, or are there limits to how much an individual can reasonably be expected to handle?

For further information on the possible application of behavioural insights to EU policy, contact [Rene.van-Bavel@ec.europa.eu](mailto:Rene.van-Bavel@ec.europa.eu).

## Understanding the Benefits of Social Networks for Organisations

If Europe is to achieve a decade of smarter, greener and more inclusive growth, as outlined in its ["Europe 2020" strategy](#), it will need to unleash all the potential afforded by information and communications technology (ICT). ICT empowers all businesses, high tech or not. And, if they are small or medium-sized enterprises (SMEs), it helps them grow.

ICT challenges established economies of scale by offering SMEs the opportunity to reach beyond their borders, to reach a larger audience in a more targeted way, to link across countries, and to have more streamlined and effective means of production. These opportunities have significantly increased over recent years with Web 2.0 developments such as blogs, wikis, Really Simple Syndication, social networking sites (SNS) and social media (SM).

In light of this, the IS Unit is looking at the ways in which organisations are benefiting from SNS and SM – and if they are not, what is standing in their

way. These technologies appear to facilitate communication and collaboration with user communities, and they seem to add value beyond traditional e-commerce activities (e.g. by creating virtual customer environments). But are organisations making the most of these opportunities?

[Assessing the Benefits of Social Networking to Organisations \(SEA-SoNS\)](#) is a project that aims to examine organisations from industry as well as public administration, with the aim of establishing a core understanding – and subsequent policy options – to catalyse the adoption and use of collaborative platforms by European organisations.

The project will analyse the current market situation for a limited number of stakeholders, identify and analyse best practices for these selected stakeholders, and define and prioritise related policy options. It will also, in a subsequent phase, analyse the role of SNS and SM in promoting business and

public administration activity, develop scenarios of future evolution of SNS and SM, and identify barriers and bottlenecks to their uptake by business (including SMEs) and public administration.

The project is currently gathering the results of an on-line discussion of experts and a series of expert interviews. These were fed into a preliminary report that was presented at the [Digital Agenda Assembly in June 2012](#), at a [dedicated session](#) aiming to establish stakeholder commitments for jobs and growth by bringing together practical experiences and insights from practitioners.

Further planned activities include a survey (n=500) building on the results of the on-line discussion and the interviews, a second round of interviews, and an expert workshop towards the second half of 2013 to present the project's findings and discuss their implications for policy.

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JRC-IPTS has launched a study on the **economic value of personal information**. The study started in January 2012 and results are expected at the beginning of 2013.

In a nutshell, the study examines what is the economic value of the personal information people disclose as they transact online, both for users (user profit) and for suppliers (service profit). The study examines two digital economy sectors in particular: **Internet Search**, and **Online Social Networking**.

JRC-IPTS is working in association with an international team of academics based at **CeDInt – Universidad Politecnica de Madrid** and with **RAND Europe**. The study is expected to generate empirical results and policy-relevant analysis on the supply and demand sides of personal information markets.

The research has direct policy significance, as it relates to the **Digital Agenda for Europe** (jobs, growth), to the issue of competition in digital markets and to issues of optimal privacy regulation in the single digital market.

Overall, the study investigates the economic value of personal information by asking the following questions:

- How does the exchange of information benefit society and the economy?
- How do companies create value from personal information (by providing new services or servicing better an existing need)?
- What are the mechanisms by which personal information exchange creates economic value?
- How does the level of privacy protection influence value creation in different markets?

In the context of Internet Search and online Social Networking, the study looks at the value that personal information provides to users and suppliers over and above basic service functions. In other words, what do users gain from disclosing personal information in search and social networking, if anything? And what do service providers, and their clients, gain from their customers' personal information, if anything?

On the demand side, data is being collected regarding users' behaviours and how they profit as they search the internet and engage on online social networks. On the supply side, data is collected concerning the monetization of personal information in the two industries' value chains.

The project assumes that data and modelling will be able to clarify a set of broader, competing hypotheses, namely:

- i. Personal information generates no externalities for the individual, only companies benefit.

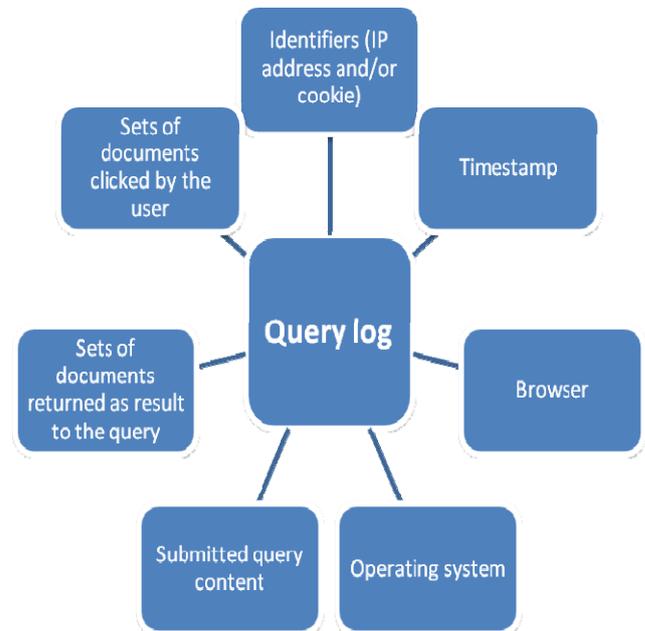
- ii. personal information is an intangible asset that benefits both companies and individuals.

- iii. companies benefit to the detriment of the user by exploiting position rents via price discrimination and market power.

An **exploratory workshop** with top experts was held in Brussels in March 2012. The project has an active [LinkedIn group of experts](#). In addition to a substantive final report of key findings, the project will organise an expert validation workshop with main experts in the field, in October 2012, to coincide with the **Amsterdam Privacy Conference 2012**. Furthermore, by its end, the project will have produced a **Web2.0 repository** on the economics of personal information including project notes, models and data.

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### ... supply-side value of PI over and above the query log



The project examines the value of personal information over and above the economic value of the query log. Traditionally, the query [customised by country, IP] is what matches users preferences with results.

Search engines generate revenue from suppliers of goods and services, via contextual and search advertising.

Personal information is increasingly used to better match products offered via query log matching to user unstated preferences [behavioural, location GPS, directly stated].

We wish to estimate the value of additional personal information over the query log and, indirectly, how much it contributes to suppliers' revenues.

## Up-scaling Creative Classrooms in Europe (SCALE CCR)

The project “[Up-scaling Creative Classrooms in Europe](#)” (SCALE CCR) was launched by JRC-IPTS Information Society Unit under an Administrative Arrangement with DG Education and Culture, to be carried out from December 2011 to June 2013. SCALE CCR contributes directly to the objectives of three of the [Europe 2020 flagships](#): the Digital Agenda, the Innovation Union Agenda and “Youth on the move”.

The aim of SCALE CCR is to further define the ‘Creative Classrooms’ (CCR) concept and provide educational policy makers, stakeholders and practitioners with an encompassing perspective of *ICT-enabled innovation for learning* in Education and Training (E&T) that can be up-scaled.

‘Creative Classrooms’ are conceptualised as innovative learning environments that fully embed the potential of ICT to innovate and modernise learning and teaching practices. The term ‘creative’ refers to innovative practices –such as collaboration and personalisation– while the term ‘classrooms’ is considered in its widest sense to include all types of learning environments, in formal and informal settings.

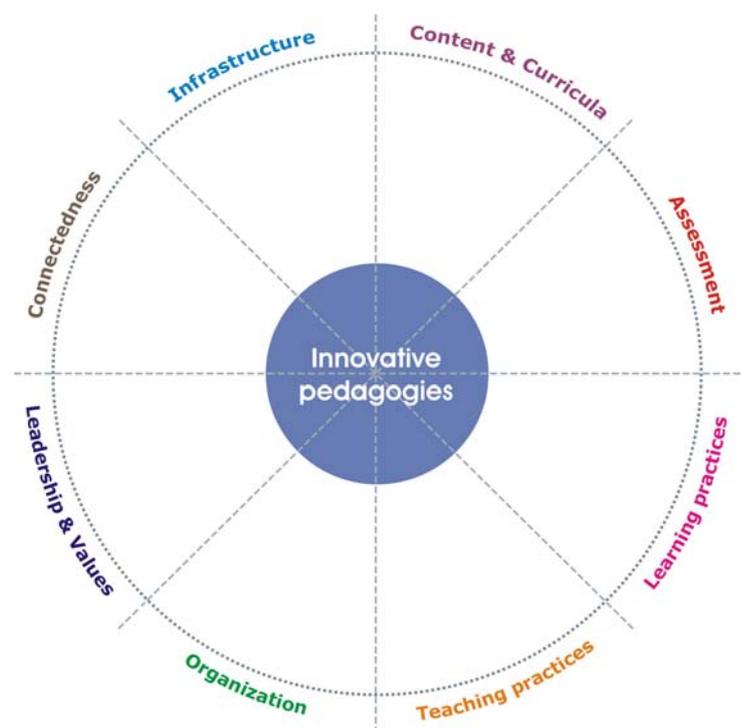
Innovative pedagogies are at the core of the CCR concept. They only emerge when practitioners try to use ICT to organize new forms of open-ended, personalized, collaborative, and creative learning activities, rather than simply to enhance traditional pedagogies based on expository lessons and task-based learning. Innovative pedagogical practices require effort by those involved both individually and collectively, as well as adequate support and recognition at system level.

In general, ‘Creative Classrooms’ can be seen as live “eco-systems”, or complex organisms that constantly evolve over the time, mainly depending on the context and the culture to which they pertain. JRC-IPTS research has developed the CCR as a multi-dimensional concept consisting of eight encompassing and interconnected key dimensions that capture the essential nature of these learning ecosystems: *Content and Curricula, Assessment, Learning Practices, Teaching Practices, Organization, Leadership and Values, Connectedness, and Infrastructure*.

It would be naïve to assume that addressing only one isolated dimension makes innovation happen. Evidence from research clearly shows that a significant number of these key dimensions –if not all– needs to be tackled by a critical mass of actors acting collectively.

In order to unravel the most innovative elements of the multidimensional CCR concept, a set of reference parameters is proposed for policymakers and practitioners, which depict the *systemic approach* that is needed for the sustainable implementation and progressive up-scaling of Creative Classrooms across Europe. These parameters constitute a list of the most important *building blocks of the CCR*: their multiple possible combinations allows for the configuration of a great variety of diverse CCR according to the given needs and contexts. As constituent entities of the “CCR ecosystems”, the reference parameters are also dynamic by nature, flexible and evolve over time.

The development of the CCR concept and reference parameters is based on desk research and a number of consultations with key stakeholders and practitioners, i.e. those who are directly involved in implementing innovation for learning. To this end, both the CCR concept and reference parameters were presented and validated at [two workshops](#) during the annual eTwinning conference 2012, which brought together more than 500 teachers and education stakeholders from across Europe.



Twenty eight teachers participated in the first workshop, “Challenges for the implementation of Creative Classroom practices”, during which they validated and clustered the CCR concept and building blocks (reference parameters) through group work and common discussion. The participants found the proposed CCR concept and reference parameters comprehensive and comprehensible. In the second workshop, “Creative Classrooms in Europe: the case of eTwinning”, twenty three eTwinners created posters with recommendations for up-scaling eTwinning, a concrete case of ICT-enabled innovation for learning. The participants formulated interesting recommendations based on their diverse backgrounds and expertise and on their experiences from eTwinning projects and networking.



The next phase of the project will focus on an in-depth analysis of the implementation strategies underpinning a number of selected cases of ICT-enabled innovation for learning, which have a significant scale, scope and/or impact at system level. This analysis will ensure a better understanding of the progress and pitfalls of ICT-enabled innovation for learning in the Member States (including the views of practitioners) and it will form the basis for the development of concrete recommendations for policy makers, stakeholders and practitioners.

For more information on the project, see the [SCALE CCR webpage](#).

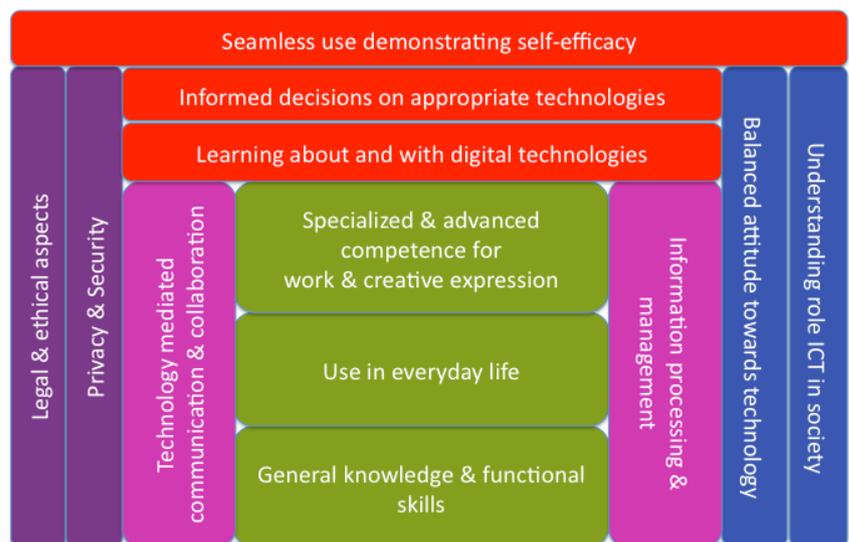
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## Developing a framework for digital competence

The [DIGCOMP project](#) started in December 2010 and will finish by the end of 2012. It aims to develop a framework for digital competence by identifying its key components in terms of the knowledge, skills and attitudes that citizens need to be digitally competent. After a [conceptual mapping](#), scanning relevant academic and policy literature, and a [case studies report](#), analysing 15 frameworks that develop digital competence, the Open University of the Netherlands, on behalf of JRC-IPTS, carried out an online consultation with digital competence experts.

This consultation was carried out in two rounds through a Delphi-like survey, from January to April 2012. In the first round, experts in the field were asked to generate as many ideas as possible on what it means to be digitally competent. A total of 204 experts were invited to take part in the online brainstorming, 79 of whom completed the questionnaire. Their input provided an initial description of digital competence consisting of 134 original statements. These statements were then clustered by 17 stakeholders at a workshop in Seville. Each area of digital competence identified was given a title and a label. This result was then presented back to the original list of experts in a second consultation round, which aimed to validate the result as a 'collective understanding' of digital competence. 57 experts replied. The results of the second round can be summarised in the following picture, which provides an overview of experts' opinions on digital competence.

### Digital Competence Building Blocks



A note of caution to sound here is that although these results can be considered a validated mapping of the collective views of experts in the field of digital competence, it should not be considered as representing consensus among the experts. In this respect, the online consultation can be considered as a balancing act between the academic (and common sense) values of parsimony and conciseness on the one hand, and doing justice to the rich variety of ideas and nuances suggested by so many experts on the other.

The results of this online consultation constitute one of the building blocks in the development of a digital competence framework. The reader is encouraged to follow the progress of the project on the [DIGCOMP project webpage](#).

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Open Educational Resources (OER) are teaching, learning or research materials that are in the public domain or released with an intellectual property license that allows free use, adaptation, and distribution (UNESCO, 2002). The last decade has seen the emergence and rapid diffusion of OER linked to the Open Education movement, which stresses that openness is a strategic opportunity to widen access to learning, improve the quality of education, foster pedagogical innovation in teaching and learning, and boost knowledge sharing and capacity building. In order to provide policymakers and stakeholders with evidence and guidance on how to further support and promote the use of OER in school education, higher education and adult education, JRC-IPTS is launching, on behalf of DG Education and Culture, the [Open Educational Resources in Europe \(OEREU\)](#) project. This will provide a critical assessment of OER initiatives and practices in Europe, develop sector-specific foresight scenarios to illustrate the benefits, carry out a representative survey on the use of OER, identify challenges across all sectors and, jointly with stakeholders, develop, discuss and propose recommendations for the further development and mainstreaming of OER in Europe. The results from a first exploration of business and sustainability models for OER initiatives are foreseen for the end of September 2012.

For more information on the project, see the [OEREU webpage](#).

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### The PREDICT project: A method to estimate public expenditures on ICT R&D in the EU

One of the objectives of the [Digital Agenda for Europe \(DAE\)](#) is to double, by 2020, Member States' annual public expenditures on ICT R&D. However, data on these expenditures is not available either from EUROSTAT, or from the Member States themselves (with the exception of the Czech Republic and Slovakia).

In 2011, discussions were held between EUROSTAT, DG Information Society and Media (DG INFSO) and JRC-IPTS on possible methods for estimating these expenditures, based on either actual public expenditures on ICT R&D or budget information (GBAORD – Government Budget Appropriations or Outlays for R&D).

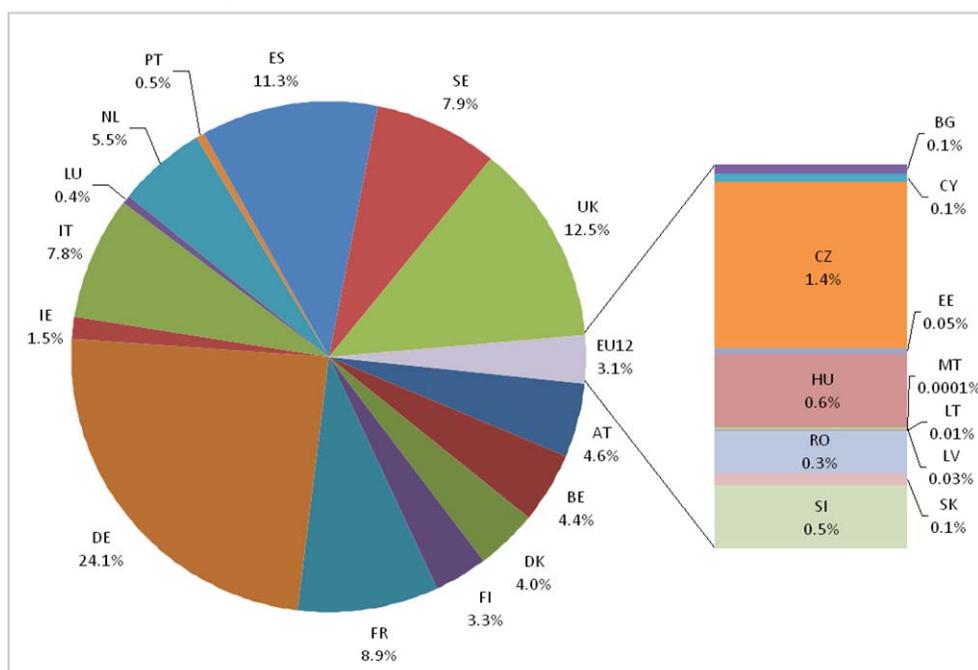
Building on its experience from the first phase of the [PREDICT project](#) (2008-2011), JRC-IPTS suggested a method that could be applied to allow DG INFSO to publish figures in the June 2012 edition of the [annual DAE Scoreboard](#). The suggested method consists of estimating ICT GBAORD, using ICT R&D employment shares as a proxy. The value of the proxy (available from the Labour Force Survey) differs across countries, NABS chapters and years, and can easily be computed every year.

According to our estimations, total EU ICT GBAORD amounts to EUR 5.4 billion (2010). Figure 1 shows its distribution across the EU Member States. A comparison of the estimates with existing data (for available countries) shows that the method provides results that are close to reality and, what is more important for the context of the DAE target, these countries' aggregate growth rates over the period 2006-2010 are almost identical (35% actual growth vs. 37% estimated).

The above-described method is a valid short-term solution for estimating ICT GBAORD in the absence of data collected by the Member States. A long-term solution would be that EUROSTAT obtains information on ICT R&D Public Expenditures directly from the Member States themselves.

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Figure 1: Distribution of ICT GBAORD in EU countries, % of total EU ICT GBAORD (2010)



On 19–20 June 2012, the Information Society Unit at JRC-IPTS, in collaboration with the World Wide Web Consortium (W3C), organized a Workshop on [Using Open Data: policy modelling, citizen empowerment, and data journalism](#).

The workshop was organized as part of the [CROSSOVER project](#), a support action co-funded by the European Commission's Directorate General Information Society and Media (DG INFSO) under the Seventh Framework Programme - ICT Work Programme, 2011-2012.

The main goal of the CROSSOVER project is **to consolidate and expand the existing community already active in the domain of ICT for governance and policy modelling** by bringing together and reinforcing the links between the different global communities of researchers and experts. In particular, the project aims to reach out to non-experts and potential users, particularly high-level policy-makers, and raise their awareness of ICT for governance and policy making. It also aims to establish a scientific and political basis for long-lasting interest and commitment to next generation policy-making.

The objective of the first CROSSOVER Workshop was to provide a joint discussion forum for both developers of applications who make use of open data, and the end users of these applications such as policy makers, journalists and citizens.

A call for papers was issued in the run up to the Workshop, which was attended by around 80 participants from all over the world. More than forty high-quality position papers were received.

The Workshop included a wide range of paper sessions and a Policy-Making panel, in order to ensure that researchers' and practitioners perspectives and also policy-makers concerns were fully represented.

The panel on **'The Impact of Open data on Policy Making'** was chaired by Gianluca Misuraca, Senior Scientist at JRC-IPTS and co-Chair of the Workshop, who moderated the discussion with the following panelists:

- ◆ Jeanne Holm, Evangelist at the USA Data.gov, White House, USA Government and Chief Knowledge Architect at NASA
- ◆ Andrew Stott, Public Sector Transparency Board, former Director of Transparency & Digital Engagement at the UK Government
- ◆ Simona De Luca, Ministry of Economic Development, Department for Cohesion, Italian Government
- ◆ Franco Accordino, Head of the European Commission's Task Force Digital Futures, DG-INFSO/CONNECT.

For more information about CROSSOVER, visit [www.crossover-project.eu](http://www.crossover-project.eu).

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### Update on ICT for Inclusion and Cultural Diversity

#### JRC-IPTS launches the development of an Impact Assessment Framework for eInclusion

The MIREIA study on "Measuring the Impact of eInclusion Intermediaries", co-funded by DG Information Society and Media and JRC-IPTS, was launched in 2012 with the following objectives:

1. Characterise and map eInclusion intermediary actors in Europe in order to better know who these actors are, what services they provide to which targets groups, how they operate and innovate, and how they can be classified.
2. Build and test an Impact Assessment Framework (IAF) that will allow us, in the future, to systematically collect end-users data through grassroots organisations. This will facilitate the estimation of these intermediary actors' impact on employment, education and social inclusion of the people they serve.

To achieve objective 1, JRC-IPTS will conduct research to provide a detailed and exhaustive picture of the e-Inclusion local landscape of actors in three selected areas. It will then map these actors at EU level, estimating their numbers and distribution. For both studies, JRC-IPTS plans to contract supporting research activities.

To achieve objective 2, JRC-IPTS contracted two research studies: the first to understand what Impact Assessment

methods are currently used in practice (Arcola, UK); and second to review the current state of literature on the theories and explanations of how Telecentres, libraries and other eInclusion actors actually help individuals and communities (University of Washington, USA). The findings of these studies were discussed at an expert workshop last 3-4 May, which was attended by more than 30 participants including policy-makers, researchers, and practitioners with responsibilities for, or expertise in, running evaluations of programmes, projects, and inclusion initiatives which make use of ICT for social inclusion.

Based on the above workshop results, JRC-IPTS will draft an Impact Assessment Framework (IAF) that will be debated at a **stakeholders' consultation and experts' workshop scheduled for 6 September 2012**. The IAF will then be revised according to the feedback received at the workshop and a call for tender will be immediately launched for interested organisations to test it during 2013.

If you would like to participate in the activities planned for the MIREIA project, please do not hesitate to contact us.

More information on the [MIREIA webpage](#).

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## CARICT finds that ICT domiciliary care services improve the health of carers and the efficiency and sustainability of the long-term care system

The main findings of the CARICT study on ICT for informal carers have been obtained recently. This study, funded by JRC-IPTS and DG INFSO, supports [Chapter 6 of the Digital Agenda for Europe \(DAE\) for digital literacy, skills and inclusion](#). A group of EU experts on ageing, long-term care and informal carers, led by the European Centre for Social Welfare Policy and Research and JRC-IPTS, applied a systematic methodology which consisted of:

- ◆ Mapping the most relevant ICT-based European initiatives to support informal carers of older people living in the community,
- ◆ Developing an assessment methodology to evaluate the impact of these services,
- ◆ Carrying out a cross-sectional analysis of the impact, success factors, drivers and challenges of 12 selected good practices, and
- ◆ Designing scenarios to illustrate the possible future provision of informal care services through ICT.

This study has brought to light a wide range of effective and efficient ICT-based support services for carers across Europe. Examples include: independent living solutions for elderly people such as social alarms or wandering alarms; on-line and off-line ICT solutions for information and training; on-line social networks for personal support and social integration, and ICT for care coordination.

The impact assessment analysis showed that the 12 good practices selected increased the quality of life of informal carers and care recipients and the quality of care (see Table 1). These benefits delay older adults' entry into institutional care, and reduce unplanned hospital admissions and the length of hospital stays. The reductions in the use of services generate savings and can increase the efficiency and sustainability of the long-term care system. The analysis of the different technological solutions also shows that independent living solutions for elderly people are the most assessed technologies as they have been used longer than other types of more recent solutions specifically developed for informal carers.

Successful developments of these services mainly depended on:

- ◆ The end-users' digital training and their involvement in the design of services,
- ◆ The integration of the (new) ICT-based services within the traditional care services,
- ◆ The collaboration among stakeholders and their role as intermediaries in the delivery chain. The third sector and volunteers were found to be main stakeholders.
- ◆ The exploitation of existing ICT and digital inclusion infrastructures, and
- ◆ Policy makers taking the lead in a policy framework for the development of these services.

Challenges still exist for the development, implementation, scalability and transferability of ICT-based services for informal care. These consist of specific issues linked to the technology, the recognition of the informal carers as care co-providers, professionals' scepticism, the provision of scientific evidence on the effectiveness and efficiency of these services, sustainable business models, and deployed initiatives. The key recommendation for addressing these challenges is that policy makers take the lead in coordinating existing support with funding programmes for stakeholders.

These findings contribute to the achievement of the objectives of the DAE and the [European Innovation Partnership on Active and Healthy Ageing](#). For example, they bring new knowledge on ICT-based services for informal care to improve the quality of care and reduce medical costs, and to give informal carers' skills for a better employability and inclusion. Moreover, the development and implementation of these services could accelerate the shift from institutional to home-based care, and empower people as regards their own health. These objectives are shared with other European policies such as the voluntary European Framework of social services and the European Platform against Poverty and Social Exclusion. For more information see the [ICT in support of domiciliary carers web-section](#).

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**Table 1. Indicators of impacts of ICT-enabled services on carers and elderly people**

ICT enabled services for:	Impacts for Informal carer	Impacts for Older person
Independent Living	- hours of care - eliminates the need for constant presence + peace of mind - anxiety + health-related quality of life + reconciliation of care and work and family + supports participation of other actors in care (family, volunteers)	+ independent living & delay dependency + health status + perception of safety + compliance in treatment + improved relation carer-older person
Communication	- burden of carer + supports participation of other members of the family + promotes volunteering	+ strengthen and develop social networks + promotes self-care + health status - isolation
Information & Learning	+ accessibility to training + finding and receiving appropriate information + caring skills and digital competence + employability + sense of security	+ Quality of care
Personal Support & Social Integration	+ promotes development of informal social networks of carers that provide practical and emotional support - isolation - stress + Quality of life + reconciliation of care and work and family	+ Quality of care + Quality of life + Improved relation carer-older person
Care Coordination	- stress + Quality of life - burden of care + reconciliation of care and work and family + builds trust with professionals	+ Quality of care + Quality of life + health status

## Digital Games for Empowerment and Inclusion

The exploratory study "Digital Games for Empowerment and Inclusion (DGEI)", launched in September 2011 and co-funded by the Information Society Unit of the JRC-IPTS and DG INFSO's ICT for Inclusion Unit, aims to better understand:

1. the industrial, market, and social opportunities and limitations of Digital Games for users' empowerment and how they could be a tool for socio-economic inclusion of people at risk of exclusion (such as youth at risk, migrants, elderly, unemployed, low-educated);
2. the technological, market, implementation, adoption and policy challenges of creating this potential, and
3. what actions would be needed to address the challenges identified.

The project is structured around the production of a report on the state of the art in DGEI (Jul 2012); a policy workshop (Sep 2012) to define a vision for DGEI in Europe; and a stakeholders' consultation event to identify a roadmap for action to achieve the vision (Oct 2012).

In the preparatory phase JRC-IPTS commissioned an expert report from IBBT (Belgium), and organised an expert workshop in January 2012, attended by 28 experts from research and industry. Experts highlighted the many motivational qualities of digital games and the diversity of uses of Digital games for empowerment and inclusion in formal and informal learning, and for participation in society. Important opportunities related to the widespread uptake of digital games across society, the recent advances in mobile devices, online games and new interfaces, and new accessible game development tools were identified.

The study has identified three main uses of digital games: use of specially-made games, use of commercial off-the-shelf games and game-making as an empowerment and learning process. These have been applied in many areas of



*Case study presented at DGEI workshop: Workshop Gamestar(t) – Skool entitled "Boys & girls", in which the kids learned about gender differences in a participatory way.*

social inclusion, from preventing school drop outs and supporting public health and migrant integration, to rehabilitation of elderly people and employability training in the workplace. While the industry and parts of formal education are enthusiastically adopting digital games and simulation tools, the pace of change is slower in the field of social inclusion. Here, the key challenges are to convince intermediaries such as schools and teachers, social workers, employers and health professionals of the value of digital games and to improve the quality of digital games and game resources for inclusion purposes.

Do not hesitate to contact us if you are working in this field!

More information on the [DGEI project webpage](#).

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## JRC-IPTS launches a new policy-oriented research line on ICT and employability

Previous research on how Information and Communication Technologies (ICT) can support socio-economic inclusion processes for groups at risk of exclusion, namely migrants and youth at risk, provides evidence of the relationships between ICT and employability. For example, access and ability to use technology affect employability and also increase wage levels. Likewise, the rise of the internet has brought about major changes in how individuals look for jobs and the factors that shape their success, such as their (on-line) social networks.

These findings have prompted JRC-IPTS to launch a new research line this year in order to provide solid theory and evidence to support policy development in the fields of employability. As a first step, JRC-IPTS has contracted the Institute of Employment Research, University of Warwick, UK to produce: 1) a literature review on employability, its dimensions and the factors which affect it in general and for groups at risk of exclusion, namely migrants, youth and older workers; and 2) a report on how ICT contribute to employability, support the reduction of barriers and create pathways to employment for all and also for the three specific groups at risk of exclusion. These reports will be available in July 2012.

This review will be discussed at an ICT and Employability Expert Workshop late 2012 or early 2013, to provide a map of available evidence, identify research gaps and challenges, and define a programme for developing further research and evidence for policy support in this field.

More information on our [ICT for employability webpage](#). Contact: [Clara.Centeno@ec.europa.eu](mailto:Clara.Centeno@ec.europa.eu), [James.Stewart@ec.europa.eu](mailto:James.Stewart@ec.europa.eu)

### **ICT Industry Analysis**

- ◆ Statistical, ecosystems and competitiveness analysis of the media and content industries: The film sector (2012). S. de Vinck, S. Lindmark, J.-P. Simon
- ◆ Statistical, ecosystems and competitiveness analysis of the media and content industries: The Music Industry (2012). A. Leurdijk, O. Nieuwenhuis, J.-P. Simon
- ◆ Statistical, ecosystems and competitiveness analysis of the media and content industries: The Newspaper Publishing Industry (2012). A. Leurdijk, M. Slot, O. Nieuwenhuis, J.-P. Simon
- ◆ Statistical, ecosystems and competitiveness analysis of the media and content industries: The media and content industries. A quantitative overview (2012). A. Leurdijk

### **Digital Living & Identity**

- ◆ Pan-European survey of practices, attitudes and policy preferences as regards personal identity data management (2012). W. Lusoli, M. Bacigalupo, F. Lupiañez, N. Andrade, S. Monteleone, I. Maghiros

### **Economic Aspects of eHealth**

- ◆ SIMPHS 2 Report on Market Developments - Remote Patient Monitoring and Treatment, Telecare, Fitness/Wellbeing and mHealth (2012). Author: P. Baum, F. Abadie. Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros, E. Villalba, B. Zamora
- ◆ SIMPHS 2 on Citizens and ICT for Health in 14 EU Countries: Results from an Online Panel (2012). F. Lupiañez-Villanueva, I. Maghiros, F. Abadie
- ◆ SIMPHS 2 Interim Report on RMT for Disease Management - Country Studies Summary (2012). Author: E. Villalba. Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros
- ◆ SIMPHS 2 Country Study Denmark (2012). Authors: C. F. Nielsen, J. Branebjerg, C. D. Marcussen, M. A. Craggs, L. Hulbæk, C. Duedahl Pedersen. Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros, E. Villalba, B. Zamora
- ◆ SIMPHS 2 Country Study Estonia (2012). Authors: P. Kruus, A. Aaviksoo, R. Hallik, M. Uus; Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros, E. Villalba, B. Zamora
- ◆ SIMPHS 2 Country Study France (2012). Authors: F. Abadie, E. Pavageau. Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros, E. Villalba, B. Zamora
- ◆ SIMPHS 2 Country Study Germany (2012). Authors: T. Bratan, K. Engelhard, V. Ruiz; Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros, E. Villalba, B. Zamora.
- ◆ SIMPHS 2 Country Study Italy (2012). Authors: S. Piai, G. Cattaneo. Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros, E. Villalba, B. Zamora
- ◆ SIMPHS 2 Country Study Spain (2012). Authors: M. Lluch, F. Lupiañez. Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros, E. Villalba, B. Zamora
- ◆ SIMPHS 2 Country Study The Netherlands (2012). Authors: A. van der Plas, M. van Lieshout. Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros, E. Villalba, B. Zamora
- ◆ SIMPHS 2 Country Study The United Kingdom (2012). Authors: M. Lluch. Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros, E. Villalba, B. Zamora
- ◆ SIMPHS 2 Interim Report on Impact Assessment State of the Art and Justifications (2012). Authors: B. Zamora. Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros, E. Villalba, B. Zamora
- ◆ Strategic Intelligence Monitor on Personal Health Systems phase 2 (SIMPHS 2) - Impact Assessment. Final Report (2012). Author: B. Zamora. Editors: F. Abadie, M. Lluch, F. Lupiañez, I. Maghiros, E. Villalba, B. Zamora

### **Learning & Skills**

- ◆ Digital Competence in practice: An Analysis of frameworks (2012). A. Ferrari.

### **Inclusion & Cultural Diversity**

- ◆ ICT to support everyday life integration of immigrants in the European Union: An On-line Survey of connected migrants: First Methodological Report (2012). G. Rissola. (*forthcoming*)
- ◆ Can technology – based services support long-term care challenges in home care? - Analysis of evidence from social innovation good practices across the EU CARICT Project Summary Report (2012). S. Carretero, J. Stewart, C. Centeno, F. Barbadella, G. Lamura, A. Schmidt. (*forthcoming*)

⇒ **19-20 June 2012: 1to 1 computing initiatives for Education and Training in Europe (Brussels, Belgium)**

JRC-IPTS has jointly organised with [European Schoolnet \(EUN\)](#) the "1to1 computing initiatives for Education & Training in Europe" expert workshop that gathered together researchers, practitioners, policy makers and representatives from industry interested in the topic of 1:1 computing initiatives for learning. Moreover, initial findings of an up-to-date overview on 1:1 initiatives in Europe, based on desk research and expert interviews, were presented and discussed in order to propose policy options to innovate and modernise Education & Training. Contact: [Yves Punie](#), [Stefania Bocconi](#)

⇒ **5 June 2012: Patent Statistics, Innovation management and IPR (Paris, France)**

JRC-IPTS is co-organising with the [Innovation and Regulation in Digital Services Chair](#) the "Patent statistics, innovation management and IPR" conference that will bring together experts from the field to better assess the potential of patent data for innovation management. Moreover, the importance and challenges of the use of IPR in the digital world will be discussed. More information about this conference on the [Innovation and Regulation chair website](#). Contact: [Giuditta De Prato](#), [Daniel Nepelski](#)

⇒ **24-25 May 2012: 4rd Workshop: The Output of R&D activities: Harnessing the Power of Patents Data (Seville, Spain)**

This [4th annual workshop on "The Output of R&D activities: Harnessing the Power of Patents Data"](#) aimed at improving the understanding of the patent system, focusing on patent system design, empirical analysis, methodology, and the use of the PATSTAT database. Following the successful format of the three previous years, the workshop was thus an arena for the discussion of the state of the art of research on patents and evidence-based policy making. Contact: [Giuditta De Prato](#), [Daniel Nepelski](#)

⇒ **14-18 May 2012: World Summit on the Information Society (WSIS) (Geneva, Switzerland)**

[WSIS Forum 2012](#) was jointly organised by the International Telecommunication Union (ITU), United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Conference on Trade and Development (UNCTAD) and United Nations Development Programme (UNDP) as the annual follow up on the preparatory process and the two phases defined in Geneva (December 2003) and Tunis (November 2005) to progress towards the Millennium Development Goals in terms of ICT for Development and the Information Society. The Summit provided structured opportunities to network, learn and to participate in multi-stakeholder discussions and consultations on WSIS implementation. It was attended by hundreds of participants (mainly representing UN Agencies and governments from developing countries), and by people around the world participating via webcast. JRC-IPTS participated in the panel of Session AL C6 Enabling Environment: Smarter regulation of the information society: ICTs as an enabler for better governance (Interactive Action Line Facilitation Meeting moderated by ITU).

⇒ **16 April 2012: Modelling the economic impact of EU ICT R&D expenditure (Seville, Spain)**

The objective of the workshop was to review and discuss options and solutions for the macro-economic modelling of the R&D processes, with emphasis on the processes within ICT sectors. The agenda for the workshop included topics related to: modelling of the R&D process in a CGE framework; elasticity of public and private R&D expenditures; diffusion of R&D outputs; and related calibration of key parameters in the model. To stimulate the debate the IS Unit presented an initial empirical approach for modelling of ICT R&D processes as well as results from illustrative simulation performed with a demo CGE model (developed by ULB-Ecomod under the [PREDICT project](#)). More information on the [workshop webpage](#). Contact: [Wojciech Szewczyk](#)

⇒ **20 March 2012: SEA-SoNS (Socio-Economic Assessment of the Benefits of Social Networks for Organizations) scoping workshop (Brussels, Belgium)**

The overall aim of the meeting, organized by JRC-IPTS and DG INFSO/D2 was to identify and prioritize the potential benefits and challenges facing European organizations that may want to adopt and use social networking (SN) tools and social media (SM), and to plan the next phases of the research. The meeting was attended by external experts on organizational use of these technologies, including technology companies (software, content and infrastructure providers), consultants and researchers, as well as several representatives from DG INFSO. Presentations are available on the [SEA-SoNS webpage](#). Contact: [Aaron Martin](#), [René van Bavel](#)

⇒ **29 February - 1 March 2012: Experts' workshop on Digital Competence descriptors (Seville, Spain)**

JRC-IPTS organised a workshop on Digital Competence gathering together about 20 international experts to discuss the preliminary findings of the DIGCOMP project and to validate its approach. Presentations are available on the [DIGCOMP webpage](#). Contact: [Anusca Ferrari](#)

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## Upcoming events

Date	Place	Title	Contact*
6 September 2012	Seville (Spain)	Experts' Workshop on Measuring the impact of eInclusion intermediary actors	<a href="#">Gianluca Misuraca</a> <a href="#">Cristina Torrecillas</a>
20-21 September 2012	Saarbrücken (Germany)	7th European Conference on Technology Enhanced Learning (EC-TEL) => JRC-IPTS will present 2 papers (eAssessment and digital competence)	<a href="#">Christine Redecker</a> , <a href="#">Anusca Ferrari</a>
27-28 September 2012	Paphos (Cyprus)	EADTU's 25th Anniversary Conference => JRC-IPTS will present a paper on OER in Higher Education	<a href="#">Alexandra Hache</a> , <a href="#">Yves Punie</a>
September/October 2012 (TBC)	Brussels (Belgium)	Stakeholder Workshop on Digital Games for Empowerment and Inclusion	<a href="#">James Stewart</a> <a href="#">Gianluca Misuraca</a>
9-10 October 2012	Seville (Spain)	Final conference of the ESSLimit project: ICT and Innovation: Accessing and linking Microdata for Firm-level Economic Analysis	<a href="#">Marc Bogdanowicz</a>
25-26 October 2012	Brussels (Belgium)	International Conference "The dynamics of Media and Content Industries" => organised by JRC-IPTS	<a href="#">Marc Bogdanowicz</a>

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- For more and updated information on our upcoming & past events, please have a look at the [Events section of the IS website](#).

### IS NEWS

The IS NEWS is a bi-annual publication of the JRC-IPTS IS Unit intended to provide information on the Unit's research activities, events and latest publications.

#### MISSION of the IS Unit of JRC-IPTS

To provide quantitative and qualitative socio-economic research in support to EU policy-makers implementing the EU2020 initiatives relating to the Digital Economy, Digital Living and Digital Society as well as the wider deployment of information and communication technologies in future EU learning policies, digital competence, social inclusion and cohesion, e-health and electronic identity.

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