



ICT – future trends and potential implications for eHealth and eInclusion.

by

JC Burgelman, JA Valverde, M Cabrera & R Ozcivelek

Institute for Prospective Technological Studies (IPTS)

Directorate General (DG), Joint Research Centre (JRC), European Commission

<http://www.jrc.cec.eu.int>

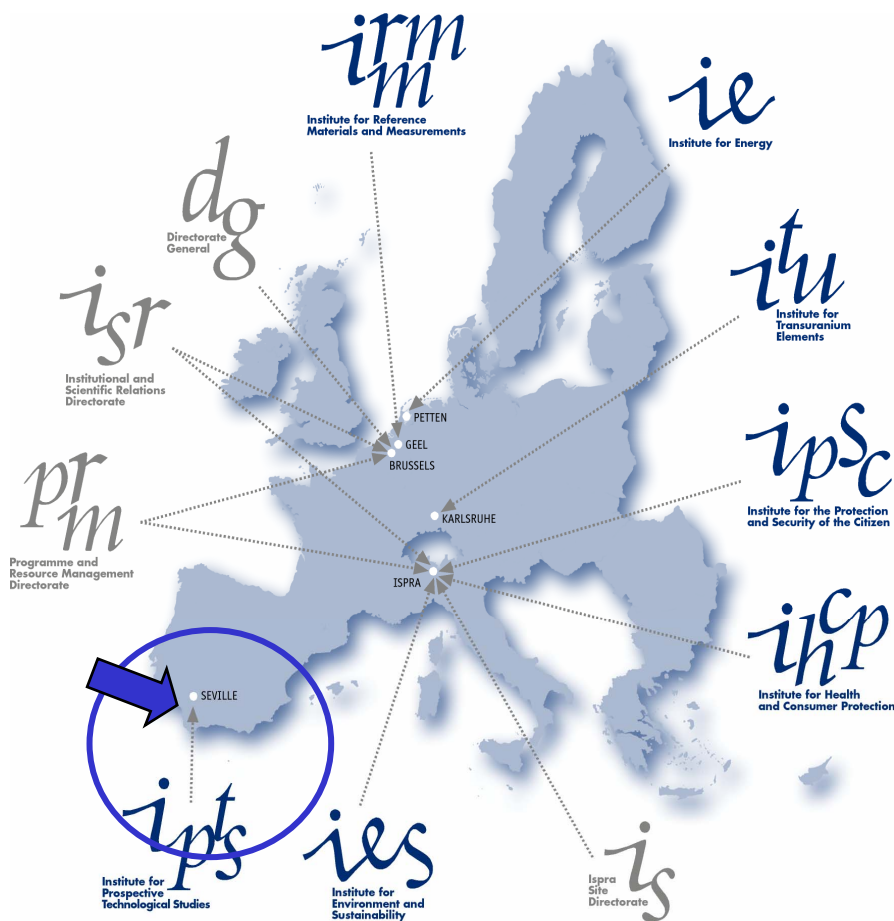
Personal Health Systems 2007 Conference.
European Parliament, Brussels 12-13 February 2007





JRC-IPTS

Joint Research Centre



IPTS: Part of DG JRC of the EC:
 7 Research Institutes across Europe

Mission: “to provide customer-driven support to the EU policy-making process by researching science-based responses to policy challenges that have both a socio-economic as well as a scientific/technological dimension”

Modus operandi: desk research, expert groups, modelling, centres of Expertise, foresight





Contents

- Emerging Technologies & Applications:
allowing new approaches to Societal Challenges
- Examples and Implications in the e-Health sector
- Examples and Implications for e-Inclusion
- Challenges – Conclusions



Emerging Technologies & Applications

Emerging ICT trends and Applications with great disruptive potential:
→ **e-ruptive trends**

VoIP
P2P
Wifi, WiMax, etc

connecting

Searching as appl platform
Networking, etc.

sharing/interface

Podding
Gaming
Blogging
Wikiing
Buying, etc.

producing content

***New Techno-
Economic
Paradigm?***

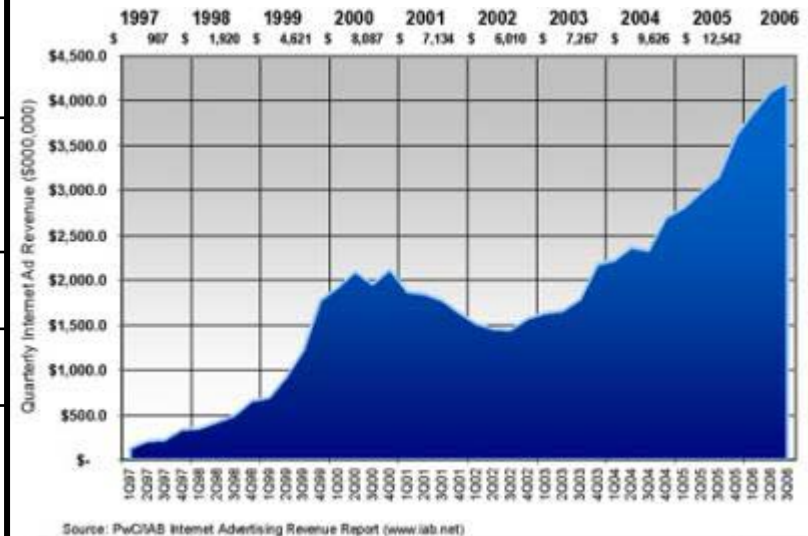




TEP growth: spectacular

Blogs	Doubling every 6 months since 2003
Podcast	50 M audience in 2010, 15 M producers
Wiki	Wikipedia 100K authors since 2003, taken seriously; citizens as reporters
P2P	In 2003 became no 1 source of traffic (above http)
VoIP	Skype 80 M users since 2003
Wi-fi sharing	World largest hotspots network
Search engines	"Google is the environment, not the competition" (and IPO in 2004)
Social networking	Myspace 100 M users, Youtube 100M videoviews/day, 45% of web users visit those sites
Multiplayer online gaming	Games largest growth segment. In 2005 online games audience has grown 16% - 4 times the rate of overall Internet growth

Internet advertising 1997-2006



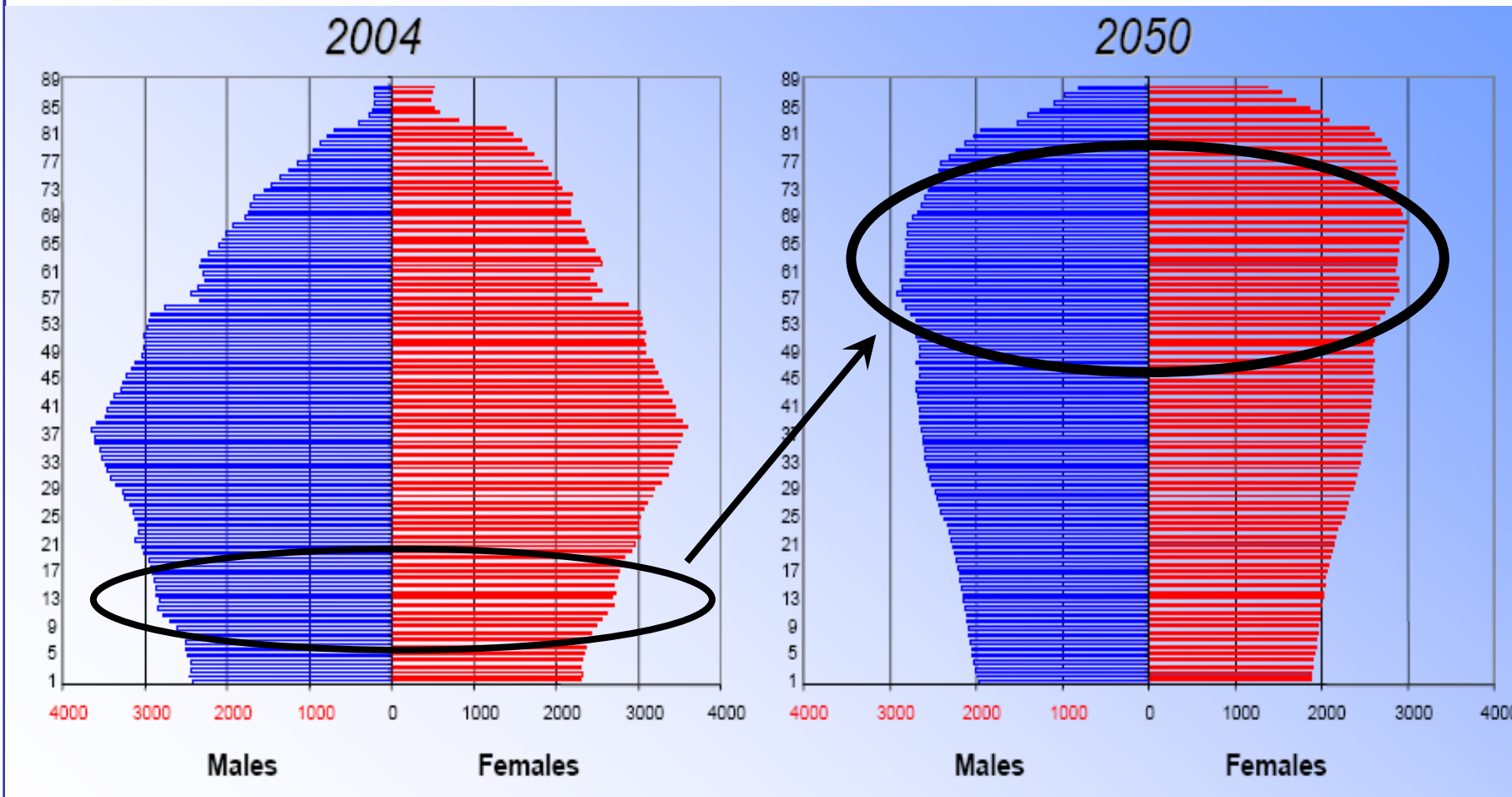


TEP: deep impact

- The **user as supplier** (and thus the whole world potentially a source):
 - of content (blog, wiki, Flickr),
 - of taste/emotion (Amazon, Delicious),
 - of goods (eBay),
 - of contacts (myplace)
 - of relevance (Google pagerank),
 - of reputation and feedback (eBay, Tripadvisor),
 - of storage and server capacity (P2P),
 - of connectivity (wifi sharing, mesh networks)
 - of intelligence (business web 2)
- **New ways of ``knowledge-mining``**: communities (e.g. MySpace), social bookmarking (e.g. del.icio.us), experience sharing like photos/videos (Flickr/YouTube,...), business connections (e.g. LinkedIn), dating...(1 in 10 American internet users do...)
 - *whatever **tacit knowledge** that was not visible before*
- And here to stay, due to
 - **low entry barriers** (technical and financial) and
 - **viable business models** (e.g. advert-brokerage model)



TEP: irreversible



Today's "geeks" → Tomorrow's customer, user, voter, elderly.... *ipts*



Examples and Implications for e-health



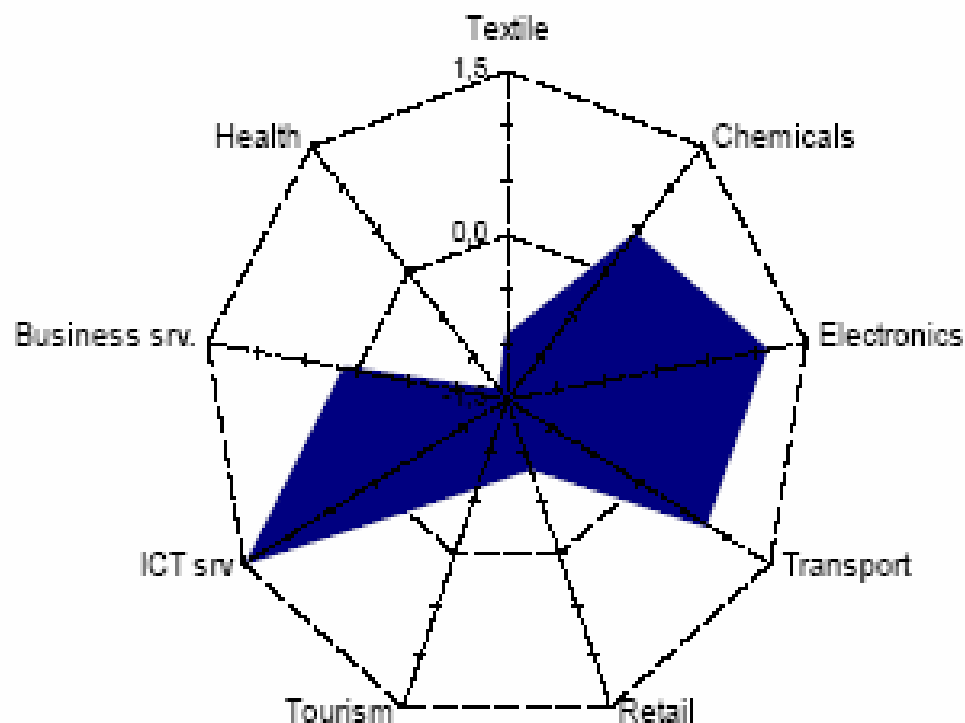
E-Health: : as we did it up till now

Offering e-solutions has been a high priority (economically and human speaking)

But

ICT use in health sector:
➤ least connected sector,
➤ great disparities across countries and regions

ICT Infrastructure Index 2003/04



Source: e-Business W@tch (2004)



Ganfyd: medical knowledge base



ganfyd

article | discussion | edit | history

Main Page

Welcome



Welcome to **ganfyd.org** - The free **medical knowledge base** that anyone can read and any [registered medical practitioner](#) may edit. Ganfyd is a collaborative medical reference by medical professionals and invited non-medical experts. The site is based around the [wiki](#) format, enabling true sharing of knowledge. Please [join](#) and help us to create a great source of information and experience!

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Ganfyd is for healthcare professionals! Please read the [disclaimer](#).

If you are unwell and looking for advice please see your own doctor or contact the [emergency healthcare services](#) as appropriate.



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- Learning disabilities

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Contact sarah.greening@wmdeanery.org
Library Services Development Unit



eHealth 2.0 ?

- Transparency
- Shared decision-making processes
- Patients writing on their Health Records

Recent articles in Medical literature

- Boulos et al. **Wikis, blogs and podcasts: a new generation of Web-based tools for virtual collaborative clinical practice and education.** BMC Medical Education 2006, 6:41.
- Connor E. **Medical Librarian 2.0.** Med Ref Serv Q. 2007 Spring;26(1):1-15.
- Giustini D. **How Web 2.0 is changing medicine.** BMJ 2006;333;1283-1284.
- Giustini D. **How Google is changing medicine.** BMJ 2005;331;1487-1488.
- Tang H, Hwee J. **Googling for a diagnosis-use of Google as a diagnostic aid: internet based study.** BMJ 2006;333;1143-1145.





Examples and implications for e-Inclusion



Zopa.com: PtP lending system for micro-credits

zopa™ [Borrowing](#) [Lending](#) [About Zopa](#) [Community](#) [My Zopa](#)
getting a loan getting a return how it works meet some members access your account

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Zopa is the marketplace where people meet to lend and borrow money
Lenders get a great return and borrowers get low-cost loans.

Borrowing market

Today's rates

MARKET	TERM	RATE**
A*	36 months	4.83%
A	36 months	5.81%

** Zopa lenders will lend £1000 to you at this rate (APR Typical).

[▶ BORROW NOW](#)

Why borrow at Zopa?

- ✓ Low, low rates
- ✓ Deal with Zopa lenders rather than banks

Financial Heaven in 2007

LENDER BONUS

Boost your returns in the A*36 and A36 month markets with our splendid 0.5% bonus offer.

[▶ FIND OUT MORE](#)

1% CASH BACK

Get lending in January and enjoy a 1% cash bonus

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Click here to read the Zopa guide to making the most of your money in 2007

Zopa on the BBC news

Watch the BBC 6 o'clock news piece on Zopa by clicking [here](#).

Lending market

Current best rates

MARKET	TERM	RATE**
C	36 months	12.15%
B	60 months	9.54%

** Average gross return on money lent out before bad debt or tax

[▶ LEND NOW](#)

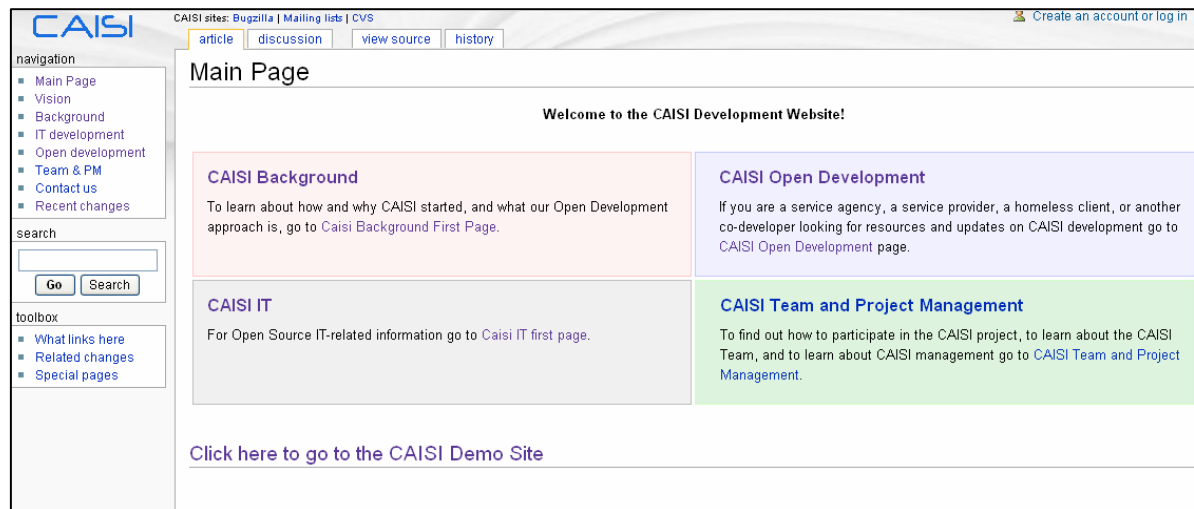
Why lend at Zopa?

- ✓ Great returns
- ✓ It's human
- ✓ It's safe



Wiki for building care networks for homeless

- CAISI: open source case management and medical information sharing between medical and social service providers for homeless in Toronto
- Networked government inside government (Canada)
- Enables integrated services for user group with multiple care needs and no permanent attachment to one provider
- Developed and deployed via Wiki collaboration platform





Google: from Visibility to Accessibility

- accessibility and navigability of website for blind as added criteria for ranking websites
- effective search for visually-impaired
- incentive for site-owners to create accessible sites, in order to gain maximum visibility





Social networking for inclusion of minorities

- **Ethnic minorities:** www.Maghreb.nl, an online platform for young immigrants
- **Peripheral local communities:** Alstor, UK
- **People with similar less-known problems/disease** (orphan disease): on www.usherlife.co.uk people with Usher Syndrome can share experiences, learn about specific products, for example "Mobile Magnifier software for help in reading text messages"
- **Baby-boom generation:** www.eons.com for "50+ everything"
- **Un-creditworthy borrowers:** www.Zopa.com is a form of peer-to-peer lending which uses collective reputation to assess reputation of borrower, and puts lender in direct contact with borrower (e-bay of micro-credit).

→ The long tail of user interests **and** needs!



Conclusions (1)

Web 2

- Tool for Self-help and empowerment
- Personalized service delivery
- Transparency and openness
- New ways of knowledge mining (increasing efficiency)
- Many to many interaction
- Scale it does not matter (eg.- rare diseases)

- Social capital as fundamental input and output
- Institutional re-engineering required



Conclusions (2)

Applications meet Visions !

- The networking potential of Social Computing to impact on the empowerment of the citizen/patient (and shift towards Prevention / Promotion).
- From symptom-based to preventive healthcare, from hospital-centred to person-centered health systems, better informed patients, medical acts tend to be consensuated.
- The end user (patient, healthcare professional) as innovator: potentially very important.
- Policies for building Social Networks as important infrastructures for inclusion.
- Self-steering networked communities.



Thank you !

Jean-Claude.Burgelman@ec.europa.eu

