ICT and digital competence for employability

Agenda

9h15-10h15 **ICT for employability and employment**
1. Evidence from practice (20’+10’ Q&A)
2. Results from a Literature Review (20’+10’ Q&A)
   Clara Centeno

10h15-10h45 **Digital Competence (15’+15’ Q&A)**
   Yves Punie
ICT for employability and employment

Clara Centeno
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ICTLI Action
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Institute for Prospective Technological Studies

**IPTS**: Part of Joint Research Centre of the EC: 7 Research Institutes across Europe

**Mission**: “to provide customer-driven support to the EU policy-making process by developing science-based responses to policy challenges that have both a socio-economic as well as a scientific/technological dimension”
Policy context: Europe 2020 targets on Inclusive Growth

Increase employment from 69 to 75% of population:
Focus on youth, older workers and low skilled workers, and the better integration of migrants

Improve educational levels through:
Reducing school drop-out rates below 10%
Increasing the share of the population having completed tertiary education, at least 40% of 30-34 years old

Promote social inclusion through:
Reducing poverty levels: at least 20 million fewer people in or at risk of poverty and social exclusion
Some employment challenges

- Increasing unemployment\(^{(1)}\) rates since mid 2011, reaching 11.6% in Sep 2012 with more than 25 million unemployed, and huge country differences (less than 6% in AT, LU, DE, NL and above 25% in EL, ES)

- Some vulnerable groups more affected by unemployment:
  - Young\(^{(1)}\) (<25): +11pps, varying from 8% in DE to 54% in ES
  - Low skilled\(^{(1)}\): 16.7% at most secondary education vs 5.6% tertiary education, and 10.3% average in 2011
  - Migrants\(^{(2)}\): +11pps vs nationals

- High mismatch between supply and demand (only in Germany 1.13 million vacant positions in Feb 2012\(^{(3)}\))

- Skills gap is widening: STEM, ICT, energy, green transport, environment and health\(^{(4)}\)

\(^{(1)}\) Eurostat; \(^{(2)}\) COM (2012) Towards a job rich recovery, SWD (2012) 90 final on labour market trends and challenges; \(^{(3)}\) Federal Employment Agency; \(^{(4)}\) European Economic and Social Committee, 2011
Can ICT support employability and employment?

1. Evidence based on practice
Research questions:

1. How can ICT support achieving EU2020 goals of inclusive growth?
   
   ICT = digital inclusion (access, skills and use)  
   ICT mediated social interventions  
   ICT based social innovation

2. How can policy support these processes and the related actors to exploit the potential offered by ICT?

Methods:

- Literature reviews
- Mapping and analysis of good practices
- Impact assessment analysis
- Analysis of key barriers and success factors and conditions
Policy support:

- Support exchange of Good practices and peer-learning
- Evidence to support policy proposals and stimulate MS actions
- Support design of EU funding programmes (FP7, CIP)

40+ reports published
Focus of research since 2005

Intermediary Actors
(Public, private and 3rd sector)

- NGOs, Teachers and trainers, youth workers, Social workers, PES, civil society

Target groups

- (Women) Carers
- Migrants
- Youth At risk
- Older workers

Impact Assessment
Social and economic Inclusion

Other social innovation actors: research, policy, industry, public sector, etc

Social Innovation
Education challenges

- **13,5%** Early school leavers in 2011 (highest levels reaching 33,5%)\(^{(1)}\)
- **12,9%** of young people (15-24) in 2011 are NEET \(^{(1)}\) (highest levels reaching 22,6%)

Employment challenges

- **Increasing unemployment rate and higher** than the older population: **22,8%** in 09/2012\(^{(1)}\). Huge diversity among MS: >20% in 2/3rds of MS, +50% in ES and Greece, <10% only in DE, AT, NL.
- **50%** of employed in low skilled or elementary occupations\(^{(2)}\)

Sources: (1) Eurostat; (2) Youth in Europe: A Statistica Portrait, Eurostat, December 2009
ICT and Youth\textsuperscript{(1)}

1. "Digital natives" do not necessarily know how to use ICT to support/improve their lives and find a job
   - Young people feel their computing skills are inadequate or do not meet the labour market needs
   - Current young generation lack of sufficient competences\textsuperscript{(2)} 1) disclosing private information in the internet; 2) legal and ethical use (cyberbullying) 3) critical attitude in creating content; 4) critical attitude in using content.

2. There are divides on digital skills, access and uses among young people, in particular affecting those with lower socio-economic backgrounds

3. ICT-based initiatives support inclusion of youth at risk of exclusion addressing skilling and empowerment, social inclusion/capital and employment.

\textsuperscript{(1)} Based on Literature review and analysis of 60+ European and national initiatives across 3 EU MS \textsuperscript{(2)} ICT Cluster Policy Brief, 2009
ICT for Youth employability and employment

Formal education

Non-formal education

Informal education

Matching

Skilling

Employment

Alternative education paths

Self confidence, Transversal skills, Language, ICT skills
Social participation

Skilling for employment in ICT, Media & Creative industries
Job search skills

On-line linking employers & candidates
## Examples of ICT initiatives for Youth

<table>
<thead>
<tr>
<th>ICT for ...</th>
<th>Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skilling</strong></td>
<td></td>
</tr>
<tr>
<td>Flexible education paths for school droppers and NEET</td>
<td>Not School (UK, IE, NZ, 2000), Studio+ (UK, 2007)</td>
</tr>
<tr>
<td>Self-confidence, social skills, language (EN) and ICT skills</td>
<td>Media skills: On road media (UK, 2005)</td>
</tr>
<tr>
<td><strong>Matching skills with labour market needs</strong></td>
<td></td>
</tr>
<tr>
<td>Skilling for employment on ICT, media and creative industries</td>
<td>Graduate Entrepreneurship Training through IT (HP wW, 2007), Fast Track toIT (IE, 1999), Fundacion Tomillo (ES, 2000)</td>
</tr>
<tr>
<td>On-line linking employers and candidates</td>
<td>Nos Quartiers ont des Talents (FR, 2005, +2500)</td>
</tr>
</tbody>
</table>
Migrants (1)

Education challenges

- Higher drop out rates (34% vs. 14%)
- Lower levels of educational attainments: (43% of active TCN have low-level education vs. 22% nationals)(3)
- Language barriers
- Insufficient multicultural education and teachers skills(2)

Employment challenges

- Higher unemployment levels vs nationals (19% vs 9%)
- Lower employment rate (10pp); gaps increase with education level; highest gaps for women (19pp)
- Higher over-qualification (45% vs 21%)
- Assessment of competences
- Language and cultural barriers and discrimination
- Lack of recognition of qualifications or experience acquired outside the EU
- Public concerns

(1) Statistical figures from Eurostat, reported in EC SWP EU initiatives supporting the integration of third country nationals 20.7.2011
(2) Green Paper on “Migration and Mobility: Challenges and Opportunities for EU Education Systems” (2008)
(3) COM (2012) Towards a job rich recovery, SWD(2012) 90 final on labour market trends and challenges
ICT for migrants integration

1. Migrants have similar/higher PC-Internet uptake compared to native population for: keeping in touch in mobility, children education, looking for jobs, live in the digital society. Internet shops have a crucial role for access (newly arrived & young).

2. Digital exclusion still exists: driven by age, host language proficiency, education, socio-economic status, gender and lack of infrastructure in disadvantages and segregated areas

3. ICT based initiatives supporting migrants’ integration focus on: education and economic participation, social participation and social inclusion

(1) Based on an analysis of 150+ initiatives across EU27 MS
Employment
ICT for migrants employability and employment

Support multiculturalism in education /teachers
Language, culture, literacy, ICT skills
Support anti-discrimination

Matching
Skilling for employment: Digital literacy, ICT jobs, ICT enabled learning
Social networks On-line linking employers & candidates
Assessment of competences

Skilling

Employment

Formal education
Non-formal education
Informal education
Examples of ICT initiatives for the economic integration of migrants

<table>
<thead>
<tr>
<th>ICT for ...</th>
<th>Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skilling</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Education / Teachers:</strong> Provide support for multicultural education and training to teachers</td>
<td>IBM Kid Smart (IBM ww; 2008), Online Support for EM Achievement (UK, 1999), Aula Intercultural (ES, 2003)</td>
</tr>
<tr>
<td><strong>Immigrants skilling:</strong> Support learning of host country language &amp; culture, ICT skills, fighting illiteracy</td>
<td>ITpreneurs (NL, 2008), Fundación Bip Bip (ES, 2003), DO IT! (BE, 2006), BYO (UK), AutreMonde (FR, 2000)</td>
</tr>
<tr>
<td><strong>Immigrants empowerment:</strong> Support access to cultural heritage, definition of identity and active citizenship</td>
<td>XénoCLIPse (pan-EU, 2002), Bordergames (ES, 2002), Rete G2 seconde generazioni (IT, 2005), Roots &amp; Routes TV (pan-EU, 2007)</td>
</tr>
<tr>
<td><strong>Providing resources</strong> on how to deal with multi-cultural contexts and fight racism and discrimination</td>
<td>Race Equality (UK, 2001), iRespect (UK, 2001), Donestech (ES; 2008)</td>
</tr>
<tr>
<td><strong>Matching skills with labour market needs</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Skilling for employment on ICT / using ICT</strong></td>
<td>Fast Track to IT (IE, 1999)</td>
</tr>
<tr>
<td><strong>On-line linking employers and candidates</strong></td>
<td>Ethnic Job Site (UK, 2000)</td>
</tr>
<tr>
<td><strong>Assessment of competences</strong></td>
<td>KEN (DE, 2008)</td>
</tr>
</tbody>
</table>
Education challenges

- Mostly unqualified to perform the caring functions, leading to low quality services
- Lack of time or mobility to learn
- For migrants: language and cultural barriers

Employment challenges

- Availability of carers, high turnover rates and vacancy rates due to hard working conditions
- Balancing work, family and care functions
- Social isolation and psychological distress
- No accreditation and certification of skills
- For migrants: worsened situation (often socially isolated, cultural and language barriers, working situation and undocumented status)

Needs

- Easy access to reliable information
- Training
- On the job support on care, medical aspects, emergencies
- Social, emotional and peer support

Diverse ICT skills and usages
1. There exist a wide range of beneficial and not very costly (30%), successful and sustainable ICT-based services for carers across Europe. These support:
   - Information & Learning
   - Personal support & Social integration of carers
   - Independent Living of elderly

2. These ICT – based services provide benefits for:
   - The quality of life of informal carers (including a better balance between care and work) and quality of care
   - The quality of life of elderly people

* Based on an analysis of 52+ initiatives in 12 EU MS
ICT in support of carers

Formal education

Non-formal education

Informal education

Information and Guidance on LTC

Peer support

Assessment / Certification of competences

On-line linking employers & candidates

Training on care giving

Better accommodation of family, work and care

Caring / Employment

Matching

Skilling

Job support
## Examples of ICT in support of women carers

<table>
<thead>
<tr>
<th>ICT for ...</th>
<th>Cases in UK / DE / IT / ES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Training on care giving</strong>&lt;br&gt;(through multimedia on-line tools)</td>
<td>• Caring with Confidence (UK)&lt;br&gt;• City &amp; Guilds – Learning for Living (UK)&lt;br&gt;• Coidanet (ES)&lt;br&gt;• Spain’s Alzheimer Foundation, FAE (ES)&lt;br&gt;• Aspasia (IT)</td>
</tr>
<tr>
<td><strong>Information and guidance on LTC</strong>&lt;br&gt;(through on-line web sites, email, telephone systems, blogs wikis, fora)</td>
<td>• Pflegewiki (DE)&lt;br&gt;• Carers Direct Helpline (UK)&lt;br&gt;• Telephone Befriending Scheme (UK)&lt;br&gt;• Carers in Hertfordshire’s website (UK)&lt;br&gt;• Sercuidador (ES)&lt;br&gt;• Un cuidador, dos vidas (ES)&lt;br&gt;• CEFA, Website of Spanish confederation of Alzheimer families associations (ES)</td>
</tr>
<tr>
<td><strong>Better accommodation of work, family and care; coordination with other actors</strong></td>
<td>• Sophia (DE)&lt;br&gt;• LifeSensor (DE)</td>
</tr>
<tr>
<td><strong>Peer support, mutual assistance, information exchange</strong>&lt;br&gt;(through on-line forum, blogs, social networks)</td>
<td>• Carers UK’s Discussion Forum (UK)&lt;br&gt;• SEKIS Berlin (DE)&lt;br&gt;• Seniorlotse Bremen (DE)&lt;br&gt;• German Alzheimer Society (DE)&lt;br&gt;• Cuidadoras en Red (ES)</td>
</tr>
</tbody>
</table>
Common opportunities

1. The connected young and migrants: underexploited opportunities for policy for achieving the Europe 2020 goals

2. Providing ICT access and developing digital competence remain critical for fighting social exclusion and for supporting skilling and employment, including for young people

3. In order to produce impact, use of ICT needs to be embedded in social inclusion interventions, addressing the specific barriers and needs of target groups

4. Empowering intermediary actors is a key to success, however they have insufficient digital skills and support

5. Opportunities offered by ICT need to be shared, promoted, upscaled and mainstreamed in non-ICT policy domains: employment, social inclusion, lifelong learning, long term care and migrants introduction and integration measures.
Common challenges

1. *(Exploratory) Research fields* where there is limited literature and data

2. Numerous ICT-based initiatives but usually *isolated, poorly known* limiting impact, peer-learning, replication and scalability opportunities

3. **Lack of awareness and information** among stakeholders

4. **Under developed Impact assessment** methodology and practice

5. **Financial sustainability** of ICT-based initiatives
Can ICT support employability and employment?

2. Results from a Literature review
**Aim:**
- Building on previous research work provide more systematic evidence about the role that ICT play for employability and employment.
- Identify research gaps, new policy opportunities and challenges in the fields of ICT, employment and social inclusion.

**Approach:**
- Exploratory: Literature review and identification and documentation of good practices
- Development of a broad employability framework to support a systematic approach
- Specific focus on vulnerable groups: youth, migrants, older workers

**Policy support:**
- Support Employment policy development and implementation
- Support the development of a research Agenda
Employability:
Preparing for, finding, retaining and progressing in work

Proposed Employability Framework

Individual factors
Individual circumstances
Role of labour market intermediaries
Employers practices

Local contextual factors
Macro level factors
## Employability Framework

### Enabling support factors

**Role of labour market intermediaries** in public, private and voluntary sectors, providing support to individuals, to employers and influencing local training/skills policy

<table>
<thead>
<tr>
<th>Individual factors</th>
<th>Individual circumstances</th>
<th>Employers practices</th>
<th>Local contextual factors</th>
<th>Macro level factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Demographic characteristics</td>
<td>- Household pattern</td>
<td>- Organisational culture</td>
<td>- Features of local employment</td>
<td>- Regulatory regime</td>
</tr>
<tr>
<td>- Heath and well being</td>
<td>- Household work culture</td>
<td>- Recruitment and selection practices</td>
<td>- Local work culture</td>
<td>- Welfare regime and institutional factors</td>
</tr>
<tr>
<td>- Economic position</td>
<td>- Access to resources</td>
<td>- Working practices</td>
<td>- Local labour market operation and norms</td>
<td>- Employment policy</td>
</tr>
<tr>
<td>- Attitudes</td>
<td></td>
<td></td>
<td></td>
<td>- Macro economic factors</td>
</tr>
<tr>
<td>- Labour market and job seeking knowled.</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>- Adaptability and mobility</td>
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<td></td>
<td></td>
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<tr>
<td>- Employability skills</td>
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</tbody>
</table>
ICT for employability

1. **ICT skills**

   **A. IMPACT**
   - Employability
   - Wages
   - Aspirations

   **B. SUPPORT DEPLOYMENT of:**
   - Transversal skills
   - Social networking, collaboration, problem solving, language skills
   - Job search skills
   - Self-confidence and self-efficacy
   - eLearning skills

   **C. FOSTER**
   - further skills development
ICT for employability

2. Supports more effective **job search**
3. Reduces **unemployment duration**
1. ICT Skills

- **85-90%** of future jobs in 2002 will require some sort of ICT skills (85% of jobs medium or high skills, Cedefop 2010; 90% of jobs IDC 2009)

- **Computer users** (working with a computer or using the internet or email for professional purposes) have access to **more creative jobs** (defined as solving unforeseen problems, complex tasks, learning new things or applying own ideas) that enable **skills development** at work and **enhance career prospects** (Eurofound, 5th European Working Conditions Survey, 2012)
2. Job search

- Increasing trend among **job seekers in the use of internet**: 46% of unemployed individuals in 2011 (Eurostat); 4 in 5 job seekers in UK in 2009 (Green, 2011)
- **ICT facilitates** broader geographical search and research about companies information
- Internet job search associated with **more intensive job search**, as Internet supplements other methods (Parry and Tyson, 2008; Stevenson, 2009).
- **Mixed methods** are the most effective.
- Patterns of ICT use for job search follow Internet use patterns and **divides** (age, education level, urban/regional)
- **Social networks** allow to build weak ties of key importance for job search
ICT & Employability: Job seekers/employees

3. Reducing unemployment duration

- **Internet job search significantly reduced unemployment durations**

- **Internet job search decreases the probability of discouragement**
  USA CPS, 2003 and 2009 analysed by Ford (2011), showed that Internet job seekers were half as likely to give up searching.

- **For 47-60 years old, being ICT literate and using a ICT reduces the likelihood of transitioning out of employment/onto retirement**
  In Italy, Bianchi (2013), found 12% decrease
ICT for employability

- Increasing role in **providing** ICT and job search **skills**

- Increasing **use of ICT** in service offer
  - **Transforming service offer**

- Individual factors
- Individual circumstances
- Role of labour market intermediaries
- Employers practices

Macro level factors
ICT & Employability: Intermediaries

- Increasing role in providing basic ICT skills
- ICT skills provision needs to be complemented with job search specific skills

Employment services increasingly using ICTs (e.g. NL), in particular:
- Tools for skills assessment
- Enhancing access to careers information and guidance
- Better access to job offers
- Matching supply and demand services
- Monitor progress of e-job seekers (e-workbook)

New roles/services emerged with Internet, both to job seekers and to employers. Transforming service offer, f.e.,
- On-line Skills assessment
- On-line employment services
ICT for employability

- e-Recruitment
- e-Selection
- Delayed retirement

Employers practices

ICT enable **new forms of work**

Local contextual factors

Macro level factors
ICT & Employability: Employers

Limited knowledge of employers practices

E-recruitment and e-selection:

- **Major drivers for ICT use** are: cost, convenience, easy of communication and flexibility.
- **Use of social networks to screen applicants**
  45% of USA managers and HR staff (US, Wortham, 2009), a figure doubling from previous year
- **High level of job posting on the web**
  Large companies in DE, posted 86% of jobs on the web, only 27% posted them only in printed media in 2006, and 2/3\(^{rd}\) of all jobs filled were posted online (Karla et al. 2008).

Flexible working:

- **ICT has facilitated flexible working, most useful to some types of jobs**
- **In particular, relevant for carers:** 6% of employees and 10% of 50-64 employees care for a relative of 15y+ (Eurofound, 2011)
<table>
<thead>
<tr>
<th>Web 1.0</th>
<th>Web 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large job boards – for employers to post vacancies to a larger audience than would be reached by other means</td>
<td>Development of new services – including online social networks such as LinkedIn to find future employees and contact applicants who may be open to a job offer</td>
</tr>
<tr>
<td>Email alerts (‘push mail’ service) – notifying pre-determined recipients of opportunities/developments on a sporadic basis</td>
<td>RSS feeds, real-time information – allowing employers to automatically place updated information on a search engine of job offers</td>
</tr>
<tr>
<td>Basic job advert (text)</td>
<td>Rich media advertisement (audio, video, animation) – providing more information about what a job is like</td>
</tr>
<tr>
<td>Active recruiters (job advertising) – used by recruiters who are actively seeking applicants to respond to a specific vacancy</td>
<td>Proactive recruiters (social networks, blogs) – where employers are proactive in searching for specific recruits, rather than merely waiting for responses</td>
</tr>
<tr>
<td>Active applicants (CV posting, reply to adverts) – these are individuals who are actively seeking work (e.g. individuals may need to meet requirements of active job search in order to receive unemployment benefits)</td>
<td>Passive or proactive applicants (open to market opportunities) – these are individuals who may make use of Web 2.0 tools to browse available opportunities on an occasional basis and/or who may apply for a new post if an attractive opportunity is presented or if an employer approaches them, but who are not searching for a job intensively</td>
</tr>
<tr>
<td>Classic communication (advertisement) – information is restricted to the specific vacancy that the employer seeks to fill</td>
<td>Development of employer’s reputation and branding – employers may use Web 2.0 tools to enhance their organisational image and help to present their organisation as an ‘employer of choice’ for applicants</td>
</tr>
<tr>
<td>Centralisation of recruitment management – generally (but not exclusively) associated with organisational centralisation in a HR department</td>
<td>Offers scope for contradictory trends: (1) decentralisation of recruitment responsibilities to different parts of the organisation (in accordance with specific needs), or (2) externalisation towards specialist recruitment agencies specialising in developing an ongoing relationship for an organisation</td>
</tr>
<tr>
<td>Transactional recruitment (one-off, short-term) – directed to the task of filling a specific vacancy</td>
<td>Relationship recruitment (applicant relationship management, long term) – geared towards developing the e-presence of the employer in the minds of (potential) applicants over the longer term</td>
</tr>
</tbody>
</table>

Source: adapted and extended from Table 4 in Aurelie and Fallery (2008)
### Examples of Good Practices

<table>
<thead>
<tr>
<th>Project/Programme</th>
<th>Key Competences/Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazing people e-programme</td>
<td>Key competences for all</td>
</tr>
<tr>
<td>Bangladeshi Youth and Cultural Shomiti</td>
<td>Kuder Career Planning System</td>
</tr>
<tr>
<td>eLSe - Senioren lernen zuhause (e-learning for seniors at home)</td>
<td>Migrant ICT Project</td>
</tr>
<tr>
<td>e Scouts (Intergenerational learning circle for community service)</td>
<td>Naric</td>
</tr>
<tr>
<td>Ethnic Jobsite</td>
<td>Notschool</td>
</tr>
<tr>
<td>Experience Counts 50+</td>
<td>Older Women in Learning and Enterprise 50+ (OWLE50+)</td>
</tr>
<tr>
<td>Fit. Fast track to IT</td>
<td>Skills Health Check Tools</td>
</tr>
<tr>
<td>Fundacion Bip Bip</td>
<td>Smart Work Association of Estonia</td>
</tr>
<tr>
<td>Get Yourself Hired</td>
<td>Spielend Lernen - Learning whilst Playing</td>
</tr>
<tr>
<td>Interface3</td>
<td>Stiftung Digitale Chancen (Digital Opportunities Foundation)</td>
</tr>
<tr>
<td>Inter-Life Project</td>
<td>Valencia Ya</td>
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<tr>
<td>IPERIA Institut, France (known previously as FEPEM institute)</td>
<td>YouthforWork-KE – Computers for Development (CFD) Youth for Youth Project &quot;Learning by Doing'</td>
</tr>
<tr>
<td>Keep employment by developing e-skills (KEMP)</td>
<td></td>
</tr>
</tbody>
</table>
Policy conclusions

1. For individuals, ICT skills have become crucial for employability AND ICT skills needed are more than “ICT operational skills”
   - Increasing labour market demand
   - ICT skills support development of transversal skills (networking, collaboration, problem solving, language learning), self-confidence and self-efficacy
   - Support Lifelong Learning
   - Needed for job search

2. A transformation of Labour market intermediaries service delivery is taking place, driven by the need for more cost-effective solutions, towards online and digital only delivery channels
   - Supporting ICT access and skills for effectively using employment services, in particular for disadvantaged groups, needs attention
   - The professional workforce lacks adequate skills for effective delivery of services
   - Opportunities offered by ICT still to be exploited to their potential

3. Lack of knowledge on employers practices and on their level of tools, competences and resources to recruit the most adequate candidates
ICT for employability: knowledge gaps

**Individuals:**
- Key ICT skills for employability
- Common methods and tools to measure Employability
- The role of online social networks in job search and finding

**Labour market intermediaires:**
- State of the art and effectiveness of ICT solutions for matching labour market demand and supply
- Role of ICTs in the quality and effectiveness of the services

**Employers:**
- Their role in employability and their selection and recruitment practices

**Emerging social innovation trends:**
- Crowd funding, Time Banks, Social media enabling social entrepreneurship, micro-work, distributed, crowdsourced labour
List of relevant publications

A copy is available in the room
Thank You

Clara.Centeno@ec.europa.eu

http://is.jrc.ec.europa.eu/pages/EAP/eInclusion.html