The Grand Coalition for digital job creation:
Closing the gap by 2020

An EU wide multi-stakeholder partnership helping to address mismatches and
fill vacancies of ICT practitioners to boost employment

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This document outlines the terms of reference for the Grand Coalition (GC) by drawing on expert input from key industry (ICT and non ICT) stakeholders and relevant Commission services. It helps identify the issues at stake and presents what needs to be done and by whom in order to fulfil the mission of the GC – *bringing together supply and demand in the ICT world to realise the largely under-tapped employment creation potential of this technology*.

1. The issue

Information technologies have become essential work tools enabling faster economic development and growth whilst also allowing for new work patterns and greater social inclusion. ICT practitioners are an essential pillar of the modern workforce across all sectors of the European economy. However, many open vacancies for ICT practitioners cannot be filled, despite the high level of unemployment in Europe. While demand for ICT practitioners is growing by around 3% a year, the number of graduates from computing sciences, and more general large from maths, science and engineering, is actually declining.

There is some quantitative information on the ICT skills at an aggregate level: in 2009, it was estimated that there could be up to 700 000 unfilled vacancies in the EU by 2015. This estimate is currently being updated, and new figures seem to be in the same order of magnitude. Informal surveys of the ICT industry and of European CIOs by their respective associations also show a widespread lack of ICT staff. There is, however, a need for more granular information, both regarding the regional distribution of the gap and regarding the specific skills profiles most in demand.

In April 2012, the Commission's Employment Package called for multi-stakeholder partnerships to address specific actions for job creation, training and education in the ICT sector and beyond. The GC will therefore contribute to accelerate and intensify efforts initiated by European policies (such as the e-Skills agenda, the Employment Package, the Communication on Rethinking Education, the Youth Employment initiative, the Digital Agenda for Europe, and the upcoming EU Initiative on Opening up education), by focusing on a few well-defined goals and using best practice examples from EU countries. The ultimate aim is that of contributing to a job rich economic recovery.

2. The Objectives

The Grand Coalition for digital jobs is a multi-stakeholder partnership seeking to reduce the gap between supply and demand for ICT practitioners in Europe. The target is to reverse the decline and starting to increase the supply of ICT practitioners by 2015, so as to ensure a sufficient number of ICT practitioners in Europe by 2020. The mandate of the Grand Coalition runs from 2013 to 2015 with a review foreseen at the end of this term.

The GC will mobilise key stakeholders (e.g. ICT companies, ICT-using industry, CIO associations, employment agencies, representatives of the education and training sector, social partners and in

particular national and regional actors) to jointly deliver concrete, local-impact short-term actions to remove bottlenecks and facilitate recruitment in the sector by employers.

After a consultation initiated by the Commission, some key stakeholder representatives (ICT industry and CIO associations) have identified specific skills gaps and successful initiatives which could be scaled up and/or easily replicated across territories (an overview is included as Annex 2).

Some granular information on vacancies and the skills needed in particular regions is available. However, the picture remains scattered and fragmented and data collection needs to be thoroughly improved by enhanced cooperation between industry and local/regional employment services. Equally, the situation needs to be monitored on the basis of the indicators put forward in Section 2.2.

2.1 Policy themes and actions

There are four aspects to the lack of ICT practitioners. Firstly, not enough people choose to work as ICT practitioners. Secondly, among those that do a significant number does not acquire through education and/or training (all) the skills demanded by industry. Thirdly, among those that do have the right skills, a substantial number lives far away from the job opportunities. And lastly, for those that would be ready to move to a job, proving their level of skills to an employer from a different country is often prohibitively complicated, especially when a part of their skills has been acquired informally, as is often the case with younger adults.

Accordingly, on the basis of preliminary work and discussion five main actions have been identified constituting the main work strands for the future of the Grand Coalition:

(1) **"Training and matching for digital jobs"**

ICT practitioners and career changers, including mid-career workers from adjacent work areas, need training programmes that meet employers' skills needs and effective placement services that help to bring them into jobs. This requires a close cooperation and exchange between industry and educational sector, specific training packages designed by or co-designed with the ICT industry, as well as more aligned degrees and curricula at vocational and/or higher education levels based on partnerships between companies and public or private education systems. In addition to an active involvement of industry from the design to the execution of the training schemes, a commitment by industry to recruiting/interviewing a high percentage of trainees upon their completing of the programmes has proven to be a key success factor. Effective services for job matching and successful placement of learners are also crucial. It would be important that industry as a whole is involved, including the ICT user industry and SME.

(2) **"Mobility"**

Hiring ICT practitioners from other Member States remains a challenge for many SMEs; where large companies have sufficient resources and extended networks, small companies lack information and scale. Yet there is clearly both a demand for additional ICT practitioners from such companies, and a supply of matching candidates from other Member States. After a detailed local identification of skills needs, and based on best practices, services could be offered to companies to solve mobility problems by collective action (e.g. set up a language class for ICT practitioners hired by several companies in a given region).

(3) **"Certification"**

The goal of this work strand is to stimulate take-up of a single European certification scheme for digital skills of ICT practitioners, based on European quality labels for ICT industry based training and certifications and the European e-Competence Framework, so as to improve ICT professionalism and recognition of qualifications across countries, including recognition of skills which have been acquired informally.

(4) **" Attracting young people to ICT: awareness raising"**

There is a need to bring greater visibility to ICT education, training, jobs and careers. Awareness raising campaigns at EU and national levels are indispensable to better inform students, young professionals and SMEs about the range of opportunities that ICT-related jobs present. In order to attract students, ICT jobs and careers need to be promoted (pointing out concrete aspects of ICT work, employment and career opportunities, pay levels), for example during school/higher education visits by ICT companies/associations, targeted websites, viral videos, etc.

(5) **"Attracting people to ICT: innovative learning and teaching"**

The choice for ICT careers by school/higher education students should be fostered. This requires more aligned educational schemes as well as structural changes inside the educational systems. Bridging the worlds of education, industry and employment is essential to reach this objective; boosting ICT education and training via attractive work-based learning –schemes; increasing the digital pedagogical skills for teachers /trainees; more efficient teacher professional development schemes, etc.

A full table is provided in Annex 1.

2.2 Targets and indicators (targets could be defined by stakeholders)

Workstream 1:
    Indicators: number of people who have graduated from the Grand Coalition ICT industry-led training and certification programmes; number of job placements through projects carried out under the GC

Workstream 2:
    Indicator: number of ICT job vacancies filled from other member states through EURES targeted mobility schemes

Workstream 3:
    Indicator: number of Member States/ companies/employees adopting and using the European e-Competence framework

Workstream 4
    Indicators: Number of ICT university enrolments/graduates; number of young people entering/finishing ICT education and training (both formal education and VET and ICT industry training

Workstream 5

Indicator(s) to be developed

3. Stakeholders and governance

The Grand Coalition relies on the active engagement of all stakeholders; the European Commission can kick-start the process and facilitate the interactions, but it can not drive the Grand Coalition alone. If the stakeholders agree to concrete proposals, based on their respective market intelligence and action potential, the Commission can support such proposals, under certain circumstances including financially.

It is proposed to have a governance structure composed of two layers. The first layer would be a (high-level) steering group, including senior representatives from industry, education and employment agencies. The second layer would be more operational ("sherpas") with one Directorate-General and one key stakeholder taking responsibility for a policy theme and its corresponding actions. Both groups will establish a draft roadmap for the Grand Coalition to be presented at the conference planned for March 2013, to be signed by the four Commissioners.

4. Funding

The Commission is making available funds for certain activities linked to the Grand Coalition (eSkills, CIP programme, employment and education programmes). More information will be available at the time of the conference (see 5).

5. Grand Coalition Conference

The Grand Coalition will be launched at during a Conference scheduled for 4-5 March 2013 entitled "Filling the gaps: eSkills and education for Digital Jobs". The **purpose** of the Conference is to deliver a roadmap for the Grand Coalition, in the context of which stakeholders will present their commitments to initiatives under each of the work strands. Four Commissioners of the Digital Agenda, Education, Employment and Enterprise will open the Conference and a workshop format that will facilitate matchmaking and collaborative problem solving will be included. During the preparation phase, a number of stakeholder pledges to concrete projects will be secured so that a critical mass of Grand Coalition projects will be presented at the Conference.

Annex 1

Priority Actions under the Grand Coalition for digital jobs

Work in progress

The tables below outline a number of <u>indicative</u> priority areas for the Grand Coalition. They also identify an indicative planning for each action along with the responsibilities envisaged for relevant stakeholders.

POLICY THEME 1 - Training and matching for digital jobs

Objectives	**Ensure provision of ICT training corresponding to labour market needs by involving industry (both ICT and non-ICT companies) in the design of training programmes;** **Ensure effective support of job matching and placement for ICT jobs, in particular for SME**
Actions	1) Industry-led training (either ICT industry or ICT user industry; either unbranded or partly-branded), which might be run in cooperation with employment and/or education providers. Degrees need to be recognised between actors (see policy theme 3: Certification, below). 2) Training Marketplace, a service to match training offers with individuals seeking training. It will also serve as a platform for vacancy postings. 3) Develop and identify regional projects to ensure effective filling of ICT vacancies, in particular from SME, through targeted training and job matching. Upscale successful local projects to achieve an impact on European level.
Who does what?	The industry (both ICT and non-ICT) will participate in the design of training offers, and the provision of work-based training. Companies will provide apprenticeships, carry out job interviews and recruit successful candidates, where appropriate. Labour market brokers and other regional/local stakeholders will offer training and assist in identifying the potential participants. The EC will, with the support of associations, employment services and other stakeholders, collect detailed information on skills gaps at local level (e.g. through the European Vacancy Monitor, the EU skills panorama and fact finding missions on local level). It will consider ways of providing financial support, for instance through PROGRESS grants. It will also stimulate the identification of the best practices and their exchange (e.g. under the Partnership between Employment Services (PARES) or in the study of DG CONNECT "DAE Engagement for Jobs and Growth")
Timing	Launch of the first training schemes: 3rd quarter of 2013 Launch of the training market place: 3rd quarter of 2013

POLICY THEME 2 - Mobility

Objective	Offering a dual solution: 1) to move qualified unemployed people from regions with high unemployment to find work in regions with skills shortages. 2) to "move" work opportunities to regions with high unemployment;
Actions	Collect detailed information on the ICT skills gap in order to identify countries or regions for mobility projects. Analyse obstacles to regional mobility of ICT workforce and work opportunities and develop solution to overcome these obstacles. Match people to jobs across borders. Offer mobility assistance services to ensure successful recruitment and a smooth transition, e.g. through language training or financial support.
Who does what?	The EC will, with the support of associations, employment services and other stakeholders, collect detailed information on skills gaps at local level and obstacles to mobility (e.g. through the European Vacancy Monitor, the EU skills panorama and fact finding missions on local level). Employment services and other stakeholders (chambers of commerce, etc.) will offer mobility assistance services, with the support of the EU (in particular grants for targeted mobility schemes under EURES).
Timing	Data collection and analysis: 1st half of 2013 Provision of mobility assistance services: January 2014

POLICY THEME 3 – ICT Industry based Training and Certification (IBTC)

Objectives	To increase the number of ICT practitioners and make ICT practitioners' skills recognized and comparable across countries. The objective is the adoption of the European e-Competences framework by the maximum number of organizations across Europe.
Actions	1) Stimulate take-up of a European certification scheme for digital skills of ICT practitioners, based on the European e-Competence Framework. Consider a Commission Recommendation ("soft law") to foster European quality labels for IBTC and the use of the European e-Competence Framework. 2) Promote ICT professionalism and further develop the European e-Competences framework (certification, standards and assessment tools)
Who does what?	1) <u>National platforms</u> ensure the implementation at national level and feed-back on uptake <u>IBTC companies and Certification bodies</u> will offer their expertise and advice; will relate to best practices, will contribute and in some cases lead activities related to designing and/or perfecting certification tools; will ultimately offer the certifications. 2) The <u>EC</u> will coordinate the actions related to improving the European e-Competence Framework for ICT practitioners and with CEN. It will organise a conference on ICT industry-based training and certifications (24 January 2013, Brussels), and an international workshop on ICT professionalism in cooperation with CEN (2Q2013 in Brussels).
Timing	Potential Commission Recommendation in 2013-2014

POLICY THEME 4 - Attracting people to ICT: awareness raising

Objective	To increase awareness and attract more (young) people towards a career in ICT.
Action	Promoting ICT education, jobs and careers with young people, for example by visiting schools, launching websites and ad campaigns, highlighting social interaction of ICT staff and career opportunities in this field. Successful informative schemes which aim to attract young people in ICT education and careers, and could be emulated, already exist in a number of countries. For example: • Involving young people in "real" ICT projects to discover fascinating domains and ultimately choosing a career in ICT. • Bringing in contact pupils and students with successful ICT personalities, organizations and senior experienced people. • Promotional events that target secondary and university students and include a competition, with scholarships awarded through industry-led competitions.
Who does what?	ICT Industry Associations will coordinate the programme; will organize the events; will identify companies interested in participating and acting as sponsors; will identify foundations interested in offering scholarships. The EC will investigate preparatory support for the programme; will make available existing platforms, such as the Get Online Week and the European e-Skills Week (which is planned for 2014).
Timing	Design of the campaign: 1S 2013 First (pilot) campaigns in at least 3 European regions and preferably in the last two classes of high-school (end of academic year 2012-13: May 2013 or beginning of academic year 2013-14 depending on exam period. General roll-out: academic year 2013-2014

POLICY THEME 5 - Attracting people to ICT: innovative learning and teaching

Objectives	Boosting the supply side for ICT jobs creation through ore aligned educational schemes as well as structural changes inside the educational systems. Boosting ICT training via attractive work-based learning - (dual initial vocational programmes with companies & public education system building partnerships; continued vocational training). Boosting ICT education by increasing the digital pedagogical skills for teachers /trainees to make use of ICT for learning and offer more efficient teacher professional development schemes (peer learning through collaborative platforms, etc.)
Actions	More aligned degrees and programmes at VET and university level have to be developed by : - providing aspiring ICT practitioners with high quality work-based experiences through dual learning programmes based on close partnership between educational organisations and industry whereby companies commit to host & work placements/internships with possibility for recruitment at the end of the scheme; - developing short cycle tertiary qualifications (2 years) focused on ICT skills in cooperation with local industry; - stimulating cross-exchanges between different countries for ICT practitioners Support training of teachers/trainers of aspiring ICT practitioners (including vocational teachers and adult educators; including STEM teachers) both on the level of initial teacher education (through the teacher educators) and on the level of continued teacher training / professional development. Provide efficient communities for these teachers/trainers of aspiring ICT practitioners (through e.g. eTwinning and from 2014 onwards OPALE for adult educators) for innovative peer learning for teachers.
Who does what?	Educational Authorities will provide advice and policies to boost the teacher education and teacher professional development together with the relevant actors such as teacher educators and teacher educational organisations, boost high quality ICT education through dual learning

	schemes.
	The EC will accelerate improvements in work-based dual learning in particular by establishing an EU-level Alliance for Apprenticeship. As the first step, the EC will support a Memorandum on European Cooperation in VET bringing together a number of MS to learn from successful approaches and schemes. It will also will coordinate action required at EU level and co-fund national initiatives; PES will organize and coordinate the programme al local level bringing in contact the candidates and the educational institutions with the companies. In the case of a cross-EU exchange programme Educational Authorities will facilitate mobility via bilateral agreements or similar acts.
Timing	Through the LifeLong Learning programme