



## EUROPEAN COMMISSION

DIRECTORATE-GENERAL CONNECT  
E.2, Software & Services, Cloud

### Workshop on Cloud and Structural Funds of 6<sup>th</sup> February 2014

#### Meeting report

#### Key Actions

- Development of guidelines for cloud providers on the use of structural funds for cloud projects (in local languages);
- Development of frequently asked questions on cloud computing for Managing Authorities and DG REGIO;
- EuroCloud to identify a list of legal and economic advisers for Managing Authorities to consider in setting up a list of providers for the ICT Innovation Voucher programme.

#### Introduction

- Mario Campolargo, Director Net Futures at DG CONNECT, thanked DG REGIO for hosting the workshop and for the cooperation with DG CONNECT. He said that the structural funds are aimed to facilitate the equal use of technology all over Europe to enhance the positive transformation of our lives. Regarding such effects, he pointed out the growth potential and chances of modernisation of the European economy through Cloud Computing, but also referred to the challenges this technology poses. Mario Campolargo asked for case based discussions for a better use of European funds for citizens and economy with the best suited technology.

#### Cloud Computing

- Ken Ducatel, Head of Unit E.2 "Software & Services, Cloud" at DG CONNECT, introduced Cloud Computing.
  - He presented the general concept of moving data from on-site locations to other business partners and subsequently accessing it online and introduced the different layers of delivery (Infrastructure, Platform, Software) and service models (Public, Private, Hybrid). He furthermore mentioned the added values of efficiency, cost reduction, elasticity, reliability and access for users and the economic opportunities that Cloud offers for the EU.
  - He also referred to the Commission's policy framework, the European Cloud Computing Strategy, and presented the different work flows for its implementation. These include Select Industry Groups on standards, on certification, on a code of conduct and on service level agreements, as well as the European Cloud Partnership, a high-level group that focuses on identifying and overcoming barriers to cloud.

- Looking at the effect structural funds could have on Cloud Computing, he explained that cloud solutions could be used for public sector modernisation, smart specialisation and as a growth engine for SMEs. He identified procedural and regulatory barriers for innovative IT solutions, the quality and lack of broadband networks and the restrictive ERDF eligibility criteria as main challenges.
- He finally pointed out the European Council conclusions of October 2013, where Cloud Computing was recognised as an important enabler for productivity and better services.

## **Structural Funds**

- Katja Reppel, Deputy Head of Unit "Competence Centre Smart and Sustainable Growth" at DG REGIO, presented the structural funds.
  - She presented the purpose of the five funds (Regional Development, Cohesion, Social, Common agricultural and rural development, Common Fisheries) as redressing regional imbalances and reconverting declining industries and presented the different instruments (grants, financial instruments, public procurement, support services, Public Private Partnership).
  - Due to problems with fund absorption, impact and sustainability, as well as a lack of coordination, the new cohesion policy uses ex ante conditionality, a thematic concentration and a common strategic framework to ensure coherence and synergies.
  - Katja Reppel explained which activities could be funded under Art. 3 (1), but also pointed out constraints on funding and the conditions for money being claimed back (stop or substantial change of productive activity, change of ownership or revenue generation). She explained that Cloud Computing could be fundable under most objectives and both as indirect usage costs and for providers themselves. However, she indicated that some member states cover these topics under national funds and not as cohesion objectives.
  - Regarding the timeline, the Commission is currently in negotiations on Partnership Agreements (PAs) and Operational Programmes (OPs). The Commission has received 4 official PAs up to date, but had studied informal drafts beforehand. The main problems identified are incomplete proposals and inconsistencies between the problem identification and the proposed solutions. Regarding Operational Programmes, Member States should develop clear intervention logic. Cloud Computing is explicitly mentioned in four programmes (Slovakia, Spain, Poland, Czech Republic).

## **ICT Innovation Vouchers**

- Helen Koepman, Deputy Head of Unit "Innovation" at DG CONNECT, presented the case of ICT Innovation Vouchers.
  - This initiative was started a year ago to use remaining funds efficiently and targeted for SMEs. This was seen as an opportunity to get SMEs to use higher value-added ICT and therefore potentially increase their revenue.
  - Helen Koepman explained that innovation vouchers are a tool that has been used for a long time, but not in the field of ICT. They provide small credit lines to SMEs who wish to purchase ICT services. The details of the provision are defined by regional authorities with variations in implementation, eligibility, rate of funding and performance measures.

- Helen Koepman explained the voucher process and indicated that the service providers were not regionally bound, but could come from all over the EU.
- Ken Ducatel said that the definition of approved providers and reliable advice in this regard was important and suggested this as a task for EuroCloud.

## Case Studies

1. SL: Dalibor Baskovc, EuroCloud Slovenia, presented the case study of **KC Class**, a Cloud Computing Project in Slovenia funded by Structural Funds.
  - Aim of project: Develop knowledge, interfaces and services in the fields of cloud computing (everything as a service - XaaS)
  - Cloud solution addressed: The project addresses different cloud delivery models (IaaS, PaaS and SaaS) as well as 4 use cases: Sustainable Growth and Quality of Life Support, E-Learning Services in the Cloud, Logistics in the Cloud, E-Health and e-Environment Services in the Cloud.
  - Type of funds used: ERDF
  - Where: Slovenia
  - Main players: KC Class brought together a range of partners in research, development and application under different topics (security, reliability, services, data, identity, infrastructure)
  - Budget: Public investment amounted to 6.395.388 €, 85% of which came from ERDF funds and 15% from Slovenian public funding. 2.930.000 € were collected through investments from each consortia member participation, and on top investments amounted to 4.959.000 €
  - Project period: 15.12.2010 - 31.12.2013
  - Key challenges:
    - Keeping right balance between the interests of research and industry players
    - Bringing IP onto the market through new service development
    - Keeping a balance between the interests of bigger and smaller players
    - A need for flexibility due to the different performance levels of project partners
    - Changing political context
    - Lack of knowledge regarding new business models on the local level
    - Long term collaboration through PP investment mechanisms
  - Lessons learned:
    - strategic partnership in joint R&D projects should be industry driven
    - need for market oriented approach
    - We can develop our innovation ecosystem through lean development concept

- lean development enables more innovation
  - long term impact needs to be internationalized
2. SK: Milan Muska, Association of towns and villages of Slovakia (ZMOS), presented a case study on the development of eGovernment services for small towns and villages (**DCOM**).
- Aim of project: supply of SaaS back-office applications to municipal offices and provision of eGov services to citizens in small municipalities
  - Cloud solution addressed: central data centre Data Centre of Towns and Villages (DCOM)
  - Structural fund used: 95% of the investment costs came from EU Structural funds over the Operational Programme Informatisation of Society (OPIS), which uses ERDF means. 5% come from Slovakian investment and the operational costs are covered by the municipalities.
  - Where: the solution is to be used both by central government and by local municipalities in Slovakia. To reach long-term project sustainability the involvement of 1,9 million citizens is needed.
  - Main players: ZMOS (see above) and Data Centre of Electronisation of Local and Regional Governments of Slovakia (DEUS)
  - Project period: The official project kick-off took place at the end of 2013. The result delivery is planned for September 2015, in order to start routine operations from October of the same year.
  - Key challenges:
    - The sheer diversity of services delivered across municipalities
    - Lack of local IT skills and infrastructure
  - Lessons learned:
    - This solution offers a unified way of service delivery
    - Local IT skills are less needed due to central support over cloud
3. PT: Paulo Calçada, EuroCloud Portugal, presented the Portuguese strategy to foster Cloud Computing and talked about **CloudAnchor**, their chosen reference project.
- He talked about the existing situation in Portugal, where a solid background of ICT development exists, but important challenges persist in the form of a lack of qualified resources, job opportunities and participation in research projects. He presented the ICT industry and three cases of innovative Portuguese Cloud products, before referring to Portugal's reference framework for structural funds. The latter was organised in a competitiveness program (can you please specify which one?) covering different clusters, with one focusing on ICT.
  - Aim of project: CloudAnchor is a public cloud broker, but in the role as reference project it was also the aim to leverage the development of an open Cloud Computing market. The projects main goals were to develop certification models, procurement and service contract guidelines, mobility guidelines and templates, as well as a compliance and testing platform and a software package for brokering.

- Cloud solution addressed:
- Structural fund used: ERDF (competitiveness programme)
- Where: Portugal
- Main players: CloudAnchor consisted of four companies (Vmuse (Startup), MultiCert, PT, EuroTux), four research&development partners (UP, IT, UMINHO, ISEP) and an advisory board (IBM, MICROSOFT, HP, APC, ClaraNet).
- Key challenges:
  - Service Level Agreement frameworks and interoperability
  - Cross-Selling frameworks
  - Identity Management Integration – Make IdPs a standard
  - Deterministic Cloud
- Lessons learned:
  - Work in clusters and in an open way
  - Specialization is good, but keeping a multidisciplinary approach is crucial
  - Identify the leaders, but work with the followers
  - Lead by example
  - Internationalization is the key success – Europe and abroad
- Regarding the structural funds, Paulo Calçada put forward several propositions to improve their impact. He asked for increased benchmarks through FP7 and Horizon 2020 funded projects and a reduction of complexity in the funding instruments. He also considered an increased knowledge transfer to industry and higher cooperation as crucial.

4. IT: Mirco Mazzucato, Istituto Nazionale di Fisica Nucleare, presented two projects that researched on the topic of "*Cloud for Smart Cities*". The responsible Italian ministries had launched two bids for Smart Cities under their Structural Funds programmes, each containing an objective on Cloud Computing. **PRISMA** and **Open City Platforms (OCP)** were the two projects chosen.

#### 4.1. PRISMA

- Aim of project: PRISMA focused on promoting digital innovation in the Public Administration by creating a common baseline Open Cloud IaaS and PaaS reference platform leveraging already existing open source solutions and by developing demonstrators for eHealth, eGov and eRisk.
- Cloud solution addressed: IaaS and PaaS reference platform, and SaaS prototypes for certain use cases
- Structural fund used: ERDF
- Where: Italy, convergence regions
- Main players:

- Public research institutions (Istituto Nazionale di Fisica, Università degli Studi di Bari, Enna Unikore (Catania), L'Istituto di Scienze e Tecnologie della Cognizione del CNR (ISTC), CINECA, CNR, Istituto di Acustica e sensoristica "O. Corbino")
  - private companies (EUCENTRE, Sielte Spa, Santer Reply SPA, Cooperativa EDP La Traccia, InnovaPuglia, ATS - Advanced Technology Solutions Srl)
  - public administrations were involved as not funded external advisors
- Budget: total costs add up to 26 million €, with
- Project period: October 2012 - June 2015
- Key challenges:
  - Lack of experience in public administration in the use of ICT solutions
- Lessons learned:
  - Responsible ministry encourages cooperation with other application orientated projects
  - Open solutions, Open Standards and Open Data are largely supported by all players and considered a solid foundation to develop a business in the Cloud domain

#### 4.2. Open City Platforms (OCP)

- Aim of project: OCP builds on the PRISMA results and aims to produce a prototype for an open federated Cloud Computing infrastructure for public administrations.
- Cloud solution addressed: federated Cloud Computing (IaaS, PaaS and SaaS)
- Structural fund used: ERDF
- Where: Italy, regions of Emilia Romagna, Marche, Toscana.
- Main players: Istituto Nazionale di Fisica Nucleare, Università degli Studi di Camerino, 2 temporary SME associations (ATI Marche, ATI Toscana-ER), Al maviva the Italian Innovation Company S.P.A, Maggioli SpA, Santer Reply S.P.A.
- Budget: 19.430.000 €
- Project period: September 2013 – September 2015
- Key challenges:
  - Integrated distributed monitoring and billing
  - Modelling of Cloud applications
  - Integration of PaaS components
  - Open data
  - Ease application porting to Cloud

- Lessons learned:
  - Research and PAs have similar needs for creating national and European federated cloud infrastructures where general services, applications and data can be reused and shared

5. PL: Anna Nietyksza, EuroCloud Poland, presented three case studies of Cloud solutions funded over EU funds, a cloud-based educational platform in Lodz, a broker internet platform and a virtual data centre.

#### 5.1. Educational Platform in Lodz

- Aim of project: Give schools and universities the chance to create their own low-cost e-learning systems.
- Cloud solution addressed: SaaS
- Structural fund used: ERDF
- Where: Lodz, Poland
- Main players: City of Lodz
- Budget: ~9.628.800 €
- Project period: ?

#### 5.2. Broker Internet platform for cloud services providers

- Aim of project: Creation of an intermediary platform between cloud providers and customers presenting cloud solutions tailored to the customers' needs
- Cloud solution addressed: IaaS, PaaS, SaaS
- Structural fund used: ERDF
- Where: Poland
- Main players: MicroBioLab, PARP Agency
- Budget: ~ 168.716 €
- Project period: project currently starting.

#### 5.3. SINERSIO Virtual Data Center

- Aim of project: A pool of cloud infrastructure resources designed specifically for enterprise business needs. Those resources include computer, memory, storage and bandwidth.
- Cloud solution addressed: IaaS, PaaS
- Where: Lubelskie, Poland
- Main players: Sinerso
- Budget: ~3.500.000 Euro

Anna Nietyksza identified the current focus of managing authorities on infrastructure investments and a lack of knowledge on Cloud as main challenges for Cloud investment in Poland. She considered that an awareness and educational campaign for SMEs would be needed for an increased use of Cloud in Structural Funds.

6. HU: Zoltan Bellak, EuroCloud Hungary, presented how venture capital financing over the JEREMIE program has been used in Hungary and explained the example of the **Tresorit** project.
  - o Aim of project: secure cloud storage service, ambition to apply their cryptographic research to a business opportunity
  - o Cloud solution addressed:
  - o Structural fund used: JEREMIE
  - o Where: Hungary
  - o Main players: Start-up of Hungarian university students
  - o Key challenges:
    - Regional venture capital in its infancy
    - Risk tolerance is very low with investors
  - o Lessons learned:
    - JEREMIE enables financing, in areas where other investors were risk averse and lacked experience

## Discussion

- In the subsequent discussion, the question of how to correctly include cloud into the structural fund rules, the possible inclusion of non-EU providers, and the expected cost reductions due to cloud were debated.
  - o Victor Izquierdo, State Secretariat of Telecommunications and Information Society Spain, asked how member states could allow Cloud Computing solutions under the rules of the Structural Funds and in how far Cloud could be financed in funding activities.
  - o Katja Reppel explained that the costs of cloud computing normally only made up a small part of costs falling into overheads. Additionally, costs for training could be covered as part of a project and funds for that would also be available over the Social Fund. She however pointed out that running costs could not be a substantial part of projects and that finance would have to be secured for the time after the project period. She also asked about the expected cost reduction due to cloud and pointed out that this would be a key argument for the use of cloud over other technologies.
  - o Several members of the EuroCloud group pointed out expected cost reductions were considered to be from 10% to 50% depending on the context. Zoltan Bellak however pointed out that the life cycle considerations were very different in Cloud to other technologies.
  - o Anna Nietyksza asked how administrations should procure cloud services and whether providers could come from non-EU countries as well. Katja Reppel replied



that public services should not procure technology specifically, but rather launch procurement calls referring to their performance needs, with different technological solutions possible. She further agreed that there would have to be a cost-benefit-analysis including a life cycle perspective.

- Ken Ducatel presented the Cloud4Europe project, which aims to define technical requirements for public procurement of cloud services and to provide pre-commercial solutions. At the current stage, a service catalogue is being created, which should be finished in April, with a call for providers published later in 2014.
- Filippo Zanella, EuroCloud Italy, asked for guidance for managing authorities. Ken Ducatel said that the Joint Research Centre was working on a tool box and that materials existed for managing authorities. He considered that the materials would however be updated and re-aligned with the inputs from the workshop. He said that it would be necessary to provide simple and short explanations to regional development authorities, that explanations should be available in local languages and that information would need to be provided to associations like EuroCloud on how the structural fund work and could be used for cloud.
- Answering a question of Anna Nietyksza, Ken Ducatel also said that awareness raising would be needed, but that it was difficult to ensure the desired depth of impact in a cost efficient way. Mirco Mazzucato intervened saying that a closer cooperation of companies with the local research sectors could lead to better information provision.

## **Participants:**

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Andreozzi Sergio	European Grid Infrastructure
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