



Commissioner Carlos Moedas

**Commissioner Moedas meets [REDACTED], [REDACTED] of
Google
"Google in the European R&I landscape"**

23/9/2015

14h30-15h00







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0. AGENDA OF MEETING / PROGRAMME OF EVENT

Topics for discussion:

- Google's investments in Europe, including Growth Engine
- Google's engagement in area of smart cities
- Google's vision on the Digital Single Market
- List of calls where Google participates in FP7/H2020.

KEY MESSAGES

- The Commission is taking very seriously the need for putting in place the framework conditions that are needed for research and innovation to flourish in Europe. One of my priorities is to create and support Open Innovation, to facilitate the translation of knowledge into economic value and help bring results of Open Science to the markets.
- I am exploring the possibility to set up a European Innovation Council that would be a 'one stop shop' for innovators. My services are already in contact with Google on this issue.
- The Digital Single Market strategy, while is one of president's Juncker ten political objectives, aims at removing legal and organisational barriers to the wider diffusion and market up-take of ICT – based products and solutions. In that context my priorities are to set-up a cloud for researchers, to ensure appropriate exceptions for research activities in future legislation on copyright (regarding Text and Data Mining) and on data protection.
- Underline that Google like other major US tech companies (e.g. Apple, Microsoft, Facebook, etc.) are buying into the European tech ecosystem to supplement their business areas. Google has created a European arm for its Google Ventures - its venture capital vehicle – in July 2014. The value of the fund is of 100M USD for European start-ups.
- Invite Google to engage in an open and constructive dialogue with European city authorities, industry, research partners and big data platforms providers on how open data access and interoperability among different IT-platforms combined with state-of the-art IT can potentially revolutionize urban planning to make smart cities a reality.

KEY FIGURES	FP7	Horizon 2020
Total number of applications (Involvement of the organisation in proposals)	29 (5 selected + 1 reserve)	3 (None selected, none in the reserve list)
Total number of signed grant agreements	6	None
ERC – Number of grantees	None	None
Marie Skłodowska-Curie – Number of grantees	None	1
EU total financial contribution to participation	€1.083.645,00 (Signed Contracts, EU Contribution)	€360.674,60 (<i>Proposal</i> requested contribution)

1. STEERING BRIEF

1.1 Scene setter

You will meet [REDACTED], who is the Google's [REDACTED], [REDACTED].

Google has been a leading technology company for more than a decade. It is of course known by everyone for its search engine, but is also offering a wide range of other innovative products.

The main source of revenue of Google comes from selling ads in its search engine, email, map and other related products. Its expansion to the mobile ad market is helped by its popular mobile operating system "Android" and the mobile versions of its search and google map applications, which are also popular with iPhone users.

For the last two years Google has been trying to get into the "Cloud" market, offering processing power, storage capacity and bandwidth to customers for a fee. So far its Cloud market share is still very small compared to the two leaders in the field, Amazon and Microsoft.

Through its Google X facility, Google is running a number of "futuristic" projects that do not generate much revenue, but help its image as a leading innovative company. Among these projects the most well-known are the self-driving car, the contact lens that monitors glucose for persons suffering from diabetes, the Google Glass (a head mounted display that is wearable and looks like a pair of glasses), and many more.

Google also has a company dedicated to healthy ageing and wellbeing (Calico), and a company that produces devices with smart sensor technology (Nest).

Recently Google announced the creation of a different corporate structure with the creation of a holding company, "Alphabet", under which the following companies will be run:

- Google: Google's search engine, maps, translate, YouTube, android etc. plus Cloud business.
- Google X: Self driving car, contact lens and other futurist projects
- Calico: Healthy aging and wellbeing
- Nest : Smart sensor technology, smart house
- Google Fiber: Fibre Optics network infrastructure
- Google Finance: Financial Services
- Google Ventures: Venture Capital

Google has a very active public sector department, looking after the relationship with, inter alia, the European Commission. They have a big office near the park Leopold where top officials are regularly invited for seminars. For instance, they have been one of the sponsors of the 4th "EUhackaton" and hosted it in their premises on 2-3 December 2014, where VP Ansip paid a visit and delivered a short speech.

The meeting takes place at a time where the Digital Single Market Initiative is high in the agenda. Many of the priorities of the Digital Single Market have some relevance to Google,

including the Analysis of the online platforms, the revision of the data protection legislation, revision of the telecoms framework, the revision of the copyright legal framework and many more. For a complete analysis see background information on DSM in 4.1 .

1.2 Objectives

- To encourage further investment in Europe, including through Google Ventures and the development of initiatives such as Google "Growth Engine".
- To encourage Google to step up its participation in Horizon 2020, in cooperation with European companies and research teams.
- To exchange views on Smart Cities, the Internet of Things, sensor technology and how all this can help address important challenges, related to inclusive growth, water management, food provision, health and wellbeing in the cities of the future.
- To present the strategic priorities of the Commissioner: Open Innovation, Open Science, Open to the World.
- To discuss the Digital Single Market and how this will help investments and growth in Europe.
- Sketch the first ideas of what the European Innovation Council can look like.

1.3 Line to take

Growth and innovation

- Research and innovation are key for Europe to turn the economic recovery into renewed long term, sustainable growth and job creation.
- Europe has many strengths, but it needs to increase its research and innovation performance in order to remain a competitive player on the global scene.
- In order to achieve this, a new strategy for European research and innovation policy is needed, adapted to a world in which innovation is more open, more digital and more global, and goes faster.
- I have recently proposed to centre this strategy around three strategic priorities: Open Innovation, Open Science and Open to the World.
- Open Innovation is about involving more actors in the innovation process and creating the right ecosystem in which these actors can work together and let innovation flourish.
- Horizon 2020 has made a huge step forward in supporting innovation; however we are working on ways of improving even further the innovation dimension of Horizon 2020. One of the ideas under discussion is that of the creation of a world class scheme to support the very best innovations, the way the European Research Council is the global reference for supporting excellent science.
- This is the inspiration behind the idea of creating a European Innovation Council, something that should be discussed as a major element under the mid-term review of Horizon 2020.
- The aim of this new scheme should be to support breakthrough innovations by providing sizeable support which would allow to generate significant impact.

- Inspiration for the European Innovation Council can be found in key success factors of the ERC as well as in existing schemes, such as the DARPA of the US. My services will have a meeting at Google's headquarters next month on this issue.

Smart Cities

- Acknowledge Google's innovation capacity and ability to process big data and utilise them in services valued by cities, businesses and citizens all over the world.
- Stress the importance of meeting physical and digital worlds and broadening the view on smart city development beyond the current focus on energy and transport in order to tackle the complex challenges our cities are facing, thus including both the smart and sustainable features of cities.
- Invite Google to engage in an open and constructive dialogue with European city authorities, industry, research partners and big data platforms providers on how open data access and interoperability among different IT-platforms combined with state-of the-art IT can potentially revolutionize urban planning to make smart and sustainable cities a reality.

2. SPEAKING POINTS

2.1 Commission's vision on Economic Growth and on Innovation

- The present European Commission has, since it entered into office, made a top priority of getting Europe out of the crisis and putting it on a path towards recovery and a brighter future via renewed growth and sustainable job creation.
- We all agree, and have done so for a long time, that in order to remain competitive on the global scene, Europe cannot compete on costs, but needs to continue excelling in making products and services with top quality, high added value and ever increasing knowledge content. In other words, knowledge, how we generate it and how we apply it to the economy, are Europe's main competitive assets.
- This is why we cannot build a brighter future for Europe without investing strongly in a strong and vibrant science and innovation base and that is why research and innovation have been at the heart of the European Commission's agenda since 2000.
- And despite the gloomy picture which is sometimes painted of Europe today, we have fantastic strengths.
- Europe leads the world in the amount of scientific publications produced and it has research universities which rank among the very best in the world. Likewise, Europe is the home of some of the most innovative firms in the world and continues to attract young innovative entrepreneurs in massive numbers.
- Europe can also build on its diversity and it has over the past decades taken important steps towards building an integrated and open European Research and Innovation Area.

- But we must also be honest about the challenges we face and I see three major challenges:
 1. We are not succeeding in getting as many research results to market as we could and would wish. Technologies developed in Europe are too often commercialised elsewhere. At the same time, and the two are obviously strongly linked, we have a critical issue with the lack of growth of our young innovative companies: our poneys have a much harder time becoming centaurs and unicorns than in the US.
 2. Although Europe generates more scientific output than any other region in the world, in some areas we fall behind on the very best science. At the same time, there is a revolution happening in the way science works. Every part of the scientific method is becoming an open, collaborative and participative process.
 3. Europe punches below its weight in international science and science diplomacy. Our collective scientific importance should be matched by a more active voice in global debates.
- In order to overcome these three challenges I want to chart a new path for research and innovation policy which focuses on three strategic priorities:
 1. Open Innovation,
 2. Open Science, and
 3. Openness to the World.
- Creating a new European Innovation Council is in my view a key element for a successful Open Innovation pillar and increasing the chances to set a number of centaurs and unicorns in Europe.
- Google's "Growth Engine for Europe" initiative is a perfect example of what Open Innovation is about.

- Horizon 2020 has made a huge step forward in supporting innovation, but I also see that Europe does not yet have a world class scheme to allow the very best and ground-breaking innovations, such as those you are showcasing through your Growth Engine initiative, to reach the market.
- In just a few years, the European Research Council has become the global reference for supporting excellent science.
- I would like us to be inspired by the success of the ERC and design a new European Innovation Council, which would offer the same support for excellent innovation.
- This is the inspiration behind the idea of creating a European Innovation Council, something that I believe should be discussed as a major element as part of the midterm review of Horizon 2020.
- I believe that in further developing this concept we can be inspired by some of the key success factors of the European Research Council, such as its autonomous governance model, its focus on breakthrough achievements and the sizeable support it provides.
- At the same time, I believe we can also be inspired by existing schemes, such as the DARPA model of the US, which has been successfully supporting 'high risk, high gain' projects. In this respect I am glad to hear that my services are having a concentration with your Google colleagues already.

2.2 Framework conditions fostering entrepreneurship and the Digital Single Market

- The European Commission has been contributing to the creation of more innovation-friendly framework conditions in Europe, tackling both knowledge creation and measures that help bringing those ideas to the markets, such as the Unitary Patent, the European Venture Capital Passport

and measures to support public procurement of innovation, including across borders, as well as faster standards setting.

- The Digital Single market initiative aims at removing the barriers for a single market in the digital era.
 - It includes initiatives for creating a modern and uniform across EU regulatory framework for example on data protection, copyright, telecom regulation and many more, delivery of audio-visual services etc.
- It aims at making sure that regulation does not constitute an obstacle for the development of new products and business models.

My key areas of interest with regard to the implementation of the DSM strategy adopted by the Commission last May are threefold:

- First the launch of a European Open Science Agenda, including in particular the development of European Open Science Cloud.
- Second, the removal of legal barriers which unduly hamper Open Science and Open Innovation, in particular the use of Text and Data Mining (TDM) techniques and the possibility to use personal data in scientific activities.
- I therefore seek appropriate exemptions for scientific research activities in the General Data Protection Regulation and the forthcoming revised EU copyright legislation.
- Third, the merger of the 'digital' and 'physical' world through initiatives such as "Industry" 4.0 .
- I believe that the Commission should also move forward with 'Industry 4.0' e.g. the systematic connection of the 'digital' with the 'physical' through initiatives aimed at the further digitization of European industry for the benefit of citizens and businesses.

2.3 Smart Cities

- The European Commission supports the development of Smart Cities technologies in different ways, first and foremost by providing the legal framework for a connected Digital Single Market. Cities are furthermore encouraged to develop open data platforms and the European Commission facilitates the dialogue between public and private actors and across sectors through the European Innovation Partnership on Smart Cities and Communities (EIP-SCC). Private companies are also encouraged to allow open access to their data.
- Through Horizon 2020 the European Commission invests in large-scale urban living labs that demonstrate systemic solutions to complex urban challenges. These living labs should deliver cost-effective, integrated grey and green (nature-based) solutions that provide multiple benefits in the nexus of energy, water, food and health and leverage costly problems into opportunities for growth, jobs and better living conditions for millions of urban citizens.
- The testing of air quality sensors on a large scale in the streets of Denver is currently among Google's many activities. With its experience in combining open data with sensor and user driven data, Google could be an interesting partner in an urban living lab or Citizens' Observatories consortium.

3. CURRICULUM VITAE

[REDACTED]



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4. BACKGROUND INFORMATION

4.1 Digital Single Market

Many of the 16 priorities identified in the Digital Single Market Communication could be of interest to GOOGLE.

To name a few (The numbers and the text in italic are from the Commission Press release on DSM) (http://europa.eu/rapid/press-release_IP-15-4919_en.htm):

1. rules to make cross-border e-commerce easier.

The majority of Google's services are delivered electronically, including its main revenue source Google Ads. Google is selling digital goods across the world, through its Google Play platform to sell books, applications, films and other digital goods.

4. to end unjustified geo-blocking.

The end of geo-blocking will benefit greatly the delivery of digital works via Google play.

5. to identify potential competition concerns affecting European e-commerce markets. The Commission therefore launched today an antitrust competition inquiry into the e-commerce sector in the European Union.

Google has been under attack recently both in the US and in Europe for alleged misuses of its dominant position in the search engine market, including directing users to its partner sites and to making access to competition more difficult. Some see similarities with the Microsoft Competition cases in the US and the EU some years ago. In Europe these allegations led to the Commission opening an investigation. Independently of the specific Google Competition case, the dominance of Google in many areas of the digital market brings about discussions as to whether Google can continue to operate as a single company or should be forced to break into smaller parts by competition authorities.

If in an “internet of things” the main provider for access, storage and mining is in the hands of one company, Google, we need to question this dominant position. In this context Google is active in pursuing a public relations campaign to prove that “it is doing no evil”.

6. a modern, more European copyright law.

Google has been often at odds with publishers and other copyright holders. An example of this is the ten-year legal battle relating to the Google Books project. Also there have been legal battles in Europe between Google and news publishers with regard to the right of Google to link to news articles. In the initiative Licences for Europe of 2012/13, Google was only member of Working Groups 1 (Cross-border access) and 2 (User Generated Content), but neither of Working Groups 3 (Audiovisual sector and cultural heritage) nor 4 (Text and Data Mining) although it most certainly followed all discussions. Because of all this, Google is expected to follow closely the developments on a comprehensive European copyright reform.

7. a review of the Satellite and Cable Directive

Google fiber is offering, in the US, fibre optics infrastructure and cable television services. A European directive on Satellite and cable TV might make a European investment more attractive.

9. present an ambitious overhaul of EU telecoms rules.

Potential interest to Google Fiber, and other infrastructure investments.

10. review the audiovisual media framework

Google Play is selling films and other audiovisual content.

11. comprehensively analyse the role of online platforms (search engines, social media, app stores, etc.) in the market. This will cover issues such as the non-transparency of search results and of pricing policies, how they use the information they acquire, relationships between platforms and suppliers and the promotion of their own services to the disadvantage of competitors – to the extent these are not already covered by competition law.

This is of major interest to Google, since it runs many of the major online platforms including and Google Search engine, Google maps, Google Translate etc.

12. reinforce trust and security in digital services, notably concerning the handling of personal data.

Google products and services store a huge amount of personal data. To mention some of the products: The search engine, Google Maps, the Android OS, Gmail, Picasa (Photos), YouTube, etc. It is therefore expected that Google is following with great interest the process of the adoption of the European Data Protection Regulation. In addition Google has been affected by the decision of the European Court on the “right to be forgotten”. Google has implemented the decision by allowing users to fill a form requesting the removal of certain documents from the search engine results.

4.2 First ideas for the European Innovation Council

The aim of this note is to provide a set of initial ideas about a European Innovation Council.

4.2.1 Statement

"..Europe does not yet have a world class scheme to support the very best innovations in the way the European Research Council is the global reference for supporting excellent science. So I would like us to take stock of the various schemes to support innovation and SMEs under Horizon 2020, to look at best practice internationally, and to design a new European Innovation Council. This is not for tomorrow, but I believe we should discuss it as a major element under the mid-term review of Horizon 2020.."

4.2.2 Success factors of the European Research Council (ERC)

The success of the ERC model builds upon:

- A clearly identified **demand** from a **constituency** for the set up of a scheme at EU level;
- An EU legal base establishing: (i) a **budget envelope**; (ii) an **autonomous governance** by this constituency, with the responsibility to design and steer a **simple instrument** (based on support to **individual teams**); (iii) a **dedicated implementing structure**;
- **Concentration of funding** through sizeable ("generous") grants;
- **open competition** to fund the **very best researchers** with **breakthrough ideas**.

4.2.3 What is the aim?

Various means exist already in Europe to support innovation, from local to European levels, addressing multiple types of activities (e.g. grants, financing instruments, regulatory incentives, ..). Work is underway, including at EU level, to develop these further. Under Horizon 2020, the "*SME instrument*" and "*Fast-track for innovation*" instrument have been introduced, the "*Innovation Investment Package*" (including the Joint Technology Initiatives and contractual public-private partnerships) has been adopted and the *EIT* resources have been scaled up.

By and large, a number of promising start-ups and a new generation of entrepreneurs is emerging in different corners of Europe but the scale and impact of these are too limited to allow for a fast enough restructuring of the European economy towards more knowledge intensive activities. More needs to be done in order for Europe to become a top leading region of the world for innovation, where it is possible to create the 'next Google'.

The existing innovation support schemes are:

- mainly oriented towards incremental innovation;
- often oriented towards SMEs or existing players;
- do not provide sufficient support to create true impact;
- and are often not well suited to promote risk taking, rapid move and radical breakthrough.

The specific aim here is to provide a support scheme – currently non-existing – which is inspired by some key elements of the ERC model in that it would target **breakthrough innovations** and provide **sizeable support** to these in order to generate significant impact. The scheme would also consider an **autonomous governance** model.

With reference to the DARPA model in the US¹, the scheme would support "**high risk high gain**" projects. Key features of this model which could usefully be considered are:

- A clear positioning of the activities in the so-called '**Pasteur quadrant**', i.e. seeking at the same time the generation of new knowledge and societal relevance;

¹ Cf. article attached: "'Special forces' innovation: how DARPA attacks problems" (R. Dugan, K. Gabriel, Harvard Business Review, October 2013)

- A focus on solving **well-defined, use-inspired needs or creating new opportunities**. The problems to be tackled must be sufficiently challenging so that they cannot be solved without pushing the boundaries of science and technology;
- Project selection and follow-up based on **risk taking** and **swift re-allocation of resources** if results do not materialise;
- A careful and balanced **portfolio management** of projects which should include both projects that are focused on new possibilities created by scientific advances and projects that are focused on solving long-standing problems through new scientific development;
- An approach based on **assembling the best minds from industry and academia** for limited time periods (e.g. two to three years) to create **diverse, agile and scalable teams**, and to allow independence in project selection and execution.

An element to further explore is how the European Innovation Council could complement the use of public money (under the form of lump sums) with other sources of funding, e.g. co-investments by foundations or business angels, crowdfunding, etc.

4.2.4 What approach to take

Step 1: checking the demand and relevance (2015-2016). The first step requires to check whether such an "innovation breakthrough" scheme corresponds to an actual demand from stakeholders, whether there is an added value in addressing it at EU level, what sort of adaptation it would need in a European context (in particular for keeping it simple, agile and fast), and whether it would need to be complemented by additional features to ensure the exploitation of its results. Such a process would help to identify and mobilize the relevant constituency and to shape a pilot experiment.

Step 2: running a pilot experiment (2017-2020). In the context of the H2020 mid-term revision, introduce a pilot experiment composed of:

- a specific budget envelope
- an autonomous governance
- a dedicated implementing structure.

to build a small portfolio of projects.

Step 3: deploying a fully-fledged scheme (next MFF/Framework programme), depending on a positive outcome of the pilot experiment.

5. FACTS AND FIGURES

5.1 Google participation in FP7 and Horizon 2020.

See table in page 3 for an overview of Google's participation.

The calls where there was participation from Google are the following:

H2020 CALL ID	DESCRIPTION
H2020-ICT-2014-1	ICT 2014 - Information and Communications Technologies
H2020-INSO-2014	NEW FORMS OF INNOVATION
H2020-MSCA-ITN-2015	Marie Skłodowska-Curie Innovative Training Networks (ITN)

FP7 CALL ID	DESCRIPTION
FP7-2013-ICT-FI	Future Internet-2013
FP7-ENV-2007-1	FP7-ENV-2007-1
FP7-ICT-2007-3	ICT call 3
FP7-ICT-2007-C	FET Open scheme
FP7-ICT-2009-4	ICT Call 4
FP7-ICT-2009-5	ICT Call 5
FP7-ICT-2009-C	FET Open scheme
FP7-ICT-2011-7	ICT Call 7
FP7-ICT-2011-C	FET Open
FP7-ICT-2011-FET-F	FET Flagship Initiative
FP7-PEOPLE-2012-ITN	Marie Curie Initial Training Networks (ITN)
FP7-PEOPLE-2013-ITN	Marie Curie Initial Training Networks (ITN)
FP7-SEC-2013-1	FP7-SEC-2013-1

6. SOCIAL MEDIA

[REDACTED]

[REDACTED]

[REDACTED]