

STUDY ON COLLABORATIVE PRODUCTION IN EGOVERNMENT SMART 2010-0075

FINAL REPORT Part. 2 Policy recommendations

Authors:

David Osimo, Katarzyna Szkuta, Roberto Pizzicannella, Laia Pujol (Tech4i2)

Ton Zijstra, prof. Ines Mergel, Craig Thomas (Experts)

Patrick Wauters (Deloitte)



Part 2. Collaborative production in eGovernment – policy recommendations	4
1. Introduction and method.....	4
2. Objectives	5
2.1. Open Data	6
2.2. Leverage the competences of citizens	6
2.3. Ensure participation of all.....	8
2.4. Stimulate the innovation capacity of civil servants	9
3. Current status of policy and civil society’s actions	11
3.1. Open data policy in Europe.....	11
3.1.1. International initiative on Open Government	13
3.2. Leveraging citizens’ competences and unlocking innovation	13
3.2.1. Policy actions	13
3.2.2. Funding measures.....	14
3.3. Engagement and skills of civil servants.....	16
3.4. Participation of all.....	17
3.5. Indicators and targets	19
4. Gap Analysis: what is needed	21
4.1. GAP 1: Making open data happen.....	22
4.1.1. Inspiring example: UK’s Open Data Institute.....	23
4.2. GAP 2: New, more agile funding models.....	24
4.2.1. Inspiring example: Principi Attivi.....	27
4.3. GAP 3: Make using prizes feasible and easy.....	29
4.3.1. Inspiring example: Challenge.gov.....	29
4.4. GAP 4: Promotion of civil servants’ innovation.....	30
4.4.1. Inspiring example: Social media use in the US and Australian government	31
4.5. GAP 5: Existing eSkills programme too limited in scale and scope.....	33
4.5.1. Inspiring examples: Social Innovation Camp and Onroadmedia.....	34
4.6. GAP 6: Not suitable indicators.....	35
4.6.1. Inspiring example: the Open Government Dashboard	36
5. Policy recommendations.....	37
5.1. Maximize the impact of open data	39
5.2. Experiment with agile funding models	40
5.3. Simplify and encourage the organisation of challenges and prizes	41
5.4. Request all MS and the EC to experiment with collaborative services	41
5.5. Activate civil servants by design.....	42
5.6. Educate and empower citizens.....	44
5.7. Introduce new indicators.....	44
6. Concluding remarks: towards public services that get better the more people use them.....	47

List of tables

Table 1 EU funding spending on collaborative eGovernment theme (2008-2011).....	15
Table 2: Policy inventory	20
Table 3: Summary of gaps	21
Table 4 Differences between government and bottom-up collaborative eGovernment projects	26
Table 5 Summary view from objectives to recommendations	37
Table 6 List of indicators measuring development of collaborative eGovernment	46

List of figures

Figure 1: Policy recommendations' logic	5
Figure 2 Principi Attivi - an example of agile funding.....	27
Figure 3 Challenge.gov platform - an example of inducement prizes policy action .	30
Figure 4 Onroad Media - an example of inclusive participation	35
Figure 5 The Open Government Dashboard - an example of innovative approach to measuring eGovernment	37
Figure 6 Relation between quality of services and number of users in government, eGovernment and collaborative eGovernment services	47

Part 2. Collaborative production in eGovernment – policy recommendations

1. Introduction and method

This section aims to build on the evidence presented so far in order to deliver concrete, actionable policy recommendations. This section is particularly important because too often eGovernment policy is not driven by real needs, but by institutional isomorphism. Governments tend to copy what other governments are doing, rather than to begin the process from defining the genuine needs.

It would be definitely easier to simply present what leading countries such as the US are doing and extend it to the EC and all MS. Indeed, it would be straightforward but would ultimately lead to a superficial and hype-based approach, which is unlikely to help Europe addressing the dramatic socio-economic challenges it faces.

To avoid this oversight, we followed a clear problem-driven approach, illustrated in Figure 1 below. In previous sections, we demonstrated the unique benefits of citizens-government collaboration, as well as risks it conveys. We have subsequently identified the key factors (drivers and barriers) that affect the deployment of collaborative e-government. As policies can act on these factors, those clustered factors became our high-level **objectives** for policy action that is aimed at enhancing the drivers and reduce the barriers.

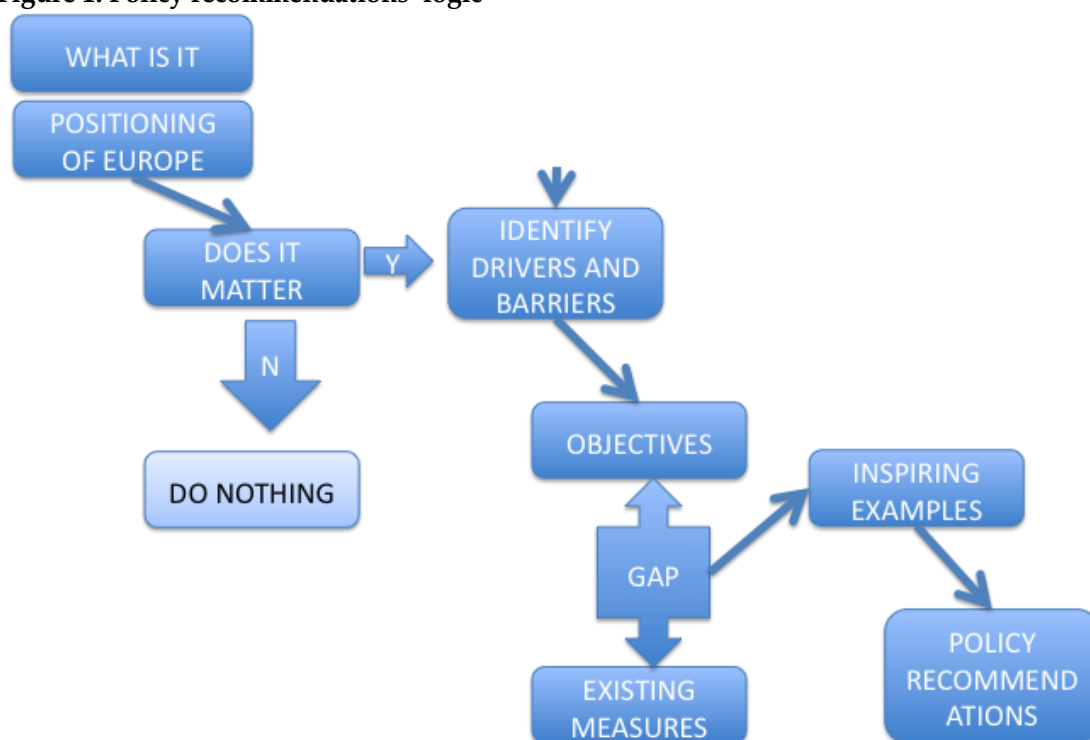
However, these objectives cannot be translated directly into policy recommendations at the risk of being too generic. To be useful, they need to be contextualised in the existing policy framework, at the EC and national level in order to map what is already being done regarding each of those objectives. Through this analysis, we were able to identify specific **gaps** that need to be addressed. These gaps represent thus “what needs to be done”.

We went one step further ahead and illustrated “how it can be done” by systematically analysing **inspiring examples** of existing practices to address these gaps in order to draw useful lessons.



Finally, based on those examples, we provided concrete, specific, actionable policy recommendations.

Figure 1: Policy recommendations' logic



2. Objectives

From the drivers and barriers to collaborative eGovernment identified in the first, analytical part of the report, we identify here the generic objectives for policy action. We have **clustered** therefore the drivers and barriers in **four objectives**:

- 1) **Open data**: It refers to the needs of opening up public data by default in a reusable, free, machine-readable format, possibly creating an open data catalogue; and how to adopt “right to know” access to public documents (rather than “need to know”) in Public Sector Information
- 2) **Leverage the competences of citizens**: citizens have unique competences that can improve and innovate public services. Many citizens are willing to provide their input and collaboration. Governments, especially in times of dramatic budgetary cuts, need to tap into this reservoir of resources.
- 3) **Ensure participation of all**: This category groups all objectives referring to increase IT skills and media literacy amongst citizens, so that they are able to create and use collaborative services; and the need to engage them in the creation but also to encourage the use of those services.

- 4) **Stimulate the innovation capacity of civil servants:** It clusters all challenges of the encouragement of civil servants to engage in social media and in developing innovative applications, it calls to provide guidelines and incentives to participation.
- 5) **A final transversal objective** is to ensure that adequate implementation measures are in place to make the four previous objectives happen. In the EU context, this refers in particular to the Open Method of Coordination, and namely the benchmarking indicators.

2.1. Open Data

As we highlighted in the first part of our report, collaborative government is enabled by opening up government data. Many interviewees therefore underlined the need of getting the open data high on the government agenda and the necessity of data cleansing upstream.

This is especially important if we recall that, as the online survey of developers showed, within the most important barriers to develop collaborative services the first one was the difficulty in getting data from the administration (64% of respondents).

The table below summarizes the barriers and drivers relevant for this objective.

From Drivers/ Barriers	To Policy objectives
Open source movement advancements and standards, positive open data climate	To leverage this favourable context
Inspiring examples from other countries as drivers	To promote knowledge sharing and exchange amongst countries and policy makers (required EU support)
Necessity to react to crisis through radical innovation	To promote prize, competitions around challenges created due to economic situation or cuts.
Necessity to address systemic societal challenges which need collaboration (climate change)	To promote collaboration amongst developers, designers to face the challenge
Economic pressures on cuts in services	To open data in a re-usable format by governments to enable developers to deliver apps that make more visible and transparent the cuts. To make compulsory by law to make public the data on public expenditures in a re-usable format.
High cost / difficulty in getting	To provide EU direction on open data,

the data	formats, standards and promote incentives/ measures amongst governments to increase adoption.
----------	---

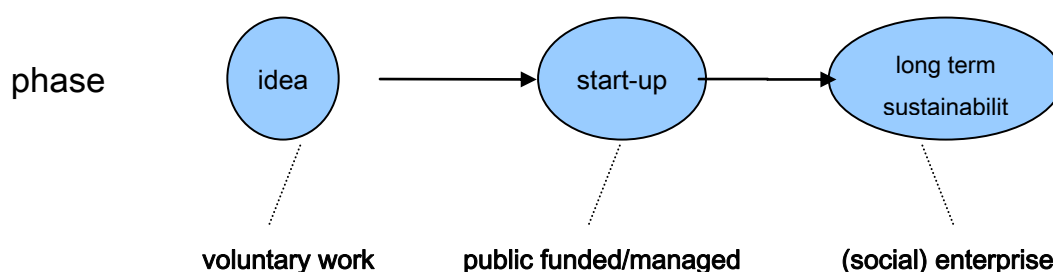
2.2. Leverage the competences of citizens

The first part of the report demonstrated that citizens have unique competences that can have a real impact on improving and innovating public services. Many citizens are willing to provide their input and collaboration. Governments, especially in times of dramatic budgetary cuts, need to tap into this reservoir of resources.

To do so, government need to proactively and systematically experiment with the potential contribution of citizens as well as stimulate bottom-up innovation from the outside.

In order to understand better the funding barriers and the policy objectives, we should firstly understand the common business model/ process used by these kinds of services. For instance, if we take Actimobs example, we realize that the original idea comes from outside the public sector to meet needs not currently covered by public services. In this initial phase the work is mainly on voluntary base, and has the objective of providing evidence of the interest and “market” for the specific service.

Then, the initiative is handed over to the public sector that provides management and funding. This phase allows the consolidation of the initiative and provides further expansion of the interest for the service from other public organisations. The availability of public funding (maybe for a predetermined amount of time) helps the initiative to develop and survive the “infant mortality” that often characterise voluntary-based initiatives (even when they have potential interest).



As it was outlined in the case studies, collaborative eGovernment services do not require extensive investment for technology development. The development cycle is short, so it needs a fast funding scheme and easy

adaptable to the idea developed in these voluntary work (e.g venture capital approach for start-ups). As this idea has already followed to some kind development of a prototype, it would be much effective to have a funding focused on results rather than proposals. We propose below some policy objectives according to the funding barriers identified.

From Barriers (needs)	To Policy objectives
Lack of funding and instruments for such initiatives. (Note: Low costs of technologies used)	- To provide lighter and fast instruments (e.g simplified proposals through short and simple proposal forms, ideally one page in the first stage, and followed by more complex forms at later stage)
Open source movement advancements and standards, positive open data climate	To leverage this favourable context
Inspiring examples from other countries as drivers	To promote knowledge sharing and exchange amongst countries and policy makers (required EU support)
Necessity to react to crisis through radical innovation	To promote prize, competitions around challenges created due to economic situation or cuts.
Necessity to address systemic societal challenges which need collaboration (climate change)	To promote collaboration amongst developers, designers to face the challenge
Economic pressures on cuts in services	To proactively identify areas where citizens contribution could help to improve the delivery of the service
Increased expectation to co-create services	To increase activities by government or governmental support to private and social initiatives on collaborative eGov (e.g prizes promoted by private organizations with commitment of government to use the winner service)

2.3. Ensure participation of all

Leverage the competence of citizens and their digital literacy is one of the barriers highlighted mainly by public administration. The quality of the input of citizens and their increasing involvement, which is needed to deliver better collaborative services, requests a critical mass of citizens' participation.

Public administrations put their attention and focus their efforts on increasing the digital literacy of citizens to tackle one of the barriers, but it is not the only bottleneck for citizen's engagement. It also requires actions to increase citizens' skills so that they provide higher quality of inputs and also to tap

into their interests and social networks in order to increase their participation and engagement.

From Drivers/ Barriers (needs)	To Policy objectives
Low quality of input from citizens	<ul style="list-style-type: none"> - To increase skills of the population through formal / informal education. - To increase the offer and opportunities for citizens to provide input for service design and delivery (learning by doing) - To provide feedback to citizen's input as a permanent process. Also to give visibility on comments, process and impact of what they are doing to raise the quality. - To use friendly tools that citizen's understand. - To give very clear message on the service and input required.
Lack of skill base to deliver some new services	<ul style="list-style-type: none"> - To promote more IT skills - To promote more training by developers already doing these services, independently of their degree. - To promote more collaboration amongst disciplines and people: from design, art, IT etc. - To promote platforms for collaboration (e.g hackmeetings, etc.)
Low interest in public issues making in general	<ul style="list-style-type: none"> - To tap into interests of people and social networks people already have - To improve communication and overcome language barriers.
Increased expectation to co-create services	<ul style="list-style-type: none"> -To increase activities by government or governmental support to private and social initiatives on collab eGov (e.g prizes promoted by private organizations with commitment of government to use the winner service)
Digital skills	<ul style="list-style-type: none"> - To adopt multi-channel approach of multiple points of entry¹ for services. It might help to diffuse some of the digital divide concerns. - More actions needed promoting inclusiveness and tackling digital divide

2.4. Stimulate the innovation capacity of civil servants

There is a general acknowledgement of the importance and the need for a radical transformation of the way in which public servants work, i.e. adopting more collaborative ways of designing and delivering public services. As we outlined in the first part of the report, it is recognised that public servants are

¹ Providing the service not only on extremely expensive smartphones, but also on newspaper sites, community and non-profit organizations in form of widgets might ultimately help to increase inclusiveness.

used to have a “directive” role and to exercise strong control towards the recipient of the services they produce. On the other side, co-production implies a deep transformation of the relationship provider-users to fully exploit the benefits coming from an improved collaboration with service users.

The experiences gathered in the data collection phase showed that the reaction of public servants to partially losing control on the process as effect of a more collaborative approach is mixed: fear, excitement and indifference are all present.

As some of the interviews highlighted, the main barrier to collaborative eGovernment service is the cultural resistance and risk aversion of civil servants: their fear of losing authority, the control, the resistance from hierarchy, resistance to share decision-making power and the fear of committing errors visible for everyone.

But the change of the public servants mindset is not the only barrier, there is also the lack of understanding of how to deliver these new services. We are referring to the lack of training and guidelines that help them to promote and use those services. As we have seen in the section related to impact of co-production on work of civil servants, in some cases the opposition to collaborative approaches is provoked by a “misunderstanding” of why new services are implemented by external actors to the public sector. This provokes the establishment of “us” (the public sector/public servants) vs “them” (the third-sector/citizens) counterposition that could be easily avoided by an early involvement of public servants (also when the project is started from outside the public sector).

However, although change in working practice of civil servants is considered essential for a successful co-production, there is no evidence of measure (and impact) taken in training public employees face the new role that co-production asks them. We could just mention an interesting policy action comes from the approach of the Big Society in UK in promoting an active involvement of the public workers in adopting co-production. One of the policy measures contemplates the possibility that public sector workers are given a new right to form employee-owned co-operatives and bid to take over the services they deliver. In this case the approach is oriented not to “react” to change, but to “promote” change from the side of the public workers. This is an important change of perspective. However, there is no evidence yet of how much this possibility has been implemented and in which context/type of

service, so a further investigation on this approach would be very useful and therefore potentially replicated by others.

From Barriers (needs)	To Policy objectives
Cultural resistance and risk aversion: Perceived loss of control, fear of loosing authority, fear of committing errors visible for everyone, personal commitment	<ul style="list-style-type: none"> - To provide incentives to public servants for delivering these services. - To increase awareness actions, guidelines on how to deliver collaborative eGovernment services and promote leadership (competitions) amongst them. -To give license for experimentation (license to fail quick and fast with small initiatives) -To promote “entrepreneurial” activities amongst civil servants -To share insightful failures amongst civil servants in order to change also the vision of failure.
Incapacity to deal with large-scale discussion	<ul style="list-style-type: none"> - To provide guidelines - To promote networks of innovative civil servants for knowledge exchange and mutual support
Lack of political leadership (e.g policy makers Denmark stated that the lack of political leadership formed a barrier to further progress on open data policy)	<ul style="list-style-type: none"> - To promote EU support and collaboration of policy makers on that field to increase awareness and adoption
Low level of data literacy	<ul style="list-style-type: none"> - To provide guidelines, training and support to deliver these new services
New generations entering the public workforce	<ul style="list-style-type: none"> It is an opportunity to promote these measures, especially the ones addressing the need of changing cultural mindset
Delivery of software-as-a-service enables to bypass institutional “authorisation”	<ul style="list-style-type: none"> It is an opportunity also for experimentation and innovate.

3. Current status of policy and civil society’s actions

This chapter focuses on a summary of European and national policies on collaborative eGovernment. This summary is the result of literature review and fieldwork. The current policy status is complemented with an examination of civil society initiatives in this field.

3.1. Open data policy in Europe

From the policy exercise described in length in Part 1 of this report we can clearly see that open data initiatives as well as public sector information legislation are far more developed than collaborative services delivery.

Open data bottom-up movement efforts (budding open data portals and open-data driven apps) were already coupled with a strong EU legislation – Directive on PSI re-use (2003). The directive was aimed at pushing public sector bodies to enhance re-use of their information resources by setting minimal rules for charging for data re-use and encouraging open data policies. Moreover, the INSPIRE directive (2007) aimed at establishing an infrastructure for spatial information, complements the PSI directive regarding spatial data. In order to maximise data re-use and promotion of government open data portals as well as make the PSI directive more effective, the eGovernment Action Plan for 2011-2015 foresees its review in 2012.

As a result of the action plan and Digital Agenda actions, the end of 2011 sees the adoption of the overall EU Open Data Strategy - a set of measures aimed at increasing government transparency and creating a market for public data². This market was estimated for €32 billion a year by recent review of existing studies made by Graham Vickery³. The strategy introduces the new Directive on the re-use of public sector information together with a revised Commission decision on the re-use of the Commission's information. According to Nellie Kroes, the revised directive will opt for getting *rid of case-specific licences and controls and make everything re-usable by default. Restrictions should have to be justified, not disclosure*.⁴ Furthermore, an European portal federating national data portals will be launched in 2013.

In the same time the open data evangelists organise (often with the public administration support) open data camps, hackathons and other community building events. Moreover, many EU countries put in place guidelines for public data re-use on the national or regional level (e.g. UK, Denmark, Italy).

In consequence of those two streams (civil society effort and legislative initiatives of the EC and Member States), all EU countries have adopted an

² <http://europa.eu/eucalendar/event/id/279090-the-european-commission-proposes-an-open-data-strategy/mode/standalone>

³ http://ec.europa.eu/information_society/policy/psi/facilitating_reuse/economic_analysis/index_en.htm

⁴ <http://blog.okfn.org/2011/10/20/ogdcamp-opening-talk-from-neelie-kroes/>

open data strategy though there are substantial differences in the level of commitment. All EU countries have transposed the PSI directive, even if some are in infringement procedure with the EC, and came up with national legislation enabling PSI re-use. Some of the MS have also deepened their legislative efforts reinforcing the re-use rules for their countries (e.g. UK, Netherlands⁵, Slovenia⁶ and recently France⁷) promoting the open data re-use.

The 2009 saw the launch of first two open data portals run by government – US data.gov and the UK’s data.gov.uk. Both were regarded as flagships of their governments’ transparency agendas. After roaring success of those pioneering initiatives, many international (WorldBank), national (Australian government) and local public bodies (Helsinki Region Infoshare) opened their own data portals. Currently, there are seven national data.gov portals in Europe (Denmark, Finland, Belgium, France - forthcoming, Italy, UK, the Netherlands). It should be underlined that apart from the UK that hosts the data on the portal, the other national initiatives in Europe have so far been limited to web directories listing data sets that are available on different government and agencies websites. The countries that already have a national portal often have also regional and local portals (e.g. several regional portals in Spain, Basque Country, Catalonia, Balearic Islands).

Also apps contests aiming at unlocking the data potential are becoming pervasive in Europe. To mention a few: Inca Awards in Flanders, Offentlige Data I Spil in Denmark, Apps for Finland, Apps for Germany, several local contests for example Open Access to Rennes Municipality. These contests, as it will be elaborated further in subsequent chapters, enable funding of innovative applications using government data and point out to novel data use. For example, Husetsweb⁸ offers a user-friendly tool for homeowners to assess and optimize their energy consumption by using the Danish Building and Housing Register (BBR) data coupled with data from Totalkredit (mortgage broker) and Rockwool (provider of insulating materials) on heating sources and their potential for improvement.

It should be noted that portals and app contests are the most tangible part of open data strategy and therefore probably easiest to design and implement.

⁵ <http://epsiplatform.eu/content/topic-report-no-17-state-play-psi-netherlands>

⁶ <http://epsiplatform.eu/content/topic-report-no-6-state-play-psi-re-use-slovenia>

⁷ <http://epsiplatform.eu/content/france-launches-data-portal>

⁸ <http://www.husetsweb.dk>

3.1.1. International initiative on Open Government

More than half of the EU Member States (UK, Bulgaria, Czech Republic, Denmark, Estonia, Greece, Italy, Latvia, Lithuania, Malta, Netherlands, Romania, Slovak Republic, Spain and Sweden) have joined recently (on September 20, 2011) the Open Government Partnership initiative that aims to secure concrete commitments from governments to promote transparency, empower citizens, fight corruption, and harness new technologies to strengthen governance. The countries signed the Open Government Declaration and should deliver a country action plan developed with public consultation in March 2012 as well as committed to independent reporting on their progress going forward. The OPG declaration calls for the increase of availability of public sector information data and enhancing of civic participation in government activities.

The Open Government Partnership may enable a real best practice exchange and push the participating countries to deepen their engagement. Unfortunately, not all EU Member States have joined the partnership that may augment already existing differences in open data and citizen engagement policy implementations in the EU.

The introduction of Open Data policy on the European level and in many Member States has brought already substantial results. Yet, the forthcoming report on Pricing of Public Sector Information: Assessment of the different models of supply and charging for public sector information (SMART 2010/0046) shows that there is still a lot to be wished for. The next chapter focussing on gap analysis will further elaborate missing elements in the current EU open data policy.

3.2. Leveraging citizens' competences and unlocking innovation

3.2.1. Policy actions

As far as the future EU policy on collaborative production is concerned, the new eGovernment Action Plan 2011-2015 puts as one of its objectives - User Empowerment and foresees as one of its actions Collaborative Production of Services. The EC plans to facilitate exchanges of knowledge and experience between stakeholders and agree with Member States on common targets for

the roll out collaborative services. As we see, on the EU level there is already recognition of the importance of collaborative eGovernment but no policy actions has been proposed yet.

The overall review of Member States policies on collaborative service delivery show that there is no EU country having a policy action in this field if we exclude legislation and activities linked to open and public sector information data. Collaboration in eGovernment is not mentioned as a priority in any policy document under study.

However, the UK with its Big Society initiative was the closest of coming up with a systemic approach. For example, communities were given the right to bid to take over local state-run services. To facilitate the engagement the Community Organisers programme is supposed to identify, train and support 5,000 people who want to make a difference to their community and catalyse social action⁹. Nevertheless, the current financial crisis has very much reduced the planned community empowerment actions.

Despite of lack of overarching strategy many European countries carry out non-coordinated efforts on the trial-and-error basis on local, regional and national level (such as co-design projects and civic engagement contests in Italy or cross-ministerial experimental laboratories of innovation in Denmark¹⁰). These are inspiring examples but none of them have been replicated or scaled-up.

3.2.2. Funding measures

The European Union applies several funding streams to support eGovernment projects related to collaborative eGovernment. The collaborative dimension can be found in the FP objective Governance and Policy Modelling, eParticipation initiatives of FP7 continued by CIP Policy Support Programme as well as in the CIP 'Smart Cities' theme.

The projects funded under Governance and Policy Modelling FP theme strive to deliver tools for inclusive and wide civic engagement, such as social media toolboxes, serious games and virtual communities to attract citizens as well as new models for testing policies. The objective has funded altogether 18

⁹ <http://www.cocollaborative.org.uk/>

¹⁰ More information in case study overview in the first part of the Final Report. Danish case is also analysed in length in the book *Leading Public Sector Innovation. Co-creating for a better society* by Christian Bason (2010, the Policy Press).

projects for the total sum of €51mln with €37,5mln of European Community contribution. The projects duration is in average three years and its average costs is around €3mln.

The eParticipation projects focussed in majority on policy design (online consultations), policy evaluation as well as civil servants' ICT skills. Even if FP6 funded 9 projects and FP 11 projects linked to eParticipation theme, the FP7 programme has funded 21 new projects. In total, the FP7-funded projects received 15 mln of EU funding and its total cost was 30mln€ with an average project arriving at €0,7mln.

Moreover, Competitiveness and Innovation Programme (CIP) ICT Policy Support Programme has funded another 5 projects together with an European network of all stakeholders active in the field of eParticipation (PEP-Net) and network of stakeholders in the Governance and Policy Modelling (NET-EUCEN). The programme total costs were €15 mln, out of which EU contributed €7,5 mln. An average project cost €3mln and lasts three years.

What is more, CIP has funded 7 new 'Smart Cities' projects that were designed to help cities deploy ICT in new and innovative ways that enable them to become 'smarter' by developing the smarter, digital, greener and more inclusive economies that need to emerge after the recession. The pilots deploy user-driven open innovation methodologies that involve citizens as co-producer of content and services. The total funding of those seven projects is €30 mln, half of this sum being secured by the EU.

EU funding measure	Total funding	EU contribution	Number of project	Average funding	Average EU contribution funding per project
CIP Smart Cities	€30 mln	€15 mln	7	€4,3 mln	€2,1 mln
eParticipation programme FP7	€15 mln	€11 mln	21	€0,7 mln	€0,5 mln
eParticipation CIP (ICT Policy Support Programme, Theme 3)	€15 mln	€7,5 mln	5	€3 mln	€1,5 mln
FP7 ICT for Governance and Policy Modelling	€51 mln	€37,5 mln	18	€2,9 mln	€2,2 mln

Total	€111 mln	€71 mln	51	€ 2,7mln	€1,6mln
-------	----------	---------	----	----------	---------

Table 1 EU funding spending on collaborative eGovernment theme (2008-2011)

In sum, an average project in the collaborative eGovernment field runs three years, incurs €2,7 mln costs and gets €1,6mln of European funding. Nevertheless, the impact of these projects is far from being demonstrated.

As the access to funding is linked to many administrative burdens and requires wide consortia, it very much hampers the access of individuals and small companies. Our analysis of non-funded bottom-up web projects offering collaborative public services (such as SeeClickFix or OpenlyLocal) shows that they have witnessed more take-up than the heavily funded eParticipation initiatives. Also, the most effective approach to web innovation is “fail fast and fail forward” rule which works much better on small projects.

The new Framework Programme for Research and Innovation - Horizon 2020 highlight the need for changes in access to funding. This integrated funding system will cover all research and innovation funding currently provided through the Framework Programme for Research and Technical Development, the Competitiveness and Innovation Framework Programme (CIP) and the European Institute of Innovation and Technology (EIT). The changes include simplification of funding and reimbursement rules, less paper work, more funding of close to the market projects and an inclusive approach to entice new entrants. Horizon 2020 will thus focus on *societal challenge, streamline funding instruments and radically simplify access through a better balance between a control-based and a trust-based system*¹¹. It answers to action 52 of Digital Agenda¹² that announced as from 2011 *measures for ‘open, light and fast’ access to EU research funds in ICT* in order to attract SMEs and young researchers.

The second source of funding, more agile, inclusive and cost-effective are inducement prizes that offer award for an accomplishment rather than choosing between written project proposals and participants’ CVs. In Europe the use of inducement prize contest is much reduced to app contests in open data projects (Inca Awards in Flanders, Offentlige Data I Spil in DK, Apps for Finland)..

¹¹ Innovation Union, SEC(2010) 1161

¹² http://ec.europa.eu/information_society/newsroom/cf/fiche-dae.cfm?action_id=210

However, the FP7 WorkProgramme for 2011-2012 already mentions organising competitions as a mean to achieve greater innovation and will launch two calls based on competition approach. It foresees one call under the Challenge 2: Cognitive Systems and Robotics, objective 2.1: Cognitive Systems and Robotics named *Speeding up progress towards smarter robots through targeted competitions*. The second call under the Challenge 4: Technologies for Digital Content and Languages, objective Intelligent Information Management concerns *Targeted competition framework speeding up progress towards large scale information management systems of global relevance*¹³.

3.3. Engagement and skills of civil servants

In order to open up the data and engage citizens in public service delivery, there is a need for engaged, ICT-proficient and aware civil servants. The policy exercise pointed out that on European and national level the policy actions targeting civil servants are very scarce.

The Ministerial Declaration on eGovernment (Malmö, 2009) approved by all MS underlined the role of civil servant's skills in efficient and affective eGovernment. It declared that MS governments *will foster innovation and relevant skills of our civil servants in order to increase the capabilities of our public administrations*.

Nevertheless, the prevalent actions are still focused on open data. Finland, Denmark and Spain published Open Government Data guidebooks for civil servants. The Swedish eGovernment Delegation was instructed to promote and coordinate the agencies' efforts to improve the conditions for the re-use of data amongst public sector bodies. Those activities, despite being needed, are not sufficient to answer the needs of developers and citizens. Civil servants need ICT and awareness training in order to fully embrace the open approach. None of the Member States has come up with a coordinated action of training and awareness rising. In the current situation, due to lack of coordinated training and mentoring programmes, the open by default approach with difficulty is paving the way in the public administration.

Denmark, Finland, Netherlands and have also published general guidelines for agencies' use of social media. This guidelines help the civil servants

¹³ ICT - Information and Communication Technologies WorkProgramme 2011-2012.

understand the benefits and risk of social networks and other Web2.0 applications.

The developers we surveyed often mentioned the indifferent attitude of public administration and that even in cases of successful collaboration the kick-off of the project was preceded by months of negotiations. The mindset of public administration is still provider-centred and changing it may prove difficult.

3.4. Participation of all

The growing demand for highly skilled ICT professionals from industry and increasing importance of ICT in everyday life made digital literacy an indispensable skill for every citizen. In order to answer industry needs and tackle digital divide the EC came up with several policy actions aimed at increasing e-Skills amongst European population.

The European e-Skills policy distinguishes between ICT professional and ICT user defining a distinctive set of skills for both targets. Those skills encompassed the confident and critical use of ICT for work, leisure, learning and communication.

The starting point of the new policy was the e-Skills summit in Copenhagen in 2002, followed by establishment of the European e-Skills Forum in March 2003 and Experts Group on e-Skills in 2006. An ICT Task Force was launched in 2006 to prepare a number of recommendations help create a more favourable environment for business in the EU. Those recommendations were taken up by the Thessaloniki Declaration adopted at the European e-Skills Conference of October 2006. In 2007 the Commission issued a communication on "e-Skills for the 21st Century: Fostering Competitiveness Growth and Jobs" (COM(2007) 496). The Council followed the EC example and adopted Conclusions on a long-term e-skills strategy for Member States. Those initiatives were backed up by industry forming e-Skills Industry Leadership.

The EC document presented five actions lines at the European level: promoting long-term cooperation and monitoring progress, developing supporting actions and tools, raising awareness, fostering employability and social inclusion, promoting better and greater use of eLearning. The actions involved among others:

- Supporting the development of a European e-Competence

Framework (general and comprehensive e-Competences that can then be adapted and customised into different ICT business contexts)

- supporting the Europass initiative in cooperation with the European Centre for Development of Vocational Training, including a project of European e-Skills and Career portal
- encouraging women to choose ICT careers (IT girls shadowing exercise)
- promoting e-training in the field of agriculture and in rural areas in the context of approved rural development programmes for the period 2007-2013
- supporting the development of e-Competence curriculum guidelines
- launching an initiative on e-Inclusion in 2008
- networking of training centres and research (Living Labs) that contributes to a better understanding of future e-skills needs

The e-Skills Steering Committee was further set up at the end of 2009 in order to organise the European Skills Week and evaluate Commission's activities regarding e-Skills (2007-2010). e-Skills Week campaign aimed informing students, young professionals and SMEs about the vast range of opportunities that ICT-related jobs present, and to highlight the growing demand for skilled ICT users and professionals. The European e-Skills Week encompassed national and pan-European events taking place between November 2009 and March 2010.

The policy actions were financed through the Lifelong Learning Programme, CIP and FP7 programme, European Social Fund as well as Structural Funds (promotion of Employment and Regional Cohesion) and the European Agricultural Fund for Rural Development (promotion of ICT, employment and growth in rural areas). Financed projects involved workshops and ICT training (mostly funded by European Social Funds), research on new technologies to be used in classrooms (e.g. FP7 financed iTEC project) and awareness raising activities (eSkills Week funded through Lifelong Learning Programme).

From this summary of e-Skills events we can infer two main targets of the EC actions:

- basic digital skills for all citizens in order to tackle digital divide

- advanced digital skills in order to answer industry growing demand for ICT professionals

3.5. Indicators and targets

Current methodology used by the Commission to measure eGovernment deployment is centred around the public services online availability. With its focus on supply-side, the existing measuring Framework fails to capture the open data policy advancements or collaborative aspect of public service delivery. Also, the low levels of user take-up and those services' impact is not captured by this methodology.

The measurement methodology was developed by Cap Gemini Ernst & Young (CGEY) for the European Commission in the frame of the eEurope action plan (COM 1999/687). The plan with regard to eGovernment made 'making public services available online' the key priority. As it also called for appropriate measurement methods to accompany the implementation of the Action Plan, the above-mentioned measurement framework was adopted.

The methodology defined 5 stages of service sophistication, to be assessed for 20 public services defined as "basic". The assessment of each stage was then recalculated as a percentage of stage 4 (full online service availability, including payment and delivery). Thus, for each country, the average percentage across the 20 services constituted the service availability¹⁴.

Benchmarking rests a powerful policy tool thanks to its simplicity and attractiveness of rankings for politicians. The results were often cited by media and even adopted by regional governments (Emilia-Romagna region in Italy¹⁵). Still, the current measuring framework with some countries reaching 100% on its scale, has reached its end in terms of comparing eGovernment maturity of EU countries.

The table below summarises all policy tools mentioned in the last subchapters .

Table 2: Policy inventory

¹⁴ Osimo (2008), Benchmarking eGovernment in the Web 2.0 era: what to measure, and how, ePractice Journal.

¹⁵ Ibidem.

	Name / Title /Source	Type	Objective
International	Open Government Partnership	Capacity building, benchmarking, joined government plans and best practice exchange	Open data/Collaborative delivery
European	Digital Agenda	Set of policy actions, overall objectives	Open data
	Public Sector Information Re-Use Directive	Legislation laying grounds on PSI re-use	Open data
	eGovernment Plan	Policy plan	Open data/Collaborative delivery
	Hackathons	Networking events, Showcase and capacity building event	Open data
	FP7(8) and CIP funding schemes	Grants for research and implementation	Open data/Collaborative delivery
	Online open data/PSI catalogues	Tools for developers and citizens aimed at creation of innovative services and transparency enhancement	Open data
	App and civic engagement contests	Funding opportunities for developers, capacity building	Open data
	Cross-ministerial innovation lab	User-centered services design	Collaborative delivery
Regional	Online open data/PSI catalogues	Tools for developers and citizens aimed at creation of innovative services and transparency enhancement	Open data
	App contests	Funding opportunities for developers, capacity building	Open data

Local	Online open data/PSI catalogues	Tools for developers and citizens aimed at creation of innovative services and transparency enhancement	Open data
-------	---------------------------------	---	-----------

4. Gap Analysis: what is needed

By comparing the objectives with the current status, we can identify a set of specific gaps that policy recommendations have to address.

In the following table we summarise in turn: the objective, status and deriving gap. Each gap is further presented in detail in the next sections together with inspiring examples that can address it.

Table 3: Summary of gaps

Objectives	Current status	Gap
Open Data	Most countries have a priority Towards open data by default	No big gap, covered in many countries but not in all Need to extend beyond the developers and PSI re-users Need to open remaining high-value datasets and set minimal standards for realising data on European level
Leverage the competence of citizens	Only the UK has a “Big Society” mandate eParticipation FP7 – CIP Declarations of principle on light and fast funding in Horizon 2020 Inducement Prizes very little used	Collaboration is not a priority in any policy document Need for new, agile funding instruments Need for clearer legislation on prizes Need for better awareness of prizes and available platform
Change the culture of civil servant	Open Data and social media use guidelines issued by few MS	Need for training and awareness activities enhancing social media use and skills, collaborative tools usage

Ensure participation of all

Indicators

Digital literacy initiatives and eSkills actions
 e-competence framework - advanced digital skills for ICT professionals
 Traditional benchmarking indicators not working

of civil servants, leading by example and mentoring actions
 Need for media literacy and coding skills - extension of basic digital skills definition
 Indicators on open data and collaboration missing

This gap analysis clearly shows how presently the policy attention has focussed almost exclusively on the Open Data agenda, which is largely covered in terms of needs and actions. Instead, the other three needs (citizen engagement, civil servant’s culture and inclusive participation) are far less covered by policy efforts. Our attention will therefore focus on the latter. However, we will also analyse the open data policy in order to identify room for improvement.

4.1. GAP 1: Making open data happen

In order to further push the ultimate goal of open data policy - open data by default, there are still some elements missing from the current EU policy.

As we could see from the overview, there is already an open data strategy in place throughout Europe, even if the distance between leaders and laggards is very important.

Firstly, some of the public sector information datasets (the most valuable for reuse by infomediaries) have not been opened yet (business registers, meteorological data, cadasters) as they provide public agencies with revenues coming from whole data sales. The current EU Re-Use Directive does not require free release of data (upper-limit being a price based on costs incurred to produce the information, together with a reasonable return on investment).

Nevertheless, the UK government recently announced its decision to open its health, transport (e.g. real time data on trains), weather (a large proportion of the Public Weather Service forecast and real time observations) and house prices (residential property sales) data. This initiative according to the UK government has in its goal creating new economic opportunities for

business¹⁶. French government decided recently that all newly released data should be free unless the public sector body can give a satisfactory explanation for charging (though this rule does not apply for PSBs already charging for data). These approaches should be showcased and closely observed in order to show benefits coming from opening valuable and important datasets such as health data.

Secondly, the quality of released data is often unsatisfactory. The developers mentioned that often they have to cleanse the data on their own which add additional cost to their re-use initiatives. For example, insufficient data quality was mentioned as a barrier by PSI re-users during the on-line public consultation on the PSI Directive¹⁷.

Also, the data.gov platforms and open data discussions and activities are still the domain of evangelists and “geeks”. Still, too few business companies regard data re-use as an interesting and profitable venture. This is due to lack of persuading business cases as well as promotion or facilitation of re-use by the government (guidelines, training, APIs).

In sum, the access to data via a government platform is not a sufficient strategy in order to deliver real benefits for citizens and businesses. What is more, the mere fact of open data release appeals only to a small community of open data evangelists and app developers. Citizens need visualisations, applications and services based on open data. Therefore public administration collaboration with online developers and reaching out to business to show the hidden value of data are important aspects of promotion of open data approach.

4.1.1. Inspiring example: UK’s Open Data Institute

An interesting approach was taken up by the UK government. The recently announced UK’s Open Data Institute (ODI) co-directed by Sir Tim Berners-Lee and Professor Nigel Shadbolt aims to involve academia and business in the research and implementation of open data opportunities. It will focus on innovation, commercialisation and the development of web standards to

¹⁶ <http://www.guardian.co.uk/government-computing-network/2011/nov/28/george-obsorne-open-data-plans?CMP=>

¹⁷ See full report: http://ec.europa.eu/information_society/policy/psi/index_en.htm

support the UK's Open Data Agenda. The UK government allocated 10 mln pounds over 5 years to fund and support the institute.

Iain Gray, Chief Executive of the Technology Strategy Board (executive non-departmental public body) that is in charge of the development said:

*It is a measure of the priority given by the government to Open Data that it has committed funding at this time to support the Open Data Institute through the Technology Strategy Board, in collaboration with industry and academic institutions. The new Institute will help to demonstrate the commercial value of public data and develop the capability of UK businesses to exploit this value, with support from academic institutions."*¹⁸.

The launch of the institute points out that showing the added-value of open data should be one of government preoccupation in order to attract businesses but also harness innovations. Supporting start-ups and SMEs by giving technical and business training is one of the goals of the ODI. Finally, the Institute foresees an open competition in order to support the most promising small businesses based on open data. The ODI inspires to *become an authoritative source of expert advice for government and help accelerate the release of Open Data in ways that will minimize private sector costs and lower barriers to reusing data, helping to reduce public sector IT and consultancy costs*¹⁹.

Other need is to augment number of people who can play with data the young population should have access to specific training (coding, creation of mash-ups and visualisations). The importance of teaching coding skills to young population will be also further elaborated in subsequent subchapters.

More efforts on European level may also shorten the distance between the leaders (UK, Netherlands, Spain, Denmark) and the laggards (countries of two last EU accessions). Still, the direction towards all MS and the EU works toward is clear – open data by default.

Key takeout

¹⁸ <http://www.innovateuk.org/content/news/open-data-institute-to-help-drive-innovation-and-g.ashx>

¹⁹ <http://www.innovateuk.org/content/news/open-data-institute-to-help-drive-innovation-and-g.ashx>

The Open Data policy on European level lacks strong coordination in order to encourage the lagging countries and a further push towards open data by default in Europe.

4.2. GAP 2: New, more agile funding models

Collaborative e-government is not just another “line to add” in the existing funding instruments, but it calls for a different approach. Today’s measures are largely designed for a central, top-down form of government which decides and execute on behalf of citizens, or for large-scale IT projects that are developed within long timeframes and large budgets.

In particular, the current funding models are not suitable for innovative projects in the frame of collaborative eGovernment. As we have seen from the cases, the most innovative projects are developed outside the traditional government funding models, without the support, the authorisation or even the knowledge of government. This is not a problem in itself. However, it turns out that even if government invest considerably in funding public innovation and collaboration with citizens, it fails to engage citizens in a meaningful way. For instance, it has been calculated that existing eParticipation initiatives spent 500 Euros per each contribution received. But there are major differences between government-funded projects and bottom-up collaborative eGovernment projects, such as FixMyStreet.com. The differences are illustrated in the table below.

Typical government funded project		Typical bottom-up collaborative e-government project
Large (>€100K euros)	Budget	Small (<€10K)
Pre-defined ex ante in bulk	Funding	Defined in stages, starts typically without any funding
Idea - funding - project	Process	idea - project - search for funding
Long (2 to 3 years to launch)	Time-to-market	Short (>6 months to launch)
Ex ante detailed planning: most project don't change during implementation	Planning	Flexible and emergent: most projects change during implementation
At the beginning through questionnaire; testing the system after more than 1 yr	Users' involvement	Testing through using the system at very early stage
Max 2	Releases	Permanent evolution (beta)
Large IT players	Players	Individuals or small companies
Large (many organisations)	Partnership size	Very small (1 or 2 partners)
Considered as the exception	Failure	High rate, perceived as normal

Table 4 Differences between government and bottom-up collaborative eGovernment projects

It is therefore not a surprise that most innovative actors are not present in traditional funding programmes. For instance, MySociety, arguably the most innovative web-related NGO in Europe, is not involved in any EU project. The reasons for their non-participation are well known:

- too complex procedures and long time before a decision to fund
- too large partnerships and projects

These arguments are not new: they are mentioned in any impact evaluation of EU funding programmes. But the question that should be asked is: is this idiosyncrasy inevitable? Is collaborative eGovernment by nature incompatible with public funding?

In the next section, we will look at promising examples of light and fast funding instruments that are more fit for the nature of collaborative eGovernment and have already proved successful.

4.2.1. Inspiring example: Principi Attivi



Figure 2 Principi Attivi - an example of agile funding

The Puglia Region is a Convergence Region in the South of Italy. The objective of the regional government was to activate the innovation capacity of young people in their region, discouraged by the bleak employment possibilities. Also existing funding such as the Structural Funds tended to “play safe” by requesting in-depth knowledge of the rules and economic soundness of the proposal. Therefore, the funds favoured established players rather than innovators with genuine new ideas.

Taking into account these factors, the Puglia Region Government launched and managed in-house a €10MLN call for proposals for micro-projects (up to €25.000) mirroring the thematic areas of the Structural Funds programming:

- environment and local development
- innovation
- active citizenship and inclusion

The **distinctiveness** of this call was:

- restricted to informal groups of young people could participate (at least two people below 32)
- very open, non prescriptive definition of the priorities
- simple application process (max. 13 pages form)
- open, peer-to-peer helpdesk that enabled the horizontal networking of participants
- transparent discussion of the selection results

And the results were impressive. 420 projects (involving 1279 young people) were funded out of 1500 proposals. Only 5% of proposals did not reach their goals but more than half changed their objectives throughout the process.

About 2000 deliverables (products, services, events) were produced. It comprised a web fiction in 12 episodes, maps in Braille language, patents for photovoltaic products, reviving computers for nonprofit associations. The variety of services is staggering and reveals the extent to which the initiative has been able to activate the creativity and participation of citizens.

In terms of additionality, 73% of participants would not have implemented the project without the funding. What is more, 80% of the projects are still active three years after the call has ended.

The simplicity, openness and extensive follow-up of the projects were the secrets of the success. This follow-up was guaranteed by four dedicated staff members, but could only be implemented thanks to the extensive usage of web tools that enabled the peer-to-peer networking of participants. The internal forum had 8000 users who created 11000 messages and viewed 450K of pages. The forum received 86% satisfaction rate by participants, second only to the direct assistance of the staff (94%).

When asked if such an initiative could scale up at EU level, the interviewee answered: *Who knows? The only way is trying!* And this is exactly the necessary attitude for such a programme to work. The team running the programme received a strong "licence to experiment" by its management and were free to try new solutions outside the comfort zone. It is also worth noting that the initiative has not been funded by the Structural Funds that proved too rigid and cumbersome for such an agile programme.

There are of course other relevant examples of fast and light funding, to name a few - Omydiar Network²⁰, Digital Pioneers²¹ in the Netherlands, Open Society Foundations. Still, all of those above-mentioned initiatives were started by Civil Society organisations, therefore we preferred to analyse in deep a government-led effort.

Key takeout

The funding instruments are unsuitable for promoting effective collaborative e-services. New instruments have to be designed and there are concrete examples to be learned from. However, these new instruments have to be accompanied by a greater autonomy and freedom to experiment by the staff responsible for the programme.

4.3. GAP 3: Make using prizes feasible and easy

Inducement prizes are a good way to leverage collaboration and collective intelligence. In the last years, mostly in the US, companies and governments have set up “challenges” projects. The financial reward goes not to the best proposals like in traditional funding but to the innovators who come up with the best working solutions. Examples include the DARPA Grand challenge (www.darpa.mil/grandchallenge/index.asp) for the driverless vehicles or the recent Australian prize for the best algorithm to identify patient at risk (www.heritagehealthprize.com).

The results are highly promising as competitions are able to attract the best innovators, even those traditionally not engaged with government funding. Also they reward concrete results, not proposals. Finally they do not require complex control systems. Competitions are able to attract a far superior number of high-quality results than traditional grant systems. They are effective in coming up with unexpected solutions from unexpected sources.

Yet, we must not consider prizes a panacea: they work only under certain conditions, for example where barriers to entry are low and innovation is not capital-intensive. They have to be properly promoted and designed. It is not clear to what extent they can upscale or what is the risk of prizes overload.

²⁰ <http://www.omidiyar.com/>

²¹ <http://digital-pioneer.net/>

Finally, prizes tend to overlook basic research, which can lead to fundamental unplanned results.

In Europe there is increasing attention towards this kind of instruments and inducement prizes are mentioned in the Horizon 2020 programme. Still, it is far from clear how such prizes would be organized. Interviewed public administration representative stated that it is difficult to understand how such prizes could be organized from the legal and administrative point of view. Would it fall under procurement legislation, or under state aid? How to deal with Intellectual Property?

4.3.1. Inspiring example: Challenge.gov

The US government has created a dedicated platform, called www.challenge.gov, to enable the organisation of competition by any government, and has promulgated the America Competes Act (http://en.wikipedia.org/wiki/America_COMPETES_Act) to simplify and streamline the organisation of challenges by government.

Government agencies can post “challenges” that can be met by any citizens. The now very promoted apps contests neatly fit in but other challenges can also be found, such as NASA competition for writing “algorithm to fly three small SPHERES satellites around the cabin of the International Space Station”.

Challenge.gov is one year old so it seems to be perfect timing for looking back at its achievements.

Among the key findings of the interview with Karen Treborn, Deputy director of Challenge.gov undertaken by the authors of this report:

- technology costs are zero, the platform has been offered by a tech provider (under a no cost contract), two people are working on it (mainly on training and awareness)
- all federal agencies but two have used the platform to launch prizes
- so far 38 million dollars in prizes have been distributed, including a 18 million dollars prize for Solid State Lighting

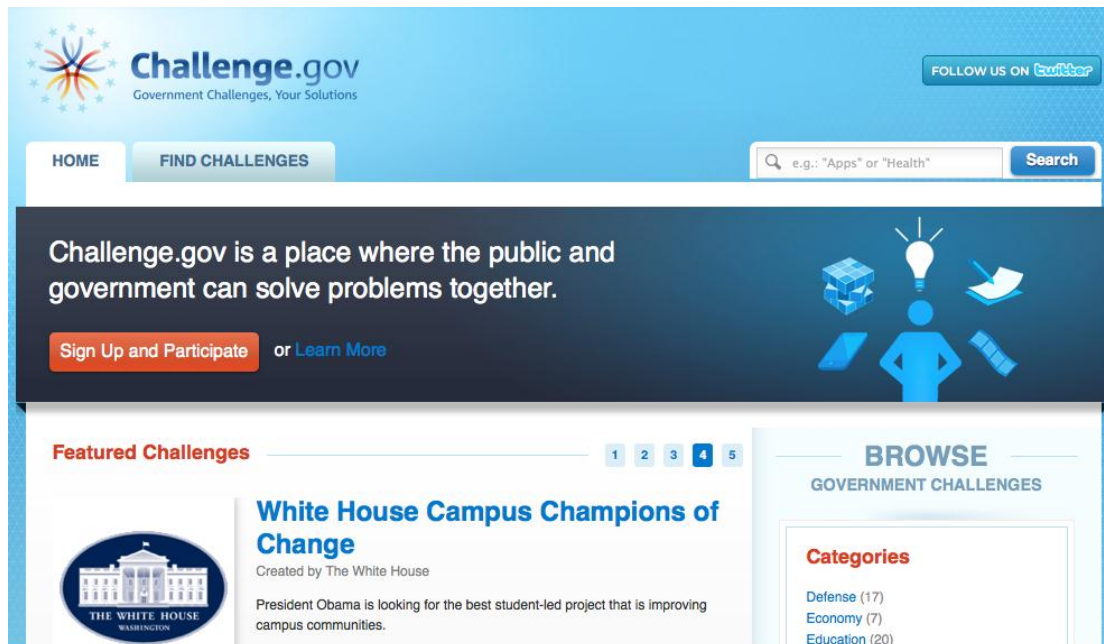


Figure 3 Challenge.gov platform – an example of inducement prizes policy action

Key takeout

Inducement prizes are an effective instrument for crowdsourcing and collaborative problem solving. Not only apps contest but also any kind of socio-economic challenge can be addressed through prizes. Europe is not taking full advantage of this opportunity. The America Competes Act and Challenge.gov initiative in the US are worth considering in order to clarify how to organize prizes and enable public administrations to use this tool.

4.4. GAP 4: Promotion of civil servants' innovation

The analysis of current state of public administration engagement in collaborative service delivery showed an important gap in training, guidelines, mentoring and leading by example approaches. Few countries have introduced guidelines on social media use and opening up data and those measures already in place are far from being satisfactory.

What is more, in most of the Member States the current use of social media by civil servants is still very low. While politicians learned very fast the value of social network outreach, the public administration is lagging behind. Australian and American examples show the successful way of engaging civil servants in social media use.

4.4.1. Inspiring example: Social media use in the US and Australian government

In the US, the publicly available guidelines for civil servants and negotiated terms of use of social networks were crucial to enable safe and efficient social media use. The government created also a “Center for New Media and Citizen Engagement”, a central entity providing guidance to public administration on the use of new media.²² The efforts culminated in a new platform called “HowTo.Gov” that provides agencies with step-by-step guides on how to present web content, a list of preselected and vetted tools to use for different types of initiatives, software downloads and instructions on how to customize and administer social media tools from a strategic and administrative perspective. Meanwhile, the public servants independently started social media activities. In 2008 over 800 local government IT professionals found a way to share lessons learned and best practices in a virtual group, called MuniGov2.0.²³ At about the same time, GovLoop – the “Facebook for Government” was created and by now has ~40,000 users sharing information about Government 2.0 related topics. Only recently, a new tool [We the People](#), open petition platform directly linked to social media tools enabling social campaigning was launched by the government.

Australia has started with a thorough analysis of Government 2.0 Taskforce (*Engage: Getting on with Government 2.0*²⁴) that resulted in changes in Freedom of Information Act, introducing social media guidelines for civil servants, a blogging platform for government ([Govspace](#)) and a national data.gov portal ([data.gov.au](#)). The Taskforce was mandated to define Government 2.0 in an Australian context and provide recommendations on key policies and processes. The consultation and engagement process employed by the Taskforce itself used crowdsourcing, blogs, Twitter, an idea prioritisation engine, collaborative editing and involved releasing documents in draft formats in a highly transparent process.

What is important, this also led to several 'failures'. There was a limited degree of engagement with the Taskforce's Facebook page and mixed success in crowdsourcing transcriptions of recorded presentations. These 'failures'

²² See GSA Center for New Media and Citizen Engagement: <http://www.gsa.gov/portal/content/140445>

²³ See [http://www.munigov.org/for more information](http://www.munigov.org/for_more_information).

²⁴ Engage: Getting on with Government 2.0 report – Government 2.0 Taskforce – <http://www.finance.gov.au/publications/gov20taskforcereport/index.html>

served to support the process by providing practical examples of how, and how not to, design and manage Government 2.0 consultation and engagement processes.

Also during 2009, as in US example, proactive public servants began forming unofficial communities of practice around Government 2.0 and social media to share information and expertise (e.g. the Government 2.0 Australia Group (groups.google.com/group/gov20canberra, hashtag #gov2au).

The government took a proactive stand towards social media engagement by issuing in 2009 a circular: *Protocols for online media participation*²⁵ (saying e.g. “in a professional and respectful manner, APS employees should engage in robust policy conversations.”). The Australian Government Information Management Office (AGIMO), part of the Department of Finance and Deregulation developed an agency blog (agimo.govspace.gov.au) to support ongoing engagement and discussion, online showcase (showcase.govspace.gov.au/) to highlight initiatives across government and initiated a official Government 2.0 community (www.govdex.gov.au). Subsequently, a platform for government blogs employing a custom installation of the open source Wordpress blog platform called Govspace (www.govspace.gov.au) was developed that now over 25 government blogs from an assortment of agencies²⁶ (for example a blog on service delivery in government servicedelivery.govspace.gov.au).

The number of Australian Government agencies utilising services such as Twitter has grown rapidly, from less than ten two years ago to more than 50 accounts today. The number of blogs used in Australian government has continued to grow at a regular pace (from one in 2007 to at least 40 by now).

The experts underline the role of leadership at all levels in government. The personal leadership of key individuals across government has helped address engagement fears. By supporting a diverse set of leaders in different aspects of social media use, the Australian Government has fostered the policy as being inclusive and accelerated the capability for culture change.

The Australian regional government in Victoria introduced also an internal program of training staff on social media engagement through Yammer, an internal Twitter-like messaging service. This ensures that staff 'learn the ropes' before encountering the public, providing an additional safety net under departmental guidance and policy. Nevertheless, still there is a need

25 Circular 2009/6: Protocols for online media participation - APSC - <http://www.apsc.gov.au/circulars/circular096.htm>

26 Directory of Govspace blogs - GovSpace - Australian Government Information Management Office - <http://govspace.gov.au/directory/>



for tailored training and ‘sandboxes’ where staff can gain exposure to the principles of online engagement and build an active understanding of the tools available and how they may be effectively used within government.

What cannot be neglected is that social media engagement policy helps to attract young generation of public servants. The Cisco Connected World Technology Report highlights that 56% of college students and newly graduates will not accept a job that does not enable social media use at work²⁷.

The Australian and American case shows that a clear government stance on social media result in a surge of public initiatives and what is important increases the chances of adoption of social media by public servants themselves (private blogs on public matters, individual Twitter accounts, etc) and this way deepens their engaging with the public. Those both cases show also that the personal leadership of key individuals across government is crucial. Collaborative eGovernment leaders (similar to open data evangelists) are needed at all government levels.

Key takeout

What we can infer from those examples is the need for the EC leading by example. National governments should also look for individuals on every level of government that can pave the way of successful social media use (not only of conversational tools but also of online crowdsourcing methods). Showcasing individual and departmental initiatives may also help to persuade the unconvinced. Finally, specific training and ‘sandboxes’ that help to change the attitude, lower the fears and the risks of misuse are needed.

4.5. GAP 5: Existing eSkills programme too limited in scale and scope

The existing eSkills and digital literacy programmes tend to focus on a narrowly defined set of eSkills.

It mainly addresses:

²⁷ <http://inesmergel.wordpress.com/2011/11/13/cisco-study-56-wont-accept-job-that-bans-social-media/>, <http://www.cisco.com/en/US/netsol/ns1120/index.html>

- basic digital literacy skills for citizens, such as ECDL and Internet usage
- advanced digital literacy skills for ICT practitioners, in order to provide ICT specialist skills in the economy (such as those spelled out in the European eCompetence framework)

These skills are typically transferred through traditional training courses, such as those provided within the Structural Funds.

This perspectives does not include the fundamental skills necessary to participate in eGovernment collaboration:

- IT web coding skills to develop collaborative website, namely based on open data. These “civic hacking” skills are much more flexible and agile than the traditional IT development skills and they are learnt through experimentation and sharing, not during a traditional training course.
- Not only basic digital skills but more sophisticated media literacy skills are necessary to make sense of user-Generated content on public websites and to contribute by making citizens’ voice heard through existing social media.

Most of all, these two sets of skills should not be considered as rigidly separate but as part of a continuum. If collaborative eGovernment is to succeed, we should expect that citizens gradually take a more proactive role and that the typical difference between IT user and IT practitioner would be less relevant. Furthermore, collaborative eGovernment requires multidisciplinary skills that can only be ensured by a merger of different skills. In other word, there is a need to make IT competences available to the widest variety of stakeholders.

4.5.1. Inspiring examples: Social Innovation Camp and Onroadmedia

Social Innovation Camp (SICamp) is a form of collaborative competition between software developers, designers and social innovators to create new businesses and projects that use the web to achieve a social goal. It is a method for social innovation. Social Innovation Camp brings together the social needs and ideas, represented by NGOs, and the technological opportunities, represented by developers, to work together and build web-



based solutions to social problems – all in just 48 hours. It provides NGOs with access to high-level software skills and stimulates the creation of innovative services. In the last 3 years, over 30 working prototypes of social ventures have been created in the UK only, and the venture has now spread worldwide with events being organised in Nigeria, South Korea and Azerbaijan.

Onroadmedia is a social venture that aims to teach video-journalism and social media skills to ethnic minorities and groups at risk of exclusion, in order to enable them to make their voice heard. Among other projects Onroadmedia launched SavvyChavy, a social network that provides young people from the Gypsy community with a safe place to share stories, podcasts and blogs about their culture. There are now almost 4000 travellers on the network; young people who experience racism on other social networking sites and therefore would not previously discuss culturally relevant issues and their problems online.



Figure 4 Onroad Media – an example of inclusive participation

Key takeout

Collaborative eGovernment is at risk of empowering only a minority of the population that can code and that can contribute actively. There is a need for providing a broader set of eSkills and eCompetences that include the capacity for developing ad hoc collaborative online services and to actively contribute through collaborative and social media. Media literacy but also partnership building between developers and social groups are the ways to escape the risk of exclusion of underprivileged.

4.6. GAP 6: Not suitable indicators

The current eGovernment indicators do not measure any form of collaboration or government transparency, only the provision of services by government. But indicators and benchmarking, in the policy domain of eGovernment, are the main policy levers available. Also with regard to open data and Public Sector Information, while strong measures such as Directives are used, soft instruments such as indicators are missing.

There is a need for a robust and feasible benchmarking framework that accompanies the development of the collaborative e-government action. This reporting should also be as open as possible to allow third parties to analyse available raw data.

These indicators should therefore cover:

- the availability of machine-readable high value public datasets
- the existence of collaborative eGovernment services
- the take-up of these services in terms of levels of active participation by citizens

However, since the take-up measures are still in its infancy and the impact is difficult to capture, the indicators related to take-up and impact should be designed mainly for mutual learning, rather than for benchmarking purposes.

4.6.1. Inspiring example: the Open Government Dashboard

The US Open Government Directive called for the establishment of an Open Government Dashboard where performance data of each agency is to be published. Each Agency had to fill a self-evaluation questionnaire, which included a set of questions on “collaboration”. This includes questions about plans and platforms for enhanced collaboration with other agencies, with the civil society and the private sector. It specifically refers to plans for organizing innovative methods such as inducement prizes for collaboration.

Last but not least, the results from this assessment are published at www.whitehouse.gov/open/around. The newly launched Open Government Partnership, where more than 30 countries take part, includes a similar self-evaluation mechanism.

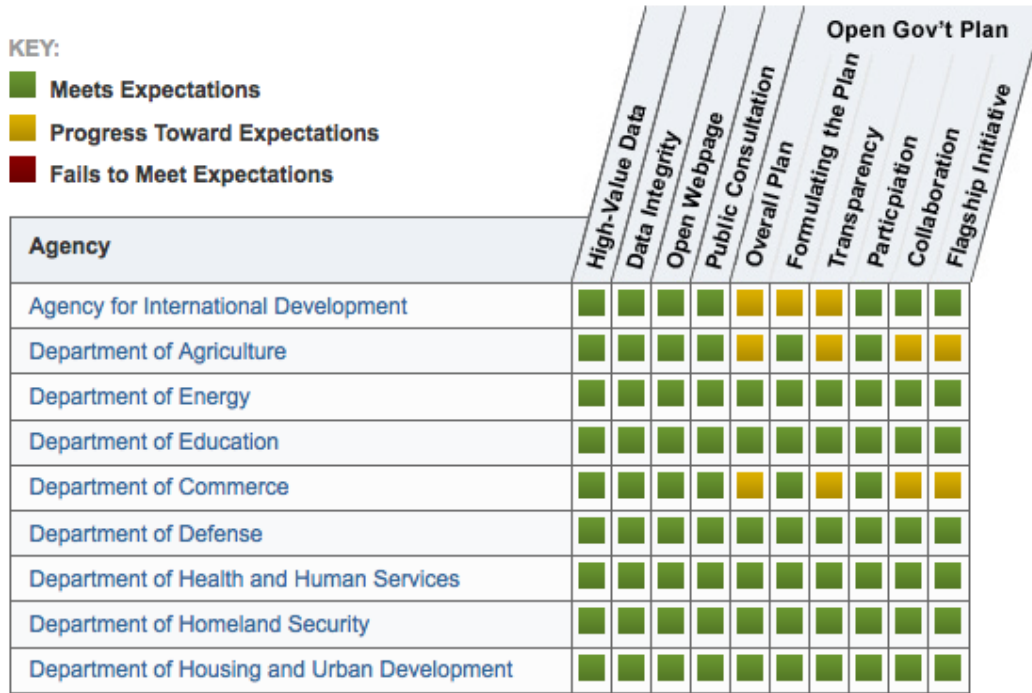


Figure 5 The Open Government Dashboard – an example of innovative approach to measuring eGovernment

Key takeout

The current benchmarking framework should be integrated by indicators on collaboration and openness, that measure the degree to which government are trying and succeeding in leveraging citizens’ collaboration.

5. Policy recommendations

In this section, we build on the identified gaps and inspiring example in order to identify the most important recommendations. The table below provides a complete overview of the logical steps in this part of the report, from the objectives to the recommendations.

Table 5 Summary view from objectives to recommendations

Objective	Status	Gap	Example	Recommendation
Open data	Most countries have a priority Towards open data by default	<i>No big gap, covered in many countries but not all Need to extend beyond the “geeks” Need to make it happen on most important</i>	Open Data Institute	<ol style="list-style-type: none"> 1. continued emphasis on open data <ol style="list-style-type: none"> 1.1. benchmark openness 1.2. open data by default 1.3. support open data ventures 1.4. set up a list of high quality data: common dataset

		<i>datasets</i>		
Leverage citizens	eParticipation FP7 – CIP Declaration of principles for Light and Fast in Horizon 2020	Need for new, agile funding instruments	Principi Attivi	2. experiment agile funding models 2.1. launch within Horizons 2020 a small agile funding focused on citizens collaboration and engagement
	Inducement Prizes very little used	<i>Need for clearer legislation on prizes Need for better awareness of prizes and available platform</i>	America Competes Act and Challenge.gov	3. simplify and encourage the organisation of challenges and prizes 3.1. Create a EU prize platform similar to challenge.gov 3.2. Simplify regulatory environment 3.3. Try it out in FP7
	Only the UK has a “big society mandate	<i>Collaboration is not a priority in any policy document</i>	UK Big Society US Open Government Act	4. ask all MS and the EC to experiment with collaborative services on at least one service, and report publicly about it 4.1. provide plans on how to involve citizens 4.2. account for it
Let civil servants innovate			Australia	1. formulate plans for activating civil servants 5.1 provide guidelines in social media use and train in web collaboration tools 5.2 encourage internal innovation and public intrapreneurship
Ensure participation of all	Traditional Digital literacy initiatives eSkills action	Need for media literacy and coding skills	Social innovation Camp Rewired State	6. education and citizens empowerment 6.1 Extend the definition of ‘digital literacy’

				6.2 Extend eInclusion initiative to include civic hacking in schools curricula 6.3 Organise social innovation camps
Make it happen	Traditional benchmarking indicators not working	New indicators	US dashboard	7. Introduce new indicators 7.1 introduce Open Data targets based on data quality 7.2 Compare collaborative services between the MS

5.1. Maximize the impact of open data

The current status and gap analysis of the open data policy in Europe show that this stream of policy is the most advanced in collaborative eGovernment. Nevertheless, on the European level actions towards streamlining the Member States level of openness are needed.

Benchmark openness

The Open Government Partnership example shows the way to effectively benchmark the countries involved – national actions plans verified by independent reporting. The European Commission should impose a set of indicators that will measure the MS' transparency and openness.

Open data by default

Secondly, the future PSI re-use directive should introduce open data by default approach with the exception of data sensitive for privacy or security reasons enhancing citizens right to public data. This approach should replace today's government approach releasing the data on case-to-case basis. The directive should also define a common standard for data re-use (minimum being structured, non-proprietary format).

Support open data ventures

The UK's Open Data Institute is a good example of coordinated approach to support economical benefits of open data. Governments should develop programmes offering technical and business support for start-ups and small companies.

Set up a list of high quality data: common dataset

In order to streamline Member States efforts, the European Commission should set up a list of the most important datasets that should be released. The list should encompass datasets important from the transparency perspective (government spending) but also from value-added perspective (transport or meteorological data).

5.2. Experiment with agile funding models

Based on existing experiences such as Principi Attivi, the EC should experiment with a dedicated, more agile fund for collaborative eGovernment project, as well as design similar instruments within Structural Funds.

This funding instrument, of the indicative size of 10 M Euros, should include:

- Smaller budgets and smaller development teams. Collaborative eGovernment services do not require extensive investment and is not as capital intensive as other research priorities, and requires a more contained partnership (including the possibility for small funding and a single partner)
- focus on results rather than on proposals. Because of short development cycles, evaluation of these tools is best based on mock-ups and visible prototypes, while the procedures for innovation funding mainly rely on extensive written documents. (e.g inducement prizes based on actual results, not on proposals: launch a specific challenge such as best algorithm to predict patients at risks and reward the team that solved the challenge)
- engage the most innovative actors: the key to innovation is the clustering of the right people at the right time. Instead, existing government programmes require bureaucratic procedures and selection process that tend to privilege the most experienced proposal writers, rather than the best ideas and implementation.
- enable short-term and fast time-to market: in a rapid evolving environment, time-to-market is essential. The development cycle from idea to market has

therefore to be shortened to a minimum (shorter project time, from 6 months to 1 year for instance)

- promote more flexible and open ended funding (allowing for serendipity and unexpected results)
- encourage risk and accept failure by design: adopt a venture-capital-like approach, where most projects are expected to fail, and only 10% to succeed but to succeed greatly
- maximize in its functioning the horizontal, peer-to-peer collaboration between innovators

This experimentation should be accompanied by the highest degree of transparency in relation to project proposals, evaluation and follow-up in order to maximize trust and learning from the experience.

5.3. Simplify and encourage the organisation of challenges and prizes

Challenges and prizes present good opportunities for crowdsourcing and collaboration, but remain too marginally used.

Create a EU prize platform similar to challenge.gov

Europe should adopt a lightweight crowdsourcing platform such as challenge.gov and open its use to any public administration. This would be a low-cost facility that could raise awareness and the profile of organising challenges. It would not compete with but run alongside other existing platforms.

Simplify regulatory environment

There is a need for further clarity on rules governing prizes and challenges. Today, public administration does not understand how these instruments would fit with the existing procurement and state aid regulation. This is why the efforts to launch them are often discouraged. The EC should issue a clarification document, much in the style of the guidelines for Green Public

Procurement ²⁸, to clarify the regulatory environment for prizes and challenges.

Experiment prizes within FP7

The current experimentation within FP7 (see section 3.2.2 on funding measures) should be extended, with particular regard to eParticipation and eGovernment initiatives. A high-profile challenge could be called, such as European competition for the best system to enable grand-scale policy discussions involving thousands of people. This could be a suitable case for experimentation, building up on the results of FP7 projects.

5.4. Request all MS and the EC to experiment with collaborative services

Introduce targets for collaborative eGovernment at MS level

The eGovernment Action Plan should include, as a target that all Member State begin to **experiment with the collaboration of citizens on at least one new eGovernment service**. By input of citizens we refer to the following six possible resources:

- **IT skills:** coders and hackers are, generally speaking, better and faster than government at creating applications. For instance, [Openly Local](#) is a far more usable and sophisticated service that government have implemented.
- **specific thematic knowledge:** Wikipedia teaches us that everyone has something (s)he's expert on. [Peertopatent](#) exploits the technological knowledge on things such as [parallel simulation](#), [Netsmum](#) the maternal experience such as [high-heeled shoes](#) for babies.
- **experience as users of public services:** it is costly and difficult for government to understand the perspective of users. Open feedback channels such as PatientOpinion highlight problems that government would not think about, such as [toilets being too low](#).
- **pervasive geographic coverage:** citizens obviously have a more pervasive coverage of the territory than government. It is far more

²⁸ http://ec.europa.eu/environment/gpp/guideline_en.htm

effective to let citizens [casually signal a problem in a street](#) than to have civil servants travelling up and down the city. This is particularly relevant in [disaster situation](#) where only citizens have the information at the right time, such as in the case of [monitoring radiation levels](#) in Japan after Fukushima.

- **trust:** citizens trust friends and experts more than government. Mums trust other mums better than government. If you want to pass messages and induce behavioural change, such as inducing people to live a healthier life as in [ActiveMobs](#), it is well known that you have to take into account the [power of imitation and influence of networks](#).
- **many eyes and many hands:** citizens are more numerous than public administration employees and it is therefore more effective to let the former monitor the quality of the data (see the [small pencil icon](#) in the Italian gov website); or to help doing large collaborative works such as in the case of [DigitalKoot](#) where 80.000 Finnish citizens took part in an online game to digitize and catalogue old newspapers and journals.

Report publicly about results

Member States should report publicly about the results of the collaboration, using the set of indicators indicated in section 5.7. The goal of this reporting should be mutual learning rather than benchmarking.

5.5. **Activate civil servants by design**

Civil servants engagement plans has not been so far the priority of eGovernments strategies. Yet, getting citizens online cannot be achieved without the involvement of public administration employees.

Provide guidelines for social media use and encourage use of web collaboration tools

For civil servant to embrace the new technologies, rules, training and 'sandboxes' to practice are necessary. Guidelines on how to effectively use social media to communicate and listen to citizens should be the minimum standard for every Member State. Clear rules on using Twitter or blogging

encourage the social media use and at the same time minimalise the problems of accountability. This strategy of encouraging social media use is also important due to new digital natives generation coming into workforce.

Civil servants need also training in other types of online tools. The efficiency coming from Web2.0 tools (e.g. wiki, blogs and storytelling) has been proved in business. According to the Enterprise 2.0 study²⁹ those tools increase the overall orientation in organisation's work, encourage innovation and create an organisation knowledge base³⁰.

Encourage internal innovation and public intrapreneurship

The last recommendation is focused on collaboration capacity of public administration. Given that developers and innovators are often put of by the government red tape and instinctive fear of change, the public-private innovation ventures take an eternity to be put in place.

In order to be open to external innovation, civil servants should be encouraged to innovate internally. Training in online technologies, showcasing best examples and good practice exchange combined with leading by example may lessen the fear of new solutions.

Intrapreneurship, i.e. entrepreneurship behaviours in large organisations seems a cost-effective way of adopting change in governments. The example of MindLab, a cross-ministerial innovation unit in Denmark, which brings together civil servants of the Ministry of Business and Growth, the Ministry of Taxation and the Ministry of Employment, strives to involve citizens and businesses in creating new solutions for society. Still, those separated units are not enough, as they are not giving the possibility to experiment for all.

Since the *ask forgiveness not permission* motto of open data developers does not fit in the public administration structure, there is a need for built-in mechanisms of encouraging entrepreneurial and innovation-focused activities of civil servants. Those mechanisms should cover monetary (contests, awards) and non-monetary enticements. For example, the Google 20% projects scheme (the time Google employees can spend on pursuing their own ventures) gives the employees an autonomy and time to innovate (Google Transit app is the outcome of one of those projects).

²⁹http://ec.europa.eu/information_society/newsroom/cf/itemdetail.cfm?item_id=7366

³⁰http://ec.europa.eu/information_society/newsroom/cf/itemdetail.cfm?item_id=7366

5.6. Educate and empower citizens

Citizens need much more than basic ICT skills in order to fully embrace the collaborative eGovernment idea. If government fail to see the opportunity the educated and skilled citizens represent, collaborative production will remain the domain of the few 'geeks' and open government evangelists.

Extend the definition of 'digital literacy'

The current ICT user and e-Business skills does not comprise programming skills. This gap results in lack of funds, training and political focus on this goal. Being able to produce new applications and re-use open data should not be a domain of a few enlightened. Also, there is a need to break the homogeneity of online developers profile in order to answer the needs of unrepresented citizens.

Introduce civic hacking in schools curricula

ICT education should not only comprise the basic knowledge of Microsoft Office applications and use of the Internet as the applications change and mute fast. Young people need computing skills in order to develop applications that answer to need which they and they only will define. Also learning how to collaborate in virtual and non-virtual environments prepares them to be active in the public sphere. We need therefore a revision of eCompetence framework as well as changes in national school curricula.

Organise social innovation camps

Matching developers and software engineers' skills with an understanding of social challenges unleash creativity that is difficult to achieve otherwise. Social innovation camps are the way to bring those two sets of skills together, enhance the capacity to answer to social problems and are rather straightforward to organise.

5.7. Introduce new indicators

As the current measuring framework does not take into account the collaborative aspect of eGovernment services delivery, there is an urgent need for new indicators in order to benchmark MS and motivate the laggards. As previously mentioned, we believe that collaborative eGovernment consists of two streams – Open Data and collaborative services delivery which should be both accordingly measured and benchmarked.

Introduce Open Data targets based on data quality

It would be difficult to compare open government agenda of MS using the number of datasets. The governments can apply different methodologies of counting the data sets (e.g. counting every dataset released per gender, year, etc and this way artificially increasing the numbers). What is much more important is the different value of data.

Therefore we propose measuring the Open Data maturity by setting up a list of most important datasets (similar to 20 basic public services of the current framework). Additionally, the data availability should be measured by using the Tim Berners-Lee five star system which consists of five levels:

1. Make stuff available on the web (whatever the format)
2. Make it available as structured data (e.g., excel instead of image scan of a table)
3. Non-proprietary format (e.g. csv instead of excel)
4. Use URLs to identify things, so that people can point at stuff
5. Link data to other people's data to provide context.

The measuring framework would thus comprise 20 datasets that are available online on one of those five levels.

Compare collaborative services between the MS

As the collaborative services are in its infancy, for benchmarking purposes, the basic indicator of collaborative production should be the number of collaborative eGovernment services available in every MS.

Given that the take-up and impact measures are not yet developed, those measures should be used for learning purposes only. Nevertheless, the comparison of take-up and impact measurements in all MS would deliver

data that enable more in-depth analysis of the phenomenon and in result help to establish more robust common indicators.

We propose to adopt the following framework of indicators for reporting, articulated alongside the traditional supply/uptake/impact conceptual model of eGovernment.

Category	Indicator
SUPPLY	Number of collaboration initiatives launched
UPTAKE	Number of contributions
	Number of contributors
IMPACT	Number of new contributors (outside “mainstream categories”)
IMPACT qualitative	Examples of valuable contributions
	Examples of contributions that were taken up and had an impact on the discussion

Table 6 List of indicators measuring development of collaborative eGovernment

6. Concluding remarks: towards public services that get better the more people use them

We struggled a lot in the course of this project to find a good definition of collaborative e-government. In particular, how to convey that collaborative eGovernment is more than “cool apps built on open data”?

My first answer was to [include emphasis on citizen-generated data](#). The study and the workshop provided me with a better answer, mutated from [Tim O’Reilly](#): **public services that get better the more people use them**.

Traditionally, in public services, the quality of services is measured in such a way that increased usage corresponds to lower quality. In health or education, countries are compared in terms of hospital beds per inhabitant, or teacher per pupil. In this way, when expenditure remains constant, increase in usage lowers the quality of the services.

When we refer to eGovernment, this increase in uptake has not a negative impact on service levels: the service level of attending an online training, or filling a form, is not affected by additional users using the service. With constant cost, the quality of service remains constant even with increase in uptake.

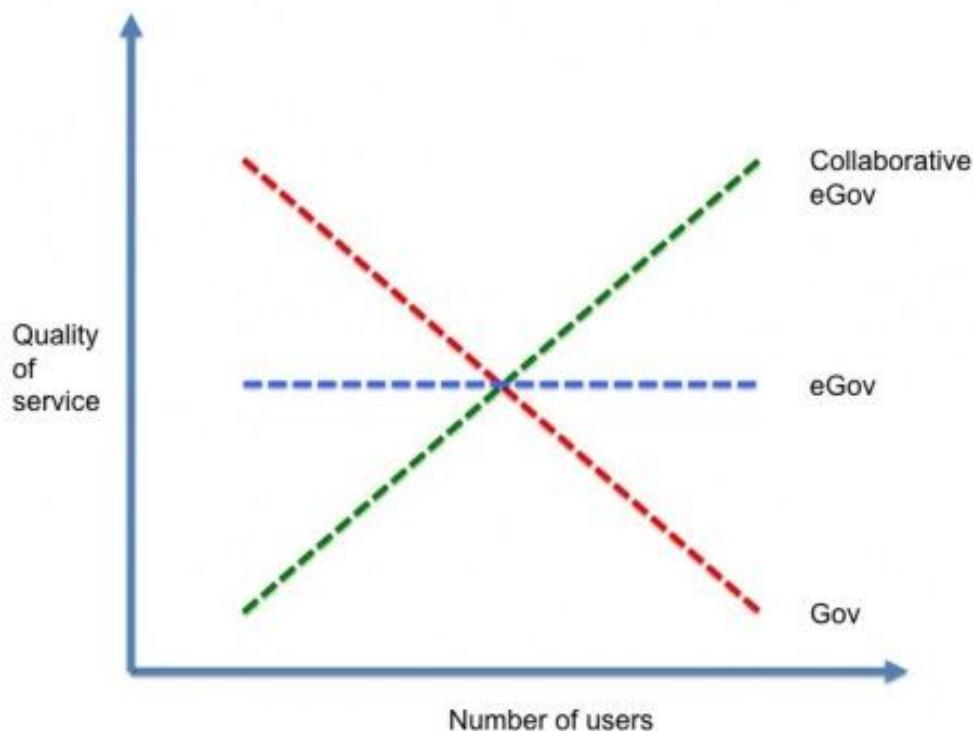


Figure 6 Relation between quality of services and number of users in government, eGovernment and collaborative eGovernment services



With government 2.0 or collaborative eGovernment, **additional usage actually increases the quality of service:**

- the more citizens signal problems in their city in [SeeClickFix](#), the more value the application has, the faster the problems get solved
- the more citizens provide feedback on hospitals in [Patient Opinion](#), the better service it can provide and the better services hospital will provide
- the more citizens contribute to [Peer to Patent](#), the better patents are assessed
- the more citizens “adopt” information on public website, the more accurate the information gets ([LineaAmica](#))
- the more citizens play with [DigiKoot](#), the better catalogue the Library of Finland can provide
- the more mums discuss on [Mumsnet](#), the better they can take care of their kids
- the more citizens search on the [Delaware.gov](#) website, the better the portal gets in showing the most relevant information
- and so on...

This definition provides a new way to think about public services which conveys the message that **collaborative e-government is NOT about a few geeks developing apps with open data, but taking advantage of the skills and goodwill of large numbers of citizens, with different degree of e-skills.**

Citizens are uniquely placed to co-produce services because they:

- have unique skills (e.g. in assessing patents, raising kids)
- have the users’ perspective on public services (e.g. in using hospitals)
- are many (e.g. in DigiKoot and SeeClickFix)!
-

In conclusion, the recommendations focus on encouraging government to think about what unique contribution citizens can make to public services.

This is even more important in times of crisis: it offers a path to increase the quality of services without substantial additional investments. And to learn faster about successful and unsuccessful ways to spend public money, avoiding waste.