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COMMUNICATION TO THE COMMISSION

Data, Information and Knowledge Management at the European Commission

{SWD(2016) 333 final}

DEFINITIONS

There are no universally agreed definitions of data, information and knowledge. In this Communication data, information and knowledge can be understood as follows:

Data *are concrete objective facts, measurements or observations that need to be processed to generate information.*

Information *can be generated when data is categorised, analysed, interpreted, summarised and placed in context that gives it structure and meaning.*

Knowledge *is acquired through analysis and aggregation of data and information, supported by expert opinion, skills and expertise, and can provide a valuable resource to help in decision making. Knowledge can be tacit (e.g. residing in the expertise and understanding of a person, in which case it is difficult to access and transfer) or explicit (in which case it is easier to articulate, codify, access and verbalise).*

I.   **INTRODUCTION**

The challenges faced by the EU today require fast and effective solutions from the Commission, which often involve multiple policy areas and departments. This is why President Juncker's mission letters to all Members of the College call for a modernisation of the Commission's ways of working, with a strong emphasis on teamwork, overcoming silo mentalities and harnessing synergies between portfolios. The strategic use of data, information and knowledge is an essential part of this new way of working.

The new approach proposed in this Communication will support this by improving the way in which data, information and knowledge are gathered, managed, shared and preserved, and by developing new opportunities for collaborative working.

In June 2015 a report by a High Level Reflection Group of Directors-General[1] set out principles, short- and medium-term actions, and governance arrangements for a corporate data, information and knowledge management policy[2]. The Group's report builds on the business needs identified by the Directors-General and draws on best practices in place in other international organisations. Its recommendations received strong support from the wider group of Directors-General and are based on two main principles:

1) **Data, information and knowledge should be shared** as widely as possible within the Commission unless there are legal requirements or clear justifications for access to be restricted, in which case these restrictions should be enforced rigorously and uniformly.

2) **Collaborative working** practices should be developed and supported both within and between DGs and departments as a preferred working method.

Based on the report of the High Level Reflection Group, this Communication sets out:

- general orientations for a Commission policy for data, information and knowledge management based on the two principles as stated above;

- concrete immediate actions in four main areas;

- a governance framework that fits into existing structures.

This new approach to data, information and knowledge management builds on ongoing initiatives and provides overall guidance for the whole Commission. It leaves room for DGs to develop actions to address their own specific needs while avoiding the creation of new silos.

The short-term actions can be implemented immediately while the general orientations will guide the development of future actions. The Communication defines priorities that, over time, will lead to a more cost effective use of existing resources, in line with the recent Communication on Synergies and Efficiencies in the Commission.[3]

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[1] The group, chaired by Walter Deffaa (REGIO), included 11 other Directors General and a Deputy Secretary General: M. Klingbeil (SG), A. Italianer (COMP), M. Servoz (EMPL), R.-J. Smits (RTD), R. Madelin (CNECT), V. Sucha (JRC), F. Frutuoso de Melo (DEVCO), W. Radermacher (ESTAT), I. Souka (HR), S. Quest (DIGIT), N. Calviño (BUDG) and M. Reicherts (OP).

[2] Ares(2015)2475458

[3] SEC(2016)170.

The Commission is invited to:

- endorse the general orientations for a corporate data, information and knowledge management policy and the short term actions set out in section II;

- adopt the governance framework described in section III.

II. FOUR MAIN AREAS FOR ACTION

The College has repeatedly underlined the need to break down barriers and work across silos in order to deliver better and more joined-up policies. Creating project teams under the leadership of Vice-Presidents to implement the Commission's political priorities was a first step towards achieving this. A sustained effort will, however, be needed if collaboration between Commission departments is to become the standard working method. Knowledge, information and data need to be shared and exploited and barriers to working together removed. This will necessitate not only a change in working habits and organisational culture, but also the development of methods and tools to support them.

This section identifies four main areas where improvements could be made and identifies a first set of concrete actions for each of these areas which could be launched or accelerated in the short term, supported by internal communication to ensure staff engagement and effective delivery. While the main focus of these actions is to improve data, information and knowledge management within the Commission, synergies at inter-institutional level and with external stakeholders will also be considered where relevant.

1. <u>Improving information retrieval and delivery</u>

Data and information are currently scattered across a multitude of disconnected systems, repositories, databases and data warehouses and access is often restricted. This makes it difficult to find and retrieve information, potentially leading to duplication and inconsistencies, and reducing productivity and staff engagement. Data and information should be made **searchable**, easily **retrievable** and as widely **available** as possible across the organisation. Internal restrictions on sharing data and information should therefore be removed where appropriate, thereby improving cost effectiveness in the medium to long term by easing discovery, search and re-use. At the same time, the Commission must continue to ensure full compliance with legal[4] and other confidentiality considerations and to guarantee a high level of security for sensitive information.

Action points

- *Develop the **capability** to **search** easily across different systems in order to find and retrieve all the relevant information held by the Commission, irrespective of where that information is stored or the underlying technology.*

- *Where appropriate **information** will be made **more easily accessible. Sensitive and classified information** needs, however, to be protected. **Restrictions** on such information will be strictly enforced and, where necessary, **security will be improved.***

- *Finding and combining information and delivering it to where it is needed will be made easier by introducing **standards** for corporate data and metadata management, e.g. for the **description of content in information systems**. As a first step, ongoing projects to create common metadata in specific areas and policies on metadata management will be reviewed, in order to identify gaps and set priorities by the end of 2016.*

- *To facilitate the exchange of data and information **new information systems***

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4 Commission Decision 2015/443 on Security in the Commission, OJ L72 17.03.2015, pp. 41-52

need to be user-centric and interoperable by design. All new systems should be designed targeting reusability of the provided services and data. A plan will be put in place by the end of 2016 identifying IT systems that need to be made more user-centric and interoperable, including a timeline to achieve this.

2. Working together and sharing information and knowledge

Better gathering, sharing and use of data, information and knowledge in the Commission are essential to deliver integrated policy work and overcome silo mentalities. Effective collaboration reduces duplication, allows broader inputs earlier in the policy cycle and leads to greater strategic alignment in the organisation. It will increase the efficiency and quality of the Commission's work and improve staff engagement. The steps proposed for achieving this fall into three main areas.

Collaborative policy-making and knowledge sharing. Collaborative working will be promoted as the preferred working method at the Commission at all levels. Tools to support this will be made more widely available. Senior managers will take steps to encourage their staff to embrace collaboration more extensively, leading by example and recognising successes. DGs should review, and where necessary improve, their own business processes that lead to the production, use or sharing of knowledge. Lessons will be drawn from existing cross-DG projects on collaborative policy-making. For these changes to be possible, DGs will need to share data, information and knowledge that are relevant to Commission policy-making. Natural starting points are the Commission's project teams and existing interservice groups.

Action points

- *Implement the **pilot project for knowledge sharing** on the European Semester, which aims to gather information and knowledge and make it available to the relevant services in the Commission. An additional pilot to coordinate the input of DGs to an inter-service steering group supporting the work of one of the project teams led by a Vice-President should be identified.*

- *Evaluate, streamline and develop **collaborative tools** already used at the Commission, provide clear guidance and organise relevant training to enhance their efficient use.*

- *Develop an improved talent search **functionality** that identifies the knowledge and skills of Commission staff building on existing tools such as the eCV.*

Knowledge and competence centres. Specific knowledge and competence centres will be set up for issues that fall under the policy priorities of the Commission, including thematic areas of the European Semester. Responsibility for knowledge management will be shared among all the departments that play a role in knowledge accumulation, creation, sharing and use. The relevant DGs will form thematic networks to underpin the work of the knowledge centres.

> **Action Point**
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> – *The JRC initiative to develop **knowledge centres and competence centres** for priority policy areas[5] will be further developed.*

Briefings and speeches. The preparation of speeches and briefings for members of the Commission and senior management is a core business process that takes place in most Commission departments. Briefings often summarise the Commission's current level of knowledge on a particular issue. A corporate standard procedure with a common tool and a single repository will make sharing, collaborative drafting and re-use possible, reduce duplication and thus the workload, and will help to ensure the coherence, quality and content of briefings.

> **Action point**
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> – *A majority of DGs already use BASIS for the **preparation of briefings**. In a first phase other IT tools used when preparing and circulating briefings will converge or be made interoperable with BASIS. Over time, BASIS should evolve to become a corporate tool allowing multi-DG briefings to be prepared following streamlined and standardised procedures. It will facilitate collaborative drafting and content sharing with other systems, such as knowledge platforms.*

3. Maximising use of data for better policy-making

Many policy domains are becoming increasingly data driven and the challenges posed by data management need to be addressed. The potential of supporting Commission policies with better evidence, especially quantified evidence, is widely acknowledged[6,7]. Data is a strategic asset for any public sector organisation, and needs to be recognised as such[8].

Data needs and knowledge gaps need to be better anticipated in order to ensure that data is available, usable and useful for impact assessments, monitoring, reporting and evaluation. Challenges to the optimal use of data need to be addressed, not least in light of the emergence of new data technologies. These challenges include legal considerations[9], the early identification and governance of data sources, data analytics, data quality and metadata management and the proper insertion of data-driven insights into the policy-cycle. Special attention will be given to big data, which has the potential to significantly increase the Commission's capabilities by allowing early detection of trends and faster feedback in support of Better Regulation and

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[5] The aim of the knowledge centres is to collect, check, structure and make easily accessible and comparable all the relevant data, knowledge and intelligence in a specific policy field. Knowledge centres will not create any new entities nor require additional staff. The aim of the competence centres is to provide expertise on specific scientific methods and tools to support policy. A number of knowledge and competence centres have been launched and additional ones are under development (see the annexed Rollin Plan for updated status).

[6] See, e.g., the OECD Ministerial Declaration "Towards a new vision for the public sector", http://www.oecd.org/governance/ministerial/chair-summary-2015.pdf

[7] This is particularly true for the EU Budget which should be supported with evidence, results and EU added value at every stage of the budget cycle. More information on the 'EU budget focus on results' at: http://ec.europa.eu/budget/budget4results/index_en.cfm.

[8] Ongoing activities contributing to the realisation of such potential include the coordination of "other statistics" as per Commission Decision of 17 September 2012 on Eurostat (2012/504/EU).

[9] E.g. intellectual property rights of third-party information providers.

evidence-based policy-making as well as to improve demonstration of results to all stakeholders.

An action plan on how to better coordinate and harness the use of new data for policy-making in the Commission will be developed and presented to the future Data, Information and Knowledge Management Steering Board (see part III). It will guide investment in infrastructure, skills, knowledge and methods for a better use of big data and will ensure the alignment of objectives and coordination of activities, including ongoing pilots and experiments. Furthermore, it will increase the Commission's big data analytics capacity and its access to big data resources.

At the same time, in accordance with its commitment to the G8 open data charter and the Decision on the re-use of Commission information[10], the Commission will set the example and make its own data as fully available as possible for use and re-use.

Action points

– *Promote cross-cutting cooperation between policy-making DGs and Member States with respect to the use and **exchange of data for policy-making**, including reporting.[11]*

– *Develop the necessary skills, tools and computing infrastructure to support a **big data capability** at the service of the Commission's political priorities and, to this end, further develop the 'Data4Policy' initiative.*

– *In order to allow for possible re-use, all new Commission information systems that produce data should be able to make them available in **machine-readable open formats**. Commission departments should publish them in the EU Open Data Portal[12], in accordance with their obligation under the Commission re-use Decision.[13]*

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[10] OJ L330, 14.12.2011, p.39.

[11] For example, across Europe geospatial data such as transport networks, population, land use, air temperatures or groundwater levels, are collected in different ways using different standards. This makes it difficult to exchange and share such information. The INSPIRE Directive (OJ L 108, 25.4.2007, p.1) seeks to create an infrastructure for sharing spatial information between public authorities in the EU. This work is carried out with the Member States and could serve as a source of inspiration for other fields.

[12] https://data.europa.eu/euodp

[13] Commission Decision 2011/833 on the re-use of Commission documents (where the word "document" encompasses any content whatever its medium). This Decision does not apply to certain categories of data, such as confidential data and documents that, pursuant to the rules established in Regulation (EC) No 1049, are excluded from access or only made accessible to a party under specific rules governing privileged access.

4. Creating a culture of knowledge sharing and learning

Changing our working habits and organisational culture is a major challenge. The objective is to make teamwork within and across DGs the norm at the Commission[14]. Organisational development and cultural change management approaches should be put in place to encourage Commission-wide knowledge sharing. The success of this approach depends on the support of senior and middle-management and their readiness to lead by example.

This change in culture should empower staff to provide added value by sharing insights and contributing to knowledge sharing and creative policy work across unit/directorate and DG boundaries. It should include promoting a stronger sense of responsibility among staff for the information and knowledge to which they have access. Central and local support is needed for developing skills and competencies, creating the correct incentives for staff and ensuring that information- and knowledge-sharing objectives are built into internal policies.

The need for this culture change is recognised in the new Learning and Development Strategy[15], which seeks to ensure that Commission staff work together effectively in networks across the Commission and with external partners, using the available expertise to make and implement policies. The Strategy identifies a number of principles and tools that aim to give staff access to information and allow them to acquire the necessary skills.

Action points

– *Develop policies on* **human capital** *focused on knowledge sharing and collaborative working so that staff can acquire the necessary skills and in particular implement the actions set out in the Learning and Development and Talent Management strategies[16].*

– *Develop and launch a* **user awareness programme** *and educational package focusing on the value of knowledge sharing and collaborative working to promote supporting values and behaviours.*

– *Support* **thematic communities of practice, professional networks** *and exchange of best practices that uphold the priorities of the Commission and link these to decision-making processes, including by building on the Learning Portal.*

– ***Develop the profession(s)*** *of data, information and knowledge management at the Commission, by defining standard job titles, job descriptions and training modules. Ensure that every DG within the Commission, has a unit or entity/ies explicitly in the lead for this specific domain, in collaboration with other units/entities.*

– *Further* **develop and promote offline collaboration skills***, such as peer learning, participatory leadership techniques and collaborative policy-design approaches, across the entire organisation.*

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[14] The example of the Environmental Knowledge Community (EKC) established by DGs ENV, RTD, JRC, ESTAT and the European Environment Agency in the environment field could serve as a model.

[15] Adopted on 24 June (C(2016) 3829 final.

[16] The Talent Management Strategy was presented to the College by Vice-President Georgieva on 15 June 2016 (see INFO(2016) 62).

III.   A COMMON GOVERNANCE FRAMEWORK

An effective governance framework will be needed to deliver the proposed strategy. It should be as light as possible and fit into the existing corporate governance structure. It should provide a corporate framework to prioritise, coordinate and steer the strategy while leaving room for DGs to develop and implement their own approaches tailored to their own unique needs. The governance framework should ensure that measurable progress towards the strategic objectives is achieved and should aim to avoid duplication, overlaps and inconsistencies in the implementation of the strategy.

- **Data, Information and Knowledge Management Steering Board**

A new Data, Information and Knowledge management Steering Board will report to the ABM Steering Group and will be chaired by a Deputy Secretary General. The Steering Board will also replace the existing eDomec Steering Committee[17] and take over its tasks.

The Steering Board will further develop and guide the corporate data, information and knowledge management policy, taking into account the Report from the High-Level Reflection Group. It will adopt its first annual work programme and action plans for each specific area by the end of 2016. The annual work programme will set clear responsibilities and targets as well as a precise timeline. The Steering Board will also ensure the monitoring of policy implementation, with a particular attention to feedback from users.

Where necessary, it will cooperate with other boards, e.g. in the IT domain[18].

Existing **inter-service groups[19]** will be called on to implement user-centric data, information and knowledge management policies and actions and to support their coordination.

- **Information Management Team**

A team of expert staff from a core group of DGs will develop policies and action plans and submit proposals to the Steering Board. The team will work under the guidance of the chair of the Steering Board and will be coordinated by the Secretariat-General. It will pay particular attention to avoiding duplication, overlaps and inconsistencies in the data, information and knowledge produced by the Commission. An initial action plan will be submitted for adoption by the Steering Board by the end of 2016. It will be based on the general orientations and specific actions described in section II and will include with clear timelines for implementation.

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[17] The e-Domec Steering Committee is the high level committee charged with supervising the implementation document management policy and relevant tools in the Commission. It decides on strategic issues, including major changes in the scope, planning, or resources of the policy.

[18] For example, the IT Board, DSF, the Synergies & Efficiencies Review, etc.

[19] For example: Interservice groups of Document Management Officers (DMO), Training Managers (COFO), Information Resource Managers (IRM), existing networks such as the Evaluation /Better Regulation Network, KM Network (informal), and other coordination groups as required.