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For discussion and recommendations

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Item 5 (b) of the Provisional Agenda

OUTLINE FOR THE CES 2015 SEMINAR "MODERNIZATION OF STATISTICAL PRODUCTION AND SERVICES AND MANAGING FOR EFFICIENCY"

Prepared by Ireland and Italy

This paper presents the draft outline for the seminar "Modernization of statistical production and services and managing for efficiency" to be organized during the CES 2015 plenary session. ***The Bureau discussed the outline and provided recommendations on the organization of the seminar.***

I. BACKGROUND

1. At its April 2014 plenary session, the Conference of European Statisticians (CES) selected the topic "Modernization of statistical production and services and managing for efficiency" for one of the 2015 CES seminars. The organisation of the seminar is being coordinated by Ireland and Italy, with sessions organised by Croatia, Finland, and Hungary.

2. This topic is related to activities being undertaken by individual countries and international cooperation initiatives such as the UNECE High Level Group on Modernization of Statistical Production and Services (HLG), the European Statistical System "Vision 2020" and the "Transformative Agenda" and "Data Revolution" activities under the UN Statistical Commission. These activities aim to modernize statistical processes and innovate data-based products and services with a view to realising efficiencies in the context of tighter budget constraints, while at the same time enhancing data quality and developing our ability to respond flexibly to increasing demands.

3. The following countries and organisations have confirmed they will contribute papers to the seminar: Australia, the Netherlands, Norway, Poland, Portugal, Slovenia, Sweden, Turkey, and Eurostat. The list of proposed papers and abstracts is provided in Annex 2.

II. STRUCTURE OF THE SEMINAR

4. Ireland and Italy will organise the seminar. Croatia, Finland and Hungary will organise the sessions. The seminar will be co-chaired by Giorgio Alleva and Padraig Dalton.

5. The preliminary timetable for the seminar is provided in Annex 1. It is proposed that the seminar is introduced by the CES discussion of the annual HLG report to take stock of activities and ongoing projects. This will pave the way for a structured discussion of strategies of national statistical institutes (NSIs) for modernization and efficiency management and lessons learned. The ensuing seminar discussion could also benefit from the report on HLG activities that provides an over-arching perspective on strategic issues and

priority areas of infrastructure development and product innovation to enable modernization of statistical process and services.

6. The seminar will open with an introduction from one of the Chairs (Padraig Dalton), followed by the keynote speech dealing with: (i) the rationale for product and process modernization in the data industry and its drivers; (ii) the key factors underlying successful strategies; (iii) frontier data analytics services and challenges for NSIs.

7. The keynote speaker is still to be identified. A tentative list of possible candidates for consideration includes:

- Hal Varian, Chief Economist, Google
- Anders Wallgren, Statistics Sweden (statistician, data integration and process modernization expert)
- Roberto Viola, Deputy Director, DG Connect, European Commission
- Dino Pedreschi, data scientist, IT expert, http://www-kdd.isti.cnr.it/people/pedreschi-dino
- Hans Rosling, see http://en.wikipedia.org/wiki/Hans_Rosling
- […..]

8. Among the options to make the seminar more interactive, the following could be considered taking into account infrastructural capabilities available:

- Using Twitter (#ces2015modernization) to solicit live questions and comments on key discussion messages;
- Sending a short questionnaire to selected NSIs representatives before the seminar to inquire about their views on key topics to be discussed in the two sessions;

9. The seminar will be concluded by a panel discussion on the way forward and recommendations, and a subsequent overall discussion. The panel will be chaired by Giorgio Alleva. It will consist of 3-4 Heads of NSIs selected from countries that have not participated in the organization of the session or presented papers.

10. The central part of the seminar will consist of two sessions: the first one focusing on statistical process modernization to achieve efficiency and strengthen responsiveness, and the second one on innovation to enhance data-based products and services to respond to demand.

A. Session 1: Statistical process modernization

Session Chairs: Finland and Hungary

11. The session should discuss conceptual models and practical implementation examples of statistical process modernization. These cover standardization of statistical processes and industrialization of statistical production phases to enhance product quality and cost efficiency. The session could further discuss the following aspects:

(a) What are the conceptual models and business architecture needed to design statistical process modernization? What is the best governance mechanism to enhance process modernization?

(b) What are the drivers of the change management process and the enabling technologies and skills?

(c) What is the role of data integration and leveraging of new data sources in statistical process modernization?

(d) What methodological and IT investments are required (including scale of investment)? What are the accompanying actions (e.g., planning, portfolio management, cost-benefit analysis capabilities)? How to deal with phasing of innovation without disrupting current production? How can this be achieved while minimising the disruption to current/ongoing production? What will our approach be to the development of strategic alliances?

(e) What can National Statistical Institutes learn from the private sector experience?

(f) How do we address the difference between the national and international perspectives? What are the benefits and limits of cooperation?

B. Session 2: Product and service innovation

Session Chair: Croatia

12. This session should focus on product and service innovation to respond to new demands. This could include an exploration of data-based services and initiatives to enhance data accessibility and usability to increase the value of statistics. The session could discuss the following issues:

(a) How should statistical products evolve to respond to new demands, including information needs for policy decisions?

(b) What new data-based services need to be developed to enhance users ability to extract knowledge out of data?

(c) How can NSIs increase access, usability and re-use of data to strengthen value and quality?

(d) What are the key constraints (including legal) to promoting greater data integration to generate value for users?

(e) Which could be the strategic partnerships among NSIs and with private sector to enhance tools for data-analytics as a service?

ANNEX 1 – TIMETABLE

Time	Item	Topic	Notes
Tuesday, 16 June 2015 (9:00-12:30 and 14:30-17:30)			
9:30 – 9:35	1	Opening addresses and adoption of the agenda	
9:35 – 10:15	2	Report of the High Level Group for the Modernization of Statistical Production and Services	Padraig Dalton
10:15 – 17:30	*SEMINAR*		
	3	**MODERNIZATION OF STATISTICAL PRODUCTION AND SERVICES AND MANAGING FOR EFFICIENCY**	
10:15 – 10:20		Introduction by Seminar Co-chair: Ireland	Padraig Dalton
10:20 – 10:40		Keynote speech	tbc
10:40 – 12:30		Session I: Statistical process modernization - Session organisers: Finland and Hungary	
10:40 – 10:45		Introduction by Session Organiser	Hungary
10:45 – 11:00		Key issues identified in the papers	Hungary
11:00 – 11:20	*Coffee/tea break*		
11:20 – 11:40		Comments by countries who prepared papers	
11:40 – 12:30		General discussion Short summary of the session	Finland
12:30 – 14:30	*Lunch break*		
14:30 – 16:30		Session II: Product and service innovation - Session Organiser: Croatia	
14:30 – 14:35		Introduction by Session Organiser	Croatia
14:35 – 14:45		Key issues identified in the papers	Croatia
14:45 – 15:15		Comments by countries who prepared papers	
15:15 – 15:35	*Coffee/tea break*		
15:35 – 16:30		General discussion Short summary of the session	
16:30 – 17:30		Conclusions and recommendations for follow-up work Panel with 3-4 NSI Heads	Led by Giorgio Alleva

ANNEX 2 – LIST OF PAPERS AND ABSTRACTS

Session 1	
Norway	Statistical methods and IT driving continuous improvement in Statistics Norway
Poland	Modernization of statistical surveys production in CSO of Poland
Portugal	Managing an integrated respondent communication: experience of Statistics Portugal
Slovenia	From domain-oriented to process-oriented production - SURS developments
Sweden	Building a common production environment for the statistical production process: the Swedish experience

Session 2	
Australia	The increasing importance of 'wholesaling' data?
Netherlands	Product and service innovation at Statistics Netherlands
Poland	Improving data dissemination. New challenges for cohesion policy: Polish experience
Turkey	ICT based innovation in production and services at TurkStat
Eurostat	Innovative products: a challenge and an opportunity for European statistics

Abstracts

1.1 Norway

Statistical methods and IT driving continuous improvement in Statistics Norway

Like other national statistical institutes, Statistics Norway has to meet new user demands, competition and budget cuts. In order to streamline the production of statistics we are carrying out standardization work and Lean initiatives. Utilizing new technical possibilities and data is a part of this work. Our strategies and plans reflect this.

One of our objectives is to create good relationships between strategy and IT development using Lean methodologies to improve and simplify the processes of project management. We also strive to improve our production efficiency in general through Lean.

Our new strategy for statistical methodology emphasizes standardization work, and the need for close cooperation between subject matter domains, methods and IT. The use of statistical methods in statistical production should wherever possible be standardized in common IT solutions for data acquisition, preparation and analysis of data.

Continuation of our work on common IT solutions to support the working processes in statistical production and further development of good systems to create better order and coherence in SSB data, are core areas in our new IT strategy. This opens up for effective reuse and dissemination of our data for further analysis and research, both internally and externally.

Development of new IT solutions will build on national and international standards, such as GSBPM and GSIM, and shall to the extent possible utilize already developed and proven

technology and reuse systems from sister organizations. The number of customized solutions will be reduced.

1.2 Poland

Modernization of statistical surveys production in CSO of Poland

Modernization of statistical surveys production in CSO of Poland requires taking action aimed at increasing the efficiency of the statistical production process. To achieve this goal a lot of activities accompanying organizational and coordination processes must be taken, out of which the main ones are mentioned below:

- Establishing processes within the particular stages of public statistics based on the Integrated Statistical Business Process Model (ISBPM), that includes models appropriate to reality and the needs of Polish public statistics.
- Standardizing organizational processes, which is based not only on ensuring uniform solutions regarding data collection and processing, but also on implementing the entire statistical process according to uniform principles and procedures.
- Preparing the procedures that make it possible to automate planning processes and survey implementation.
- Implementing the concepts, rules and procedures in stages, with regard the possibilities and human and financial resources.
- Preparing and implementing in stages data collection strategy as well as data storage, processing and dissemination.
- Defining goals and requirements for the metadata system supporting management of integrated statistical production processes.
- Implementing the meta-information concept that enables the use and creation of meta-information on every stage of the statistical process as well as management of the access, users and the quality of meta information.

The Concept of Statistical Surveys Organization in the CSO of Poland covers the whole transformation programme from the current surveys organization model based on a stovepipe model to the Integrated Statistical Business Process System, which will be fully implemented by 2020.

1.3 Portugal

Managing an integrated respondent communication: Statistics Portugal experience

Statistics Portugal started ten years ago a process of modernisation of its production system. In this process, focusing on business surveys, three key elements are worth to be highlighted:

(i) Implementation of the Simplified Business Information (an administrative internet based source) that conveys each year almost census data on the corporation sector, covering the information requested by four public institutions;

(ii) Full implementation of an Integrated Survey Management System which consists of components that support the basic statistical production sub-processes to collect, process, analyse and disseminate data;

(iii) Promotion of a better relationship between data providers and INE notably by improving the dialogue with the data providers and by designing a service of customized feedback information to them.

This paper provides an overview on the content of these three elements.

1.4 Slovenia

More and more demands for statistical data and more and more requests for costs reduction force statistical organisations to change their functioning. Modernisation and rationalisation of the statistical production cycle, taking into account advantages of the rapid IT development, is a natural request in this situation.

Modernisation of the statistical production systems is demanding and certainly a long-term job. This job includes development of the new IT solutions as well as a radical change of the whole production system on institutional level. In recent years statistical institutions are putting a lot of their resources into the projects aiming at moving from stove-pipe, domain oriented systems to generalised, process oriented solutions.

The Statistical Office of the Republic of Slovenia (SURS) began this modernisation few years ago by launching a large infrastructure project. The project based its premises on the «GSBPM» oriented process model and few cornerstone concepts which should assure development of generalised but still flexible enough solutions to cover the needs of most of the statistical surveys. Instead of creating one overall general solution for all the statistical process we decided for step-by-step approach. Generalised solutions for the specific parts of the process (e.g. data editing, aggregation, standard estimation) will gradually be developed and introduced into the regular statistical production.

In the paper we describe the main concepts of the development project, present the results achieved so far and sketch the plans for further developments.

1.5 Sweden

Building a common production environment for the statistical production process: the Swedish experience

Since 2008, Statistics Sweden has moved to a process oriented approach to the statistical production process. The aim is to make the production more efficient and standardized, using common methods and tools wherever possible. One important aspect of this is building a common IT platform where existing and new tools can communicate efficiently with each other, and where each survey can choose the necessary tools based on their design choices.

For data collection this platform has been realized through the Triton project, which is now used by many surveys to collect and validate data through web collection and paper forms. The structure set by the Triton project is now being applied and expanded to other parts of the statistical production (processing, analysis and dissemination). The paper describes how far we have come, the ongoing work, our vision and some lessons learned so far.

2.1 Australia

The increasing importance of 'wholesaling' data?

The ABS dissemination strategy recognizes that our presence on the web is no longer defined by our primary website but by our visibility and agility across multiple channels. We need to understand how people (and machines) interact online and then structure our content, services and presentation accordingly.

We predict that National Statistical Agencies will be expected to do a much better job at 'wholesaling' content and have recognized the importance of exposing our content via machine to machine web services also known as application programming interfaces or APIs.

This paper will explore how 'wholesaling' is a reality now for the ABS and how the ABS and many other organisations are benefiting from the ability to interface with the ABS data stores to pull our content into their applications and apps using the APIs.

The ABS website is also benefiting from this approach with our own 'dynamic' publishing applications interfacing the APIs. The Data by Region (DbR) application provides easy access to a comprehensive range of ABS statistics based on geographic regions. The biggest innovation of DbR is 'under the hood' - with the way it calls information/data using the APIs.

An additional innovation for us is providing access to powerful multidimensional data for aggregated statistics but also our detailed microdata which utilises 'confidentialise on the fly' systems to expose the full power of the data and protect confidentiality.

We see the quality data wholesaling transformation as critical to the industrialization and modernization of the communication of ABS statistics and maximizing the use of ABS data.

2.2 Netherlands

Product and service innovation at Statistics Netherlands

Statistics Netherlands faces severe budget cuts, just as almost all public organizations in the Netherlands. In this climate, it is of particular importance to maximize the public value of official statistics. This requires a continuous improvement and innovation of the products and services. An important goal of a national statistical institute is to enable rational evidence-based governance, that is, governance based on facts. However, it becomes more and more difficult to characterize complex phenomena in society using just one or a few indicators. To overcome this problem, Statistics Netherlands is renewing its publication strategy by reporting more underlying indicators in a coherent way to create a deeper and more complete understanding of developments in society. In this way, Statistics Netherlands strives to deliver factual information at the right time which can be used effectively by policymakers.

This strategy has implications for both statisticians within Statistics Netherlands as well as for the way the communication is organized.

2.3 Poland

Improving data dissemination. New challenges for cohesion policy: Polish experience

With the approval of the Lisbon Treaty the scope of cohesion policy has changed — social and economic issues have been complemented by a territorial aspect. During the ongoing discussion on this topic it is necessary to emphasize the role of public statistics as a data source, essential for the policy objectives' creation, monitoring and evaluation.

Statistical offices acting as producers of official statistics face the challenge of data dissemination. Information should meet users' demand and keep track of the changing reality. Attractive and intuitive form of data dissemination is nowadays of crucial importance, to users who are not statistical experts.

Central Statistical Office of Poland has undertaken activities aiming at developing a dissemination policy to enhance communication with various groups of users. Taking into account the needs of policymakers, a special system (called STRATEG) has been created, which fits the requirements of an innovative statistical product. The system is dedicated particularly to users interested in monitoring cohesion policy as well as country and regional development. STRATEG system is a combination of knowledge treasury and functional tools for data presentation and analysis.

Beside STRATEG system, Local Data Bank and Geostatistical Portal are important channels of statistical data dissemination. Nowadays thematic statistical databases have been created. Apart from the access to basic data these new products offer also methodological information and links to statistical publications.

While improving the policy of modern approach to data dissemination, the CSO of Poland is guided by both usability and attractiveness of statistical products.

2.4 Turkey

ICT based innovation in production and services at TurkStat

This paper presents the recent crucial developments in information and communication technologies (ICT) studies of Turkish Statistical Institute (TurkStat) within the context of production and service innovation.

TurkStat has recently developed two spectacular projects named "Harzemli" and "MEDAS" Projects. Harzemli, an application platform which works based on user defined DDI metadata and rule xml files, consists of three different application platforms: Desktop application, web application and mobile application. As a part of standardization and modernization process of statistical production systems in TurkStat, Harzemli platform provides a generic application development environment that only gets a DDI file containing reference and structural metadata information about a study as an input. It furthermore generates an application which has a generic user interface. Harzemli also provides interface for data editing and analysis purpose. Harzemli platform standardizes data collection processes with using common classification and code list, shortening preparation data entry programs time from 40 days to 10 days, and shortening press release date minimum 4 days.

Regarding the dissemination part, in addition to the static tables and bulletins, the end users are able to make dynamic queries on TurkStat's Website. MEDAS, Turkstat's new dissemination system that consists of a common database and a common application is sufficient for querying all different statistical subjects at the same time, which is a unique feature in statistical dissemination. This feature provides the users with comparing the data of different statistical areas at the same page which can lead to finding new correlations between them. Using one application and a common database for all statistical areas both increases the reliability of statistical data and makes maintenance easier.

As a result, these two projects considerably increase the reliability and consistency of data, simplify the maintenance, and minimize the time to produce data.

2.5 Eurostat

Innovative products: a challenge and an opportunity for European statistics

In a digital and information driven society, official statistics have to face several challenges to respond to user's needs: technology, methodology, governance, organisation, dissemination and innovation. In order to match these challenges, national statistical offices and international statistical organisations strive to adapt to the evolving society; in other words they try to stay relevant becoming modern.

The provision of innovative products and services is a key aspect of the modernisation of European statistics. The key drivers are: a progressive switch from statistics to dashboards of indicators produced by combining different sources and methods in a flexible and agile way; a renewed emphasis on timeliness combined with quality assurance; a value added approach to statistics moving towards the provision of statistical information and services; an interconnected view that encompasses basic statistics, accounting frameworks and indicators; products that are not anymore mere numbers but combine also meta-information and visualization.

The European Statistical System is moving along these new societal trends: till recently rapid estimates, composite indicators, scoreboards, wiki articles, mobile services, have represented the innovative strand in official statistics. This paper explores some potential ideas for new and renewed products and services for European statistics: portals, interlinked indicators, partnership-based outputs, classic statistics produced with innovative techniques, infographics, tailor-made statistics etc. A new way of conceiving, producing and disseminating statistical information that is not so far from our daily reality.

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