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Topic (iv): International cooperation/collaboration

Methodological and IT innovation instruments in the European Statistical System: present and future

Invited Paper

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I.   Introduction – Towards a common ESS infrastructure

1.   The Commission communication on the production method of EU statistics: "A vision for the next decade" was endorsed jointly by the European Statistical System in May 2010. It has the ambition to trigger a paradigm move from a business architecture mainly based on a product stovepipe model to a more integrated production system at the scale of the European Statistical System (ESS).

2.   The current model is indeed no longer suitable for an efficient production:

(a)   New requirements for statistics will continue to increase in terms of both quantity and quality. New themes and policies such as Europe 2020, GDP and Beyond, require data describing complex and interrelated phenomena in a flexible way. A stovepipe approach in which area statistics are produced independently from each other is poorly adapted to serve the policy requirements for integrated indicators and datasets.

(b)   Streamlining of data collections and reduction of the burden on the respondent is a permanent priority for the ESS. The stovepipe model does not account for the coordination of the burden on respondents and still imposes that sometimes information is requested twice from the same provider.

(c)   New ICT tools are changing the way information is gathered, combined, exchanged and stored. The development, production and dissemination of official statistics have thus to be adapted to the conditions of the "knowledge society". ICT technologies should enable better integration of statistical production processes and interoperability IT infrastructure.

3.   The challenge ahead is to move from a situation where the domain specific statistical production and dissemination processes are providing optimal conditions for process owners to an integrated system where

suboptimal solutions are shared by most. This move has started in many National Statistical Organizations (NSOs) pushed by the need to gain efficiency and reduce operational budget.

4.   The new model for ESS business architecture is based on a more integrated production process built on shared data warehouses. This model combines data from different sources (administrative and new data sources) on top of traditional survey instruments while maintaining the current standard of quality.

5.   This integration requires actions on:

  (a)   the EU legal framework for statistics, with for instance the change of statistical domain specific legislation towards broader framework legislation;
  (b)   the IT infrastructure and applications with the development of interoperable shared tools and services;
  (c)   methodological innovation with the development and the incorporation of new techniques like data linking and matching and new analysis and visualisation techniques;
  (d)   the standardisation and the industrialisation of production processes.

6.   Starting, there is a need to set up a common vision/description of the architecture of the new system allowing the network of EU official statistics providers to collaborate synergistically. One of the first steps is clearly to agree on a common vocabulary and description language for the different layers of the architecture and to define some key communication standards to ensure the operability of the different systems.

7.   In this context it is important to build on the ongoing international initiatives and standards like the MSIS/GSBPM for describing the business process, the GSIM development (HLG-BAS group) to develop the statistical information model and the SDMX and DDI initiatives that provide reference solutions for information and data modelling and process documentation.

8.   A possible representation of the ESS enterprise architecture is given in fig 1. where the above-mentioned developments are represented.
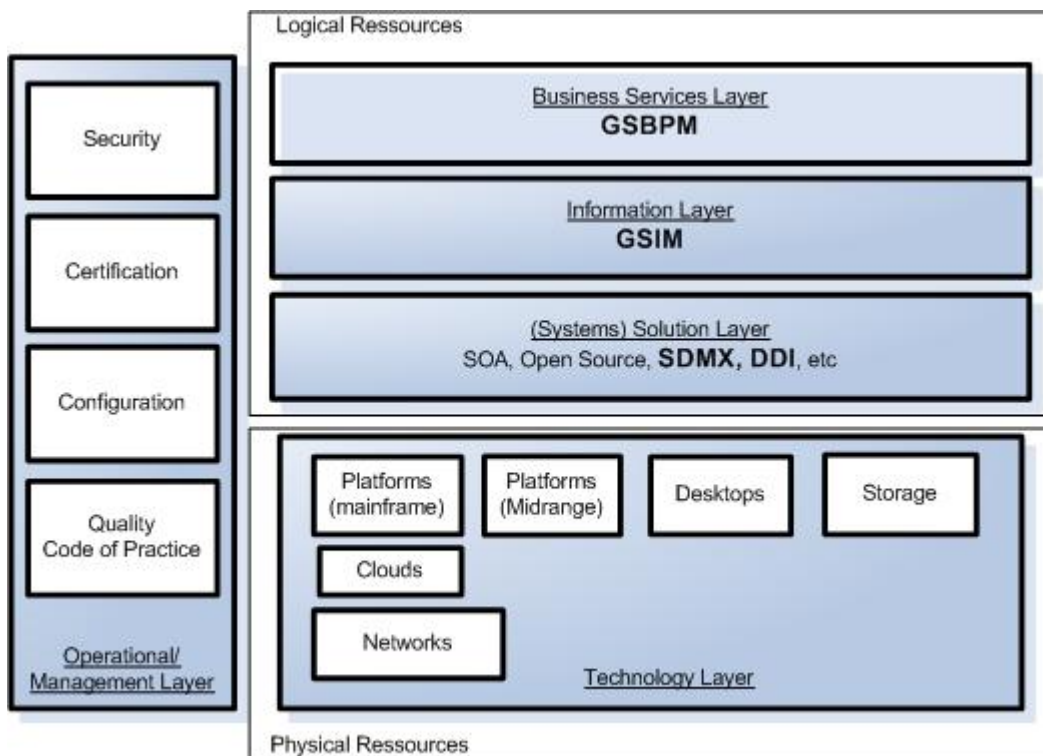

Figure 1. Layered view of an enterprise architecture for the ESS

9.   The move toward a common ESS architecture will be possible if supported by a strong culture of knowledge sharing, a sustainable generation, management and dissemination of statistical knowledge and know how.

10.   A series of ESS mechanisms are already in place to prepare/contribute to this change. These mechanisms are described in the subsequent sections of the paper. Their scope and contribution to the implementation of a new integrated and industrialised system of production of EU statistics is highlighted.

II.   The ESS instruments for modernisation and integration of EU statistical production

A.   Research in Official Statistics and ESS research transfer

11.   In 2009 the Eurostat Conference on New Techniques and Technologies for Official Statistics (NTTS) concluded that there was the need for NSOs to be open and responsive to innovative research results to cope with the challenge ahead. Future trend and opportunities for producing official statistics were well identified and discussed during the NTTS conference in 2011: new techniques and technology for analysing big datasets, linking and matching statistical information, automated data capture and use of new source of information in a distributed IT infrastructure while data accessibility and data security, confidentiality, and privacy are real challenges

12.   In the period 1999 to 2002, Eurostat launched 35 research projects within the 5th EU Framework Programme for Research and Development (FP5), which have pushed the frontiers of knowledge in a number of leading-edge statistical and technical issues.
For instance, in this period significant progress was made on the development of indicators through the FP5 programme on the Statistical Indicator of the New Economy (SINE), continued in the research line "How indicators are used in policy" of the 7th EU Framework Programme.

13.   The ongoing series of projects on research data infrastructures in FP7 European e-infrastructures like DWB (Data Without Boundaries), SHARE, ESS (European Social Survey) and related multi-disciplinary and service oriented data infrastructures (i.e. ENGAGE, DASISH) are important models for the future data infrastructure for Official Statistics

14.   Eurostat strives to maintain such research activities in the prioritised domains. The research work programme in Official Statistics for the next 10 years is currently under development and will be put for consultation on the CROS (Collaboration between Researchers and Official Statisticians) platform www.cros-portal.eu .

15.   Research transfer and the mechanism leading to innovation in production of Official Statistics is thus a key challenge for the ESS.

16.   Firstly, there should be more room for systematic incorporation of small-scale methodological experiments into statistical production processes for testing innovations. A series of projects aiming at implementing new methods i.e. the improvement of the relevance and quality of EU policy indicators are being launched in the framework of the Laboratory just created in Eurostat. .

17.   Similarly, there is a need to conduct experiments at national level on, for instance, data capture and data collection innovation (register versus interview data, data integration methods, multi-mode methods, web survey technologies, etc.), estimation and analysis methods and tools (e.g. small area estimation techniques combined with innovative graphical tools) and dissemination (e.g. mobile dissemination techniques).

18.   In order to keep track with the rapid development of statistical methodology and tools, communication and cooperation between ESS and universities is crucial. The CROS portal is meant to improve the networking

between the ESS and the research community, to better involve all the stakeholders and contribute to the ongoing definition of the research needs and orientations in Official Statistics

19   In addition, since 2008 Eurostat has developed a Scientific Cooperation Agreement with the one pilot University (Trier – Germany). This cooperation gives the basis to enhance scientific statistical capacity within Eurostat Further extensions of the agreement are envisaged.

20   Eurostat is also investigating the possibilities to create a post-graduate degree in European Official Statistics starting from existing programmes in Member States. This will be a first step towards a European training facility which will facilitate the implementation of the vision in the MS by developing the human capital. All these activities aim to improve statistical literacy and exchange of good practices and methodologies between universities and the ESS and ultimately the speed of transfer of leading edge results into Official Statistics.

B.   ESSnets: a multipurpose instrument for the ESS

21.   An ESSnet project is defined as "A collaborative network of several ESS organisations aimed at providing results beneficial to the whole ESS".

22.   In total, currently 26 ESSnet projects have been launched since 2006, 8 projects are finished up to now and 15 projects are under preparation for 2011. Short descriptions of these projects are provided in annex. Full information on the projects can be found on the ESSnet platform: www.essnet-portal.eu .

23.   ESSnet projects are one of the key tools for transferring the results of research projects into the statistical production process. They allow covering more practical development at shorter to mid-term drawing on research results. ESSnet projects have been initially developed to cover methodological activities. Currently a wide variety of activities can be undertaken under this umbrella from conceptual development to development prototype of common IT tools, including training and dissemination activities.

24.   The ESSnet projects can be grouped according to their scope and impact. Classification is not one-to-one, some ESSnets contributing to different components of the future architecture

25.   Originally some ESSnet projects aimed at continuing/complementing **research** activities like the first ESSnet on Statistical Disclosure Control (SDC I) and ISAD (Integration of Statistical and Administrative Data)

26.   They were naturally complemented by ESSnet projects aiming at creating a **pole of expertise** in the EU for some common step of the future common business architecture (GSBPM). The key ones are dealing with statistical disclosure control (ESSnet SDC II), small area estimation (ESSnet SAE) and data integration (ESSnet DI).

27.   A bunch of other ESSnets target the establishment of the common ESS **infrastructure**. The most important ones are the Common Reference Architecture CORA followed the Common Reference Environment CORE.; the MEETS ESSnet on Eurogroups Register; the GEOSTAT ESSnet; the MEETS Consistency and the MEETS data warehouse and finally 2 projects on SDMX.

28. ESSnets naturally create opportunities for **standardisation** and exchange of knowledge: developments are made in common for the sake and benefit of the whole community.

29. Methodological standardisation is at stake in the SDC harmonisation ESSnet, the MEETS Memobust (Methodology for Modern Business Stastistics) and the ESSnet preparation on Standardisation which reviews the status of current methodological standards in the ESS. The future ESSnet on mixed mode data collection for household surveys will aim to carry out further experiments with a view to standardising practices at an early stage of the development.

30.   ESSnets can provide a framework for implementing a **strategy** for standardisation as set by the high level undertaking like sponsorships.

31.   ESSnets remain also a key instrument for piloting and testing in common new surveys, new variables, new approaches and elaborating on new user requirements in very specific domains. Key examples are ESSnet Culture, Decentralised access to EU micro data and Automated Data Collection.

32.   The scope and the field of action of the main ESSnet projects are represented on the Enterprise Architecture model (infrastructure ESSnets) and the GSBPM (process support ESSnets) (Fig2)
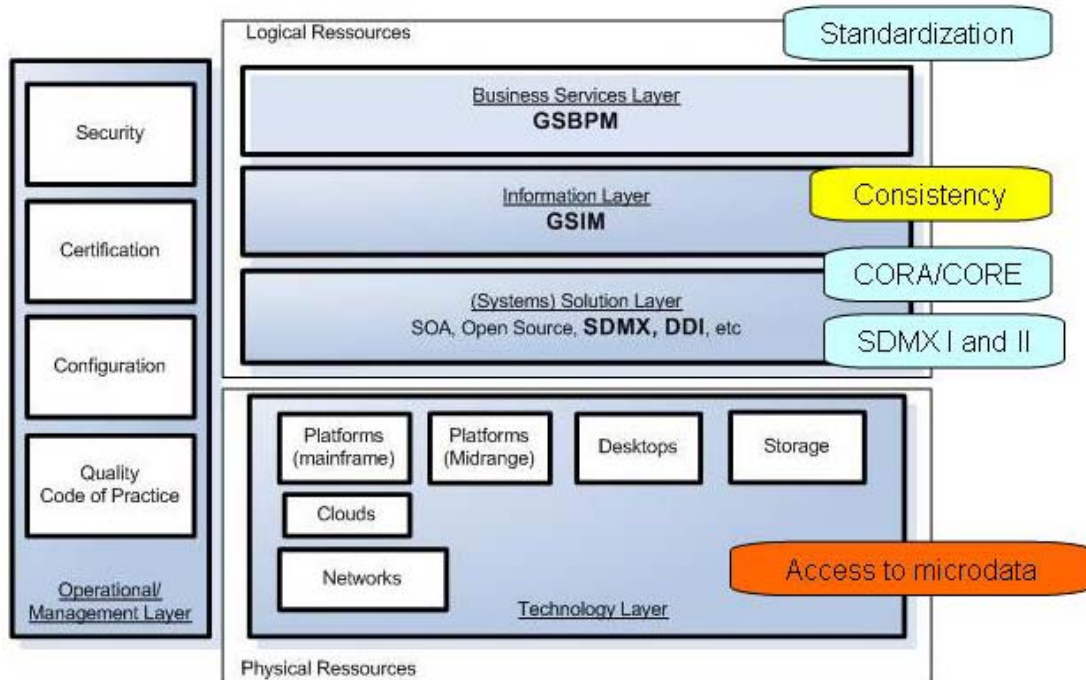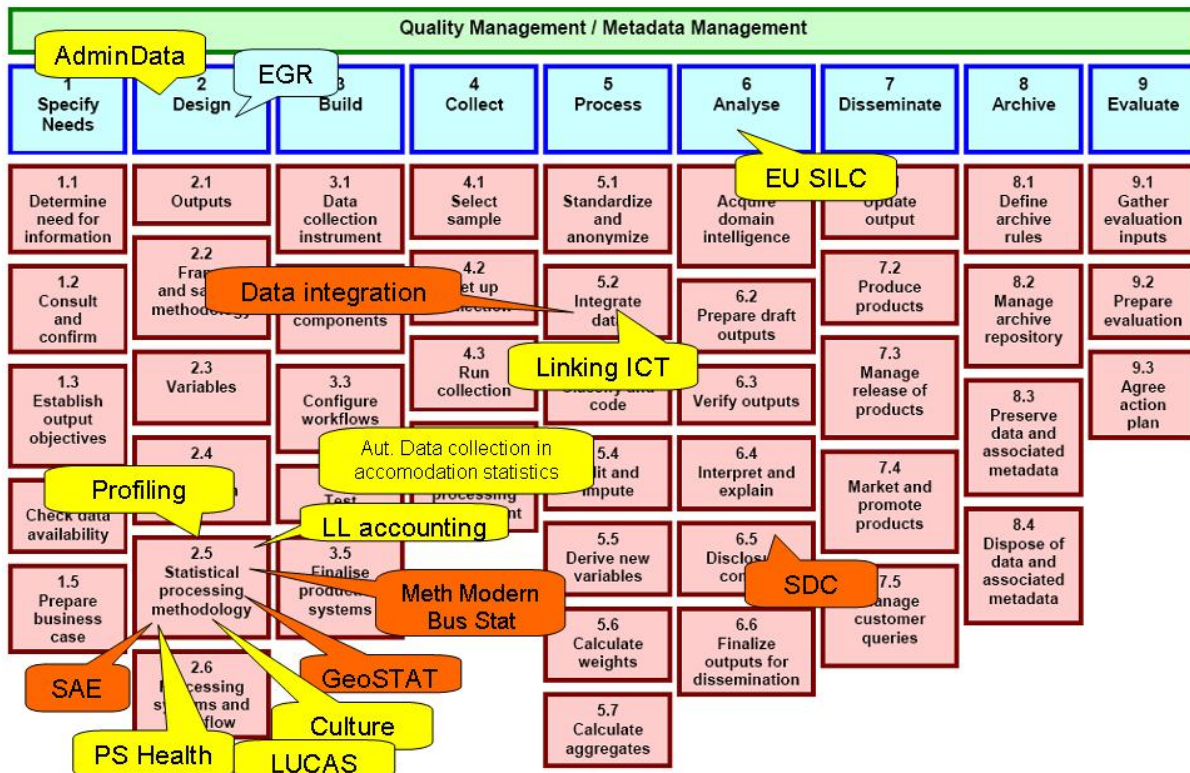
Generic Statistical Process Business Model

Figure 2. Contribution of ESSnets to the ESS Enterprise Architecture and its business layer (GSBPM)

C.   Common development of IT tools

33.   The development of IT tools is seen as a critical element for implementing, integrating and standardising production processes. They usually do not fit in the ESSnet framework because they need specific governance mechanisms. The development of tools rather complements the development of methodological guidelines at stake in ESSnets. The use of open source development is gradually emerging as a response to the need to share the knowledge and development costs of software and to eventually integrate the tools in production systems.

34.   The development of Demetra+, the new ESS software for the implementing the ESS guidelines on seasonal adjustment is seen as a pilot for common development of a production software. The governance of this projects is ensured by the Seasonal Adjustment Steering Group (a Eurostat-ECB high level group of experts from NSIs and NCBs) which has established the guidelines.

35.   The model for development is based on prototyping. Since 2009, a user testing group composed of members of NSIs, Eurostat and ECBs, has continuously tested and improved the prototypes developed by the National Bank of Belgium in an iterative and constructive approach. The new software has been released in March 2011 in a .NET, C# version. The work is now continuing with BNB to migrate the Demetra+ tool in JAVA including a full redesign of the core routines for signal extraction (Tramo/Seats and X11/Arima). This model for common tool development is going to be exported for the development of ARGUS+, an open source solution for Statistical Disclosure Control drawing on the existing T and Mu-Argus software developed by Statistics Netherlands.

D.   VIPs: the Eurostat component of modernisation

36.   Similar changes should take place at Eurostat level. The infrastructure which supports the Eurostat business process (data reception - data validation – data processing- data analysis and dissemination) should also be adapted to the new technological and methodological environment and to be prepared for a better integration with Member States (MS) production systems (so called the vertical integration).

37.   A series of projects called Vision Implementing Projects have been launched recently. They aim also at improving the integration of Eurostat production processes and the integration of new methods to produce statistics. The projects are systematically drawing on a close cooperation between horizontal units (methodology and IT) and business areas/production units.

38.   Five projects directly target the modernisation of the Eurostat production infrastructure.

39.   Firstly, the organisational framework for data validation and the related IT tools are expected to be improved by the VIP Data Validation. This is done in parallel with the development of a specific IT platform infrastructure for sharing confidential data with MS (VIP SICON). These two projects aim ultimately at streamlining and moving the validation process closer to data collection in MS.

40.   Secondly, the VIP project "New Dissemination" aims at improving the Eurostat dissemination process and data warehouse infrastructure. It will better allow the integration of the dissemination of EU statistics with MS, implementing the Sponsorship on Communication recommendations.

41.   Thirdly, a generic production system (collection, validation and production) for economic indicators is being developed (VIP NAPS). If successful, it will be extended to most times-series related processes in Eurostat. It is based on Service Oriented Architecture and used available generic services like Demetra+ for seasonal adjustment.

42.   These projects clearly target a better interoperability with MS processes

43.   Fourthly, the VIP "Data Matching" aims to test the data integration techniques at the level of Eurostat and improve Eurostat capabilities for the new process step.

44.   The last project, the VIP "Pillar" aims to design the new infrastructure for the collection of household and individual micro data in the ESS, based on a limited number of survey instruments/pillars fostering coherence and better integration of the different sources. It complements the well known ESS flagship projects like the EuroGroups Register and the Census Hub dissemination platform

45.   The necessity to maintain close links between the ESS and Eurostat initiatives is crucial in order to ensure consistency/sustainability of development and the future interoperability of systems. In some cases, VIP projects can be seen as the Eurostat counterpart of ESSnet projects. The contribution of these VIP projects to the future architecture and their link to ESSnets is illustrated on Fig 3.
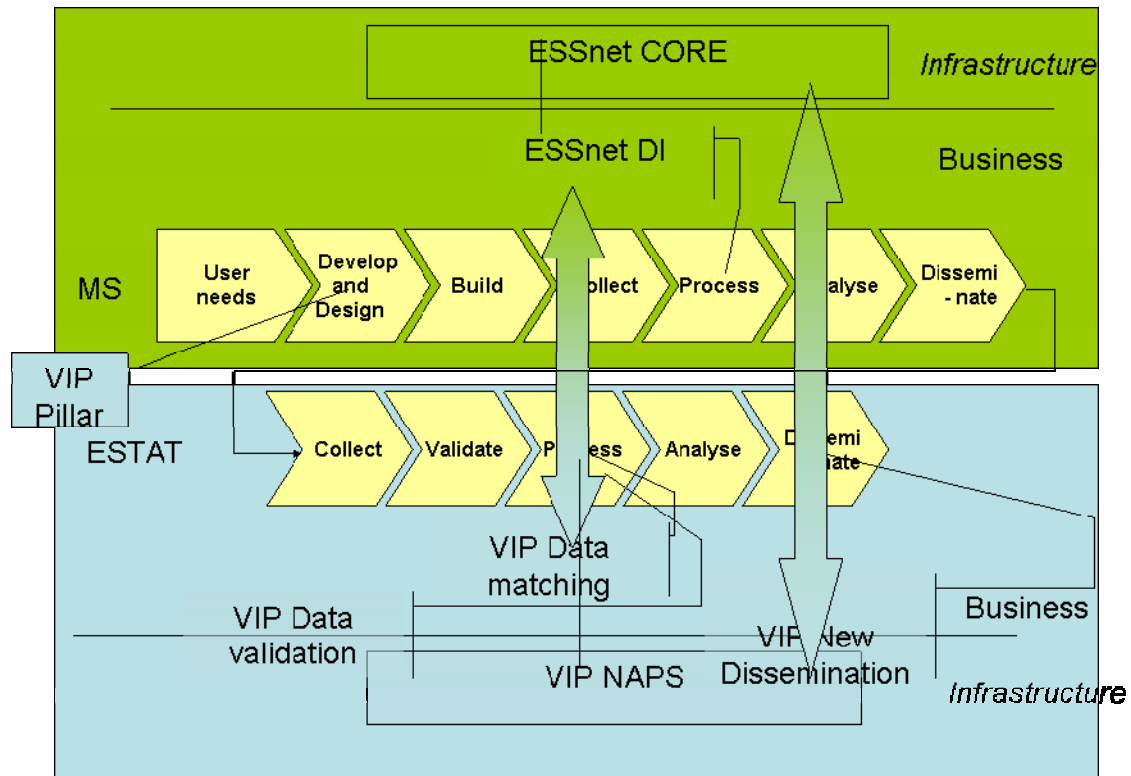
Figure 3. Contribution of VIPs to the Eurostat business process and its links with ESS initiative

E   Sponsorships: incorporating ESS management level

46.   Sponsorships are high level undertakings at management level of the ESS (a group of general directors or deputies of NSOs, co-chaired by Eurostat and a NSO) to build mechanisms and steer competences on key challenges for the ESS. Four Sponsorship groups are currently running: the Sponsorship on Quality, the Sponsorship on Communication, the Sponsorship on Measuring progress, well-being and sustainable development and the Sponsorship on Standardisation, just created.

47.   Following the renewal/adaptation of the ESS code of practice and quality framework for EU statistics by the Sponsorship on Quality, the new Sponsorship on Standardisation is expected to play an important role in the industrialisation and integration of ESS production processes.

48.   The Sponsorship group on Standardisation is composed of 6 MSs and Eurostat, and is co-chaired by the Statistics Netherlands and Eurostat.

49.   Its objectives are to set up a framework (business architecture) for the standardisation of processes at ESS level. It will identify and promote existing standards, define the ambitions, establish a business model and contribute to strengthening the ESS instruments for standardisation (legal framework, IT tools, methodological references, metadata and communication standards). It will further identify domains where benefit of standardisation are high and draw up an action plan with initiatives that promise to deliver the necessary benefits. Finally, it will ease standardisation by identifying barriers and communicating proactively towards the ESS. The sponsorship will fully liaise with and draw on ongoing international initiatives.

III.   Future perspectives

50.   The modernisation of the statistical business architecture underway allows the ESS to meet the challenges ahead. Improving efficiency through more cooperative and collaborative approaches within the ESS combined with standardisation of the processes and formats, is a first step. Ultimately the statistical

production will rely on a common shared statistical infrastructure based on metadata, registers, geographical information systems and common formats.

51.   The modernisation should incorporate the emerging technologies like Web 3.0. Official Statistics should be prepared to take benefit of Internet-based services that collectively comprise the so-called "intelligent Web", the semantic web, micro formats, natural language search, data mining, machine learning, recommendation agents and artificial intelligence technologies. The third decade of the Web, from 2010 to 2020, will propose several major complementary technologies like transformation of the Web from a network of separately siloed applications and content repositories to a more seamless and interoperable whole. Open technologies, APIs and protocols, data formats, open-source software platforms and finally distributed databases combined with ubiquitous metadata will be constitutive element of the future infrastructure allowing better exchange and sharing of tools, methods and data within the ESS and boosting the implementation of the vision. Investments in research are obviously still required to take full advantage of the continuing improvements in information technologies to design, collect, capture and code data, with their associated metadata.

IV.   Conclusions

52.   The integration that is envisaged requires/draws on more innovation, harmonisation and standardisation of statistical methodologies for data collection, data validation, dissemination and communication within the ESS, better access to detailed and intelligent data, the harmonisation of IT infrastructure and the sharing of IT tools as a way to facilitate the use of agreed statistical methods. Harmonised metadata are necessary to permit easy and efficient data exchange and re-use.

53.   Its implementation will require a wide variety of actions involving a wide variety of stakeholders in a rapid evolution and complex environment. To avoid the risk of dispersion, the multiplicity of developments and the risk of non interoperability of new production systems being put in place in MS and Eurostat, it is important to set up and maintain a set of shared principles and to guide the developments of the different layers of the architecture. This ESS Enterprise Architecture should allow to plan, trace and integrate future activities into a coherent framework.

Annexe: Short description of key modernisation projects

A.   ESSnet projects

CENEX on SDC
Title: Statistical Disclosure Control
Project status: finished
Main objectives:
- (a)   to investigate the current situation in Europe with respect to the application of SDC-methods.
- (b)   to propose guidelines for the application of SDC-methods in practice.

ISAD
Title: ESSnet Statistical Methodology - Area ISAD (Integration of survey and administrative data)
Project status: finished
Main objectives:
- (a)   to promote knowledge and application in practice of sound methodologies for the joint use of existing data sources in the production of official statistics.

ESSnet on SDC
Title: ESSnet on Statistical Disclosure Control
Project status: finished
Main objectives:
- (a)   promotion of the results achieved in previous projects.
- (b)   to make SDC tools more easily applicable and to assist NSIs by raising the level of knowledge and skills to a higher level.

EGR
Title: Development of the methodology of business registers on multinational enterprise groups
Project status: ongoing
Main objectives:
- (a)   To develop and implement the methodology for the collaborative network for the EuroGroups Register (EGR) and for the national registers on multinational enterprise groups;
- (b)   To support the implementation of the EGR in the Member States;
- (c)   To support the integration of the EGR in statistical production processes.

NET-SILC
Title: Network for the Analysis of EU-SILC
Project status: finished
Main objectives:
- (a)   to develop methodology for the analysis of the EU statistical data reference source for poverty and living conditions (EU-SILC), covering both cross-sectional and longitudinal dimensions;
- (b)   to use EU-SILC data for providing in-depth comparative analysis of income and living conditions in the EU (with a particular focus on the extent of financial poverty, social exclusion and deprivation).

DA
Title: Decentralised access to EU microdata sets
Project status: finished
Main objectives:
- (a)   to study the feasibility of setting up a network of Safe Centres that enables access to confidential microdata sets for research purposes throughout EU countries.
- (b)   to set up procedures and technical solutions for sharing microdata sets amongst Safe Centres

(c)   to develop the methodology, guidelines and requirements that are compatible with the current legal frameworks and practices with respect to the handling of confidential data in the European Statistical System (ESS).

(d)   to support/guide NSIs to set up and to adapt their infrastructure in order to comply with minimum requirements for hosting European microdata sets.

CORA

Title: Common Reference Architecture

Project status: ongoing

Main objectives:

(a)   To support the development and maintenance of statistical IT tools for use by NSIs and other national authorities, within the general framework of common reference architecture for the data life cycle at national level, and using appropriate common open standards and guidelines such as SDMX.

Profiling

Title: ESSNet - Profiling of large and complex Multinational Enterprise Groups

Project status: ongoing

Main objectives:

(a)   To define the feasibility and the scope of 'profiling' large and complex MNEs.

(b)   The development of a common conceptual framework, methodology, rules and standards for 'profiling'.

(c)   The development of process descriptions, tools, operational guidelines and quality assurance of profiling.

(d)   The development of models for the organisation and financing of 'profiling'.

(e)   Testing and implementing 'profiling'

(f)   The development of a model for sharing of 'profiles' (including legal framework).

Culture

Title: Culture Statistics

Project status: ongoing

Main objectives:

(a)   to further develop EU common statistical concepts and methods, needed in order to produce harmonised statistics, including the revision of the definition of the framework of cultural statistics (elaborated in 1999 by the LEG-culture),

(b)   to contribute to further development of data production for such statistics, based on EU existing data sources,

(c)   to test new pilot data collections when existing data sources cannot be used,

(d)   to provide national experience for permitting larger and deeper analysis of the data.

SDMX

Title: ESSnet on SDMX

Project status: ongoing

Main objectives:

(a)   Broaden and strengthen a NSI standard SDMX framework;

(b)   Make standard tools available to a more easy implementation of the standard SDMX in the processing and exchange of data and metadata files between national and international organizations;

(c)   Improve the semantic harmonization of concepts and terminology supporting this standard;

(d)   Disseminate, widely, related tools and documentation.

PH

Title: Partnership Health

Project status: ongoing

Main objectives:

(a)   to assist Eurostat in the preparation of implementing measures for the new Regulation on public health statistics.

(b)   to create synergy by coordinated actions in view of methodological and data quality improvements, recommendations for analyses and common tools.

DI

Title: Data Integration
Project status: ongoing
Main objectives:

(a)   The field of integration is in continuous development. Challenging problems need to be tackled from the methodological point of view to assess the accuracy of integration methods and to ensure the usability of the integrated data set.

(b)   ESSnet DI focuses on methodologies for data integration (Record Linkage, Statistical Matching, Micro integration Processing) and on statistical aspects to be considered to make those methods concretely applicable by NSIs).

SAE

Title: Small Area Estimation
Project status: ongoing
Main objectives:

(a)   Complete the state of the art produced in the EURAREA project, update the documents available on small area estimation, describe the current application in UE NSIs and non-UE NSIs, create a common knowledge on application of small area estimation methods;

(b)   Review and develop suitable criteria to assess the quality of SAE methods for the choice of proper model and the evaluation of MSE;

(c)   Make available software tools for SAE to the ESS;

(d)   Foster knowledge transfer by the development of case studies and associated recommendations on representative problems in small area estimation in the ESS;

(e)   Provide practical guidelines in ESS social surveys context;

(f)   Transfer knowledge and know-how to non-participating NSIs and disseminate results

GeoStat

Title: GeoStat
Project status: ongoing
Main objectives:

(a)   Develop a set of methods, tools and guidelines to create harmonised data sets, such as on handling confidentiality issues of population statistics and disaggregation processes.

(b)   Understanding of user needs from both businesses and public sector.

(c)   Improved population map applying the developed tools and methodologies.

(d)   Vision for a spatial data infrastructure for Geostatistics

CORE

Title: Common Reference Environment
Project status: ongoing
Main objectives:

(a)   to extend CORA model by defining the new information model e-CORA.

(b)   analysis of a list of tools and to the study of the effort necessary to integrate such tools into the e-CORA model.

(c)   definition of a way of exchanging data between tools designed inside GSBPM sub-processes, and development of components wrapping such tools in order to integrate them.

Stand-Prep

Title: ESSnet on Preparation of Standardisation
Project status: ongoing
Main objectives:

(a)   to provide a review of the issues that have to be tacked when defining the standardisation of the statistical production process in the European Union. The results will incorporate the objective of building a share view on these issues, based on a sufficient number of NSIs to incorporate a representative sample of work cultures in the ESS.

SDC harmonisation

Title: ESSnet on common tools and harmonised methodology for SDC in the ESS
Project status: ongoing
Main objectives:

(a)   to pave the way for future cooperation in Europe. Therefore the main outcome of this project will be case studies investigating new directions to be realised by future projects and an architecture for making the ARGUS software more open, allowing to enlarge the team of developers.

MEMOBUST

Title: MEETS: Methodology for modern business statistics
Project status: ongoing
Main objectives:

(a)   identification of best practices and the development of common methodology and ESS guidelines supporting the production of business statistics aiming at reducing respondent burden and fostering efficiency and integration of processes.

Consistency

Title: ESSnet on consistency of concepts and methods of business-related statistics
Project status: ongoing
Main objectives:

(a)   Inventory of implementation of the definitions of statistical units in Member States.
(b)   Identification and evaluation of inconsistencies
(c)   Proposals of necessary adjustments.

B.   VIP projects

National Accounts Production System (NAPS)

This project, started in 2010, aims at the development of a generic production system based on Service Oriented Architecture and the alignment of existing common tools with the new architecture.

Enhanced Dissemination and data warehouse

The project addresses the need for improvement of the data warehouse aspects of EU statistics dissemination, for reinforcement of Eurostat data base for dissemination infrastructure and of data presentation.

Social survey integration - a pillar approach

This project aims at the redesign (content and instruments) in close collaboration with MS of the system of ESS social surveys along a pillar approach fostering rationalisation and integration of components.

Common infrastructure for sharing/releasing of confidential data in the ESS

The overall aim of the project is to develop and establish a pilot of infrastructure, services and documentation for accessing EU confidential datasets held in Eurostat by external partners, mainly NSIs in view of integrating MSs and Eurostat processes.

Validation

The scope of the project covers the organisational and technical aspects of data validation in Eurostat and the ESS. Test cases will be based on representative Agriculture Statistics processes. The achievement of the objective implies also a cultural change in the relationship between Member States and production units in Eurostat.

Data matching techniques for social surveys

The scope is this action is the exploration statistical matching techniques with datasets available in Eurostat in the domain of social statistics. The overall aim of the project is to analyse if statistical matching methods are an appropriate tool for providing cross-cutting indicators in the framework of social statistics.

C.   Sponsorship on standardisation

Objectives of the sponsorship:

- (a)   Describe the state of the art of ESS standardisation and organise it in an information model clarifying the types of standards their properties, relationships and operations.
- (b)   Define the scope of standardisation at ESS level and identify key components like shared infrastructure, common methodologies, interoperability of IT, centres of competence/treatment, common data model, common process description, input/output harmonisation, legal framework, metadata framework.
- (c)   Define a level for process, information and methodology description that will enable standardisation and sharing in the ESS; promote a common language.
- (d)   Define a framework for categorising and evaluating standardisation initiatives fostering their synergies. Recommend prioritised actions and draw up an action plan. A limited number of areas where development is possible should be selected. Distinguish between quick wins and more long-term efforts.
- (e)   Define a business model for implementing standardisation specifying the legal structure, the organisation of strategic and operational management, the sharing of costs and benefits etc. Also make recommendation for its implementation. Clarify how existing collaborative instruments (ESSnets, task forces, working groups) can be used to produce, maintain and implement standards and what new instruments are required.
- (f)   Create favourable conditions for standardisation. In case barriers are identified, the Sponsorship shall propose remedial actions.
- (g)   Review and liaise with on-going initiatives related to standardisation in the broader international context.