

SHARING STATISTICAL PRODUCTION AND DISSEMINATION SERVICES AND SOLUTIONS IN THE EUROPEAN STATISTICAL SYSTEM (2016.06)

Type of Activity	Common services
Service in charge	ESTAT.B3
Associated Services	ESTAT.B1 ESTAT.B5

EXECUTIVE SUMMARY

European statistics are produced by the European Statistical System (ESS) that is a partnership between the Commission (Eurostat), and the public administration responsible for the production and dissemination of official statistics in each Member State¹ (mainly national statistical institutes (NSIs) as well as other national authorities). Member States collect data and compile statistics for national and EU purposes. The ESS functions as a network in which Eurostat has a key role to ensure harmonization of statistics working in close cooperation with the national statistical authorities. The ESS members share the same challenges and drivers: they have to embrace the digital transformation as well as to produce new, innovative and high quality standard statistical products under the pressure of limited and decreasing resources.

Based on a long tradition of sharing information, standards and tools, Eurostat and the members of the ESS jointly developed a common vision, the “ESS Vision 2020”², which

- Aims at further developing the cooperation between ESS members;
- Strives for setting up more collaborative production processes based on a shared architecture in the ESS, which should enable addressing new business requirements with a reduced time to market, strengthened quality and increased efficiency;
- Aims in particular at a future-proof dissemination and communication strategy that satisfies user needs at both national and European level, is flexible enough to adapt to emerging technologies and offers a variety of output channels and services.

Actions of this proposal elaborate on closely related to on-going ESS Vision 2020 implementation initiatives:

1. ESS Enterprise Architecture (ESS EA) – a joint effort to create a comprehensive target state ESS architecture considering both Member States and Eurostat. This allows harmonisation of business processes and bridging the gap between business and IT;
2. “Shared SERVICES” (SERV) – a project to create the conditions for sharing technical statistical services (including dissemination) and supporting their integration in the statistical production processes at national, ESS and Commission level;
3. Digital Communication (DIGICOM) – a programme to develop key capabilities to support user analytics, communication, dissemination, data visualisation, mobile solutions etc.

Part of those initiatives are already funded by Eurostat and some other parts require additional funding – potentially from ISA². ISA² funding is necessary to:

¹ and EEA and EFTA countries

² The statistical dissemination has received as well special attention at EC level as external communication is listed as a key domain for cross sector and cross policy IT rationalisation in “Communication from VP Šefčovič to the Commission: Follow up to the Communication “Getting the best from IT in the Commission” of 7 October 2010 - First decisions in the IT rationalisation process”.

1. Finalise and extend the current **ESS statistical production reference architecture** to get it closer to implementation integrating the information sharing and the interoperability aspects;
2. Develop a sustainable release of **common infrastructure elements** such as the ESS catalogue of shared services;
3. Perform a thorough benchmark of as is architecture in MS to **identify components which can be readily transformed into shared services** as well as mapping the needs and gaps and tentatively define roadmaps for benefiting from shared development;
4. Provide new **reusable services and solutions** based on existing components or certified open source statistical library/components and to allow statistical producer to upgrade their architecture. For **dissemination of statistics, reusable solutions** will be derived from the "renovated Eurostat dissemination chain for statistical dissemination";
5. Set up **reference implementations of processes using shared services** suitable to various environments and to propose technical architecture patterns and open source environments suitable for integration of service in statistical production.

The results of these actions will be publicly available benefiting a broad range of public administrations that *produce and disseminate statistics*. In particular, the European Commission DG and Agencies of the European Union that collect and disseminate "other" statistics for their policy monitoring could reuse the dissemination packages, should they need so. In this case the cost of integration should be relatively low as the reusable components should operate as well on the generic EC infrastructure.

This proposal was already selected for the first year of implementation of the ISA2 work programme. A budget of 1050k€ was allocated to ESTAT. The preparatory work (contract preparation and signature etc.) is on-going since May 2016 and the project plan is in line with initial scope and objectives. The development activities will start in September 2016 (see more details in section 3.1.10)

OBJECTIVES

The overall objective of the proposed project is to realise the conditions and implement the sharing of statistical services among organisations contributing to the production and dissemination of European statistics building on the early developments initiated by two ESS Vision implementation initiatives, namely the ESS Enterprise Architecture initiative and the Shared Service project.

The objectives of the proposed project are the following:

- Provide a reference architecture for statistical production provisioning for operational, semantic and technical operability of processes and information systems in the European Statistical System
- Develop the common infrastructure necessary to support sharing of components;
- Improve the alignment to ESS reference architecture and adoption of Shared Services standards for at least 5 ESS members;
- Support and guide statistical organisations to upgrade their architecture to align to the target state architecture and to benefit from services sharing;
- Identify and build shared services based on existing components in use or certified open source statistical libraries.
- Deliver reusable services and a packaged solution for the statistical dissemination.

SCOPE

The project will deliver:

- Extension and consolidation of the ESS Statistical Production Reference Architecture (for the 4 layers of EA).

- Development of a multi-tenant version of the ESS Service Catalogue and related common infrastructure;
- Support to statistical production organisation to upgrade and align their infrastructure to benefit from shared statistical services;
- Establishment of a list of certified and existing components or libraries suitable for the compilation of shared services;
- Setting up of a whitelist of architecture patterns and open source components for realising the integration and usage of shared services;
- Implementation of new statistical production processes using shared services providing reference implementations adapted to different contexts.
- Development and packaging of reusable solution and services for statistical dissemination

Out of scope for the project (*what the project will not deliver*):

- Development of statistical methodologies, libraries and code (that is in the scope of separate business projects such as the "renovated Eurostat dissemination chain");
- Production of statistical data;
Standardisation of metadata repositories used by EC statistical data producers.

ACTION PRIORITY

Contribution to the interoperability landscape

The contribution of this action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
<p><i>Does the proposal directly contribute to implementing the European Interoperability Strategy, the European Interoperability Framework, or other EU policies with interoperability requirements, or needed cross-border or cross-sector interoperability initiatives? If yes, please indicate the EU initiative / policy and the nature of contribution.</i></p>	<p>The project contributes to</p> <p>1) EIS - cluster 'Trusted Information Exchange'</p> <ul style="list-style-type: none"> ○ By providing a catalogue of reusable statistical IT services and solutions for the production and dissemination of statistics by EU public administrations (including the EC) <p>2) EIS _cluster "Interoperability Architecture"</p> <ul style="list-style-type: none"> ○ By providing an implementation of the EIRA in the domain of production and dissemination of official statistics ○ By providing a common infrastructure and for the exposure and consumption of shared statistical services <p>In addition, as described in the introduction, the proposal contributes significantly to the realisation of the ESS Vision 2020 objectives in the domain of sharing tools and improving statistical dissemination.</p>

<p><i>Does the proposal fulfil an interoperability need for which no other alternative solution is available?</i></p>	<p>The proposal follows a interoperability standard (CSPA) which has been proposed at the level of the Official Statistics Community for the sharing of statistical services .</p>
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Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the sectors concerned

Question	Answer
<p><i>Will the proposal, once completed be useful, from the interoperability point of view, and utilised in two (2) or more EU policy areas? If yes, which are those?</i></p>	<p>Yes, in general, the statistical products and services produced, developed and disseminated by the ESS constitute key data and information assets in order to help the Commission achieve its overall political objectives.</p> <p>The realisation of all Commission political priorities as a whole indeed relies heavily on the quality and accessibility of the European statistics</p> <p>In the case of dissemination, solution reuse is already planned in the domains of Economics and Financial affairs (DG ECFIN) as well as Taxation and Customs union (DG TAXUD), and should be soon in discussion for: Employment (DG EMPL), Internal Market (DG GROW), Competition (DG COMP) Education (DG EAC), plus possibly other DGs</p>

Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
<p><i>Will the proposal, once completed be useful, from the interoperability point of view, and used by public administrations of three (3) or more EU Members States?</i></p>	<p>Yes, in the current state, the development of statistical services includes a broad international community.</p> <p>In the ESS, no less than 10 MS are actively involved in the development of the guidelines for sharing of statistical services. More countries will be interested in the reuse of developed solutions and services.</p> <p>In the architecture domain, the ESS reference architecture in its current state has been adopted by the 28 NSI's CIO's and Heads of Methodology. Its improvement towards more interoperability through more standards and deeper architectural</p>

	guidance is done in collaboration with an ESS EA Board involving 5 MS
<i>For proposals or their parts already in operational phase: have they been utilised by public administrations of three (3) or more EU Members States?</i>	NA

Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	All actions of the proposal are key actions for the ESS Vision 2020 implementation which aims among others to upgrade ESS capacity to respond to policy needs by providing high quality and timely indicators for the monitoring of the objectives of EU 2020 strategy. More specifically, several business projects like the European Systems of Business Registers or the National Accounts are in demand of clear interoperability guidance and reusable services ensuring the smooth functioning of their service based target architecture. In addition, in the domain of statistical dissemination, the project has been listed as a critical project for Eurostat, with a strong commitment for the delivery of package solutions to DG ECFIN and TAXUD.
<i>Does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?</i>	A closer integration of production and dissemination of statistics with ISA2 framework will clearly generate economies of scale and sustainability of the results. The financial support of the ISA2 will certainly allow going a step further in the operationalization of the ESS Vision 2020 objectives.

Reusability of action outputs

The re-usability of the action, measured by the extent to which its results can be re-used

Can the results of the proposal be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Name of reusable solution	Reusable solution for the dissemination of statistics
Description	<p>Dissemination means the activity of making statistics and statistical analysis accessible to users.</p> <p>The project aims at providing a reusable solution for the dissemination of statistics (cross policy & cross sector) to significantly improve technical interoperability in the fields of statistics, i.e. allowing multiple organisation to expose the same dissemination tools towards data consumers.</p> <p>The dissemination tools included in the solution are based on the established SMDX standards³ (information model, guidelines for web services, implementations & tools);</p>
Reference	<p>SDMX Information model</p> <p>See https://webgate.ec.europa.eu/fpfis/mwikis/sdmx/index.php?title=Special:Pdfprint&page=SDMX https://webgate.ec.europa.eu/fpfis/mwikis/sdmx/index.php/Self_Learning_Tutorial:_Information_Model https://sdmx.org/wp-content/uploads/SDMX_2-1-1_SECTION_2_InformationModel_201108.pdf</p>
Target release date / Status	<p>1) For ECFIN & TAXUD</p> <ul style="list-style-type: none"> • Alpha release delivered in early July 2016 • Beta release to be delivered in December 2016 • Release Candidate release to be delivered by end Q1 2017 • Release for production to be delivered by end Q2 <p>2) For all other DGs</p> <p>Available for reuse by DGs of the European Commission: as from Mid-2017.</p> <p>By end 2016, Eurostat will identify candidate DGs to further extend the reuse within the EC as from the 2nd half of 2017</p> <p>3) For any other purpose</p> <p>Available on Joinup in 2018 (first publication), as a downloadable package</p>
Critical part of target user base	Any administration, institution or organisation in need of disseminating statistics
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Although the solution is still not operational, the first alpha release has been delivered in early July 2016 to the two target DGs, in accordance with the planned target for this year.

Output name	Statistical Production Reference Architecture V1.0 and subsequent
Description	Based on the ESS EA RF developed by the ESS, this (ISA) project will release a fully fledged and ready for implementation Statistical

³ <https://sdmx.org/>

	<p>Production Reference Architecture i.e. set of artefacts to standardise EU statistic production processes including information and interoperability aspects. Subsequent releases will be enriched by reference to standard solution and reference implementations. Organisation should use it to benchmark their production architecture, develop services to be shared and integrate shared service in their production of statistics.</p> <p>This Statistical Production Reference Architecture can be re-used by the ESS Members and also by other Commission DG's dealing with official statistics.</p>
Reference	<p>ESS EA RF</p> <p>European Interoperability Reference Architecture (EIRA)</p>
Target release date / Status	SPRA v1.0 (first release) : 31/03/2017
Critical part of target user base	ESS 32 NSIs (EU + EFTA) and Eurostat
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	The ESS EA RF has been adopted as a common reference for ESS Vision 2020 implementation by 28 NSI CIO's

Output name	Multi-tenant version of the ESS Service Catalogue
Description	<p>Multi-tenancy is an architecture in which a single instance of a software application serves multiple customers. A central ESS Service Catalogue is required to publish the statistical services that are available for re-use in the European Statistical System. This service catalogue should use the same solution as the global (UN sponsored) service catalogue of statistical services (CSPA Service Catalogue). These catalogues shall be based on the same system, but shall clearly indicate the level of availability of the offered statistical services (e.g. ESS level or global level). It shall be also analysed how the ESS Service Catalogue – that contains statistical services according to international standards – can be integrated with the Service Catalogue of the Joinup platform.</p>
Reference	<p>SERV Business Case</p> <p>ESSC 29th meeting minutes</p>
Target release date / Status	31/12/2017
Critical part of target user base	<p>ESS 32 NSIs (EU + EFTA) and Eurostat</p> <p>Oher statistical organisations</p>
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Output name	Reference implementations of statistical and dissemination processes using shared services adapted to different contexts
Description	The project will identify and prioritise development of shared services within the ESS. 5 new shared services based on existing components or statistical libraries will be implemented during the project and reference point in the ESS catalogue. The shared service will be implemented in the statistical processes of multiple ESS members and bring them process improvements. Furthermore the implementation and integration of those statistical services in several ESS members will lead to improvement of those services, which will allow easier adoption by further organisations.
Reference	TF Shared Services Mandate
Target release date / Status	31/12/2017
Critical part of target user base	ESS 32 NSIs (EU + EFTA) and Eurostat
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Output name	White list of open source packages for statistical production business functions and for integration and orchestration of statistical productions
Description	<p>Re-using services can be based on services developed by other statistical organizations and also on open source. This work package will leverage the open source solutions for statistical production and for process orchestration.</p> <p>Commercial statistical production systems (e.g. SAS or ORACLE) have sophisticated functionality, however they require high license fees. On the other hand open source packages (e.g. packages in language R) are offering similar functionality. The price of open source is much lower, however it is not clear if the applied algorithms can be trusted at the same level and provide the same level of integration and interoperability of solutions as the ones in the commercial packages. Some NSI's are using the open source statistical packages, however some others refrain using them with the rationale that verifying the open source packages would require at least as much resources as the licence fees of the commercial packages. However, if we consider the ESS as whole, and its economy of scale, the verification of open source software can already pay off. This deliverable will provide a verified set of open source packages that can be safely used for statistical production.</p> <p>Similarly the open source packages for process orchestration can</p>

	facilitate the implementation of service oriented architectures in statistical organizations..
Reference	SERV Business Case ESSC 29 th meeting minutes
Target release date / Status	31/12/2017
Critical part of target user base	ESS 32 NSIs (EU + EFTA) and Eurostat Other statistical organisations
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Output name	Technical architecture patterns for realising the ESS EA
Description	The analysis of open source software packages and the benchmark of MS architectures will produce a number of technical architecture patterns for realising the target state architecture. This will enable MS's to make practical decisions to start implementing the architecture in full scale. These architecture patterns will also be available and beneficial to other producers of statistics such as parts of the Commission.
Reference	CSPA
Target release date / Status	31/12/2017
Critical part of target user base	ESS 32 NSIs (EU + EFTA) and Eurostat
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Output name	Fit / Gap Analysis and roadmaps for the transition to a target state architecture
Description	As part of the project, at least 5 ESS members use the benchmarks to evaluate their fit to the defined architecture. The members will perform a fit/gap analysis, define roadmap to target architecture, and implement measures to improve alignment with the target architecture. The roadmaps can be used by other organizations as examples for transitioning to a modernised architecture, which should lower barriers and increase the likelihood of successful realisation of the ESS

	EA.
Reference	
Target release date / Status	31/12/2017
Critical part of target user base	ESS 32 NSIs (EU + EFTA) and Eurostat
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Output name	Inventory of reusable software components for statistical production
Description	The benchmark of the Member State architectures will identify and qualify a various solutions and services that can be made available to the ESS community and potentially outside the ESS
Reference	
Target release date / Status	31/12/2017
Critical part of target user base	ESS 32 NSIs (EU + EFTA) and Eurostat
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Level of reuse by the proposal

The re-use by the action of existing common frameworks and elements of interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA ² , ISA or other relevant interoperability solution(s)? Which ones?	<p>Joinup</p> <p>The reusable statistical services delivered by the project will be made available to anyone by means of Joinup, Joinup will serve as a repository for the ESS shared services catalogue where interfaces and service description will be made available in a standard way.</p> <p>EIRA - European Interoperability Reference Architecture</p> <p>ISA programme of the European Commission for classifying and organising building blocks relevant to interoperability, which are used in the delivery of digital public services. The goal is to facilitate interoperability and reuse when developing public services. EIRA will be used to upgrade the ESS Statistical Production Reference Architecture.</p> <p>DCAT Application Profile for data portals in Europe</p> <p>The DCAT Application Profile for data portals (DCAT-AP) provides a common specification for describing public sector datasets in Europe to enable the exchange of descriptions of datasets among data portals.</p> <p>EUPL - European Union Public Licence</p> <p>The EUPL is the first European Free/Open Source Software (F/OSS) licence</p> <p>The expected applicable license scheme used for the delivery of this project is likely to EUPL (solution derived from existing open source software component, licensed under the EUPL)</p> <p>EIC - European Interoperability Cartography</p> <p>The EIC is an instrument to map and analyse the interoperability landscape in Europe and to identify solutions that are available</p> <p>Open data Support</p> <p>Open Data Support is a 36 month project of DG CONNECT of the European Commission to improve the visibility and facilitate the access to datasets published on local and national open data portals in order to increase their re-use within and across borders.</p>

	<p>Catalogue of Services - Service attributes</p> <p>A2A Catalogue of Services- list of common service attributes or service descriptors to identify web services across different MS</p> <p>EUSurvey</p> <p>EUSurvey is a multilingual online survey management system built for the creation and publication of surveys and public consultations.</p>
For proposals or their parts already in operational phase: has the action reused existing interoperability solutions? If yes, which ones?	NA

Interlinked

The link of the action with Union initiatives to be measured by the collaboration and contribution level of the action to Union initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	<p>DSM – Open government + Content & Media</p> <p>The reusable solution for the dissemination of statistics can be used by any administration (first EC DGs, in 2018 any organisation through Joinup) to</p> <ul style="list-style-type: none"> • Ease the public delivery of statistical data to consumers, i.e. promoting open data and the reuse of public sector information / statistical data • Reduce the costs of dissemination • Re-use building block(s)

PROBLEM STATEMENT

Historically, statistical organizations have developed their own business processes and IT-systems. This can be referred to as 'accidental architecture' as the process and solutions were not designed from a holistic view.

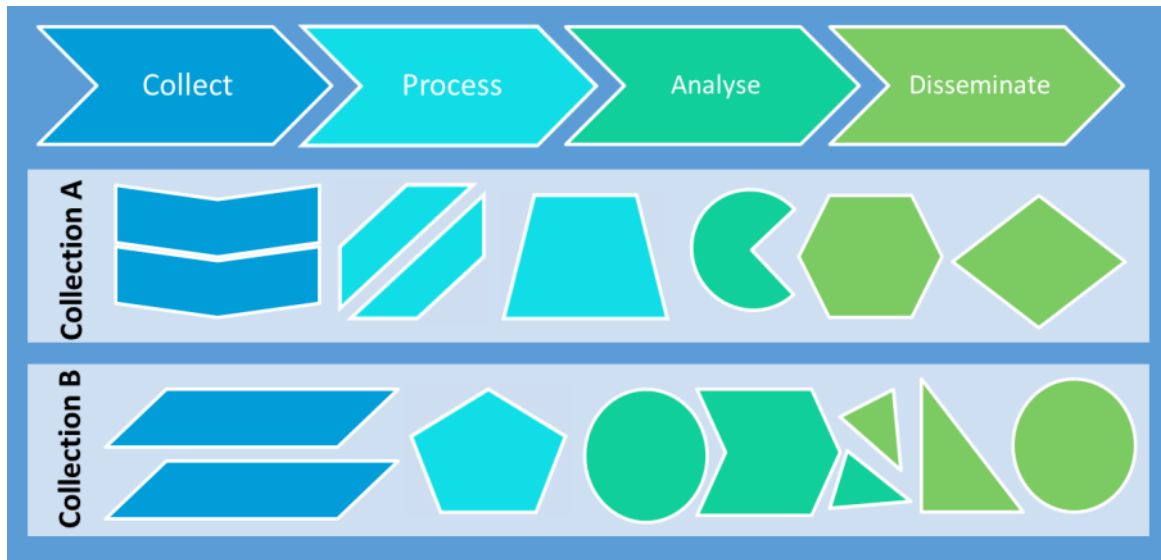


Figure 1: Accidental Architectures

Statistical organizations find it difficult to produce and share data and information aligned to modern standards⁴. Process and methodology changes are time consuming and expensive resulting in an inflexible, unresponsive statistical organization.

Enterprise architecture is more and more used by statistical organisation to underpin their vision and change strategy. Enterprise architecture work enables to standardize organisation and processes. This is shown in Figure 2 where, as opposed to Figure 1, the countries have standardized their components and interfaces.

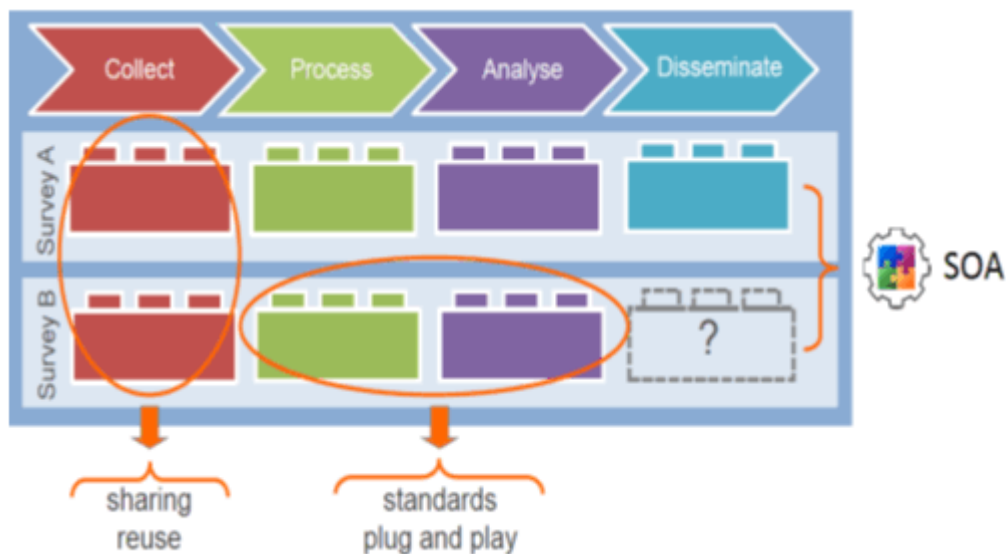


Figure 2: The result of standardization within an organization

A common reference architecture will allow the statistical organisation in the ESS to share development cost and to provide new statistical products in a cost efficiency manner.

EXPECTED BENEFICIARIES AND ANTICIPATED BENEFITS

Beneficiaries	Anticipated benefits
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⁴ E.g. Data Documentation Initiative (DDI) and Statistical Data and Metadata eXchange (SDMX)

Eurostat	<ul style="list-style-type: none"> • Harmonization of processes and methodologies for the production of EU statistics • Capability to promote statistical standardisation and related best practices • Increased quality of statistical data • Technical interoperability reducing manual intervention
Member States' National Statistical Institutes (as members of the European Statistical System)	<ul style="list-style-type: none"> • Support the cost-efficient modernization of their architectures • Improved statistical processes by sharing best practices and services • Delivery of new statistical products meeting users needs • Cost savings via reusable services and solutions • Capability to share further statistical services
Other European Commission services	<ul style="list-style-type: none"> • Reuse statistical services for the production of European-level statistics (e.g. data validation services) • Reuse architecture patterns for statistical production based on corporate EC platform • Reusable solution for the dissemination of statistics <ul style="list-style-type: none"> ○ Cost-efficiency and economies of scale ○ IT rationalisation ○ Integration with EU Open Data Portal and European Data Portal ○ Integration with NE-CMS Europa <p>Currently,</p> <ul style="list-style-type: none"> ○ DG ECFIN for Business and Consumer Surveys (BCS) and annual macro-economic database (Ameco) ○ DG TAXUD for effective tax levels data. <p>collaborate with Eurostat to be ready for go live by mid-2017.</p> <p>Focus will then go to promote reuse in other DGs, first with</p> <ul style="list-style-type: none"> ○ DG COMP for State Aid Scoreboard statistical data ○ DG GROW for postal statistics ○ DG EMPL⁵ for Labour Market Policies <p>Eurostat will in 2017 further develop contacts⁶ with other DGs known to disseminate statistics</p>
European citizens (data consumers)	<ul style="list-style-type: none"> • Improved cost-efficiency of official statistics • Easier and smarter access to statistics with cross-sector & cross-policy relevance

⁵ See also <http://ec.europa.eu/social/main.jsp?catId=1143&intPageld=3227&langId=en>

⁶ Following communication channels will be used

- Meetings of the [network of statistical correspondents](#)
- [Digital Stakeholders Forum](#)
- Inter-institutional Editorial Committee on the Internet (CEIII)
- Bilateral meetings between Eurostat and DGs

ORGANISATIONAL APPROACH

Expected stakeholders and their representatives

Stakeholders	Representatives
Eurostat	Eurostat Architecture extended Team ESS Vision 2020 portfolio managers Eurostat units B3, B4, B5
National Statistical Institutes	Members for the Task Force and Steering Groups Shared Service Grant participants Members of the ESS EA Board
EC & inter-institutional stakeholders	EC (other statistics): network of statistical correspondents Inter-institutional: Editorial Committee on the Internet (CEII)
Information Resource Managers (IRMs)	<ul style="list-style-type: none"> • List of Information Resource Managers • Digital Stakeholder Forum - chaired by DIGIT and assures inter-service communication and coordination for all matters relating to IT in the Commission
DIGIT	<ul style="list-style-type: none"> • DIGIT.B1 (Architecture centre of excellence) • DIGIT ISHS • DIGIT IPCIS team

Identified user groups

The ESS IT Working Group bringing together IT correspondents in 32 NSIs and EVUG (EDAMIS and Validation Service User group)

The ESS EA Community of Practice (first meeting on 23 November 2016)

The EC DGs and agencies disseminating statistics

Communication plan

Being part of the ESS Vision 2020 implementation the project will benefit from a broad communication plan designed for its purpose. Specific component targeting Commission services producing statistics will be added.

The main list of stakeholders for ESS Vision 2020 and tentative related communication channels are:

European Commission	MyIntraComm Ad hoc seminar and workshops Digital Stakeholder Forum Leaflets
Eurostat staff	Cybernews Eurostat-Infos Lunchtime presentations Ad hoc seminar and workshops
NSI staff	European Statistical Training Program Quartely news letter on Vision implementation

	Videos and webinars on the Vision implementation
NSI management	Regular presentation of project advances (Vision Implementation Group) ESS Website Dedicated European Statistical Training Program courses Circabc Leaflets
General Public	Eurostat website (ESS vision dedicated section) Joinup
Official statistics Community	Conferences, Workshops Leaflets

Governance approach

Project owner: E. Baldacci, Director - Methodology; corporate statistical and IT services (ESTAT.B).

The project will report about the reusable dissemination solution for internal Eurostat governance to the

- Eurostat Dissemination Chain Steering Group;
- Eurostat IT Advisory Committee, and finally to
- Eurostat Director's Meeting

The project will report to the related ESS governance bodies

- The ESS Steering Group on Shared Services;
- The ESS Task Force on Shared Services for the project;
- ESS IT Director's Group (ITDG) will review project progress and its main deliverables;
- The Vision Implementation Group established by delegation of ESSC (The European Statistical System Committee) will provide strategic guidance for the project.

At EC level, involved governance bodies are the following

- IT Governance: the [IT Board](#)
- ISA2 Governance bodies (through monitoring & evaluation reports, reporting about sub-delegated credits usage)

TECHNICAL APPROACH AND CURRENT STATUS

The project builds on a service-oriented paradigm to establish the cooperative architecture for ESS and for sharing statistical services among organisations. This approach leans on the SOA strategy of the Commission and on the Common Statistical Production Architecture developed at industry level facilitated by UNECE. The reusable solution for dissemination leans on the future renovated Eurostat dissemination chain (see task 8 description)

Task 1: Develop detailed ESS EA.

Activities: Detail the existing ESS EA to provide an operationalization of the sharing of services, the orchestration of these services in production processes and the management of data and metadata in the process. Communicate the ESS EA and facilitate the discussion and agreement in the ESS community on the ESS EA.

Deliverables: The ESS EA incorporating EIRA and operationalizing the sharing and orchestration of services and the management of metadata.

Current status: Contract signed. Benchmarking study of ESS EA against EIRA is starting on 1 September 2016. New release of SPRA is planned by April 2017.

Task 2: Benchmark ESS architectures.

Activities: Analyse the ESS member architectures (as-is and target architectures) and benchmark the implementations and usage of technology to support the ESS EA. Identify potential components and services for sharing in the community.

Deliverables: Best practice architecture patterns, list of sharable services/solutions, sample roadmaps for realising the ESS EA based on specific as-is architectures and business requirements. List of possible candidates for shared services.

Current status: the elaboration of the benchmarking model will start on 1 November 2016

Task 3: Develop multi-tenant version of the ESS Service catalogue.

Activities: Develop an ESS Service catalogue for federated use in the ESS with requirements that support a flexible adoption and supporting easy discovery, test, and implementation of usage of a shared service which is preferably built on existing software.

Deliverables: An ESS service catalogue, which can be deployed in a federated manner including both service shared in the ESS as well as MS specific services.

Current status: the architecture of the multitenant catalogue is being elaborated and discussed with stakeholders. Contracts are being launched for implementation.

Task 4: Develop statistical and dissemination services for sharing.

Activities: To select and develop existing functionality into shared services that can be used by the community.

Deliverables: Three services developed and made available to the community either at ESTAT or an NSI.

Current status: not started

Task 5: Produce white-list of open source software.

Activities: Analyse existing open source software packages and produce a white-list of components to be used in the technical architectures

Deliverables: The white-list of open source packages and guidance on its usage in the ESS EA.

Current status: not started

Task 6: Support architecture alignment.

Activities: Support the architecture alignment in ESS member to be carried out by a group of experts from ESS members e.g.: support for implementing an open source software package, detailed guidelines for exposing a shared service to the community.

Deliverables: Active support function to architecture alignment with established KPI (e.g. number of early adopters of the target architecture in the ESS) .

Current status: not started

Task 7: Implement shared services in production processes.

Activities: Support the implementation in production processes of the shared statistical services within ESS members.

Deliverables: The integration of shared statistical services in 7 ESS members production processes.

Current status: not started

Task 8: deliver a reusable solution for the dissemination of statistics.

Activities: retain and further develop the future renovated Eurostat dissemination tools specific components and package these as a software solution for systematic reuse.

Deliverables: Integrated software components and services for the dissemination of statistics

Current status: Contract signed. Alpha release delivered to DG ECFIN and DG TAXUD.

Task 9: extension of the reusable solution for the dissemination of statistics, and services, for the ESS in synergy with DIGICOM

Activities: extensions to the reusable solution for the dissemination of statistics, in a ESS context and development of potential synergies with the Work Package 3 of DIGICOM⁷ about (linked) open data applied to the context of statistics.

Deliverables: generic tools and services for reuse

Current status: not started

COSTS AND MILESTONES**Breakdown of anticipated costs and related milestones**

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipate d Allocations (KEUR)	Budget line ISA / others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Inception	Project plan	0	ESTAT	15/09/2015	31/12/2015
Execution	Task 1: Develop detailed ESS EA.	200	ISA ²	01/09/2016	30/06/2017
Execution	Task 2: Benchmark ESS architectures.	300	ISA ²	01/01/2017	30/06/2018
Execution	Task 3: Develop multi- tenant version of the ESS Service catalogue.	200	ISA ²	01/10/2016	31/12/2017
Execution	Task 4: Develop statistical services for sharing.	314	ISA ²	01/07/2017	31/12/2018
Execution	Task 5: Produce white-list of	180	ISA ²	01/07/2017	31/12/2017

⁷ See also <http://www.cros-portal.eu/sites/default/files/TFDIGICOM-2015-0910-02.pdf>

	open source software.				
Operational	Task 6: Support architecture alignment.	450	ISA ²	01/07/2017	31/12/2018
Operational	Task 7: Implement shared services in production processes.	275	ISA ²	01/07/2017	31/12/2018
Execution & Operational	Task 8: Deliver a reusable solution for the dissemination of statistics.	800	ISA ²	01/01/2016	31/12/2018
Execution & Operational	Task 9: ESS extensions to reusable statistical dissemination solution.	500	ISA ²	01/06/2017	31/12/2018
	Total	3219			

Breakdown of ISA funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Initiation & Execution	1050	
2017	Execution & Implementation	1669	
2018	Implementation & Operation	500	
2019			
2020			

ANNEX AND REFERENCES

Description	Reference link	Attached document
SERV Business Case	https://circabc.europa.eu/sd/a/0ffc64b1-5d5c-4a61-a030-4acd897779e0/SERV%20Business%20case%20v0.7.pdf	-
ESSC 29 th meeting (SERV document)	https://circabc.europa.eu/w/browse/2102612c-8f20-4a16-bb5e-5d5541b03492	-
SERV TF Mandate	-	Version 1.1
ESS EA RF	https://ec.europa.eu/eurostat/cros/content/ess-enterprise-architecture-reference-framework_en	Version 1.0
SPRA	https://ec.europa.eu/eurostat/cros/content/spra_en	Version 0.4
ESS Vision 2020	http://ec.europa.eu/eurostat/web/ess/about-us/ess-vision-2020	-
DISSCHAIN RENOV Business Case	https://circabc.europa.eu/w/browse/a21ebee-7491-4806-8306-2ace57894218	
CSPA	http://www1.unece.org/stat/platform/display/CSPA/CSPA+v1.5	Version 1.5