

DIME/ITDG SG November 2015

**DIRECTORS OF METHODOLOGY/IT DIRECTORS
JOINT STEERING GROUP**

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Item 03 of the agenda

ESS Vision 2020: ESS.VIP VALIDATION



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1. Purpose of the document

This document is a status report for the ESS.VIP Validation project, which will come to an end in November 2015. The document contains an overview of the project, an assessment of the status of the expected deliverables and a summary of the next steps foreseen.

One of the main deliverables of the project, a draft proposal for a business and IT architecture for validation in the ESS, is also provided in annex to the current document. This deliverable is for review by the Joint Steering Group of the DIME and ITDG.

2. Recommendation for action by the DIME/ITDG SG

The Joint Steering Group of DIME and ITDG is invited to:

- Take note of the current status of the ESS.VIP Validation project.
- Provide feedback on the suggested roadmap and next steps to continue work in the area of validation in the context of the ESS Vision 2020.
- Provide feedback on the draft proposal for an ESS business and IT architecture for validation (which is provided as an annex to the current document).

3. Background and brief history

3.1. Medium-term goals for validation in the ESS

In January 2013 the ESSC launched the ESS.VIP Validation project. The aim of the ESS.VIP Validation project is to lay the groundwork for achieving the two medium-term goals below.

Medium-term goals	Business Outcomes	Scope
Goal 1: Ensure the transparency of the validation procedures applied to the data sent to Eurostat by the ESS Member States.	Increase in the quality and credibility of European statistics Reduction of costs related to the time-consuming validation cycle in the ESS ("validation Ping-Pong")	NSI-Eurostat interface
Goal 2: Enable sharing and re-use of validation services across the ESS on a voluntary basis.	Reduction of costs related to IT development and maintenance	NSI-Eurostat interface + NSI and Eurostat internal processes



As can be seen from the table above, the two goals target different parts of the ESS production chain. Goal 1 only focuses on the data sent to Eurostat by Member States, i.e. on the interface between NSIs and Eurostat. Goal 2 on the other hand aims at enabling sharing and re-use potentially throughout the whole ESS production chain (sharing and re-use of validation services would always take place on an optional basis).

Achieving the medium-term goals mentioned above involves creating deliverables covering five different dimensions:

- Methodology: Creation of a common ESS methodological framework containing common definitions, classifications and metrics for validation processes.
- Information Standards: Establishment of a common validation syntax for validation rules.
- IT: Establishment of a common architecture for validation solutions in the ESS and creation of a set of re-usable services based on this common architecture.
- Human resources: Provision of ESS-wide training and communication on the goals for validation in the ESS and the available deliverables to achieve them.
- Processes/Governance: Establishment of a common validation policy focusing on the attribution of validation responsibilities, as well as a framework to tie validation to compliance monitoring.

Each of the five dimensions mentioned supports either one of the two goals or both. For example, the Methodology dimension is a necessary element for both Goal 1 and Goal 2, while the IT dimension is tightly linked to Goal 1. The table below shows which goals each dimension contributes to.

	Medium-term goal 1	Medium-term goal 2
Methodology	+	+
Information Standards	+	+
IT	—	+
Human Resources	+	+
Processes/ Governance	+	—

3.2. Objectives of the current ESS.VIP Validation project

The current ESS.VIP Validation is limited to providing the methodological and architectural frameworks needed to achieve the medium-term goals mentioned above. The project therefore focuses mostly on developing the Methodology and Information Standards dimensions,



notably through the creation of an ESS methodological handbook and the development, evaluation and piloting of the Validation and Transformation Language (VTL) sponsored by the SDMX community. A secondary focus area is the IT dimension, as the project will develop two prototypes for potential future ESS services.

The remaining two dimensions (Human Resources and Processes/Governance) are only marginally covered by the ESS.VIP Validation. A limited number of deliverables is expected to be provided in these areas.

4. Current status

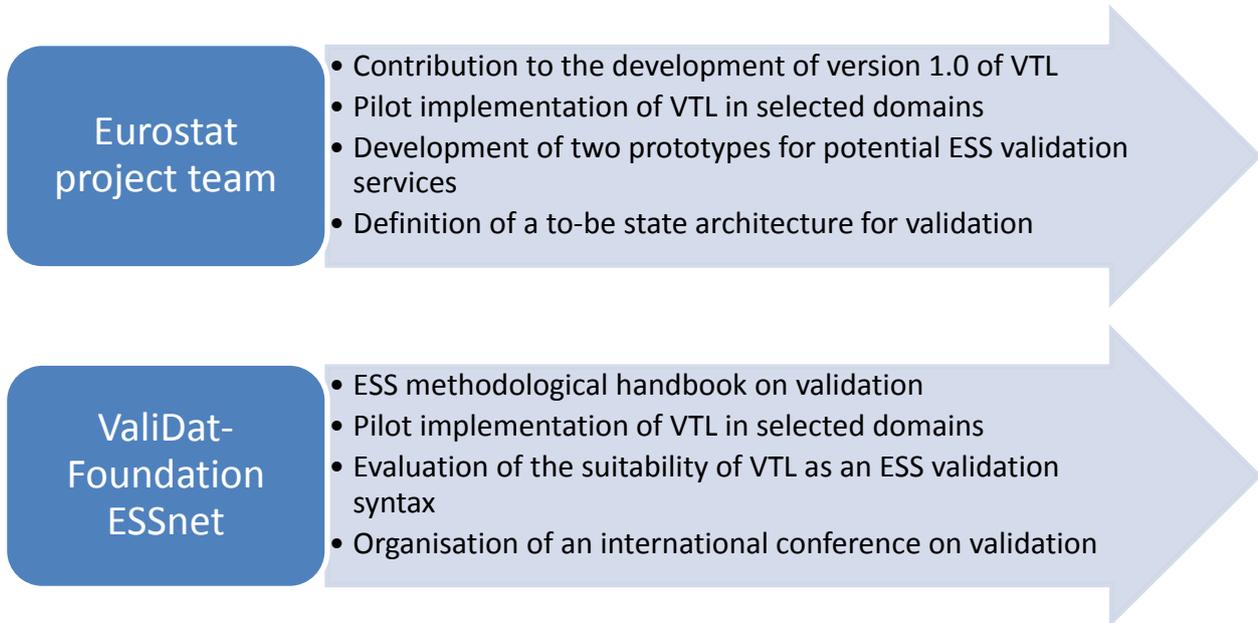
4.1. Main actors

Work on the ESS.VIP Validation has been carried out by Eurostat's ESS.VIP Validation project team and by the ValiDat-Foundation ESSnet. The ValiDat-Foundation ESSnet was launched as part of the ESS.VIP Validation project in order to involve Member States in the development of the project's deliverables. Four Member States (DE, IT, LT and NL) are participating in this ESSnet. The ESSnet will end on December 15 2015, i.e. at approximately the same time as the ESS.VIP Validation.

4.2. Overview of main deliverables

While the ESS.VIP Validation has 19 distinct deliverables, the main high-level deliverables are summarised in the table below, followed by a more detailed description of each one of them.

Deliverable	Main Actor	Business case deliverable ID
ESS methodological handbook for validation	ESSnet	1.4
Contribution to the development of version 1.0 of VTL	ESTAT	4.1
Pilot implementation of VTL in selected domains	ESTAT/ESSnet	1.1
Evaluation of the suitability of VTL 1.0 as a common validation syntax for the ESS	ESSnet	1.3
Organisation of an international conference on the activities of the ESS.VIP Validation and of the ValiDat-Foundation ESSnet	ESSnet	4.2
Development of two prototypes for potential future ESS validation services	ESTAT	3.2 to 3.7
Definition of a to-be state architecture for validation of Member States data	ESTAT	1.5 and 3.1



ESS methodological handbook for validation	Project dimension	Methodology	Main actor	ESSnet
	Expected delivery date	Nov-2015	Delivery confidence	Green
	<p><i>Description</i></p> <p>The deliverable will contain definitions, classifications and metrics that can be used to describe validation processes across the ESS.</p> <p><i>Status and impact</i></p> <p>Work on the handbook within the ESSnet is proceeding as scheduled. The handbook is expected to be of high quality and to provide a common business language to underpin discussions about validation in the ESS.</p>			
Contribution to the development of version 1.0 of VTL	Project dimension	Information Standards	Main actor	Eurostat
	Delivery date	Mar-2015	Delivery confidence	Green
	<p><i>Description</i></p> <p>The ESS.VIP Validation represented the positions of Eurostat and the</p>			



	<p>ESS during the development of VTL, a validation syntax created by the SDMX Sponsors.</p> <p><i>Status and impact</i> Version 1.0 of VTL was published in March 2015¹. Although VTL will need to be further improved before it can be implemented, this represents a major milestone in the development of a standard language to express validation rules.</p>			
<p>Pilot implementation of VTL in selected domains</p>	<p>Project dimension</p>	<p>Information Standards</p>	<p>Main actor</p>	<p>Eurostat/ESSnet</p>
	<p>Delivery date</p>	<p>Oct-2015</p>	<p>Delivery confidence</p>	<p>Green</p>
	<p><i>Description</i> The ESS.VIP Validation project team has applied VTL 1.0 to translate validation rules in two domains (SIMSTAT, Animal Production Statistics). The ESSnet has also translated further rules obtained from an ESS-wide survey.</p> <p><i>Status and impact</i> These pilots were completed in October 2015. Although the VTL translations were only performed as "pen-and-paper" exercises, they have provided useful input to the overall evaluation of VTL 1.0 and have contributed to building know-how on the use of VTL.</p>			
<p>Organisation of an international conference on the activities of the ESS.VIP Validation and of the ValiDat-Foundation ESSnet</p>	<p>Project dimension</p>	<p>Human Resources</p>	<p>Main actor</p>	<p>ESSnet</p>
	<p>Delivery date</p>	<p>Nov-2015</p>	<p>Delivery confidence</p>	<p>Green</p>
	<p><i>Description</i> The ValiDat-Foundation ESSnet organised an international conference on validation². The conference took place on November 10-11 in Wiesbaden and showcased the results of the ESS.VIP Validation and the ValiDat-Foundation ESSnet.</p> <p><i>Status and impact</i> The conference contributed to raising awareness in the ESS of the work that has been carried out by the ESS.VIP Validation. It was also a chance to collect feedback on the work performed so far from a large number of Member States.</p>			

¹ The specifications of VTL 1.0 are available at the following address: https://sdmx.org/?page_id=5096

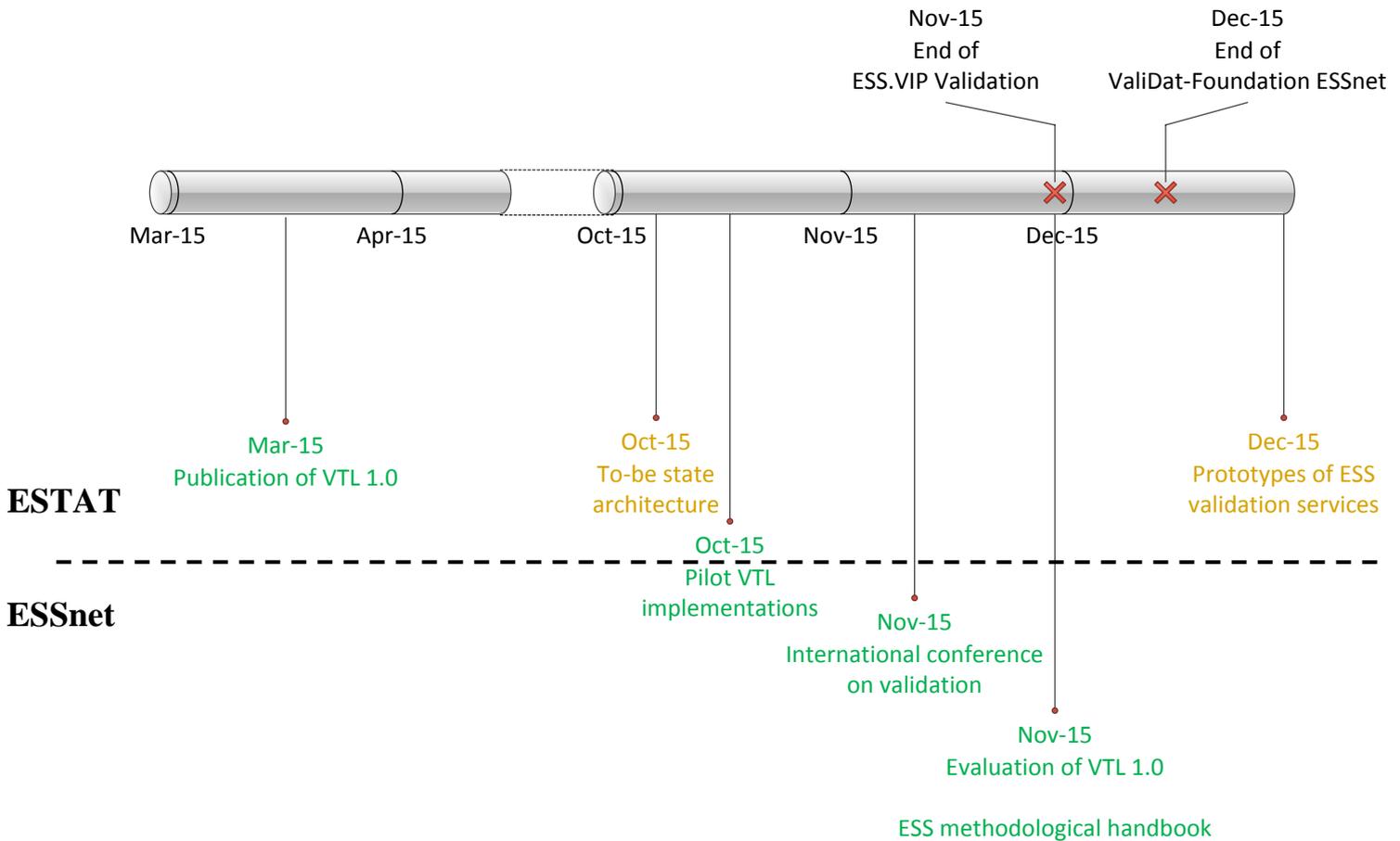
² More information on the content on the conference can be found on the ESSnet's CROS Portal page: <http://www.cros-portal.eu/content/workshop>



Development of two prototypes for potential future ESS validation services	Project dimension	IT	Main actor	Eurostat
	Expected delivery date	Dec-2015	Delivery confidence	Amber
	<p><i>Description</i></p> <p>Prototypes for a validation rule registry and an SDMX-based structural validation service will be delivered. The purpose of these prototypes is mainly to start collecting know-how on how some future technical difficulties in the construction of ESS validation services may be tackled (e.g. building SOA services, masking the complexity of validation rules through a user-friendly interface, etc...).</p> <p><i>Status and impact</i></p> <p>These deliverables suffered delays and will be completed one month after the projected end of the ESS.VIP Validation project.</p>			
Proposal for a to-be state business and IT architecture for validation of Member States data	Project dimension	Processes/ Governance	Main actor	Eurostat
	Delivery date	Oct-2015	Delivery confidence	Amber
	<p><i>Description</i></p> <p>This deliverable describes a to-be state business and IT architecture for the validation of Member States data. The document contains proposals on the respective roles of Member States and Eurostat in the validation of data sent to Eurostat. The deliverable is provided as an annex to the current document.</p> <p><i>Status and impact</i></p> <p>While this document has been delivered within the required timeframe, the delivery confidence for this deliverable is marked as amber because Member State involvement in its drafting was low. This is due to deficiencies in the governance structure of the ESS.VIP Validation project (e.g. lack of a Steering Group for the project). It is possible that a more in-depth involvement of Member States will be needed at a later stage to have a high-quality document with broad consensus.</p>			

4.3. Timeline and key milestones

The diagram below highlights when the main deliverables have or will become available. The diagram shows that the ESS.VIP Validation project is heavily back-loaded: most of the deliverables become available during the final months of the project.



4.4. Overall evaluation of progress

As is indicated in the preceding paragraphs, due to delays and low Member State involvement the main deliverables related to the IT and Processes/Governance areas suffered some setbacks. It should however be underlined that:

- All deliverables related to the key focus areas of the current ESS.VIP Validation project, Methodology and Information Standards, are expected to be delivered with the required quality by the end of the project.
- The delays experienced in the deliverables related to the IT dimension are minor. They are currently estimated to be around one month.

5. Next steps and roadmap



The ESS.VIP Validation project will come to a conclusion at the end of November 2015. After the end of the project, two immediate actions will be undertaken:

- A written consultation of the DIME/ITDG on the relevant high-level deliverables mentioned in the current document will be launched at the end of 2015.
- A complete end-of-project report will be presented to the ESSC in February 2016 and at the February 2016 DIME/ITDG plenary meeting.

As previously mentioned, the current ESS.VIP Validation project focused mostly on the Methodology and Information Standards dimensions. Moreover, the project did not cover the implementation of the deliverables provided into production. Eurostat will therefore advance proposals for the continuation of work in the area of validation in the context of the ESS Vision 2020. These proposals are planned to be discussed at the DIME/ITDG plenary meeting in February 2016. The table below contains an early list of possible future actions and deliverables which would be needed to achieve the medium-term goals for validation in the ESS.

Dimension	Status by November 2015	Possible future steps
Methodology	ESS methodological handbook for validation	Pilot implementation of the methodology handbook and amendments to it based on feedback
Information standards	Contribution to the development of version 1.0 of VTL Pilot implementation of VTL in selected domains Evaluation of the suitability of VTL as a common validation syntax for the ESS	Development of VTL 1.1 based on the evaluation made by the ESSnet Large-scale pilot of VTL 1.1 and decision on its adoption as an ESS validation syntax Standard formats for validation reports
IT	Development of two prototypes for potential future ESS validation services	Feasibility study and roadmap for the creation of VTL-compliant IT solutions Identification of needed ESS validation services Further development of the existing prototypes (if considered valuable as ESS validation services)



Human Resources	International conference on data validation	Enlarge outreach actions on the medium-term goals for validation in the ESS Training programme on ESS validation
Processes/ Governance	Definition of a to-be state architecture for validation of Member States data	Review of to-be state architecture and approval Common ESS validation policy and implementation plan