**UNECE High-level Group for the
Modernisation of Official Statistics**

**Project Proposal:**

**Link CSPA to the Implementation Standards (SDMX, DDI, VTL) for Plug-and-Play**

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| This business case was prepared by Modernisation Committee on Standards, and is submitted to the HLG-MOS for their approval. |

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| **1 Purpose** |
| The purpose of this activity is to enhance the plug-and-playability of CSPA services by linking CSPA to the “implementation” standards (such as SDMX, DDI, VTL) in a consistent manner. The goal is to reduce IT costs (by increasing reusability), increase development speed (by providing development and implementation guidance), and increase quality (by increasing standardisation and giving clearer checks to CSPA review board). |
| **2 Description of the activity** |
| It is proposed that a clear way is described for developers to implement standards such as SDMX, DDI, Validation and Transformation Language (VTL) in CSPA services. An issue that exists with the current CSPA is this: Two developers are given the following same task: To create a CSPA service for exactly the same functionality that involves SDMX (say, a collect and process service). The two developers will probably create two processes that have similar functionality, but are not interoperable. This does not realise the goal of plug-and-play because the services cannot communicate with each other in an interoperable, deterministic way. Also, if the developers are given another service to create, the likelihood of non-compatibility increases.This activity aims to avoid this issue. It should build on the developed CSPA Logical Information Model (LIM), not create another model. There are several ways to realise this initiative. It is proposed that the first activity is to prioritise these proposals and explore further solutions:* Add mapping between CSPA LIM and implementation standard information models as suggested in CSPA 1.5 documentation: figure 5, para 93;
* Add more specific implementation guidance to base CSPA documentation;
* Add methods/operations to the LIM, other than constructors;
	+ Consider a standard vocabulary for naming statistical class methods. E.g.:
		- **Dataset**: Validate
		- **Statistical Classification**: Transform
* Validate/Extend the SDMX/DDI GSIM mapping and reference in CSPA core documentation.
	+ Add the VTL mapping
* Create CSPA documentation for each implementation standard? E.g.
	+ Add extra metadata to SDMX Glossary terms to map to CSPA LIM

The resulting benefit of the activity is that services can be more easily created, having greater reusability, can be plugged in to an architecture with other services, and the service interfaces are well understood and non-ambiguous. It could also help towards the development of a generic CSPA orchestration architecture. |
| **3 Alternatives considered** |
| A simpler alternative could be to provide a separate CSPA guideline document for each implementation standard:* CSPA LIM services for SDMX
* CSPA LIM services for DDI
* Etc.

These alternatives would provide benefits for developers; however it would be preferable to put the information at the developers fingertips in the LIM model itself, as per the original proposal.The alternative to do nothing is not recommended, as this will result in the problems and inefficiencies described in the section above. |
| **4 Expected Benefits** |
|[x]  Reduced costs |
|[x]  Increased efficiency |
|[ ]  Reduced risks |
|[x]  New capabilities to meet user needs |
| **Justification:** To realise the high-level HLG-MOS goal of shareable, plug-and-play services, and to make IT architecture orchestration possible, the service interfaces should be unambiguous and deterministic across CSPA service development teams. |
| **5 Type of Activity** |
|[ ]  New activity |
|[x]  Extension of existing activity |
|[ ]  Other *(specify below)* |
| The standards committee are the custodians of the CSPA standard so it is natural that the work is coordinated by that group. However, members of the implementation standard working groups outside of the HLG-MOS groups will be required. |
| **6 Which key priorities in the HLG-MOS Strategic Framework does the proposed project relate to?** |
|[x]  Take cost out of our organisations to reinvest in more value added areas |
|[x]  Explore new areas collectively and leverage each other’s' research investments in specific areas |
|[ ]  Provide whole of government data ecosystems based on international standards, for better estimates in key policy areas |
|[ ]  Renew our governance and operating processes |
| **Justification:** The adoption of CSPA is gaining momentum with several services under development, though adoption of CSPA LIM is low as it is young. The take-up of implementation standards is also increasing. This is all very positive, though there is an increased risk of more wheels (systems) being reinvented because the interoperability isn’t defined, preventing effective reuse in architectures. This initiative will help avoid this by:* Increasing operability between services
* Enable assembling systems and business functionality, rather than having to make further developments to CSPA services into an existing architecture

This initiative could also help “market” CSPA LIM by relating it closely to the implementation standards which developers are familiar with. CSPA LIM is rather abstract at the moment, and this initiative should make its use more certain for developers. |
| **7 How does the proposed activity relate to other activities under the HLG-MOS?** |
| This work supports and promotes the usefulness of international standards, in particular CSPA, CSPA LIM, GSBPM, GSIM; also related standards such as SDMX, DDI, VTL. It reuses and builds on work that has been done before rather than inventing a model that competes with anything else. In addition, it follows general IT best practices in the context of statistical systems.  |
| **8 Proposed start and end dates** |
| **Start:****End:** | January 2017December 2017 |
| **9 Expected costs** |
| 20 person months spread across an estimated 10 participating organizations and the UNECE Secretariat6 person months for a project managerCosts associated with 10-12 persons attending a physical sprint session in early 2017 and a project meeting back-to-back with a suitable international event such as the 2017 CSPA Implementation Workshop. |