

**UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE
CONFERENCE OF EUROPEAN STATISTICIANS**

Workshop on Strategic Developments in Business Architecture in Statistics
(Geneva, Switzerland, 7-8 November 2012)

FINAL REPORT OF THE WORKSHOP

1. The Workshop on Strategic Developments in Business Architecture in Statistics was held in Geneva, Switzerland, from 7-8 November 2012. It was attended by representatives of the High-Level Group for the Modernisation of Statistical Production and Services (HLG), the Bureau of the Conference of European Statisticians, and twenty-one expert groups whose work is related to the modernisation of statistics.

2. Ms Lidia Bratanova, Director of the UNECE Statistical Division, opened the workshop and welcomed participants. She described the purpose of the Workshop and outlined the agenda:

- (i) The Generic Statistical Information Model;
- (ii) Moving towards standards-based modernisation;
- (iii) Priorities for future work;

3. All background documents and presentations for the workshop are available on the website of the UNECE Statistical Division (<http://www.unece.org/stats/documents/2012.11.hlgbas.html>).

4. The keynote presentation was given by Mr Gosse van der Veen (Netherlands). He presented the work of the HLG, including the development of a vision and a strategy, both of which have been endorsed by the Conference of European Statisticians. He outlined the work done to develop a Generic Statistical Information Model (GSIM), identified as a priority at the previous Workshop. He also presented the main conclusions of the High-Level Seminar on Streamlining Statistical Production and Services, held in St Petersburg in October, which provided strong support for the work of the HLG.

5. The points raised in response to this presentation included:

- The speed of development of the GSIM has been impressive, many people thought it would not be possible, but it shows what can be achieved with a lot of effort and the right people
- The HLG can only oversee a limited number of projects, but should be aware of other initiatives going on in parallel
- The human resources dimension is critical to the success of modernisation initiatives
- More cross-specialism working is needed to make progress with modernisation
- The use of standards such as the GSIM promotes collaboration and convergence
- Now that we have standard models, we will need standards for implementing them
- Statistical organisations need to be better prepared for change, new skills and training are needed
- Practical demonstrations of the value of modernisation will increase support

Session (i) Generic Statistical Information Model (GSIM)

6. This session focussed on the Generic Statistical Information Model (GSIM) Project. The acceleration of work to develop the GSIM was identified as a key priority by the previous workshop. Thérèse Lalor presented an overview of the model including the development approach (“Sprints”) and the current status of the project.

7. One of the priorities of the project is to communicate the GSIM in the most effective way within statistical organisations and beyond. Participants were split into groups to discuss this issue. A number of key target audiences were identified and the importance of communicating to different regional audiences was emphasised.

8. The groups also discussed the key messages and questions about the GSIM. Points raised during the discussion were:

- How does the GSIM fit and add value as a component within standardisation
- The GSIM is “work in progress”: Organisations should commit to improving it
- How do we give feedback and maintain the model?
- There is now a need to move from the abstract to the concrete. How do you use GSIM?
- Who is using GSIM? What are their plans?
- Implementation of the GSIM implementation is more complicated than the Generic Statistical Business Process Model (GSBPM)
- The GSIM will facilitate implementation of other metadata standards – Data Documentation Initiative (DDI) and Statistical Data and Metadata eXchange (SDMX)
- The GSIM is a common language across agencies and helps with external, internal and multi lingual communication.
- We need to better communicate the importance of harmonisation.
- How will the GSIM facilitate collaboration? GSIM terminology could help in international technical assistance projects
- What are the lessons learned from the “sprint” approach? Can we apply this approach to our other projects?

9. The release of GSIM v1.0 requires a focus on how the GSIM will be used by statistical organisations. Arofan Gregory gave a presentation that aimed to explore what a GSIM 1.0 implementation will look like.

10. The participants were split into four groups for detailed discussions. One of the first steps identified in implementing the GSIM is to map an organisation’s business processes to the GSBPM and GSIM. Some groups were given scenarios which were examples of what these mappings might look like. Other groups were asked to brainstorm other steps needed to implement the GSIM.

11. Points raised in the plenary discussion included:

- The scenarios are a good start, but documentation of actual implementations will be more useful
- Different audiences require different levels of detail
- It would be good to give staff tools and templates to use with the GSIM
- An implementation strategy in a number of countries is needed to give a demonstration. Then there will be a compelling argument for others. The real challenge is to get to the point where there are a number of countries with an implementation strategy.

- The GSIM needs to be combined with other standards to produce real use cases. This makes providing nice examples of GSIM implementation more challenging.
- The GSIM can be implemented step by step. For example, when legacy systems are modernised, refer to the GSIM.
- The GSIM is necessary but not sufficient. If we miss the metadata and architectural standards, most of the benefits of the GSIM will be lost.
- We have to create extensions to make the GSIM concrete, but it must exist as a whole like a reference thesaurus.
- There could be a collaboration of statistical agencies for a reference implementation - Build once with GSIM and GSBPM, DDI, SDMX, etc. There will be some differences but most of it will be common.
- There should be more collaboration with other standards – for example between GSIM and other metadata standards to build a common lower level on which implementations could take place.
- Collaboration could be done using the open source community model.
- There must be some governance, the amount must be appropriate.

Topic (ii): Moving towards standards-based modernization

12. This session looked at how to combine the GSIM, the Generic Statistical Business Process Model (GSBPM), harmonized methods and standardized technology to achieve modernization. Brian Pink made a presentation on the next steps in modernizing the statistical production system. He stressed the need to define “plug and play” architecture to support effective collaboration within and beyond official statistics, and to agree on how SDMX and DDI will be used to represent information in a standard way. He also emphasized that it is necessary to look for synergies with work being undertaken within the ESS, Statistical Network and other groups in regard to defining aspects of common business architecture. Designers of new processes, methods, components and data repositories should be aligning with the HLG strategy and designing for sharing and reuse to the greatest extent possible. We need to think about managing our information as a corporate resource accepting that solutions that are optimal for the organisation may not always be optimal for all individual business areas. This requires cultural changes at all levels.

13. Issues raised during the discussion included:

- The need for the “grand unification” idea (with a different name) to move forward with GSIM.
- How to make better use of the unprecedented computing power at our disposal?
- The need to develop the necessary sets of skills within statistical organizations.
- The need to make progress with practical software component developments.
- There should be more focus on training to spread the ideas behind modernization and avoid that they only remain in the meeting room.
- How to work with standards bodies? The DDI Alliance is willing to cooperate on future work related to GSIM.
- How to facilitate and achieve organizational and cultural change when funding is restricted? This is a challenge for senior management.
- The challenge of speeding up statistical production without compromising on quality.

- Is there a governance gap? What do we need to do to reach the next point of delivery?
- It is a big step from sharing knowledge to sharing services.
- The importance of aligning modernization strategies between organizations.
- How to manage the fact that some organizations will implement standards and frameworks earlier than others.
- How to build the frameworks to be able to cooperate more effectively? Is an open-source approach, at least within the statistical community, the best approach?
- The need for greater clarity and simplicity in how different statistical outputs relate to each other.
- The need for architectures which are more metadata-driven.
- The geo-spatial aspect of statistical data is becoming more important.
- By doing projects one can move forward through examples, eventually leading to culture change.

Topic (iii): Priorities for Future Work

14. This session considered possible work packages to advance the implementation of the HLG Strategy. Marton Vuksan outlined the work packages, the process by which they had been created, and the process by which the Workshop should allocate priorities.

15. Issues raised during the initial discussion included:

- Learning from standardisation activities in other industries should be more explicit
- When determining priorities, user views should be taken into account
- Whether to separate the maintenance of standards from work on their interactions
- How to measure success?
- The need for tools to implement the models that have been developed
- How to organise and get the best value from feedback on practical implementations of standards?
- Whether to try to monitor the closeness of national modernisation strategies to the HLG Strategy.

16. Participants then split into small groups to discuss priorities. The results were that all groups identified Work Packages 11 (GSBPM / GSIM Implementation, Maintenance and Support) and 9 (Plug and Play Architecture) as the top priorities. Other work packages, particularly concerning human resource management, and legal / licensing issues, were seen as important supporting activities, and essential enablers to ensure the successful completion of the chosen work packages.

17. Other points raised in the final plenary discussion included:

- The importance of a good feedback mechanism for GSIM, perhaps based on the UNECE wiki platform
- Whether the “plug and play” work should focus on architectures, practical tools as a proof of concept, or both of these in parallel

- Whether “sprints” would be an appropriate mechanism for implementing the “plug and play” work package
- The importance of taking account of previous projects such as CORE (Common Reference Environment) in the “plug and play” work programme
- The increasing importance of ensuring appropriate governance mechanisms for the work done under the HLG
- The need to find a way to make best use of existing resources within statistical organisations, given that the best people are often already very busy

18. In his summary, the Chair noted that the work of the HLG is becoming more and more serious. To be successful we must have an impact and relate to our stakeholders’ needs. We have to balance the need for practical results with the need to have sound underlying models and architectural frameworks. This way we can prove to chief statisticians that this work has real substance and value, and encourage them to be more than just spectators.

19. In closing the Workshop, the Chair thanked all participants for their energy, ideas, and commitment to the work of the HLG.