



8th SDMX Global Conference — Data Without Barriers
September 27–30, 2021
Summary Report

The 8th Global Conference on Statistical Data and Metadata Exchange ([SDMX](#)) took place during **September 27–30, 2021**. The SDMX Global Conference is a bi-annual event organized by the [SDMX Sponsor agencies](#)¹ which aims to share information and progress on SDMX developments from international organizations, national statistical offices, central banks, academia, and the private sector. This edition was hosted “virtually” by INEGI, the National Institute of Statistics and Geography of Mexico. The conference was organized for the first time in the Latin American and Caribbean region, after previous editions in South Asia, Africa, and Eastern Europe. As in past editions, this year’s event also offered a [capacity building program](#) on SDMX during **September 20–23, 2021**, which included sessions covering the training needs of both beginner and more advanced SDMX users.

More than 1,000 participants registered to the conference, and two-thirds also signed up for the capacity building sessions. Registered participants represented a wide range of countries, with a strong representation from Latin American and the Caribbean region (about 350). The conference and capacity building program were attended by between 300 and 400 people every day. Thanks to the virtual format of the event, the number of participants has been substantially higher than in previous SDMX event. Sponsor agencies noted the importance of organizing hybrid events in the future to support a growing SDMX community. All presentations and video recordings of the sessions are available on the [conference website](#) hosted by INEGI. To improve effectiveness of the conference in the region, simultaneous interpretation in Spanish was offered for all sessions of the conference; the capacity building program was offered in both English and Spanish.

The [conference agenda](#) offered 57 presentations, including contributions from Sponsor agencies (37%), national statistical offices (34%), central banks, other international organizations, and the private sector (29% in total). The new version of the standard — **SDMX 3.0, a five-year project** supported by the Sponsors agencies and led by the BIS — was officially launched during the conference. The conference theme **Data without Barriers** was chosen to highlight the benefits of SDMX in the various stages of the data lifecycle: reporting, collection, processing, exchange, and dissemination. Sessions of the conference were organized around the strategic priorities of the [SDMX Roadmap 2025](#). The conference was an opportunity to showcase successful implementation of SDMX by agencies of national statistics systems and international organizations in different steps of the data lifecycle. Furthermore, this year’s conference highlighted an increased interest from the private sector to integrate SDMX in

¹ The SDMX Sponsor agencies are the BIS (Bank for International Settlements), ECB (European Central Bank), EUROSTAT (Statistical Office of the European Union), IMF (International Monetary Fund), OECD (Organisation for Economic Co-operation and Development), UN (United Nations), and the World Bank.

commercial data management tools. A summary of the content and main discussion points from each session is provided below.

In the **opening session**, **Julio Santaella**, president of INEGI, welcomed participants to the first virtual SDMX Global Conference, emphasizing the potential of SDMX for official statistics to modernize and expand the global data ecosystem in the digital age. Speaking on behalf of the SDMX Sponsors, **Cristina Pereira de Sá** (Eurostat) highlighted the pillars of the SDMX Roadmap 2025, which aim to make SDMX easier to use, facilitate its expansion to other statistical domains, and broaden its use by new players in the public and private sectors. The Keynote address was given by **André Loranger**, Assistant Chief Statistician of Statistics Canada, who emphasized the role of the SDMX standard as an enabler for Statistics Canada's modernization journey to facilitate the internal exchange of data and metadata. Finally, in his strategic remarks on SDMX 3.0, **Bruno Tissot** (BIS) noted how SDMX has helped enhance trust in official statistics in the last 20 years, and that the new version will help support the modernization of official statistics in several areas, such as collection of granular microdata and alternative "big" datasets.

Session I (chaired by BIS) officially launched **SDMX 3.0**. The session was structured into three parts. It started with a short presentation of the SDMX 3.0 project and a quick summary of all the changes introduced in the new version. The session continued with more detailed presentations showcasing the enhancements introduced: microdata support, improved code lists, geospatial information, reference metadata, enhanced artefacts, semantic versioning, dataflow mapping, and the new 3.0 API. The last part discussed the future of SDMX 3.0, the improvements on referential metadata, and SDMX 3.0-ready tools (Fusion Metadata Registry and sXs). Discussion highlighted interests in the new features, particularly the new SDMX 3.0 API, the mapping capabilities and support to geospatial data. Furthermore, the importance of referential metadata as the "bridge" between business and IT functions was recognized.

Session II Data without Barriers (chaired by UNSD) presented the experience of national statistics offices with successful implementation and ongoing plans to use SDMX to facilitate smoother and faster data dissemination and exchange. Presentations were made by Cambodia (jointly with UNSD), Canada, Italy, Mexico, Tunisia, and the United Kingdom. The session highlighted that SDMX is increasingly used by countries for data reporting, dissemination, management, and other stages of the statistical value chain. Also, the flexibility of SDMX reporting and its interoperability brought by the global DSDs are increasingly appreciated by the countries and has helped facilitate adoption of the standard. It was also noticed that a growing number of powerful SDMX-based platforms are available, including the IStat Toolkit, the .Stat Suite, and others, which are actively used by a range of countries. There is strong interest in running SDMX tools and platforms at the UN Global Platform. Lastly, the session highlighted that knowledge and skills transfer can work for countries with less exposure to SDMX even in the case of highly complex SDMX-based systems. However, many countries need strong IT support, so that they can focus on their core competencies of data management.

Session III Making Data Usage Easier via SDMX (chaired by IMF) discussed how international, regional, and national organizations are leveraging SDMX to make their data more accessible and easier to consume for their users. The plenary session featured presentations from the IMF on the use of SDMX in its Data Dissemination Initiatives (SDDS Plus, SDDS, and e-GDDS) and the SDMX-powered data hub created by the Pacific Community. This experience

showcased how SDMX is being used as a mechanism to facilitate data dissemination with the support of international and regional organizations. In the breakout rooms, the focus was on the experience from agencies of the national statistical systems in implementing SDMX to improve collection, processing and dissemination of data using SDMX. Presentations were made by Colombia, Cote d'Ivoire, India, Malaysia, Rwanda, Saudi Arabia, and United Arab Emirates. Across all presentations, two projects promoted by SDMX Sponsor agencies were highlighted as being highly useful for SDMX implementers: the IMF's National Summary Data Pages (NSDP) and the OECD's .Stat Suite. Participants showed interest in understanding resources and training needed to organize SDMX work, and in how to convince management and other stakeholders about the benefits of SDMX.

Session IV Strengthening the Implementation of SDMX (chaired by OECD) focused on practical aspects of SDMX implementation in all of its dimensions — tooling, data and metadata, skills, and capacity building — and how to strengthen them through international collaboration. Presentations were made by ECB, ILO, Meaningful Data, Metadata Technology, OECD, Reserve Bank of India, UNICEF, and UNSD. The session emphasized that SDMX brings value as the best way to model statistical information. Harmonized data and metadata models are ultimately the foundations to deliver on business objectives, such as making data more accessible, making data processing more efficient through automation or delivering on data quality objectives. Successful SDMX tools focus on enhanced user experience and ease of use ('hiding the complexity'). The session also highlighted that adoption of good practices in data and metadata modelling requires training, coaching and appropriate governance in each organization and between organizations. It was also noted that the new features of SDMX 3.0 will require new versions of the SDMX content-oriented guidelines to show adopters how to use them and follow best practices. Examples are semantic versioning, how to create a structural model, multiple observation status representation. Finally, the session discussed VTL, a cousin of SDMX, which fits well with SDMX implementations and complements the static objects of SDMX to create dynamism in a data-processing system — with the same standard-oriented, plug and play/modular spirit. The VTL implementations also demonstrated the capacity to interface with non-SDMX data storage layers.

Session V Using SDMX to Modernize Statistical Processes and IT Infrastructure (chaired by ECB) was dedicated to the use of SDMX to modernize statistical processes and IT infrastructure. Presentations were made by BIS, ECB, ILO, INEGI (Mexico), INSEE (France), OECD, National Bank of Slovakia, redpelicans, and UNSD. The session showed that many national and international modernization initiatives use SDMX to improve and standardize data and metadata exchange and dissemination; to make data usage easier; to maintain data quality; to reduce production and dissemination costs; and to help users find and use the data they need. Examples provided by different presenters including the private sector showed how the current version of the standard (SDMX 2.1) has helped achieve these goals. Participants were interested in the interoperability of the applications that were presented and the easiness to integrate them in local systems. One important discussion point was the fact that the introduction of the new version of the standard widens the scope of SDMX, making it more flexible, more compatible with other standards and usable for different types of data including microdata. Another key point was that modernizing statistical processes will become even easier with SDMX 3.0, but of course the community will need time to work towards its implementation. New technology elements and new data platforms can be integrated with

SDMX data and metadata driven processes; this is one of the fields that the SDMX community could be expanding its work in the future.

Session VI SDMX and New Technologies (chaired by OECD) opened with a presentation on the collaboration efforts by Sponsor agencies (BIS, Eurostat, and OECD) to develop and provide open-source and reusable SDMX solutions. The presentation discussed how the community could benefit from synergies among organizations, as well as building open-source tools and models, accessible to all. The session also showed the development of an SDMX connector in PowerBI, provided by OECD (as open source under [SIS-CC](#)), in collaboration with [Curbal](#). The SDMX-PowerBI connector has been certified by Microsoft and will be available in the standard installation worldwide starting this fall. Next, the session highlighted a partnership between the Australian Bureau of Statistics (ABS) and ESRI to provide an SDMX API for geospatial data in ArcGIS. These collaborations with Microsoft and ESRI highlighted a rising interest in the private sector to integrate SDMX connectors in data management and visualization tools. The session also stressed how SDMX can be used in modern data science programming languages. Statistics Netherlands presented an R tool to validate data using metadata retrieved from SDMX registries. UNICEF developed a Python tool using SDMX data to automate multilingual print and digital publication.

Session VII Building a Sustainable SDMX Roadmap (chaired by World Bank) presented the findings of the SDMX Survey, a bi-annual survey conducted prior to the SDMX Global Conference which aims to measure acceptance level, challenges and implementation plans of SDMX in official statistics. 48 agencies participated in this year's survey, compared with 81 in 2019. Most organizations perceive SDMX as 'very useful'. Dissemination and reporting continue to be the main uses of SDMX, although collection and internal data management are almost as popular. Global DSDs in demand are business statistics, population, housing and migration, and regional statistics. The session also featured a presentation by the World Bank on adopting a phased approach for implementing SDMX in countries with limited resources. It was noted that capacity building and all documentations should be available in multiple languages. A quick reference guide on SDMX was recognized as a significant factor to kick start implementation. Lastly, it was also recognized that buy-in from subject matter experts is very important to lead the effort, especially to explain the potential future benefits vis-à-vis the high initial investment cost. Finally, the session focused on how SDMX is enabling Open SDG data reporting, strengthening SDG dataflows for consuming and disseminating data.

The closing session presented a **panel discussion on capacity building** (chaired by Eurostat). This panel discussed training needs of organizations that aspire to implement SDMX, and how the SDMX community can address these needs. The need for capacity building has often been highlighted as one of the main challenges to widen SDMX implementation, and hence represents a potential barrier to global SDMX-based data exchange. The panel included senior representatives from different types of organizations: two representatives from regional organizations (Economic Commission for Latin America and the Caribbean and Eurasian Economic Commission) and three representatives from national organizations (Central Bank of Tunisia, Statistical Office of the Republic of Serbia, and National Institute of Statistics and Census of Costa Rica). The panelists highlighted that the support of Sponsor organizations was instrumental in the success of national and regional SDMX implementation projects (e.g., Eurostat for Serbia, UNSD for the Eurasian Economic Commission, and IMF for the Central bank of Tunisia). The discussion also highlighted the importance of peer-to-peer collaboration

for building SDMX capacity in national organizations, through examples of successful bilateral collaboration with statistical offices, central banks, and other data producing agencies of national statistical systems with high level of SDMX maturity. The discussion also highlighted the importance for Sponsor organizations to coordinate with regional bodies to establish SDMX implementation strategies at the regional level. The panel also highlighted the importance of having free and open-source SDMX IT tools, and the need for a wider availability of translated versions of key SDMX documents. While a lot of training material is available, a guide on how to best navigate it and use it is missing. Moreover, the training material is geared towards helping organizations supply data via SDMX. Specific training is required for organizations that want to collect data via SDMX (e.g., regional organizations). Finally, the panelists noted that a structural issue with SDMX capacity building in developing countries is the high rate of staff turnover due to favorable professional opportunities in other organizations (i.e., “brain drain” phenomenon).

The results from the feedback survey highlighted that most participants were satisfied with the content and structure of the conference (96%). Respondents found the content of the conference to be helpful to learn new things about SDMX (93%) and to be relevant to their work (89%). One fourth of respondent indicated that more time is needed for discussion. Participants attending the capacity building were also satisfied with the training program (92%) and the level of interactions during the training sessions (86%).