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Metadata flows within the Mexican technical norm for generation of basic statistics

I. Introduction

1. In Mexico the generation of statistical information is a federal responsibility of diverse administrative agencies, the National Institute of Statistics and Geography (INEGI) is the principal producer, furthermore INEGI is designated for the Law of the SNIEG as the coordinator of the statistical activities in Mexico. In this idea, INEGI has the function to promote the adoption of standards that improve the quality of the information.

2. In this context, the INEGI elaborated the Technical norm for the generation of basic statistics and he is promoting the adoption of international standards. These tasks must be aligned to obtain better results.

3. This document will present the advances in the implementation of the Technical standard, the DDI and the SDMX, underlining their interaction.

II. Mexican Technical norm (MXTN)

4. The Technical norm for the Generation of Basic Statistics takes as a regular object the generation of basic statistics needed by the National System of Statistical and Geographical Information (SNIEG), by means of the standardization of the processes, causing that the information fulfills with the requirements of relevancy, conceptual rigor, reliability, opportunity, accessibility, comparability, sufficiency and facility of consultation.

5. The standard establishes that the process for the generation of statistical basic information has the following stages:

- Planning of the project. The persons in charge of the project will have to establish: objectives of the project, the general strategies for the development of each one of the phases, the technologies of information and communication that will be in use, the

general program of the project, the structure of personnel, the budget for covering the activities of the project, the safety measures to protect the information and the mechanisms to document the decisions.

- Administrative control of the project. The persons in charge of the project will have to observe the program of administration of resources that should define the mechanisms of follow-up to the development of the project.
- Conceptual design. The persons in charge of the project will have to establish a conceptual frame, the instrument of capture, questionnaire or format of record, the manuals of capture and support for the application of the instruments of capture, the criteria of codification and validation of the information and the general plan for the publication of results.
- Sample design. The persons in charge of the project will have to assure reliable estimations of the variables of interest.
- Data collection design. The persons in charge of the project will have to cover the general program of operative of capture, in the same way they will have a staff, a procedure for the control of the coverage and quality in the filling of the questionnaires.
- Processing design. The persons in charge of the project will have to define and to test: IT support, telecommunications, the program of activities of the processing, the quality controls of each one of the activities, the schemes of report and analysis of results of every activity, the staff and the manuals of support for the different activities.
- Data collection.
- Processing
- Presentation of results. Besides the statistical results it is necessary to present the documentation that describes the general process of each one of the phases, as well as the results of the indicators used to measure the quality of the process in his different stages.

Table 1: Process of the phases along with quality indicator results

GSBPM	Technical norm INEGI
Specify Needs	Planning of the project Administrative control of the project
Design	Conceptual design Sample design
Build	Data collection design Processing design
Collect	Data collection
Process	Processing
Analyze	Presentation of results
Disseminate	
Archive	

III. INEGI's metadata

6. For more than ten years there was identified in the INEGI the need to offer the documentation to the users of the statistical information on the projects, arising the product Knowing the Statistics of Mexico (COESME) that compiled the basic metadata of projects.

7. From 1983 to 2008, Law of Statistical and Geographical Information was in force in Mexico. This Law was establishing as a task of the INEGI the elaboration of a Statistical National Record (REN) that is shaped by all the statistical projects that are realized in the country, INEGI chose a core set of information to characterize projects and offices of government responsible for the same ones.

8. On the other hand, with the advance in the technologies of the information there developed the Data warehouse (DWH) that allows an efficient access to the databases, for which is indispensable to have the documentation that it should facilitate the suitable use of the information, in this context the DWH generated a metadata with the principal characteristics of the projects and his databases.

IV. Adoption of the Initiative of Documentation of Information (DDI) in the INEGI

9. The general objective of the adoption of the DDI is the integration of the metadata of the projects and their products, in a scheme that allows to take advantage of the INEGI's experience as metadata producer and to have an efficient process.

10. The INEGI concluded the documentation of eight surveys. At this moment we are documenting the censuses of population and housing, economic censuses and ten sample surveys, that was developed in the Clinic of production of files DDI that took place from August 29 to September 9 and was financed by the OECD and the World Bank.

V. Adoption of the SDMX in the INEGI

11. In 2005 the INEGI elaborated a matrix of flows of information about the form in which the OECD requests and receives statistical information of Mexico, INEGI found that the mechanisms to request the information are diverse and many are not institutional one, which complicates to check the quality of the information and especially to have constant flows of information, in this way INEGI decided to work in the implementation of the SDMX as technological standard for the transfer of data and metadata.

12. The first step of the implementation was to check the requirements of the OECD and the International Monetary Fund, to know the characteristics of the information requested. Later there were checked SDMX's web services to adapt the information of the INEGI to the schemes needed by the OECD and the IMF.

13. Today, INEGI works in using increasingly the SDMX to transfer information between international organizations and to Mexican government agencies, using statistical specific domains

in the implementation of the standard, in addition INEGI works in adopt the SDMX in the National System of Statistical and Geographical Information (SNIEG).

VI. Metadata flows

14. INEGI established that in the process of production of the DDI documentation they must also develop at the same time projects to improve documentation quality.

Table 2: Phases of GSBPM mapped to DDI

GSBPM	Technical normINEGI	DDI	INEGI's metadata
Specify Needs	Planning of the project Administrative control of the project	Producers and sponsors Scope	
Design	Conceptual design Sample design	Coverage Sampling	
Build	Data collection design Processing design	Data collection Data processing	
Collect	Data collection	Data collection	
Process	Processing	Data processing	
Analyze	Presentation of results	Materials of reference Data bases Data evaluation	COESME DWH REN SDMX
Disseminate			
Archive			
Evaluate			

15. DDI metadata should be the main input in the development of other metadata, SDMX is also the tool that should be used for transferring data.

VII. Conclusions

16. The Technical norm is an important tool in the efficient adoption of the DDI and SDMX, since it allows the consolidation of knowledge of the producers of information of the benefits of the standards.