

ORGANISATION FOR ECONOMIC COOPERATION AND
DEVELOPMENT (OECD) STATISTICS DIRECTORATE



Administrative Unit: DIRECCION GENERAL DE INTEGRACION, ANALISIS E INVESTIGACION	
1. Project: Quality Assurance System of the Statistical Information	2. Code: M-DI-SAC-002
	3. Version: 001
	4. Date: September 2011

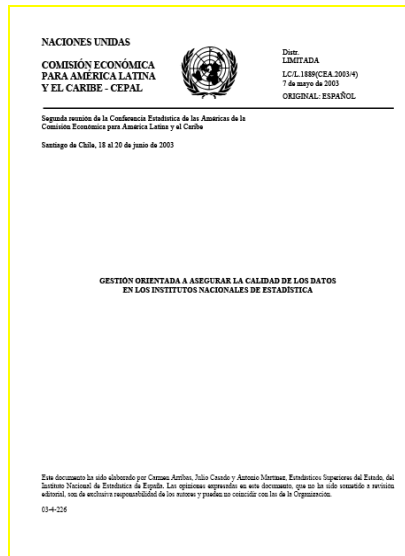
10 **Workshop on Statistical Metadata (METIS)**
(Geneva, Switzerland, 05-07 October 2011)

I. Background:

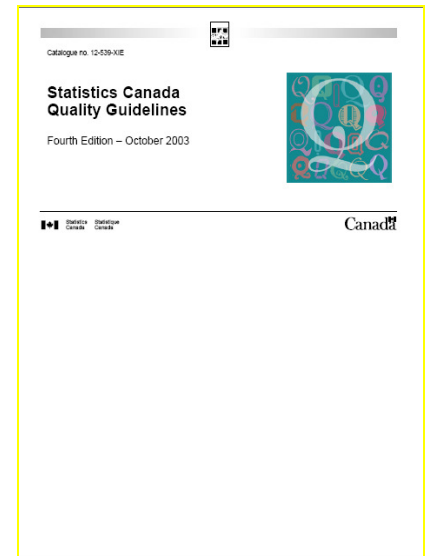
1. The quality in the generation and delivery of statistical information has been one of the issues that has been discussed and analysed by different information-producing units at international level, it is of great magnitude and importance that agencies such as UN, EUROSTAT and OECD, among others, have been developing a series of regulations and standards that are targeted to standardize criteria and guides, in such a way, that the methodological basis can be established to ensure the quality of the information provided to the society.

2. In the advances on the field of information, the work carried out by INE Spain within the context of the Economic Commission for Latin America and the Caribbean (ECLAC) stands out, issuing the guidelines related to management, to ensure the data quality in the national institutes of statistics, the efforts made by EUROSTAT with its best-practices code of european statistics, as well as the different proposals developed by institutes or agencies dedicated to the production of statistical information in their respective countries, such as the Ministry of Industry Canada (quality guides or guidelines), DANE Colombia and INE Chile among others.

INE SPAIN (ECLAC)



CANADA



3. The quality of the information has been widely discussed and analyzed in different international forums, generating a great quantity of guides and reference frames, which broadly and in general terms consider two large environments where the principles or lines for the quality of the information are established, as first instance, those related to the process of information production and secondly, the considered attributes or features of the Final product that is delivered to the customers and users.

4. The concepts and structures can be summarized as:

PROCESS

- Development and implementation of institutional quality models.
- Development and implementation of Quality Management Systems.
- Preparation and collection of data for assessment of quality information.
- Development and monitoring of quality information indicators.
- Preparation of standard quality reports.

PRODUCT

- Determination of the attributes or features of information such as: relevance, accuracy, opportunity, accessibility, comparability, coherence and completeness.
- Development, implementation and monitoring of indicators for assessing the attributes or features of the information quality.

IMF-WB

Fifth Review of the Fund's Data Standards Initiatives - Data Quality Assessment Framework and Data Quality Program

Home | What's New | Site Map | Site Index

International Monetary Fund

About the IMF | IMF at Work | IMF Finances | Country Info | News | Publications

FIFTH REVIEW OF THE FUND'S DATA STANDARDS INITIATIVES
Data Quality Assessment Framework and Data Quality Program
 Prepared by the Statistics Department
 (in consultation with other departments)
 June 25, 2003

I. Introduction

II. The Data Quality Assessment Framework

III. Refinements to the DQAF

IV. The DQAF at the Center of the DQP

V. Priorities for Future Work

Text Boxes

1. [Data Quality Program \(DQP\)](#)
2. [Hedone to Define a Road Map for Statistical Development](#)

Appendix

I. Introduction

1. The Data Quality Assessment Framework (DQAF) was developed to address the Executive Board's interest in data quality as expressed during the December 1997 discussion of the Progress Report on the Provision of Information to the Fund for Surveillance.¹ This interest was reaffirmed at the Third Review of the Fund's Data Standards Initiatives in March 2000 and during the discussion of Data Provision to the Fund for Surveillance Purposes in June of that year. A paper outlining the DQAF was presented to the Executive Board in July 2001.

<http://www.imf.org/external/press/pr03062503eng/03062503.htm> (1 of 11) [24-Jun-04 12:17:16 PM]

EUROSTAT

EUROPEAN COMMISSION
 EUROSTAT

DESAP

The European
 Self Assessment Checklist
 for Survey Managers

Name of the country:

Name of the Survey Manager:

Date:

5. Following up on the points mentioned before, and with the objective of implementing mechanisms to support the development of management systems for the quality of information, some agencies have created tools to evaluate and develop reports, such as the International Monetary Fund in collaboration with the World Bank, are developing the framework to assess the quality data production (Data Quality Assessment Framework and Data Quality Program).

6. EUROSTAT also proposed a self-assessment system for the quality of statistical information, based on the development of questionnaires that consider a best practices code (Development of a Self-Assessment Programme).

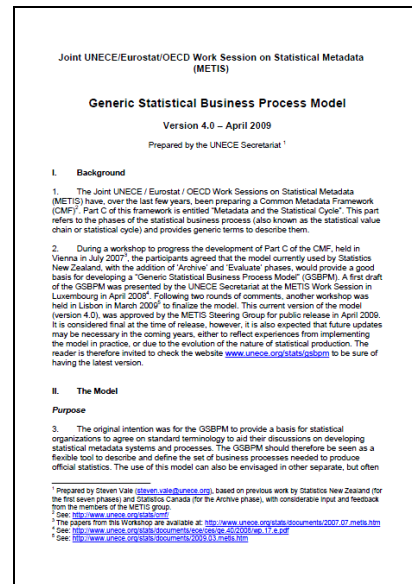
7. Another example is the development achieved by the DANE of Colombia with support from the quality regulatory frameworks and the incorporation of ISO's 9001 elements and structures: In 2000 develop the project called, "Development of a management system addressed to the precepts for a final internal information certification".

8. We can assure that there is a series of work and effort put on the establishment of mechanisms, guidelines and recommendations to improve the quality of statistical information, through the development of frameworks and management systems within institutes or organizations. However it can be concluded that up to date, the impulse of creating self-assessment questionnaires to obtain information that would help in taking action in the improvement of statistical production has more weight.

9. It is important to mention the large amount of existing information in the context of the development of demographic and economic statistics, identifying within, the same standards of general or specific application, rules and regulations, methodologies, recommendations and even suggestions of important usefulness for the different institutions or organizations, that base on them to establish alignment strategies with international agencies.

10. Particularly the case of the work done by the UNECE, EUROSTAT and the OECD related to the Generic Statistical Business Process Model, which aims to establish a standard terminology to support the development of systems and statistical processes related to metadata.

11. This work is targeted, at roughly disclosing the components and elements in a quality assurance system and their interrelations with the Generic Statistical Business Process Model and finally with the Metadata Management.



II. Objectives:

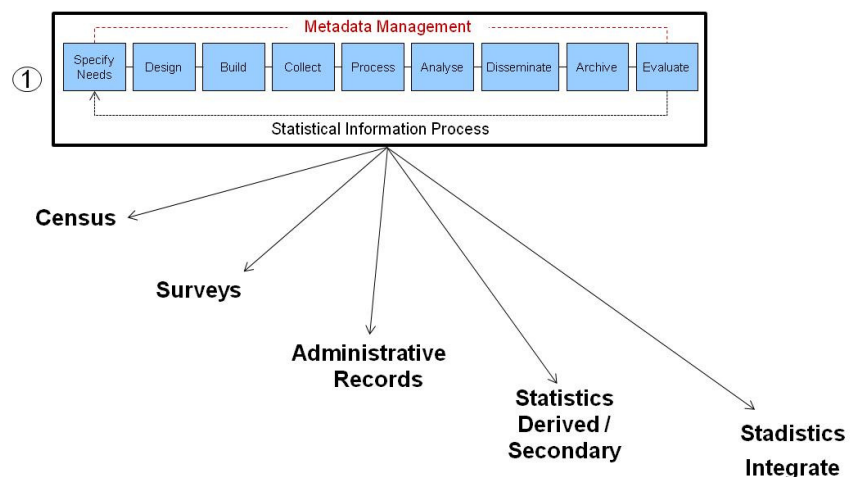
12. The objectives include to

- Present the General Quality Assurance System for statistical information that allows warranting the proper implementation of the national and international policy frameworks, of the established methodological basis, the compliance of the determined policies, the objectives, principles and values, as well as the proper and transparent use of resources allocated.
- Generally analyze the interrelations and coordination of the Quality Assurance System with the Generic Statistical Business Process Model and finally with the Metadata Management.

III. Quality Assurance System for Statistical Information:

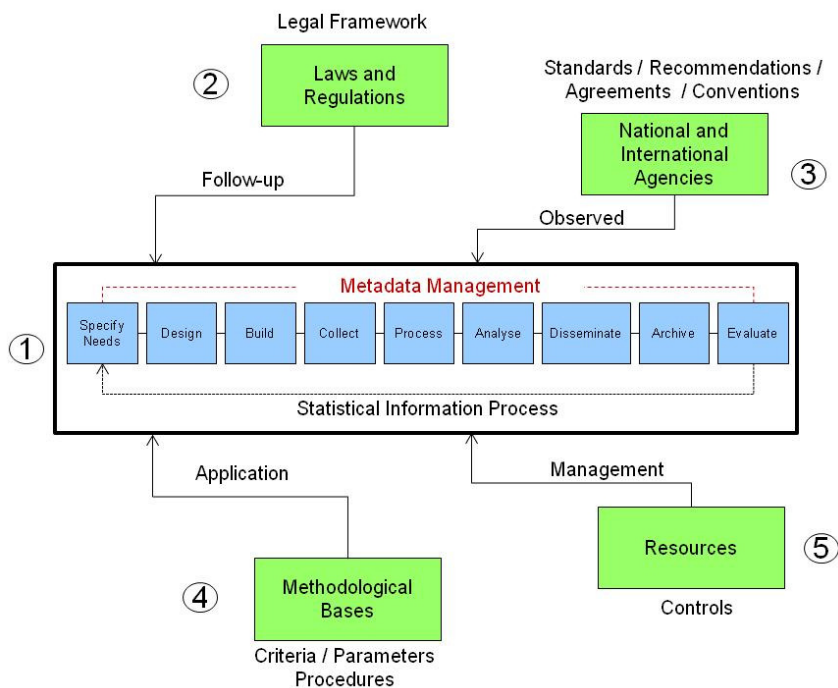
13. Once each of the constituent elements of the model for certification, accreditation or evaluation of the quality of statistical information are determined, and based on the interviews with specialists, as well as the analysis of information on best practices, the definition, construction and description of the different constituent parts can then be defined.

14. The system must consider the different elements and components in the process of the generation of statistical information, the first element, is the identification and definition of the phases or stages of the process of generation or production of statistical information, understanding that it may be at more or less detail; everything depends on the organizational elements that are available, and the analytical interpretation given.



15. According to the Generic Statistical Business Process Model, nine phases or stages of the process for the generation of statistical information were identified: Specify Needs, Design, Build, Collect, Process, Analyze, Disseminate, Archive and Evaluate, resulting in the development of census, surveys, administrative registers, derived statistics and the integration of statistics.

16. It is important to mention that within each of the stages or phases of the process, the principles and actions related to the management of metadata are developed and applied.



17. Regarding the second element, to do with the compliance and monitoring of the laws, it establishes regulations and standards, in other words, the legal framework governing and in force, for the generation or production of statistical information, which in INEGI's case is mainly the LIEG, which considers all the sections related to this concept. Likewise, there are other regulations that are not directly applied like the LIEG, but still must be complied; like the Transparency and Access to Governmental Public Information Law and the Federal Public Administration Organic Law, among others.

18. The third element due to its importance, must be related to the other stages of the process (first element), it is constituted by the observation, the fulfillment and monitoring of standards, recommendations, agreements and commitments established by and with

international and national agencies, which are normally defined through cooperative agencies and the multinational participation like the ONU, OCDE, OIT, EUOSTAT, among others, applying the best practices worldwide.

19. The importance lies in defining the regulating framework and the criteria to which the alignment is convenient and necessary, so that the information that is generated or produced by the Institute is backed up and recognized by these agencies; Moreover, we have platforms that allow us to perform comparisons that support new research and improve the established methods and procedures.

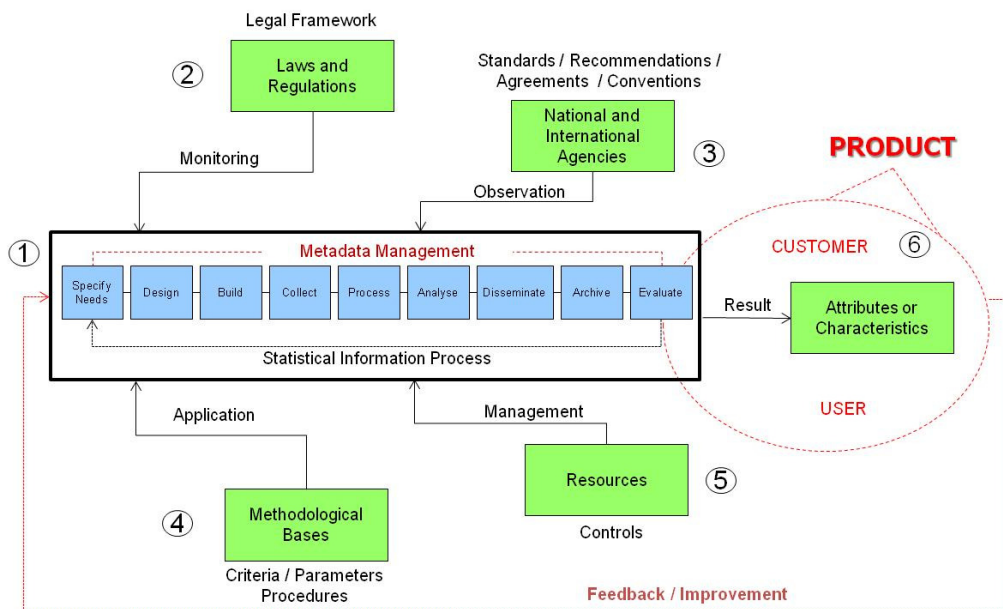
20. The fourth element of the model has to do with the fulfillment and monitoring of the methodological bases used and developed in each stage of the generation or production of statistical information.

21. It is clear to say that some of the methodological basis have already been defined within the standards, recommendations, agreements and suggestions in the range of national and international agencies.

22. In general, the methodological basis together with the standards, recommendations, agreements and suggestions originate technical regulations and are the guidelines or specific guides that sustain the operation of the different stages and procedures of the generation or production of the statistical information process; These rules are generally recognized and agreed upon, by the institutions or units involved or that are part of certain agency.

23. The fifth element considers all the necessary resources for the operation. Ranking from the budget programming to the allocation of resources. In this regard, it is necessary to have a management system of human, financial and material resources to optimize and give transparency in its use, based on programs, control procedures and the development of the Statistical Information Process that guarantee the generation of information.

24. We can then summarize that the first five elements are directly related to the operating process.

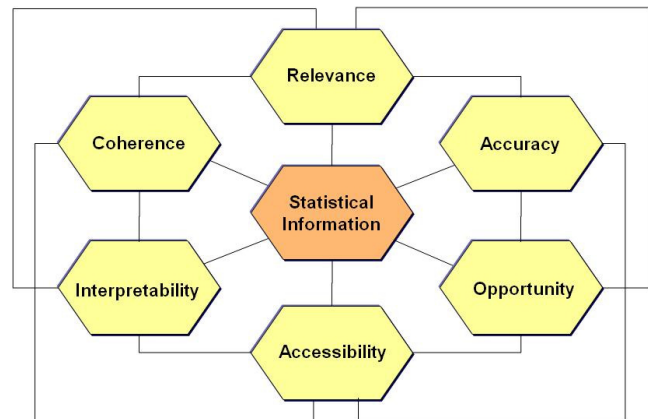


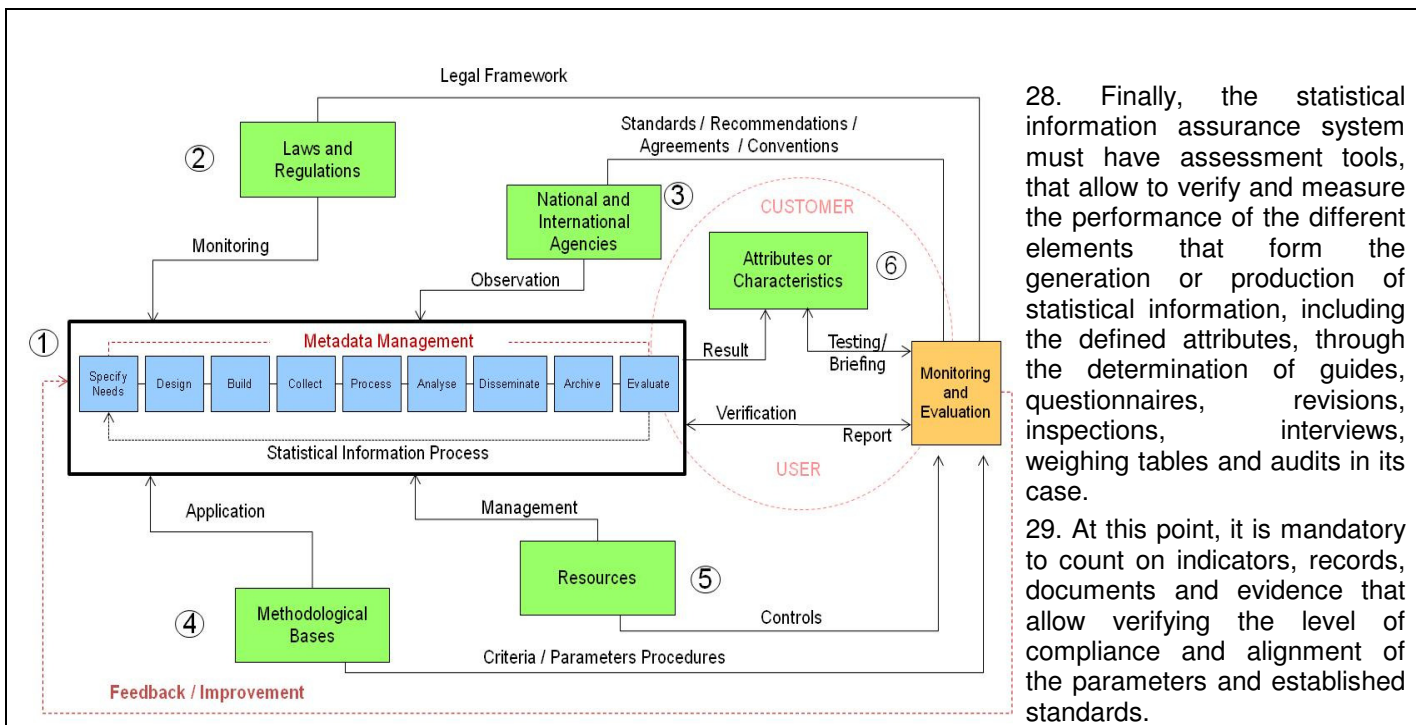
25. The sixth element is directly associated with the so called "product" and is closely related to the satisfaction of the needs and expectations of customer's information, users and society in general.

26. We refer to the attributes or features of statistical information, which according to the consulted information can be framed in the following 6 quality categories: relevance, accuracy, opportunity, accessibility, interpretability and Coherence.

27. Where each of them, in general terms mean:

- a. **Relevance:** reflects the degree of adequacy of statistical information to the real needs (current and future) of customers and users.
- b. **Accuracy:** It represents the degree of correction with which the statistical information describes the phenomena it intends to measure.
- c. **Opportunity:** It refers to the time between the end of the collective operative and the date in which the results are made available to customers, users and society in general.
- d. **Accessibility:** It refers to the ease with which anyone can know the existence of information, locate it and make use of it.
- e. **Interpretability:** It reflects the supplementary information availability, and the necessary metadata, that allow the proper interpretation and use of the information.
- f. **Coherence:** It refers to the comparison that can be made among statistics. The evaluation and comprehensive monitoring in the process of generating information and its five elements, as well as the product, with its quality attributes, will allow proper timely decision-making, to comply with the established quality specifications for the delivery of statistical information to customers, users and society in general.





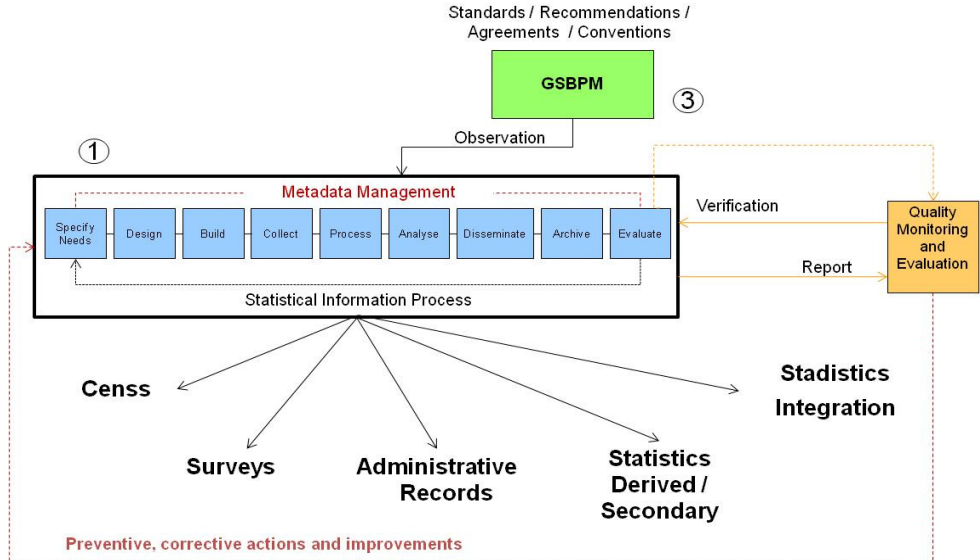
28. Finally, the statistical information assurance system must have assessment tools, that allow to verify and measure the performance of the different elements that form the generation or production of statistical information, including the determination of guides, questionnaires, revisions, interviews, weighing tables and audits in its case.

29. At this point, it is mandatory to count on indicators, records, documents and evidence that allow verifying the level of compliance and alignment of the parameters and established standards.

30. In the Statistical Information Process, the quality assessment is established as the final part of the same, however, when you have established a quality assurance system, the validation and revision of the elements and components for the process as well as for the product, are carried out permanently, in accordance with the established objectives and strategies.

31. We can therefore identify two assessment instances, the one that corresponds to the part of the operational development and the one that corresponds to the compliance of all the elements and components related to the statistical information generation process as well as to the compliance of the information attributes (product).

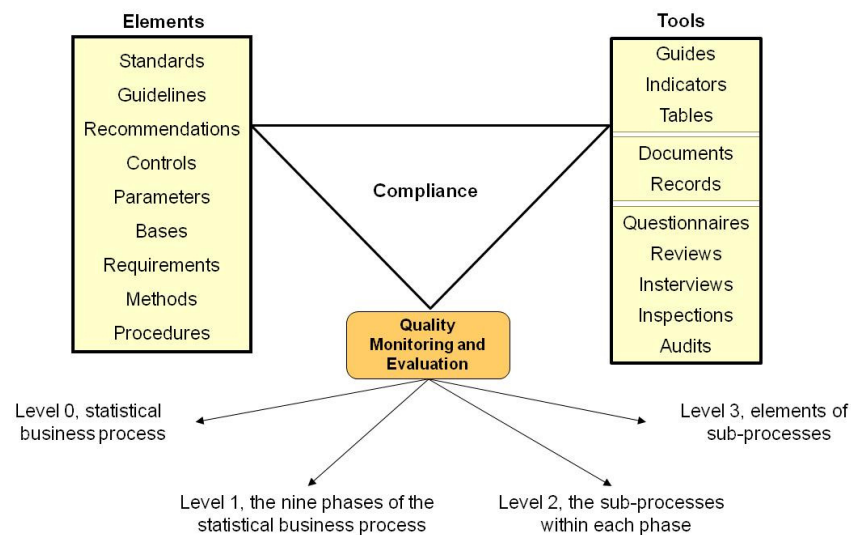
The intention is for the GSBPM to be applied to all the activities undertaken by producers of official statistics, at both the national and international levels, which result in data outputs. It is designed to be independent from the data source, so it can be used for the description and quality assessment of processes based on surveys, census, administrative records, and other non-statistical or mixed sources.



32. Quality management also involves the evaluation of groups of statistical business processes, and can therefore identify potential duplication or gaps. All evaluations should result in feedback, which should be used to improve the relevant process, phase or sub-process, creating a quality loop.

33. Quality management can take several forms, including: Seeking and analysing user feedback; Reviewing operations and documenting lessons learned; Examining process metadata and other system metrics; and Benchmarking or peer reviewing processes with other organizations.

34. The quality assurance system within its structure and operation considers the four evaluation levels established in the GSBPM, which have to do with the Statistical Information Process, it also recognizes the nine phases of threads, and finally each of the elements and components.



35. In the process, the methods and time for evaluation must be established or the identified methods that must be complied, considering their features and the levels in which they must be developed. With the above, the evaluation will focus on the verification of the evidence that will allow us to confirm the compliance of the different elements, supporting on everything that facilitates the identification of these, such as guides, indicators and tables among others. To verify, the documentation and records that show the state of compliance must be available. All of the above can be done with the support and monitor of surveys, interviews, revisions, inspections or even audits.

36. Referring to the interrelation of the Metadata Management and the Statistical Information Quality Assurance System, the evaluation phase must provide information related to the fulfillment of its 16 principles.

Metadata handling:

- a) *Statistical Business Process Model.*
- b) *Active not passive.*
- c) *Reuse.*
- d) *Versions.*

Metadata Authority

- e) *Registration.*
- f) *Single source.*
- g) *One entry/update.*
- h) *Standards variations.*

Relationship to Statistical Cycle/ Processes

- i) *Integrity.*
- j) *Matching metadata.*
- k) *Describe flow .*
- l) *Capture at source*
- m) *Exchange and use*

Users

- n) *Identify users.*
- o) *Different formats.*
- p) *Availability.*

IV.- Change control

Revision	Pages	Nature of changes	Comments
01	1 a 6	Original document	For conference presentation point (iv) The GSBPM and the quality management process. Workshop on Statistical Metadata: Implementing the GSBPM1 and Combining Metadata Standards. Geneva, Switzerland, from 5-7 October 2011.

V.- Historical

Revision	Date	Developed by	Revised	Approved
01	07/09/2011	Enrique Ledesma	Juan Muñoz / Erick Rodríguez	Enrique Ordaz