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**EUROPEAN COMMISSION
STATISTICAL OFFICE OF THE
EUROPEAN COMMUNITIES (EUROSTAT)**

**ORGANISATION FOR ECONOMIC
COOPERATION AND DEVELOPMENT (OECD)
STATISTICS DIRECTORATE**

Joint UNECE/Eurostat/OECD meeting on the management of statistical information systems
(Bratislava, Slovakia, 18-20 April 2005)

**REPORT OF THE JOINT UNECE/EUROSTAT/OECD MEETING ON
MANAGEMENT OF STATISTICAL INFORMATION SYSTEMS**

Prepared by the UNECE secretariat

1. The Joint UNECE/Eurostat/OECD Meeting on the Management of Statistical Information Systems was held in Bratislava, Slovakia, from 18 to 20 April 2005. It was attended by participants from: Australia, Austria, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Latvia, Lithuania, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Turkey, United Kingdom, and United States of America. The European Commission was represented by Eurostat. Representatives from the following international organizations also attended: United Nations Educational, Scientific and Cultural Organization (UNESCO), Organization for Economic Cooperation and Development (OECD), the International Monetary Fund (IMF), the European Central Bank (ECB), and the Bank for International Settlements (BIS).

2. Mr. Peter Mach, President of the Statistical Offices of the Slovak Republic addressed the meeting at the opening session. In his introductory speech he referred to the links between the work of the UN and the Conference of European Statisticians to Bratislava through founding the present INFOSTAT as the former Research Computing Centre of the UN and the history of seminars on Integrated Statistical Information Systems and Related Matters (ISIS) that took place in Bratislava regularly until 1996. He highlighted the importance of management and good governance of information systems for statistical offices, as evidenced by exceptionally high participation of about eighty delegates of national and international statistical offices.

3. The agenda of the meeting (CES/AC.71/2005/1) consisted of the following substantive topics:

- (i) IT governance in statistical offices;
- (ii) Development strategies for statistical information systems;
- (iii) XML and web services;
- (iv) Review and follow-up to the activities of the Conference of European Statisticians.

4. Mr. Mel TURNER (Canada) acted as Chairman of the meeting. The preparation of topics (i) to (iv) was organized by: Ms. Cathy Wright (IMF); Mr. Lars Thygesen (OECD); Mr. Marton Vuksan (Netherlands); and Mr. Juraj Riecan (ECE).

RECOMMENDED FUTURE WORK

5. In line with established practice, the participants put forward their proposals for future work to the members of the Steering Group that synthesized the proposals into a consolidated proposal. This discussion and final recommendation was made at the last plenary session of the meeting.

6. The participants stressed that IT specialists from national statistical offices are usually exposed only to internal users and have very few opportunities for international exchange of experiences. They therefore appreciate this opportunity provided by the three international organizations sponsoring MSIS. They considered the following topics as being of common interest for the future exchange of experiences:

- (i) Changes in statistical processes;
 - Enterprise architecture;
 - Data warehousing;
 - Metadata;
 - Production/quality control;
 - Use of data from administrative and other public sector sources;
 - Harmonization of concepts;
 - Linkage and privacy protection including legislation;
 - Subject area specific issues;
- (ii) Dissemination and client relations;
 - Changing users' profiles;
 - Content management systems;
 - Audience management (feedback, etc.);
 - Respondents needs;
 - Access to microdata;
- (iii) IT service management;
 - Outsourcing;
 - Off shoring;
 - Contracting;
 - Partnering;
 - Changes to management structure;
 - Potential collaboration;
 - Sharing web services components;
 - Common terminology across the organizations.

7. The participants also recommended balancing better the time allocated for presentations and discussion, while keeping a possibility for authors of supporting papers to address the meeting. They asked the Steering Group to develop a template for presentations.

8. The delegates of Bulgaria and Croatia expressed their willingness to host some of the future meetings. The participants asked the UNECE Secretariat to discuss the practical arrangements with the Statistical Offices of Bulgaria and Croatia.

FURTHER INFORMATION

9. The participants thanked the Statistical Office of the Slovak Republic and its research institute INFOSTAT for hosting the meeting and providing excellent facilities for its work.

11. The conclusions reached during the discussion of the substantive items of the agenda are contained in the Annex. Presentations and all background documents for the meeting are available on the website of the UNECE Statistical Division (<http://www.unece.org/stats/documents/2005.02.dissemination.htm>).
12. The participants adopted the present report before the Work Session adjourned.

ANNEX

SUMMARY OF THE MAIN CONCLUSIONS REACHED AT THE JOINT UNECE/EUROSTAT/OECD MEETING ON MANAGEMENT OF STATISTICAL INFORMATION SYSTEMS

Topic (i): IT governance in statistical offices

Discussant: Cathy Wright (IMF)

Documentation: Invited papers by Austria, Finland and United Kingdom; supporting papers by France, Ireland, Sweden, Switzerland and ECB

1. The participants considered several IT governance models. These differ often by the drivers (technological trends, benefits, business requirements, etc.). They agreed that the right IT governance model depends on the overall business context (statistics). For statistical offices it is necessary to combine knowledge in statistics and information technology. In an ideal situation, development of skills and modernization in the field of IT and in the field of statistics should be closely linked together, and influenced by the overall strategy of the office and the IT strategy. It was not easy to draw a line between a statistical and IT organization. Therefore, some participants opted to speak about information management comprising infrastructure, operational standards (e.g. storage, metadata, etc.), applications and statistical business processes. There is still some way to go to reach this ideal situation of harmony between the IT and business processes, and the time it takes may differ from office to office.
2. In many cases, a unique IT governance structure covers both the IT infrastructure and applications/systems development and maintenance. However, some participants suggested that it might be good to distinguish between these two aspects. Delegates expressed the opinion that it was of a paramount importance that the head of IT be part of the overall management of the office. This seemed to be a reality in about half of the offices represented at the meeting.
3. The stakeholders expect value for the investments put into modernization. This can be represented by decreased costs, increased output or a combination of both. The question of what proportion of the IT budget related to the office's total budget was raised and some examples quoted were around 10-15%. The participants agreed that it is difficult to estimate the value of IT to an organization only in monetary terms, as there are also general benefits in improving statistical production.
4. A quick survey conducted in the conference room showed that centralized IT services prevail in most offices, while there are others where the IT management is significantly decentralized. Differences in approaches reflect the specific organizational setup (budget, legislation, relationship with other departments, internal organizational structure, etc.). In decentralized models, the subject-matter departments (business owners) take part of the responsibility for managing and financing IT-related functions. This may create some difficulties for development of horizontal systems. There was a suggestion that horizontal systems may be financed through a costs recovery approach, which also works in some countries using the centralized model.
5. Various approaches to outsourcing were presented, as compared to in-house IT services. The work outsourced may mean, in some cases, real outsourcing to an external company; in other cases to another government agency and finally, it could also mean just a division of labour within a statistical office with a rather decentralized internal structure.
6. Documentation of business processes was mentioned as one of the preconditions for IT support. This helps the statistical office to find synergies between the various processes and to harmonize the IT applications. Another aspect of documentation is represented by the service level agreements between the IT services and subject-matter departments. Depending on the local conditions there may be more formal agreements or, in other cases, more collegial relationships.

Topic (ii): Development strategies for statistical information systems

Discussant: Lars Thygesen (OECD)

Documentation: Invited papers by Netherlands, United Kingdom, United States, Eurostat/OECD; supporting papers by Armenia, Bulgaria, Poland, Romania, Slovakia, Serbia and Montenegro.

7. IT-related projects in statistics are becoming more complex. As a consequence, there is a need for more professional and formalized project management. The management methods comprise all stages from formulating business cases through high-level and more detailed specifications, testing, and users' acceptance. Traditionally project managers were from the IT departments, but now there are also project managers from the statistical business side. The participants suggested that the managerial competencies were more important than from what unit the manager was coming from. The change of management culture should be gradual and it should first be applied to new and more important projects.

8. Past experience has shown that the amount of documentation for some projects was too large in proportion to the actual size of the project. As a consequence, the users had difficulties to accept it. A solution would be to scale the size and level of detail according to the actual importance and size of the project. In some offices the situation was improved by reducing the volume of documentation while keeping its essence.

9. With respect to skills and competencies, the participants considered that the structure of the staff should cut across various age groups combining fresh ideas with experience. Renewal may apply to new recruitment as well as to training and upgrading of skills.

10. Past experience has also witnessed a number of failures of generalized systems. A possible cause could be that they were initiated by the IT organization. The insufficient involvement of business owners might cause a vulnerability to the change of environment and statistical processes themselves.

11. The discussion also touched on the issue of proportion of electronic vs. hard copy publishing. While the Internet is rapidly gaining a dominant position in dissemination of statistics, there still seems to be a place for hard copy publications. Translated into the field of information systems this necessitates implementation of integrated approaches permitting simultaneous issuance of electronic and paper publications and decreasing the burden of their preparation.

Topic (iii): XML and web services

Discussant: Marton Vuksan (Netherlands)

Documentation: Invited papers by Netherlands, OECD and Eurostat; supporting papers by Germany, Italy, United Kingdom and ECB.

12. An automated database access was discussed at the meeting. There are various motivations for such access, some of them being: the need for data/metadata users to look regularly for updated information on the same topics; decreased burden on national statistical offices when reporting to international organizations; keeping in line with the general development of web services, etc. In this connection, the participants also stressed the security of ensuring the data repositories. The offices represented at the meeting usually offer the web services free-of-charge.

13. The participants considered XML as a prospective choice when looking for a format suitable to link various modules of a statistical information system. In this way, for example, the modules for the web and print publishing may be linked from a unique source. Another example is modules corresponding to different phases of statistical survey processing. International standards (e.g. SDMX-ML) or internal standards may be applied.

14. XML format is also used for dissemination to external users. Push and pull mechanisms were compared in this connection. When using the push approach (e.g. SDMX-EDI) the data provider sends data in

the standardized format to the data recipient, who has an interface to process the message. The pull approach (e.g. SDMX-ML) allows the data provider to publish data on the web service once and interested recipients may download the data/metadata in an automated way, when they need them.

15. The participants noted the progress report on the SDMX initiative, originally submitted to the UN Statistical Commission. The SDMX standards are intended for the exchange of aggregated statistics. Version 1.0 standards focused mainly on data and structural metadata and some technical aspects. On the other hand version 2.0 will be strongly oriented towards metadata – statistical concepts, Metadata Common Vocabulary, etc. Interested statistical offices may find more information on the website <http://www.sdmx.org>. However, the present website contains highly technical documents and is lacking general overview information for newcomers. Progress in this direction is expected to accompany the work on version 2.0 of the SDMX standards.

16. In summarizing the discussion, it was highlighted that the majority of XML and web services applications are positioned in the area of dissemination. However, there were some examples of data collection applications. The statistical offices would welcome generic dissemination tools (“of-the-shelf”) that could be used by everyone, but none are available at present.

Topic (iv): Review and follow-up to the activities of the Conference of European Statisticians

Discussant: Juraj Riecan (UNECE)

Documentation: background papers by the UNECE

17. The participants discussed the results of the pilot survey on e-services in national statistical offices on the basis of the summary drafted by the UNECE Secretariat (CES/AC.71/2005/25). They agreed that it may be more appropriate to share their experiences through a direct discussion rather than through a full-scale survey, and to use the results of the pilot survey to identify the topics of interest.

18. The participants also took note of the ongoing activities of the Conference of European Statisticians in the area of (i) management of statistical information systems; (ii) statistical metadata; (iii) statistical data editing; and (iii) technical aspects of statistical data confidentiality.

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