TWINNING PROJECT

Support to Development Process in the State Statistics Service of Ukraine with the Objective to Enhance its Capacity and Production

Ukraine



REPORT ON

a unified web portal for official statistics of Ukraine based on the results of

THE STUDY VISITS

to

Statistics Lithuania

August 31 – September 2, 2015, Vilnius, Lithuania

ISTAT Italy

September 21 – 23, 2015, Roma, Italy

Statistics Finland

September 21– 24, 2015 , Helsinki, Finland

Statistics Estonia

September 23, 2015, Tallinn, Estonia

Component 13 Effective Communication with Media and Public

Activity 13.3 Study Visit on Effective Communication with Media and Public + Image

Component 15 Use of Web Portal Solutions for Distribution and Exchange of Statistical Information

Activity 15.2 Study visit on Preparation of the Tender for the SSSU´s new Web Portal to ISTAT, Italy

Component 16 Data Collection

Activity 16.2 Study visit on Preparation of the Tender for the SSSU´s new Web Portal

In September 2015, under the framework of the Twinning Project "Support to Development Processes in the State Statistics Service of Ukraine with the Objective to Enhance its Capacity and Production", study visits of the State Statistics Service of Ukraine's (SSSU) specialists took place to the statistical services of Lithuania, Italy, Finland and Estonia.

These visits were aimed at familiarisation with experiences on creation and operation of official statistics web portal, taking into consideration international standards, modern technologies and approaches to development and maintenance of web portals, and best statistical practice. A brief overview and outcomes of the study visits are as following.

For data processing and analysis, the Statistics Finland uses statistical databases created with the PC-Axis software (developed by Statistics Sweden and used mainly in the Nordic countries such as Denmark, Norway, Finland, Iceland, and Greenland). The PC-Axis software has the standard model and structure of metadata, and the rules on how to use it. This provides prompt publication of output indicators on the web portal in PX-Web format. PX-Web databases are a part of the PC-Axis software. However, given the growing users' needs, the shortcomings of such PX-Web databases consist in inability to combine data from several different tables.

In October 2009, the Italian National Institute of Statistics (ISTAT) took a decision to set up a new warehouse for statistical data and metadata. In July 2010, the Istat joined the Community Statistical Information System Collaboration (SIS-CC) to study the OECD experience on how to set up a unified corporate data warehouse .STAT.

In 2002, the OECD developed the database .STAT. It is the central warehouse of verified data and associated metadata, which allows combining the processes of data production and dissemination. The .STAT technologies support all modern standards and best practices: GSIM, GSBPM, SDMX (XML and JSON), etc., and allow exporting into formats, such as PC-Axis, Excel, CSV, SDMX. Since 2007, the OECD started to distribute software basic components of its statistical information system (SIS) within the framework of cooperation with the IMF on development of statistical data warehouse OECD.Stat. Therefore, SIS-CC for experience exchange was organised. Today it includes nine international organisations and national statistical institutions: Australian Bureau of Statistics, International Monetary Fund, Italian National Institute of Statistics, National Bank of Belgium, Organisation for Economic Co-operation and Development, Statistics Estonia, Statistics New Zealand, UNESCO Institute for Statistics, UK Data Service.

In December 2010, in close cooperation with SIS-CC, experts from the ISTAT completed development of the data warehouse I.Stat; and in March 2011, a new warehouse was presented online to all users. In the nearest future, Istat is going to complete data migration from the old database to the I.Stat and to extend the functionality of the new portal to external users. Current solutions regarding the existing ISTAT web portal are developed and operated by the Institute experts without programmers outsourcing. The IT team (I.Stat development and installation, maintenance and administration of SQL Server, Windows Server, firewall, proxy, DNS, etc.), the group of portal content management and the team to support cooperation with the SIS-CC are involved in the I.Stat implementation. The Istat's experience shows that the existence of an institution’s own team for portal solutions development permits to use successful experience gained by other SIS-CC organisation members when developing systems for dissemination of statistical information.

Statistics Estonia until recently has used databases developed with the PC-Axis software. However, the service specialists have reached conclusion on functional insufficiency of the PC-Axis and PX-Web Tools to satisfy users’ growing needs in statistical information. Therefore, in 2012 the Statistics Service of Estonia began switching over to the .STAT data warehouse and in April 2013, became a SIS-CC member. This helped it to accelerate the development and introduction of new dissemination database. It is planned to introduce portal solutions based on the .STAT in late 2015. Estonia Statistics Service experience shows that good practice is the availability of a qualified specialist who would understand how the warehouse .STAT works, setting realistic dates for implementation of portal solutions and willingness to accept the fact that the first version of the new functionality will always have errors which need time to correct.

Given the absence of own software designers, Statistics Lithuania has outsourced experts into the project on development of a new statistical web portal. Several procurements were performed, the first of which was the procurement of software to create a web portal. During the first phase of the project implementation, the tender winner– the portal designer – undertook analysis of the situation and developed technical specifications for the procurement of hardware that would meet all requirements to the future portal of statistical information. In the second phase of the project on development of portal software, appropriate hardware (servers, network equipment, etc.) was purchased.

Statistics Lithuania practice on use of VMware virtualisation for web portal is of some interest. On the one hand, it has reduced purchase costs for the hardware (servers). On the other hand, the problems have risen with a full functioning of Oracle Real Application Clusters (RAC) software for clustering and increasing the accessibility of web portal database. As a result, the necessary level of access to portal information cannot be ensured.

The experience to apply free of charge software which can be used for filling the web portal with content and content management as well as for data migration from the old database and filling the portal statistical information database with content is also very useful. The SSSU should take the above mentioned into account while preparing web portal requirements in the future.

Conclusions and Recommendations

Summing up the mentioned above, we can draw the following conclusions:

1. Regarding the possibility of using PC-Axis software products, PC-Axis license is available at the SSSU. Thus, Lviv regional office (HUS) specialists have some PC-Axis skills, which allows them upgrading their own website and carrying out its daily updates and supports. However, the number of software designers working in the Lviv HUS is very limited (only 2-3 programmers). They cannot undertake unscheduled works, particularly modernisation of the SSSU central website without detriment to their ongoing work. With regard for creation of the state statistical offices' web portal, including 26 regional websites, this team is unlikely to be sufficient. Now the SSSU central level and its local offices have their own websites developed with different technologies and diverse designs at different time. In the meantime, a large volume of statistical information has been presented on the websites (since 1999) grouped up according to certain sections and themes as well as statistical publications, yearbooks and archival data for many years. After a unified web portal creation, all information has to be uploaded into the dissemination database and data migration from old databases and output tables has to be conducted. The experience of using PC-Axis within regional website is insufficient to develop a web portal of official statistics, which should integrate on a single hardware platform the central website and 26 websites of regional statistical offices using unified design, technologies and interfaces to access content. One should also consider the fact that the internal part of the future web portal (Intranet) should be able to implement remote learning for specialists of the state statistical offices with a set of relevant training courses (it was stipulated in the previous technical specifications for procurement).

2.  Joining the SIS-CC community to study the experience of building a unified corporate data warehouse on the .STAT platformis considered as one of the SSSU priorities in the context of developing a web portal of statistical information. This is not a commercial platform, its development is based on collaboration of the SIS-CC various statistical services. Software use does not require licenses (software is free of charge and with no time limit). Using the unified software platform by statistical agencies from different countries allows simplifying and speeding up data and metadata exchange and promotes the generation of common procedures for collection and dissemination of statistical data. Using the .STAT by developing countries will not require spending except on training of personnel engaged into the development and implementation of the .STAT. At the same time, the issue of a new web portal development and integration of the regional statistical offices' websites into it is still of current interest to the SSSU. After that, the data warehouse platform .STAT can be implemented. Currently, the SSSU has no web portal designers of its own as well as a team that would be involved in the study of the .STAT technologies and cooperation with the SIS-CC. However, in a view of the forthcoming reorganisation of the SSSU central level, a special department for web resource on creation of Ukr.Stat data warehouse has to be created. In particular, it could be engaged into activities on developing the Ukr.Stat data warehouse.

3. The most acceptable to the SSSU is Statistics Lithuania's web portal development experience. Given the similarity of the organisational structure, information and telecommunication systems architecture, data migration, content and maintenance of the dissemination database and lack of qualified programmers in the staff, it is not an option to create the web portal of statistical information on our own.

We would like to give a special consideration to Statistics Lithuania's experience as to filling the web portal database with content, which currently can be used in Ukraine. Since the SSSU has recently started implementing a new integrated system for processing statistical information and a unified dissemination database is still missing, which is also the case with Lithuania, it is planned to fill the database with content by importing xls or csv files which will be exported from the old systems for processing statistical data. In future, as soon as the integrated system for processing statistical information has been implemented, the SSSU plans to include this system's data warehouse to the web portal.

Therefore, the SSSU is ready to update the technical specifications for development of statistical information web portal based on experience gained, including changes in the number and timing of procurements (separate procurements of services for development of web portal software and for hardware), as well to clarify support requirements for .STAT data warehouse and remote system for training the SSSU's specialists and studying new technologies to be implemented.

Study visits participants:

Family name: VLASENKO, First name: NATALIIA

Position: Adviser to Chair, BC Project leader, SSSU

Family name: KOROL, First name: MARIANNA

Date of expiry: 02 October 23

Position: Deputy Director, Head of Information Systems Division, Department for Information technologies, SSSU

Family name: TOVCHENKO, First name: ANTON

Position: Head of Division for Mathematical Methods to Process and Analyse Statistical Data, Department for Statistical Infrastructure, SSSU

Family name: FEDOROVA, First name: INNA

Position: Deputy Director, Department for Information Dissemination and Communication, SSSU

Family name: HINCHUK, First name: LILIIA

Position: Head of Division for Legal Support, Prevention and Identification of Corruption, SSSU

Family name: OKSIUTA, First name: IRYNA

Position: Chief specialist-economist, Department for Information Dissemination and Communication, SSSU

Family name: PUZANOVA, First name: OLENA

Position: Director, Department of Information Technologies, SSSU

Family name: ZHUK, First name: ANTON

Position: Deputy Manager, Telecommunication Systems, SSSU

Family name: VERNER, First name: IHOR

Position: Director, Main Regional Statistics Unit, SSSU

Family name: VYSHNEVSKA, First name: OLENA

Position: Director, Department for Information Dissemination and Communication, SSSU

Family name: BEZUGLYI, First name: VOLODYMYR

Position: Chief Specialist, Department of Information Technology, SSSU

Family name: BURLACHENKO, First name: VIKTORIIA

Date of expiry 24 June 19

Position: Interpreter, Senior specialist-economist of International Relations Unit, International Cooperation Directorate

Family name: KOROL, First name: MARIANNA

Position: Deputy Director, Head of Division of Information systems, Department of Information technologies, SSSU

Family name: SULTANOVA, First name: VIKTORIIA

Position: Head of Division for Web Resources Support, Department for Information Dissemination and Communication, SSSU