

4th Quality Conference 2006 in Tampere/Finland

- Long Description -

1) Title of the case

A digital link between business and statistics

- eSTATISTIK.core -

Transfer of statistical data from corporate accounting applications

2) General description of the organisation and/or the project

Based on objective, neutral and scientifically collected facts, the Federal Statistical Office provides information on the economic development, the population, social issues and the environment in Germany. On the very day of their production, the results of the approximately 390 statistics are made available to any interested citizen, politicians, businesses and institutions by active press and public relations work. The strategic goal is to obtain highly up-to-date statistical results while keeping the burden on responding enterprises to a minimum.

This is where the eSTATISTIK.core project comes in, which was initiated in early 2003 by the statistical offices of the Federation and the Länder in co-operation with the *Arbeitsgemeinschaft für wirtschaftliche Verwaltung e.V. (AWV)*. In co-operation with software producers, software modules are developed for an automated extraction of raw statistical data from the businesses' accounting systems. Once the standard software has been extended by those statistics modules, the desired data packages can be produced for the relevant statistics "at the push of a button" and can then be sent via the internet to a central point for incoming data of the statistical offices. That incoming data unit checks the data packages before automatically distributing them to the responsible statistical office for further processing. For the businesses, the new technology provides a reduction of burdens, it reduces handling time and, consequently, reduces costs. With eSTATISTIK.core, the statistical offices in Germany make a major contribution to the reduction of bureaucracy.

3) The main content of the case

To make statistical reporting easy and convenient for the respondents, the Federal Statistical Office has for some years, and to a growing extent, been using the internet. For quite some time already, businesses have had the opportunity to supply their statistical data via the internet. However, all data must still be entered "manually" into the online questionnaires. In some cases, such data have to be extracted manually from various data storage systems of the businesses and must explicitly be compiled for official statistics. In many businesses, the time and staff effort required for the purpose is perceived as a burden.

As the data collected by the statistical offices generally are stored in the businesses' data systems, the important thing is to find an automated, and for all parties optimal way to extract the relevant data from the business accounting systems. Such automated extraction of statistical data from the accounting system is exactly what is provided by eSTATISTIK.core.

The package consists of the following components:

- *Statistics software modules*: Businesses obliged to provide information use the statistics modules which are provided through their standard software and extract - in a way tailored to the relevant statistical survey - the data from the business data available.
- *Internet-based data reception of raw statistical data*: Such data are then transmitted in an encrypted form via the internet to a central point of the statistical offices for incoming data. There the data received are checked and distributed to the statistical office responsible.
- *Data exchange through standardised xml formats*: This allows easy checking and further processing of incoming data which have been generated from statistics modules of various software providers.
- *"Support" of the statistical offices for software companies and responding businesses*: The statistical offices support, first, the software companies by providing a software library to extend the relevant standard software by the statistics modules and, second, the software users by providing the user identification and password required for using the central incoming data point. Those services are free of charge.

That technical solution has considerable potential for reducing burdens because a "mouse click" is all the responding business needs to initiate the compilation and transmission of a statistical data report; this means that in this way the entire data collection procedure within the enterprise is automated. At the same time, the statistical offices benefit from that approach: Automated production considerably improves data quality, analysis results become more accurate, and the data can immediately be further processed. As the statistical offices of the Federation and the Länder are networked through the central incoming data point, any responsible office can directly access the data, and data exchange is easy and rapid. Altogether, the new method improves the efficiency within the federal system of official statistics in Germany.

4) The reason behind the case

Due to legal obligations, businesses in Germany have to supply many data to various institutions, which include, for instance, tax authorities, social insurance institutions, and also statistical offices. Every single data supply places just a small burden on the business. The real burden is created by the total of statistical reporting duties.

Attempts are therefore made as part of the Federal Government's initiative for bureaucracy reduction to reduce the burden on businesses, for example by abolishing laws. The statistical offices, too, have started a reform of business statistics whose objective is to minimise the response burden on businesses, for example by using administrative data. As, however, data demand in many cases is highly complex and users require highly up-to-date statistical results, it will not be possible to cancel primary data surveys. It is therefore necessary to

develop new methods allowing businesses to supply their statistical data easily, rapidly and without great efforts. This is precisely what the eSTATISTIK.core project is intended for.

eSTATISTIK.core started in early 2003. Discussions about improving the reporting procedure for wage statistics were held with the *Arbeitsgemeinschaft für wirtschaftliche Verwaltung e.V. (AWV)*, with which contacts had been established in earlier co-operation projects. The Federal Statistical Office proposed to develop an automated data collection method for that area, such as eSTATISTIK.core. At the time, business associations, too, were looking for new reporting channels that could further disburden the enterprises. In October 2003, the Federation of German Industries presented its "proposals for the further development of the statistical information infrastructure from the German industry's point of view", arguing for more intensive use of internet-based data collection. The recommendations also said that this would require specific statistics software modules which, prior to data transmission via the internet, extract in an automated manner the data from the business accounting systems.

5) The actors behind the case

To implement the project, the Federal Statistical Office had to look for support. It found a competent partner, that is the *Arbeitsgemeinschaft für wirtschaftliche Verwaltung e.V. (AWV)*. That institution promotes the communication and co-operation between businesses, the scientific community and public authorities. In February 2003, the Federal Statistical Office and the AWV set up the working group on "data exchange with statistical offices", which deals not only with subject-related matters but also with methodical and EDP problems of automated extraction of business data and their transmission to the statistical offices.

Implementing automated data extraction from business accounting systems touches nearly all stages of the statistical data collection process and thus requires the co-operation with many parties involved, both within and outside the system of official statistics. So, the existing co-operation with the AWV is highly useful because, to carry out the project, the AWV has some 500 voluntary staff at its disposal, part of whom come from well-known software companies and big enterprises. For the subject-related co-operation, work teams have been set up, which examine the implementation of eSTATISTIK.core in various statistics. Members of those teams are not only experts of the Federal Statistical Office, the 15 Land statistical offices and the AWV, but also experts of the software companies and representatives of responding enterprises and business associations. This ensures, first, that implementing eSTATISTIK.core meets of the requirements of the statistical offices, of the responding businesses and of the software producers. Second, it ensures that the results are a solution acceptable to all parties involved. The activities of the work teams are co-ordinated by the Federal Statistical Office in co-operation with the AWV.

6) The process leading to success

What is crucial for the success of eSTATISTIK.core is that businesses and statistical offices have developed a common solution in close co-operation from the start. The partners agree that disburdening the responding enterprises is the top criterion for success. Thanks to AWV with its numerous contacts to associations, businesses and

politicians, it has been possible to get the software companies with their ERP experts involved in the project. Together with the statistical offices, it enlists support for eSTATISTIK.core among political decision-makers and the associations which, acting as multipliers, transmit information to their member companies.

The project partners meet regularly in specific working groups where the possibilities of implementing eSTATISTIK.core are checked for every single statistics. The main issue here is to find out whether the data needed for specific statistics can be extracted direct from the businesses' accounting systems. The work results of the various teams are checked by the Federal Statistical Office and the AWW. This ensures that the solutions developed in any team can be implemented also by other software producers and can be used by other working groups. Also, the working groups provide an ideal forum for direct exchange of opinions between statisticians, AWW, responding businesses and software companies. This is to the benefit of all parties because they can explain their requirements to the partners so that they will understand them.

Once the software companies have created first statistics modules for the extraction of data from business accounting systems, they are tested in selected responding enterprises. During the pilot phase, the activities are closely accompanied by the Federal Statistical Office and the responsible Land statistical office. What is tested is not only error-free online transmission of data to the central incoming data point and their passing on to the statistical office responsible for those data, but also the quality of the incoming reports and, consequently, the quality of the software implemented. In this context, the data are compared with data supplied in the past to ensure that the data generated through the standard software really meet the requirements. Only when the pilot phase has successfully been terminated, the Federal Statistical Office will release the software extensions for the software producers and thus their delivery to the software users, i. e. the potential responding enterprises.

The success has however also been supported by some technological factors, including the fact that the internet is now globally available as a standard technology. In the first quarter of 2005, just under 80% of businesses in Germany had internet access. For businesses, eSTATISTIK.core therefore is a low-cost alternative to traditional reporting channels - even more so as the statistics modules can easily be integrated into existing standard software and as that service provided by the software producers is largely covered by regular maintenance, so that it does not cause any additional costs.

7) Results indicating the success

Since November 2005, responding enterprises where relevant statistics modules have been integrated into existing standard software may use eSTATISTIK.core to supply their data for three different economic statistics: These are the continuous earnings survey, the survey of gross annual earnings, and the monthly report in manufacturing. For those three statistics, six software providers have developed statistics modules for the extraction of data from business accounting systems and have delivered them to their customers. The number of registered users supplying, or intending to supply, data through eSTATISTIK.core is increasing by the day. In the second quarter of 2006, further statistics modules will be offered, that is for the monthly surveys in distributive trade and the hotel and restaurant industry. eSTATISTIK.core is now also successfully used for statistics in the areas of justice, health and social matters, where authorities and institutions in the Federation, Länder and municipalities are questioned.

As eSTATISTIK.core follows a generally valid approach to processing and providing data for the entire area of statistics, joint efforts are made by statisticians from the Federation and the Länder, AWW representatives and experts of the software companies to introduce eSTATISTIK.core for a number of other surveys. These include the 2006 structure of earnings survey, the survey of investments, the cost structure survey, the production survey, and environmental statistics.

Among experts, too, the eSTATISTIK.core project has greatly been appreciated from the start. The project's innovative and trend-setting approach was awarded with prizes in several competitions. At the CeBIT fair 2005, eSTATISTIK.core won the highest award of the 5th eGovernment competition in the political field of "business and employment". In the same year, it won a prize of the 7th International Speyer Quality Award and the BundOnlineSuperStar of the Federal Ministry of the Interior in the category G2B (Government to Business).

8) The main obstacles of the case

A precondition for implementing eSTATISTIK.core is that the requested statistical data are contained in the enterprise's data stock. The working groups have found out that sometimes it is difficult to allocate statistical variables to business data; therefore, definitions must be harmonised. In the area of wage statistics, for example, the definition of the statistical variable "gross wage" had to be adjusted to the business term "taxable wage". Another obstacle is the fact that, in different work areas of the enterprise, different software applications are used without interface between them. That highly scattered data environment with many individual applications makes it difficult to organise automated compilation of raw statistical data.

To make eSTATISTIK.core more than just pure theory for the users, statistics modules must be available for the users as early as possible. This is where the software companies come in: They must try to minimise the time lapse between finishing a module and its actual implementation at the businesses. It is especially important for the image of the project, and thus for the image of official statistics, that interested businesses can directly use all tools when wishing to apply eSTATISTIK.core.

What should be improved is the distribution and application of eSTATISTIK.core among responding enterprises. To disburden the businesses in general and to improve data quality, it is necessary to implement eSTATISTIK.core in as many businesses as possible. It has turned out that introducing new methods in responding businesses with established data provision channels requires a lot of convincing. Therefore, by well-targeted advertising, the project partners from the business and statistical spheres try to increase the awareness of eSTATISTIK.core and to convince potential users of the benefits of the new reporting method. Such actions include, for instance, publishing press releases and articles in specialised publications, sending information letters to the responding businesses, as well as organising workshops and presentations at trade fairs.

9) Main sources of inspiration behind the case

As information providers and producers, the statistical offices of the Federation and the Länder use modern information and communication technologies to a large extent. Therefore, they are involved in the Federal Government's eGovernment activities with a variety of projects. The focus here is, first, general process

optimisation and, second, disburdening businesses and citizens in the context of responding to statistical surveys. eSTATISTIK.core is such a project within the scope of the Germany-online initiative of the Federal Government. That initiative groups together all activities by which the Federation, Länder and municipalities make joint efforts in providing online administrative services, setting up networked portals and developing uniform standards. In that context, the statistical offices of the Federation and the Länder developed eSTATISTIK.core as a common project in order to optimise their procedures and to adjust them to the technological state of the art. As eSTATISTIK.core aims at simplifying statistical reporting, it meets all criteria of the initiative for bureaucracy reduction of the Federal Government, whose objective is to reduce bureaucratic obstacles and thus to release energy for innovation and investment.

10) The most important lesson learned

eSTATISTIK.core has successfully finished the introduction phase and it is now in actual operation. It has turned out that automated data extraction is absolutely feasible in technological terms. However, that technological solution needs much subject-related support: Close co-ordination of definitions of business and statistical variables is a precondition for developing statistics modules which are integrated into the business software of the responding enterprises. For the partners involved, this is a great obligation: eSTATISTIK.core can successfully be introduced for further statistics only if statisticians and ERP experts of the software companies, acting as multipliers, show the same commitment to the project. The special form of co-operation for eSTATISTIK.core and the structures of project organisation require that all parties involved show a high ability to communicate and particular management qualities.

To make a noticeable contribution to disburdening businesses, eSTATISTIK.core must be used by a very large number of enterprises. This requires that potential users' awareness of the eSTATISTIK.core product is increased. Such a broad marketing campaign cannot be performed by the statistical offices alone without a strong partner such as the AWV, which acts as a link to businesses, associations and the political sphere, and without the support by other multipliers. The success of eSTATISTIK.core is mainly based on the fact that the project partners are in a classical win-win situation: They look for a sustainable solution which is supported and accepted by all parties involved because everyone is certain to gain something by that solution.