

New approaches to data exchange with businesses

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ABSTRACT

Electronic data and information exchange is a major issue in Statistic Norway's new strategic plan for the next few years. The purpose of electronic data collection is to minimise the response burden and to improve quality of data and efficiency of data collection in the institution. Statistics Norway is already involved in several large projects in this field. Data from all municipalities and counties are reported electronically from this year, and work is underway to establish an infrastructure that will enable us to offer all companies the possibility of reporting by Internet. During the last years Internet has become the main channel for disseminating statistics, and since data providers also are users of statistics, communication and feedback have come in focus. A relative large part of the statistics in the Nordic countries is based on administrative registers, and the work on developing electronic data collection also includes direct transfer from data systems of the data providers (such as accounting systems and technical systems). Other important issues in our work are how data suppliers perceive electronic questionnaires, the handling of metadata in data collection, data security and organisational aspects of data collection (for example how to treat data collected in different ways effectively).

Large businesses have a great impact on the statistics. For these businesses we think it is necessary with individually solutions. Finally the paper tries to address Statistics Norway within a broader context of governmental policy such as e-government and 24-hours access to public offices.

1. INTRODUCTION

In the year 2000, Statistics Norway received public funds to a project called IDUN¹. These funds intended to cover Statistics Norway's part of the cooperation project with The Tax Authorities and the Brønnøysund Register Centre². This is the Norwegian official register of legal units. The funds where also intended to cover internal projects on electronics data reporting.

The objective with the project is to.

- Reduce the response burden for businesses
- As quickly as possible offer good electronic communication solutions
- Prepare for two-way communication and
- Coordinate with other public authorities

The main project was organised with a small central project group. The extra recourses where allocated to each involved statistical division. The main idea is to integrate the work with ordinary developing work in each division. We have also received support from other projects concerning:

¹ IDUN= Informasjon og DataUtvexling med Næringslivet = Information and Data Exchange with Businesses

² The Brønnøysund Register Centre is a Norwegian registration department, and consists of among others 'The register of Business Enterprises', 'The register of Company Accounts' see also: [HTTP:\\ www.brreg.no/english](http://www.brreg.no/english)

- Strategic work on security problems;
- Questions concerning Statistics Norway's information strategy and
- The KOSTRA³ project.

2. SOME BASIC PRINCIPLES IN THE DATA COLLECTION POLICY

The Statistics Act from 1989 gives object, definitions and scope for Statistics Norway. The Act § 3-2 also gives access to all administrative data-processing systems, which state agencies and nationwide municipal organisations collect and store in such a manner that the information may be retrieved for use in connection with the activities of the agency or the organisation. The purpose is to ensure more efficient public use of data collected for administrative purposes. Statistics Norway may forward proposals concerning how an administrative data processing system shall be designed so that it may be used for statistical purposes; this includes proposals concerning:

- What information it ought to contain
- Definitions of units, variables, classifications etc.
- System structure
- Data control
- What information shall be transmitted to Statistics Norway and the time for transmission

It is clear that the emphasis of designing or changing an administrative data processing system has to be on the cost aspect.

There have been worked out written agreements with all the main state agencies and nationwide municipal organisations concerning these matters. This means that every time there are planned changes in an administrative data system or there are plans to develop a new administrative data system Statistics Norway shall be informed about this plans.

The Statistical Act §2-2 also says that when administrative agencies are planning to carry out major statistical investigations, they shall on their own initiative inform Statistics Norway.

In order to coordinate official statistics or lightening the response burden for businesses Statistics Norway then may forward proposals how and which information that should be collected. Information should, as a principle only be collected once. This gives for example Statistics Norway the possibility to use the tax return data from the tax authorities, and we can ask them to collect some basic figures to the economic statistics. With this in mind it is understandable that Statistics Norway as a principle always first look at what data are collected by other state agencies or nationwide municipal organisations before we go out and ask the businesses directly.

Another principle is that data collected by Statistics Norway according to the Statistical Act §2-5 only may be used for the production of official statistics, or for such other use as is approved by the Data Inspectorate and is detrimental to the security of the realm. Any agency that hand over information to Statistics Norway may stipulate conditions inter alia concerning the use of the information and who shall be responsible for the information and have access there to, concerning the storage and return of borrowed material, the destruction of copies etc.

³ KOSTRA= Kommune-Stat-Rapportering = Municipality – State - Reporting

3. CURRENT WORKING STRATEGIES

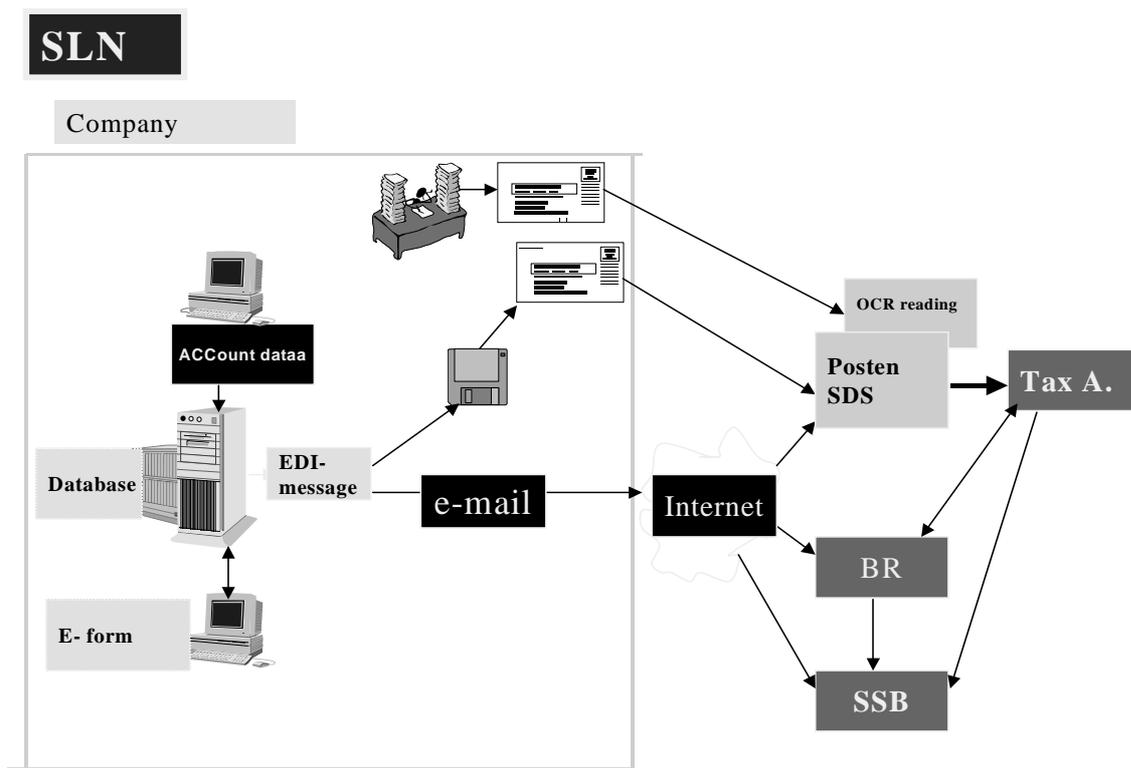
Our focus has so far been on the following parts within this subject:

- Joint project with other authorities - SLN⁴
- Develop a Web based data exchange solution
- Integration of the new data collecting methods with on-going routines within the agency

3.1 The SLN -project

A background for the joint project is a governmental program for "A simpler Norway". The Government has said that the public services should be available 24-hours a day. As a part of this programme the three agencies Statistics Norway, The Tax Authorities and the Brønnøysund Register Centre started a common project called SLN. We have developed a system where the respondent can extract data from existing data within in the respondents account system or punch information in to a predefined form that has the same layout as the paper form. This is software that has to be installed into the providers computer system – the database in Figure 1. After installation there is a possibility to extract the information directly from for example the providers account system or register information into an electronic questionnaire. Before the information is sent by e-mail or diskette there is a format-control, signature routines, encryption, sending routines and receiving routines at Statistics Norway or the Tax Authorities.

Figure 1. The SLN-project⁵.



⁴ Norwegian acronym meaning "System for electronic tax return account for businesses"

⁵ BR= Brønnøysund Register Centre, SSB=Statistics Norway, Tax A.= Tax Authorities, Posten =Post Office, OCR=optical reading

The data sources we have used are account data, administrative register data (employment/wages) and production data within the companies. For the moment we can submit annual tax data with the balance sheet from the internal account data and send E-forms manually filled in at the respondents desktop.

During this year the system has been tested and our experiences are not too good. The system is available on a CD .We have also written an installation guide, established help-desk on both the technical solutions and subject matter experts. The first and main problem is that installation in the respondents IT-system is too difficult. They have different problems from elementary understanding of the installation to more complex problem as own firewalls and security systems. In technical advanced systems like this we must rely on the fact that all parts of the systems must work - the problems will occurs in all parts of the system. The first lesson we learned is that one must test, test and test again. When the system is installed is it quite simple to use - good functionality. For the time being we think that systems like this should be installed and used by accountant companies etc. Which can send information for several respondents, or in large firms that has their own IT-experts. After three years of testing the system will be one option for businesses to deliver the tax return account electronically in 2002. From 2003 all businesses in Norway will have this option available.

3.2. A Web based data exchange solution

3.2.1 Framework

One of the objectives is to establish an electronic reporting channel via Internet to Statistics Norway. We started with the assumption that there should not be any need for the respondent to do any investments in extra equipment, software or licences. The respondent shall be a thin client, i.e. only with connection to Internet and a browser. For the time being the system only runs on Internet Explorer, but we will adapt the solution to other browsers. If the respondent has an old version of the browser it is possible to download a newer version form the web site. It should be a general solution and possible to enlarge both the number of users and statistical surveys so new forms easily could be put into the solution. We have now put two surveys into production, the monthly retail trade index and the quarterly investment statistics.

An important part is that there should be a two-way communication between the respondent and Statistics Norway. The response burden is the sum of the costs for the respondent minus the value of what they receive from Statistics Norway. Each respondent receives a report of own reported data and we also plan to develop some analyses where we look at the respondent's data and compare with the figures for the activity group of the respondent. There are also links to relevant statistics.

No respondent data is transferred across Internet while the questionnaire is answered, simply HTML pages containing instructions and questions, and JAVA scripts for editing and navigation. We are know implementing Secure Socket Layer to our server so the information is encrypted on the respondents' workstation and then sent to Statistics Norway or the other way for control or reports. .

3.2.2 User dialogue

The user dialogue can be divided into five different parts:

- Starting page
- Respondents homepage/ dialogue page
- Profile/Respondent information page - Basic information about the responding unit
- The questionnaire
- Reporting page and a receipt

Starting page

The entrance to the solution is a quite simple page with some basic information about the solution, a login function and the possibility to download the newest version of Internet Explorer. We are now planning to develop a Power Point presentation. The respondents will in advance receive a letter with a user ID and password.

The respondent is defined as the local unit. In practice this means that an enterprise that consists of several local units will receive an ID and password for each local unit.

Home page - dialogue page

The meaning with this page is to give an overview of the dialogue between the respondent and Statistics Norway. It is also important to show which surveys the local unit is a part of. Here you can go to each questionnaire and see the deadline for the survey, if the questionnaire is answered and sent or not, and go to the reports. We are also looking at the possibilities to update basic information in the business register.

Respondent information page (profile)

Here the respondent has the possibility to control and update the information that usually is pre-printed in the paper form. The information is also essential in the business register up-dating routines. Everyone has to pass this page before they can enter the questionnaire.

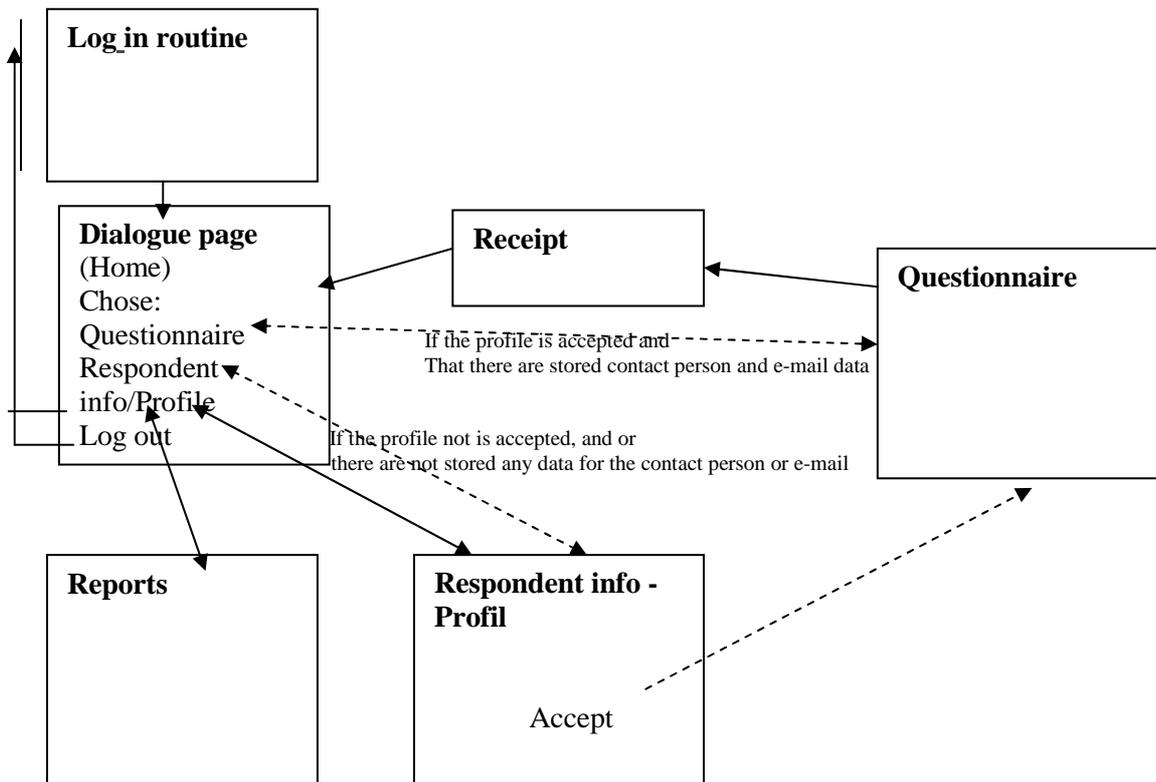
The questionnaire

The electronic form is not a copy of the paper version. In the work with the questionnaire, it is said that it should be recognizable compared with the paper version, i.e. we try to use some of the advantages in the electronic world. There are developed some basic controls where there are comparison between previous stored data and the reported data. There are two kinds of errors, absolute error and possible error. The absolute errors must be corrected before it is possible to send the data, while the data could be sent with possible errors as we do not know if this an error or not. The main challenge with an electronic questionnaire compared with a paper version is to recognize the extent of the form. Here there are need to develop new solutions and learn from other agencies.

Reporting page and a receipt

For the respondent this is a completely new part. First a receipt is always produced. The receipt gives a short overview of the reported data. The respondent is presented information that shows which data is delivered and received by Statistics Norway. The reports gives a short analysis of the delivered data in comparison with earlier delivered data and the whole activity group, Figure 3. Each statistical division has to develop the reports according to the needs within the different industries. The challenge is to implement such a good security system that it is the respondent and no one else that has access to the data.

Figure 2. User dialogue in the web solution



Retail trade index. Example of a report

"The turnover for the business is in August 2 012 000 NOK. This is 6.1 % higher then last month, and 2.3 % higher than the same month last year. If you compare the turnover for each month and the sum for the last 12 months period you can have an indicator if the real turnover follow the planed activities in the budget.

The turnover for the whole activity group 52.42 Wholesale of clothing is 3.1 % higher then the same month last year. In the same period has the turnover for your business changed 2.3%. There has not been the same positive development as for the whole activity group.

Figure 3 is an example of a report sent to an individual business. The figures are calculated with a months delay.

Figure 3: "Name of the business" turnover during the last 12 months

Month	Reported turnover 1000 NOK	Change since last month. Per cent.	Change since the same month last year. Per cent
1. January 2001	78	-220.5%	+39.7%
2. December 2000	250	+ 25.0%	
3. November 2000	200	+ 33.3%	
4. October 2000	150	+ 20.0%	
5. September 2000	125	+ 2.4%	
6. August 2000	122	+ 35.6%	
7. July 2000	90	- 5.3%	
8. June 2000	95	+ 18.8%	
9. Mai 2000	80	+ 6.7%	
10. April 2000	75	- 6.3 %	
11. Mars 2000	80	- 10.1%	
12. February 2000	89	+ 89.3%	
13. January 2000	47		
14. Total turnover latest 12 months	1434		
Industry 52.42 January 2001		-47.1%	+10.7%

3.2.3 Testing and some results form the use of web-based questionnaires

The strategy that has been followed during the development of the solution is that first to develop a prototype, then testing and use the experiences from the testing to change the prototype and test again. It is now the fourth versions that are in use. A lot of resources have been used in the testing phase. We visited the respondent and videotaped the whole testing process. This gives a very good material and understanding among the IT-developers when they try to find better solutions of the problems that were registered during the testing.

One of the first things that we found during testing is that there should be few links or hyperlinks in the first parts of the questionnaire. Therefore all links to other statistics, Statistics Norway's homepage etc is first found in the receipt. There is a help function linked to each page.

Several test persons also have problems to understand conceptions/IT-words etc. The language has been simplified. When one is using the web-medium, several different languages are in use. It is the written word, the layout, the colours used, the logic in the dialogue and how the page is logically build up.

When a paper questionnaire is transferred to a screen is it not possible to show the whole paper page. We have seen that it is easier to move down on the screen than to move horizontally. Mostly the respondent start to read from the upper left corner. Everything one want the respondent to read first must be written here, and all the text elements must be placed in a logical ordered way: It could be introduction, question, help and answering field? When a page is trimmed with a browser menu on top, a web menu on the left side and/or a help menu on the right side there is little space left to the

questions. The lesson learned is that one always clearly must tell the respondent what one is expected to do in the next step.

In appendix 1 there is an overview of some of the results and the comments from the respondents has so far been very positive. On the other hand we must be aware on the fact that the users so far has been persons that is positive to use new media and to experiment with new solutions

Traditionally the statistical office has measured the response burden by measuring the time used to complete the questionnaire. The test persons used longer time to answer the web-questionnaire than to answer a similar paper form, but they all said that they would prefer to use the electronic version. The reasons for this are that in the first run is exiting to use the web-media. But the test persons also gave other explanations. It is more professional to use the PC, and paper work seems to be more burdensome than PC-work. The response burden is the differences between the costs they have minus what one get back. All the test persons said that it was positive to have a receipt and know that Statistics Norway had received their answer. Several of the test units used consultant help to find the figures they know could receive directly from Statistics Norway. Their advantage was greater than the costs they had to answer the questionnaire. It is essential to develop a two-way communication between the statistical bureau and the respondent. Furthermore, it looks like the response burden not only can be measured by the time used to fill in a questionnaire, but should be changed to an evaluation question. Recent research also shows that the respondent answers a questionnaire differently in different media, i.e. telephone-, mail-, IVR- or web-technique⁶.

3.3 Data collection from retail/wholesale chain offices

During the last 10 years there has been a strong concentration among the retail shops. It has been built up several new business organisations. We call them chains. It means that the independent shops are working close together within the same business concept. They could be linked together juridical in different ways like franchise operation, joint venture, partnership and so on. Statistics Norway contacted some of the main chain offices, and after some discussions we had an agreement concerning data delivery to the monthly retail trade index statistics.

It is the monthly turnover that is the base for the statistics. These offices also collect turnover from all the shops that are a part of a chain. Spreadsheet is commonly used in private business, and Statistics Norway developed an Excel spreadsheet. Each chain office is linking their own data for the shops/local unit's into the spreadsheet and sends it Statistics Norway by e-mail or diskette. We are now offering an encryption solution, but no chain office has so far used this solution. In total we now receive monthly figures from 67 chain offices that covers over 6000 local shops. Some years ago this statistics collected figures from a sample. The sample size was then about 3000 shops. For Statistics Norway this approach has both lightened the response burden for the local shops and improved the quality of the statistics. Other Chains hear about the fact that we centralize the data collecting to the chain offices, and then want to do the same, and therefore the number of chains covered by the solution is increasing every month.

3.4 Integration of EDR with on-going routines in Statistics Norway

The integration of these new routines into the statistical subject matter routines has cost a lot more than we calculated from the beginning. There are thousands of arguments related to the adoption of EDR - not only among the respondents, but also within Statistics Norway. This is in many ways understandable. Data is now collected many ways, traditional questionnaires, telephone or CATI-solutions, diskettes, e-mail and web. One must not underestimate the work that is needed to organise good data collection routines and develop new production routines for the different statistics. The

⁶ Prof Don Dillman, Response Rate and Measurement difference in mixed mode surveys, 2001

integration of data and management information from EDR with other collecting methods is very important. We have also experienced that one respondent can one month use the web solution and the next month send the traditional paper form. Coordination between the different collecting methods is essential to the subject matter statisticians and before there is a full integration between the different methods they are sceptical of the benefits of the new options.

3.5 Metadata and The Register of Reporting Obligations of Enterprises

3.5.1 The Register of Reporting Obligations of Enterprises

The act concerning the register of reporting Obligations of Enterprises passed Stortinget - The Norwegian Parliament - in June 1997.

The main task of the Register is to maintain a constantly updated overview of the reporting obligations business and industry have, and to find ways to coordinate and simplify these obligations. The aim is to prevent the unnecessary compilation and registration of information, particularly for small and medium-sized companies. The Register of the Reporting Obligations of Enterprises maintains an overview of the information the various registers and agencies require from business and industry. The information supplied by each business enterprise is not registered by the Register of the Reporting Obligations of Enterprises, but by the authorities in question, as has been the case up to now.

The Register of the Reporting Obligations of Enterprises compares forms from various public authorities. If two or more public authorities ask the same questions of the same type of company, these authorities shall then collaborate so that the question is asked only once. Under the Act relating to the Reporting Obligations of Enterprises, the public authorities must coordinate their reporting activities. The Register of the Reporting Obligations of Enterprises also maintains an overview of the permits that are required to operate within various businesses and industries, and provides information on how to obtain such permits.

Currently the register is restricted to business and industry's reporting obligations to the central authorities. Gradually reporting obligations required by county and municipal authorities will also be included.

In order to protect privacy, not all information can be exchanged between the various government agencies. Only agencies allowed to request similar information directly from the business enterprise may have access to the data from another agency.

A business enterprise may obtain answers to a number of questions regarding its own reporting obligations from the Register of the Reporting Obligations of Enterprises:

- Which reporting obligations apply to me?
- Where can I obtain a particular form and instructions?
- Which public agencies will be allowed to see the information I submit?

3.5.2 Metadata

In both the SLN- project and the web-project we have started to define the elements in the questionnaire according to the registration in The Register of the Reporting Obligations of Enterprises. This is a public register and the aim in doing this is to:

- Start to develop common definitions of data elements among different public agencies
- Give an exact definition of the data elements to private software developing companies so these definitions can be used in defining extracts of data from existing data systems within in the respondents account system, production system etc.

- Distribute these definitions through a public channel

The register does for the moment not fulfil these requirements, but planning and work to develop the register to a common metadata base has started.

4. THE NORWEGIAN KOSTRA PROJECT⁷

The Kostra⁸ project was launched in 1994, as a response to a Parliament Report discussing the relationship between the local and central government administrations. In 1995 a project group led by Statistics Norway was established to carry out the first pilot project within the framework of Kostra. Statistics Norway has since then had the leading role of the project, which is sponsored by the Ministry of Local Government and Regional Development.

The project objectives are

- To enhance the quality and consistency of data and statistics on the use of resources in the local government administrations (i.e. the municipalities) in Norway, and to ensure better comparability between information from different local administrations
- To collect, compile and disseminate statistical information in this field with less resource consumption in terms of money and manpower

To achieve this, the following activities are carried out through a comprehensive development project involving all municipalities and several governmental administrations. The work within some of the activities has been redefined due to the experiences gained over the past years. The below listing is currently to be read as a summary of ongoing and finished activities within the project:

- To redefine the structure of the accounting system in the municipalities, including classifications and coding, in order to make better relationship between the accounts and the services performed by the municipalities
- To provide an IT network defining rules and formats for the collection of data, supported by third party software to be installed in the municipalities
- To derive accounting data directly from the different accounting systems
- To develop and distribute electronic questionnaires to be filled in for collection of data on services
- To develop a database to store and administer the data received, acting also as the master file for all data during decentralised data editing within Statistics Norway
- To establish methods and procedures for data editing both horizontally and longitudinally, across different sectors or statistical domains and between different subject matter units
- To disseminate key figures once the data are received, and to disseminate final results not longer than five and a half months after the end of the reporting year

4.1 Publishing

All Kostra publishing is done by the website. The data ready for dissemination are loaded into the Central Distribution Server (CDS). Via a web interface data are published directly after some automatic error and consistency controls as key figures (for the moment only in Norwegian). The consequences of this publishing policy has led to higher quality on the data that Statistics Norway receives from the local administrations.

⁷ Prepared by Rune Gløersen and Tore Eig, Statistics Norway

⁸ KOSTRA is a Norwegian acronym meaning "Municipality – State - Reporting"

The web site offers functionality for comparing municipalities, groups of municipalities and average for the county or for the whole country. Via Px-Web (a light web-client of PC-Axis⁹) users can also make their own tables from the collected data (<http://www.ssb.no/kostra>).

All tables may be downloaded in Excel-format or PC-Axis format for further local processing. PC-Axis can be downloaded from our web site <http://www.ssb.no/kommuner/programvare>.

4.2 The 2001 reporting - Kostra goes XML

During the project we have experienced that any system that requires installation of software at the respondents, cause problems. The willingness to pay is also rather low. Furthermore, if the software requires IT personnel to be installed or operated, this expertise cannot always be expected to be present. The EDIFACT solution, which is based on widely accepted standards with regards to format and concepts, is not supported by widely known or commonly used software. A lot of efforts have been spent until now on installation, training and support of the technology. Moreover, since the reporting is done only once a year, quite naturally problems seem to reoccur because of loss of memory.

The maintenance cost of questionnaires is somewhat too high. When questionnaires are changed the content and layout is changed using Form Flow. Then the questionnaires have to be tested, and the flow of questionnaire data through each component of the system must be tested if variables have been added or deleted.

New technology based on XML seems to be able to solve some of the problems we are currently facing. The objectives for our XML initiative are that:

- Installation of third party software should not be necessary or at least be kept to a minimum
- Installation and use of electronic questionnaires must not require any kind of IT expertise, just the skills of an average user of IT equipment and software
- Conversion of data is a cause to mistakes and should be kept to a minimum
- The software needed at respondent side should be offered free of charges
- The cost of software distribution should not be subject to third party license fees for the collector
- Questionnaires should be generated from a meta database, to ease the process of creation or modification

Pieces of software that are mentioned in this description are developed under the framework the IQML (Intelligent Questionnaire Mark-Up Language) project. This is a project co-financed from the 5th Framework for Research and Development in the EU. Statistics Norway is one of the participants.

Using both the old EDIFACT solution and the new XML solution will carry out the Kostra 2001 reporting. 22 municipalities will perform a complete XML based reporting. In addition all reporting within one area - family care - will be done the XML way. The reporting area for family care involves 63 offices for family care, which will report one form for the whole office and one form for each client receiving service from the office. It also involves two forms for each of the 19 counties. Totally we expect more than 10.000 forms to be transferred using our XML based reporting this year. 5 municipalities tested this XML reporting last spring for a few forms - all with positive experience.

⁹ PX-Axis is a tool for statistical analysis and tables originally developed by Statistics Sweden. Other products in this family have been developed in cooperation with Statistics Denmark and Statistics Norway.

5. FUTURE DEVELOPMENT

Since the IDUN- project started up has Statistics Norway together with the Tax Authorities and the Brønnøysund Registers gain experiences in use of EDR. We have seen that the respondents should have one official web destination with a common security system. If not, a single enterprise must learn to use several different solutions. These agencies have decided to develop a common web-reporting channel - Altinn. The project will start next year and the object is that the common solution should replace the systems that have been developed within each institution.

One of the challenges will be to cover the different needs between the institutions. One example is that we do not have the same reporting units. A tax unit is not always the same as the statistical unit enterprise or local unit/local kind of activity unit. A tender has just been published and the project is defined to cover these objects:

- Web reporting channel with a common user interface
- Standardised interface against electronic subject matter systems, i.e. account systems, production systems etc.
- Develop a common data return facility
- Develop further a security solution based on standards with a better possibility to implement different security levels
- Transmitting solution for reception, storage and delivering of data to and from the involved agencies and to and from the respondents.
- Administration of metadata, users and roles/profiles.
- Capacity and knowledge to deliver these services

In the coming period Statistics Norway will put more focus on data extraction from different electronic systems used by the respondents. There have already been developed methods to extract wage data from wage systems. I think that a main challenge will be to define the different interfaces between the different electronic systems. Metadata and the development of good routines to update metadata will be essential in this work.

Our experience also show that we have very limited success with an option that requires downloading of software to the respondent. This means that we have to use thin clients. Another critical factor is to have a good and secure electronic contact with the respondent through e-mail. There is a need of good and up-dated e-mail addresses. This will be a challenge for the business registers. In the Norwegian Business Register we have decided to operate with two e-mail addresses, an official e-mail address to the company/respondent and an e-mail address to the contact person. E-mail addresses changes rapidly. A test showed that approximately 10-20% of all e-mail addresses are changed in one or the other way during a year. To find and changes and up-ate the business register will be important if the EDR option is going to be a success.

The technology is changing rapidly. A good example is the movement that has taken place between EDIFACT and XML specified documents. 5 years ago when the SLN-project started EDIFACT was the leading standard. Now we are only talking about XML. What will the situation be like in 5 years?

KIS - keep it simple, statisticians are very good in defining questions and different problems that have to be measured, but we must always think of the respondent. The respondent must understand what we mean and see the purpose with the survey. Therefore, it is a need to test, test and test the solutions again and again to be sure that everything is understood. Statistics Norway has together with the employers organisation in Norway worked out some rules for official forms. These rules are also valid for electronic forms/reporting systems:

- The questionnaire must consist of a manageable amount of relevant questions
- The form must be understandable for everyone in the sample
- The form must require a specified level of details
- The information asked for must be available for the respondent
- Always show the usefulness of the statistics for the enterprise
- Always show the usefulness of the statistics for the society
- Always coordinate the data collection with other official data
- Use a pleasant and active language and attractive design
- There must be sensible time-limits and
- Reasonable notice in the questionnaires

References:

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Appendix 1

Question	Yes	No	Comments
Did you have problems to find the page??	0	11	
Was it OK to log on the system?	10	1	Had some problems to log in the first time, afterwards no problem.
Did you use the help-function?	1	10	
- Where the explanations good?	1		The help text was precise and good.
Did you use the reports to watch earlier reported figures?	6	5	Printed out old figures and used them as a control It was very useful to look at the old figures before the new figures were registered.
- Would it be interesting with a graphic presentation?	5	1	Have not thought about it, but it could be useful. We would like to have a graphic presentation Everything is of interest. It would be very interesting. Everything is interesting when we talk about reported figures. The figures have little use for us.
- Other reports that could be of interest?	1	5	Statistics within our business/activity, and links to other statistics within our activity group. I would like to compare the figures with my own budget.
Could you easily register the information about your business?	11	0	Received an error message and understood it.
Was it difficult to find the investment questionnaires?	1	10	Had some problems, but found it out.
Was it obvious to fill in your figures in the form?	11	0	I am not used to use the arrow key when I am moving in a screen
Did you receive any messages when you sent the answers to Statistics Norway?	5	6	
- Did you understand the messages?	4	1	It was a little bit confusing, but I managed to send the figures. Several different send buttons are confusing. Did not understand the error message. Phoned the support for I had to control the old figures, found that they were wrong Had a "warning", but it was easy to understand. I was not frightened. Had a message about deviation, and understood directly what to do.
Comments to the receipt?	1	10	Very smart!
Would you like to use the solution to answer another questionnaire?	11	0	I would be pleased! Yes, it was good! Of course I could, but it does not mean so much for me