ОРГАНИЗАЦИЯ ОБЪЕДИНЕННЫХ НАЦИЙ **E**

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СТАТИСТИЧЕСКАЯ КОМИССИЯ и
ЕВРОПЕЙСКАЯ ЭКОНОМИЧЕСКАЯ КОМИССИЯ

КОНФЕРЕНЦИЯ ЕВРОПЕЙСКИХ СТАТИСТИКОВ

Пятидесятая пленарная сессия
(Париж, 10-12 июня 2002 года)

ДОКЛАД О РАБОТЕ ФЕВРАЛЬСКОЙ (2002 ГОДА) СОВМЕСТНОЙ РАБОЧЕЙ СЕССИИ ЕЭК/ЕВРОСТАТА ПО ЭЛЕКТРОННОМУ ПРЕДСТАВЛЕНИЮ ДАННЫХ

Записка, подготовленная секретариатом

1. Рабочая сессия ЕЭК ООН/Евростата состоялась 13-15 февраля 2002 года в Женеве. Она была совместно организована ЕЭК ООН и Евростатом. В ее работе приняли участие представители Австрии, Венгрии, Германии, Израиля, Италии, Канады, Кипра, Латвии, Литвы, Нидерландов, Норвегии, Польши, Румынии, Словакии, Словении, Соединенных Штатов, Чешской Республики, Финляндии, Франции и Швейцарии. В соответствии со статьей 11 Положения о круге ведения Европейской экономической комиссии в ней также приняла участие Австралия. Европейская комиссия была представлена Евростатом. На ней также были представлены Продовольственная и сельскохозяйственная организация Объединенных Наций (ФАО) и Организация Объединенных Наций по вопросам образования, науки и культуры (ЮНЕСКО). По приглашению секретариата на ней также присутствовал представитель Консорциума XBRL.

2. Участники сессии утвердили повестку дня.

3. Председателем был избран г-н Марио Менар (Канада), а заместителем Председателя - г-н Геррит де Больстер (Индерланды).

ОРГАНИЗАЦИЯ РАБОТЫ СЕССИИ

4. На сессии были обсуждены следующие основные темы:

i) вопросы управления, организации и политики;

ii) вопросы безопасности, конфиденциальности и неприкосновенности данных;

iii) метаданные, концептуальные модели и стандарты;

iv) опыт пользователей в области использования различных вариантов ЭДП.

5.Обязанности организаторов заседаний выполняли следующие участники: Тема i) - г-жа Черил ЛАНДМАН (Бюро переписи США) и г-н Жан-Пьер ГРАНЖАН (Франция); Тема ii) - г-н Тони ЛАБИЙУА (КАНАДА) и г-н Свен БЬЁРКВИСТ (Финляндия); Тема iii) - г-н Уве КУНЦЛЕР (Евростат) и г-н Петер СТРЁЙС (Нидерланды); Тема iv) - г-н Торе ЭЙГ (Норвегия) и г-н Тамаш КОЛТАИ (Венгрия).

6. Специальные документы были подготовлены следующими странами:

- Тема i): Франция, Словения, Бюро статистики труда США;
- Тема ii): Налоговое управление США и Бюро переписей США, Израиль;
- Тема iii): Австрия, Эдинбургский университет (Соединенное Королевство) и Евростат;
- Тема iv): Канада, Нидерланды и Норвегия.

7. Кроме того, обсуждение тем велось на основе вспомогательных документов и демонстрационных материалов, подготовленных Арменией, Австралией (2 документа), Чешской Республикой, Финляндией, Германией, Венгрией, Израилем, Италией, Бюро переписей США (2 документа), Национальной службой сельскохозяйственной статистики США, Евростатом и Консорциумом XBRL.

БУДУЩАЯ РАБОТА

8. Участники Рабочей сессии рекомендовали провести следующую рабочую сессию по ЭПД в 2003/2004 году. Исходя из этого было предложено включить в Комплексное представление программы работы Конференции европейских статистиков на 2003/2004 год следующий текст:

2.2. Сбор и обработка статистических данных

Мероприятия ЕЭК

Рабочая сессия ЕЭК/Евростата по ЭПД в 2003/2004 году для рассмотрения следующих вопросов:

i) национальная интеграция (инициативы по развитию системы "электронного правительства");

ii) национальные исследования (вопрос качества, организация, административные источники);

iii) поведение респондентов (безопасность, электронная коммерция, встроенные процедуры редактирования, сверка данных с контрольными показателями);

iv) связь и поддержка (служба помощи, обучение);

v) осуществление (параллельно с программой работы рабочей сессии).

9. На заключительном заседании участники утвердили доклад о работе сессии.

10. Более подробное резюме дискуссии, состоявшейся в ходе сессии, приводится в приложении (только на английском языке).

ANNEX

SUMMARY OF THE MAIN CONCLUSIONS REACHED AT THE WORK SESSION

I. Management, organizational and policy issues

1. The discussion showed that most statistical offices are experimenting with the use of different EDR options in data collection. EDR technology is mostly used for the collection of data from institutions such as businesses, schools, health organizations and prisons. It is used less for household data collection, although there is some experience with the population census in several countries.

2. The work session noted that the majority of the member states of the EU have defined programmes that by the year 2005 allow citizens and businesses to fill in all their government forms online electronically.

3. A solution that was often discussed was to use Web-forms. The Web is a mature technology for EDR because of widespread public acceptance, improved interactivity and security. It can also build on the favourable experience with data dissemination Web sites. Many management and security issues need to be addressed in this connection. Most organizations are using EDR as an option in addition to other collection methods, which in reality requires additional resources and increases management complexity.

4. For the successful implementation of EDR, the commitment of the top management is very important. The biggest problem is how to achieve the change in the organizational culture. Good preparatory work with clear objectives is required. The management plays a critical role in the success of EDR as it is needed to introduce the changes into the regular production process while it is running. The technology changes quickly and offers new solutions very often but the statistical offices need to keep the production process stable.

5. The importance of training should not be overlooked. Training is needed both for the staff of the statistical office and for the respondents. In cases where the EDR development activities are outsourced, the knowledge transfer is critical to the office’s ability to maintain the system after ending the outsourcing contracts especially with increased complexity as a result of EDR technology usage. There should be a critical mass of staff in the office who would be capable of maintaining the system. The training can be linked to general promotion activities to potential EDR respondents. The respondents' benefits need to be clearly explained to convince them to use EDR, as the direct gains in efficiency and quality are not often evident in the initial phase of EDR introduction.

6. Often the primary goal in EDR implementation has been not so much cost savings and quality improvement as simplification and respondent-friendliness, allowing users another option to respond in the hope of improving response rates. Because the set-up costs of electronic reporting can sometimes be quite high (especially with using EDI), the cost savings will (hopefully) come later when the system is well established and has gained wider recognition from respondents as well as the potential time savings as more respondents use electronic reporting. Lowering the respondent burden is also viewed as a positive goal since on-line edits could eliminate a follow-up contact with the respondent as well as save costs.

7. In order to be efficient, EDR has to be incorporated into the standard technological environment. Other important factors are the standardization and integration of technological and organizational infrastructure, pilot testing at the level of the responding units, use of mixed teams (input division, statisticians, IT staff) with a good knowledge of respondents, systematic planning, use of good practices and experiences from others, etc. Standardization allows the saving of resources. Developing standards for questionnaires within and across statistical subject-matter areas poses many problems in practice. Building and re-use of metadata would assist with standardization. We need to monitor to determine if a good solution is to develop or purchase standard questionnaire development tools, such as Slovenia “Q” Questionator, USA-Census Bureau GIDS, Czech ProjektMan, etc. These are in the development stage and have not been in production long enough to realize their full impact and potential. Sharing these tools could help lower development costs.

8. The statistical offices often provide a very favourable climate to introduce electronic data collection because of the e-government initiatives. Powerful administrations, such as tax authorities, customs, social security institutions, etc. are launching projects to facilitate the administrative procedures of businesses. These activities will enforce each other to benefit from the spreading culture of the use of new technologies. The integration with e-commerce was also mentioned. For some countries to be successful, there is a need for cooperation among government institutions to harmonize requests to businesses from different government agencies while other countries have statutory regulations limiting this integration. Integration is needed on the technical, but even more on the content and legal level. It was also mentioned that research should be organized accordingly.

9. The implementation rate of electronic reporting has often been lower than expected. Although the implementation is slow, the statistical offices need to be positioned to respond quite rapidly as rising expectations and acceptance of use of online technology reaches a critical mass.

10. In some cases, significant improvements in the quality of the collected data were observed. The decrease in the respondent burden when using EDR is not always obvious. However, other participants mentioned that they noticed different behaviour from respondents depending on the mode used to provide the information. The main advantage can be the possibility to include data checking and validation, which will reduce the need for statistical office to recontact the respondent to verify the data. The gains in quality often depend on the ergonomics of the web-form and included edits. Some plausibility checks could even irritate the respondent and increase the burden. Usability and cognitive testing is needed to establish the reasonable balance for providing this kind of information.

11. EDR allows organizations to give respondents more information about the impact of their data on the aggregated statistics, provide graphical displays comparing their data to earlier published estimates, include plausibility checks, etc. However, this can introduce bias into data and impact data integrity. Some participants mentioned that giving respondents benchmark data could be an asset but others mentioned the concern that providing data in relation to what others reported may cause data to merge to norm. This needs to be researched.

12. Monitoring customer satisfaction can often be critical to the success of EDR projects. The problems related to the technical implementation and security constraints have a strong impact on customer satisfaction, and consequently on the rate of using the EDR option among all other options for providing data to the statistical office. Clearly more research is needed into the reasons why the rate of using EDR is quite low while technical preconditions exist for most of the respondents. Some participants mentioned that giving back to respondents some personalized data could be useful.

13. It is clear that electronic data collection cannot be a solution to all data collection related problems. In order to harmonize different procedures into one overall process appropriate for every kind of reporting, some organizational and technical changes will have to be made. Statistical offices have to adapt the interior environment to the electronic method of data collection. It was agreed that the use of a mixed mode of data collection (partly paper, partly electronic questionnaires) is quite costly to maintain but will continue. Electronic data collection should not be considered an add-on function but should be integrated into business processes so that organizations can realize efficiency and success.

14. The implementation of EDR in a decentralized statistical organization has its own additional challenges. One agency (BLS) in the United States presented an example of a centralized platform and single point of data entry while trying to preserve decentralized applications for individual surveys. This requires a strong coordination effort between the central point of input and the application development tools used in different programmes. In

practice, however, the diversity of applications requires additional efforts to bring the disparate pieces together and it was finally decided to centralize the programming work and to use generalized instrument design systems. Other U.S. organizations noted their integration into existing modified decentralized environment (decentralized authoring of questionnaires and help desk with central IT support for Internet hardware and software) continues to be the accepted working solution.

15. The importance of research in the area of EDR was highlighted. As statistical offices do not have sufficient resources for research in this area, mechanisms are needed to cooperate with other statistical agencies of other countries. Some examples of informal cooperation mechanisms without special funding were given. For example, the currently ongoing research projects in Eurostat are often focused on the technology and software, and not so much on the impact of EDR and its use. Research would be needed on the EDR related data quality issues, such as modal research, on-line editing, and usability testing in addition to other issues such as security and how to integrate EDR into the regular production process via Business Process Re-engineering. It would be useful to define a set of good practices in this area, e.g. how to choose the population of businesses which would be the best target ones, how to convince respondents, what the questionnaire should look like on the screen, what edits and checks to include, etc.

16. It was also mentioned that EDR as a tool for vertical and horizontal integration needs research that extends beyond the statistical agencies. Since EDR is a tool for other operations such as administrative areas within countries, research should be organized across these different areas.

17. Ideas for sharing information between sessions included establishing a portal or "Communities of Practice" for posting and exchanging information or linking with AMRADS, the EU statistical research working groups to help share and exchange knowledge about EDR.

II. Security, confidentiality and privacy issues

18. Security is of great concern to the statistical agencies when offering the EDR option to their respondents. Security is a very complex issue involving technical and legal questions, but also very importantly respondent perceptions. As the security systems are complex, a lot of resources are needed. It therefore requires proper management and must be addressed in a systematic manner. Security is not only a technical issue but it also involves responsibilities and thus it must be well organized. Defining roles is important in order to facilitate a good, non-overlapping division of tasks and responsibilities (i.e. security & IT). A well-defined process of deciding on security is crucial, otherwise people see it as a burden. Often the statistical offices

need to develop new guidelines and policies on security, confidentiality and privacy that are directly related to electronic collection and communication with respondents.

19. Security consumes a lot of resources and can be in conflict with productivity and usability. A clear definition of roles is therefore needed; responsibilities should not be overlapping but need proper management. The main issue with security is often not technical but rather an awareness question. Security should be seen as the means, not the end in itself. There is a need to plan better the strategy and share experiences.

20. Furthermore, the constant change in applications requires security to be adaptable: this often requires HardWare level security solutions. The default security of off-the-shelf packages is not granted, in fact, it is often very poor. The default settings of security are often not sufficient and should be amended. Vendor-specific standard techniques can include breaches. There can be technical problems with compatibility and technology. A heterogeneous technical environment with an old or new, vendor-specific or standard techniques is a real security challenge.

21. The meeting considered different security solutions used by statistical organizations. One of the frequently used methods is the Public Key Infrastructure (PKI). Developing PKI solutions in countries is often related to the e-government initiatives. Coordination of the statistical office's data collection activities with these programmes can help to achieve the acceptance of EDR methods among respondents. Also, the management of the PKI solutions can be delegated in this case to a responsible government authority. Government PKI infrastructure might bring solutions on the national level. However, this technology is not yet well established and still needs time to mature.

22. One frequently upcoming issue in the discussion was the questions of trust in the statistical office. There is a link between businesses' willingness to provide confidential data to statistical agencies and their trust in both the competence of the agency in using the data and the ability of the agency to protect it. Communicating the security measures to respondents is often as important as the technical side. Different approaches to inform and educate respondents were presented. However, the general conclusion is that statistical offices need to pay much more attention to increasing the awareness of respondents and users in security issues. The policy and tools need to be in place to react to the concerns of respondents. A good example would be to explore how the banking industry guarantees security and also handles customer relations in this respect.

23. At the same time, the statistical office is one link in this chain of trust, involving also the users, respondents, other government authorities, researchers, etc. Agreements between agencies should ideally be reached to guarantee the security of data throughout this chain.

24. The strict policies related to confidentiality can, on the one hand, assure respondents of guaranteeing the privacy of their data. On the other hand, it makes reporting to the statistical agency less user-friendly, more cumbersome, and thus makes more difficult the acceptance of this data reporting option. The security constraints can increase the burden on respondents using EDR. In reality, the electronic transfer of data is not more prone to confidentiality violations than using the traditional paper collection method but these concerns do influence the acceptance of the new method. It is important to maintain the balance between the strictness of security and confidentiality measures, and the real threat and possible effect of security breaches. A shift can be observed in statistical agencies toward making security more simple, to achieve easier usability and less respondent burden.

25. As a response to the issues of increased complexity and respondent burden, different levels of required security and confidentiality could be considered for data with different levels of sensitivity. In agreement with the respondent, less secure solutions could be used for data that do not require a very high security level. In this case, both sides need to be well informed about the associated risks and responsibilities. It is necessary to consult with respondents on how to do EDR, on what data should be considered sensitive and on the ways to protect that.

26. Security concerns are even greater when the statistical offices collect data directly from respondents' information systems. In this case, respondents could consider EDR as an invasion of their privacy. This is not perhaps an actual issue yet but it can become so with the development of the technical means, such as the Extensible Business Reporting Language (XBRL), Extensible Markup Language (XML), etc. The security issue of open and readable standards, such as XML, can play an important role in whether the statistical offices and respondents will adopt these solutions.

27. When applying a new technology, the security know-how must often be brought in via consultants. Due to its importance, security should not be completely outsourced - the office should maintain control. Well-defined processes are crucial for defining responsibility.

28. The greatest number of threats are internal, e.g. carelessness, unawareness, or even an ill-wishing (former) employee. The breach of a single transmission would not be a catastrophe, a more serious case can be the exchange of data with other authorities (tax). In fact, the situation with EDR is not worse than with mail that might get misrouted. More imminent security threats

to EDR are not so much the confidentiality issues and disclosure but the technical problems and, for example, viruses.

29. Education of the agency's personnel in security aspects becomes vital, especially in the case of field surveys and interviewers. It is necessary for the application manager to know a lot about security to be able to use it properly. The efficient management of such personnel is necessary to define precisely the person, contact and to control them. Technical solutions are also needed for distribution and substitution in case of failure of the technology.

III. Metadata, conceptual models and standards

30. This session was aimed at the identification of new developments in metadata, models and standards in relation to EDR, and the harmonization and exchange of good practices. The meeting considered the role and function of statistical metadata in the electronic data reporting process. In order to introduce EDR into the regular production, conceptual models are required for the survey process, EDR and metadata.

31. EDR metadata is, to a great extent, built up from questionnaire metadata, i.e. metadata describing the actual questionnaire (questions, answer types, screen texts, etc.), questionnaire layout metadata and metadata supporting the respondent in completing the questionnaire (help texts, nomenclatures, classifications, validation rules, auto-fill rules, pre-filled data, etc). The EDR metadata, on the one hand, has to fit into the conceptual model of the survey process and, on the other hand, it has to be a part of the metadata model. The management of EDR metadata should be integrated with the metadata management in the statistical production process.

32. When the agency needs to manage a wide range of surveys, development and maintenance of the survey specific software is time and resource consuming. Standardizing the preparation of electronic questionnaires is needed to reduce costs involved in this phase. The standard software should be part of a complete infrastructure covering all phases of the data collection process from the development of questionnaires up to the processing of incoming data. For this purpose, a generic solution is needed where the role of metadata is crucial. Statistics Austria presented such an electronic questionnaire management system named e-Quest. The solution is based on specifying all survey-related meta information in XML format. The generic system is able to manage metadata and create programme and data flows dynamically, based on actual metadata active at any time. An additional benefit is the possibility to automate the completion of questionnaires by importing data from the respondents EDP systems. The English language version of the system will be available soon. It was pointed out that in order to implement such a system successfully, some promotional activities and public relations work is needed. A good help system and user guides are also very important.

33. The IQML (a software suite and XML standard for intelligent questionnaires) was presented. The aim of IQML is to capture the main aspects of the process of designing and administering a survey covering questionnaire design, survey administration, data capture and storage of the related metadata. The related software modules share a common data model. IQML includes a Questionnaire Presentation Tool, the Database Interrogation Tool, Questionnaire Design Tool, Survey Administration Tool and the Metadata Repository. The IQML project is based on the Common Warehouse Model, which enables easy interchange of metadata between data warehousing tools and metadata repositories in distributed heterogeneous environments.

34. An overview of the work related to developing metadata standards in the European Statistical System (ESS) was given. The goal is to define common e-standards and a series of high-priority standardization activities in the field of metadata production, exchange and dissemination, that could allow gaining efficiency and avoiding duplication of effort. This would also reduce the respondent burden through the implementation of a common platform for producing and sharing statistical information.

35. Most of the EDR metadata is of a technical nature. A lot of the discussion focused, therefore, on the technical standards for data exchange. XML is taking the lead as the document and data exchange standard for the Web, for instance in Germany. XML-based framework standards like ebXML and XBRL will have a heavy impact on the automation of data collection.

36. The European Commission has selected ebXML as a standard for EDR because of its continuity to the EDIFACT standard. EbXML is a modular suite of specifications that enables enterprises of any size and in any geographical location to conduct business over the Internet. EbXML defines the semantics on top of the XML syntax. The Eurostat strategy is to develop and produce ebXML compliant versions of the statistical messages used in the ESS. However, ebXML is not yet fully completed.

37. XBRL is a development that is likely to play an important role in the information flow between businesses and statistical offices. XBRL, which was presented at the meeting, is a "business reporting language" accepted in many countries for the distribution of business information, primarily of a financial kind. It is a way to map the internally used accounts of businesses to common terms used externally. Given its spreading use, XBRL can be expected to become a de-facto standard for transferring business information. As the electronic forms of data reporting developed solely for statistical purposes do not provide a strong value proposition for the provider, XBRL would be a good option as it allows to re-package/reuse business information for multiple purposes. The XBRL has a great potential for electronic data capture as

a by-product of the provider's finance and/or management information systems. One of the future activities on XBRL is the meeting in Toronto, Canada in June 2002 where statistical needs could be considered. Statistics Canada and the Australian Bureau of Statistics (ABS) will follow up on that.

38. XBRL is potentially able to map to ebXML, and other data transfer formats that are developed for different purposes. To some extent, the software support to map the XBRL concepts to business accounting, and other concepts is already available. Many big software vendors are in the process of integrating it into their standard tools in the very near future. The statistical offices could cooperate to convince software vendors to take into account the requirements of statistics in that process.

39. It should be kept in mind, however, that XBRL and this type of data extraction from respondent information systems cannot be a solution to all data collection. The ABS estimates that about 40% of the data that statistical offices collect from businesses can be defined and mapped to XBRL. Other forms of data collection must be used for the remaining part.

40. There was general agreement that statistical offices should follow closely the developments in data exchange standards and influence the taxonomies so that statistical needs are covered. There will be a repository of taxonomies online, in connection with the XBRL development. All subject areas, including statistics, are free to develop their own taxonomies. A very good example that could be followed for this purpose is the International Accounting Standards Taxonomy that will be available at the repository. The meeting recommended that statistical offices should take the initiative to map the XBRL concepts to their statistical concepts as metadata.

IV. Users' experience with EDR options

41. The meeting considered both positive experiences and difficulties encountered by respondents in deploying the EDR options. It is important to look at all technical and non-technical aspects of EDR together in order to find the most convenient options for users. An optimal solution is needed for technical matters, such as download time, size and compatibility with respondents' existing software systems. On the other hand, the subject-oriented matters, instructions for use and help facilities are also a significant factor in convincing users of the advantages of EDR.

42. Experience shows that users expect EDR to be a very flexible tool that can be adapted to their specific needs. However, each respondent is an individual and it is not possible for statistical offices to address everyone's needs. The statistical offices have to strive at developing

generic solutions that could be adapted to different requirements, and to determine the relevance and the order of priority of implementation of EDR for the various surveys. It may depend on requests from respondents, the cost of adding the EDR option, the level of security or the technical difficulties associated with each collection strategy. Some types of statistical surveys are less appropriate for EDR collection, such as those with long and complex questionnaires, or heavily interviewer-based ones.

43. An important factor to improve the acceptance of EDR among respondents is to look at the EDR users in a wider context of their reporting duties, e.g. tax authorities, other governmental institutions, etc. One of the challenges will be to cover the different needs of the governmental institutions. Governmental institutions and statistical offices do not have the same reporting units, for example a tax unit is not always the same as the statistical unit. Furthermore, it is essential to integrate relevant information systems from the content point of view.

44. When developing EDR options for respondents, the success of the new technological solutions depends largely on the compatibility of new technologies to the respondents existing software systems. It is important to recognize changes in the technology that can be used for EDR, but it is essential to be aware of the habits of respondents and to be able to adapt quickly to these trends. EDR technology continuously improves and new versions of operating systems and software packages are being released. Statistical offices have to choose between the new and more efficient solutions and solutions usable by the greater amount of respondents. The reliability, robustness, flexibility and adaptability to statistical requirements should be taken into account. One of important new developments in this respect is electronic commerce. It can be expected that EDR will be a by-product of e-commerce in a few years.

45. The implementation of EDR in statistics should consider issues related to security, risks or convenience by the respondents and by the statistical agency representatives. The notion of measuring respondent burden is not only applicable to the time and effort to respond to a questionnaire but also has to include the other aspects associated with the collection method. These aspects are sometimes difficult to evaluate. They are, however, very important when defining the respondents collection method. The advantages of EDR should be clearly shown from the respondent's perspective in order to increase the effectiveness of this collection method over time.

46. The general view was expressed that small and simple e-questionnaires are easier to implement. Ideas were considered on how to propose to the respondent the length of the questionnaire in e-format. For example, the Australian Bureau of Statistics has some Excel specific standards. They are ready to share them with other statistical offices. Splitting surveys was demonstrated by Austria. When the questionnaires are filled in by multiple sessions, the

later authorization of different parts of questionnaires, consolidation and sending out a consolidated answer could be an issue. The whole process of e-responses will have to be reconsidered.

47. From the respondent's perspective, it should be understood how the questions are defined, what are the related problems and what is the purpose of the survey. Therefore, it is necessary to test repeatedly the proposed solutions. Some general rules worked out for paper questionnaires could also be valid for electronic forms/reporting systems: the questionnaire must consist of a manageable number of relevant questions, the form must be legible, the information asked for must be available to the respondent, the usefulness for the statistics for the enterprise and the public must be shown, data collection coordinated with other official data, a pleasant and active language and attractive design should be used, there must be sensible time-limits and reasonable notice in the questionnaires.

48. A good example of EDR was given in the Internet Enabled Self Interviewing (IESI) project developed by the Statistics Netherlands. Investments in the various IESI-methods have to be made profitable by recruiting a certain minimal number of respondents. Whether respondents are going to participate depends on their (technical) ability and their willingness. The willingness of respondents can be influenced with a communication strategy where objections are countered and advantages are accentuated. Applying has to be made easy by the respondent, whereas a call-centre call asking directly for an e-email address seems to work best. The possibility to analyze the respondents' behaviour is important.

49. Experience has demonstrated a limited success with an option that requires downloading of the software to the respondent. Another critical factor is to possess a good and secure electronic contact with the respondent through e-mail. There is a need for consequent updating of e-mail addresses. This can be a challenge for the business registers, since the statistical office can operate with two or more e-mail addresses.

50. EDR pushes statistical institutions to more centralized and uniform data collection methods. There is a need to preserve a certain level of standardization between the different modes of data reporting.

51. EDR on its own is not an asset to institutions, it needs to be integrated into the whole data processing and management system. Integration is needed across surveys as well as coordinating inside the office and between other companies across country. Countries demonstrated examples of such coordination, e.g. Norway has a registry of questionnaires to avoid duplication of data collection. In Canada, the standards on presentation of questionnaires are well done but integration of data itself needs further development.

V. Future work

52. The following topics were proposed for discussion at the future meeting:

A. Integration in the national context (E-government initiatives, infrastructure (e.g. security, metadata), organization, legal settings, use of administrative sources, co-operation of partners, harmonization);

B. Research (quality, usability, mode effect, standards), user satisfaction, Business Processes Re-engineering (mixed mode, frequency and form restructuring), new technology, sharing and dissemination of results, pilots, commercial developments);

C. Communication and support to participating actors (promotion (national, international), stimulation (respondents, intermediaries, policy makers), help desk, training, information (security, building trust, possibilities).

D. Respondents' behaviour (security, e-commerce, built-in edits, benchmarking of data, etc.)

53. There can be also demonstrations of applications, good practices and results presented in parallel with the programme of the work session.