



EU Twinning Project

Forwarding Armenian Statistics Through Twinning

AM09/ENP-PCA/TP/04

MISSION REPORT

on

ICT SOCIETY STATISTICS

Activity F3: Sampling method

Mission carried out by

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External annexes produced in connection to this report

Annex F3.8 Power Point presentation "ICT in Enterprises - Workshop 9 November 2011"

List of Abbreviations

BC	Beneficiary Country
MS	Member State
MSE	Member State Experts
NSSRA	National Statistical Services of the Republic of Armenia
RTA	Resident Twinning Advisor
ToR	Terms of Reference

1. Executive Summary

NSSRA has made basic decisions about the ICT surveys of ICT usage in enterprises and institutions in that they are going to be carried out as a pilot surveys during 2012 and focusing on gathering methodological experience. However, the methodology developed within the Twinning project is fully valid for a full scale survey and the experience from the pilot studies will form a valuable basis for regular yearly surveys, starting from 2013 given that the financing issues are solved.

The activities on clarifying the scope of the indicators to be included in the questionnaire are important for the quality of the surveys before the continuation of the pilots as a full scale survey.

Accordingly, the need for statistical information on the ICT usage has been decided in co-operation with main users, and additional hearings before the data collection starts are now supposed to improve the wording of the questionnaire and examples of the interviewer instructions.

The questionnaire follows the principles of the EU survey, using variables from the 2011 EU model questionnaire supplemented with questions from earlier versions. The questionnaire for the survey on enterprises' ICT usage also forms the basis for the separate survey on institutions' ICT usage, with some sector specific questions omitted or added.

Besides focusing on the upcoming pilot studies, also the sampling and weighting strategy for the full scale survey was discussed intensively during the mission.

2. General comments

This main part of the mission report was prepared by the MS Experts during the mission to NSSRA. The MS Experts would like to thank the individuals met during the mission much for providing valuable information about the current and future situation and for their kind support during the stay.

The overall purpose and mandatory result for component F, Information Society is firstly to roll out and publish results from a survey on ICT usage by enterprises and institutions before the Twinning project ends, and secondly to train NSSRA staff on issues related to statistics for the information society.

The planned activities and the expected output of the activity were achieved - cf. the ToR and the programme (annex 1 and annex 2).

The views and observations stated in this report are those of the MS Experts and do not necessarily correspond to the views of Statistics Denmark and Statistics Lithuania.

3. Assessment and results

The discussions with the NSSRA experts provided a comprehensive overview of the current situation, and the possible obstacles and solutions. The status on previous activities is discussed below.

The detailed time schedule for the component for the remainder of the project period was updated during the mission, cf. annex 7.

3.1 The enterprise survey

The sample should be representative for the target and frame population concerning ICT usage, and should aim at covering ICT-users as well as non-users of ICT. The coverage should follow the Eurostat survey 2011 including enterprises with minimum 10+ employees as described in annex 11 of the F.1/F.2 mission report. The EU standard size classes (no. of employees) are: 10–49, 50–249, and 250 +.

Stratification and sampling

The stratification and the sample size are mainly decided by the level of dissemination. The EU regulation explicitly specifies the necessary level of detail in the data that is transmitted from the Member States to Eurostat, and this level of detail in turn is decisive for the (minimum) stratification for the individual sample surveys in the EU member states.

These data are published by Eurostat. However, the Member States are allowed to “flag” data if these data for reasons of statistical uncertainty should not be published at this detailed level, but only at more aggregated level. In their national dissemination some countries, like Denmark, for this reason only publish data at an aggregate level of five industry groups, while others, like Lithuania, disseminate at the detailed EU level.

In all cases, the disseminated data do not show the combination of industry group and size class. Rather, the dissemination focuses either on size classes (across industries) or industry groups (across size classes).

For a country with relatively many small enterprises a different grouping of size classes might be more relevant for *national dissemination*, for example this:

1. 10-19
2. 20-49
3. 50-99
4. 100+

Statistics Denmark uses thus this set of size classes for national dissemination. In order to comply at the same time with the EU size classes, the group of 100+ is split into two: 100-249 and 250+ in the stratification and the weighting, creating in total 5 size classes. On the other hand, Statistics Lithuania disseminates nationally according to the EU size classes.

Regions are not part of the EU requirements to stratification and weighting (unless a regional breakdown is required specifically from EU from the Member state). On the other hand it is common to publish Armenian statistics with a breakdown at a regional level (11 regions). In order to cast light on the regional dimension, some overview tables were produced by the Business Register Division of NSSRA, cf. annex 6. From these tables it is clear that the majority, around 70 per cent, of all enterprises with 10 or more employees are located in

Yerevan. It is also clear that the distribution of the bigger enterprises outside Yerevan, among regions and NACE industry groups, is very moderate.

The questionnaire

During the first mission (F.1/F.2) a preliminary list of user needs was drawn up by NSSRA, concerning core indicators. This list formed the basis for a draft questionnaire based on the 2011 EU model questionnaire and supplied with questions from earlier versions of the model questionnaire.

The proposed questionnaire by NSSRA follows the principles of the EU questionnaire design. It has a clear and logical, modular structure with use of filter questions to minimise respondents' burden.

After F5, the study visit, a draft questionnaire was sent to Enterprise Incubator Foundation (EIF)¹ for comments. EIF accepted the variables and in writing provided NSSRA with suggestions for improvement of explanations and examples. These suggestions were elaborated on the 9 November workshop.

Workshop 9 November 2011

A workshop was organized during the mission on 9 November 2011 with participation of external participants from various ministries and agencies (see Annex 3). At the workshop the project and the pilot survey was presented with emphasis on the enterprise survey and the indicators.

The workshop participants had received the draft questionnaire in advance. It served as a reference frame for the discussion on the methodology and the possible contents of a future full-scale survey.

The BC Component Leader, Mr. Ananyan, welcomed the participants and outlined the purpose of the workshop and perspectives of the survey, after which the MS experts gave a presentation on the EU legal foundation together with user needs and examples of dissemination (Annex 8).

The draft questionnaire was presented by NSSRA and discussed by the participants. The discussion provided suggestions for further improvement of the wordings and definitions, not to change the meaning of the variables, but to make them more understandable and relevant.

The Member State Experts confirmed that in most member states it is normal and necessary to develop the most relevant examples and wording rather than to use a direct translation. If a question was improved or changed in the concept, however, it should be treated as a new variable. It is in general an option for NSSRA to also include variables that are defined according to national needs rather than being from the set of EU harmonized variables.

The discussion was constructive and fruitful, and NSSRA concluded that an additional hearing of wording, concepts and examples among external experts would improve the quality of the questionnaire further. NSSRA expressed hope that this cooperation could continue in the future, also in order to further develop the questionnaire to satisfy new information needs.

¹ EIF is a business development and incubation agency supporting technology companies in Armenia with the objective of, among others, improving the competitiveness of Armenian IT companies and improve their access to knowledge and information on best practices and experience.

The pilot study on enterprises' ICT usage

Before the F.3 mission it had been decided to make a pilot study:

- consisting of approximately 100 enterprises;
- in the Yerevan region only;
- interview based;
- mandatory participation.

The sample will be drawn from the business register, and the population of the survey will correspond to the EU population. During the mission, it was agreed that a random, stratified sample will be drawn from 16 strata, constructed by the combination of industry groups, and size classes by number of full-time employees.

Suggested strata for the pilot enterprise survey

Industry groups (NACE rev. 2)	Size classes			
	10-19	20-49	50-99	100+
Industry and energy (section C, D, E)				
Construction (section F)				
Trade (section G)				
Other services (section H, I, J, L and division 69-74, section N and 95.1)				

Alternatively, the size classes for the pilot study might be changed to the three of the EU standard used by Statistics Lithuania which is also used for Eurostat's dissemination.

3.2 The institutions' survey

Between the study visit (F.5) and the current mission it was decided that a pilot study of the ICT usage in institutions should also be conducted during the Twinning project. This decision was taken in co-ordination with the EU Delegation to Republic of Armenia who had consulted with Eurostat on the exact definition of "institutions".

During the mission the following principles on the survey was agreed:

- interview based,
- with mandatory participation,
- sample of a limited number of governmental institutions,
- using a modified (shortened) version of the enterprise questionnaire.

As "institutions" is not well-defined, the Eurostat recommendation was to interpret it according to the national accounts' definition of "General Government and Public Sector".

The implication of this recommendation has been analyzed by the MS Experts during F.3. As there is no EU regulation on statistics on public sector's ICT usage, merely other countries' practical experience can be used.

From Denmark and Lithuania, Lithuania has the more relevant experience of comparing and using similar indicators in enterprises and the public sector. For both countries, parts of the public sector as schools, kindergartens, hospitals etc. are not considered for the survey. Rather, and for reasons of homogeneity, both countries' surveys on the public sector's ICT usage are restricted to the government administrative level and municipalities/regions.

The questionnaire for the survey on institutions' ICT usage is recommended by the MS Experts to be based on the one developed for the enterprises survey, i.e. the modules A and B of the enterprise questionnaire with three extra questions. Questions less relevant for institutions, such as e-commerce, have been omitted. The recommended questionnaire directed towards institutions' ICT usage is included as annex 5.

4. Conclusions and recommendations on enterprises' ICT usage survey

The recommendations of the MS Experts apply to a full-scale survey of enterprise usage, following EU standards. These are described in the first mission report (F.1/F.2) and their implementation is developed in this report.

In addition, specific recommendations have been made for the two pilot studies of enterprises' and institutions' ICT usage, respectively.

4.1 Population, sample and weighting

The full-scale survey

The MS Experts recommend that the Business Register Division and the Methodology Division assist Trade and Other Services Division with providing the population, and, respectively, the sampling and subsequent weighting for the full scale survey.

Using this information it is recommended that NSSRA (Methodology Division) before next mission consider sample design and stratification of a full-scale survey. See also the updated road map, annex 7.

When sampling, the number of employees should be the *annual average*. It is recommended to draw a randomly stratified sample for the survey, using a combination of the 14 industry classes and 3-5 size groups depending on the Armenian business demography².

Results should be weighted *by number of enterprises* (raised to frame population) to correct for imbalances in the sample. The strata from the sampling may be used also for the weighting with possible combinations of strata with little coverage.

Quantitative variables in the e-commerce module related to sales/purchases should be weighted *by total turnover/total purchases*.

On the one hand, and due to the possible inhomogeneity of the Armenian regions, it is the viewpoint of the MS Experts that the regional level may be considered in the design of stratification and weighting of a full scale survey for 10+ enterprises.

On the other hand, the inclusion of the regional level in the dissemination would necessitate close to total regional coverage in several industry groups in order to ensure a sufficient coverage, cf. annex 6. The MS Experts thus recommend that the necessity of dissemination of regionally distributed data is reconsidered.

As alternatives, it is possible to include the regional dimension in the weighting either separately or integrated with the weighting by industry/size classes. The possibility of stratifying with Yerevan and the rest of the republic as two rather homogeneous geographical zones might also be considered. It should be noted that regional aspects are not specified in the EU requirements to stratification and weighting.

² It is possible for NSSRA to expand the coverage (e.g. include smaller enterprises than 10 employees) if it is considered relevant. This is actually the case with a few EU member states.

Pilot studies

The MS Experts supports the continued planning of the pilot study, that the enterprise pilot study is implemented for 10+ enterprises in Yerevan, the enterprises being randomly drawn from a stratification of the business register with four industry groups and three, four or five size groups. The MS Experts believe that the future surveys will strongly benefit from the implementation of a pilot study.

The MS Experts suggest that the Armenian pilot study on institutions' ICT usage with the Twinning project is restricted to concentrate only on the General Government, and to involve only the 17 line ministries in the pilot study. This will facilitate a test of the questionnaire developed specifically for the public sector, and also it may be realistic to publish some results on the General Government's ICT usage.

Alternatively, the pilot study could be divided between some of the line ministries and some municipalities. This may, though, be more burdensome, and may not enable the publishing of any results.

4.2 Questionnaire

The MS Experts evaluate the questionnaire by NSSRA to have a clear and logical, modular structure with use of use of filter questions to minimize respondents' burden. It follows the principles of the EU questionnaire design. The MS Experts support the decision of a final hearing among users that was agreed upon during the workshop.

4.3 Data collection and data processing

It is important that the pilot survey is implemented according to the principles and methodology developed for the full scale survey.

For personal interviews an interview guide should be prepared in advance. Means should be taken to reduce non-responses (unit and item) to a minimum, and the MS Experts especially recommend the following.

The data processing should include editing for logical errors:

- The edited dataset should not have routing conflict between filter and underlying questions;
- The coding of the dataset should distinguish between two types of voids:
 1. "Do not know"/Item non-response: questions that in principle should have been answered, but where the enterprise could or would not give an answer.
 2. "Null values"/"Out of scope": questions that were not posed to the enterprise.
- Item-non response should be kept and recorded. No imputation should be made from other units (see EU model questionnaire).
- 'Invalid' data values should not enter the final dataset, but the answers should rather be recorded as Item non-response.

The questionnaire should be accompanied by instructions to the interviewers, clear definitions and explanations of e.g. technological terms. Sources for constructing the instructions are:

- The glossary of the EU model questionnaire;
- The EU Methodological Manual (selected parts);
- Information from national experts.

In particular, the pilot survey should focus on gathering experience, and the MS Experts recommend a system of feedback from the interviewers to provide information on the difficulties in the questionnaire linked to types of enterprise (industry group and size).

The MS Experts recommend that the variables/labels of the dataset include the question numbers.

5. Annexes

Annex 1: Terms of Reference

Activity F.3 Sampling method

1. Purpose of activity

The purpose of the activity is to follow up on activities F.1/F.2 and the study visit F.5 and to update the roadmap. In particular the further planning of the actions necessary for the implementation of the pilot studies will be undertaken.

2. Expected output of the activity

The expected outputs of the activity are:

- A workshop with external stakeholders on the draft questionnaire;
- A finalization of the drafting of the questionnaires to be used for the pilot studies;
- Discussion and agreement on the interviewer instructions to be used in the pilot studies;
- Decisions on what enterprises and “institutions” should take part in the pilot studies;
- Fundamental agreement on the sampling principles of the future regular survey on enterprises’ ICT usage, based on the business register;
- An outline of the Terms of Reference for and decision of the timing for the next activity, F.4.

3. Project Participants

Mr. Gagik Ananyan, Member of State Council on Statistics (*BC Component Leader*);

Ms. Anahit Harutyunyan, Head of Trade and Other Services Statistics Division;

Ms. Inga Baroyan, Main Specialist of Trade and Other Services Statistics Division;

Mr. Martin Lundø, Chief Adviser, Business Development Division, Statistics Denmark (*MS Component Leader*);

Mr. Gediminas Samoulis, Head of Knowledge Economy Division, Statistics Lithuania.

External Stakeholders taking part in the activity

Enterprise Incubator

Ministry of Economic Affairs

Annex 2: Programme for the mission

Time	Place	Event	Purpose / detail
Monday, 7 Nov. Morning	Congress Hotel	Meeting with RTA	To discuss the programme of the week
Afternoon	NSSRA	Meeting with BC Component Leader	Current status. BC Component Leader on developments and internal follow up since F1/F2 and F5.
	NSSRA	Meeting with Trade and Other Services division	What interviewer instructions are needed in relation to the developed questionnaire? And how/on basis of what should these be developed?
Tuesday, 8 Nov. Morning	NSSRA	Meeting with Trade and Other Services division	Discussion and decision of the enterprises and institutions to be chosen for the pilot studies, and consequences for the results to be published.
Afternoon	NSSRA	Meetings with Methodology and Business Register divisions	Development of the complete methodology – sampling techniques, and actual possibilities from the business register of NSSRA
Wednesday, 9 Nov.	NSSRA	Workshop with external stakeholders	The survey on enterprises' ICT usages: 1. background, philosophy, actual status 2. the close-to-finished questionnaire 3. future developments of the survey
Thursday, 10 Nov. Morning	NSSRA	Meeting with BC Component Leader	Follow up on the workshop, and agreement on possible adjustments to the questionnaire.
	NSSRA	Ad-hoc meetings	Further meetings on the population and sampling issues – Business Register, Methodology, Trade and Other Services
Afternoon	NSSRA	Ad-hoc meetings	Continuation of morning programme. Adjustments of roadmap and drafting of mission report.
	NSSRA	Meeting with BC Component Leader	Discussion of preliminary conclusions and updates of roadmap.
Friday, 11 Nov. Morning	NSSRA	Ad-hoc meetings	Further work on the mission report, and preparations for debriefing.
	NSSRA	Debriefing with BC Project Leader	Conclusions and recommendations. Consequences for the next mission and implied work programme for BC Experts

Annex 3: Persons met

List of all the people met during the mission.

Gagik Ananyan	Member of State Council on Statistics
Anahit Safyan, Division Head	International statistical cooperation division
Hasmik Egiazaryan, Leading specialist	International statistical cooperation division
Ruzanna Shaboyan, 1st category specialist	International statistical cooperation division
Anahit Harutyunyan, Division Head	Trade and Other services division
Inga Baroyan, Main specialist	Trade and Other services division
Arevik Saghumyan, Leading specialist	Trade and Other services division
Gayane Vardanyan, 1st category specialist	Trade and other services division
Anahit Araqelyan, 1st category specialist	Trade and Other services division
Anna Antonyan, 1st category specialist	Trade and Other services division
Heghine Babayan, Main specialist	Trade and Other services division
Armine Shaboyan, Main Specialist	Methodology Division
Garik Khachatryan, Main specialist	Business Register Division
Laert Harutyunyan, Division Head	Business Register Division

Participants in the workshop 9 November 2011

Arman Galstyan	Ministry of Transport and Communication
Bagrat Yengibaryan	Enterprise Incubator Foundation
Elina Mkrtumova	Ministry of Economy
Naira Mirzoyan	Public Services Regulatory Commission

Annex 4 Enterprise questionnaire

This version of the questionnaire includes the changes suggested from Incubator and MS Experts. A final version with improvement of wording and examples based on further hearing of national experts will be made subsequently.

ONE TIME SURVEY ICT AND E-COMMERCE USE UN ENTERPRISES

Presented according to the LAW 20-48 dated 04/04/2000 on "State Statistics", "State statistical annual work program" approved by the State Statistical Council and "Regulation on submission of statistical data" approved by State statistical council on 03/10/2003 by decision 11-Ն

Anonymity of provided information is guaranteed by law

Enterprise name _____

Main activity type _____

_____ | | | | | |

↓

Address _____ | | | | | | | | | |

(postal code)

Marz _____ | | | | Community _____ | | | | | | | | | |

Web site _____

State register registration number | | | | | | | | | |

Identification code | | | | | | | | | |

Tax payer registration number _____ | | | | | | | | | |

Form 1-ICT

5.1. «Confirmed by »

5.2. Resolution 02 -Ն dated
25/06/2010 by State Statistical
Council

Submitted by legal units

State register registration number and identification code are filled according to the data available on the certificate provided by the Ministry of Justice of Republic of Armenia

Violation of state statistics law by the data providers as well as by official bodies who compile the statistics causes to responsibility according to the law

Module A Use of computers and computer networks in January 2011		
	YES	NO
A1. Did your enterprise use computers? Computers include Personal Computers, portable computers (e.g. laptops, notebooks, nettops), personal digital assistants (PDA)	<input type="checkbox"/>	<input type="checkbox"/> → Go to X1
A2. Number of employees using computer Computers include Personal Computers, portable computers (e.g. laptops, notebooks, nettops), personal digital assistants (PDA)		----- number Or ____%
A3. Did your enterprise have internal computer network ? (e.g. LAN)	<input type="checkbox"/>	<input type="checkbox"/>
A4. Does your enterprise have internal Intranet?	<input type="checkbox"/>	<input type="checkbox"/>
A5. Do the persons employed have access to personal human resources services electronically? e.g. working time recording system, request annual leave, view or download payslips, or other services	<input type="checkbox"/>	<input type="checkbox"/>

Module B . Access to Internet in January 2012		
	YES	NO
B1. Does your enterprise have access to Internet?	<input type="checkbox"/>	<input type="checkbox"/> → Go to C1
B2 Number of employees who have access to Internet		_____ Num ber Or _____ %
B3. Does your enterprise have the following types of external connection to the Internet ?		
a) Traditional Modem (dial-up access over normal telephone line)	<input type="checkbox"/>	<input type="checkbox"/>
b) ISDN connection		
c) DSL (xDSL, ADSL, SDSL, VDSL etc) connection	<input type="checkbox"/>	<input type="checkbox"/>
d) Other fixed Internet connection, e.g. cable, leased line (e.g. E1 or E3 at level 1 and ATM at level 2), Frame Relay, Metro-Ethernet, PLC - Powerline communication, etc, fixed wireless connections	<input type="checkbox"/>	<input type="checkbox"/>
e) Mobile broadband connection (via at least 3G modem or handset) using e.g. WiMAX, UMTS, CDMA2000 1xEVDO, HSDPA	<input type="checkbox"/>	<input type="checkbox"/>
f) Other mobile connection using e.g. analogue mobile phone, 2G, GSM, GPRS, EDGE	<input type="checkbox"/>	<input type="checkbox"/>
B4. What was the maximum contracted download speed of the fastest Internet connection of your enterprise? (tick only one)		
a) less than 2 Mbit/s		<input type="checkbox"/>
b) at least 2 but less than 10 Mbit/s		<input type="checkbox"/>
c) at least 10 but less than 30 Mbit/s		<input type="checkbox"/>
d) at least 30 but less than 100 Mbit/s		<input type="checkbox"/>
e) at least 100 Mbit/s		<input type="checkbox"/>
B5. How many persons employed were provided with a portable device with at least 3G technology for accessing the Internet? e.g. via portable computer with modem or via handset, with at least 3G technology using e.g. UMTS, CDMA2000 1xEVDO, HSDPA, while excluding GPRS		_____ number _____ %
	YES	NO
B6. Does your enterprise have a Website?	<input type="checkbox"/>	<input type="checkbox"/> → Go to B7
B7. Did your Website have any of the following facilities in January 2012	<input type="checkbox"/>	<input type="checkbox"/>
a) Online ordering or reservation or booking, e.g. shopping cart		
b) A privacy policy statement, a privacy seal or certification related to website safety		
c) Product catalogues or price lists		
d) Possibility for visitors to customise or design the products		
e) Advertisement of open job positions or online job application		
f) Other online facility		
Section 2. Use of the Internet in contact with public authorities in 2011		
	YES	NO

B8.	did your enterprise use the Internet to contact with public authorities	<input type="checkbox"/>	<input type="checkbox"/> → Go to B8
	a) obtain information from public authorities' websites or home pages?	<input type="checkbox"/>	<input type="checkbox"/>
	b) obtain reporting forms from public authorities' websites or home pages? e.g. tax declaration	<input type="checkbox"/>	<input type="checkbox"/>
	c) return filled in reporting forms electronically, e.g. forms for customs or VAT declaration	<input type="checkbox"/>	<input type="checkbox"/>
	d) other purpose		
B9	Do you consider any of the following reasons as limiting your electronic interaction with public authorities?		
	a) Concerns related to data confidentiality and security	<input type="checkbox"/>	<input type="checkbox"/>
	b) Electronic procedures are too complicated and/or too time consuming	<input type="checkbox"/>	<input type="checkbox"/>
	c) Electronic procedures still require exchange of paper mail or personal visits	<input type="checkbox"/>	<input type="checkbox"/>
	d) other reason		
Section 3. Internet usage for interaction with public authorities for e-procurement in 2010			
<p>Public electronic Procurement refers to the use of the Internet by enterprises to offer goods or services to public authorities at national level or in other EU countries. The eProcurement process is based on a number of stages from the notification process (online availability of procurement notices and tender specifications) through tendering, awarding, to payment.</p> <p>eTendering is the stage of an eProcurement process dealing with the preparation and submission of tenders or proposals online; this includes bids submitted through open, restricted, or negotiated procedures, as well as Framework Agreements and Dynamic Purchasing Systems (DPS). Submission of bids by e-mail is excluded.</p>			
		YES	NO
B10.	Did your enterprise use the Internet for accessing tender documents and specifications in electronic procurement systems of public authorities?	<input type="checkbox"/>	<input type="checkbox"/>
B11.	During 2011, did your enterprise use the Internet for offering goods or services in public authorities' electronic procurement systems (eTendering)?	<input type="checkbox"/>	<input type="checkbox"/>
	1) RA	<input type="checkbox"/>	<input type="checkbox"/>
	2) in other countries	<input type="checkbox"/>	<input type="checkbox"/>
B12.	During 2011, did your enterprise use electronic signature in any message sent? (, i.e. using encryption methods that assure the authenticity and integrity of the message (uniquely linked to and capable of identifying the signatory and where any subsequent change to the message is detectable)	<input type="checkbox"/>	<input type="checkbox"/>
Module C Sending/receiving of messages suitable for automatic processing to/from systems outside the enterprise in January 2012			

<p>Electronic transmission of data suitable for automatic processing means:</p> <ul style="list-style-type: none"> – sending and/or receiving of messages (e.g. orders, invoices, payment transactions, product descriptions, transport documents, tax declarations) – in an agreed or standard format which allows their automatic processing, e.g. EDI, EDIFACT, ODETTE, TRADACOMS, XML , xCBL, cXML, ebXML – to or from other enterprises, public authorities or financial institutions – without the individual message being typed manually – via any computer network 		
	Yes	No
C1. did your enterprise send or receive electronically such information in a format that allowed its automatic processing?	<input type="checkbox"/>	<input type="checkbox"/> → Go to D1
C2. Did your enterprise send or receive electronically such information for the following purposes?		
a) Sending payment instructions to financial institutions	<input type="checkbox"/>	<input type="checkbox"/>
b) Sending or receiving product information (e.g. catalogues, price lists)	<input type="checkbox"/>	<input type="checkbox"/>
c) Sending or receiving transport documents (e.g. consignment notes)	<input type="checkbox"/>	<input type="checkbox"/>
d) Sending or receiving data to/from public authorities (e.g. tax returns, statistical data, import or export declarations)	<input type="checkbox"/>	<input type="checkbox"/>
e) other (please indicate) _____		
Module D		
Submission of documents (invoices) electronically in January 2012		
	YES	NO
D1. Did your enterprise send electronic documents (invoices)	<input type="checkbox"/>	<input type="checkbox"/> → Go to D2
a) e-invoices in a standard structure suitable for automatic processing? e.g. EDI, UBL, XML, (please add national examples)	<input type="checkbox"/>	<input type="checkbox"/>
b) Electronic invoices not suitable for automatic processing e.g. emails, email attachment in PDF format	<input type="checkbox"/>	<input type="checkbox"/>
D2. In January 2011, did your enterprise receive e-invoices in a standard structure suitable for automatic processing? e.g. EDI, UBL, XML, please national examples	<input type="checkbox"/>	<input type="checkbox"/>
Module E		
Automatic share of information within the enterprise in January 2012		
	YES	NO
E1. Did your enterprise receive sales order or if other information was the relevant information about it shared electronically and automatically with the software used for the following functions?	<input type="checkbox"/>	<input type="checkbox"/>
a) Your management of inventory levels		

	b) Your accounting c) Your production or services management d) Your distribution management		
E2	In January 2011, when your enterprise sent a purchase order (either electronically or not), was the relevant information about it shared electronically and automatically with the software used for the following functions? a) Your management of inventory levels b) Your accounting	YES	NO
Module F			
Ecommerce transactions (sales and purchase)in 2011			
An e-commerce transaction is the sale or purchase of goods or services conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online. e-commerce transactions exclude orders made by manually typed e-mail messages.			
Section 1. WEB sales			
		YES	NO
F1.	During 2011, did your enterprise <i>receive</i> orders for products or services placed via a website?	<input type="checkbox"/>	<input type="checkbox"/> → Go to F4
F2.	did your enterprise <i>receive</i> orders placed via a website by customers located in the following geographic areas		
	1) RA	<input type="checkbox"/>	<input type="checkbox"/>
	2) CIS countries	<input type="checkbox"/>	<input type="checkbox"/>
	3) Other countries	<input type="checkbox"/>	<input type="checkbox"/>
F3.	Please state the value of the turnover resulting from orders <i>received</i> that were placed via a website (in monetary terms, excluding VAT	_____ thousand drams Or _____ %	
Section 2 EDI-type sales			
EDI-type sales are sales made via EDI-type messages. EDI (electronic data interchange) is used here as a generic term for sending or receiving business information in an agreed format which allows its automatic processing (e.g: EDIFACT, UBL, XML, ...).			
		YES	NO
F4.	Did your enterprise <i>receive</i> orders for products or services placed via EDI-type messages?	<input type="checkbox"/>	<input type="checkbox"/> → Go to F7
F5.	In 2010, did your enterprise <i>receive</i> orders placed via EDI-type messages by customers located in the following geographic areas?		
	1) RA	<input type="checkbox"/>	<input type="checkbox"/>
	2) CIS countries	<input type="checkbox"/>	<input type="checkbox"/>

	3) Other countries	<input type="checkbox"/>	<input type="checkbox"/>
F6.	Please state the value of the turnover resulting from orders <i>received</i> that were placed via EDI-type messages (in monetary terms, excluding VAT)	_____ thousand drams Or _____ %	
Section 3. E-commerce Purchases			
		YES	NO
F7.	During 2011, did your enterprise send orders for products or services via computer networks? (via a website or EDI-type systems, and excluding manually typed e-mails)	<input type="checkbox"/>	<input type="checkbox"/> → GO to G1
F9.	Did your enterprise <i>place</i> orders via a website or EDI-type messages to suppliers located in the following geographic areas		
	1) RA	<input type="checkbox"/>	<input type="checkbox"/>
	2) CIS countries	<input type="checkbox"/>	<input type="checkbox"/>
	3) other countries	<input type="checkbox"/>	<input type="checkbox"/>
F8.	Please state the value of the purchases resulted from orders <i>placed</i> electronically (in monetary terms, excluding VAT)	_____ <i>Thousand drams</i> Or _____ %	
Module G			
Main indicators of enterprise activity in 2010			
G1 .	Average monthly number of employees used for calculation of salaries	_____ employees	
G2 .	Total turnover (in value terms, excluding VAT)	_____ thousand drams	

6.

7. Thank you for providing information!

Interviewer _____
(Name, surname)

(Signature)

« ____ » _____ 20____
(Completion date)

Annex 5 Institution questionnaire, suggestion by MS Experts

The below suggestion is made on the version of the enterprise questionnaire included in the F5 mission report. All subsequent changes in the enterprise questionnaire should be entered in the institution questionnaire whenever the same variables are used.

Yellow: suggested additional questions aimed specifically for the public administration.

Green: additional indicators for inspiration, not presented during mission.

Module A		
Use of computers and computer networks in January 2012		
	YES	NO
A1. Did your institution use computers? Computers include Personal Computers, portable computers (e.g. laptops, notebooks, nettops), personal digital assistants (PDA) or smartphones	<input type="checkbox"/>	<input type="checkbox"/> → Go to X1
A2. Number of employees using computers Computers include Personal Computers, portable computers (e.g. laptops, notebooks, nettops), personal digital assistants (PDA) or smartphones	<input type="checkbox"/>	<input type="checkbox"/>
A3. Did you have internal computer network (ex: Local Area Network)		
A4. Does your institution have internal home page (Intranet)?	<input type="checkbox"/>	<input type="checkbox"/>
A4. Did the persons employed have access to personal human resources services electronically? e.g. working time recording system, request annual leave, view or download payslips, or other services	<input type="checkbox"/>	<input type="checkbox"/>
Module B:		
Access and use of the Internet		
Section 1. Access to Internet in January 2012		
	YES	NO
B1. Did your institution have access to Internet?	<input type="checkbox"/>	<input type="checkbox"/> → Go to C1
B2. Number of employees with access to the Internet	(Number)	
B3. Did your institution have the following types of external connection to the Internet?	YES	NO
a) Traditional Modem (dial-up access over normal telephone line) or ISDN connection	<input type="checkbox"/>	<input type="checkbox"/>
b) DSL (xDSL, ADSL, SDSL, VDSL etc) connection	<input type="checkbox"/>	<input type="checkbox"/>
c) Other fixed Internet connection, e.g. cable, ibre optic leased line (e.g. E1 or E3 at level 1 and ATM at level 2), Frame Relay, Metro-Ethernet, PLC - Powerline communication, etc, fixed wireless connections	<input type="checkbox"/>	<input type="checkbox"/>
d) Mobile broadband connection (via at least 3G modem or handset) using e.g. UMTS, CDMA2000 1xEVDO, HSDPA	<input type="checkbox"/>	<input type="checkbox"/>
e) Other mobile connection using e.g. analogue mobile phone, GSM, GPRS, EDGE	<input type="checkbox"/>	<input type="checkbox"/>
B4. What was the maximum contracted download speed of the fastest Internet connection of your institution? (tick only one)		
a) less than 2 Mbit/s		<input type="checkbox"/>
b) at least 2 but less than 10 Mbit/s		<input type="checkbox"/>
c) at least 10 but less than 30 Mbit/s		<input type="checkbox"/>

	d) at least 30 but less than 100 Mbit/s	<input type="checkbox"/>	
	e) at least 100 Mbit/s	<input type="checkbox"/>	
Section 2. E-services in January 2012			
		YES	NO
B5.	How your institution provides public services		
	a) Direct communication (on visit)	<input type="checkbox"/>	<input type="checkbox"/>
	b) By traditional post	<input type="checkbox"/>	<input type="checkbox"/>
	c) Through a call centre	<input type="checkbox"/>	<input type="checkbox"/>
	d) By phone	<input type="checkbox"/>	<input type="checkbox"/>
	e) By mobile phone	<input type="checkbox"/>	<input type="checkbox"/>
	f) By Internet telephony (e.g. Skype)	<input type="checkbox"/>	<input type="checkbox"/>
	g) By e-mail	<input type="checkbox"/>	<input type="checkbox"/>
	h) Via a website	<input type="checkbox"/>	<input type="checkbox"/>
	i) Via Internet social networks (e.g. Facebook)	<input type="checkbox"/>	<input type="checkbox"/>
B6.	Did your institution have a Website or Home Page?	<input type="checkbox"/>	<input type="checkbox"/> → Go to B9
B7.	What information is available on your institution's Web site		
	a) Structure and contacts of institution	<input type="checkbox"/>	<input type="checkbox"/>
	b) Information about the institution's activity	<input type="checkbox"/>	<input type="checkbox"/>
	c) Relevant news related to the institution's activity	<input type="checkbox"/>	<input type="checkbox"/>
	d) Information about services	<input type="checkbox"/>	<input type="checkbox"/>
	e) Consulting services via website	<input type="checkbox"/>	<input type="checkbox"/>
B8.	Which e-services provided your institution on website		
	a) Offer a possibility to download forms	<input type="checkbox"/>	<input type="checkbox"/>
	b) Offer a possibility to return filled out forms	<input type="checkbox"/>	<input type="checkbox"/>
	c) Offer a possibility to perform administrative procedures electronically, without additional paperwork	<input type="checkbox"/>	<input type="checkbox"/>
	d) Offer a possibility to comply procedure using previous registration of the user (without repeated data entry, automatically using the information already available)	<input type="checkbox"/>	<input type="checkbox"/>
B9 (I Ent. Survey B12.)	During 2011, did your institution use electronic signature in any message sent? (i.e. using encryption methods that assure the authenticity and integrity of the message (uniquely linked to and capable of identifying the signatory and where any subsequent change to the message is detectable)	<input type="checkbox"/>	<input type="checkbox"/>
Module X: Background information^{*3} (X1-X4) available in some countries from the business register or administrative data and thus not to be included; latest available information should be provided			
X1.	Average number of persons employed, during 2011		

Extra questions that might be considered

	YES	NO
Your institution regularly sharing electronically information with other institution in order to reduce expenditure and accelerate information exchange processes?	<input type="checkbox"/>	<input type="checkbox"/>
Did your institution have in use, in January 2012, third party free or open source systems, such as Open Office, Linux, etc.? (i.e. with its source code available, no copyright cost, and the possibility to modify and/or (re)distribute it)	<input type="checkbox"/>	<input type="checkbox"/>
In January 2012, did your institution have in use any software application for managing information about customers (so called CRM)	<input type="checkbox"/>	<input type="checkbox"/>

³ For background information of the benchmarking framework

Annex 6: Enterprise demography according to EU stratas

Armenia in total

employee nace rev 2	0-9	10-19	20-49	50-99	100-249	250+	Grand Total
10-18	484	159	97	33	27	15	815
19-23	190	58	41	23	7	6	325
24-25	81	34	15	6	1	6	143
26-33	127	41	36	14	12	1	231
35-39	45	41	27	3	10	11	137
41-43	300	135	104	52	36	8	635
45-47	4264	396	165	36	26	6	4893
49-53	244	128	102	35	11	10	530
55	83	19	13	3	4		122
58-63	155	24	22	8	3	2	214
68	507	41	19	8	2		577
69-74	602	86	51	26	21	2	788
77-82	374	55	33	9	10	3	484
26.1-26.4, 26.8, 46.5, 58.2, 61, 62.01, 62.02, 62.03, 62.09, 63.1	288	41	39	14	4	4	390
Grand Total	7744	1258	764	270	174	74	10284

Yerevan region

employee nace rev 2	0-9	10-19	20-49	50-99	100-249	250+	Grand Total
10-18	349	99	51	19	13	9	540
19-23	143	37	21	12	6	1	220
24-25	61	22	10	3		5	101
26-33	94	32	23	11	7		167
35-39	8	8	5	2	7	7	37
41-43	194	77	52	26	17	7	373
45-47	3063	259	137	31	25	6	3521
49-53	141	94	80	27	10	9	361
55	36	12	8	3	4		63
58-63	133	18	16	8	2	2	179
68	479	37	18	7	1		542
69-74	535	73	51	23	19	2	703
77-82	332	41	27	9	9	3	421
26.1-26.4, 26.8, 46.5, 58.2, 61, 62.01, 62.02, 62.03, 62.09, 63.1	239	38	34	12	4	4	331
Grand Total	5807	847	533	193	124	55	7559

Annex 7: Roadmap of activities

For sample design and stratification of a full-scale survey in order to decide the minimum sample size for a future survey.

Time plan

Time	Action
December 2011	Final hearing of users and experts concerning questionnaire.
January 2012	Finalizing questionnaire (translated version to MSE) Preparing sample
February 2012	<p>PILOT SURVEY</p> <ol style="list-style-type: none"> 1. Interviewer instructions completed 2. Sample taken for the 4 x 4 stratified pilot study (4 industry groups; 4 size groups) 3. Sample taken for the institutions pilot study <p>FULL SCALE SURVEY - (in co-operation with Business Register, Methodology Division and RTA): The overview tables from Business Register (annex 6) handed over to Methodology Division for preliminary analysis of sampling/dissemination possibilities.</p>
March 2012	<ol style="list-style-type: none"> 1. Training of interviewers (by NSSRA staff) 2. Collection of data 3. Development of data base for data entry 4. Collecting feedback from interviewers about functionality of the indicators
April 2012	Data entry, quality work, re-contacting with enterprises
May 2012 (beginning)	2-3 overview tables produced and sent to MS experts Anonymized data base sent to MS experts
May 2012 (end)	<p>Training mission, F.4: Support to analysis and presentation of findings.</p> <p>PILOT SURVEY</p> <p>Evaluation of quality of reported data Decision on what to disseminate (both enterprises and institutions) Specific charts Specific tables Development of appropriate programming</p> <p>FULL SCALE SURVEY - discussion of future strategy Analysis of business register data incl. regional level: The size of the future ICT usage survey covering all Armenia. Is the regional dimension important for stratification purposes (sample representativity) or dissemination purposes?</p>
June 2012 (end)	Complete set of tables sent to MS experts for general comments within 10 days
September 2012 (end)	<ol style="list-style-type: none"> 1. Publication on pilot study ready as a draft version 2. Draft survey plan for a full-scale survey sent to MS experts for general comments within 10 days. The plan should include data collection method, sample and weighting strategy incl. suggested stratas and minimum sample size.
October 2012 (end)	<ol style="list-style-type: none"> 1. Public dissemination via website of pilot study results 2. Final survey plan for a full-scale survey
November 2012 (end)	<p>Review mission, F.6</p> <p>Meeting with stakeholders Discussion of future perspectives</p>

All written material to be provided to the MS Experts in English.



The ancient *Garni Temple*, southeast from Yerevan