Interoperability Solutions for European Public Administrations Monitoring and Evaluation

D03.05/D03.06 Action 2.6 Perceived Quality and Utility Monitoring Report

Framework Contract n° DI/07173

31st July 2015

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EXECUTIVE SUMMARY

The purpose of this section is to provide an overview of the key findings of the Perceived Quality and Utility monitoring and evaluation activities.

The Action 2.6 EUSurvey online tool and EUSurvey solution survey was launched during the first semester of 2015. The objective of the survey was to evaluate the Perceived Quality and Utility of the EUSurvey solution. More specifically, the goal of the survey was to understand to what extent the solution is user-friendly and to identify the benefits which users might gain from using it.

The survey was designed in the EUSurvey tool and distributed by e-mail to 2465 respondents.

The survey was launched on the 20th of April 2015 and was active until the 19th of May 2015. In total, 379 people responded to the survey, which accounts for 15% of the total amount of recipients.

The survey result analysis (see Table 1) shows the Action 2.6 Perceived Quality and Utility scores. The **Perceived Quality score** is **3.80** (scale: 1…5) and the **Utility score** is **4.04** (scale: 1…5).

The detailed score calculation process is described in Section 4.2.3.

TABLE 1 – ACTION 2.6 SURVEY RESULTS

Evaluation criteria	Mean[1]	Mode[1]	StDev[1]	StErr[1]
Action 2.6 Perceived Quality	3.80	4	0.97	0.01
Action 2.6 Utility	4.04	4	0.84	0.02

Conclusion: Based on the results received, EUSurvey effectively enhances cross border and cross sector interoperability. Moreover, it saves users' time and costs and it is easy to use. Based on the survey data analysis, the results and effects of EUSurvey tool successfully correspond with the needs, problems and issues that are to be addressed by the ISA programme.

However, there is a need for drawing special attention to EUSurvey's weak aspects, i.e. the survey design process, e.g. reducing the amount of error messages appearing during the data import/export, improving and varying the formatting options, as well as simplifying the process of creating the multilingual surveys.

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[1] See Glossary (Section 6.5)

REVISION HISTORY

Date	Version	Description	Authors	Approved by
31-July-2015	1.00	For QA purpose, the accepted draft version is changed into the final version. No other changes are implemented.	CGI-Accenture	
22-June-2015	0.20	Initial version updated	CGI-Accenture	
09-June-2015	0.10	Initial version	CGI-Accenture	

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1 INTRODUCTION

CGI-Accenture has been requested to deliver a Perceived Quality and Utility Monitoring and Evaluation Report as part of the execution of the ISA programme monitoring (Technical Annex for Specific Contract N° 52 under Framework contract N°DI/07173).

Based on the scope of the Specific Contract, the Perceived Quality is to be measured for 9 actions and the Utility is to be measured for 13 actions. This report covers the Perceived Quality and Utility measurements for Action 2.6 – EUSurvey Online Tool and EUSurvey Solution.

This document is divided into the following sections:

- **Section 1** provides an overview of the structure of the report;
- **Section 2** provides an overview of the methodology used for the Perceived Quality and Utility measurements;
- **Section 3** summarises the collected data;
- **Section 4** focuses on the survey result overview and data analysis;
- **Section 5** provides the survey conclusions and recommendations;
- **Section 6** appendix includes:
    - o Statement mapping per dimensions;
    - o Status of the respondents agreed to be contacted;
    - o Raw data export;
    - o Respondent comments and recommendations;
    - o Glossary.

2 SURVEY METHODOLOGY

A common methodology was developed by the previous ISA Monitoring and Evaluation contractor for all the surveys that enables comparison between the different survey results. This methodology was also applied to evaluate the Action 2.6. This section explains how the Perceived Quality and Utility are measured and what dimensions are covered under each evaluation criterion. The last part of this section describes the architecture of the survey.

2.1 PERCEIVED QUALITY

'Perceived Quality' is defined as the **extent to which the outputs of an ISA action are meeting its direct beneficiaries' expectations.[2]**

Perceived Quality is measured using the eGovQual scale model[3].
The assessment is based on the following dimensions:

- **Efficiency:** measures the degree to which the tool is easy to use;
- **Trust (Privacy):** measures the degree to which the user believes the tool is safe from intrusion and protects personal information;
- **Reliability:** measures the feasibility and speed of accessing, using, and receiving services of the tool;
- **Support:** measures the ability to get assistance when needed.

2.2 UTILITY

'Utility' is defined as the **extent to which the effects (impact) of an ISA action correspond with the needs, problems and issues to be addressed by the ISA programme[4].**

Utility is measured using an adaptation of the VAST (**V**alue **AS**sessment **T**ool) methodology[5], considering an additional dimension related to the Global and Intermediate objectives of the ISA programme.

The assessment is based on the following dimensions:

- **Value for the European Union:** Looks at the assessment of the external value of an information system or an IT project. External value of a project is considered to be any benefit which is delivered outside the Commission itself. This external aspect is divided into two parts: society (Social Value) and individuals (External Users' Value);

- **Value for the European Commission:** Encompasses criteria through which the internal value of an IT project can be assessed. All factors that can contribute to the improvement of the EC performance should be considered as delivering an internal value;

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[2] DG BUDG (2004), "Evaluating EU activities, a practical guide for the Commission services"
[3] eGovQual scale developed by Papadomichelaki and Mentzas (2012)
[4] DG BUDG (2004), "Evaluating EU activities, a practical guide for the Commission services"
[5] More information can be found on: http://ec.europa.eu/dgs/informatics/vast/

- **Value for cross-border and cross-sector interoperability:** Covers all aspects of how information system or IT project can support the efficient and effective cross-border and cross-sector interaction between the European Public Administrations.

The ISA Programme is mainly focusing on the value for the cross-border and cross-sector interoperability dimension. In this context, the value for EC is considered to have a lower weight than other dimensions. Consequently, this particular survey did not focus on this dimension and there are no utility statements that cover this dimension.

2.3 SURVEY ARCHITECTURE

In order to measure the Perceived Quality and Utility, a respondent is supposed to grade the statements based on his/her level of agreement. A 5-point Likert scale[6] is used as a grading scale, ranging from 'Strongly Agree' to 'Strongly Disagree' with an additional 'No Opinion/Not Applicable' option. However, for this particular survey 'Neither Agree nor Disagree' option is omitted.

As the responses collected are depending on the users' profiles, the user is requested to answer skip logic questions with either 'Yes' or 'No' and afterwards more questions are presented if the respondent selected 'Yes'.

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[6] A Likert Scale is a widely used scaling method developed by Rensis Likert. Likert scale refers to the use of an ordinal 4- or 5-point rating scale with each point anchored or labeled.

3   ACTION 2.6 SURVEY DATA SUMMARY

Table 2 gives an overview on the survey start date, end date, the amount of responses collected, as well as the survey launching method.

<p align="center">**TABLE 2 – ACTION 2.6 SURVEY DATA SUMMARY**</p>

Action 2.6 – EUSurvey Online Tool and EUSurvey Solution	
Start date:	20/04/2015
End date:	19/05/2015
Sample Size:	2465
Amount of responses:	379
The survey launching method:	E-mail notification and pop out message on EUSurvey

4   SURVEY RESULTS AND ANALYSIS

This section aims to provide a detailed survey analysis and to present the results depending on the division of EUSurvey Online Tool and EUSurvey Solution within the Action 2.6 Perceived Quality and Utility evaluation criteria.

4.1 RESPONDENT DISTRIBUTION ANALYSIS

4.1.1   Respondent Distribution by User Type and the EUSurvey Solution

Figure 1 shows the classification of the Action 2.6 survey's respondents according to their role and the solution they used. In total, 379 respondents participated in the survey. In total, 216 respondents indicated the Survey Author as their role and 163 as the Survey Respondents. The majority, i.e. 212 Survey Authors indicated that they used the EUSurvey web-based application, whereas only 4 Survey Authors used the EUSurvey open source software. Figure 1 also demonstrates the number of the Action 2.6 survey's respondents according to the type of organisation they belong to.

<p align="center">**FIGURE 1 – RESPONDENT DISTRIBUTION BY USER TYPE AND THE EUSURVEY SOLUTION**</p>

Figure 2 is a graphical representation of the Survey Author distribution according to the level of knowledge and frequency of using EUSurvey. There is a regularity among the EUSurvey experts using the tool more frequently and among beginners using the tool less frequently.

FIGURE 2 – RESPONDENT DISTRIBUTION BY THE LEVEL OF KNOWLEDGE AND FREQUENCY OF USING THE EUSURVEY
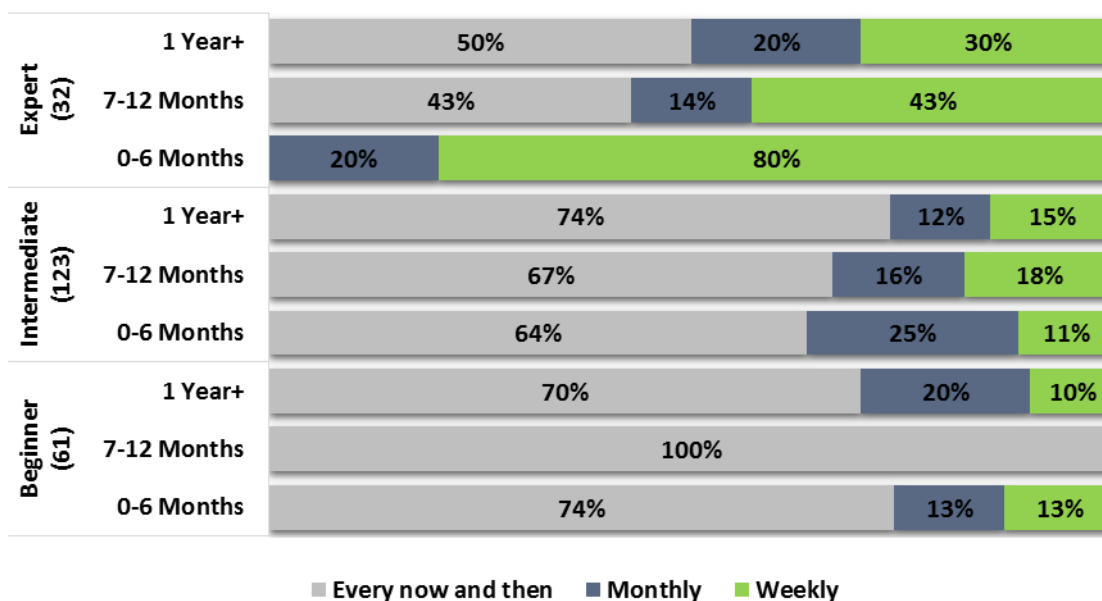
4.2 ACTION 2.6 SURVEY RESULT OVERVIEW

This section aims at providing an overview on the survey response range at the following levels:

- **Survey response overview** shows a survey response range collection covered by the Action 2.6 Perceived Quality and Utility survey;
- **Result overview according to the evaluation criteria** shows the survey response range per statement depending on the evaluation criteria (Perceived Quality and Utility);
- **Result analysis according to the evaluation criteria** provides a score calculation by evaluation criteria dimension and the overall evaluation criteria score.

4.2.1   Survey Response Overview

Figure 3 gives an overview of the survey results provided by the EUSurvey Respondent user group. The statements were graded based on the users who responded 'Yes' to the skip logic question (a question that directs a respondent to a series of questions based on their responses).

FIGURE 3 – ACTION 2.6 SURVEY RESPONSE OVERVIEW BY SURVEY RESPONDENT USER GROUP
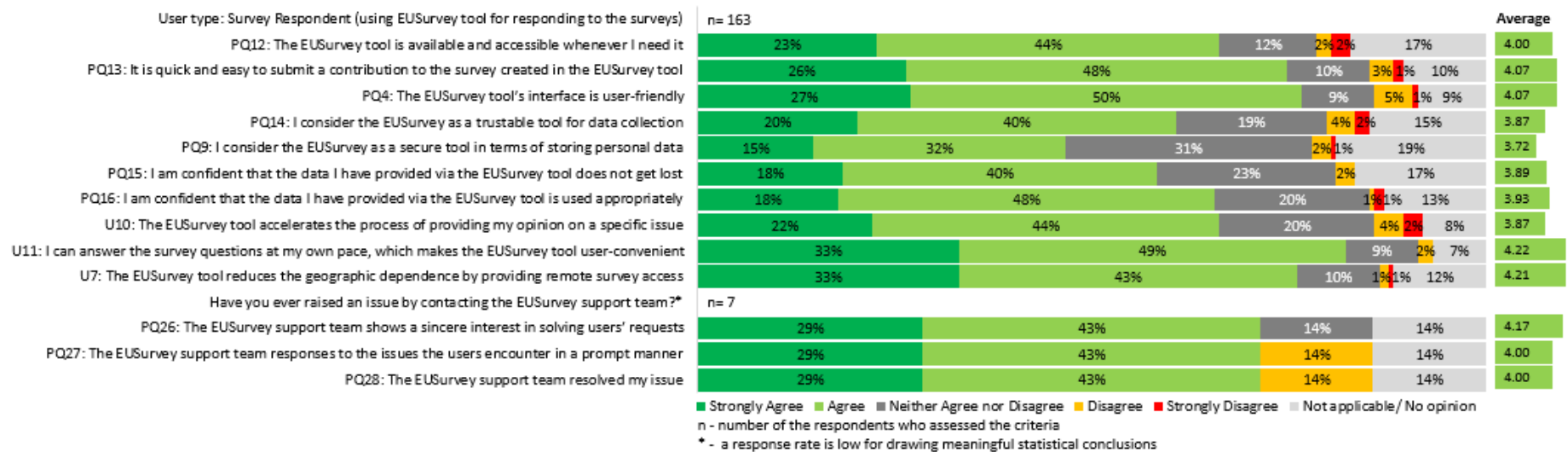
Figure 4 gives an overview of the survey results provided by the EUSurvey Author user group (using the Open Source Software). The statements were graded based on the users who responded 'Yes' to the skip logic question (a question that directs a respondent to a series of questions based on their responses).

FIGURE 4 – ACTION 2.6 SURVEY RESPONSE OVERVIEW BY SURVEY AUTHOR USER GROUP (USING OSS)

	Average
User type: Survey Author (using EUSurvey tool for the survey creation)* n= 4	
PQ2: It is easy to install/integrate the EUSurvey tool	4.00
PQ4: The EUSurvey tool's interface is user-friendly	3.67
PQ5: It is quick and easy to create a survey using the EUSurvey tool	4.00
U1: The EUSurvey tool functionality is sufficient for an effective survey design	3.34
PQ6: It is easy to manage the Form Elements in the EUSurvey tool	4.00
PQ7: The documentation provided as a guidance for the use of the EUSurvey tool is clear and helpful	2.34
PQ8: I consider the EUSurvey as a trustable tool for data collection	4.34
PQ9: I consider the EUSurvey as a secure tool in terms of storing personal data	2.00
PQ10: I am confident that the survey results collected via the EUSurvey tool do not get lost or corrupted	4.00
PQ11: I am confident that the survey results collected via the EUSurvey tool are used appropriately	4.00
PQ12: The EUSurvey tool performs the users' requests at the first time, i.e. with no delays	4.00
U2: The EUSurvey tool is beneficial in terms of saving time and costs, as it is a reusable solution	4.00
U3: The EUSurvey tool accelerates the process of collecting stakeholders' opinions on a specific issue	4.00
U4: The EUSurvey tool supports the cross-border and cross-sector interoperability by providing a multilingual solution for conducting the survey	4.00
U5: The respondents can answer the survey questions at their own pace, which makes the EUSurvey tool user-convenient	4.00
U6: The EUSurvey tool is constantly processing the respondents' answers and therefore allows the author to browse and analyse the results immediately	4.34
U7: The EUSurvey tool reduces the geographic dependence by providing remote survey access	4.00
U8: The EUSurvey tool increases the response rate by using the 'skip logic technique' (question dependencies)	4.00
U9: The EUSurvey tool allows the publishing of results over the web, which increases cross-borders and cross-sectors awareness	4.00
PQ17: I am satisfied with the security settings offered by the EUSurvey tool	4.00
PQ18: I am satisfied with the survey testing functionality offered by the EUSurvey tool	3.34
PQ19: I am satisfied with the survey translation functionality offered by the EUSurvey tool	2.00
PQ20: I am satisfied with the survey publishing functionality offered by the EUSurvey tool	4.00
PQ21: I am satisfied with the survey data analysis offered by the EUSurvey tool	3.50
PQ22: I am satisfied with the survey data export functionality offered by the EUSurvey tool	4.00
PQ23: I am satisfied with the survey result publishing functionality offered by the EUSurvey tool	3.00
Have you ever integrated the EUSurvey web service into your information system?* n= 2	
PQ24: It is easy to integrate the EUSurvey web service into the specific information system	4.00
PQ25: I didn't experience challenges in connecting required data sources and implementing the service on a server	3.50
U12: The EUSurvey web services are versatile by design, as it can be accessed via a web-based client interface, other application or web service	4.00
U13: Integration of the EUsurvey web service is beneficial in terms of saving costs, as it removes the need to create highly customized application for integrating...	4.50
Have you ever raised an issue by contacting the EUSurvey support team?* n= 3	
PQ26: The EUSurvey support team shows a sincere interest in solving users' requests	3.67
PQ27: The EUSurvey support team responses to the issues the users encounter in a prompt manner	3.34
PQ28: The EUSurvey support team resolved my issue	3.34

■ Strongly Agree ■ Agree ■ Neither Agree nor Disagree ■ Disagree ■ Strongly Disagree ▫ Not applicable/ No opinion
n - number of the respondents who assessed the criteria
* - a response rate is low for drawing meaningful statistical conclusions

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Figure 5 gives an overview of the survey results provided by the EUSurvey Author user group (using the web based application). The statements were graded based on the users who responded 'Yes' to the skip logic question (a question that directs a respondent to a series of questions based on their responses).

FIGURE 5 – ACTION 2.6 SURVEY RESPONSE OVERVIEW BY SURVEY AUTHOR USER GROUP (USING WEB BASED APP)

4.2.2   Comments and Recommendations

The Action 2.6 survey collected a significant amount of feedback and recommendations. This subsection provides the main trends presented; a complete list of comments and recommendations is included in the Appendix, in Section 6.4.

The commentary was collected from respondents who chose the 'Disagree' or 'Strongly Disagree' option (except for the open question: 'The main reasons of using EUSurvey') to at least one of the survey statements. The collected comments were grouped as follows:

- The main reasons for using the EUSurvey tool;
- The survey design process in the EUSurvey tool;
- Survey result exporting functionality;
- Support Service.

A number of respondents indicated EUSurvey tool as an alternative of IPM (which was discontinued). The respondents working for EU institutions were highly recommended to use EUSurvey as an official tool. The EUSurvey interface and ease of use were much appreciated by the respondents. Additionally, the respondents highlighted the EU Survey being beneficial in terms of cost savings and security.

The process of designing the survey in the EUSurvey tool was treated as rather unpredictable by the respondents. The users are not satisfied with the speed and amount of error messages appearing during the survey creation process.

Regarding the survey result exporting functionality, the comments present that the tool users are looking forward to having an export with extra options to make the survey data analysis more convenient to implement. A number of respondents indicated the excel export to be too basic. According to the respondent comments, the translation functionality needs to be improved as well.

According to the respondent comments, the EUSurvey support team demonstrated a sincere interest in solving users' issues. However, some respondents were not satisfied with the support team's response rate.

The main commentary trends are supported by the comment excerpts that are included in the Table 3.

<div align="center">

TABLE 3 – ACTION 2.6 RESPONDENT COMMENTS

</div>

Reasons of Using EUSurvey Tool	We were required to by the clients.
	Working for a European programme, it makes sense to use the European Commission's official survey tool. It is as easy to use others with the advantage of being secure in term of storing personal data.
	More stability, support and user-friendly interface that allows every partners/colleagues to use it easily.

	IPM was stopped and replaced by EUSurvey.
	Free, includes helpdesk, comes with EC approval, data security / privacy.
The Survey Design Process	Very slow, a lot of error messages.
	The elements after saving are sometimes changing their places. It is difficult to spot duplicate questions (check for duplicates would be helpful). Automatic question numeration does not recognize text (text field is treated as question).
	Loss of data (almost fully recovered after action taken by the tool managing team) - Inconsistencies in the data (e.g. number of answers to a question (or total number) may vary from one place to another) - Flexibility of dependencies could still be increased - Not possible to publish only the answers to a particular selection of questions based on the answer provided to a particular question.
	Users cannot save the results and work on their response at a later time.
	Some ways of publishing look visually nice but make it impossible to get an overview/print the responses properly. This creates intransperency.
Survey Result Exporting Functionality	The main problem I have with the surveys is the treatment of the answers. As the survey in itself is user-friendly, the export files are not, especially when there are a lot of answers (more than a hundred).
	It could be improved, it could provide more options.
	Browsing the published results is not user friendly at all.
	Adding languages is awkward - exploiting results online is not flexible: results are not readable online when the survey has more than a few columns and a few lines.
Support Service	I opened a few incidents/requests with EUSurvey team, and to be quite honest no easy solution was suggested to me no any clear explanation was provided on how to effectively use the tool. I had to think and investigate by myself how to optimise the tool for my purposes.
	Lacking response / communication via https://joinup.ec.europa.eu/software/eusurvey/forum/all discussion space - only 2 responses do not show much live interest to the application.
	The support team was very nice but not able to solve the problems promptly.
	If you have really an important survey to encode you need a helpdesk who can help you within 24 hours and not two days later or one week. Presumably the service is understaffed.

TABLE 4 – ACTION 2.6 RESPONDENT RECOMMENDATIONS

Recommendations	Indicate more info about the background, the objectives and the managers of the survey.
	Please don't use Excel to extract written data.
	Happy with the tool although still needs some fine-tuning.
	I would recommend to improve marketing side of the EUSurvey - publishing the source code and support via Join Up may not be sufficient - it looks like a separated.
	Some info messages are not translated into different languages. E.G., when building a survey in Spanish, some messages as "field marked with * are mandatory".
	Allow university students to use it with the institutions population, so that they can have good results if, for example, they have to make a sociologic research, or a political research.
	Enabling the creator for the field "email" to request the system to send the submitted pdf form directly to the user email address provided in that field (so no need to provide the email address again after the submission). This would enhance the tool security as in case e.g. a stakeholder try to answer to a questionnaire only addressed to Member States competent authorities the concerned MS contact point may come back to us pointing out this fake submission

Please improve the instruction material. I use the tool frequently but I do not know if I make the best use of the features which area available in the tool. It was also be good export data into a short report, or to be able to download comments and statistics separately. Overall, I think the tool is good but I am sure we are not using it to its full potential due to the lack of an instruction manual.

4.2.3   Result Overview According to the Evaluation Criteria

This section aims at presenting the method used for Perceived Quality and Utility score calculation. In order to obtain more accurate results, mean, mode, standard deviation and standard error values have been calculated. Before performing the calculations, the 5-point Likert scale range values need to be interpreted as numeric values, i.e.:

- 5 – Strongly Agree;

- 4 – Agree;

- 3 – Neither Agree nor Disagree;

- 2 – Disagree;

- 1 – Strongly Disagree;

- 0 – No opinion/not applicable **was not considered for the calculation** (I don't know).

4.2.3.1   PERCEIVED QUALITY

Figure 6 gives an overview on the Perceived Quality results of Action 2.6 – EUSurvey. The statements were graded based on the users who responded 'Yes' to the skip logic question (a question that directs a respondent to a series of questions based on their responses).

FIGURE 6 – ACTION 2.6 PERCEIVED QUALITY STATEMENT COMPARISON

Statement	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Not applicable/ No opinion	Average
PQ1: It is easy to connect to the EUSurvey web-based application |n=212	39%	50%	5%	3%	2%	1%	4.22
PQ2: It is easy to install/integrate the EUSurvey tool |n=4	50%		50%				4.00
PQ3: The EUSurvey tool is available and accessible whenever I need |n=212	33%	45%	9%	6%	2%	4%	4.07
PQ4: The EUSurvey tool's interface is user-friendly |n=379	23%	49%	17%	5%	2%	4%	3.90
PQ5: It is quick and easy to create a survey using the EUSurvey tool |n=216	25%	43%	17%	8%	3%	4%	3.83
PQ6: It is easy to manage the Form Elements in the EUSurvey tool |n=216	13%	40%	23%	13%	2%	9%	3.55
PQ7: The documentation provided as a guidance for the use of the EUSurvey tool is clear and helpful |n=216	9%	31%	22%	14%	10%	14%	3.19
PQ8: I consider the EUSurvey as a trustable tool for data collection |n=216	26%	48%	15%	5%	2%	5%	3.97
PQ9: I consider the EUSurvey as a secure tool in terms of storing personal data |n=379	19%	34%	25%	2%	1%	18%	3.84
PQ10: I am confident that the survey results collected via the EUSurvey tool do not get lost or corrupted |n=216	18%	43%	19%	4%	3%	14%	3.81
PQ11: I am confident that the survey results collected via the EUSurvey tool are used appropriately |n=216	18%	44%	19%		3%	16%	3.91
PQ12: The EUSurvey tool performs the users' requests at the first time, i.e. with no delays |n=379	18%	43%	16%	4%	3%	16%	3.84
PQ13: It is quick and easy to submit a contribution to the survey created in the EUSurvey tool |n=163	26%	48%	10%	3%	1%	10%	4.07
PQ14: I consider the EUSurvey as a trustable tool for data collection |n=163	20%	40%	19%	4%	2%	15%	3.87
PQ15: I am confident that the data I have provided via the EUSurvey tool does not get lost |n=163	18%	40%	23%	2%		17%	3.89
PQ16: I am confident that the data I have provided via the EUSurvey tool is used appropriately |n=163	18%	48%	20%	1%	1%	13%	3.93
PQ17: I am satisfied with the security settings offered by the EUSurvey tool |n=216	17%	49%	13%	4%	2%	15%	3.89
PQ18: I am satisfied with the survey testing functionality offered by the EUSurvey tool |n=216	19%	53%	13%	6%	2%	7%	3.89
PQ19: I am satisfied with the survey translation functionality offered by the EUSurvey tool |n=216	6%	21%	14%	5%	3%	51%	3.47
PQ20: I am satisfied with the survey publishing functionality offered by the EUSurvey tool |n=216	13%	48%	15%	4%	1%	19%	3.82
PQ21: I am satisfied with the survey data analysis offered by the EUSurvey tool |n=216	7%	37%	23%	11%	3%	19%	3.43
PQ22: I am satisfied with the survey data export functionality offered by the EUSurvey tool |n=216	14%	50%	11%	9%	4%	12%	3.70
PQ23: I am satisfied with the survey result publishing functionality offered by the EUSurvey tool |n=216	9%	31%	17%	5%	3%	35%	3.58
PQ24: It is easy to integrate the EUSurvey web service into the specific information system |n=14	14%	50%	7%	29%			3.50
PQ25: I didn't experience challenges in connecting required data sources and implementing the service on a server |n=14	14%	36%	21%	7%	7%	14%	3.50
PQ26: The EUSurvey support team shows a sincere interest in solving users' requests |n=123	42%	35%	9%	5%	5%	4%	4.10
PQ27: The EUSurvey support team responses to the issues the users encounter in a prompt manner |n=123	36%	33%	11%	12%	7%	2%	3.81
PQ28: The EUSurvey support team resolved my issue |n=123	30%	35%	13%	9%	7%	6%	3.76

■ Strongly Agree   ■ Agree   ■ Neither Agree nor Disagree   ■ Disagree   ■ Strongly Disagree   ■ Not applicable/ No opinion

n - number of the respondents who assessed the criteria

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4.2.3.2 Utility

Figure 7 gives an overview of the utility results. The statements were graded based on those users who responded 'Yes' to the skip logic question (a question that directs a respondent to a series of questions based on their responses).

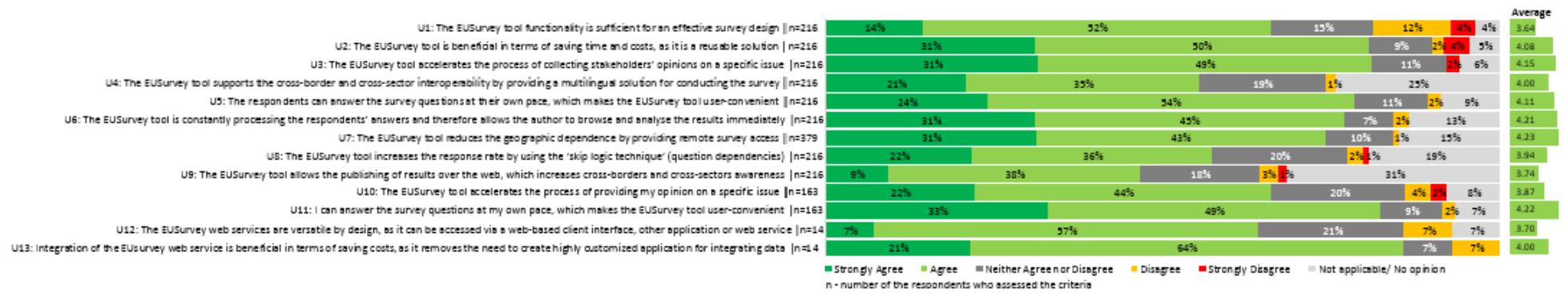**FIGURE 7 – ACTION 2.6 UTILITY STATEMENT COMPARISON**

4.2.4   Result Analysis According to the Evaluation Criteria

This section aims at presenting the method used for Perceived Quality and Utility score calculation. In order to obtain more accurate results, mean, mode, standard deviation and standard error values have been calculated.

Mean and mode are used in statistics and hereafter in this report for measuring the Perceived Quality and Utility evaluation criteria:

- The **mean**[7] (average) is the most popular measure of location or central tendency; has the desirable mathematical property of minimizing the variance. To get the mean, you add up the values[8] for each case and divide that sum by the total number of cases;

- **Mode** refers to the most frequent, repeated or common value[8] in the quantitative or qualitative data. In some cases it is possible that there are several modes or none.

In order to measure the degree of dispersion of a probability distribution, i.e. how far the data points are from the average, the standard deviation and standard error values are applied:

- **Standard deviation**[9] shows the spread, variability or dispersion of scores in a distribution of scores. It is a measure of the average amount the scores in a distribution deviate from the mean. The more widely the scores are spread out, the larger the standard deviation;

- **Standard error**[9] is the standard deviation of the sampling distribution of a statistic. It is a measure of sampling error; it refers to error in estimates due to random fluctuations in samples. It goes down as the number of cases goes up. The smaller the standard error, the better the sample statistic is as an estimate of the population parameter – at least under most conditions.

Based on the survey methodology presented in Section 2, the statements related to the Perceived Quality were mapped to four dimensions and the statements related to the Utility were mapped to three dimensions. The detailed mapping of the statements is described in Section 6.1.

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[7] Dictionary of statistics & methodology: a nontechnical guide for the social sciences (page 226).
[8] 5-point Likert scale range values are interpreted as numeric values like described in Section 4.2.3.
[9] Dictionary of statistics & methodology: a nontechnical guide for the social sciences (page 375).

4.2.4.1 PERCEIVED QUALITY OF THE ACTION 2.6

Table 5 presents the detailed analysis of each Perceived Quality statement.

TABLE 5 - ACTION 2.6 PERCEIVED QUALITY SCORE DETAILS AT STATEMENT LEVEL

Statement	Mean	Mode	StDev	StErr	Dimension
PQ1: It is easy to connect to the EUSurvey web-based application	4.22	4	0.85	0.05	Efficiency
PQ2: It is easy to install/integrate the EUSurvey tool	4.00	4	0	0	Efficiency
PQ3: The EUSurvey tool is available and accessible whenever I need	4.07	4	0.94	0.05	Reliability
PQ4: The EUSurvey tool's interface is user‑friendly	3.90	4	0.91	0.05	Efficiency
PQ5: It is quick and easy to create a survey using the EUSurvey tool	3.83	4	1.02	0.06	Efficiency
PQ6: It is easy to manage the Form Elements in the EUSurvey tool	3.55	4	0.99	0.06	Efficiency
PQ7: The documentation provided as a guidance for the use of the EUSurvey tool is clear and helpful	3.19	4	1.18	0.07	Efficiency / Support
PQ8: I consider the EUSurvey as a trustable tool for data collection	3.97	4	0.9	0.05	Security/Privacy (Trust)
PQ9: I consider the EUSurvey as a secure tool in terms of storing personal data	3.84	4	0.87	0.05	Security/Privacy (Trust)
PQ10: I am confident that the survey results collected via the EUSurvey tool do not get lost or corrupted	3.81	4	0.93	0.05	Security/Privacy (Trust) / Reliability
PQ11: I am confident that the survey results collected via the EUSurvey tool are used appropriately	3.91	4	0.79	0.05	Security/Privacy (Trust)
PQ12: The EUSurvey tool performs the users' requests at the first time, i.e. with no delays	3.84	4	0.93	0.05	Reliability / Efficiency
PQ13: It is quick and easy to submit a contribution to the survey created in the EUSurvey tool	4.07	4	0.82	0.05	Efficiency
PQ14: I consider the EUSurvey as a trustable tool for data collection	3.87	4	0.91	0.05	Security/Privacy (Trust)
PQ15: I am confident that the data I have provided via the EUSurvey tool does not get lost	3.89	4	0.78	0.04	Security/Privacy (Trust) / Reliability
PQ16: I am confident that the data I have provided via the EUSurvey tool is used appropriately	3.93	4	0.77	0.04	Security/Privacy (Trust)
PQ17: I am satisfied with the security settings offered by the EUSurvey tool	3.89	4	0.86	0.05	Efficiency
PQ18: I am satisfied with the survey testing functionality offered by the EUSurvey tool	3.89	4	0.88	0.05	Efficiency
PQ19: I am satisfied with the survey translation functionality offered by the EUSurvey tool	3.47	4	1.02	0.06	Efficiency
PQ20: I am satisfied with the survey publishing functionality offered by the EUSurvey tool	3.82	4	0.82	0.05	Efficiency
PQ21: I am satisfied with the survey data analysis offered by the EUSurvey tool	3.43	4	0.97	0.05	Efficiency

Statement	Mean	Mode	StDev	StErr	Dimension
PQ22: I am satisfied with the survey data export functionality offered by the EUSurvey tool	3.70	4	1	0.06	Efficiency
PQ23: I am satisfied with the survey result publishing functionality offered by the EUSurvey tool	3.58	4	1	0.06	Efficiency
PQ24: It is easy to integrate the EUSurvey web service into the specific information system	3.50	4	1.1	0.06	Efficiency
PQ25: I didn't experience challenges in connecting required data sources and implementing the service on a server	3.50	4	1.17	0.06	Efficiency
PQ26: The EUSurvey support team shows a sincere interest in solving users' requests	4.10	5	1.1	0.06	Support
PQ27: The EUSurvey support team responses to the issues the users encounter in a prompt manner	3.81	5	1.25	0.07	Support
PQ28: The EUSurvey support team resolved my issue	3.76	4	1.23	0.07	Support

Table 6 gives an overview on the analysis of each Perceived Quality dimension, as well as the total score of the Perceived Quality evaluation criteria.

In order to make the total Perceived Quality score calculation more accurate, a weighted mean[7] was used. The dimension weight is defined based on the amount of statements within a specific dimension. Three from four perceived quality dimensions – Efficiency, Reliability, Security/Privacy – were considered as applicable for the Action 2.6.

The weighted average of the Perceived Quality is 3.80 with a standard deviation equal to 0.97, on a scale from 1 to 5, where 5 is the maximum (best) value.

TABLE 6 - ACTION 2.6 PERCEIVED QUALITY SCORE DETAILS

	Mean	Mode	StDev	StErr	Dimension	Weight
Per Dimension	3.77	4	0.98	0.02	Efficiency	0.53
	3.65	4	1.24	0.25	Support	0.125
	3.90	4	0.91	0.03	Reliability	0.125
	3.88	4	0.86	0.02	Security/Privacy (Trust)	0.22
Perceived Quality	**3.80**	**4**	**0.97**	**0.01**		

Figure 8 gives a visual overview on the Perceived Quality coverage per four predefined dimensions.

FIGURE 8 – ACTION 2.6 PERCEIVED QUALITY AGGREGATION
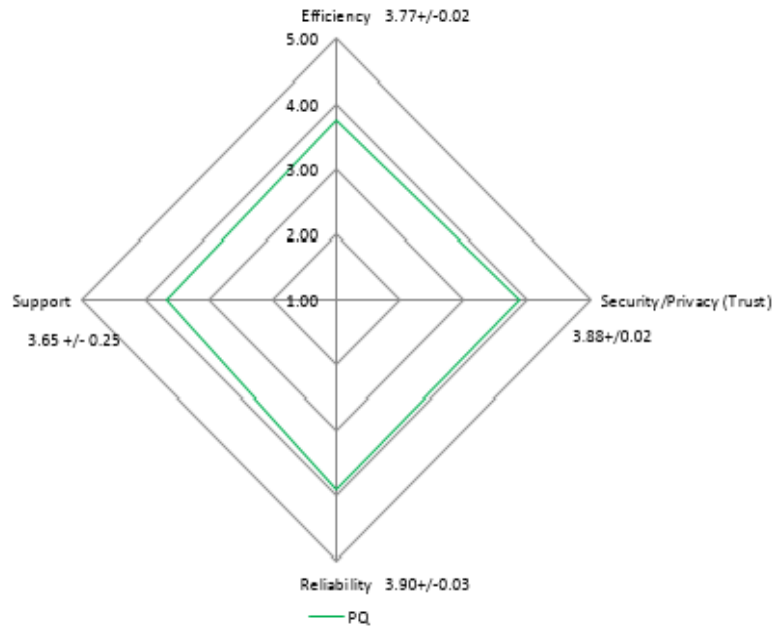
4.2.4.2 UTILITY

Table 7 presents the detailed analysis of each utility statement.

<p align="center">TABLE 7 – ACTION 2.6 UTILITY SCORE DETAILS ON STATEMENT LEVEL</p>

Statement	Mean	Mode	StDev	StErr	Dimension
U1: The EUSurvey tool functionality is sufficient for an effective survey design	3.64	4	1.01	0.06	Value for EU
U2: The EUSurvey tool is beneficial in terms of saving time and costs, as it is a reusable solution	4.08	4	0.93	0.05	Value for EU
U3: The EUSurvey tool accelerates the process of collecting stakeholders' opinions on a specific issue	4.15	4	0.8	0.05	Value for cross-border and cross-sector interoperability
U4: The EUSurvey tool supports the cross-border and cross-sector interoperability by providing a multilingual solution for conducting the survey	4.00	4	0.78	0.04	Value for cross-border and cross-sector interoperability
U5: The respondents can answer the survey questions at their own pace, which makes the EUSurvey tool user-convenient	4.11	4	0.68	0.04	Value for EU
U6: The EUSurvey tool is constantly processing the respondents' answers and therefore allows the author to browse and analyse the results immediately	4.21	4	0.75	0.04	Value for cross-border and cross-sector interoperability
U7: The EUSurvey tool reduces the geographic dependence by providing remote survey access	4.23	4	0.71	0.04	Value for cross-border and cross-sector interoperability
U8: The EUSurvey tool increases the response rate by using the 'skip logic technique' (question dependencies)	3.94	4	0.86	0.05	Value for EU
U9: The EUSurvey tool allows the publishing of results over the web, which increases cross‑borders and cross-sectors awareness	3.74	4	0.82	0.05	Value for cross-border and cross-sector interoperability
U10: The EUSurvey tool accelerates the process of providing my opinion on a specific issue	3.87	4	0.92	0.05	Value for cross-border and cross-sector interoperability
U11: I can answer the survey questions at my own pace, which makes the EUSurvey tool user‑convenient	4.22	4	0.7	0.04	Value for EU
U12: The EUSurvey web services are versatile by design, as it can be accessed via a web‑based client interface, other application or web service	3.70	4	0.76	0.04	Value for cross-border and cross-sector interoperability
U13: Integration of the EUsurvey web service is beneficial in terms of saving costs, as it removes the need to create highly customized application for integrating data	4.00	4	0.79	0.05	Value for cross-border and cross-sector interoperability

Table 8 gives an overview on the analysis of each Utility dimension as well as a total score for the utility evaluation criteria.

In order to make the total Utility score calculation more accurate, a weighted mean[7] was used. The dimension weight is defined based on the amount of statements within specific dimension.

The weighted average of the Utility is 4.04 with a standard deviation equal to 0.84, on a scale from 1 to 5, where 5 is the maximum (best) value.

TABLE 7 – ACTION 2.6 UTILITY SCORE DETAILS

	MEAN	MODE	StDev	StErr	Dimension	Weight
Per dimension	3.98	4	0.88	0.03	Value for EU	0.38
	4.07	4	0.8	0.02	Value for cross-border and cross-sector interoperability	0.62
	-	-	-	-	Value for EC	-
Utility	**4.04**	**4**	**0.84**	**0.02**		

Figure 9 gives a visual overview on the Utility coverage per two predefined dimensions.

FIGURE 9 – ACTION 2.6 UTILITY AGGREGATION

26
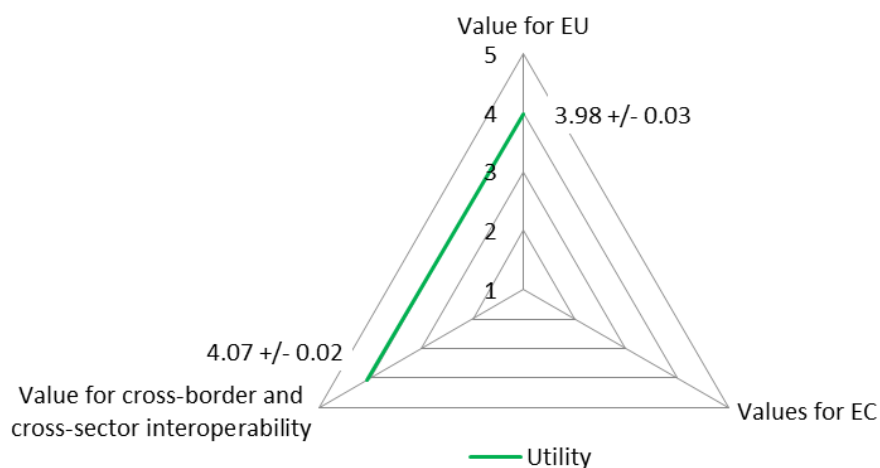
4.3 STRENGTHS AND WEAKNESSES OF THE EUSURVEY ONLINE TOOL AND EUSURVEY SOLUTION

This section provides an overview of the strong and weak aspects of the EUSurvey, revealed by the Action 2.6 Perceived Quality and Utility survey.

Prioritization of the statements were made based on the mean value of each statement. Statements with nearby mean values were grouped into three different clusters, to which the following colours have been applied:

- A Green colour applies to statements that refer to the strong aspects of the EUSurvey;
- A Grey colour applies to statements that refer to the aspects that require attention. For those statements respondent opinion was spread proportionally between 'Agree' and 'Disagree';
- An Orange colour applies to statements that refer to the weak aspects of the EUSurvey.

4.3.1 Perceived Quality

Table 8 presents an overview of the aspects that are strong, require attention or are weak of the EUSurvey in the context of Perceived Quality. Clusters were grouped based on the range of the Perceived Quality mean score only.

TABLE 8 – ACTION 2.6 EUSURVEY PERCEIVED QUALITY STRENGTHS AND WEAKNESSES

Perceived Quality Statement	Mean	Dimension
PQ1: It is easy to connect to the EUSurvey web-based application	4.22	Efficiency
PQ26: The EUSurvey support team shows a sincere interest in solving users' requests	4.10	Support
PQ13: It is quick and easy to submit a contribution to the survey created in the EUSurvey tool	4.07	Efficiency
PQ3: The EUSurvey tool is available and accessible whenever I need	4.07	Reliability
PQ2: It is easy to install/integrate the EUSurvey tool	4.00	Efficiency
PQ8: I consider the EUSurvey as a trustable tool for data collection	3.97	Security/Privacy (Trust)
PQ16: I am confident that the data I have provided via the EUSurvey tool is used appropriately	3.93	Security/Privacy (Trust)
PQ11: I am confident that the survey results collected via the EUSurvey tool are used appropriately	3.91	Security/Privacy (Trust)
PQ4: The EUSurvey tool's interface is user‑friendly	3.90	Efficiency
PQ15: I am confident that the data I have provided via the EUSurvey tool does not get lost	3.89	Security/Privacy (Trust)
PQ17: I am satisfied with the security settings offered by the EUSurvey tool	3.89	Efficiency
PQ18: I am satisfied with the survey testing functionality offered by the EUSurvey tool	3.89	Efficiency

Perceived Quality Statement	Mean	Dimension
PQ9: I consider the EUSurvey as a secure tool in terms of storing personal data	3.84	Security/Privacy (Trust)
PQ12: The EUSurvey tool performs the users' requests at the first time, i.e. with no delays	3.84	Reliability
PQ20: I am satisfied with the survey publishing functionality offered by the EUSurvey tool	3.82	Efficiency
PQ10: I am confident that the survey results collected via the EUSurvey tool do not get lost or corrupted	3.81	Security/Privacy (Trust)
PQ27: The EUSurvey support team responses to the issues the users encounter in a prompt manner	3.81	Support
PQ28: The EUSurvey support team resolved my issue	3.76	Support
PQ22: I am satisfied with the survey data export functionality offered by the EUSurvey tool	3.70	Efficiency
PQ23: I am satisfied with the survey result publishing functionality offered by the EUSurvey tool	3.58	Efficiency
PQ6: It is easy to manage the Form Elements in the EUSurvey tool	3.55	Efficiency
PQ24: It is easy to integrate the EUSurvey web service into the specific information system	3.50	Efficiency
PQ25: I didn't experience challenges in connecting required data sources and implementing the service on a server	3.50	Efficiency
PQ21: I am satisfied with the survey data analysis offered by the EUSurvey tool	3.43	Efficiency

4.3.2 Utility

Table 9 presents an overview of the aspects that are strong, require attention or are weak of the EUSurvey in the context of Utility. Clusters were grouped based on the range of the Utility mean score only.

TABLE 9 – ACTION 2.6 EUSURVEY UTILITY STRENGTHS AND WEAKNESSES

Utility Statement	Mean	Dimension
U7: The EUSurvey tool reduces the geographic dependence by providing remote survey access	4.23	Value for cross-border and cross-sector interoperability
U11: I can answer the survey questions at my own pace, which makes the EUSurvey tool user‑convenient	4.22	Value for EU
U6: The EUSurvey tool is constantly processing the respondents' answers and therefore allows the author to browse and analyse the results immediately	4.21	Value for cross-border and cross-sector interoperability
U3: The EUSurvey tool accelerates the process of collecting stakeholders' opinions on a specific issue	4.15	Value for cross-border and cross-sector interoperability

Utility Statement	Mean	Dimension
U5: The respondents can answer the survey questions at their own pace, which makes the EUSurvey tool user-convenient	4.11	Value for EU
U2: The EUSurvey tool is beneficial in terms of saving time and costs, as it is a reusable solution	4.08	Value for EU
U4: The EUSurvey tool supports the cross-border and cross-sector interoperability by providing a multilingual solution for conducting the survey	4.00	Value for cross-border and cross-sector interoperability
U8: The EUSurvey tool increases the response rate by using the 'skip logic technique' (question dependencies)	3.94	Value for EU
U10: The EUSurvey tool accelerates the process of providing my opinion on a specific issue	3.87	Value for cross-border and cross-sector interoperability
U9: The EUSurvey tool allows the publishing of results over the web, which increases cross‑borders and cross‑sectors awareness	3.74	Value for cross-border and cross-sector interoperability
U12: The EUSurvey web services are versatile by design, as it can be accessed via a web‑based client interface, other application or web service	3.70	Value for cross-border and cross-sector interoperability
U1: The EUSurvey tool functionality is sufficient for an effective survey design	3.64	Value for EU

5 CONCLUSIONS AND RECOMMENDATIONS

The objective of the survey was to evaluate the Perceived Quality and Utility of Action 2.6 – EUSurvey. The following conclusions have been drawn based on the analysis performed:

- Perceived Quality:
  - The majority of the respondents highlighted the ease of use of the EUSurvey tool and appreciated it being available and accessible whenever they need it;
  - The majority of respondents is satisfied with the support service provided;
  - The findings present that the weakest aspect of the EUSurvey tool is its 'unpredictability'. A significant number of respondents is dissatisfied with the error messages appearing during the survey design process, especially during the import/export of data. In these respondents' opinion, the formatting should be improved and modernized.

- Utility:
  - The results show that the EUSurvey is perceived as beneficial in terms of saving time and costs;
  - The results show that the EUSurvey contributes to the cross-border and cross-sector interoperability;
  - The respondents appreciated the multilingual solution provided by the EUSurvey, though indicated that it requires some improvement.

Based on the conclusions drawn as well as the own experience in using EUSurvey, CGI-ACN adduces the following recommendations:

- Perceived Quality:
  - A possibility of importing/exporting a significant amount of data, with no error messages appearing;
  - To modernize the interface, making it more attractive;
  - To provide more formatting functionalities, e.g. to introduce a dropdown.

- Utility:
  - To introduce some e-lessons for learning the tool by visual means;
  - To raise awareness of the EUSurvey tool not only among the EU/EC related institutions but also among schools and universities.

6 APPENDIX

6.1 STATEMENT MAPPING TO DIMENSIONS

In order to measure the Perceived Quality and Utility of the Action 2.6 and calculate the average score of each dimension, all survey statements were mapped to the dimensions according to the evaluation criteria.

Table 10 shows the statements mapping according to four dimensions of the Action 2.6 Perceived Quality.

<p align="center">TABLE 10 – ACTION 2.6 PERCEIVED QUALITY STATEMENT MAPPING TO DIMENSION</p>

Question	ID	Efficiency	Security/Privacy (Trust)	Reliability	Support	Count of areas covered by question
For EUSurvey WBA users. It is easy to connect to the EUSurvey web-based application	PQ1	✓				1
For EUSurvey OSS users. It is easy to install/integrate the EUSurvey tool	PQ2	✓				1
For EUSurvey WBA users. The EUSurvey tool is available and accessible whenever I need	PQ3			✓		1
The EUSurvey tool's interface is user‑friendly	PQ4	✓				1
It is quick and easy to create a survey using the EUSurvey tool	PQ5	✓				1
It is easy to manage the Form Elements in the EUSurvey tool	PQ6	✓				1
The documentation provided as a guidance for the use of the EUSurvey tool is clear and helpful	PQ7	✓			✓	2
I consider the EUSurvey as a trustable tool for data collection	PQ8		✓			1
I consider the EUSurvey as a secure tool in terms of storing personal data	PQ9		✓			1
I am confident that the survey results collected via the EUSurvey tool do not get lost or corrupted	PQ10		✓	✓		2
I am confident that the survey results collected via the EUSurvey tool are used appropriately	PQ11		✓			1
The EUSurvey tool performs the users' requests at the first time, i.e. with no delays	PQ12	✓				1
It is quick and easy to submit a contribution to the survey created in the EUSurvey tool	PQ13	✓				1
I consider the EUSurvey as a trustable tool for data collection	PQ14		✓			1
I am confident that the data I have provided via the EUSurvey tool does not get lost	PQ15		✓	✓		2
I am confident that the data I have provided via the EUSurvey tool is used appropriately	PQ16		✓			1

Question	ID	Efficiency	Security/Privacy (Trust)	Reliability	Support	Count of areas covered by question
I am satisfied with the security settings offered by the EUSurvey tool	PQ17	✓				1
I am satisfied with the survey testing functionality offered by the EUSurvey tool	PQ18	✓				1
I am satisfied with the survey translation functionality offered by the EUSurvey tool	PQ19	✓				1
I am satisfied with the survey publishing functionality offered by the EUSurvey tool	PQ20	✓				1
I am satisfied with the survey data analysis offered by the EUSurvey tool	PQ21	✓				1
I am satisfied with the survey data export functionality offered by the EUSurvey tool	PQ22	✓				1
I am satisfied with the survey result publishing functionality offered by the EUSurvey tool	PQ23	✓				1
It is easy to integrate the EUSurvey web service into the specific information system	PQ24	✓				1
I didn't experience challenges in connecting required data sources and implementing the service on a server	PQ25	✓				1
The EUSurvey support team shows a sincere interest in solving users' requests	PQ26				✓	1
The EUSurvey support team responses to the issues the users encounter in a prompt manner	PQ27				✓	1
The EUSurvey support team resolved my issue	PQ28				✓	1
# of questions covering dimension		17	7	3	4	
% of questions covering dimension		61%	25%	11%	14%	

Table 11 shows the statement mapping according to three dimensions of the Action 2.6 Utility.

TABLE 11 – ACTION 2.6 UTILITY STATEMENT MAPPING

Question	ID	Value for EU	Value for EC	Value for cross-border and cross-sector interoperability	Count of areas covered by question
The EUSurvey tool functionality is sufficient for an effective survey design	U1	✓			1
The EUSurvey tool is beneficial in terms of saving time and costs, as it is a reusable solution	U2	✓			1
The EUSurvey tool accelerates the process of collecting stakeholders' opinions on a specific issue	U3			✓	1
The EUSurvey tool supports the cross-border and cross-sector interoperability by providing a multilingual solution for conducting the survey	U4			✓	1
The respondents can answer the survey questions at their own pace, which makes the EUSurvey tool user-convenient	U5	✓			1
The EUSurvey tool is constantly processing the respondents' answers and therefore allows the author to browse and analyse the results immediately	U6			✓	1
The EUSurvey tool reduces the geographic dependence by providing remote survey access	U7			✓	1
The EUSurvey tool increases the response rate by using the 'skip logic technique' (question dependencies)	U8	✓			1
The EUSurvey tool allows the publishing of results over the web, which increases cross‑borders and cross-sectors awareness	U9			✓	1
The EUSurvey tool accelerates the process of providing my opinion on a specific issue	U10			✓	1
I can answer the survey questions at my own pace, which makes the EUSurvey tool user‑convenient	U11	✓			1
The EUSurvey web services are versatile by design, as it can be accessed via a web‑based client interface, other application or web service.	U12			✓	1
Integration of the EUSurvey web service is beneficial in terms of saving costs, as it removes the need to create highly customized application for integrating data	U13			✓	1
# of questions covering dimension		5	0	8	
% of questions covering dimension		38%	0%	62%	

6.2 STATUS OF THE RESPONDENTS AGREED TO BE CONTACTED

163 Action 2.6 Utility and Perceived Quality survey respondents agreed to be contacted. The list of contacts has

been transmitted to DIGIT/ISA and is not provided in this document for the confidentiality reasons.

6.3 RAW DATA EXPORT

The attached file provides the survey result export.

EUSurvey_Perceived
_Quality_Raw Data E

6.4 RESPONDENT COMMENTS AND RECOMMENDATIONS

The attached file provides all respondent comments and recommendations.

ME_D03
05-EUSurvey_Comme

6.5 GLOSSARY

- The mean[7] (average) is the most popular measure of location or central tendency; has the desirable mathematical property of minimizing the variance. To get the mean, you add up the values[8] for each case and divide that sum by the total number of cases;

- Mode refers to the most frequent, repeated or common value[8] in the quantitative or qualitative data. In some cases it is possible that there are several modes or none;

- Standard deviation[9] shows the spread, variability or dispersion of scores in a distribution of scores. It is a measure of the average amount the scores in a distribution deviate from the mean. The more widely the scores are spread out, the larger the standard deviation;

- Standard error[9] is the standard deviation of the sampling distribution of a statistic. It is a measure of sampling error; it refers to error in estimates due to random fluctuations in samples. It goes down as the number of cases goes up. The smaller the standard error, the better the sample statistic is as an estimate of the population parameter – at least under most conditions;

- 'Perceived Quality' is defined as the extent to which the outputs of an ISA action are meeting its direct beneficiaries' expectations[2];

- 'Utility' is defined as the extent to which the effects (impact) of an ISA action correspond with the needs, problems and issues to be addressed by the ISA programme[4];

- A Likert Scale is a widely used scaling method developed by Rensis Likert. Likert scale refers to the use of an ordinal 4- or 5- point rating scale with each point anchored or labelled;

- Weighted mean is a procedure for combining the means of two or more groups of different sizes; it takes the sizes of the groups into account when computing the overall or grand mean.