INTEROPERABILITY SOLUTIONS FOR EUROPEAN PUBLIC ADMINISTRATIONS MONITORING AND EVALUATION

D03.04/D03.05 PERCEIVED QUALITY AND PERCEIVED UTILITY MONITORING REPORT

ISA ACTION 1.3 CATALOGUE OF SERVICES

Framework Contract n° DI/07173-00

16 August 2016

DISCLAIMER

EXECUTIVE SUMMARY

The purpose of this section is to provide an overview of the key findings of the Perceived Quality and Perceived Utility monitoring of the documentation and the tools/services of **the ISA Action 1.3 – Catalogue of Services.** The objective of the survey is to measure the action's Perceived Quality which is defined as the extent to which the outputs of an ISA action are meeting its direct beneficiaries' expectations[1] and Perceived Utility which 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[2] and the actions' specific objectives.

The survey of the Action 1.3 included the evaluation of the Catalogue of Services including all its outputs (i.e. the common data models, an analysis and a proposal for a harmonised list of key business events). The survey was designed in the EUSurvey tool and distributed by e-mail to 81 contacts. Over a duration of more than one month[3], 14 stakeholders have responded.

Table 1 and Table 2 give an overview of the main results of the survey. The detailed score calculation process is described in section 5.4.4.

TABLE 1 – ACTION 1.3 PERCEIVED QUALITY SURVEY MAIN RESULTS

	Score	Explanation of the score scale
Usefulness Score	6.00	Average value on a scale from 1 (Not useful at All) to 7 (Very Useful).
Value Score	4.13	Average value of all the statement means in the range from 1 (Disagree) to 5 (Agree).
User Satisfaction Score	54.29	User Satisfaction Score from 0 (none of the respondents are satisfied) to 100 (all respondents are satisfied with the work performed by the Action).
Net Promoter Score	7	Net Promoter Score from -100 (every customer is a Detractor) to 100 (every customer is a Promoter).
OVERALL PERCEIVED QUALITY SCORE	**3.69**	**The Overall Perceived Quality Score is the average value of the Usefulness Score, the Value Score, the User Satisfaction Score, and the Net Promoter Score reduced to a five point scale in range from 1 – the lowest score to 5 – the highest score.**

[1] DG BUDG (2004), "Evaluating EU activities, a practical guide for the Commission services"
[2] Papadomichelaki, X. and Mentzas, G. (2012), "e-GovQual: A multiple-item scale for assessing e-government service quality"
[3] The survey was launched on the 9th of February 2016 and was active until the 18th of March 2016.

TABLE 2 – ACTION 1.3 PERCEIVED UTILITY SURVEY MAIN RESULTS

	Score	Explanation of the score scale
Usefulness Score	6.00	Average value on a scale from 1 (Not useful at All) to 7 (Very Useful).
Value Score	4.39	Average value of all the statement means in the range from 1 (Disagree) to 5 (Agree).
User Satisfaction Score	54.75	User Satisfaction Score from 0 (none of the respondents are satisfied) to 100 (all respondents are satisfied with the work performed by the Action).
Net Promoter Score	-13	Net Promoter Score from -100 (every customer is a Detractor) to 100 (every customer is a Promoter).
OVERALL PERCEIVED UTILITY SCORE	**3.66**	**The Overall Perceived Utility Score is the average value of the Usefulness Score, the Value Score, the User Satisfaction Score, and the Net Promoter Score reduced to a five point scale in range from 1 – the lowest score to 5 – the highest score.**

It is important to take into account that only 14 out of 81 respondents participated in the survey. All 14 respondents evaluated the Perceived Quality from whom only 8 respondents qualified for the evaluation of the Perceived Utility. This means that the results of this survey are to be considered as indicators of the Perceived Quality and Perceived Utility without fully representing the opinions of all the users.

Main findings:

- The survey results demonstrate that, in general, users of the Catalogue of Services documentation and tools/services consider its Perceived Quality and Perceived Utility as rather positive, meaning that there are some aspects requiring improvement.
- Regarding Perceived Utility, the results show that the documentation and the tools/services of the Catalogue of Services are perceived as **more beneficial in terms of Collaboration than Sustainability and Potential Re-usability**.
- Improvements in Usability would be of benefit to the documentation and the tools/services of the Catalogue of Services as respondents evaluate it as the most important aspect.
- Regular Catalogue of Services updates are necessary.
- According to the respondents, the work from SPOCS and e-SENS should be taken into consideration to improve the Catalogue of Services.

REVISION HISTORY

Date	Version	Description	Authors	Approved by
24/05/2016	0.10	Initial version	CGI - Accenture	
16/06/2016	1.00	Final version	CGI - Accenture	
16/08/2016	2.00			Approved by HVA on 29/07/2016.

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1 INTRODUCTION

CGI-Accenture has been requested to deliver Perceived Quality and Perceived Utility Monitoring and Evaluation Reports as part of the execution of the ISA programme monitoring (Technical Annex for Specific Contract SC 193 under Framework contract n° DI/07173-00).

Based on the scope of the Specific Contract, the Perceived Quality is to be measured for 15 actions and the Perceived Utility is to be measured for 17 actions. This report covers the Perceived Quality and Perceived Utility measurement of the documentation and the tools/services of Action 1.3 – Catalogue of Services.

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 action and its objectives;
- **Section 3:** explains the methodology used to measure the Perceived Quality and Perceived Utility;
- **Section 4:** summarises the collected data;
- **Section 5:** focuses on the survey results and the data analysis:
    - The demographic profile of respondents;
    - Usage frequency of the action's outputs;
    - Usefulness Score;
    - Perceived Quality and Perceived Utility measurements;
    - Action strengths, weaknesses, opportunities and threats;
    - Statements based on action objectives;
    - Usage of future action outcomes;
    - Respondent recommendations and opinions;
- **Section 6:** provides the survey conclusion and recommendations;
- **Section 7:** appendix includes:
    - Raw data export;
    - Glossary.

2 ACTION 1.3 – CATALOGUE OF SERVICES

The ability to build cross-border European public services is based on the reuse of public services operated by Member States at various administrative levels.

The ability to reuse these services on a pan-European basis can potentially reduce the administrative burden for businesses and citizens and support the creation of 'life event services' related to study, work, leisure and retirement in Europe.

At present, Member States do not have up-to-date information on basic public services available in other Member States or the means to efficiently and easily access them since there is a number of obstacles limiting the cross-border use of these services at the technical, semantic, organizational and legal level of interoperability.

In addition to this, a large number of catalogues, portals, etc. have been implemented or are being implemented throughout Europe with no harmonization among them, for example, in terms of the description of the service and the associated information. This lack of harmonisation makes it difficult to envisage any kind of link between them. To overcome these obstacles, the action sets out to explore the current difficulties and the benefits and feasibility of developing a European combined catalogue of public services by conducting a study at national and European levels identifying best practices and initiatives of interest that could be reutilised at the European level.

This action does not intend to build a new catalogue but instead will analyse the feasibility of achieving harmonisation of public service catalogues. That would help European Public Administrations (PAs) to understand what is available, to access tools and frameworks fostering information interoperability (particularly at the technical and semantic levels) in order to interconnect the public service catalogues, and to create a European combined catalogue for public services.

Action's objectives:

- Implement some interoperability specifications that will help European PAs to describe public services and group them under life and business events;
- Implement solutions to enable the link and federation of national and European public service single digital gateways in order to foster them as one-stop-shops;
- To test how the solutions can provide the expected benefits and improve them based on the practical results;
- Promote the federation and in some cases aggregation of the public services offered by the various levels of PAs into single digital gateways. This would lead at a later stage to the creation of a European catalogue of public services in various domains.

Action's benefits:

- Easier provision of cross-border public services;
- Efficient reuse of information available in other Member States by European national authorities or agencies.

3 SURVEY METHODOLOGY

A common methodology was developed by the CGI-Accenture team for all the surveys included in the Perceived Quality and Perceived Utility Monitoring and Evaluation Reports. The common methodology enables a comparison between the different action results. The first section explains how the Perceived Quality is measured and which dimensions are covered. The second section explains how the Perceived Utility is measured and which dimensions are covered. The next section gives an overview of the main survey measurements. The last section describes the architecture of the survey.

3.1 PERCEIVED QUALITY

Perceived Quality is defined as the extent to which the outputs of an ISA action are meeting its direct beneficiaries' expectations[1]**.**

Eight dimensions are used to measure the Perceived Quality criterion. These dimensions are derived from the main objectives of the ISA programme. Perceived Quality for information is measured using Framework for Assessing Documentation Adequacy[4] and it covers the following four dimensions:

- **Accuracy (A)**: the freedom from mistake or error; a synonym is "correctness"[4];
- **Completeness (C)**: the possession of all necessary parts, elements or steps[4];
- **Usability (U)**: the capability, convenience of using the document(s)[4];
- **Expandability (Ex)**: the ability to apply in broader/other context (for example to cross-sector, or from local to regional, national level) [4].

The survey statements for the dimensions listed above are developed according to the information presented in the framework specification[4] document.

Perceived Quality for tools and services is measured using an adaption of the eGovQual scale model[5] which covers the following four dimensions:

- **Usability (Us)**: the ease of using or user friendliness of the service/tool and the quality of information it provides5;
- **Trust (Privacy) (T)**: the degree to which the user believes the service/tool is safe from intrusion and protects personal information5;
- **Performance (P)**: the feasibility and speed of accessing, using, and receiving services of the service/tool5;

[4] Arthur J. D, Stevens K. T (1990), "Document Quality Indicators: A Framework for Assessing Documentation Adequacy"
[5] Papadomichelaki X., Mentzas G (2012), "e-GovQual. A multiple-item scale for assessing e-government service quality" http://imu.ntua.gr/sites/default/files/biblio/Papers/e-govqual-a-multiple-item-scale-for-assessing-e-government-service-quality.pdf

- **Support (S)**: the ability to get help when needed and the level of service received5.

The Trust (Privacy) dimension was included in the dimensions' importance evaluation in order to collect the users' opinion on how importance the Trust (Privacy) dimension is for them in general. However, this dimension was excluded from the statement conformity evaluation as these statements were considered as not applicable by the Project Officer.

The survey statements for the dimensions listed above are directly adapted from the statements used in the eGovQual scale model.

3.2 PERCEIVED UTILITY

Perceived 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[6] and the action's specific objectives.
Regarding the Perceived Utility measurement, several statements are derived from the objectives of the ISA programme. These statements are grouped in three dimensions which are defined as the criteria for measuring the Perceived Utility:

- **Potential Re-usability:** the degree to which the action's outcome(s) can be reused by PAs;
- **Sustainability:** to what extent is the financial, technical and operational sustainability of solutions ensured[7].
- **Collaboration:** the degree to which the action promotes/facilitates collaboration/cooperation between PA's[8].

The survey statements for the dimensions listed above were developed according to:

- The ISA programme's main objectives: "To support cooperation between European Public Administrations by facilitating the efficient and effective electronic cross-border and cross-sectorial interaction between such administrations, including bodies performing public functions on their behalf, enabling the delivery of electronic public services supporting the implementation of Community policies and activities"[9] and actions' specific objectives. The Perceived Utility statements were tailored to reflect these objectives and were based on the ESOMAR[10] (World Association of Opinion and Marketing Research Professionals) standards.

The developed Perceived Utility dimension allows a comparison between different actions and also provides the opportunity to see if the ISA programme objectives have been met (from the user point of view).

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[6] Papadomichelaki, X. and Mentzas, G. (2012), "e-GovQual: A multiple-item scale for assessing e-government service quality"
[7] European Commission (2013), Interim evaluation of the ISA programme, "Report from the Commission to the European Parliament and Council COM (2013) 5 final".
[8] CRN (2015), Collaboration http://research.crn.com/technology/knowledge_management/collaboration
[9] Decision No 922/2009/EC of the European Parliament and of the Council of 16 September 2009 on interoperability solutions for European public administrations (ISA) (2009)
[10] ESOMAR, edited by Hamersveld. M., Bont C. (2007), Market Research, Handbook, 5th Edition

3.3 SURVEY MEASUREMENTS

In the data analysis, the core types of measurements which are performed include the Usefulness Score, the Value Score, the User Satisfaction Score, the Net Promoter Score and the Overall Score for Perceived Quality and Perceived Utility. The survey measurements are divided into two groups: action level measurement and Perceived Quality and Utility level measurements.

Action level measurements:

- The Usefulness Value Score indicates the respondents' evaluation of how useful the action is. The Usefulness Value Score is calculated taking into account a mean value from a single question: *"Overall how useful is the "Catalogue of Services" outputs (i.e., common data models, an analysis and a proposal for a harmonised list of key business events) to your work)?"*
- Action strengths, weaknesses, opportunities and threats: Statements are located in quadrants, based on the calculated mean values of the dimensions' conformity and dimensions' importance. The quadrants highlight the weak and strong aspects of the action, as well as threats and opportunities.
- Statements based on action objectives show the respondents' evaluation to what extent the action's objectives have been achieved.
- Usage of future outcomes shows how frequently respondents would intend to use any of the Catalogue of Services tools, on the basis of the tool description, which are intended to be developed and tested.

Perceived Quality and Perceived Utility level measurements:

- The Value Score shows the action's compliance to the dimensions defined above (see sections 3.1 and 3.2). Two aspects are considered for each dimension. On one side, the importance of the dimension for the users is assessed. On the other side we measure if the action is compliant with the dimension. This section includes statement mapping to dimensions, dimensions conformity results, criterion score and aggregation.
- The User Satisfaction Score shows how satisfied the respondents are with the action. The User Satisfaction Score is assessed with reference to the results of the dimensions' importance and conformity evaluation. The User Satisfaction Score is measured at the individual level for each of the survey respondents via the identification of the important dimensions for that particular respondent.
- The Net Promoter Score® (NPS) is a widely used management tool that helps evaluate the loyalty of a customer relationship. In order to evaluate the NPS, the question *"how likely the respondent would recommend the particular action's output to others"* is asked.

- The Overall Score is used to get a single score that describes the overall Perceived Quality and/or Perceived Utility of the action. In order to determine the Overall Score, the average value of the Usefulness Score, the Value Score, the User Satisfaction Score and the Net Promoter Score is calculated. To calculate the Overall Score, all measurements are reduced to a five point scale.

3.4 Survey Architecture

The survey is divided into several sections which are outlined below:

- The demographic profile: for the purpose of identifying the respondents' demographic profile, respondents are asked to answer several questions. The demographic profile illustrates the diversity of the respondents who have participated in the survey.
- Usage of the action outputs: for the purpose of identifying the usage rate of the action outputs, the respondents are asked to answer several questions regarding the usage of every action output. These questions also work as filters, selecting the respondents who should evaluate the statements regarding the specific action output.
- The action's Usefulness: for the measurement of the action's usefulness, the respondents are asked to evaluate a single question using a 7-point Likert grading scale[11].
- The Perceived Quality and Perceived Utility Measurement: in order to measure the Perceived Quality and Perceived Utility, the respondents are asked to grade dimensions and statements based on their level of importance and agreement. A 5-point Likert grading scale[11] is used as a grading scale. Responses to these questions are used to determine the Value Score, action strengths, weaknesses, threats and opportunities, and the User Satisfaction Score.
- The Net Promoter Score: there is a single question that measures the Net Promoter Score. By answering this question, the respondents indicate their likelihood of recommending the action's outputs to colleagues or other public administrations.
- Action strengths, weaknesses, opportunities and threats show the location of the action statements based on dimension conformity and importance results.
- Statements based on action objectives: in order to evaluate the extent to which these objectives conform to the action, the respondents are asked to grade statements based on their level of agreement. A 5-point Likert scale[11] is used as a grading scale.
- Usage of future outcomes: for the measurement of the future Catalogue of Services tools, on the basis of the tool description.

[11] 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.

- The recommendations: the last section includes three open questions for recommendations and opinions regarding the action and the survey.

4 SURVEY DATA SUMMARY

This section aims to provide detailed information about the data gathering fieldwork. Table 3 gives an overview of the survey start and end dates, the number of respondents the survey was proposed to, the amount of responses collected, as well as the survey launching method.

TABLE 3 – ACTION 1.3 SURVEY TECHNICAL INFORMATION ABOUT THE FIELDWORK

Start date:	09/02/2016
End date:	18/03/2016
The survey launch method:	E-mail notification
Reminders:	E-mail reminders sent out on 18/02/2016, 29/02/2016, 07/03/2016 and 14/03/2016
Target population:	81
Total number of respondents:	14
Number of suitable respondents for the survey:	14

5 SURVEY RESULTS AND ANALYSIS

This section aims to provide the detailed survey analysis and to present the results.

5.1 DEMOGRAPHIC PROFILE OF RESPONDENTS

The respondents' demographic profiles tend to describe the action respondents from the demographic point of view to illustrate the diversity of the respondents. Table 4 gives an overview of the demographic profile of the respondents. **It is important to take into account that only 14 respondents participated in this survey, thus the percentage value of one respondent is 7.14%.**

TABLE 4 – ACTION 1.3 DEMOGRAPHIC PROFILE OF RESPONDENTS

RESPONDENT PROFILE			
		Amount	Col %
ALL RESPONDENTS		14	100.0
RESPONDENT GROUP*	Policy makers domain	7	50.0
	Technical people	7	50.0
	Legal department	3	21.4
	Large scale projects (e-Sens,…)	2	14.3
	Other (1 respondent: Expert group member)	1	7.1
ORGANIZATION	Public administration at national level	14	100.0
LOCATION	Austria	1	7.1
	Bulgaria	1	7.1
	Croatia	1	7.1
	Estonia	1	7.1
	Finland	1	7.1
	Greece	2	14.3
	Hungary	1	7.1
	Latvia	1	7.1
	Lithuania	1	7.1
	Netherlands	1	7.1
	Romania	1	7.1
	Slovakia	1	7.1
	Sweden	1	7.1
POSITION LEVEL	Technical project manager	6	42.9
	Business analyst	3	21.4
	Business manager	2	14.3
	Legal responsible	1	7.1
	Other (1 respondent: Expert level)	2	14.3

Base: all respondents, n=14

**There were multiple choices possible for these questions. This explains why the percentage of responses can exceed 100%.*

5.2 USAGE OF THE ACTION

The usage profile provides an overview of the usage rate of the action. Table 5 shows how familiar the respondents are with the documentation and the tools/services of the Catalogue of Services. **It is important to take into account that only 14 respondents participated in this survey, thus the percentage value of one respondent is 7.14%.**

TABLE 5 – ACTION 1.3 USAGE OF CATALOGUE OF SERVICES

USAGE PROFILE			
		Amount	Col %
ALL RESPONDENTS		14	100.0
USAGE	Have tried it once	1	7.1
	Have used it occasionally	7	50.0
	Just heard, but don't use/work with the "Catalogue of Services"	5	35.7
	Use it regularly (Common data models)	1	7.1

Base: all respondents, n=14

5.3 USEFULNESS SCORE

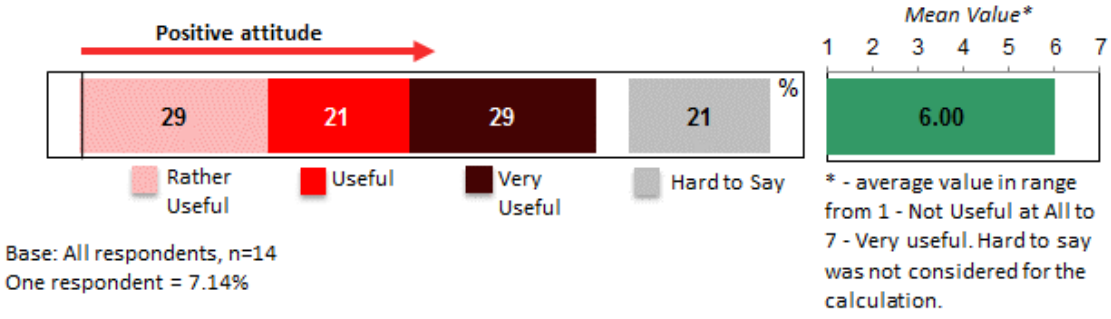
The Usefulness Score is calculated taking into account a single question: *"Overall how useful are the "Catalogue of Services" outputs (i.e., common data models, an analysis and a proposal for a harmonized list of key business events) to your work?"*

The survey respondent is asked to provide his/her opinion using the 7-point Likert grading scale. For evaluation of the Usefulness, a grading scale is used with values ranging from "Very Useful" to "Not Useful at All". An additional "Hard to Say" option is provided, however this score is excluded from the score calculations. Before performing the survey data calculations, the 7-point Likert scale values are interpreted as numeric values:

- 7 – Very Useful;
- 6 – Useful;
- 5 – Rather Useful;
- 4 – Neither Useful nor Not Useful;
- 3 – Rather Not Useful;
- 2 – Not Useful;
- 1 – Not Useful at All;
- 0 – Hard to Say (*is not considered for the calculation).*

In order to have an overview of the positive attitude (Rather Useful, Useful and Very Useful), the bars in pink and red represent the positive answers. In addition, a no opinion bar in grey is presented separately on the right. An explanatory legend with colour codes represents the data which is available. The average mean value is presented on the right side of the figure.

FIGURE 1 – ACTION 1.3 USEFULNESS VALUE SCORE



The survey results show that none of the respondents have a negative attitude towards the Usefulness of the Catalogue of Services outputs. It appears to be useful to 79% of the respondents, while 21% (three respondents) could not determine the Usefulness of the Catalogue of services outputs. The mean value is **6.00,** which is a very high score, meaning that respondents have a very positive attitude about the Usefulness.

However, due to the fact that only 14 respondents participated in this survey, the data should be reviewed with caution.

5.4 Perceived Quality and Utility measurements

This section aims to provide a detailed Perceived Quality and Perceived Utility measurement analysis and to present the results.

5.4.1 Value Score

This section includes the analysis and results of Perceived Quality and Perceived Utility Value Score. It is structured into two main sections: the dimensions' importance and conformity via statements.

5.4.1.1 Dimensions Importance

Prior to the evaluation of the dimensions' conformity to the outputs of the action, it is essential to initially ascertain whether these dimensions are important to the respondents while working with the action. If a specific dimension is important to respondents, then it is essential that its conformity assessment is positive. However, if a dimension is not important to respondents, it should not be considered as the action's weakness because of non-compliance with the outputs of the action.

Eight Perceived Quality dimensions (Accuracy, Completeness, Usability (documentation), Expandability, Usability (tools/services), Trust (Privacy), Performance and Support), and three Perceived Utility dimensions (Collaboration, Sustainability and Potential Re-usability) are evaluated in the survey. This section describes the respondents' answers regarding the importance of the dimensions.

Each respondent is requested to provide his/her opinion using the 5-point Likert grading scale. For the dimensions' importance evaluation, a grading scale with values ranging from 'Important' to 'Not important' is used. An additional 'Hard to Say/Not Applicable' option is provided, however this choice is excluded from the score calculations. Before performing the survey data calculations, the 5-point Likert scale values are interpreted as numeric values:

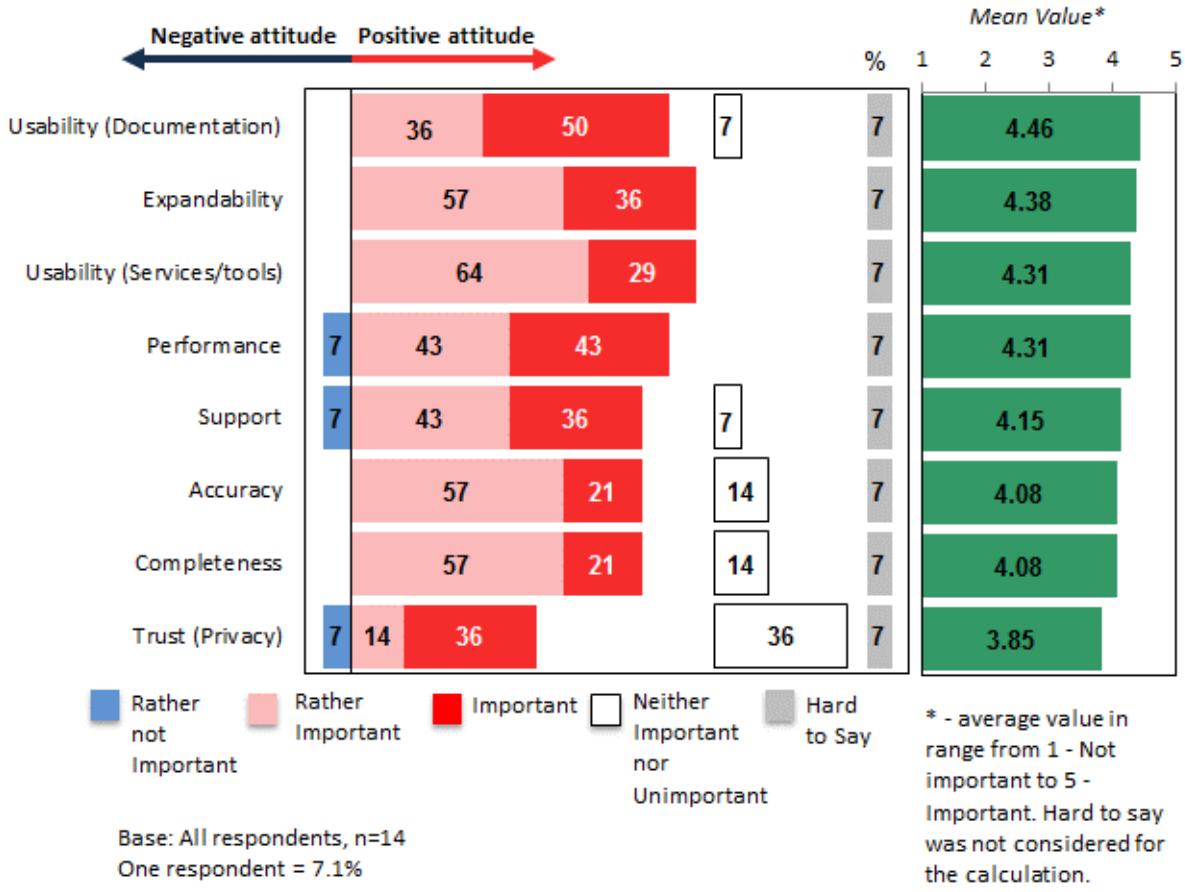
- 5 – Important;
- 4 – Rather Important;
- 3 – Neither Important nor Unimportant;
- 2 – Rather not Important;
- 1 – Not Important;
- 0 – Hard to Say/Not Applicable *(is not considered for the calculation).*

In order to have an overview of the positive and negative attitude proportions, the bars in blue represent the negative attitude (answers 'Not Important' and 'Rather not Important'), whereas the bars in pink/red represent the positive one (answers 'Rather important' and 'Important'). In addition, a neutral opinion (the

bars in white) and no opinion (the bars in grey) answers are presented separately on the right. An explanatory legend with colour codes represents the available data. The average mean value for each of the dimensions is presented on the right side of the figure.

FIGURE 2 – ACTION 1.3 PERCEIVED QUALITY DIMENSIONS IMPORTANCE RESULTS

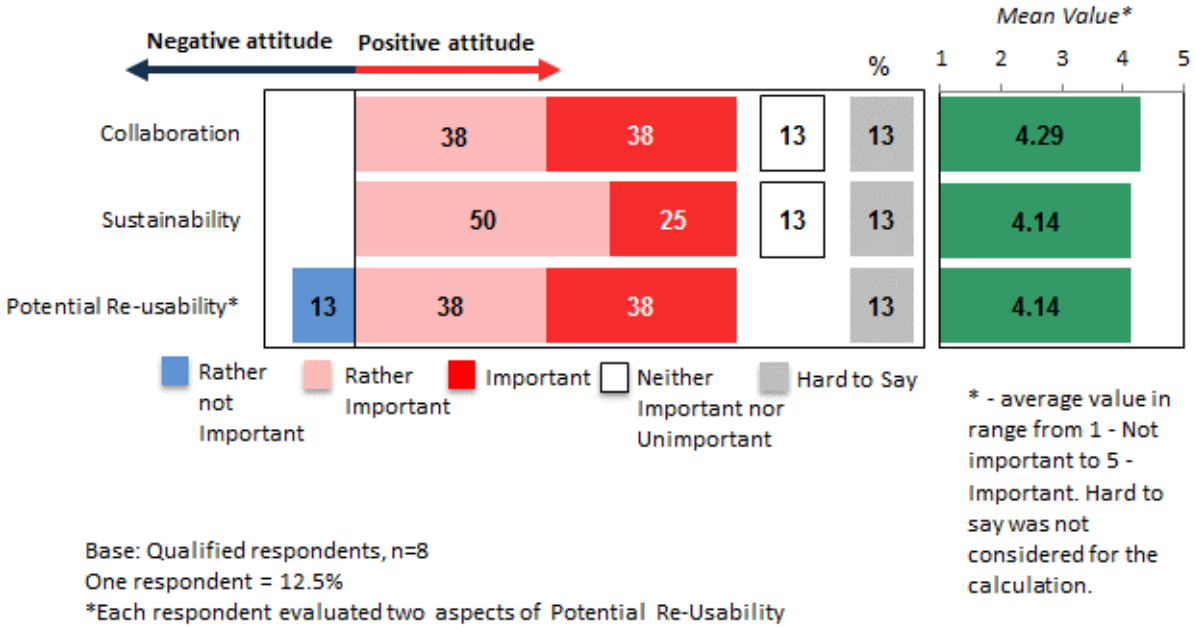
"How important to you are these factors when using "Catalogue of Services", taking into consideration the Action as a whole with all its outputs (i.e., common data models, an analysis and a proposal for a harmonised list of key business events)?"



The survey results indicate that the most important Perceived Quality dimension for Action 1.3 – Catalogue of Services is the Usability of the documentation. Half of the respondents evaluated this dimension as 'Important' while 36% evaluated it as 'Rather Important'. The mean value is **4.46**. The Expandability (mean value **4.38**), the Usability (Services/tools) (mean value **4.31**) and the Performance (mean value **4.31**) dimensions follow next. The Trust (Privacy) dimension has the lowest mean value – **3.85**, however, the mean value is still higher than the average value/neutral value (3 - 'Neither Important nor Unimportant'). Also, the standard deviation is very low, meaning that all the dimensions with the exception of the Trust (Privacy) are considered as highly important.

FIGURE 3 – ACTION 1.3 PERCEIVED UTILITY DIMENSIONS IMPORTANCE RESULTS

"How important to you are these factors when using "Catalogue of Services", taking into consideration the Action as a whole with all its outputs (i.e., common data models, an analysis and a proposal for a harmonised list of key business events)?"



The survey results indicate that the most important Perceived Utility dimension for the documentation and the tools/services is Collaboration (mean value 4.29). Three out of eight respondents evaluated the Collaboration dimension as 'Important'. The Sustainability and the Potential Re-usability dimensions are the next most important with mean values of **4.14**. However, due to the fact that only eight respondents qualified for the evaluation of the Perceived Utility, the data should be reviewed with caution.

5.4.1.2 DIMENSIONS CONFORMITY

In order to measure the Perceived Quality and Perceived Utility dimensions' conformity to the action, a set of descriptive statements was developed for each dimension. By evaluating the statement conformity to the action, the extent to which the dimensions correspond to the ISA programme's objectives is measured.

This section provides an analysis of the statements. It starts with statement mapping to dimensions, which is followed by the analysis of the Perceived Quality and Perceived Utility dimension conformity statements. Finally, the last section provides an overview of the statement conformity scores, which are summarised in groups according to the dimensions.

5.4.1.2.1 Statement Mapping to Dimensions

In total, Action 1.3 has seventeen Perceived Quality and eight Perceived Utility statements regarding the dimensions' conformity. Table 6 gives an overview of the statements representing each dimension. The Accuracy, the Usability (documentation), the Support, the Collaboration and the Sustainability dimensions are represented by three statements each, while the Usability (tools/services), the Performance, the Completeness, the Expandability and the Potential Re-usability are represented by two statements each.

TABLE 6 – ACTION 1.3 STATEMENT MAPPING TO DIMENSIONS

	Perceived Quality Statements	Dimension
1	The structure of the provided output is clear and easy to follow	Usability (tools/services)
2	The output is well customized to individual users' needs	Usability (tools/services)
3	The output is available and accessible whenever it is needed	Performance
4	The output performs the service successfully upon the first request	Performance
5	The support team showed a sincere interest in solving users' problem	Support
6	The support team provided prompt replies to the users' inquiries	Support
7	The support team has the knowledge to answer users' questions	Support
8	The output is accurate	Accuracy
9	The sources of output listed are verifiable	Accuracy
10	The output is free from grammar/style errors	Accuracy
11	The reference links work and are accessible	Completeness
12	The output is complete and does not require additions	Completeness
13	The output is appropriate/applicable to my business needs	Usability (documentation)
14	The guidelines are easy to understand	Usability (documentation)
15	The structure of the output is clear and the systematic design remains consistent	Usability (documentation)
16	The output is applicable to other sectors	Expandability
17	The output format is transferrable to other applications	Expandability
	Perceived Utility Statements	**Dimension**
1	Overall, the action activities help save costs	Potential Re-usability
2	Overall, the action activities help save time	Potential Re-usability
3	The output is planned to be used in future	Sustainability
4	The output provides sustainable solutions that will also be relevant in future	Sustainability
5	Overall, the output supports effective reuse of tools/services/documentation	Sustainability
6	The output helps successfully cooperate with other public administrations/departments	Collaboration
7	Overall, the output supports effective electronic cross-border and cross-sector interaction	Collaboration
8	The output supports the implementation of European community policies and activities	Collaboration

5.4.1.2.2 DIMENSIONS CONFORMITY RESULTS

For the purpose of describing dimensions' conformity to the action, 17 Perceived Quality statements are designed for this survey. The respondents are asked to evaluate the extent to which these statements conform to the particular action.

Each respondent is requested to provide his/her opinion using the 5-point Likert grading scale. For the dimensions' conformity evaluation, a grading scale with values ranging from 'Agree' to 'Disagree' is applied. An additional 'Hard to Say/Not Applicable' option is provided, however this score is excluded from the score calculations. Before performing the survey data calculations, the 5-point Likert scale values are interpreted as numeric values:

- 5 – Agree;
- 4 – Rather Agree;
- 3 – Neither Agree nor Disagree;
- 2 – Rather Disagree;
- 1 – Disagree;
- 0 – Hard to Say/Not Applicable *(is not considered for the calculation).*

In order to have an overview of the positive and negative attitude proportions, the bars in blue represent the negative attitude (answers 'Disagree' and 'Rather Disagree'), whereas the bars in pink/red represent the positive ones (answers 'Agree' and 'Rather Agree'). In addition, a neutral opinion (the bars in white) and no opinion (the bars in grey) are presented separately on the right. An explanatory legend with colour codes represents the available data. The average mean value for each of the dimensions is presented on the right side of the figure.

FIGURE 4 – ACTION 1.3 PERCEIVED QUALITY DIMENSIONS CONFORMITY RESULTS

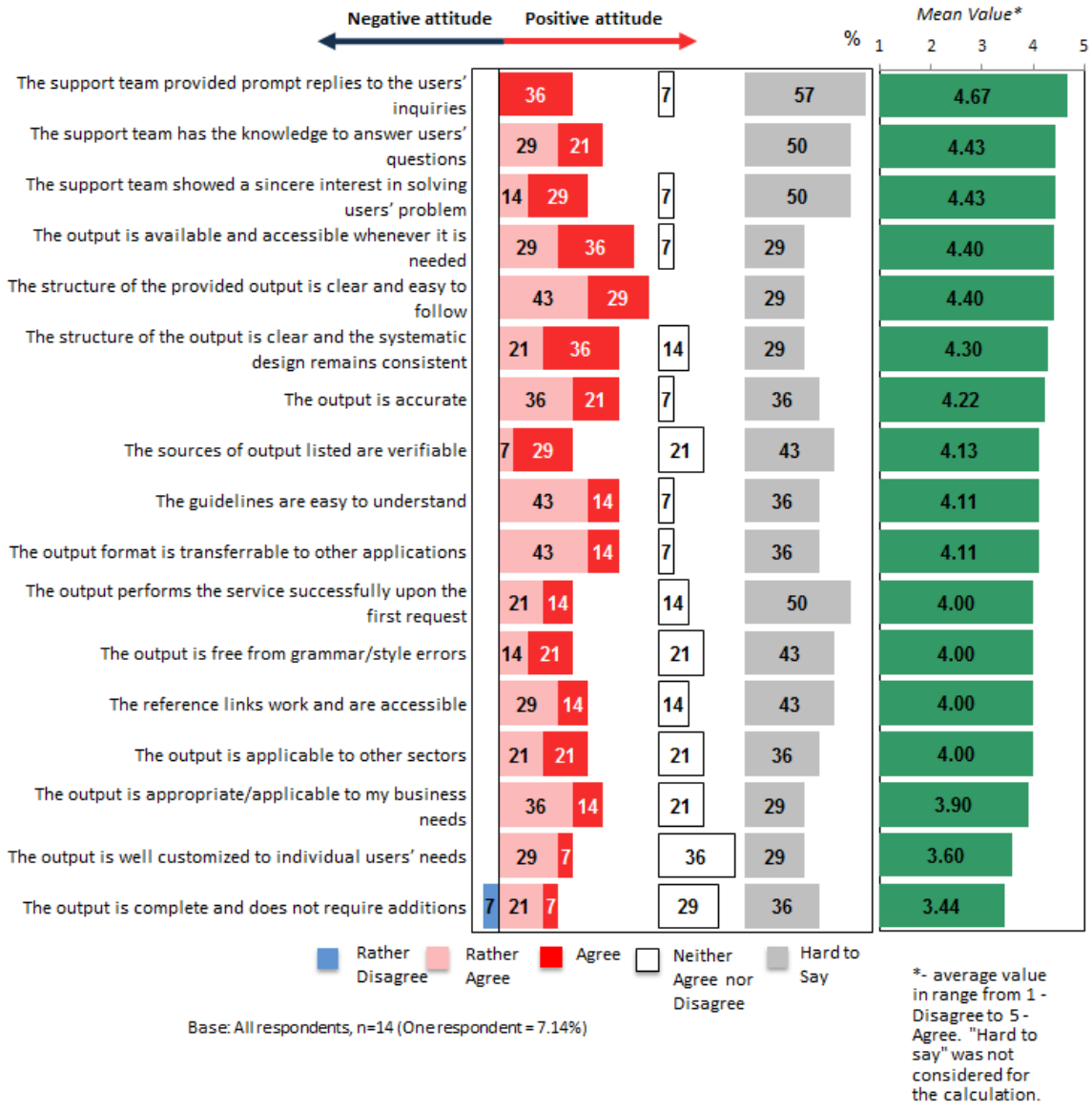


Figure 4 shows that for most of the statements, a considerable number of respondents chose the answers "Hard to say" and "Neither Agree nor Disagree". However, the other respondents evaluated the statements as relevant to the documentation and the tools/services of the Catalogue of Services. The most relevant statements regarding the evaluation of the documentation and the tools/services of the Catalogue of Services are:

- *'The support team provided prompt replies to the users' inquiries'* (mean value **4.67**);
- *'The support team has the knowledge to answer users' questions'* (mean value **4.43**) and
- *'The support team showed a sincere interest in solving users' problem'* (mean value **4.43**).

FIGURE 5 – ACTION 1.3 PERCEIVED UTILITY DIMENSIONS CONFORMITY RESULTS

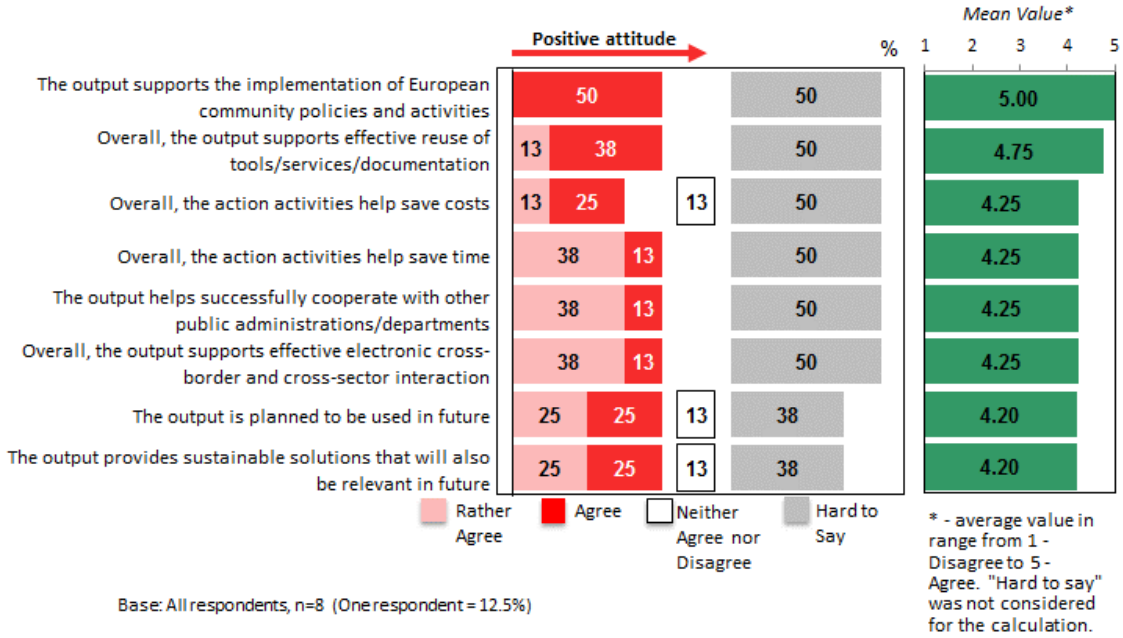


Figure 5 shows that all of the statements are evaluated as relevant to the documentation and the tools/services of the Catalogue of Services; the average value is higher than the positive value (4 - 'Rather Agree'). The most relevant statement is:

- *'The output supports the implementation of European community policies and activities'* (mean value **5.00**).

However, these values are only indicative due to the low number of respondents who participated in this survey and the high amount of respondents who chose the answer 'Hard to say'.

Table 7 and Table 8 provide an overview of the statement conformity scores, which are summarised per dimension. To calculate these scores, the average values of all the conformable dimension statements are taken into account.

With reference to the theory used in business research methods,[12] it is concluded that for statistically meaningful calculations of mode, standard deviation and standard error the minimum respondent number is equal to or greater than ten per statement, therefore additional statistical calculations are excluded from Table 7 and Table 8.

[12] Cooper D. R., Schindler P. S. (2013), Business Research Methods, 12th Edition

TABLE 7 – ACTION 1.3 AVERAGE RATING PER PERCEIVED QUALITY DIMENSION

	Dimension	MEAN
Per dimension	Support	4.50
	Performance	4.24
	Accuracy	4.12
	Usability (documentation)	4.11
	Expandability	4.06
	Usability (tools/services)	4.00
	Completeness	3.71
Total Criterion Score		**4.11**

The survey results show that the respondents evaluated the Support statements as the most relevant to the documentation and the tools/services of the Catalogue of Services (mean value 4.50). The Performance statements (mean value **4.24**) are the next most relevant. The respondents evaluated the Completeness statements (mean value **3.71**) as the least relevant (but not as irrelevant, since the value is higher than the neutral value of 3 - 'Neither agree nor disagree'). However, the fact that only 14 respondent evaluated each statement should be taken into account.

TABLE 8 – ACTION 1.3 AVERAGE RATING PER PERCEIVED UTILITY DIMENSION

	Dimension	MEAN
Per dimension	Collaboration	4.50
	Sustainability	4.36
	Potential Re-usability	4.25
Total Criterion Score		**4.37**

The survey results show that the respondents evaluated the Collaboration statement as the most relevant to the documentation and the tools/services of the Catalogue of Services (mean value 4.50). The Sustainability (mean value **4.36**) and the Potential Re-usability statements (mean value **4.25**) are the next most relevant. However, due to the fact that only eight respondents participated in this part of the survey the data should be reviewed with caution.

5.4.1.2.3 Perceived Quality and Perceived Utility Criterion Score Aggregation

Figure 6 and

Figure 7 provides a visual overview of the dimension conformity scores.

FIGURE 6 – ACTION 1.3 PERCEIVED QUALITY CRITERION SCORE AGGREGATION

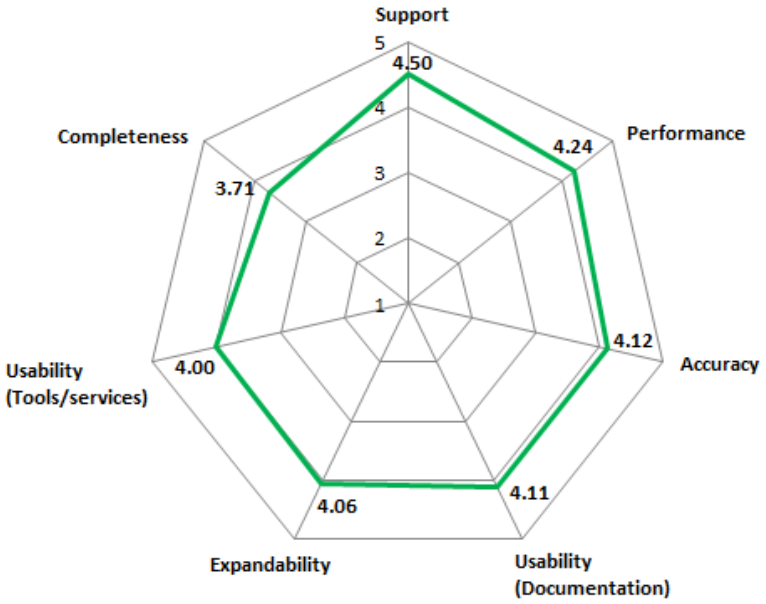
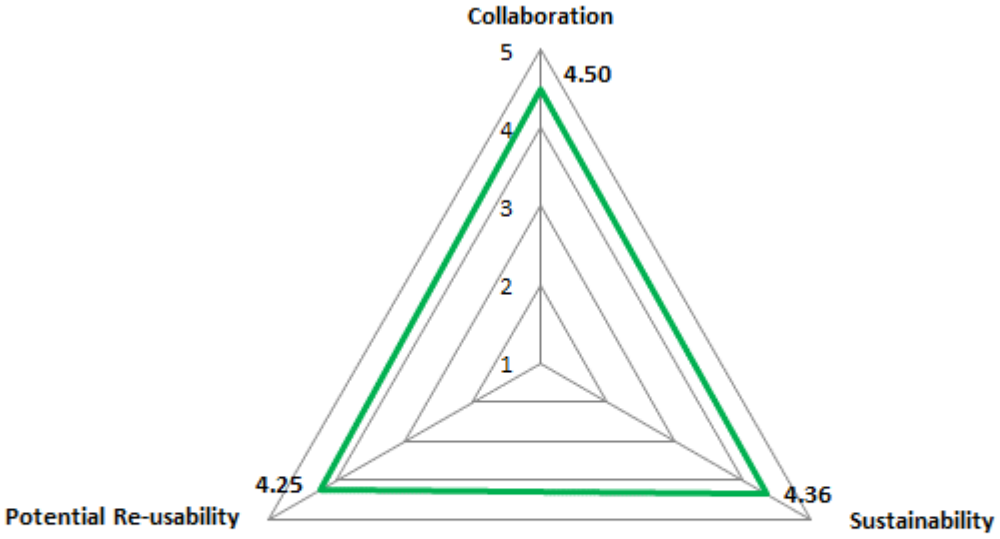


FIGURE 7 – ACTION 1.3 PERCEIVED UTILITY CRITERION SCORE AGGREGATION



5.4.2 User Satisfaction Score

The User Satisfaction Score shows how satisfied and happy the respondents are with the performance of a specific action. The User Satisfaction Score is expressed as a percentage from 0 to 100, where 0 signifies that there are no satisfied and happy respondents, whereas 100 signifies all respondents are satisfied and happy with the work performed by the action.

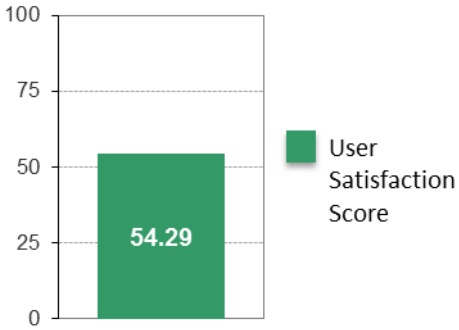
The User Satisfaction Score is assessed with reference to the results of the dimensions' importance and dimensions' conformity evaluation. The User Satisfaction Score is measured at the individual level for each of the survey respondents via identification of the important dimensions for that particular respondent.

To increase the accuracy of the calculation, a specific weight coefficient is applied to the dimensions. To those dimensions which respondents evaluated as "Important" a weight coefficient of 1 was applied, while a coefficient of 0.5 was applied to the dimensions which respondents evaluated as "Rather Important". A coefficient of 0 is applied to all the other dimensions. Finally, all the individual values are summed.

As the next step, an analysis of the statements which represent these identified dimensions is performed. If a respondent claimed that a particular statement fully corresponded to the specific dimension (value 5 – 'Agree'), then a coefficient of 100 (100% eligibility) is assigned. If evaluated with 4 – 'Rather Agree', a coefficient of 75 applies, if evaluated with 3 – 'Neither Agree nor Disagree', a coefficient of 50 applies, if evaluated with 2 – 'Rather Disagree', a coefficient of 25 applies, and in the case it was evaluated with 1 – 'Disagree', the coefficient is 0.

FIGURE 8 – ACTION 1.3 PERCEIVED QUALITY USER SATISFACTION SCORE

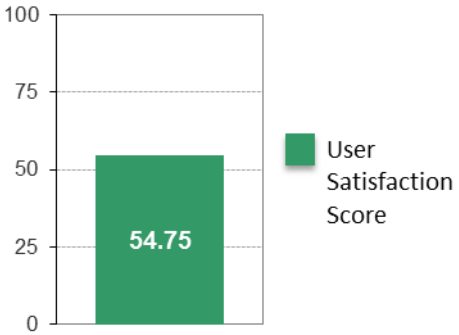
Figure 8 shows that the **Perceived Quality User Satisfaction Score is 54.29**. The result indicates an average level of respondent satisfaction with the documentation and the tools/services of the Catalogue of Services. However, this value is only indicative due to the low number of respondents who participated in the survey.



Base: All respondents, n=14

FIGURE 9 – ACTION 1.3 PERCEIVED UTILITY USER SATISFACTION SCORE

Figure 9 shows that the **Perceived Utility User Satisfaction Score is 54.75**. The result indicates an average level of respondent satisfaction with the documentation and the tools/services of the Catalogue of Services. However this value is only indicative due to the low number of respondents who participated in the survey.



Base: All respondents, n=8

5.4.3 Net Promoter Score

The Net Promoter Score® (NPS) is a widely used management tool that helps evaluate the loyalty of a customer relationship[13]. This management tool has been adapted to suit the ISA programmes' Evaluation and Monitoring activities and measures the overall respondents'/stakeholders' experience and loyalty to a specific ISA action.

In order to evaluate the NPS, the question "how likely the respondent would recommend the particular action's output to others" is asked. The assessment is done on a scale from 0 to 10, where 0 represents the answer "Not likely at all" and 10 – "Extremely likely"[14]. After the data analysis, the respondents are classified as follows:

- **Promoters** (numeric values from 9 - 10) - loyal users who will keep using the action's final outcome and refer others, promoting the usage of the action's outcomes;
- **Passives** (numeric values from 7 - 8) - satisfied but unenthusiastic users who will most probably not recommend the action's outcomes to others;
- **Detractors** (numeric values from 0 - 6) - unhappy users who can damage the image and decrease the usage of the action's outcomes.

The NPS final score calculation is done based on the following formula:

NPS = % of Promoters - % of Detractors[14]

The result can range from a low of -100 (every customer is a Detractor) to a high of +100 (every customer is a Promoter).

[13] Official webpage of Net Promoter Score ® community http://www.netpromoter.com/home.
[14] Markey, R. and Reichheld, F. (2011), "The Ultimate Question 2.0: How Net Promoter Companies Thrive in a Customer-Driven World"

FIGURE 10 – ACTION 1.3 PERCEIVED QUALITY NET PROMOTER SCORE

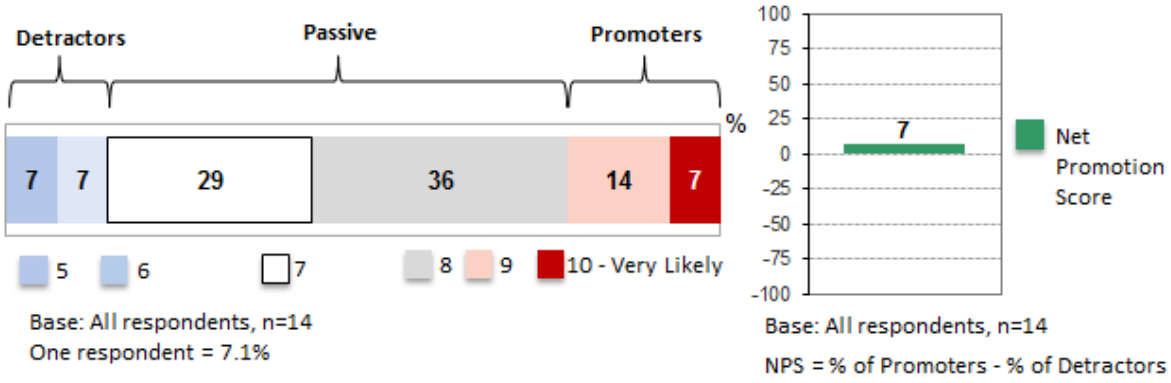


Figure 10 shows that 21% (three out of fourteen) of the respondents are Promoters of the documentation and the tools/services of the Catalogue and Services and would recommend it to colleagues or other PAs. A slightly lower proportion of the respondents, 14% (two out of fourteen), are Detractors of the documentation and the tools/services of the Catalogue of Services and would not recommend it to colleagues or other PAs. The Net Promoter Score is 7, meaning that more respondents would recommend the documentation and the tools/services of the Catalogue of Services, however the difference between Promoters and Detractors is only one respondent. Therefore, the NPS should be looked upon as an indicator that there are respondents who are loyal users of the documentation and the tools/services of the Catalogue of Services and that at the same time there are unhappy users.

FIGURE 11 – ACTION 1.3 PERCEIVED UTILITY NET PROMOTER SCORE

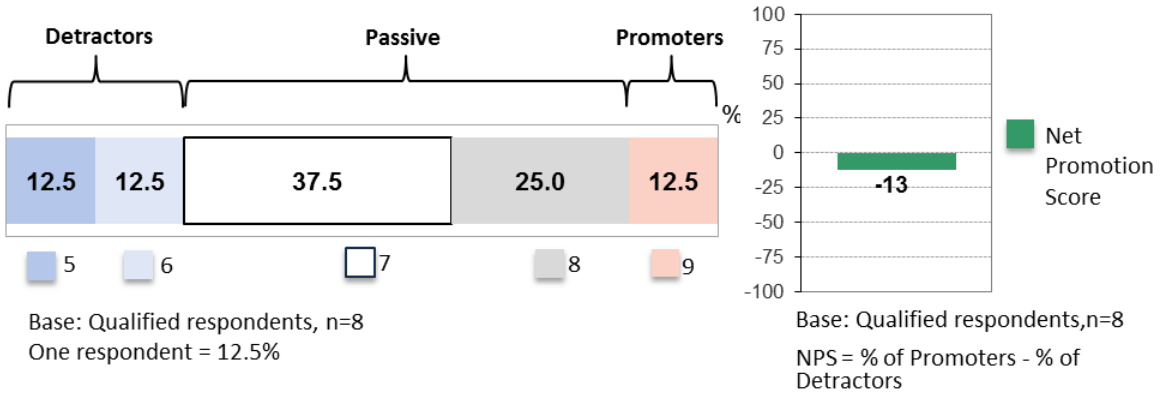


Figure 11 shows that one respondent is a Promoter of the documentation and the tools/services of the Catalogue of Services and would recommend it to colleagues or other PAs. Two respondents are Detractors of the documentation and the tools/services of the Catalogue of Services and would not recommend it to colleagues or other PAs. The Net Promoter Score is -13, meaning that more respondents would not recommend the documentation and the tools/services of the Catalogue of Services, however the difference

between Promoters and Detractors is only one respondent. Therefore, the NPS should be looked upon as an indicator that there are respondents who are loyal users of the documentation and the tools/services of the Catalogue of Services and at the same time there are unhappy users.

5.4.4 Overall Score

Referring to the performed measurements described earlier, namely the Value Score, the User Satisfaction Score, the Usefulness Score and the NPS, an Overall Perceived Quality Score is calculated.

To calculate the Overall Perceived Quality Score, all measurements are reduced to a five point scale (the statements used to calculate the Value Score are already expressed using a scale from 1 to 5, the Usefulness Score had values from 1 to 7, NPS - from -100 to +100, and the User Satisfaction Score - from 0 to 100). In order to determine the Overall Perceived Quality score, the average value of these four measurements is calculated. To reduce any linear scale to a different linear scale the following formula[15] is used:

$$Y = (B - A) * (x - a) / (b - a) + A$$

- Y = Value after reducing to a five point scale
- x = Value in the initial scale
- B = The highest value of the new scale (in this case it is 5, as we are reducing other scales to a five point scale)
- A = The lowest value of the new scale (in this case it is 1, as we are reducing other scales to a five point scale)
- b = The highest value of the original scale (for Net Promoter Score and User Satisfaction Score it is + 100, for Usefulness Score it is 7)
- a = The lowest value of the original scale (for the Net Promoter Score it is 100, for the User Satisfaction Score it is 0 and for the Usefulness Score it is 1)

Example of reducing Net Promoter Score to a five point scale:

*(5-1) * ((7) - (-100)) / (100 - (-100)) + 1 = 4 * 107 / 200 + 1 = 428 / 200 + 1 = 2.14 + 1 = 3.14*

[15] *Transforming different Likert scales to a common scale*. IBM. Retrieved February 04. 2016., from http://www-01.ibm.com/support/docview.wss?uid=swg21482329

TABLE 9 – ACTION 1.3 OVERALL PERCEIVED QUALITY SCORE CALCULATION

NAME OF THE SCORE	ORIGINAL VALUE	VALUE AFTER REDUCING TO A FIVE POINT SCALE
Usefulness Score	6.00	4.33
Value Score	4.13	4.13
User Satisfaction Score	54.29	3.17
Net Promoter Score	7	3.14
OVERALL PERCEIVED QUALITY SCORE		**3.69**

The survey results show that on a 5-point scale the Usefulness Score has the highest score (4.33), which indicates high Usefulness of the documentation and the tools/services of the Catalogue of Services. The Value Score **(4.13)** has the next highest value. The User Satisfaction Score **(3.17)** and the Net Promoter Score **(3.14)** have the lowest value, yet both of them are above the average– 3. However, due to the low number of respondents who participated in this survey and the high standard error in cases when the response rate is relatively low, these values are only indicators of the real situation.

TABLE 10 – ACTION 1.3 OVERALL PERCEIVED UTILITY SCORE CALCULATION

NAME OF THE SCORE	ORIGINAL VALUE	VALUE AFTER REDUCING TO A FIVE POINT SCALE
Usefulness Score	6.00	4.33
Value Score	4.39	4.39
User Satisfaction Score	54.75	3.19
Net Promoter Score	-13	2.74
OVERALL PERCEIVED UTILITY SCORE		**3.66**

The survey results show that on a 5-point scale the Value and Usefulness Scores have the highest score (4.39 and 4.33). The User Satisfaction Score **(3.19)** has the next highest value. The Net Promoter Score **(2.74)** is the lowest value and the only value below the average – 3.However, due to the low number of respondents who participated in this survey and the high standard error in cases when the response rate is relatively low, these values are only indicators of the real situation.

5.5 ACTION STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS

When analysing the data results of the dimensions' conformity versus the dimensions' importance, the action's strengths, weaknesses, opportunities and threats can be identified.

Statements are located in quadrants, based on the dimensions' conformity statements and dimensions' importance calculated mean values. The quadrants highlight the weak and strong aspects of the action, as well as threats and opportunities.

In general, all the statements that are attributed to the action can be grouped into four categories:

- Strengths – Essential to respondents and relevant to the action (1st quadrant);
- Weaknesses – Essential to respondents but not relevant to the action (2nd quadrant);
- Threats – Not essential to respondents and not relevant to the action (3rd quadrant);
- Opportunities – Not essential to respondents but relevant to the action (4th quadrant).

Four colours are used to identify Perceived Quality dimensions in Figure 12:

- Dark blue: Usability (Tools/services);
- Red: Performance;
- Brown: Support;
- Purple: Accuracy;
- Green: Completeness;
- Light blue: Usability (Documentation);
- Orange: Expandability.

Three colours are used to identify Perceived Utility dimensions in Figure 13:

- Dark blue: Potential Re-usability;
- Red: Sustainability;
- Brown: Collaboration.

As seen in Figure 12, all 17 Perceived Quality statements are evaluated as essential to respondents and relevant to the action - all of them are located in the 1st quadrant and are identified as strengths of the Catalogue of Services documentation and tools/services.

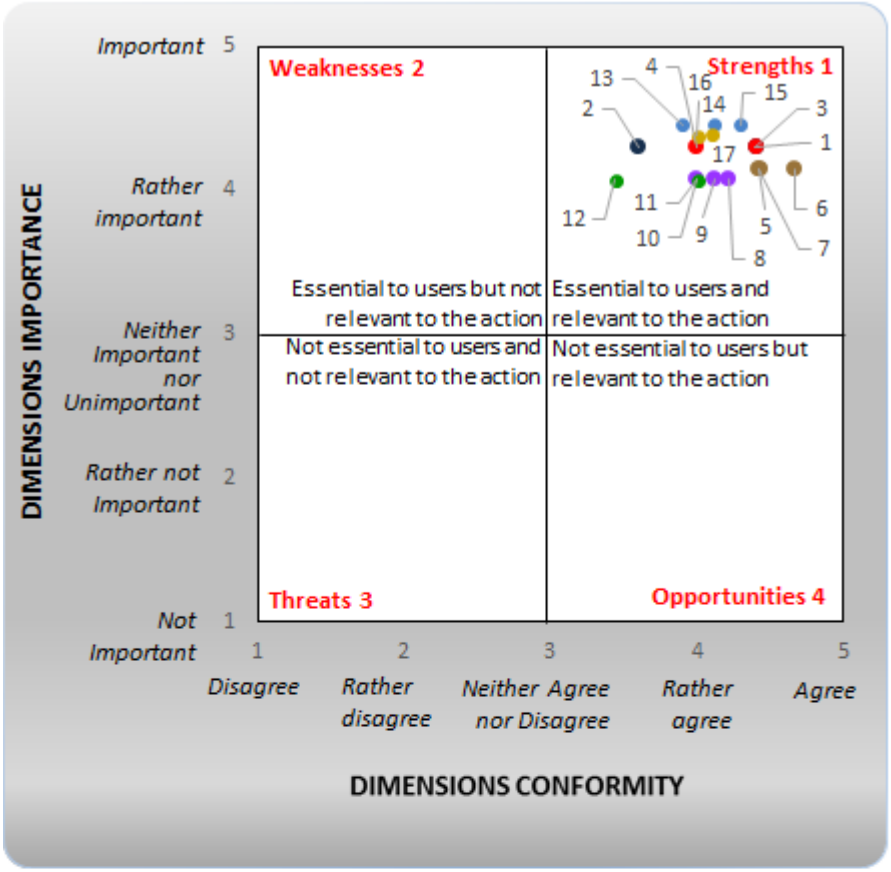
The following three statements are the most important to respondents:

- *'The output is appropriate/applicable to my business needs'* (statement 13);
- *'The guidelines are easy to understand'* (statement 14) and
- *'The structure of the output is clear and the systematic design remains consistent'* (statement 15).

While the following five statements are the most relevant to the Catalogue of Services:

- *'Overall, the action activities help save costs'* (statement 6);
- *'The support team showed a sincere interest in solving users' problem'* (statement 5);
- *'The support team has the knowledge to answer users' questions'* (statement 7);
- *'The output is available and accessible whenever it is needed'* (statement 3) and
- *'The structure of the provided output is clear and easy to follow'* (statement 1).

FIGURE 12 – ACTION 1.3 PERCEIVED QUALITY ACTION STRENGTHS, WEAKNESSES, OPPORTUNITES AND THREATS



I. Usability (Tools/Services):

1 - The structure of the provided output is clear and easy to follow

2 - The output is well customized to individual users' needs

II. Performance:

3 - The output is available and accessible whenever it is needed

4 - The output performs the service successfully upon the first request

III. Support:

5 - The support team showed a sincere interest in solving users' problem

6 - The support team provided prompt replies to the users' inquiries

7 - The support team has the knowledge to answer users' questions

IV. Accuracy:

8 - The output is accurate

9 - The sources of output listed are verifiable

10 - The output is free from grammar/style errors

V. Completeness:

11 - The reference links work and are accessible

12 - The output is complete and does not require additions

VI. Usability (Documentation):

13 - The output is appropriate/applicable to my business needs

14 - The guidelines are easy to understand

15 - The structure of the output is clear and the systematic design remains consist

VII. Expandability:

16 - The output is applicable to other sectors

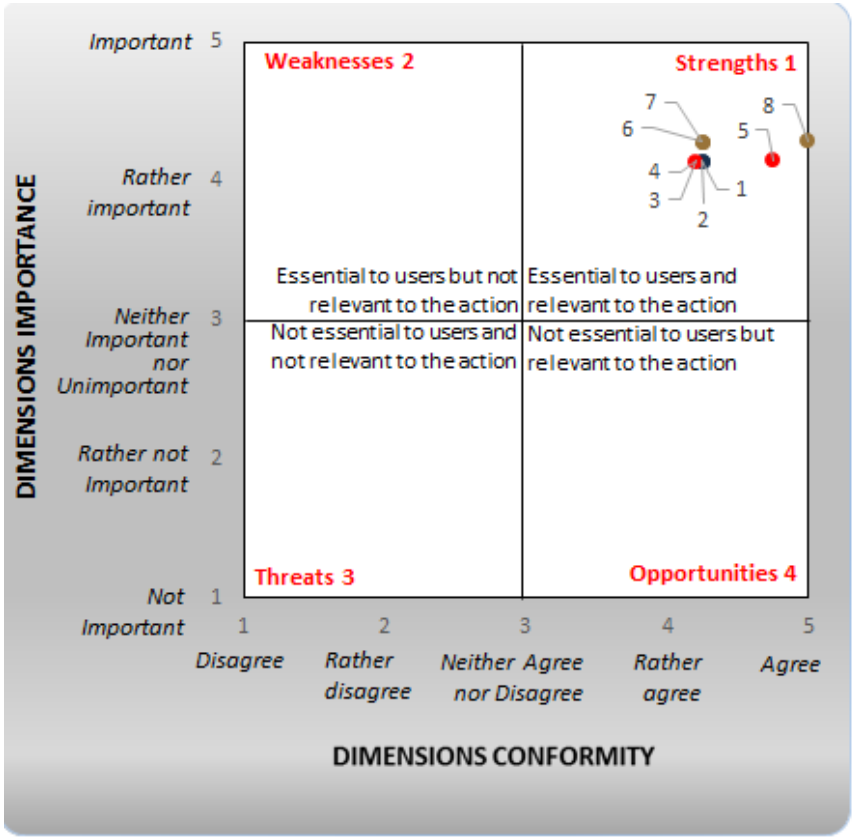
17 - The output format is transferrable to other applications

As seen in Figure 13, all eight Perceived Utility statements are evaluated as essential to respondents and relevant to the action - all of them are located in the 1st quadrant and are identified as strengths of the Catalogue of Services documentation and tools/services.

The following two statements are the action's most important strengths (the most relevant to the action and important to the respondents):

- *'The output supports the implementation of European community policies and activities'* (statement 8) and
- *'Overall, the output supports effective reuse of tools/services/documentation'* (statement 5).

FIGURE 13 – ACTION 1.3 PERCEIVED UTILITY ACTION STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS



I. Potential Re-usability:
1 - Overall, the action activities help save costs
2 - Overall, the action activities help save time
II. Sustainability:
3 - The output is planned to be used in future
4 - The output provides sustainable solutions that will also be relevant in future
5 - Overall, the output supports effective reuse of tools/services/documentation
III. Collaboration:
6 - The output helps successfully cooperate with other public administrations/departments
7 - Overall, the output supports effective electronic cross-border and cross-sector interaction
8 - The output supports the implementation of European community policies and activities

5.6 STATEMENTS BASED ON ACTION OBJECTIVES

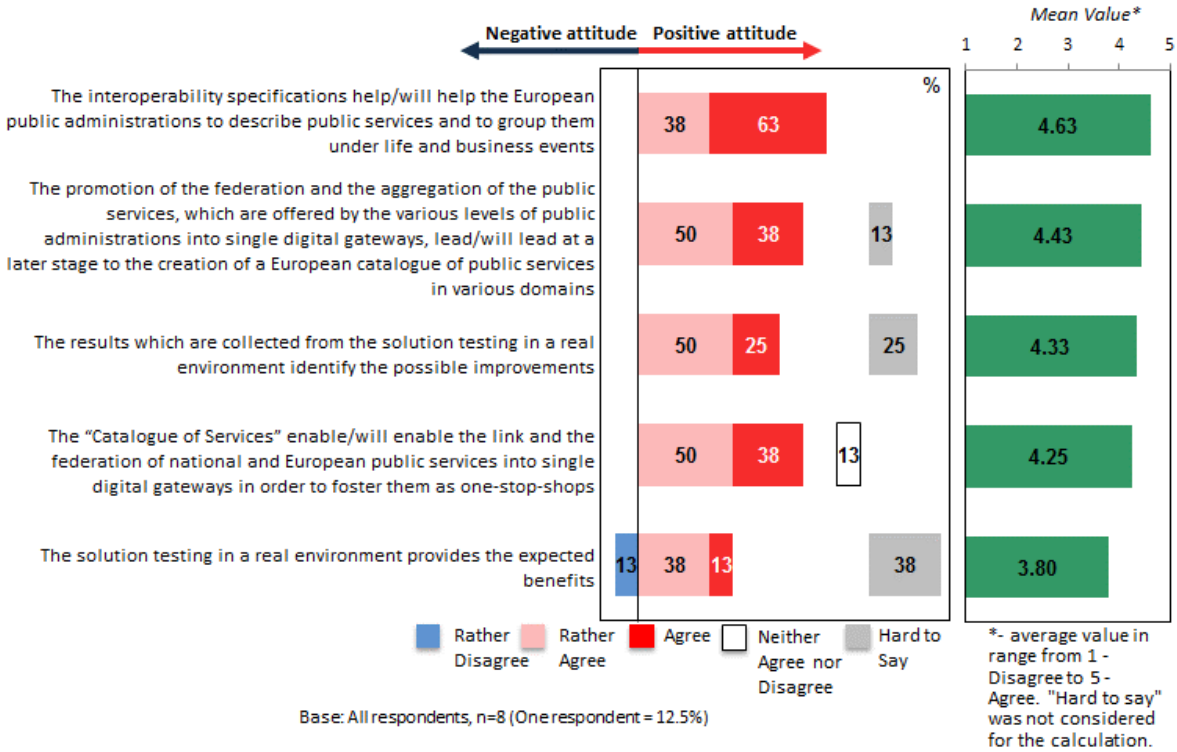
For the purpose of describing the action's objectives, statements based on action objectives were designed for this survey. The respondents were asked to evaluate the extent to which these statements conform to the particular action, namely, if the action's objectives have been achieved.

The respondent is asked to provide his/her opinion using the 5-point Likert grading scale. For the dimension conformity evaluation, a grading scale with values ranging from 'Agree' to 'Disagree' is applied. An additional 'Hard to Say/Not Applicable' option is provided, however this score is excluded from the score calculations. Before performing the survey data calculations, the 5-point Likert scale values are interpreted as numeric values:

- 5 – Agree;
- 4 – Rather Agree;
- 3 – Neither Agree nor Disagree;
- 2 – Rather Disagree;
- 1 – Disagree;
- 0 – Hard to Say/Not Applicable *(is not considered for the calculation).*

In order to have an overview of the positive and negative attitude proportions, the bar in blue represents the negative attitude (answers 'Disagree' and 'Rather Disagree'), whereas the bars in pink/red represent the positive ones (answers 'Agree' and 'Rather Agree'). In addition, a neutral opinion (the bar in white) is presented separately on the right. An explanatory legend with colour codes represents the available data. The average mean value for each of the dimensions is presented on the right side of the figure.

FIGURE 14 – ACTION 1.3 STATEMENTS BASED ON ACTION OBJECTIVES



The survey results demonstrate that all of the statements based on action objectives have been evaluated as relevant to the action. All of the statements have a higher mean value than the neutral value (3 - 'Neither Agree nor Disagree'). However, due to the fact that only eight respondents participated in this survey, the data should be reviewed with caution.

5.7 USAGE OF FUTURE ACTION OUTCOMES

Respondents were asked to evaluate the possibility of using future outcomes of Catalogue of Services. Table 11 gives an overview of the data.

TABLE 11 – ACTION 1.3 USAGE OF FUTURE ACTION OUTCOMES

USAGE OF FUTURE ACTION OUTCOMES			
		Amount	Col %
ALL RESPONDENTS		14	100.0
CPSV-AP Mapping Tool	Regularly	4	28.6
	Occasionally	1	7.1
	At least once - to test the tool	6	42.9
	Never	2	14.3
	Hard to say	1	7.1
Public Service Description Editor	Regularly	8	57.1
	Occasionally	3	21.4
	At least once - to test the tool	1	7.1
	Never	1	7.1
	Hard to say	1	7.1
CPSV-AP Data Validator	Regularly	3	21.4
	Occasionally	1	7.1
	At least once - to test the tool	5	35.7
	Never	1	7.1
	Hard to say	4	28.6
Public Service Description Harvester	Regularly	6	42.9
	Occasionally	1	7.1
	At least once - to test the tool	2	14.3
	Never	1	7.1
	Hard to say	4	28.6

Base: all respondents, n=14

Table 11 shows that the service which has the highest chance of being used regularly is the "Public Service Description editor", followed by the Public Service Description harvester". However, due to the fact that only eight respondents participated in this survey, the data should be reviewed with caution.

5.8 Respondent Recommendations and Opinions

This section provides an overview of the recommendations and main benefits received about the documentation and the tools/services of the Catalogue of Services. It should be noted that each response is given by a single survey respondent, which means that the number of different answers to each question is the same as the number of respondents who had an opinion or a recommendation to the specific question.

TABLE 12 – ACTION 1.3 RECOMMENDATIONS

"Do you have any recommendations to improve the Action "Catalogue of Services", taking into consideration the Action as a whole with all its outputs (i.e., common data models, an analysis and a proposal for a harmonised list of key business events, CPSV-AP Mapping Tool and other tools as the future action outputs)?"
Take into consideration the work from SPOCS and e-SENS
"What are the main benefits or the most valuable things about the Action "Catalogue of Services"?"
a common structure on which to base our national solution
The common data model and the respective mapping tools
interoperability

6 SURVEY CONCLUSION AND RECOMMENDATIONS

The objective of this survey was to evaluate the Perceived Quality and Perceived Utility for the documentation and the tools/services of Action 1.3 – Catalogue of Services. It is important to take into account that only 14 respondents participated in the survey, from whom only eight respondents qualified for the Perceived Utility evaluation, meaning that the results of this action are more like indicators of the Perceived Quality and Perceived Utility and do not fully represent the opinion of all the users. The following conclusions have been drawn based on the analysis performed:

- The documentation and the tools/services of the ISA Action 1.3 – Catalogue of Services received a **rather positive Perceived Quality (3.69) and Perceived Utility (3.66) assessment.** The Value and the Usefulness scores have the highest evaluation. The Net Promoter Score has the lowest value in both cases, yet the data shows that there is only a one respondent difference between those who would recommend the documentation and the tools/services of the Catalogue of Services to colleagues or other PAs and those who would not.
- Regarding Perceived Quality, the results show that the documentation and the tools/services of the Catalogue of Services is perceived as **most beneficial in terms of Support and Performance**.
- Regarding Perceived Utility, the results show that the documentation and the tools/services of the Catalogue of Services is perceived as **more beneficial in terms of Collaboration than Sustainability and Potential Re-usability**.
- The findings represent that the “Public Service Description editor” and the Public “Service Description harvester” are the most likely future outcomes to be used regularly.

Based on the conclusions drawn, CGI-Accenture adduces the following recommendations:

- Improvements in Usability would be of benefit to the documentation and the tools/services of the Catalogue of Services as respondents evaluate it as the most important aspect.
- Regular Catalogue of Services updates are necessary.
- According to the respondents, the work from SPOCS and e-SENS should be taken into consideration to improve the Catalogue of Services.

7 APPENDIX

7.1 RAW DATA EXPORT

The attached file contains the survey result export.

Raw Data.xls

7.2 GLOSSARY

- 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.

- The mean[12] (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 for each case and divide hat sum by the total number of cases;

- Mode[12] refers to the most frequent, repeated or common value in the quantitative or qualitative data. In some cases it is possible that there are several modes or none;

- The Net Promoter Score® (NPS) is a widely used management tool that helps evaluate the loyalty of a customer relationship. Customers are classified as Promoters, Passive and Detractors.

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

- Standard deviation[12] 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[12] 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 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;