INTEROPERABILITY SOLUTIONS FOR
EUROPEAN PUBLIC ADMINISTRATIONS
MONITORING AND EVALUATION

D03.04/D03.05 Perceived Quality and Perceived Utility Monitoring Report

ISA Action 4.1.2 Interoperability Maturity Model

Framework Contract n° DI/07173-00

16 August 2016

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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 Perceived Utility of the tool and the documentation of **the ISA Action 4.1.2 – Interoperability Maturity Model (IMM).** 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 evaluation of Action 4.1.2 includes the evaluation of the IMM tool and documentation:

- Self-assessment tool which is presented in the form of a questionnaire, a paper-text format, a spreadsheet format and a checklist;
- Supporting documentation and guidelines of the IMM.

The survey was designed in the EUSurvey tool and distributed by e-mail to 30 contacts. Over the duration of more than two months[3], eight 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 4.1.2 PERCEIVED QUALITY SURVEY MAIN RESULTS

	Score	Explanation of the score scale
Usefulness Score	4.43	Average value on a scale from 1 (Not useful at All) to 7 (Very Useful).
Value Score	3.73	Average value of all the statement means in the range from 1 (Disagree) to 5 (Agree).
User Satisfaction Score	67.76	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	-50	Net Promoter Score from -100 (every customer is a Detractor) to 100 (every customer is a Promoter).
OVERALL PERCEIVED QUALITY SCORE	3.18	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.

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[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 22th of January 2016 and was active until the 1st of April 2016.

TABLE 2 – ACTION 4.1.2 PERCEIVED UTILITY SURVEY MAIN RESULTS

	Score	Explanation of the score scale
Usefulness Score	4.43	Average value on a scale from 1 (Not useful at All) to 7 (Very Useful).
Value Score	3.85	Average value of all the statement means in the range from 1 (Disagree) to 5 (Agree).
User Satisfaction Score	71.64	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	-50	Net Promoter Score from -100 (every customer is a Detractor) to 100 (every customer is a Promoter).
OVERALL PERCEIVED UTILITY SCORE	**3.25**	**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 eight respondents participated in this survey, from whom five have never used IMM. The results of this survey perform more like indicators of the Perceived Quality and Perceived Utility without fully representing the opinion of all the users.

Main findings:

- The survey results demonstrate that the tool and the documentation of the **Action 4.1.2 – Interoperability Maturity Model (IMM) comply with the action's specific objectives, but comply only partially with the ISA programme's objectives, meaning that there are numerous aspects requiring additional work**.

- Five out of eight respondents evaluated the tool and the documentation of IMM from a theoretical point of view, as they have had no experience working with it.

- Respondents were very satisfied with the work of the support team.

- According to one of the respondents, IMM must be provided in an online assessment tool. The respondents did not find the paper/spreadsheet format useful.

- The main benefit of the tool and the documentation of the IMM is the interoperability level improvement in the services.

- Additional work should be done to make the structure of the documentation clear and to make the guidelines more easily understandable.

REVISION HISTORY

Date	Version	Description	Authors	Approved by
20/06/2016	0.10	Initial version	CGI - Accenture	
27/06/2016	1.00	Final version	CGI - Accenture	
05/07/2016	2.00	Updated version	CGI - Accenture	.
16/08/2016	3.00			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 tool and the documentation of Action 4.1.2 – Interoperability Maturity Model.

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;
    - Perceived Quality and Perceived Utility measurements;
    - Action strengths, weaknesses, opportunities and threats;
    - Statement based on action objectives;
    - Respondent recommendations and main benefits;
- **Section 6:** provides the survey conclusion and recommendations;
- **Section 7:** appendix includes:
    - Raw data export;
    - Glossary.

2 ACTION 4.1.2 – INTEROPERABILITY MATURITY MODEL

The Digital Agenda for Europe has identified the lack of interoperability as a major obstacle for growth. More recently, the Digital Single Market strategy has promoted interoperability and standards as important enablers for the Digital Single Market. Although EU Member States have accomplished significant work in this domain, it has proven to be difficult to assess the progress made so far by the different Public Administrations (PAs) to reach higher levels of interoperability.

This action has developed the IMM (Interoperability Maturity Model) to provide PAs with insight into their interoperability performance. The IMM is a maturity model coupled with a self-assessment tool. The IMM helps managers of a public service enhance the quality of service delivery, reduce costs and overcome integration issues by reusing available services and orchestrate services in an effective manner to maximize service outcome and benefits for citizens and PAs.

Action's objectives

To provide insight into two key aspects of their interoperability performance:

- The current interoperability maturity level of a Public Service;
- Improvement priorities to reach the next level of interoperability maturity.

The Interoperability Maturity Model measures how well a PA interacts with external entities in order to organise the efficient provisioning of its public services to other PAs, businesses and/or citizens.

Action's benefits:

- Enabling Member States and EU institutions to assess their interoperability maturity against a common framework and identify current interoperability gaps in public service provision;

- Using the model as a guide to develop interoperable services by design.

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 tool/service and the quality of information it provides5;

- **Trust (Privacy) (T)**: the degree to which the user believes the tool/service is safe from intrusion and protects personal information5;

- **Performance (P)**: the feasibility and speed of accessing, using, and receiving services of the tool/service5;

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[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 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 actions' specific objectives.

Regarding the Perceived Utility measurement, several statements are derived from the objectives of the ISA programme. These statements are grouped into 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 PAs[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 to perform a comparison between different actions and also will provide 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 Perceived Utility level measurements.

Action level measurements:

- The Usefulness Score indicates the respondents' evaluation of how useful the action is. The Usefulness Score is calculated taking into account a mean value from a single question: *"Overall, how useful is/will be the "Interoperability Maturity Model (IMM)" and its tool/documentation – the IMM model in paper-text format, the IMM model in spreadsheet format, the IMM checklist - 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.

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 dimensions' 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 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[13] 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 PAs.

- Action strengths, weaknesses, opportunities and threats show the location of the action statements based on dimensions' conformity and dimensions' 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.

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

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[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.

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 4.1.2 SURVEY TECHNICAL INFORMATION ABOUT THE FIELDWORK

Start date:	22/01/2016
End date:	01/04/2016
The survey launch method:	E-mail notification
Reminders:	E-mail reminders sent out on 29/01/2016, 10/02/2016, 22/02/2016, 01/03/2016, 07/03/2016, 16/03/2016 and 23/03/2016
Target population:	30
Total number of respondents:	8
Number of suitable respondents for the survey:	8

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 and 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 eight respondents participated in the survey thus the percentage value of one respondent is 12.5%.**

TABLE 4 – ACTION 4.1.2 DEMOGRAPHIC PROFILE OF RESPONDENTS

RESPONDENT PROFILE		Amount	Col %
ALL RESPONDENTS		8	100.0
	Public service IT owner	4	50.0
	Public service business owner	3	37.5
	Public service architect	2	25.0
RESPONDENT GROUP*	Public service business analyst	1	12.5
	Public service developer	1	12.5
	Other (1 respondent: Coordinator data standardisation)	1	12.5
ORGANIZATION	EU institution	5	62.5
	Public Administration at national level	3	37.5
	Belgium	1	12.5
	Greece	2	25.0
LOCATION	Italy	1	12.5
	Luxembourg	3	37.5
	Netherlands	1	12.5
POSITION LEVEL	Staff	4	50.0
	Middle management	3	37.5
	Senior management	1	12.5

Base: all respondents, n=8

5.2 USAGE OF THE ACTION

The usage profile provides an overview of the usage rate of the action. Table 5 shows the respondents groups and the outputs used by the respondents. **It is important to take into account that only eight respondents participated in the survey thus the percentage value of one respondent is 12.5%.**

TABLE 5 – ACTION 4.1.2 USAGE OF IMM

USAGE PROFILE		Amount	Col %
ALL RESPONDENTS		8	100.0
USAGE	Have used it multiple times	1	12.5
	Have tried once and intend using it again	2	25.0
	Just heard, but don't use/work with the "Interoperability Maturity Model"**	5	62.5
DOCUMENTATION FORMATS USED*	Spreadsheet format	3	100.0
	Paper-text format	1	33.3

Base: all respondents, n=8
*Base: respondents who have at least tried the IMM, n=3
*There were multiple choices possible for these questions. This explains why the percentage of responses can exceed 100%.
**Evaluates the Perceived Quality and Perceived Utility from a theoretical point of view.

5.3 USEFULNESS SCORE

The Usefulness Score is calculated taking into account a single question: *"Overall, how useful is/will be the "Interoperability Maturity Model (IMM)" and its tool/documentation – the IMM model in paper-text format, the IMM model in spreadsheet format, the IMM checklist - to your work?"*

Each respondent is requested to provide his/her opinion using the 7-point Likert grading scale. For the evaluation of 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 ('Rather Useful', 'Useful' and 'Very Useful') and negative ('Rather Not Useful', 'Not Useful' and 'Not Useful at All') attitude proportions, the bar in blue represents the negative attitude, whereas the bars in pink and red represent the positive one. In addition, a neutral opinion (the bar in white) and 'Hard to say' answer (the bar in grey) are 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 4.1.2 USEFULNESS SCORE
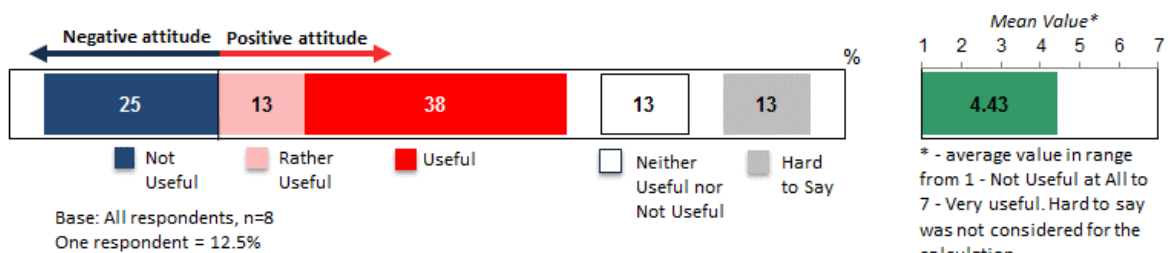
As Figure 5 identifies, half of the respondents consider the tool and the documentation of IMM as useful. Only two respondents out of eight think that it is not useful. The mean value is **4.43** and it is between the values 4 - 'Neither Useful nor Not Useful' and 5 - 'Rather Useful'.

5.4 PERCEIVED QUALITY AND PERCEIVED 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 Scores. It is structured into two main sections: the dimensions' importance and dimensions' 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 the respondents, then it is essential that its conformity assessment is positive. However, if a dimension is not important to the respondents, then it should not be considered as the action's weakness because of non-compliance with the outputs of the action.

Eight Perceived Quality dimensions (Support, Completeness, Accuracy, Usability (tools/services), Usability (documentation), Performance, Expandability and Trust (Privacy)) 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, neutral opinions (the bars in white) 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.

"How important to you are these factors when using the "Interoperability Maturity Model (IMM)", taking into consideration the project as a whole with all its outputs – the IMM model in paper-text format, the IMM model in spreadsheet format, the IMM checklist?"

The survey results indicate that the most important Perceived Quality dimensions for Action 4.1.2 – Interoperability Maturity Model (IMM) are Support with mean value 3.88, Completeness with mean value 3.88 and Accuracy (mean value 3.75). The Trust (Privacy) dimension has the lowest score and it is the only dimension with a slightly lower mean value (3.13) than the rest. All of the dimensions are evaluated with mean values in a range from 3 – 'Neither Important not Unimportant' to 4 – 'Rather Important', meaning that all of them are important to the respondents to a certain degree. According to the data, one particular respondent evaluated each of the dimension as 'Not Important'.

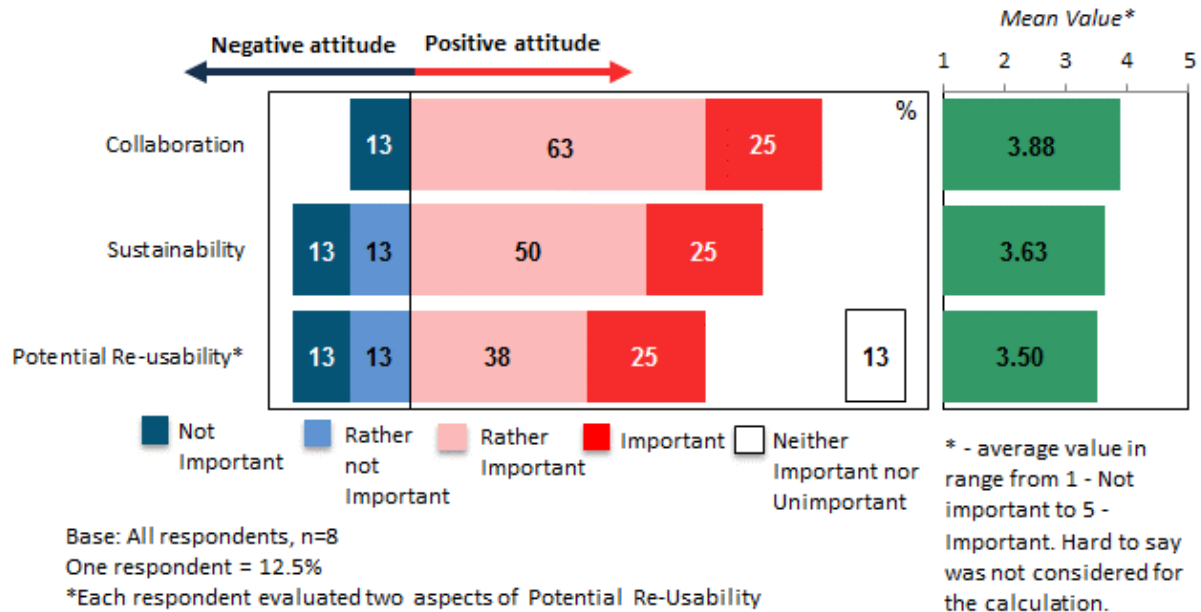**FIGURE 3 – ACTION 4.1.2 PERCEIVED UTILITY DIMENSIONS IMPORTANCE RESULTS**

"How important to you are these factors when using the "Interoperability Maturity Model (IMM)", taking into consideration the project as a whole with all its outputs – the IMM model in paper-text format, the IMM model in spreadsheet format, the IMM checklist?"

The survey results indicate that for the respondents the Collaboration (mean value 3.88) dimension for the tool and the documentation of IMM is more important than the Sustainability (mean value 3.63) and Potential Re-Usability (mean value 3.50) dimensions. However, due to the low number of respondents who participated in the survey, the data should be reviewed with caution as the mean values are in the range of the standard error. According to the data, one particular respondent evaluated each of the dimension as 'Not Important'.

5.4.1.2 DIMENSIONS CONFORMITY

In order to measure the Perceived Quality 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 4.1.2 has nineteen 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, the Trust (Privacy) and the Potential Re-usability dimensions are represented by two statements each.

TABLE 6 – ACTION 4.1.2 STATEMENT MAPPING TO DIMENSIONS

	Perceived Quality Statements	Dimension
1	The structure of the provided IMM tool is clear and easy to follow	Usability (tool)
2	The tool is well customized to the IMM individual users' needs	Usability (tool)
3	Data provided by users in the IMM tool are archived securely	Trust (Privacy)
4	Data provided in the IMM are used only for the reason submitted	Trust (Privacy)
5	The IMM tool is available and accessible whenever it is needed	Performance
6	The IMM tool performs the service successfully upon the first request	Performance
7	The support team showed a sincere interest in solving users' problems	Support
8	The support team provided prompt replies to the users' inquiries	Support
9	The support team has the knowledge to answer users' questions	Support
10	The documentation is accurate	Accuracy
11	The sources of documentation listed are verifiable	Accuracy
12	The documentation is free from grammar/style errors	Accuracy
13	The reference links work and are accessible	Completeness
14	The documentation is complete and does not require additions	Completeness
15	The documentation is appropriate/applicable to my business needs	Usability (documentation)
16	The guidelines are easy to understand	Usability (documentation)
17	The structure of the documentation is clear and the systematic design remains consistent	Usability (documentation)
18	The documentation is applicable to other sectors	Expandability
19	The documentation format is transferrable to other applications	Expandability
	Perceived Utility Statements	Dimension
1	Overall, the IMM activities help save costs	Potential Re-usability
2	Overall, the IMM activities help save time	Potential Re-usability
3	The IMM tool and documentation are planned to be used in future	Sustainability
4	The IMM tool and documentation provide sustainable solutions that will also be relevant in future	Sustainability
5	Overall, the IMM tool and documentation support effective reuse of tools and documentation	Sustainability
6	The IMM tool and documentation help successfully cooperate with	Collaboration

	other Public Administrations/departments	
7	Overall, the IMM tool and documentation support effective electronic cross-border and cross-sector interaction	Collaboration
8	The IMM tool and documentation support 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, nineteen Perceived Quality and eight Perceived Utility statements are designed for this survey. The respondents are asked to evaluate the extent to which these statements conform to this 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 one (answers 'Agree' and 'Rather Agree'). In addition, a neutral opinion (the bars in white) and answer 'Hard to say' (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 4.1.2 PERCEIVED QUALITY DIMENSIONS CONFORMITY RESULTS

Statement	Disagree	Rather Disagree	Rather Agree	Agree	Neither Agree nor Disagree	Hard to Say	Mean Value*
The support team showed a sincere interest in solving users' problems			25	38		38	4.60
The support team provided prompt replies to the users' inquiries			25	38		38	4.60
The support team has the knowledge to answer users' questions			13	38	13	38	4.40
Data provided in the IMM are used only for the reason submitted			25	13	13	50	4.00
The IMM tool is available and accessible whenever it is needed			38	13	13	38	4.00
The reference links work and are accessible			13	13	13	63	4.00
Data provided by users in the IMM tool are archived securely			38		13	50	3.75
The documentation is free from grammar/style errors			13	13	25	50	3.75
The documentation is applicable to other sectors			38		13	50	3.75
The documentation format is transferrable to other applications			13	13	25	50	3.75
The documentation is complete and does not require additions			13		25	63	3.67
The structure of the provided IMM tool is clear and easy to follow			13	13	38	38	3.60
The documentation is accurate			13	13	38	38	3.60
The sources of documentation listed are verifiable			13	13	38	38	3.60
The documentation is appropriate/applicable to my business needs			13	13	38	38	3.60
The IMM tool performs the service successfully upon the first request	13	13	13		25	38	3.40
The tool is well customized to the IMM individual users' needs					63	38	3.00
The guidelines are easy to understand		13	13		38	38	3.00
The structure of the documentation is clear and the systematic design remains consistent	13	13	13		13	50	2.75

Base: All respondents, n=8 (One respondent = 12.5%)

* - average value in range from 1 - Disagree to 5 - Agree. "Hard to say" was not considered for the calculation.
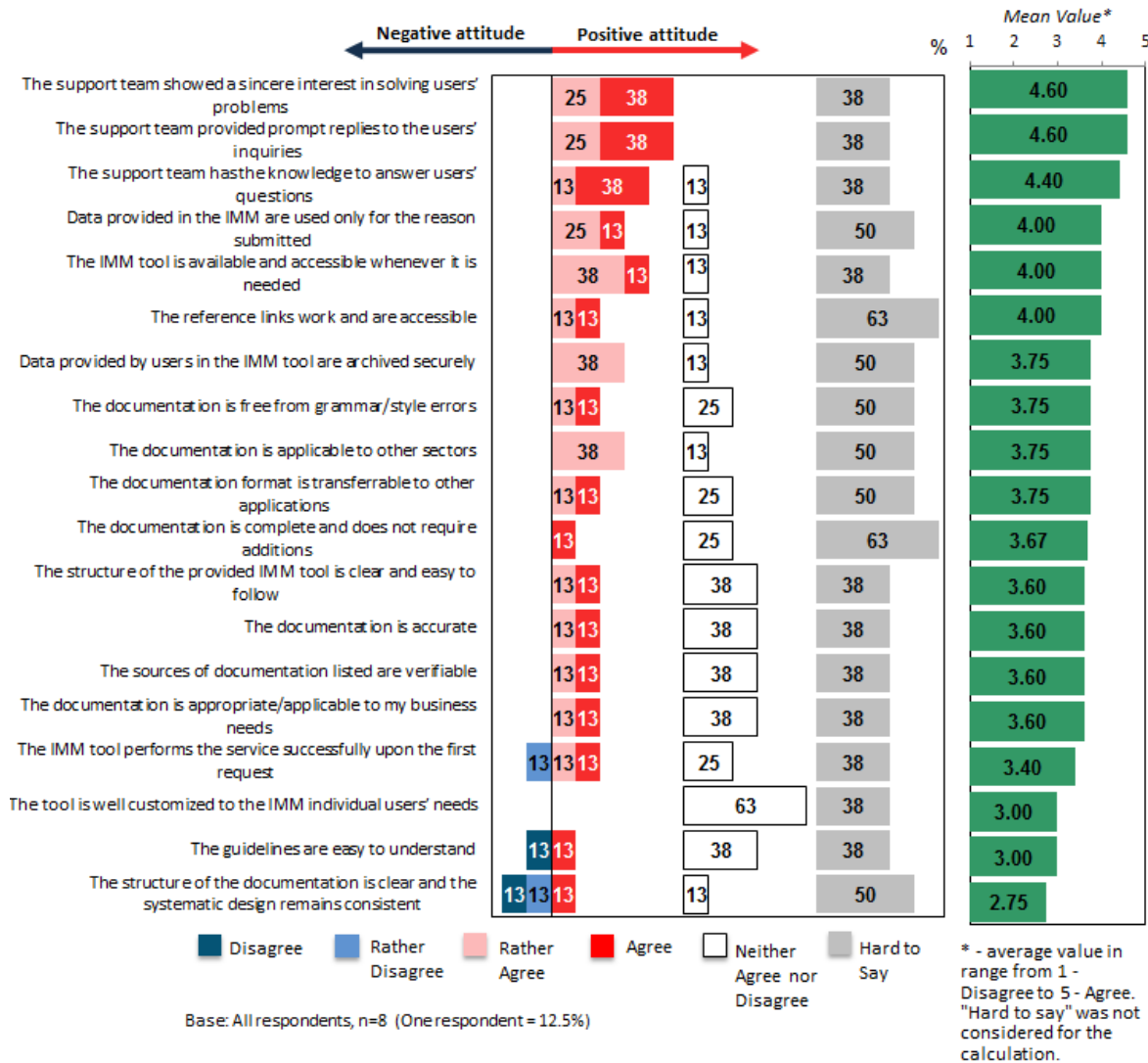
Figure 4 illustrates that statements regarding the support team have been evaluated as the most conformable to the tool and the documentation of IMM. The mean values for these statements are between values 4 – 'Rather Agree' and 5 – 'Agree.' Three statements have been evaluated with a mean value **3.00** or lower, meaning that these statements are not conformable to the tool and the documentation of IMM.

Also, a considerable amount of respondents chose the answer 'Hard to say' for all of the statements, which means that they were unable to evaluate them or simply haven't had enough experience working with the tool and the documentation of IMM. Due to the high standard error, the mean values of Perceived Quality statements should be viewed with caution.

FIGURE 5 – ACTION 4.1.2 PERCEIVED UTILITY DIMENSIONS CONFORMITY RESULTS
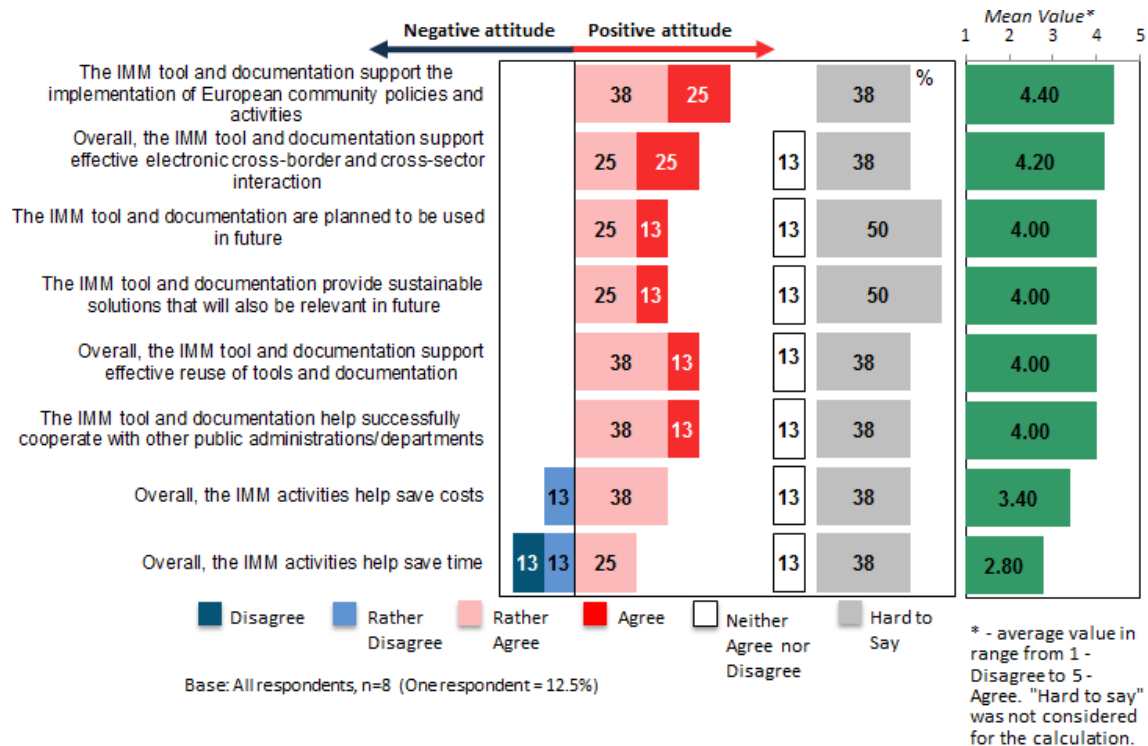

Figure 5 shows that all but one of the Perceived Utility statements regarding the tool and the documentation of IMM are evaluated with a mean value which is higher than the neutral value of 3, meaning that these statements conform to the tool and the documentation of IMM. **Also, a considerable proportion of respondents (three out of eight) chose the answer 'Hard to say' for all of the statements,** which means that they were unable to evaluate them or simply haven't had enough experience working with the tool and the documentation of IMM. However, due to the high standard error, the mean values of the Perceived Utility statements should be viewed with caution.

Table 7 and Table 8 provide an overview of the statements' conformity scores, which are summarised per dimension. To calculate these scores, the average values of all the relevant dimension statements are taken into account. With a reference to the theory used in business research methods[12], it is concluded that for statistically meaningful calculations[13] of mode, standard deviation and standard error, the minimum respondent number must be equal to or greater than ten per statement, thus they are excluded from Table 7 and Table 8.

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[12] Cooper D. R., Schindler P. S. (2013), Business Research Methods, 12th Edition
[13] Dictionary of statistics & methodology: a nontechnical guide for the social sciences (page 226).

TABLE 7 – ACTION 4.1.2 AVERAGE RATING PER PERCEIVED QUALITY DIMENSION

	Dimension	MEAN
Per dimension	Support	4.54
	Trust (Privacy)	3.88
	Completeness	3.84
	Expandability	3.75
	Performance	3.70
	Accuracy	3.65
	Usability (tools)	3.30
	Usability (documentation)	3.15
Total Criterion Score		**3.73**

The survey results show that, regarding the tool and the documentation of IMM, respondents evaluated the Support dimension (mean value 4.54) as more conformable than all other dimensions. Both Usability dimensions are evaluated as the least conformable to the tool and the documentation of IMM. Due to the fact that only eight respondents participated in this survey the data should be reviewed with caution.

TABLE 8 – ACTION 4.1.2 AVERAGE RATING PER PERCEIVED UTILITY DIMENSION

	Dimension	MEAN
Per dimension	Collaboration	4.20
	Sustainability	4.00
	Potential Re-Usability	3.10
Total Criterion Score		**3.77**

Table 8 indicates that the respondents have evaluated the Collaboration and the Sustainability dimensions as more conformable to the tool and the documentation of IMM than the Potential Re-Usability dimension. The mean value of all the dimensions is 3.77, which is higher than the average value – 3. However, due to the low number of respondents who participated in the survey, the results are only indicators of the real situation.

5.4.1.2.3 PERCEIVED QUALITY AND PERCEIVED UTILITY CRITERION SCORE AGGREGATION

Figure 6 and Figure 7 provide a visual overview of the dimensions' conformity scores.
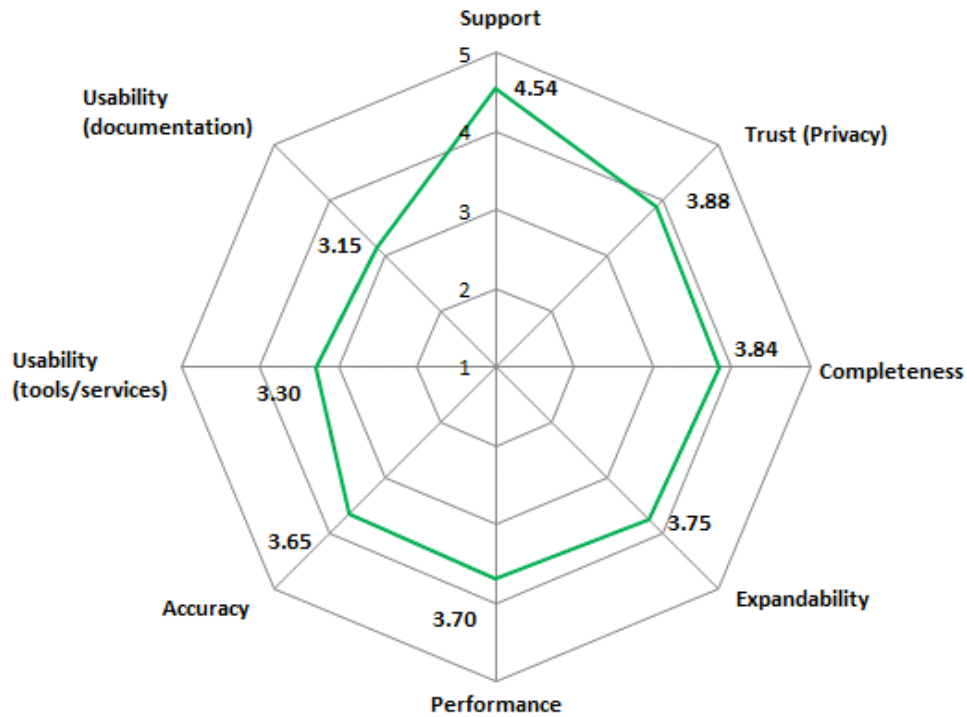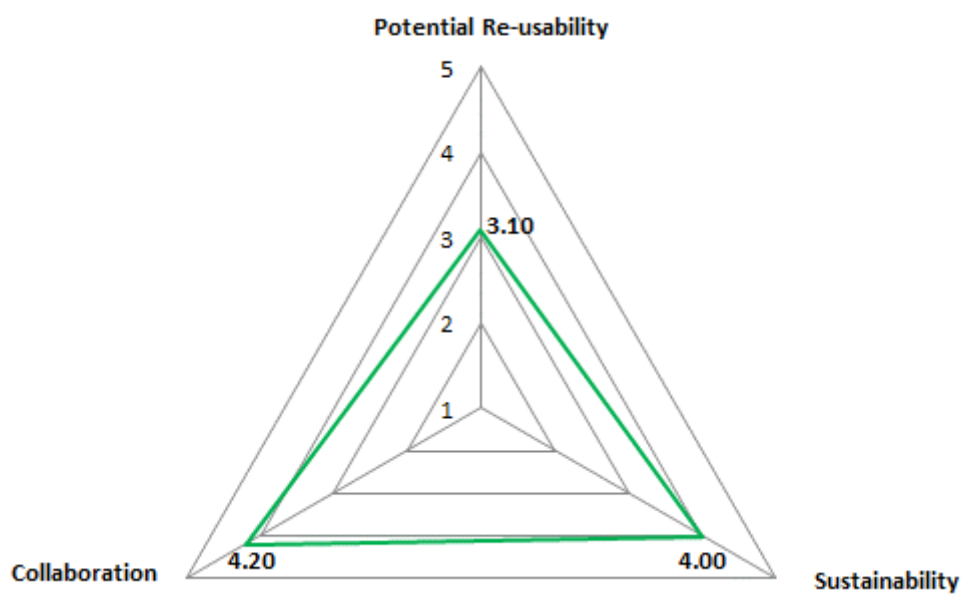

FIGURE 6 – ACTION 4.1.2 PERCEIVED QUALITY CRITERION SCORE AGGREGATION

FIGURE 7 – ACTION 4.1.2 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 that 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 were evaluated as "Important" a weight coefficient of 1 was applied, while a coefficient of 0.5 was applied to the dimensions which were 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 4.1.2 PERCEIVED QUALITY USER SATISFACTION SCORE

Figure 8 shows that the **Perceived Quality User Satisfaction Score is 67.76**. The result indicates an average level of respondent satisfaction with the tool and the documentation of IMM. However, this value is only indicative due to the low number of respondents who participated in the survey.
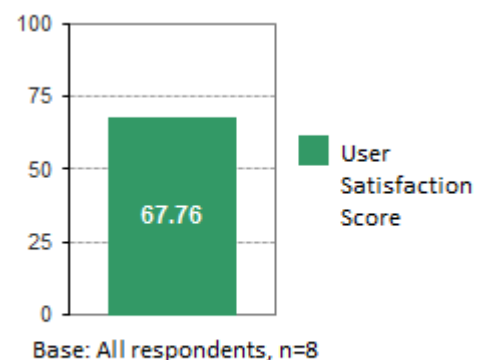

Base: All respondents, n=8

FIGURE 9 – ACTION 4.1.2 PERCEIVED UTILITY USER SATISFACTION SCORE

Figure 9 shows that the **Perceived Utility User Satisfaction Score is 71.64**. The result indicates an average level of respondent satisfaction with the tool and the documentation of IMM. However, this value is only indicative due to the low number of respondents who participated in the survey.

Base: All respondents, n=8
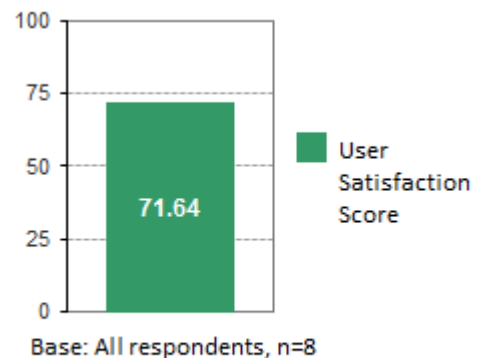
5.4.3 Net Promoter Score

The Net Promoter Score® (NPS) is a widely used management tool that helps evaluate the loyalty of a customer relationship[14]. 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"[15]. 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[15]**

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

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

FIGURE 10 – ACTION 4.1.2 PERCEIVED QUALITY NET PROMOTER SCORE

Base: All respondents, n=8
One respondent = 12.5%

Base: All respondents, n=8
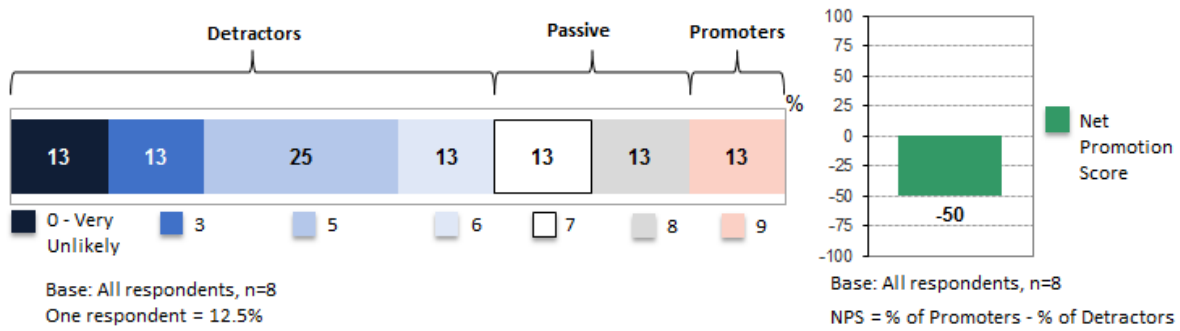NPS = % of Promoters - % of Detractors

Figure 10 shows that only one respondent out of eight is a Promoter of the tool and the documentation of IMM and would recommend it to colleagues or other PAs. More than half of the respondents (five out of eight) are Detractors of the tool and the documentation of IMM and would not recommend it to colleagues or other PAs. Regarding the five respondents who are unfamiliar with the action, one of them is a Passive user and four are Detractors. In addition, the respondent who has used the IMM multiple times is classified as a Detractor. The Net Promoter Score is -50, meaning that more respondents would not recommend the tool and the documentation of IMM. As the difference between Promoters and Detractors is only four respondents, the NPS should be seen as an indicator that there are respondents who are loyal users of the IMM tool and documentation, however at the same time there are unhappy users as well.

FIGURE 11 – ACTION 4.1.2 PERCEIVED UTILITY NET PROMOTER SCORE

Base: Qualified respondents, n=8
One respondent = 12.5%

Base: All respondents,= n=8
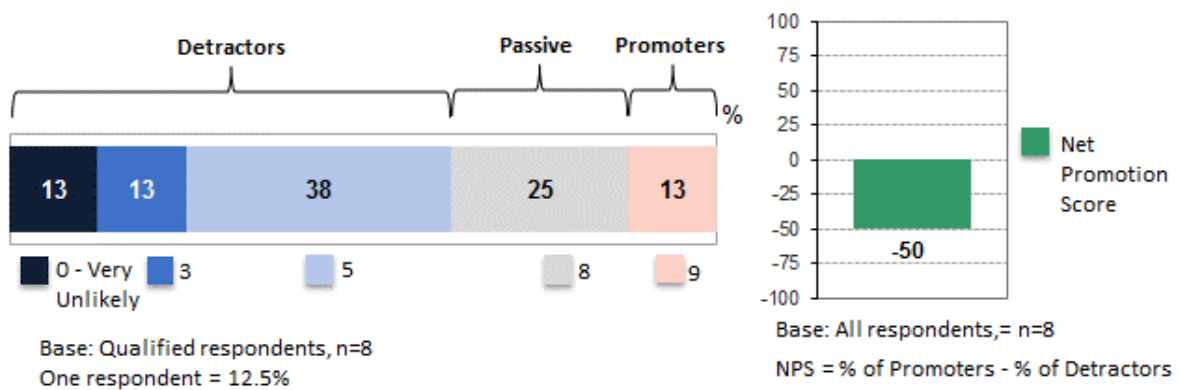NPS = % of Promoters - % of Detractors

Figure 11 shows that the Perceived Utility Net Promoter respondent classification results are similar to the Perceived Quality Net Promoter classification. There is only one respondent who is a Promoter of the tool and the documentation of IMM and there are five respondents who are Detractors. It is important to specify that the five respondents who are unfamiliar with the action are the five Detractors. The Net Promoter Score is -50, meaning that more respondents would not recommend the tool and the documentation of IMM. As the difference between Promoters and Detractors is only four respondents, the NPS should be seen as an indicator

that there are respondents who are loyal users of the IMM tool and documentation, however at the same time there are unhappy users as well.

5.4.4 Overall Score

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

To calculate the Overall Perceived Utility 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 Utility score, the average value of these four measurements is calculated. To reduce any linear scale to a different linear scale the following formula[16] 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) * ((-50) - (-100)) / (100 - (-100)) + 1 = 4 * 50/ 200 + 1 = 200/ 200 + 1 = 1.00 + 1 = 2.00

TABLE 9 – ACTION 4.1.2 OVERALL PERCEIVED QUALITY SCORE CALCULATION

NAME OF THE SCORE	ORIGINAL VALUE	VALUE AFTER REDUCING TO A FIVE POINT SCALE
Usefulness Score	4.43	3.29
Value Score	3.73	3.73
User Satisfaction Score	67.76	3.71

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

Net Promoter Score	-50	2.00
OVERALL PERCEIVED QUALITY SCORE		**3.18**

The survey results show that on a 5-point scale the Value Score (3.73) and User Satisfaction Score (3.71) have the highest scores. The Net Promoter Score **(2.00)** has the lowest value and it is below the average value – 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 4.1.2 OVERALL PERCEIVED UTILITY SCORE CALCULATION

NAME OF THE SCORE	ORIGINAL VALUE	VALUE AFTER REDUCING TO A FIVE POINT SCALE
Usefulness Score	4.43	3.29
Value Score	3.85	3.85
User Satisfaction Score	71.64	3.87
Net Promoter Score	-50	2.00
OVERALL PERCEIVED UTILITY SCORE		**3.25**

The survey results show that on a 5-point scale the User Satisfaction Score (3.87) and the Value Score (3.85) have the highest scores. The Net Promoter Score **(2.00)** has the lowest value and it is below the average value – 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).

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

- Dark blue: Usability (tools/services);
- Red: Trust (Privacy);
- Brown: Performance;
- Purple: Support;
- Green: Accuracy;
- Light blue: Completeness;
- Orange: Usability (documentation);
- Pink: 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, 16 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 tool and the documentations of IMM. Two more statements are on the line between the 1st and 2nd quadrant:

- *'The tool is well customized to the IMM individual users' needs'* (statement 2) and
- *'The guidelines are easy to understand'* (statement 16).

These statements can be identified as neither strengths nor weaknesses of the IMM. While one statement is a weakness and it is located in the 2nd quadrant:

- *'The structure of the documentation is clear and the systematic design remains consistent'* (statement 17).

FIGURE 12 – ACTION 4.1.2 PERCEIVED QUALITY ACTION STRENGTHS, WEAKNESSES, OPPORTUNITES AND THREATS
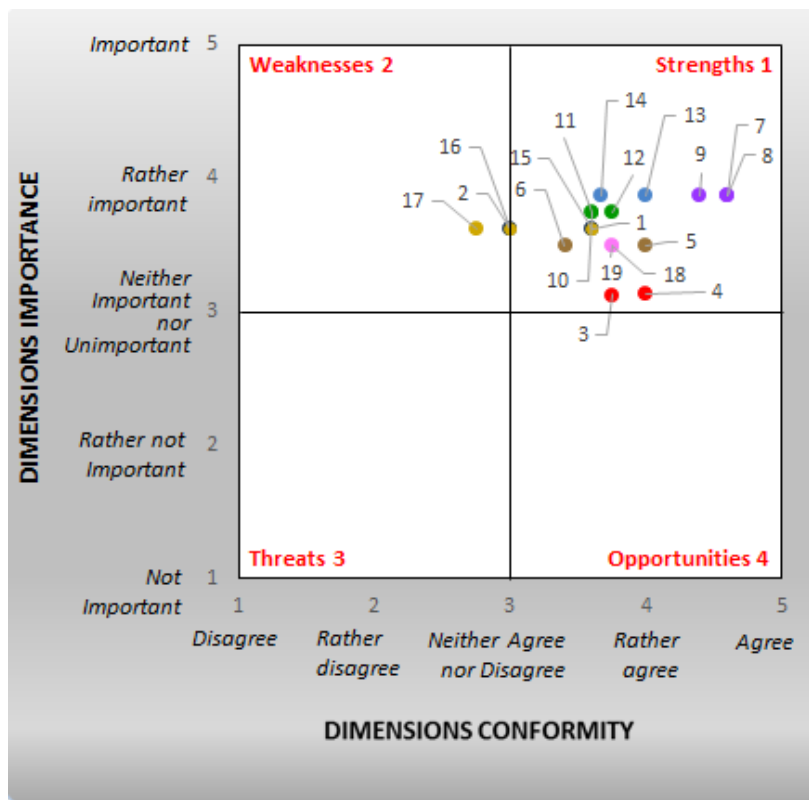
I. Usability (tools/services):
1 - The structure of the provided IMM tool is clear and easy to follow
2 - The tool is well customized to the IMM individual users' needs
II. Trust (Privacy):
3 - Data provided by users in the IMM tool are archived securely
4 - Data provided in the IMM are used only for the reason submitted
III. Performance:
5 - The IMM tool is available and accessible whenever it is needed
6 - The IMM tool performs the service successfully upon the first request
IV. Support:
7 - The support team showed a sincere interest in solving users' problems
8 - The support team provided prompt replies to the users' inquiries
9 - The support team has the knowledge to answer users' questions
V. Accuracy:
10 - The documentation is accurate
11 - The sources of documentation listed are verifiable
12 - The documentation is free from grammar/style errors
VI. Completeness:
13 - The reference links work and are accessible
14 - The documentation is complete and does not require additions
VII. Usability (documentation):
15 - The documentation is appropriate/applicable to my business needs
16 - The guidelines are easy to understand
17 - The structure of the documentation is clear and the systematic design remains consistent
VIII. Expandability:
18 - The documentation is applicable to other sectors
19 - The documentation format is transferrable to other applications

As seen in Figure 13, seven 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 documentation/ tools of IMM, while one statement is a weakness.

Figure 13 shows that the Collaboration dimension statements are the most important statements to the respondents.

FIGURE 13 – ACTION 4.1.2 PERCEIVED UTILITY ACTION STRENGTHS, WEAKNESSES, OPPORTUNITES AND THREATS
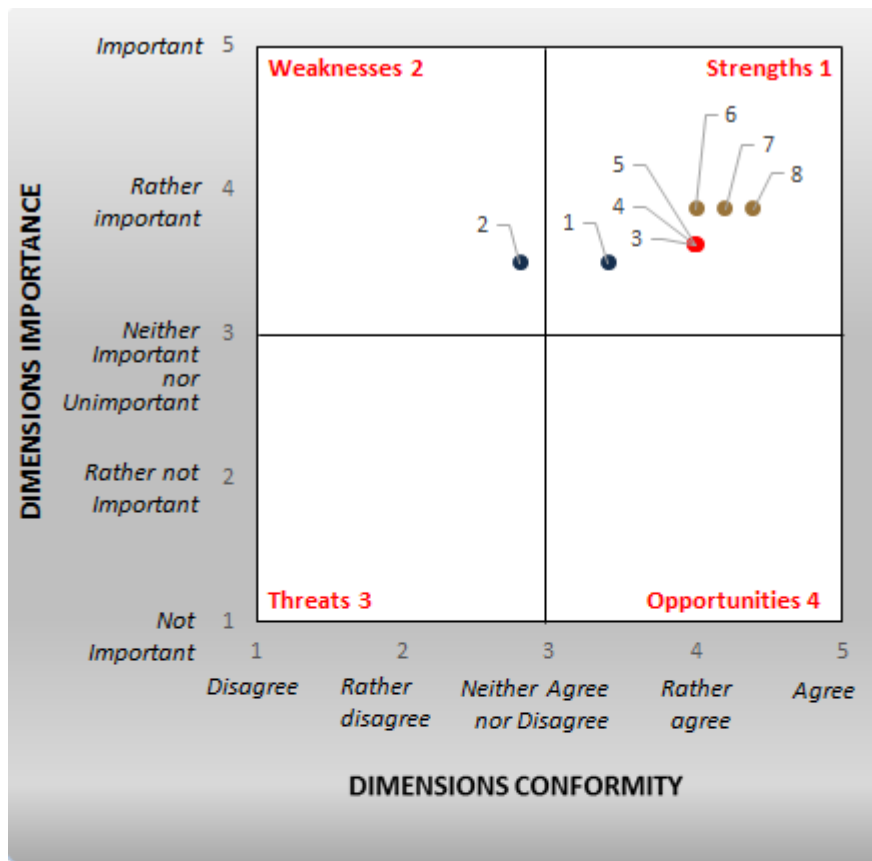
I. Potential Re-usability:
1 - Overall, the IMM activities help save costs
2 - Overall, the IMM activities help save time

II. Sustainability:
3 - The IMM tool and documentation are planned to be used in future
4 - The IMM tool and documentation provide sustainable solutions that will also be relevant in future
5 - Overall, the IMM tool and documentation support effective reuse of tools and documentation

III. Collaboration:
6 - The IMM tool and documentation help successfully cooperate with other public administrations/departments
7 - Overall, the IMM tool and documentation support effective electronic cross-border and cross-sector interaction
8 - The IMM tool and documentation support the implementation of European community policies and activities
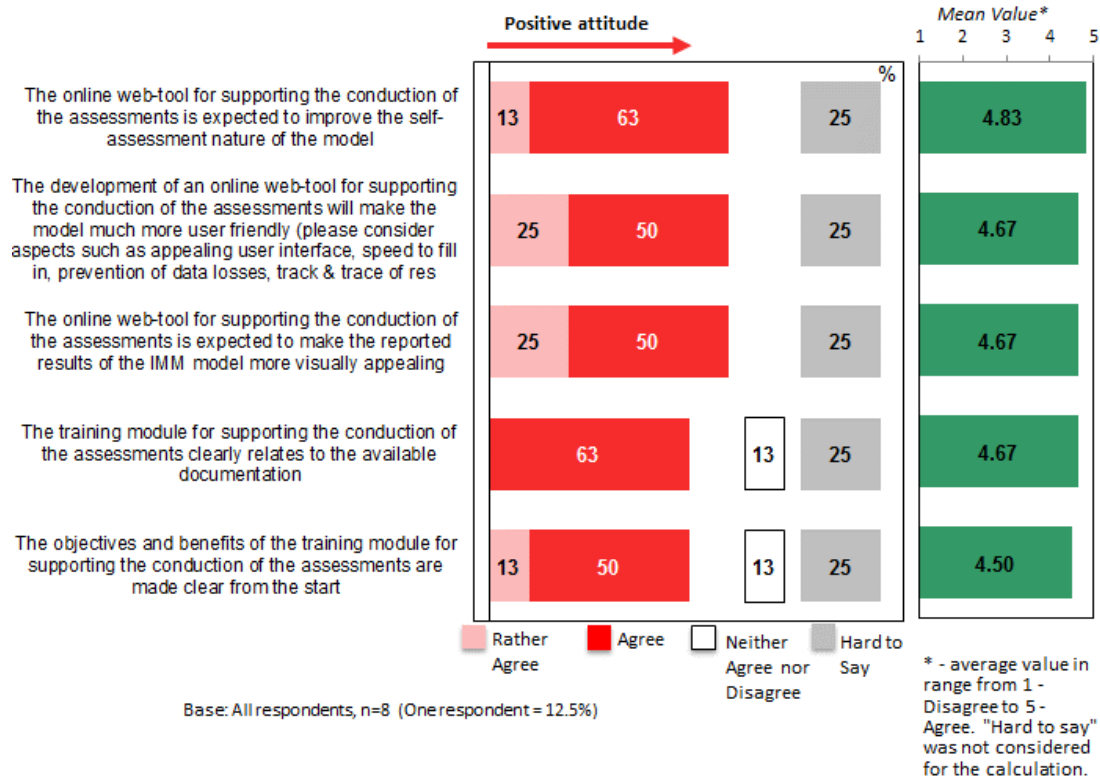
5.6 STATEMENTS BASED ON ACTION OBJECTIVES

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 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 Figure 14, the bars in pink/red represent the positive opinion (answers 'Agree' and 'Rather Agree'). In addition, a neutral opinion (the bars in white) and a 'Hard to say' answer (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 14 – ACTION 4.1.2 STATEMENTS BASED ON ACTION OBJECTIVES

Base: All respondents, n=8 (One respondent = 12.5%)

The survey results demonstrate that the respondents have evaluated the statements based on action objectives as relevant to the tool and the documentation of IMM. The mean values are between values 4 – 'Rather Agree' and 5 – 'Agree'. None of the respondents evaluated the statements based on action objectives with a negative answer. However, due to the fact that only eight respondents participated in this survey, the data should be reviewed with caution.

5.7 RESPONDENT RECOMMENDATIONS AND OPINIONS

This section provides an overview of the feedback received on the tool and the documentation of IMM. 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 11 – ACTION 4.1.2 IMM RECOMMENDATIONS AND MAIN BENEFITS

"Do you have any recommendations to improve "Interoperability Maturity Model (IMM)", taking into consideration the project as a whole with all its outputs – the IMM model in paper-text and in spreadsheet format, the IMM checklist?"
It must be provided in an online assessment tool. Paper/spreadsheet is not useful - only for reference.
"What are the main benefits or the most valuable things about "Interoperability Maturity Model (IMM)"?"
Improve the level of interoperability in the services
Makes you rethink things you know and should put into practice

6 SURVEY CONCLUSION AND RECOMMENDATIONS

The objective of the survey was to evaluate the Perceived Quality and the Perceived Utility for the self-assessment tool and the documentation of Action 4.1.2 – Interoperability Maturity Model (IMM). It is important to take into account that only eight respondents participated in this survey, from whom five have never used IMM. Therefore, the results of this survey perform more like indicators of the Perceived Quality and Perceived Utility without fully representing the opinion of all the users.

The following conclusions have been drawn based on the analysis performed:

o The tool and the documentation of the ISA Action 4.1.2 – Interoperability Maturity Model (IMM) received an average **Perceived Quality (3.18) and Perceived Utility (3.25) assessment.** The Value Score and the User Satisfaction Score have the highest evaluations. The Net Promoter Score has the lowest value, yet the data shows that there is only a difference of a couple of respondents between those who would recommend the tool and the documentation of IMM to colleagues or other PAs and those who would not.

o Five out of eight respondents evaluated the tool and the documentation of IMM from a theoretical point of view, as they have had no experience working with it, thus a lot of statements were evaluated with the answer 'Hard to say'.

o The respondents were very satisfied with the work of the support team.

o According to one of the respondents, IMM must be provided as an online assessment tool instead of the paper/spreadsheet format.

o One respondent admitted that the main benefit of the tool and the documentation of the IMM is the interoperability level improvement in the services.

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

• According to one of the respondents, IMM must be provided as an online assessment tool instead of the paper/spreadsheet format.

• Additional work should be done to make the structure of the documentation clear and to make the guidelines easy to understand.

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[13] (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 that sum by the total number of cases;

- Mode[13] 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[13] 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[13] 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;