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INTEROPERABILITY SOLUTIONS FOR  
EUROPEAN PUBLIC ADMINISTRATIONS  
MONITORING AND EVALUATION

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

ISA Action 2.8 Machine Translation Service by the  
European Commission

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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 assessment of **the ISA Action 2.8 – Machine Translation Service by the European Commission (MT@EC)**. 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<sup>1</sup>, 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<sup>2</sup> and the action’s specific objectives.

The respondents were asked to evaluate the MT@EC service, its web interface and technical documentation for the web service. The survey was designed in the EUSurvey tool and distributed by e-mail to 11 contacts. The survey was promoted in a conference and through side banners on a website. A link to the survey was also included in the emails which were sent to the MT@EC users when they used the service. Over the duration of more than one month<sup>3</sup>, 78 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.

	Score	Mode	StDev	StErr	Explanation of the score scale
<b>Usefulness Score</b>	6.41	7	0.87	0.10	Average value on a scale from 1 (Not Useful at All) to 7 (Very Useful).
<b>Value Score</b>	4.31	5	0.83	0.04	Average value of all the statement means in the range from 1 (Disagree) to 5 (Agree).
<b>User Satisfaction Score</b>	83.16	Not applicable for this score			User Satisfaction Score from 0 (none of the respondents are satisfied) to 100 (all respondents are satisfied with the work performed by the Action).
<b>Net Promoter Score</b>	42	Not applicable for this score			Net Promoter Score from -100 (every customer is a Detractor) to 100 (every customer is a Promoter).
<b>OVERALL PERCEIVED QUALITY SCORE</b>	4.27				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).

**TABLE 1 – ACTION 2.8 SURVEY PERCEIVED QUALITY MAIN RESULTS**

	Score	Mode	StDev	StErr	Explanation of the score scale
<b>Usefulness Score</b>	6.41	7	0.87	0.10	Average value on a scale from 1 (Not Useful at All) to 7 (Very Useful).

<sup>1</sup> DG BUDG (2004), “Evaluating EU activities, a practical guide for the Commission services”

<sup>2</sup> Papadomichelaki, X. and Mentzas, G. (2012), “e-GovQual: A multiple-item scale for assessing e-government service quality”

<sup>3</sup> The survey was launched on the 2<sup>nd</sup> of December 2016 and was active until the 19<sup>th</sup> of January 2016.

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Perceived Quality and Perceived Utility Report July 2016**

<b>Value Score</b>	4.38	5	0.78	0.05	Average value of all the statement means in the range from 1 (Disagree) to 5 (Agree).
<b>User Satisfaction Score</b>	88.63	Not applicable for this score			User Satisfaction Score from 0 (none of the respondents are satisfied) to 100 (all respondents are satisfied with the work performed by the Action).
<b>Net Promoter Score</b>	53	Not applicable for this score			Net Promoter Score from -100 (every customer is a Detractor) to 100 (every customer is a Promoter).
<b>OVERALL PERCEIVED UTILITY SCORE</b>	4.40				The Overall 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).

**TABLE 2 – ACTION 2.8 SURVEY PERCEIVED UTILITY MAIN RESULTS**

Main findings:

- The survey results demonstrate that the web service, its web interface and the technical documentation for the web service of **Action 2.8 – Machine Translation Service by the European Commission (MT@EC) comply with the ISA programme’s objectives, as well as the action’s specific objectives;**
- The results show that the MT@EC web service, its web interface and technical documentation for the web service are perceived as more beneficial in terms of Trust (Privacy), Usability and Performance than in Support;
- There is room for improving the quality of service provided by the support team, as the Support dimension had the lowest conformity, although the absolute results was still judged positively;
- Almost all of the respondents (97%) think that, in overall, the MT@EC web service, its web interface and technical documentation for the web service are useful in their work;
- The majority of the respondents are loyal users of MT@EC;
- The main benefits or the most valuable aspects of MT@EC are that it saves time, it is fast, available and reliable.

Recommendations:

- Addition of new functions or improvements of already existing ones are needed;
- Improvements in the language translation and grammatical forms are necessary;
- The quality of service provided by the support team should be increased.

## REVISION HISTORY

Date	Version	Description	Authors	Approved by
18/03/2016	0.10	Initial version	CGI - Accenture	
09/05/2016	0.20	Updated version	CGI - Accenture	
27/06/2016	1.00	Final version	CGI - Accenture	
01/07/2016	2.00	Updated version	CGI - Accenture	.
16/08/2016	3.00			Approved by HVA on 29/07/2016

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# 1 INTRODUCTION

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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 web interface/service of Action 2.8 – Machine Translation Service by the European Commission (MT@EC).

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;
  - Respondent recommendations and main benefits;
- **Section 6:** provides the survey conclusion and recommendations;
- **Section 7:** appendix includes:
  - Raw data export;
  - Recommendations and comments provided by the respondents;
  - Glossary.



## 2 OVERVIEW OF THE ACTION 2.8 - MACHINE TRANSLATION SERVICE BY THE EUROPEAN COMMISSION

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Documents used by the European Commission, other European Institutions and Public Administrations (PAs) in the multilingual environment of the European Union (EU) need to be available in different national languages. The sheer volume of content makes this an impossible task to achieve using human translators alone.

The European Commission provided a machine translation service for a number of years, based on "rule-based" Machine Translation technology. The service delivered a certain level of automated "raw machine translation" quality for a small number of language pairs.

In the past few years, however, machine translation technology has shifted towards Statistical Machine Translation (SMT), which opens new opportunities, given its quality, time-to-market and development costs.

With MT@EC, the Commission has now launched a new system based on SMT that provides an improved machine translation service in terms of both quality of output and the number of supported languages. A total of 552 language pairs covering all of the EU official languages are currently provided. The service run by the Commission guarantees continuity and quality of service, as well as respect of confidentiality and other legal aspects related to trust in information exchange.

### **Action's Objective:**

- Operation of a common Statistical Machine Translation service, MT@EC and online services offered by the European Commission and used by European and national PAs.

### **Action's benefits:**

- Increasing speed so the receiving administration quickly understands the information without having to wait for a translation and "routes" it to the right person/department;
- Reducing cost since human translators in the receiving administration will only receive requests to translate the specific pages of an incoming document deemed important;
- Enabling asynchronous machine translation of working documents, letters, e-mails, etc;
- Facilitating easier information exchange within and between interest groups, between judicial collaborators etc., based on their expertise and not on the knowledge of the working language(s) of the group.

## 3 SURVEY METHODOLOGY

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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<sup>1</sup>.

Four dimensions are used to measure the Perceived Quality criterion: These dimensions are derived from the main objectives of the ISA programme. Perceived Quality for tools and services is measured using an adaption of the eGovQual scale model<sup>4</sup> 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 provides<sup>4</sup>;
- **Trust (Privacy) (T):** the degree to which the user believes the service/tool is safe from intrusion and protects personal information<sup>4</sup>;
- **Performance (P):** the feasibility and speed of accessing, using, and receiving services of the service/tool<sup>4</sup>;
- **Support (S):** the ability to get help when needed and the level of service received<sup>4</sup>.

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<sup>5</sup> 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 into three dimensions which are defined as the criteria for measuring the Perceived Utility:

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<sup>4</sup> 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>

<sup>5</sup> Papadomichelaki, X. and Mentzas, G. (2012), "e-GovQual: A multiple-item scale for assessing e-government service quality"

- **Potential Re-usability:** the degree to which the action's outcome(s) can be reused by PAs;
- **Sustainability:** to what extent the financial, technical and operational sustainability of solutions is ensured<sup>6</sup>;
- **Collaboration:** the degree to which the action promotes/facilitates collaboration/cooperation between PAs<sup>7</sup>.

Due to the non-applicability of the Sustainability dimension, it was excluded from the evaluation of Action 2.8 – Machine Translation Service by the European Commission upon the request of the Project Officer.

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<sup>8</sup> and actions' specific objectives." The Perceived Utility statements were tailored to reflect these objectives and were based on the ESOMAR<sup>9</sup> (World Association of Opinion and Marketing Research Professionals) standards.

The developed Perceived Utility dimensions enable the 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).

### 3.3 SURVEY MEASUREMENTS

In the data analysis, the core types of measurements which are performed include 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 the mean value from a single question: "*How useful overall is MT@EC in your work?*"

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<sup>6</sup> European Commission (2013), Interim evaluation of the ISA programme, "Report from the Commission to the European Parliament and Council COM (2013) 5 final".

<sup>7</sup> CRN (2015), Collaboration [http://research.crn.com/technology/knowledge\\_management/collaboration](http://research.crn.com/technology/knowledge_management/collaboration)

<sup>8</sup> 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)

<sup>9</sup> ESOMAR, edited by Hamersveld. M., Bont C. (2007), Market Research, Handbook, 5<sup>th</sup> Edition

- 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 **Error! eference source not found.** 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 a question regarding the usage of action outputs. This question also works as a filter, 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<sup>10</sup>.
- 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 using a 5-point Likert grading scale<sup>10</sup>. 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 using a 5-point Likert grading scale<sup>10</sup>.
- The recommendations: the last section includes several open questions for recommendations and opinions regarding the action and the survey.

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<sup>10</sup> 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. The data collection period is longer than the usual duration of one month due to the holiday period at the end of the year.

**TABLE 3 – ACTION 2.8 SURVEY TECHNICAL INFORMATION ABOUT THE FIELDWORK**

<b>Start date:</b>	02/12/2015
<b>End date:</b>	19/01/2016
<b>The survey launch method:</b>	E-mail notification, side banners on web sites and e-mails providing translation and promotion in a conference on the 4 <sup>th</sup> of December 2015
<b>Reminders:</b>	E-mail reminders sent out on 09/12/2015, 19/12/2015, 05/01/2016 and 19/01/2016
<b>Target population:</b>	11 contacts via e-mail and everyone using the Machine translation web site
<b>Total number of respondents:</b>	80
<b>Number of suitable respondents for the survey:</b>	78*

*\*2 responses were excluded from the further analysis due to the respondents' unfamiliarity with this action (i.e., they have never heard of MT@EC or have just heard of it but have never worked with it).*

## 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 profile describes the action respondents from the demographical point of view. It illustrates the diversity of the respondents, thus ensuring that the opinions of different groups are included.

**TABLE 4 – ACTION 2.8 DEMOGRAPHIC PROFILE OF RESPONDENTS**

RESPONDENT PROFILE			
		Amount	Col %
<b>ALL SUITABLE RESPONDENTS</b>		78	100.0
<b>RESPONDENT GROUP</b>	Translator	33	42.3
	Machine user	23	29.5
	EU non-translator official	13	16.7
	EU Member State's Public Administration	7	9.0
	Other (Mentioned 1 time: Researcher (University of Porto); Developer)	2	2.6
<b>ORGANISATION</b>	EU institution	67	85.9
	Public administration at national level	9	11.5
	Academic	1	1.3
	Private sector	1	1.3
<b>LOCATION</b>	Austria	1	1.3
	Belgium	32	41.0
	Croatia	1	1.3
	France	1	1.3
	Germany	1	1.3
	Greece	1	1.3
	Ireland	1	1.3
	Italy	2	2.6
	Lithuania	1	1.3
	Luxembourg	30	38.5
	Poland	1	1.3
	Portugal	1	1.3
	Romania	3	3.8
	Slovenia	1	1.3
	Spain	1	1.3

Base: all suitable respondents, n=78

## 5.2 USAGE OF THE ACTION

The usage profile provides an overview of the usage rate of the action. Table 5 illustrates the diversity of the action’s output usage, thus ensuring that the opinions of different respondent groups are included.

**TABLE 5 – ACTION 2.8 USAGE OF MT@EC**

USAGE PROFILE			
		Amount	Col %
<b>ALL SUITABLE RESPONDENTS</b>		78	100.0
<b>INTENSITY WORKING WITH MT@EC SERVICE</b>	Use it regularly	47	60.3
	Have used it occasionally	24	30.8
	Have tried it once	5	6.4
	Other (Mentioned 1 time: Used as a service (Application to Application) on users demand; hard to say)	2	2.6
<b>PURPOSE OF MT@EC USAGE*</b>	MT of working documents, letters, emails within European Commission services	52	66.7
	MT of working documents, letters, emails within Member States’ Public Administrations	20	25.6
	MT for online services within European Commission services	16	20.5
	Spaces where information is exchanged between national representatives in the framework of EU wide collaboration activities within Member States’ Public Administrations	10	12.8

*Base: all respondents, n=78*

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



### 5.3 USEFULNESS SCORE

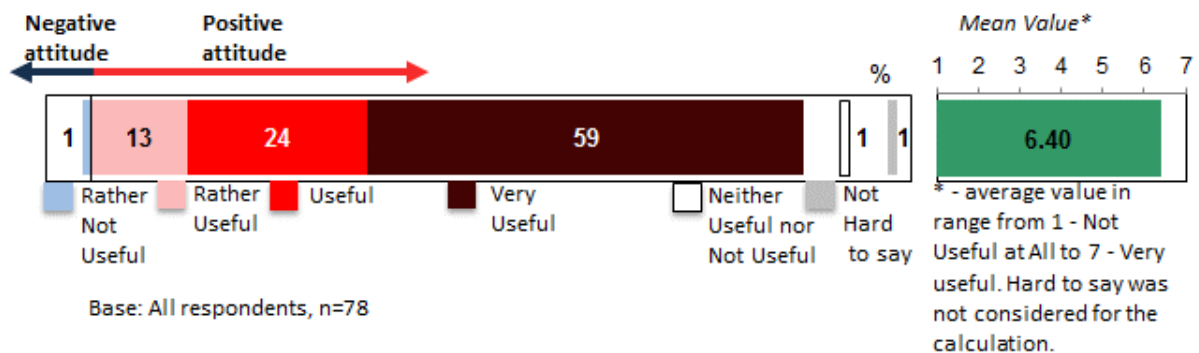
The Usefulness Score is calculated taking into account a single question: “How useful overall is MT@EC in your work?”

The survey respondent is asked 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 attitude. In addition, a neutral opinion (the bar in white) and a ‘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 2.8 USEFULNESS SCORE**



The survey results show that the MT@EC service, its web interface and the technical documentation for the web service are considered as useful to almost all respondents in their work; only 1% (one respondent out of seventy-eight) provided a negative response. To 59% of the respondents the MT@EC service, its web interface

and the technical documentation for the web service seem to be very useful, while 24% consider them as useful. The mean value is **6.40**, and it is between 6 - 'Useful' and 7 - 'Very 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.

Four Perceived Quality dimensions (Usability, Trust (Privacy), Performance, Support) and two Perceived Utility dimensions (Collaboration 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:

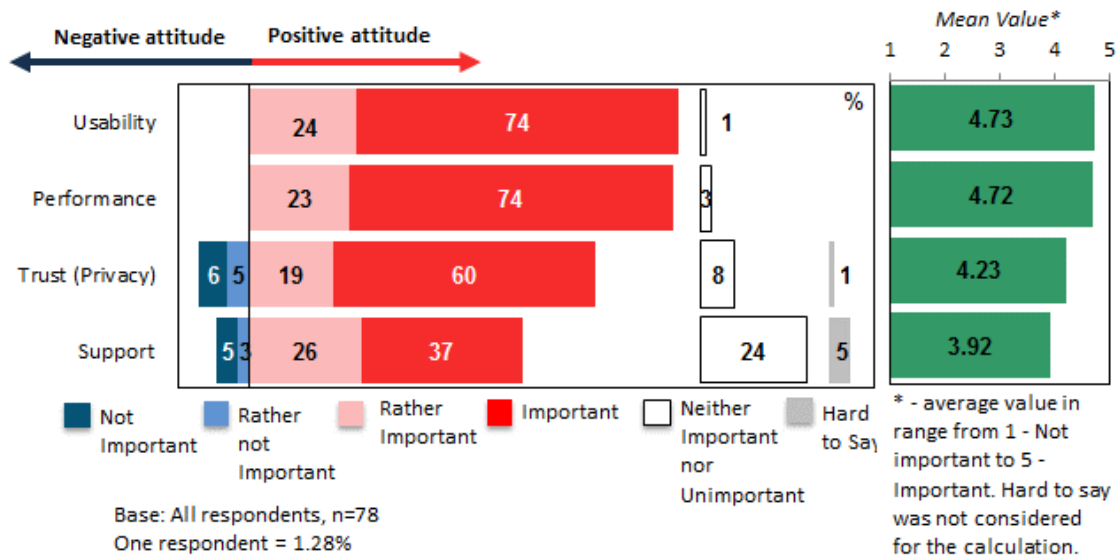
- 5 – Important;
- 4 – Rather Important;
- 3 – Neither Important nor Unimportant;
- 2 – Rather not Important;
- 1 – Not Important;
- 0 – Hard to Say/Not Applicable (*is not considered for the calculation*).

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 attitude (answers 'Rather important' and 'Important'). In addition, a neutral opinion (the bars in white) and a 'Hard to say' answer (the bar 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 2 – ACTION 2.8 PERCEIVED QUALITY DIMENSIONS IMPORTANCE RESULTS**

"How important are the factors below to you when using MT@EC, taking into consideration the service as a

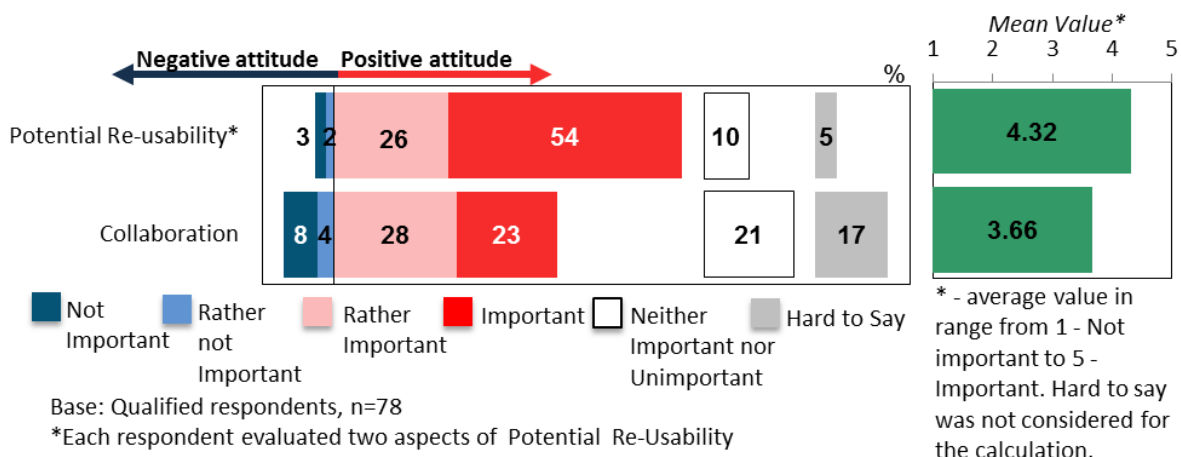


whole with all its outputs (web interface, web service, technical documentation for web service)?"

The survey results indicate that the Usability and the Performance dimensions are equally important to the respondents regarding the MT@EC service, its web interface and the technical documentation for the web service. None of the respondents evaluated these dimensions as not important or rather not important, and three fourths of the respondents consider them as important. The mean value for Usability is **4.73**, and for Performance it is **4.72**. Considering the usage of MT@EC service, its web interface and the technical documentation for the web service, the Trust (Privacy) and Support dimensions were regarded as less important, with mean values of **4.23** and **3.92**, respectively. However, the mean value of the lowest evaluated dimension is still higher than the neutral value 3 - 'Neither Important nor Unimportant'.

**FIGURE 3 – ACTION 2.8 PERCEIVED UTILITY DIMENSIONS IMPORTANCE RESULTS**

"How important are the factors below to you when using MT@EC, taking into consideration the service as a whole with all its outputs (web interface, web service, technical documentation for web service)?"



The survey results indicate that the Potential Re-Usability dimension regarding the MT@EC service, its web interface and the technical documentation for the web service is more important to the respondents than the Collaboration dimension. Only 5% of the respondents evaluated this dimension as not important or rather not important, and 52% of the respondents evaluated it as important. The mean value is **4.32**, while the mean value of the Collaboration dimension's importance is **3.66**, which is higher than the neutral value 3 - 'Neither Important nor Unimportant'.

#### **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 2.8 has ten Perceived Quality statements and six Perceived Utility statements regarding the dimensions' conformity. Table 6 gives an overview of the statements representing each dimension. The Usability, the Support, the Collaboration and the Potential Re-usability dimensions are represented by three statements each, while the Performance and the Trust (Privacy) dimensions are represented by two statements each.

**TABLE 6 – ACTION 2.8 STATEMENT MAPPING TO DIMENSIONS**

	Perceived Quality Statements	Dimension
1	The structure of the web interface provided is clear and easy to use	Usability
2	The structure of the technical documentation provided for the web service is effective	Usability
3	The services are well customized to individual users' needs	Usability
4	Data provided by users in this service is treated securely	Trust (Privacy)
5	Data provided in this service is used only for the reason submitted	Trust (Privacy)
6	The service is available and accessible whenever it is needed	Performance
7	The MT@EC application performs the service successfully upon the first request	Performance
8	The support team showed a sincere interest in solving users' problems	Support
9	The support team provided prompt replies to users' inquiries	Support
10	The support team has the knowledge to answer users' questions	Support
	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 service is planned to be used in future	Potential Re-usability
4	The service helps successfully cooperate with other public administrations/departments	Collaboration
5	Overall, the service supports effective electronic cross-border and cross-sector interaction	Collaboration
6	The service 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, ten Perceived Quality and six Perceived Utility statements were designed for the 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 bar in blue represents the negative attitude (answers 'Disagree' and 'Rather Disagree'), whereas the bars in pink/red represent the positive attitude (answers 'Agree' and 'Rather Agree'). In addition, a neutral opinion (the bars in white) and the 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 2.8 PERCEIVED QUALITY DIMENSIONS CONFORMITY RESULTS

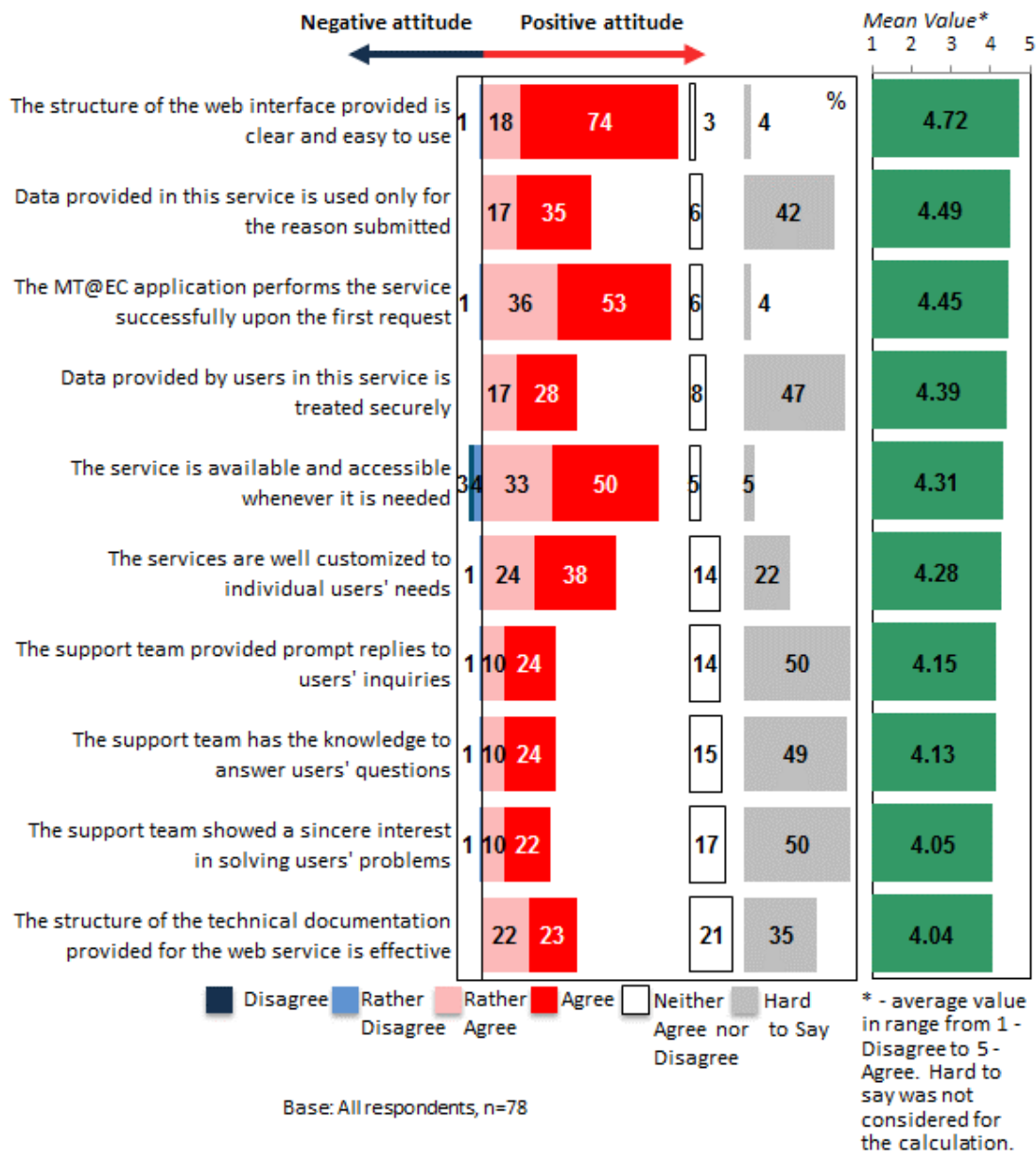


Figure 4 shows that all of the statements are evaluated as relevant to the MT@EC service, its web interface and technical documentation for the web service; all average values are higher than the value 4 – 'Rather Agree'. For many statements a high amount of respondents chose the answer 'Hard to say', meaning that the respondent couldn't evaluate each of those statements or just haven't had enough experience working with the MT@EC service, its web interface and technical documentation for the web service. The most relevant statements regarding the evaluation of MT@EC are:

- 'The structure of the web interface provided is clear and easy to use' (mean value **4.72**);
- 'Data provided in this service is used only for the reason submitted' (mean value **4.49**) and
- 'The MT@EC application performs the service successfully upon the first request' (mean value **4.45**).

FIGURE 5 – ACTION 2.8 PERCEIVED UTILITY DIMENSIONS CONFORMITY RESULTS

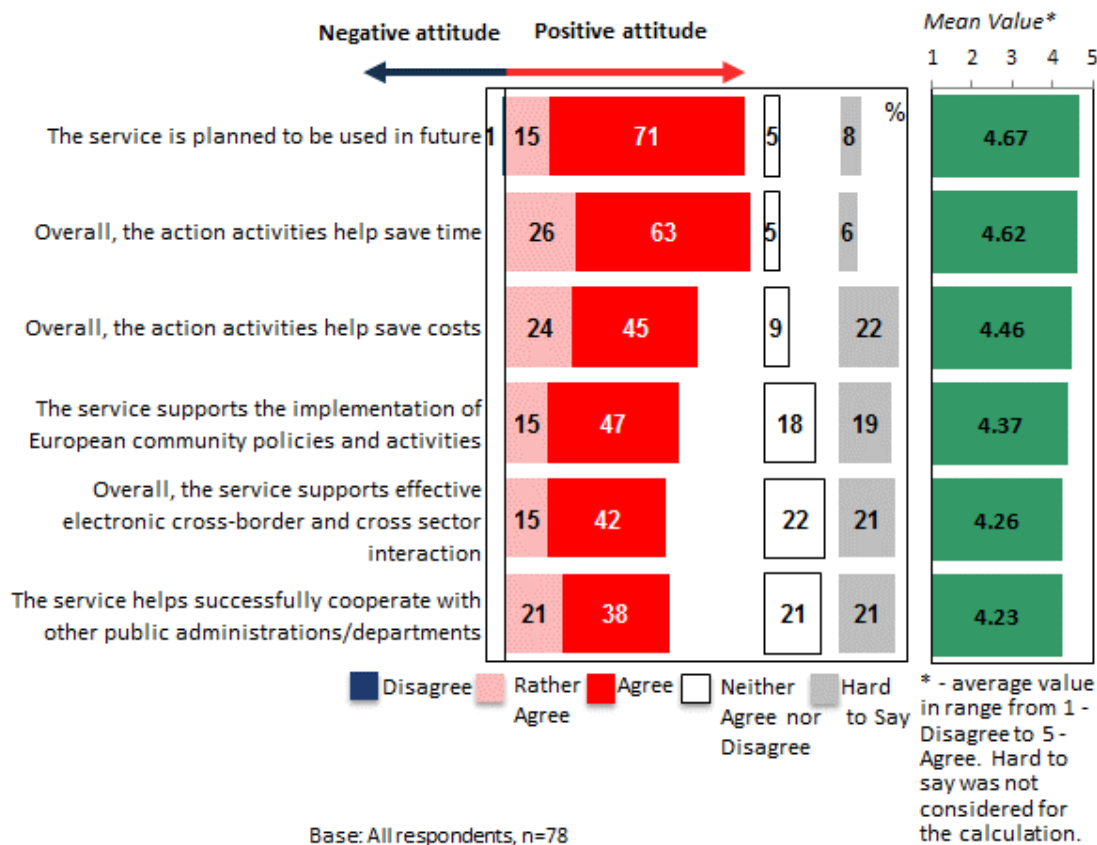


Figure 5 indicates that all statements are evaluated as relevant to the MT@EC service, its web interface and technical documentation for the web service. The average value is higher than a positive value 4 – ‘Rather Agree’. The most relevant statements regarding the evaluation of the MT@EC are:

- ‘Overall, the action activities help save time’ (mean value **4.62**) and
- ‘Overall, the action activities help save costs’ (mean value **4.46**).

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 relevant dimension statements are taken into account.

Table 7 and Table 8 also provide an overview of the additional statistical calculations<sup>11</sup> - mode, standard deviation and standard error. With reference to the theory used in business research methods,<sup>12</sup> it is concluded that for statistically meaningful calculations, the minimum respondent number is equal to or greater than ten per statement.

<sup>11</sup> Dictionary of statistics & methodology: a nontechnical guide for the social sciences (page 226).

<sup>12</sup> Cooper D. R., Schindler P. S. (2013), Business Research Methods, 12th Edition



**TABLE 7 – ACTION 2.8 ADDITIONAL STATISTICAL CALCULATIONS FOR PERCEIVED QUALITY DIMENSIONS**

	Dimension	MEAN	MODE	StDev	StErr
Per dimension	Trust (Privacy)	4.44	5	0.83	0.07
	Performance	4.39	5	0.72	0.08
	Usability	4.35	5	0.79	0.06
	Support	4.12	5	0.94	0.09
Total Criterion Score		4.33	5.00	0.82	0.08

The survey results show that the respondents evaluated the Trust (Privacy) statements as the most relevant to the MT@EC service, its web interface and technical documentation for the web service (mean value **4.44**). The Reliability statements (mean value **4.39**) and the Usability statements (mean value **4.35**) are the next most highly evaluated. However, the Trust (Privacy), the Performance and the Usability dimensions have a very similar conformance, as they fall within the range of the standard error. The respondents evaluated the Support statements (mean value **4.12**) as the least relevant, though not as irrelevant, since the value is higher than the neutral value 3 - 'Neither agree nor disagree'.

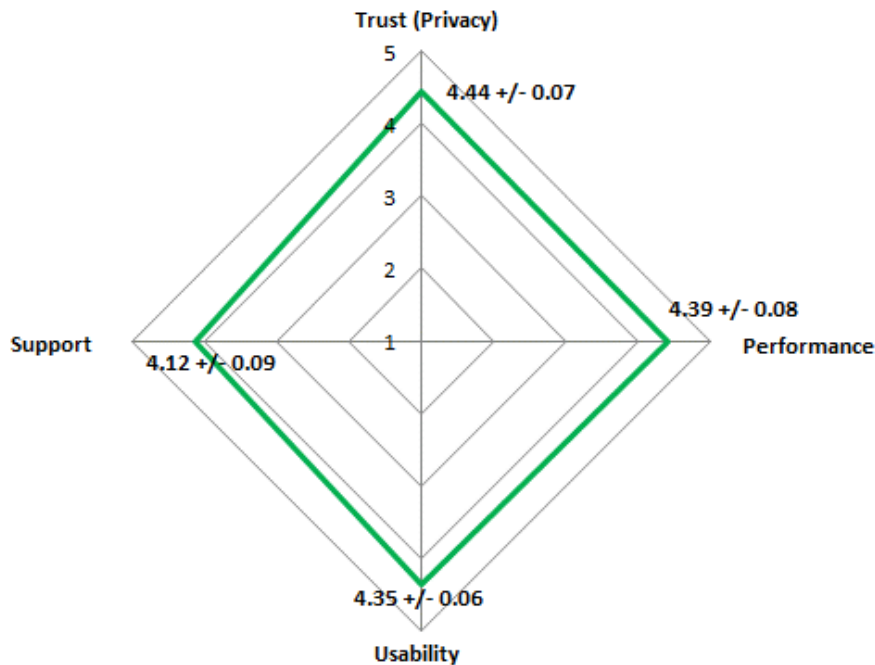
**TABLE 8 – ACTION 2.8 ADDITIONAL STATISTICAL CALCULATIONS FOR PERCEIVED UTILITY DIMENSIONS**

	Dimension	MEAN	MODE	StDev	StErr
Per dimension	Potential Re-usability	4.59	5	0.67	0.05
	Collaboration	4.29	5	0.85	0.07
Total Criterion Score		4.44	5	0.76	0.06

The survey results show that the respondents evaluated the Potential Re-usability statements as more relevant to the MT@EC service, its web interface and technical documentation for the web service (mean value **4.59**) than the Collaboration statements (mean value **4.29**).

### 5.4.1.2.3 CRITERION SCORE AGGREGATION

Figure 6 provides a visual overview of the dimension conformity scores.



**FIGURE 6 – ACTION 2.8 PERCEIVED QUALITY 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.

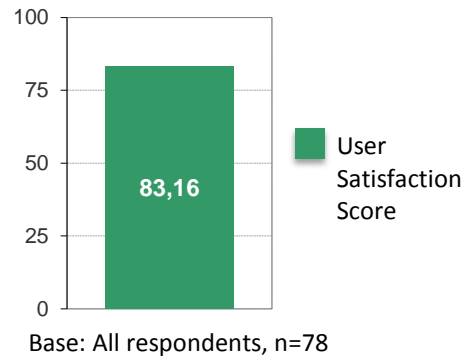
To increase the accuracy of the calculation, a specific weight coefficient is applied to the dimensions. To those dimensions which were evaluated as "Important" a weight coefficient of 1 was applied, while a coefficient of 0.5 was applied to the dimensions which were evaluated as "Rather Important". 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.

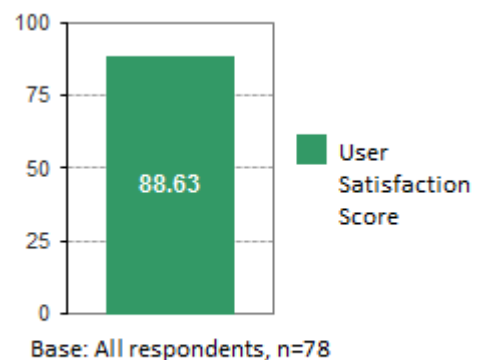
**FIGURE 7 – ACTION 2.8 PERCEIVED QUALITY USER SATISFACTION SCORE**

Figure 7 shows that the User Satisfaction Score is **83.16**. The result indicates a high level of respondent satisfaction with the Perceived Quality of the MT@EC service, its web interface and technical documentation for the web service.



**FIGURE 8 – ACTION 2.8 PERCEIVED UTILITY USER SATISFACTION SCORE**

Figure 8 shows that the User Satisfaction Score is **88.63**. The result indicates a high level of respondent satisfaction with the Perceived Quality of the MT@EC service, its web interface and technical documentation for the web service.



### 5.4.3 Perceived Quality Net Promoter Score

The Net Promoter Score® (NPS) is a widely used management tool that helps evaluate the loyalty of a customer relationship<sup>13</sup>. This management tool has been adapted to suit the ISA programme’s 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

<sup>13</sup> Official webpage of Net Promoter Score® community <http://www.netpromoter.com/home>.

answer “Not likely at all” and 10 – “Extremely likely”<sup>14</sup>. 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:

$$\text{NPS} = \% \text{ of Promoters} - \% \text{ of Detractors}^{14}$$

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

**FIGURE 9 – ACTION 2.8 PERCEIVED QUALITY NET PROMOTER SCORE**

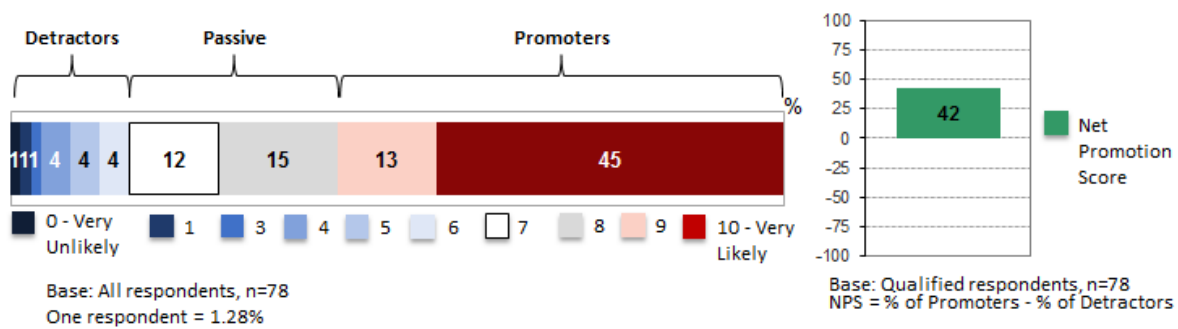


Figure 9 shows that 58% of the respondents are Promoters of the MT@EC service, its web interface and technical documentation for the web service. Considering the Perceived Quality, it is very likely that this respondent group would recommend it to colleagues or other PAs. 15% of the respondents are Detractors, unhappy users who can damage the image and decrease the usage of MT@EC. The Net Promoter Score value is calculated as the percentage difference between Promoters and Detractors. The NPS is **42** (NPS is expressed in whole numbers). This indicator can be assessed as good due to its positive value (above the neutral value of 0).

<sup>14</sup> Markey, R. and Reichheld, F. (2011), “The Ultimate Question 2.0: How Net Promoter Companies Thrive in a Customer-Driven World”

**FIGURE 10 – ACTION 2.8 PERCEIVED UTILITY NET PROMOTER SCORE**

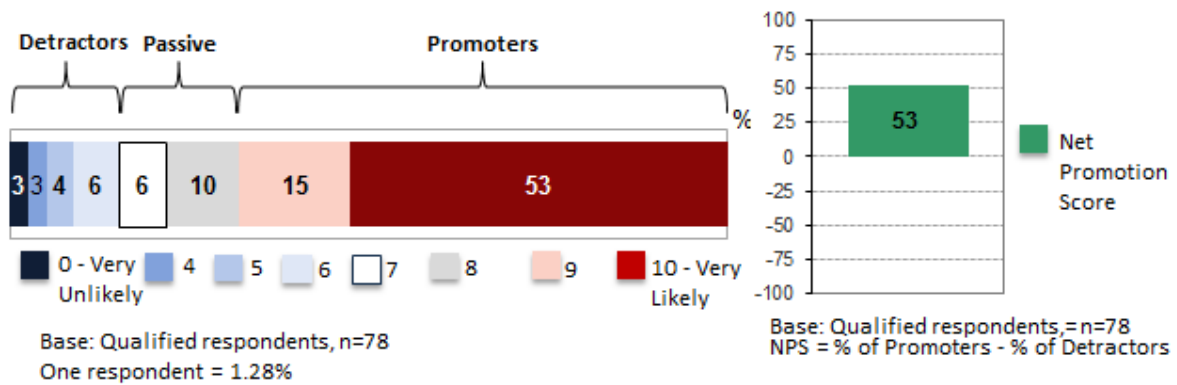


Figure 10 shows that 68% of the respondents are Promoters of the MT@EC service, its web interface and technical documentation for the web service. Considering the Perceived Utility, it is very likely that this respondent group would recommend it to colleagues or other PAs. 15% (In graph seen as 16% due to the percentage roundup) of the respondents are Detractors. The NPS is **53**. This indicator can be assessed as very good due to its positive value (above the neutral value of 0).

#### 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 Quality and Perceived Utility Score are 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<sup>15</sup> 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)

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

- 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:*

$$(5-1) * ((42) - (-100)) / (100 - (-100)) + 1 = 4 * 142 / 200 + 1 = 568 / 200 + 1 = 2.84 + 1 = 3.84$$

**TABLE 9 – ACTION 2.8 OVERALL PERCEIVED QUALITY SCORE CALCULATION**

NAME OF THE SCORE	ORIGINAL VALUE	VALUE AFTER REDUCING TO A FIVE POINT SCALE
Usefulness Score	6.41	4.61
Value Score	4.31	4.31
User Satisfaction Score	83.16	4.33
Net Promoter Score	42	3.84
<b>OVERALL PERCEIVED QUALITY SCORE</b>		<b>4.27</b>

The survey results identify that, on a 5-point scale, the Usefulness Score has the highest value (**4.61**), which indicates that it is the strongest aspect of the action. The User Satisfaction Score (**4.33**) and the Value Score (**4.31**) both have a high score as well, indicating that the respondents are satisfied with the MT@EC service, its web interface and technical documentation for the web service. The Net Promoter Score has the lowest score (**3.84**), yet it is positive in general, which means that a larger proportion of respondents would recommend these Action 2.8 outputs to colleagues or other PAs.

**TABLE 10 – ACTION 2.8 OVERALL PERCEIVED UTILITY SCORE CALCULATION**

NAME OF THE SCORE	ORIGINAL VALUE	VALUE AFTER REDUCING TO A FIVE POINT SCALE
Usefulness Score	6.41	4.61
Value Score	4.38	4.38
User Satisfaction Score	88.63	4.55
Net Promoter Score	53	4.06
<b>OVERALL PERCEIVED UTILITY SCORE</b>		<b>4.40</b>

The survey results present that on a 5-point scale the Usefulness Score (**4.61**) has the highest score, which indicates that the strongest aspect of the action is its Usefulness. The User Satisfaction Score (**4.55**) and the Value Score (**4.38**) both have a high score as well, indicating that the respondents are satisfied with the MT@EC service, its web interface and technical documentation for the web service. The Net Promoter Score

has the lowest score (**4.06**), yet it is positive in general, indicating that a majority of respondents would recommend these Action 2.8 outputs to colleagues or other PAs.

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

Four colours are used to identify Perceived Quality dimensions in Figure 11:

- Dark blue: Usability;
- Red: Trust (Privacy);
- Brown: Performance;
- Purple: Support.

Two colours are used to identify Perceived Utility dimensions in Figure 12:

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

As seen in Figure 11, all of the statements are evaluated as essential to the respondents and relevant to the action - all of them are placed in the 1<sup>st</sup> quadrant and are identified as strengths of the MT@EC service, its web interface and technical documentation for the web service.

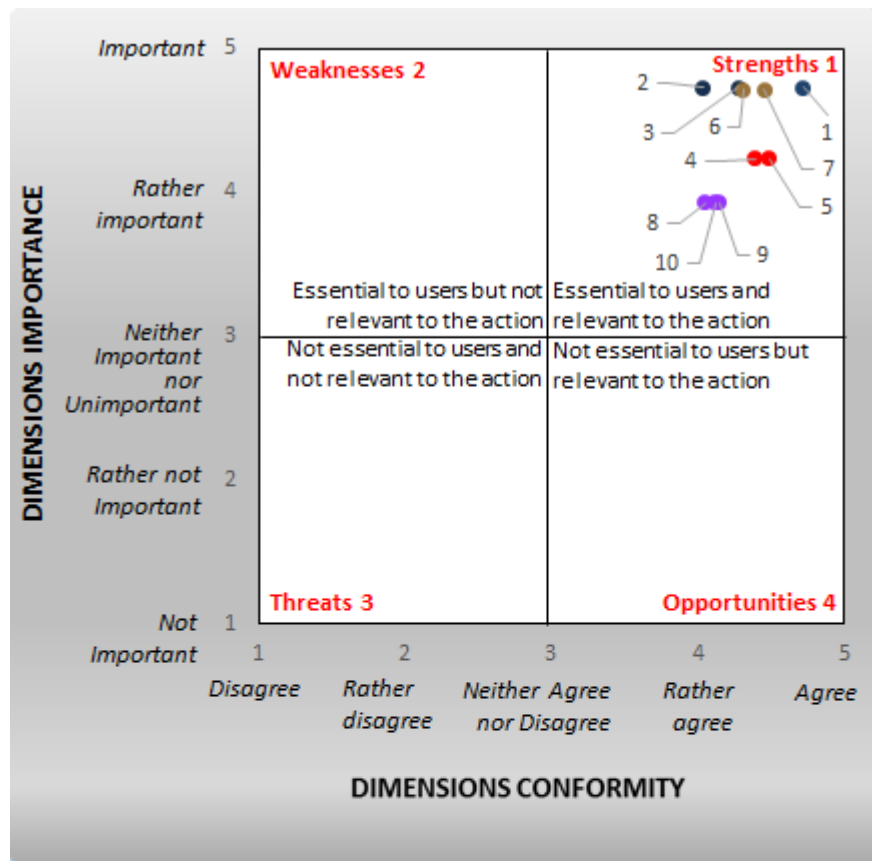
When comparing different statements, it is evident that the following two statements have the highest evaluation (the most relevant to the action and important to the respondents):

- *'The structure of the web interface provided is clear and easy to use'* (statement 1) and
- *'The MT@EC application performs the service successfully upon the first request'* (statement 7).

The following two statements have a high conformability to the action, though they are less important to the respondents:

- 'Data provided in this service is used only for the reason submitted' (statement 5) and
- 'Data provided by users in this service is treated securely' (statement 4).

**FIGURE 11 – ACTION 2.8 PERCEIVED QUALITY ACTION STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS**



**I. Efficiency:**

- 1 - The structure of the web interface provided is clear and easy to use
- 2 - The structure of the technical documentation provided for the web service is effective
- 3 - The services are well customized to individual users' needs

**II. Trust (Privacy):**

- 4 - Data provided by users in this service is treated securely
- 5 - Data provided in this service is used only for the reason submitted

**III. Reliability:**

- 6 - The service is available and accessible whenever it is needed
- 7 - The MT@EC application performs the service successfully upon the first request

**IV. Support:**

- 8 - The support team showed a sincere interest in solving users' problems
- 9 - The support team provided prompt replies to users' inquiries
- 10 - The support team has the knowledge to answer users' questions



As seen in Figure 12, all six statements are evaluated as essential to the respondents and relevant to the action - all of them are placed in the 1<sup>st</sup> quadrant and are identified as strengths of the documentation and web interface/service of MT@EC.

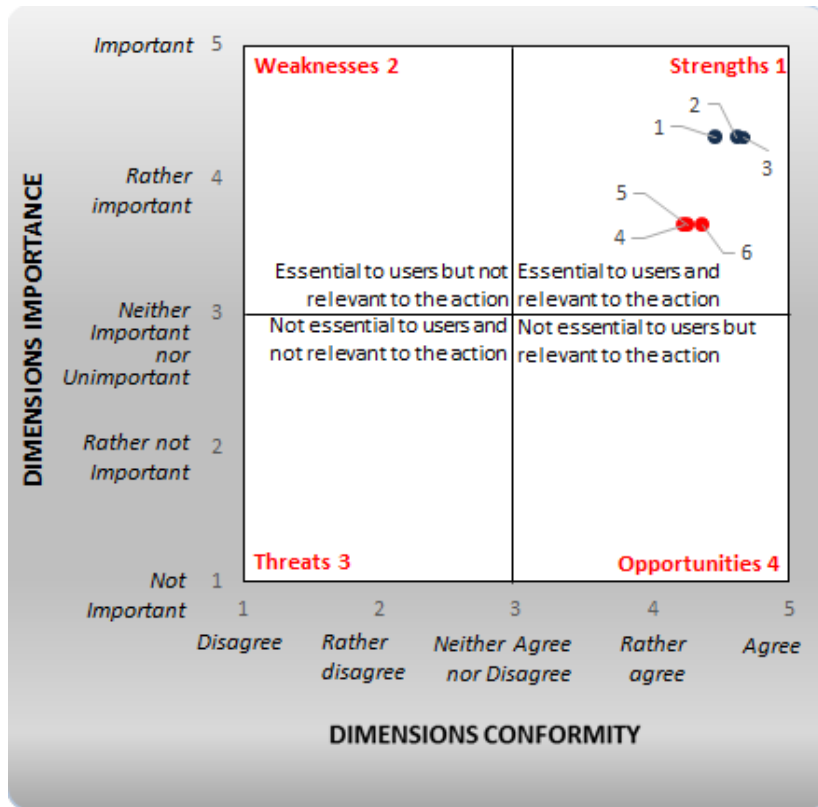
When comparing different statements, it is evident that the following two statements are the action's most important strengths (the most relevant to the action and important to the respondents):

- *'The service is planned to be used in future' (statement 3);*
- *'Overall, the action activities help save time' (statement 2).*

The respondents have evaluated the Collaboration statements as slightly less important (but not irrelevant, because the average score is higher than 3):

- *'The service supports the implementation of European community policies and activities' (statement 4);*
- *'Overall, the service supports effective electronic cross-border and cross sector interaction' (statement 5) and*
- *'The service helps successfully cooperate with other public administrations/departments' (statement 6).*

FIGURE 12 – ACTION 2.8 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
- 3-The service is planned to be used in future

**II. Collaboration:**

- 4 - The service helps successfully cooperate with other public administrations/departments
- 5 - Overall, the service supports effective electronic cross-border and cross-sector interaction
- 6 - The service 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 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 attitude (answers 'Agree' and 'Rather Agree'). In addition, a neutral opinion (the bars in white) and the 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.

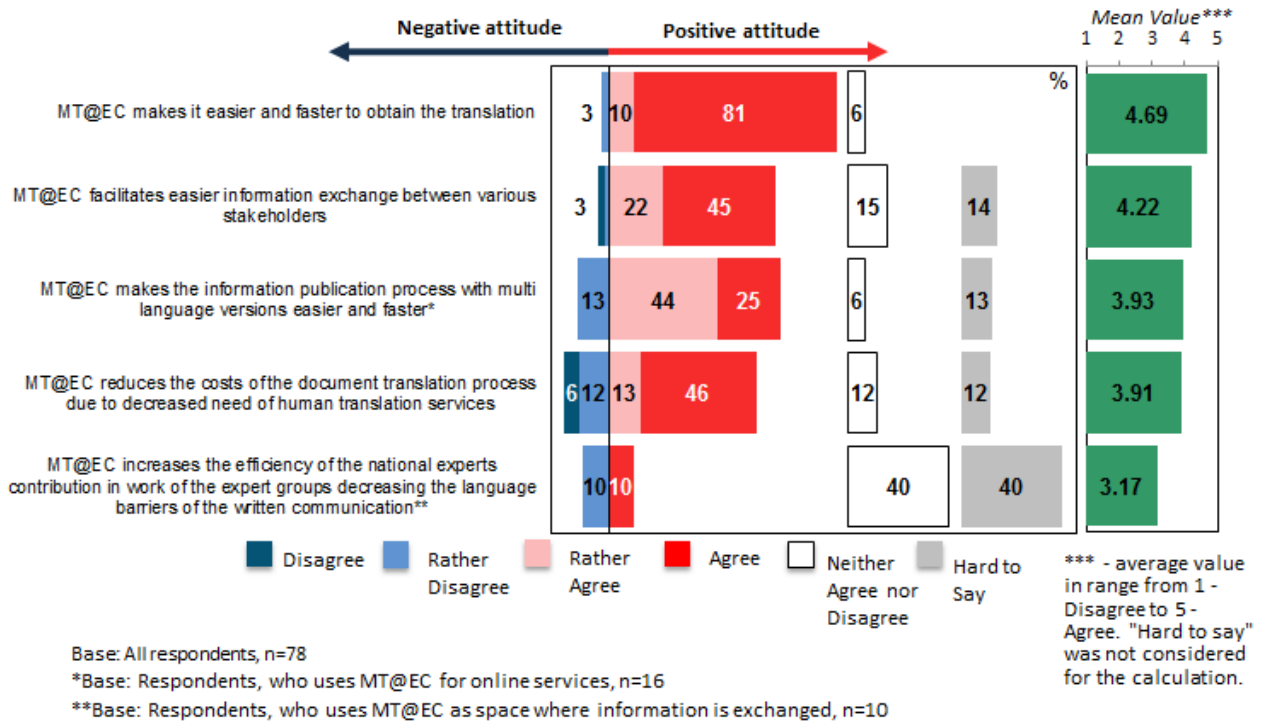


FIGURE 13 – ACTION 2.8 STATEMENTS BASED ON ACTION OBJECTIVES

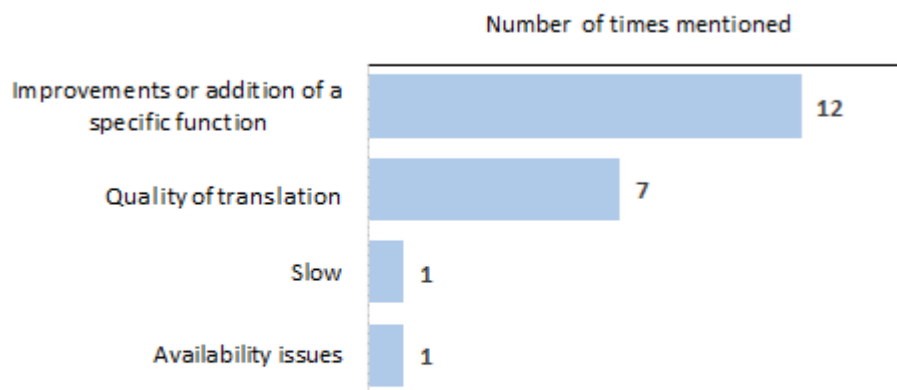
The survey results demonstrate that all of the statements which are based on action objectives have been evaluated as relevant to the action. All of the statements have a higher mean value than the neutral value 3 - 'Neither Agree nor Disagree'. The following two statements have the highest evaluation and conformity to the MT@EC service, its web interface and technical documentation for the web service:

- 'MT@EC makes it easier and faster to obtain the translation' and
- 'MT@EC facilitates easier information exchange between various stakeholders'.

## 5.7 RESPONDENT RECOMMENDATIONS AND OPINIONS

This section provides an overview of the recommendations and opinions received about the MT@EC service, its web interface and technical documentation for the web service.

In total, 15 respondents had recommendations on ways of improving MT@EC. Figure 14 shows provides an overview of the users recommendations.



Base: Respondents who named a recommendation, n=15  
Respondents could name more than one recommendation. This explains why the total amount of responses is higher than the number of respondents who had recommendations.

**FIGURE 14 – ACTION 2.8 RESPONDENT RECOMMENDATIONS ABOUT MT@EC**

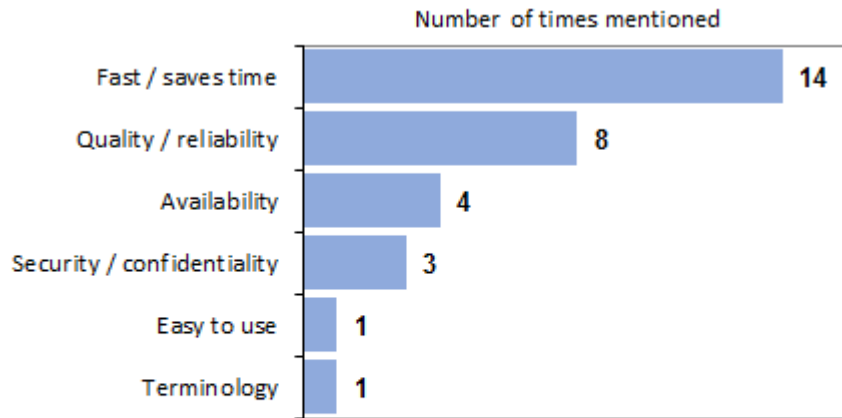
Twelve respondents gave specific recommendations on how to improve the already existing MT@EC functions and/or recommendations about new functions that could help them in their work with MT@EC, for example:

- *“It would be very useful if larger documents could go through, currently the max. size is 5 MB”;*
- *“When translating whole pdf documents it would be useful if one could choose the font size”;*
- *“It might help to have a profile - i.e.; line of work therefore precise vocabulary for specific areas - i.e. legal; transport; agriculture”;*
- *“Keep hyperlinks within translated documents visible and at the same place”;*
- *“In the matrix “Quality indication by language pair”, the column “EN” should fully coloured in “Gold”.*

Seven respondents admitted that the quality of the MT@EC translation, especially from and to a language other than English, needs improvement.

24 respondents named the benefits and the most valuable things about the documentation and web interface/service of MT@EC. Figure 15 provides an overview of the main benefits of MT@EC.

**FIGURE 15 – ACTION 2.8 BENEFITS OF MT@EC**



Base: Respondents who named benefits, n=24  
Respondents could name more than one benefit. This explains why the total number of responses is higher than the number of respondents, who named benefits of MT@EC.

14 respondents think that MT@EC is fast and that using it helps save time. Eight respondents said that the quality of the translation is the main benefit of MT@EC.

A full list of recommendations, named benefits and most valuable things are available in the section 7.2.

## 6 SURVEY CONCLUSION AND RECOMMENDATIONS

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The objective of the survey was to evaluate the Perceived Quality and the Perceived Utility of Action 2.8 – Machine Translation Service by the European Commission (MT@EC). The respondents were asked to evaluate the MT@EC service, its web interface and technical documentation for the web service. The following conclusions have been drawn based on the analysis performed:

- The ISA Action 2.8 – Machine Translation Service by the European Commission (MT@EC) received a **high Perceived Quality and Perceived Utility assessment with an Overall Perceived Quality Score of – 4.27 out of 5 and Overall Utility Score of – 4.40 out of 5**. The high Overall Perceived Quality and Perceived Utility Scores and the high values of the individual parameters indicate that, in overall, the respondents consider the MT@EC service, its web interface and technical documentation for the web service as useful and that they are satisfied with them.
- The results identify that the MT@EC service, its web interface and technical documentation for the web service are perceived as more beneficial in terms of Trust (Privacy), Usability and Performance than in Support.
- Almost all of the respondents (97%) think that, in overall, the MT@EC service, its web interface and technical documentation for the web service are useful in their work.
- The majority of the respondents (68% from the Perceived Utility and 58% from the Perceived Quality point of view) are loyal users who will keep using MT@EC and would recommend it to colleagues or other PAs.
- Respondents think that the main benefits or the most valuable aspects of the MT@EC are that it saves time and that it is fast, available and reliable.

While respondents admitted that the translation provided by the MT@EC is one of the key benefits, at the same time there is a need for improvements. Based on the conclusions drawn, CGI-Accenture adduces the following recommendations:

- The addition of new functions or improvements (according to the needs of the respondents) to already existing ones could be of benefit to the action.
- Improvements in the language translation and grammatical forms are necessary, to increase the usage of MT@EC.
- There is room for improving the quality of service provided by the support team, as the Support dimension had the lowest conformity, although the absolute results was still judged positively;

## 7 APPENDIX

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### 7.1 RAW DATA EXPORT

The attached file contains the survey result export.



Raw Data.xls

### 7.2 RECOMMENDATIONS AND COMMENTS

The attached file contains the respondent recommendation and comment export.



Recommendations  
and benefits.xls



- 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<sup>11</sup> (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<sup>11</sup> for each case and divide that sum by the total number of cases;
- Mode<sup>11</sup> 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<sup>11</sup> 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<sup>1111</sup> 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;

## 7.3 GLOSSARY