INTEROPERABILITY SOLUTIONS FOR EUROPEAN PUBLIC ADMINISTRATIONS MONITORING AND EVALUATION

D03.04 PERCEIVED UTILITY MONITORING REPORT

ISA ACTION 2.14 ASSESSMENT OF TRANS-EUROPEAN SYSTEMS SUPPORTING EU POLICIES

Framework Contract n° DI/07173-00

16 August 2016

DISCLAIMER

EXECUTIVE SUMMARY

The purpose of this section is to provide an overview of the key findings of the Perceived Utility monitoring of **the ISA Action 2.14 – Assessment of trans-European systems supporting EU policies, particularly the European Union (EU) Cartography.** The objective of the survey is to measure the action's 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[1] and the actions' specific objectives.

The survey of the Action 2.14 included the evaluation of the Trans-European Systems (TES) Cartography. The survey was designed in the EUSurvey tool and distributed by e-mail to two contacts. As the TES Cartography is not finished yet, the evaluation of it could only be done by two people who had access to the test version. The data collection lasted for more than one month[2], but only one stakeholder responded.

Table 1 gives an overview of the main results of the survey. The detailed score calculation process is described in section 5.2.4.

TABLE 1 – ACTION 2.14 PERCEIVED UTILITY SURVEY MAIN RESULTS

	Score	Explanation of the score scale
Usefulness Score	5.00	Value on a scale from 1 (Not useful at All) to 7 (Very Useful).
Value Score	3.38	Average value of all the statement means in the range from 1 (Disagree) to 5 (Agree).
User Satisfaction Score	64.11	User Satisfaction Score from 0 (none of the respondents are satisfied) to 100 (all respondents are satisfied with the work performed by the Action). However, in this particular case when only one respondent provided their evaluation, this score shows how satisfied this person is with the performance of the TES Cartography.
OVERALL PERCEIVED UTILITY SCORE	**3.50**	**The Overall Perceived Utility Score is the average value of the Usefulness Score, the Value Score and the User Satisfaction Score reduced to a five point scale ranging from 1 – the lowest score to 5 – the highest score.**

It is important to take into account that only one respondent participated in the survey. This means that the results of this survey only represent the opinion of this unique respondent and cannot be used as a statistically meaningful assessment of the entire action.

Main findings:

- The respondent evaluated the usefulness as the most positive aspect of the TES Cartography.
- The TES Cartography is **more beneficial in terms of Potential Re-Usability than in Sustainability and Collaboration**.

[1] Papadomichelaki, X. and Mentzas, G. (2012), "e-GovQual: A multiple-item scale for assessing e-government service quality"
[2] The survey was launched on the 3rd of February 2016 and was active until the 18th of March 2016.

- The main benefit of the TES Cartography is the ability to detect re-usable building blocks.
- Enhancing the usability of the query tool would improve the user experience of the TES Cartography.

REVISION HISTORY

Date	Version	Description	Authors	Approved by
03/06/2016	0.10	Initial version	CGI - Accenture	
13/06/2016	1.00	Final version	CGI - Accenture	.
16/08/2016	2.00			Approved by HVA on 29/07/2016

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1 INTRODUCTION

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

Based on the scope of the Specific Contract, the Perceived Quality is to be measured for 15 actions and the Perceived Utility is to be measured for 17 actions. This report covers the Perceived Utility measurement for the Action 2.14 – Assessment of trans-European systems supporting EU policies.

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

2 ACTION 2.14 – ASSESSMENT OF TRANS-EUROPEAN SYSTEMS SUPPORTING EU POLICIES

The European Commission is currently implementing an overall strategy to rationalise and streamline the IT systems it develops, maintains and operates. A similar process is also on-going in Member States at their national and regional levels.

The aim of this rationalisation is to avoid duplication and promote common, reusable and flexible solutions.

Rationalising the number of information systems supporting EU policies will result in a reduction of costs in terms of development, maintenance, implementation, operation and training at the European and national levels. At the same time, the use of a reduced set of solutions, methods, processes and tools will simplify cooperation between EU-wide administrations.

This action targets systems that support EU policies and exchanges between European Public Administrations (PAs) at the European and national levels. It also covers those systems managed by the European Commission allowing for exchanges between Member States.

A study will define the assessment criteria for the rationalisation, describe the building blocks, deliver an analysis based on these criteria and propose a list of rationalisation opportunities.

It will also provide a map which will be the basis for a strategic plan to boost the reuse and sharing maturity of the EU systems. At the same time, it will provide input to the EU cartography which will be built in the context of the “European Interoperability Architecture” (EIA) Action.

The study will deliver the basis for rationalisation decisions. The rationalisation decisions themselves will be the responsibility of the Commission or other relevant bodies' policy entities.

Objectives of the Action:

1. Provide recommendations to the IT governance bodies of the European Commission in the Trans-European Solutions domain. This includes the identification of:
    - Potential re-usable services and building blocks;
    - Potential duplications (systems covering identical or similar processes) and overlapping functionalities within a domain or cross domain.
2. Identify reusable and interoperable solutions and put those into the EIC:
    - Provide and update data to the Cartography tool which maps the information collected from TES to the Building Blocks of EIRA;
    - IES identified in objective 3 are also part of objective 2.
3. Pilot the use of the TESCart in Member States and agencies and the creation of their cartographies:

- Define use cases for the TESCart (in the perspective of its use at national level);
- Educate, support, coach and provide assistance to EU representatives and MSs using Joinup Cartography services and/or the CarTool PoC;
- Gather feedback from selected Member States on the Joinup Cartography Services, CarTool PoC and TESCart;
- Identify and capture information at least 30 national/agency IES and support the creation of their cartographies.

Benefits of the Action:

- Streamlined interface/integration with existing EU IT systems;
- Use of similar IT systems (to those used in other Member States);
- Reduced training efforts as fewer IT tools are used;
- Less time needed to obtain IT tools for new areas;
- Reduced IT development and maintenance costs;
- Reduced training, helpdesk and awareness raising costs;
- Less time needed to deliver IT solutions for new areas;
- Reduced administrative burden and increased efficiency;
- Improved and accelerated services delivered by public authorities.

3 SURVEY METHODOLOGY

A common methodology was developed by the CGI-Accenture team for all surveys included in the Perceived Quality and Perceived Utility Monitoring and Evaluation scope. The common methodology enables a comparison between the different action results. The first 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 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[3] 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 in three dimensions which are defined as criteria for measuring 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[4];
- **Collaboration:** The degree to which the action promotes/facilitates collaboration/cooperation between PA's[5].

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"[6] and actions' specific objectives. The Perceived Utility statements were tailored to reflect these objectives and were based on the ESOMAR[7] (World Association of Opinion and Marketing Research Professionals) standards.

The developed Perceived Utility dimensions will allow 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).

[3] Papadomichelaki, X. and Mentzas, G. (2012), "e-GovQual: A multiple-item scale for assessing e-government service quality"
[4] European Commission (2013), Interim evaluation of the ISA programme, "Report from the Commission to the European Parliament and Council COM (2013) 5 final".
[5] CRN (2015), Collaboration http://research.crn.com/technology/knowledge_management/collaboration
[6] 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)
[7] ESOMAR, edited by Hamersveld. M., Bont C. (2007), Market Research, Handbook, 5th Edition

3.2 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 Utility. The survey measurements are divided into two groups: action level measurement and Perceived Utility level measurements.

Action level measurement:

- The Usefulness Score indicates the respondents' evaluation of how useful the action is. The Usefulness Value Score is calculated taking into account a mean value from a single question: *"Overall, how useful is/would be the TES Cartography to your work?"*
- Action strengths, weaknesses, opportunities and threats: Statements are located in quadrants, based on the dimensions' conformity and dimensions' importance calculated mean values. The quadrants highlight the weak and strong aspects of the action, as well as threats and opportunities.
- Statements based on action objectives shows the respondents' evaluation to what extend the action's objectives have been achieved.

Perceived Utility level measurements:

- The Value Score shows the action's compliance to the dimensions defined above (see section 3.1). Two aspects are considered for each dimension. On one side, the importance of the dimension to the users is assessed. On the other side we measure if the action is compliant with the dimension. This section includes the analysis of specific statements, statement mapping to dimensions, dimensions conformity results, criterion score aggregation and strengths and weaknesses of the action.
- The User Satisfaction Score shows how satisfied the respondents are with the action. The User Satisfaction Score is assessed with the reference to the results of the dimension importance and conformity evaluation. The User Satisfaction Score is measured at the individual level for each of the survey respondents via the identification of the important dimensions for that particular respondent.
- The Net Promoter Score® (NPS) is a widely used management tool that helps evaluate the loyalty of a customer relationship. In order to evaluate the NPS, the question *"how likely the respondent would recommend the particular action's output to others"* is asked.
- The Overall Score is used to get a single score that describes the overall Perceived Utility of the action. In order to determine the Overall Score, the average value of the Usefulness Score, the Value Score and the User Satisfaction Score is calculated. To calculate the Overall Score, all measurements are reduced to a five point scale.

3.3 SURVEY ARCHITECTURE

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

- The demographic profile and the future usage of the action's outputs: for the purpose of identifying the respondents and their opinions about using the TES Cartography in the future.
- 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 scale[8].
- The Perceived Utility Measurement: in order to measure the Perceived Utility, the respondents are asked to rate dimensions and statements based on their level of importance and agreement. A 5-point Likert scale[8] is used as a grading scale. Responses to these questions are used to determine the Value Score, action strengths and weaknesses and the User Satisfaction Score.
- The Net Promoter Score: there is a single question that measures the Net Promoter Score. By answering this question, the respondents indicate their likelihood of recommending the action's outputs to colleagues or other public administrations.
- Action strengths, weaknesses, opportunities and threats shows the location of the action statements based on dimension conformity and importance results.
- Statements based on action objectives: in order to evaluate the extent to which these statements conform to the particular action, the respondents are asked to grade statements based on their level of agreement. A 5-point Likert scale[8] is used as a grading scale.
- The recommendations: the last section includes three open questions for recommendations and opinions regarding the action and the survey.

[8] 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 2 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. As the TES Cartography is not finished yet, the evaluation of it could only be done by two individuals who had access to the test version of the TES Cartography, yet only one of them participated in the survey.

TABLE 2 – ACTION 2.14 SURVEY TECHNICAL INFORMATION ABOUT THE FIELDWORK

Start date:	03/02/2016
End date:	18/03/2016
The survey launch method:	E-mail notification
Reminders:	E-mail reminders sent out on 10/02/2016, 22/02/2016, 29/02/2016, 7/03/2016 and 14/03/2016
Target population:	2
Total number of respondents:	1
Number of suitable respondents for the survey:	1

5 SURVEY RESULTS AND ANALYSIS

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

5.1 RESPONDENT DEMOGRAPHIC PROFILE AND THE FUTURE USAGE OF THE TES CARTOGRAPHY

This section provides demographical information about the respondent who participated in the survey, as well as an evaluation of their intention to use the TES Cartography in the future.

The only respondent who participated in the survey is an ISA Programme Manager working with EU policies. The respondent is from Belgium, respondent works at the Management level in the EU institution.

The respondent admitted that it is hard to say if he will use the TES Cartography in the future.

5.2 USEFULNESS SCORE

The Usefulness Score is calculated taking into account a single question: *"Overall, how useful is/would be the TES Cartography to your work?"*

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

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

The survey results show that the respondent evaluated the potential usefulness of the TES Cartography as value 5 – 'Rather Useful'.

5.2.1 Value Score

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

5.2.1.1 DIMENSIONS IMPORTANCE

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

Three Utility dimensions (Sustainability, Potential Re-usability and Collaboration) are evaluated in the survey. This section describes the respondent's answers regarding the importance of the dimensions.

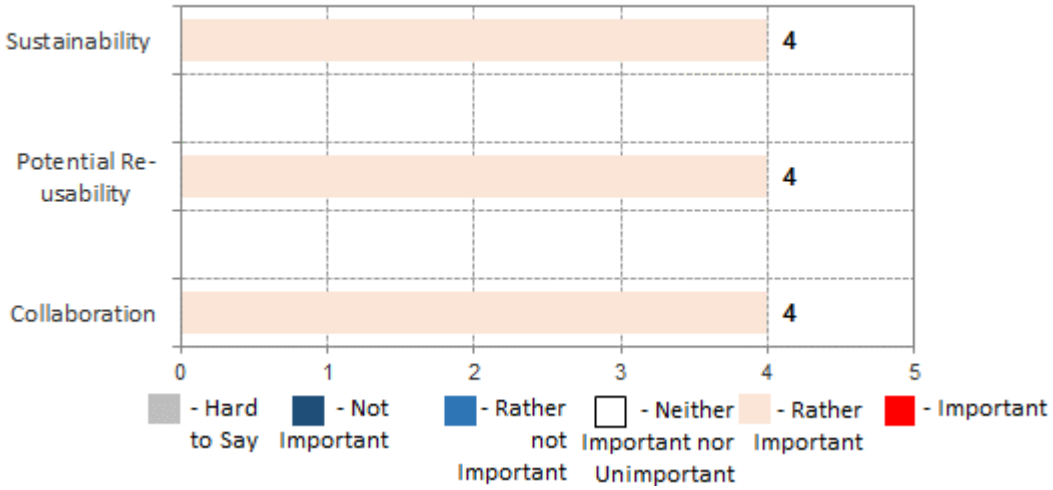
The respondent is requested to provide his/her opinion using the 5-point Likert grading scale. For the dimension importance evaluation, a grading scale with values ranging from 'Important' to 'Not important' is used. An additional 'Hard to Say/Not Applicable' option is provided, however this score is excluded from the

score calculations. Before performing the survey data calculations, the 5-point Likert scale values are interpreted as numeric values:

- 5 – 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).*

FIGURE 1 – ACTION 2.14 PERCEIVED UTILITY DIMENSIONS IMPORTANCE RESULTS

"How important to you are/would be these factors when using the TES Cartography?"



The survey results indicate that the respondent evaluated all of the Perceived Utility dimensions as rather important to the TES Cartography.

5.2.1.2 DIMENSIONS CONFORMITY

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

The following section starts with the statement mapping to the dimensions and an analysis of the dimension conformity statements. The next section provides an overview of the statement conformity scores, which are summarised in groups according to the dimensions.

5.2.1.2.1 Statement Mapping to Dimensions

In total, TES Cartography has eight Perceived Utility statements regarding the dimensions' conformity. Table 3 gives an overview of the statements representing each dimension. The Collaboration and the Sustainability dimensions are represented by three statements each, while the Potential Re-usability dimension is represented by two statements.

TABLE 3 – ACTION 2.14 STATEMENT MAPPING TO DIMENSIONS

	Perceived Utility Statements	Dimension
1	Overall, the TES Cartography helps save costs	Potential Re-usability
2	Overall, the TES Cartography helps save time	Potential Re-usability
3	You plan to use the TES Cartography in the future	Sustainability
4	The TES Cartography provides sustainable solutions that will also be relevant in the future	Sustainability
5	Overall, the TES Cartography supports the effective reuse of tools/services/documentation	Sustainability
6	The TES Cartography enables the successful cooperation with other public administrations/departments	Collaboration
7	Overall, the TES Cartography supports an effective electronic cross-border and cross-sector interaction	Collaboration
8	The TES Cartography supports the implementation of European community policies and activities	Collaboration

5.2.1.2.2 Dimensions Conformity Results

For the purpose of describing dimensions' conformity to the action, eight Perceived Utility statements are designed for this survey. The respondent is asked to evaluate the extent to which these statements conform to the particular action.

The respondent is requested to provide his/her opinion using the 5-point Likert grading scale. For the dimension conformity evaluation, a grading scale with values ranging from 'Agree' to 'Disagree' is applied. An additional 'Hard to Say/Not Applicable' option is provided, however this score is excluded from the score calculations. Before performing the survey data calculations, the 5-point Likert grading 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 a visual overview of the respondent's answers different colours are used for positive and negative evaluations. The colour pink represents a positive evaluation, while blue represents a negative one. The bar is white if the respondent had a neutral opinion.

FIGURE 2 – ACTION 2.14 UTILITY DIMENSIONS CONFORMITY RESULTS

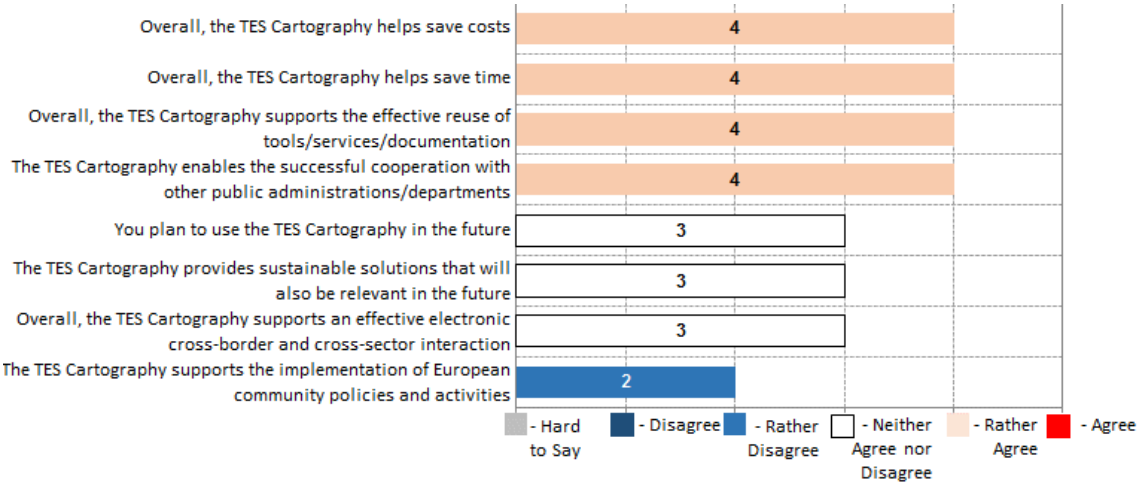


Figure 2 shows that the respondent evaluated four out of seven statements as relevant to TES Cartography, the only statement that received an evaluation below the average value of 3 is:

- "*The TES Cartography supports the implementation of European community policies and activities" (statement 8).*

Table 4 provides an overview of the statement conformity scores, which are summarised per dimension. To calculate these scores, the average values of all the conformable dimension statements are taken into account.

With reference to the theory used in business research methods[9], it is concluded that for statistically meaningful calculations of mode, standard deviation and standard error, the minimum respondent number must be equal to or greater than ten per statement, which is why the additional statistical calculations (mode, StDev, SrErr) was not performed.

TABLE 4 – ACTION 2.14 AVERAGE RATING PER PERCEIVED UTILITY DIMENSION

	Dimension	MEAN
Per dimension	Potential Re-usability	4.00
	Sustainability	3.33
	Collaboration	3.00
Total Criterion Score		**3.44**

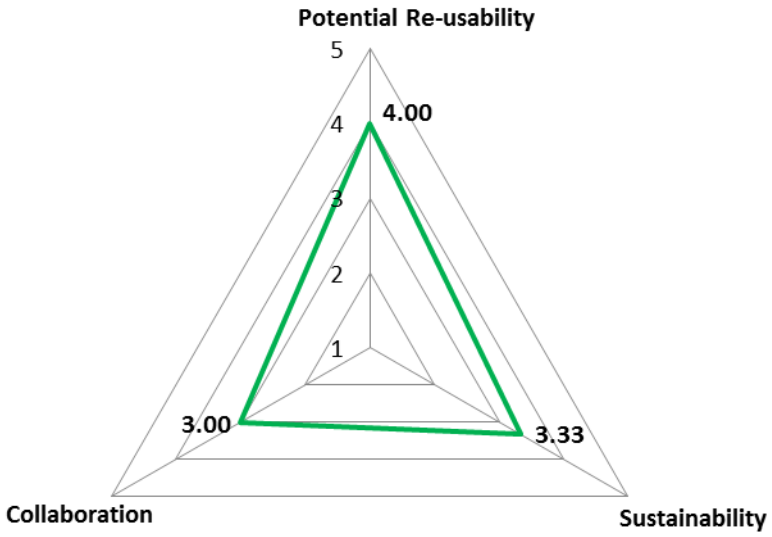
[9] Cooper D. R., Schindler P. S. (2013), Business Research Methods, 12th Edition

The survey results show that the respondent evaluated the Potential Re-usability statements as the most relevant to the TES Cartography (4.00). The Sustainability **(3.33)** and the Collaboration statements (**3.00**) follow then.

5.2.1.2.3 Perceived Utility Criterion Score Aggregation

Figure 3 provides a visual overview of the dimensions' conformity scores.

FIGURE 3 – ACTION 2.14 PERCEIVED UTILITY CRITERION SCORE AGGREGATION



5.2.2 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 conformity evaluation. The User Satisfaction Score is measured at the individual level for each of the survey respondents via identification of the important dimensions for that particular respondent.

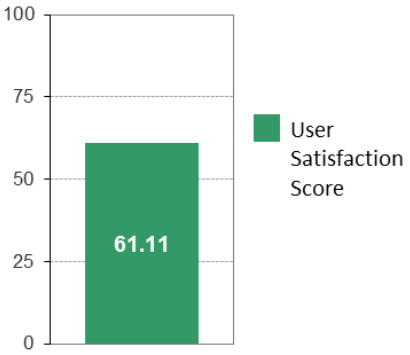
To increase the accuracy of the calculation, a specific weight coefficient is applied to the dimensions. To those dimensions which respondents evaluated as "Important" a weight coefficient of 1 is applied, while a

coefficient of 0.5 is applied to the dimensions which respondents evaluated as "Rather Important". A coefficient of 0 is applied to all the other dimensions. Finally, all the individual values are summed.

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

FIGURE 4 – ACTION 2.14 PERCEIVED UTILITY USER SATISFACTION SCORE

Figure 4 shows that the **Perceived Utility User Satisfaction Score from the one survey respondent is 61.11**. Usually the User Satisfaction Score shows how satisfied users in total are with the performance of the Action, however, in this particular case when only one respondent gave his evaluation, this score shows how satisfied this person is with the performance of the TES Cartography.



5.2.3 Net Promoter Score

The Net Promoter Score® (NPS) is a widely used management tool that helps evaluate the loyalty of a customer relationship[10]. 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 answer *"Not likely at all"* and 10 – *"Extremely likely"*[11]. 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;

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

- **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[11]

The result can range from a low of -100 (every customer is a Detractor) to a high of +100 (every customer is a Promoter). However, due to fact that only one respondent participated in this survey, the calculation of Net Promoter Score could not be done, but the respondent can be classified into a group according to the Net Promoter Score classification.

The respondent evaluated the possibility that they would recommend the TES Cartography to colleagues or other public administrations with a value of 7, meaning that according to the Net Promoter Score classification the respondent is a passive user.

5.2.4 Overall Score

Referring to the performed measurements described earlier, namely, the Value Score, the User Satisfaction Score and the Usefulness Score 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 and the User Satisfaction Score - from 0 to 100). In order to determine the Overall Perceived Utility score, the average value of these three measurements is calculated. To reduce any linear scale to a different linear scale the following formula[12] 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 User Satisfaction Score it is + 100, for Usefulness Score it is 7)

[12] *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 original scale (for the User Satisfaction Score it is 0 and for the Usefulness Score it is 1)

Example of reducing Usefulness Score to a five point scale:

*(5-1) * (5 - 1)) / (7 - 1) + 1 = 4 * 4 / 6 + 1 = 16 / 6 + 1 = 2.67 + 1 = 3.67*

TABLE 5 – ACTION 2.14 OVERALL PERCEIVED UTILITY SCORE CALCULATION

NAME OF THE SCORE	ORIGINAL VALUE	VALUE AFTER REDUCING TO A FIVE POINT SCALE
Usefulness Score	5.00	3.67
Value Score	3.38	3.38
User Satisfaction Score	61.11	3.44
OVERALL UTILITY SCORE		**3.50**

The survey results show that on a 5-point scale, **the Usefulness Score has the highest score (3.67), meaning that the usefulness of the TES Cartography to the respondent is the biggest benefit**. The User Satisfaction Score is the second highest with a score of **3.44**. The Value score has the lowest evaluation – **3.38**, yet it is still higher than the average value – 3.

5.3 Action Strengths, Weaknesses, Threats and Opportunities

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 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:

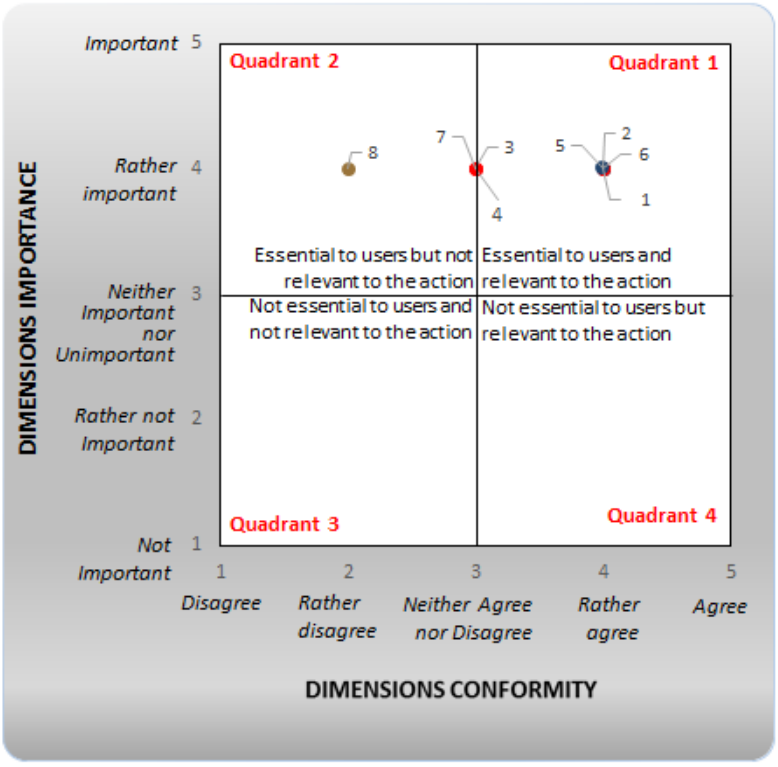
- Strengths – Essential to respondents and relevant to the action (1st quadrant);
- Weaknesses – Essential to respondents but not relevant to the action (2nd quadrant);
- Threats – Not essential to respondents and not relevant to the action (3rd quadrant);
- Opportunities – Not essential to respondents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

Three colours are used to identify Perceived Utility dimensions:

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

As seen in Figure 5, four Perceived Utility statements are evaluated as essential to the respondent and relevant to the TES Cartography - all of them are located in the 1st quadrant and are identified as strengths of the TES Cartography. One statement, according to the respondent, is identified as a weakness of the TES Cartography. In Figure 5 it is seen that different statements have the same value, thus there are only three points visible in the graph.

FIGURE 5 – ACTION 2.14 STRENGHTS, WEAKNESSES, OPPORTUNITIES AND THREATS



I. Potential Re-usability:

1 - Overall, the TES Cartography helps save costs

2 - Overall, the TES Cartography helps save time

II. Sustainability:

3 - You plan to use the TES Cartography in the future

4 - The TES Cartography provides sustainable solutions that will also be relevant in the future

5 - Overall, the TES Cartography supports the effective reuse of tools/services/documentation

III. Collaboration:

6 - The TES Cartography enables the successful cooperation with other public administrations/departments

7 - Overall, the TES Cartography supports an effective electronic cross-border and cross-sector interaction

8 - The TES Cartography supports the implementation of European community policies and activities

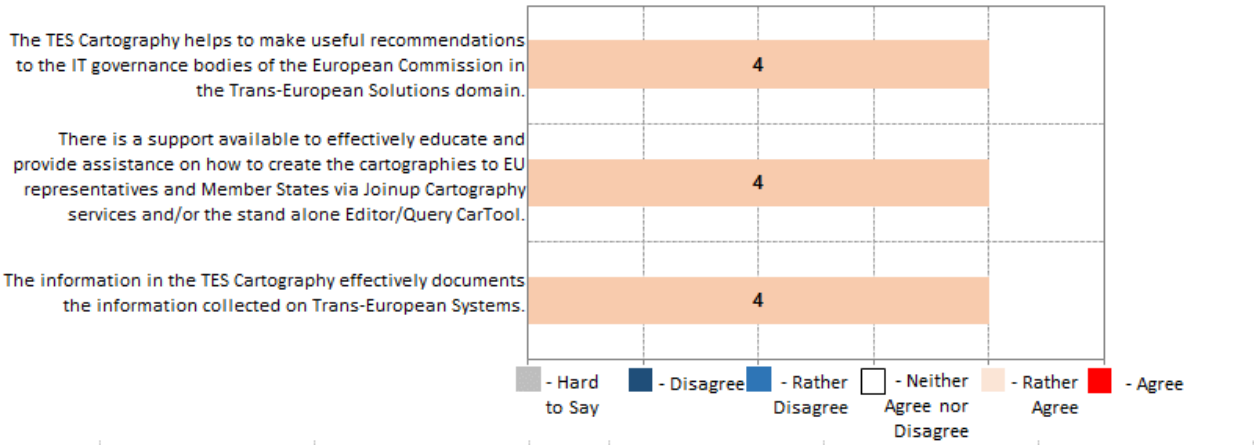
5.4 Statements Based on Action Objectives

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

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

FIGURE 6 – ACTION 2.14 STATEMENTS BASED ON ACTION OBJECTIVES



The survey results demonstrate that all of the specific statements (statements which describe the action's objectives) have been evaluated as relevant to the TES Cartography. Each statement was evaluated with a value 4 – 'Rather Agree'.

5.5 Respondent Recommendations and Opinions

This section provides an overview of the recommendations and main benefits received regarding the TES Cartography. The one respondent who participated in this survey thinks that the main benefit of the TES Cartography is:

- *"Detecting re-usable building blocks".*

The respondent also gave a recommendation on how to improve the TES Cartography:

- *"More user friendly query tool".*

6 SURVEY CONCLUSION AND RECOMMENDATIONS

The objective of this survey was to evaluate the Perceived Utility of Action 2.14 – Assessment of trans-European systems supporting EU policies – TES Cartography. It is important to take into account that the TES Cartography is not finished yet, so the evaluation of it could only be done by two individuals who had access to the test version. Only one participated in the survey. This means that the results of this survey only represent the opinion of this unique respondent and cannot be used as a statistically meaningful assessment of the entire action.

- The ISA Action 2.14 – TES Cartography received a **rather positive overall Perceived Utility assessment of - 3.50 out of 5.** The respondent evaluated the usefulness as the most positive aspect of the TES Cartography.
- Regarding the Perceived Utility, the results show that the respondent thinks that the TES Cartography is **more beneficial in terms of Potential Re-Usability than in Sustainability and Collaboration**.
- The main benefit of the TES Cartography according to the respondent is the ability to detect re-usable building blocks.
- Based on the respondent recommendations: enhancing the usability of the query tool would improve the user experience of the TES Cartography.

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

- Based on the recommendation of the respondent, a more user friendly query tool would benefit the TES Cartography.

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

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

- 'Perceived 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.