INTEROPERABILITY SOLUTIONS FOR EUROPEAN PUBLIC ADMINISTRATIONS MONITORING AND EVALUATION

D03.05 ACTION 2.2 UTILITY MONITORING REPORT

Framework Contract n° DI/07173

31st July 2015

DISCLAIMER

EXECUTIVE SUMMARY

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

The survey for measuring the Utility of Action 2.2 – CAMSS - Common Assessment Method for Standards and Specifications, was launched during the first semester of 2015. The objective of the survey is to evaluate the Utility of Action 2.2 among its users. More specifically, the goal is to understand who is using the method and to identify the benefits which users might gain from using it.

The survey was designed in the EUSurvey tool and distributed by e-mail to 96 respondents. The survey was open from the 23th of March 2015 till the 1st of May 2015. In total, 20 answers were collected.

The survey result analysis (see Table 1) shows the Action 2.2 Utility score. The **Utility score** for Action 2.2 – CAMSS - Common Assessment Method for Standards and Specifications, is **3.58** (scale: 1…5).

The detailed score calculation process is described in section 4.2.3.

TABLE 1 – ACTION 2.2 SURVEY RESULTS

Evaluation criteria	MEAN[1]	MODE[1]	StDev[1]	StErr[1]
Action 2.2 Utility	3.58	4	0.98	0.07

Conclusion: Based on the survey data analysis, CAMSS meets its main objectives. According to the Action 2.2 objectives, CAMSS successfully supports the Member States in terms of running their own assessments by establishing national recommendations of standards and specifications.

However, there is a need for drawing special attention to promote the CAMSS, since, based on the survey results, 50% of the respondents were not aware of CAMSS. More recommendations are provided in section 5.

Attention should be paid to the reliability of the survey results. Only 9 out of 20 respondents were able to rate the Utility of Action 2.2, i.e. a response rate is considered to be low for drawing meaningful statistical conclusions.

[1] see Glossary (section 6.46.4)

REVISION HISTORY

Date	Version	Description	Authors	Approved by
31-July-2015	1.00	For QA purpose, the accepted draft version is changed into the final version. No other changes are implemented.	CGI-Accenture	
21-May-2015	0.20	Draft version updated	CGI-Accenture	
11-May-2015	0.10	Draft version created	CGI-Accenture	

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1. INTRODUCTION

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

Based on the scope of the Specific Contract, the Utility is to be measured for 13 actions. This report covers the Utility measurement for Action 2.2 – CAMSS - Common Assessment Method for Standards and Specifications.

This document is divided into the following sections:

- **Section 1** provides an overview on the structure of the report;
- **Section 2** provides an overview on the methodology used for the Utility measurement;
- **Section 3** summarises the collected data;
- **Section 4** focuses on the survey result overview and data analysis;
- **Section 5** provides the survey conclusions and recommendations;
- **Section 6** is the appendix and includes:
    - Statement mapping per dimensions;
    - Reasons of not using CAMSS/sharing their assessment(s);
    - Raw data export;
    - Glossary.

2. SURVEY METHODOLOGY

A common methodology has been developed for all surveys. This enables the comparison between the results of the different surveys. This section explains how the Utility is measured and what dimensions are covered under evaluation criterion. The last part of this section describes the architecture of the survey.

2.1. UTILITY

'Utility' is defined as the **extent to which the effects (impact) of an ISA action correspond with the needs, problems and issues to be addressed by the ISA programme[2].**

Utility is measured using an adaptation of the VAST (**V**alue **AS**sessment **T**ool) methodology[3], considering an additional dimension related to the Global and Intermediate objectives of the ISA programme.

The assessment is based on the following dimensions:

- **Value for the European Union:** Looks at the assessment of the external value of an information system or an IT project. External value of a project is considered to be any benefit which is delivered outside the Commission itself. This external aspect is divided into two parts: society (Social Value) and individuals (External Users' Value);
- **Value for the European Commission:** Encompasses criteria through which the internal value of an IT project can be assessed. All factors that can contribute to the improvement of the EC performance should be considered as delivering an internal value;
- **Value for cross-border and cross-sector interoperability:** Covers all aspects of how an information system or IT project can support the efficient and effective cross-border and cross-sector interaction between the European Public Administrations.

The ISA Programme is mainly focusing on the value for the cross border and cross sector interoperability dimension. In this context, the value for EC is considered to have a lower weight than other dimensions. Consequently, less focus is put on this dimension.

2.2. SURVEY ARCHITECTURE

In order to measure the Utility, a respondent is supposed to grade the statements based on his/her level of agreement. A 5-point Likert scale[4] is used as a grading scale, ranging from 'Strongly agree' to 'Strongly disagree' with an additional 'No opinion/ not applicable' option.

For each presented statement the user is able to provide his/her opinion and suggestions for improvement in a free text field, in case he/she rated the statement with 'Disagree' or 'Strongly Disagree'.

As the responses collected are depending on the users' profiles, the user is first requested to provide his/her profile, and afterwards the questions based on the user response are presented.

[2] DG BUDG (2004), "Evaluating EU activities, a practical guide for the Commission services"
[3] More information can be found on: http://ec.europa.eu/dgs/informatics/vast/
[4] A Likert Scale is a widely used scaling method developed by Rensis Likert. Likert scale refers to the use of an ordinal 4- or 5-point rating scale with each point anchored or labeled.

3. ACTION 2.2 SURVEY DATA SUMMARY

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

TABLE 2 – ACTION 2.2 SURVEY DATA SUMMARY

Action 2.2	
Start date:	23/03/2015
End date:	01/05/2015
Sample size:	96
Amount of responses:	20
The survey launching method:	E-mail notification

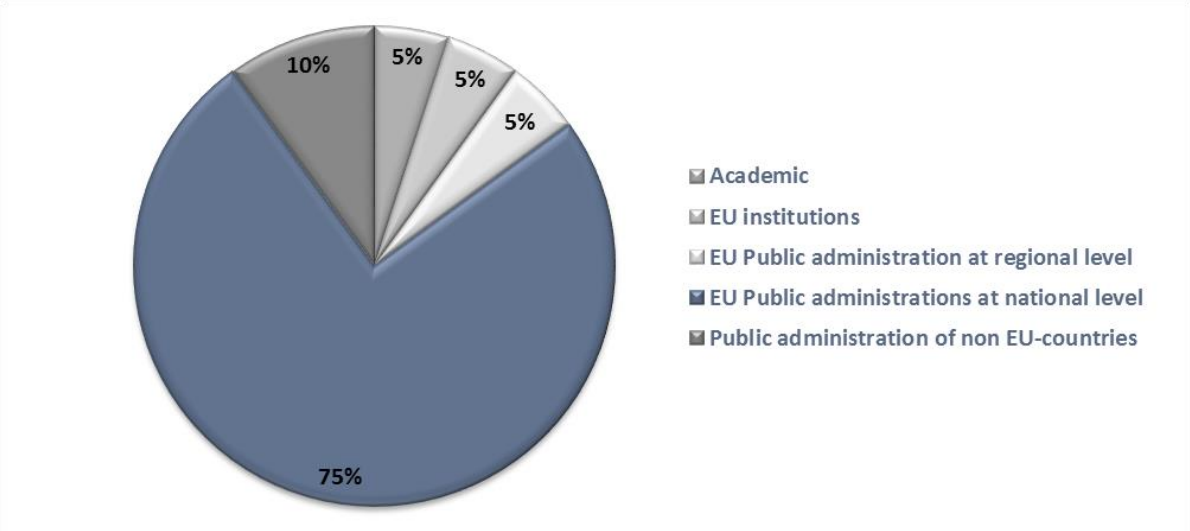
4. ACTION 2.2 SURVEY RESULTS AND ANALYSIS

This section aims at providing a detailed survey analysis and to represent the results depending on the user division within the Action 2.2 Utility evaluation criteria.

4.1. ORGANIZATION LEVEL ANALYSIS

Figure 1 shows the classification of the CAMSS survey respondents, according to the type of organisation they belong to. Most of the CAMSS survey respondents are representatives of the EU Public administration at national level.

FIGURE 1 – RESPONDENT DISTRIBUTION BY ORGANISATION TYPE



Based on the responses received from different countries Figure 2 shows the lists of those countries with the reference to CAMSS, i.e. the countries that searched for the information in the CAMSS community, consulted the 'CAMSS Wiki', downloaded the 'CAMSS tool', used an assessment method in their own organisation or shared assessment in the CAMSS Library.

FIGURE 2 – COUNTRIES THAT USED CAMSS/SHARED ASSESSMENT(S)[5]

MS representative searched for the information in the CAMSS community	Netherlands Spain Denmark UK Germany Belgium
MS representative consulted the 'CAMSS Wiki' or downloaded the 'CAMSS tools'	Netherlands Spain Denmark UK Germany Belgium
MS representative use the Assessment Method for Standards and Specifications in their own organization	Slovakia Switzerland Netherlands UK Denmark Belgium
MS representative shared their assessment(s) in the CAMSS library	Netherlands

4.2. ACTION 2.2 SURVEY RESULT OVERVIEW

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

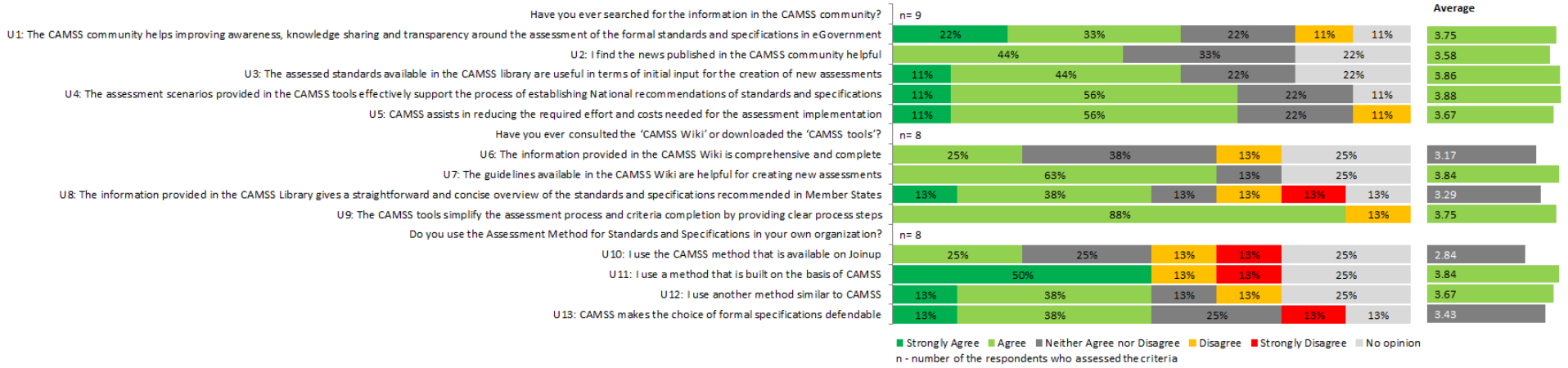
- **Action 2.2 overall survey response** overview shows a complete survey response range collection covered by the Action 2.2 Utility survey;
- **Result analysis according to the evaluation criteria** provides a score calculation by evaluation criteria dimension and the overall evaluation criteria score.

4.2.1.Action 2.2 Overall survey response overview

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

[5] Action 2.2 Project Officer is aware only about two Member States using CAMSS, i.e. UK and Netherlands. This fact might raise an impact on the reliability of the survey results.

FIGURE 3 – OVERALL ACTION 2.2 SURVEY RESPONSE OVERVIEW



4.2.1.1. USER RECOMMENDATIONS

Table 3 gives a detailed overview of the recommendations received for the Action 2.2 Utility.

TABLE 3 – ACTION 2.2 USER RECOMMENDATIONS

Recommendations for an improvement of the current CAMSS	Disseminate information.
	CAMSS is based on input from the MS, but each input needs validation by a team of experts if possible from different MS. A strategic planning with MS for completing the library is missing. Each question should be justified in the comment box for all possible responses yes/no/N/A. Comments need to be cross-checked with National MS lists like SAGA etc. and a team of experts needs to validate it. Only if good, verified information is available, continues maintained, then MS might be inclined to use it.
	Expand towards formalization of the endorsements that can come from an assessment.
	I would like to Merge CAMSS with BoMOS.
	Questions requesting evidence are difficult to answer positively in many instances, because evidence is not available. Several of the questions would benefit from more clarity.
Other recommendations	DG CNECT and DG GROW are in discussion with MS of an European Catalogue, which might be CAMSS or based on CAMSS, but where MS should buy in. A consultant is not adequate to steer such complex and sensitive assessment method.
	Please align closely with the ADMS. Integrate the assessments and endorsements with the Joinup catalogue
	Further alignment/ cooperation between ISA and MSP is acclaimed.
	Would prefer the assessments were available in the browser, rather than in the attachments.

4.2.2.Result overview according to the evaluation criteria

In order to provide unbiased overview on the survey results, this section represents a comparison of the received replies, depending on the user type and evaluation criteria.

Before performing the calculations, the 5-point Likert scale range values need to be interpreted as numeric values, i.e.:

- 5 – Strongly Agree;
- 4 – Agree;
- 3 – Neither Agree nor Disagree;
- 2 – Disagree;
- 1 – Strongly Disagree;
- 0 – No opinion/ not applicable, **that was not considered for calculation**.

4.2.3.Result analysis according to the evaluation criteria

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

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

- The **mean**[6] (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[7] for each case and divide that sum by the total number of cases;
- **Mode** refers to the most frequent, repeated or common value[7] in the quantitative or qualitative data. In some cases it is possible that there are several modes or none.

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

- **Standard deviation**[8] 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**[8] is the standard deviation of the sampling distribution of a statistic. It is a measure of sampling error; it refers to error in estimates due to random fluctuations in samples. It goes down as the number of cases goes up. The smaller the standard error, the better the sample statistic is as an estimate of the population parameter – at least under most conditions.

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

4.2.3.1.Utility of the Action 2.2

Table 4 represents the detailed analysis of each Utility statement.

TABLE 4 – ACTION 2.2 UTILITY SCORE DETAILS ON STATEMENT LEVEL

Statement	MEAN	MODE	StDev	StErr	Dimension
U1: The CAMSS community helps improving awareness, knowledge sharing and transparency around the assessment of the formal standards and specifications in eGovernment	3.75	4	1.04	0.24	Value for cross-border and cross-sector interoperability
U2: I find the news published in the CAMSS community helpful	3.58	4	0.54	0.12	Value for EU; Value for cross-border and cross-sector interoperability

[6] Dictionary of statistics & methodology: a nontechnical guide for the social sciences (page 226).
[7] 5-point Likert scale range values are interpreted as numeric values like described in section 4.2.2.
[8] Dictionary of statistics & methodology: a nontechnical guide for the social sciences (page 375).

Statement	MEAN	MODE	StDev	StErr	Dimension
U3: The assessed standards available in the CAMSS library are useful in terms of initial input for the creation of new assessments	3.86	4	0.70	0.16	Value for EU
U4: The assessment scenarios provided in the CAMSS tools effectively support the process of establishing National recommendations of standards and specifications	3.88	4	0.65	0.15	Value for EU; Value for cross-border and cross-sector interoperability
U5: CAMSS assists in reducing the required effort and costs needed for the assessment implementation	3.67	4	0.87	0.20	Value for EU; Value for cross-border and cross-sector interoperability
U6: The information provided in the CAMSS Wiki is comprehensive and complete	3.17	3	0.76	0.17	Value for EU; Value for cross-border and cross-sector interoperability
U7: The guidelines available in the CAMSS Wiki are helpful for creating new assessments	3.84	4	0.41	0.10	Value for EU; Value for cross-border and cross-sector interoperability
U8: The information provided in the CAMSS Library gives a straightforward and concise overview of the standards and specifications recommended in Member States	3.29	4	1.39	0.31	Value for EU; Value for cross-border and cross-sector interoperability
U9: The CAMSS tools simplify the assessment process and criteria completion by providing clear process steps	3.75	4	0.71	0.16	Value for cross-border and cross-sector interoperability
U10: I use the CAMSS method that is available on Joinup	2.84	3	1.17	0.27	Value for EU; Value for cross-border and cross-sector interoperability
U11: I use a method that is built on the basis of CAMSS	3.84	5	1.84	0.42	Value for EU; Value for cross-border and cross-sector interoperability
U12: I use another method similar to CAMSS	3.67	4	1.04	0.24	Value for cross-border and cross-sector interoperability
U13: CAMSS makes the choice of formal specifications defendable	3.43	4	1.28	0.29	Value for EU; Value for cross-border and cross-sector interoperability

Table 5 gives an overview on the analysis of each Utility dimension, as well as the total score of Utility evaluation criteria.

In order to make the total Utility score calculation more accurate, a weighted mean[9] was used. The dimension weight is defined based on the amount of statements within specific dimension.

Weighted average of the Utility is 3.58 on a scale from 1 to 5, where 5 is the maximum (best) value.

Standard deviation is equal to 0.98, indicating that the users' opinion was spread out over a wide range of values.

TABLE 5 – ACTION 2.2 UTILITY SCORE DETAILS

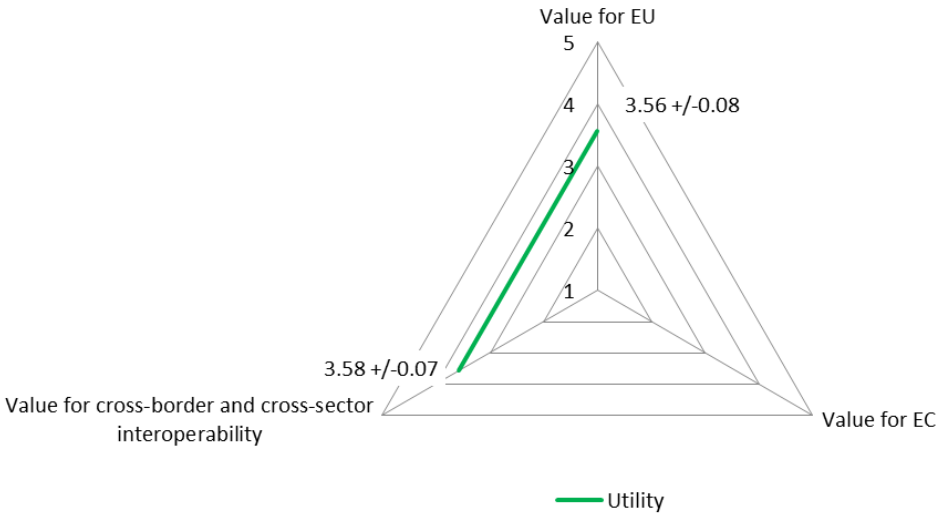
	MEAN	MODE	StDev	StErr	Dimension	Weight
Per dimension	3.56	4	1.01	0.08	Value for EU	0.45
	-	-	-	-	Value for EC	-
	3.58	4	1.00	0.07	Value for cross-border and cross-sector interoperability	0.55

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

Utility	**3.58[9]Error! Bookmark not efined.**	**4**	**0.98**	**0.07**

Figure 4 gives a visual overview on the Utility coverage per dimension.

FIGURE 4 – ACTION 2.2 UTILITY AGGREGATION



4.3. STRENGTHS AND WEAKNESSES OF THE CAMSS

This section aims to give an overview of the strong and weak aspects of CAMSS, revealed by the Action 2.2 Utility survey.

Prioritization of the statements is done based on the mean value of each statement.

For each statement, the following colour has been applied:

- Green colour applied to the statements that refers to the strong aspect of CAMSS (i.e. mean>3.7);
- Grey colour applied to the statement that refers to the aspect that needs attention. For those statements respondent opinion was spread proportionally between 'Agree' and 'Disagree' (i.e. mean between 3.4 and 3.7).
- Orange colour applied to the statements that refer to the weak aspects of CAMSS (i.e. mean<3.4).

4.3.1. Utility of the Action 2.2

Table 6 gives an overview of strong and weak aspects of the Action 2.2 in the context of Utility.

TABLE 6 – ACTION 2.2 UTILITY STRENGTHS AND WEAKNESSES

Utility statement	MEAN	Dimension
U4: The assessment scenarios provided in the CAMSS tools effectively support the process of establishing National recommendations of standards and specifications	3.88	Value for EU; Value for cross-border and cross-sector interoperability
U3: The assessed standards available in the CAMSS library are useful in terms of initial input for the creation of new assessments	3.86	Value for EU
U7: The guidelines available in the CAMSS Wiki are helpful for creating new assessments	3.84	Value for EU; Value for cross-border and cross-sector interoperability
U11: I use a method that is built on the basis of CAMSS	3.84	Value for EU; Value for cross-border and cross-sector interoperability
U1: The CAMSS community helps improving awareness, knowledge sharing and transparency around the assessment of the formal standards and specifications in eGovernment	3.75	Value for cross-border and cross-sector interoperability
U9: The CAMSS tools simplify the assessment process and criteria completion by providing clear process steps	3.75	Value for cross-border and cross-sector interoperability
U5: CAMSS assists in reducing the required effort and costs needed for the assessment implementation	3.67	Value for EU; Value for cross-border and cross-sector interoperability
U12: I use another method similar to CAMSS	3.67	Value for cross-border and cross-sector interoperability
U2: I find the news published in the CAMSS community helpful	3.58	Value for EU; Value for cross-border and cross-sector interoperability
U13: CAMSS makes the choice of formal specifications defendable	3.43	Value for EU; Value for cross-border and cross-sector interoperability
U8: The information provided in the CAMSS Library gives a straightforward and concise overview of the standards and specifications recommended in Member States	3.29	Value for EU; Value for cross-border and cross-sector interoperability
U6: The information provided in the CAMSS Wiki is comprehensive and complete	3.17	Value for EU; Value for cross-border and cross-sector interoperability
U10: I use the CAMSS method that is available on Joinup	2.84	Value for EU; Value for cross-border and cross-sector interoperability

5. CONCLUSIONS AND RECOMMENDATIONS

The objective of the survey was to evaluate the Utility of Action 2.2 – CAMSS - Common Assessment Method for Standards and Specifications. The following conclusions have been drawn based on the analysis performed:

- The most important aspect identified during the survey is that CAMSS is not very well promoted among Member States, as 50% of the survey respondents was not aware of CAMSS;
- Information provided in the CAMSS Library and CAMSS Wiki did not completely satisfy the users' needs. This conclusion based on the low assessment on U6 and U8 statements.

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

- Promotion campaigns should take place in order to raise awareness and introduce CAMSS to a wider audience;
- Documentation available in the CAMSS Library and CAMSS Wiki should be reviewed in order to make it more oriented to the end users.

Attention should be paid to the reliability of the survey results. Only 9 out of 20 respondents were able to rate the Utility of Action 2.2, i.e. a response rate is considered to be low for drawing meaningful statistical conclusions.

6. APPENDIX

6.1. ACTION 2.2 STATEMENT MAPPING TO DIMENSION

In order to measure the Utility of the Action 2.2 and calculate the average score of each dimension, all survey statements were mapped to the dimensions according to the evaluation criteria.

Table 7 shows the statement mapping according to three dimensions of the Action 2.2 Utility.

TABLE 7 – ACTION 2.2 UTILITY STATEMENT MAPPING TO DIMENSION

Question	ID	Value for EU	Value for EC	Value for cross-border and cross-sector interoperability	Count of areas covered by question
The CAMSS community helps improving awareness, knowledge sharing and transparency around the assessment of the formal standards and specifications in eGovernment.	U1			✓	1
I find the news published in the CAMSS community helpful.	U2	✓		✓	2
The assessed standards available in the CAMSS library are useful in terms of initial input for the creation of new assessments.	U3	✓			1
The assessment scenarios provided in the CAMSS tools effectively support the process of establishing National recommendations of standards and specifications.	U4	✓		✓	2
CAMSS assists in reducing the required effort and costs needed for the assessment implementation.	U5	✓		✓	2
The information provided in the CAMSS Wiki is comprehensive and complete.	U6	✓		✓	2
The guidelines available in the CAMSS Wiki are helpful for creating new assessments.	U7	✓		✓	2
The information provided in the CAMSS Library gives a straightforward and concise overview of the standards and specifications recommended in Member States.	U8	✓		✓	2
The CAMSS tools simplify the assessment process and criteria completion by providing clear process steps.	U9			✓	1
I use the CAMSS method that is available on Joinup	U10	✓		✓	2
I use a method that is built on the basis of CAMSS.	U11	✓		✓	2
I use another method similar to CAMSS	U12			✓	1
CAMSS makes the choice of formal specifications defendable.	U13	✓		✓	2
# of questions covering dimension		10	0	12	
% of questions covering dimension		45%	0%	55%	

6.2. REASONS OF NOT USING CAMSS/SHARING ASSESSMENT(S)

Table 8 shows the reasons why the CAMSS survey respondents did not search for information in the CAMSS community, did not consult the 'CAMSS Wiki' or download the 'CAMSS tools' and did not share their assessment(s) in the CAMSS library.

The majority of the survey respondents was not aware of the CAMSS - Common Assessment Method for Standards and Specifications.

TABLE 8 – REASONS OF NOT USING CAMSS/SHARING ASSESSMENT(S)

Reasons of not searching for the information in the CAMSS community	I did not know of it
	We didn't know it exists
	Wasn't acquainted with this specific community
	I just find out about it
	I didn't know the CAMSS community
	I don't know CAMSS
	I was to occupied with other issues
	Standards are not reviewed very often. In the next round we will take CAMSS into account
	No assessments has been done
	I have not had the time to do it. We are working on different topics at the moment. But soon we will need it
Reasons of not consulting the 'CAMSS Wiki' or downloading the 'CAMSS tools'	I did not know of it
	We didn't know it exists
	I don't know CAMSS
	I didn't know the CAMSS community
	Wasn't acquainted with this specific community
	I was to occupied with other issues
	Standards are evaluated in the national level
	Different standardisation organisations
	The assessment method the Netherlands uses is similar to CAMSS so I look at the Dutch version
	I have not had the time to do it. We are working on different topics at the moment. But soon we will need it.
Reasons of not sharing assessment(s) in the CAMSS library	We are not part of EU. Our Assessment method was designed earlier
	I was to occupied with other issues
	CAMSS not known
	MSP identification will be transposed towards CAMSS
	Unclear how to share
	Didn't do any assessments
	Didn't know about the CAMSS library
	We have our own assessment method
	I didn't know the CAMSS community
	We publish our assessments in html, and would prefer to paste a link to signpost join up users
	Denmark does not do assessments of standards and specifications any more
	I have not had the time to do it. We are working on different topics at the moment. But soon we will need it.
	I don't know CAMSS
	We did not know of it

6.3. RAW DATA EXPORT

The attached file provides the survey result export.

RawDataExport.xls

6.4. GLOSSARY

- The mean[6] (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[7] for each case and divide that sum by the total number of cases;

- Mode refers to the most frequent, repeated or common value[7] in the quantitative or qualitative data. In some cases it is possible that there are several modes or none;

- Standard deviation[8] 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[8] 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;

- '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[2];

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

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