

Benchmarking on-line Public Services

To develop and improve the eGovernment indicators, Second Year Contract

Final Report

20 January 2008

Author	<p>Cristiano Codagnone, cristiano.codagnone@unimi.it</p> <p>For RSO SPA Via Leopardi 1, 20123 Milan Tel: +39 02 724011 Fax: +39 02 72401251</p> <p>And</p> <p>IDC Italy Viale Monza, 14, 20127 Milan Tel: +39 02 28457374 Fax: +39 02 28457333</p>
Deliverable	Final Report
Due date	December 31 2007
Date and place	Milan January 20 2008
Report version	Final version
Addressee officers	<p>Juan Arregui Mc Gullion European Commission Directorate – General Information Society and Media Directorate C Unit C1, Lisbon Strategy and eEurope 1049 Brussels</p>
Contract ref.	Contract Nr 30-CE-0033963/00-37

Table of content

Introduction	4
1 Synthetic Background	6
1.1 The context and the key reference points of the study	6
1.2 The 2007 vs. 2006 editions: A two-fold research question	7
1.3 The unit of analysis: approach and findings of first phase of activities	8
1.4 The indicator : preliminary input from first phase of activities	10
1.5 Second phase of work: Tasks and objectives	12
2 The Unit of Analysis	13
2.1 Draft Final Report Findings and Recommendations	13
2.2 Analysis of Input from DG MARKT	15
2.3 Final Recommendations	27
3 The Indicator	31
3.1 Draft Final Report Findings and Recommendations	31
3.2 Workshop comments on the indicator	36
3.3 Final Considerations	36
ANNEX I: System of accounts (extracts from SNA 93 and ESA 95)	38

The opinions expressed in this study are those of the authors and do not necessarily reflect the views of the European Commission.

INTRODUCTION

This is the Final Report of the 2007 edition of the pilot study focusing on public eProcurement, and represents the last formal deliverable requested as per the Tender Terms of Reference and the approved Management and Inception Report.

The main goal of this Final Report is to incorporate the proceedings of the workshop with experts and stakeholders held in Brussels on December 6 2007, whose minutes are delivered separately together with the study team workshop. Both the workshop minutes and the workshop presentation must be considered as an integral part of this final deliverable.

This Final Report will re-consider the final recommendations presented in the Draft Final Reports in light of some key inputs and comments received during the workshop and in its immediate aftermath.

As such, it is structured as an executive and slightly update and amended version of the Draft Final Report. This means that, while some of the background will be given at the beginning for the sake of clarity in the logic of reasoning, it will focus only on the recommendations and on how they are affected by the received input and comments. Accordingly it will neither go through again all the methodological and implementation steps, nor report all the research tools and solutions used and adopted. The activities and analysis carried out from February 2007 until the workshop of December 6 2007 remain the same, as do the output produced. Between the workshop and the final drafting of this report the only additional activities undertaken are the production of the workshop minutes (reflected in the corresponding deliverable) and the revision of the recommendations in light of the workshop input which are presented in this document. For all the methodological and activities detail the reader can refer to the Draft Final Report. Moreover, the synthesis of all the work processes and output of this year study can be found in the presentation delivered at the workshop.

Before illustrating the structure of this report, we anticipate here our own evaluation and interpretation of the input received during the workshop and in its immediate aftermath.

Overall the comments of workshop participants to a large extent praised the study approach and validated most of its findings and proposals. They, however, presented also some request for substantial changes.

Our approach and proposal (but see more in Section 1) has been closely tailored to the objective of Unit C1 of DG INFSOC, that is adding indicator(s) for public eProcurement to the traditional benchmarking of online public services. As such, especially for what concern the unit of analysis, it took as key guiding principles comparability and feasibility, trying to strike the right balance in the context of public procurement, whose complexity creates an evident trade off between them. Ensuring comparability across Member States in terms of the unit of analysis reduces the feasibility in terms of the amount of work to be carried out for the actual realisation of the benchmarking. For the operationalisation of the supply side indicator our approach also strived to ensure comparability and feasibility, as well as finding a way to operationalise the indicator by balancing between, on the one hand the need of reflecting the extreme complexities/intricacies of the various public eProcurement processes, and on the other proposing an indicator that is not too complex to measure. We are confident that such reasonable and pragmatic approach responds to the focus of Unit C1, which has a generalist and horizontal interest on the topic (meas-

urement), as well as to its objective to continue to use the consolidated methodology resting on a web based survey.

While all participants provided input and comments, the most profound and structured ones came from DG MARKT on the unit of analysis, and by IDABC (DG DIGIT) on the indicator.

It is worth stressing from the very start that the remarks, comments and requests for changes, expressed by both DG MARKT and IDABC are extremely valid and based on solid and specialised expertise and experience. We do not question the merit of such comments and proposals and we will consider them and to some extent try to incorporate them into our recommendations. Yet, they come from two EU entities with a much more specialised and vertical interest and focus, that is on the institutional side for DG MARKT and on the more technical and organisational/functional side for IDABC.

Accordingly, it is our position that they cannot be fully accommodated if we want to preserve feasibility and comparability and respond to the objectives Unit C1 of DG INFSOC.

In **Section 1** one we provide the synthetic background needed to provide the logic of the reasoning to the reader.

In **Section 2** we briefly recall our findings and recommendation concerning the unit of analysis, we analyse the input provided by DG MARKT, and we provide our slightly revised recommendations.

In **Section 3**, we follow the same structure of Section 2 but we focus on the operationalisation of the indicator, so e briefly recall our findings and recommendations, we recall the main comments received during the workshop , and we provide our slightly revised recommendations.

As both Section 2 and Section 3 contain a paragraph with conclusive recommendations and consideration, no further conclusive section is needed.

1 SYNTHETIC BACKGROUND

1.1 The context and the key reference points of the study

Ever since 2002 the European Commission manages yearly a supply side measurement of online public service provision using a methodology that has been consolidated throughout the years and it is entirely based on a web survey as the source of the data for the calculation of the indicator (online availability and sophistication). The methodology rests also on a consolidated and operationalised unit of analysis, that is to say the 20 basic online public services and the about 14,000 or more websites that are surveyed to calculate the indicators. The contractor that has so far performed this exercise on behalf of the Commission (Capgemini) has gradually and constantly built up and updated these list of websites also in collaboration with relevant contact points for the Member States.

In 2005 Unit C 1 of DG INFSOC published a call for Tender for pilot studies (running for three years, 2006, 2007 and 2008) aimed at proposing and testing new indicator(s) to integrate the mentioned consolidated benchmarking measurement of online public services. The contract has been awarded to RSO (with IDC as sub-contractor), and in 2006 the pilot study focused on issues of user impact and in 2007 on public eProcurement.

In carrying out such studies our team has hold firm two key guiding principles, both during the 2006 and 2007 editions. Such principles derive from the objective clearly stated in the 2005 Tender Specifications:

While the new indicators to be proposed should enrich the consolidated benchmark, they must be such that they can also be measured in the same fashion, namely through a web based assessment and measurement of the public services available online.

It is evident to us that some aspects and dimensions of online public service provisions might be not be captured and measured only using a web based survey and would rather require other sources. This is, however, a potential critique of the indicator we propose that is beyond our scope, in other words is an 'external critique', for we framed our activities and proposals assuming that the data for measuring the indicator(s) is only the web based survey.

From this requirement the two guiding principles derived are **feasibility** and **comparability**.

The **Feasibility** of the indicator(s) proposed depends on three dimensions: a) the information needed to measure the indicators can be gathered directly through a web survey; b) the amount of work required through a web survey falls within the scope of what has been done in the past¹; c) the information needed for the measurement can be gathered in short and limited period of time and do not require a steady and repeated assessment of relevant websites.

Comparability, simply stated, means ensuring that the final indicator or composite index is calculated by surveying in each country the websites of a panel of institu-

¹ The term of comparison are the about 14.000 usually surveyed for the 20 basic online public services. It must be stressed, however, that this does not mean that we could propose an indicator requiring up to another 14,000 websites. In fact the measurement of the indicator(s) proposed must be done within the same benchmarking exercise, whose scope cannot double from one year to the other.

tions that exhaustively represents the phenomenon object of measurement. In other words comparability should guarantee that no Member State can reject the final indicator/index and rank as not fully representative of its situation because the web survey missed some relevant online offerings. In other words comparability must ensure that overall sample of assessed websites reflect the peculiarities of MS and is accepted by them as a reference point. In this respect, ever since 2001 the list of the 20 basic public services and the corresponding and yearly updated database of websites surveyed has functioned as the accepted **unit of analysis** for the consolidated benchmarking of online public services carried out on behalf of the Commission by Capgemini.

As we stated in the introduction, the peculiar complexity of the public procurement and eProcurement landscape, creates a trade off between feasibility and comparability. We can further add, anticipating some of the conclusions of this report, that there is also a trade off between feasibility and two other criteria such as “exhaustiveness” of the unit of analysis (capturing all the relevant entities including for instance utilities) and “validity of the indicator” in the sense of fully reflecting the phenomenon meant to be measured (i.e. web based survey not capturing the “machine-to-machine dimension of public eProcurement”).

1.2 The 2007 vs. 2006 editions: A two-fold research question

Starting from these premises in the 2006 pilot study we proposed and tested a number of indicators related to issues of usage and, as a result, the 7th Measurement re-carried out by Capgemini and released in September 2007 included two new elements: the fifth level and the user centricity composite index². Since the unit of analysis was given (the consolidated database of websites surveyed by Capgemini to benchmark the 20 basic public services), our research question in the 2006 edition was to propose and test feasible and comparable new indicators reflecting issues of usage and impact. **So the focus was simply on the indicators.**

On the contrary, this year edition of the pilot study focussing on public eProcurement entailed a two-fold research question: a) define the unit of analysis; b) propose and test the indicator(s).

In the case of public eProcurement we do not have the consensual and consolidated list of websites (or in this case also ‘platforms’) to be surveyed in EU25³ for measuring the new indicator(s) to be proposed. Even if we accept the smaller estimates of the full universe of relevant entities provided during the workshop by DG MARKT, that is to say approximately 25-30.000 entities, it is evident that it would not be a feasible starting point. In fact, 25.000 websites would be too extensive.

Therefore, the unit of analysis research question required us to come up with an empirically grounded rationale for proposing a much smaller unit of analysis (feasibility), which at the same time would ensure comparability across EU25. Since feasibility would entail a restricted selection among all the possible relevant entities and their

² Directorate General for Information Society and Media, *The User Challenge: Benchmarking The Supply of Online Public Services, 7th Measurement*, September 2007 (http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/egov_benchmark_2007.pdf)

³ While we are now in a EU27, our terms of references and allocated resources are based on analysing focussing on 25 Member States. Therefore, we refer to EU25 for our work analysed only 25 MS.

respective website/platform (if any), such selection should reflect the peculiarities of each Member State and be empirically backed in a uncontroversial way. In other words the unit of analysis should ensure that Member States representatives would not object to it on the grounds that it does not capture and reflect all the dimensions of public procurement and public eProcurement in their countries.

This research question has been addressed by developing an Institutional Map of public procurement in general during the first phase of work (February-May 2007, delivered in the Interim Report and synthesised in the Draft Final Report), and then by comparing such map with the Public eProcurement Landscape developed in the second phase of work (June-October 2007, delivered in the Draft Final Report).

For what concerns the indicators naturally we selected as a starting point the two targets set during the Second eGovernment Ministerial Conference held in Manchester (November 2005) and contained in the new EC eGovernment Action Plan, namely:

- 1) By 2010 all public administrations across Europe will have the capability of carrying out 100% of their procurement electronically, where legally permissible, thus creating a fairer and more transparent market for all companies independent of a company's size or location within the single market (**supply side indicator**);
- 2) By 2010 at least 50% of public procurement above the EU public procurement threshold will be carried out electronically (**take up indicator**)

Stated more simply and adding a delimitation for the sake of feasibility the two possible public eProcurement indicators would be:

- ❑ Percentage of public procurement above EU threshold available electronically;
- ❑ Percentage of public procurement above the EU threshold carried out electronically.

For the sake of brevity, we anticipate here that as a result of the first phase of the work the **take up indicator** was already discarded as non feasible and, accordingly, we proceeded the work focussing only on the **supply side indicator**.

The research question concerning the indicator has been addressed through a preliminary overview of public eProcurement conducted during the first phase of work (delivered in the Interim Report), and then more substantially by the pilot feasibility test conducted in the second phase of work (delivered in the Draft Final Report).

1.3 The unit of analysis: approach and findings of first phase of activities

The lack of updated and disaggregated statistics on public procurement spending in all of the EU25, not only by administrative layers and sector but also by key entities⁴, led us to attempt the definition of the unit of analysis by focussing on specialised procurement entities and by looking (both through desk research and through a questionnaire distributed to, and returned compiled by, experts in each of the EU25) at the institutional arrangement of public procurement. This meant assessing the level of centralisation or de-centralisation of public procurement, not in terms of actual spending, but in terms of roles and responsibilities (particularly to determine the level of autonomy of regions and local administrations).

The choice of focussing on the specialised procurement entities (choice A) , rather than attempting to provide a list of concrete public bodies country by country (Choice

⁴ We mean spending key Ministries, central agencies, regional and local administrations.

B)⁵, was also shaped by a type of reasoning that was not made explicit in the Draft Final Report and in the workshop presentation and it is worth adding here.

We can anticipate that in the revised recommendations (see paragraph 2.3) we have attempted to partially integrate our approach (choice A) with choice B.

The key findings of this first phase of work were the following:

- ❑ In almost all MS a specialised procurement agency, or a central ministry, or a department within a central ministry, is in charge of aggregating demand and performing procurement functions on behalf of other public sector bodies. We refer to these player as National Procurement Entities (NPEs). NPEs are usually not mandatory, which means that they are not the only player within the public procurement landscape.
- ❑ In some countries we find also specialised Regional Procurement Agencies (henceforth RPEs) replicating in a region what NPEs do at national level.
- ❑ In others we can find some form of local level specialised agencies/consortia/platforms (henceforth simply LPEs).
- ❑ Finally, at the national level there exist Vertical Procurement Agencies (henceforth VPEs), such as for instance in Denmark and UK ad hoc agencies in charge of procurement for the entire Health sector, or in France the Economat des Armees, entitled to manage procurement for Defence.
- ❑ So we have a landscape potentially populated by various forms of Specialised Procurement Entities (SPEs) being they national generalist, national vertical, regional or local generalist.
- ❑ One should additionally consider that, since in the overwhelming majority of cases SPEs are not mandatory, Public Sector Bodies (PSBs) of any kind and administrative level can run their own procurement autonomously (table below report all acronyms used).

The main conclusion was that, even focussing only on SPEs, the landscape is highly fragmented, heavily shaped by countries peculiarities, and does not lend itself to any easy definition of a comparable unit of analysis. All of the empirical findings of the first phase are prone to ambivalent interpretations in terms of comparability.

Accordingly our conclusion was that the definition of a comparable panel of administration is 'technically indeterminate'. By this we meant that, while we produced a tentative proposal, in the context of a policy relevant benchmarking such as the one carried out by the EC, the mentioned ambivalences could be easily used by MS to question the comparability of the selected panel.

The tentative proposal was a clusterisation of countries with respect to two dimensions: a) whether the public procurement system can be considered highly centralised or not (as defined earlier in terms of roles and responsibility and not of actual expenditure); and b) whether there is only 1 specialised agency (the NPE) or there are several of them (especially at regional and local level).

As the cluster proposal, further validate in the second phase of work, became part of our recommendations, it will be presented in Section 2.

⁵ This means that, for instance, one could have operated as follows (exemplificative illustration):

- Country X: Ministries A,C, C; Regions: all; Local municipalities: all regions capital.
- Country Y: All ministries; Regions: none; Local municipalities: x,y,z,w,

1.4 The indicator : preliminary input from first phase of activities

The starting hypothesis for the indicator, as anticipated, was the following:

Percentage of public procurement above EU threshold available electronically

The preliminary analysis led us to conclude for several reasons (see Draft Final Report) that **the use of a supply side indicator expressed in percentage term is not a feasible choice**. Accordingly **we did not consider the issue any longer**.

The only other alternative, already proposed in the Management and Inception Report, was to follow the same approach used for the availability and sophistication index calculated for the 20 basic services, with an opportune and empirically informed definition of the various possible stages, which brings us to discuss and operationalise the expression 'available electronically' contained in the Manchester target. We took as a starting point the consolidated sophistication stages model used in the Capgemini benchmarking, that is to say:

- Stage 1= Information
- Stage 2= One way interaction (downloadable forms)
- Stage 3= Two-way interaction (electronic forms)
- Stage 4= Transaction (full electronic case handling)

Full electronic case handling implies that no other formal procedure is necessary via "paperwork".

In the Capgemini benchmark two core indicators are used the 'sophistication' indicator and the 'fully online availability' indicator. The latter is measured on the basis of a two level framework:

- "no full online availability" : contains stages 0 to 3 of the sophistication framework;
- "full online availability" : status granted to all services that reach a stage strictly above the 3rd stage of the sophistication framework.

So following this approach, 'full electronic availability' for public eProcurement must also be interpreted at stage 4, that is full electronic case handling. For public eProcurement already in the Management and Inception Report we advanced the following preliminary proposal for the different sophistication stages:

- Tender published online (information);
- Documentation downloadable (one way interaction)
- Tender submission and management⁶ (two way interaction)
- eOrdering and ePayment (full electronic case handling)

During the first phase of work we interviewed representatives from DG MARKT and asked their opinion on a sophistication type of supply side indicator. The initial response was positive, but also warned us that in such progression the stage most difficult to implement is electronic submission and management due to eID and interoperability bottlenecks. According to them, eOrdering and ePayment (and invoicing) may occur even when electronic management and submission is not possible, and thus our preliminary progression of stages would not work.

⁶ Including evaluation and notification.

Finally, as a result of the first phase of work, we defined a comprehensive break down of public procurement into phases to be used as a general reference framework for the pilot feasibility test to be conducted in the second phase.

Table 1: Public eProcurement phases

Macro-phase	Sub-phase	Items/Functionalities
1. Pre-Awarding	1.1 eNotification	1.1.1 Publication of notices to official electronic notice boards
		1.1.2 Use of electronic messages to automate publication in the Official Journal of the European Union
		1.1.3 Secure notification using email
		1.1.4 SMS notification as an alerting mechanism
		1.1.5 Match of the supplier profile to business opportunities
	1.2 eSubmission	1.2.1 Online execution of Q&A sessions between Contracting Authorities and Economic Operators
		1.2.2 Creation of user accounts and profiles with related roles
		1.2.3 Pre-qualification questionnaire for short-listing suppliers
		1.2.4 Mechanism for encrypting and locking submitted tenders
		1.2.5 Tender updating service
		1.2.6 Assistance to suppliers during tender submission through user-friendly Graphic User Interface
	1.3 Tender evaluation	1.3.1 Phased opening of tenders according to the tender documentation type
		1.3.2 Application of the Four-Eye Principle ⁷
		1.3.3 Configuration of eAuctions according to nature of procurement
		1.3.4 Transformation of non-price criteria into monetary values
1.3.5 Notification of contract award		
2. Post-Awarding	2.1 eOrdering	2.1.1 Configuration of eCatalogues according to nature of procurement
		2.1.2 Set-up of order placing automated online procedures
		2.1.3 Elimination of "maverick buying" procedures ⁸
	2.2 eInvoicing	2.2.1 Issue of invoices by email directly to the customer
	2.3 ePayment	2.3.1 Receipt of payments by electronic funds transfer
		2.3.2 ePayment security procedures

Source: RSO/IDC elaboration

Starting from this conceptual framework, the pilot feasibility test would then have to assess to what extent the information on these various items/functionalities could be found directly through a web based survey.

⁷ Compliance with the Four-Eye Principle envisages ensuring that, during eProcurement processes, access to tenders cannot be obtained by anyone until authorised procurement officers open the Tenders. Furthermore, it envisages that two or more authorised procurement officers are able to open tenders simultaneously.

⁸ Elimination of "maverick buying" procedures occurs if the eProcurement system in place makes it possible to avoid buying stock from small local suppliers, and encourages buying from larger more convenient suppliers, thus creating economies of scale.

1.5 Second phase of work: Tasks and objectives

In the second phase of work the following three tasks were accomplished:

- 1) Matching the Institutional Map with the Public eProcurement landscape;
- 2) Pilot feasibility test;
- 3) In depth interviews with webmasters of public eProcurement portals/platforms.

As explained earlier, in the first phase of work we developed an in depth Institutional Map of public procurement and we sketched a preliminary overview of the public eProcurement offer. In this second phase of work we proceeded to a more in depth analysis of the eProcurement landscape in order to assess to what extent the clusters of countries proposed on the basis of the public procurement map, is reflected in the offer of public eProcurement. In other words, for instance, we assessed to what extent in countries where we found several specialised players (NPEs, VPEs, RPEs, LPEs), for each of them was possible also to identify one eProcurement portal/platform. **So the objective of this first task was to further corroborate the proposed clustering.**

The pilot feasibility test was carried out on several public eProcurement portals/platform in order to assess to what extent the information needed for a supply side indicators (that is to say the items/functionalities listed in table 1 reported in the previous page) could be retrieved directly and simply only through a web based survey. **The objective of this task was, therefore, to identify what information is feasible to obtain in order to proceed to the operationalised proposal of a supply side indicator that can be measured through a web based survey.**

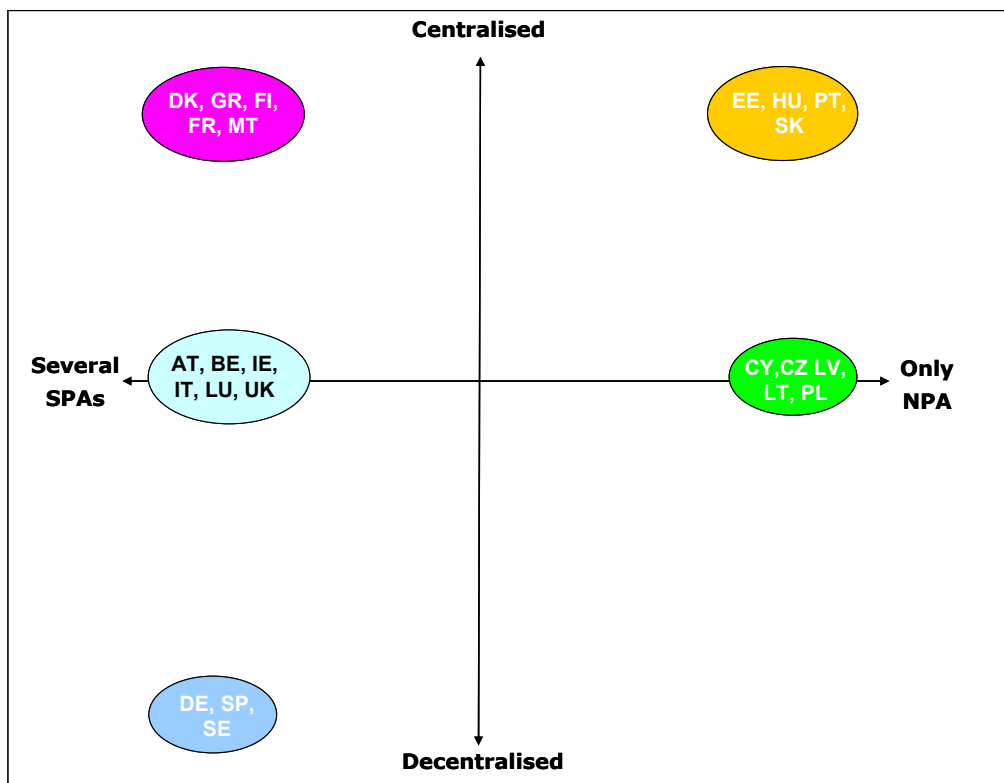
The in depth interviews were meant to further validate both the findings of the first task and, especially, those of the second task (pilot feasibility test).

2 THE UNIT OF ANALYSIS

2.1 Draft Final Report Findings and Recommendations

As anticipated, despite the complexities of public procurement across EU25, focusing on Specialised Procurement Entities only (SPEs) and considering the institutional model of managing public procurement, at the end of the work on the Institutional Map we proposed the following 5 clusters of countries.

Exhibit 1: Clusters of Countries



It is worth recalling again that the two dimensions used were:

- ❑ Whether the public procurement system in a given country can be deemed highly centralised or not in terms of roles and responsibility of the public sector bodies operating at different administrative layers (not in terms of the level of actual expenditure);
- ❑ Whether there is only 1 specialised procurement entity (the NPE) or there are several of them (at regional and local level and a central vertical level).

The findings of the Public eProcurement Landscape confirmed the robustness of these clusters (see Draft Final Report for full illustration of methodology and findings).

Accordingly, the recommendations for the definition of the unit of analysis presented in the Draft Final Report are summarised in the table reported overleaf.

Table 2: Unit of analysis proposal: Draft Final Report version

Cluster	Country	websites by type of specialised procurement entities			
		Central SPE website	Central SPE website	Central SPE website	Central SPE website
1	EE	✓			
	HU	✓			
	PT	✓			
	SK	✓			
2	DE	✓	✓	✓	
	SP	✓	✓	✓	✓
	SW	✓	✓	✓	
3	DK	✓	✓	✓	✓
	GR	✓	✓	✓	✓
	FI	✓	✓	✓	
	FR	✓	✓	✓	✓
	MT	✓	✓	✓	
4	AT	✓	✓	✓	✓
	BE	✓	✓	✓	✓
	IE	✓	✓	✓	✓
	IT	✓	✓	✓	
	LU	✓	✓	✓	
	UK	✓	✓	✓	✓
5	CY	✓			
	CZ	✓			
	LV	✓			
	LT	✓			
	PL	✓			
No cluster	NL		✓	✓	✓
	SL	✓	✓	✓	✓

The table above, focussing only on SPEs as the aggregation points to be surveyed, indicates for each country which type of SPEs and their eProcurement offer, if any, should be surveyed for each country to ensure broadly defined comparability.

This must be considered as a reasonable starting point for the definition of the unit of analysis. It must be recalled that it was based on the choice of focussing on the specialised procurement entities, rather than going into the peculiarities of each country and select the relevant entities one by one (such and such ministries, such and such region, such and such city, etc).

Having illustrated this proposal, it is worth repeating some of the caveat already discussed at the end of the first phase of work in the Interim Report and in the accompanying Institutional Map Report.

This choice might result controversial for a benchmarking with policy implications such as the one run by the EC. If the measurement of the supply side eProcurement indicator has to be carried out within the context of the traditional EU benchmarking implemented so far by Capgemini, then the selected panel of administrations must be accepted by Member States.

The only way to present such proposal and withstand possible objections would be to have the quantitative data objectively showing that the samples selected in each country are fairly representative of the public procurement universe in terms of the actual volume managed (monetary value or number of Tenders). If we could, for instance, show that surveying only a NPE in country X, and several specialised procurement entities in country Y would amount to capture 70% of public procurement in both cases, then no comparability issue could be raised

It was, however, not feasible within the scope of this year pilot to gather such kind of data⁹ for all EU25. Actually, as reported in the Draft Final Report, interviews with webmasters of public eProcurement websites/platform confirmed that finding such data is difficult in general. Lacking such granular quantitative data, we concluded that any proposal for the unit of analysis would be technically indeterminate and could be the object of various critique and would be extremely difficult to have all MS agree on it.

We, therefore, restate as a conclusion that the only way to define the unit of analysis and then launch the eProcurement supply side benchmark would be to start from our proposal (as integrated in paragraph 2.3) and discuss it with MS representatives, to eventually ask them to provide a selected list of relevant websites to be surveyed that they deem as fairly representative of the eProcurement offering in their countries.

2.2 Analysis of Input from DG MARKT

During the workshop the discussion on the unit of analysis was very lively and interesting. In general our approach was considered appropriate, but several suggestions were made on how to integrate it. The comments are reported in full in the workshop minutes, and so here we briefly summarise the key ones.

In general the suggestion was to integrate our proposal (so to still preserve the focus on the specialised procurement entities) with the indication of specific public sector bodies by administrative layers and sectors using several criteria (different participants proposed different ones). The key criteria would be to include the big spender at central level covering different sectors, and to restrict the inclusion of local municipalities using some size threshold (i.e. only large enough cities).

The most structured and specialised input came particularly from representatives of DG MARKT. In the aftermath of the workshop during a conference call between them and the study Project Manager Cristiano Codagnone (**CC**), the input/requests of DG MARKT were better clarified and the two key ones were the following:

1. Analyse the data on public procurement expenditure that DG MRKT provided **CC** to refine the cluster and then extract recommendations on possible integration in terms of the specific entities to be considered in the unit of analysis;

⁹ It is worth stressing that such data are not those on aggregate expenditure by layers, but rather on the amount of procurement managed by each entity. In this case we are considering only the specialised procurement entities, but if one would want to do it exhaustively then it would have to gather data on amount of procurement managed by each possible single public sector body. Even if one would singled out only some big spenders at central level, a few regions and large cities, gathering this sort of data is in general very hard and it was clearly beyond the time and resources available for this study.

2. Consider the entities addressed in Directive 2004/17/EC that covers the procurement of utilities (water, electricity, gas, airports, railways, urban transport, ports, postal operators and extraction of oil)¹⁰ and listed in annexes I through X of the mentioned directive.

We address below each of these two points presenting and analysing the input provided.

2.2.1 DATA ON PUBLIC PROCUREMENT EXPENDITURE

The data provided by DG MARKT provide the public procurement expenditure in **2004** disaggregated according to the ESA 95 (European System of Account) classification. For the various categories, which are included in the various tables below, the definition provided in ESA 95¹¹ and also in SNA 93 (System of National Accounts)¹² are reported in Annex I.

For simplicity in the tables only abbreviations of the full denomination of these categories are used¹³:

- ❑ **GGOV**= General Government (see definition in Annex), comprising the following sub-sectors:
 - ❑ **CGOV**= Central Government (self-explanatory, but see definition in Annex I)
 - ❑ **STGOV**= State Government (meaning the second tier entities in country with a federal structure, but see full definition in Annex I);
 - ❑ **LCGOV**= Local Government (includes together any local level, which in non federal states means regions, provinces and municipalities altogether, but see full definition in Annex I);
 - ❑ **SSEF**= Social Security Funds (central, state and local institutional units providing mostly providing social benefits and separately organised and autonomous with respect to the administrative layer to which they belong, but see full definition in Annex I).

In addition to this data, DG MARKT provided also their internal estimation of the procurement expenditure by public utilities (those covered by the mentioned EC directive), but only for 2003 and EU15 (in the tables referred to as **UT**).

Before presenting and analysing the data, we provide some general considerations on their limitations and usefulness.

First, the data are provided by Eurostat every four years and those currently available refer to 2004. Using them to redefine the clusters may miss some institutional changes leading to a re-allocation of spending functions among sectors, especially for new Member States that have embarked in various reforms as a result of the accession process most likely not captured by 2004 data.

Second, the break down does not provide information on specific big spenders, which would have to be selected anyway looking at country by country peculiarities.

¹⁰ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004L0017:EN:NOT>

¹¹ See the ESA 95 official website: <http://circa.europa.eu/irc/dsis/nfaccount/info/data/esa95/esa95-new.htm>

¹² See the SNA 95 official website: <http://unstats.un.org/unsd/sna1993/toctop.asp>

¹³ Social transfer in kinds are not considered in order to simplify the analysis.

Third, they are useful to rule out an entire sector if its dimension is very small compared to other, namely the local level to focus only on the central one where the data justify such choice or vice versa. In other words they can be used to refine our clustering of countries

Fourth, the presence of the **SSEF** category complicates to some extent limit the usefulness illustrated under the previous point. The **SSEF** data is provided in aggregate form, but depending on different institutional arrangements it can be spread differently across central, state and local level in different countries. This is a very relevant complication, for **SSEF** size is very large in some countries but marginal or totally absent in others. This clearly reflect the institutional peculiarities of each country (extent to which social benefits are administered by separate and relatively autonomous entity). In practice such category reduce the comparability of the percentage share that each different category has over the total public procurement expenditure and will force a simplified use of the data.

Table 3: Total Public Procurement, 2004 (mio Euro)

COUNTRIES	CGOV	STGOV	LCGOV	SSEF	GGOV
Belgium	2.881	8.582	5.103	19.135	35.700
Czech Republic	4.685	:	5.455	4.975	15.116
Denmark	7.603	:	16.224	:	23.827
Germany	29.200	35.940	69.570	149.160	283.870
Estonia	602	:	368	171	1.141
Greece	10.891	:	2.542	2.854	16.287
Spain	18.129	47.395	21.789	1.958	89.271
France	52.139	:	80.667	99.720	232.526
Ireland	3.902	:	11.274	279	15.454
Italy	23.863	:	112.952	1.117	137.932
Cyprus	965	:	140	12	1.117
Latvia	799	:	424	5	1.228
Lithuania	1.090	:	582	206	1.878
Luxembourg	1.311	:	803	1.393	3.507
Hungary	4.838	:	3.951	1.890	10.679
Malta	421	:	27	:	448
Netherlands	20.343	:	32.531	37.141	90.015
Austria	5.339	5.828	5.969	7.808	24.945
Poland	7.904	:	11.257	3.994	23.155
Portugal	9.203	:	4.412	272	13.887
Slovenia	1.613	:	910	541	3.063
Slovakia	2.164	:	1.024	1.143	4.331
Finland	6.536	:	12.365	2.436	21.337
Sweden	16.339	:	28.250	:	44.767
United Kingdom	142.142	:	91.386	:	233.528

Source: Elaboration on Eurostat data provided by DG MARKT

A few immediate comments can be made already on the table above. First, we evidenced in yellow the only four countries with a federal structure to which the **STGOV** sub-sector applies (Austria, Belgium, Germany and Spain). Evidently to fully compare all the countries in terms of the different share between central and broadly defined local expenditure, for these countries **STGOV** and **LCGOV** will have to be summed up. This is not a loss of information because, it is evident anyway that the

STGOV sub-sector is fundamental for these countries and will have to be taken into account. Second, as anticipated the large variability across countries emerges as per the dimension of **SSEF**, which can be better appreciated in the following table providing the percentage shares.

Table 4: Public Procurement, % shares by sub-sector 2004

COUNTRIES	CGOV	STGOV	LCGOV	SSEF
Belgium	8,1%	24,0%	14,3%	53,6%
Czech Republic	31,0%	n.a.	36,1%	32,9%
Denmark	31,9%	n.a.	68,1%	:
Germany	10,3%	12,7%	24,5%	52,5%
Estonia	52,8%	n.a.	32,3%	15,0%
Greece	66,9%	n.a.	15,6%	17,5%
Spain	20,3%	53,1%	24,4%	2,2%
France	22,4%	n.a.	34,7%	42,9%
Ireland	25,2%	n.a.	72,9%	1,8%
Italy	17,3%	n.a.	81,9%	0,8%
Cyprus	86,3%	n.a.	12,6%	1,1%
Latvia	65,0%	n.a.	34,5%	0,4%
Lithuania	58,0%	n.a.	31,0%	11,0%
Luxembourg	37,4%	n.a.	22,9%	39,7%
Hungary	45,3%	n.a.	37,0%	17,7%
Malta	93,9%	n.a.	6,1%	:
Netherlands	22,6%	n.a.	36,1%	41,3%
Austria	21,4%	23,4%	23,9%	31,3%
Poland	34,1%	n.a.	48,6%	17,3%
Portugal	66,3%	n.a.	31,8%	2,0%
Slovenia	52,6%	n.a.	29,7%	17,6%
Slovakia	50,0%	n.a.	23,6%	26,4%
Finland	30,6%	n.a.	58,0%	11,4%
Sweden	36,5%	n.a.	63,1%	:
United Kingdom	60,9%	n.a.	39,1%	:

Source: Elaboration on Eurostat data provided by DG MARKT

The last column reporting the share of **SSEF** over the total uses colour to characterise such variation:

- In light blue the countries where **SSEF** share is above or about 40% (Belgium, Germany, France, The Netherlands, Luxembourg);
- In orange the countries where **SSEF** share is at least above 25% (Czech Republic, Austria and Slovakia);

- In light green the countries where **SSEF** share is at least above 10% (Estonia, Greece, Lithuania, Hungary, Poland, Slovenia and Finland);
- In red the countries where **SSEF** share is either null or below 3% (Denmark, Spain, Ireland, Italy, Cyprus, Latvia, Malta, Portugal, Sweden and the United Kingdom).

Sure enough the knowledge of the different history and traditions of European Welfare State (especially for what concern Health) can help us making sense of such variability and interpret it. So, taking almost as ideal types Germany and the United Kingdom, the former embodies the Bismarck model based on mandatory social insurances operating as separate entity (where citizens are reimbursed), whereas the latter is the classic Beveridge model based on a universalistic provision directly by entities included within the government (at central level, or in other version such as Italy at regional level).

Yet the different shares reported in table 4 do not help us refine our cluster in terms of centralisation versus decentralisation of expenditure, and without further break down are not very comparable. From these data we do not know what part of **SSEF** expenditure in Germany can be attributed to the central, state, and local level. On the other hand, they provide useful information if one would want to follow a different approach to the definition of the unit of analysis than the one we chose (and we will use in the final recommendation). In other words if the unit of analysis will be defined selecting country by country the relevant institutions to be included in the unit of analysis, from this data one could draw the conclusions that for all the countries with an high share of **SSEF** the various entities managing social security funds (see precise definition in Annex I) will have to be surveyed. Proceeding down this road, one could conclude for instance that for Austria, Belgium and Germany the institutions making up **STGOV** and **SSEF** should certainly be included. The data presented, however, would not allow to go too far with such approach, at least from the perspective of what is possible to do within the scope of this Final Report.. In fact, once such general choices are made then one would still have to choose which individual big spenders to include in the unit of analysis to preserve feasibility, and select them in such a way to ensure comparability across Member States. This means, for instance, that if large social security fund managing entities are included in Germany, then one would have to find the entities performing equivalent functions and managing an equal share of procurement in countries where **SSEF** expenditure data are null or very low.

From our perspective, despite its limits, the most interesting input to extract from these data is to break down between central and broadly defined local level. The only way to do is to subtract the **SSEF** expenditure from the **GGOV** total, calculate the new total without **SSEF**, for countries with a federal structure add up **STGOV** and **LCGOV**, and then compare the share of aggregated local level expenditure and **CGOV**, calculated in percentage of the new total excluding **SSEF**. The result of such operation produce the percentage shares reported in next table overleaf.

This table provides a nicely break down of countries in four groups in terms of centralisation /de-centralisation of expenditure. Going down from highly centralised to highly decentralised they are rendered by the different gradation of blue and are:

1. Centralised expenditure: countries where **CGOV** is above 60%;
2. Intermediate case: countries where **CGOV** is between 55% and 40%;
3. Decentralised expenditure: countries where **CGOV** is between 40% and 30%;
4. Highly decentralised expenditure: countries where **CGOV** is below 30%.

Table 5: % shares of central and local level (excluding SSEF) 2004

COUNTRIES	CGOV	STGOV + LCGOV
Malta	94%	6%
Cyprus	87%	13%
Greece	81%	19%
Slovakia	68%	32%
Portugal	68%	32%
Latvia	65%	35%
Lithuania	65%	35%
Slovenia	64%	36%
Estonia	62%	38%
Luxembourg	62%	38%
United Kingdom	61%	39%
Hungary	55%	45%
Czech Republic	46%	54%
Poland	41%	59%
France**	39%	61%
Netherlands	38%	62%
Sweden	37%	63%
Finland	35%	65%
Denmark	32%	68%
Austria	31%	69%
Ireland	26%	74%
Germany	22%	78%
Spain	21%	79%
Italy	17%	83%
Belgium**	17%	83%

Source: Elaboration on Eurostat data provided by DG MARKT

Naturally the subtraction of **SSEF** for those countries where its size was very large (Belgium, Germany, France, Luxembourg) or fairly large (Czech Republic, The Netherlands, Austria and Slovakia) may affect substantially to which of the four groups they belong. In order to be fully confident about the countries included in the five groups we would have to know how **SSEF** is broken down between the central and local level. In absence of such data, we can use the knowledge we gathered on the institutional characterisation of the countries and draw the following tentative conclusions:

- ❑ In **Belgium** public procurement roles and responsibilities are fairly decentralised and so, even if **SSEF** would spread in favour of the central level, the expenditure would probably remain fairly decentralised but probably the country would fit Group 3 rather than Group 4;
- ❑ For **Germany**, given the high decentralisation of the division of role and responsibilities, its inclusion in Group 4 would probably not be changed if we could allocate **SSEF** to the different layers;
- ❑ **France** is a clear case in need of being re-positioned from Group 3 to Group 2, for its large **SSEF** managing organisations operate mostly at the central level;
- ❑ **Luxembourg** inclusion in Group 1 is in line with its public procurement management model;

- For all other countries the position in their groups is justified by their public procurement institutional model.

So only **France** and **Belgium** have to be repositioned.

Having clarified the above, at this point it is interesting to re-define the cluster presented earlier in exhibit 1, by preserving the horizontal axis (only one or many specialised procurement entities) and substituting the vertical one with the dimension of centralisation de-centralisation of expenditure (while in exhibit 1 was centralisation / de-centralisation of roles and responsibilities).

Exhibit below reports the new clusters, whereas the exhibit in next page report the original and new clusters together.

Exhibit 2: New Clusters using expenditure data

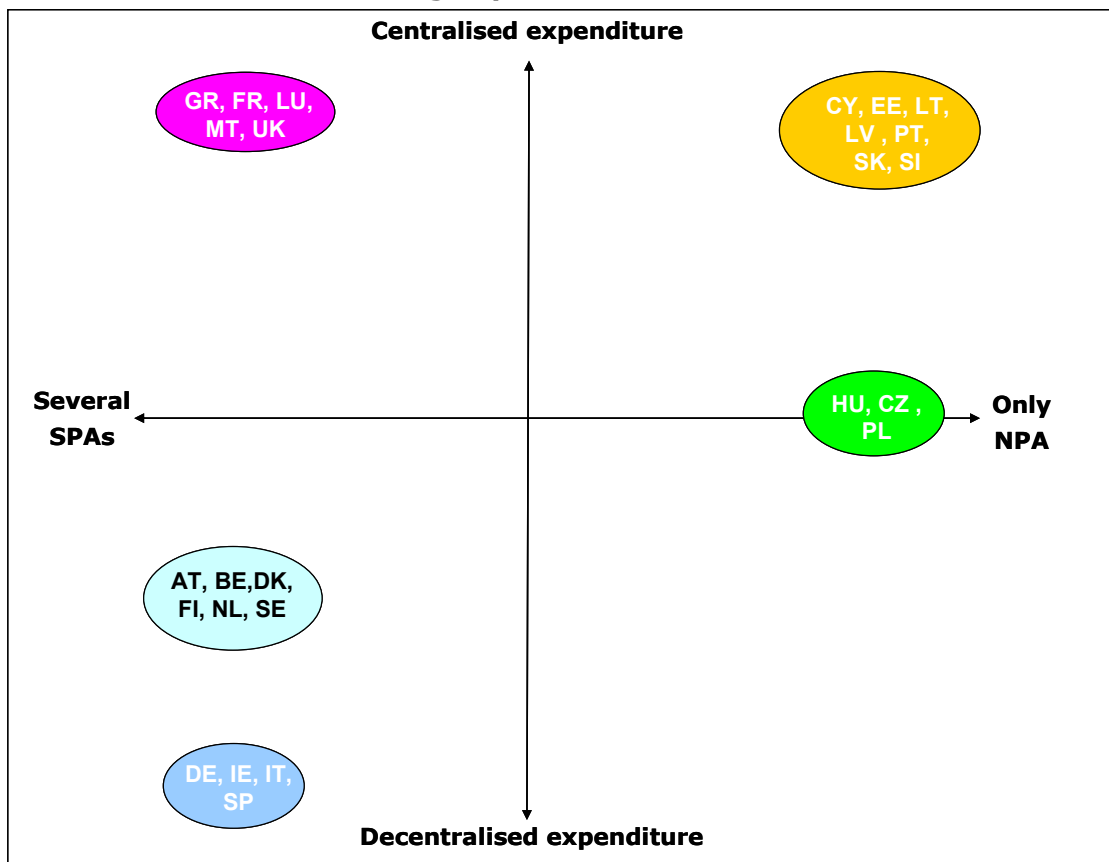


Exhibit 3: Clusters compared



In terms of the positioning of clusters, the data allowed to move the light blue one on the left hand side of the graph from the intermediate position more clearly into the quadrant of decentralisation.

In terms of countries inclusion within the clusters using expenditure data the following changes occurred (going against the clock):

- ❑ **Italy and Ireland** moved to the highly decentralised cluster;
- ❑ **Sweden**, went to the simply decentralised cluster;
- ❑ The **UK** and **Luxembourg** moved up into the centralised cluster;
- ❑ **Denmark** and **Finland**, moved down from centralised to decentralised;
- ❑ **Hungary** repositioned from highly centralised to the intermediate right hand cluster;
- ❑ **Cyprus, Latvia and Lithuania** are now in the right hand side centralised cluster;
- ❑ In addition, it was possible to position the **Netherlands** (in the left hand side simply decentralised cluster) and **Slovenia** in the right hand side centralised cluster.

On the more clear cut side, we can now confidently conclude that:

- ❑ **Cyprus, Estonia, Latvia, Lithuania, Portugal, Slovakia** and **Slovenia**, are countries where both the institutional settings and expenditure are centralised and where there is only one specialised public procurement entity. We call this "Pure Centralised Cluster"

Second, the data on expenditure corroborate the fact that there are countries where both the institutional settings and expenditure are, though to a different extent, decentralised, and where several specialised procurement entities are present, these are:

- **Austria, Belgium, Denmark, Finland, Germany, Ireland, Italy, the Netherlands, Spain and Sweden**, are countries where, though to different degrees the institutional settings and/or¹⁴ expenditure are de-centralised and where there is only one specialised public procurement entity. We call this “Pure Decentralised Cluster”

Evidently the “Pure Centralised Cluster” and the “Pure Decentralised Cluster” are opposite to one another in a clear cut way, which makes sense: more de-centralised more SPEs, more centralised only one SPE.

Yet there are still less clear cut cases such as the top left hand side group with countries where expenditure is centralised (**France** and **United Kingdom**) or even highly centralised (**Greece** and **Malta**), and where nonetheless we have found several specialised procurement entities (as well as eProcurement platform especially in France and the UK). So in these cases deciding to focus only on the central level and select relevant institutions rather than focus on specialised entities and their eProcurement platform, would amount to loose some relevant players.

In synthesis the new clustering produce some useful input but is not more conclusive than the original one, and do not entirely solve the same ambivalent issues. It nonetheless provide useful integration to our earlier analysis, which will be reflected in our final recommendations.

¹⁴ We the case of Denmark and Finland where, apparently, while role and responsibilities are centralised the actual expenditure seems to be decentralised.

2.2.2 PUBLIC UTILITIES

As anticipated, one of the input from DG MARKT was to consider in the definition of the unit of analysis the entities addressed in Directive 2004/17/EC that covers the procurement of utilities (water, electricity, gas, airports, railways, urban transport, ports, postal operators and extraction of oil)

The relevance of procurement expenditure by utilities can be gathered from the data reported in table below for 2003 for EU15

Table 6: GGOV and Utilities, 2003 (EU15 mio Euro)

COUNTRIES	GGOV	UT	GGOV+UT	UT%
Belgium	42.465	8.924	51.389	17,4%
Denmark	34.566	12.980	47.546	27,3%
Germany	369.726	80.586	450.312	17,9%
Greece	21.560	5.899	27.459	21,5%
Spain	99.982	18.192	118.173	15,4%
France	249.227	29.350	278.576	10,5%
Ireland	17.053	2.256	19.309	11,7%
Italy	159.364	24.344	183.708	13,3%
Luxembourg	3.727	451	4.178	10,8%
Netherlands	102.813	13.575	116.387	11,7%
Austria	36.319	12.127	48.446	25,0%
Portugal	17.253	3.694	20.947	17,6%
Finland	24.229	4.058	28.287	14,3%
Sweden	51.722	7.492	59.214	12,7%
United Kingdom	291.897	80.820	372.718	21,7%

Source: Elaboration on Eurostat data provided by DG MARKT (data on utilities expenditure are DG MARKT estimates)

In the table we added up data from Eurostat for GGOV expenditure in 2003 with the Estimates produced by DG MARKT for the procurement expenditure by utilities, and then obtained the relative share of the latter. As can be appreciated, public utilities account for a relevant share of the extensive definition of public procurement, always above 10% and beyond 20% in various cases.

First, it is undeniable that such entities are, therefore, a relevant group in terms of their size.

Second, their inclusion within a unit of analysis for a benchmarking on public eProcurement is fairly justified by the public role such entity pursue, regardless of their form of property (which is why they are addressed by the mentioned EC directive)

The problem, again, is one the feasibility of selecting and including such entities with respect to the limit of this Final Report, but to some extent also from the perspective of the actual implementation of the online benchmarking including the indicator on public eProcurement.

The relevant entities are listed in the mentioned directive in annexes I through X¹⁵ for a total of 30 pages, of which the screenshot below provide an illustrative example only for entities in the transport or distribution of gas and heat.

ANNEX I

CONTRACTING ENTITIES IN THE SECTORS OF TRANSPORT OR DISTRIBUTION OF GAS OR HEAT

Belgium

- Distrigaz/NV Distrigaz.
- Local authorities, or associations of local authorities, for this part of their activities.

Denmark

- Entities distributing gas or heat on the basis of an authorisation pursuant to § 4 of the lov om varmforsyning, see Consolidation Act No 772 of 24 July 2000.
- Entities transporting gas on the basis of a licence pursuant to § 10 of lov nr. 449 om naturgasforsyning of 31 May 2000.
- Entities transporting gas on the basis of an authorisation pursuant to bekendtgørelse nr. 141 om rørdningsanlæg på dansk kontinentalsokkelområde til transport af kulbrinter of 13 March 1974.

Germany

- Local authorities, public law bodies or associations of public law bodies or State-controlled undertakings supplying gas or heat to others or operating a general supply network pursuant to Article 2(3) of the Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz) of 24 April 1998, as last amended on 10 November 2001.

Spain

- Enagas, S.A.
- Bahía de Bizkaia Gas, S.L.
- Gasoducto Al Andalus, S.A.
- Gasoducto de Extremadura, S.A.
- Infraestructuras Gasistas de Navarra, S.A.
- Regasificadora del Noroeste, S.A.
- Sociedad de Gas de Euskadi, S.A.
- Transportista Regional de Gas, S.A.
- Unión Fenosa de Gas, S.A.
- Bilbogas, S.A.
- Compañía Española de Gas, S.A.
- Distribución y Comercialización de Gas de Extramadura, S.A.
- Distribuidora Regional de Gas, S.A.
- Donostigas, S.A.
- Gas Alicante, S.A.

First, the list from all the ten Annexes of the directives will be quite long and the websites of all such entities would have to be checked.

Second, there is an additional complication further increasing the potential work load: as can be seen from the screenshot above while for Spain the list of the entities is provided, for the other countries only general definition of the entities are given. This means such definition would have to be interpreted and used to look for, and precisely identify, such entities in each country.

It is probably superfluous to add that such work is absolutely beyond the time and resources that were available to complete this year study with the delivery of this Final Report.

We could solve this issue by simply phrasing a recommendation such as “include in the unit of analysis the entities listed in Annex I through X of Directive 2004/17/EC”.

¹⁵ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004L0017:EN:NOT>

This would, however, amount to a load of work beyond even the resource and time that will be available to the contractor taking over our recommendations and having then to implement them during the 2008 edition of the consolidated benchmarking of online public services.

As matter of fact in our final recommendation we adopt a much more pragmatic and feasible solution.

2.3 Final Recommendations

In light of the received input and of their discussed usefulness and limitations in these final recommendations we integrated or earlier recommendations in two ways.

First, we revise the recommendations contained in table 2 in light of the revised clustering derived from the analysis of the expenditure data.

Second, we integrate them with a preliminary and generic indication of the kind of public entities to be included in the unit of analysis in addition to the Specialised Procurement Entities (SPEs).

Evidently, which one concrete public entities is a choice that we cannot address and will be left for the Commission, the future contractor selected for the realisation of the benchmarking of online public services in 2008 and, last but not least, for consultation with Member States. We also tentatively define how many of each entities should be included, but this is also a choice to be later re-considered and discussed by the mentioned players (EC, contractor, MS).

Before presenting the final recommendations in table 8, a few additional illustrations are needed to contextualise them.

Table 7: Final Break down of EU25 into groups

Groups	Characterisation	Countries
1	Federal structure, decentralised expenditure, relevant SSEF , several SPEs	AT, BE, DE
2	Federal structure or constitutional regionalism, decentralised expenditure, no SSEF , several SPEs	IT, SP
3	Decentralised expenditure, No SSEF , several SPEs	DK,FI,IE,NL, SE
4	Centralised expenditure, relevant SSEF , several SPEs	FR, GR
5	Centralised expenditure, no SSEF , several SPEs	MT, UK
6	Balance expenditure, relevant SSEF , 1 SPE only	CZ, HU, PL
7	Centralised expenditure, relevant SSEF , 1 SPE only	PT, SK
8	Centralised expenditure, no SSEF , 1 SPE only	CY, EE, LT, LV, SI

First, using all of the relevant dimensions (state structure, centralisation/decentralisation of expenditure, share of SSEF, number of existing SPEs) emerged during the previous analysis the table above report the final break down of countries into 8 groups, which shape the recommendations

Second, we follow the suggestion to limit the local level to the inclusion of largest cities. The difference in the suggestions on cities depend on the state structure and to the size of each county.

Third, given the above, we do not use the ESA 95 abbreviation **LCGOV** but the new notation **REGOV** to indicate higher instances of local government (regions or provinces)

Finally the notation "BIG" means Big Spenders. The table that follow in the next three pages does not require any further comment.

Table 8: Unit of analysis final proposal

Group	COUNTRIES	websites by type of specialised procurement entities				websites of other selected entities
		Central SPE website	Regional SPE website	Local SPE website	Vertical SPE website	
1	Austria	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ SSEF BIG ○ STGOV all ○ STGOV capital cities ○ 10 largest UT
	Belgium	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ SSEF BIG ○ 2 STGOV ○ 5 Largest cities ○ 5 Largest UT
	Germany	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ SSEF BIG ○ STGOV all ○ STGOV capital cities ○ 10 largest UT
2	Italy	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ Health, welfare BIG ○ 10 REGOV BIG ○ REGOV capital cities ○ 10 largest UT
	Spain	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ Health, welfare BIG ○ STGOV all ○ STGOV capital cities ○ 10 largest UT
3	Denmark	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ Health, welfare BIG ○ REGGOV BIG ○ 5 Largest cities ○ 5 largest UT
	Finland	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ Health, welfare BIG ○ REGGOV BIG ○ 5 Largest cities ○ 5 largest UT
	Ireland	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ Health, welfare BIG ○ REGGOV BIG ○ 5 Largest cities ○ 5 largest UT
	Sweden	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ Health, welfare BIG ○ REGGOV BIG ○ 5 Largest cities ○ 5 largest UT
	The Netherlands	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ Health, welfare BIG ○ REGGOV BIG ○ 5 Largest cities ○ 5 largest UT

Table 8 continued

Group	COUNTRIES	websites by type of specialised procurement entities				websites of other selected entities
		Central SPE website	Regional SPE website	Local SPE website	Vertical SPE website	
4	France	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 10 CGOV ○ SSEF BIG ○ 20 largest cities ○ 10 largest UT
	Greece	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 10 CGOV ○ SSEF BIG ○ 5 largest cities ○ 5 largest UT
	Luxembourg	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 10 CGOV ○ SSEF BIG ○ Country capital ○ 5 largest UT
5	Malta	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 10 CGOV ○ Health / welfare BIG ○ Country capital ○ 5 largest UT
	United Kingdom	✓	✓	✓	✓	<ul style="list-style-type: none"> ○ 10 CGOV ○ Health / welfare BIG ○ 20 largest cities ○ 10 largest UT
6	Czech Republic	✓				<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ SSEF BIG ○ 5 Largest cities ○ 5 largest UT
	Hungary	✓				<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ SSEF BIG ○ 5 Largest cities ○ 5 largest UT
	Poland	✓				<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ SSEF BIG ○ 5 Largest cities ○ 5 largest UT

Table 8 continued

Group	COUNTRIES	websites by type of specialised procurement entities				websites of other selected entities
		Central SPE website	Regional SPE website	Local SPE website	Vertical SPE website	
7	Portugal	✓				<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ SSEF BIG ○ 5 Largest cities ○ 5 largest UT
	Slovakia	✓				<ul style="list-style-type: none"> ○ 2-3 CGOV BIG ○ SSEF BIG ○ 5 Largest cities ○ 5 largest UT
8	Estonia	✓				<ul style="list-style-type: none"> ○ 10 CGOV ○ Health / welfare ○ Country capital ○ 2-3 largest UT
	Cyprus	✓				<ul style="list-style-type: none"> ○ 10 CGOV ○ Health / welfare ○ Country capital ○ 2-3 largest UT
	Latvia	✓				<ul style="list-style-type: none"> ○ 10 CGOV ○ Health / welfare ○ Country capital ○ 2-3 largest UT
	Lithuania	✓				<ul style="list-style-type: none"> ○ 10 CGOV ○ Health / welfare ○ Country capital ○ 2-3 largest UT
	Slovenia	✓				<ul style="list-style-type: none"> ○ 10 CGOV ○ Health / welfare ○ Country capital ○ 2-3 largest UT

3 THE INDICATOR

3.1 Draft Final Report Findings and Recommendations

3.1.1 PREPARATORY AND INSTRUMENTAL FINDINGS/RECOMMENDATIONS

From the Pilot Feasibility Test and from the interviews with webmasters we extracted findings/recommendations that can be considered preparatory or instrumental to the final proposal of the indicator. Below they are reported in a synthetic fashion:

- ❑ *An indicator bases on sophistication stages assuming a linear progression cannot be calculated¹⁶;*
- ❑ *The information retrievable directly and simply by a web survey is very limited, and the calculation of a meaningful indicator covering all phases and functionalities will require the provision of dummy identity to the analysts carrying out the measured for them to access areas requiring registration;*
- ❑ *There is an hidden side of public eProcurement that cannot be captured using only the web¹⁷ and in order to be measured would require the integration of the web based survey with the analysis of the user manual that in principle all portals/platform should provide to registered users;*
- ❑ *Some eProcurement platforms, by their institutional defined mission, are in charge of only some of the eProcurement phases and raise the problem that they cannot be scored across all the identified phases and corresponding functionalities*

¹⁶ The findings of the pilot test, corroborated by the interviews, confirmed that in some cases Tender submission and management is more difficult to handle electronically than ePayment and eInvoicing and, therefore, the linear progression hypothesised cannot be applied.

¹⁷ For instance: a) back-office functions such as the automated forwarding of eNotifications to the OJEU (eNotification sub-phase) or the transformation of non-price criteria into monetary values (Tender Evaluation sub-phase); and b) two way interaction applications such as the matching between the supplier profile and the business opportunities available on the platform (eNotification sub-phase).

3.1.2 THE INDICATOR

In the Draft Final Report for what concerned the indicator we provided clear recommendations (see sub-par. 3.1.2.1) but we also left other issues open for discussion at the workshop (see sub-par. 3.1.2.2).

3.1.2.1 Recommended actions

From the first finding listed in the previous paragraph, ruling out an indicator bases on a linear progression of sophistication stages, the following choices for the calculation of the supply side indicators and index descends:

The only possibility is to score the various items/functionalities and calculate indicators and index is using a binary scale "Available" (=1) "Not Available" (=0), and apply this to the various items reported in the table below.

Table 9: Items to be assessed and scoring criteria

Macro-phase	Sub-phase	Item	score
1. Pre-Awarding	1.1 eNotification Max score= 5	1.1.1 Publication of notices to official electronic notice boards	1/0
		1.1.2 Use of electronic messages to automate publication in the Official Journal of the European Union	1/0
		1.1.3 Secure notification using email	1/0
		1.1.4 SMS notification as an alerting mechanism	1/0
		1.1.5 Match of the supplier profile to business opportunities	1/0
	1.2 eSubmission Max score= 6	1.2.1 Online execution of Q&A sessions between Contracting Authorities and Economic Operators	1/0
		1.2.2 Creation of user accounts and profiles with related roles	1/0
		1.2.3 Pre-qualification questionnaire for short-listing suppliers	1/0
		1.2.4 Mechanism for encrypting and locking submitted tenders	1/0
		1.2.5 Tender updating service	1/0
		1.2.6 Assistance to suppliers during tender submission through user-friendly Graphic User Interface	1/0
	1.3 Tender evaluation Max Score= 5	1.3.1 Phased opening of tenders according to the tender documentation type	1/0
		1.3.2 Application of the Four-Eye Principle	1/0
		1.3.3 Configuration of eAuctions according to nature of procurement	1/0
		1.3.4 Transformation of non-price criteria into monetary values	1/0
1.3.5 Notification of contract award		1/0	
2. Post-Awarding	2.1 eOrdering Max score= 2	2.1.1 Configuration of eCatalogues according to nature of procurement	1/0
		2.1.2 Set-up of order placing automated online procedures	1/0
	2.2 eInvoicing Max score= 1	2.2.1 Issue of invoices by email directly to the customer	1/0
	2.3 ePayment Max Score= 2	2.3.1 Receipt of payments by electronic funds transfer	1/0
		2.3.2 ePayment security procedures	1/0

Before proceeding further, we point out that to simplify the picture, also in light of the limits on the amount of information retrievable online, we eliminated the following two items:

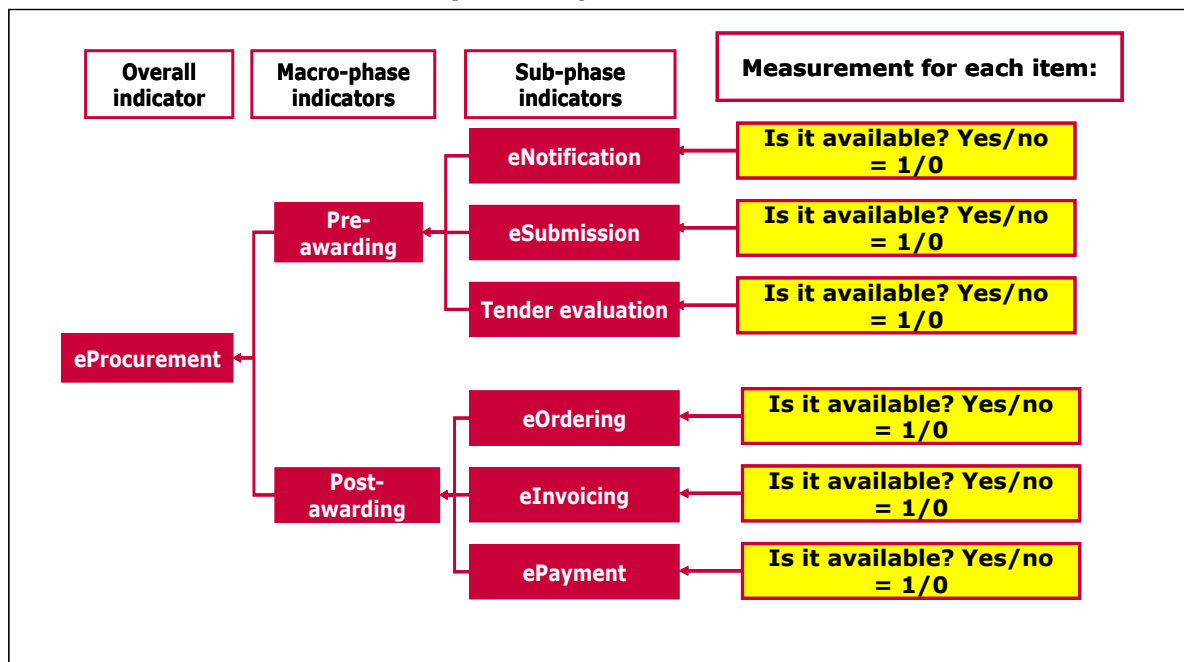
- ❑ Four eyes principle¹⁸
- ❑ "maverick buying" procedures¹⁹

Moreover, ever since the initial overview of public eProcurement conducted at the very start of the project we rule out Dynamic Purchasing System (DPS) in view of the fact that we found no evidence of any public sector platform using it.

So in our proposal the analysts performing the benchmark will assess each of the public eProcurement portals/platforms included in the unit of analysis using the check list provided by the table reported in the previous page and assign a score of 1 or 0 for each of the items/functionalities of each sub-phase.

By dividing the total score obtained for each sub-phase by the maximum potential score indicated in the table above (i.e. 5 for eNotification) various percentage based indicators for each sub-phase will be obtained we can call "**sub-phases availability indicators**". Then a "**Pre-awarding availability indicator**" can be calculated as the arithmetic mean of the corresponding "**sub-phases availability indicators**" (eNotification, eSubmission, Tender evaluation), and in the same way a "**Post-awarding availability indicator**" (eOrdering, eInvoicing, ePayment). Finally, a "**eProcurement Overall Availability Indicator**" could be calculated as the arithmetic mean of the value of the indicators for all of the sub-phases. The next two exhibits summarise the considerations above.

Exhibit 4: Indicators hierarchy and implementation



Source: RSO/IDC elaboration

¹⁸ Compliance with the Four-Eye Principle envisages ensuring that, during eProcurement processes, access to tenders cannot be obtained by anyone until authorised procurement officers open the Tenders. Furthermore, it envisages that two or more authorised procurement officers are able to open tenders simultaneously.

¹⁹ Elimination of "maverick buying" procedures occurs if the eProcurement system in place makes it possible to avoid buying stock from small local suppliers, and encourages buying from larger more convenient suppliers, thus creating economies of scale

Exhibit 5: Indicators elaboration

Level and Number of Indicators	Type of Indicator	Method of Calculation for each Website	Aggregation at Member State Level
20 Item Indicators	Number	1 (yes) or 0 (No)	
6 Sub-phase Indicators			
eNotification (5 items)	Percentage	Sum of Item scores (simple or weighted)/ Maximum Possible scores	Arithmetic Mean of Sub-phase indicators (simple or weighted) for all websites analysed
eSubmission (6 items)			
Tender evaluation (5 items)			
eOrdering (2 items)	Percentage	Sum of Item scores (simple or weighted)/ Maximum Possible scores	Arithmetic Mean of Sub-phase indicators (simple or weighted) for all websites analysed
eInvoicing (1 item)			
ePayment (2 items)			
2 MacroPhase Indicators			
1. Pre-Awarding	Index	Arithmetic Mean of pre-Awarding Sub-phase indicators (simple or weighted)	Arithmetic Mean of pre-Awarding Sub-phase indicators (simple or weighted)
2. Post-Awarding	Index	Arithmetic Mean of post-Awarding Sub-phase indicators (simple or weighted)	Arithmetic Mean of post-Awarding Sub-phase indicators (simple or weighted)
1 Overall Indicator	Index	Arithmetic Mean of all Subphase Indicators (simple or weighted)	Arithmetic Mean of all Subphase Indicators (simple or weighted)

3.1.2.2 Issues left open

Among the open issues we mentioned the possibility to calculate the overall indicator using different weights and presenting it as a proxy sophistication indicators. This could be done by assigning, for instance (but it just an exemplificative proposal) an equal weight to eSubmission, Tender Evaluation, eOrdering, eInvoicing and ePayment, and a substantially lower weight for eNotification (for instance 19% weight for the first five, and only 5% for eNotification). An alternative is to apply the weights to the different platforms according to their importance (see exhibit below)

Exhibit 6: Weighting Options

Level and Number of Indicators	Type of Indicator	Weight Options 1/ website level	Weight Option 2/ Member State level
20 Item Indicators	Number		
6 Sub-phase Indicators			
eNotification (5 items)	Percentage	Mean of item scores, weighted by relevance within each subphase	Weight website scores by type (ie national platform more important than regional/specialized)
eSubmission (6 items)			
Tender evaluation (5 items)			
eOrdering (2 items)	Percentage	Mean of item scores, weighted by relevance within each subphase	idem
eInvoicing (1 item)			
ePayment (2 items)			
2 MacroPhase Indicators			
1. Pre-Awarding	Index	Mean of subphase indicators weighted by relevance (ie reduce eNotification phase weight)	idem
2. Post-Awarding	Index	Mean of subphase indicators weighted by relevance	idem
1 Overall Indicator	Index	Mean of MacroPhase indicators weighted by relevance (ie 70 pre-award, 30 post-award)	Weight website scores by type (ie national platform more important than regional/specialized)

The way in which this scoring produced for each of the surveyed portal/platform will have to be aggregated into an overall country score, and possibly into other aggregations (i.e. national level and regional level), is an issue the contractor who will carry out the benchmarking will have to operationalise. In general the basic principles of the consolidated Capgemini benchmark can be applied, but naturally will have to be opportunely adapted to the way the unit of analysis will be defined.

The analysis carried and presented in the Draft Final Report left open a number of other issues, which were presented for discussion at the workshop::

- 1) At what hierarchy level should we weight the different indicator components?²⁰ Should we weight by item/functionality or only by sub-phase?
- 2) Weights: which criteria should we rely on in order to weight the indicators? As already explained, the sub-phases and the items do not design a progression in the e-procurement adoption. Therefore, the weight criteria cannot be based on a progression of e-procurement adoption. We suggest that weights could be based on the saving (potentially) achieved by the public administration when the sub-phase or the item is implemented on-line instead of off-line.
- 3) Comparability: in our view, there are at least two issues for the indicator comparability. First, some platforms may be addressed to the pre-awarding sub-phases; others may be addressed to the post-awarding sub-phases. How can we compare the overall indicators of such websites? Second, vertical platforms/portals may transact different shares of commodities or specialties. This may have a different influence on the use of the sub-phases and of the items

²⁰ Referring to this issue, two options could be further explored:

- 1) Weighting the eProcurement components according to gains, in terms both of efficiency and effectiveness, the final users could achieve by accessing them online;
- 2) Weighting the components according to the nature of the good/service whose purchase they enable online.

3.2 Workshop comments on the indicator

The comments received during the workshop can be summarised as follows:

- 1) web based measurement is too limited for this survey. It has to be complemented with objective data from other sources (eg OPOCE for notices, Eurostat, etc);
- 2) The study is too oriented to human-to-web interaction. Even if you can only perform the survey using web-based info, you cannot ignore that a substantial part of eProcurement is just machine-to-machine:
 - It is relevant and feasible to analyse the user manual or technical specifications of eProcurement platforms;
 - Systems using just email and PDF documents (invoices, notices) do not show a high level of development. Efficiency arrives only via XML and structured messages (which can be processed by machines instead of human beings). Also, email is neither a secure way of transmission nor legal for invoices. Invoices should be signed electronically or sent via VAN networks;
- 3) Some phases or key eProcurement process are missing, for instance DPS (Dynamic Purchase System): No member state has yet implemented it, but those which will do it will show a high degree of e-availability;
- 4) Cross-border barriers, when they exist, should lead to scores;
- 5) Each phase should be evaluated independently:
 - Each phase could be implemented in a different web site for the same public entity;
 - Each phase can be measured in a range 0-100% electronic availability (for instance, invoices sent by e-means but credit notes sent by fax means half availability), instead of 0-1;
 - Member states should be scored at least at phase level and should be comparable at that level (eg. Availability at eNotices, availability at eInvoices, availability at ePayment).

3.3 Final Considerations

Comment 1) and 2) focus on the same issue of the appropriateness of using a web survey to measure the public eProcurement supply side indicator. The way comment 1) is phrased amounts to what we earlier termed a legitimate and valid but "external critique". For use the approach of using a web based survey was a given assumption. As for comment 2), we can but repeat what we already recommended in the Draft Final report: *that the web survey is integrated with an analysis of user manuals*.

Comment 3) and 4) both go into the direction of adding more items to those we proposed in table 9 for the scoring. Our choice is informed by the principle of feasibility and simplicity and we already suggested 21 items. So from our perspective we point out to Unit C1 such suggestions, but we do not change our recommendations as expressed in the mentioned table 9.

The final comment 5) is the most relevant and thorny one as it touches on a challenge we also signalled in the Draft Final Report and we recalled in sub-paragraph 3.1.1.

On this and on the other open issues the comments and input of the workshop cannot be considered conclusive. Moreover, these are issues of operationalisation that the Commission and the contractor which will be selected for the benchmarking of 2008 will have to finalise. Accordingly we do not provide a final answer/recommendation to them.

ANNEX I: SYSTEM OF ACCOUNTS (EXTRACTS FROM SNA 93 AND ESA 95)

Entities	SNA 93 definitions	ESA 95 Definitions
General Government	<p>§ 2.2 The general government sector consists of the totality of institutional units which, in addition to fulfilling their political responsibilities and their role of economic regulation, produce principally non-market services (possibly goods) for individual or collective consumption and redistribute income and wealth</p>	<p>§ 2.68 The sector general government includes all institutional units which are other non-market producers whose output is intended for individual and collective consumption, and mainly financed by compulsory payments made by units belonging to other sectors, and/or all institutional units principally engaged in the redistribution of national income and wealth</p>
Central Government	<p>§ 4. 118 The political authority of central government extends over the entire territory of the country. Central government has therefore the authority to impose taxes on all resident and non-resident units engaged in economic activities within the country. Its political responsibilities include national defence and relations with foreign governments and it also seeks to ensure the efficient working of the social and economic system by means of appropriate legislation and regulation and also the maintenance of law and order. It is responsible for providing collective services for the benefit of the community as a whole, and for this purpose incurs expenditures on defence and public administration. In addition it may incur expenditures on the provision of services, such as education or health, primarily for the benefit of individual households. Finally, it may make transfers to other institutional units - households, NPIs, corporations and other levels of government</p>	<p>§ 2.71 The sub-sector central government includes all administrative departments of the State and other central agencies whose competence extends normally over the whole economic territory, except for the administration of social security funds. Included in sub-sector are those non-profit institutions which are controlled and mainly financed by central government and whose competence extends over the whole economic territory.</p>

Entities	SNA 93 definitions	ESA 95 Definitions
State Government	<p>§ 4.124 State governments are institutional units exercising some of the functions of government at a level below that of central government and above that of the governmental institutional units existing at a local level. They are institutional units whose fiscal, legislative and executive authority extends only over the individual "states" into which the country as a whole may be divided. Such "states" may be described by different terms in different countries. In some countries, especially small countries, individual states and state governments may not exist. However, in large countries, especially those which have federal constitutions, considerable powers and responsibilities may be assigned to state governments.</p>	<p>§ 2.72 The state government sub-sector consists of state governments which are separate institutional units exercising some of the functions of government at a level below that of central government and above that of the governmental institutional units existing at local level, except for the administration of social security funds. Included in sub-sector are those non-profit institutions which are controlled and mainly financed by state governments and whose competence is restricted to the economic territories of the states.</p>
Local government	<p>§ 4.128 The local government sub-sector consists of local governments that are separate institutional units plus those NPIs which are controlled and mainly financed by local governments. In principle, local government units are institutional units whose fiscal, legislative and executive authority extends over the smallest geographical areas distinguished for administrative and political purposes. The scope of their authority is generally much less than that of central government or regional governments, and they may, or may not, be entitled to levy taxes on institutional units resident in their areas. They are often heavily dependent on grants or transfers from higher levels of government, and they may also act as agents of central or regional governments to some extent. However, in order to be treated as institutional units they must be entitled to own assets, raise funds and incur liabilities by borrowing on their own account; similarly, they must have some discretion over how such funds are spent. They should also be able to appoint their own officers, independently of external administrative control.</p> <p>[...]</p>	<p>§ 2.73 The sub-sector local government includes those types of public administration whose competence extends to only a local part of the economic territory, apart from local agencies of social security funds. Included in sub-sector are those non-profit institutions which are controlled and mainly financed by local governments and whose competence is restricted to the economic territories of the local governments</p>

Entities	SNA 93 definitions	ESA 95 Definitions
<p>Social security funds</p>	<p>§4.112 Social security funds may be distinguished by the fact that they are separately organized from the other activities of government units and hold their assets and liabilities separately from the latter. They are separate institutional units because they are autonomous funds, they have their own assets and liabilities and engage in financial transactions on their own account. However, institutional arrangements in respect of social security differ from country to country and in some countries they may become so closely integrated with the other finances of government as to bring into question whether they should be treated as a separate sub-sector. The amounts raised, and paid out, in social security contributions and benefits may be deliberately varied in order to achieve objectives of government policy that have no direct connection with the concept of social security as a scheme to provide social benefits to members of the community. They may be raised or lowered in order to influence the level of aggregate demand in the economy, for example. Nevertheless, so long as they remain separately constituted funds they must be treated as separate institutional units in the System.</p> <p>§ 4.130 The social security funds sub-sector consists of the social security funds operating at all levels of government. As explained in paragraph 111 above, social security funds are social insurance schemes covering the community as a whole or large sections of the community that are imposed and controlled by government units</p>	<p>§ 2.74 The sub-sector social security funds includes all central, state and local institutional units whose principal activity is to provide social benefits and which fulfil each of the following two criteria:</p> <ul style="list-style-type: none"> a) by law or by regulation certain groups of the population are obliged to participate in the scheme or to pay contributions; b) general government is responsible for the management of the institution in respect of the settlement or approval of the contributions and benefits independently from its role as supervisory body or employer (see paragraph 4.89.). <p>There is usually no direct link between the amount of the contribution paid by an individual and the risk to which that individual is exposed.</p>