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**EVALUATION of the 2004 ACTION PLAN FOR ELECTRONIC PUBLIC
PROCUREMENT**

Accompanying document to the

Green Paper on expanding the use of e-Procurement in the EU

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1. EXECUTIVE SUMMARY

Introduction

This evaluation assesses the advances made in the adoption of e-Procurement since 2004 and the contribution of the Commission's 2004 "Action Plan for the implementation of the legal framework for electronic public procurement" to that progress. It also identifies outstanding challenges and issues which need to be resolved. The review is timely - there is still a window of opportunity to influence development and integration within the e-Procurement market, which has not yet reached a critical mass. However, the market is evolving, different national solutions are being developed and the window will not remain open for long.

EU procurement legislation has helped to embed a culture of professional and value-driven procurement, bringing greater transparency to European markets for public contracts. In 2009 over 150,000 contracts were advertised EU-wide with an estimated value of around 3% of EU GDP. Directives 2004/18/EC and 2004/17/EC were intended to modernise and simplify public procurement procedures and recognised the on-going transition within Member States to e-Government in general. For the first time it was possible to use electronic means and new modern purchasing techniques. To support and facilitate this introduction of e-Procurement, the Commission adopted the Action Plan for e-Procurement in December 2004.

E-Procurement refers to the use of electronic communications and transaction processing by government institutions and other public sector organisations when buying supplies and services or tendering public works. However, there is much more at stake than the mere changeover from paper-based procurement systems to ones using electronic communications. E-Procurement has the potential to yield important improvements in the efficiency of individual purchases, the overall administration of public procurement and the functioning of the markets for government contracts.

What is e-Procurement? Why is it important?

Public procurement consists of eight phases – publication of tender notices, access to tender documents, submission of tenders, evaluation, award, ordering, invoicing and payment. Although each of these phases has a certain role to play in the full e-Procurement process, it is not always necessary or even appropriate to provide all these phases electronically e.g. e-Evaluation of contracts requiring predominantly qualitative assessments. Some processes e.g. invoicing and payment are not procurement-specific and solutions developed for the wider (B2B) market can be put to work in e-Procurement. Others call for customised solutions; e-Submission, e-Evaluation and e-Ordering pose the greatest challenges, requiring an agreed set of protocols and standards to organise the exchange of complex documents and interactions between public purchasers and suppliers

This evaluation assumes that the minimum requirement for a system to be defined as providing e-Procurement is the electronic provision of the publication of tender notices, access to tender documents and submission of tenders.

The Commission believes that the wider use of e-Procurement could deliver significant benefits. E-Procurement has the potential to streamline and accelerate public purchasing, benefiting both public purchasers and suppliers along the way. It could lead to more efficient procurement administration resulting in cost and time savings. When coupled with the

development of centralised purchasing bodies, e-Procurement could provide a way to optimise these efficiencies further, integrating resource-consuming support functions and delivering savings due to economies of scale. By automating and strengthening the flow of information about individual tender opportunities, e-Procurement should reach a wider audience and provide greater publicity, which could lead to increased participation by economic operators and as a consequence, increased competition. E-Procurement could also promote cross-border procurement, not just through greater publicity of contracts, but also by enabling a certain degree of language independence (through the use of e-Catalogues for example) and standardising certain practices. Equally, e-Procurement presents an opportunity to introduce more rigour within procurement systems, providing ways to apply more objectivity in selecting suppliers and support better governance.

Ultimately, this should all lead to better value for money for the taxpayer, which in the current financial climate could be very welcome, maximising the potential of constrained resources. E-Procurement systems have already proved useful in speeding up the expenditure of public procurement budgets.

What role has the EU played to date in promoting e-Procurement?

The Commission's 2004 Action Plan provided a roadmap, establishing a strategy designed to accelerate the adoption of e-Procurement whilst safe-guarding the core principles and provisions of existing EU procurement legislation and wider Treaty principles. It was intended to encourage the development and use of convergent, accessible, secure but commercially viable solutions and disseminate examples of best-practice. Action was also required to stimulate and orientate the work of the first movers in the field, who had already introduced e-Procurement elements in their legislation or practices, or set up e-Procurement systems. The policy vision underpinning the Action Plan was very ambitious - to create a situation where *"... any business in Europe with a PC and an internet connection can participate in a public purchase conducted electronically."*¹

The Action Plan was organised around three main objectives:

- (1) Ensure a well functioning Internal Market in electronic public procurement;
- (2) Achieve greater efficiency in procurement, improve governance and competitiveness;
- (3) Work towards an international framework for electronic public procurement.

EU policy was designed to play a complementary role in support of national or regional efforts to put procurement on an electronic footing. It recognised the need to take into account an EU level dimension, without which the switch-over could be hampered and resources could be wasted as the wheel was constantly re-invented. A total of 31 measures were identified, directed at the Commission, Member States, standardisation bodies and the Public Procurement Network.

¹ Page 10 of the Extended Impact Assessment COM 2004(841), annexed to the Action Plan Communication.

Approach to this evaluation

Within the Action Plan, the Commission was tasked, by the end of 2007, to start to "review and report on the results achieved and to propose, if need be, [...] corrective action or additional measures"².

The evaluation therefore focuses on pulling together a picture of the current state of play and identifying what has changed. Given the fairly short reference period and the absence of detailed, consistent EU-wide data, it has proved difficult to attempt a definitive evaluation at this stage. Nonetheless, the evaluation tries to identify where it is reasonable to imply that the Action Plan has influenced any change and to assess how far it has progressed towards achieving its specified objectives. Ultimately, by responding to the three evaluation questions (see later), the report judges the progress made against the expectations of 2004 and the contribution of the Action Plan to this process. It also identifies issues requiring further attention.

To assist in this process, two external pieces of work were commissioned and provide much of the evidence presented³. Information has also been gathered from practical experience and developments, including: visiting and reviewing e-Procurement websites and portals; case studies published (particularly on the e-Practice website); meetings and discussions of the e-Procurement Working Group; and the many conferences and seminars organised by practitioners and associations.

The state of play – availability and use of e-Procurement in Europe today

Approaches adopted: The 2004 Action Plan permitted authorities to develop solutions and introduce e-Procurement, in the way best suited to them, subject to compliance with the legal framework and guidance provided. The resultant kaleidoscope of approaches and results reflects this flexibility. Many Member States adopted national action plans although fewer countries appear to have plans/a clear strategy covering the future roll out and use of e-Procurement. Although no examples of plans directed at national buyers were found, Ireland, France, Scotland and Italy did develop plans specifically targeted at improving SME participation in e-Procurement and report some success. There is some evidence that many SMEs find e-Procurement solutions beneficial saving them time and money and providing access to a larger pool of opportunities.

Whilst some Member States leave it up to contracting authorities to decide whether to use electronic means or not, others have introduced or plan to introduce mandatory requirements. For example, Portugal has made e-Procurement mandatory for all pre-award phases; other countries have (or will have) mandatory e-Notification (BE, CY, NL) or e-Invoicing (SE, DK). Some countries oblige certain levels of government to use e-Procurement e.g. in Austria federal authorities must use electronic framework agreements when purchasing specific goods and services. Some countries tend towards centralisation of procurement and the use of Central Purchasing Bodies (which often make extensive use of electronic methods) whilst others have a more decentralised approach. Some systems are run by public agencies, while

² Page 10 of the Action plan for the implementation of the legal framework for electronic public procurement

³ The resultant study published alongside this evaluation is "Study on the evaluation of the Action Plan for the implementation of the legal framework for electronic procurement" by Siemens-time.lex.

others are provided by private sector companies; contracting authorities then pay on a flat-rate or per-use basis.

Availability of technical solutions: E-procurement is now possible in practice – not just in theory. The technology exists and is being used in several countries to permit all the procurement phases to be completed on-line. However, technology has not provided the expected (high tech) solutions to all procedural steps. In some cases, progress has resulted from a more pragmatic approach – in the form of practical 'workarounds' involving less technically demanding solutions or combining on/off-line communication e.g. the approaches adopted to the provision of evidentiary documents for exclusion and selection criteria; the use of user name and password solutions to authenticate a bidder. Such solutions are valid – they simply provide alternative ways to reach the end result. Certain limits to "straight through e-Procurement" have been identified e.g. difficulties in using automated evaluation approaches to complex purchases; absence of a recognised EU-wide time-stamping system. Although some progress has been made towards developing standards for e-Invoicing and e-Ordering there are in general still too many standards relating to e-Procurement and their content is too broad. Approaches to authentication issues vary widely.

Investment in and availability of e-Procurement capacity: E-procurement is beginning to make its presence felt in Europe. The success of a number of platforms demonstrates the business case. Today systems offering some level of functionality exist in 30 of the 32 countries (26 Member States), although, the services provided vary quite markedly, both in terms of the number of phases/tools supported and in the level of sophistication of the ICT solutions adopted. In 25 of the 32 countries considered (24 Member States) there are systems capable of e-Submission and hence fulfil the definition of e-Procurement used for this evaluation. 18 countries (17 Member States) offer the full pre-award phases to some degree. A number of successful systems have adopted an e-Procurement model provided by 3rd parties over a network, often offering their services to several organisations at the same time.

Actual use of e-Procurement: Actual use of e-Procurement is difficult to measure, but is estimated to be much lower than might be inferred from the infrastructure which has been put in place. The EU average figure is estimated to be less than 5% of total value, other than in Portugal, where the mandatory approach results in nearly 100% use of e-Procurement. France and Italy, first mover countries in e-Procurement, estimate that only 4% and 2.5% respectively of their total procurement is conducted electronically. Uptake is likely to increase as experience with e-Procurement grows – many systems are still fairly new and there are signs that momentum is building in the e-Procurement market. Wider anecdotal evidence suggests that many contracting authorities and economic operators who have made the switch-over to e-Procurement would not contemplate a return to paper based procedures.

Good progress has been made in the simpler e-Notification and e-Access phases which only require a one-way flow of information. This may also be due to the incentives within the 2004 Directives, permitting the reduction of deadlines when these phases are provided via electronic means. There is now a single, accepted and well used system for the publication of above threshold notices across the EU (Tenders Electronic Daily or TED), supported by compatible infrastructure at national level. In 2009 just over 90% of forms sent to TED were received electronically and in a structured format. The electronic publication of notices for below threshold procurement has also advanced at national or regional level. Although figures are not available for e-Access it is also expected that its use is fairly high. This success tails off as the two-way communication phases are entered and more complex technical requirements are encountered.

Cross-border accessibility of e-Procurement systems: Whilst there may be some grounds to believe that there is a certain degree of consistency in relation to legal compliance, technologically there is little doubt that within the EU different systems have been developed to different requirements and standards with the resultant negative impacts on authentication and interoperability between systems. Examples of functioning interoperability between systems are limited and mainly rely on solutions being found to integrate support for non-national solutions which meet the applicable national standards.

In today's market, economic operators wishing to participate in on-line procurement procedures in other Member States are faced with a range of practical, technical and administrative obstacles. National/regional e-Procurement procedures are designed by reference to local administrative or technical practices which may differ significantly. As a result, little concrete progress has been made towards unhindered, cross-border electronic procurement.

Some significant success has been achieved in areas where a common EU-level infrastructure has been set up – TED has helped make the use of e-notification wide-spread in the EU. Several actions are on-going which may improve the cross-border accessibility of e-Procurement.

Commission financed and steered actions to support e-Procurement:

PEPPOL: a joint project between the European Commission and several EU public-sector organisations, PEPPOL is a major cross-border project intended to provide large-scale, standards-based IT infrastructure and services to set up and run on-line pan-European public procurement operations.

Open e-PRIOR: the European Commission has developed and deployed e-PRIOR to allow the exchange of structured e-Catalogues, e-Ordering and e-Invoicing documents between the Commission and its suppliers. Open e-PRIOR publicly provides this solution in a re-usable open-source format.

E-CERTIS: e-CERTIS is a free, on-line information tool which will provide details of the different certificates and attestations frequently requested in procurement procedures across the 27 Member States, Candidate and EEA countries. It will help interested parties to understand what information is being requested or provided and to identify mutually acceptable equivalents.

Savings from the use of e-Procurement: There is a small but growing body of proof that savings are being realised as a result of e-Procurement use. Often these savings are substantial (€millions); experience suggests these investments can be recouped in administrative savings within short time-frames. Investment costs in national and regional e-Procurement facilities – spanning e-portals to more comprehensive solutions – range from 0.5m€ to 5m€. ⁴ Maintenance costs vary from several thousand Euros to several million, presumably depending on the size and sophistication of the system. Time savings are also reported – not just as a result of the possibility to reduce deadlines, but also through the introduction of more efficient processes.

⁴ Based on information available from the e-Practice website

Have the objectives of the Action Plan been achieved?

As at end 2009, 13 of the 31 measures in the Action Plan had been completed, three were partially completed (i.e. some action has been undertaken but at present little advance is being made), 13 were on-going and two had been delayed.

In broad terms it is clear that whilst progress has been made to introduce and use e-Procurement, the overall objective of unhindered cross-border electronic procurement has not yet been achieved. Realistically, given the complexity of the change required and the inherent challenges in moving towards electronic systems, these objectives were always unlikely to be achieved in such a short time-frame – it is perhaps fairer to ask if greater progress could have been expected.

Do we have a well functioning Internal Market in electronic public procurement?

Progress has been made, particularly at the national level, but there is currently no internal market in e-Procurement – greater availability of e-Procurement infrastructure has not yet translated to wide-spread use and cross-border e-Procurement is virtually non-existent. Whilst different "island" solutions exist, the bridges to connect them do not and the lack of common standards and interoperability problems create barriers to cross-border e-Procurement. The legal framework appears to have been correctly implemented and many countries now have the appropriate basic tools in place, although some legal issues still need to be addressed. The current situation bears marked similarity to the baseline scenario of the extended impact assessment i.e. the situation expected to develop in the absence of Community level action. Given that action was taken, it would seem fair to conclude that less has been achieved than might have been expected.

Have we achieved greater efficiency in procurement, improved governance and competitiveness?

At a national level, there is some evidence that efficiency has improved due to e-Procurement – certainly many portals promote the savings made by using their systems. Some initial improvements in governance have been seen – at least during the process of introducing e-Procurement, when many countries followed national plans; future strategies appear less well developed. Goal oriented policy making does not seem to have been widely adopted – only seven countries have systems for regularly collecting procurement data and information and it is not clear how much e-Procurement monitoring is conducted. There are indications that competition has increased – some countries report increased numbers of bidders per tender – certainly many economic operators appear to be registering with the various portals. So some improvements have been seen, although again they are probably less than might have been expected.

Have we progressed towards an international framework for electronic public procurement?

Although the Commission has made progress and carried out the actions identified under the Action Plan, there has not been much progress in developing an international framework for e-Procurement. Here expectations were perhaps not that high as success relied on a multitude of factors and was not always within the control of the EU.

How the Action Plan has contributed to the current situation

The contribution of the Action Plan to the current situation is best addressed by considering the answers to the three evaluation questions.

To what extent have public procurement procedures been "computerised"?

As discussed above much progress has been made to introduce national level solutions, but actual use appears to be low and there is still a long way to go to achieve the vision of the Action Plan. Some countries have developed "state of the art" systems; others have adopted simpler, lower-tech solutions. As yet, no evidence has been presented that approaches based on lower levels of technology have experienced any problems in relation to providing acceptable levels of security and trust. Many of the necessary technical building blocks which were expected to develop over this period have not advanced to a point where the market has converged on common standards or approaches. Whilst e-Procurement in the EU may be nearing the Manchester target⁵ of 100% availability in 2010, at least in theory, it is currently far short of the 50% use target.

To what extent did the EU Action Plan for e-Procurement identify the right priorities and strategy? To what extent has it been implemented?

The Action Plan appears to have identified the main priorities for developing e-Procurement although more emphasis/action could have been directed at aiding and encouraging organisational change. It correctly identified the need to create a single consistent EU legislative framework and provide related guidance. It stressed the need to develop solutions for interoperability, standardisation and authentication and promoted clear planning and monitoring to efficiently manage the introduction of procurement using electronic means. Many measures encouraged sharing best practices and experience. Perhaps a little prematurely, it also promoted advancing EU solutions on the international stage and encouraged consistency with international developments.

A few, perhaps subtle exceptions may be highlighted however. One relates to the emphasis placed on the adoption of qualified signatures. These technologically demanding solutions may be creating an unnecessary barrier to access and cross-border use and to-date, no "lower tech" solutions have caused problems relating to security / trust. Also, there has been a certain trend to develop and use more practical workarounds rather than higher tech solutions which were implicit in the Action Plan (e.g. in respect of e-Certificates and e-Attestations).

The soft law approach of the Action Plan has certainly been fruitful and encouraged the development of creative solutions. Whilst appropriate in the context of a developing market, the strategy could have gone slightly further and been more pro-active, putting in place control mechanisms to ensure actions were conducted. Often the more targeted actions, accompanied by the use of clear incentives – for example the changes to TED and e-Notification, produced greater success, more directly attributable to the Action Plan. Perhaps the greatest flaw, although no-one could know this at the time, was the reliance on faster technological developments expected to create the optimal conditions for introducing and adopting e-Procurement.

⁵ Manchester ministerial declaration, 24 November 2005

How relevant, efficient and effective has the Action Plan been in achieving or at least nearing the stated objectives of efficient and unhindered cross-border e-Procurement in the EU?

The evaluation shows quite clearly that the majority of priorities identified by the Action Plan were relevant in 2004 and many remain relevant today, although some shifts of emphasis may be appropriate in relation to issues such as authentication and e-Attestations. It is more difficult to judge how well resources from the Action Plan have been used to achieve the results identified. Reviews of the existing systems imply that the studies and projects have contributed to the progress made but it is not possible at present to assess the overall efficiency of the Action Plan. Many of the Action Plan measures have contributed in some degree to the progress made, but the actual objectives of the Action Plan have not been met in full and hence its actual effectiveness is limited. To achieve the vision of the Action Plan, further co-ordinated action is required.

Remaining issues and challenges to developing wide-spread, cross-border e-Procurement

A number of challenges and weaknesses have been identified which prevent the wider take-up of e-Procurement and cross-border participation in on-line procurement. Looking to the future, the Commission must continue to act to minimise the risks of a decentralised, fragmented approach at EU level. The following issues (presented in no particular order) appear important.

- **Provision of a supportive legal environment.** As systems develop it may be necessary to set clearer conditions for their use and to define the obligations relating to the provision and operation of such platforms. In the wider legislative context, changes might be required in related legislation e.g. the e-Signatures Directive (under consideration), e-Invoicing and VAT.
- **More pragmatic approach, where appropriate, to technical issues:** Some of the more sophisticated approaches to e-Procurement may be preventing wider access and interoperability. There is currently no way to facilitate mutual recognition of national digital solutions to critical e-Procurement elements such as authentication and evidentiary documents. Solutions need to be found which are proportionate to the risks within the procurement process and which reduce the burden on contracting authorities and suppliers wishing to operate in a wider European market.
- **Greater support for administrative simplification and organisational change.** Many countries have reported inertia and a lack of interest on the part of economic operators and contracting authorities. More needs to be done to identify and promote ways to simplify the procurement process and facilitate organisational change. Within this policy, steps should be taken to introduce better monitoring systems at both EU and national level.
- **Lack of standards in e-Procurement processes.** For the foreseeable future, suppliers will be confronted with an e-Procurement landscape consisting of different e-Procurement platforms and arrangements. Each system may contain different technical features and functions, complicating the task of suppliers who seek to participate in multiple systems. Whilst convergence on one monolithic system is neither desirable nor intended, it will facilitate participation if there is some common core functionality across systems. Many of the most challenging issues manifest themselves in the submission and processing of tenders phases.

- **Improved access and wider inclusion.** Action may be necessary to ensure that e-Procurement is available to all interested parties including SMEs and that the benefits can be shared by all.

Next Steps

Faced with this situation, the Commission believes that there is a need for sustained attention at EU level to accompany the wider take-up of e-Procurement. Rather than proposing detailed recommendations here, the Services of the Commission would like to first propose a period of wider consultation, to build consensus on the most important issues to be addressed and the approach to be adopted. This consultation phase will be triggered by the publication of a Green Paper, building on the results of this evaluation, intended for publication in October 2010.

Future monitoring and evaluation

Monitoring is an important part of any policy intervention which allows users and managers to check that an activity is “on track” and identify timely “corrective” actions if necessary. In conducting this evaluation it has become clear that although progress has been made since 2004, with much research undertaken and publication of case studies and findings, there is a marked lack of commonly defined and collected statistics and indicators at an EU level. Whilst it is neither possible nor appropriate at this point to actually define the indicators required, there are three obvious areas where effort must be targeted: the development of indicators for the availability and use of e-Procurement and also to measure progress in eliminating the main barriers identified.

2. INTRODUCTION

EU procurement legislation has helped to embed a culture of professional and value-driven procurement across Europe. It has brought transparency to markets for public contracts. In 2009, over 150,000 contracts were advertised EU-wide, for an amount estimated at around 3.11% of EU GDP. Given the amount of public money at stake and the number of public purchasers and suppliers involved, the way in which public procurement is regulated and administered has an immediate and significant influence on the business environment.

E-Procurement refers to the use of electronic communications and transaction processing by government institutions and other public sector organisations when buying supplies and services or tendering public works. However, there is much more at stake than the mere changeover from paper-based systems to ones using electronic communications for public procurement procedures. E-Procurement has the potential to yield important improvements in the efficiency of individual purchases, the overall administration of public procurement, and the functioning of the markets for government contracts. The phasing-in of e-procurement forms part of the ambitious e-government agenda which can fundamentally transform the delivery and performance of public administration. The Commission's European Digital Agenda foresees the adoption of a Commission White Paper outlining steps that the Commission will take to establish an inter-connected e-procurement infrastructure⁶.

This evaluation assesses the advances made in the adoption of e-Procurement since 2004 and the contribution of the Commission's 2004 "Action Plan for the implementation of the legal framework for electronic public procurement"⁷ to that progress. The objectives of the Action Plan were further underlined by the Manchester ministerial declaration which called for:

"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

By 2010 at least 50% of public procurement above the EU public procurement threshold will be carried out electronically."

If the benefits attributed to the introduction and use of e-Procurement can be achieved fully, or even only in part, the potential for savings, both in time taken to procure and financially, is enormous. The Extended Impact Assessment (EIA)⁸ which was published alongside the Action Plan estimated that:

"If online procurement is generalised, it can save governments up to 5% on expenditure and up to 50-80% on transaction costs for both buyers and suppliers."

This evaluation presents the EU and Member States with a timely opportunity to review the progress which has been made in moving from a purely paper based environment to one where e-Procurement is legally permitted, available and used. It will also identify any barriers

⁶ A Digital Agenda for Europe COM(2010) 245 (page 32)

⁷ Extended Impact Assessment, COM 2004(841) available on DG MARKT website http://ec.europa.eu/internal_market/publicprocurement

⁸ Page 1 of the EIA COM 2004(841)

to cross-border participation and issues which still need to be resolved. This review is well-timed - there is still a window of opportunity to influence the development, shape and integration within this market, which has not yet reached a critical mass. However, the market is evolving at an ever faster pace, a range of different national solutions are being developed and the window will not remain open for long.

2.1. Purpose of this report

In 2004 when the Action Plan was drawn up, certain objectives were set, resulting in expectations of how and what would be achieved and where e-Procurement would be today. This evaluation will provide an overview of the current state of play, identifying and analysing the structures and arrangements that have been put in place to support and promote e-Procurement. It will also identify the assumptions made in 2004 and assess whether expectations have been met. Ultimately the report will present a judgement on how much progress has been made and whether the objectives have been achieved, in particular that

"Use of electronic means should guarantee in practice that any business in Europe with a PC and an internet connection can participate in a public purchase conducted electronically"⁹.

Once this stock-take is complete and the actual situation has been compared with what had been expected, the focus will turn towards the future. This evaluation will be key in identifying any issues or areas for further action and hence developing future EU policy.

The remainder of this chapter presents a short explanation of the basis upon which a system can be defined as providing e-Procurement or not and discusses some of the main reasons for using electronic procurement systems. Chapter 3 provides a brief background summary of the situation in 2004, public procurement legislation, and the aims and approach of the Action Plan whilst the approach to this evaluation and the methodology adopted is outlined in Chapter 4. Chapter 5 presents an overview of the current state of play of e-Procurement within the EU, highlighting the changes over this period. The impacts and role of the Action Plan in contributing to this situation are then analysed in Chapter 6, which concludes by assessing the progress made against the three objectives of the Action Plan. Chapter 7 assesses the overall change and replies to the evaluation questions, identifying the remaining issues to be addressed and drawing conclusions on how successful the Action Plan has been. Recommendations for further policy development are also presented in Chapter 7 together with the proposed future approach to monitoring and evaluation.

2.2. What is "e-Procurement"?

Whereas there is a certain consensus around what it means to conduct "public procurement"¹⁰ it has become apparent over the course of this evaluation that the same can not be said for "e-Procurement". The 2004 Public Procurement Directives refer to the 'use of electronic means'. At its simplest, e-procurement is a catch all term for the replacement of paper based procedures with ICT based communications and processing throughout the procurement

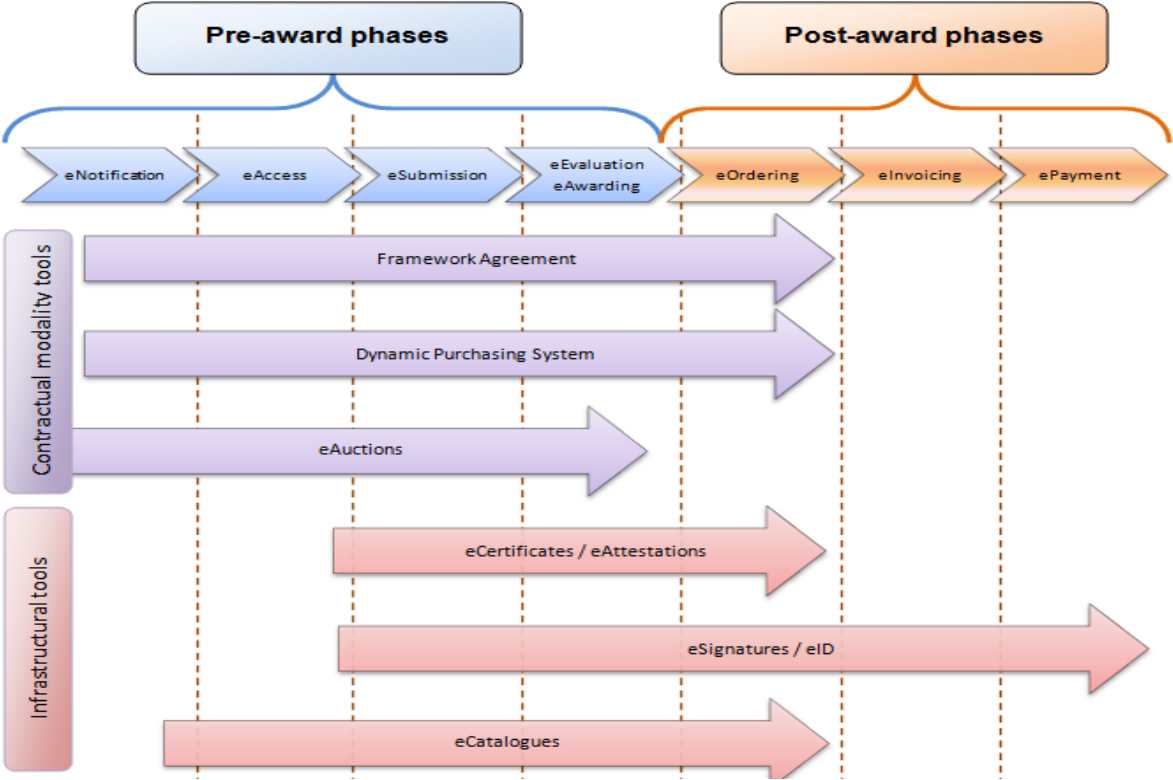
⁹ Page 10 of the EIA COM 2004(841)

¹⁰ Public procurement is the process whereby the public sector, i.e. national, regional and local government and certain utilities, awards contracts to companies for the supply of goods or services, including building and construction works. The procurement procedure for contracts with an expected value above certain thresholds is regulated by EU legislation, intended to promote transparency and competition, thereby avoiding discriminatory or preferential purchasing and encouraging purchasing bodies to make the best use of public resources.

chain. In addition, the use of electronic means allows for new purchasing techniques, e.g. innovative repetitive purchasing methods based on the re-use of data.

E-Procurement involves the introduction of electronic processes to support the different phases of a procurement process – publication of tender notices, provision of tender documents, submission of tenders, evaluation, award, ordering, invoicing and payment. The process is illustrated graphically below, and a more detailed description can be found in Annex III. Although each of these phases/tools has a certain role to play in the full e-Procurement process, it is not always necessary or even appropriate for all these elements to be provided electronically. Not all of the currently available solutions are suited to all types of procurement and different approaches may be needed to integrate certain post-award phases with other back-office practices. Indeed it is quite possible that some solutions e.g. for e-Evaluation may never be developed to deal with all procurements e.g. procurements which require predominantly qualitative assessments.

Figure 1 - Overview of possible phases and tools in an e-Procurement process



Source: Siemens-time.lex report.

This evaluation has worked on the assumption that it is not necessary for all of these phases/tools to be carried out for a procurement to qualify as "e-Procurement". For the purposes of this evaluation the minimum requirement for a system to be defined as providing e-Procurement is the electronic provision of the phases covering publication of tender notices, access to tender documents and submission of tenders.

2.3. Why do e-Procurement?

The Commission supports the transition from paper-based to on-line procurement because it sees the following advantages:

- **Benefits for individual procedures:** Compared to paper based systems, e-Procurement can help contracting authorities and economic operators to reduce administrative costs and speed up individual procurement procedures. In the current financial climate, such efficiencies could be very welcome, maximising the potential which can be obtained from limited resources.
- **Benefits in terms of more efficient procurement administration:** the development of Central Purchasing Bodies (CPBs), often making extensive use of electronic procedures, can help to centralise costly procurement back-office functions and reap scale economies in procurement administration.
- **Greater transparency and better monitoring of procurement:** By automating and centralising the flow of information about individual tender opportunities, e-Procurement can also enhance the transparency and overall efficiency of public procurement, opening up markets to more competition and deepening the pool of competing suppliers, whilst at the same time improving spend management and overall planning.
- **Potential for integration of EU procurement markets:** E-Procurement reduces distance barriers and information gaps which could have reduced or discouraged cross-border participation in paper-based procedures. It should be underlined that, while e-Procurement can overcome distance-related costs to participation in the procurement procedure itself, it will not change the relevance of distance or physical proximity in the actual performance of the underlying business transaction. An increasing number of procurements, for example the provision of services such as software, design competitions and helpdesks, can be provided from another country and e-Procurement should be well suited to publicise, exploit and ultimately realise such opportunities.
- **Administrative modernisation and simplification,** encouraging the integration of various administrative processes as well as diffusion of ICT in government and society.

However, realisation of these benefits depends on significant investment throughout the procurement eco-system to build the necessary capacity and manage the change-over and these constraints should not be underestimated.

3. LEGAL AND POLICY BACKGROUND

3.1. E-Procurement: The situation in 2004

In 2004 e-Procurement was more of an aspiration than a reality. Some countries had already started to establish a legal environment for e-Procurement, with 17 out of 25 Member States already having some provisions permitting the use of e-Procurement. However, these provisions were not necessarily aligned with the 2004 Directives. The available tools and websites were still embryonic - the Extended Impact Assessment (EIA) mentioned that most of the experience in 2004 was limited to pilot schemes, often designed for below threshold

contracts and/or central governments. The 36 portals and platforms found in 2004¹¹ covered 16 Member States (21 at national level, nine at regional level and six sector specific), but were mostly limited to publishing information about opportunities; only five Member States had made available systems covering both the notification and tendering phases. In general, it was noted that the availability of solutions decreased as one went through the phases from e-Notification to e-Payment and particularly once the phases required a two-way flow of information. Public and private sectors were not very involved in the process.

At this time, Member State systems were often limited by the existing software and legal considerations were not necessarily taken into account. Although advanced electronic signatures were permitted in 15 of the 25 Member States, actual use was low and not necessarily related to e-Procurement.

In terms of the national strategies available at that time, two opposite approaches were apparent – detailed strategies with concrete measures or loosely defined, more general, strategic statements.

In 2004, a lot of attention was being focussed on the challenges and difficulties of moving to e-Procurement. This reflected the lack of operational experience across Europe in using electronic procedures within a public procurement context. Both the Ramboll study and the EIA highlighted such concerns, particularly in relation to problems of financing and the organisational changes which would be required to switch from paper based procurement to e-Procurement. These included:

- The affordability of the creation and use of new technologies, particularly with regard to the possibly limited financing capacities or will of economic operators and small and medium sized enterprises (SMEs). Particular emphasis was given to the resultant potentially negative impact on SMEs.
- The possibility that procurement actors (both contracting authorities/entities and economic operators) who did not want to pay for the change would exclude themselves from the procurement market.
- The challenging scale of changes in management and/or human resources within the public procurement sector.
- The risk of a major negative impact in terms of access costs for businesses due to the un-coordinated development of too many different initiatives and a lack of overall governance.

3.2. The role of the EU in promoting e-Procurement

The Commission's 2004 Action Plan provided a roadmap, establishing a strategy designed to accelerate the adoption of e-Procurement whilst safe-guarding the core principles and provisions of existing EU procurement legislation and wider Treaty principles. It was intended to encourage the development and use of convergent, accessible, secure but commercially viable solutions and disseminate examples of best-practice. Action was also required to stimulate and orientate the work of the first movers in the field, who had already

¹¹ Impact Assessment: Action Plan on electronic Public Procurement, study produced by Rambøll Management for the European Commission, available on DG MARKET website http://ec.europa.eu/internal_market/publicprocurement

introduced e-Procurement elements in their legislation or practices, or set up e-Procurement systems. The policy vision underpinning the Action Plan was very ambitious - to create a situation where "... any business in Europe with a PC and an internet connection can participate in a public purchase conducted electronically."¹²

The Action Plan was organised around three main objectives:

- (1) Ensure a well functioning Internal Market in electronic public procurement;
- (2) Achieve greater efficiency in procurement, improve governance and competitiveness;
- (3) Work towards an international framework for electronic public procurement.

EU policy was designed to play a complementary role in support of national or regional efforts to put procurement on an electronic footing. It recognised the need to take into account an EU level dimension, without which the switch-over could be hampered and resources could be wasted as the wheel was constantly re-invented. A total of 31 measures were identified, directed at the Commission, Member States, standardisation bodies and the Public Procurement Network.

3.3. The Public Procurement Directives

The Treaty on the Functioning of the European Union (TFEU), drawing on earlier treaties, lays down fundamental and general principles applicable to contracting authorities in the context of public procurement¹³. However it was decided, that on their own, these prohibitions were not sufficient to establish a single market in this area. Differences between national rules and the absence of requirements to open up contracts to EU-wide competition often resulted in national markets being closed to foreign competitors. Secondary legislation was therefore needed to ensure this openness, as well as to make procedures more transparent.

Since 1971, several Directives have been adopted to supplement the general provisions of the Treaty, based on three main principles:

- Community-wide advertising to foster cross-border competition;
- The prohibition of technical specifications liable to discriminate against potential foreign bidders; and
- Application of objective criteria for evaluation and award of public contracts.

Over the years new Directives¹⁴ were adopted both to expand the coverage of the Directives (eventually to works, supplies and services) and to exclude certain sectors (e.g. transport, energy, water and telecommunications). Other changes were necessary to integrate requirements related to GATT/WTO agreements and to address deficiencies of earlier

¹² Page 10 of the EIA COM 2004(841)

¹³ The provisions of the economic freedoms ban discriminatory measures and unfair treatment on grounds of nationality, in order to promote the internal market objective of removing barriers to trade and economic flows within the EU. The general ban on discrimination allows some flexibility in relation to security, health, environmental and consumer protection justifications, under certain conditions.

¹⁴ Annex based on Claudio table showing evolution of Directives

legislation, such as national markets which were still not sufficiently open. The first Utilities Directive (90/531/EEC), in 1990 was based on the same principles as the previous Directives, and introduced a higher degree of flexibility for contracting entities.

In April 2004 the Council adopted Directives 2004/18/EC and 2004/17/EC which replaced the previous Directives. They were intended to modernise and simplify public procurement procedures, and recognised for the first time in EU procurement law, the possibility of using electronic procedures. The introduction of provisions on e-Procurement was expected to bring benefits to the Single Market, with greater flexibility, transparency and competition, deemed to be key ingredients for moving towards the possibility of cross-border participation. The introduction of provisions on electronic communications was also part of the on-going transition to e-Government in general, wanted by Member States. The provisions permitting e-Procurement are contained in article 42 of Directive 2004/18/EC and article 48 of Directive 2004/17/EC, which place the use of electronic means in procurement procedure on a par with paper-based approaches. Several more detailed articles provide further details relating to electronic communication, e-Notices and electronic access to contract documents, electronic reception devices for tenders, and for supporting tools such as electronic auctions and dynamic purchasing systems.

The Directives' provisions on e-Procurement were intended to address the on-going introduction of e-Procurement in some Member States and co-ordinate (to a certain extent) the approaches taken by Member States, so as to avoid the creation of any new barriers to access. The 2004 Directives were intentionally not prescriptive and allow some flexibility with respect to the possible methods used to organise e-Procurement, as long as "such use complies with the rules drawn up under this Directive and the principles of equal treatment, non-discrimination and transparency"¹⁵. As a result, the new Directives introduced the possibility for e-Procurement, but refrained from imposing any obligation on contracting authorities and system users.

3.4. The 2004 Action Plan

The general basis for e-Procurement policy was sketched out during the preparation of the 2004 public procurement Directives. At that time, some Member States had already started thinking about modernising their procurement practices, but the new Directives together with the e-Procurement Action Plan were the first EU level policy actions to that effect. The general intention was to bring the practices of the public sector closer to those of the private sector. In this context, the Action Plan provided a roadmap, establishing a strategy for transition and grouping actions under three policy goals at EU level, designed to:

- Address general internal market policy concerns, both within the EU and internationally (Objectives 1 and 3);
- "Deepen" EU public procurement policy (Objective 2); and
- Introduce e-Procurement specific measures in areas under direct EU competence (mainly within Objective 1).

The Action Plan also recognised that certain intermediary measures were required to provide elements for the other actions to build on (namely, the development of some common

¹⁵ Recital 12, Directive 2004/18/EC, Recital 20, Directive 2004/17/EC

necessary basic tools and building blocks / templates to make electronic procurement systems function). The full set of measures proposed by the Action Plan, together with further information relating to the barriers intended to be addressed and the scope of the action can be found in annex IV.

3.4.1. Content of the Action Plan

Being a key EU internal market policy, public procurement, and e-Procurement in particular, needs to be conducted in a way that encourages, or at least permits cross-border exchanges. A major risk when introducing e-Procurement would be to recreate national borders on the basis of national technical and policy choices. The first set of measures in the Action Plan, under Objective 1, focuses on the transposition of the legal framework - the key element for developing coherent initiatives at various levels based on common grounds. The use of electronic means provides several possibilities to improve the internal market for public procurement. E-Procurement has the potential to reduce distance barriers and information gaps which could have reduced or discouraged cross-border participation in paper-based procedures. It may also increase efficiency through use of electronic means for managing and processing data.

Interoperability of systems and the related openness of e-Procurement markets were also important and are addressed by elements of the Action Plan. The Commission was tasked with the responsibility to define and explain the EU technical, legal and policy framework and ensure coherence in the internal market. Within this framework, Member States should be able to advance at their own pace and move more flexibly, encouraging solutions and allowing a single market to develop.

In terms of deepening the role of the public procurement policy, e-Procurement was seen as a modern way to achieve greater transparency and efficiency. For example, automation and control mechanisms in electronic proceedings were viewed as ways to limit the human factor for a certain number of phases, reducing the time required, increasing consistency and where appropriate, making the process more objective. Complementary to this, the clear definition of roles and tasks in electronic systems could improve governance. Online publication (e-Notification) and availability of tender documents (e-Access) were both seen as ways to dramatically increase the potential publicity given to business opportunities. This was expected to increase access/inclusion in public procurement markets for every interested company (including SMEs), which as a consequence should encourage competition. Increased competition in public procurement should, in theory at least, lead to a better choice amongst tenders, resulting in better value for money (via reduced prices, increased quality or both). It should also play an important role in the elimination of unfair behaviours.

E-Procurement specific measures were also set in the Action Plan. The goal was the reduction of administrative costs in the preparation and transmission of offers, as well as simplifying the preparation of tenders. Both due to the provisions of the Directives on the reduction of publication delays and on easier and faster accomplishment of the different phases pre- (e-Access, e-Submission) and post-award (like e-Ordering and e-Invoicing), e-Procurement was seen as a promising way to streamline and accelerate e-Procurement procedures.

In addition, the Action Plan foresaw intermediary measures to develop the basic building blocks for other initiatives. These actions were mostly directed at the European Commission and encompassed basic standardisation decisions such as the adoption of new standard forms for the publication of procurement notices adapted to take into account the new procedures

and the use of electronic applications, or the revision of the Common Procurement Vocabulary (CPV) to adjust it to an electronic environment.

Finally, on the basis of the last objective of the Action Plan, the European Commission was to undertake some fairly flexible actions at international level chiefly intended to share good practices and promote the development of e-Procurement techniques and systems which would be interoperable with the European ones through international standards.

3.4.2. Strategic approach of the Action Plan

The EIA which led to the development of the Action Plan identified a range of possible strategies. From these, the two more moderate (soft law) suggestions were retained as most viable and form the basis of the roadmap which was drafted at EU level.

The EU Action Plan adopted a deliberately flexible and non-prescriptive approach intended to foster creativity and encourage the development of new solutions, whilst coordinating transposition and implementation by the Member States. This approach seemed most appropriate given the coordinating character of the basic public procurement Directives, which limits action at EU level, and the very decentralised and multi-faceted structure of public procurement market in the Member States. In particular it was considered too early to impose certain standards and behaviours in policy area which was still new and largely unexplored in 2004 when the Action Plan was drafted.

In essence, the chosen approach for the Action Plan reflects the challenge of regulating ICT-related policy generally, and particularly in a complex, rules-driven field such as public procurement

The downsides of this approach were clear at the outset – the possible development of many different solutions could cause problems with interoperability and lead to the emergence of new barriers. This was due to the fact that, in many areas, the Directives implicitly placed the adjustment costs for ensuring interoperability upon the Member States, if not with the individual contracting authorities. The risk was that those adjustment costs, e.g. the costs of using a compatible application or signature, would be further shifted to businesses wanting to bid in public procurement, especially across borders, thus reducing participation.

In order to counter this risk of fragmentation, the Action Plan carved out a specific role for the Commission. Together with the Member States, it was intended to identify the main interoperability challenges and how to address them, including appropriate and effective means for compliance verification of national developments. However, the Action Plan itself was based on soft-law, meaning that none of the measures identified were legally enforceable. As such, the ability of the Action Plan to achieve its set objectives was clearly dependent on the co-operation and participation of the various parties. Although the Commission had proposed certain actions, it had limited scope to ensure compliance with specific recommendations, beyond what was foreseen in the Directives. Despite these limitations, the Action Plan set itself three very ambitious objectives, intended to accelerate and promote EU-wide adoption of e-Procurement and hence realise the benefits predicted in as short a time as possible. It was expected that developments in the technology would occur in the same timeframe, allowing the maximum synergy to be achieved. E-Procurement developments were also expected to act as a catalyst for the wider e-Government environment, triggering improvements and adoption across a range of services.

4. EVALUATION METHODOLOGY

4.1. Scope and limitations of the evaluation

The 2004 Action Plan calls on the Commission, by the end of 2007, to start to *"review and report on the results achieved and to propose, if need be, [...] corrective action or additional measures"*.

This evaluation has therefore two objectives:

- (1) To report on the current state of play for e-Procurement and identify the progress made since 2004; and
- (2) To review and evaluate the contribution of the Action Plan to that progress and identify issues requiring attention.

Given the fairly short reference period and certain known limitations on the available quantitative data sets, it was clear from the outset that it would be difficult to attempt a definitive evaluation. The absence of detailed, consistent EU-wide data makes it difficult to assess objectively the cause and effect relationships which would usually be the focus of any evaluation of the role played by the Action Plan. As a result of these data limitations, it has not been possible to define or use consistent indicators of progress made. This report therefore presents a stock-take of developments and tries to identify/indicate why these results are observed. Often these judgements are not based on specific pieces of evidence, but draw more on the overall trends observed. The report highlights areas where further review and adjustment of policy may be required, before new e-Procurement systems and tools become too entrenched.

4.2. Our approach

The evaluation concentrates on assessing the extent to which public procurement procedures in the EU have been digitised, and how the progress observed is related to the measures included in the Action Plan. As such, the focus is not on providing a full economic evaluation of the impacts of the Action Plan, but rather, on pulling together a picture of what has changed and trying to identify where it is reasonable to imply that the Action Plan has influenced any change and to assess how far it has progressed towards achieving its specified objectives (see below).

The state of play (see Chapter 5) presents the progress made in moving from paper based systems to e-Procurement during the period 2004-early 2010 and covers the 27 EU Member States, three EEA and two Accession countries (Croatia and Turkey). As part of this process, the transposition of the 2004 Directives has been reviewed and all phases and tools of the e-Procurement process have been assessed, with particular attention to the tools introduced by the 2004 Directives. The value of contracts dealt with by some e-Procurement systems is not always clear. Where known, the evaluation report states whether the information relates specifically to contracts above or below the thresholds set by the EU procurement Directives.

In considering the contribution of the Action Plan, three main evaluation criteria are considered:

- Effectiveness – to what extent the Action Plan measures have achieved or contributed towards meeting the objectives of the Action Plan;

- Efficiency – whether in carrying out these measures, good use has been made of the resources available given the results identified; and
- Relevance – to what extent the Action Plan measures still match the current needs of e-Procurement.

Some distributional effects are also considered, albeit to a limited extent – how different parties have been affected, including Economic Operators and more particularly SMEs, Member States and Contracting Authorities. Other factors of interest which are also assessed include trends towards centralisation and aggregation effects.

Rather than placing too much emphasis on the individual success of each of the 31 measures which make up the Action Plan, conclusions are more generally drawn with respect to the three main objectives and the groupings of measures which were presented under each of them. These break down as:

- (1) Ensure a well functioning Internal Market in electronic public procurement (total 16 measures);
 - Implement the legal framework correctly and on time (3 measures)
 - Complete the legal framework by the appropriate basic tools (4 measures)
 - Remove / prevent barriers in carrying public procurement procedures electronically (6 measures)
 - Detect and address interoperability problems over time (3 measures)
- (2) Achieve greater efficiency in procurement, improve governance and competitiveness (total 10 measures);
 - Increase efficiency of public procurement and improve governance (4 measures)
 - Increase competitiveness of public procurement markets across the EU (6 measures)
- (3) Work towards an international framework for electronic public procurement (total 5 measures)

The intervention logic, evaluation questions and their related success criteria presented below (see section 4.4) have been drawn up on this basis. Chapter 6 presents the results of this evaluation, first by using the state of play to assess how much the expectations of the Action Plan (identified in the intervention logic) have been achieved and secondly, by assessing how far the objectives of the Action Plan have been realised. The evaluation questions are then answered in section 7, by reference to the success criteria.

The final assessment of how much progress has been made and how successful the Action Plan has been will be to judge the current situation against the "ideal" vision, i.e. to ensure that it is now possible in Europe that, through the use of electronic means: "*... any business in Europe with a PC and an internet connection can participate in a public purchase conducted electronically.*"¹⁶

¹⁶ Page 10 of EIA COM 2004(841)

Whilst this vision was always very challenging (and perhaps unrealistic in the short timeframe) it nonetheless provides a clear benchmark against which actual progress can ultimately be measured.

4.3. Data sources

A great deal of work has been undertaken in the field of e-Procurement in the last years, and practitioners have often been open to sharing their experiences – so this evaluation has been able to draw on a range of case studies, published individually or in particular on the e-Practice website¹⁷. There are also several large studies on specific aspects – particularly tools and phases, some of which have been produced as a result of various measures in the Action Plan¹⁸. Much of this information is qualitative and although very valuable in explaining what has happened in an individual instance, it is not always possible to compare or aggregate cases, due to different understandings or objectives for e-Procurement. The main information relating to the situation in 2004 is taken from the EIA and the supporting external study¹⁹.

As has already been mentioned, quantitative data is more difficult to come by – virtually no information is available which has been calculated on a consistent basis across the whole EU. Where appropriate, data has been extracted from the Tenders Electronic Daily (TED) database, which contains the information, provided by Contracting Authorities when they complete the standard forms. In general this information relates only to procurements above the thresholds set in the EU Directives and there are only a limited number of entries relating to e-Procurement tools.

In order to prepare this evaluation two new pieces of work were commissioned – the first by Ernst and Young Italy provided background information and attempted to collect data via detailed questionnaires from all relevant stakeholder groups²⁰. Whilst every effort was made to ensure a good response rate to these questionnaires and the efforts of those who responded are much appreciated, the number of replies was not sufficient to allow representative statistics to be calculated. As a result, no report was produced analysing the results; where appropriate and useful, the responses to certain questions have been used in this report (and in the Siemens-time.lex study mentioned below) to shed some light on developments. However, due to the small data set, these findings should be treated with caution and are generally only presented in tandem with information from other sources.

Secondly, a study by Siemens-time.lex built on findings from the earlier work and resulted in the report "Study on the evaluation of the Action Plan for the implementation of the legal framework for electronic procurement" published at the same time as this evaluation report. This study provides an assessment of the approach and strategy of the Action Plan and a detailed state of play of e-Procurement in the countries reviewed (both as an overview and in terms of the different phases and tools). It also contains a first analysis of the role the Action Plan has played in moving e-Procurement forward and presents some recommendations for future strategic action. As part of this work, fiches have been drawn up identifying the legal, political and technical infrastructure in each of the 32 countries. These fiches were then

¹⁷ www.ePractice.eu

¹⁸ See Annex II for list of reports and studies

¹⁹ Available at http://ec.europa.eu/internal_market/publicprocurement/e-procurement_en.htm

²⁰ 2008 Commission e-Procurement survey announced in press release IP/08/1577

validated by members of the e-Procurement Working Group²¹ and form the basis for much of the analysis presented. Unless stated otherwise, this study is the main source of the evidence quoted in this evaluation and will be referred to as the "Siemens-time.lex study".

A great deal of information has also been gathered from practical experience and developments, including visiting and reviewing many of the websites and portals which have been developed. Other useful sources of information include the meetings and discussions of the e-Procurement Working Group and the many conferences and seminars which have been organised by various practitioners and associations.

Further details on this reference material are presented in Annex II.

Taken together this information provides a broad base to describe the current state of play with respect to e-Procurement. Often however it is not sufficient to prove, particularly on an EU level, that certain results are due to certain actions. This has had a limiting effect on the evaluation.

4.4. Intervention logic and evaluation questions

The intervention logic is a visual representation of the originally expected "cause and effect" consequences of the Action Plan at its adoption. It has been constructed after considering the main objectives of the Action Plan and identifying what it hoped to achieve and how. Figure 2 below represents these expectations at the level of the three main objectives (grouped measures) discussed above. As such, it is the summary of separate intervention logics which were created for each objective (see Annex VI).

In broad terms the intervention logic shows that in the first instance, the Action Plan measures were supposed to result in a clearer legal environment, where there were no legislative barriers to the use of certain tools. This was to be achieved through joint efforts by both the Commission and the Member States that would build on the skeleton provided by the Directives. Technical barriers were also expected to be overcome or at least minimised and it was expected that the basic infrastructure for providing e-Procurement would be made available/improve in all Member States. Transparency should increase, particularly due to the measures relating to the Common Procurement Vocabulary (CPV), standard forms and the creation and use of a fully electronic system for the collection and publication of procurement notices on TED (Tenders Electronic Daily).

The Action Plan contained measures addressed to both buyers and suppliers. The rationale was that some measures should make it easier for Economic Operators (EOs) to participate in electronic procurements, particularly across borders and there was also a specific action targeted at improving access to these markets by SMEs. However, this action could only be a soft approach, as contracting authorities and bidders must act within the confines of their national procurement regime and hence could only be targeted in an indirect way. Contracting authorities should be inspired to adopt business friendly approaches, avoiding squarely shifting transaction costs to the economic operators whilst preserving different business models

²¹ The e-Procurement working group is a committee comprised of experts from European national administrations.

Over time, it was expected that it would be possible to build on these initial results, and e-Procurement would be more frequently used; users would be more confident and all parties would experience greater security and reliability in the procurement process. After an initial period of setting up and transferring to electronic systems, the effort and costs associated with conducting e-Procurement were also expected to reduce as parties became more familiar with the process and it became more mainstream. At the same time, this process of change was expected to foster and introduce administrative simplification – resulting both from technological advances and reviews of previous systems. Indirectly this might also cause some increase in unemployment, possibly offset by new jobs in innovative sectors which could provide the new technologies required. There was also some expectation that this increased use would ripple out, improving the interoperability and sophistication of the wider e-Government environment and leading to greater investment.

In addition it was expected that the parties who (first) moved towards using these systems would already have a higher than average level of technical ability, perhaps having already some knowledge or experience of e-Procurement. Given that these systems could also be quite costly to introduce, it was also thought possible that more affluent parties (e.g. contracting authorities with access to larger budgets, certain economic operators) would take the first steps into this area. Implicitly, this accepted that some parties might use cost as a justification for not adopting e-Procurement.

Ultimately it was hoped that the convergence of all these effects would lead to increased use of e-Procurement, particularly across borders thus ensuring an open and efficient internal market for public procurement. Competition benefits were also expected – both in terms of greater competition for bids with a resultant reduction in the price paid by the public sector and also in relation to improving European competitiveness through the use of new, innovative e-Business tools.

Drawing on this intervention logic, three key evaluation questions were identified:

- (1) To what extent have public procurement procedures in the EU and EEA Member States been 'computerised', i.e. migrated from paper to the use of electronic means (including legal/policy/economic/technical aspects)?
- (2) To what extent has the EU e-Procurement Action Plan identified the right priorities and strategy to progressing towards the use of electronic means in public procurement, and to what extent has it been implemented?
- (3) How relevant, efficient and effective has the Action Plan been in achieving or at least nearing the stated objectives of efficient and unhindered cross-border e-Procurement in the EU?

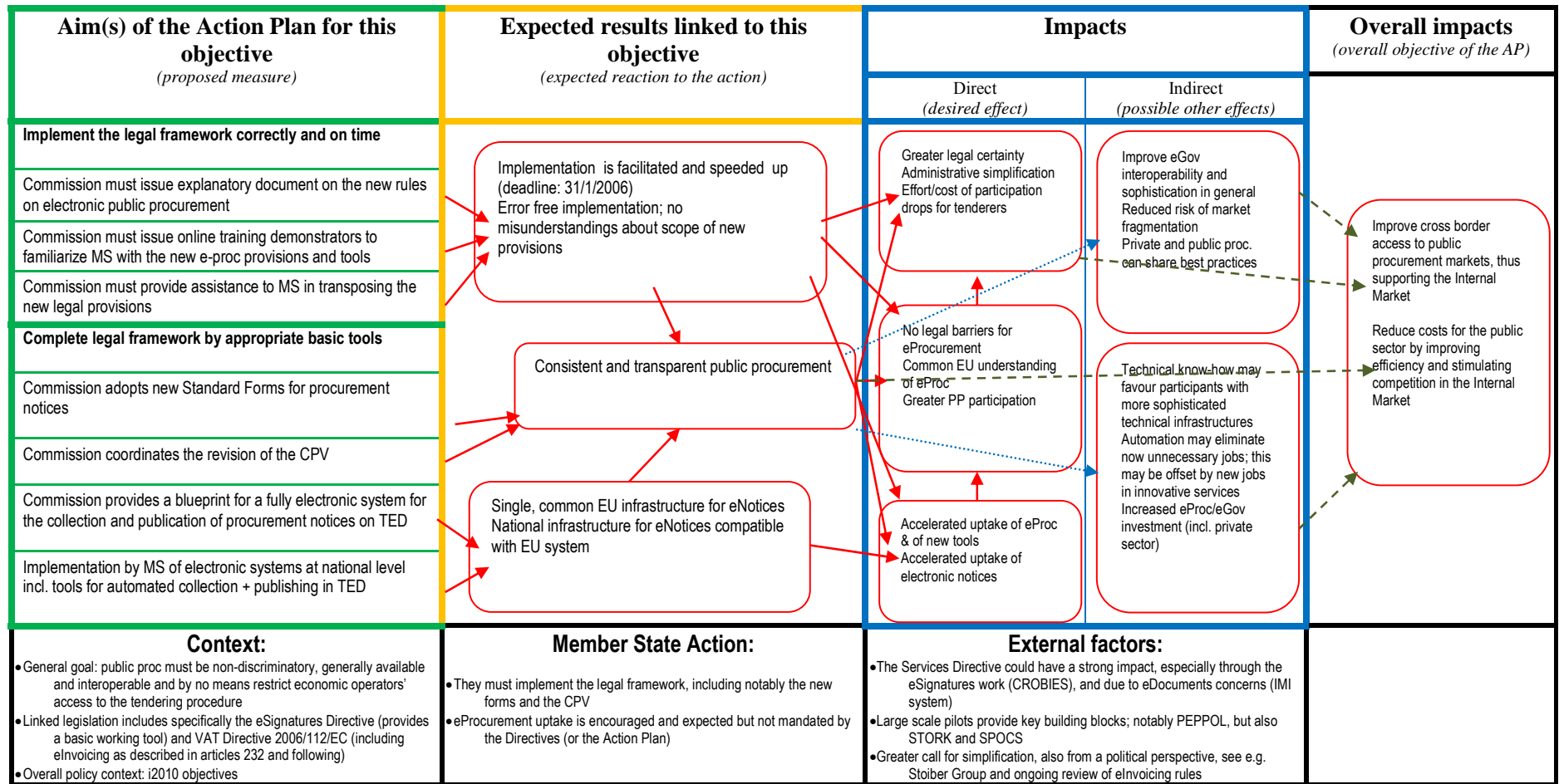


Figure 2 Intervention Logic

Source Siemens-time.lex report

Taken together, these questions cover the three evaluation criteria mentioned in section 4.2 - effectiveness, efficiency and relevance. In answering these questions, this evaluation will assess the extent to which the assumptions and expectations summarised in the intervention logic have become reality. To help identify and measure the progress made, the following success criteria were selected. Given the limitations in the quantitative data available, no numeric indicators have been selected; the success criteria will be used to provide a mainly qualitative assessment of what has actually been achieved, supplemented by numeric data where possible. There is some overlap between the application of these success criteria to a particular question – for simplicity, in the table below they have been "assigned" to the most relevant question.

Table 1- Evaluation questions and success criteria

Evaluation Question	Success Criteria
<p>To what extent public procurement procedures in the EU and EEA Member States have been 'computerised', i.e. migrated from paper to the use of electronic means (including legal / policy / economic / technical aspects)</p>	<ul style="list-style-type: none"> • Increased <u>availability</u> of different e-Procurement phases and tools in countries in comparison to 2004 • Increased <u>use</u> of different e-Procurement phases and tools in countries as compared to 2004 • Degree of technological sophistication evident in systems developed
<p>To what extent the EU e-Procurement Action Plan has identified the right priorities and strategy to progressing towards the use of electronic means in public procurement, and to what extent it has been implemented</p>	<p>Priorities</p> <ul style="list-style-type: none"> • No legal barriers to use of e-Procurement • No technical barriers to use of e-Procurement (particularly in relation to agreed standards and e-Signatures) • Interoperable e-Procurement systems within and across countries • Increased use of electronic signatures since 2004, especially qualified signatures • Existence and use of common standards for documents, phases and tools • Improved governance of public procurement (including collection and publication of related statistics) • Progress towards creation of an international framework for e-Procurement

Evaluation Question	Success Criteria
<p>To what extent the EU e-Procurement Action Plan has identified the right priorities and strategy to progressing towards the use of electronic means in public procurement, and to what extent it has been implemented</p>	<ul style="list-style-type: none"> • Equal and fair access to all markets for all Economic Operators, particularly SMEs • Dissemination and sharing of experiences <p>Strategy</p> <ul style="list-style-type: none"> • Use of guidance material, demonstrators etc • Application of recommendations from various studies provided • Completion and compliance of various actors with the measures
<p>How relevant, efficient and effective has the Action Plan been in achieving or at least nearing the stated objectives of efficient and unhindered cross-border e-Procurement in the EU?</p>	<ul style="list-style-type: none"> • Clear links between progress achieved and measures in Action Plan • Ability of e-Procurement systems to permit cross border procurement • Reduced cost of procurement resulting from use of electronic systems • Reduced time to procure resulting from use of electronic systems • Systems introduced are less complicated and bureaucratic than systems they replace

5. STATE OF PLAY

5.1. Introduction

The current state of play across the EU, EEA and Accession countries is the result of a wide variety of approaches and concrete actions, many of which were included in the Action Plan. This section tries to give an overview of the situation by 2010 in terms of availability, technical choices, policy and organisational approaches and distributive effects. Overall, it can be seen that clear progress has been made in the migration of the procurement phases and the development of tools for e-Procurement is promising.

5.2. How have countries implemented the possibilities offered by the 2004 Directives?

While the Action Plan did not specify a particular approach to transposition, it aimed to facilitate the understanding of the legal framework and to encourage an appropriate exchange with the Member States when their transposition provisions were at drafting stage. The issues

that could have arisen during the transposition process include: ensuring consistency within the overall national legal framework; possible uncertainty or inconsistency resulting from national actions and/or different transposition timing. The following summarises the more detailed information on transposition contained in the Siemens-time.lex study.

The 2004 EU Public Procurement Directives defined a new set of procedures e.g. e-Auctions, Framework Agreements, Buyer Profiles and Dynamic Purchasing Systems (DPS) designed to give procurement authorities a range of possibilities to carry out effective and efficient procurement. Some such procedures (e-auctions, DPS) were explicitly designed for the use of electronic means, to improve procurement outcomes by taking maximum advantage of the possibilities offered by technology.

Member States were given the choice of implementing provisions concerning the use of such tools. It is therefore important to examine the main approaches adopted and understand the current e-Procurement context in different countries.

5.2.1. E-Auctions

e-Auctions are defined in the Public Procurement Directives as ‘a repetitive process involving an electronic device for the presentation of new prices, revised downwards, and/or new values concerning certain elements of tenders, which occurs after an initial full evaluation of the tenders, enabling them to be ranked using automatic evaluation methods’²². Thus, through an electronic auction, economic operators are invited to update their offers one or more times after the initial submission with respect to the price or to other criteria that can be automatically evaluated, in order to ensure that their offer is optimally placed to win the procurement contract. The Directives exclude from the scope of electronic auctions certain service contracts and works contracts having as their subject matter intellectual performances, as such performances cannot reasonably be evaluated automatically.

In 2004, seven countries reported some experience with e-Auctions, while 23 countries expressed the intention to introduce e-Auctions. In 2010, 26 countries support its use. Among the six countries that have not transposed the e-Auctions provisions, only two countries do not intend to do so (DE and LI). The majority of countries opted for a direct transposition of the provisions of the Directives. Where gold-plating²³ has occurred, countries have added further provisions intended to delineate the scope of e-Auctions and to clarify communication flows during e-Auctions.

Table 2 - Transposition choice: e-Auctions

e-Auctions transposition choice	Legally supported		Not legally supported	
	26		6	
Direct transposition	Gold plating	Simplified transposition	Unknown	
15 countries (including 12 Member States)	6 countries (including 5 Member States)	1 country (including 1 Member State)	4 countries (including 4 Member States)	

Source: DG MARKT based on Siemens-time.lex report

²² Article 1.7 of Directive 2004/18/EC

²³ Gold-plating refers to the practice where national bodies exceed the terms of European Community directives when implementing them into national law (see Commission Communication on simplification; see http://ec.europa.eu/governance/better_regulation/glossary_en.htm#top)

5.2.2. Framework agreements

Framework agreements are defined in the Directives as “an agreement between one or more contracting authorities and one or more economic operators, the purpose of which is to establish the terms governing contracts to be awarded during a given period, in particular with regard to price and, where appropriate, the quantity envisaged”. Through framework agreements, a temporary ad hoc environment is thus created within which contracting authorities can launch specific procurements, for which offers can only be submitted by economic operators who are a part of this environment, and in which these offers must comply with the specific requirements of the environment. Electronically managed framework agreements have the potential to include more economic operators and to serve more contracting authorities, leading to more efficient purchases.

In 2004, there was experience with framework agreements in 15 Member States. Relevant provisions were transposed in all the Member States except Belgium where framework contracts are recognised. Some Member States adopted provisions so as to adapt the content of the Directives with specific features e.g. Austria has made the use of electronic framework agreements mandatory for federal authorities for specific goods and services. (Please note, the standard forms received from Belgian authorities indicating framework agreement were actually framework contracts, concluded between a single contracting authority and a single economic operator for a limited duration of time.)

5.2.3. Buyer profiles

Buyer profiles are an optional feature introduced in the 2004 Directives²⁴, intended as an additional information element to advertise planned purchases in a given year. This should be published on the websites of contracting authorities, providing certain basic information as requested by the Directives. The information published on buyer profiles is non-binding and should be regarded as an "early warning" system, which has to be complemented by a very short notice in the OJ.

The current transposition status of buyer profiles is the following:

Table 3 - Transposition choice: buyer profiles

Buyer profiles are supported/defined in the legislation	Buyer profiles are <i>not</i> supported/defined in the legislation
20 countries (including 18 Member States)	12 countries (including 9 Member States)

Source: Siemens-time.lex country fiches

However, it should be noted that the transposition of the buyer profile might be somewhat unclear - among the very small number of "notices on a buyer profile" published on TED between 2006 and 2008, 73.9% did not mention the URL where the buyer profile could be found, which is a major requirement for the proper use of buyer profiles.

²⁴ Point 2(b) of Annex VIII of Directive 2004/18/EC

5.2.4. DPS

A DPS is defined in the Directives as “a completely electronic process for common purchases, the characteristics of which, as generally available on the market, meet the requirements of the contracting authority, which is limited in duration and open throughout its validity to any economic operator which satisfies the selection criteria and has submitted an indicative tender that complies with the specification.”²⁵

In essence, a DPS can be thought of as an electronic open framework agreement i.e. a procurement system in which economic operators that have joined the DPS via an indicative tender can choose to announce the availability of standardised goods, services or works which meet the requirements defined by the contracting authority that set up the DPS, and which can thereafter be used by that contracting authority to easily and electronically acquire such goods, services or works from the most favourable economic operator. Contrary to a framework agreement, new economic operators can join a DPS after its establishment by submitting an indicative tender which meets the requirement of the DPS. As with a framework agreement, accession to a DPS does not necessarily lead to a concrete procurement as such; an economic operator could join a DPS and offer its goods or services to contracting authorities without ever successfully concluding a procurement contract for these products or services with an economic operator. This could be because there is no demand for the goods or services being offered or because another economic operator offers more favourable terms.

In 2004, when there was virtually no experience with DPS, 18 Member States expressed their intention to implement it. In 2010, 27 countries legally support it. Among the five countries that have not transposed the DPS provisions, only two countries do not intend to do so (DE and SE).

Within their national legislation, 10 Member States have added further provisions on DPS, relating to: clarification of the conceptual framework and the different stages; delineating the scope of DPS as well as procedural and/or administrative requirements. This may show that some Member States felt it was necessary to address a lack of clarity in the Directive provisions on DPS. 13 adopted a direct transposition and only one country chose a simplified transposition (Estonia).

Table 4 - Transposition choice: dynamic purchasing systems

DPS transposition choice	Legally supported		Not legally supported	
	27		5	
Direct transposition	Gold plating	Simplified transposition	Unknown	
13 countries (including 9 Member States)	10 countries (including 9 Member States)	1 country (including 1 Member States)	3 countries (including 3 Member States)	

Source: DG MARKT based on Siemens-time.lex report

²⁵ Article 1.6 of Directive 2004/18/EC

5.2.5. E-Signatures

In 2004, 15 out of 25 Member States reported the introduction of electronic advanced signatures and seven expressed their intention to introduce such signature. In 2010, 18 countries expressly require the use of electronic signatures in e-Procurement procedures, while 13 countries do not explicitly require them. In terms of the type of signature required, 13 out of the 27 Member States have introduced a legal requirement specifying the use of advanced e-Signatures. The regulatory choices of Member States in regard to e-Signatures may indicate their preferences in relation to security and trust but also need to be considered from a cross-border and interoperability perspective.

Table 5 – Transposition choice: e-Signature

e-Signature is always required				Contracting authority may require the use of an e-Signature				No signature requirement
e-Signature	Advanced e-Signature	Advanced based on qualified certificate	Qualified signature	e-Signature	Advanced e-Signature	Advanced based on qualified certificate	Qualified signature	
4 countries (including 3 Member States)	4 countries (including 3 Member States)	4 countries (including 4 Member States)	6 countries (including 6 Member States)	4 countries (including 4 Member States)	6 countries (including 4 Member States)	0 countries (including 0 Member State)	1 country (including 1 Member State)	2 country (including 2 Member States)

Source: DG MARKT based on Siemens-time.lex report

5.2.6. Transposition: time taken and approaches adopted

In the 2004 EIA Member States indicated their intended transposition timetable and approach, against which the actual transposition process can be compared. The deadline for transposition was 31st January 2006. At that time, one country anticipated transposition in 2004 (DK), while 14 Member States expected the Directive to be transposed in 2005 and eight in 2006. Two Member States did not, at that point, have a set timetable for implementing the Directives. In fact 11 Member States implemented the Directive within the applicable deadline and 21 countries transposed with some delay (among them the five non - EU countries). On average, the delay compared to Member States' expectations was around 14 months.

With respect to the different transposition approaches, Member States either opted to update existing Public Procurement Acts or to create entirely new ones: 22 countries chose to adopt new acts, whereas 10 decided to update existing acts. Several strategies were adopted by Member States: some opted for a transposition *telle quelle*; others chose to add further details to the Directive provisions in the national legislations (so-called "gold-plating").

5.3. What e-Procurement strategies have been adopted?

The differences in the existing administrative context and culture, available IT infrastructures and the state of art of early e-Procurement operations, have all contributed to Member States choosing different strategies to implement e-Procurement.

5.3.1. National level approaches

The Action Plan recommended that Member States adopt national plans to channel and coordinate the efforts of the national procurement authorities towards the defined goals.

From the policy point of view, only 18 out of the 32 examined countries adopted national action plans containing “measurable performance targets” as required by the Action Plan. 14 countries have either no action plan at all or only loosely defined high level policy declarations.

The level of policy detail for national action plans is summarised in the following table:

Table 6 - National action plans

No action plan / high level only	Action plan with phases of implementation	Action plan with uptake goals	Action plan with cost savings goals
Bulgaria Denmark Estonia Finland Greece Hungary Luxembourg Malta Poland Slovakia Slovenia UK Iceland Liechtenstein	Belgium Cyprus France Germany Latvia Lithuania The Netherlands Portugal Spain Sweden Croatia Turkey	Austria Cyprus France Germany Ireland Italy Latvia Romania Turkey	Czech Republic Ireland Italy Latvia Portugal Norway Turkey
14 countries (including 12 Member States)	12 countries (including 10 Member States)	9 countries (including 8 Member States)	7 countries (including 5 Member States)

Source: Siemens-time.lex report

In terms of the development of an e-Procurement policy, the Ernst & Young survey gives an insight to the various approaches. Most countries adopted a "step by step" implementation approach (14 replies put of 22); two went "big bang", introducing a full and comprehensive policy; one developed the policy as it went along; two answered that they have no current implementation of e-Procurement. As regards the timing of policy developments, 12 out of 22 respondents answered that their e-Procurement strategy was still being implemented in 2010 while six out of 22 have completed it (others have not answered or did not know).

The Action Plan also highlighted two other types of specific plan: i) to be targeted at SMEs and ii) individual national buyers. Only four instances of clear SME related plans were found by Siemens-time.lex in Ireland, France, Scotland and Italy. All four countries have experienced some success in encouraging SMEs to move from paper based to electronic procurement. Some concerns are also being voiced in other countries where there is a feeling that SMEs are being excluded from procurement opportunities, often due to trends towards aggregation and centralisation.

Although Siemens-time.lex did not identify any Action Plans which were adopted by national buyers, replies to the Ernst and Young Member State questionnaire did imply that nine countries (from 22 replying to the questionnaire) had found it useful to address the issue of most powerful buyers for procurement at a non-central level; six countries had found it useful to have elements relating to regional buyers; similarly seven countries had found it useful to have elements relating to local buyers.

Public Contracts Scotland portal²⁶ - SMEs participation

The Public Contracts Scotland (PCS portal - www.publiccontractsscotland.gov.uk/) was created to act as a single public sector “electronic portal” to support this process.

The system is intended to allow all public sector contracting authorities in Scotland to manage the procurement process from end-to-end in an electronic environment, from preparing standard documentation to advertising a notice, from receiving electronic tenders to awarding a contract. It is currently used by over 1100 public sector users across central government (including agencies and non-departmental public bodies) and local government; the National Health Service; higher and further education organisations; police, fire and rescue services; voluntary sector organisations; registered social landlords and all other public sector contracting authorities operating in Scotland.

Uptake has been successful, with 28.000 economic operators registered, 82% of which are SMEs. In the first eight months of operation, over 780.000 e-mail alerts were sent to economic operators, alerting them to over 3.700 potential business opportunities. This has resulted in over 16.000 notes of interest on contracts, of which 81% are from SMEs.

As for investments associated with this portal, implementation costs were reported to be between €500,000 and €999,000, with yearly costs between €49,000 and €299,000. Economic effects are estimated in the range of €1,000,000 and €5,000,000.

Source: DG MARKT, based on Siemens-time.lex report

5.3.2. Centralisation

A major policy concern, linked to Objective 2 of the Action Plan, relates to the question of the centralisation of purchases. The 2004 Directives introduce the notion of central purchasing bodies (CPBs) as entities that procure on behalf of other public bodies, meaning that the actual beneficiary of such procurement is not its contracting authority²⁷. This has two possible consequences:

- CPBs may reach greater efficiency in procurement, as they buy on a larger scale, which can create savings. They may frequently use framework agreements (and DPS), thus conducting lighter procedures and/or saving time;
- CPBs could reduce competition, particularly if they use framework agreements with identified suppliers and which may exclude SMEs (which are assumed to be less capable of providing the resources required by large framework agreements.)

The study conducted by Ernst & Young provides interesting data on centralisation and CPBs. It implies that many countries have encouraged centralisation; 12 respondents have encouraged centralisation at central/national level and seven of these twelve have also done so at regional or local level. Of these seven, five countries also promote centralisation at sectoral level. Thus centralisation at all levels (i.e. national, regional, local and vertical) is occurring in a fairly small number of countries.

²⁶ Source: <http://www.epractice.eu/en/cases/pcscotland>

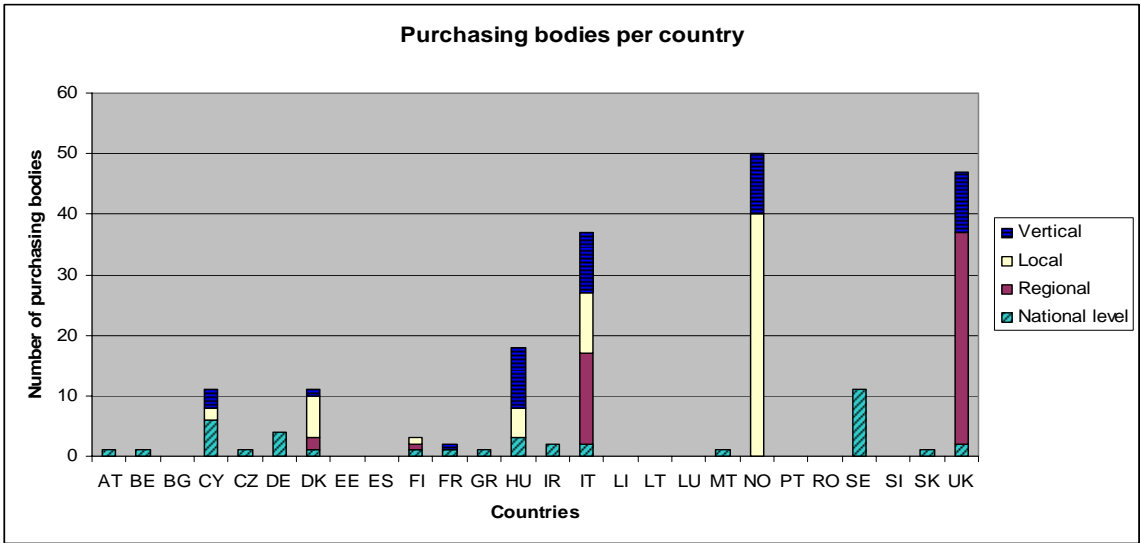
²⁷ Article 11 of Directive 2004/18/EC

Almost all countries encouraging centralisation at national level also reported an effective increase in the aggregation of purchases. At regional/local level, 5/7 countries reported such an increase and 3/5 at sectoral level. Only two countries did not experience any increase in centralisation, despite having encouraged it at central/national and regional level. Conversely, some countries experienced an increase in centralisation while not explicitly encouraging it.

Considering the different ways to centralise purchases, the survey seems to imply that most purchasing bodies are found at national level, 16 Member States declared at least one national purchasing body and only three stated that they have none at that level. Interestingly, very few countries seem to have purchasing bodies acting on regional or local levels. One country, Norway, has a large number (40) of local purchasing bodies.

The following table gives an overview of the number of CPBs by country.

Figure 3 - Central Purchasing Bodies at national level



Source: DG MARKT based on Ernst & Young stakeholders survey

5.3.3. Simplification

Simplification was one of the key policy targets of the Action Plan. This simplification could be compared against two situations, i) to paper procurement, or ii) to the situation in 2004. In both cases, the current state of play seems to be more efficient for the phases of e-Notification and e-Access. As per the provisions of the Directives, use of the two electronic phases allows a subsequent reduction of the procedural times. As those phases are both available in 29 of the 32 countries, there is a strong potential for simplification, but no figures relating to the length of procedures are currently available which might help to confirm this (the underlying assumption being that simpler procedures take less time). It should be underlined also that economic operators, particularly SMEs, raised some concern about the reduction in timescales and the subsequent time available to prepare their bids.

From looking at the portals and platforms, it would seem that those which require simpler authentication are likely to be less subject to cross-border difficulties. One example is the use of username/password systems, for instance in Ireland or the UK, which is simpler to manage for both buyers and suppliers and theoretically permits easier cross-border access if the

requirements to obtain identifiers are kept accessible to foreign users. Tools or procedures more complex to set up such as DPS seem to have been neglected.

Public Procurement in general has been targeted as being a priority area by the "Better regulation" agenda of the European Commission and is one of the policy areas considered by the High Level Group of Independent Stakeholders on Administrative Burdens ('Stoiber group'). In this forum, e-Procurement has been promoted as a means to simplify public procurement.

5.3.4. *Mandatory requirements*

On the question of whether the use of e-Procurement should or should not be made mandatory, there are interesting differences in approach. According to the Ernst & Young survey, eight Member States have already made e-Notification mandatory and a further four are thinking of doing the same. At present, two countries have made e-Access mandatory. In other cases, some Member States have made or plan to make post-award phases such as invoicing and payment mandatory (SE & DK). Other Member States do not plan to adopt a mandatory approach.

It is interesting to see that many countries have preferred to introduce a more restrictive policy than the EU legislation, including mandatory elements in parts of their e-Procurement systems and procedures. The most frequent element is e-Signatures, made mandatory in 19 of the 32 countries. Some Member States have made the use of specific phases mandatory for purchases above certain threshold values or for defined types of purchases (e.g. AT and FR for e-Submission). Portugal has taken the strongest approach, in this regard, making e-Procurement mandatory for the whole pre-award process. The table provided in annex IX gives an overview of the situation for the 32 countries.

5.4. **What infrastructure has been put in place?**

5.4.1. *Different types of infrastructure identified*

Existing types of e-Procurement infrastructures can be summarised as follow:

a) **e-Procurement platform:** A solution designed specifically for an individual organisation to support its procurement processes. Due to the high development costs, such a system is commonly used by large organisations with a high number of procurement processes.

b) **Multi-organisation platform:** A solution that a service provider develops and runs for subscribing procurement organisations. Individual buyers "rent" from a third party a private space on the procurement application where they can define their own users, processes and deliverables. This model is widely implemented across Europe with many variants. The third-party service is offered in certain countries by a public body and in other countries by private organisations on a competitive basis. Subscription by procurement authorities and charges vary accordingly. In some countries (e.g. Portugal), this model has been made mandatory to achieve economies of scale for the whole public sector e.g. Vortal (PT).

The new Portuguese legal framework

Under the new Portuguese legal framework (Decree 18/2008), from 1 November 2009 any public procurement procedure (open, restricted or negotiated) has to be conducted electronically (from e-Notification to e-Award). In concrete terms, contracting authorities have to use one of the seven currently certified platforms to run their procedures.

It is interesting to see that each and every step of an e-Procurement procedure can be managed on line in Portugal in systems which are not intended to create any extra costs for the economic operators. The costs related to the use of the platform are borne by the contacting authorities through service contracts with the platform. In terms of e-Signatures, Portuguese citizens and companies may use their e-ID card to sign throughout the procedure. In the future, this option will probably also be opened up to citizens and companies from EU Member States using similar e-ID cards. In the meantime, foreigners may request to have the signature they use recognised as valid by the Portuguese system, after it has undergone validation by recognised e-Signatures verification authorities.

The measured impacts of e-Tendering in Portugal are:

- Open procedures reduced from 88 to 49 days
- Estimated annual administrative costs savings (time, overheads, paper etc.) of €28 million per year.

Source: DG MARKT, based on 2008, Deloitte "Impacts of the Introduction of the Public Contract Law" quoted in L. Valadares Tavares (eVA), "Public e-Tendering in the European Union"

c) **CPBs' framework platform:** A system supporting the provision of goods and services to public offices under framework agreements signed by a CPB. CPBs, at national or regional level, establish framework contracts setting conditions and terms for the supply of certain (common) products and/or the provision of (common) services to the benefit of the public buyers in their jurisdiction. Products and services covered by each framework contract are usually then placed in a catalogue. By navigating such a database, individual public offices issue specific orders (by basically selecting how much they want to buy in the case of products and what type of tasks they want to be performed in the case of services). One example is the Austrian Federal Procurement Agency (FPA).

d) **Marketplace:** A general catalogue of (common) products and services offered by a CPB to public buyers in a country or region. Interested suppliers subscribing to these services publish their products in the catalogue offered by the CPB specifying price, delivery time, areas served, guarantee period, etc. Procurers can navigate the catalogue, identifying for each item the suppliers offering that item and the related conditions and terms. They then choose the product by placing it into a "shopping cart". This type of service can only be used for below threshold procurement, complying in legal terms to placing a direct order within an informal list of accredited economic operators. The Italian marketplace MEPA provides such services (see box below).

e) **Procurement portal:** A web based solution offering a single entry point to a number of procurement platforms such as those indicated above. The portal may provide some information on top of the services that it gives access to. Again, the portal may be run by national authorities or by businesses on a competitive basis.

The Italian Electronic Public Administration's Marketplace (MEPA)²⁸

“The Italian Public Administration e-Marketplace is a virtual market in which any Public Administration can buy goods and services, below the European threshold, offered by suppliers qualified according to non restrictive selection criteria. The entire process is digital, using digital signature to ensure transparency of the process. It is a dynamic tool in which products and services are presented in e-Catalogues according to standard formats. [...] It allows the public administration to negotiate the price and service conditions by inviting a pool of qualified suppliers to make a customized quotation, providing both price and technical/quality details.” This dynamic procedure stimulates strong competition, gathering offers from various suppliers. In 2007, the volume of all purchases completed through MEPA since its launch in 2003 reached €160 million. Recent regulations have made the use of the Marketplace compulsory for central public bodies. Implementation costs were reported to be between €5,000,000 and €10,000,000. General economic effects were estimated to be over €10,000,000.

One of the main goals of MEPA was to improve SME participation in public procurement procedures, through openness, transparency and process simplification related to the adoption of electronic tools. This policy appears to have been successful:

- 97% of registered suppliers (more than 5.000) are SMEs, and 64% are “micro” (less than 10 employees).
- SMEs receive more than 90% of MEPA total spending (€170 million in 2008) - “micro” enterprises get 45%. This represents a substantial increase against 2005 figures.²⁹

Source: DG MARKT based on ePractice

5.4.2. Overview of existing infrastructure

Overall, the availability of portals and platforms for e-Procurement in the countries studied has increased dramatically since 2004. The degree of sophistication and coverage of the e-Procurement phases varies, but the progress from 2004 is encouraging. The number of available systems and websites has also significantly increased. The Siemens-time.lex report draws on the study of 129 main sites (22 CPBs, 81 portal sites and 26 platforms), which compared to the 36 systems identified in 2004, clearly shows the growth in the number of sites. Both the lists for 2004 and 2010 were not necessarily comprehensive - they gathered what was known at the time and where duplicates exist, certain solutions were counted as one - for example the German private sector owned Administration Intelligence AG platform, which is available in a number of contracting authorities (e.g. the cities of Frankfurt and Bremen and Hessen (Land)). Furthermore, the Siemens-time.lex study shows that "at least rudimentary systems are now known to exist in all but two countries: Greece and Liechtenstein³⁰".

²⁸ See <http://www.epractice.eu/en/cases/mepa1>

²⁹ For more information see: « The determinants of suppliers' performance in e-Procurement: evidence from the electronic public administration's marketplace (MEPA), Gian Luigi Albano, Federico Dini, Roberto Zampino and Marta Fana; see <http://www.consip.it/on-line/Home/Ricercaesviluppo/UfficioStudi/Ricercheincorso/documento4679.html>

³⁰ Siemens-time.lex report, section 5.3.2.2

It is important to note that availability in this context means that there is a national capacity for running a specific phase or tool. It does not mean that these elements are necessarily available on the same platform, or that they are interoperable at national level when operated on different platforms. On the same basis, the availability of phases, tools or parts of a procedure does not mean that national solutions are opened to foreign bidders.

Cross border accessibility can be marred in practice through language barriers. Based on an examination of 129 key sites, 39 provided at least some information in languages other than the national language(s). In each of these 39 cases, English is among the supported languages. However, only 13 of these 39 sites were ranked as comprehensive, i.e. providing enough information in the translated language to permit full usage of the website. Language coverage thus remains a key challenge.

E-Bourgogne platform/e-Ten procure pilot project

Launched in 2005, the e-Procurement platform e-Bourgogne serves over 950 public bodies from the Burgundy region of France. The platform has been used by more than 17,000 economic operators (mostly local SMEs, but also many companies from across Europe), generating a total of nearly 315 000 downloads and more than 8000 electronic tenders between 2005 and 2009. A reduction of 15-20% in the value of regular small tenders has been reported. Contracting authorities have also experienced an increase in the number of tenders received, from one or two to 10 to 20³¹. The mutualisation of development and exploitation of the platform allowed savings of €3 to 4 million.

The technology used in e-Bourgogne has been made available to other regions of the EU thanks to the EU-funded PROCURE project; The platform was built with an open-source licence, which enabled any other organisation to take it, adapt it and deploy it for their own e-tendering protocols. PROCURE has benefited from the expertise of the e-Bourgogne team to roll out an e-tendering platform in several other EU regions: Brittany, Central Bohemia, Guadeloupe, Piedmont, and Uddevalla. But PROCURE goes a step further than simply deploying isolated systems. The project links them together and creates the first interregional network of shared e-Procurement platforms, providing cross-border e-Procurement solutions. Economic operators would benefit from greater business opportunity in a one-stop shop, with single registration; while contracting authorities enjoy the results of increased competition.

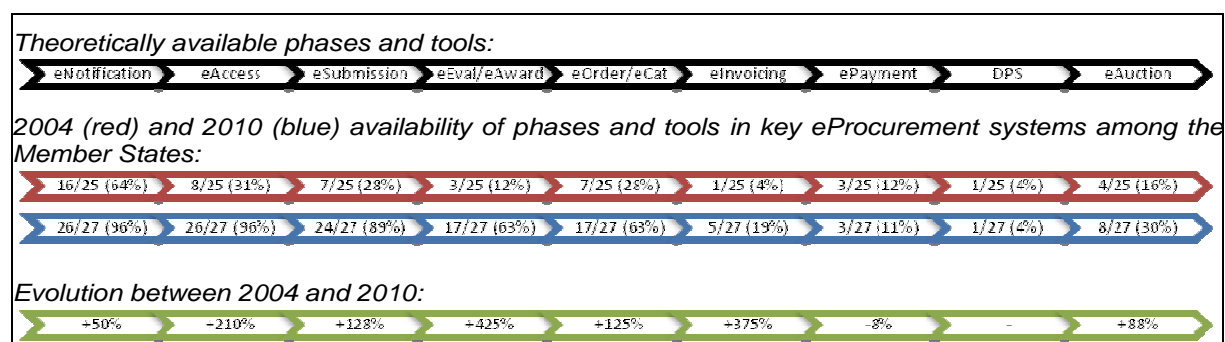
Source: DG MARKT based on ePractice and eTen Procure websites

With regards to available phases and tools, the Siemens-time.lex report included the following summary chart, drawing on data relating to the known portals and platforms:

31

<http://cordis.europa.eu/ictresults/index.cfm?section=news&tpl=article&BrowsingType=Features&ID=90524>

Figure 4 – Availability of phases and tools 2004 vs. 2010



Source: Siemens-time.lex report

It is interesting to see that the most widespread phases in 2004 and 2010 are the same, namely e-Notification and e-Auction. Efforts seem to be more focused on the pre-award phases than on the post-award. The availability of e-Payment and DPS has not changed much between 2004 and 2010. It is important to stress, this chart shows the theoretical availability and not the usage, and does not make visible inconsistencies or gaps in the "straight through e-Procurement" process across Member States. It is also interesting to note that the availability of e-Evaluation and e-Award is much lower compared to the other pre-award phases; a similar tail-off is observed over the post-award phases from e-Ordering to e-Payment.

Another element to take into consideration within the current state of play is that just because a specific tool or phase is legally possible does not mean it is available, let alone used, in practice. The most striking example of this is the DPS, which is legally supported in 22 EU Member States, but supported on a known e-Procurement website in only one Member State (France)³².

5.4.3. Straight through e-Procurement: pre-award and post-award

The table of availability provided in the Siemens-time.lex report³³ gives a good overview of the situations of tools and phases across the countries. From an operational point of view, it can be summarised as shown in Table 7.

Only two EU and one EEA countries are able (or will be soon) to run a fully fledged e-Procurement procedure, from e-Notification to e-Payment: the United Kingdom, Finland (which stated in their country fiche that e-Evaluation and e-Awarding was in a pilot phase) and Norway.

This table indicates that the focus seems to have been more on the pre-award phases than on the post-award. Interestingly, the final phases of both the pre- and post-award phases of the procurement procedure are missing in a number of countries:

- E-Evaluation and e-Award for the pre-award, which can be more difficult to automate or which may require a human intervention in a large number of cases;

³² Siemens-time.lex, section 3.2.2, page 79

³³ Siemens-time.lex, section 5.3.2.1, page 128

- E-Payment for the post-award, which might be more related to accounting and banking than to procurement strictly speaking.

On the pre-award part, two Member States and the two candidate countries are still limited to the one-way flow of information phases: e-Notification and e-Access. Three countries are considered in this table as having no or very limited pre-award experience:

- Iceland has an e-Notification system available without any known e-Access;
- Greece has no known platform or portal offering e-Notification, but is sending notices to TED in a structured format, which means that there is some e-Notification capacity;
- No information has been found for Liechtenstein.

For e-Notification and e-Access, apart from the language barrier, the introduction of a cross border dimension does not make the technical management and availability of this phase significantly more complex, as there are no major access/usage difficulties.

For the post-award phases, there is no known e-Invoicing practice in countries that do not have known e-Ordering practices.

Table 7 – Availability of phases

Part of the procurement procedure	Availability of phases	Countries
Pre-award phases	Full pre-award	Belgium, Denmark, Germany, Ireland, Spain, France, Italy, Cyprus, Lithuania, Hungary, Malta, Austria, Portugal, Romania, Slovenia, Slovakia, Sweden, United Kingdom, Norway
	Full pre-award except e-Evaluation and e-Award	Czech Republic, Estonia, Latvia, Netherlands, Poland, Finland
	Only e-Notification and e-Access	Bulgaria, Luxembourg, Croatia, Turkey
	No pre-award or very limited	Greece, Liechtenstein, Iceland
Post-award phases	Full post-award	Finland, United Kingdom, Norway
	Full post-award except e-Payment	Czech Republic, Denmark, Spain, Sweden
	No post-award or very limited	Bulgaria, Estonia, Greece, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Slovakia, Slovenia, Iceland, Liechtenstein, Croatia, Turkey

Source: DG MARKT based on Siemens-time.lex report

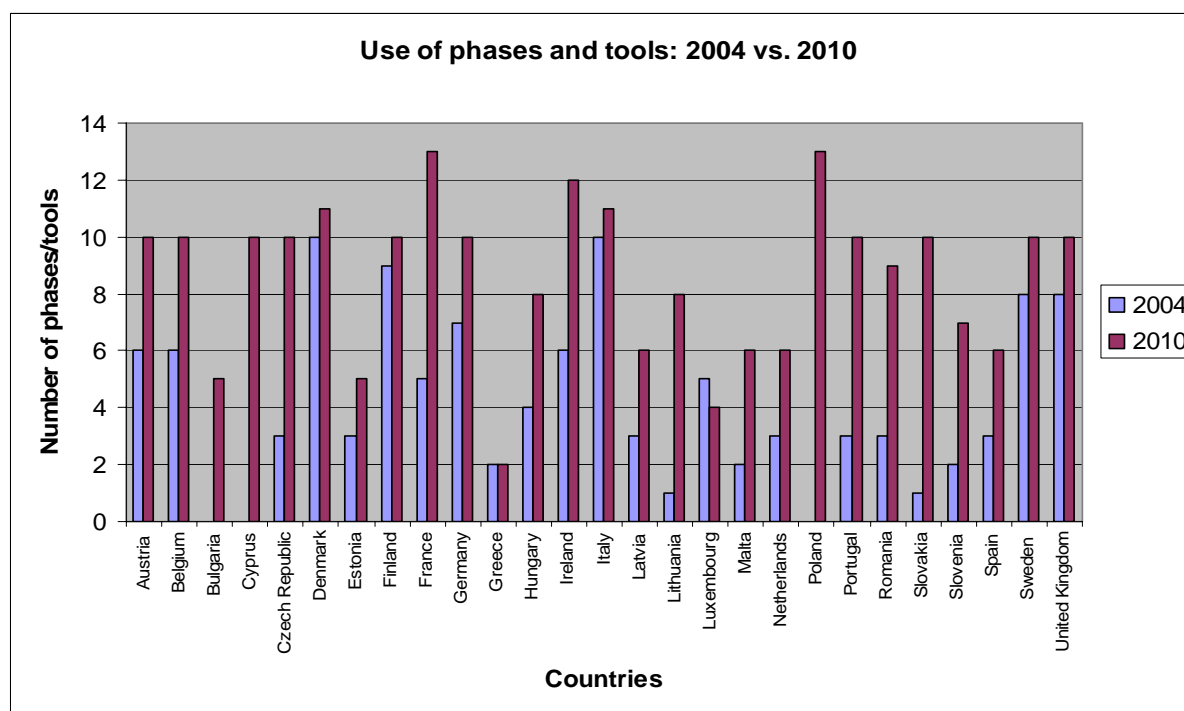
5.5. Resultant use of e-Procurement

In order to complement the availability assessment provided above, it would have been interesting to have consistent figures corresponding to the usage (in terms of contract value) of these websites (platforms or portals). This would have given a clearer indication of the actual take-up of e-Procurement across the EU. Unfortunately, this is not possible at present. Whilst some websites appear to have impressive use data, it is difficult to place a figure on the exact volume of procurement being conducted through these sites. Some sites are used more for below EU threshold value contracts, others for above; some provide data on all the contracts they have helped to conduct since the creation of the website. It is also unclear how many phases need to be completed electronically for a procurement to count as electronic. Whilst little can thus be said about the total value of contracts being procured electronically, some information is available about the use of the various phases and tools.

Two EU Member States which have been at the forefront of developing e-Procurement, France and Italy, estimate that electronic procurement accounts now for approximately 4% (in France) and 2.5% (in Italy) of the total volume of procurement. In Austria, using just the data relating to the mandatory use of electronic frameworks by federal agencies, the figure would seem to be around 2%. Portugal, where e-Procurement has been mandatory since 1 Nov 2009, is the exception as it should now be nearing 100%. In the absence of comparable figures for 2004, it is difficult to evaluate the progresses made either in those Member States or in the EU as a whole. However, based on the limited data available, there is no reason to believe overall EU use is currently greater than 5% of the total procurement value.

As a summary, the following chart gives information on the number of e-Procurement phases and tools used in 2004 and 2010.

Figure 5- Comparison of phases and tools used (2004 and 2010)

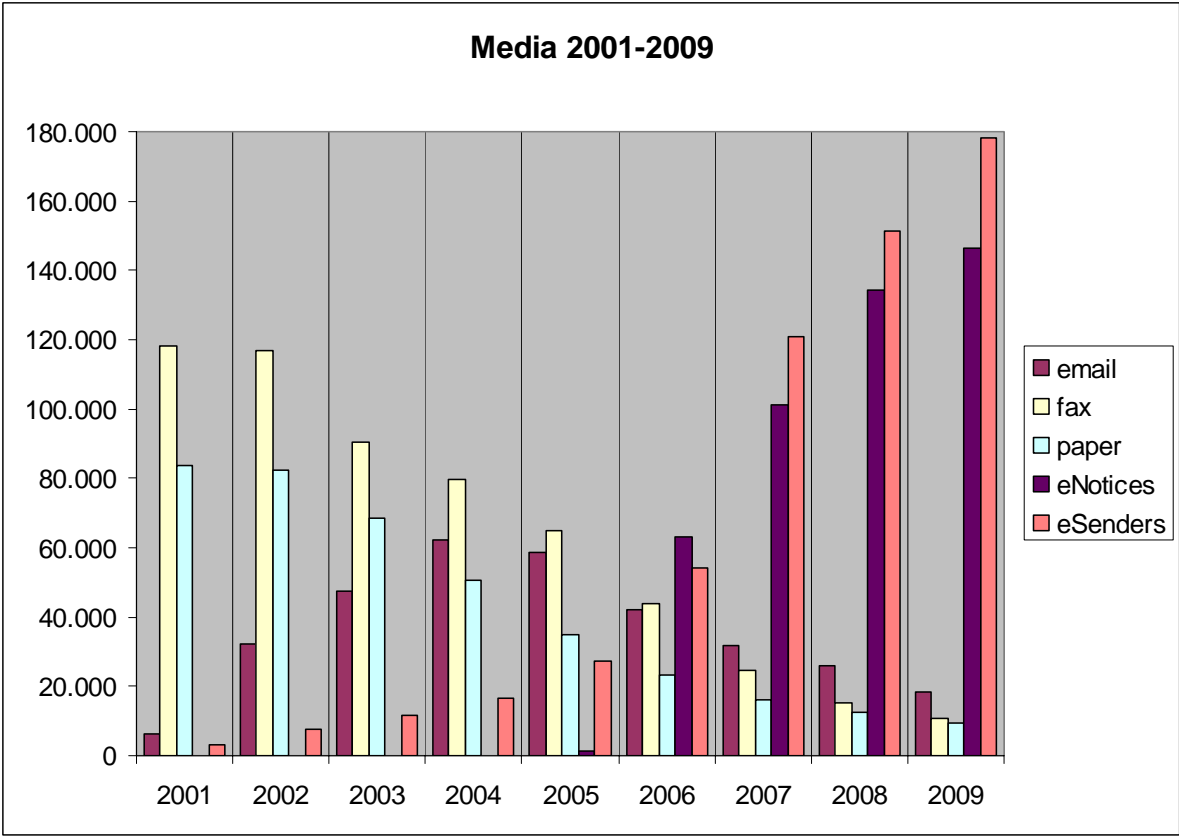


Source: DG MARKT based on Siemens-time.lex

The phase which is most used across the EU is certainly e-Notification. This is understandable, as e-Notification is the entry point for any e-Procurement solution, be that via a single platform or an e-Notification website linked to an e-Tendering platform providing further functionality.

The following chart is based on data from the EU Publications Office and presents the evolution in the transmission media for notices between 2001 and 2009.

Figure 6 - Transmission media for notices



Source: OP

The chart shows that there has been an almost constant decrease in the number of notices transmitted by fax and on paper (non-structured data). At the same time there has been an almost constant increase in the number of notices sent by e-Senders (structured data) and e-Notices (structured data) to the TED website, from their creation in 2005 following the release of the new standard forms requested by the Action Plan. Between 2001 and 2004 there seems to have been a move to using e-mail as a new transmission media (non-structured data, electronically sent), but from 2005, e-mails follow the same decreasing trend as other non-structured media.

5.6. Assessment of the availability and use of specific e-Procurement tools

The following table³⁴ gives a picture of the availability of electronic tools. It should nevertheless be underlined that the availability of tools on a known e-Procurement website does not necessarily mean use in practice.

Table 8 – Available tools: e-Catalogues, DPS and e-Auctions

Tool	Member States where it is available on known sites	Total
e-Catalogues for e-Ordering	Belgium, Czech Republic, Denmark, Germany, Ireland, Spain, France, Italy, Cyprus, Hungary, Austria, Poland, Portugal, Romania, Finland, Sweden, United Kingdom, Norway	18 countries (including 17 Member States)
DPS	France	1 country (1 Member State)
E-Auctions	Denmark, Ireland, France, Italy, Cyprus, Hungary, Poland, United Kingdom, Norway	9 countries (including 8 Member States)

Source: DG MARKT based on Siemens-time.lex report

This section presents a more in-depth analysis of the situation with respect to electronic tools for e-Procurement in the Member States

5.6.1. E-Catalogues

E-Catalogues are electronic documents established by suppliers, according to the guidelines or layout prescribed by the contracting authority in a specific procedure, which describe products and prices in a structured manner. E-Catalogues may constitute an offer in the pre-award phase of a procedure or may be used for e-Ordering in the post-award phase. As they consist of two major elements – structure and contents – which should be standardised, but for which there are currently no widely used standards in the EU market, the exchange of e-Catalogues and their understanding by both parties may be complex.

E-Catalogues are being used and developed but on an ad-hoc basis, rather than in a structured and re-useable format. The use of e-Catalogues for e-Submission is still limited (although some interesting use cases exist in Denmark and Cyprus). Currently, e-Catalogues appear to be used mostly by CPBs for ordering under framework agreements, using ad-hoc e-Catalogues. There is, at the moment, no clearly defined experimentation on the re-use of e-Catalogues in the e-Submission and e-Ordering phases of the same procedure. The re-use of an e-Catalogue is possible only when both structure and contents are built on common standards.

Whilst attempts to improve the definition of standardised elements for the structure is well under way, with studies and pilots in PEPPOL and e-Prior, attempts to standardise the contents are still limited. Contents need to be described using product classifications or

³⁴ Data from Siemens-time.lex report, section 5.3.2.1, page 128

dictionaries which are sufficiently detailed to clearly identify a product for ordering in the post-award phase, or describe a product when tendering in the pre-award phase. CEN is currently working, in its CC3P workshop, on proposals to take advantage of the strengths of several commonly used classifications.

5.6.2. *Certificates and attestations*

E-Certificates and e-Attestations are the electronic equivalent of the certificates and attestations used in traditional paper procurement. They refer to documentary evidence provided in an electronic form by economic operators, together with their bid, in order to demonstrate compliance with particular requirements.

Electronic certificates and attestations have been the subject of various implementations and attempts to balance efficiency and security according to countries' priorities. The following table summarises the four types of measures which have been observed.

Table 9 – e-Attestations and Certificates

Economic operators provide a declaration of compliance	Economic operators register with a limited trusted third party (TTP) or prequalification system	Contracting authorities obtain the information from another public sector controlled entity	Administrations issue electronic certificates or attestations signed with a PKI signature
<ul style="list-style-type: none"> - to postpone the submission of attestations - or to replace it - in some cases, submission of offers constitute an implicit declaration of compliance 	<ul style="list-style-type: none"> - single confirmation of compliance issued by the TTP - contracting authorities may be authorised to obtain information from the TTP 	<ul style="list-style-type: none"> - direct and protected transfer of information from an administration to another 	<ul style="list-style-type: none"> - still largely in a pilot stage
10 out of 32 countries; 31%	8 out of 32 countries; 25%	5 out of 32 countries; 16%	4 out of 32 countries; 12,5%

Source: DG MARKT based on Siemens-time.lex report

The main approach adopted for certificates and attestations seen at present is to reduce as far as possible the need to submit documents (in electronic or paper format) before signing the contract, thus relying on self-declarations from the economic operators. The existence of four separate solutions, relying on different degrees of external intervention, may increase the problem of cross-border participation in public procurement between countries using different systems. Moreover, a national system is not necessarily interoperable with the same system ran in another country.

5.6.3. E-Signatures

Within the e-Procurement context, the need to ensure a suitable level of authentication has been a key concern. E-Signatures are one possible solution to this issue, providing the additional benefit of establishing data integrity. E-Signatures are electronic information attached to documents to ensure their authenticity and integrity. They are the technological approach recommended (but not mandated) by the 2004 Directives³⁵. When electronic means are used for public procurement, secure communication channels (such as those provided by TLS/SSL) and/or advanced electronic signatures may be used by the parties involved, to address authentication issues.

As a result, in principle contracting authorities are free (subject to national regulations) to choose the appropriate means of communication and authentication, including electronic signatures.

National legislation may establish mandatory requirements for the use of e-Signatures (see section 5.2.5), by all contracting authorities, or may allow each contracting authority to independently choose the level of signature required for a given procurement. The approach followed by the Member States in this area is very important, because the use of different e-Signatures can lead to interoperability problems between countries. In particular, it may not be possible for one country to verify a document that is signed in another country, even in the case that a tenderer fully adheres to the specifications and applies exactly the type of electronic signature demanded by the contracting authority.

This makes cross-border submission, in the case where an electronic signature is demanded, quite complicated at present. Procurements requiring simpler but less secure authentication methods (e.g. username / password) are, in theory at least, subject to fewer cross-border difficulties.

5.6.4. Framework agreements

As mentioned earlier, the situation in relation to framework agreements is different from the other e-Procurement elements as it is more a modality for public procurement than a real e-Procurement issue. Legally supported across all the countries, apart from Belgium which recognises framework contracts, its usage varies greatly depending on the countries.

Table 10 - Use in practice: framework agreements

Practice	Low usage (less than 1% of notices)	Medium usage (1 to 10% of notices)	High usage (more than 10% of notices)
	Bulgaria, Cyprus, Greece, Hungary, Italy, Lithuania, Malta and Poland	Austria, Belgium, Czech Republic, Germany, Estonia, Spain, Finland, Ireland, Luxembourg, Latvia, Portugal, Romania, Sweden, Slovenia and Slovakia	Denmark, France, Netherlands and United Kingdom
	8 Member States	15 Member States	4 Member States

Source: Siemens-time.lex report

³⁵ The 2004 Directives establish that awarding entities may decide that communication and exchange of information with economic operators can be performed exclusively by electronic means or by a combination of electronic means and paper.

In general, the framework model has proved very useful and successful. In some countries Member States have also used CPBs or central agencies to provide electronic framework agreements maximising the potential of e-Procurement to aggregate contracts, reduce back office costs and reap efficiencies of scale. In an electronic format they should be able to serve a larger number of CAs and manage a larger number of participating EOs efficiently. Austria has made their use mandatory for electronic purchases by federal agencies (Sweden has also made their use mandatory by Government Agencies unless the agency finds a more beneficial solution but does not specify the use of electronic means).

However, there may still be some issues to be addressed – there are still worries about the closed nature of framework agreements reducing competition and also how they may be restricting the access of SMEs to the procurement market

5.6.5. *DPS*

Although the related provisions have been transposed by a large number of countries (27 countries), the analysis of TED data for the periods 2006-2009 shows that DPS seem to be technically implemented only in France. In the other countries, the "simplified contract notice on a dynamic purchasing system" (standard form n°9) has been used only rarely. However, as none of these forms indicate references to a previous publication (the original contract notice establishing a DPS must be referenced), it is difficult to judge if these publications really indicates that DPS are available in the country publishing the form n°9, or if it is an inappropriate use of the form. Adding to this confusion, there are instances where form n°9 has been used in Member States where DPS are not, or not yet, legally supported.

5.6.6. *Buyer profiles*

The availability of buyer profiles on platforms is interesting to analyse. Buyer profiles are legally defined in 20 countries and are available on known platforms in 12 countries. However, buyer profiles are both legally defined and available in only 7 countries, meaning that technically they are available in 5 countries despite not being defined in the legislation.

The appropriate standard form³⁶ to advertise the use or update of a buyer profile has been used in 14 Member States, including one Member State where buyer profiles are neither legally defined, nor available in any known platform. The actual usage of buyer profiles, as notified to TED, is very low (344 notices on a buyer profiles published on TED from 2006 to 2009). It is therefore difficult to analyse them any further. The tool seems either to be too loosely defined to be interesting for contracting authorities, or too unclear to be properly used across the countries. A quick review of various websites implies a wider use, but the elements labelled as buyer profiles are often limited, acting more as an electronic business card.

5.7. **Technical approaches present in e-Procurement systems**

The choice of a particular technical approach has huge consequences both in terms of cross-border exchanges and interoperability (because of conflicting standards, or because of the non-recognition of certain solutions across borders). It also affects the sophistication of a solution and thus in different degrees, the overall automation of the processes. Authentication is also an important factor – many of the fears and concerns in moving towards e-Procurement relate to issues of trust; both EOs and CAs need to have faith that the systems put in place, the

³⁶ Standard Form n°8 "Notice on a buyer profile"

tools they are using are providing them with real, reliable information that can be handled and stored safely without risk of being altered or fraud being committed. There are also various ways to improve efficiency – particularly through avoiding practices which "re-invent the wheel" – practitioners want to obtain the maximum re-usability from their efforts, avoid duplication and wherever possible, simplify the processes.

5.7.1. Authentication

The elimination of barriers to cross-border procurement was one of the main goals of the Action Plan. The issue of authentication, particularly the use of e-Signatures, was considered at that time as being a key factor influencing cross border exchanges. As shown earlier (5.6.3), four different variants of e-Signatures are used in all but one Member State (Finland), either compulsorily or not. Authentication systems for critical phases such as e-Submission can follow different techniques ranging from the fairly simple (but possibly less secure) to the very technical (but more secure):

- Using a username/password authentication following prior registration. This poses few cross-border problems once the registration is completed, if no country-specific information is required for the registration; and
- Using PKI based authentication systems (supported by cryptography using encryption certificates). Currently these are, to large extent, unable to accept foreign solutions.

5.7.2. Standardisation

Technical cross-border difficulties have been spotted in the e-Ordering and e-Invoicing phases. While XML based standardisation work (notably UBL 2.0) is becoming more and more popular, use is still based on national variations, making any cross-border application difficult or impossible in practice.

Standardisation issues are also crucial for e-Catalogues, where there is no widespread use yet of standards like UBL or UN/CEFACT XML schemes. In addition to this, there is no widespread unique classification system to describe products in an e-Catalogue prospectus. Moreover, as e-Catalogues are currently often set up for ordering under a specific framework contract, ad-hoc solutions relying on the contracting authorities' own classification of products and preventing reuse are still common practices.

5.8. Savings

In terms of benefits delivered by operations ran across the EU, there were great expectations relating to the savings which could be realised as a result of the introduction of e-Procurement. The potential to reduce costs was promoted as a key incentive to encourage the switch to electronic procedures. Certain Member States have turned it into an objective of their national strategy, such as Ireland where five of the quantitative targets of their national action plan were focused on costs.

Due to the lack of appropriate data, it is not possible at this stage to evaluate the reduction of costs of single procedures in the Member States. E-Procurement is expected to have initially increased the costs due to the necessary spending for the creation of platforms, but a dramatic decrease of costs was expected, once the structural costs had been absorbed.

There is however a small but growing body of proof that savings are being realised as a result of e-Procurement use (see box below). Wider anecdotal evidence suggests that many contracting authorities and economic operators have made the switch-over to e-Procurement and would not contemplate a return to paper based procedures.

The ePractice³⁷ website gathers case studies showing examples of Member States (such as Austria, Spain, France or Romania) where the savings made through e-Procurement exceed the investment and running costs. The table in Annex VIII gives a broad overview of the situation by Member State in terms of savings.

Examples of savings and improvements

- Italian Emilia Romagna's agency Intercent ER offers e-Procurement services including e-Marketplace, e-Catalogues and e-Auctions and is now the reference point for 539 administrations (90% of local agencies). In 2008 it processed transactions amounting to some € 419 million, delivering efficiency benefits of € 67.5 million and time savings of 45 man-years.
- The Austrian Federal Procurement Agency centralises purchases for federal authorities through e-Procurement functionalities. In 2008 it reported savings of €178 million against a procurement volume of €830 million. Benefits seem to significantly outweigh the annual maintenance costs of €5 million, which are less than 3% of the savings.
- As of 1 February 2005, all contracting authorities in Denmark may only accept electronic invoices. This reform affects approximately 15 million invoices a year, and applies to the entire public sector, from ministries to nursery schools. The use of e-Invoicing is expected to save the public €100 million every year, on top of savings in internal administrative processes.
- In Norway, the Ehandel platform is helping authorities to achieve 20-40% reductions in the time taken to handle orders, receipt of goods and invoicing and delivering price savings in the region of 2-10%.
- In the UK, the Buying Solutions website reported in its 2008/09 annual report that it had facilitated sales of over £5 billion, delivering £732 million in savings. The UK also reported savings frequently exceeding 10% (and even up to 45%) through the use of e-Auctions and recently announced plans to use e-Auctions to save the taxpayer up to £270 million by the end of 2011.
- A Portuguese study compared the best bids for public works contracted by 50 Portuguese public hospitals in 2009 (using paper based systems) and 2010 (using e-Procurement). It concluded that a cost reduction of 18% had been achieved in 2010, due to the increase in competition generated by e-Procurement.

Source: DG MARKT, based on ePractice, national e-Procurement sites and Member State presentations

³⁷ <http://www.epractice.eu/>

Most of the required investment in e-Procurement must be undertaken at national or regional level, as this is where the needs and resources for system-building lie. Therefore, any efforts that are undertaken at EU level must recognise that the primary impetus for e-Procurement comes from the national or regional level, or that of relevant contracting authorities.

5.9. Comparison with the experiences of international partners

It is interesting to see that the same trends visible in the EU and EEA in terms of the various developments in the e-Procurement arena can also be observed at international level. A set of reference points or demonstrations emerge from analysing various case studies, showing possible areas of interest in relation to the problems being encountered in the EU and EEA countries. On a general note, it would appear that at an international level also, the initial enthusiasm and high expectations for e-Procurement have not (yet) materialised and usage is still low. It is often observed that the lack of consistent e-Procurement indicators hampers the development of a clear picture of how electronic purchasing techniques are evolving. However, many third countries have taken a more prescriptive and centralised approach than the EU, trying to address specific policy targets such as: inclusion of SMEs (e.g. by introducing preferential treatment by law); definition of the role of central purchasing agencies; preference for integrated e-Procurement systems with prior supplier registration ("closed circuit" systems); use of e-Auctions and framework agreements. The intention is also often to switch the focus more on efficiency than only on compliance.

The major success story at international level is the South Korean platform KONEPS³⁸. From its origins in 1997, its efficiency has been recognised at international level and it has received several international awards over the last years (including from the UN and OECD). This system addresses each and every phase of a procurement procedure from notification to payment, with one single registration to use the platform. The transaction cost savings are estimated at 4.5 billion US\$ per year. It is highly centralised and fully interconnected with other e-Government elements and databases in Korea, for instance the acquisition of certificates through queries directly from KONEPS to the relevant administration. It is also interconnected with banks for the e-Payment phase, allowing fast payments. The system provides high degrees of security, with encryption of data and advanced signature requirements, for example through the biometric identification of signatories. Full transparency is ensured through real-time process tracking. KONEPS is a comprehensive communication system enabling the use of e-Catalogues, electronic marketplaces, features for CPBs, and also feeds from other e-Government databases such as the one for taxation. KONEPS as communication interface could, to some extent, be compared to the infrastructure being developed by PEPPOL, but goes much further in terms of data acquisition and tools.

The central government platform of Chile, ChileCompra³⁹, is another example of a successful platform. It manages transaction volumes of 60 billion US\$ per year, which corresponds to 3.5% of GDP. The system manages around 500,000 public tenders per year, federating 85,000 active suppliers. The current priority of ChileCompra is to dramatically increase the use of electronic catalogues. The main asset of the system is that it allows a comprehensive spend analysis, which allows procurers to better plan their purchasing process, to provide suppliers with better market information and to focus control agencies on high risk processes. Savings

³⁸ <http://koneps.go.kr/>

³⁹ <http://www.chilecompra.cl/>

calculations are based on a comparison of internal and external marketplace prices. To date, they amount to more than 140 billion US\$, half on prices paid and half on transaction costs.

The Canadian Merx⁴⁰ platform is a good example of the diffusion of cross-border opportunities and of the interrelations between public and private procurements. The first element to note is that due to the bilingual nature of Canada, the Merx platform is fully available both in French and English, and public contracts notices are available in both languages. It is open both to public and private procurement. Nine governments of Canada (out of 13 provinces and territories) and the federal government participate in Merx. Under the tab "U.S. tenders", the platform makes available thousands of public procurement notices from U.S. government agencies, at federal, state and local levels. The "U.S. tenders" section of the platform links back to Canadian public tenders, so that the platform is fully operable across the border and can be used equally by US and Canadian operators. The existence of such a cross-border platform can partially be explained by the fact that Mediagrif⁴¹, the company running the Merx platform, also runs the Government contracts USA portal⁴² and the four platforms under this portal. This example may show that the private sector has a particular card to play in term of cross border interoperability when they operate services in the public interest.

Much work has been done by the Multi-lateral Development Banks (MDBs) who promote the use of e-Procurement, particularly in relation to requirements for anti-fraud and corruption measures. Often their funding is tied to the introduction of such systems. The MDBs are active in South America, but 10 EU countries are also eligible for their assistance.

5.10. Summary – where are we today?

The 2004 Action Plan permitted national, regional and other authorities to develop solutions and introduce e-Procurement, in the way best suited to them, subject to compliance with the legal framework and the guidance provided. Some Member States have taken steps to normalise the use of e-Procurement within their borders, setting out clear rules which state exactly when, or when not, e-Procurement must be used.

Other than TED (Tenders Electronic Daily – the electronic notification database put in place to allow contracting authorities to publicise their above threshold tenders at EU level), no EU level, centralised infrastructure was provided. Many of the measures in the Action Plan were "soft law" - designed to promote discussion and debate; to share studies or experience in developing such systems and disseminate best practise.

This policy of "letting 1000 flowers bloom" was designed to encourage creativity and innovation in an emerging market, where no mature standards or technological solutions had yet emerged. Both the benefits and the risks of this strategy have now crystallised. This evaluation has shown that much progress has been made since 2004. Significant efforts and progress have been made by some contracting authorities, economic operators, Central Purchasing Bodies and Member States. Great progress has been made in developing electronic applications capable of supporting most/all phases of procurement procedures. Some Member States or regions have put in place e-Procurement systems which can support 'straight through electronic procurement' processes – at least for purchases of standard

⁴⁰ <http://www.merx.com/>

⁴¹ <http://www.mediagrif.com/government-opportunities-en.jsp>

⁴² <http://www.governmentcontractsusa.com/index-en.jsp>

supplies and services. These efforts notwithstanding, overall take-up both within most countries and across the EU as a whole, remains low.

Technology has not provided the expected (high tech) solutions to all procedural steps. In some cases, progress has resulted from a more pragmatic approach – in the form of practical 'workarounds' involving less technically demanding solutions or combining on/off-line communication. Nonetheless, these solutions are valid – they simply provide alternative ways to reach the end result. Certain limits to "straight through e-Procurement" have also been identified e.g. difficulties in using automated evaluation approaches to complex purchases; absence of a time-stamping system which is accepted EU wide.

Our assessment (based on examination of design and requirements for access to systems, and PEPPOL preparatory work) is that in today's market, economic operators wishing to participate in on-line procurement procedures in other Member States will be faced with practical, technical and administrative obstacles. National/regional e-Procurement procedures are designed by reference to local administrative or technical practices which may differ significantly. As a result, despite the great progress at national level, little concrete progress has been made towards unhindered, cross-border electronic procurement.

6. HOW HAS THE ACTION PLAN CONTRIBUTED TO THIS PROGRESS?

The 31 measures of the Action Plan covered a wide range of actions designed to accelerate adoption and ensure access (partly through the provision of common building blocks) to e-Procurement. They were also intended to address the high risks of market fragmentation which could occur if the transfer to electronic systems was carried out in an inappropriate / uncoordinated manner. There was widespread awareness that the introduction of e-Procurement could lead to the creation and maintenance of a range of legal, policy and technological barriers. Member States, candidate countries and businesses were prepared to act accordingly, to ensure that such a situation was avoided.

By mid 2010, 13 of the 31 measures had been completed (including those where no final outcome has been achieved, but all the actions expected in the given period were completed), three were partially completed (i.e. some action has been undertaken but at present little advance is being made), 13 were on-going and three had been delayed. The sections below present the developments that have occurred and compare to the expectations of 2004 (by reference to the Intervention Logics drawn up for each objective). They also assess, in as objective a manner as possible, how the Action Plan has contributed to the progress that has been made. It is however difficult to judge in absolute terms how far today's e-Procurement market has been influenced by the measures undertaken via the Action Plan, particularly given the data constraints, and some degree of subjectivity is inevitable. Many of the actions related to the provision of studies, or contributing to the development of solutions – measures which it is difficult to prove or associate directly with the results visible in the current market. The more detailed background and evidence for some of these assessments is provided in the Siemens-time.lex report.

Whilst each action was intended to assist a particular objective, it is clear that there is a certain amount of synergy and interaction between the measures and the results/impacts obtained. In the following sections, for each objective, the initial results and achievements due to the (grouped) actions are presented first and then the combined effects and longer term impacts are discussed in a concluding section. Each section begins with a table summarising

the various measures, the issues they were expected to address and the current state of play in relation to the measure.

6.1. Ensure a well functioning Internal Market in electronic public procurement

The actions carried out under this first objective were split under four headings, each of which is considered in more detail below. The Intervention Logic for this objective is provided in Annex VI. The actions address a range of areas, including legal, technical and infrastructure.

6.1.1. Implementing the legal framework correctly and on time – measures and results

Table 11 - Measures relating to the implementation of the legal framework

Action Plan measure	Issues to be addressed	State of Play
Commission to issue interpretative document on the new rules on electronic public procurement	Legal	Completed - Commission Staff Working Document (SEC 959 of 8.7.2005; EN only)
Commission to make online training demonstrators available, allowing CAs and EOs to familiarise with new e-proc provisions and tools	Technical Trust Resistance to change Lack of understanding of benefits Doubts on feasibility Accessibility Set up a reference model	Completed - 2005; Applications available on IDABC ⁴³ website ⁴⁴ - helpdesk services (2005-2009)
Commission to provide appropriate assistance to Member States in transposing the new legal provisions	Legal	Completed - e-Procurement Working Group (ePWG) of the Advisory Committee for Public Contracts, meetings (from 2003) - DG MARKT website

Source: DG MARKT

To avoid barriers to competition and distortion of markets the Action Plan considered it was very important that the 2004 Directives were adopted in a timely and correct manner. This was also expected to encourage and assist the early adoption and effective use of e-Procurement by Economic Operators.

⁴³ Interoperable Delivery of European eGovernment Services to public Administrations, Businesses and Citizens. A Commission programme that ran between 2005 and 2009, developing recommendations and, solutions and providing services helping European public services to communicate electronically

⁴⁴ <http://ec.europa.eu/idabc>

While the Action Plan did not specify a particular approach to transposition, it aimed to facilitate the understanding of the legal framework and to encourage the appropriate related exchange of views with the Member States when their transposition provisions were at drafting stage. Although delayed in some countries, in general the transposition of the 2004 Directives has been done within a reasonable timescale - 11 Member States transposed by the deadline and for those which were late, the average transposition delay compared to what was expected in 2004 was around 14 months. To-date no evidence has been found of serious errors in transposition.

The assistance and guidance provided by the Commission has played a positive part in achieving this outcome. It would appear that Member States have made extensive use of the information provided and have sought further clarification and assistance from the Services of the Commission as necessary. Of the 22 Member States who replied to the Ernst and Young questionnaire addressed to policy making bodies, 17 said that EU rules and functional requirements had influenced their choices when defining policy for the adoption of e-Procurement systems and tools in their country.

Whilst assistance is generally provided to support the adoption of new legislation, by formalising and publicising these measures and emphasising the importance of achieving a correct and timely transposition the Action Plan probably managed to obtain greater effort and compliance. Certainly, transposition of the 2004 Directives occurred more speedily than for the previous set of Directives, where there was no Action Plan.

However, this does not mean that all legal issues have been resolved. As we saw in section 5.2.6, Member States have introduced gold-plating for several tools e.g. DPS and e-Auctions because they felt the Directives plus existing guidance did not provide sufficient detail. This gold-plating could lead to some confusion, creating as it does different conditions for using such tools e.g. specifying the type of purchase permitted and could ultimately lead to some incompatibility between systems. For example, the Siemens-time.lex study showed that in France e-Auctions can only be used for purchases of goods (i.e. not permitted for services and works) over €133,000 for state procurements and over €206,000 for defence; in Poland they are permitted for all types of purchase but the value must be below €60,000.

As well as these specific issues, there are more general discrepancies appearing between Member States relating to the use of e-Procurement. In some Member States e-Procurement is optional, in others the use of certain tools or phases is obligatory, either for all CAs (e.g. Portugal) or in particular circumstances. For example in France the use of e-Procurement for ICT contracts over €90,000 has been mandatory since the start of 2010; Austria has made it mandatory for federal agencies to use central framework contracts offered via the portal of the Federal Procurement Company. Another possibly important difference relates to the fact that a growing number of platforms and functionalities are provided by third parties, who have not traditionally been a key actor in procurement. Hence there may be some future need to consider whether it might be necessary to set clearer conditions for the use of e-Procurement and to define some of the obligations relating to the provision and operation of such platforms.

Some concerns have also been raised in relation to complementary legislation – particularly in relation to the different approaches to using and accepting e-Signatures⁴⁵ but also relating to issues affecting e-Invoicing (where different national rules make it impossible to seamlessly exchange electronic documents across the EU) and VAT.

Hence although today we have a common legal framework, differences exist in relation to the application and scope of certain e-Procurement functionalities and there may be some emerging issues relating to the way in which e-Procurement infrastructure is provided. This means that there are still some legal issues which need to be addressed.

The provision of on-line demonstrators appears to have been helpful – based on an analysis of hits to the DG MARKT website, the on-line reports have been widely accessed and a helpdesk service was provided from 2005-2009. Many of the sites that have been reviewed appear to have developed broadly in line with the recommendations presented. This is not to say that these demonstrators have been the only influence and much of the information provided may have seemed "common sense" to developers. However this study⁴⁶ together with other relevant documents, seems to have provided a useful reference point and should have helped to address initial worries, such as a lack of technical knowledge; doubts on the feasibility of e-Procurement and perhaps also some of the initial resistance to change. **The increase in the number of platforms between 2004 and 2010 and the degree of functionality now possible in some of these systems shows that e-Procurement systems are feasible, at least within the national context and many of the technical issues can now be addressed. However, this does not mean that common, widely accessible, interoperable solutions have been adopted in all countries and issues relating to access and trust still remain.**

In terms of the early adoption and effective use by EOs, it is difficult to draw any concrete conclusions, as little hard evidence is available at present (see section 6.2.2 for further discussion on increased competition). There are some indications that participation has increased – several countries have indicated that there are now more bidders per electronic tender and many of the portals listed in Annex VII show that large numbers of EOs are registered with them. There is also some anecdotal evidence from discussions with practitioners that e-Notification and the increased ability to find opportunities on-line is making at least these early phases attractive. However as discussed in chapter 5 many of the expected efficiencies relating to re-usable formats and standardisation have not yet been achieved. Without doubt, **the differences which exist between the various systems can generate efficiency problems and costs to EOs wishing to submit bids to different CAs using different e-Procurement systems.**

There is also some feedback from Member States through the various EU level committees about continued inertia/ resistance to change on the part of both EOs and CAs. When considering the success of the two one-way phases of e-Procurement – e-Notification and e-Access - it is interesting to consider that these are also the only phases where the 2004 Directives introduce clear incentives for their use, at least by the CA. e-Notification is legally permitted to speed up the process of publication benefiting both CAs and EOs; e-Access, where it is available 24/7, legally permits the CA to shorten the deadline for submission

⁴⁵ Study on mutual recognition of e-Signatures: update of country profiles, IDABC, produced by Siemens-time.lex, available at <http://ec.europa.eu/idabc/servlets/Doc?id=32436>

⁴⁶ Functional requirements for conducting e-Procurement under the EU framework, available at <http://ec.europa.eu/idabc/servlets/Doc?id=22191>

(although this could be considered a negative by an EO who would have preferred more time to prepare a bid). **In considering how best to overcome this inertia, it may well be worth reflecting on other incentives which can be put in place, legally or otherwise, which may present clear benefits to CAs and/or EOs.**

6.1.2. *Completing the legal framework by the appropriate basic tools – measures and results*

Table 12 - Measures for completing the legal framework by the appropriate basic tools

Action Plan measure	Issues to be addressed	State of Play
Commission to adopt new Standard Forms for procurement notices taking account of new procedures + the use of electronic means of communication	Standardisation Transparency Publicity/dissemination Cross-border Common understanding	Completed - Regulation N°1564/2005 of 7 September 2005 on Standard Forms ⁴⁷
Commission to present proposals for revision of the Common Procurement Vocabulary (CPV)	Standardisation Cross-border Interoperability Common understanding	Completed - Regulation N°213/2008 of 28 November 2007 amending CPV ⁴⁸
Commission to present Blueprint for a fully electronic system for the collection and publication of procurement notices on TED	Transparency Accessibility Automation (Simplification) Cross-border	Completed - Feasibility study completed July 2007 (<i>Mandatory electronic transmission of procurement notices for publication</i>) ⁴⁹
Member States to implement fully electronic systems at national level including appropriate tools for automated collection + publishing in TED	Transparency Accessibility Automation (Simplification)	On-going

Source: DG MARKT

The overall title for this section is perhaps misleading as three of the actions focus on the basic tools required for the first phase of e-Procurement – e-Notification – at European level. In 2004, 90% of the notices sent to TED were received on paper and, as stated in the third measure under this heading, it was felt that decisive action should be taken to develop a “fully

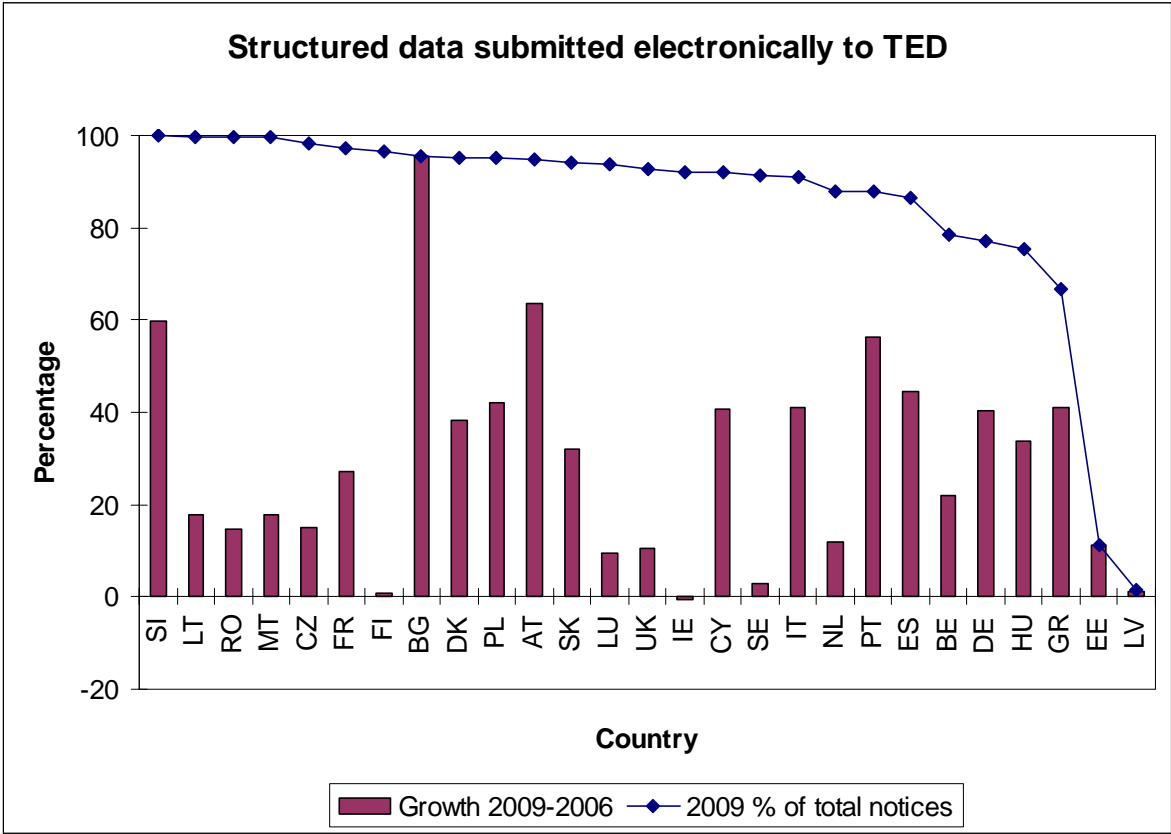
⁴⁷ The standard forms are available online at SIMAP website (<http://simap.europa.eu>)

⁴⁸ The old and new CPV versions are available online at SIMAP website (<http://simap.europa.eu>)

⁴⁹ Available at DG MARKT website http://ec.europa.eu/internal_market/publicprocurement/e-procurement_en.htm#feasability

electronic system for the collection and publication of procurement notices on TED” (to be precise, the measure calls for the development of a "blueprint", so by actually providing the system, the Commission has gone further than originally requested). The actions relating to the creation and use of a common infrastructure for e-Notification have been very successful. There is now a single, accepted and well used system for the publication of above threshold notices across the EU, supported by compatible infrastructure at national level. In 2009 just over 90% of forms sent to TED were received electronically and in a structured format. Over the period there has been an increase in the absolute number of contract notices published on TED and also in the use of e-Senders and e-Notices. As can be seen from the graph below, figures vary by country, but in general use is high and those countries with lower publication figures in 2009 have made significant improvements. This does not mean however that all the procurement opportunities available at any one time can seamlessly be accessed from a single entry point. In fact, publication of notices for below threshold procurement is not regulated and there is not systematic centralisation or interconnection of information sources.

Figure 7 - e-Notification growth over time



Source: DG MARKT based on data provided by DG OP

Data is now provided in a more consistent manner due to the use of the standard forms and EOs can also search for opportunities by using CPV codes, which are widely used within the EU. The CPV has also enjoyed some international success – it has been translated into several languages, including Russian and Arabic and is voluntarily used by a range of third parties. Whilst this has led to a marked increase in transparency, including across borders, caution needs to be taken in claiming “absolute” or “complete” transparency.

Firstly, not all EOs know about or choose to use TED; some prefer to look for national opportunities (frequently below threshold) by accessing individual CA websites and portals for information. The availability indicator, created as part of DG INFSO's 2009 benchmarking exercise⁵⁰, produced results which were strongly contested by some Member States who felt that their scores were too low as their individual national set-up had not properly been taken into consideration, but which could also be interpreted as showing that at a national level transparency and information about the existing structures may not be so good. Some countries have a centralised system (which may be public or private) which publishes all the calls for tender; others operate on a more decentralised basis, with one or more notification hubs, or with notices published on individual CA sites. The basic structure of publication services is not always signposted which can lead to confusion and missed opportunities. Depending on the model used and whether there is the habit of publicising and providing links to these various centralised notification sites on national/regional/local portals, this may adversely affect not just businesses coming from a different country, but also national operators. **In practice, EOs can end up going through many sites searching for relevant tenders, which is not very efficient.**

The fourth action was much wider and complex in scope than many others, relating as it did to the introduction of full e-Procurement systems. However it has been completed to a certain extent and not just in terms of e-Notification, where TED perhaps stands out as the only common, centralised infrastructure currently provided at EU level. As seen in sections 0 and 5.4.3 **almost all countries now have some infrastructure providing e-Procurement systems – but these systems are very varied in terms of: the phases and tools on offer; the entities that can use them; how they are used; and in the degree of technological sophistication involved.**

On first glance, there is reason to celebrate – 24 out of 27 Member States now support the phases up to e-Submission, with 17 also providing systems capable of conducting e-Evaluation and e-Award. But these figures obscure a larger failure – although there are systems available which provide the potential for conducting procurements electronically, they are not necessarily open to all businesses or even Contracting Authorities and the overall use (in terms of number and value of contracts concluded) is low. Apart from in Portugal, where e-Procurement is mandatory in the pre-award phases for all CAs and hence usage is nearly 100%, rates in other countries are low. As has been repeated several times, e-Procurement use figures are not easily available for many countries (see section 6.2 for discussion of actions relating to statistical data collection and monitoring) but where they have been estimated they are generally below 5% of the national total.

Some of these difficulties should perhaps have been anticipated or better acknowledged. There are well known differences between the countries involved which may affect their approach to e-Procurement and sometimes make it more difficult to adopt. For example, large countries with many contracting entities face different problems to smaller ones with fewer, not least in terms of providing and affording training. Some countries already have fairly centralised procurement and hence may find it easy to introduce one or a small number of e-Procurement portals; in countries with a more decentralised approach, many portals are likely to spring up bringing with them further issues relating to access, standardisation and interoperability.

⁵⁰ http://ec.europa.eu/information_society/eeurope/i2010/benchmarking/index_en.htm#e-Government_Benchmarking_Reports

Whilst the work undertaken relating to the development of TED and e-Notification can be attributed to the measures of the Action Plan, it is less clear what influence the Action Plan has had on the development of national e-Procurement systems. Some development would have occurred anyhow – 17 countries were already developing systems prior to 2004. However, others were not, and **by encouraging discussion, promoting best practice/ providing reference studies, it is fair to assume that the Action Plan has contributed to some degree, by at least encouraging this wider development. However there are many issues still to be addressed – they include: problems relating to improving access particularly across borders; the continuing lack of common standards and understanding; and also the need for increased simplification and interoperability.**

6.1.3. *Removing / preventing barriers in carrying public procurement procedures electronically – measures and results*

Table 13 - Measures intended to remove/prevent barriers to carrying out e-Procurement

Action Plan measure	Issues to be addressed	State of Play
Member States and Commission test, refine and validate results of IDA common functional requirements for e-Procurement systems	Legal Accessibility Cross-border Technical Dissemination of best practices Common understanding	Completed - Report on Preliminary Functional Requirements for e-Procurement (03/2005) - Report on Preliminary Functional Requirements for e-Catalogues (12/2007) ⁵¹
Member States to review whether all operational e-Procurement schemes have been adjusted to the requirements of the Directives	Legal Accessibility Cross-border Technical Common understanding	On-going
Member States introduce national accreditation schemes to verify compliance of e-tendering systems with legal framework	Legal Trust Accessibility Policy Cross-border	On-going

⁵¹ Available at DG MARKT website http://ec.europa.eu/internal_market/publicprocurement/e-procurement_en.htm#feasability

Action Plan measure	Issues to be addressed	State of Play
Member States and Commission consider through a feasibility study whether to introduce a European compliance verification scheme	Legal Trust Policy Cross-border	Completed - Feasibility study on Common Compliance Verification mechanisms, completed 07/2007 ⁵¹
Commission proposes an action under IDABC programme to help Member States co-ordinate implementing the use of advanced qualified signature to resolve interoperability problems	Authentication Interoperability Cross-border	Completed ⁵²
Member States apply, if required by national law, interoperable qualified e-Signatures	Authentication Cross-border Interoperability	On-going

Source: DG MARKT

There was considerable concern in 2004, particularly amongst businesses, that systems would be developed based on inappropriate designs or to incompatible IT standards, making it increasingly difficult for suppliers to access the different systems and/or increasing the costs of participation. The first four measures in this group were expected to address these concerns by testing and validating a set of common functional requirements complemented by review and compliance mechanisms. **It is hard to judge the impact of these actions, as much of the work undertaken to review and "accredit" systems has been done at national level and little is available to assess how consistently and thoroughly this has been done across the EU.**

According to the information collected by Siemens-time.lex it is difficult to know how well Member States have assessed the compliance of operational systems. At the time of the 2007 study into compliance verification, 48% of Member States had an official verification strategy employing either an independent 3rd party or a nationally recognised central agency to produce the assessment. A small number of countries (11%) had no such strategy. The study presented a range of recommendations on how to approach the idea of a European Compliance Verification scheme – with reference scenarios covering a “lite” approach (voluntary, resulting in a quality label); a system based on national bodies; and, the possibility to create a European Agency with European Standards. No decision has yet been taken on how to proceed.

Again, it is likely that the functional requirements have been used – they have been widely accessed (over 2000 hits on the DG MARKT pages in the period April 2008 to April 2010) and should have saved their readers' time in assessing and analysing various elements. It is

⁵² EU Action Plan for interoperable e-Signatures and e-Authentication has been adopted (2008), EC inter-service group has been set up

probably not a coincidence that most of the sites reviewed for this evaluation appear to follow, at least in general terms, these requirements. The information provided was very detailed and developers repeating the exercise would probably come up with very similar results. However, **differences in approach have been identified – particularly in relation to authentication and accessibility.**

Two further measures addressed issues relating to the use of interoperable electronic signatures and particularly "qualified" signatures as the reference point for authentication and the integrity of business transactions. Authentication is a key element in several stages of the e-Procurement process.

The procurement directives give CAs the freedom to choose the appropriate method of authentication in e-procurement procedures but explicitly encourage use of electronic signatures, in particular advanced electronic signatures. This approach gave rise to Member States setting different levels of requirements for authentication, ranging from a light user-ID and password-based model up to qualified electronic signatures. There is also a problem of definition – whilst some Member States specify unambiguously the type of e-Signature (e.g. advanced based on a qualified certificate), others just ask for an e-Signature (which could be any of the four levels) or an advanced signature (which may or may not require a qualified certificate). So even if a country has made it mandatory to use an e-Signature (the situation in 18 countries of which 16 are Member States), it is not always clear what is being requested or more importantly perhaps, what can be accepted. 11 other countries (including nine Member States) permit the CA to decide on a case by case basis whether to request an electronic signature whilst two Member States impose no e-Signature requirements.

While the light solution does not pose cross-border interoperability problems, the different national schemes enforced by electronic signatures create, in the majority of cases, the situation where a tender electronically signed by an economic operator in one country cannot be verified by a contracting authority in another country.

Recognising this problem, the Action Plan emphasised the use of qualified electronic signatures that, being in large part defined by the directive on electronic signatures⁵³ offered a reasonable cross-border interoperability perspective. However, the vision of the Action Plan has not yet materialised due to the different approaches taken in implementing electronic signature standards in the various Member States.

Over this period, the Commission has been involved in a range of studies relating to this issue. DG MARKT's involvement includes contributing to the 2008 e-Signatures Action Plan and work carried out by DGs DIGIT and INFSO. Another promising initiative is the work being developed under the PEPPOL module addressing e-Signatures. In this area the PEPPOL project is trying to create a distributed certificate-validation service that is capable of validating electronic signatures, particularly advanced signatures based on qualified certificates. For further information, see the box describing PEPPOL below. Finally, greater degrees of interoperability and acceptance across borders should be obtained within the recent initiative, under the aegis of the Services Directive, to introduce a central "trust list", with links to national "trusted lists" of certification-service providers issuing qualified certificates.

⁵³ E-Signatures Directive 1999/93/EC, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999L0093:en:HTML>

In the meantime, the issue of cross-border authentication is still unresolved. In terms of authentication it is perhaps most interesting to note that in countries which have adopted a lighter approach to the technology required, posing lesser or no technical barrier to cross-border accessibility, no instances of security being breached have been reported so far.

Therefore it is fair to say that, **although progress towards greater degrees of interoperability and acceptance across borders can possibly be expected in the near future, the goals of the Action Plan have not been achieved in this area.**

Hence there is neither greater clarity nor much increase in interoperability and with the growth of use, the number of solutions requested by particular CAs/portals has multiplied. **In this instance it could be fair to say that the interoperability barriers across countries resulting from the use of e-Signatures have actually increased rather than decreased.** At present, the lack of interoperable e-Signatures (of any type) is probably the greatest blocking factor to EU-wide e-Procurement and e-Government services in general.

PEPPOL – Pan-European Public Procurement On-Line⁵⁴

PEPPOL is a major cross-border e-procurement project run by public-sector organisations from various EU countries and co-funded by the European Commission. PEPPOL partners have joined forces to set up a large-scale, standards-based IT infrastructure and services to set up and run e-procurement operations across Europe.

The project has created a comprehensive, coherent set of technical specifications and open software components which will then be integrated within the IT infrastructure of the partner organisations to support the exchange of e-procurement business transactions. These specifications cover e-ordering and e-invoicing in the post-awarding phases and provide building blocks towards the creation of e-catalogues, signature validation and the Virtual Company Dossier (VCD) which can be widely used by system planners and designers to set up pre-awarding operations.

At the heart of the PEPPOL architecture is a transport network, enabling e-procurement business partners to connect their own IT resources to perform secure and reliable exchanges of business documents. It is expected that PEPPOL interconnection services will be taken up by market players and will be widely offered to the business community in all the countries on a commercial basis.

Where possible, all PEPPOL specifications are defined drawing on existing standards. In areas where standards do not yet exist, PEPPOL partners work in close collaboration with the standards bodies in order to make sure that all new specifications are taken up in the standard making process.

Source: DG MARKT

In terms of the results of these six actions, it is clear that there can be no assurance that the systems which have been introduced in the various countries are based on a common understanding of the European framework. **Whilst there may be some grounds to believe that there is a certain degree of consistency in relation to legal compliance, technologically there is little doubt that within the EU different systems have been**

⁵⁴ See www.peppol.eu for further information

developed to different requirements and standards with the resultant negative impacts on authentication and interoperability between systems. Generally within a country it can be inferred that the available systems are based on similar principles and processes and can interact to some degree, or that the infrastructure has some commonality. On a cross-border basis the picture is bleaker – examples of functioning interoperability are limited and mainly rely on solutions being found to integrate support for non-national solutions which meet the applicable national standards. For example, Austria can accept e-Signatures created using Belgian, Italian and Slovenian electronic identification cards; in Norway the e-Tendering platform can also accept the e-Signatures used for the (private) BBS Validation Authority; in Denmark and Slovakia businesses are emailed a compliant advanced signature certificate after registration.

6.1.4. *Detecting and addressing interoperability problems over time – measures and results*

Table 14 - Measures to detect and address interoperability issues

Action Plan measure	Issues to be addressed	State of Play
CEN / ISSS completes gap analysis on interoperability needs for effective e-Procurement	Interoperability Accessibility Cross-border	Completed - CEN Workshop Agreement CWA 15236:2005 ⁵⁵
Commission proposes to continue activities on e-Procurement under the IDABC programme for exchange and discussion on interoperability issues and monitoring of Member States' developments	Interoperability Accessibility Cross-border Policy Dissemination of best practices	Completed
Commission and Member States promote standardisation activities at European level and liaise with international standardisation bodies	Standardisation Interoperability Cross-border Accessibility Policy Dissemination of best practices	On-going ⁵⁶

Source: DG MARKT

⁵⁵ *Analysis of standardization requirements and standardization gaps for e-Procurement in Europe*, available at CEN website <ftp://ftp.cenorm.be/PUBLIC/CWAs/e-Europe/eProc/cwa15236-00-2005-Feb.pdf>

⁵⁶ COM has successfully promoted standardisation over the last years. Various standardisation activities have been completed by CEN and OASIS on XML automated messaging. Development of standards is still on-going.

Standardisation

E-procurement involves the exchange of business transactions over a network. This requires precisely defined interfaces at both ends of the exchange. It is not just about technical requirements: the semantics and all the elements of the transactions have to be agreed upon. For each transaction, each single business exchange needs to be defined. For each business exchange an agreement is needed on the role of the parties involved, the business rules and the data to be exchanged. As a result three distinct interoperability levels can be defined:

- (1) At the business level, interoperability requires an agreement on business processes and semantic document models;
- (2) At the syntax level, it involves the use of structured documents compliant with schemas from standards such as UN/CEFACT XML and OASIS Universal Business Language; and
- (3) At the technical level, it implies common requirements such as the use of a document transport infrastructure.

Standardisation in the e-Procurement domain is therefore complex in its own right. The scenario is further complicated because at present a large number of competing standards exist in some areas, whilst there is a substantial lack of agreed specifications in other areas.

Three main lines of standardisation are currently underway addressing the various standardisation requirements. These are:

- The Universal Business Language (UBL) is an XML based library of common business documents defined and maintained by OASIS, a not-for-profit consortium that drives the development, convergence and adoption of open standards for the global information society.
- ebXML (an open, XML-based infrastructure designed for global use of electronic business information) and UN/EDIFACT (covering the structured transmission of data between organisations by electronic means) are international standards maintained by the United Nations Centre for Trade Facilitation and Electronic Business, (UN/CEFACT).
- Finally, CEN (one of the European standards-making bodies) is committed to profiling existing e-business in order to consistently address all the interoperability levels for business transactions discussed above. To carry out such work, the BII (Business Interoperability Interfaces) workshop has been set up, focussing on post-award phases. It concentrates on the semantics of the public procurement business processes built by XML based vocabularies as specified by UBL 2.0 and UN/CEFACT core components, aiming at international convergence. The BII Workshop coordinates with other CEN developments, such as the workshop on 'Multilingual e-Cataloguing and e-Classification in e-Business' (WS/eCAT). This work aims to design the architecture of a multi-user, multilingual catalogue platform that can be used by any company to store and present its products. Currently, discussion is under way to map the four major existing product classification systems (UNSPSC, eCl@ss, GPC and CPV) for use within the catalogue.

Source: DG MARKT based on Siemens-time.lex report

These three measures were expected to first identify and then address other issues relating to interoperability as the market developed. Again, many studies and research projects have been initiated in relation to standardisation, either commissioned directly by the Services of the Commission or to which the Services have contributed⁵⁷. It should also be noted that "interoperability" covers a wide range of issues and is more relevant to certain tools and phases.

Whilst it is fair to infer that these actions have had some impact on improving the understanding of interoperability issues, it is not possible to say how much these programmes have influenced the current state of play. Certainly the degree of interoperability between Member States' e-Procurement systems remains low and convergence to common sets of standards has been slow. The PEPPOL Standard Basic e-Ordering report⁵⁸ found that local contexts are highly influential in determining the format used and that the lack of common standards has (negatively) affected cross-border interoperability. A certain trend towards UBL based standardisation is emerging in the post-award phases of e-Ordering and e-Invoicing.

This result should perhaps not be surprising – e-Procurement is a complex topic, covering a wide range of issues. However it would appear that the Action Plan underestimated the efforts required and perhaps took too flexible approach to how such standardisation could be achieved – expecting market developments to drive the move towards greater standardisation, without any stronger guidance or influence from other external sources. **At present there are still too many standards and their content is too broad.** On the other hand, the measures in the Action Plan were suitably widely drawn that they can claim some causality in relation to the limited success that has been achieved in certain areas.

6.1.5. Wider impacts of the measures under Objective 1

Taken as a whole, **the measures carried out under this objective have probably had some influence on the progress made towards several of the results expected** – particularly in relation to the timely and accurate implementation of the 2004 Directives and the creation of a common EU infrastructure for e-Notices supported by compatible national level systems. Their impact is less obvious in relation to the creation of national e-Procurement systems which are based on a common understanding; increased use of e-Procurement; increased use of qualified e-Signatures; increased understanding and greater interoperability; and increased standardisation. **Whilst many legal barriers may have been avoided, there are still some legal issues which need to be addressed and hence the desired impact of no legal barriers has not been achieved.** Additionally, it is not clear that all new tools are being used correctly – some further legal clarification may be necessary and some EU wide level of system validation may be desirable.

In terms of technical barriers, it is likely that no barriers have actually been removed on an EU-wide level and it is possible the situation has actually got worse as a result of the development of more systems across the EU. Given the problems with interoperability and standardisation identified in the state of play, it cannot be claimed that the desired impacts resulting from the introduction of systems which have few technical barriers to

⁵⁷ See bibliography

⁵⁸ http://www.peppol.eu/work_in_progress/wp4-eordering/results/d4.1-standard-basic-eordering-format-and-data-structure/eordering-standard-basic-eordering-format-and-data-structure

cross-border procurement and which actually permit increased cross-border transactions have been achieved. There may also be legal ramifications to these technical developments which may require further considerations.

In the longer term, some of these actions are helping to improve transparency. The electronic publication of notices and standard information has helped increase the availability and ease of access to procurement, although some issues, often relating to whether information is provided in a centralised or de-centralised manner still exist. **Although figures for participation are not widely available it can be inferred that in some instances, participation has increased and thus potentially competition also.** Certainly several e-Procurement portals and case studies advertise the significant savings which they are achieving (see section 5.8).

Levels of confidence and security vary, depending on the system in place and the experience of users. Costs related to security may have increased, particularly in those instances where the solutions adopted require quite high levels of IT knowledge and investment. Given the limited information available on actual use of e-Procurement (see section 5.5) it can be inferred that many EOs and CAs have yet to use e-Procurement and may still have concerns which need to be addressed. Those that have used systems have mixed feelings – for some it is a good experience, saving time and effort, for others, particularly in countries where e-Procurement systems are still fairly basic, it is not sufficiently mainstream as to be worth the effort. From the picture provided above (see chapter 5), a certain momentum is building; use and experience with such systems, while currently modest, may yet reach critical mass. However **it is not likely that e-Procurement in its current form has had much influence on wider e-Government practice and the application/development of standards in the private sector.**

6.2. Achieve greater efficiency in procurement, improve governance and competitiveness

The Action Plan recognised that change would be necessary at many levels – legal, policy, technical, institutional and organisational – if the use and related benefits of e-Procurement were to be achieved. Specific actions were thus targeted at improving efficiency and governance. It also recognised that by streamlining procedures, suppliers could save time and money thus making public procurement more attractive and ultimately more competitive. To reflect these priorities, the actions under this objective were grouped under two headings which will be discussed in the following sections. The Intervention Logic for this objective is provided in Annex VI.

6.2.1. *Increasing the efficiency of public procurement and improving governance – measures and results*

Table 15 - Measures to increase efficiency and improve governance

Action Plan measure	Issues to be addressed	State of Play
Member States to prepare national plans for introducing e-Procurement setting measurable performance targets, taking account of specific national needs	Policy Security Trust Inclusion Monitoring Dissemination of best practices	Partially completed
Member States to encourage preparation of similar plans by individual national buyers and coordinate + monitor their implementation	Policy Security Trust Inclusion Dissemination of best practices Monitoring	Partially completed
Commission to continue monitoring work on e-invoices by CEN/ISSS and propose continuation of XML activities undertaken in 2003-2004 on e-invoices and e-Ordering under IDABC	Standardisation Interoperability Cross-border	On-going ⁵⁹
Member States to set up efficient electronic systems for the collection and processing of statistical procurement data	Dissemination of best practices Monitoring	Partially completed - Study on the automation of statistical data collection in 11 Member States (April 2007) - Appropriate measures taken by some Member States

Source: DG MARKT

Acknowledging the complexity of the change programme required, the Action Plan encouraged Member States to plan and monitor their move to e-Procurement, suggesting that a phased transition from paper-based to automated systems would probably be most efficient.

⁵⁹ Activities monitored on various standardisation activities by CEN and OASIS on XML automated messaging for e-Ordering & e-Invoicing, and various operational initiatives by DIGIT, ENTR

Such systems were expected to provide important information about the state of the e-Procurement markets and to identify at an early stage areas requiring further attention.

According to the Siemens-time.lex review, 14 countries (12 Member States) did not produce a national action plan for e-Procurement, or these documents only contained quite general statements. However it was recognised that this assessment did not take into account five or six countries where a clear strategy existed but which was not formally documented in an Action Plan. Furthermore, some countries developed policies which specified particular elements e.g. infrastructure in Belgium, Netherlands and Spain and which may or may not be accurately classified as an Action Plan. Other countries set a specific period of duration for their plans and it is difficult to know what happened afterwards in relation to the creation of new plans, or the extension of deadlines.

In the Ernst and Young survey of Member State bodies, three countries suggested reasons for not creating a national plan/strategy – these included: problems getting stakeholders to agree; lack of political priority at that time; different bodies having different needs; and the belief that a plan was not necessary to develop and implement e-Procurement strategies properly. After some consideration, **Siemens-time.lex concluded that there was no obvious relationship between the existence of national plans and the progress observed.** The EIA, researching before the publication of the Action Plan, found that "the majority of Member States have developed a strategy for the introduction of electronic public procurement (21 countries)"⁶⁰. Nine out of 12 respondents to the Ernst and Young survey of Member States said that the EU Action Plan had played a role in determining the national plan/strategy for e-Procurement.

Hence **it is not clear how successful the Action Plan was in encouraging the development of formal national plans and addressing a wide range of concerns (including legal, technical, policy and infrastructure).** However, as noted, approaches differed between countries and **the lack of a formal plan has not necessarily prevented a country making progress in adopting e-Procurement** (24 Member States have systems capable of providing the phases to e-Submission to some extent).

E-PRIOR

E-PRIOR has been developed and deployed by the European Commission to allow the exchange of structured e-Catalogue, e-Ordering and e-Invoicing documents between the Commission and its suppliers. It is being developed under the IDABC programme and was initiated by Directorate-General for Internal Market (DG-MARKT) and Directorate-General for Informatics (DIGIT) of the European Commission.

Open e-PRIOR provides an opportunity for reusability of an open-source solution that has already been implemented at the Commission and which provides a secure platform for document exchange. Open e-PRIOR is the first e-Procurement implementation which enables the exchange of electronic business documents using the data models of CEN/ISSS WS/BII.

Source: DG MARKT

⁶⁰ See Siemens.time-lex report page 96

Although Siemens-time.lex did not identify any Action Plans which were adopted by national buyers, replies to the Ernst and Young Member State questionnaire did imply that some countries had found it useful to address the issue. Thus **it can be inferred that Action Plan had at best fairly limited success in encouraging the adoption of plans by individual national buyers.**

The third measure in this group related to monitoring the development of solutions for e-Invoicing and e-Ordering – key post-award transactions, which could improve efficiency and have particular benefits in relation to interoperability. The Commission has continued to monitor progress in these fields and has contributed to various activities and projects, particularly the development of e-Prior (see box below). As reported in Chapter 5, **there has been some progress relating to standardisation, but there may be outstanding legal issues relating to the European framework for e-Invoices.** Availability/use has increased since 2004, with more countries now possessing systems capable of operating these phases (**17 countries now capable of conducting some e-Ordering/e-Catalogues** as compared to seven in 2004; **five countries now have some e-Invoicing capacity** compared to one in 2004). **The countries which operate these phases report very high potential savings – both in time and money.** The Danish estimate a saving of 12 to 20 minutes per invoice, translating to yearly cost savings of approximately €500 million; significant savings are also reported in Finland. According to a recent Deutsche Bank study⁶¹ moving from paper based to digital means could save the party receiving the invoice around €11.6 per transaction and the invoice issuer around €6.9 per transaction.

The fourth action under this objective targeted the creation of thorough monitoring systems via the collection and processing of relevant statistical data. Although the Siemens-time.lex study identified seven countries which collect (or plan to collect) public procurement statistics on a fairly regular basis, **few statistics are currently available relating to e-Procurement and only one country (France) has publicised a coherent monitoring strategy.** When validating their country fiches for the Siemens-time.lex study, very few countries were able or perhaps unwilling to provide statistical data. Provision and publication of such data may be sensitive - sometimes political reasons prevent figures from being disclosed. The lack of data may also be related to the fact that many national action plans did not contain quantitative targets. This lack of available data has certainly affected the ability of this evaluation to assess progress and has made it more difficult to assess the efficiency of actions taken. It has also influenced the **lack of progress towards the expected development of goal-oriented policy making with quantifiable targets** and will therefore have hampered the identification/evidence base of both emerging problems and successes. As a result, **e-Procurement policy is unlikely to have been as efficient and effective as it could have been.**

⁶¹ Deutsche Bank Research paper "e-Invoicing Final steps of an efficient invoicing process" May 2010

6.2.2. *Increasing the competitiveness of public procurement markets across the EU – measures and results*

Table 16 - Measures to increase competitiveness

Action Plan measure	Issues to be addressed	State of Play
Commission to consider proposing services for the electronic supply of business information and certificates in public procurement for implementation under the IDABC programme	Accessibility Standardisation Cross-border Automation (Simplification) Re-usability	Completed - Feasibility study on the electronic provision of certificates & attestations most frequently required in PP, completed (12/2008). ⁶²
Member States and Commission agree on a common set of frequently required electronic certificates for use in e-proc	Accessibility Standardisation Cross-border Re-usability	On-going - e-CERTIS Feasibility study ('e-Certificates II') on creation of an online database on certificates & attestations (funded by IDABC)
Commission proposes launching study on e-catalogues (in DPS + electronic framework agreements) using work by CEN/ISSS under the IDABC programme	Standardisation Technical Inclusion	Completed - Feasibility study on e-Catalogues (November 2007) ⁶²
Public Procurement Network to organise benchmarking on transparency, auditing + traceability of e-proc systems	Transparency Legal Trust Common understanding	Delayed
Public Procurement Network to organise workshops to promote exchanges on tender document standardisation	Accessibility Standardisation Automation (Simplification)	Delayed
Member States to launch and support specific awareness campaigns +training for SMEs at national + regional level	Inclusion Policy	On-going

Source: DG MARKT

⁶² Available at DG MARKT website http://ec.europa.eu/internal_market/publicprocurement/e-procurement_en.htm#feasability

On-line procurement has the potential to be more transparent than paper-based – it permits simple and quick exchange of contract related information and can reduce opportunities for fraud. In the same way, on-line procurement should be easier to conduct. In order to achieve this, the Action Plan made it clear that steps should be taken to simplify the procurement process.

In 2004, practical experience relating to the use and provision of electronic documents was virtually non-existent. The feasibility study completed in 2008 identified potential scenarios to overcome the existing interoperability problems and created road-maps to realise the selected scenarios. Subsequently, DG MARKT has commissioned the e-CERTIS tool, which lists all the documents commonly required in a country and contains a mapping to equivalent/similar documents in other countries where possible. **E-CERTIS will be launched in the autumn of 2010 and should help address the concerns of both EOs and CAs relating to the various attestations and documents requested/accepted in different countries, improving access and saving time.**

E-CERTIS

E-CERTIS is a free, on-line source of information to help economic operators and contracting authorities to cope with the different forms of documentary evidence required for cross-border tenders for public contracts.

e-CERTIS presents the different certificates frequently requested in procurement procedures across the 27 EU Member States, two candidate countries (Turkey and Croatia) and three EEA countries (Iceland, Liechtenstein and Norway). Currently, the documents required differ from one country to another. E-CERTIS helps tenderers and contracting authorities to find their way through this maze.

In particular, e-CERTIS helps:

- Economic operators to find out which certificates issued in their country they need to include in tender files submitted to an authority in a partner country;
- Contracting authorities to establish which documents issued by a partner country are equivalent to the certificates which they require to confirm the eligibility of the tender.
- E-CERTIS matches equivalent documents across the different national datasets. The common, consistent structure permits fairly in-depth analysis of the different types of document. Keyword searches, logical field grouping and compare functions help all involved in procurement procedures to recognise business documents and assess their content.

Source: DG MARKT

PEPPOL is also addressing the issue of business documents, with the goal of setting technical standards to enable EOs to set up a Virtual Company Dossier (VCD). A VCD is the collection of various types of evidence in electronic format. The Services of the Commission have also been involved in work in several other areas relating to this issue, which has wider e-Government implications. These areas include the Services Directive, exchange of judicial records, developments on e-Customs and also for BRITE – an on-line business standards register. **It was expected that these measures would lead to the development of more**

standardised practises resulting in greater and easier use of common e-Documents. What has actually happened is that **little if any progress has been made in terms of identifying a common set of frequently required documents - rather countries have adopted more pragmatic approaches** – the study on e-Certificates identified various workarounds designed to eliminate or reduce the need for e-Attestations. For example, some CAs accept self-declaration forms from EOs or declarations of compliance provided via a trusted third party. Whilst it is debatable whether these solutions are truly "electronic attestations", the study shows that they work in practice at a national level and reduce the administrative burden on the EO. However they do present some difficulties for EOs coming from other countries.

The third measure under this objective related to the use of electronic catalogues in DPS and electronic framework agreements - the resultant study concluded inter alia:

- That common standards were required for e-Catalogues, not just for use in e-Procurement but in the wider e-Business environment;
- E-Catalogues should be used in both e-Tendering and e-Ordering; and
- That electronic catalogues should be reusable.

Adopting these measures would realise efficiency gains related to greater automated processing and the ability to re-use catalogues and formats when moving between bids. Related initiatives include the PEPPOL work package on e-Catalogues and work undertaken by CEN and DIGIT. **Availability/use of e-Catalogues has increased since 2004** – 19 countries (18 Member States) have been identified as operating some degree of e-Catalogues, **although use varies by country and is generally found in the e-Ordering phase. The lack of coherent standards remains a key issue** – there are many standardisation bodies operating in this area (OASIS, UN/CEFACT, CEN/ISSS etc) and several competing classification schemes (including the CPV).

The two measures addressed to the Public Procurement network (PPN) have not been started and hence have not affected the situation in the way intended. Indeed, it could be argued that by not conducting such an exercise, valuable information which could have effected the efficient and effective development of e-Procurement systems has been lost.

Finally, under this objective, Member States were encouraged to launch and support awareness campaigns targeting SMEs. Not all Member States have adopted this measure – but those that have, notably **Ireland, France, Scotland and Italy, have experienced some success in encouraging SMEs to move from paper based to electronic procurement.** Although not tasked explicitly under this measure, the Commission has also been active in this area – in 2008 it published the European Code of Best Practises Facilitating Access by SMEs to Public Procurement Contracts and the 2008 European Small Business Act. **Some countries report that SMEs are finding it harder to access markets** – for example, in a recent meeting of the ACPC, Austria mentioned concerns that trends towards aggregating contracts offered electronically (for example, via Central Purchasing Bodies or under Framework Agreements) were excluding SMEs. **As further developments and refinements are made, it may be necessary to ensure that all e-Procurement systems are SME friendly.** Given the lack of specific policy within the majority of Member States, at an EU level, the Action Plan has not contributed significantly to delivering the expected result of increasing SME participation in e-Procurement.

6.2.3. Wider impacts of the measures under Objective 2

Taken together, it was expected that the results of these measures would lead over time to an increased and improved national co-ordination of public procurement and e-Procurement strategies. Despite the absence of clear and open monitoring systems, it is strongly probable (human nature) that countries have adapted their strategies in the face of the results they have seen and the problems discovered through implementing e-Procurement. **The e-Procurement community has proved good at disseminating and sharing experiences** via conferences, EU meetings (most notably the e-Procurement working group) and on the Commission's website for sharing e-Government related experience (www.epractice.eu). Again, **due to limited improvements in interoperability and standardisation, the wider benefits relating to increased competition and greater cross-border use are unlikely to have been achieved to any great degree at present.** Some of the developments, e.g. with respect to e-Attestations and e-Invoicing may have had wider effects in the overall e-Government theatre, but these are likely to be limited. **Some evidence relating to possible efficiency gains has been provided** (e.g. e-Invoicing) but has yet to be demonstrated at the wider EU level.

6.3. Work towards an international framework for electronic public procurement

The third objective of the Action Plan looked to the wider stage and considered actions intended to ensure that third country markets which adopted e-Procurement remained open to EU businesses and vice versa. It is not clear how much real progress was expected in this area; several of the expectations were perhaps more aspirational than concrete and were conditioned upon wider developments occurring at EU and international level. The Intervention Logic for this objective is provided in Annex VI.

Table 17 - Measures to work towards an international framework

Action Plan measure	Issues to be addressed	State of Play
Commission to pursue negotiations on the review of the Government Procurement Agreement (GPA)	International cross-border Policy Legal	On-going ⁶³
Commission to take initiatives in the GPA to progress towards utilisation of a single common nomenclature for the classification of procurement goods and services	International cross-border Standardisation Policy International common understanding	On-going ⁶³

⁶³ COM has taken action according to the Action Plan's objectives, but the negotiation is still on-going.

Action Plan measure	Issues to be addressed	State of Play
Commission to promote the activities of and liaise with international standardisation bodies & fora to avoid emergence of interoperability barriers at international level	International cross-border Policy Standardisation Interoperability	On-going
Commission to cooperate with Multilateral Development Banks (MDBs) network in view of co-ordinating technical assist. to 3 rd countries, supporting re-organising and computerising their PP regimes	International cross-border Policy Inclusion	On-going
Commission to consider any adjustments necessary + feasibility of e-Procurement in context of EU external aid instruments	Policy Transparency	On-going

Source: DG MARKT

6.3.1. Results of these measures

The Action Plan recognised that the EU/ and associated countries were not the only ones developing e-Procurement solutions. Global developments in e-Procurement could probably lead to a range of barriers being introduced, preventing European and 3rd country firms from accessing each other's markets. The Action Plan identified measures designed to ensure that EU rules were compliant with international obligations and developments and that good practices were widely disseminated.

In terms of the GPA, both the identified measures are still on-going – the Commission has made proposals within the current GPA review:

- To include provisions relating to e-Procurement which should ensure alignment between the EU and international approaches; and
- Within article 22 (the "*rendez-vous*" clause) it has been proposed that within a three year time frame, the GPA committee discusses the development of standardisation notices and the use of common nomenclatures.

To date no common nomenclatures have been found for goods; the UN classification (CPC – in full) is used by most GPA countries for services. However, until the full negotiations are completed, these propositions are provisional.

The third measure under this objective related to preventing the emergence of technological barriers at the international level through liaison with the appropriate standardisation bodies and fora. Although this action has been completed (in terms of the time period, in practice it has no set end point and is permanently on-going) – as discussed in the chapters above the Commission is active in discussions relating to these matters and liaises with bodies such as CEN, and UNCEFACT. PEPPOL also recognises the importance of dissemination and

consensus building and has a work package focussed on making the project and its results well-known and accepted by all key players in the EU, and (presumably) on the international stage.

Multilateral Development Banks also play an important role in the development of EU and international e-Procurement. As recommended in the Action Plan, the Commission has followed various activities to co-ordinate technical assistance to third countries that were also modernising their procurement systems and moving to e-Procurement. Again this is considered to be completed on an on-going basis as there is no set end point. There has also been co-operation and co-ordination with UNCITRAL which holds a twice annual meeting of a working group for Public Procurement.

In relation to the final measure, discussions are on-going within the Commission to consider whether a simplified set of standard forms can be created which are more appropriate for procurements related to the provision of EU external aid.

Despite these efforts, **little concrete progress can be said to have been made in relation to eliminating legal and technical barriers on an international level and increasing international e-Procurement.** Indeed this is not surprising given the limited progress at EU level and the issues relating to cross border procurement within the EU; greater progress at EU level would have perhaps made it easier to make the case for adopting European standards and approaches. **Websites such as e-Practice do disseminate information relating to European Best Practice and there is an active e-Procurement community which presents and shares information via conferences around the world.**

6.3.2. *Wider impacts of the measures under Objective 3*

Overall, progress has been limited and overall little impact has been made in relation to facilitating e-Procurement at an international level. As mentioned above, **it was probably not realistic to expect clear progress under this objective, which is partly dependent (e.g. GPA negotiations) on the priorities and interests of other parties.** However it was, and remains, an important area for EU involvement.

6.4. **Other issues raised in the Action Plan**

Although not addressed by specific measures the Action Plan (page 7) referred to the need to: "pay attention to potential excessive or abusive centralisation of purchases, inappropriate use of electronic auctions and preferences for closed purchasing systems (e.g. framework agreements) over open systems."

As discussed in section 5.6.4, the use of framework agreements has grown since 2004; they are legally permitted in all Member States apart from Belgium (which recognises framework contracts) and frequently used, particularly in some countries (e.g. Sweden, Finland, Norway, Austria, Denmark, Italy and the United Kingdom). As far as can be assessed, the Siemens-time.lex study concludes that where used, framework agreements appear to have delivered cost savings and have led to improved efficiency but **it is not clear how many framework agreements are being conducted electronically.** Although the data from TED implies that many framework agreements are signed with only one EO, and hence subject to no competition for the contracts awarded via the agreement, no indication has been found to support the concerns of the Action Plan. In some countries Member States have also used CPBs to provide framework agreements – again, it would seem that Member States view this

as an efficient approach, implying they are not worried by any possible negative effects or assume that the positives outweigh the negatives.

Centralisation effects in general are more difficult to judge – there are some indications that there is a tendency to greater centralisation (e.g. the number of CPBs, the range of services they cover) but equally moves to encourage participation by SMEs have resulted in tenders being broken up into smaller lots.

Whilst e-Auctions appear to be delivering large savings in some cases, this is unlikely to be a concern to many CAs in the current financial climate. However some concerns have been voiced about the lack of benefits to EOs which could ultimately prevent some players from competing in e-Auctions and lead to restricted markets where prices are actually higher than in a more open system.

6.5. Have the objectives of the Action Plan been achieved?

In broad terms it is clear from the state of play and the above assessment that whilst progress has been made to introduce and use e-Procurement, the overall objective of unhindered cross-border electronic procurement has not yet been achieved. Realistically, given the complexity of the change required and the inherent challenges in moving towards electronic systems, these ambitious objectives were always unlikely to be achieved in such a short time-frame – it is perhaps fairer to ask if greater progress could have been expected.

6.5.1. Do we have a well functioning Internal Market in electronic public procurement?

Progress has been made, particularly at the national level, but there is currently no internal market in e-Procurement – although e-Procurement is beginning to make its presence felt, use at the moment is still marginal at best and cross-border e-Procurement virtually non-existent (perhaps reflecting some of the limitations which appear in the current, paper-based, market). However the success of a number of platforms indicates that a business case can be made.

Whilst different "island" solutions exist, the bridges to connect them do not. Nonetheless, the legal framework does appear to have been correctly implemented albeit to a slightly longer timetable than originally desired and many countries now have infrastructures which provide the appropriate basic tools. However this infrastructure is not based on common standards and interoperability problems exist, creating barriers to cross-border e-Procurement. There are also some outstanding legal issues to be addressed. A range of projects and studies are on-going, looking into ways to address the various technical issues and provide, in the coming years, some solutions to these interoperability problems on an EU-wide basis. **This situation bears marked similarity to the baseline scenario outlined in the impact assessment i.e. the situation expected to be in place if no action was taken at Community level. Given that action was taken, it would seem fair to conclude that less has been achieved than might have been expected.**

6.5.2. Have we achieved greater efficiency in procurement, improve governance and competitiveness?

Again, **at a national level, there is some evidence that procurement has become more efficient as a result of e-Procurement** – certainly many portals promote the savings made by using their systems. **Some initial improvements in governance have been seen** – at least

during the process of introducing e-Procurement, when many countries created national plans. Fewer countries appear to have plans/a clear strategy covering the future roll out and use of e-Procurement. Goal oriented policy making does not seem to have been widely adopted – only seven countries seem to have systems for regularly collecting data and information. **There are indications that competition has increased** – some countries report increased numbers of bidders per tender – certainly many Economic Operators appear to be registering with the various portals available nationally. **So some improvements have been seen, although again they are probably less than might have been expected.**

6.5.3. *Have we progressed towards an international framework for electronic public procurement?*

Although the Commission has made progress and carried out the actions identified under the Action Plan, **there has not been much progress in developing an international framework for e-Procurement.** Here expectations were perhaps not that high as success relied on a multitude of factors and was not always within the control of the EU.

7. CONCLUSIONS

Whilst Chapter 6 provided an assessment of how much the Action Plan has contributed to the progress which has been made in relation to e-Procurement, this chapter will focus on answering the evaluation questions. It will also identify the outstanding issues and discuss the next steps, particularly in relation to developing a future monitoring and evaluation strategy.

7.1. Answers to the evaluation questions

7.1.1. *To what extent have public procurement procedures been "computerised"?*

As has been shown, progress has been made to introduce e-Procurement systems - today systems offering some level of functionality exist in 30 of the 32 countries (26 Member States). The services provided vary quite markedly across these countries however, both in terms of the number of phases/tools supported and also in terms of the approach taken and the level of sophistication of the ICT solutions adopted. **In 25 of the 32 countries considered (24 Member States), there are some systems available and capable of providing e-Submission and hence meet the definition of e-Procurement used for this evaluation.** 18 countries (17 Member States) offer the full pre-award phases. Some Member States or regions have put in place e-Procurement systems which can support 'straight through electronic procurement' processes – at least for purchases of standards supplies and services. **Whilst these figures show that availability has increased and it is now possible, in theory, to conduct procurements electronically in the majority of countries, it is not clear how many authorities and economic operators have access to these systems, some of which are limited to certain users (e.g. central government).**

The actual number and value of tenders which are both being made available and concluded using electronic means is not clear. **Actual use of e-Procurement is difficult to measure, but is estimated to be much lower than might be inferred from the figures relating to the infrastructure which has been introduced.** Other than in Portugal, where electronic procurement has been mandatory since 2009 and nearly 100% of all procurement is conducted electronically, the EU average figure is likely to be less than 5% of total value. France and Italy, countries which have been active supporters and adopters of e-Procurement estimate that only 4% and 2.5% respectively of their total procurement is conducted electronically. Uptake is likely to increase as experience with e-Procurement grows – many of the systems are still fairly new and there are signs that momentum is building in the e-Procurement market.

Good progress has been made in terms of the phases which only require a one-way flow of information (e-Notification and e-Access), which have also perhaps benefited from the incentives built in to the 2004 legislation. **The introduction of systems which can conduct two-way flow of information has been more difficult** - mainly due to issues around the required level of security/trust which a system must provide, but also perhaps influenced by lack of clear incentives for their use by all parties.

Member States have taken the widest possible range of positions in approaching authentication - from simple user id/password systems available to all, to technically demanding e-Signature solutions which only a limited number of operators can meet. **This has had knock-on effects for the systems they have developed and ultimately the**

accessibility of these systems by different EOs, particularly non-national operators. No known breaches of trust or security have been reported for either type of system.

Different approaches have also been seen in terms of the degree of technological advancement built into a system. Some Member States/providers have produced systems which act mainly as communication channels between the CAs and EOs, permitting the upload and exchange of documents prepared locally by either the CA or EO; others have created systems which allow EOs to work within the e-Procurement system itself, entering their data and information directly into (standard) documents and forms on the central system. (See Annex III for further detail)

Many of the necessary technical building blocks which were expected to develop over this period have not advanced to a point where the market has converged on common standards or approaches. In some areas, such as e-Attestations, pragmatic approaches or workarounds have been adopted which allow e-Procurement systems to operate. It is questionable whether such systems will/should adopt technologically more advanced solutions if they become available, or if they will continue to operate at a technologically less advanced, but more pragmatic level.

Multi user platforms appear to be very successful. These can be provided in a range of ways - for example CAs can hire space on a private system or can use a CPB, which may be publicly or privately run. Also electronic marketplaces are proving successful in some instances - suppliers freely publish catalogues and registered administrations procure what they want in a "click and buy" fashion – although such solutions are generally suited to below threshold e-Procurement. **The key concept appears to be the provision of solutions by 3rd parties.**

In summary, progress has been made, but there is still a long way to go to achieve the vision of the Action Plan. The degree of technological sophistication evident in the systems developed varies widely. Some countries have developed "state of the art" systems; others have adopted simpler, lower-tech solutions. As yet, no evidence has been presented that the approaches which are based on lower levels of technology have experienced any problems in relation to providing acceptable levels of security and trust. Building on such solutions, which are more accessible to EOs, including non-nationals, may thus be the best way to advance the switch from paper to computer based systems in the short to medium term and facilitate the possibility to conduct cross-border electronic procurement. **Whilst e-Procurement in the EU may be nearing the Manchester target of 100% availability in 2010, at least in theory, it is currently far short of the 50% use target.**

7.1.2. To what extent did the EU Action Plan for e-Procurement identify the right priorities and strategy? To what extent has it been implemented?

Whilst not all the measures foreseen under the Action Plan have been completed, or in a few instances not yet started, 13 have been completed and a similar number are still on-going. **In assessing to what extent the Action Plan has achieved its objectives it has become clear that the areas targeted for attention were, on the whole, relevant and important to improving and increasing the development and use of e-Procurement systems. Hence, the Action Plan did identify the right priorities:**

- A single consistent legislative framework was required in the EU, defining in broad terms the requirements for e-Procurement systems;

- Solutions needed to be found to issues such as interoperability, standardisation and authentication;
- To manage and achieve the switchover from paper to computer, clear planning and monitoring was required;
- Best practices and experience needed to be shared; and
- To a lesser extent, although still important, the EU needed to promote the advances being made within its borders and ensure that international developments were in step with what was happening in Europe.

A few, perhaps subtle exceptions may be highlighted however. One relates to the emphasis placed on the adoption of qualified signatures. These technologically demanding solutions may be creating an unnecessary barrier to access and cross-border use. Whilst they have the same legal value as hand-written signatures, there is currently no evidence that such a sophisticated solution is actually required in practice. As yet, no "lower tech" solutions have caused problems relating to security / trust and to require e-Signatures at submission may be slightly over zealous. The solutions requested for e-Procurement should be proportionate to the risks involved in the process. For example, further consideration could perhaps be given to the possibility that it is only once a contract is awarded and signed that legal certainty is required; if something goes wrong after that point, legal re-dress is ensured via the provisions of the contract itself. Whilst conducting the procurement process this trust and honesty can, to a large extent, be assumed.

Secondly, the need to develop and use electronic certificates may have reduced, at least in the short to medium term, due to the more practical workarounds which have been adopted by some countries. The acceptance of declarations of compliance by CAs, allowing bids to be evaluated first and requiring proof of certain eligibility and suitability criteria only from the winning bidder can significantly reduce the administrative burden placed on EOs. Such measures are permitted under the 2004 Directives.

Given that the majority of these priorities are still valid in 2010, it is perhaps more revealing to consider whether the strategy adopted by the Action Plan was appropriate.

Firstly, it should be noted that the Public Procurement Directives are by their very nature, not prescriptive – they provide the framework within which Member States are free to define their own particular mode of operation. Also, in 2004 when the Action Plan was drawn up, the e-Procurement market was still very much in its infancy. In particular, many of the technological drivers for change, such as common standards and formats and ways to address interoperability, were undeveloped. No real leading contenders could be identified – the market needed to evolve and in so doing find solutions to the various issues. After some consideration⁶⁴, a flexible, somewhat gentle, approach (rather than a prescriptive or directive one) was deemed most appropriate to prevent innovation and competition from being stifled. Of course, this ran the risk that a range of stand alone solutions would be developed which could not, at least in their initial versions, interact – which is precisely the situation we have today. Equally, the Action Plan assumed that these technological advances would be made

⁶⁴ See EIA for further detail.

fairly quickly; actual progress has been slow and it is only now in 2010 that we are finally progressing to putting the necessary technological building blocks in place.

According to the EIA (page 32), the strategy proposed relied upon "close co-operation and partnership between the Commission and the Member States in order to exploit the available synergies and co-ordinate efforts among all the actors involved in implementing the Action Plan." **Although this "soft-law" approach has been fruitful and encouraged the development of creative solutions, with the benefit of hindsight, it might still have been better to be more pro-active and directive in relation to certain measures.** Many Action Plan measures consisted of guidance or pilot studies which sought to test or promote certain solutions. They have raised awareness of problems, pointed towards solutions and provided common points of reference for the wider market. However, they did not seek to impose particular solutions or outcomes at a time when technology and business models were still evolving. As they have been drafted in terms which are sufficiently broad, it is possible to claim some measure of success, without it being particularly clear what contribution they actually made to the progress achieved. If these actions had been somewhat more specific and included pro-active follow-up measures (e.g. workshops to identify and agree next steps), their resultant impacts may have been greater (and easier to assess). **Often where there were more targeted actions, accompanied by the use of clear incentives – for example the changes to TED and e-Notification, greater success, more directly attributable to the Action Plan (and the incentives) can be identified.**

Although there was a certain natural allocation of tasks between the Commission and Member States, and it was assumed that all parties were equally willing and able to carry out the tasks given to them, this has not always happened. There may be many reasons why some Member States have not advanced their e-Procurement infrastructure or followed up some of the policy recommendations included in the Action Plan. The two actions led by the Public Procurement Network (PPN), a forum for Member States run by Member States have been delayed, as have certain actions for the Commission such as adjusting external aid instruments where progress has been made only recently. Since there was no clear mechanism put in place to monitor developments and no powers were given to any party to enforce or demand that such actions were fulfilled, progress in some areas was always likely to slip. In other instances, whilst it was appropriate (under subsidiarity) to encourage Member States to put in place data collection and monitoring systems, some central guidance from the Commission would also have been useful, helping to promote both action under this heading and in ensuring commonality and consistency between systems.

In terms of the results this strategy has delivered, judged against the success criteria identified earlier (see 4.4) progress has been less than might have been hoped. Legal barriers, or at least issues, still exist – some should be fairly simple to address e.g. by issuing further clarification, others such as the legal issues relating to the providers of e-Procurement systems and access to markets will require greater thought. Technical barriers have not been reduced and it could be argued that with the increased number of solutions developed, the increased number of e-Signatures available, they have even increased. No real interoperable systems currently exist within Europe although some interoperability is possible between systems existing at the national level (often because those systems have been developed from one common template).

The use of qualified e-Signatures (and e-Signatures in general) has increased since 2004 but this has not led to them becoming the standard e-Signature type nor even the main approach to authentication – other forms are also used. Common standards do not currently exist, but

there has been some progress towards them, particularly in post-award phases. Governance of public procurement has seen some improvement in some countries, but it is not clear if this was just focussed on the implementation stage – not many plans or strategies were identified for the upcoming period. Some countries have adopted better data collection and monitoring systems but not all. Given the interoperability issues, we know that some national markets are effectively closed to non-national economic operators. Centralisation may be reducing access to markets for some operators, particularly SMEs although some countries have introduced quite detailed plans aimed at ensuring greater access to markets for SMEs. While proposals have been made to the GPA and the Commission is active in various fora, overall progress towards an international framework for e-Procurement remains limited.

Although dissemination has been fairly good within the e-Procurement community, more can be done to reach EOs and CAs who are not yet aware or convinced of the benefits e-Procurement can offer. The business case for e-Procurement needs to be promoted more – and to do this effectively, greater effort should be made to produce and use key statistics.

This assessment hides however the efforts and achievements that have been made by some contracting authorities, economic operators, CPBs and Member States to adopt the changes that have been made to date. The Action Plan perhaps underestimated, or did not put sufficient focus on the large organisational and operational challenges that such a move requires. It is not clear how much advance has been made in simplifying processes and extracting efficiencies. Even where countries had the political support and hence access to technical and financial resources, change has been slow to happen. Different countries start at different points of the learning curve; they also have different issues to overcome. For example, large countries with many contracting entities face different problems to smaller ones; some countries already have fairly centralised procurement and hence may find it easy to introduce one or a small number of portals – in countries with a more decentralised approach, many portals are likely to spring up bringing with them further issues relating to access, standardisation and interoperability.

The review of websites and e-Procurement systems, plus more general feedback from various actors, implies that the guidance and pilot studies produced as a result of the Action Plan have been useful. They have raised awareness of problems, pointed towards solutions and provided common reference points for the wider market.

Little information is available at national or EU level to allow a thorough assessment of how compliant the various actors have been with the measures proposed. However, given that 13 measures are complete with a further three having shown good progress and 13 are on-going it is clear that much effort has been made.

In summary, it would seem that broadly speaking the priorities identified in the Action Plan were generally correct, although more emphasis/action could have been directed at aiding and encouraging organisational change. The strategy itself, whilst appropriate in the context of the developing market, could have been better – even if it could not be prescriptive, it could have been somewhat more pro-active and put in place control mechanisms or procedures to ensure actions were conducted. Whilst much work has been undertaken as a result of the Action Plan, as noted earlier, the ambitious objectives are yet to be met. Perhaps the greatest flaw, although no-one could know this at the time, is that it assumed, incorrectly as it turns out, that technology would advance more quickly and create the optimal conditions for introducing and adopting e-Procurement.

7.1.3. *How relevant, efficient and effective has the Action Plan been in achieving or at least nearing the stated objectives of efficient and unhindered cross-border e-Procurement in the EU?*

As has been identified above, e-Procurement is now a real possibility within the EU, but in practice actual use remains small and unhindered cross-border procurement has not been achieved. In terms of the three evaluation criteria, the following conclusions can be drawn:

- **Effectiveness** - in some areas, the Action Plan measures have contributed towards the progress which has been made, although the actual objectives of the Action Plan have not been met. Hence the effectiveness of the Action Plan is limited;
- **Efficiency** – it is difficult to judge how well resources have been used to achieve the results identified. Reviews of the existing systems imply that the studies and projects have contributed to the progress made but it is not possible at present to assess the overall efficiency of the Action Plan.
- **Relevance** – the assessment provided here shows quite clearly that the majority of priorities identified by the Action Plan were relevant in 2004 and many remain relevant today. Some slight shifts of emphasis may be appropriate in relation to authentication and e-Attestations and to some extent to the focus put on cross border e-Procurement.

It is perhaps also pertinent at this point to mention a few results which were not expected under the Action Plan. These relate to the more pragmatic solutions adopted sometimes at a national level, sometimes more locally, which bypass some of the more technical issues and allow e-Procurement systems, albeit less sophisticated ones to operate. Most notably, this can be seen in the decision by some parties not to adopt the complex e-Signatures promoted by the Action Plan, but to implement simpler systems which permit wider access. The other obvious area where this has occurred is in relation to e-Attestations – rather than creating or providing such electronic documents, there has been a move to accepting declarations of compliance or allowing Third Parties to assess compliance.

Hence although the Action Plan has delivered its objectives to some extent, many of its priority areas are still relevant and if the vision of the Action Plan is to be achieved, further co-ordinated action is required. The following section summarises the main outstanding issues and barriers.

7.2. **What are the remaining issues to be addressed?**

This evaluation has identified a number of challenges and weaknesses which, if not addressed, will prevent the realisation of wider take-up of e-Procurement and cross-border participation in on-line procurement. Looking to the future, the Commission must continue to act to minimise the risks of a decentralised, fragmented approach at EU level. To this end it could, in broad terms:

- Adapt Community legislation or policy actions where they have missed their targets or where appropriate, re-define targets;
- Promote common principles, building blocks and models for regionally or nationally built e-Procurement systems to facilitate technical inter-connections between them or participation by operators in multiple systems;

- Encourage convergent, secure but commercially viable solutions to critical phases and applications; and
- Disseminate examples of best-practices.

Within this framework of actions, the issues presented below (in no particular order) appear to have most importance. There is some cross-over and synergy between these areas.

- **Provision of a supportive legal environment.** As systems develop it may be necessary to set clearer conditions for their use and to define the obligations relating to the provision and operation of such platforms. In the wider legislative context, to facilitate and reinforce greater use of e-Procurement at both national and cross-border level and ensure a coherent legal environment, changes might be required in related legislation, such as the e-Signatures Directive (currently being considered), e-Invoicing and VAT.
- **More pragmatic approach, where appropriate, to technical issues:** Many of the more sophisticated approaches to authentication, particularly those based around e-Signatures are preventing wider access and interoperability. The desired efforts to standardise and restructure business documents and create electronic versions which are usable and acceptable across borders have been slow to materialise. Technology should be considered more as a means to achieve electronic procurement rather than an end in itself.
- **Greater support for administrative simplification and organisational change.** Many countries have reported inertia and a lack of interest on the part of EOs and CAs. More needs to be done to identify and promote ways to simplify the procurement process and facilitate organisational change.
- **Lack of standardisation.** The availability of standards setting common rules on process and data structures for the exchange of business information is clearly a success factor for e-Procurement. One of the biggest problems in relation to interoperable e-Procurement systems, was in 2004, and remains today in 2010, the lack of a coherent set of standards for communication and format.
- **Development of a more convergent infrastructure.** Whilst convergence on one monolithic system is neither desirable nor intended, it will facilitate participation if there is some common core functionality across systems. Little commonality is currently visible in the different systems which have been developed – individual island solutions have been developed and if action is not taken quickly to create bridges between these systems, there is a strong risk of market fragmentation. To foster e-Procurement take-up, one of the key challenges is to make available in the various alternative forms (standards specifications, off-the-shelf products, open-source software, application services provided by 3rd parties) the largest possible number of building blocks, which together should ensure a certain degree of homogeneity across e-Procurement systems.
- **Improved access and wider inclusion.** Closely linked to some of the issues identified above, more needs to be done to ensure that e-Procurement is available to all interested parties including SMEs and that the benefits can be shared by all. Increased use will lead to increased realisation of these benefits.
- **Best practice and dissemination.** As we move forward, it is vital that we avoid re-inventing the wheel and find a mechanism which profits more directly from these

experiences and more actively promotes and realises the wider benefits. Within this policy, steps should be taken to introduce better monitoring systems at both EU and national level. This would enable progress to be tracked more closely and, provided the appropriate indicators are introduced, facilitate timely action to address issues as they develop rather than once they have become endemic.

- **Greater emphasis on the pre-award phases, particularly e-Submission.** This phase is a complex and interactive phase, involving several important e-Procurement challenges including: certification of submission time; authentication of the information provided by the bidder; submission of attestations; and ensuring the confidentiality and integrity of the bids received. Addressing the problems posed by the different steps within the e-Submission phase and moving towards a more homogeneous landscape of e-Submission systems would greatly increase the use of e-Procurement in general and hence the realisation of the resultant benefits. It would also make it easier for economic operators to move between systems, both on a national and cross border level.

7.3. Next steps

Despite the inherent potential of e-Procurement to facilitate remote participation in tenders, significant levels of participation in cross-border e-Procurement procedures have not yet materialised. This evaluation has identified a series of impediments to the wider up-take of e-Procurement and increased cross-border participation which have their origin in legal, technical and administrative features. The proliferation of e-Procurement systems and solutions at national/regional level will exacerbate the interoperability challenge. While there is limited evidence to-date that technical and legal barriers are stifling cross-border participation in e-Procurement, failure to address these barriers at the outset will deprive economic operators and contracting authorities of the full benefits that e-Procurement offers.

Faced with this situation, the Commission believes that there is a need for sustained attention at EU level to expand the use of e-Procurement in the EU. Rather than proposing detailed recommendations here, the Services of the Commission would like to first propose a period of wider consultation, to build consensus on the most important issues to be addressed and the approach to be adopted. This consultation phase will be triggered by the publication of a Green Paper, building on the results of this evaluation, intended for publication in October 2010.

7.4. Future Monitoring and Evaluation

Monitoring is an important part of any policy intervention. By monitoring a system, an information process is designed which permits users and managers to periodically measure or test the state of the system. It allows them to check that an activity is “on track” in relation to the pre-defined objectives and identify timely “corrective” actions if necessary.

In researching this evaluation it has become clear that although progress has been made since 2004, with much research undertaken and publication of case studies and findings, there is a marked lack of commonly defined and collected statistics and indicators at an EU level. Although some Member States have taken action to define and implement their own monitoring strategies, there may be differences in approach which could make it difficult to use and compare results. Even where such data is being collected, it is not always made publicly available. This lack of data has undoubtedly affected the ability to objectively assess and judge the progress which has been made.

As we go forward, a clear monitoring strategy needs to be defined and implemented for e-Procurement. This strategy would define:

- The data to be collected, (taking into account the costs of data collection);
- The indicators to be compiled;
- When the above actions should be undertaken and however measurement will occur;
- Who will undertake this work.

The indicators should initially measure what is happening in a Member State at national level and a method should be defined to allow compilation of EU level statistics. Where appropriate, these indicators should build on existing measures, aiming for consistency across the countries involved and avoiding overlap/duplication wherever possible.

Future updates might then allow for lower level indicators to be considered – possibly by regional or local level, or in relation to particular purchase types. As part of the strategy, a baseline measurement should be conducted, against which future progress could be benchmarked. Ideally this data would be collected before/at the start of the new policy stage, but more realistically, given the need to define the precise indicators, this might happen in the early stages of implementation.

It is neither possible nor appropriate at this point to actually define the actual indicators, but in terms of the areas for which indicators should be developed, there are three obvious candidates where effort must be targeted. **Indicators must be agreed to measure both the availability and use of e-Procurement.** Depending on the degree of sophistication required, it may be necessary to develop several indicators for each of these areas. It is not always necessary to create complicated indicators and it might be better to start with simple measures such as counts, which would at least provide some consistent information, and develop more sophisticated indicators over time.

Particular emphasis should be placed on measuring the use and availability of the e-Submission phase as this has been identified as a key part of the e-Procurement dynamic, being the first phase where two-way information flows are required and hence an appropriate testing ground for the monitoring the degree of success observed in solving many of the issues which have been identified.

For availability, possible suggestions include simple counts per country of available sites providing certain tools and phases possibly by type of provider (public, private, CPB etc); multi-criteria indicators could also be developed based on combinations of availability against pre-defined standards.

In relation to indicators of use, measures should be created which indicate the number of contracts conducted electronically (which could again be measured by the phases completed electronically) and by the value of these contracts. These figures could then be compared to the total number and volume of contracts being publicly procured within the EU to give some idea of overall use.

When measuring e-Submission it might be necessary to consider how various tools are provided – for example, actual use of e-Signatures in bids and the level of signature requested; the requirements for e-Documents/e-Attestations.

Indicators must also be developed relating to the main barriers identified, so that progress towards reducing or removing them can be measured clearly. In terms of interoperability, indicators will probably include some measure of cross-border activity e.g. cross-border bidding and success. Use and availability indicators for various tools and phases may be sufficient to identify progress in eliminating issues where problems of clarity or definition have been identified.

Other topics for consideration could include a measure of the involvement of SMEs and some measurement of costs and benefits. For example, it would be useful to compare costs per paper procedure and costs per electronic procedure, or to estimate and compare pay back periods for different e-Procurement systems.

It is always tempting to define a large number of indicators based on areas of interest and possible hypotheses. Care must be taken to balance out the need for indicators against the cost of collecting consistent and reliable data across 32 countries.

Only once the indicators have been developed and a baseline identified, should some thought be given as to whether targets should be set and by whom.

ANNEX I - Glossary

ACPC (Advisory Committee on Public Contracts)

Advanced electronic signature

An electronic signature which meets the following requirements:

It is uniquely linked to the signatory

- It is capable of identifying the signatory
- It is created using means that the signatory can maintain under its sole control
- It is linked to the data to which it relates in such a manner that any subsequent change of the data is detectable.

Attestation

A document originating from a party other than the economic operators intended to demonstrate a quality or fact pertaining to the economic operator.

Authentication

The corroboration of the claimed identity of an entity and a set of its observed attributes (i.e. the notion is used as a synonym of “entity authentication”).

BII Workshop

Business Interoperability Interfaces on public procurement in Europe (BII) is CEN Workshop providing a basic framework for technical interoperability in pan-European electronic transactions, expressed as a set of technical specifications that in particular are compatible with UN/CEFACT.

BRITE (Business Register Interoperability Throughout Europe)

An on-line business standards register

CA (Contracting Authority)

State, regional or local authorities, bodies governed by public law, associations formed by one or several of such authorities or one or several of such bodies governed by public law, subject to the European regulatory framework on public procurement

Certification Authority

A certification service provider which issues digital certificates for use by other parties. CAs is characteristic of many public key infrastructure (PKI) schemes.

Contract Award Notice

A document completed by the Contracting Authority and made public after award of a contract.

CC3P (e-Catalogue Classification in Public and Private Procurement)

CEN Project, its title is “Classification and catalogue systems for public and private procurement” (CC3P) to be carried out within the framework of Workshop eCAT ‘Multilingual e-Cataloguing and e-Classification in e-Business’.

CEN (Comité Européen de Normalisation – European Committee for Standardization)

The European Committee for Standardization (ISO’s counterpart and the European entry point to UN/CEFACT). CEN Workshops are open consensus building platforms for contributing to standards, especially in the ICT area, and their product is a CEN Workshop Agreement.

CEN/e-Invoicing

A CEN Workshop providing an open platform for stakeholder consensus on the implementation of e-Invoices in Europe.

CEN / ISSS (Information Society Standardisation System)

CEN/ISSS (Information Society Standardisation System) was created in mid-1997 by CEN as the focus for its ICT standards activities.

CWA (CEN Workshop Agreement)

CII (Cross-Industry Invoice)

The CII standard was developed by UN/CEFACT with a view to enhance links between the business and financial supply chains and to enable cross-industry and cross-domain interoperability. This standard is based on a set of business requirements from different industries and stakeholders in both the private and public sectors

Contract Notice

A document completed by the Contracting Authority inviting companies to tender.

CPB (Central Purchasing Body)

A contracting authority which acquires supplies and/or services intended for contracting authorities, or awards public contracts or concludes framework agreements for works, supplies or services intended for other contracting authorities.

CPC (Central Product Classification)

The United Nations Product Classification, covering goods and service

CPV (Common Procurement Vocabulary)

The CPV establishes a single classification system for public procurement aimed at standardising the references used by contracting authorities and entities to describe the subject of procurement contracts.

CROBIES

Study on Cross border Interoperability of e-Signatures. Its objective is to propose solutions to remove barriers to cross border interoperability of qualified electronic signatures and advanced electronic signatures based on qualified certificates.

CSP (Certification Service Provider)

An entity or a legal or natural person who issues certificates or provides other services related to electronic signatures.

COM (European Commission)

CWA (CEN Workshop Agreement)

A CEN Workshop agreement is a standardisation document, developed in a CEN Workshop. The latter is open to the direct participation of anyone with an interest in the development of the agreement.

DG MARKT (Internal Market and Services Directorate General)

Internal Market and Services Directorate General of the European Commission

DG DIGIT (Directorate General for Informatics)

DG ENTR (Enterprise and Industry Directorate General)

DG INFSO (Information Society and Media Directorate General)

Digital certificate

A small set of structured data that has been electronically signed by a Certification Authority to bind the identity of a legal or natural person to a 'public key' that can be used e.g. to verify electronic signatures created by that person.

Directive

A Directive is a legislative act of the European Union which requires Member States to achieve a particular result without dictating the means of achieving that result. Although obligatory to implement, Directives normally leave Member States with a certain amount of leeway as to the exact rules to be adopted.

DPS (Dynamic purchasing system)

A completely electronic process for making commonly used purchases, the characteristics of which, as generally available on the market, meet the requirements of the contracting authority, which is limited in duration and open throughout its validity to any economic operator which satisfies the selection criteria and has submitted an indicative tender that complies with the specification.

e-CERTIS

Public database containing information on (e-)Attestations.

EIA (Extended Impact Assessment)

The Extended Impact Assessment relating to the development of the Commission's Action Plan for e-Procurement, COM (2004)841, is available on the DG MARKT website

EO (Economic operator)

Generic term for a contractor, supplier or service provider in a public procurement. The terms "contractor", "supplier" and "service provider" mean any natural or legal person or public entity or group of such persons and/or bodies which offers on the market, respectively, the execution of works and/or a work, products or services.

eCI@ss

The international standard for unified and consistent classification of products, materials and services along the entire supply chain

EDI (Electronic Data Interchange)

Electronic Data Interchange refers to the structured transmission of data between organisations by electronic means. It is used to transfer electronic documents from one computer system to another (i.e.) from one trading partner to another trading partner.

EEA (European Economic Area)

The Agreement creating the European Economic Area entered into force on 1 January 1994. It allows the EEA EFTA States (Norway, Iceland and Liechtenstein) to participate in the Internal Market on the basis of their application of Internal Market relevant acquts.

e-ID

An electronic representation of a certain subset of one or more attributes pertaining to an entity. While an entity has only one identity, it may have many electronic identities. It should be noted that eIDs can take many forms, and can be stored on many different types of media. An electronic identity or eID is not synonymous with an eID card: an eID card is only one of many tokens that can be used to support an eID.

e-Invoicing Workshop

The CEN/ISSS Workshop providing consensus-based guidance for business on electronic invoicing. Two phases were completed by the end of 2009, and a third phase started in February 2010.

Electronic attestation / e-Attestation

A generic term for a dematerialised attestation. See under Attestation.

Electronic auction / e-Auction

A repetitive process involving an electronic device for the presentation of new prices, revised downwards, and/or new values concerning certain elements of tenders, which occurs after an initial full evaluation of the tenders, enabling them to be ranked using automatic evaluation methods.

Electronic invoice / e-Invoice

A generic term for a dematerialised invoice. See under Invoice.

Electronic Signature or e-Signature

Electronic signatures are data in electronic form which are attached to or logically associated with other electronic data and which serve as a method of authentication.

EPC (European Payments Council)

The European Payments Council is the decision making and co-ordination body of the European banking industry in relation to payments. Its purpose is to support and promote the creation of a single euro payments area (SEPA) through industry self-regulation. The EPC defines common positions for core payment services within a competitive market place, provides strategic guidance for standardisation, formulates best practices and supports and monitors implementation of decisions taken.

e-Procurement

A public procurement procedure initiated, negotiated and/or concluded using electronic means, i.e. using electronic equipment for the processing and storage of data, in particular through the Internet.

ePWG (e-Procurement Working Group)

e-Procurement Working Group of the Advisory Committee for Public Contracts

ePPS (electronic Product Property Server)

The ePPS project aims at defining a systematic and generic approach to implement an operational product property server.

The ePPS project will deliver a CEN Workshop Agreement (CWA) on «Guidelines for the design, implementation and operation of a product property server». These guidelines will be drawn on the basis of data tested mainly in two industrial sectors - heating, ventilation, air-conditioning, sanitary-ware (HVAC) and optical - and then extended to other industries.

e-PRIOR (e-Invoicing and e-Ordering Pilot)

Project established within the Commission to produce business requirements for e-Invoicing systems in a public procurement context and cross border environment and set up an e-Invoicing and e-Ordering pilot to be used by DIGIT and some of its suppliers. An e-Catalogue component is in production.

ERP (Enterprise Resource Planning)

An ERP is an integrated computer-based system used to manage internal and external resources including tangible assets, financial resources, materials, and human resources.

e-Senders/e-Notices

e-Notifications can be sent via online forms or via the e-Senders platform, which relies on registered service providers that have implemented standard XML forms in their software. The online forms are free, and are typically used by contracting authorities which send only a limited amount of notices each year, whereas the e-Senders platform is oriented more towards larger users.

EU (European Union)

FTP (File Transfer Protocol)

FTP is a standard network protocol used to copy a file from one host to another over a TCP/IP-based network, such as the Internet.

Framework Agreement

An agreement between one or more contracting authorities and one or more economic operators, the purpose of which is to establish the terms governing contracts to be awarded during a given period, in particular with regard to price and, where appropriate, the quantity envisaged.

GATT (General Agreement on Tariffs and Trade)

GPA (Government Procurement Agreement)

The GPA establishes a set of rules which (a) govern the procurement activities of its Parties and (b) enable the Agreement to function as an international one.

GDP (Gross Domestic Product)

A measure of a country's overall economic output. It is the market value of all final goods and services made within the borders of a country in a year.

GPC (Global Products Classification)

GPC is the products classification of GS1, an organisation that works for the design and implementation of global standards

IDABC

Interoperable **D**elivery of European e-Government Services to public **A**dministrations, **B**usinesses and **C**itizens. A Commission programme developing recommendations and solutions and providing services helping European public services to communicate electronically.

Interoperability

A property referring to the ability of diverse systems and organisations to work together (inter-operate). The term is often used in a technical systems engineering sense, or alternatively in a broad sense, taking into account social, political, and organisational factors that impact system to system performance.

Invoice

The invoice is a document or a data set marked with the word 'invoice', formally specifying details of a (or part of a) trade and all settlement related information for the (or part of the) trade, explicitly and separately stating the applicable tax.

ICT (Information and communication technologies)

ISO (International Organization for Standardization)

Organisation developing international standards and other types of normative documents.

IT (Information technology)

ITT (Invitation to Tender)

A *call for bids* or *call for tenders* or *invitation to tender* (ITT) (often called tender for short) is a special procedure for generating competing offers from different bidders looking to obtain an award of business activity in works, supply, or service contracts.

MDB (Multilateral Development Bank)

Institution created by a group of countries, which provides financing and professional advising for the purpose of development. MDBs have large memberships including both developed donor countries and developing borrower countries. MDBs finance projects in the form of long-term loans at market rates, very-long term loans (also known as credits) below market rates, and through grants.

The following are usually classified as the main MDBs:

- World Bank
- African Development Bank
- Asian Development Bank
- European Bank for Reconstruction and Development
- Inter-American Development Bank Group

MEPA (The Italian Electronic Public Administration's Marketplace)

MS (Member State)

Member State of the European Union

NES (Northern European Subset)

NES was formed in January 2006 with the objective to facilitate the establishment of a common platform for e-commerce in national and cross border trade. Currently, the initiative comprises government representation from six countries: Norway, Sweden, Finland, Great Britain, Iceland and Denmark. The technical development of NES is now carried out in the CEN/ISSS Workshop BII.

OASIS (Organization for the Advancement of Structured Information Standards)

OASIS is a not-for-profit consortium that drives the development, convergence and adoption of standards in many domains, including Web services, security, and e-business.

OECD (Organisation for Economic Co-operation and Development)

OJEU (Official Journal of the European Union)

The Official Journal of the European Union is the gazette of record for the European Union.

OP (Publications office of the European Union)

PDF (Portable Document Format)

PDF is a file format created by Adobe Systems in 1993 for document exchange. PDF is used for representing two-dimensional documents in a device-independent and display resolution-independent fixed-layout document format.

PEPPOL (Pan-European Public Procurement Online)

PEPPOL is a large scale pilot project, with the objective to pilot solutions to make it easier for European economic operators, in particular SMEs, from one country to respond electronically and in an interoperable way to public procurement opportunities and carry out the subsequent business transactions, including invoicing.

PKI (Public Key Infrastructure)

Public Key Infrastructure is a set of hardware, software, people, policies, and procedures needed to create, manage, distribute, use, store, and revoke digital certificates. In cryptography, a PKI is an arrangement that binds public keys with respective user identities by means of a certificate authority (CA). The user identity must be unique within each CA domain. The binding is established through the registration and issuance process, which, depending on the level of assurance the binding has, may be carried out by software at a CA, or under human supervision. The PKI role that assures this binding is called the Registration Authority (RA). For each user, the user identity, the public key, their binding, validity conditions and other attributes are made unforgeable in public key certificates issued by the CA.

PP (Public procurement)

A procedure initiated by a contracting authority with a view of acquiring goods, services or public works for the fulfilment of its tasks.

PPN (Public Procurement Network)

Qualified Electronic Signature

Advanced electronic signatures which are based on a qualified certificate and which are created by a secure-signature-creation device.

Qualified Certificate

A digital certificate issued by a supervised/accredited Certification Service Provider (CSP) and which meets the following requirements:

- the indication that the certificate is issued as a qualified certificate
- the identification of the Certification Authority and the State (European or foreigner) in which it is established
- the name (or pseudonym) of the signatory, to identify her/him
- signature-verification data which correspond to signature-creation data under the control of the signatory
- the indication of the period of validity of the certificate

- the identity code of the certificate
- the advanced electronic signature of the certification-service-provider (Certification Authority)

RSS (Really Simple Syndication)

RSS is a family of web feed formats used to publish frequently updated works—such as blog entries, news headlines, audio, and video—in a standardised format. An RSS document (which is called a "feed", "web feed", or "channel") includes full or summarised text, plus metadata such as publishing dates and authorship.

SEPA (Single Euro Payments Area)

The Single Euro Payments Area will be the area where citizens, companies and other economic actors will be able to make and receive payments in euro, within Europe, whether between or within national boundaries under the same basic conditions, rights and obligations, regardless of their location. It consists of the European Union Member States plus Iceland, Norway, Liechtenstein and Switzerland.

SLA (Service Level Agreement)

A service-level agreement is a negotiated agreement between two parties where one is the customer and the other is the service provider. This can be a legally binding formal or informal 'contract'.

Service Provider

Entities that provide services to end-users offer wide variety of business services and models ranging from supply chain and procurement services, software and integration services, invoice and related document transmission and networks and integration with financial services.

SIMAP

The SIMAP portal provides access to most important information about public procurement in Europe.

SME (Small and Medium-sized Enterprise)

The category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding 43 million EUR.

SMS (Short Message Service)

SMS is a form of text messaging on mobile phones.

SPOCS (Simple Procedures Online for Cross border Services)

SPOCS is a pilot project launched by the European Commission which aims to remove the administrative barriers European businesses face in offering their services abroad, notably in the context of the implementation of the Services Directive.

STORK (Secure Identity Across Borders Linked)

A pilot project to enable the interoperability of electronic identification solutions between participating Member States.

TED (Tenders Electronic Daily)

TED is the online version of the 'Supplement to the Official Journal of the European Union', dedicated to European public procurement.

TFEU (The Treaty on the Functioning of the European Union)

TRUST (Transparent Reliable Unhindered Secure Tendering)

Part of a study for which the objective was to identify, analyse and compare optimum mechanisms for verifying in all EU/EEA Member States that the systems and tools existing or forthcoming in electronic public procurement comply with the requirements of the new public procurement Directives 2004/18/EC and 2004/17/EC.

TTP (Trusted Third Party)

In order to limit the transmission of identifiers and thus also the compilation of user profiles by third parties, the Trusted Computing Group makes it possible for a trusted third party to certify users' identities and confirm them to their correspondents without actually revealing the identities.

UBL (Universal Business Language)

UBL is a library of standard electronic XML business documents such as purchase orders and invoices. UBL was developed by a Technical Committee in OASIS (an industry standards consortium) with participation from a variety of industry data standards organisations. Under an agreement between UN/CEFACT and OASIS, UBL requirements will be taken up in modifications to the relevant UN/CEFACT standards documents, including the CII.

UN/CEFACT

The United Nations' Centre for Trade Facilitation and Electronic Business has a global remit to secure the interoperability for the exchange of information between private and public sector entities. It has developed UN/EDIFACT, the international standard for electronic data interchange together with supporting components and methodologies.

UNCITRAL

The United Nations Commission for International Trade Law

UN/EDIFACT

The United Nations / Electronic Data Interchange for Administration, Commerce and Transport.

URL (Uniform Resource Locator)

Link to a website

VAT (Value added tax)

VCD (Virtual Company Dossier)

The Virtual Company Dossier (VCD) was developed within the PEPPOL pilot project, as a container used to exchange information among tenderers and procurers in the tendering stage to improve the outcomes of the tendering process.

WTO (World Trade Organisation)

XML

XML (Extensible Markup Language) is a set of rules for encoding documents electronically. It is defined in the XML 1.0 Specification produced by the W3C, and several other related specifications, all gratis open standards.

Source: DG MARKT based on Siemens-Time.lex report

ANNEX II - Bibliography

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Source: DG MARKT based on Siemens-time.lex report

ANNEX III – What is e-Procurement?

1. INTRODUCTION

This document examines common functionalities of an e-Procurement system across all phases of a procurement process. It is not intended as a reference framework for building e-Procurement applications. It just presents and discusses some of the implementation options available to a public organisation's system planners and designers when setting up an e-Procurement solution, taking into account the potential of current technology, common approaches that are emerging in existing e-Procurement operations and the goals pursued by the 2004 e-Procurement Action Plan.

2. FUNCTIONAL DESCRIPTION OF THE ELEMENTS OF E-PROCUREMENT

The various functionalities of an e-Procurement system, across all the sequential phases of a typical procurement process, are examined below.

2.1 E-Notification

The first element of an e-Procurement system is, in general, the provision of web-based tools for creating and publishing the various public procurement notices. This usually involves the automatic generation of an XML notice for publication in the Official Journal of the European Union (OJEU). Such notices are mandatory for procurement above the threshold set out in the EU Directives.

Within this element all the standard communication types should be supported: advance notices, contract notice, contract awarded, etc.

Sophisticated systems supporting the whole e-tendering process may handle notice preparation as part of the overall preparation for a new call. Where this is the case, the call for tender's manager is asked to enter the call's data only once and the system is able to (transparently) use such data to generate the notice, together with the overall workflow for the full procedure.

The system should have the capability to generate multiple XML outputs in order to publish the same data through all the communication channels prescribed by law including, where relevant, possible third parties and public and privately-operated information resources grouping business opportunities.

2.2 Registration

Most e-Procurement systems include a registration module enabling the business parties that take part in a procurement process to be uniquely identified. An account is created on the system for each actor taking part in the process (e.g. the call's managers, the evaluation committee members, the tenderers).

Two major approaches have been identified for registering tenderers:

- Once-and-for-all registration, enabling the registered tenderers to take part in multiple calls issued by the same awarding authorities;

- Call-basis registration - which involves participation in one call at a time. A new account (with the associated registration process) is set up for each call.

Once-and-for-all registration may help procurers streamline the administrative process. Where permitted by the national law implementing the Directive, the registration phase may enable submission of the relevant certificates and attestations relating to the selection and exclusion criteria which remain valid for all the competitive procedures held by a single contracting authority on that particular system (with refreshment of data at agreed time intervals or upon changes of status).

Registration may be scheduled at various stages of the procurement process.

In principle, the earlier the registration is done the greater the control the call manager has on the process at the pre-tendering stage. If tenderers get registered at a preliminary stage (e.g. when they have shown their interest in the call by downloading the tender specifications) then subsequent stages and phases (especially communications) can be more efficiently controlled, because the user group being set up around a specific call for tenders can be profiled at an early stage to the advantage of the contracting authority.

However, to foster the maximum possible number of tenderers, an e-Procurement solution should not place burdens on interested parties. It would be more beneficial to let would-be procurers freely download specifications and submit enquiries without prior registration. All the communication issues could be solved by publishing news on a web page reserved for each specific call, which is open to everybody (in this case the contracting authority will have to specify in the terms of reference that all interested tenderers must check this page regularly).

This would permit registration to remain open until the very end of the pre-tendering phase – i.e. when the would-be tenderer actually decides to submit a proposal - and closed forever on conclusion of the call at hand.

A challenge for registration at the moment is to develop the ability for a business to register once on an e-Procurement system and this registration to be automatically accepted by other systems, leveraging off a shared (standard) distributed ID management model.

2.3 Generation and publication of a call's terms of reference (TOR)

The Terms of Reference documentation (TOR) is the set of specifications and directions for tenderers interested in responding to a call for tender.

The Contracting Authority draws up the TOR and publishes it so that interested companies can get all the relevant information (including for example downloading specific tools for local use) to respond to the call for tender.

The TOR editing and publication process is dependent on the e-submission mechanism supported by the procurement system. Two major application classes can be profiled based on the way the e-submission process is currently handled:

- Support for the communication process only;
- Support for preparing both the content of the TOR and the response by an interested company (support to both parties).

2.3.1 *Support for the communication process*

Certain types of systems do not offer content-related functionality but rather handle the communication process only. Such systems just focus on the process and transactions to be exchanged between the Contracting Authority and the tenderers using the underlying secure platform for e-submission.

For such systems the TOR is usually just a document (typically PDF). The Contracting Authority prepares the tendering specifications offline, as in a traditional paper-based process, using standard office tools, for later publication on the website.

To respond to such a type of call, the tenderer too prepares the documentation in the format of unstructured, textual documents. The tenderer also generates PDF documents and sends (or uploads) them, upon completion, to the Contracting Authority website within the deadline, following the rules established in the TOR. The platform is just the means to perform e-submission, replacing the traditional registered mail-based submission.

2.3.2 *Support of the tendering content preparation*

The other main type of system supports to a large extent the management of the tendering contents. This system offers a tool for:

- i) The Contracting Authority to prepare the call's terms of reference, and
- ii) Tenderers to prepare their individual responses meeting the formal, legal, technical and management requirements set out in the call.

Specifications may be structured as catalogue-based forms, that the Contracting Authority sets up and publishes on the website for the responding tenderers to fill in (probably, but not necessarily, online – see below).

The specifications preparation process can be described as follows:

- Using a form generator, the Contracting Authority prepares on screen the list of products and services being procured (i.e. the technical specifications attached to the call for tender) providing details of all relevant characteristics for each of them;
- Certain systems might require the Contracting Authority to freely write product/services item descriptions e.g. on an Excel sheet, while other systems might enable the Contracting Authority to download the product definitions from a product property server. The product property server is a database describing market products and services and their characteristics. The database may be part of the e-proc system itself or an external service provided by third parties in the form of an ASP service (see below). The process is designed to let the Contracting Authority select the items to be procured and all other elements (e.g. delivery time, ancillary services, etc.) from a product/services catalogue.
- On completion of the selection, the Contracting Authority instructs the system to make the resulting form(s) available on the procurement website. To complete the package, the form(s) are accompanied by all the supporting documents (e.g. description of projects context, instructions for tenderers, draft contract, etc.). Therefore to complete the publication process the Contracting Authority has to upload on its website all the relevant documents not just the catalogue information it has created.

Once the TOR package (the catalogue file and attached documents) is loaded on the system and published on the internet, the call is open for tenderers to prepare and submit their proposals.

Each tenderer responding to the call accesses the catalogue form (various process models can be defined for this particular procedure – see below) and fills in the fields that are requested for each item of the call, thereby providing the detailed specification of the product or service they can provide.

The catalogue-based model described presents a number of challenges and opportunities including:

- 1) Use of standards-based catalogues. If the system uses a standards-based, third-party product server to prepare the form, the following benefit can be achieved:
 - The same view of the products/services being procured as defined within the Contracting Authority's e-proc system is shared by any counterpart system (e.g. ERP) potentially used by the supplier. As a result, by mapping the tenderer's catalogue information onto the Contracting Authority's catalogue information, a tenderer's system could be set up to automatically perform most stages of preparing a response to a call (including decisions such as the capability or opportunity for the tenderer to actually respond to that particular call), leaving the tenderer with the ultimate task of determining any possible price reduction and/or technical improvements within a particular bid;
 - The intrinsic language independence of a standard-based catalogue would maximise the chance for cross-border participation, as the catalogue data can be prepared in any language by the Contracting Authority and read in another language by the suppliers;
- 2) Maximising the use of structured information to define product/services characteristics as opposed to textual descriptions would minimise human interpretation at the proposal's evaluation stage (see below, e-Evaluation). This increases the specification effort from the Contracting Authority, but decreases the risk of challenges because the evaluation criteria are specified in detail in the TOR and detected on the proposal in an automatic, unbiased manner.
- 3) Process control tools would enable a high degree of support for all parties throughout the e-Procurement phases thereby reducing the risk of errors as well as the time to be devoted to ancillary tasks.

2.4 Managing question / answer sessions on a call's terms of reference

As soon as the complete set of specifications and the TOR documentation are online, would-be tenderers are entitled to ask the Contracting Authority for clarifications.

An e-procurement system can group all the information relating to a specific call in a recognisable web section open for wide consultation. Using common web-content management tools (e.g. a web form), the Contracting Authority's website should enable interested parties to submit queries to the Contracting Authority within a time limit that is to be set by the Contracting Authority in the TOR.

The same tool should enable the Contracting Authority to prepare responses and publish them in a recognisable chapter of the same section. Questions and answers are an integral part of the TOR. As such, they shall remain on line for public consultation together with all other TOR material.

A particular issue arises in case of clarifications or rectifications affecting a catalogue-based specification set. This may require a further specification or modification of some catalogue items. The system should therefore enable the Contracting Authority to publish a revised catalogue while, for documentation purpose, maintaining the previous version of the catalogue available under a tracking system easily visible and accessible by the interested tenderers.

2.5 E-Access to tender specification

The publication system should enable free access to all the tendering documentation by any interested party wishing to gain an understanding of all the details of the call for tender.

In general this is all the access functionality that an e-proc system supporting a simple electronic document submission needs to enable. Interested tenderers, once the specification are downloaded on their local system, prepare their response locally using standard office tools.

Similarly, catalogue-based systems just need to support the downloading functionality if they do not offer interactive access to the e-catalogue. The e-catalogue is a common file that the tenderers download onto their own local systems for further processing by some "tender response editing" software. Such software may be a common spreadsheet or a specialised application that the tenderer may download from the Contracting Authority's website itself. In a near future, the tenderer may already have such specialised software available locally, embedded in their own ERP system and capable of performing an automatic mapping of the tenderer's local catalogue (i.e. what the tenderer can offer within a given set of products and services) to the call's catalogue (i.e. what the Contracting Authority is asking within a specific call for tenders).

Finally, some catalogue-based systems may offer an on-line tender response editor. This would be a web application operating on the Contracting Authority's website enabling the tenderer-user to navigate in a structured fashion between all the requested catalogue items and to provide detailed response data. To do so, the system needs to feature:

- A user workspace where tenderers can store all their drafts and relevant documents that are necessary for preparing their response until the deadline for submission;
- A set of security measures, including tracking and auditing mechanisms, to ensure the "inviolability" of the proposal until the opening process begins (see below). That means that top-level confidentiality is to be enforced against potential access to data from anybody (especially in the Contracting Authority's organisation, including system administrators) other than designated "editors" appointed by the candidate tenderers.

Systems supporting the tender editorial process should enable submission versioning, i.e. the tenderer may complete the uploading of the documents in subsequent stages, even modifying the contents of documents already submitted until the deadline expires (at that stage, only the final version of the submission would be retained for subsequent processing).

2.6 E-Submission

Once the tenderer, with or without web application support, has completed their response to the TOR, then the tender package is either uploaded to the platform or sent via an asynchronous, email-type communication channel (e.g. standard email – with various security mechanisms on top – or a dedicated communication infrastructure such as the one being developed by PEPPOL) according to the instructions provided by the Contracting Authority in the TOR.

At this stage, several issues arise, that need to be tackled by the e-proc system in such a way as to not artificially restrict the range of potential tenderers based on the technology and process being used.

The problem areas are individually addressed below.

2.6.1 *Certification of submission time*

The alternative submission methods require a completely different approach as to the certification of the submission time:

- In the uploading model, the e-Procurement system issues a digitally signed receipt certifying date and time of submission;
- In the asynchronous transmission model (e.g. PEPPOL) an external time stamping service is required (at the moment this poses a cross-border obstacle as an interoperable EU-wide time stamping system does not exist).

2.6.2 *Authentication of the submission*

Authentication of submission has to do with the mechanisms enforced by the e-proc solution to ensure that:

- The tender is submitted by a physical person who effectively is the person that he/she purports to be (i.e. the person legitimate to commit the tendering business);
- The tenderer cannot deny having submitted a proposal;
- The material that is submitted is not altered (accidentally or on purpose) from the very moment it is sent by the officer authorised by the tenderer to submit.

At the moment the level of assurance that an e-proc solution has to enforce against the above risks is established by the national implementation of the procurement Directives.

Contracting Authorities in certain Member States are allowed to use a simple user registration-based model. In such Member States, the law recognises the legal value of an electronic transaction replacing traditional signed tendering documents, and attaches a sufficient level of assurance to user-id and password to permit user identification and authorisation as well as for non-repudiation. However, for such systems, it is important that a security token (e.g. a digital certificate for e-Signature) is downloaded from the Contracting Authority website to ensure that the documents being submitted are protected against tampering. This solution is posing no interoperability problems (including cross-border).

In countries that mandate the use of qualified electronic signatures for e-Procurement, there may be various differences in the ways electronic signatures are used e.g.:

- E-Procurement systems using a one-for-all registration procedure demand the tenderer to register once thereby enabling the tenderer to respond to several calls launched within that particular context. In such a scenario, the Contracting Authority may mandate the submission of a unique digitally signed request for registration. On conclusion, the user receives a user ID and tools that ensure top-level user authentication without requiring later submissions to be electronically signed.
- One-time registration systems mandate the supplier to submit electronically signed proposals each time.

Either way, there are currently interoperability problems in using electronic signature services across Europe. This means that if a foreign tender is received there is a high risk that the e-Procurement system cannot verify the digital certificate supporting the signature.

The problem can be dealt with in a wide range of ways. One solution is the work being undertaken by the Commission and the Member States to establish the so called "trust list" (an electronic, machine-processable list that should enable cross-border verification of qualified electronic signatures), in the meantime Contracting Authorities need to set up a double submission channel to enable foreign competitors to take part in the call.

Another possible solution is for a call to enable those who do not own a compatible qualified electronic signature to submit an unsigned electronic file and simultaneously, via ordinary registered mail or fax, a statement - generated by the e-Procurement website itself and linked (maybe via a barcode) to the digital transmission - duly signed by the company's legal representative.

2.6.3 Submission of e-Attestations

The e-Attestations that tenderers have to attach to their proposals to demonstrate their suitability to take part in a call for tender are affected by problems similar to those described above for authentication.

At present e-Attestations digitally signed by issuers in the Member States are rarely available. Therefore the Contracting Authority has to enforce a transitional solution to enable completion of the electronic procedure in compliance with the evidence requirements of the procurement Directives.

As for the situation with incompatible electronic signatures, one solution could be for a Contracting Authority to allow the tenderer to:

- Attach a provisional electronic statement within the e-tender package, in order not to hinder/delay the automatic processing of the submission;
- Prepare, in parallel, a paper-based file and send it in via registered mail within a deadline set in the TOR.

2.6.4 Confidentiality of the tender until formal opening

Another key aspect of the submission relates to the "inviolability" of the tender until the opening process begins.

Tendering documents must be within the Contracting Authority's document repository when the deadline for submission expires, but they must also be inaccessible to everybody until the tenders are opened. There are several techniques commonly used to ensure this. One example is a one-time password that the tenderer selects to encipher the documents and uses at an agreed time to decipher the documents on the portal, thereby enabling authorised persons to officially access the data.

Another solution consists in ensuring that the tendering documents do not leave the tenderer's system, i.e. where they are prepared, until the deadline. As soon as the deadline expires, the Contracting Authority's system uploads the documents from all tenderers' systems. This method has the opposite sensitivities: to ensure that the documents cannot be changed by the tenderers after the deadline is expired. This would be achieved by the tenderer using time-stamping services, to be applied to a proposal upon the deadline thereby ensuring that the proposal cannot be modified. This method has a large shortcoming: the current unavailability of an interoperable time-stamping service across the EU.

2.7 Tender opening process

Once the deadline for submission has expired the opening process begins, causing:

1. All tendering documents to become visible to designated people within the Contracting Authority's organisation (i.e. tendering evaluators and administrative staff);
2. Verification of completeness of the information included in each tender e-package submitted. Verification at this stage is probably only required in the case of systems supporting simple submission. When a system supports tendering preparation, the system is likely not to allow submission of incomplete information. However, the opening stage may result in rejection of incomplete proposals, to be handled as part of the workflow;
3. Communication to all participating tenderers of the list of tenderers admitted to the selection, the list of rejected tenderers on grounds of proposal incompleteness and all other information that tenderers are entitled to know about their competitors.

The opening is a formal process that in certain Member States is carried out via a public procedure that all tenderers are entitled to take part in. Therefore an e-proc system covering this phase needs to make available, simultaneously to all the tenderers, all relevant information for each single tender that must be disclosed by law, as appropriate.

To this respect, it should be noted that in some countries the price of each tender is made public at the opening stage (e.g. Austria), while in other countries (e.g. Italy) price is the very last information to be disclosed/read under the procedure – this happens after the tendering evaluation is completed – and made publicly available via a public procedure. In such situations the price must remain "inviolable" until the final opening is made. This may be a

major factor preventing replication of the applications across countries, but does not hinder accessibility within countries.

2.8 E-Selection

E-selection is the process through which the capability of the tenderers to deliver the products / services that are the subject of the call is checked against the exclusion and selection criteria stated in the TOR. Limitations or non-compliance in any such areas lead to exclusion of the tender without any evaluation of the technical proposal on the basis that the tenderer is not appropriate/able to carry out the project at hand.

E-selection could in principle be fully automated, in that the Contracting Authority sets the minimum reference parameters in purely quantitative terms (e.g. minimum acceptable amount for total yearly turnover, minimum acceptable amount for turnover related to the specific project, absence of conviction for the tenderer representative, etc.) and provides a standard electronic form to gather each tenderer's data. On this basis, the system could then check data against reference values and validate the tenderer's statement against the electronic supporting evidence attached to the tender.

In practice the current lack of general availability of e-Certificates and e-Attestations which are machine-processable makes it quite unlikely that a fully automated selection can be conducted.

A partially automated selection may instead be possible in which the values stated by the tenderers in the electronic form for all evidence items mandated in the TOR is checked against the attached certificates and attestations by an evaluator appointed by the Contracting Authority, who fills in a selection form provided by the e-proc system.

2.9 E-Evaluation/ e-Award

In a similar manner to e-Selection, e-Evaluation can be supported by e-proc systems offering a computer-assisted tool for:

- Contracting Authorities to set evaluation criteria using an electronic form, that will be published as part of the tendering specifications;
- Tenderers to supply information that automatically fills the form with performance data;
- Evaluation panel members to assess individual tenders and award the contract to the winning tenderer based on the award criteria established in the TOR.

Commonly, tools handle the following evaluation criteria (identified in the TOR) according to the European and national law:

- Best price;
- Price + technical evaluation (most economically advantageous tender);
- Price + [technical evaluation +] a final auction.

Best price evaluation can be conducted by the system in a totally automated fashion. The price is encoded in each tender and the role of the contracting authority's evaluation panel is

just to verify that tenderers effectively commit to supplying products/services requested in full compliance with the TOR (basically this boils down to completeness of the tender). The system then automatically ranks the tenders by price resulting in the choice of the best bid.

The "Most economically advantageous tender evaluation" criterion requires judgement by the Contracting Authority. A specific evaluation panel is appointed with the responsibility for marking the tenders based on the criteria provided in the TOR. To support this process, a comprehensive e-proc system may prepare and make available to designated evaluators an evaluation sheet, which each assessor fills in with merit indicators for each of the tenders received.

In such instances, the electronic part of the evaluation is simply the process of recording this data for each tender and performing the subsequent calculations. Once the designated evaluators have assigned performance marks to each characteristic of the proposals the system automatically performs the ranking, combining technical and price score information based on the awarding algorithm (whose publication in the TOR is made mandatory in most countries) and generates the necessary reports and lists.

The auction is a further step that the Contracting Authority may want to carry out after evaluation, on a short list of tenders that meet the TOR requirements. (Obviously, such a choice must be clearly specified in the TOR.)

E-Auctions involve a public interactive session on the internet which starts after the evaluation has been conducted, where the tenderers are invited to propose:

- Further price reduction (reverse auction) – this is the case for the procurement of generic, common and comparable products where price is the only relevant factor to affect the Contracting Authority's decision;
- Further improvement of price and other significant aspects of the tender, which is possible when some features of the supply are generic, well defined and comparable across tenders (e.g. delivery time) and are regarded as a key factor in determining the Contracting Authority's choice.

E-Evaluation ends with a ranking of bidders.

The e-Award phase involves all the communications required by law to the winner and other participants on the awarding decisions made by the awarding authority. Communications may be handled by the system by having the Contracting Authority publish individual letters, digitally signed, in the reserved area assigned to each tenderer for the latter to download.

E-Award ends with the preparation of contractual records, containing all elements and characteristics of the supply that is forwarded to the selected tenderer for final contract signing. This then marks the end of the pre-award phase of procurement.

2.10 E-Ordering

E-ordering is the process enabling:

- Direct procurement - an order is issued to a specific supplier without prior selection of tenderers (e.g. possible in many countries for procurement below the threshold or under specific circumstances indicated by law);

- A specific order within a framework contract or a DPS.

A fully-fledged e-ordering functionality involves the definition of e-procurement requirements, requirements approval and making and sending orders to suppliers.

In the case of direct procurement, requirements are defined from scratch and a supplier is chosen freely – possibly from supplier lists already held in the system - as no previous e-tendering process has been carried out. In the case of an existing framework contract or a DPS requirements are just specified in more detail (e.g. quantities, delivery dates, etc), since product and services profiles have been spelled out within the pre-awarding phase and the suppliers to be invited are those the Contracting authority has signed a contract with.

E-ordering is commonly achieved via the above illustrated process of catalogue-item selection and preparation of an electronic formal communication for the tenderer.

2.11 E-Contract management

E-contract management is the function that enables the Contracting Authority to keep track of the supply or the provision of services. The Contracting Authority monitors contract performance and records all deliverables that are received as part of the contract. Formal approval statements from designated reviewers are recorded.

As soon as a deliverable or a set of deliverables that contractually involve an agreed payment is released (and approved), e-Invoicing is given green light from the Contracting Authority point of view.

2.12 E-Invoicing

From the point of view of a Contracting Authority organisation, e-Invoicing is the process of receiving an invoice electronically from a supplier or service provider and:

- Verifying that the invoice corresponds to a payment due based on an existing order or part order (in case of partial payments foreseen in the contract);
- Verifying that the amount is correct against the order (see above, e-Ordering);
- Verifying that the amount is payable because the conditions for payment as established in the order occur (see above, e-contract management);
- Handling any non-compliance with regard to the above;
- Triggering the payment; and
- (In the case of full compliance), archiving it in line with the bookkeeping obligations.

2.13 E-Payment

E-payment is an electronic order issued by the Contracting Authority's system to the financial institution of the Contracting Authority to proceed with the payment of the amount due to the contractor.

3. SUPPORT FOR DIFFERENT PUBLIC PROCUREMENT PROCEDURES

The functions described in the previous section are variously combined to implement on an electronic infrastructure the different administrative procedures and contractual arrangements defined in the procurement Directives. This section outlines possible ways of implementing such procedures.

3.1 Open procedure

In an open procedure wide participation of businesses is sought by the Contracting Authority who issues a general invitation to which anybody meeting the profile specified in the TOR can respond.

In principle the Contracting Authority does not know who is going to take part in the tendering process until the tendering submission deadline. However, if the e-Procurement system offers would-be tenderers a tender preparation environment then a registration process must be completed well before formal submission.

Systems offering a simple submission mechanism only may allow registration until or as part of the very stage of formal submission.

As the deadline for submission expires, the submission channel is disabled and all tenders that have been submitted by that time qualify for selection and evaluation.

All phases outlined in sections 2.1 to 2.10 are carried out in a sequential manner.

3.2 Restricted procedure

In a restricted procedure, following an open invitation which everybody can respond to by submitting the information specified in the TOR (in general describing the technical, financial and management capability of the company), several respondents are selected and invited to submit a proposal.

The process is therefore split up in two phases:

- Phase 1 includes the selection phase and ends with a comparative evaluation of the tenderer capability, resulting in a shortlist of tenderers to be retained. The short listing process may be designed as a particular form of e-Evaluation and e-Award, with all the implications discussed under sections 2.1 to either 2.8 or 2.9 resulting in a number of "winners" instead of a single "winner";
- Phase 2 moves on from the invitation of tenderers and goes through a standard e-submission process up to contract conclusion.

3.3 Framework agreement

In a framework contract a Contracting Authority establishes with one or more contractors conditions and terms for the provision within a given time frame of a number of products and services. On this basis the Contracting Authority issues specific orders as needed, based on the requirements of the organisation being served.

To support such a process a procurement system has to feature two main components:

- The module for selection of the supplier (or the suppliers in the case of framework with reopening of competition), offering the functionality described in sections 2.1 to 2.9 (namely e-notification, e-access, e-submission e-Evaluation and e-Awarding) aimed at setting up a catalogue of products and services available for a given period of time. This catalogue does not immediately result in an order placed to the selected contractor but just in a contractual framework in which the products available under the contract are specified in all details including price;
- The e-Ordering module, supporting the functionality as described under 2.10, available to the Contracting Authority for issuing specific orders. If the framework is simple (i.e. there is only one supplier selected or a supplier is selected for each specific lot) then the client organisation navigates the catalogue of products available and issues an order specifying, by means of a web transactional application, quantities and characteristics of products/services. If the framework is complex (i.e. any specific order may be issued only on conclusion of a competitive process where the order is placed with the supplier offering best price or best performance where performance can be described in quantitative terms) then the process goes through simplified phases of e-notification, e-submission, e-Evaluation and e-Award.

3.4 DPS

A DPS implementation has a lot in common with the implementation of framework agreement with the reopening of competition.

A DPS can be seen as a procurement process through which a Contracting Authority acquires over time standardised (generic, common and comparable) goods, services or works.

Economic operators are first invited to join a catalogue-based e-procurement system via an indicative tender meeting framework requirements defined in the TOR by the contracting authority running the DPS, and subsequently, when the Contracting Authority launches a specific procurement process, submit the details of the products / services they can provide.

The first part of the procedure is carried out with an application supporting the functionality described under 2.1 to 2.9. The second part of the procedure is done with a standard e-ordering functionality supporting a competitive supplier selection process within the contractor list set out in the DPS (e-notification, e-submission, e-Evaluation and e-Award).

As opposed to framework agreement, though, a DPS system must support the publication of a new notice using the channels prescribed by law (i.e. the OJEU and other sources possibly prescribed at national level) at any specific order that the Contracting Authority issues, to allow new bidders to join in by submitting a specific tender via reiteration of the process described under 2.1 to 2.9.

3.5 Direct order (for purchases under the threshold)

For procurement under threshold, a Contracting Authority has greater autonomy in terms of supplier selection. It should be noted that some Member States may have defined in their national law implementing the Directives a lower threshold, setting an area between the national threshold and the EU threshold where specific national rules for selection and awarding may apply. Therefore it is under this national level, if any, that national Contracting

Authorities may in principle award a contract to a trusted supplier via direct order without prior competition among tenderers.

To handle direct orders, two scenarios can be envisaged:

1. Placing an order by sending a "request for quotation" to the trusted supplier. The latter replies by sending to the Contracting Authority a catalogue-based file for the Contracting Authority to approve or ask for modifications until an agreement is reached and an order confirmation is issued. The process described configures the most typical e-Ordering case (see 2.10) and is fairly commonly supported in current ERP environments.
2. Placing an order to an existing Marketplace offered by national procurement authorities. These are services increasingly offered in the Member States whereby Contracting Authorities navigate a general catalogue of products and services available and chose each item by placing it into a typical "shopping cart". Interested suppliers publish their products on the catalogue specifying price, delivery time, areas served, guarantee period, etc.

3.6 E-Auctions

The present document handles e-Auctions as an awarding mechanism (see 2.9), although the Directives include e-Auction among the new administrative procedures. Basically, the e-Auction process follows the steps outlined for the open procedure until e-Awarding, at which stage an interactive session is opened allowing selected tenderers to submit price reductions (or improvement of individual characteristics of the suppliers that can be quantitatively be expressed) until the most economic (or advantageous) tender is found.

Source: DG MARKT

ANNEX IV – Measures under the Action Plan and current status

Action Plan measure	Issues to be addressed	State of Play
Commission to issue interpretative document on the new rules on electronic public procurement	Legal	Completed - Commission Staff Working Document (SEC 959 of 8.7.2005; EN only)
Commission to make online training demonstrators available, allowing CAs and EOs to familiarise with new e-proc provisions and tools	Technical Trust Resistance to change Lack of understanding of benefits Doubts on feasibility Accessibility Set up a reference model	Completed - 2005: Applications available on IDABC ⁶⁵ website ⁶⁶ - helpdesk services (2005-2009)
Commission to provide appropriate assistance to Member States in transposing the new legal provisions	Legal	Completed - e-Procurement Working Group (ePWG) of the Advisory Committee for Public Contracts, meetings (from 2003) - DG MARKT website
Commission to adopt new Standard Forms for procurement notices taking account of new procedures + the use of electronic means of communication	Standardisation Transparency Publicity/dissemination Cross-border Common understanding	Completed - Regulation N°1564/2005 of 7 September 2005 on Standard Forms ⁶⁷

⁶⁵ Interoperable Delivery of European eGovernment Services to public Administrations, Businesses and Citizens. A Commission programme that ran between 2005 and 2009, developing recommendations and, solutions and providing services helping European public services to communicate electronically

⁶⁶ <http://ec.europa.eu/idabc>

⁶⁷ The standard forms are available online at SIMAP website (<http://simap.europa.eu>)

Action Plan measure	Issues to be addressed	State of Play
Commission to present proposals for revision of the Common Procurement Vocabulary (CPV)	Standardisation Cross-border Interoperability Common understanding	Completed - Regulation N°213/2008 of 28 November 2007 amending CPV ⁶⁸
Commission to present Blueprint for a fully electronic system for the collection and publication of procurement notices on TED	Transparency Accessibility Automation (Simplification) Cross-border	Completed - Feasibility study completed July 2007 (<i>'Mandatory electronic transmission of procurement notices for publication'</i>) ⁶⁹
Member States to implement fully electronic systems at national level including appropriate tools for automated collection + publishing in TED	Transparency Accessibility Automation (Simplification)	On-going
Member States and Commission test, refine and validate results of IDA common functional requirements for e-Procurement systems	Legal Accessibility Cross-border Technical Dissemination of best practices Common understanding	Completed - Report on Preliminary Functional Requirements for e-Procurement (03/2005) - Report on Preliminary Functional Requirements for e-Catalogues (12/2007) ⁷⁰

⁶⁸ The old and new CPV versions are available online at SIMAP website (<http://simap.europa.eu>)

⁶⁹ Available at DG MARKT website http://ec.europa.eu/internal_market/publicprocurement/e-procurement_en.htm#feasability

⁷⁰ Available at DG MARKT website http://ec.europa.eu/internal_market/publicprocurement/e-procurement_en.htm#feasability

Action Plan measure	Issues to be addressed	State of Play
Member States to review whether all operational e-Procurement schemes have been adjusted to the requirements of the Directives	Legal Accessibility Cross-border Technical Common understanding	On-going
Member States introduce national accreditation schemes to verify compliance of e-tendering systems with legal framework	Legal Trust Accessibility Policy Cross-border	On-going
Member States and Commission consider through a feasibility study whether to introduce a European compliance verification scheme	Legal Trust Policy Cross-border	Completed - Feasibility study on Common Compliance Verification mechanisms, completed 07/2007 ⁷⁰
Commission proposes an action under IDABC programme to help Member States co-ordinate implementing the use of advanced qualified signature to resolve interoperability problems	Authentication Interoperability Cross-border	Completed ⁷¹
Member States apply , if required by national law, interoperable qualified e-Signatures	Authentication Cross-border Interoperability	On-going

⁷¹ EU Action Plan for interoperable e-Signatures and e-Authentication has been adopted (2008), EC inter-service group has been set up

Action Plan measure	Issues to be addressed	State of Play
CEN / ISSS completes gap analysis on interoperability needs for effective e-Procurement	Interoperability Accessibility Cross-border	Completed - CEN Workshop Agreement CWA 15236:2005 ⁷²
Commission proposes to continue activities on e-Procurement under the IDABC programme for exchange and discussion on interoperability issues and monitoring of Member States' developments	Interoperability Accessibility Cross-border Policy Dissemination of best practices	Completed
Commission and Member States promote standardisation activities at European level and liaise with international standardisation bodies	Standardisation Interoperability Cross-border Accessibility Policy Dissemination of best practices	On-going ⁷³
Member States to prepare national plans for introducing e-Procurement setting measurable performance targets, taking account of specific national needs	Policy Security Trust Inclusion Monitoring Dissemination of best practices	Partially completed

⁷² *Analysis of standardization requirements and standardization gaps for e-Procurement in Europe*, available at CEN website <ftp://ftp.cenorm.be/PUBLIC/CWAs/e-Europe/eProc/cwa15236-00-2005-Feb.pdf>

⁷³ COM has successfully promoted standardisation over the last years. Various standardisation activities have been completed by CEN and OASIS on XML automated messaging. Development of standards is still on-going.

Action Plan measure	Issues to be addressed	State of Play
Member States to encourage preparation of similar plans by individual national buyers and coordinate + monitor their implementation	Policy Security Trust Inclusion Dissemination of best practices Monitoring	Partially Completed
Commission to continue monitoring work on e-invoices by CEN/ISSS and propose continuation of XML activities undertaken in 2003-2004 on e-invoices and e-Ordering under IDABC	Standardisation Interoperability Cross-border	On-going ⁷⁴
Member States to set up efficient electronic systems for the collection and processing of statistical procurement data	Dissemination of best practices Monitoring	Partially completed - Study on the automation of statistical data collection in 11 Member States (April 2007) - Appropriate measures taken by some Member States
Commission to consider proposing services for the electronic supply of business information and certificates in public procurement for implementation under the IDABC programme	Accessibility Standardisation Cross-border Automation (Simplification) Re-usability	Completed - Feasibility study on the electronic provision of certificates & attestations most frequently required in PP, completed (12/2008). ⁷⁵

⁷⁴ Activities monitored on various standardisation activities by CEN and OASIS on XML automated messaging for e-Ordering & e-Invoicing, and various operational initiatives by DIGIT, ENTR

⁷⁵ Available at DG MARKT website http://ec.europa.eu/internal_market/publicprocurement/e-procurement_en.htm#feasibility

Action Plan measure	Issues to be addressed	State of Play
Member States and Commission agree on a common set of frequently required electronic certificates for use in e-proc	Accessibility Standardisation Cross-border Re-usability	On-going - e-CERTIS Feasibility study ('e-Certificates II') on creation of an online database on certificates & attestations (funded by IDABC)
Commission proposes launching study on e-catalogues (in DPS + electronic framework agreements) using work by CEN/ISSS under the IDABC programme	Standardisation Technical Inclusion	Completed - Feasibility study on e-Catalogues (November 2007) ⁷⁶
Public Procurement Network to organise benchmarking on transparency, auditing + traceability of e-proc systems	Transparency Legal Trust Common understanding	Delayed
Public Procurement Network to organise workshops to promote exchanges on tender document standardisation	Accessibility Standardisation Automation (Simplification)	Delayed
Member States to launch and support specific awareness campaigns +training for SMEs at national + regional level	Inclusion Policy	On-going
Commission to pursue negotiations on the review of the Government Procurement Agreement (GPA)	International cross-border Policy Legal	On-going ⁷⁷

⁷⁶ Available at DG MARKT website http://ec.europa.eu/internal_market/publicprocurement/e-procurement_en.htm#feasability

⁷⁷ COM has taken action according to the Action Plan's objectives, but the negotiation is still on-going.

Action Plan measure	Issues to be addressed	State of Play
Commission to take initiatives in the GPA to progress towards utilisation of a single common nomenclature for the classification of procurement goods and services	International cross-border Standardisation Policy International common understanding	On-going ⁷⁸
Commission to promote the activities of and liaise with international standardisation bodies & fora to avoid emergence of interoperability barriers at international level	International cross-border Policy Standardisation Interoperability	On-going
Commission to cooperate with Multilateral Development Banks (MDBs) network in view of co-ordinating technical assist. to 3 rd countries, supporting re-organising and computerising their PP regimes	International cross-border Policy Inclusion	On-going
Commission to consider any adjustments necessary + feasibility of e-Procurement in context of EU external aid instruments	Policy Transparency	On-going

Source: DG MARKT

⁷⁸ COM has taken action according to the Action Plan's objectives, but the negotiation is still on-going.

ANNEX V– Table of public procurement legislation

NB: This table mentions the thresholds as foreseen in the initial text of the Directives mentioned. It does not include updates for any subsequent adaptation of the thresholds' value over time.

Directive	Who	Coverage and threshold	Comments
71/305/EEC	Public sector	Works contracts, equal to and above € 1 million	Works concessions not covered, transport, water and energy sectors excluded
77/62/EEC	Public sector	Supplies contracts, equal to and above € 200,000	Transport, water, energy and telecommunications sectors excluded
80/767/EEC	Public sector, central state authorities	Supplies contracts, equal to and above € 140,000	Amending Directive 77/62/EEC, mainly because of the 1979 GATT Agreement on Government procurement. Transport, water, energy and telecommunications sectors excluded
88/295/EEC	Public sector	Supplies contracts, equal to and above € 130,000 (for central state authorities), otherwise equal to and above 200,000 €	Amending Directive 77/62/EEC, i.a. because of the 1986 GATT Agreement on Government procurement. Transport, water, energy and telecommunications sectors excluded
89/440/EEC	Public sector	Works contracts, works concessions contracts, works contracts awarded by concessionaires, subsidised works contracts, equal to and above € 5,000,000	Amending Directive 71/305/EEC. Definition of contracting authorities broadened (bodies governed by public law), definition of works contracts broadened (execution and design ... or the execution by whatever means ...). Transport, water and energy sectors excluded
90/531/EEC	Utilities (water, energy, transport and telecommunications sectors)	Works contracts, equal to and above € 5,000,000 Supplies contracts € 400,000 – 600,000 (central State authorities – others)	Works concessions contracts not covered, very broad definition of special or exclusive rights
92/50/EEC	Public sector	Service contracts, subsidised contracts, design contests equal to and above € 200,000	Two tier system, service concessions excluded. Water, energy, transport and telecommunications sectors excluded.
93/36/EEC	Public sector	Supplies contracts, equal to and above € 130,000 – 200,000 (central State authorities - others)	Codified Directive 77/62/EEC and its subsequent amendments and introduced substantial changes. Definition of contracting authority broadened (body governed by public law). Water, energy, transport and telecommunications sectors excluded.
93/37/EEC	Public sector	Works contracts, works concessions contracts, works contracts awarded by concessionaires, subsidised works contracts, equal to and above € 5,000,000	Purely a codification of Directive 71/305/EEC and its subsequent amendments (see remarks to 89/440/EC). Water, energy, transport and telecommunications sectors excluded.

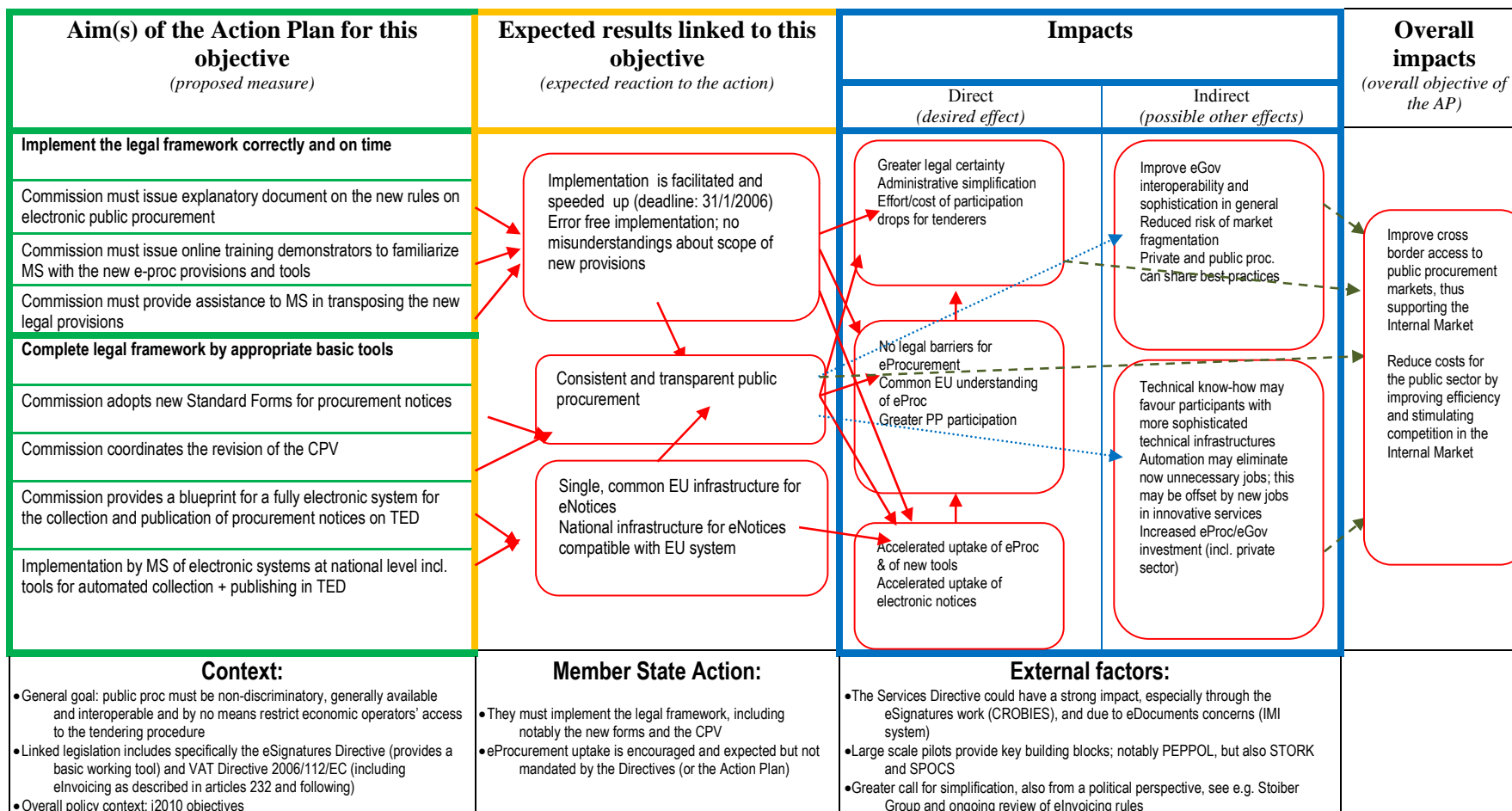
Directive	Who	Coverage and threshold	Comments
93/38/EEC	Utilities (water, energy, transport and telecommunications sectors)	Works contracts, supplies contracts services contracts, design contests, equal to and above € 5,000,000 for works, equal to and above € 400,000 – 600,000 for supplies and services (central State authorities – others)	Codification of Directive 90/531/EEC with the new provisions concerning service contracts. Two tier system for services. Works and service concessions contracts not covered, very broad definition of special or exclusive rights
97/52/EC & 98/4/EC	Public sector and Utilities	Changes to previous thresholds. equal to and above €5,000,000 / SDR 5,000,000 for works, SDR 130,000 - € 600,000 for supplies and services contracts	Directive 97/52/EC amended Directives 92/50/EEC, 93/36/EEC and 93/37/EEC, while Directive 98/4/EC amended Directive 93/38/EEC. Mainly because of the 1994 WTO Agreement on Government procurement.
2004/17/EC	Utilities (Water, energy, transport and postal sectors)	Works, equal to and above € 6,242,000 Supplies and services contracts, design contests, equal to and above € 499,000. (Currently: equal to and above € 4,845,000 for works contracts; equal to and above € 387,000 for supplies, services) and design contests.	Replaced Directive 93/38/EEC and its subsequent modifications. Two tier system for services. Works and service concessions contracts not covered. Narrower but refocused definition of special and exclusive rights. Postal sector added and telecommunications sector excluded. Provisions on e-Procurement included.
2004/18/EC	Public sector	Works, works concessions contracts, works contracts awarded by concessionaires, subsidised works equal to and above € 6,242,000 Supplies and services contracts, subsidised service contracts, design contests, equal to and above € 162,000 – 249,000 (currently: equal to and above € 4,845,000 for works, works concessions contracts, works contracts awarded by concessionaires, subsidised works. equal to and above € 125,000 – 193,000 for supplies and services contracts, subsidised service contracts, design contests)	Replaced Directives 92/50/EEC, 93/36/EEC and 93/37/EEC and subsequent modifications. Two tier system for services. Service concessions contracts not covered. Water, energy, transport, telecommunications and postal sectors excluded; Provisions on e-Procurement included.

Source: DG MARKT

ANNEX VI - Intervention logics

First objective - Ensure a well functioning Internal Market in electronic public procurement

Source: Siemens-time.lex study



First objective - Ensure a well functioning Internal Market in electronic public procurement (continuation)

Source: Siemens-time.lex study

Aim(s) of the Action Plan for this objective <i>(proposed action/measure)</i>	Expected results linked to this objective <i>(expected reaction to the action)</i>	Impacts		Overall impacts <i>(overall objective of the AP)</i>
		Direct <i>(desired effect)</i>	Indirect <i>(possible other effects)</i>	
<p>Remove/prevent barriers in e- procurement procedures</p> <p>MS and Commission issue functional requirements for eProcurement systems</p> <p>MS review whether e-proc systems have adjusted to Directives</p> <p>MS introduce national accreditation schemes to verify legal compliance</p> <p>MS and Commission perform a feasibility study for a European compliance verification scheme</p> <p>Commission proposes initiatives to assist the MS to resolve interoperability problems for e-signatures</p> <p>MS apply interoperable qualified electronic signatures</p>	<p>MS have eProcurement systems that support the new tools based on a common understanding of the European framework</p> <p>MS' eProcurement systems comply with the legal framework</p> <p>Usage of qualified electronic signatures is facilitated, including at the cross border level</p>	<p>Increased confidence in eProcurement</p> <p>Increased transparency</p> <p>Greater participation and competition (especially cross border) reduces costs for public sector</p> <p>Effort/cost of participation drops for all participants (public and private)</p> <p>Greater security and reliability of procurements</p> <p>No legal and few technical barriers for cross border eProc & use of new tools</p> <p>All new tools used, correctly</p>	<p>Improve eGov interoperability and sophistication, including for eCertificates / eSignatures</p> <p>Standardisation will likely trickle through to private section initiatives (including private procurement, eInvoicing, e-signatures)</p> <p>Technical know-how may favour participants with more sophisticated technical infrastructures</p> <p>Automation may eliminate now unnecessary jobs; this may be offset by new jobs in innovative services</p> <p>Standardisation will improve return on investment for eProc</p> <p>Security may increase costs of compliance</p>	<p>Improve cross border access to public procurement markets, thus supporting the Internal Market</p> <p>Reduce costs for the public sector by improving efficiency and stimulating competition in the Internal Market</p>
<p>Detect and address interoperability problems over time</p> <p>Commission and MS promote standardisation activities at European level and liaise with international standardisation bodies</p> <p>CEN/ISS issues gap analysis on interoperability needs</p> <p>Commission proposes to continue activities on e- procurement under the IDABC programme on interoperability issues</p>	<p>Better understanding of interoperability issues and greater interoperability between Member States</p> <p>Increased standardisation</p>			
<p>Context:</p> <ul style="list-style-type: none"> • General goal: public proc must be non-discriminatory, generally available and interoperable and by no means restrict economic operators' access to the tendering procedure • Linked legislation includes specifically the eSignatures Directive (provides a basic working tool) and Services Directive (addresses similar issues) • Overall policy context: i2010 objectives 	<p>Member State Action:</p> <ul style="list-style-type: none"> • MS are expected (but not required) to implement compliant eProcurement infrastructure. Use of these systems was expected, as was the adoption of qualified signatures, but not required. 	<p>External factors:</p> <ul style="list-style-type: none"> • The Services Directive could have a strong impact, especially through the eSignatures work (CROBIES), and due to eDocuments concerns (IMI system) • Large scale pilots provide key building blocks; • Greater call for simplification, also from a political perspective, see e.g. Stoiber Group and ongoing review of eInvoicing rules 		

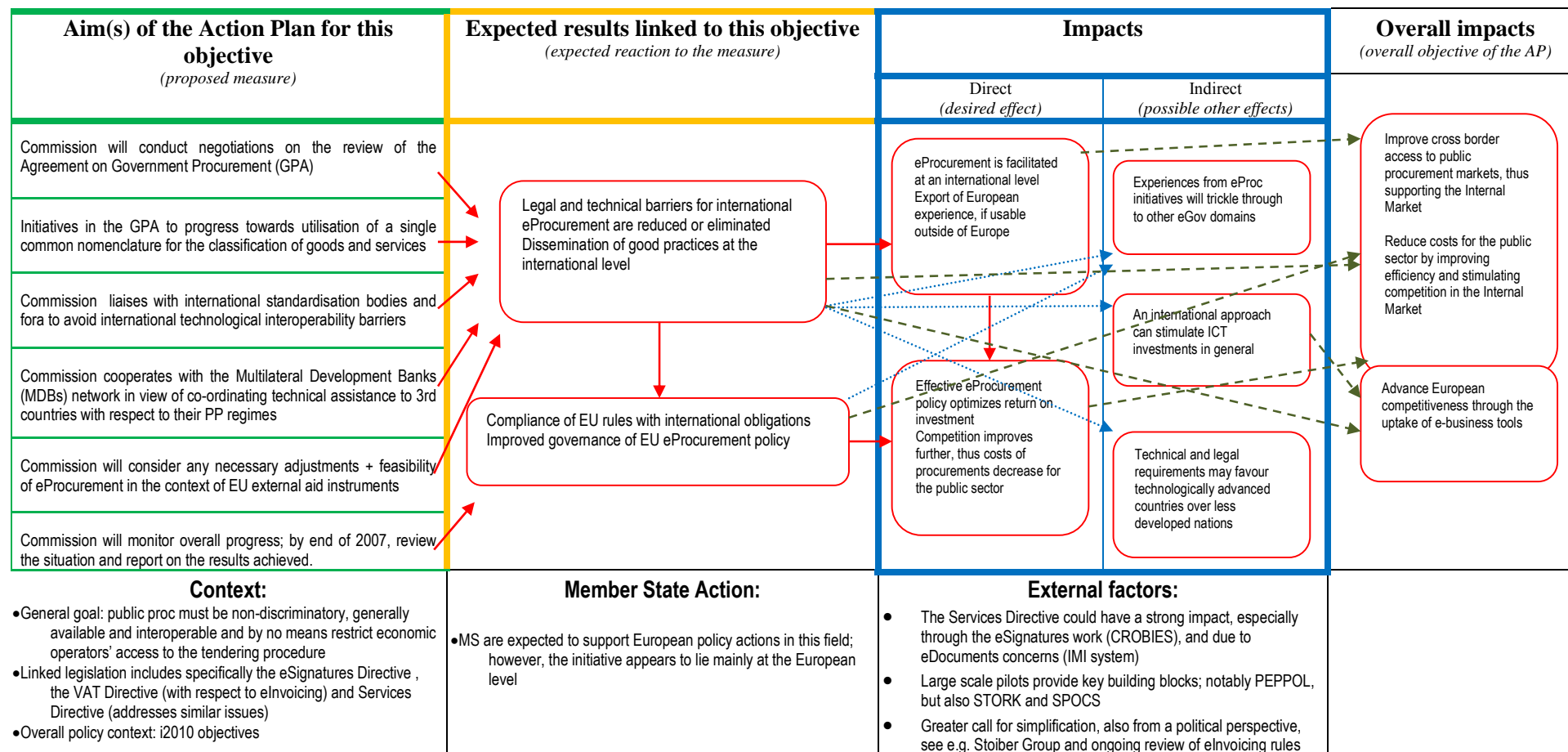
Second objective - Improve procurement efficiency, governance and competitiveness

Source: Siemens-time.lex study

Aim(s) of the Action Plan for this objective <i>(proposed measure)</i>	Expected results linked to this objective <i>(expected reaction to the action)</i>	Impacts		Overall impacts <i>(overall objective of the AP)</i>
		Direct <i>(desired effect)</i>	Indirect <i>(possible other effects)</i>	
<p>Increase procurement efficiency and improve governance</p> <p>MS will adopt national action plans for introducing eProcurement, including measurable performance targets, and will encourage preparation of similar plans by individual national buyers</p> <p>Commission will continue monitoring work on eInvoices by CEN/ISSS and XML activities on eInvoices and eOrdering</p> <p>MS will set up efficient electronic systems for the collection and processing of statistical procurement data (including TED data)</p>	<p>National action plans are established Individual buyers adopt similar strategies Statistical data on eProc is collected</p> <p>More efficient/consistent national eProc policy</p>	<p>Improved national coordination of PP / eProcurement strategies Goal-oriented policy making is promoted through quantifiable targets; weaknesses can be seen and addressed</p>	<p>Improve eGov interoperability and sophistication, including for eCertificates / eSignatures More centralization and improved return on investment More effective investment in eGov infrastructure</p>	<p>Improve cross border access to public procurement markets, thus supporting the Internal Market</p> <p>Reduce costs for the public sector by improving efficiency and stimulating competition in the Internal Market</p> <p>Advance European competitiveness through the uptake of e-business tools</p>
<p>Increase competitiveness of EU public procurement markets</p> <p>Commission will consider to propose services for the electronic supply of business information / certificates in public procurement; MS and Commission will agree on a common set of frequently required eCertificates; and the Public Procurement Network organizes a benchmark exercise on transparency, auditing+traceability of e-proc systems</p> <p>Commission studies eCatalogues (in DPS and framework agreements)</p> <p>Public Procurement Network organises workshops to promote tender document standardisation</p> <p>MS launch and support specific awareness campaigns +training programmes for SMEs</p>	<p>Adoption of eInvoicing and eOrdering in transactions with the public sector More standardised eCertificate/eDocument practices, leading to easier exchange/use of common eCertificates/eDocuments Increased use/uptake of eCatalogues, incl. in DPS and framework agreements</p> <p>Greater participation in eProcurements, including cross border, specifically for SMEs</p>	<p>Increased use of eProc (incl. cross border) reduces costs of procurements Effort/cost of participation drops for tenderers</p> <p>Increased confidence in eProcurement SMEs can realize more of the gains of PP</p>	<p>Goal-oriented policies improve accountability</p> <p>Standardisation work may trickle through to private initiatives (including private procurement, eInvoicing); eInvoicing will be taken up more outside of PP</p> <p>SME awareness of business opportunities may increase</p>	
<p>Context:</p> <ul style="list-style-type: none"> General goal: public proc must be non-discriminatory, generally available and interoperable Linked legislation includes specifically the eSignatures Directive, the VAT Directive (with respect to eInvoicing) and Services Directive 	<p>Member State Action:</p> <ul style="list-style-type: none"> MS are expected to adopt action plans and collect statistical data, leading to the professionalization of public proc policy. Administrative practices (especially with respect to eCertificates) must be modernized and streamlined 	<p>External factors:</p> <ul style="list-style-type: none"> The Services Directive(eDocuments concerns (IMI system)) Large scale pilots provide key building blocks Greater call for simplification, also from a political perspective, see e.g. Stoiber Group and ongoing review of eInvoicing rules 		

Third objective - Work towards an international framework for electronic public procurement

Source: Siemens-time.lex study



Source: Siemens-time.lex

ANNEX VII – List of portals reviewed

Country and website	Type	Additional languages	Coverage for add. languages	Access
Austria				
Federal Procurement Agency http://www.bbg.gv.at/	CPB	EN	Low	High
Austrian Register of Tenderers/Contractors – ANKÖ http://www.ankoe.at/	Portal	-	-	Medium
Pep-online http://www.pep-online.at/	Portal	-	-	Medium ⁷⁹
Austrian Federal Railways and ASFINAG (Highway Company) http://www.ava-online.at/	Portal	-	-	Medium
Vemap procurement platform – www.vemap.com . Implemented i.a. by: – Procurement Portal of St Pölten city http://stpoelten.vemap.com/ – Federal State of Lower Austria (Land Niederösterreich) http://noe.vemap.com/ – Holding of companies of the city of Vienna (Wiener Stadtwerke) http://wstw.vemap.com/	Platform	-	-	Medium
Belgium				
Belgian federal public procurement portal http://www.publicprocurement.be/	Portal	EN	High	Low

⁷⁹

Requires payment to receive tender information

Country and website	Type	Additional languages	Coverage for add. languages	Access
Federal Procurement Central ⁸⁰ (Centrale de Marchés de l'Administration fédérale - Federale Opdrachtcentrale) http://www.publicprocurement.be/portal/page/portal/pubproc/ambtenaren/for%20-%20federale%20opdrachtcentrale	CPB	EN	High	Low
Walloon public procurement portal http://marchespublics.wallonie.be/	Portal	-	-	High
Flemish public procurement portal http://www.kanoo.be/	Portal	-	-	Low
Bulgaria				
Public Procurement Portal http://www.aop.bg	Portal	EN	High	High
Electronic market for small public procurement http://smallsrv.minfin.bg/	Portal	-	-	Medium
Croatia				
Portal of Public Procurement http://www.javnanabava.hr/	Portal	EN	Medium	-
Electronic procurement search ads http://ponuda-jn.nn.hr/	Portal	-	-	Low ⁸⁰
Cyprus				
Cyprus e-Procurement System (CyePS) http://www.e-Procurement.gov.cy	Portal	EN	High	Medium

⁸⁰ Requires payment to receive tender information

Country and website	Type	Additional languages	Coverage for add. languages	Access
Czech Republic				
Official website of public contracts http://www.isvzus.cz/	Portal	EN	High	High
Public procurement of the Ministry for Regional Development http://ezak.mmr.cz/	Portal	-	-	High
Public Procurement and Concessions Portal http://www.portal-vz.cz/	Portal	EN	High	⁸¹
Czech Post Auction http://www.centralniadresa.cz/cadr	Platform ⁸²	EN	High	High
Denmark				
Public procurement portal – SKI www.ski.dk	CPB	EN	Low	Medium
Public procurement portal – DOIP – DOIPEI www.doip.dk	Portal	EN, SV, NO	Medium	Medium
SKI electronic catalogue www.netindkob.dk	Portal	-	-	Medium
SKI electronic catalogue www.netkatalog.dk	Portal	-	-	Medium
Mercell www.mercell.dk	Platform	-	-	Medium
Udbudsavisen.dk www.udbudsavisen.dk	Portal	-	-	Medium

⁸¹ Forward to <http://ezak.mmr.cz/>

⁸² Used for any auction, including private auctions (non-public procurement)

Country and website	Type	Additional languages	Coverage for add. languages	Access
Amgros www.amgros.dk	Portal	EN	Low	High
Estonia				
State Procurement Register https://riigihanked.riik.ee/	Portal	EN	Low	Medium
Merzell http://www.merzell.ee/	Platform	-	-	Medium
Finland				
HILMA http://www.hankintailmoitukset.fi/	Portal	-	-	High
Hansel Ltd http://www.hansel.fi/	CPB	EN	Low	Medium
KL-Kuntahankinnat Oy http://www.kuntahankinnat.fi	CPB	EN, (SV ⁸³)	Low	High
France				
Place de marché interministérielle www.marches-publics.gouv.fr	CPB	EN, ES	High	Medium
Bulletin officiel des annonces de marchés public www.boamp.fr	Portal	-	-	Medium
Les Chambres de Commerce et d'Industrie www.marches.cci.fr	Portal	-	-	Medium

⁸³ Swedish is also an official language in Finland; therefore it should not be considered an additional language for the purposes of this table.

Country and website	Type	Additional languages	Coverage for add. languages	Access
<p>e-Procurement sites based on the LT-MPE-platform http://www.atexo.com/LT-MPE.htm; some examples include :</p> <ul style="list-style-type: none"> – Marchés publics e-Bourgogne marches.e-bourgogne.fr – E-megalis set up by the region of Brittany. http://www.e-megalisbretagne.org/ – Marchés publics Ile-de-France e-marchespublics.iledefrance.fr – Marchés publics de Nantes Métropole marchespublics.nantesmetropole.fr – Marchés publics de La Région Alsace http://marchespublics.region-alsace.eu – Marchés publics Pas-de-Calais www2.local-trust.com/cg62 	Platform	-	-	Medium
<p>e-Procurement sites based on the SIS-ePP-platform http://www.sis-france.com/5.aspx; some examples include :</p> <ul style="list-style-type: none"> – Conseil Régional Midi-Pyrénées https://marchespublics.midipyrenees.fr/marchespublics2/ – Marchés publics d'OPAC VOSGES http://marchespublics.opacvosges.fr/asp-opac88/index.jsp – Marchés publics La Carène http://www.carene-epp.cce.bull.fr/CARENE/index.jsp 	Platform	-	-	Medium
Réseau des acheteurs hospitaliers d'Ile de France www.resah-idf.com	Portal	-	-	Medium
e-Marchespublics.com www.e-marchespublics.com	Portal	-	-	Medium

Country and website	Type	Additional languages	Coverage for add. languages	Access
Mairie de Lyon www.marches.lyon.fr	Portal	-	-	Medium
Marchés publics du Grand Ouest www.ouestmarches.com	Portal	-	-	High
Germany				
Vergabepattform des Bundes www.evergabe-online.de	Portal	-	-	Low
Beschaffungsamt des Bundesministeriums des Innern www.bescha.bund.de	CPB	-	-	High
Kaufhaus des Bundes www.kdb.bund.de	Portal	-	-	High
Land Nordrhein-Westfalen www.evergabe.nrw.de/VMPCenter	Portal	-	-	Medium
Mercell www.mercell.de	Platform	-	-	Low
Sites based on the Arriba platform (http://www.rib-software.com/de/loesungen/e-business-e-vergabe/e-vergabe.html); including www.vergabe.stuttgart.de	Platform	-	-	Low

Country and website	Type	Additional languages	Coverage for add. languages	Access
Sites based on the Administration Intelligence AG platform (http://www.ai-ag.de/); including: <ul style="list-style-type: none"> – www.vergabe.stadt-frankfurt.de – Deutsche Rentenversicherung www.deutsche-rentenversicherung-bund.de – www.vergabe.bremen.de – www.vergabe.hessen.de – Landschaftsverband Rheinland http://www.lvr.de/ 	Platform	-	-	Low
Greece				
None identified				
Hungary				
Public Procurement Council (Központi Szolgáltatási Főigazgatóság) http://www.kozbeszerzes.hu/	CPB	EN	Medium	High
KSZF http://kszfweb.econet.hu/	Portal	-	-	Medium
Electool Hungary Ltd http://www.e-eljaras.hu	Platform	-	-	High
Iceland				
State Trading Center www.rikiskaup.is/utbod	Portal	EN	Low	High

Country and website	Type	Additional languages	Coverage for add. languages	Access
Ireland				
eTenders Public Procurement www.etenders.gov.ie	Portal	-	-	High
National Public Procurement Policy Unit http://www.etenders.gov.ie/aboutus/AboutUs_NPPPU.aspx	CPB	-	-	High
Italy				
Acquisti in Rete http://www.acquistinretepa.it/	Portal	-	-	Medium
CONSIP http://www.consip.it/on-line/Home.html	CPB	-	-	High
Friuli Venezia Giulia http://www.acquisti.regione.fvg.it/	Portal	-	-	High
Piedmont http://portal.sistemapiemonte.it	Portal	-	-	High
Municipality of Florence Marketplace http://www.comune.fi.it	CPB	-	-	Medium
Region Marche http://www.emarche.it/	CPB	-	-	Medium
Autonomous Province Bolzano http://www.provincia.bz.it/	CPB	(DE ⁸⁴)	High ⁸⁵	Medium
IntercentER http://www.regione.emilia-romagna.it/	CPB	-	-	Medium

⁸⁴ Some sections of the website are also available in English, but not those pertaining to e-Procurement opportunities. In the autonomous province of Bolzano, German and Italian are both official languages.

⁸⁵ Including also the call for tenders' text

Country and website	Type	Additional languages	Coverage for add. languages	Access
Umbria region http://88.61.35.136/regione/interfaccia/	Portal	-	-	High
EmPULIA - Shopping Center For Public Service http://www.empulia.it/	Portal	-	-	Medium
Campania region www.sitar-campania.it	Portal	-	-	High
Latvia				
Procurement Monitoring Office (IUB) www.iub.gov.lv	CPB	-	-	High
Latvian public procurement www.eiepirkumi.gov.lv	Portal	-	-	High
Mercell www.mercell.lv	Platform	-	-	Low
Lithuania				
Central Public Procurement Information System pirkimai.eviesiejipirkimai.lt	Portal	EN	Low	Medium
Central Public Procurement Portal www.evpp.lt	Portal	-	-	Medium
Central project management agency http://www.cpva.lt/ and www.cpo.lt	CPB	EN	Low	Medium
Mercell http://www.mercell.lt/	Platform	-	-	Low
Luxembourg				
Public e-Procurement portal http://www.marches.public.lu/	Portal	-	-	High

Country and website	Type	Additional languages	Coverage for add. languages	Access
Malta				
Department of Contracts http://www.contracts.gov.mt/	CPB	-	-	Medium
Government e-Procurement System http://www.e-Procurement.gov.mt/	Portal	-	-	Medium
Department of Information http://www.doi.gov.mt/	Portal	-	-	High
Enemalta http://www.emcservices.gov.mt/	Portal	-	-	High
Netherlands				
TenderNed http://www.tenderned.nl/	Portal	-	-	-
Aanbestedings kalender http://www.aanbestedingskalender.nl/	Portal	-	-	High
Aanbestedingenonline.nl http://www.aanbestedingenonline.nl	Portal	-	-	Medium
Ik ben Brig id http://www.brigid.nl	Portal	-	-	Medium
Tenders for architects and design contest http://www.ontwerpwedstrijden.nl	Portal	-	-	High
City of Nijmegen http://www.nijmegenonderneemtmeer.nl	Portal	-	-	Medium
ProRail (public transportation) http://www.aanbesteden.prorail.nl	Portal	-	-	Medium

Country and website	Type	Additional languages	Coverage for add. languages	Access
Norway				
Database for public procurement notifications Doffin.no (Software as a service provided by Millstream Ltd) www.doffin.no	Portal	EN	High	High
Electronic Public Procurement Portal Ehandel.no www.ehandel.no	Portal	EN	High	High
Ehandel.no eTendering solution (Software as a service solution provided by two suppliers: Merzell and VismaUnique www.ehandel.no/kgv)	Portal	EN	Medium	High
Ehandel.no e-Ordering solution (Software as a service solution provided by IBX) www.ehandel.no/ehp	Portal	EN	Medium	High
Merzell www.merzell.no	Platform	-	-	Low
Poland				
Public Procurement Office – Electronic Auctions Platform https://aukcje.uzp.gov.pl/ or https://licytacje.uzp.gov.pl	Portal	-	-	Medium
e-Przetarg.pl http://www.e-przetarg.pl/	Platform	-	-	Medium
Market Planet http://www.marketplanet.pl/	Platform	EN	Medium	Medium
Polish Procurement Platform PWPW http://www.ppp.pwpw.pl/	Platform	EN	High	Low
XTRADE http://www.xtrade.com.pl/	Platform	-	-	Medium

Country and website	Type	Additional languages	Coverage for add. languages	Access
eTender - Electronic Procurements http://www.etender.pl/	Platform	EN	Medium	Medium
Portugal				
ANCP – Agência Nacional de Compras Públicas, E.P.E. www.ancp.gov.pt and http://ancpconcursos.ancp.gov.pt/	CPB	-	-	Medium
Portal Base www.base.gov.pt	Portal	-	-	High
VortalGOV http://www.vortal-info.biz/	Platform	EN, ES	Medium	High
bizGov http://www.bizgov.pt/	Platform	EN	High	High
Infosistemas DL - Compras AP https://www.compraspt.com/compraspt/	Portal	-	-	Medium
Plataforma de Compras Públicas https://www.compraspublicas.com/	Portal	-	-	Low
anoGov http://www.anogov.com/plataforma/	Portal	-	-	Medium
acinGov http://www.acingov.pt	Portal	-	-	Low
Romania				
Sistemul Electronic de Achizitii Publice (SEAP) www.e-licitatie.ro	Platform	EN	High	High
National Authority for Regulating and Monitoring Public Procurement (NARMPP) http://www.cnmsi.ro/	CPB	-	-	High

Country and website	Type	Additional languages	Coverage for add. languages	Access
Slovakia				
Electronic procurement (EVO) www.evo.gov.sk	Portal	-	-	High
National Journal of Public Procurement www.e-vestnik.sk	Portal	-	-	High
Office of Public Procurement www.uvo.gov.sk/zovo	CPB	-	-	Low
Slovenia				
Ministry of Finances www.enarocanje.si	Portal	-	-	High
Spain				
Plataforma de contratación del estado http://contrataciondelestado.es/	Portal	-	-	Medium
Conecta-patrimonio http://catalogopatrimonio.meh.es	Portal	(Catalan, Basque, Galician) ⁸⁶ EN, FR	Low	High

⁸⁶

Recognised regional official languages

Country and website	Type	Additional languages	Coverage for add. languages	Access
Red.es http://www.red.es/index.action	CPB	(Catalan, Basque, Galician) ⁸⁷ EN	Low	Low
Electronic Contracting Platform of Public Administration for some local authorities in the region of Catalonia http://www.pecap.org/	Portal	(Catalan) ⁸⁸ EN	Low	Low
Spanish Agency of Medicines and Health Products http://www.agemed.es/actividad/licitacionPublica/	Portal	(Catalan, Basque, Galician) ⁸⁹ EN, FR	Low	High
Spanish Agency for Food Security and Nutrition http://www.aesan.msc.es/AESAN/web/licitaciones_publicas/licitaciones_publicas.shtml/	Portal	-	-	High
National Institute of Health Management http://www.ingesa.msc.es/ciudadanos/licitaciones/index.jsp/	Portal	(Catalan, Basque, Galician) ⁹⁰ EN, FR	Low	Medium ⁹¹

87 Recognised regional official languages
88 Recognised regional official languages
89 Recognised regional official languages
90 Recognised regional official languages
91 Restricted to people with a NIF/CIF code

Country and website	Type	Additional languages	Coverage for add. languages	Access
National Drug Plan http://www.pnsd.msc.es/Categoria4/licitaciones/licitacion.htm/	Portal	(Catalan, Basque, Galician) ⁹² EN, FR	Low	High
Sweden				
Avropa http://www.avropa.se/	Portal	EN	Low	Medium
Opic http://www.opic.se/	Portal	EN, LT	Medium	Medium
Mercell http://www.mercell.se/	Platform	-	-	Low
Eniro procurement http://www.eniroupphandling.se/	Portal	-	-	Low
Liechtenstein				
None identified				
Turkey				
Public Procurement Platform Citizen Transactions http://vatandas.ihale.gov.tr/	Portal	-	-	Medium
United Kingdom⁹³				

⁹² Recognised regional official languages

⁹³ Only a subset of the large list of the UK portals and platforms

Country and website	Type	Additional languages	Coverage for add. languages	Access
The public sector's national procurement portal http://www.buyingsolutions.gov.uk/	CPB	-	-	High
Sites based on the BraveSolution platform (https://www.bravosolution.com/), such as: National Policing Improvement Agency https://npia.bravosolution.co.uk/ Department for Communities and Local Government https://communities.bravosolution.co.uk/ Ministry of Justice https://justice.bravosolution.co.uk/	Platform	-	-	High
IDeA: Improvement and Development Agency for local government http://www.idea.gov.uk/idk/core/page.do?pageId=1002	Portal	-	-	High
The Scottish Government e-Procurement http://www.e-Procurementscotland.com/	Portal	-	-	High
Wales e-Procurement http://www.xchangewales.co.uk/	Portal	-	-	High
Home Office eSourcing Portal https://sourcing.homeoffice.gov.uk/	Portal	ES, PT, FR, DE, IT, JA, ZH, RU	Low	Medium
Delta Electronic Tendering Service (https://www.delta-ets.com/) used by: Department for Culture procurement portal http://dcms.g2b.info/	Platform	-	-	Medium
Department of Health Procurement & Proposals http://www.dh.gov.uk/en/Procurementandproposals	Portal	-	-	High
Ministry of Defence http://www.contracts.mod.uk/	Portal	-	-	Medium

Country and website	Type	Additional languages	Coverage for add. languages	Access
EGS e-Procurement http://www.egsgroup.com/	Platform	-	-	High

Source: Siemens-time.lex

ANNEX VIII – Costs for e-Procurement

Country	Platform name	COSTS for CAs		BENEFITS for CAs		Other statistics	ECONOMIC OPERATORS	
		Implementation costs	Annual costs	Savings	Estimate benefits		Fee (EO)	Benefits (EO)
AT	ANKÖ Vergabeportal						Enterprises pay an annual fee for the use of the platform	
AT	e-shop (BBG)		€1-49,000	Approximately €63/order ; €3.5 Million/year		A growth rate of volume and number of orders of about 25 percent per year		
AT	FPC	€1-5 million	€500-999,000	2008: procurements of € 830 Million and savings of 17.64 % (178 Million Euro).				
BE	e-Procurement Flanders (Kanoo.be)	€1-5 million	€49-299,000				A low fee - contributing to the maintenance	

Country	Platform name	COSTS for CAs		BENEFITS for CAs		Other statistics	ECONOMIC OPERATORS	
		Implementation costs	Annual costs	Savings	Estimate benefits		Fee (EO)	Benefits (EO)
CY	Cyprus e-Procurement System	€1-5 million	€300-499,000		60 to 70% savings associated with e-Notification; 80% for e-Access to e-Submission, 40 to 70% for e-Awarding; over 90% for the operation of the electronic marketplace. e-Auctions: further cost saving of 5% on prices (increased competitiveness). The use of catalogue and framework agreement: 10% savings in prices.			Estimate of 20% T-costs savings for EOs for the operation of the electronic marketplace
DE	www.tek-service.de (The administration of the Landratsamt Ostalbkreis)	€49-299,000	€1-49,000		€100,000 year			
DE	e-Catalogues and e-Ordering, developed by Procurement Agency of the Federal Ministry of the Interior				Each electronically executed order saves at least 6hrs (equating to €195 in personnel cost) compared to the simplest form of a single tender action.			

Country	Platform name	COSTS for CAs		BENEFITS for CAs		Other statistics	ECONOMIC OPERATORS	
		Implementation costs	Annual costs	Savings	Estimate benefits		Fee (EO)	Benefits (EO)
ES	Municipality of Burgos	€300-499,000	€49-299,000	Economic effect: €500-999,000. Price reduction of 5-10 % of prices reduction ; 25-40 % reduction in administrative burden				25-40 % reduction of administrative burdens (administration and providers)
FR	e-Bourgogne	€5-10 million	€5-10 million	€3-4 million savings by mutualising the development and exploitation of the platform. Economic effects: Larger than €10 million		Over 950 public entities are users. Average number of notices online: 500. Over 17 000 registered economic operators. 315 000 downloads between 2005 and 2009		
IE	National Platform	€500-999,000	€49-299,000	€1-5 million	"One authority even managed to halve its costs per tender from over £1,000 to below £500. This particular authority issues about 40 notices a year"	100,000 visitors a month on the website-more than double the number compared to the old website. The number of suppliers registered has also doubled from around 15,000 to over 30,000.This website publishes over 95% of Ireland's OJEU notices.		

Country	Platform name	COSTS for CAs		BENEFITS for CAs		Other statistics	ECONOMIC OPERATORS	
		Implementation costs	Annual costs	Savings	Estimate benefits		Fee (EO)	Benefits (EO)
IT	Albofornitori	€1-5 million	€1-5 million	Economic effects: larger than €10 million		7.000 suppliers; more than 40 awarding authorities; two regional centralized awarding authorities; one association of 500 local authorities; 3.000 tenders; more than 1 billion euro transaction over the European threshold; totally paperless procedure; only 90 days between the official notice and the contract (on average); best results for the most complex tender: 64 days for €290 million, 100 suppliers, 900 items.		
IT	IntercentER -Emilia Romagna	€1-5 million	€1-5 million	Efficiency benefits of € 67.5 million in 2008, and 45 man-years savings. (+102.7% from 2007).		Reference point for 539 administrations (90% of local agencies), transactions for € 419 million in 2008, with a 122% increase on 2007.		
LT		The allocated budget amounted to approximately €3.7 million			Expected to provide e-Notices integration with e-Access, e-Submission and e-Evaluation, e-Catalogues, e-Auctions, external time stamping and PKI infrastructure, improved security, better technical and internet infrastructure, better and more user friendly interface, free access and multilingual services (LT, EN)			

Country	Platform name	COSTS for CAs		BENEFITS for CAs		Other statistics	ECONOMIC OPERATORS	
		Implementation costs	Annual costs	Savings	Estimate benefits		Fee (EO)	Benefits (EO)
LV					The Government will save €1 million per year after 2009 by automating procurement procedures in the public sector			
NO	Ehandel.no			Experiences from Norwegian public sector entities indicate a potential for 20-40 % time reductions on handling of orders, goods receipt and invoices, and between 2-10 % price reductions in operations related procurement expenditures.		10,218 e-tenders in 2008. 60 Public entities on e-procurement. 453 Active suppliers on e-procurement. Aggregated e-Order value (last 12 months): \$ 536,250,000. Number of e-Orders (last 12 months): 255,000. Around 60 % of hospitals are operative (or about to be). 30 of 435 municipalities are operative. None of the many small municipalities are operative. During 2009, 80 public enterprises in Norway made use of the platform and the total procurement volume for 2009 has exceeded \$3 billion. With the new solution, the goal is that total volume will increase to \$16 billion by 2013		
PT	all platforms			€28 million/year in administrative costs (Deloitte)		From August 2009 to April 2010, 32 301 offers were submitted through the two leading electronic platforms, involving more than 12 400 suppliers and almost 2000 different contracting authorities. The average number of electronic proposals per procedure is 3.4. Time of open procedures reduced from 88 to 39 days (from Vortal's brochure)		

Country	Platform name	COSTS for CAs		BENEFITS for CAs		Other statistics	ECONOMIC OPERATORS	
		Implementation costs	Annual costs	Savings	Estimate benefits		Fee (EO)	Benefits (EO)
PT	Ministry of justice, using e-Procurement platform (Vortal)			e-Tendering process greatly simplified and fully dematerialised, giving a 53 % process costs reduction				
RO	SEAP portal	€1-5 million	€300-499,000	Savings of 22%. (official figures released in 2003) Economic effects: Larger than €10 million		Mid-January 2010: Registered Contracting Authorities/Suppliers: 11,577/22,261; Published Notices/Request For Quotation Invitations: 145,130/239,397 ; Notices Sent To OJEU: 34,816 ; Published Catalogue Products: 185,182 ; Published Requests For Quotation/Direct Acquisitions: 48,717/674,836 ; Awarded Acquisitions Total: 19,736,511,785.18 RON (approx. 4.7 billion EUR, presumably referring to the total amount since the platform's inception in 2002)		
SE	platform OPICTen	€500-999,000	€49-299,000	€1-5 million				
UK	Public contracts Scotland	€49-299,000	€49-299,000	Larger than €10,000,000		28,000 economic operators registered, (82% SMEs). Over 780,000 e-mail alerts have been sent to economic operators during the first 8 months of the service, alerting them to over 3,700 potential business opportunities. This has resulted in over 16,000 notes of interest on contracts since the service started, of which 81% are from SMEs.		

Country	Platform name	COSTS for CAs		BENEFITS for CAs		Other statistics	ECONOMIC OPERATORS	
		Implementation costs	Annual costs	Savings	Estimate benefits		Fee (EO)	Benefits (EO)
UK	Supplier and Contract Management System	€500-999,000	€49-299,000	€1,000,000-5,000,000		The SCMS used by over 2,600 buyers and procurement professionals throughout the region. Over 29,000 registered suppliers and over 4,600 active contracts with a value of over £2.5 billion, and about 2,000 tendering opportunities per year		
UK	Welsh platform	€500-999,000	€49-299,000			Public sector spending about £5 billion, over 50% advertised on the portal; 43,000 registered suppliers, (24,229 based within Wales = 20% of the active Welsh supplier community, many of them are SMEs); 2,500 procurement users from 200 Welsh CAs, 6,500 notices (total £8.3 billion) of which in 2009, £183 million consisted of 'non OJEU' opportunities favourable to SMEs.		

Source: DG MARKT based on ePractice website and Siemens-time.lex report

ANNEX IX– Phases or tools made mandatory in certain Member States

Country	Mandatory phase	Mandatory tool	e-Procurement mandatory for certain type of purchase/contracting authorities
EU	Usage of the standardised forms is mandatory above the EU thresholds; publication in the OJ is mandatory above the EU threshold.	CPV is already the mandatory tool within e-Notifications in Europe	
Austria	E-Submission for certain types of procurements (Framework agreement, federal authorities)	Mandatory e-Signature; mandatory framework contracts for federal authorities	Usage of the central framework contracts offered via the portal of the Federal Procurement Company is mandatory for federal agencies for specific goods and services (See Ordinance of the Minister of Finance BGBl II 2001/2008)
Belgium	E-Notification will be mandatory on the national platform in 2011.	Mandatory e-Signature	
Bulgaria		Mandatory e-Signature	
Croatia	Mandatory National platform approach. It is mandatory to publish tenders on a single National Portal. Obligations can be bound to certain criteria: European tenders, or tenders above a national threshold, or tenders within a specific sector	Mandatory e-Signature	The obligation to publish tenders on the National Portal can be bound to certain criteria: European tenders, or tenders above a national threshold, or tenders within a specific sector such as ICT
Cyprus	It seems that since November 2009, usage of the CyPS portal to submit electronic notifications has become mandatory in Cyprus		
Czech Republic	Mandatory National platform approach: it is mandatory to publish tenders on a single National Portal. Obligation can be bound to certain criteria: European tenders, or tenders above a national threshold, or tenders within a specific sector	Mandatory e-Signature	
Denmark	As of 1 February 2005, all public institutions in Denmark may only accept invoices from suppliers in electronic format . Thus, all public-sector entities have been required to convert all systems and administrative processes from physical to digital handling of invoices, credit notes and other transactions		
Estonia	National e-Procurement platform is mandatory, for the publication of contract notices and contract award notices		
Finland			

Country	Mandatory phase	Mandatory tool	e-Procurement mandatory for certain type of purchase/contracting authorities
France	E-Submission: Article 56 of the Public Procurement Code made the use of electronic procedures mandatory for informatics purchases above EUR 90,000.	Mandatory e-Signature	The use of the National Platform is mandatory for National contracting authorities. Article 56 of the Public Procurement Code made the use of electronic procedures mandatory for informatics purchases above EUR 90,000.
Germany		Mandatory e-Signature	The National e-Procurement Platform is mandatory for Federal Government Contracting authorities.
Greece		Mandatory e-Signature	
Hungary		Mandatory e-Signature	
Ireland			
Italy	The Financial Bill for the year 2007 introduced a compulsory use, on behalf of state central administrations, of the framework contracts and the e-marketplace (MEPA) handled by MEF and Consip.	Mandatory e-Signature	The use of the National Platform is mandatory for National contracting authorities.
Latvia		Mandatory e-Signature	
Lichtenstein		Mandatory e-Signature	
Lithuania		Mandatory e-Signature	
Luxembourg	Mandatory National platform approach: Publication of contract notices on the national portal is mandatory for contract notices above and below thresholds	Mandatory e-Signature	
Malta	The Department of Contracts acts also as central purchasing body, since it publishes calls for tenders estimated over €47,000 excluding VAT on behalf of most Government Ministries, Departments and Entities. The use of the services provided by the Department of Contracts is mandatory and only particular government entities can carry out their own procurement outside the Department of Contracts (Central Bank of Malta, the Malta Stock Exchange, the Malta Tourism Authority and Local Councils).		
Netherlands	Usage of the portal is not mandatory, except for e-Notification, where usage will be mandatory under planned new legislation.		The National e-Procurement Platform is mandatory for Central Government Contracting authorities
Norway	Mandatory national platform for tender notifications above EU thresholds (Doffin).		

Country	Mandatory phase	Mandatory tool	e-Procurement mandatory for certain type of purchase/contracting authorities
Poland		Mandatory e-Signature	The National e-Procurement Platform is mandatory for Central Government Contracting authorities
Portugal	e-Proc mandatory for all contracting authorities	Mandatory e-Signature	
Romania	Romania is running the “Mandatory National e-Procurement Portal” model: it is mandatory to publish tenders on a single National Portal.		
Slovakia		Mandatory e-Signature	
Slovenia	The use of the National Platform is mandatory for all contracting authorities. The National Platform only includes e-Notification and e-Access at the moment	Mandatory e-Signature	
Spain		Mandatory e-Signature	The National e-Procurement Platform is mandatory for Central Government Contracting authorities
Sweden	E-Invoicing. The Swedish National Financial Management Authority was also responsible for the introduction of electronic invoicing for public authorities under the government (mandatory as of 1st of July 2008)		
United Kingdom			The National e-Procurement Platform is mandatory for Central Government Contracting authorities

Source: DG MARKT based on Siemens-time.lex report