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**Communication from the Commission to the Council, the European Parliament, the
European Economic and Social Committee and the Committee of the Regions**

**”Action plan for the implementation of the legal framework for electronic public
procurement”**

EXTENDED IMPACT ASSESSMENT

{COM(2004)841 final}

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1. INTRODUCTION

The eEurope Action Plan¹ called on the Council and the European Parliament to adopt as quickly as possible the legislative package on procurement Directives and on Member States to carry out a significant part of public procurement electronically by end of 2005.

The first target was met in April 2004² by the entry into force of the new procurement Directives. Member States are due to transpose them into national law at the latest by 31st January 2006. Some Member States are well placed to reach the second target. However, the full potential of electronic public procurement remains largely untapped. This is not surprising given the complexity of the issues involved: the correct implementation of the legal framework, development of operational electronic procurement systems that are in line with the new legislation, modernisation of the operational environment, re-engineering of practices and streamlining of processes involved. Successful implementation of electronic public procurement will require considerable effort in the Member States in order to put all the pieces of the puzzle together and modernise the way procurement is conducted nationally and at regional level.

The legislative package introduced for the first time detailed provisions on the use of electronic means in the public procurement process. It sets the necessary legal guarantees for carrying procedures electronically in an open, transparent and non-discriminatory way across Europe and introduces the use of modern innovative purchasing techniques based on electronic means of communication.

This report presents the outcome of the research and consultations carried out by the Commission services in order to assess whether additional Community action is necessary to support the implementation of the legal framework for electronic public procurement.

The report is based on an in depth review of electronic public procurement across Europe. Consultations and specific studies were carried out by the Commission in order to assess the state of development of electronic public procurement, to review technical solutions and developments in the different Member States and to identify potential problems which may either raise barriers to the Internal Market or hinder the uptake of electronic public procurement in the near future if no action is taken. These studies are annexed to the Extended Impact Assessment report and will be available to all interested parties.

[The conclusion of the impact assessment is that Community action would strengthen national efforts to implement electronic public procurement and should produce substantial benefits for both buyers and suppliers in the EU]. *[Brackets to be removed after adoption of the proposal by the College]*

¹ COM (2002) 263 final, “eEurope 2005: An information society for all” and COM (2004) 380 final, “eEurope 2005 Action Plan: an Update”

² Legislative package of procurement Directives adopted on 31 March 2004 and entered into force on 30 April 2004; [Directive 2004/17/EC](#) of the European Parliament and of the Council coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors; [Directive 2004/18/EC](#) of the European Parliament and of the Council on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts

2. PURPOSE AND STRUCTURE OF THE IMPACT ASSESSMENT

The starting point for the impact assessment is the adoption of the legal framework set out the rules for using electronic means in public procurement and the deadline of 31st January 2006, for implementing Community rules at national level in the EU 25 Member States. The main policy question to be addressed by the impact assessment is whether the adoption and forthcoming transposition of the EU rules at national level provides an adequate framework for moving public procurement online rapidly and smoothly or whether additional measures are required in order to avoid barriers to the Internal Market and to achieve efficiency in public procurement.

This impact assessment does not consider the merits and advantages of electronic public procurement and of the specific new EU legal framework but rather the difficulties and risks of achieving the objectives of the Internal Market and the general policy objectives set out in the eEurope action plan.

The analysis of the current trends and risks are considered in section 3. Section 4 analyses the different options considered and section 5 the potential impacts of a Community Action Plan.

3. WHAT ISSUES IS THE ACTION PLAN EXPECTED TO TACKLE?

The research and studies accompanying this report provide a wealth of information on the state of development of electronic public procurement in the 25 Member States.³ It shows that the up-take of electronic public procurement has been slow in Europe as the absence of political commitment, a clear legal framework and technical and organisational problems have delayed progress in this direction.

Detailed information on the issues at stake can be found in Annex II.

3.1. The current use of electronic means in the procurement process

Analysis of the background information⁴ points to a rather fragmented landscape and uneven development of operational electronic public procurement systems in Europe. In most Member States electronic public procurement is still at an initial state of development. In addition, the level of sophistication and available functionalities vary enormously. Some Member States operate parts of their procurement electronically, in particular, at central government level. In countries such as the United Kingdom, Denmark, Finland, Italy and France fully operational systems exist for advertising and tendering procurement contracts electronically. In others the effort has concentrated on developing portals which provide information for public authorities and economic operators along with some basic directory and search services. Pilot projects are also underway in different countries mostly for contracts below the EU thresholds as public authorities are trying to acquire experience and experiment with the novel tools offered by ICT.

³ The detailed analysis and comparison of the e-procurement situation in 25 EU Member States is presented in Part 1: Baseline analysis of the “Impact Assessment of an Action Plan on electronic public procurement”, *Ramboll Management, December 2004. This chapter presents only the main conclusions.*

⁴ Majority of the analysis in this chapter is based on the report done by *Ramboll Management in the “Impact Assessment of an Action Plan on electronic public procurement”, December 2004;*

National strategies and organisational structures

Introduction of electronic means in public sector procurement is pursued most often at national level in the framework of long term plans to modernise government and administrative practices. Interviews with Member States' experts show that governments' main incentive for introducing electronic public procurement is to achieve public savings. This effort is mainly driven by the central level of government, while other stakeholders in the public and private sector are often only marginally involved in this process. Most noticeably, the European dimension of this process does not seem to occupy a high rank on the administrations' policy agenda, despite the importance of ensuring an open and competitive EU public sector procurement market.

The degree of detail in national strategies on electronic public procurement varies considerably. Some have developed rather elaborate strategies while others have formulated brief, overall strategic statements concerning electronic public procurement without allocating specific resources for funding the transition from paper to electronic procurement.

Implementation of the new procurement rules should enable contracting authorities to use electronic means exclusively in the procurement process. In practice, however, it can be expected that paper based procedures and electronic means will co-exist for some time. This entails higher costs and can give rise to inefficiencies and errors. The sooner public authorities will be able to switch to the exclusive use of electronic means the higher the benefits would be for both buyers and suppliers.

At institutional and organisational level two trends can be observed: on the one hand public procurement is primarily organised in a decentralised way as individual authorities are having responsibility for their own purchases and financial management. On the other hand, new structures are being put in place in order to introduce electronic public procurement and use electronic means effectively which tend to centralise responsibility for the management of procedures and purchases. In many cases, central purchasing bodies have taken the lead in trying to introduce electronic means in the public procurement process.

Differences can also be observed in the way electronic public procurement services to contracting authorities and suppliers are financed. Some Member States have committed significant funds for the realisation and operation of their e-procurement initiatives, offering the services to all parties free of any charge, achieving a return-on-investment from cost-savings achieved in the public sector. On the other hand, some administrations charge fees to both contracting authorities and suppliers for using their e-procurement services. The latter may exclude suppliers or administrations which may not be ready to pay such fees for carrying their tenders electronically or managing their contracts with the public sector.

Legal and technical framework

National laws transposing the EU rules on the use of electronic means in public procurement are in the pipeline. Member States are planning to transpose the legal framework during 2005-2006. In some Member States some of the tools foreseen by the Directives have already been regulated (e.g. e-auctions, electronic receipt of offers). However, no Member State has yet transposed the complete set of rules on electronic public procurement. In any case, as the purchasing cycle covers a wider range of activities, in establishing the rules for electronic public procurement Member States will have to take into account other pieces of Community legislation which regulate issues such as data protection, electronic invoicing, e-commerce,

electronic signatures etc. The transposition of the EU provisions on electronic means should help eliminate a great deal of the legal risks encountered at present. It should provide the basis for a systematic spread of electronic means in public sector procurement; in particular, for building capacity among public sector entities and re-engineering traditional public procurement processes.

The Directives do not limit the definition of electronic public procurement to a given technology or a particular process; they rather opt for an open and technologically neutral definition which simply puts electronic means on a par with traditional paper based procurement. Their aim is to facilitate the efficient introduction of different solutions on the condition that they respect the safeguards and meet the procedural requirements set out by the Directives. The transposition of the new directives does not require the creation of a uniformly standardised environment. Different approaches may co-exist, as conditions and needs vary in the different countries and among different types of buyers.

The translation of the legal provisions into operational terms and technical specifications can create difficulties of interpretation which may result in diverging requirements, the application of incompatible standards and the use of different terminologies. A review of some of the most important operational systems carried out under the IDA programme confirms that none of the systems reviewed supported fully the functionalities prescribed by the new Directives⁵. Due to varying public procurement needs as well as laws and priorities in the different Member States, authorities appear to have privileged the digitisation of different procedures and processes. In addition, there exist significant divergences in the development of systems that model the tender reception process as prescribed by the Directives, the associated internal business processes of public administrations, as well as, the use of CPV codes and security aspects.

Most existing systems were conceived, designed, and implemented prior to the adoption of the new public procurement directives. They are therefore based on national rules which are not necessarily aligned to the new legal framework. In practice, however, most applications are based on existing commercial marketplace products offered by vendors with minimal customisation. Although this approach can initially facilitate the timely launching of systems with relatively small investments, it results in electronic public procurement systems that are software-driven rather than legislation-driven and present limited interoperability across Europe. This trend may create barriers to the functioning of the Internal Market to the extent that future technical solutions may not reflect the EU requirements imposed by the procurement legislation.

Potential difficulties may arise from implementing security for electronic transactions and communications. In moving procurement online, developers need to consider various issues: for example, the secure transmission and safe storage of data, integrity and confidentiality of offers and authentication of users. Authorities and developers have often followed different approaches depending on their perception of security risks and obligations resulting from national legislation. At present, in some case existing systems require “basic” user authentication through credentials (e.g. user names and passwords), while other systems support “strong” authentication by imposing the use of advanced electronic signatures. Strong security measures may make the system difficult to access and use, leading to the exclusion of

⁵ State of the Art report, Volumes 1 and 2, European Dynamics, December 2004; study financed under the IDA programme

potential suppliers. This is particularly the case with the use of advanced qualified electronic signatures (qualified signatures)- imposed in some systems in order to accept tenders submitted electronically by economic operators - due to technical and organisational problems which at present limit the mutual recognition of such signatures across borders (see further section 2.2).

Use of electronic means in different phases of the procurement process

In the absence of systematic statistical data on the performance of public procurement markets it is very difficult to draw quantitative figures on the current level of use of electronic means in public procurement.

E-procurement in the *private sector* seems much more widespread than among public authorities. Generally, it is concentrated in two phases: sourcing (finding suppliers and products via internet) and payments. In 2003, 19% of European companies made online sales (employee weighed figures). This can be seen as an indicator of the ‘e-maturity’ of the supplier base. There is virtually no difference in figures for online selling between small, medium and large enterprises: 16% (0-49 employees), 22% (50-249 employees) and 18% (250+ employees). The share of European companies that procure online (‘procurement of at least some of their direct or indirect production inputs) is considerably higher than the share of online sales: 50% in 2003 (employment weighed figures). This figure is lower for small enterprises (36%) compared to large businesses (61%). It should be noted that these figures include all companies that confirm that they procure/sell at least some of their goods online. It does therefore not necessarily mean that they have substantial online procurement or sales⁶.

Figure 1: Phases covered by electronic procurement systems in EU Member States

Procurement phase	Electronic system	%
Notification/Advertising of tenders	33	92%
Publication of tender documents	17	47%
Management of receipt/submission of tenders	9	25%
Evaluation of tenders	3	8%
Ordering	8	22%
Invoicing	1	3%
Total	36	100%

Source: *Impact Assessment of an Action Plan on electronic public procurement*, Ramboll Management, December 2004

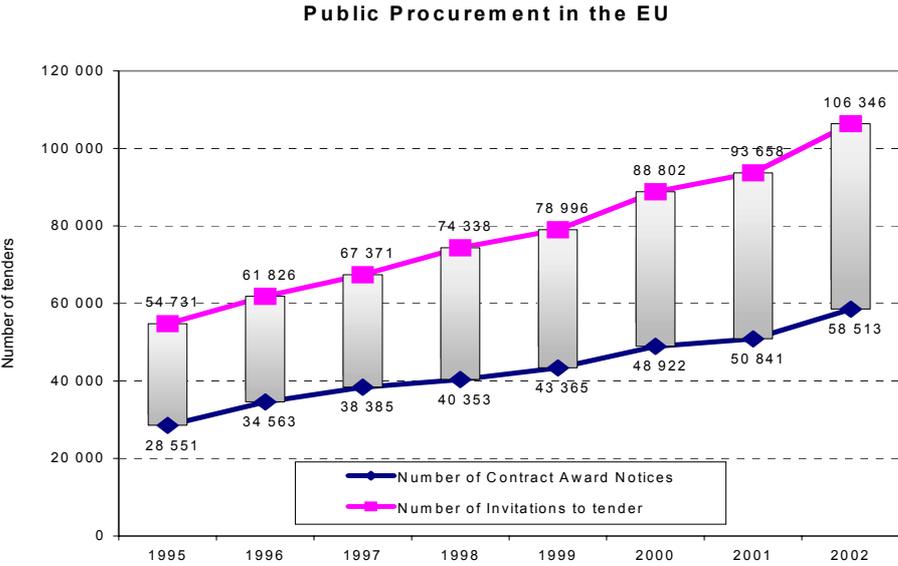
⁶ “Impact Assessment of an Action Plan on electronic public procurement”, *Ramboll Management, December 2004*; from E-Business Watch: The European e-Business Report – A portrait of e-business in 15 sectors of the EU economy, 2003 edition

An analysis of 36 public sector e-procurement systems shows that the two first phases in the procurement process, i.e. the electronic notification and publication of tenders have most often moved online at national level (figure 1). Despite this progress, the notification and advertising of contract opportunities at national level is very little integrated with the advertising at European level thus resulting in the duplication of efforts at national and European level despite higher costs and lower efficiency.

Judging by the number of procurement portals and the electronic publication of tenders, the trend in using electronic means in public procurement is pointing rather upwards. Indeed, public procurement portals with some minimum functionality such as notification about tenders and publication of tender documents are established in 16 of the 25 Member States. As shown in Figure 2, the number of notices published electronically on TED has also been growing steadily. In 2002, 106,346 invitations to tenders and 58,513 contract award notices were published. This represents an increase in the share of EU covered procurement from 8.4% in 1995 to 16.2% in 2002 in the EU 15 Member States.

Most operational electronic public procurement systems focus on the procurement of standard goods rather than more complex purchases such as services and works. The volume of tendering and ordering procedures carried out electronically today is probably rather small. According to IT vendor estimates, approximately 100 public institutions at national, regional or local level have currently implemented e-tendering or e-ordering procurement systems. The use of these systems remains though unclear. IT vendors estimate that these probably represent less than 1% of orders and less than 5% of public procurement value. The potential group of users of electronic public procurement is, however, certainly much larger. The main target group for e-procurement systems (tendering and ordering) in Europe can be estimated at approximately 1.000 public institutions (ministries, regional authorities etc.) to which should be added some larger government agencies, health sector institutions (hospitals), education bodies (Universities) and the utility sector.

Figure 2: Transparency in public procurement and use of electronic means



Source: “A report on the functioning of public procurement markets in the EU: benefits from the application of EU directives and challenges for the future”, Commission staff working document, 3 February 2004

A small number of public authorities has been testing and experimenting with some more sophisticated tools such as electronic catalogues, electronic market places (including dynamic purchasing systems) and electronic auctions, which are some of the most innovative elements of the public procurement legislative package. In some countries, authorities have already decided to promote actively the use of electronic auctions. To this end, they have issued appropriate guidelines and put in place operational solutions enabling purchasing authorities to use such tools.

Savings and performance

To date only scattered and anecdotal evidence exists on realised savings from electronic means in the procurement process. Figure 3 compiles some figures given by public authorities on savings achieved on administrative costs and purchasing prices due to the use of electronic means in public purchases.

Figure 3: Savings from electronic public procurement on purchasing prices and administrative costs

Public Body	Purchasing price	Administrative costs
General Delegation for Armament, Ministry of Defence, France ⁷		31% decrease in administrative costs
OGCbuying Solutions, UK (e-purchasing)		28-90£ savings per procurement transaction
CONSIP, Italy ⁸ (e-purchasing)	36% estimated average savings when buying online	-
DOPI, Denmark ⁹ (e-auctions)	18% realised savings	-
National e-Procurement Program, Portugal (e-auction)	25% savings in the purchase of paper supplies for a month	-
Essex Marketplace ¹⁰ (e-auction)	53 % realised savings on goods 26% saving on IT consumables ¹¹ 25% saving on stationery ¹²	-
NHS Purchasing and Supply Agency (e-auction)	31% savings from IT hardware	-
Wales Health Supplies ¹³ (e-auction)	10% lower price - projected savings of £600,000 over three years	-

Source: *Impact Assessment on Action Plan on electronic public procurement, Ramboll Management 2004*

⁷ Interview with representatives from the French Ministry of Defense, Rambol Management; savings from enhanced use of ICT, new management tools, and the creation of a purchasing function

⁸ IDA Public eProcurement, State of the Art Report (May 2004)

⁹ See www.doip.dk

¹⁰ Source: <http://www.ogc.gov.uk/index.asp?docid=1001028>

¹¹ Basildon District Council, source : <http://www.paessex.gov.uk/content1.php?sectionID=101>

¹² Basildon District Council, source : <http://www.paessex.gov.uk/content1.php?sectionID=101>

¹³ Source: <http://www.ogc.gov.uk/index.asp?docid=1001028>

It shows that the use of electronic public procurement in appropriate circumstances and depending on the type of purchases may result in considerable savings. These can range between 10% - 50% on the initial purchasing price. Transaction cost reductions are equally important. Buyers, for example, can save up to 50-80% of such costs. The cost of processing a notice for publication on the Supplement of the EU Official Journal could be from €111 today, down to €57.5, if only electronic forms were used by contracting authorities. Major buying agencies in France and the United Kingdom also report significant administrative savings.

It has not been possible to identify empirical data on suppliers' savings as these are difficult to measure. Typically they relate to: easier access to public sector markets within and beyond national borders; reduction of market surveillance costs; time savings; lower tendering costs due to the reuse of electronically supplied information; more transparent evaluation of tenders; elimination of costs related to printing and shipment of tenders; reduced market entry costs.

3.2. The main issues - is the Community intervention justified?

The transformation of paper based procurement to electronic is a complex operation which requires actions and decisions at many levels beyond the simple transposition of the new rules at national level. Organisational, technical and institutional issues should be addressed in order to re-engineer existing processes for tendering and purchasing so as to be able to exploit the available ICT solutions and tools.

Adoption of the EU legal framework for the use of electronic means in the public procurement process was a first significant step in order to remove legal uncertainties and establish the required safeguards for open, transparent and non-discriminatory public procurement using electronic means.

The move from paper based to electronic procurement is not without risks. Incorrect application of the new EU rules and discriminatory technical solutions and practices can deter businesses from embracing electronic public procurement and effectively fragment the Internal Market. Correct and timely implementation of the new EU provisions on electronic public procurement will determine Europe's capacity to keep the market open for public procurement conducted electronically and reaching a critical mass of users (buyers and suppliers). 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.

However, there is a number of risks and problems related to the use of electronic means in procurement. They can be identified in the following areas:

- legal environment;
- technical environment;
- administrative and organisational processes;
- businesses' access;
- knowledge, skills and awareness;

Legal environment

The first policy concern relates to the development and implementation of the *regulatory framework for electronic public procurement* across Europe. Member States are required to implement the new procurement Directives including the provisions on electronic public procurement by 31 January 2006 at the latest. Transposition of the new rules is underway in some EU countries. Past records suggest however, that delays in transposition beyond the 31 January 2006 deadline are likely to occur. In the absence of a particular effort at national and Community level to accelerate national transposition and ensure that the new rules are transposed in time, the current state of fragmentation not only threatens to persist, but could be aggravated due to legal uncertainties for both buyers and potential suppliers.

The quality of the legal environment is equally important. The design and organisation of procurement systems as well as the standards that should be used are going to be influenced by the national legal framework. Erroneous or divergent interpretation of the new rules means that operational electronic public procurement solutions may not always comply with the EU rules thus giving rise to legal and technical barriers. These may not only affect cross-border trade and distort competition but can also slow down the use of electronic public procurement at national level. The analysis shows that there is already some divergence in the systems, tools and solutions currently applied in the Member States. Such divergences can become effective “e-barriers” if no particular effort is made to ensure compliance and convergence of electronic public procurement tools and systems with the EC Directives. A ‘letting a thousand flowers bloom’ situation - whereby electronic public procurement systems with diverging requirements, even minimal, proliferate across Europe - may appear conceptually attractive but in reality it would mean that costs for businesses to access the different systems would become unmanageable.

International obligations

The same risks exist at international level. The use of electronic means in public procurement is being developed worldwide while the existing plurilateral General Procurement Agreement (GPA) and bilateral agreements do not regulate their use. In the absence of international rules, legal and technical choices in electronic public procurement systems may reduce procurement opportunities for EU businesses in third countries, as well as restrict access of third country suppliers to the EU market. In light of these developments, it is necessary to make sure that barriers to international trade are effectively avoided.

Security and electronic signatures

One of the most significant barriers to cross-border tendering arises in relation to *security issues* and in particular, to the use of electronic signatures. In line with current practice for tenders submitted in paper, the new public procurement Directives do not define which type of e-signatures should be used in electronic tendering. The choice is left to the Member States, provided they apply correctly national laws implementing the e-signatures Directive 1999/93/EC. As the legal concept is not the same in all Member States, the way e-signatures are implemented in electronic public procurement is critical. Potential difficulties relate in particular to the use of advanced electronic signatures based on a qualified certificate, which are created by a secure-signature-creation device (hereafter ‘qualified signatures’). Several Member States require or intend to require the use of such qualified signatures for the submission of offers and/or requests to participate. They consider that only such means

guarantee unique and unmistakable authentication of signatories and ensure that any change of the data to which the signature relates can be detected.

The existence of significant differences between qualified signatures, as required by some Member States, should be reason for great concern. In the absence of a mature European market for this type of signatures and in the light of interoperability problems encountered at present, despite the existence of standards, they pose real obstacles to cross-border electronic tendering¹⁴. There is a risk that these problems may persist, even if at a later stage they will become essentially of an organisational nature.

The use of qualified signatures in public procurement is expected to be the first generalised application whereby businesses may be required to use qualified signatures in transactions with public authorities in a Member State other than their home country. The Directives oblige any public purchaser in the EU to effectively recognize, receive and process tenders submitted, if required, with a qualified signature and their accompanying certificates, regardless of their origin within the EU or their technical characteristics, and even when they contain documents of different origins (i.e., from a consortium of suppliers) and possibly bear signatures of different levels from different sources (i.e., from different national authorities)¹⁵. This means two types of problems will have to be addressed: ensuring the mutual recognition and acceptance of qualified signatures, their accompanying certificates and messages, and ensuring unhindered technical reception of those signatures and certificates. It seems likely that the market will not provide for a mutual recognition system of qualified signatures (i.e. advanced signatures accompanied by a qualified certificate and created on the basis of a security creation device) in the near future. This can impact negatively on the Internal Market and investments in electronic public procurement.

Technical environment

The development and penetration of ICT is continuing to grow rapidly both in the private and in the public sector. Introduction of electronic means in public procurement is not threatened to be compromised by infrastructure problems. Although the *EU rules do not prescribe specific technical solutions* for implementing electronic procurement in the public sector, they set out specific functional requirements in order to ensure transparency, equality of treatment and fair competition when using electronic means in the procurement process. The functional requirements are either expressed in terms of specific conditions for means of communication, tools and devices used in the procurement process, or procedural rules to guarantee the respect of the principles of equal treatment, non-discrimination and transparency.

It is likely that differences in the architecture of systems, diverging technical specifications and standards, and the choice of particular tools can hinder businesses' access to electronic public procurement systems, thus limiting competition and leading to discriminations against certain businesses.

¹⁴ For an in-depth analysis on the implementation of Directive 1999/93/EC see “The legal and market aspects of electronic signatures”, Study for the European Commission, Interdisciplinary Centre for Law and Information Technology, Catholic University of Leuven, October 2003.

¹⁵ This situation becomes all the more complex as the provisions of art. 5 of Directive 1999/93/EC need to be taken into account. It requires Member States to not deny legal effectiveness to electronic signatures that they have received.

Internet based tools provide an environment which most businesses are familiar with. For the basic electronic tendering functions foreseen by the Directives, careful design and application of Internet based tools can avoid most problems, that is, for advertising tender opportunities, accessing tender documents, communicating documents and information, and submitting offers electronically. Security requirements are a particular case. If they are not set too high and conditions of operation of e-procurement systems allow for various formats and capacities, businesses are not expected to face any particular difficulties in communicating effectively with contracting authorities and in tendering electronically.

Currently, there is no sign of a uniform standardised environment emerging for conducting more complex electronic public procurement operations. With the current fragmentation in key areas such as schemes for exchange of messages, electronic catalogues, classifications and qualified signatures, and in light of the pace of standardization work, development towards a common set of agreed standards will be very slow. As standardisation in the ICT sector is driven by the market and evolves very rapidly it would not be feasible to agree on one common standard at EU level for carrying procurement electronically. This is why in the procurement Directive the accent is placed on *interoperability* in order to make sure that different solutions are made compatible.

The major e-procurement IT vendors are working on further integrating e-procurement solutions by facilitating the shift between e-sourcing, e-tendering, e-ordering and e-payments. In the mid-term, the move towards more integrated e-procurement solutions is likely to create interoperability problems and cross-border barriers as far as not all businesses are equipped to cope with this type of processes. For this type of more advanced e-procurement, there is a risk that small enterprises (in particular with less than 20 employees) will not be able to participate on an equal footing. This is due to a shortage of relevant skills and knowledge among SMEs but also to the difficulty of achieving a return on investment. These differences between the smaller companies on one side and larger companies on the other side might be reinforced as e-public procurement systems become more advanced with the continuous upgrading of e-procurement software.

The major IT-vendors intend to develop software for most of the procurement procedures provided by the procurement Directives as part of their IT offer, i.e. electronic auctions, electronic framework agreements and dynamic purchasing systems. Today, these players account for more than 50% of the market. It can be expected that this can provide some homogeneity in the development of electronic public procurement. Historically, e-procurement has been developed in the business-to-business electronic commerce environment. In order to provide efficient and attractive systems, the needs of both buyers and suppliers should be carefully evaluated and coherence between B2B and G2B applications should be maintained. The Directives operate with certain trade-offs in terms of efficiency of electronic procurement solutions and legal safeguards to ensure equality of treatment and non-discriminatory access. The application of these principles should not be compromised by ill-adapted technical solutions. Therefore, some mechanisms will be necessary to monitor compliance of the electronic systems with the legal requirements.

Administrative and organisational processes

It is no secret that public sector procurement involves a lot of paperwork and red tape. Success depends on the degree of transformation of off-line practices to fully fledged online services. This requires an intensive effort in re-thinking the service provided and re-engineering the different processes. In this respect, the development of horizontal e-

government services should open the way to higher efficiencies in the procurement process. Laws and regulations require from potential tenderers to submit a sizeable amount of certificates and documents to prove their qualifications and capacity to provide the works, services public authorities intend to purchase. Most of such documents are only available in paper form today. Although the new rules allow tenderers to submit them in paper form when they are not available electronically it is clear that it will not be possible to develop a fully integrated electronic public procurement system until such e-government services are available across Europe. Agreement on a minimum set of certificates and their development across all Member States would be necessary in order to gradually streamline processes and eliminate red tape in the procurement process. It is absolutely necessary that such services develop across all Member States because otherwise public authorities will be obliged to maintain a dual system of paper and electronic records even if only one Member State is lagging behind in the development of such e-government services.

Problems can be also expected *with e-invoicing and e-ordering* systems, as they continue to be used differently in each Member State. These are factors which will have a more negative influence on electronic public procurement across borders in Europe strongly than on national markets, where some positive developments may occur.

The re-engineering of administrative systems and practices is essential, as asymmetries in the incentive structure for developing electronic public procurement and resistance to change can delay the use of electronic public procurement systems at national and regional level. Inefficiencies in electronic public procurement systems and failures to reduce transaction costs will naturally limit the scope and interest for moving procurement online. This is a serious risk for both buyers and suppliers. Figure 4 shows that the strongest incentives for electronic public procurement exist at the aggregate level (national and European level). Therefore in order to release, the full benefits from moving traditional procurement procedures online, a certain critical mass of users should be reached.

Figure 4: Basic incentive structure in public and private sector – aggregate level, institutional level, and individual level

Level of aggregation	Benefit of electronic procurement	Cost of electronic procurement
Entire public sector at European level	Very significant	Marginal
Entire public sector at national level	Significant	Marginal
Large purchasers	Moderate	Minor
Medium purchasers	Minor	Moderate
Small purchaser	Marginal	Significant
Large enterprise (250+ employees)	Significant	Marginal
Medium sized enterprise (50-249 empl.)	Moderate	Minor
Small enterprise (20-49 employees)	Minor	Moderate
Micro enterprise (<20 employees)	Marginal	Significant

Source: Adapted from "Impact Assessment of an Action Plan on electronic public procurement", Ramboll Management, December 2004

Businesses' access

The underlying vision of the new Directives is that any business with a PC and an internet connection should be able to participate effectively to a call for tender organised electronically. To this end, the Directives require that the means and tools of communication should be generally available, non-discriminatory and interoperable with means and tools of general use. Successful implementation of electronic public procurement will depend on how such conditions are fulfilled in practice. So far the development of electronic public procurement has been software-driven. The challenge and risk for Member States and the administrations is to ensure that the IT-tools satisfy the conditions set out by the regulatory framework.

Hence, it is particularly important to guarantee the full participation of SMEs in the new markets. Most public procurement contracts are currently awarded to SMEs. As one would have expected, SMEs' access to contracts with local authorities is relatively easier. However, their chances of success in cross-border procurement are much lower. SMEs acting as subsidiaries of foreign firms still have a high rate of success, but the difference with respect to large enterprises is not very significant in statistical terms. Sectoral differences also have an important influence. SMEs are particularly well represented in the construction sector and less so in the business services sector.

The use of electronic public procurement can threaten the current balance if electronic public procurement is introduced in such a way that:

- costs for participation in electronic tendering and procurement are proportionately higher for SMEs compared to large businesses, as government agencies employ systems and tools which require adaptations and specific investments in IT not commonly used in day-to-day business from economic operators;
- the use of electronic public procurement is accompanied by excessive centralisation and standardisation of public sector purchases in a drive to consolidate the supplier base and standardise purchases, and thereby increase volumes and reduce unit costs; this has often been the approach of large multinationals in using e-procurement solutions.
- charges are levied on operators wishing to access tender information and to bid electronically despite the efficiency gains and savings realised in the public sector from moving public procurement online.
- Such risks are not new. They exist also in paper based public procurement. Nevertheless the introduction of electronic means risks aggravating them. The *institutional set up and organisational structure* is therefore crucial in order to ensure the successful implementation of electronic public procurement. Some good practices already exist in the Member States as identified in the IDA state of the Art report. It could be expected that the different parties agree to share such type of information and that they share their experiences. This, however, cannot happen automatically. Some effort at national and Community level will be required to collect information on and spread awareness of such issues.

Knowledge, skills and awareness

It is expected that *knowledge* of electronic public procurement will increase in public institutions and in companies following adoption of e-business/e-procurement in the private sector¹⁶ and the introduction of electronic means in public sector procurement. It can also be expected that there will be an ongoing upgrading of computer skills in both the public and the private sector. Concerning the need to upgrade skills and knowledge in the public sector it seems likely that specific training will need to be envisaged by Member States in particular, where implementation of electronic public procurement results in organisational restructuring and staff redundancies, or reallocation of staff to more qualified tasks. The demand for training from both public and private stakeholders will most likely increase in the near future. The tendency seen today in the countries with relatively developed e-public procurement initiatives is that national authorities and organizations will provide different training and awareness programmes. It seems therefore realistic to expect that more initiatives of this kind will commence at national level across the Member States.

The translation of the legal provisions into operational terms and technical specifications can create difficulties of interpretation which may result in diverging requirements, the application of incompatible standards and the use of different terminologies. A review of some of the most important operational systems carried out under the IDA programme confirms that none of the systems reviewed supported fully the functionalities prescribed by the new Directives¹⁷. Due to varying public procurement needs as well as laws and priorities in the different Member States, authorities appear to have preferred the digitisation of different procedures and processes. In addition, there exist significant divergences in the development of systems that model the tender reception process, prescribed by the Directives, and the associated internal business processes of public administrations, and the use of CPV codes and security aspects.

3.3. Conclusions

The current state of play and analysis of developments and problems (parts 2.1 and 2.2 above) leads to the conclusion that a “*business-as-usual*” scenario, whereby no action at all is taken by the Commission further to the adoption of the legal package to support the implementation of electronic public procurement across Europe, involves considerable risks of market fragmentation and exclusion as well as of inefficiencies. Despite agreement on a common legal framework for moving public procurement online, at least during an initial transitional period barriers to the Internal Market may remain and new could emerge, thus limiting the potential of operational electronic public procurement across Europe.

¹⁶ Ministry of Industry of France, “E-commerce Scoreboard Update”, April 2004, p. 54

¹⁷ State of the Art report, Volumes 1 and 2, European Dynamics, December 2004; study financed under the IDA programme

4. POLICY OBJECTIVES AND ACTIONS FOR IMPLEMENTING ELECTRONIC PUBLIC PROCUREMENT ACROSS EUROPE

4.1. Policy objectives

The analysis presented in section two showed that the take-up of electronic public procurement in Europe has been slow so far. This is a significant weakness in the Community's quest for increased competitiveness. In addition, agreement on a common legal framework for moving procurement online would not be enough to avoid, at least during an initial transitional period, barriers to the Internal Market and to realise the full potential of operational electronic public procurement across Europe. In view of this situation three objectives have been set:

- *To ensure a well functioning Internal Market in public procurement;*
- *To achieve greater efficiency in public procurement and to improve governance;*
- *To work towards an international framework for electronic public procurement.*

The aim of this *first objective* is not only to ensure the correct and timely implementation of the new legislative framework by 31 January 2006 and to complete it by the adoption of appropriate basic tools such as all-electronic forms and an up-to-date classification system but also to ensure that contracting authorities use generally available, non-discriminatory and interoperable means and tools of communication in compliance with the new legislation. These are essential pre-requisites for avoiding 'e-barriers' and ensuring competition and effective usage of e-procurement applications across Europe.

The *second objective* aims to ensure that electronic public procurement effectively becomes a lever for modernising public procurement more generally, through a more efficient procurement environment for buyers and a more competitive procurement markets for suppliers by for example, encouraging the full computerisation of the national transactional environment for public procurement procedures, co-ordinating efforts to cut red tape, encouraging standardisation of the national procurement environment and documents for the greatest number of users, encouraging automated data collection, promoting transparency, auditing and traceability of e-procurement operations and encouraging SME participation.

Finally, the *third objective* is already sufficiently operational in aiming at bringing the same level of safeguards and discipline in international public procurement trade to ensure EU suppliers non-discriminatory access to third country markets and to promote e-procurement in an efficient and open way in international trade.

4.2. Policy options

In order to meet these objectives and address the risks and problems identified in section 3 the following policy options were considered:

1. "*Business-as-usual*" scenario, as described in the previous section;
2. The "*classic approach*": that is, the use of legal instruments available at European level in a focused and limited number of actions in order to ensure the full and correct transposition of the new provisions in national laws, to prevent the emergence of legal barriers and to complete the legal framework by adopting specific

instruments (e.g. fully electronic standard forms, updated CPV) including agreement on international disciplines for electronic public procurement.

3. The “*partnership approach*”: that is, to initiate actions across the board in close co-operation and in a co-ordinated way between the Community and Member States in order to prevent barriers, improve governance and achieve greater efficiency in public procurement markets. In fact such a “partnership” approach would encompass the “classic approach” but also complement it by taking initiatives and proposing measures which address specific problems identified in the administrative and technical working environments within which electronic public procurement is set to take place so as to fully exploit efficiencies in the procurement process.
4. The “*full standardisation*”: that is, to promote the development of centrally designed and conceived, and possibly managed, common tools accompanied by detailed descriptions of the desired architecture and functions including the adoption through regulation of detailed technical standards for the different steps in the electronic public procurement process in a top-down approach aimed at achieving a uniform technical environment across all Member States and at guaranteeing 100% accessibility to e-procurement markets for all tenderers.

(1) *Screening of options*

The “*business-as-usual*” scenario, or status quo, has already been presented above. This option would not be sustainable in the medium to long run as it bears considerable risks of market fragmentation, low effectiveness and inefficiencies.

Option 4, that is, the “*full standardisation*” of the electronic public procurement environment would also need to be discarded as it is not a viable solution. Although it would eventually create a more uniform technical environment - meaning 100% accessibility to EU procurement markets for all tenderers – its implementation appears unrealistic given market developments and the policy instruments available. Implementing electronic public procurement on the basis of a detailed Community design would have been beyond Community competencies and would conflict with the subsidiarity and proportionality principles. In addition, such a top down approach would be ineffective due to the considerable time and effort this would require in order to accommodate the different needs at sectoral and national level.

Options 2 and 3 could offer an effective response and meet the policy objectives provided all the appropriate actions for their implementation are correctly identified and adequate means are allocated to their practical implementation.

Figure 5 lists the proposals for action retained for further evaluation and the corresponding objectives to which these actions respond. This list was established on the basis of consultations with the experts in the Member States and through detailed analysis of the different studies and contributions received by the Commission services. Starting from a rather broad list of possible actions, the number of actions was progressively reduced by eliminating those that were considered to either have negligible impact or that were less likely to meet the policy objectives established at the beginning of the exercise. Some of the actions discarded were for example, proposals for the simplification of national rules as this is incompatible with the current public procurement policy whose aim is to co-ordinate procurement

procedures rather than to harmonise national laws. Actions aiming at extending the scope of electronic means below the Community thresholds were also abandoned as they conflict with the principles of subsidiarity. The regulation of electronic means for such contracts is an issue for the Member States. Due to their low value such contracts are unlikely to impact on the functioning of the Internal Market. The idea of fixing uniform quantitative targets for Member States' use of electronic public procurement was also set aside. Conditions in the Member States vary considerably making such initiatives impractical and counter productive.

Figure 5: List of retained actions and corresponding operational objectives

Category of issues	Objective 1: a well functioning Internal Market		Objective 2: greater efficiency in public procurement			Objective 3: international framework
	Legal barriers	Technical barriers	Administrative and organisational barriers	Businesses' access	Knowledge, skills and awareness	Compliance with international obligations
Interpretative document on the new rules on electronic public procurement	✓	✓	✓	✓	✓	✓
Online training demonstrators allowing contracting authorities and economic operators to familiarise with the new e-procurement provisions and tools	✓	✓	✓	✓	✓	
Provide appropriate assistance to Member States in transposing the new provisions on electronic public procurement	✓	✓				
Revise the Common Procurement Vocabulary (CPV)	✓	✓		✓		
Fully electronic system for the collection and publication of procurement notices on TED (the EU online publication board)	✓	✓	✓			
Fully electronic notices at national level including appropriate tools for publishing at European level on TED	✓	✓				
Establish common functional requirements for electronic public procurement systems	✓	✓	✓	✓		
Adapt all operational e-procurement systems to the requirements of the Directives	✓	✓		✓		
Introduce national and European accreditation schemes to verify compliance of electronic tendering systems with the legal framework	✓	✓	✓			
Resolve interoperability problems affecting the use of advanced qualified signatures	✓	✓		✓		
Promote standardisation activities at European level and international level	✓	✓		✓		✓
Monitor interoperability issues and developments	✓	✓				✓

Establish national plans for introducing electronic public procurement	✓	✓	✓	✓	✓	✓
Main buyers to establish individual plans for introducing electronic public procurement		✓	✓	✓		
Pursue XML standardisation activities on e-invoices and e-ordering		✓		✓		✓
Set up electronic systems for the collection and processing of statistical procurement data			✓		✓	
Agree on a common set of frequently required electronic certificates for use in electronic public procurement procedures		✓	✓		✓	
Promote electronic supply of business information and certificates in public procurement			✓			
Promote standardisation of e-catalogues for use in Dynamic Purchasing Systems (DPS) and e-framework agreements			✓			
Promote transparency, auditing and traceability of e-procurement systems		✓		✓		
Promote standardisation of tender documents			✓	✓		
Promote awareness of and training programmes for SMEs at national and regional level				✓	✓	
Pursue negotiations on the review of the Government Procurement Agreement (GPA)				✓		✓
Promote use of a single common nomenclature for the classification of procurement goods and services in international trade				✓	✓	✓
Support technical assistance to third countries for computerising their public procurement regimes				✓	✓	✓
Consider electronic public procurement in the European external aid instruments and tools	✓	✓	✓	✓		✓

Source: Assessment by the European Commission services

(a) Comparison of retained options

On the basis of the list of actions presented in Figure 5 the two retained options were compared against the “business-as-usual” scenario in order to determine the scope of policy intervention.

- Figure 6 summarises the main points from the comparison of the three potential scenarios. It shows that the “partnership” option offers the best prospects for successfully introducing electronic means in public procurement. The comparison of the three options shows that the incremental costs for additional measures, beyond the traditional legal approach, are outweighed by far by the potential positive effects that a co-ordinated approach would have in rolling out electronic public procurement.

Figure 6: General comparison of main scenarios

	Business-as-usual	Classic Approach	Partnership
Main positive impact	The new procurement Directives and the general trend towards use of IT in public administrations will contribute to the uptake of electronic public procurement at least in a limited number of leading countries and regions	Intensive efforts result in correct transposition and application of new rules. Major compliance problems are avoided and legal uncertainties are reduced.	Action plan addresses problems across the board. Correct transposition and application of rules, interoperability and clear objectives reduce Internal Market barriers and stimulate uptake of electronic public procurement
Main negative impact	Main problems and barriers remain unsolved to the detriment of the Internal Market and efficiency in public procurement markets. Uptake of electronic public procurement is limited	Resolution of legal issues only marginally manages to stimulate uptake of electronic public procurement. Technical and organizational difficulties continue to impact negatively on uptake of electronic public procurement and efficiency gains	Some barriers and problems remain mainly because it is impossible to address all the potential problems due to their diverse nature and structural characteristics.
Costs	No direct costs but many opportunity costs as potentials benefits remain unexploited along with important barriers to the Internal Market	Limited direct costs to ensure legal and practical compliance with Internal Market rules and principles. Efficiency gains remain largely untapped	The Action Plan implementation entails higher costs. In light of potential benefits these are seem justified. Additionally economies of scale are achieved due to concerted and coordinated effort at national and European level
Influence on main objectives: IM Lisbon objective	EU regulation provides limited impulse to moving procurement online. Member States accord priority to other IT applications due to the complexity in reforming markets for electronic public procurement. Lisbon objectives are not met as economic impact is watered down by barriers and limited uptake	Positive impact on the removal of barrier to the Internal Market but limited economic impact due to limited penetration of electronic public procurement and diseconomies in using electronic means. Generalised use of electronic public procurement is not achieved by 2010	Strong impact on the IM and the EU economy as a whole. Likely generalisation of electronic public procurement across Europe.

Source: Adapted from "Impact Assessment of an Action Plan on electronic public procurement", Ramboll Management, December 2004

The impact of policy intervention seems therefore strongest if legal, technical and organisational problems are tackled simultaneously and on the basis of Europe-wide collaboration between all the different stakeholders. Indeed it is materially very difficult to dissociate the legal effects from those of greater efficiency, improved governance and higher competitiveness and their effects are mutually reinforcing and cumulative.

Such a comprehensive approach requires the close collaboration of the Community and Member States, in line with the principles of subsidiarity and proportionality which should apply in defining the exact measures and identifying the most appropriate actors. The

intention is to design an effective policy combining national and Community efforts in a co-ordinated way so as to facilitate and eventually to accelerate the introduction of electronic means in public sector procurement at national and regional level. A co-ordinated development with clearly defined operational objectives is most likely to maximise benefits for both the public and the private sector. This type of partnership is new in the public procurement area but it is essential; results risk to be delayed and unsatisfactory if each Member State tried to deal individually with the complex issues involved.

5. WHAT ARE THE IMPACTS – POSITIVE AND NEGATIVE – EXPECTED FROM THE DIFFERENT OPTIONS

This section addresses in more detail the possible impact of the actions which the Commission has identified as suitable for the Action Plan on electronic public procurement as part of the combined *'partnership'* scenario.

Figure 7 below lists the detailed actions and evaluates the expected impact on transparency, competition and efficiency of the selected measures described above. Their impact over time is also considered, e.g. whether a measure is likely to become effective in the short-, mid- or long-term. The actions, described in more detail in the Commission proposal for the Action Plan, are linked to each other so as to form a coherent whole. While all actions may therefore be seen to have at least some effect on each of the three criteria, the table shows where the intended impact is thought to be particularly relevant.

Very generally, the common feature of the actions proposed is to help avoiding the transactional costs related to the non-implementation or incorrect implementation of operational e-procurement systems. If one goes into the detail of each group of actions, one can see that the measures retained under option 1 are predominantly geared to achieve greater transparency and, as a consequence, competition; also, they are likely to yield results relatively quickly (1-2 years). Applying a form of 'negative' integration, they aim at abolishing and preventing barriers to the Internal Market in electronic public procurement. In comparison, measures retained under option 2 are geared more towards enhancing efficiency and competition also in national electronic public procurement markets and taking actions towards 'positive' integration by establishing interoperable tools and standards. This process may take longer, with results expected to be visible rather in the mid-term (2-4 years).

Figure 7: Comparative potential impact of proposed Action Plan measures on transparency, competition and efficiency as well as over time

	Action	Transparency	Competition	Efficiency	Impact over time
Objective 1	Interpretative document on the new rules on electronic public procurement	+++	+++	+++	Immediate
	Online training demonstrators allowing contracting authorities and economic operators to familiarise with the new e-procurement provisions and tools	++	+	+	ST-MT
	Provide appropriate assistance to Member States in transposing the new provisions on electronic public procurement	++	++	+	ST-MT
	Revise the Common Procurement Vocabulary (CPV)	++	++	+++	ST
	Fully electronic system for the collection and publication of procurement notices on TED (the EU online publication board)	+++	+++	+++	ST
	Fully electronic notices at national level including appropriate tools for publishing on TED at European level	+++	+++	+++	ST-MT
	Establish common functional requirements for electronic public procurement systems	+++	+	+++	ST
	Adapt all operational e-procurement systems to the requirements of the Directives	+++	+++	++	ST-MT
	Introduce national and European accreditation schemes to verify compliance of electronic tendering systems with the legal framework	+++	++	++	MT
	Resolve interoperability problems affecting the use of advanced qualified signatures	+	+++	++	ST-MT
	Promote standardisation activities at European level and international level	++	++	+	MT
	Monitor interoperability issues and developments	++	++	+	
Objective 2	Establish national plans for introducing electronic public procurement	++	++	+++	MT
	Main buyers to establish individual plans for introducing electronic public procurement	++	++	+++	MT
	Pursue XML standardisation activities on e-invoices and e-ordering	++	++	+++	ST-MT
	Set up electronic systems for the collection and processing of statistical procurement data	+++	+	+++	MT
	Agree on a common set of frequently required electronic certificates for use in electronic public procurement procedures	+	++	+++	MT
	Promote electronic supply of business information and certificates in public procurement	+	++	+++	MT
	Promote standardisation of e-catalogues for use in DPS and e-framework agreements	+	++	+++	MT

	Action	Transparency	Competition	Efficiency	Impact over time
	Promote transparency, auditing and traceability of e-procurement systems	+++	+	+	ST-MT
	Promote standardisation of tender documents	++	+	++	MT
	Promote awareness of and training programmes for SMEs at national and regional level	++	++	+	MT
Objective 3	Pursue negotiations on the review of the Government Procurement Agreement (GPA)	++	++	++	ST-MT
	Promote use of a single common nomenclature for the classification of procurement goods and services in international trade	+	++	+++	ST-MT
	Support technical assistance to third countries for computerising their public procurement regimes	+	+	+	MT
	Consider electronic public procurement in the European external aid instruments and tools	+	+	+	ST-MT

+++ strong impact ++ moderate impact + low impact ST short term MT medium term LT long term

Source: Assessment by the European Commission services

In terms of the two alternative options previously considered, Objectives 1 and 3 correspond to the “classic” approach, while the three objectives combined correspond to the “partnership” scenario.

The following sub-sections describe the impact of introducing electronic public procurement on the different market actors and sectors of the economy, assuming that all actions listed in Figure 7 are fully and correctly implemented.

5.1. The impact on markets, trade and investment flows

Specific measures in the action plan proposals aim at removing or preventing potential ‘e-barriers’ in order to avoid fragmentation of procurement markets and to maintain competitive pressure across Europe. Correct introduction of electronic means in the procurement process should indeed increase transparency and strengthen competition in public procurement markets thus providing incentives for higher productivity for both governments and for businesses. Incorrect introduction of e-procurement could result in lesser efficiency in the relations of buyers to suppliers than currently achieved through paper procedures.

The public sector purchases a vast array of goods, works and services. Not all sectors will be equally affected by the introduction of electronic means in the procurement process. Competitive pressure is likely to be bigger for standard off-the-shelf products and services compared to more complex contracts. However, increased transparency should level the field for new entrants who are often outpaced by incumbent players who may capitalise on their better knowledge of public sector markets. It should also impact positively on cross-border trade in public procurement which is today relatively low. The use of electronic means can facilitate cross-border market access for businesses. It should also make it easier for public

purchasers to organise on a more international basis where synergies can make cross-border purchases more effective. Initiatives in this direction have been underway in the utilities sector and may be extended to other areas where such types of synergies are available.

It should also be noted that excessive reliance on framework agreements can also limit competition and new market access as such agreements are usually established for 3 or more years. Certainly the introduction of electronic means in framework agreements could improve their management, in particular, if use is made of the multi-supplier agreements which allow the reopening of competition among parties to the agreement. Dynamic purchasing systems offer a credible alternative with the same efficiencies to framework agreements within a much more open procurement environment.

Establishing a European procurement market endowed with modern tools and technologies is a pre-requisite for competing effectively in global markets which are increasingly moving online. The use of electronic means in public procurement is being developed worldwide among the EU's traditional partners such as the United States, Canada, and Japan, and new players entering the world ICT market such as China, India and Brazil¹⁸. In light of current international developments, legal and technical choices in electronic public procurement systems may reduce procurement opportunities for EU businesses in third countries, as well as restrict access of third country suppliers to the EU market. Existing WTO agreements in procurement (General Procurement Agreement, GPA) and bilateral agreements do not regulate their use. In the absence of such regulation, increased share of electronic means in the procurement process could impact negatively on international public procurement trade.

5.2. The direct and indirect costs for businesses

Successful implementation of the Action Plan should have a positive impact on some of the direct costs for businesses involved in public procurement procedures. Public procurement markets are notorious for their red tape. Although precise estimates are not available on tendering costs for businesses, it is clear that a reduction in the administrative burden will benefit economic operators who could reallocate resources to more productive activities.

Businesses can also benefit indirectly from improved management of public contracts and better governance. The scale of such effects depends on the conditions of procurement markets at the outset. The use of electronic means cannot work miracles. While the use of electronic means can help reduce corruption and unlawful practices, it may involve also higher risks for the confidential treatment of commercially sensitive information submitted by tenderers during calls for competition.

5.3. The impact on innovation

Transposition of the procurement Directives will encourage standard e-procurement systems based on existing technologies. The important factor will be reaching a critical mass of buyers and suppliers using e-tendering or e-procurement marketplaces. Whereas the cost side of implementing electronic public procurement is not expected to change significantly for the contracting authorities, the benefit side is expected to improve significantly along with an

¹⁸ COM (2004) 757 final, "Challenges for the European Information Society beyond 2005"

increasing uptake of electronic public procurement. If that scenario materialises demand for electronic public procurement, this should stimulate investment in ITC both within the administrations and among businesses. The introduction of new procurement procedures and requirements is expected to increase demand for certain IT applications, electronic auctions, e-signatures, decision support tools etc. to the benefit of vendors specialising in this area of services.

5.4. Administrative requirements on businesses

Implementation of electronic public procurement should not lead to an increase in administrative requirements for businesses. On the contrary, it should lead to a reduction in the administrative burden and the associated compliance costs during the tendering process. Nevertheless, in certain countries where security requirements for tendering electronically have been set at a very high level, businesses may find themselves obliged to invest in specific solutions in order to be able to tender electronically. The same may happen if tendering is unnecessarily complicated due to the compulsory use of unsatisfactory standards and formats not generally used by industry for the submission of tenders or the inappropriate automation of procurement processes without taking account of industry standards and practices.

There is certainly a trade-off between more stringent requirements and an approach based on a pragmatic assessment of market conditions and the capacity of businesses to cope with public administrations' requirements. The issue of electronic signatures analysed in the previous chapters highlights perfectly these types of problems and their impact not only on domestic markets but also on electronic cross-border trade.

In the absence of pragmatic approaches and solutions, the impact on businesses and on the functioning of the Internal Market could be negative and increase the cost for businesses when carrying procurement procedures electronically.

5.5. Impact on labour market and employment

The resulting economic changes and better governance from electronic public procurement could raise the EU's growth potential by giving an additional stimulus to labour productivity and business dynamism. Implementation of the Action Plan is not expected to have an impact on the functioning of the labour market. However, it may positively affect the quality of labour in terms of the IT skills required from the move to online public procurement.

The deployment of electronic public procurement may only marginally lead to loss of employment insofar as certain larger purchasing authorities may find necessary to streamline purchasing departments. The most likely scenario is that natural attrition and reallocation of tasks will absorb the excess workforce in public administrations.

It is more than likely that for a certain period electronic means will continue to be used parallel to traditional paper based procedures. The effect on employment for private businesses involved in public procurement contracts would therefore be neutral. Some reallocation of tasks and upgrading of jobs should be expected.

5.6. The consequences for public authorities and governance

Effective introduction of electronic public procurement requires action at the level of public purchasers. The Action Plan calls for governments and major purchasers to establish national and individual plans respectively in order to introduce electronic means in the procurement process. To be effective such plans should include the allocation of specific funds in national budgets and within the different administrative bodies and agencies.

IT costs for implementing electronic procurement are likely to go down, since a maturing market for electronic public procurement solutions will provide more standard, out-of-the-box solutions which will mean cheaper technology/software. Thus, the cost of an e-public procurement is more significant at the buyer side as it involves the reengineering of existing processes and in many cases requires upgrades in existing hardware and software installations and specific interfaces to link with legacy systems. Thus the total cost of electronic public procurement is not expected to be significantly lower than currently as the purely IT part only constitutes a relatively small fraction (10-20%) of the total costs. The cost for individual purchasing authorities will be proportional to the number of participants to an electronic public procurement system. Tools and platforms can be shared by many suppliers and agencies which significantly reduces the costs for users. Many Member States are effectively planning to outsource or sometimes even develop such central platforms that can provide services to individual buyers.

The positive impact on the management of public contracts is evident. Electronic means offer enormous improvements for monitoring expenditure, improved compliance with rules and regulations and auditing of operations.

The modernisation of procurement environment from the introduction of electronic means will pay off for public administrations through better prices and quality of purchases and increased productivity. These savings are proportionately more important for larger administrations with large purchasing departments. Smaller contracting authorities may not at first hand have incentives to use electronic public procurement. An appropriate incentive structure should be found so that benefits are shared across all levels of government.

5.7. The impacts on specific regions and sectors

In organising public procurement electronically care should be taken not to push for an excessive centralisation of purchases. Without a careful assessment of market conditions, centralisation of purchases can lead to distortions of competition by privileging larger businesses that usually are better positioned to compete for large contracts. Electronic public procurement represents a great potential for SMEs, as administrative burden and high transaction costs are proportionately higher for them. SMEs traditionally supplying to the public sector or interested to enter this market will have to adapt to this new environment and learn how to use the new tools. There is danger, however, that introduction of highly integrated and sophisticated electronic public procurement systems is not affordable for SMEs and could lead to their exclusion from procurement markets if applied too early in the process of switching to electronic public procurement. This became evident in some past marketplace projects which were terminated due to the lack of businesses' participation.

The development of electronic public procurement is usually associated with central government. It is however, worth noting that many initiatives across Europe are already

regionally based. This is an encouraging sign which proves that the economics of electronic public procurement have improved in recent years. In order to make sure that no region is left behind, national plans should encourage development of electronic public procurement at all levels of government. The Action Plan gives the less technologically mature countries and regions an opportunity to catch up with the leading players.

Some sectors are likely to feel the impact of electronic public procurement more strongly than others during the initial phase of development, as pointed out from different studies. At the initial stage, the use of electronic means can be very effective for the procurement of articles characterized by low value of each component and high order frequency. A closer look on the goods, works and services procured by public institutions in Europe shows that the proportion of such purchases in total procurement is rather limited.

5.8. Potential overall economic impact of the proposal

On the basis of the relatively conservative figures of 5% savings on the purchasing price and 50 EUR savings per invitation to tender in administrative costs, it is estimated that annual savings from full implementation of electronic public procurement will amount to almost € 19 billion by 2010, when full generalisation of electronic public procurement can be expected.

Figure 8: Estimated annual savings on purchasing price and administrative costs for buyers (based on 2002 figures for EU15)

Savings on purchasing price	Savings on administrative costs (buyers)
<ul style="list-style-type: none"> • Total value of public procurement in the EU15: 1,500 Billion EUR • Value of e-public procurement at a 25% level uptake in the public sector in EU15: 375 Billion EUR • Range of savings realized today: Between 10% - 53% • Conservative estimate for savings on purchasing price: 5% • Estimated total savings calculation: 375 Billion EUR / 5% 	<ul style="list-style-type: none"> • Total annual number of public procurement transactions in the EU (above and below threshold): 665,000 • Estimated number of e-public procurement transactions at a 25% level uptake: 166,000 • Savings per invitation to tender: 31% realized (40 EUR – 130 EUR per transaction) • Conservative estimate for savings on administrative costs per transaction: 50 EUR • Calculation for estimated total savings on administrative costs: 166,000 X 50 EUR
<p>Estimated total savings on purchasing price: € 18.75 billion per year (for EU15)</p>	<p>Estimated total savings on administrative costs: € 8.3 million per year (for EU15)</p>

Source: *Impact Assessment study on electronic public procurement, Ramboll Management 2004*

The calculations above show that the potential savings seem to be considerable at the aggregate European level, even under a conservative estimate. Annual savings do not include figures from electronic ordering and invoicing nor savings for suppliers or due to increased efficiency and improved governance.

6. MONITORING AND IMPLEMENTATION OF E-PROCUREMENT ACTION PLAN

The Commission assisted by the Advisory Committee for Public Contracts will monitor overall progress in implementing the Action Plan. By the end of 2007, the Commission will review the situation and report on the results achieved. This assessment will concentrate on the progress achieved on the legal front, the development of the necessary infrastructures for carrying procurement electronically, the use of electronic means and progress achieved in implementing the Action Plan. An assessment of economic impacts would be rather premature as experience shows that benefits from such reforms take longer to materialise.

In terms of indicators the Commission will use the following type of information to monitor progress:

- **Indicators for the implementation of the legal framework:** Transposition of all provisions on electronic public procurement in each member state; timely implementation of the directives; number of legal actions for failure in the transposition into national legislation; date of transposition of the directives into national legislation.
- **Indicators for use of electronic means in public procurement process:** share of notices dispatched electronically by contracting authorities; share of tender documents accessible electronically; number and volume of dynamic purchasing systems; share of calls for tender using electronic auctions.
- **Economic indicators:** statistical information is already collected on public procurement markets; these will be progressively extended to cover electronic means such as the share of central purchasing and evolution of dynamic purchasing systems

7. RESULTS OF THE STAKEHOLDER CONSULTATION

7.1. Which stakeholders were consulted, at which stage of the process and for what purpose?

To complement the Impact Assessment and guarantee the widest input possible to the Action Plan, the Commission has consulted all parties involved in introducing electronic public procurement: Member States and public administrations (buyers); economic operators and business associations (suppliers) and providers of electronic public procurement systems. Findings from these consultations have been thoroughly examined and taken on board in the Action Plan.

Because of the very nature of public procurement, national governments have a key role in introducing electronic procedures. This is why the Commission has sought to work in close partnership with the Member States.

- As a first step, the Commission organised detailed discussions on an on-going basis with the *Advisory Committee on Public Contracts* and in particular, the *Working Group on e-*

procurement set up under its auspices, in order to bring together legal and technical experts actively involved in the development of electronic public procurement in the Member States. Member States tabled specific proposals. Discussions in the group during 2004 allowed the Commission services to create a synthesis of the views expressed in the group and to put forward specific proposals for action at EU and national level.

In the framework of the impact assessment study, the contractor also consulted national experts on the state of play in each Member State.

- In addition, members of the *Consultative Committee for the Opening of Procurement Contracts (CCO)*, including procurement specialists from academia, business associations and trade unions as well as procurement practitioners examined the impact of the forthcoming legislative framework for conducting procurement electronically and the draft Action Plan in three consecutive meetings from December 2003 to November 2004.
- In May 2004, the Commission organised a one-day conference in Brussels via the IDA programme on the theme of *'Electronic public procurement: bringing down e-barriers'*. The conference gathered approximately 450 participants from national administrations, industry and standardisation bodies and discussed technical developments and interoperability questions raised by the implementation of electronic public procurement.

To ensure the practical relevance of its proposals for action, the Commission has equally sought constant exchange with representatives of business.

- Based on its 'Interactive-Policymaking' tool (IPM), the Commission conducted an *online survey* on the attitudes to e-procurement of businesses and business associations from 15 September to 15 November 2004. More than 400 participants from all EU Member States, including the new members, as well as of EFTA and other third countries responded to the voluntary survey on their experiences with and expectations towards e-procurement.
- While the survey may be positively biased towards those businesses and business associations that already have experience with the use of electronic means in conducting business with government, it captures a first picture indicating both trends and areas of concern for businesses across Europe.
- Individual contributions were received from UNICE (European employers' confederation), Eurochambers (Association of European Chambers of Commerce and Industry) and the Chamber of Commerce and Industry of Paris. E-procurement was also one of the main themes at the UNICE conference 'Public procurement: the new regime ahead' in Oslo from 29-30 September 2004.
- Finally, the Commission services pursued contacts with operational e-procurement systems providers, IT vendors and industry experts through bilateral meetings and in public conferences.

7.2. Results of the consultations

The consultations showed a relative convergence of views of the different actors involved. All parties welcomed the new legislation on e-procurement, with some, e.g. UNICE and Eurochambers, calling explicitly for action by the Commission to facilitate its implementation. At the same time, the contributions made clear that legislative and

implementing measures should aim at setting the general framework and improving conditions for conducting public procurement electronically, whilst development of specific systems and software solutions should be left to the markets.

Member States

All Member States recognise the potential of e-procurement for increased savings and greater efficiency, and hence the beneficial impact of migrating rapidly to electronic procedures. In fact, many consider e-procurement as a lever to modernise their public procurement more generally. At the same time, Member States identified together with the Commission major risks of incorrect implementation. The Working Group's priority was to clarify in detail the legal and functional requirements of the Directives. It also concentrated on the potential objectives and scope for action.

In the discussions and written contributions it was evident that implementation of the new Directives will need to be supported by specific additional measures and accommodate different needs arising from Member States' different legal traditions, as well as their varying state of advancement in setting up operational e-procurement systems, e.g. in addressing the question of how to best organise the transition from, and possibly co-existence of, paper-based and electronic procedures.

After a detailed discussion in the ePWG, Member States in the ACPC endorsed the thrust and general principles underlying the draft Action Plan and its overall content. While some countries anticipate potential difficulties in implementing the Action Plan within the proposed time-frame, they consider it would, however, be a very good reference and political support for action. National plans setting performance targets were accepted as the most appropriate instrument and incentive to achieve the objectives of the Action Plan in due time.

Industry and business associations

UNICE and Eurochambers strongly welcome the Action Plan. They are particularly aware of the Internal Market aspects of e-procurement and support a coordinated approach to avoid fragmentation of EU public procurement markets through new 'e-barriers'. The mutual compatibility of the technical systems of the bidding industry and public authorities is the prerequisite to achieve cross-border procurement and to make e-procurement an incentive for businesses to go and trade online. Echoing the concerns of individual businesses about transparency, security and interoperability of electronic procurement procedures, industry associations therefore call for common guidelines on functional requirements for e-procurement systems, and even for harmonising 'to the greatest extent' the requirements set within the individual Member States, as well as for using internationally recognized applications and standards.

They have identified specific points to be most urgently addressed, namely such that relate to the mandatory use of qualified electronic signatures in some Member States and the transparency of and procedural safeguards for electronic auctions, followed by rules on electronic archiving and data protection.

Finally, both the IPM survey as well as consultations of UNICE show that businesses expect e-procurement to yield advantages for SMEs, such as new market opportunities and lower bidding costs. These are thought to outweigh possible detrimental effects from greater competition by large-size companies.

Business IPM survey

Individual businesses favour the introduction of electronic public procurement but remain cautious regarding security and performance, probably due to lack of familiarity with the new tools and procedures.

Asked what was important for them in using electronic public procurement, over half of the businesses interviewed in the IPM survey said that it should involve less effort than procedures using paper-based means (63.9%); that it should be easy to use, with reliable IT tools (62.5%), and that transparency of the electronic tendering procedures should be ensured (63.2%). In contrast, costs for investment in IT tools or the issue of staff training were considered less important (33.7% and 14.4% respectively).

Today, it seems that many businesses have already used electronic means in the early stages of a public procurement procedure, and consider the experience useful. Thus, a majority of 89.8% of businesses interviewed welcomed the opportunity to download specifications and tender documents and to search for tender opportunities online. This reflects the importance of transparency and possibly the use of tools already available, not least via EU sites such as TED. In comparison, more advanced tools - many of which may not yet be generally available in practice - are viewed with greater caution, such as documents using XML-standards, electronic signatures or electronic auctions. Instruments familiar from electronic commerce transactions, in particular for carrying out financial transactions such as electronic payments, also seem to be considered relatively useful (70%).

According to the survey a great majority of businesses is favourable to the immediate or progressive introduction of electronic public procurement in the EU (31% and 59.6% respectively). The greatest role for the Commission is seen in standardisation activities, e.g., with regard to forms and documents (67.3%), but also to electronic tools (47%). Secondly, the Commission is expected to promote the use of simple and generally available tools for conducting e-procurement (60%).

8. COMMISSION PROPOSAL AND JUSTIFICATION

(Tentative conclusions to be confirmed when the Commission adopts its proposal)

After examination of all above options, the evaluation of the available information and the extensive consultations of stakeholders, the Commission is of the opinion that the adoption of an Action Plan on electronic public procurement is the most effective way to ensure the smooth functioning of the Internal Market when implementing the legal framework for electronic public procurement, to achieve greater efficiency in procurement, and to improve governance and competitiveness.

This solution relies on 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. This may appear as a weakness as compared to more orthodox tools of regulatory intervention and legal action. In this environment however, such tools would have been ineffective in view of the complexity of implementing electronic public procurement. In addition, the chosen route is compatible with the subsidiarity and proportionality principles which should be guiding the Community policy.

The targets and actions foreseen in the Plan are scheduled to be implemented over a short period. The decision to fix a tight schedule is driven by needs on the ground and the 31st January deadline for transposition of the legislative package of EU public procurement Directives. The foreseen monitoring of the Action Plan will provide feedback on progress achieved and provide guidance in due course on any additional operational needs and possible adjustment of targets.

9. ANNEXES

9.1. Annex I: List of references

European Commission documents

[Directive 2004/17/EC](#) of the European Parliament and of the Council coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors

[Directive 2004/18/EC](#) of the European Parliament and of the Council on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts

European Commission (2004): “A report on the functioning of public procurement markets in the EU: benefits from the application of EU directives and challenges for the future”, *Commission staff working document*, 3 February 2004 at http://europa.eu.int/comm/internal_market/publicprocurement/studies_en.htm

European Commission (2002): COM (2002) 263 final, “eEurope 2005: An information society for all”;

European Commission (2004): COM (2004) 380 final, “eEurope 2005 Action Plan: an Update”

European Commission (2004): COM (2004) 757 final, “Challenges for the European Information Society beyond 2005”

European Commission (2003): COM (2003) 283 final, Communication from the Commission to the Council and the European Parliament – Public Finances in EMU - 2003

Studies mandated by the Commission

Ramboll Management (2004): “Impact Assessment of an Action Plan on electronic public procurement”, December 2004

European Dynamics (2004, forthcoming): *Electronic Public Procurement in Europe: State of the Art report*, Volumes 1 and 2, Study mandated by the European Commission under IDA Programme, December 2004

Other references

Catholic University of Leuven (2003): “*The legal and market aspects of electronic signatures*”, Study for the European Commission, Interdisciplinary Centre for Law and Information Technology of the Catholic University of Leuven, October 2003

EIM Business and policy research (2004): “*The access of SMEs to public procurement contracts*”, 22 March 2004 at <http://europa.eu.int/comm/enterprise/entrepreneurship/craft/craft-studies/craft-publicprocurement.htm>

World Bank (2003): “Electronic Government Procurement World Bank draft strategy”, October 2003;

E-Business Watch (2003): “*The European e-Business Report – A portrait of e-business in 15 sectors of the EU economy*”, 2003 edition

Ministry of Industry of France (2004): “*E-commerce Scoreboard Update*”, April 2004

MOD/Industry Commercial Policy Group (2004): “*Defense e-Business – A guide to Commercial Issues*”.

OECD (2004): “OECD Information Technology Outlook 2004”

9.2. Annex II: The issues at stake and driving forces

The issues at stake

The implementation of the EU public procurement Directives agreed back in the 80s and 90s as part of the Single Market programme has increased cross-border competition and improved prices paid by public authorities¹⁹. Despite this progress, cross-border trade for procurement contracts remains low and advertising for business opportunities has not reached its full potential. In addition, the paper based processing and documenting of procurement information and transactions is slow, cumbersome and costly; in particular for SMEs²⁰ tendering costs can be disproportionately high as the same documentation and information is requested in different formats and must be submitted several times in order to participate in a call for tender. At macro level lack of efficiency and barriers to trade in public procurement markets impact negatively on public finances and the control of public spending²¹.

The possibilities offered by IT tools for improving cost efficiency and increasing competition in public procurement markets were already acknowledged in the *eEurope Action Plan*²² which made electronic public procurement one of its priorities. Academics and practitioners all agree that if implemented correctly, electronic public procurement can:

foster competition and improve cost effectiveness in public contracts, contributing to reducing fiscal expenditure and stimulating a more competitive supply base;

generate savings of time and costs in the contract award process and improve the administration and implementation of contracts awarded;

¹⁹ As estimated in the Commission staff working paper on the functioning of public procurement markets in the EU², 10% savings in public procurement expenditure could have turned most of Member States' budget deficits in 2002 to surpluses while no euro zone Member State would have broken the 3% public sector deficit ceiling; “A report on the functioning of public procurement markets in the EU: benefits from the application of EU directives and challenges for the future”, Commission staff working document, 3 February 2004

http://europa.eu.int/comm/internal_market/publicprocurement/studies_en.htm

²⁰ The access of SMEs to public procurement contracts, EIM Business and policy research, 22 March 2004 <http://europa.eu.int/comm/enterprise/entrepreneurship/craft/craft-studies/craft-publicprocurement.htm>

²¹ COM (2003) 283 final, Communication from the Commission to the Council and the European Parliament – Public Finances in EMU - 2003

²² COM (2002) 263 final, “eEurope 2005: An information society for all”; COM (2004) 380 final, “eEurope 2005 Action Plan: an Update”

increase transparency and fairness in the award of contracts, contributing to stronger credibility and attractiveness of the public procurement market;

contribute to better monitoring and auditing of contracts and hence improve compliance with rules and policies, thus minimising corruption and abuse;

strengthen competitiveness with improved access to public sector markets and better opportunities for cross-border trade.

Figure 1 summarises these benefits for governments, suppliers and the public in general from the perspective of transparency and efficiency gains.

Figure 1: Potential benefits from electronic public procurement

	Government	Suppliers	Public
Transparency	<ul style="list-style-type: none"> • Anti-corruption • Increased number of suppliers • Better integration and interaction between governments • Professional procurement monitoring • Higher quality of procurement decisions and statistics • Political return from the public 	<ul style="list-style-type: none"> • Increased fairness and competition • Improved access to the government market • Open the government market to new suppliers • Stimulation of SME participation • Improved access to public procurement information • Government accountability 	<ul style="list-style-type: none"> • Access to public procurement information • Monitor public expenditure information • “Have a say” in public sector purchases • Government accountability
Costs	<ul style="list-style-type: none"> • Lower prices • Lower transaction costs • Staff reduction 	<ul style="list-style-type: none"> • Lower transaction costs • Staff reduction • Improved cash flow 	<ul style="list-style-type: none"> • Redistribution of fiscal expenditure
Efficiency	<ul style="list-style-type: none"> • Reduction in fiscal expenditure • Simplification/elimination of repetitive tasks • Communication anywhere/anytime • Shorter procurement cycle 	<ul style="list-style-type: none"> • Simplification/elimination of repetitive tasks • Communication anywhere/anytime • Shorter procurement cycle 	<ul style="list-style-type: none"> • Communication anywhere/anytime
Time	<ul style="list-style-type: none"> • Reduction in fiscal expenditure • Simplification/elimination of repetitive tasks • Communication anywhere/anytime • Shorter procurement cycle 	<ul style="list-style-type: none"> • Simplification/elimination of repetitive tasks • Communication anywhere/anytime • Shorter procurement cycle 	<ul style="list-style-type: none"> • Communication anywhere/anytime

Source: *Electronic Government Procurement World Bank draft strategy, October 2003*

The overall positive effect on the economy in terms of competitiveness and improved allocation of resources from moving public sector procurement online is obvious. Electronic public procurement can lead to substantial productivity gains for both governments and for businesses as well as to important cost reductions and to price savings. The resulting economic changes should raise the EU's growth potential by giving an additional stimulus to

labour productivity and business dynamism. Further, establishing a European procurement market endowed with modern tools and technologies is a pre-requisite for competing effectively in global markets which are increasingly moving online²³.

In social terms the effects can also be positive not only due to higher growth and productivity but also to improved public sector performance in terms of services, public sector accountability and redistribution of fiscal expenditure.²⁴ Improved governance and reduced opportunities for fraud and corruption can tender public sector procurement more attractive. Indeed, the electronic documentation of procurement transactions can enhance management's information on spending and contracts' performance by encouraging possible savings and making governments more accountable in spending taxpayer's money. In addition, the electronic processing and documentation of procurement information and transactions, and the possibility to track down their detail at each stage of the procurement process reduce opportunities and incentives for fraud. In the short term, certain adjustment costs should be foreseen in the public sector due to the need to reorganise purchasing activities and to reallocate responsibilities and tasks in departments which are responsible for the purchase of goods and services. However, the benefits from implementing electronic public procurement solutions outweigh such costs.

Benefits will not only be felt at the macro level. Inefficiencies and lack of transparency in public procurement markets impact on the costs and the quality of goods, works and services purchased by public authorities, affecting negatively both the value for taxpayers' money and the quality of services provided by the public sector. In addition, the administrative burden of complying with procurement procedures, the high transaction costs and the lack of transparency in contract opportunities often deter businesses from entering public procurement markets and from competing across borders or regions. The re-engineering of traditional paper based procedures required to operate electronic public procurement effectively can change this by, for example, automating repetitive and routine tasks and streamlining administrative processes. On the buyer side, the simplification and speeding up of procurement procedures can release resources currently tied up in performing bureaucratic tasks so as to improve the management, monitoring and performance of contracts. On the supplier side, businesses can also concentrate on improving their offer rather than focusing on compliance with administrative requirements.

Adoption of the EU legal framework for the use of electronic means in the public procurement process was a first significant step in order to remove legal uncertainties and establish the required safeguards for open, transparent and non-discriminatory public procurement using electronic means. The use of electronic means in the procurement process encompasses a broad range of solutions: the simple dispatch of notices for publication on electronic tender boards; the online access to tender documents and specifications; the exchange of messages and electronic submission of tenders and the evaluation and award of contracts including electronic auctions, and even fully fledged electronic systems for purchasing goods, services and works. But the use of electronic means is not limited to public procurement procedures only: it extends to the whole purchasing cycle from the stage of

²³ "Electronic Government Procurement World Bank draft strategy", October 2003; "OECD Information Technology Outlook 2004"

²⁴ Although environmental concerns are not a key issue here, some reports have found a positive impact in terms of reduction in the use of paper as a result of digitisation of the procurement process. MOD/Industry Commercial Policy Group: "Defense e-Business – A guide to Commercial Issues". (2004)

defining specifications up to billing and monitoring of contracts. Some of the most advanced IT applications developed by the market in e-business are used precisely in the ordering and invoicing stages of the purchasing cycle.

The transformation of paper based to electronic procurement is a complex operation which requires action and decisions at many levels beyond the simple transposition of the new rules at national level. Organisational, technical and institutional issues should be addressed in order to re-engineer existing processes for tendering and purchasing, so as to be able to exploit the available ICT solutions and tools.

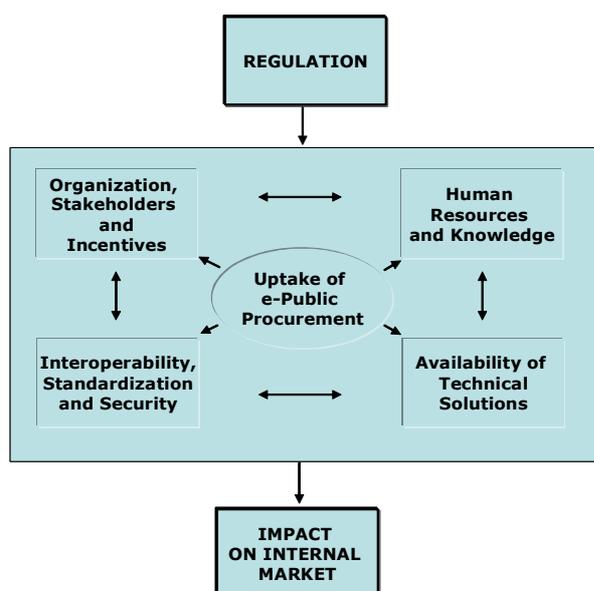
The move from paper based to electronic procurement is not without risks. Incorrect application of the new EU rules and discriminatory technical solutions and practices can deter businesses from embracing electronic public procurement and effectively fragment the Internal Market. Correct and timely implementation of the new EU provisions on electronic public procurement will determine Europe's capacity to keep the market open for public procurement conducted electronically and reaching a critical mass of users (buyers and suppliers). 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.

Spreading electronic public procurement across Member States and regions is a major challenge for most public authorities. Its effective use will determine the size of benefit for buyers, suppliers and the economy as a whole. Network effects are important in this area and therefore achieving a balanced development across all Member States is crucial for releasing the full potential from moving public procurement online. Its speedy application in all Member States will be decisive for further raising Europe's competitiveness. The challenge for policy makers and public purchasers is to ensure that the legal and technical conditions do not raise barriers to the Internal Market and allow for effective, open and fair competition in public procurement across Europe.

The driving forces in introducing electronic public procurement and parties affected

Various factors will influence and determine the development of operational electronic public procurement. Figure 2 illustrates the main driving forces which are expected to influence the transformation of traditional paper based to electronic procurement. While there can be

Figure 2: Main driving forces influencing developments in the electronic public procurement market



Source: *Impact assessment on Action Plan on electronic procurement*, Ramboll Management

variations between Member States and differences in the importance of these forces, the model is rather generic and can be used for analysing alternative options for policy intervention in order to promote electronic public procurement across Europe.

The fundamental role of the *regulatory framework* is evident. The forthcoming transposition into national law of the EU procurement rules will provide the framework for the evolution of electronic public procurement in the coming years. The correct understanding of these rules, their timely implementation and uniform application will determine to a large extent the pace and quality of the environment for moving traditional public procurement procedures online.

The *institutional set up and organisational structures* put in place to operate public procurement electronically are one of the keys for the successful switch to electronic public procurement. They determine the relations of contracting authorities with different stakeholders, define their respective roles and responsibilities and establish a framework for the interaction between the authorities involved and private economic operators. There are numerous contracting authorities of different sizes and institutional character involved in the organisation of procurement competitions. There can be large government purchasing organisations (e.g. Ministries or central purchasing bodies), or small organisations, such as municipalities and local authorities. Similarly, on the supply side a wide range of businesses with different profiles and interests are involved. It is clear that administrations and businesses have a mutual interest in working together in order to benefit both from the opportunities offered by electronic means in the procurement process. However incentives, of the different stakeholders can vary enormously, therefore in order to succeed in operating procurement electronically the institutional and organisational set up should provide the right balance and the right incentives to all the stakeholders involved.

Human resources, knowledge and organisational capacity as well as ICT skills are capital in moving procurement online as they determine the readiness of the actors involved to employ new working processes and apply new technologies. In moving public procurement online staffs both in the public and in the private sectors will need to become familiar with the new tools and procedures. Retraining staff to deal with more qualified tasks will also be necessary on both sides. Even if ICT technologies could fully automate the different stages in the

purchasing process, human resources would remain central as they define the processes and programme, manage the IT systems and ultimately decide on actual purchases.

Finally, the *technology available* for electronic public procurement and the level of standardisation in solutions applied will determine the evolution and uptake of electronic procedures. The concept of *interoperability* stands out as a core element here, that is, the mutual compatibility of systems used by buyers and suppliers. Interoperability is important in the entire procurement process - from tendering to invoicing - to ensure that the move of public procurement online does not create new barriers to actors willing to participate in public procurement markets. A high degree of interoperability will increase participation in procurement carried out electronically whereas lack of interoperability will constitute an important barrier. *Security* is also an important issue. Some suppliers and buyers are concerned about using the Internet to transmit confidential information. Possible security flaws in transactions over the internet can decrease supplier confidence and trust in e-procurement, while too high security standards can generate barriers to electronic transactions if the solutions applied are not generally available.

9.3. Annex III: Results of the interactive policy making survey

Section 1			
Please indicate whether you are:			
		Number of replies	% of total
	a company	354	(85.7%)
	a business association	59	(14.3%)
Please indicate your main sector of activity.			
		Number of replies	% of total
	Services	223	(54%)
	Manufacturing	67	(16.2%)
	Other, please specify:	47	(11.4%)
	Trade	40	(9.7%)
	Construction	36	(8.7%)
Please indicate whether your business association is:			
		Number of replies	% of total
	National	33	(8%)
	European	9	(2.2%)
	International	7	(1.7%)
	Other, please specify:	6	(1.5%)
Please indicate the number of employees in your company.			
		Number of replies	% of total
	1 - 9	100	(24.2%)

	10 - 49	74	(17.9%)
	50 - 249	83	(20.1%)
	> 250	92	(22.3%)

Please indicate in which country you are based.			
		Number of replies	% of total
	EU Member State	379	(91.8%)
	Rest of Europe	14	(3.4%)
	North America	8	(1.9%)
	European Economic Area (Norway, Iceland, Lichtenstein)	3	(0.7%)
	Rest of the world	3	(0.7%)
	Asia	2	(0.5%)
Please specify:			
		Number of replies	% of total
	France	74	(17.9%)
	Germany	65	(15.7%)
	United Kingdom	50	(12.1%)
	Sweden	33	(8%)
	Netherlands	31	(7.5%)
	Belgium	17	(4.1%)
	Spain	14	(3.4%)
	Finland	14	(3.4%)
	Austria	11	(2.7%)
	Portugal	11	(2.7%)
	Italy	7	(1.7%)
	Hungary	6	(1.5%)

	Czech Republic	5	(1.2%)
	Ireland	5	(1.2%)
	Latvia	4	(1%)
	Denmark	3	(0.7%)
	Poland	3	(0.7%)
	Greece	2	(0.5%)
	Malta	2	(0.5%)
	Slovenia	2	(0.5%)
	Luxembourg	1	(0.2%)
	Slovak Republic	1	(0.2%)
	Cyprus	0	(0%)
	Estonia	0	(0%)
	Lithuania	0	(0%)
Apart from your home country, in how many countries of the European Union do you regularly sell products and / or services?			
		Number of replies	% of total
	1 - 4	126	(30.5%)
	5 - 10	46	(11.1%)
	11 - 15	15	(3.6%)
	> 15	11	(2.7%)
	all Member States of the European Union	32	(7.7%)
	none	107	(25.9%)
Do you do business electronically with other businesses?			
		Number of replies	% of total

	Occasionally	124	(30%)
	Often	110	(26.6%)
	Main way of doing business	42	(10.2%)
	Never	38	(9.2%)
	Considered the possibility only	23	(5.6%)
Which of the following do you use when doing business electronically? Please tick the appropriate box(es).			
		Number of replies	% of total
	Downloading of specifications and business related documents	303	(73.4%)
	Online search for business opportunities	278	(67.3%)
	Electronic catalogues	211	(51.1%)
	Electronic payments	207	(50.1%)
	Receiving orders electronically	180	(43.6%)
	Submitting of offers online	178	(43.1%)
	Sending electronic invoices	118	(28.6%)
	Electronic marketplaces	89	(21.5%)
	Electronic auctions	87	(21.1%)
	Exchange of data using XML standards	84	(20.3%)
	Electronic signatures	80	(19.4%)
	Other EDI based applications	51	(12.3%)
	Other	24	(5.8%)
	Not applicable	16	(3.9%)
	I am not familiar with any of these tools	10	(2.4%)
Section 2			
Have you ever bid for public tenders in your home or in another Member			

State?			
		Number of replies	% of total
	Often	150	(36.3%)
	Occasionally	104	(25.2%)
	Never	74	(17.9%)
	Main area of business	57	(13.8%)
	Considered the possibility only	28	(6.8%)
In relation to public tenders using electronic means, which of the following aspects would you consider most important? Please tick the appropriate box(es).			
		Number of replies	% of total
	It must require less effort than traditional paper based means	264	(63.9%)
	Transparency of the electronic tendering procedures	261	(63.2%)
	The required IT tools must be easy to use and reliable	258	(62.5%)
	Confidence in the fairness of the contract awarding procedure	217	(52.5%)
	A secure environment for transactions	204	(49.4%)
	The required IT tools must be generally available	177	(42.9%)
	Investment costs in IT tools must be reasonable	139	(33.7%)
	Fewer legal requirements than traditional paper based procedures	121	(29.3%)
	Training of my staff	58	(14%)
	Other	15	(3.6%)
	I don't know	15	(3.6%)
Section 2.1			
a. The online search for tender opportunities:			

		Number of replies	% of total
	is not useful	11	(2.7%)
	makes no difference	19	(4.6%)
	is useful	337	(81.6%)
	I don't know	11	(2.7%)
	I have no experience with this tool	34	(8.2%)

b. Electronic marketplaces:

		Number of replies	% of total
	are not useful	14	(3.4%)
	make no difference	31	(7.5%)
	are useful	218	(52.8%)
	I don't know	27	(6.5%)
	I have no experience with this tool	119	(28.8%)

c. Electronic catalogues:

		Number of replies	% of total
	are not useful	8	(1.9%)
	make no difference	29	(7%)
	are useful	285	(69%)
	I don't know	21	(5.1%)
	I have no experience with this tool	65	(15.7%)

d. Electronic auctions:

		Number	% of total
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		r of replies	
	are not useful	71	(17.2%)
	make no difference	20	(4.8%)
	are useful	136	(32.9%)
	I don't know	26	(6.3%)
	I have no experience with this tool	148	(35.8%)
e. The downloading of specifications and tender documents:			
		Number of replies	% of total
	is not useful	3	(0.7%)
	makes no difference	11	(2.7%)
	is useful	371	(89.8%)
	I don't know	6	(1.5%)
	I have no experience with this tool	17	(4.1%)
f. The submission of offers online:			
		Number of replies	% of total
	is not useful	18	(4.4%)
	makes no difference	21	(5.1%)
	is useful	293	(70.9%)
	I don't know	10	(2.4%)
	I have no experience with this tool	67	(16.2%)
g. Electronic signatures:			
		Number of replies	% of total

	are not useful	14	(3.4%)
	make no difference	42	(10.2%)
	are useful	216	(52.3%)
	I don't know	17	(4.1%)
	I have no experience with this tool	120	(29.1%)

h. The tracking of orders online:			
		Number of replies	% of total
	is not useful	11	(2.7%)
	makes no difference	17	(4.1%)
	is useful	279	(67.6%)
	I don't know	16	(3.9%)
	I have no experience with this tool	79	(19.1%)
i. Receiving orders electronically:			
		Number of replies	% of total
	is not useful	6	(1.5%)
	makes no difference	27	(6.5%)
	is useful	291	(70.5%)
	I don't know	16	(3.9%)
	I have no experience with this tool	69	(16.7%)
j. Electronic invoicing:			
		Number of replies	% of total
	is not useful	7	(1.7%)
	makes no difference	36	(8.7%)
	is useful	247	(59.8%)
	I don't know	16	(3.9%)
	I have no experience with this tool	99	(24%)
k. Electronic payments:			

		Number of replies	% of total
	are not useful	6	(1.5%)
	make no difference	28	(6.8%)
	are useful	289	(70%)
	I don't know	19	(4.6%)
	I have no experience with this tool	68	(16.5%)

1. Documents using XML standards:			
		Number of replies	% of total
	are not useful	6	(1.5%)
	make no difference	12	(2.9%)
	are useful	177	(42.9%)
	I don't know	68	(16.5%)
	I have no experience with this tool	140	(33.9%)

Section 3			
Which, if any, significant problems or barriers have you encountered - or do you anticipate - when using electronic means whilst participating in public procurement in your own country? Please tick the appropriate box(es).			
		Number of replies	% of total
	Inappropriate design of tendering systems	181	(43.8%)
	Incompatible IT standards	123	(29.8%)
	Inappropriate security arrangements	106	(25.7%)
	Inadequate legal framework	97	(23.5%)
	Insufficient commercial benefits	86	(20.8%)
	High adjustment costs	66	(16%)
	Lack of IT skills	58	(14%)
	I don't know	52	(12.6%)
	No barriers encountered	50	(12.1%)
	My business is not suited for electronic trade	42	(10.2%)
	The necessity of reorganising our company	35	(8.5%)
	Other	21	(5.1%)

Which, if any, significant problems or barriers have you encountered - or do you anticipate - when using electronic means whilst participating in public procurement in other EU Member States? Please tick the appropriate box(es).

		Number of replies	% of total
	Linguistic barriers	141	(34.1%)
	Inappropriate design of tendering systems	135	(32.7%)
	I don't know	121	(29.3%)
	Incompatible IT standards	119	(28.8%)
	Inadequate legal framework	102	(24.7%)
	Inappropriate security arrangements	84	(20.3%)
	Insufficient commercial benefits	54	(13.1%)
	High adjustment costs	53	(12.8%)
	Lack of IT skills	52	(12.6%)
	My business is not suited for electronic trade	31	(7.5%)
	The necessity of reorganising our company	25	(6.1%)
	Other	21	(5.1%)
	No barriers encountered	14	(3.4%)

Which other factors do you think may limit the generalised use of electronic public procurement? Please tick the appropriate box(es).

		Number of replies	% of total
	Different rules in Member States	248	(60%)
	Complex rules in tendering procedures	212	(51.3%)
	Lack of information on how electronic tendering works	193	(46.7%)
	Fear of corrupt practices	131	(31.7%)

	Unsatisfactory rules on the security of data transmission	121	(29.3%)
	Lack of trust in electronic tools	118	(28.6%)
	Risks involved in doing business electronically	104	(25.2%)
	I don't know	20	(4.8%)
	Other	16	(3.9%)
	None of the above	15	(3.6%)

Are you aware that the recently adopted European Directives on public procurement introduce, for the first time, the use of electronic means in public procurement?			
		Number of replies	% of total
	Yes	221	(53.5%)
	No	145	(35.1%)
	I don't know	47	(11.4%)
Do you believe that the new rules on the use of electronic means in public procurement will resolve the concerns you mentioned earlier?			
		Number of replies	% of total
	Yes	48	(11.6%)
	No	62	(15%)
	I don't know	102	(24.7%)
In which fields do you think the European Commission should further undertake action in order to resolve the concerns you mentioned earlier? Please tick the appropriate box(es).			
		Number of replies	% of total
	Standardisation of forms and documents	278	(67.3%)
	Promotion of simple and generally available tools for procurement	249	(60.3%)
	Standardisation of electronic tools	194	(47%)
	Modernisation of the legal environment	182	(44.1%)
	Interoperability between electronic procurement systems	167	(40.4%)
	Environment for secure transactions	142	(34.4%)
	Remove obstacles to crossborder transactions	127	(30.8%)

	I don't know	20	(4.8%)
	Other	13	(3.1%)

Section 4			
Do you think that using electronic means in public procurement will make it easier to do business with the public sector?			
		Number of replies	% of total
	Yes	291	(70.5%)
	No	76	(18.4%)
	No opinion	46	(11.1%)
In your opinion, are there any substantial differences between trading with businesses electronically and doing electronic procurement with the public sector?			
		Number of replies	% of total
	Yes	209	(50.6%)
	No	127	(30.8%)
	No opinion	77	(18.6%)
The level of service is:			
		Number of replies	% of total
	worse	70	(16.9%)
	more or less the same	53	(12.8%)
	better	38	(9.2%)
	No opinion	36	(8.7%)
Procedures are:			
		Number of replies	% of total

	more or less the same	72	(17.4%)
	more unfair	55	(13.3%)
	fairer	37	(9%)
	No opinion	34	(8.2%)

Costs are:			
		Number of replies	% of total
	lower	63	(15.3%)
	higher	56	(13.6%)
	more or less the same	50	(12.1%)
	No opinion	26	(6.3%)
The level of trust is:			
		Number of replies	% of total
	more or less the same	82	(19.9%)
	lower	55	(13.3%)
	higher	35	(8.5%)
	No opinion	25	(6.1%)
Tendering systems are:			
		Number of replies	% of total
	more or less the same	71	(17.2%)
	No opinion	53	(12.8%)
	not reliable	36	(8.7%)
	reliable	35	(8.5%)
Tendering systems are:			
		Number of replies	% of total
	Complex to use	94	(22.8%)

	More or less the same	41	(9.9%)
	No opinion	35	(8.5%)
	Easy to use	28	(6.8%)

Section 4.1			
a. The use of electronic means in public procurement makes the process:			
		Number of replies	% of total
	more transparent	175	(42.4%)
	more or less the same	162	(39.2%)
	less transparent	42	(10.2%)
	No opinion	34	(8.2%)
b. Electronic means in public procurement provides:			
		Number of replies	% of total
	more or less the same security	218	(52.8%)
	more security	86	(20.8%)
	less security	57	(13.8%)
	No opinion	52	(12.6%)

c. The use of electronic means in public procurement:			
		Number of replies	% of total
	decreases transaction costs	266	(64.4%)
	more or less the same	82	(19.9%)
	No opinion	38	(9.2%)
	increases transaction costs	27	(6.5%)
d. Using electronic means in public procurement makes the process:			
		Number of replies	% of total
	faster	287	(69.5%)
	more or less the same	86	(20.8%)
	No opinion	31	(7.5%)
	slower	9	(2.2%)
e. The use of electronic means in public procurement makes it:			
		Number of replies	% of total
	easier to find information	300	(72.6%)
	more or less the same	58	(14%)
	No opinion	29	(7%)
	harder to find information	26	(6.3%)
f. Using electronic means in public procurement will help:			
		Number of replies	% of total

	competition to increase	215	(52.1%)
	more or less the same	136	(32.9%)
	No opinion	37	(9%)
	competition to decrease	25	(6.1%)

g. Using electronic means in public procurement creates:			
		Number of replies	% of total
	more business opportunities within the Internal Market	205	(49.6%)
	more or less the same	131	(31.7%)
	No opinion	47	(11.4%)
	less business opportunities within the Internal Market	30	(7.3%)
h. Using electronic means in public procurement:			
		Number of replies	% of total
	enhances international co-operation	77	(18.6%)
	more or less the same	33	(8%)
	No opinion	10	(2.4%)
	makes international co-operation more difficult	1	(0.2%)
h. Using electronic means in public procurement:			
		Number of replies	% of total
	allows easier access to new markets	272	(65.9%)
	more or less the same	88	(21.3%)
	No opinion	31	(7.5%)
	limits access to new markets	22	(5.3%)
Section 4.2			
How advanced is your country in the move from paper based means to electronic means in the area of public procurement?			
		Number of	% of total

		replies	
	Electronic means are starting to be used in public procurement	262	(63.4%)
	I don't know	57	(13.8%)
	Procedures are all based on paper based means	56	(13.6%)
	Electronic means are generally used in public procurement	35	(8.5%)
	Procedures are all based on electronic means	3	(0.7%)

In what way do you think that electronic means should be introduced in public procurement within the EU?			
		Number of replies	% of total
	Progressively	246	(59.6%)
	Immediately	128	(31%)
	No opinion	19	(4.6%)
	Maybe in 5 years..	12	(2.9%)
	Never	8	(1.9%)
In which sectors do you think that the use of electronic means in public procurement will create most opportunities?			
		Number of replies	% of total
	Services	250	(60.5%)
	Trade	186	(45%)
	Construction	103	(24.9%)
	Manufacturing	96	(23.2%)
	No opinion	74	(17.9%)
In your opinion, how will a generalised use of electronic means in public procurement impact on SME's?			
		Number of replies	% of total
	SME's will have more opportunities to penetrate new markets	206	(49.9%)
	SME's will have lower bidding costs	151	(36.6%)
	The increase of competition will squeeze SME's margins	129	(31.2%)

	SME's risk loosing long-term business relationships	116	(28.1%)
	SME's are outcompeted by larger companies	89	(21.5%)
	I don't know	67	(16.2%)
	None of the above	12	(2.9%)
	Other	10	(2.4%)