

# **WHITE PAPER**

## **Exploiting the possibilities of e-procurement in the public sector**

## **Abstract**

This white paper is based on the nomination of the Norwegian electronic public procurement portal [www.ehandel.no](http://www.ehandel.no) for European eAwards for eGovernment – 2005 and the Norwegian strategy document “Strategy and actions for the use of electronic business processes and electronic procurement in the public sector”.

The Norwegian Government has established a fully operational tool for electronic public procurement. The main goal of the initiative was to attain a critical user mass of electronic public procurement by lowering the threshold for taking e-procurement into use, both for public sector entities and their suppliers.

The Norwegian e-procurement initiative was approved by the Cabinet in 1999 and the Programme for Electronic Commerce in the Norwegian Public Sector was established for the period 1999 to 2003 and prolonged to the end of 2004. From 2005, the initiative is organised as an e-procurement Secretariat under the Ministry of Modernisation. The direction for the future work on electronic public procurement are given in the strategy document “Strategy and actions for the use of electronic business processes and electronic procurement in the public sector” presented in October 2005 by the Ministry of Modernisation as a follow-up to the eGovernment initiative “eNorway 2009 - the digital leap”.

For administrations, the use of electronic public procurement has made more time and money available for improved public service production. Experiences from Norwegian public sector entities indicate a potential for 20-40 % time reductions in handling of orders, goods receipts and invoices, and between 2-10 % price reductions in operations related procurement expenditures.

The current public sector user organisations on [ehandel.no](http://ehandel.no), represents approximately 25 % of the total Norwegian public sector operations related procurement expenditures (€14 billions). There is still a huge growth potential in actual use, but the general perception is that critical mass of users has been reached.

In a study initiated by the European Commission [ehandel.no](http://ehandel.no) is recognised as a leading solution for electronic public procurement in Europe. The study also indicates that the Norwegian focus and priorities of tendering and ordering in the value chain of public procurement represent a proper way to secure implementation of e-procurement tools and to cater for cost cutting and more efficient public procurement processes.

The key innovations of [ehandel.no](http://ehandel.no) lies in the flexible Internet based service provision concept and the business model for co-operation with a private company as service provider. The concept and business model has made it easier for public sector entities to take e-procurement into use and led to a considerable reduction of cost and risk in implementation projects. The result is easy access to a user friendly and affordable tool for operational e-procurement both for public sector entities and their suppliers.

The lessons learned in the Norwegian initiative should be relevant to all member state administrations that are interested in following up the EU Action plan for the implementation of the legal framework for electronic public procurement.

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# 1 Background

## 1.1 Introduction

Electronic public procurement is a tool for modernisation of the public sector and realisation of benefits both in administrations and businesses. Modernisation of the public sector is necessary in order to ensure future welfare for the citizens.

The Norwegian electronic public procurement portal [www.ehandel.no](http://www.ehandel.no) was established in 2002 in order to attain a critical user mass of electronic public procurement. The introduction of electronic public procurement has been embedded in different national and local/regional eGovernment strategies since 1999. In October 2005 the strategy document "Strategy and actions for the use of electronic business processes and electronic procurement in the public sector" was presented as a follow-up to the eGovernment initiative "eNorway 2009 - the digital leap". Participation in [ehandel.no](http://www.ehandel.no) activities is open for central, regional and local authorities and their suppliers. The total budget for centralised co-ordination, facilitation and support activities has been €2,5M from 1999.

The purpose of [ehandel.no](http://www.ehandel.no) is to give public sector entities and their suppliers easy access to a user friendly and affordable tool for operational e-procurement.

## 1.2 Specific problem addressed

The Norwegian electronic public procurement portal [www.ehandel.no](http://www.ehandel.no) has had an initial focus on handling of orders. More support to sourcing activities and invoice handling will be prioritised in the next four years. Notification of public procurement in a national database and a centralised electronic connection with the EU Publication office (OPOCE) and the TED-database has been available since 1997. Use of the service has been made mandatory through the national public procurement regulations since 2001 and today close to 100% of Norwegian tenders above EU thresholds are sent electronically to TED.

Through the focus on the ordering process, the [ehandel.no](http://www.ehandel.no) initiative addresses challenges related to the highly decentralised nature of Norwegian public procurement. The public sector entities on all authority levels can decide quite freely where to purchase various goods and services, as long as the purchases are made in compliance with the EU-based Norwegian procurement regulations. The entities often consist of a considerable number of buyers. Compliance with procurement regulations is not only complicated by the multitude of buyers, but also by the practical difficulties in regard to the control aspect.

The challenge for the public sector entities is to achieve a sufficient level of loyalty towards procurement procedures in general and towards use of available framework agreements in specific, throughout their organisations. By using [ehandel.no](http://www.ehandel.no), the public sector entities have access to an efficient tool for implementation of procurement procedures and for distribution of updated information about goods and services available through each framework agreement: The public sector entities are given access to an easy-to-use e-procurement solution where their procurement procedures are applied and where it is easy to place orders in compliance with the available framework agreements.

In order to handle large numbers of buyers and suppliers, an effective and easy to distribute ICT-solution was needed. This should be an open standard, web based e-procurement solution, both for public sector buyers and their suppliers in the private sector. Such a solution would also eliminate the problem of being too tightly linked to the supplier's web shops and/or ordering technologies. For the public sector it is essential to be able to replace technology and/or suppliers without big cost and long timeframes.

It is important that the different public sector entities reduce the number of ICT-solutions involved in their procurement activities and cater for interoperability. Multiple system solutions without focus on

interoperability will give the suppliers implementation and integration challenges and increase the cost of handling public sector customers.

The Government has a clear policy on budget control. The best way to achieve control on spending vs. available budget on procurement is to secure electronic approval of the purchases *before* orders are sent to the suppliers. If the order information contains accounting information and is linked directly to the accounting system, one gets daily control on spending vs. budget.

### ***1.3 Political context and strategy***

The Norwegian e-procurement initiative was approved by the Cabinet in 1999 and the Programme for Electronic Commerce in the Norwegian Public Sector<sup>1</sup> was established for the period 1999 to 2003 and prolonged to the end of 2004. From 2005, the initiative is organised as an e-procurement Secretariat under the Ministry of Modernisation. The direction for the future work on electronic public procurement are given in the strategy document “Strategy and actions for the use of electronic business processes and electronic procurement in the public sector”<sup>2</sup> presented in October 2005 by the Ministry of Modernisation as a follow-up to the eGovernment initiative “eNorway 2009 - the digital leap”.<sup>3</sup>

In the 1999 government white paper,<sup>4</sup> five main strategies for implementing e-commerce and e-business in Norway were suggested:

- Good and predictable legal and economic framework conditions.
- Open ICT infrastructure and services.
- A sufficient number of users – i.e. through public procurement.
- Competence, knowledge and insight.
- Giving active consideration to social and public interests.

The goal was clearly defined: *Moving Norway to the forefront of development in e-commerce and e-business*. This will give socioeconomic benefits and enhance development of a competitive new branch of procurement in Norway. At the same time, fundamental values and socioeconomic considerations will be stressed in order to prevent undesirable consequences.

The overall goal for the electronic public procurement initiative was then to attain a critical user mass of electronic procurement in the public sector. The use of e-procurement in the public sector should contribute to lower procurement related costs and increase the quality of the public procurement process. Released resources from a more efficient procurement process should contribute to an increased service production in the public sector entities and an increased focus on their core activities. The electronic public procurement initiative should also contribute to an increase in overall procurement competence in the public sector. Furthermore, the initiative should help the public entities developing their negotiating and business skills to become a more professional and demanding customer, in order to achieve better terms from and relations to suppliers.

In the description of Programme for Electronic Commerce in the Norwegian Public Sector, the following critical success factors were indicated:

- The introduction of e-procurement will inevitably result in certain organisational changes. It must therefore be backed by solid cross-disciplinary, organisational and management support.
- Establishing a good, coordinated and standardised electronic infrastructure will be necessary, in order to meet the fundamental challenges that most certainly will arise. The Internet in itself will not be the answer to these challenges, but may present new opportunities.

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<sup>1</sup> The Programme description is available from [www.ehandel.no/data/file/file□51.pdf](http://www.ehandel.no/data/file/file□51.pdf)

<sup>2</sup> The strategy document is available from [www.ehandel.no/data/file/file□□□.pdf](http://www.ehandel.no/data/file/file□□□.pdf).

<sup>3</sup> The eNorway 2009 document is available from [www.odin.dep.no/filarkiv/254956/eNorway□□009.pdf](http://www.odin.dep.no/filarkiv/254956/eNorway□□009.pdf).

<sup>4</sup> □ hite paper 41 (199□99) About electronic commerce and business, Norwegian version is available from [www.odin.dep.no/nhd/norsk/dok/regpubl/stmeld/024005-040011/dok-bn.html](http://www.odin.dep.no/nhd/norsk/dok/regpubl/stmeld/024005-040011/dok-bn.html)

- Investments must be made in reasonable, simple and effective solutions which make it possible to derive and demonstrate benefits on a continuous basis. These benefits should be possible to measure on regular basis.
- Emphasis should be put on development of e-procurement competence relevant to the challenges and the understanding of the total public procurement value chain.

At the national level, the challenge was to create the right environment so that the different public sector entities would establish strategies and plans for their procurement activities with specific goals on the use of electronic means, so that professionalized and effective electronic public procurement could be implemented on the end user level.

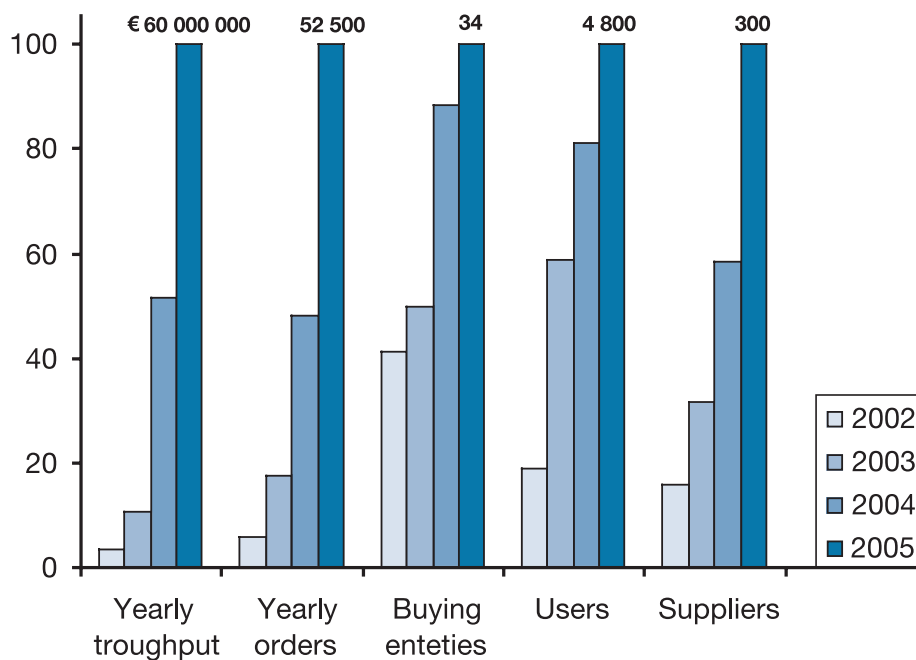
## 2 Impact and benefits

### 2.1 Statistics

In September 2005, the status for usage of ehandel.no was:

- Total throughput the last 12 month period: NOK 480 million (€ 60 million). The target for 2005 is NOK 1 billion (€ 125 million). Total throughput since start up in June 2002: NOK 655 million (€ 81 million).
- Total number of transactions the last 12 month period: 52 500. Totally 77 000 since start up in June 2002.
- 34 public entities use ehandel.no for electronic ordering. 23 of these are municipalities, 3 are counties (of a total of 433 municipalities and 18 counties) and 8 are central government entities.
- 4 800 persons are registered users of the web based e-procurement solution. In addition some 4 000 persons are users of internal ordering systems integrated with the ehandel.no platform.
- 300 suppliers are connected to the portal; in addition approximately 200 are currently in process for connection within 2005.

The graphs below show these figures divided in 12 month periods, where the current figures are given the value 100 %.



The current public sector user organisations on ehandel.no, represent approximately 25 % of the total Norwegian public sector operations related procurement expenditures (€14 billions). There is a huge growth potential in actual use, but the general perception is that critical mass of users has been reached.

In a study initiated by the European Commission<sup>5</sup> ehandel.no is recognised as a leading solution for electronic public procurement in Europe. The study also indicates that the Norwegian focus and priorities of tendering and ordering in the value chain of public procurement represent a proper way to secure implementation of e-procurement tools and to cater for cost cutting and more efficient public procurement processes.

## ***2.2 Impact among public sector entities***

For administrations, the use of electronic public procurement has made more time and money available for improved public service production. Experiences from Norwegian public sector entities indicate a potential for 20-40 % time reductions in handling of orders, goods receipts and invoices, and between 2-10 % price reductions in operations related procurement expenditures.

The Norwegian administration needs modernisation and generally more efficient processes in their service production to both citizens and businesses, in order to meet the future budget expansion due to an aging population. The Government acknowledges that implementation of effective ICT-tools is a major critical success factor in achieving more effective processes. The ICT strategy implemented by the Government focuses on avoiding “tie-in” strategies and having interoperable systems, preferably distributed through the Internet (where this is possible without the risk of security and data protection issues).

Implementation of new ICT tools, will eventually effect how administration employees do their daily work. The need for change and the ability to manage change are vital elements in succeeding. The need for transformation is a central aspect in ehandel.no projects in every public sector entity.

Another strategy in support of the same goal is regarding public sector as a professional and demanding customer to its suppliers. To implement this strategy, public sector needs to know: What is bought, how much, at what prices pr unit, who is buying and who is the supplier. Most ordinary accounting systems are unable to provide the answers. Implementing e-procurement systems integrated with budget and accounting systems, is the only way to introduce such a strategy without considerable costs and laborious processes.

Systems integration of e-procurement and invoicing has a huge impact on transaction processing in back-office. Some entities in public sector in Norway have pioneered in implementing full electronic and automatic match between the order and the invoice. When the match is 80-90% of the transaction is done automatically, back-office personnel will only have to handle the deviations and errors.

Previously, invoices were routed in the organisation for control, approval and accounting. This kind of process often took weeks and invoices were frequently lost. Many public sector entities had to pay interest and fines due to slow transaction process before payment was done. To get full control of the procurement process, many important questions had to be asked - and the answers were not at all easy to get:

- Have we received the goods or services ordered?
- Have we made any orders relating to the received goods or services?
- Are the prices in accordance with the contractual terms (where can I find information on prices and conditions in an easy way)?
- Who made the order, and is this person really authorised to make orders of this size?

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<sup>5</sup> European Commission, Internal Market Directorate-General: Impact Assessment: Action Plan on e-Public Procurement, Part 1: Baseline Analysis, December 2004 ([www.ehandel.no/data/file/file\\_237.pdf](http://www.ehandel.no/data/file/file_237.pdf)).

In a typical Norwegian public sector entity 90% of the resources are spent on control and accounting. Consequently, only 10% are available for purchasing. However, implementation of e-procurement is forever changing the back-office procedures and routines. A lesser amount of the resources will be demanded for back-office routines, enabling more focus to be put on the earlier stages of the value chain in a public procurement process. In this way more emphasis may be put on finding better suppliers (sourcing), making better agreements, partnering with suppliers and follow up every agreement in a way that present administration systems do not allow for.

### ***2.3 Impact among suppliers***

Implementing e-procurement effectively is not possible without the suppliers taking part. In the Norwegian electronic public procurement portal ehandel.no the suppliers are invited to participate by their public sector customers. The ehandel.no business model is based on both public sector entities and the suppliers paying for their active use of the e-procurement system. The suppliers have no cost for just receiving orders via e-mail or fax without having an eCatalogue present on ehandel.no. However, most public sector users of ehandel.no require the supplier to present their products in eCatalogues and many also require that the suppliers are able to respond to their orders via ehandel.no. In order to comply with these customer needs, the supplier must enter into an agreement with the operator of ehandel.no. Dependent of the price model chosen by the supplier (e.g. fixed price per customer, variable price dependent on sales volumes) they pay annual fees to the operator from €1500 to a maximum €15 000. Small suppliers can choose price models with an annual fee that is either €625 or €1250; dependent on the number of line items in their eCatalogues. Initially, there were some negative reactions from the suppliers on the business model and the price level. Now, the vast majority of suppliers are positive when invited to join ehandel.no as long as they can see that their public sector customer(s) are serious in their efforts to implement electronic procurement.

The results among the suppliers so far are that:

- An increasing number of suppliers acknowledge the importance of ehandel.no as a sales improving tool and are increasingly aware of the need for correct, sufficient and updated information in their eCatalogues.
- Most of the suppliers (also one-man companies) requested to join ehandel.no by their public sector customers now manage to produce eCatalogues with acceptable quality.
- Many suppliers have integrated ehandel.no with their internal order handling systems to improve their own back-office processes. Many more are in the process of doing so.
- The number of errors have dropped rapidly (in ordering and invoicing), improving the profitability in the relations with their public sector customers.
- The loyalty towards the agreements is improving and the suppliers get more business out of their agreements with their public sector customers.

All of this has a further and positive impact:

- Some suppliers are now offering up to 3 % price reductions if ordering is done through ehandel.no.
- Some suppliers - especially those with integration with their back-office systems - ask their public sector customers for more orders through ehandel.no. Hence, they are pushing for more volumes to get their part of the savings and increased quality in the ordering process.

The business environment is improving and the ehandel.no initiative has created basis for a win-win situation – not only as political “wishful thinking”, but in real life. Another important result is that the small and medium sized businesses are doing as well as the large companies on ehandel.no. Approximately 50% of the suppliers on ehandel.no belong to in this category.

## 3 Learning points

### 3.1 Current experiences

Based on Norwegian experiences so far, it seems that the lack of general knowledge about and competence on procurement as such is a major challenge needed to be addressed in an electronic public procurement initiative. This may also be the case in the follow up of the EU Action plan for the implementation of the legal framework for electronic public procurement. Too many public sector entities have too much of their focus on the legal aspects when entering into agreements with suppliers. Instead of saving their organisation a lot of money through favourable contracts as intended, they end up with a very costly way of repeatedly doing business with the same suppliers and in the same way as in previous years. There are several reasons for this. E.g. the typical users:

- Don't know about the new agreements.
- Don't know how to order from the new suppliers.
- Don't know the exact prices on their supplier's products and services.
- Don't care because nobody asks them anyway where and what they order at what prices.
- Are not in favour of changes. "I have been making orders for the last 20 years; nobody is going to tell me who has the best prices and quality".
- Have little or no incentives for changed behaviour in procurement matters.

The results of this may be dramatic. Experience from the ehandel.no initiative indicates that the loyalty toward existing agreements was as low as 20 to 40 percent. So when the procurement department is talking about how much money they have saved for the organisation, the management should focus on how the agreement is being spread/implemented in the organisation and what is being done to cater for actual use of the new agreements throughout all relevant parts of the organisation.

On a more general level, the single most important learning point from the establishment and operations of ehandel.no so far is that introduction of e-procurement should be looked upon as a change management project that needs top management attention and involvement. This may seem self evident but is still an important aspect to consider when preparing the public sector entities for the new electronic procurement future. Our conclusion is derived from the experience that introduction of electronic public procurement takes more time and demands more resources than expected – both in the public sector and among their suppliers.

The most important unique e-procurement related challenges experienced under the ehandel.no initiative are to provide the buyers with relevant, correct and up to date information as a basis for the buying decision. This implies a need to focus on:

- Supplier adoption – to have the relevant suppliers available.
- The establishment of high quality eCatalogues.
- Functionality in the solution and the user interface.

These lessons learned should be relevant to all member state administrations that are in the process of establishing e-procurement solutions. In addition, the member state administrations should bear in mind the following challenges:

- Do not underestimate the efforts needed to establish necessary awareness of procurement and e-procurement challenges and possibilities.
- Select the public procurement processes to be supported by electronic means carefully.
- Focus on establishment of relevant e-procurement services at an affordable price and acceptable risk for both public sector entities and their suppliers.
- Focus on the fact that e-procurement services are not a goal in itself, but a way of achieving real and considerable benefits related to procurement activities as such.

The use of a private company as operator of ehandel.no has been a success so far. This conclusion can be drawn from the fact that:

- The service provider has substantial synergy effects with the operations of similar services in the private sector.
- The chosen business model has led to a considerable reduction of cost and risk for the Norwegian administration compared to self development or other more traditional models.

### ***3.2 The way forward***

The results achieved through the ehandel.no initiative and the learning points made so far on implementation of electronic public procurement give Norway a good starting point for further efforts in the years to come. The national ambitions for electronic public procurement are set in the eGovernment plan eNorway 2009 – the digital leap: <sup>6</sup>

- By 2007, all public sector entities shall have goals, strategies and plans for their procurement that include use of electronic processes.
- By 2009, 25 percent of the volume of public sector operations related procurement shall be wholly or partly achieved through competition based on electronic processes for interaction with suppliers.

For realisation of these ambitions, the strategy document “Strategy and actions for the use of electronic business processes and electronic procurement in the public sector” was presented in October 2005. Here, emphasis is placed on that Norwegian public sector entities should be able to conduct all their procurement activities by electronic means.

This implicates a focus on the total public procurement value chain:



Under the strategy and action plan it is proposed to prioritise increased support for electronic invoice handling and publication of tenders when new projects are initiated. Further, a continued development and functionality enhancement on existing solutions on notification ([www.doffin.no](http://www.doffin.no)) and ordering ([www.ehandel.no](http://www.ehandel.no)) is prioritised. A pilot project on electronic support for the sourcing process was initiated in January 2005 and will also be followed up as part of the strategy and action plan.

## **4 Transferability**

The key innovations of ehandel.no lies in the flexible Internet based service provision concept and the business model for co-operation with a private company as service provider. The concept and business model has made it easier for public sector entities to take e-procurement into use and led to a considerable reduction of cost and risk in implementation projects. The result is easy access to a user friendly and affordable tool for operational e-procurement both for public sector entities and their suppliers.

The lessons learned in the Norwegian initiative should be relevant to all member state administrations interested in following up the EU Action plan for the implementation of the legal framework for electronic public procurement. The ehandel.no project covers planning, design, implementation, roll-out and monitoring of an electronic public procurement initiative. Other administrations would

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<sup>6</sup>The eNorway 2009 document is available from [www.odin.dep.no/filarkiv/254956/eNorway\\_2009.pdf](http://www.odin.dep.no/filarkiv/254956/eNorway_2009.pdf)

have the best value from sharing the Norwegian experiences in the planning and design phase of new projects.

As a supplement to our Norwegian website, information can be found in English on [www.ehandel.no/english](http://www.ehandel.no/english). This is some of the information currently available:

- Background information about the Norwegian e-procurement initiative
- Report on the experiences gained from the establishment project of ehandel.no.
- eCatalogue documentation: The Norwegian electronic public procurement portal ehandel.no is an important channel for distribution of the content of framework agreements to the individual buyers in the different public sector entities. This is done through the use of eCatalogues. In this section, you will find information on how the eCatalogues are established and maintained and on the contents of the eCatalogues used in ehandel.no, including:
  - o A platform independent/semantic description of the business processes used on the portal ehandel.no in order to establish and maintain product catalogues
  - o A catalogue toolkit that gives guidance to suppliers on how to establish a high quality eCatalogue
- Infrastructure for e-procurement: When ehandel.no was established, emphasis was placed on establishing the e-procurement portal as an integral part of an open infrastructure for electronic business. The main results of this approach are documented through the following deliverables
  - o Platform Independent Model (MDA/UMM/ebXML)
  - o Platform Specific Realisation (xCBL 3.0)
  - o Collaboration Protocol Agreement (CPA)
- Specifications of ehandel.no:
  - o E-procurement solution – functional specifications
  - o E-commerce platform – functional specifications
- Articles and presentations

The Norwegian Ministry of Modernisation eProcurement secretariat is available for further information and sharing of experiences. Contact us via [info@ehandel.no](mailto:info@ehandel.no).

More information on Norwegian experiences, specifications  
etc. can be found on [www.ehandel.no/english](http://www.ehandel.no/english).  
The Norwegian Ministry of Modernisation eProcurement secretariat  
is available for further information and sharing of experiences.  
Contact us via [info@ehandel.no](mailto:info@ehandel.no).