

## The Virtual Customs Office – eServices for Traders, Citizens, Students, Press and Media

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### Introduction

It is said that a Customs Officer holds the oldest profession in the world, full of traditions and values. However, the world continuously moves on and so must European Customs administrations in order not to become extinct; adopting working-methods and services to the 21<sup>st</sup> century. This challenge must be taken seriously especially by countries that like Sweden is dependent on foreign trade, hence making Customs a business advantage. Therefore increased service-levels and trade-facilitation has been on the agenda of Swedish Customs for years, resulting in among other things sophisticated automated risk-analysis and certification of compliant operators (The Stairway®).

However, Customs is complex and needs for individual support independent of time and room is growing due to increased trade volumes and globalisation. Swedish Customs offers customers free supportive web-services for customs-business in order to facilitate day-to-day work and also strengthen Swedish competitiveness through The Virtual Customs Office. Unique service-options for unique customers based on modern technology increase quality and efficiency at the same time as compliance costs decreases. Smart mobile solutions with high degree of scalability and good cost/benefit will make Europe a strong global economy with a bright future. Please visit <http://www.customs-vip.info/eGov/> for a glimpse of the future already today!

### Background

Customs was assigned by Swedish Government to be in the front regarding service-levels and the use of information technology among Swedish public services. Hence Swedish Customs offered Swedish traders the possibility to submit electronic Customs-declarations through the Customs Information System by use of EDIFACT already in the beginning of the 1990's. This strategic setup has resulted in a 90 % plus of all declarations today is submitted electronically. Through automated clearance systems 70 % plus of the declarations are treated within three minutes. Since then increased trade-volumes, more complex legislation, globalisation, new technology and tougher demands on public services have meant that new business-opportunities have been identified as interesting challenges.

Swedish Customs initiated in the year 2000 the construction of The Virtual Customs Office in order to give Swedish trade possibility to apply seamless electronic processes in order to enjoy efficient and effective foreign trade procedures. The earliest initiative was a pre-study performed under the management of Swedish Customs Head of Strategy outlining the concept of The Virtual Customs Office to be. Already at this early stage it was clear that information and eServices must be divided into different functions in order to provide the best service possible for the different customer-segments identified. Due to the mobility of the contemporary world it was already at an early stage decided to use web-technology as the basis of the design of The Virtual Customs Office. Swedish Customs apply the perspective “from outside and in” in order to put the client in focus. Hence customers were invited at the earliest stage possible to discuss the kind of eServices and solutions desired, resulting in the overall concept of The Virtual Customs Office, providing all services given by a traditional office and also added

value through the use of modern technology. Currently more than 500 traders frequently use the numerous services integrated in The Virtual Customs Office.

### Specific objectives

Through application of customer-orientated development strategies, Swedish Customs rapidly arrived at the conclusion that not all customers have similar needs, competence or even prerequisites, still The Virtual Customs Office's overall objective was availability for every user, offering the same level of service at all times. The solution must focus on availability 24/7 around the year and also offering eServices that would add value for the customers regardless of their level of competence and prerequisites. The challenge to conquer and short term objective was to align services of equal high quality for all users of The Virtual Customs Office. The solution was to create different segments of customers and then develop tailor-made solutions for each of the segments based on the dialogue established. Currently The Virtual Customs Office provides uniquely designed eServices for the segments Frequent Traders, Infrequent Traders, Citizens, Students and Press & Media.

The long term objectives for The Virtual Customs Office are to enable seamless electronic processes covering the full value chain through use of sophisticated eServices and total mobility. In order to achieve this, tailor-made web-services according to the needs of each of the customer segments are made available for free, in the areas Information, Communication, Tools and Transactions.

### Resources - influences from outside, solutions from within

The Virtual Customs Office was developed by Swedish Customs within given financial framework of the research and development budget meaning that no external or otherwise not already existing funding was made available. This normally rather frustrating situation turned out to be full of opportunities since Swedish Customs had to manage the full development, implementation and maintenance of The Virtual Customs Office with given human and financial structure meaning that the in-house competence had to match the overall objectives. Swedish Customs' in-house IT-department along with key-staff at the Customs Future Centre proved to be sufficient in order to fulfil the objectives laid down for The Virtual Customs Office. Design, technical development and implementation was performed under the guidance of the Deputy Director General with resources from all processes of Swedish Customs, hence paving way for successful internal implementation, necessary organisational reallocations and other strategic decisions. At the same time permanent organisational structures were established in order to secure maintenance and updating in dialogue with the managers for the processes of Swedish Customs. A person responsible was appointed for each of the defined customer-segments with the task to continuously develop new solutions in close dialogue with the users. Every piece of information in and every eService of The Virtual Customs Office has been appointed to a responsible person, or information-manager, ensuring that the content always is updated and relevant. The Virtual Customs Office is proof that existing skills and competence will greatly suffice in order to face the challenging future and produce desired, frequently used and praised solutions.

### Keep it technically simple

The objective to integrate electronic processes might imply complex technical solutions and laid down certain knowledge on behalf of the users both external and internal. However, this is not the case regarding The Virtual Customs Office where the need for technical skills on

the user-level has been kept to an absolute minimum. The three examples below will briefly describe this and in combination with <http://www.customs-vip.info/eGov/> Swedish Customs visualises the practical use of The Virtual Customs Office.

#### *Customs Internet declaration*

As mentioned before Swedish Customs at a very early stage embraced means of electronic communication by use of EDIFACT that was successfully implemented. However technical development enabled the design of an application for submitting declarations also over the Internet: Swedish Customs Internet Declarations Service could be designed and implemented. By use of logical and easy-to-fill-in web-forms customers are today able to submit declarations with the only prerequisites of Internet-access and registration at Swedish Customs as users. By means of communication Swedish Customs has chosen XML-format, something that might seem natural due to the almost global focus on XML today, for instance UN ebXML. However, the application of XML-based communication of Swedish Customs has proved its innovativeness through having obtained the European XML Award in 2002, a benchmark that The Virtual Customs Office and all of its human enablers proudly cherish. The concept of the Swedish Customs Internet Declaration was promoted in a special campaign through a joint letter signed by both Swedish Minister of Finance, Mr Bo Ringholm, and Swedish Minister of Trade, Mr Leif Pagrotsky. It was promoted to small- and medium sized enterprises and currently has more than a 100 frequent users. Also internationally the solution has verified its potency. A Green Corridor with Russia has been established where the Customs Internet Declaration form the basis for accredited Swedish companies allowing facilitated bordercrossing into Russian territory.

#### *Security solution*

Regarding security Swedish Customs at the earliest stage possible entered a dialogue with the customers in order to listen in on their needs, desires and possibilities. It soon became evident that due to increased mobility and globalisation even small and medium-sized companies requested a solution enabling them to perform their day-to-day Customs-business in the most flexible way possible. Of course the use of certificates and/or PKI were elements in the customer-dialogue but the solution opted for by Swedish Customs focuses on flexibility and independence of both time and room. Hence a security-solution has been implemented meaning that the only prerequisites for a customer to be able to submit an electronic Customs declaration are a mobile phone and Internet-access. The principles of the chosen solution is that a user of The Virtual Customs Office registers and in doing so is given the possibilities both to personalise his information-management under the concept of My Customs-Office and also to submit Customs declarations via the Internet. When logging in to My Customs Office the user receives a SMS (Short Message Service) to his appointed mobile phone. The SMS includes a one-time code that must be used in order to be able to log in. The same procedure is applied when submitting Customs declarations. This is a solution naturally responding to the customers' needs for flexibility, enabling all users access to on-line Customs-services regardless of when and where a customer chooses to conduct foreign trade. And the only equipment necessary is what is part of the globalised society; a mobile phone and any computer with Internet-access!

#### *Information management*

One of the major challenges in order to provide attractive, updated and relevant eServices is to ensure the information management from a publishing perspective. Many interesting initia-

tives have failed due to the fact that information is old, irrelevant and in general not kept up to date. Swedish Customs therefore has as mentioned before focused on appointing responsible persons for every piece of information contained on The Virtual Customs Office, hence ensuring updating and maintenance of information and services provided. In order to facilitate the work of these appointed persons, great efforts have been invested in identifying and implementing easy-to-manage and logical tools for publishing information on the Internet, a Content Management System. The solution selected enables persons responsible for any kind of information on The Virtual Customs Office to produce, manipulate and update relevant texts etc. by using the standard word-processing software of Swedish Customs, Microsoft Word, and then by easy convergence format text suitable for publishing on the Internet. This means that Swedish Customs has ensured the maintenance and updating of the contents of The Virtual Customs Office by applying information source-management at the lowest level possible by giving personal responsibility to appointed information-owners, something that guarantees updating and relevance of information contained in The Virtual Customs Office.

### Single windows in practice

Swedish Customs has through the application of process-management come to the conclusion that the Customs-process does not start or even finish within Customs. The process of foreign trade is rather complex and a number of stakeholders have interest in the swiftness, flexibility and quality of that process. This in combination with an old Swedish public service tradition, namely that Customs is in principle the only authority present on the Swedish border, meaning that Swedish Customs performs numerous tasks on behalf of other public services, naturally has led to discussions with other public stakeholders in the foreign trade process. The result of this is that The Virtual Customs Office contains a number of integrated, interdepartmental eServices adding value to the overall foreign trade process for the Swedish business community. Besides the traditional Single Window solutions, such as Customs collecting Value Added Taxes on import on behalf of the Taxation authorities and also collecting trade statistics on behalf of Statistics Sweden, Swedish Customs has in partnership with the Board of Trade and the Board of Agriculture developed innovative eServices facilitating foreign trade regarding licenses. This means that a customer can apply for, monitor and deduct given license quantities and/or values by using My Customs Office under The Virtual Customs Office, hence creating a Single Window with three public services sharing a mutual front-office solution. In short, the concept will be expanded regarding the Board of Agriculture covering also an electronic process for export-refunds, where information is given only once at The Virtual Customs Office and then shared in joined back-office functions of Swedish Customs and the Board of Agriculture. Through the application of true Single Window solutions, Swedish Customs in partnership with other public stakeholders in the foreign trade process manage to facilitate for the Swedish business community at the same time as overall effectiveness and quality is increased.

### Implementation

The implementation process of The Virtual Customs Office was publicly started already in February 2002 when the Swedish Minister of Trade officially inaugurated this unique collection of eServices for Customs business. Of course many internal measures had been taken before the opening of The Virtual Customs Office through the prominent Mr Leif Pagrotsky, of which some are described in the following.

*Internal organisation – mirroring needs of the business community*

The Virtual Customs Office overall objective is to provide relevant eServices to everybody independent of time and room with a quality and effectiveness that will facilitate foreign trade for the Swedish business community. This of course means rather challenging demands for the organisation, which is responsible for the overall concept during all phases of the establishment of The Virtual Customs Office, from development to implementation and to maintenance.

Also clear distinction was made between front-office functionality and back-office support by means of multi-skilled persons operating the front-end of The Virtual Customs Office and experts with deep knowledge within specific areas as back-up for more complicated or otherwise unusual cases to manage. One of the most important features in order to manage The Virtual Customs Office internally is to provide sophisticated and user-friendly means of communication so that customers will use electronic means of communication instead of traditional ones and hence facilitate the internal communication management. Swedish Customs has therefore, within the framework of an eCentre, developed a number of different means that can be used to simply contacts with Customs through The Virtual Customs Office. Examples of this is Short Message Service with automated responses to frequently asked questions, e-mail, site call and online chat where a Customs Officer enters a virtual discussion with a customer. An effective 24-hour eCentre is in our belief one of the most effective ways to increase service and quality for all Customs-business through the use of time and room independent solutions.

Combine this with an eService development team whose only task is to develop new, customer-orientated eServices and the result is a modern public service fully adapted and prepared to manage and maintain the challenges invoked by eGovernment.

**Innovation – the sky is the limit**

With a set-up consisting of modern technology, skilled staff, customer-orientated eServices and logic interface The Virtual Customs Office in itself is innovation and within the field of Customs business not comparable with any other such initiative. From the perspective of Swedish Customs most of the more than hundred eServices available on The Virtual Customs Office contain innovation to at least some content, even if benchmarks are to be made as comparison with other advanced Customs administration around the world. Some of the more innovative solutions and features are briefly described below.

One effect of the increasing globalisation and world trade in general is that customers wish to communicate with public services based on their prerequisites, languages being perhaps the most obvious one. Swedish Customs has embraced this and The Virtual Customs Office enables multi-language communication between customers and Customs Officers, given that the communication is performed by electronic means. Besides Swedish, Easy Swedish and Sami, currently ten languages, including Russian, Turkish, Finnish, German and French, are available on The Virtual Customs Office. This means that for instance an e-mail in Spanish will be replied to in the Spanish language, an innovation that at least in Sweden is one of its kind in the public sector.

Another area within which The Virtual Customs Office provides a unique Swedish public sector service is the production of Swedish Customs Television Team, an in-house team skilled in production of web-Television programmes related to relevant topics. Today the total

production covers more than 30 different topics available in Swedish and/or English. For the time being Swedish Customs has only started to explore this powerful mean of communication and it is foreseen that in future the combination of picture and sound will prove to be a most important information measure.

A challenge in the contemporary world and its information overflow is how to manage information in the most effective way. In order to facilitate that challenge The Virtual Customs Office provides solutions that will support that process by means of modern technology. It is for instance possible to subscribe to different kinds of news letters, either through e-mail or Short Message Service. Also registered user may design their own personal Customs Office covering only the parts of the Customs processes that are necessary in order to support the specific needs of the individual customer.

Another natural element in a customer-orientated eGovernment solution is e-learning where The Virtual Customs Office covers a number of traditional training modules adopted to the needs of the customers. Other innovative measures included in The Virtual Customs Office is of course the security solution as mentioned before, possibility to fill in online forms and submit them electronically, e-dialogue with the customers of Swedish Customs and several other measures best be appreciated by visiting <http://www.customs-vip.info/eGov/>.

## Results

### *Customs – in everybody's computer*

The Virtual Customs Office shows very tangible results in the area of online support for Customs business, something often only available through expertise within a Customs administration or specialised consultants/brokers. The availability in combination with logical functionality facilitates day-to-day business for the Swedish business community engaged in foreign trade through tailor-made customer-orientated eServices. The impact of The Virtual Customs Office for the customers of Swedish Customs has not yet been fully explored since new eServices are constantly developed and implemented. However, with a starting-point in free online services with from a business perspective attractive and at the same time normally complicated areas, quality will increase at the same time as compliance costs are lowered. The Virtual Customs Office hence creates a win-win situation where both customers and Customs will benefit through the use of modern technology in order to enhance resource allocation.

### *Choice of the customer – multiple options for Customs business*

All customers and users in focus has been the guiding principle during the development and implementation of The Virtual Customs Office, something foremostly shown as a result by the multiple choices available for several of the eServices available. For instance the possibility to communicate in several languages and through multiple means of electronic communication, SMS, e-mail, chat etc, enables everybody to have access to information regarding Customs business regardless if you are an experienced multinational customer or a small exporting company recently established.

### *Sharing – a strategy for quality improvements*

Another result-orientated impact through The Virtual Customs Office is the fact that the tools used by Customs Officials are made available for the customers, ensuring updated, correct and relevant information, for instance regarding classification of commodities and Customs tariffs. The increase in quality of submitted electronic declarations has been significant and

currently 70 % of all Customs declarations have such high quality that automated clearance is possible. As a supplement to the customers sharing the expert systems of Swedish Customs, new methods of support has been introduced acknowledging the fact that systems developed in order to support experts are not always too logical to inexperienced users. The Virtual Customs Office therefore introduced the eService Co-Surfing meaning that a user might call for online support and be guided in real time on his screen by a Customs Officer being able to share the same screen with the customer.

#### *Openness and transparency*

A very important aspect for all public services in Sweden is openness, transparency and access to information from a customer perspective. This had been taken onboard also by The Virtual Custom Office through a number of eServices available free for all customers and citizens. For instance the eDiary of Swedish Customs is available within the framework of The Virtual Customs Office and several measures in order to enhance the overall dialogue with those for whom we exist, the customers. Especially worth mentioning is the introduction of the customer ombudsman, a specially appointed Customs Officer with responsibility to support customers in their dialogue with Swedish Customs. This primarily regarding complaints and other remarks on how the tasks are performed at the operational level.

#### **Learning points and conclusions**

The Virtual Customs Office has been established as a nationally and internationally recognised concept of how Customs business, with the use of modern technology, may be conducted in the 21<sup>st</sup> century. The work and the solutions of Swedish Customs are often nationally put forward as a good example of how an overall eGovernment concept may be developed and implemented. In the international context solutions developed are to be implemented in a joint project with the Russian Customs administration and also the European Commission, DG TAXUD, has shown interest in the overall electronic Customs solutions designed by Swedish Customs. The following learning points are considered important to share as regards to development and implementation of eGovernment solutions, since they are of a general nature and from the experiences of Swedish Customs more or less crucial to consider during such initiatives.

#### *Top management support*

To ensure top management support when developing eGovernment solutions is of course crucial since such initiatives are bound to use resources, both financial and human, in all stages of the designing and maintenance of such systems. Feasibility studies with sound and clear decisions points are necessary to present in order to allow decisions makers to objectively review possibilities and opportunities at the same time as costs, necessary organisational reallocations and also in order to see any other strategically important issues.

#### *The customer in focus*

Cost effectiveness is crucial when developing and implementing e-solutions since investments are relatively substantial compared to traditional public services. In order to guarantee this the importance of initiating a customer-dialogue cannot be stressed enough. The needs, requirements and desires of the customers will be the most important incentive whether eServices will receive the intended number of users. To embrace the perspective "from-outside-and-in" facilitates such dialogues, putting the customer in focus and hence adding some element of sureness that eServices will be used to the greatest extent possible.

### *Iterative development strategies*

A strong learning point Swedish Customs has reached during the development of The Virtual Customs Office is to apply iterative development strategies since the area of modern Internet-technology rapidly progresses today. Therefore it is crucial to apply strategies and an approach that allows for influences from outside independent of what phase the work or project has reached. An active environmental scanning serves as a good foundation in order to ensure this in combination with structured models for project management and IT-development.

### *Seamless solutions with focus on flows and processes*

The processes, and then naturally services and eServices, in a public authority never starts of finish within that authority. This should also be reflected in eGovernment initiatives in order to ensure attractive eServices where customers can use and reuse existing business information as means of increasing effectiveness and obtaining seamless electronic processes and–contacts with public services.

### *Front- & back office structures*

The most advanced eServices might only be offered to as many users as possible if the internal organisational set-up of the public service allows for it. Communication between front and back office is of outmost importance since this adds value to the eGovernment solutions. Otherwise the best of initiatives might in the end merely become a traditional, static web site.

### *Multiple options – means for customer satisfaction*

Even though it is from an internal efficiency perspective important to draw up clear strategies regarding how a public service would like to perform most of its contacts with users and customers, i.e. electronic communication, it is equally crucial that the means to enable such contacts and interaction are adopted to as many customers as possible. Swedish Customs has for The Virtual Customs Office opted for multiple choices: e-mail, chat, co-surfing and eCentre along with options for exchange of electronic information such as EDIFACT and XML.

## Closure

As is often said by IT-strategists, the potential and the impact of the use of Information Technology has just started to influence our daily life and there is no means to foresee what radical changes will appear in the future. Swedish Customs strives to adopt a similar relationship with the use of The Virtual Customs Office as regards moving Customs business further into the 21<sup>st</sup> century. Customer-dialogue, sound internal organisation, top management support and innovative measures will safeguard a continuous development of new eServices to be implemented within The Virtual Customs Office, ensuring a dynamic and attractive source of facilitation for the business community.

## References and links

[www.tullverket.se](http://www.tullverket.se)

[www.statskontoret.se](http://www.statskontoret.se)

<http://www.customs-vip.info/eGov/>