

Part 2

Dealing with business - HM Customs and Excise

- 2.1 Government agencies dealing with businesses on a large scale have already heavily invested in pre-Internet forms of electronic communication. In particular, public sector organisations have used electronic data interchange (EDI), dedicated private networks facilitating large-scale electronic transactions, with their biggest business partners. EDI systems have been in place for many years and can handle high transaction volumes at very low individual transaction costs. Introducing Web-based systems may not offer government agencies or the large businesses dealing with them radical opportunities to reduce their costs compared with continuing with EDI systems, especially when heavy development and organisational learning costs are sunk in systems and processes of this kind. However, EDI systems provide less incentive for small and medium sized businesses to interact electronically with government. The greatest opportunities for cost savings through the development of Internet-based solutions therefore lie in moving paper-based systems and processes onto Web-based interactions with the large numbers of medium and small enterprises which do not currently link electronically to government.
- 2.2 In this part of the report we focus on Her Majesty's Customs and Excise as a business-facing case study. The department has 22,000 staff collecting around £140 billion from businesses and making around £40 billion of payments to businesses through 24 million transactions with business each year in value added tax (VAT), excise duties and tariffs. In addition, Customs and Excise has significant interaction with businesses through its role facilitating trade and the movement of goods. So Customs and Excise is a crucial player in the government's e-business strategy. We look at the key e-business issues facing the department, the development of its current e-business strategy, and its web site at www.hmce.gov.uk before drawing conclusions and recommendations (Appendix B on page 69 provides background information on how Customs and Excise is organised and operates, for readers unfamiliar with the department).

e-business issues facing Customs and Excise

- 2.3 The department's experience with IT has been quite different for two of its business areas, import-export and VAT.

- For import-export, Customs and Excise was an early leader in government computing (particularly EDI), developing a computerised system to process export trade statistics in 1963 and an import cargo system in 1971. The department's EDI-based customs declaration processing system, the Customs Handling of Imports and Exports Freight (CHIEF) was implemented in 1994 and solutions of this type are now widely used throughout the world. The system controls and records UK international trade movements (by land, sea and air). It links Customs offices around the country to ports, airports and thousands of businesses and is integrated with commercial processes to facilitate the movement of goods across national frontiers. CHIEF is provided free to all traders, with a choice of three routes for EDI input, either via third party agents, or by attachment to internet e-mail or to older standard messaging systems. Virtually all traders (99.8 per cent) now use this system



for import declarations and 20 per cent of traders for export transactions. The system handles the vast bulk of revenues collected at ports and airports, amounting to £14 billion of revenue each year via 16 million transactions. CHIEF also facilitates the collection of international trade and transport statistics and controls the import and export of restricted goods. Other important EDI services include an Intrastat return service for collecting economic statistics, which deals with 40 per cent of traders. Since June 2000, this system has included an Internet service for which some 3,000 of the largest traders (10 per cent of the total) have registered.

- Customs and Excise have had significant success with EDI in the import-export area. Here the department's ICT staff and top managers regard externally facing Web-based technologies as having less transformative potential directly for these activities than for the rest of its business. The key effect has largely been achieved already by the department's business process changes which formed part of the original move to electronic systems. The EDI-based customs declaration system CHIEF is not currently Web-based although Customs are evaluating migration options. Take-up of the CHIEF import system is virtually universal as electronic declarations are standard for most imports. Smaller companies for whom it is not financially viable to purchase the necessary industry software use a registered agent, who submits electronically. In its current form Customs and Excise believe that there is not a strong incentive to invest in new web technology, but opportunities to incorporate it will be taken as part of normal business changes. The New Export System to be rolled out in 2002 will have a Web-based front end (using standard XML schemas). After that time, Customs expect that take-up of the electronic service will exceed the current level for exports of 20 per cent. Although there will be some additional costs for electronic messaging, the electronic service is already being marketed as faster and more streamlined than the paper-based version and the option to submit a paper version will only be available for certain ('standard full pre-entry') procedures. Electronic declarations will either continue to be submitted to Customs via the Community Systems Providers who currently provide such services in all the major ports and airports; or direct to Customs, for example by e-mail or via the Customs website over the Internet. The department feel that the key lesson from the success of their import-export system is that the information they require should wherever possible form part of businesses' standard processes and information needs for importing and exporting.
- The implementation of universal electronic VAT services presents different issues for the department. There are 1.65 million VAT-registered traders, ranging from large multinational corporations to

sole traders. At the time of writing (December 2001) virtually all businesses register for VAT manually, and file VAT returns on paper by post. VAT payments and repayments are made by means of cheques and electronic transfers (although on-line paperless direct debits are to be introduced from early 2002). Information from paper forms is keyed into Customs and Excise databases manually. 90 per cent of VAT repayments by the department are made by electronic transfers to businesses' bank accounts. Around 2,500 staff are involved in processing activities, about 2,000 of them concerned with VAT. The Department see bringing VAT on-line as offering benefits in terms of cost, service quality and compliance. Cost economics depend on achieving high levels of take-up of electronic services. In addition to the processing staff, around 6,500 VAT staff work on tax compliance and assurance, including the 160,000 VAT audits that are carried out each year. There are potential diseconomies of running both manual/paper-based and electronic services in tandem. The business case for bringing VAT on-line requires, the department either to look to the phased introduction of mandatory electronic communication in high volume transactions, or be able to achieve high level of voluntary take-up by providing packages of accessible and attractive e-services. The current priority focuses on the latter course.

- 2.4 There are a number of important constraints affecting Customs and Excise's plans for their customer or client base. First, larger companies already have EDI accesses developed in many areas of their business processes and internal systems. The size of a company is an important factor in predicting which of Customs and Excise's customers will be on-line, even though Internet penetration rates among businesses have increased significantly during 2001. An International Benchmarking Study in April 2001 suggested that 81 per cent of UK businesses were now on-line, up from 63 per cent in 2000. The Internet penetration rate still varies according to a firm's size. An Oftel survey in February 2001 suggested that Internet penetration for small businesses was 59 per cent (with a further 9 per cent in the process of connecting) while the rate for medium sized businesses was much higher at 92 per cent. However, complete Internet penetration may not be needed because intermediaries (such as accountants or high street professionals) could offer small businesses access to e-services.
- 2.5 Customer segmentation refers to a strategy of dividing up potential users who are more or less likely to accept interacting with Customs and Excise on-line, focusing on segments of the market which offer the most chance of developing on-line accesses, and also developing different approaches to maximise take-up in different market segments. The Department tracks the views of the traders they have dealings with using a 'business needs

survey' which gives a broad view of how the industry sees the department every two years. The latest survey was launched in November 2001 and is due to be completed by the end of April 2002, so at the time of writing, the latest available data was from the 1999 survey. At that time 40 per cent of traders reported that they wanted to transact with Customs and Excise electronically, while 80 per cent said that they liked the current system. Analysis of Web site usage statistics to try and model what use traders might make of on-line services and what they are willing to do electronically, could help here. And the department will be launching a programme of market research early in 2002 as part of the development of new customer-focused Web-based services.

- 2.6 A second major constraint on Customs and Excise's strategy for doing business on-line is that the security of information is of particular concern for their customers and for the agency itself. The government's version of an industry-led system of 'trust rating' material to be held electronically gives scores which run from 0 (the lowest security level) to 3 (the highest level). Most of Customs and Excise's information exchanges (such as the provision of trading statistics) are rated as level 1, whereas information with significant financial implications such as the VAT return are rated as trust level 2, for which the most appropriate method of authentication is digital certificates. Customs and Excise therefore require traders to acquire digital certificates before they can be offered secure VAT registration, filing or payment on-line. The current kind of digital certificates used by the UK government is that for 'trusted third party recognition'. Certificates of this kind are not at present extensively used by any non-government organizations in the UK. The only way that they could be obtained by firms was by purchasing them in person from the British Chambers of Commerce and now, more recently, on-line from the company Equifax plc.
- 2.7 Customs and Excise launched a pilot experiment to file quarterly VAT returns on-line on the Government Gateway during 2001 with an initial set of 1,000 traders signed up. Subsequently, however, over two-thirds of the initial set of traders dropped out of the pilot. The key problem hinged around the question of security. Companies had to buy digital certificates in order to participate, which costs £50 plus VAT if purchased from the Chambers of Commerce, although Equifax subsequently entered the market with their certificates costing £25. Customs and Excise offered an incentive of £50 to businesses for participating in the on-line pilot, but even that initially gave firms sending in on-line VAT returns no positive financial incentive. Even with on-line certificates, Equifax report that the limited transactions that a single certificate user can perform has been a significant impediment to take up. The company found that the most frequent negative response when completing registration requirements was 'Why do I need to do all this if all I can do is file my VAT return?'

Despite the drop-out from the initial pilot group, businesses continued to register for the pilot and by November 2001 a total of 980 businesses were registered for using the VAT pilot on the Gateway (and therefore had obtained a certificate).

- 2.8 It is not clear how many firms had tried to register for on-line VAT returns and failed to do so. Of the 980 registrees 662 filed their VAT returns on-line by October 2001. By November 2001 the Gateway system had securely handled over £500 million of VAT payments, and provides an end-to-end electronic service from point of submission through the department's back-office systems to the customer's bank account. By February 2002 around 2,500 users were registered for VAT returns on-line. Customs and Excise are currently working with the Office of the e-Envoy and other Whitehall departments on a more flexible approach to security problems.
- 2.9 To examine how other large business-facing organisations are tackling analogous problems we conducted some interviews with senior personnel in major UK retail banks and examined trends in that sector. This evidence suggests that business-facing government agencies like Customs and Excise are right to be concerned about security, because businesses are different from individuals in their approach to electronic service delivery. Banks offering Internet services have found that while personal customers are reasonably willing to divulge confidential information over the Internet, businesses are less so. In particular, companies often have strong concerns about staff inside their organisation gaining access to confidential information which they did not have previously. HSBC Bank suggested that a significant proportion of their business customers see security concerns as a barrier to using on-line banking. A number of banks have developed different solutions to the issue of security. For example, HSBC is using a type of digital certificate that can be downloaded by businesses via Web browsers after verification through multiple password and pin-number access. Barclays' business banking division is now piloting an Internet solution for its larger corporate customers that supplies all businesses with card-readers and individual users with smart-card access to the service. Both banks' solutions allow differential access privileges. Most of the banks have also long provided their business customers with a dial-up service with dedicated software, which many customers perceive (perhaps misguidedly) as more secure than an Internet-based application. They continue to offer this service in tandem with Internet banking. Another distinctive feature of the business market is that companies have widely varying needs. Banks have found that the incentives required for large and small businesses to transact on-line will be very different. Large companies, for example, can easily absorb the cost of a digital certificate. But for micro-

businesses a certificate fee of £50 a year can be a significant disincentive. The main banks have found that paying even £10 monthly for dial-up electronic banking services can discourage firms from adopting them.

Customs and Excise's current e-business strategy

- 2.10 Like all central government departments, Customs and Excise must develop electronic service delivery to meet the government-wide targets that all services should be capable of being conducted electronically by 2005. The departmental Public Service Agreement (PSA) and Service Delivery Agreement agreed with the Treasury for the period March 2001 to April 2004 additionally specify 60 per cent availability of services electronically by spring 2002, 75 per cent by spring 2003, and 87 per cent by spring 2004. Customs and Excise are one of only two departments to have actual take-up or usage targets for electronic services delivery specified in their PSA. Customs and Excise must persuade 35 per cent of their customers into using on-line methods by spring 2004 and 50 per cent by 2005.
- 2.11 Unless take-up of e-services is high, Customs and Excise's e-government targets may have implications for its more general productivity growth targets. The PSA and the Service Delivery Agreement for 2001-4 state that the department should improve value for money by achieving average annual productivity gains of at least 2.5 per cent a year until 2004, without detriment to either accuracy of administration or customer satisfaction. One way Customs intend to meet this PSA commitment is to release posts from support for deployment to activities which directly contribute to key departmental outcomes. Customs and Excise anticipate that through the introduction of information age government opportunities will be created to recycle resources. The Department will need to overcome some of the diseconomies in running manual and electronic systems in tandem, particularly for VAT. Initial calculations by the department suggest that the take-up of electronic services by customers would have to be much higher than in its Treasury-set target, possibly closer to 80 per cent - now a design figure to which the department are working. Achieving the target of 50 per cent take-up of electronic services would inevitably mean continuing to operate with 50 per cent paper-based services. However, Treasury officials involved in the setting of the PSAs and SDA for Customs and Excise indicated to us that the Treasury itself did not make an explicit link between productivity growth targets and electronic service delivery and considered that it was for Customs and Excise's management to decide how productivity targets might be achieved.
- 2.12 The central planning tool used by the Office of the e-Envoy has been to ask departments to produce e-business strategy documents. The first version of Customs and Excise's e-business strategy (produced in October 2000) considered three alternative organisational change options for achieving central e-government targets. The first was the radical idea of setting up a new 'dot.com' organisation (modelled on the dot.com, Web-only firms) which would operate independently of the current department, with purely e-enabled procedures. This idea was similar to the launch of the Internet bank Egg, which was set up at arms length and with its own management structure by the long-established Prudential insurance company. But this option was rejected as a 'too high cost an approach', as was the second option, a wholesale rebuilding of the complex maze of existing Customs and Excise inter-connecting IT systems. The department opted instead for a third option 'to build elements of a HMCE "dot.com" organisation plus elements of a total HMCE rebuild'. New web-enabled front-office systems would be constructed and treated as a new channel, while business processes would be re-engineered to operate in an e-business environment. These new systems would be linked to existing Customs and Excise's back-office systems via what is called 'middleware', software that sits between two sets of systems processing database access calls. Where possible or necessary, back-office systems would be streamlined and restructured but in general, those that were operational would remain.
- 2.13 In their general guidance for the first e-business strategy the Office of the e-Envoy focused on 32 different services identified, of which 15 concerned the provision of information to customers, 11 the collection of revenues, 4 the collection of statistics, and 2 the regulation of taxation (Appendix B, Table B.2). The Office of the e-Envoy did not ask for any details of the transactions load under each heading, and in line with its general policy there was no discussion of the levels of actual usage or take-up of electronic services to be achieved by the department. Instead the Office of the e-Envoy made clear that progress was to be measured simply by counting the number of services which could be ticked as electronically enabled or available at any given date. This particular performance indicator meant that achieving electronic collection of the excise duty on tobacco (paid by only 7 very large companies in under 250 transactions a year) would have exactly the same 'weight' in terms of being seen to achieve electronic services delivery as if Customs and Excise could get its 7 million VAT returns submitted on-line. **Figure 6** summarises how Customs and Excise's first e-strategy document filled in the Office of the e-Envoy's table for the earlier dates. (Every service was ticked for 2005). The department reported that they had already achieved 27 per cent electronic capability in mid 2000, would attain 63 per cent electronic capability (under

this particular counting method) by 2002, and would deliver all their services in an electronic form by 2005. On this counting scheme the worst performing aspect of the department's activities in 2000 was the provision of information, followed by the collection of revenue. The collection of statistics was the most successful 'electronic' area. By 2002 just under half the provision of information activities were planned to be electronically available, and just over half the collection of revenue functions.

2.14 Customs and Excise's second e-business strategy was produced in July 2001. The department saw the document as a strategic analysis, and the first stage of a detailed business planning process beginning in October 2001 and lasting for around six months. The new e-business strategy was written at a high level. In terms of content and layout the document was much more fluid than that of the first strategy and did not include the detailed business case. It repeated a central objective 'to migrate the majority of the customers to the new environment by 2005', but made no reference to the central targets or any milestones on the way to 2005. The strategy proposed the creation of a new 'E-Operating Unit' to 'pull through change for the Department', 'enabling us to grasp new opportunities at a new pace.' The E-Operating Unit will report to the Director Logistics, who is also Customs' designated e-champion. People with commercial sector expertise have been recruited to work in the E-Operating Unit, which will exist alongside the rest of the department's business apparatus rather than replacing it. The Unit's head (appointed in September 2001) envisages that the unit will have around 60 to 70 staff in total, reporting to an 'e-board' of six to ten people (also including external people from the private sector). Chaired by the Chairman of Customs and Excise, the new Board met for the first time in December 2001. The planning process involves in succession the production of a business architecture, followed a technical architecture, a high-level organisational design, a revised business case and a migration plan. A Service Design unit of 20-25 staff will deal with business architecture and operate a 'Design Forum' at which all ICT projects will be evaluated (or re-evaluated) and either authorised for funding or scrapped. There will be

a unit of 10 staff dealing with marketing and with the Customs and Excise Web site. A Programme Management team of 27 will take ownership of projects authorised by the Design Forum.

2.15 Customs and Excise plan to use the e-business strategy as an opportunity to effect more fundamental business re-engineering of their organisation as a whole, thereby overcoming some of the challenges to cost-effective electronic service delivery noted above. Over the last 15 years Customs and Excise staff have handled progressively greater workloads within falling personnel numbers. This has been achieved primarily through the strong development of risk management approaches to tax assurance work, regulation and many areas of law enforcement and the development of more automated systems for processing data. Instead of trying to audit or inspect all transactions, Customs have concentrated their attention on traders and problems chosen on a risk assessment basis, producing a progressively greater targeting of administrative effort. Electronic delivery of services can potentially extend this pattern of development, allowing faster and more complete acquisition of data in real-time. The change could make feasible more sophisticated programmes for spotting anomalies or finding similar cases or identifying potential problems. And it should provide much more accessible information easily available on-line, so that traders wishing to be compliant can get accurate and immediate help with their problems. As a result it may be feasible to secure efficiency savings amongst staff undertaking tax assurance, regulatory and informational work more generally as well as supporting compliance and improved service quality.

2.16 A key area of uncertainty remains as to why the department's customers will want to move over to undertaking VAT transactions electronically. Customs wish to ensure that when e-services are offered to their customers they should work first time, without the risk that false starts will alienate potential users. They also wish to ensure that the new facilities should offer businesses an improved 'quality of experience' in managing their relations with the department. Part of the reason for not 'going to market' earlier with new Internet-based services has been to ensure that new

6 The number of services enabled for electronic delivery in Customs and Excise's statements for 2000, 2002 and 2005, by type of function

Date	Providing information	Collecting revenues	Collecting statistics	Regulation	Total	Per cent achieved
2000	2 of 15	1 of 11	3 of 4	0 of 2	5 of 32	27
2002	7 of 15	6 of 11	4 of 4	1 of 2	18 of 32	63
2005	15 of 15	11 of 11	4 of 4	2 of 2	32 of 32	100

departmental systems can be satisfactorily incorporated into third party software and services, such as popular accounting software packages. The chances of high take-up are significantly improved if access to Customs can become a facility within existing well-used software and business systems. In addition, Customs may have to offer incentives to increase take-up, for example by offering flexibility in payment dates to fit with businesses' cash flow or increasing Customs and Excise's advisory role if returns are filed electronically. Although the cost and business implications of such incentives would need to be assessed. The success of CHIEF in getting nearly all import declarations and many export declarations carried out in an electronic way offers a possible model here.

2.17 The Office of the e-Envoy has evaluated the second Customs and Excise strategy and given feedback, which was 'very positive'. The Office feels that the department is focusing on the business outcomes it wants to achieve. It is using e-enablement as a driver for business change and with the establishment of the E-Operating Unit it now has the right level of skills and top management involvement right up to the Chairman. The traditional EDI system provided by CHIEF has been operational with almost maximum levels of take-up for some time - and will contribute to Customs and Excise's meeting the 2005 target. But it is clear that if the department is to achieve full electronic availability, plus the take-up targets set by the Treasury and their own stated aim of increasing electronic communications with traders, electronic VAT returns and registration processes will be vital. All the departmental staff we interviewed agreed that 'the VAT/SME market place is the one to crack.' The 2001 departmental report states that Customs and Excise will meet its targets for increasing its electronic communications by making available VAT declarations for completion on the Internet and bringing in online VAT registrations by 31 March 2002. A pilot for on-line registration is due to start in January 2002 and will coincide with Customs and Excise publishing their whole e-government strategy to the trader community and re-launching their Web site in a new format. This recognises the importance of building a complete e-environment as part of the incentive for VAT traders to move their dealings with Customs and Excise on-line. Uncertainty still surrounds the question of how to make VAT transactions secure. However, the current service relies on the Gateway for authentication. As a major business-facing department Customs and Excise will be a key member of future central initiatives, such as a possible business portal (see Part 4) and any further central developments on meeting government departments' security needs for on-line services.

2.18 In line with the experience in many other departments, Customs and Excise does not yet have a complete picture of the costs of completing basic administrative tasks to assist decision-makers in determining the scope of possible efficiency savings through growing e-services. Some pointers do exist to the emerging business case. The cost of processing a combined VAT return and cheque under current manual systems is known to be £1.16 each time. This is in line with accepted benchmarks of around £1 to process a single transaction in banking services. Industry research suggests that the processing of such financial transactions electronically costs around 25p via a bank automatic teller machine (ATM) and less than 10p over the Internet. Applying these figures to Customs and Excise's VAT returns load of over 7 million transactions a year suggests that there are potential savings to be achieved. In addition Customs and Excise identify 240,000 errors each year in the submission of VAT Export Sales Lists from businesses. Each error costs £1.50 to correct (or around £360,000 a year). Savings could be made here if lower levels of error could be achieved with businesses using direct input via the Web. There may also be opportunities to reduce phone enquiries and traffic through better Web services. Currently the department's National Advice Centre handles around 480,000 calls per year with an average call time of just over 5 minutes each. It employs 306 staff. However, the phone service also provides a quality of immediate and interactive advice that could be hard to match using electronic means. The revised business case for e-service requirements will need to take into account the costs of the current services as well as the more qualitative aspects. However, net benefits can only be optimised from developing e-services if running manual and e-processing systems in tandem is kept to a minimum. The detailed planning will need to demonstrate how this goal can be achieved.

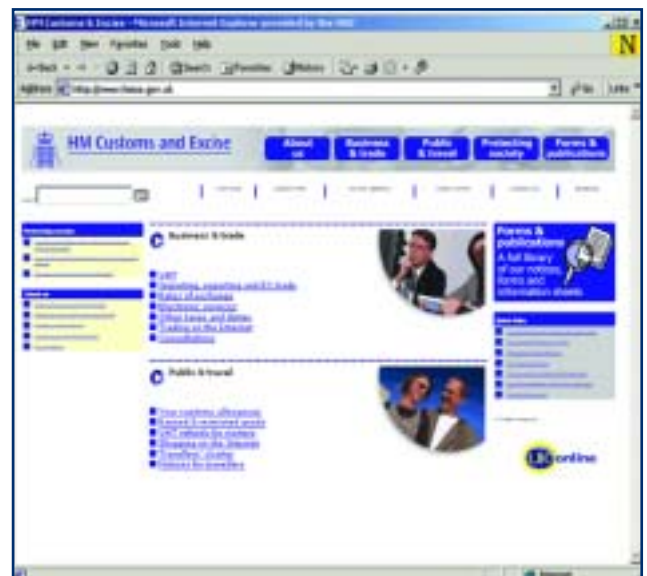
2.19 The Customs and Excise e-business strategy also recognises that effective customer segmentation will be central to growing e-services, so that services are targeted at correct trader groupings. The department currently divides up its customer base (for instance, by trade class, size and risk level). However, a much finer granulation is needed for e-business customer segmentation, and this work is being undertaken.

The Customs and Excise Web site

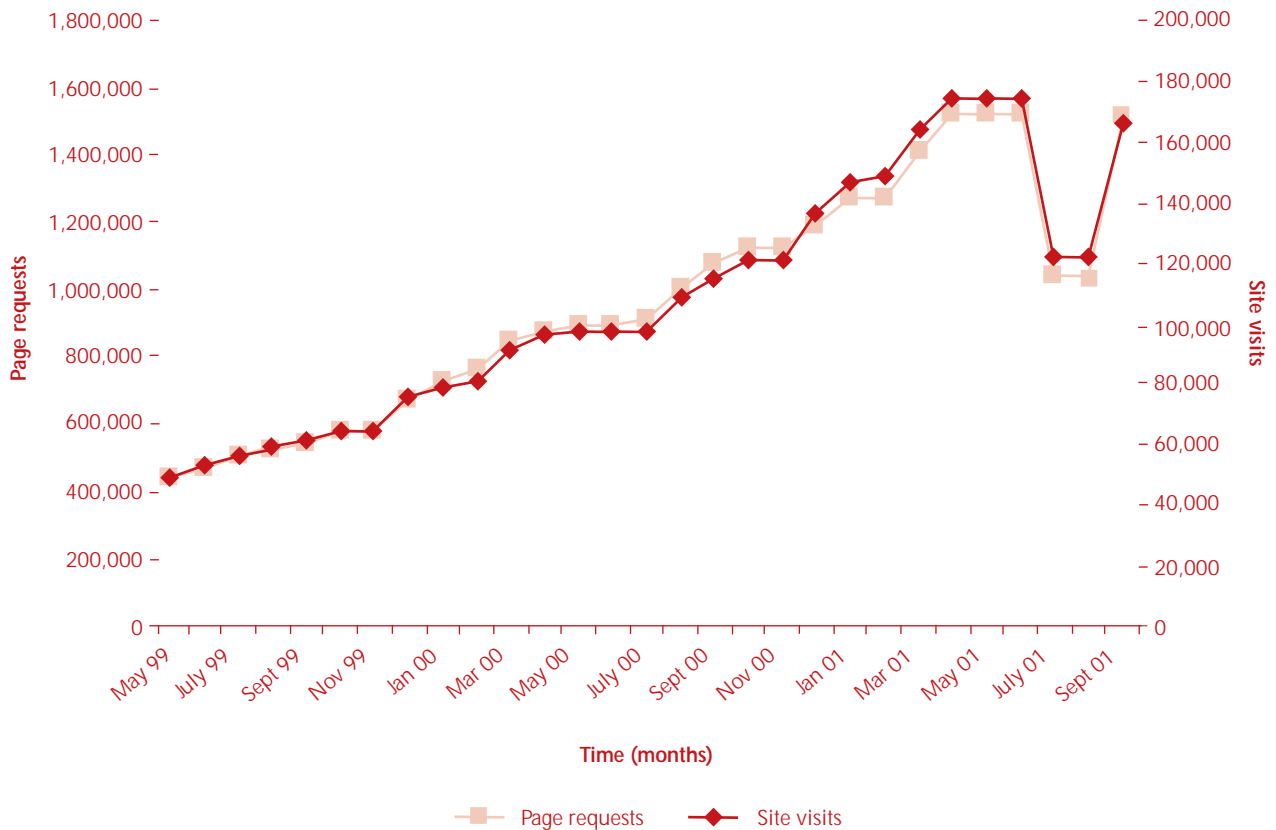
2.20 Customs and Excise's management attention to date has been focused on the governance and business architecture changes required for effective e-services to be introduced. The department's existing Web site offers the potential to develop knowledge about its customer base and their Web behaviours through analysis of Web usage. Customs and Excise first developed a Web site in 1998. The original site created continued in its original form with only minor improvements until mid December 2001. During 2000 a new site was developed in partnership with the Web services company Parity. However, this new site was not implemented immediately because the department was engaged in rolling-out a new IT desk-top infrastructure. During 2001 there were 12 staff working on development of the new as yet unimplemented Web site: 4 on corporate publishing, 4 on web site development and 4 on content management. Work was also undertaken on methods of handling structured e-mails, so that they can be built into the content management system: the department are concerned to avoid a 'flood' of unstructured e-mails. Meanwhile two staff maintained the publishing function of the original site.

2.21 The Customs site has the Web address or URL (universal resource locator) of: www.hmce.gov.uk. Although typing in the words 'Customs' and 'UK' into the major Web search engine Google does produce the Customs and Excise site as the first item found. In other countries it is relatively easy for users to guess the Web names of their agencies (www.customs.gov for the USA, or www.customs.gov.au for Australia, for example). As part of the Web site upgrade in January 2002, Customs took the opportunity to implement www.customs.gov.uk as an alias to the existing URL. In the period 1997-2001 the departmental Web site expanded greatly in its size. However, it was in clear need of upgrading throughout 2001.

2.22 On the Web site in use throughout virtually all of 2001 we sought information as a new business owner on whether we needed to pay VAT. In June and again in November the information given on the site was elementary in character, with most Web pages being reproductions of non-Web leaflets. In June we found broken links between pages and mis-directions within documents. There seemed to be major 'version control' problems, with various pages advising different VAT liability thresholds without being inter-related. A link in the basic VAT information leaflet to the department's local and regional offices instead led to a page on a national advice service, suggesting that the basic leaflet has not been updated to take account of recent Customs and Excise reorganisations. All information seemed to be provided listwise. We found no interactive or question-and-answer facilities on the site, and no opportunities for users to tailor the information given to



7 'Page requests' data (left axis) and 'site visits' data (right axis) for the HM Customs and Excise' website between January 1999 and September 2001



Source: HMCE Web site at www.hmce.gov.uk/stats

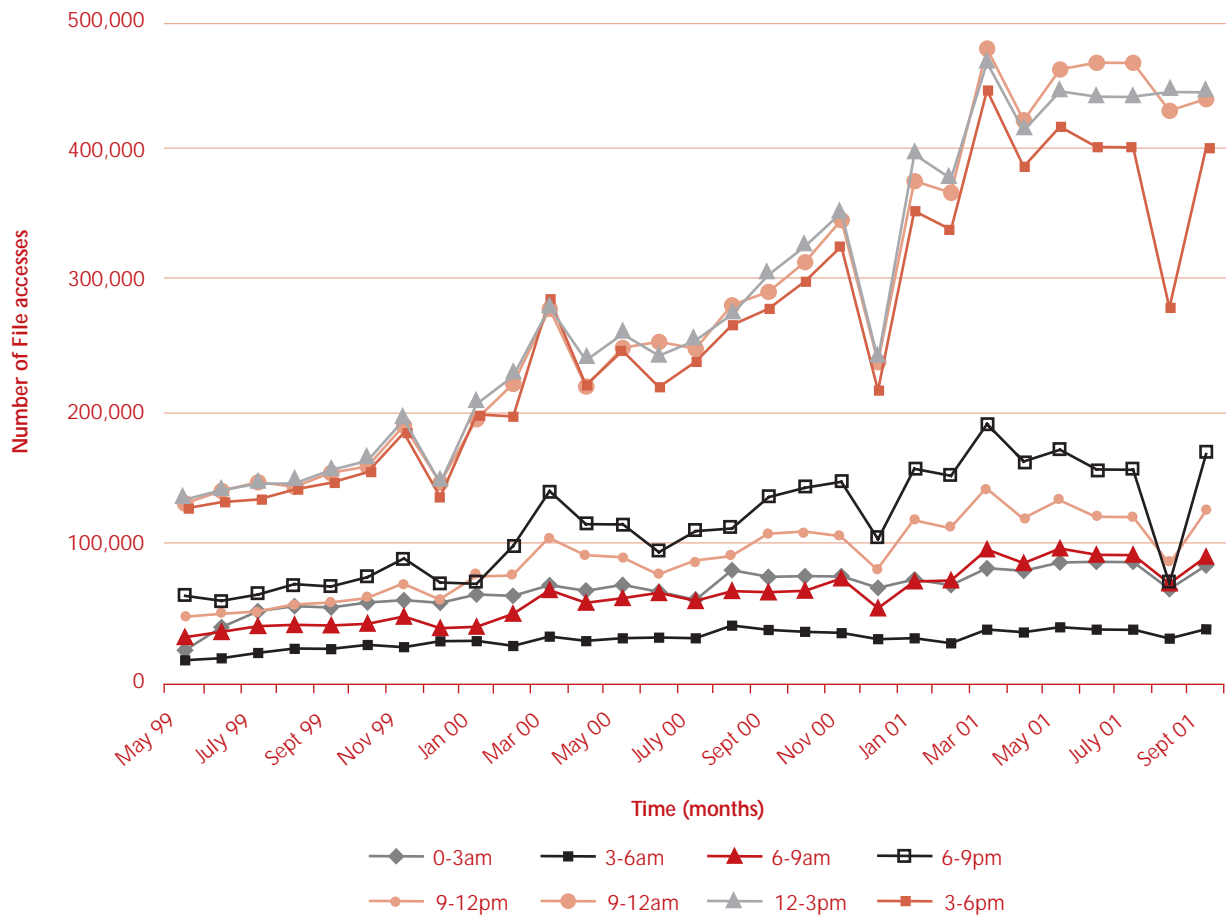
their needs, although taxation rules lend themselves to this method of exposition. There were few buttons provided for on-line forms: although some electronic copies of forms could be downloaded they were quite hard to find. The only interactive or transactional facilities were: an offer of electronic VAT returns via the Government Gateway; the depositing or retrieving of trade data with the Intrastat online database, used by 3,000 customers a month; the CHIEF declaration procedures; and some limited feedback facilities, such as the opportunity to e-mail a general enquiries address. The search engine on the site throughout most of 2001 was especially problematic - complex to use, yet incapable of finding even the basic search terms we submitted.

place. An improved search engine is included which can recognise different wording forms (for instance, 'registering for VAT' as well as the more official-sounding 'VAT registration'). The new site also groups electronic services together in a more accessible way. There are still areas that could be improved. For example, the system of directing enquiries still relies on people clicking on a small map, while elsewhere users have to page through a long list of postcodes to find whom to contact on VAT. In both these cases users now expect a more interactive solution where they just enter their postcode and are then directed to the right contact points. But the overall impression made by the new site is now more consistent with the department's plans to develop electronic services.

2.23 As noted above in mid December 2001 Customs and Excise addressed these issues by re-launching their Web site in a new design. It is now more clearly laid out and presents useful, up to date information for businesses and citizens in separate, well-signposted sections, and with much more accessible explanations for users. After a while the information tends to peter out in screens showing departmental leaflets, but the arrangement of the site and the content provided is greatly improved. It will be important to maintain the current consistency and integrity of information as budgetary and legislative changes take

2.24 As noted earlier, Customs and Excise do not at present make internal use of their web statistics in their thinking about electronic services. However, they were able to provide us with data going back to May 1999 and which are graphed in **Figure 7**. Usage of the www.hmce.gov.uk site rose modestly to a steady monthly figure in mid 2001 of around 1.5 million page requests per month, or about 174,000 user visits a month. These figures are reasonably credible amongst government departments, but they suggest that only a small proportion of department's client group are actually using the site. **Figure 8** shows how the usage statistics

8 The time of day for file accesses to the HM Customs and Excise website between May 1999 and September 2001



Source: HMCE web site at www.hmce.gov.uk/stats

broke down across different portions of the day. They demonstrate that the most intensive usage of Customs and Excise's site took place predominantly during UK office hours. There were over thirteen times as many visits between the peak hours of 9 am to 12 pm as during the lowest usage hours of the day, 3 am to 6 am. These figures suggest another challenge facing Customs and Excise in common with other business-facing agencies, that of *concurrency* - the usage of any electronic provision is likely to be far more concentrated within working hours. This characteristic of business banking has already been identified as a problem by the

banking sector, because any electronic services have to be supported by significant additional server capacity to cope with peak demand - which will then stand idle at other times. However, the Customs and Excise site has performed satisfactorily at times of peak usage during the year, such as Budget times. Notwithstanding the limited nature and quality of the old www.hmce.gov.uk site, it is notable in Figure 8 that the number of office hours page impressions grew by around two and a half times from early 1999 to mid 2001. These figures seem to demonstrate a clear demand from Customs' users for electronic information.

Conclusions and recommendations

2.25 The considerable size of Customs and Excise's transaction load, administrative operations and revenue collection operations make the department a crucial player in the government's strategy for electronic service delivery. The department had an early success with delivering the import-export function electronically. At the time of writing over half of VAT payments and most VAT repayments, by value, are made electronically, but the Department is still at the pilot stage in bringing VAT returns on-line. Customs believes that the simplicity of the VAT return makes it more difficult to move users away from the paper-based process. The department has set out ambitious plans for the future, particularly to growing the electronic take-up of services and to providing an integrated suite of services for businesses. A major process of re-engineering the department has begun.

2.26 Overall, Customs and Excise have £150 million allocated for their latest e-business strategy, roughly £50 million per year. Detailed figures for new spending are not available at present, but Customs and Excise envisage that most expenditure will be spent on new e-business capabilities (mostly Web based). The main investments to be made will support business registration, returns, payments, refunds, and statements of account, and also cover advice and education and complaint handling. Other significant areas of expenditure will be on enhancing the skills of personnel in the department and providing internal systems for e-learning and electronic 'human relations' facilities. It remains to be seen whether the funding available will be sufficient to achieve the department's aims. Customs and Excise have established a process for developing a

more detailed business cases for individual projects, and are starting to implement it. Banks have found that Internet solutions for business customers are comparatively expensive and may not pay back in terms of cost savings or new revenue streams for many years. Those that offer on-line business banking have undertaken the investment only after extensive preparations and developing comprehensive business cases. Similarly the banks active in this area carry out frequent and extensive analysis of their Web usage statistics, seeing them as a vital part of any management information report. The department have not sought to analyse through web usage data their customers' appetite for using electronic provision, in order to work out how take-up of electronic services might be maximised. The economics of electric collection of VAT with only partial take-up remain unclear.

2.27 The management team in charge of change is confident, committed, keen to make a controlled but emphatic transition in Customs and Excise's fundamental methods of working. Until recently Customs and Excise's existing Web provision provided few incentives for businesses to try and transact with them. Some welcome Web site improvements have been delivered from mid December 2001, and department officials also envisage that Web developments will be used to achieve a series of 'quick wins' during 2002. It will be important for the department to progress in a balanced fashion in future, growing its current Web usage in a pro-active way and expanding its whole portfolio of Internet services and information *at the same time* as investing heavily in the management and business architecture changes needed to facilitate the introduction of transactional services.



In Part Three:

The role of the Department for Transport, Local Government and the Regions and progress in implementing e-government in its headquarters

The department's policy for encouraging local authorities in England to develop electronic services and e-government

How far local authorities have already developed their Web sites

Our main conclusions and recommendations about the department's policies