



## DATA COLLECTION INITIATIVES STRATEGY - EXTRACT FOR OECD

### 1. Introduction<sup>1</sup>

1.1. The Data Collection Initiatives (DCI) programme contributes to ONS's key objectives of improving quality, reducing the compliance burden and achieving value for money. It is a major contributor to the achievement of the government's e-Business targets.

1.2. This review has been undertaken to ensure that the DCI Strategy is consistent with the recent changes both internal and external to ONS, including:

- the ONS Business Strategy, as outlined in the ONS Business Plan 2002/03 - 2004/05 (including the specific e-Business Plan and the Service Delivery Agreements);
- the Information Management programme currently under development;
- the Statistical Infrastructure Development programme;
- new targets and initiatives being led by the Office of the E-Envoy;
- advances in technology.

1.3. Some key points of progress are:

- a new digital Telephone Data Entry (TDE) system has been installed, and all existing TDE inquiries are now running live on the new system - 20% of all forms are now collected via TDE;
- the completion of two pilots investigating the collection of data via the Internet;
- proposals have been drawn up in conjunction with Information Management Group (IM) and Social Directorate (SD) for a future system to collect data over the Internet, using the Government Gateway;
- a prototype Collection Database has been developed and piloted.

### 2. Context

2.1. The DCI Strategy springs from commitments in ONS's Business Strategy, which are detailed further in the ONS e-Business Strategy. This DCI Strategy specifies how the e-Business Strategy, and therefore the ONS Business Strategy, will be implemented for the collection of economic data.

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<sup>1</sup> Please note, this is an extract of an internal ONS document. It has been provided specifically for inclusion in the OECD *STES timeliness framework* only.

## ONS Business Strategy

2.2. The ONS Business Strategy is about turning ONS, at each stage of its value chain, into an e-business, with e-access to information, e-business processes, e-collection of information, and e-directories and registers. ONS's Business Plan for 2002/03 - 2004/05 states that:

"... To meet these challenges we will make full use of e-technology, transforming ONS into an e-business over the next three years. We will capture much more of our source material electronically, easing compliance costs for business and other customers ..."

2.3. Within the **High Quality National Statistics Sources** portfolio one of the development outputs (contributing to world class status) is to **achieve Internet access**. The targets within this objective are:

Build infrastructure for communication with Government Gateway	31/3/03
Implement Internet registration	31/3/03
Use secure e-mail	31/3/03
Introduce interactive Web form for selected inquiries	31/3/04
Make Web form available for all inquiries	31/3/05
Introduce direct reporting from business and accountancy systems	31/3/05

2.4. Within the **Other Corporate Services** portfolio one of the outputs is **Electronic Data collection**, with the specific target being:

100% of business inquiries offering electronic collection	31/3/05
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2.5. ONS's current Service Delivery Agreement includes a target to:

"By March 2005, to make it possible for 100% of business forms to be collected electronically and to have achieved 50% of forms collected by that route".

## ONS e-Business Strategy

2.6. The ONS's e-Business Strategy has four distinct thrusts, one of which is e-Collection, described as "changing our interfaces with data providers and changing other means of collection". The e-Business Strategy states that

"The collection of information by using the Internet, and other electronic means, allows us to move away from the concept of a survey, to a broader view of the participation by businesses and people in statistical surveys and administrative sources."

2.7. ONS as a whole is still significantly reliant on paper-based data collection. On the economic statistics side, approximately 20% of forms are now capable of being returned electronically via the Telephone Data Entry (TDE) "touchtone" system.

2.8. The e-Business Strategy commits ONS to implementing data collection via the Internet for business contributors, as can be seen in this extract:

"ONS is among the leading developers in the world in the design and testing of interactive web-based data collection, but there are security issues to overcome. In consultation with other leading National Statistical Institutes, Customs & Excise, the Inland Revenue, and with the e-Envoy's Office, we are exploring data security issues associated with this form of data collection and other plans, including assessing the facilities provided by the Government Gateway. **Subject to resolving security issues, the roll-out of this form of interactive, self-validating collection methodology will deliver considerable benefits in terms of ONS business efficiency and data quality improvement, and compliance-saving benefits for business contributors**".

2.9. The e-Business Strategy states targets that directly affect this DCI Strategy:

"By 2005

There will be a **much reduced dependency on paper returns, and a high proportion of electronic data capture** through intranets, the Internet or other telecommunications routes. This will bring benefits to ONS in terms of speed and accuracy of data, and to those providing material (e.g. businesses) because we will need to do less checking back with them.

**We have to give our data providers a choice**, and the options we make available to them depend heavily on the level of response and data quality that we are looking for. For example, small businesses and individuals may not be in a position to use the range of electronic transfer choices, and will only participate in a survey if the paper or telephone choices are available. **We will therefore offer TDE for all suitable business inquiries, and web collection on every inquiry, but also continue to offer paper-based collection where necessary.**

**Internet data collection will be available, subject to the security issues being resolved, where we anticipate the Government Gateway providing authentication facilities and a secure interface.** This form of interactive, self-validating collection methodology will deliver considerable benefits in terms of ONS business efficiency and data quality improvement, and compliance-saving benefits for business contributors.

Integration with commercial business software will, we hope, allow data sought by ONS to be readily extracted from standard software packages in widespread use. This will reduce the burden on suppliers. ONS, Customs & Excise and Inland Revenue are in discussion with the British Accountancy Software Developers Association with a view to encouraging **the inclusion in standard accountancy software of modules which would enable the immediate transfer of data to Government Departments**"

## Statistical Infrastructure Development Programme

2.10. The Statistical Infrastructure Development Programme (SIDP) is intended to create, a regime for the effective production, analysis and dissemination of statistics. This regime will be based on agreed statistical methods, supported by high quality, tested systems that facilitate the various stages of statistical work within the ONS. It will build on systems already available where appropriate, to develop a limited number of common set of statistical tools for use across the ONS

2.11. Successful implementation of SIDP is seen as resulting in data held within a limited number of well defined databases linked by common metadata structures. Tools will be available to business areas to facilitate their statistical activities from collection through processing, and analysis to dissemination. Standards will be supported for a range of methodological areas, for example, data item definition, classifications, testing and editing protocols. Management information, including quality measures will be supported. Data will be integrated through the use of common definitions and methods, and will be relatable and accessible as rich linked datasets for dissemination. Metadata will flow with information through the statistical system on a "specify once, use many times" basis, to support effective end-user access.

2.12. SIDP has defined a list of desired outcomes. These are shown in the table below, together with a brief description of how the DCI Strategy contributes to the implementation within PBG of these desired outcomes.

## **SIDP desired outcome**

**1. Business continuity in respect of key statistics**, throughout the development and implementation of the programmes. The SDC [Statistical Development Committee] must work to ensure none of its decisions, or programme approaches, creates significant business discontinuities. Activities that maintain business as usual should be ringfenced during re-engineering of processes.

**2. Reduced support and maintenance costs for fixed capacity.** Efficiency gains will come from the economies of scale that will result from standardisation of robust, high quality, statistical and computing infrastructures and the automation or elimination of routine tasks. There will also be cost savings from a reduced software set (licence fees, training costs etc).

**3. Increased speed of development and delivery**, through added tools and accessibility of tools and improved and automated corporate dissemination systems. More standardised production streams will reduce errors and shorten delivery times and there will also be efficiency gains when the re-use of existing solutions speeds (re)development.

**4. Increased value of statistical outputs**, e.g. by providing fast access to metadata such as definitions, classifications and quality measures. Greater comparability between data sources and outputs will produce more and higher quality outputs from existing data. In addition, comprehensive metadata will provide the structure for navigation of the NS website and enable greater visibility of not just data, but processes and methods.

**5. Improved integration to extract additional information.** There will be greater comparability between data sources and outputs through the incorporation of agreed data format standards, common definitions, classifications and statistical processes. Benefits will also include reduced resources to find, reformat or re-use datasets.

## **DCI Contribution**

The DCI programme has always placed a high importance on maintaining business as usual. The evaluation of pilot projects includes the impact on statistical outputs, especially the possible introduction of bias. Future projects will include a Quality Plan to ensure the continued monitoring of data quality beyond the introduction of a new system.

DCI aims to standardise systems and processes across PBG wherever possible, and has achieved considerable success in this in the past. For example, replacing paper forms with their scanned images allowed many tasks to be eliminated or automated within a workflow system based on Notes.

DCI will further ensure the standard ONS infrastructures are implemented wherever possible.

Development of DCI systems will use the corporate standard development environments and tools, and will reuse existing solutions wherever possible. Any exceptions, and the reasons for those exceptions, will be submitted to the SDC for their agreement.

The DCI programme will provide a substantial amount of metadata to input into the corporate metadata pools; e.g. the proposed Question Library, and the Collection Database.

DCI will implement agreed data format standards, definitions and processes wherever appropriate, to enable this integration to take place. Much of this standardisation of data formats will be implemented through the Collection Database.

**6. Reduced cost of analysis.** Web-based dissemination of integrated data with agreed standards will allow the customer the flexibility to tailor data on-line.

DCI will implement the agreed standards throughout its systems as appropriate, to ensure this flexibility can be achieved.

**7. Reduced system failures.** Standardised infrastructure will be easier to maintain and to keep operational.

DCI systems will be implemented on the corporate infrastructure.

**8. Reduced staff costs for same outputs.** Standardisation will provide efficiency gains through automation and the elimination of routine tasks. There will be reduced effort required to (re)design and implement systems. Simplified training for new staff will also reduce costs.

The DCI programme has already had considerable success in automating routine tasks in the past, and in standardising across business inquiries. This will continue.

**9. Improved quality** resulting from less diversity in our methods and better ability to assure them.

The DCI programme and systems will support improved quality, and will provide enhanced metadata and process data to assist in quality assurance processes.

**10. Better user confidence and trust** through the increased availability of metadata, reduced level of error in outputs and reduced delays.

The DCI programme is the means through which an increasing amount of metadata will be made available to the corporate metadata pools.

**11. Reduced need for surveys through better access to administrative records.** Providing information based on administrative data and/or through integration with existing information sources will reduce the burden on ONS and suppliers

The DCI project "Business Systems Software" (also known as "Accountancy Software" is a joint venture with Customs & Excise, Inland Revenue Companies House and BASDA (British Accountancy Software Developers' Association) to enable to extraction of data directly from businesses' software systems.

**12. Reduced risk of staff moving on and taking key knowledge with them.** Simplified software will allow IS staff to become expert in a more limited domain and so provide a better service, and staff in business areas to be flexible in their ability to move from one area to another given that methods and systems will be more common between different areas.

DCI has already been successful in standardising systems across PBG. This will continue. In addition corporate standard systems will be implemented wherever appropriate.

**13. Reduced start up costs for new developments.** New developments will benefit from being able to draw on standard tools and processes. The initial costs of staff training, systems testing and support will be thus kept to a minimum and there is likely to be a shorter time from project specification to live running.

DCI will use the corporate development environments and tools wherever appropriate.

## Information Management Programme

2.13. The Information Management Programme (IMP) is intended to modernise ONS's systems. ONS's business objective is to improve access to, and availability of, its data and information. IMP will provide modern, integrated information systems that will enable ONS to respond quickly and flexibly to the information needs of our customers. It will create a comprehensive e-business, enabling customers to get information quickly in the format of their choice.

2.14. IMP's vision consists of a number of elements:

**A common statistical infrastructure.** The common statistical infrastructure is about the adoption wherever practical of standard methods, techniques and tools (including proprietary software packages) for the whole range of statistical processes and activities.

**Web dissemination.** Web dissemination has two components to it. The first is that, wherever practical, web dissemination will be the default and paper and other electronic media a spin-off from delivery to the web. The second aspect is the creation of a single, highly automated, output stream for all of the business areas, which will feed the website.

**Data management (including provision of a single definitive source of ONS data).** Data management is about the organisation-wide adoption of data standards, the creation of a data catalogue and definitive shared data pools. It will also include the provision of tools and utilities for translation between formats, and to provide (and control) access to the contents of the shared data pools.

**Metadata management.** Metadata management is about the creation and maintenance of a comprehensive, structured, electronically searchable set of information describing the information resources held by ONS. Metadata will also include quality descriptions of procedures.

**Better access to administrative records.** Better access to administrative records is about the creation of data communications and storage facilities that will enable ONS to import and use additional administrative data to supplement and/or replace survey data.

**Common information systems and infrastructure.** Common information systems and infrastructure is about the adoption wherever practical of standard IS solutions and the modularisation of bespoke applications such that corporate solutions are developed to meet recurring needs.

2.15. The DCI Strategy contributes to and is guided by the standards and implementation of IMP. The Collection Database will be the common infrastructure supporting the collection processes and providing survey data for all business surveys, with solutions which will conform or, if necessary, be adapted to conform to IMP data and metadata standards. The prototype of the Collection Database uses Microsoft SQL Server, as will the initial implementation depending on timing, but will be migrated, if necessary, to conform with IMP standards when they have been decided. The underlying data model for the Collection Database and the metadata requirements for the Question Library can be expected to influence IMP standards, but will be adapted where necessary to meet corporate requirements.

2.16. The IMP vision requires the DCI Strategy to take into account a wider scope than the requirements of BDD or PBG, in order to ensure that standards and solutions can be adopted from or shared with other areas of ONS. IMG, through their membership of the DCI Steering Group, will

ensure that the design of all systems is compatible with the IMP technical architecture. Following a joint Awayday involving BDD, SD, MG and IM, opportunities for synergy between data collection for business and social statistics are being explored.

### **3. The DCI Strategy**

#### **Vision**

3.1. The vision for DCI is that the programme should enable data returned by contributors to arrive at the Data Validation Unit (DVU) desktop in a transparent manner, irrespective of the method used to return the data. The whole process should be seamlessly integrated, giving end-users efficient methods of collecting and processing the data, while simultaneously moving validation of the data to the point of capture wherever possible. Contributors will have a choice of methods for providing their data; and by 2005 every contributor will have the option of providing data via the Internet. In addition the programme should enable work areas within all parts of business statistics to function more efficiently and effectively. The DCI programme aims to implement the foundations on which the DVU functions.

#### **Objectives**

3.2. The objectives of the DCI Strategy are:

- to reduce the cost and increase the efficiency of data collection for business inquiries;
- to reduce the burden on the contributor;
- to improve the quality and timeliness of data;
- to achieve ONS's e-Business Strategy, and therefore to meet the E-Government target to implement 100% electronic availability for the collection of data from businesses by 2005.

### **4. Assumptions**

Assumptions made in this Strategy are:

- The Strategy covers the period 2002/03 to 2006/07. No costs or benefits have been considered outside this period.
- There will not be a significant increase in the level of administrative data used; in other words, data collection will continue to be founded on form-based inquiries. While investigations are underway to make more use of VAT data, operationally there will be no significant increase in the use of VAT or PAYE data as a substitute for the current data collection process for at least the next two or three years. This issue will be taken into account in the regular reviews of this Strategy.

- There will be a continuing requirement to collect data for business statistics similar to that which is currently collected; we envisage that our customers' requirements for data collection will be the same or similar.
- Contributors will be offered a choice of ways in which they may provide their data, i.e. PBG will continue to provide both paper and electronic means of returning data;
- The Strategy can expect to influence IMP and SIDP but needs to be ready to adapt to their emerging requirements.
- An increasing number of businesses will have access to the Internet, and make use of it as standard business practice.
- Systems must be prepared to cope with the potential transition from Sterling to Euro with cost effective solutions which minimise the adverse impact on quality.

## 5. Principles

5.1. In order to achieve the objectives described above, we propose the following principles. These will guide future work on the DCI programme.

5.2. We will achieve the above objectives by:

- encouraging electronic communication and return of data;
- implementing contributor-based collection rather than inquiry-based methods wherever possible, subject to timeliness constraints;
- implementing validation of data at the earliest appropriate point in the collection process;
- supporting the Information Management and Statistical Infrastructure Development programmes, ensuring that all developments are modular and generic as far as possible;
- designing and developing systems that as far as possible support the corporate generic collection of data, whether business, social, or registration;
- working in conjunction with Methodology Group to ensure that the procedures, methods and systems used underpin the collection of high quality data, using appropriate testing and evaluation to minimise modal bias;
- adhering to corporate ONS solutions, policies and standards wherever possible, according to the business requirements;
- further integrating the processes involved in forms design, forms printing, and the scanning of and extraction of data from returned forms;
- improving flexibility by reducing the effort involved to change an inquiry form, whether a paper or an electronic version of that form;
- rationalising, standardising and improving the internal systems used in the capture, validation and processing of data;
- implementing a single interface for all areas within business statistics, possibly using Lotus Notes, acting as a client or front-end for all appropriate applications;

- improving communication between the various IS software and tools;
- making better use of and expanding telephony and associated systems for data collection;
- promoting the collection of data over the Internet;
- designing solutions that complement the ONS business continuity strategy.

## 6. Business benefits and costs

6.1. ONS's e-Business Strategy is predicated on securing substantial efficiency gains internally in five main areas, two of which are:

"**Electronic collection of data** - reducing the need for manual processing ... "

"**Better workflow arrangements** - workflow management will reduce duplication of effort, ensure the right steps (or clearances) are taken at the right time and provide a more controlled quality-assured process."

It also includes efficiencies external to ONS:

" ... Efficiencies external to ONS will include lower compliance costs for business suppliers of data ..."

6.2. The DCI Strategy, as underpinning the e-Business Strategy, is designed to increase efficiency and effectiveness, while reducing the burden of bureaucracy. The electronic collection of business data is faster, simpler, more efficient, and less onerous for business, giving business the choice of how they respond to ONS surveys.

6.3. In order to minimise the additional costs ONS strategic software and hardware is used wherever possible. The overall cost of this strategy over the next five years is estimated at **£1402k**. Savings over the five-year period are estimated at **£1854k**. The Net Present Value (NPV) of the total net savings over the five year period is **£340k**. This assumes a conservative **10% take up of Internet forms**.

If we assume a **20% Internet take up**: The overall cost of this strategy over the next five years is estimated at **£1402k**. Savings over the five-year period are estimated at **£2742k**. The Net Present Value (NPV) of the total net savings over the five year period is **£1136k**.

If we further assume a **30% Internet take up**: The overall cost of this strategy over the next five years is estimated at **£1402k**. Savings over the five-year period are estimated at **£3630k**. The Net Present Value (NPV) of the total net savings over the five year period is **£1933k**.

6.4. Intangible benefits, which include:

- There is a longer term business gain from the integration of the three take-on methods: paper (including fax), TDE, and Internet. This also fits closely with the objectives of IMP and SIDP.
- The introduction of bespoke forms to all business inquiries will enable a major reduction in compliance costs.

This Strategy is essential for ONS to achieve:

- the ONS Business Strategy and e-Business Strategy;
- the e-Government targets within the overall Modernising Government strategy;
- ONS's Service Delivery Agreement.

6.5. Assumptions have been made regarding contributor take-up of Internet collection for the first three years. For years 4 and 5 it has been assumed that take-up will remain constant rather than increasing further, as may well be the case. We are not yet in a position to estimate how quickly contributor take up will expand.

## **7. Solutions: tools and technologies**

### **Collection by Paper - Scanning and Intelligent Character Recognition (ICR)**

7.1. The current Integrated Data Capture (IDC) system for handling paper forms needs upgrading and replacing. Alternative methods of scanning and ICR have been researched, and the future software will utilise question recognition rather than the current form recognition principles using templates. This step is essential to meet the anticipated requirements of bespoke forms using a question library, and will have the effect of reducing the constraints and lead times required for producing paper forms. Dependency on the 16-bit software components of the current software will be eliminated. The new methods will allow the procedures used for handling paper forms to share common systems and standards with other media, via the Collection Database.

7.2. Benefits of this approach include:

- the move to 32-bit software, essential for the proposed introduction of future versions of the Windows operating system;
- reduced lead time needed to make changes to inquiry forms;
- savings in the DVU resulting from faxed forms being integrated into the ICR process, rather than being keyed from image by the DVU (except on recognised 'golden days');
- this is one of the essential foundation stones needed before a Bespoke Forms system can be implemented; i.e. increased flexibility to change inquiry questions or to vary questions within inquiries.
- further integration of processes within the Integrated Data Capture area;
- extending the range of inquiries for which it is cost effective to introduce scanning and ICR, thus reducing DVU effort;
- introducing further standardisation across different modes of collection.

### **Fax**

7.3. A considerable number of completed forms are returned to ONS by fax. Currently faxed forms for the majority of inquiries (excluding those inquiries with the larger more complex forms e.g. ABI) are now returned to the central fax server (FacSys). The images are indexed by the Integrated Data Capture team, and are then passed to the DVU for online data take-on. The current scanning and recognition software means that it is not possible to integrate incoming faxes into the standard ICR

process, as the quality of the incoming faxes is too poor. This depends on the sending fax machine, over which ONS has no control.

7.4. However, it is believed that the introduction of the new question-based recognition software will enable incoming faxes to be integrated with the mainstream processing. This will reduce the need for online data take-on by the DVU, although this may still be needed in certain circumstances, for example, on the day prior to results being run, when batch updating will be too slow.

### **Telephone Data Entry**

7.5. A new, digital, Telephone Data Entry (TDE) system has been procured and installed, and all existing inquiries have now migrated to the new system. Currently approximately 20% of forms are collected using this method. We believe there is scope to increase this percentage; firstly by implementing TDE on a number of additional inquiries that are suitable; and secondly by increasing the take-up of TDE by businesses.

7.6. MG are currently starting work to investigate potential modal bias of TDE, and to recommend standards for dialogues to ensure bias is eliminated or minimised. All inquiries (existing and new) using TDE will implement these recommendations.

### **Internet**

7.7. Two pilot projects have now been completed, on the Prodcum and Research & Development inquiries. These have given valuable information and have guided the future strategic direction of Internet collection. The proposal for the collection of business statistics over the Internet has been redesigned to use the infrastructure supported by the Office of the e-Envoy (OeE) for external communication and associated standards (e.g. e-GIF), and to adopt technical solutions within ONS which will fit with the strategic direction of the Information Management Programme. This will also enable the potential use of developments achieved by other departments (e.g. Inland Revenue, Customs & Excise).

7.8. As a public-facing organisation, ONS engages in two-way transactions with the public and with other parts of Government. The integrity of our processes and the confidentiality of the data collected is paramount. The Government Gateway will be used for the collection of business data because it provides:

- secure transfer between businesses and the ONS secure data repositories;
- an authorised and approved public interface;
- an authentication management service to enable Public Key Infrastructure (PKI) and Level 2 services for data collection;
- access to the authentication agreements of other departments that can be applied by businesses dealing with ONS for data collection activities;
- robust and resilient infrastructure for hosting ONS communication services.

7.9. MG will be involved in advising on the design of Internet questionnaires and other issues to ensure modal bias is eliminated or minimised.

### **The Collection Database**

7.10. All of the above systems (for paper, fax, TDE and Internet) can be developed and implemented as separate systems, but this implies large overhead, maintenance and data integration problems. We propose to solve these problems with the introduction of the Collection Database.

7.11. The Collection Database will be used to drive all the processes connected with the capture of data for inquiries, integrating the various collection media. It will underpin the collection of data, irrespective of the medium by which that data is collected - it will cater for data returned to the office on paper, by fax, via the Telephone Data Entry (TDE) system, and via the Internet. Eventually the database should also drive the production of the collection instrument; ultimately it could potentially be used by the DVU when validating and editing returned data.

7.12. Benefits of this approach include:

- a single integrated system supporting and driving data capture via all types of media, and managing increasing mixed mode data collection in a standard way;
- increased commonality and standardisation of processes, and therefore reduced maintenance costs;
- the provision of considerable data for the management of the collection processes, including for audit and monitoring processes;
- it is one of the essential foundations that must be in place before Bespoke Forms can be implemented for the fast and flexible production of forms; which leads to
- increased flexibility for RAP customers to change inquiry questions/ability to vary questions within inquiries;
- therefore a reduction in compliance costs;
- a number of technical solutions to dealing with the transition to the Euro become available, in contrast to the current scanning and recognition system which offers limited scope for a solution and would be at risk of being unable to cope with the required increase of formtypes.

7.13. The Collection Database will be designed and implemented in such a way that it can be used to drive the collection of any data required by ONS or other Government Departments, not just the collection of business data.

### **Groupware / workflow**

7.14. ONS's current policy is to use Lotus Notes as the core support tool for internal communications and business management. PBG has a number of workflow applications to assist the processing and validation of returned forms. With the advent of Notes 5 further improvements in integration are possible. Improvements in communication between different systems are also being

implemented, using Lotus Notes as a front-end. These initiatives will ensure that PBG processes business inquiry data in the most efficient way possible, minimising duplication of effort and ensuring that quality control procedures are built into the process.

### **Business systems software**

7.15. The use of accountancy software to gather information from businesses without the need for them to complete business inquiry forms has significant potential to reduce compliance costs for businesses. This is particularly the case for short-term business inquiries where the relatively aggregate data collected is more readily mapped to business accounts which do not have any standard framework or definitions. BDD is working with Customs and Excise (C&E) and the Business Applications Software Developers Association (BASDA) to build up a common data requirement to be used by the commercial software developers. There are also potential quality and congruence benefits of accessing company data via accountancy software.

7.16. A number of companies currently market business applications software, including accountancy software, to help businesses manage their company accounts. Much of the information that ONS collects via business inquiries is held within software. However, it is not held in a way in which a business that uses such software can readily extract it for passing to ONS as an alternative to completing an inquiry form. There are two reasons why the information cannot be readily extracted. Firstly within the United Kingdom there is no standard accounting framework. This means that the information stored by businesses will vary in detail and will be coded differently. Secondly the level of detail requested in ONS business inquiries, particularly the detailed annual inquiries, will not match the data held in the accountancy software.

7.17. Firms that market accountancy software have shown some interest in the past in working with ONS, to develop modules that extract the information from the accounts data held within the software, in a format that readily provides the information needed by our business inquiries. However, this interest did not lead to any positive outcome in the delivery of any modules. One reason for this was thought to be the case was that ONS believed the software companies would develop the modules from their own resources, as they would see a marketing benefit. This proved not to be the case. BDD is now proposing that another approach should be made, working closely with C&E.

7.18. There are clear benefits from businesses being able to provide their data directly from accountancy software:

- data quality should be high as it would be taken directly from the systems that the businesses use to monitor the company finances;
- businesses should have less difficulty in understanding what data is being asked for than on the paper inquiry forms, as the software would link to the correct data;
- businesses would have a much lower compliance burden as the software would extract the required data automatically, thus avoiding the transcription needed for other data collection mediums, and also eliminate associated transcription errors;
- there is scope to take more data from a business than is strictly needed by an individual inquiry, as this would be as easy for a business to provide as a more restricted set;

- the software would ensure that the data sent to ONS was in an ONS defined format.

## **Comprehensive Business Directory**

7.19. Over recent years the ONS has been leading a project to develop a Comprehensive Business Directory (CBD). Although not an integral component of the DCI Strategy the CBD is closely linked, particularly with regards to the work being undertaken on Internet collection.

7.20. The main thrust for the CBD project has been to:

- work towards achieving the joined-up government principles set out in the Modernising Government agenda, and
- work towards the 2005 electronic government targets

7.21. The project has been undertaken in collaboration with HM Customs & Excise, Inland Revenue and Companies House. Its primary aim is create a CBD as a central facility, which can provide a range of services by acting as a hub containing information to link data relating to the business community held in administrative data sources.

7.22. To address this the ONS CBD team has commenced development of a prototype virtual data warehouse model, whereby electronic access by ONS to HM Customs & Excise and Inland Revenue data can be promoted and strictly controlled. The model also includes improved access to public domain data held by Companies House and Yell. Better access to data will result in improved quality of business statistics. There is also the potential for achieving more consistency between departments, especially in the case of the classification of businesses.

7.23. Data transfers from the administration departments will be via direct and secure electronic means, providing greater resilience and more streamlined and timely flows. Security of the data transfers is key to the concept, and the project will make use of the government standards for data exchange and authentication that are provided within the Government Gateway strategy.

7.24. The development of a CBD model is based on matching of data, in the absence of a single business registration system for government. The quality of the matching tools will determine the extent to which the model can be implemented more widely within government.

## **8. Methodology Issues**

There are various methodological issues which require MG involvement. These include:

- Investigation of the potential modal effects of different data collection methods. If there are found to be modal effects, recommendations must be made and implemented to minimise these effects, and to fully take them into account in processing results.
- Accurate measurement of take-up of each method of collection must be implemented.

## **9. Risks**

9.1. Programme and project management will ensure that all new developments and new technologies are properly assessed, trialled and piloted before full implementation. The e-Business

Strategy states that ONS's policy is "to ensure that only working, quality systems are released to the public and our customers, or used internally".

9.2. A revised risk register is at Appendix D

**9.3. It is important to note that in the absence of some additional resources or appropriate resources, we will still continue to pursue this strategy on which we have embarked. But the result would almost certainly be longer timescales for delivering ONS's e-Business strategy and the Business Plan, failure to meet ONS's Service Delivery Agreement, delays in the delivery of the benefits and savings outlined, and a substantial threat to ONS's contribution to the Government's overall e-Government targets.**

## 10. Implementation of the Strategy

10.1. The implementation of this strategy will be achieved by a number of projects. The existing three-phase approach to the work will continue:

- research and development in conjunction with IM;
- running a pilot, again in conjunction with IM;
- implementation of successful technologies and methods; this will include
  - ensuring a split between development and operational systems;
  - full handover of operational systems to IM;
  - resilience issues.

10.2. The DCI Working Group, reporting to the PBG Data Sources Steering Group, will monitor and control all DCI initiatives. It will act as a Programme Board for all DCI projects.

10.3. As much DCI work as possible is managed using a Project Management approach. There will be two types of project:

- **Pilot projects**, typically involving research, development, and investigation of the applicability to business statistics.
- A pilot project generally encompasses the feasibility stage of a typical PRINCE project. The outputs of a pilot project may include:
  - identification of successes and failures;
  - evaluation and quantification of potential costs and benefits, including savings;
  - recommendation whether to proceed to implementation or not;
  - if the pilot is considered successful, the business case for implementation.

**Implementation projects**, typically resulting from successful pilot projects.

Implementation projects revisit the user requirements and the business needs of any potential application, and also the appropriate hardware and software to be used, taking into account the probable scaling up of the successful associated pilot project. An implementation project would only be approved if there was a strong and robust business case. An implementation project would include among its outputs:

- implemented system(s) and application(s) amongst business areas;
- full technical and user documentation;

- provision of appropriate training to users;
- proposals to ensure the expected benefits are measured and monitored.

Before an implementation project is signed off as complete the resulting system(s) or application(s) must be accepted by the maintenance team and by the end-users in the business area. This acceptance would normally follow a period of consolidation; i.e. there will be a period when the system is running live but is supported by the developers.

10.4. The DCI Steering Group will approve the submission of proposed projects to the ONS Investment Board. The DCI Steering Group reports to the Business Sources Steering Group.