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Report of the  
**Auditor General  
of Canada**  
to the House of Commons

Managing Identity Information



Office of the Auditor General of Canada

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For copies of the Report or other Office of the Auditor General publications, contact

Office of the Auditor General of Canada  
240 Sparks Street, Stop 10-1  
Ottawa, Ontario  
K1A 0G6

Telephone: 613-952-0213, ext. 5000, or 1-888-761-5953

Fax: 613-943-5485

Hearing impaired only TTY: 613-954-8042

Email: [distribution@oag-bvg.gc.ca](mailto:distribution@oag-bvg.gc.ca)

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Auditor General of Canada  
Vérificatrice générale du Canada

To the Honourable Speaker of the House of Commons:

I have the honour to transmit herewith this report to the House of Commons, which is to be laid before the House in accordance with the provisions of subsection 7(5) of the *Auditor General Act*.

A handwritten signature in black ink that reads 'Sheila Fraser'.

Sheila Fraser, FCA  
Auditor General of Canada

OTTAWA, 5 November 2008





**Managing Identity Information**

*All of the audit work in this chapter was conducted in accordance with the standards for assurance engagements set by The Canadian Institute of Chartered Accountants. While the Office adopts these standards as the minimum requirement for our audits, we also draw upon the standards and practices of other disciplines.*

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# Managing Identity Information

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## Foreword

Canadians and residents of Canada come in contact with the federal government in several ways. They receive services and benefits such as income security and Canada Pension Plan payments; they exercise their rights—the right to vote, for example, and to move freely in and out of the country; and they fulfill obligations such as the requirement to pay taxes. The various federal institutions that deliver these services and benefits, and support the exercise of these rights, have to confirm that their clients are the people they claim to be.

Confirming a person's identity every time they deal with government is a complex business challenge. Many people use slight variations of their names or record their dates of birth in different ways. Each year, enormous numbers of Canadians move to new addresses. And people forget or misplace the identifying numbers assigned to them and the passwords that they have created.

To meet this challenge, federal institutions collect information from the same people for different purposes—information that is similar, though not always exactly the same from one organization to another.

Several recent audits by the Office of the Auditor General found that organizations managing this similar information faced similar challenges. In the spring of 2007, the Office decided to look more closely at how federal institutions manage the information that they use to identify their clients—their “identity” information. The Office was particularly interested in how they ensure the quality of the information and to what extent they collaborate to ensure the efficient use of the government's information holdings.

The Office of the Privacy Commissioner has also conducted several audits of how federal institutions are managing the personal information they hold, which includes identity information. It found that institutions need a robust privacy management framework if they are to achieve their program objectives and observe best privacy practices. The Commissioner's Office decided to look more closely at the privacy management frameworks of certain federal institutions—how they organize themselves through structures, policies, systems, and

procedures to distribute privacy responsibilities, coordinate privacy work, manage privacy risks, and ensure compliance with the *Privacy Act*.

Our two offices therefore agreed to work collaboratively on concurrent audits, consistent with our respective mandates. This collaboration represents a historic first—audits of selected federal institutions, conducted and reported on concurrently by two officers of Parliament.

The two audit teams participated jointly in audit-related processes and shared information on a regular basis.

Both offices report on the systems and practices of four federal institutions, each of which manages at least one large database of personal information that includes identity information. Elections Canada, for example, manages the National Register of Electors, which contains the personal information of about 23 million eligible Canadian voters. Service Canada manages the Social Insurance Register, with the personal information of everyone who has applied for a social insurance number; the Register held nearly 31 million active records in 2007. The Canada Revenue Agency manages the IDENT database containing the personal information of about 33 million individual taxpayers, and Passport Canada's Central Index contains records of more than 17 million active passports.

The Office of the Auditor General found that, with one exception, the organizations collected only the identity information they are authorized to collect. The quality of the collected information is managed well in two of the federal institutions, while there are opportunities to improve in the two others. However, federal institutions have not integrated their approaches to managing identity information. Many similar frameworks, strategies, and initiatives have been pursued over the past 10 years, but the result has been some duplication of process, frequent reconsideration of the same problems, and incomplete solutions to the underlying needs.

The Office of the Privacy Commissioner found that the privacy management frameworks of two of the four federal institutions are reasonably robust, but require improvement, while there are significant gaps with respect to the way personal information is managed by the two other institutions. It found instances where personal information is being collected and used without legislative authority, where personal information is at risk of unauthorized disclosure or loss, or where privacy risks were not appropriately assessed. Weaknesses in an institution's privacy management framework can have a variety of real

consequences for Canadians, including the risk that personal information will be used for illegal activities such as identity theft.

Both officers of Parliament call for stronger leadership from the centre of government—specifically, the Treasury Board of Canada Secretariat. The Secretariat has a critical role to play in setting standards and issuing policy, directives, and guidance on managing identity information and developing model frameworks for privacy management.

Without stronger leadership, federal institutions will likely continue independently to develop incomplete solutions to their common challenges: how to authenticate the identity of the Canadian citizens and residents they serve; and how to ensure the privacy of the personal information they collect and use, including its integrity, security, and confidentiality. The full picture of the opportunities—and the risks of inaction—emerges in reading the two reports as a whole.

Federal institutions can do a better job of managing the personal information assets of government. Failure to do so will be costly and inefficient and could erode the privacy of Canadians.



Sheila Fraser  
Auditor General of Canada



Jennifer Stoddart  
Privacy Commissioner of Canada





# Managing Identity Information

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## Main Points

### What we examined

The government's ability to deliver some of its largest and most significant programs to Canadians relies on information that allows federal institutions to identify the individuals applying for services. This identity information includes, for example, an individual's name, date of birth, and address.

Our audit examined identity information databases of the Canada Revenue Agency, Elections Canada, Passport Canada, and Service Canada. The four databases we reviewed contain similar identity information about the majority of adults in Canada. We looked at whether the four institutions manage identity information as a valuable asset, collecting only what is relevant to their programs or activities and using practices that are adequate to ensure the quality of the information. We also looked at the extent to which they have worked together to address common problems and to share solutions, in order to manage identity information efficiently while respecting privacy and other legal requirements. Our audit also included the Treasury Board of Canada Secretariat in its role of providing central guidance on information and identity management in the federal government.

We did not audit data security, that is, controls on access and security of data transmissions.

### Why it's important

People requesting government services today expect federal institutions to meet their needs seamlessly and efficiently. To do this, federal institutions increasingly use the identity information in their databases to identify the individuals applying for services. Those institutions need to ensure that the information they use is valid and accurate.

It is difficult to determine the costs of managing identity information. Based on information provided to us, however, estimated development costs of each of the four databases we examined ranged from \$12 million to \$31 million. Each database also costs from around \$3 million to over \$20 million a year to operate. Improving the management of identity information could increase efficiency and reduce duplication. It could also improve service to Canadians by

reducing the need to repeat processes, streamlining access to services, and improving communication with government.

### What we found

- There is no integrated federal approach to managing identity information; many similar frameworks and strategies have been developed but not formally adopted by the government. Policy guidance has undergone several iterations, all with similar elements. Initiatives pursued by federal institutions over the past 10 years to jointly use and manage identity information have resulted in duplication, frequent reconsideration of the same problems, and incomplete solutions to the underlying needs. The inability to arrive at solutions has been due to two main barriers: difficulty in establishing governance structures to manage interdepartmental or inter-jurisdictional initiatives—including an equitable means of paying for the solutions; and a lack of policy direction on managing identity information.
- Federal institutions have pursued many initiatives—jointly and separately, many of them overlapping—to establish electronic routing of vital events information (on births and deaths, for example) from provincial vital statistics organizations. However, almost 10 years after the first electronic links to provincial systems were established, only some information is being obtained electronically and only by some federal institutions; and some of the information is duplicated.
- The institutions we examined collect and manage selected identity information as a valuable asset, with a few exceptions. For the most part, they collect only identity information that is relevant to their programs. The four institutions have a variety of systems and practices to ensure the quality of their identity information. However, Passport Canada has not implemented a comprehensive quality management system to provide adequate assurance that its identity information database contains accurate and complete information.

**The federal institutions have responded.** The federal institutions agree with our recommendations. Their responses follow each recommendation throughout the report.

## Introduction

### Identity information is essential to delivering federal services

1. The federal government's Policy on Information Management states that government information is essential to effective management. Further, it says that information should be managed as a valuable asset to support all aspects of government business.

**Identity information**—The personal information commonly used alone or in combination with other information to identify individuals—for example, name, date of birth, gender, citizenship, address, or assigned identifying number (such as a social insurance number, birth certificate registration number, or passport number).

2. **Identity information** is central to the government's ability to deliver some of its largest and most significant programs. It helps federal institutions provide services to only those entitled to receive them.

**Identification and authentication**—The process of validating and verifying a claimed identity based on assessing the reliability of the information provided.

3. People requesting government services today expect federal institutions to meet their needs seamlessly and efficiently. As federal institutions provide more services electronically, they are using the information contained in identity information databases to **identify and authenticate** Canadians. They need to ensure that they do this efficiently and that the information they use is valid and accurate.

4. Acting on opportunities to improve the management of identity information has several potential benefits. For federal institutions, it could increase efficiency and reduce duplication. For clients, it could reduce the need to repeat processes, streamline their access to services, and make it easier for them to communicate with government. Furthermore, ensuring that the information is accurate could reduce errors, help prevent fraud, and improve program delivery.

**Personal information**—Under the *Privacy Act*, personal information is information about an identifiable individual that is recorded in any form and includes, but is not limited to, name, national or ethnic origin, colour, religion, age, marital status, education, financial transactions, address, fingerprints, blood type, and medical, criminal, or employment history.

5. As a type of **personal information**, identity information is subject to the *Privacy Act* and the associated privacy policies that govern the collection, use, and disclosure of personal information. The collection and management of identity information by particular federal institutions is also governed by program legislation such as the *Canada Elections Act*, the *Employment Insurance Act*, and the *Income Tax Act*. How the information is managed must also be consistent with the Government Security Policy.

6. We estimate that there are at least nine large databases in the federal government that include establishing identity as an important aspect of delivering services to clients and in which most adults in Canada can expect to be included at some point in their lives. Four federal institutions manage these nine databases.

7. We examined one database (Exhibit 1) in each of the following four federal institutions:

- Canada Revenue Agency’s Individual Identification Master File (known as IDENT);
- Elections Canada’s National Register of Electors (NRE);
- Passport Canada’s database for issuing passports (known as the Central Index); and
- Service Canada’s Social Insurance Register (SIR).

8. Costs of managing identity information are difficult to estimate because the information is usually considered a subset of the personal information managed by an institution and is often managed as part of a larger set of program information. Nevertheless, based on information provided by federal institutions, estimated development costs of each of the four databases ranged from around \$12 million to \$31 million. The estimated annual cost to operate each database ranges from around \$3 million to over \$20 million, but not all relevant costs are included in these figures. Some federal institutions did not include costs of data collection, overhead, or quality assurance activities in their operating costs; and none was able to provide its costs for the archiving and disposal of information.

**Exhibit 1** The identity information databases examined in the audit

Database	Federal institution	Contents	Created	Number of active records
Individual Identification Master File (IDENT)	Canada Revenue Agency	Identification information from tax returns and applications for benefit payments	1985	33.4 million*
National Register of Electors (NRE)	Elections Canada	Identification information on Canadians qualified to vote	1997	23.3 million
Central Index	Passport Canada	Completed passport applications and supporting documentation for issued passports and travel documents	1999	16.4 million
Social Insurance Register (SIR)	Service Canada	Personal information on applicants for social insurance numbers	1964	31.1 million

\* IDENT includes some records marked as deceased for which there is ongoing tax activity.

Sources: Canada Revenue Agency, Elections Canada, Passport Canada, and Service Canada.

### Focus of the audit

9. The audit focused on how the Canada Revenue Agency, Elections Canada, Passport Canada, and Service Canada manage the identity information included in the four databases we examined. (Several of these institutions have undergone name changes in recent years due to government reorganizations; this report uses their current names.)

10. The objective of the audit was to determine whether the four institutions manage identity information as a valuable asset, collecting only identity information that is relevant to their program needs and using practices that are adequate to ensure the quality of the information. We also looked at the extent to which they have worked together to address common problems and share solutions in order to manage identity information efficiently while respecting privacy and other legal requirements.

11. Our audit included the Treasury Board of Canada Secretariat in its role of providing central guidance on information and identity management in the federal government. We also looked at Statistics Canada since, at the time of the audit, it was the lead federal department responsible for the National Routing System (a specific project we examined).

12. More details on the audit's objective, scope, approach, and criteria are in **About the Audit** at the end of this report.

## Observations and Recommendations

### Identity information holdings

13. Under the *Privacy Act*, a federal institution cannot collect identity information unless it is directly related to its programs or activities. Managing identity information that is not relevant to its programs may also be an inefficient use of its resources.

14. We looked at what kinds of identity information the selected databases contain and why the Canada Revenue Agency, Elections Canada, Passport Canada, and Service Canada collect and manage the information.

#### **Three of the four institutions collect only identity information they are authorized to collect**

15. **Canada Revenue Agency, Passport Canada, and Service Canada.** In the databases we examined, we found that the use made of each identity element by the Canada Revenue Agency, Passport

Canada, and Service Canada is directly related to the programs they provide. We also found that they have the authority—set out in the Acts, regulations, and policies governing their respective programs—to collect the identity information in their databases.

**16. Elections Canada.** Elections Canada lacks authority for some identity information it collects and keeps. Section 44 of the *Canada Elections Act* establishes the National Register of Electors and specifies several identity data elements that should be maintained in it. The Act also permits Elections Canada to collect and retain information it considers reliable and needed to update the register.

**17.** Elections Canada collects information from provincial and territorial drivers' licence registries (in some cases through provincial electoral agencies) mainly to obtain changes of address. Some provinces and territories send identity information on all drivers, including those under the age of 18—information that Elections Canada does not have the authority to collect, since these individuals are known not to be electors. Officials at Elections Canada told us that this information allows it to invite individuals to register as electors as they turn 18. Elections Canada estimates that it currently holds identity information on about 104,000 individuals under the age of 18.

**18. Recommendation.** Elections Canada should ensure that it collects only the identity information permitted by the *Canada Elections Act*.

**Elections Canada's response.** Elections Canada agrees with the recommendation and will take the following steps to comply by 31 March 2009:

- Elections Canada will purge from its database all information on individuals under 18 years of age.
- Elections Canada will contact its suppliers to request that they provide information only for individuals 18 years of age or older. Until they have implemented this change, Elections Canada will filter the files received from its suppliers and will remove the records of individuals under 18 years of age before processing the files.

However, pursuant to subsection 540(2) of the *Canada Elections Act*, Elections Canada is required to keep, for at least two years, documents that relate to the updating of the National Register of Electors. After that period and subject to the consent of the Librarian and Archivist of Canada, Elections Canada will destroy CD-ROMs, diskettes, or other physical media on which the data was provided.

Elections Canada notes that information on these individuals under 18 years of age has not been included in the National Register of Electors or on lists of electors.

## Management of information quality

19. Managing identity information that is poor in quality or is not usable is inconsistent with the *Privacy Act* and the Treasury Board's policy guidance on managing information. Both require that federal institutions take reasonable steps to ensure that their personal information holdings are accurate, up-to-date, and complete. If federal institutions do not appropriately manage the quality of identity information, they risk having to do work over again to fix errors and being unable to provide good customer service. Furthermore, having identity data that is of good quality helps in detecting and preventing abuse and fraud.

20. Quality management systems provide assurance that individual quality controls are working as intended. They are essential to providing management with independent information on performance and early warning of risks that could affect program delivery. In database management, they also provide a means to ensure that information already in the system does not become corrupted and unusable.

21. We looked at what steps the Canada Revenue Agency, Elections Canada, Passport Canada, and Service Canada take to ensure that the identity information going into their databases is accurate, complete, and valid, and that it is kept up-to-date and not corrupted over time.

### Elections Canada and Service Canada have adequate quality management systems

22. **Elections Canada.** In November 2005, we reported that Elections Canada had in place the core elements of a quality management system, including two targets for the **coverage** and **currency** of the information in the National Register of Electors (NRE) (November 2005 Report, Chapter 6, Administering the Federal Electoral Process—Elections Canada). We also reported that Elections Canada had controls and means in place to ensure that it met these targets.

23. Our current audit found that Elections Canada still measures and reports on the two targets for quality of information in the NRE and has taken steps for further improvement.

24. **Service Canada.** In February 2007 we reported that while Service Canada was heading in the right direction to improve data quality in the Social Insurance Register (SIR), much still remained to be done (February 2007 Status Report, Chapter 6, The Management

**Coverage**—The percentage of the estimated total number of eligible voters who are included in the National Register of Electors.

**Currency**—The percentage of the estimated total number of eligible voters who are included in the National Register of Electors at the correct address.

of the Social Insurance Number—Human Resources and Social Development Canada).

25. Our current audit found that Service Canada has taken significant steps to implement a quality measurement and reporting system for the data in the SIR, as well as a quality management strategy for new data as it is entered into the SIR when someone applies for a social insurance number (SIN). Since February 2007, Service Canada has developed two goals for the quality of identity information in the SIR—**legitimate SINs accuracy rate** and **vital events accuracy rate**—and has established targets for these goals. Service Canada officials informed us that they plan to measure and report on these accuracy rates in the 2007–08 Departmental Performance Report of Human Resources and Social Development Canada (of which Service Canada is a part).

**Legitimate SINs accuracy rate**—The estimated proportion of active SINs that are not multiples or based on fabricated identities and stolen identities of deceased individuals.

**Vital events accuracy rate**—An estimate of the percentage of birth and death dates contained in the SIR that are accurate.

26. In October 2007, Service Canada implemented a national quality control process for SIN applications. Randomly selected cases are reviewed independently to verify that new information entering the SIR at the time of a SIN application is complete, accurate, and valid.

#### **Canada Revenue Agency can further improve quality management of identity information**

27. We found that the Canada Revenue Agency has processes in place designed to identify and act on potential quality problems in its identity information database (IDENT). Some of these processes are undertaken by the managers of IDENT—annual testing of the database before the new tax season begins, for example, and monthly error reports that identify inconsistencies in information and identify when system validity rules are bypassed. We found that the Agency acts promptly to investigate and correct errors.

28. Other quality processes are managed by the business functions that use the identity information in various activities such as processing tax returns. For example, the Agency annually updates identity information based on tax returns filed by individuals and also evaluates how accurately tax returns are processed. The Agency is currently developing a strategy to standardize and better monitor the quality review process in its operational centres, which could further ensure that information on tax returns, for example, is reflected accurately in IDENT.

29. However, we found that in some cases not all the available processes and reports that provide information on the quality of data

in IDENT are being fully used. Using them would enable managers to monitor the information in IDENT and act on problems as necessary.

**30.** We also found that the Agency formally measures and reports against a quality target for only one element of the identity information in IDENT—namely, addresses (for the Agency to receive preferential mail rates from Canada Post, 95 percent of the addresses on its mailings must be accurate).

**31.** In 2006, the Canada Revenue Agency began a multi-year project to renew the IDENT database. The project includes validating information and processes for many data fields; establishing a data stewardship function that identifies business owners of the data; and redefining authorities and rules that govern how the information is entered and extracted from the database. We observed that the validation activities to date have not identified significant data quality problems.

#### **Passport Canada lacks some key elements of a quality management system for identity information**

**32.** Passport Canada has controls in place that are designed to identify and resolve potential data quality problems when a passport application is processed. However, it does not have a comprehensive quality management system that would monitor the effectiveness of the application-processing controls and, over time, the quality of the information in the Central Index (the database for issuing passports).

**33.** The simplified passport renewal process introduced in August 2007 relies on the identity information submitted with the previous passport application around five years earlier and entered in the Central Index at that time; the passport holder is not required to submit the same identity documents again. After 2011, when a 10-year passport is to be introduced, renewals will rely on data entered in the database up to 10 years earlier. These two changes make it critical not only that the quality of data on passport applications be assured before it is entered in the system but also that the quality of the data be maintained over time.

**34.** Passport Canada does not have explicit quality goals but rather works to ensure that identity information on the passport application is correctly reflected on the printed passport. We examined the controls designed to achieve this objective at one of Passport Canada's two application-processing sites. We found manual and automated controls in place to help ensure that identity information on passport applications is entered accurately into the system. Passport agents were

actively following up and correcting problems prior to the printing of the passport. However, with the exception of a report on spoiled passports, Passport Canada does not systematically monitor to what extent these controls work.

**35.** Management also does not systematically measure and report on the quality of the identity data in the Central Index, though sometimes it asks for reports on quality if there is a specific need. For instance, in 2007, a risk assessment of the simplified passport renewal process analyzed discrepancies between information in the system and information provided with passport renewal applications. The assessment showed that there were some inaccuracies in the database in spite of the quality controls on data entry. This indicates that there would be benefits to regularly assessing the quality of information in the system.

**36.** In 2007 we reported that Passport Canada had begun work on a quality assurance program to support the passport issuance process and that officials expected it to be implemented before 2008 (February 2007 Status Report, Chapter 5, Passport Services). Our current audit found that work had stopped on this program due to operational priorities related to the **Western Hemisphere Travel Initiative**. Passport Canada officials informed us they would resume work in 2008.

**37. Recommendation.** Passport Canada should implement a comprehensive quality management system to ensure the quality of eligibility decisions, the quality of data entry, and the quality of the information in the Central Index, the database for issuing passports. It should develop explicit goals for data quality and should measure and report on the extent to which it meets them.

**Passport Canada's response.** Passport Canada agrees that a more comprehensive quality management system should be pursued. Passport Canada will define the concepts of quality of eligibility decisions, quality of data entry, and quality of the information in the Central Index for issuing passports in the context of its operations; develop explicit goals and performance measures; and examine a reporting system that permits monitoring of performance. Consultations with organizations in other countries and with Canadian organizations—such as those mentioned in the report—will be pursued by the end of fiscal year 2009–2010.

**Western Hemisphere Travel Initiative—** Changes to United States laws that required all individuals to carry a valid passport when crossing into the United States by air, beginning 23 January 2007. This requirement significantly increased the demand for Canadian passports. Starting 1 June 2009, individuals will have to present a valid passport to enter the United States by water or land.

### Implementation of the comprehensive quality management system:

- An improved capability has been created and allows employees to ensure that remarks included in electronic files are clear and intelligible. This has improved the quality of information contained in the Central Index. [Completed].
- Passport Canada will sample all business channels to review its data-entry error rate. Passport Canada will also examine critical elements, including the verification of the documentary evidence of citizenship information submitted against information retained in its Central Index. [End of fiscal year 2008–2009].
- Passport Canada will explore the feasibility of conducting ad hoc verification of information, based on sampling and a risk-based approach, with the Vital Statistics offices in certain provinces. [End of fiscal year 2008–2009].

### A whole-of-government approach

38. Through its policy framework on information and information technology, the Treasury Board of Canada Secretariat has encouraged a whole-of-government approach to managing information, within any limits imposed by other specific legal and policy requirements.

39. A whole-of-government approach to managing identity information means

- jointly using and managing the information across federal institutions where doing so provides significant government-wide benefits;
- establishing government-wide policies, standards, guidelines, practices, and tools, as well as sharing best practices to ensure quality and integration of information;
- standardizing sources of data and reusing identity information and technology solutions to eliminate duplication; and
- maximizing investments and minimizing costs.

40. Other governments have studied whether they should adopt a more integrated approach to managing the identity information they have on their citizens. They have concluded that there are efficiency and service delivery benefits to be gained. We visited several jurisdictions within and outside Canada and found that in some cases they used more integrated practices than the federal government currently follows, though none had a complete solution. Their practices included systems that

- allow individuals to notify multiple organizations at the same time about address changes;

- allow government organizations, and sometimes others, to subscribe to a common death-notification service; or
- are shared by several organizations within the government for identification and authentication.

Some of these governments also recognize identity information as distinct from other personal information and as a common need in identifying clients. This distinction allows greater reuse of identity information by government organizations.

### **An integrated approach to managing identity information does not exist**

41. We examined how the Canada Revenue Agency, Elections Canada, Passport Canada, and Service Canada collect and maintain identity information in the four selected databases, what identity information they hold in common, and what identity information the four federal institutions share.

42. The four institutions collect similar information (Exhibit 2) and share some of it. However, these activities have evolved independently and at different times, based on individual program needs, priorities, and authorities. Consequently, an integrated approach to managing identity information in these databases does not exist.

43. Service Canada and Passport Canada each separately collect the identity information in their databases. Service Canada collects identity data for the Social Insurance Register once, when an individual applies for a social insurance number (SIN). The data can be updated when the individual applies for a replacement card, or corrected, if necessary, when the individual applies for other benefits that use the SIN, such as Employment Insurance. Passport Canada collects identity data each time an individual applies for a passport—currently about every five years, but this will change in 2011 when a 10-year passport is introduced. Both organizations collect much of the identity information directly from Canadians.

44. In contrast, the Canada Revenue Agency and Elections Canada use information received from partner organizations as a basis for much of the identity information they add to their databases. Each week, the Canada Revenue Agency receives from Service Canada the name, birth information, and gender of each individual issued a new SIN. The Agency updates and collects additional identity information, such as addresses, from annual tax returns filed by individuals.

45. Elections Canada collects and updates the identity data contained in the National Register of Electors (NRE) mainly through information provided monthly or quarterly by various partners—including the Canada Revenue Agency as well as provincial and territorial electoral agencies, drivers' licence registries, and vital statistics agencies. The NRE is also updated when voters update their identity information during an election, about every four years.

46. The four institutions we examined have more than 60 arrangements with each other and with other partners to validate and update the identity information contained in each database. However, the extent of this sharing is defined in program legislation and bilateral agreements and not necessarily determined by assessing the most efficient and beneficial arrangement from a whole-of-government perspective.

47. The information-sharing arrangements are predominately one-way transfers of data rather than an exchange of data between institutions. Each arrangement represents costs in time and resources to negotiate and maintain the data-transfer processes. These many arrangements have resulted in some duplication as well as missed

**Exhibit 2** Four federal institutions collect much of the same identity information separately for their own databases

Identity Data Element	Federal Institution and Database			
	Canada Revenue Agency IDENT	Elections Canada NRE	Passport Canada Central Index	Service Canada SIR
Name	●	●	●	●
Date of birth	●	●	●	●
Place of birth			●	●
Death information	●	●	Note <sup>1</sup>	●
Citizenship	●	Note <sup>2</sup>	●	●
Address	●	●	●	●
Marital status	●		●	
Gender	●	●	●	●
Assigned number	Social Insurance Number	Elector Number	Passport Number	Social Insurance Number

● Identity information collected

<sup>1</sup> Although there is a field to record date of death in the Central Index, Passport Canada does not systematically collect this information.

<sup>2</sup> Citizenship data field does not exist in the NRE because the database contains only eligible voters, who must be Canadian citizens.

Sources: Canada Revenue Agency, Elections Canada, Passport Canada, and Service Canada

opportunities. We found that typically, the underlying authorities and the information-sharing arrangements themselves do not provide for correcting errors in information received. For example, if Elections Canada determines that its address information is more current than information it receives from the Canada Revenue Agency, it has no mechanism to inform the Agency. Resolving this situation could require changing the legislation that governs these databases.

### **Many potential benefits of common solutions have not been realized**

48. We examined how the federal institutions in our audit have addressed two common needs in their management of identity information:

- identification and authentication processes for online service delivery; and
- validation of identity information, such as birth and death data, with provincial and territorial vital statistics authorities.

49. **Online identification and authentication.** Electronic service delivery requires robust mechanisms for identification and authentication, in order to ensure that services are provided only to the individuals entitled to them. Increasingly, identification and authentication mechanisms rely on identity information contained in federal databases.

50. In 2002, the Treasury Board of Canada Secretariat proposed developing a common identification and authentication system for services delivered online. The potential benefits of a common system would include better client service and more efficient use of resources. Individuals applying for services would have a simpler, more consistent way of identifying and authenticating themselves to various federal institutions. Each federal organization could avoid incurring the cost of developing its own identification and authentication solution. In addition, generic versions of many activities associated with system development, such as threat and risk assessments and privacy impact assessments, could be developed and adapted to specific institutions' needs, thereby reducing the associated workload and costs.

51. We found that although the Canada Revenue Agency and Service Canada discussed implementing a common system several times, ultimately they developed similar but separate systems (Exhibit 3).

52. Elections Canada and Passport Canada have not yet developed services using online methods for identification and authentication.

**53. Validating identity information with provinces and territories.** Provincial and territorial vital statistics agencies are the source authority for birth and death information in Canada. The Canada Revenue Agency, Elections Canada, Passport Canada, and Service Canada use this information from the provinces and territories to confirm identity and determine eligibility for benefits and services. Since at least the late 1990s, federal institutions have recognized that the benefits of validating this information with source authorities include better data quality, more timely decisions, reduced overpayments, improved client service, and the ability to more easily and quickly identify misuse of the information, including possible fraud.

**Exhibit 3 Separate solutions to common needs for online identification and authentication have been developed**

When	Who	What	What happened
Early 2002 to January 2003	Canada Revenue Agency Service Canada Treasury Board of Canada Secretariat	Explore collaborative work on a shared authentication system based on the social insurance number. Funding of about \$1 million is approved to explore this arrangement.	Business model is developed and presented to citizen focus groups in 2002.  Project is discontinued in 2003 because of concerns about using income data to access social programs.
Spring 2002 to present	Canada Revenue Agency	Develops its own authentication management system. Development costs budgeted at about \$4.6 million.	Process is implemented in stages, using IDENT database and income information.
Fall 2002 to present	Service Canada	Develops its own registration and authentication system for certain programs. Costs about \$7.4 million to develop and operate up to March 2008.	Conducts a feasibility study in 2002 for its own online authentication system and begins implementation in January 2004.
Early 2003	Elections Canada	Conducts a feasibility study for online voter registration.	No online solution is implemented. Elections Canada reviews its overall strategy for registering voters.
March 2004	Canada Revenue Agency Service Canada	Explore collaborative options to share their individual authentication systems.	No decisions made.
2006 to present	Canada Revenue Agency Veterans Affairs Canada	Implement a shared registration and authentication solution called Portageur, at a cost of about \$1.1 million.	Individuals requesting online services from Veterans Affairs Canada are authenticated using the Canada Revenue Agency's system.
2006	Canada Revenue Agency Service Canada	Discuss merging their identification and authentication systems based on the Portageur concept.	No common solution is developed due to lack of agreement on levels of assurance provided by each separate system and the funding needed to merge them.

Sources: Canada Revenue Agency, Elections Canada, Service Canada, and Treasury Board of Canada Secretariat

54. In 1999, the Vital Statistics Council for Canada (an advisory body of representatives from Statistics Canada and each of the 13 provincial and territorial vital statistics agencies) recognized that a national approach to routing vital events information electronically would have benefits such as cost reductions and quicker access to updated information.

55. However, almost 10 years after an electronic link was first established between a federal institution and a province, only some identity information is being obtained electronically and some of that information is duplicated. Individual federal institutions have made separate arrangements with some of the same provinces. Of the four federal institutions we examined, only Elections Canada receives identity information from all provinces and territories, but its access is not automated. The Canada Revenue Agency and Service Canada are receiving vital events information electronically from some provinces under two separate projects. Passport Canada participated in pilot projects to validate birth information but currently is not obtaining birth or death information electronically.

56. Exhibit 4 shows how these arrangements evolved.

#### **Duplication exists in practices to obtain vital events data**

57. **Multiple attempts to validate birth information with provinces.** We found that since 1998, Service Canada has had the ability to electronically validate birth information with the province of New Brunswick. It has not yet done so with other provinces but was developing a process with British Columbia, Alberta, and Ontario in 2008. As Exhibit 4 shows, several other pilot projects have been carried out by federal institutions to test the validation of birth information.

**Exhibit 4** There have been many federal initiatives and several false starts in attempts to obtain provincial and territorial identity information electronically

When	Who	What	What happened
1998 to present	Service Canada	Establishes electronic access to New Brunswick birth information.	Validates birth information with the province when individuals apply for a social insurance number (SIN).
1999 to 2001	Vital Statistics Council for Canada, including Statistics Canada	Conceptual design and business case are developed for a national routing system to collect and share vital events information electronically among partners. Costs to implement were estimated at over \$10 million.	The project is put on hold due to costs.
2000 to 2003	Passport Canada British Columbia vital statistics agency	Develop an E-Links strategy for validating birth information electronically to authenticate information submitted by passport applicants.	A three-month pilot project is undertaken in 2003.
2003 to March 2006	Statistics Canada Passport Canada Canada Revenue Agency Alberta and British Columbia vital statistics agencies Other federal institutions	Statistics Canada re-initiates its national routing project from 2001. The project merges with Passport Canada's E-Links strategy, forming the National Routing System (NRS) project. Canada Revenue Agency joins.  Treasury Board provides funding of more than \$4.3 million under the government-online initiative.	NRS pilot project runs from April 2004 to March 2006. Evaluation report concludes that the project is a success. Passport Canada demonstrates that birth data can be validated directly against provincial databases and that partners can be promptly notified of birth and death information. The Canada Revenue Agency estimates a \$2-million reduction in overpayments annually if all provinces and territories participate.
2004 to present	Service Canada Ontario, British Columbia, and Alberta vital statistics agencies	Service Canada decides it cannot wait for the results of the NRS pilot project and begins its own project—Vital Events Linkages. The goals of the Vital Events Linkages project are to process a SIN application and register a birth together (Newborn Registration Service) and, as the NRS project does, obtain death notifications and validate birth information electronically.  Service Canada spent around \$5.7 million up to March 2008.	In 2006 and 2007, the Newborn Registration Service is implemented in Ontario and British Columbia; death notifications from Ontario, British Columbia, and Alberta start.  Pilot projects for electronic birth validation are planned for Ontario, British Columbia, and Alberta in 2008.
Mid-2004 to April 2006	Treasury Board of Canada Secretariat Canada Revenue Agency Passport Canada Service Canada Statistics Canada Other federal institutions	Vital Events Solution committee of assistant deputy ministers established to oversee policy issues related to developing a common system for routing vital events data in Canada.	Concludes in 2004 that merging the National Routing System and Service Canada's similar Vital Events Linkage project could yield potential savings. A draft business requirements document is prepared in 2005. No further progress is made.

**Exhibit 4** There have been many federal initiatives and several false starts in attempts to obtain provincial and territorial identity information electronically (cont'd)

When	Who	What	What happened
April 2006 to March 2007	Passport Canada Canada Revenue Agency Statistics Canada Alberta and British Columbia vital statistics agencies	Central funding for the National Routing System (NRS) pilot project ends. The pilot team led by Passport Canada proposes central funding to implement the system nationally. Costs are estimated at around \$370 million over five years to implement a complete solution, which would include routing of birth, death, and other vital events information such as name changes; electronic validation of various types of identity information including birth and citizenship; and development of a full data integrity model.	Central agencies, including Treasury Board Secretariat, have concerns about the governance and funding structure. A national solution and funding are not pursued.  The partners continue with a reduced scope—dropping the electronic validation of birth data but keeping the notification of information. Passport Canada needs the validation function and drops out. Statistics Canada assumes leadership.
March 2007 to present	Treasury Board of Canada Secretariat Canada Revenue Agency Passport Canada Service Canada Statistics Canada Other federal institutions	The Inter-Jurisdictional Information Exchange Working Group, led by the Treasury Board of Canada Secretariat, is established to develop a national approach for electronic exchange of provincial and territorial vital events information.	A business case concludes in August 2007 that there are benefits to basing a government-wide solution on the work of the NRS pilot project and Service Canada's Vital Events Linkages project. Options for governance and funding structures are proposed.  Work is put on hold in November 2007 due to other priorities of the Treasury Board of Canada Secretariat.
Early 2007 to present	Statistics Canada Canada Revenue Agency Alberta, British Columbia, Manitoba, and Nova Scotia vital statistics agencies Other federal institutions	Partners self-fund the National Routing System project and continue to transmit data. More provinces join; Statistics Canada provides them with funding of about \$400,000 each. The Canada Revenue Agency pays for the project office (estimated at over \$150,000 for fiscal year 2007–08).	Electronic birth and death notifications that started during the pilot phase of the NRS project continue from Alberta and British Columbia vital statistics agencies. Manitoba and Nova Scotia join in early 2007.  Since late 2007, other federal organizations have joined or are considering adopting the NRS standards to take advantage of the electronic routing technology for death and other types of information.

Source: Various federal documents

**58. Duplication in processes to obtain death information.**

We found that Elections Canada, the Canada Revenue Agency, and Service Canada obtain death information from vital statistics organizations in different ways:

- Elections Canada receives death information from all provinces and territories on a quarterly basis. Information is received mainly by CD-ROM.

- The Canada Revenue Agency receives death information from British Columbia and Alberta under the National Routing System (NRS) using the messaging standard (common protocol for communicating messages electronically) that was adopted by all the NRS partners.
- Service Canada receives death information from British Columbia, Alberta, and Ontario under its Vital Events Linkages project. Information is exchanged using several different processes including secure email.

**59.** In addition to the cost of setting up these arrangements, each federal institution pays for this information from the provinces. We found that federal institutions generally pay about \$1.10 per death notification. With about 230,000 deaths in Canada a year, individual costs may not be significant; nevertheless, the federal government is paying more than once for the same information. Furthermore, the federal institutions exchange this death information. Elections Canada receives death information from the Canada Revenue Agency, and Service Canada and the Canada Revenue Agency exchange death information with each other.

**60. Some convergence of standards.** Despite the duplication, we found that the federal organizations we examined recognize the need for common standards for identity information. Common standards are important to ensure interoperability and consistency in the exchange of information between different information systems. For instance, Service Canada under its Vital Event Linkages project and the Canada Revenue Agency under the National Routing System (NRS) both use the same data standards—common ways to present the identity information being exchanged. Furthermore, Service Canada has indicated that as it implements electronic validation of birth information, it plans to adopt the messaging standards used by NRS partners.

#### **Legislative and privacy considerations need not be barriers**

**61.** Under the Policy on Information Management, the deputy heads of federal institutions are responsible for ensuring that information is shared within and across federal institutions to the greatest extent possible while respecting security and privacy requirements. According to the Treasury Board of Canada Secretariat's Framework for the Management of Information, institutions must work in partnership with each other and with other government levels and jurisdictions to deliver on government commitments and achieve results for Canadians. The Framework explains that much of this collaboration is done through government-wide committees and working groups.

**62.** We found that the federal institutions we examined are willing to discuss developing common solutions that could apply to the whole of government in order to be more effective and efficient. We also found that when they have a clear need and similar priorities, they have been able in some instances to make progress. They have addressed legal and privacy considerations through project design, use of technology, and changes to legal authorities.

**63.** For example, the four institutions we examined have successfully established linkages with vital statistics agencies, even though each province and territory has its own program legislation, priorities, and privacy legislation that must be balanced against those of the federal government. Although it takes time to establish such arrangements, the successes to date under the National Routing System and Vital Events Linkages projects show that it can be done.

**64.** Similarly, the Canada Revenue Agency has been able to address the concerns about privacy, legislative constraints, and citizens' perceptions that had prevented it from implementing a joint identification and authentication solution with Service Canada. In 2006 the Canada Revenue Agency implemented its Portageur project with Veterans Affairs Canada. Rather than duplicate the Agency's process and incur the cost of developing and operating its own authentication process for online service registration, Veterans Affairs Canada allows its clients to use the authentication credentials provided to them by the Canada Revenue Agency.

**65.** We also found that some program legislation has been changed to provide for a re-use of identity information that would not otherwise be authorized. In 1997, the *Canada Elections Act* was amended to allow the addition of new electors to the National Register of Electors from information transferred by the Canada Revenue Agency provided that taxpayers gave their consent on their annual tax returns. In 2007, the *Canada Elections Act* was amended again, allowing the Canada Revenue Agency to collect citizenship information from taxpayers and pass it on to Elections Canada (the Agency does not use citizenship information for its own programs).

**66.** However, partnership and collaboration have not been able to overcome all barriers to an integrated, whole-of-government approach. We found that two main barriers have impeded progress: a lack of effective governance and funding structures, and a lack of formal policy guidance on managing identity information.

**Effective structures for governance and funding of a common approach do not exist**

67. Attempts to develop a common approach to managing identity information have been hampered by governance problems such as

- unclear roles and responsibilities for identity management, including accountability for results;
- differing priorities among programs and jurisdictions;
- difficulty setting project objectives and defining requirements;
- lack of commitment and buy-in from all partners for an integrated approach;
- lack of mechanisms for resolving conflicts and making decisions; and
- absence of equitable and sustainable means of paying for projects or solutions shared by many partners.

68. Senior officials in the federal institutions we examined identified these issues as important barriers to progress. We also found that the same issues had been identified over the years by the groups and individuals involved in various initiatives. For example, the proposal to implement the National Routing System nationally was not endorsed because of concern about how and by whom the project would be managed and how the requested funds would be allocated among participating federal and provincial institutions. Similar concerns slowed progress on implementing the recommendations of the Identity Management and Authentication Task Force (Exhibit 5).

**There has been little policy direction on managing identity information**

69. We found that over the past six years, many similar policy frameworks and strategies for identity management have been proposed (Exhibit 5), yet none has been formally adopted by the federal government. Many of the policy initiatives cover the same ground and mention the need for similar elements such as shared accountability and responsibility, a risk-based approach, standardization, and interoperability.

**Exhibit 5 Many initiatives to develop policy principles for identity management cover the same ground and none yet adopted by the government**

When	Who	What	What happened
2002 to 2006	Passport Canada Canada Revenue Agency Service Canada Treasury Board of Canada Secretariat Other federal, provincial, and territorial institutions	Federal/Provincial/Territorial Council on Identity in Canada created to develop a framework for a comprehensive and consistent approach to establishing and verifying identity across federal, provincial, and territorial jurisdictions.	A draft Policy Framework is developed in November 2002 and submitted to the federal government for approval in 2004.  It is not formally adopted but elements are used in support of other initiatives.
September 2003 to late 2006	Treasury Board of Canada Secretariat Representatives from provinces and municipalities	An inter-jurisdictional working group on Identity Authentication and Authorization formed to <ul style="list-style-type: none"> <li>• develop standards and guidelines, common definitions, and vocabulary for identity authentication and authorization processes; and</li> <li>• recommend next steps, including a governance structure.</li> </ul>	A draft framework and guidelines are prepared in November 2004. Governance options are proposed to the joint councils on information and service delivery in May 2005. Not formally adopted.
February 2004	Service Canada	A draft national identity policy is developed in connection with the vision for modernizing services for Canadians.	The draft was not submitted for federal endorsement but the principles informed Service Canada's development of its registration and authentication system.
Mid 2004	Canada Revenue Agency Service Canada	Options for a system to manage individual identity data based on the social insurance number are explored in context of the federal government's work to streamline processes, achieve cost savings, and improve service. Potential benefits include improved integrity of individual identity information, more efficient data sharing, reduced costs, and improved service.	Canada Revenue Agency proposes IDENT as the authoritative source for identifying individuals. Service Canada proposes to use the SIR. Options were not pursued due to privacy concerns, and lack of agreement on implementation and funding for a common service model.
Early 2005	Passport Canada Treasury Board of Canada Secretariat Other federal institutions	The state of identity management across 11 federal institutions is mapped and opportunities to improve processes are identified.	A discussion paper proposes some next steps including a need for governance and an integrated approach to identity management for the whole of government. Not formally adopted.

**Exhibit 5 Many initiatives to develop policy principles for identity management cover the same ground and none yet adopted by the government (cont'd)**

When	Who	What	What happened
September 2005 to present	Treasury Board of Canada Secretariat Canada Revenue Agency Passport Canada Service Canada Statistics Canada Other federal institutions	Assistant Deputy Minister Identity Committee formed to provide consultation and advice to the Chief Information Officer Branch on the design, development, and communication of a consistent view of identity and identity management.	Brings together assistant deputy ministers with significant responsibilities in the area of identity and identity management. The committee provides input on identity-related initiatives.
Mid 2006	Treasury Board of Canada Secretariat	The Chief Information Officer Branch identifies identity management as a strategic priority.	A project charter is developed in August 2006 that sets out a work plan to develop a framework, vision, and strategy for an integrated government-wide approach to identity management.
November 2006 to present	Treasury Board of Canada Secretariat Service Canada Representatives from provinces and territories	Deputy Ministers of Service Delivery establish the inter-jurisdictional Identity Management and Authentication Task Force to develop a national identity management and authentication framework, governance structure, funding model, and action plan for implementation.	Final report in July 2007 cites multiple identity management initiatives in Canada and inconsistencies in how identity information is collected and verified.  After initial concerns about the proposed governance and funding structures, participating jurisdictions agree in February 2008 to a proposed framework, common language, and principles. A new committee is established to oversee the work. Membership and next steps are expected to be set in June 2008.
June 2007	Treasury Board of Canada Secretariat Passport Canada Service Canada Other federal institutions	From the 2006 identity management project charter, a discussion paper is developed as a first step in establishing the foundation for a common approach to identity management in the Government of Canada.	Sets out a conceptual framework, principles, and a common language for identity management. Next steps include establishing ongoing governance and an implementation plan.
July 2007 to present	Treasury Board of Canada Secretariat	Draft directives on identity and identity management governance are developed.	Approval expected within the next year.

Source: Various federal documents

**Treasury Board of Canada Secretariat has done some recent work on policy guidance but more is needed**

70. The Treasury Board of Canada Secretariat is responsible for information management government-wide; for supporting the use of information technology to improve the delivery of services and reduce their costs; and for establishing policy and standards for the security of government assets, including information. The Secretariat is therefore in a position to set strategic direction for managing identity information in the Government of Canada by, for example, developing and implementing strategies, policies, guidelines, standards, and key performance indicators. Nevertheless, the deputy heads of federal institutions are responsible for the management of information within their organizations. Therefore, they need to collaborate with each other and with the Treasury Board of Canada Secretariat to achieve government-wide results.

71. We found that recently the Treasury Board of Canada Secretariat has played a more active role in bringing coherence to the management of identity information. In 2006, the Chief Information Officer Branch of the Secretariat established identity management as a top leadership priority.

72. The Secretariat has been working on an identity policy directive since 2007, and more recently a directive on governance of identity management. The goal is to provide a comprehensive government-wide framework to support departments and establish a strong and systemic method of managing identity government-wide. The Secretariat anticipates that these policy documents will be approved within the next year.

73. **Recommendation.** The Treasury Board of Canada Secretariat should

- take action to standardize identity management practices and increase interoperability within the Government of Canada, with particular focus on the use of vital events information and online authentication;
- establish governance arrangements—such as clear mandates for interdepartmental committees—to manage interdepartmental initiatives concerning identity information and to achieve common results; and
- lead an assessment to identify the challenges (technical, financial, legislative, or policy) in current identity information management initiatives and determine whether current arrangements support

effective and efficient delivery of government services while protecting privacy, and act on the results of the assessment.

**Treasury Board of Canada Secretariat's response.** Agreed. In the context of policy suite renewal, the Treasury Board of Canada Secretariat is enhancing government security policy instruments to address identity management. Specifically, these instruments will support the management of business processes related to the validation of identity information and online authentication, and will encourage interoperability by ensuring that common direction and guidance is prescribed around identity management practices.

The new Policy on Government Security will address the authority for interdepartmental committees to lead in the domain of identity management, including interdepartmental identity information initiatives. The implementation of the new policy and related instruments is expected to commence next year with full implementation expected within three years.

The Secretariat will undertake an assessment to identify the challenges associated with existing identity management initiatives and make recommendations to the Secretary regarding the necessary and appropriate measures required to address the challenges identified.

The assessment will be informed and directed by new governance arrangements, which will be established by the renewed Policy on Government Security and related directives. The Secretariat's assessment will inform the evaluation of the policy over the next three to five years.

## Conclusion

**74.** With a few exceptions, the four federal institutions we examined collect and manage selected identity information as a valuable asset.

**75.** We found that the Canada Revenue Agency, Passport Canada, and Service Canada collect only identity information that is consistent with their authorities. We also found that Elections Canada receives identity information on a small group of individuals for which it does not have authority.

**76.** We found that the four institutions have a variety of systems and practices designed to ensure the quality of the identity information they manage. There are opportunities for the Canada Revenue Agency to improve its quality system as it renews the IDENT database.

Passport Canada does not have a comprehensive quality management system to provide assurance that the quality of the identity information in its database is adequate.

**77.** Finally, we found that the four federal institutions have pursued many initiatives over the past 10 years to jointly use and manage identity information. However, these initiatives have resulted in some duplication, frequent reconsideration of the same problems, and incomplete solutions to the underlying needs. The difficulty of arriving at solutions has often been due to the lack of governance structures needed to manage interdepartmental or inter-jurisdictional initiatives; inability to establish sustainable means of funding a whole-of-government solution; and a lack of formal policy instruments to guide work in this area. The Treasury Board of Canada Secretariat needs to address these issues.

## About the Audit

### Objective

The objective of the audit was to determine whether selected federal government institutions collect and manage selected identity information as a valuable asset, in that they

- collect only identity information that is relevant to program needs;
- have systems and practices in place to ensure the quality of the identity information collected; and
- have systems and practices in place to ensure a whole-of-government approach to the efficient management of identity information, while respecting legal and policy requirements.

### Scope and approach

The audit examined the management of identity information contained in the following databases managed by the federal government:

- Canada Revenue Agency's Individual Identification Master File, known as IDENT;
- Elections Canada's National Register of Electors (NRE);
- Passport Canada's database for issuing passports, known as the Central Index; and
- Service Canada's Social Insurance Register (SIR).

These databases were selected by analyzing the 2006/2007 *Info Source* publication—a listing of the information holdings of federal government organizations, published annually by the Treasury Board of Canada Secretariat. We examined *Info Source* to identify the databases that can be expected to include the majority of Canadian residents at some point during their lives; that include establishing identity as an important aspect; and that are related to the delivery of programs to the clients listed in them.

The audit also included the Treasury Board of Canada Secretariat in its role of providing central guidance on information management and identity management in the Government of Canada. It also involved Statistics Canada in its role as the lead federal department responsible for the National Routing System at the time of the audit. Statistics Canada collects vital events data under this project for health and demographic analysis, not for identity purposes.

Several of the federal institutions included in this audit have had name changes as a result of government reorganizations in recent years. This report refers to the institutions by their current names.

We conducted audit work at the national headquarters of the federal institutions involved in the audit. Our work involved interviews, document reviews, analysis of data transfers, data analyses, and process walkthroughs. In particular, we examined

- how each piece of identity information is collected, how it is maintained by each federal institution, and under what legislative and program authority this is undertaken;
- what systems and practices the federal institutions use to ensure the quality of the data; and
- how interdepartmental and inter-jurisdictional committees are used to promote a whole-of-government approach to managing identity information.

To assess the extent to which systems and practices were in place to ensure a whole-of-government approach to managing identity information, we also examined how federal institutions have been implementing projects to

- develop identification and authentication processes that rely on the underlying identity data contained in the databases, and
- validate and share identity information with provincial and territorial vital statistics organizations.

Our review of these projects included examining project business cases, background documentation on the creation of the project, information on the technical and business solution employed during the project, and other relevant departmental documents. We also conducted interviews with management and employees. The audit did not examine similar projects to share immigrants’ vital statistics information, which is held by Citizenship and Immigration Canada.

In addition, we conducted interviews with government officials from the following jurisdictions to explore relevant alternatives and challenges to managing identity information: Ontario, British Columbia, Quebec, United Kingdom, and Ireland. This work was not assurance-level audit work and was used to inform our analysis of the Canadian federal situation.

The audit did not include an examination of data security, including access controls and security of data transmissions.

**Criteria**

Listed below are the criteria that were used to conduct this audit and their sources.

Criteria	Sources
While respecting legal and policy requirements, we expected federal institutions to	
<ul style="list-style-type: none"> <li>• collect only identity information that is relevant to program needs;</li> </ul>	<ul style="list-style-type: none"> <li>• Treasury Board, Policy Framework for Information and Technology (2007), Section 3.1</li> <li>• Treasury Board, Policy on Information Management (2007), Section 3.1</li> <li>• Treasury Board of Canada Secretariat, Framework for the Management of Information: Foundation Section—Principles (2002), Section 2.1.4</li> </ul>
<ul style="list-style-type: none"> <li>• have systems and practices in place to ensure the quality of identity information they collect and manage;</li> </ul>	<ul style="list-style-type: none"> <li>• Treasury Board, Policy Framework for Information and Technology (2007), Section 3.1</li> <li>• Treasury Board, Policy on Information Management (2007), sections 6.1.4 and 6.1.8</li> <li>• Treasury Board of Canada Secretariat, Framework for the Management of Information: Foundation Section—Principles (2002), Section 2.1.4, and Information Governance and Accountability Overview (2002), Section 2.2.1</li> </ul>

Criteria	Sources
<ul style="list-style-type: none"> <li>jointly use and manage identity information where horizontal approaches provide significant government-wide benefits;</li> </ul>	<ul style="list-style-type: none"> <li>Treasury Board, Policy Framework for Information and Technology (2007), Section 3.1</li> <li>Treasury Board, Policy on Information Management (2007), Section 6.1.3</li> <li>Treasury Board of Canada Secretariat, Framework for the Management of Information: Foundation Section—Principles (2002), Section 2.1.2</li> </ul>
<ul style="list-style-type: none"> <li>set or participate in government-wide frameworks and policy, standards, guidelines, practices, tools and best practices to ensure integration;</li> </ul>	<ul style="list-style-type: none"> <li>Treasury Board, Policy Framework for Information and Technology (2007), Section 3.1</li> <li>Treasury Board, Policy on Information Management (2007), sections 6.1.6, 6.1.9, and 6.2</li> <li>Treasury Board of Canada Secretariat, Framework for the Management of Information: Information Governance and Accountability Overview (2002), Section 2.3</li> </ul>
<ul style="list-style-type: none"> <li>standardize information sources of common data;</li> </ul>	<ul style="list-style-type: none"> <li>Treasury Board, Policy Framework for Information and Technology (2007), Section 3.1</li> <li>Treasury Board of Canada Secretariat, Framework for the Management of Information: Foundation Section—Principles (2002), Section 2.1.2</li> </ul>
<ul style="list-style-type: none"> <li>reuse identity information and technology solutions to eliminate duplication and redundancy;</li> </ul>	<ul style="list-style-type: none"> <li>Treasury Board, Policy Framework for Information and Technology (2007), Section 3.1</li> <li>Treasury Board of Canada Secretariat, Framework for the Management of Information: Foundation Section—Principles (2002), Section 2.1.2</li> </ul>
<ul style="list-style-type: none"> <li>maximize investments and minimize costs; and</li> </ul>	<ul style="list-style-type: none"> <li>Treasury Board, Policy Framework for Information and Technology (2007), Section 3.1</li> <li>Treasury Board, Policy on Information Management (2007), Section 6.1.4</li> <li>Treasury Board of Canada Secretariat, Framework for the Management of Information: Foundation Section—Principles (2002), Section 2</li> </ul>
<ul style="list-style-type: none"> <li>document decisions and decision-making processes.</li> </ul>	<ul style="list-style-type: none"> <li>Treasury Board, Policy on Information Management (2007) Section 6.1.2</li> <li>Treasury Board of Canada Secretariat, Framework for the Management of Information: Foundation Section—Principles (2002), Section 2.1.5</li> </ul>

### **Audit work completed**

Audit work for this chapter was substantially completed on 30 May 2008.

### **Audit team**

Assistant Auditor General: Sylvain Ricard

Principal: Nicholas Swales

Director: Jennifer McLeod

Jared Albu

Jessica Charron

Jenna Laframboise

Marc Legrand

Isabelle Marsolais

Kevin McGillivary

Étienne Robillard

Lisa Séguin

Dan Steeves

For information, please contact Communications at 613-995-3708 or 1-888-761-5953 (toll-free).

## Appendix List of recommendations

The following is a list of recommendations found in this report. The number in front of the recommendation indicates the paragraph where it appears in the chapter. The numbers in parentheses indicate the paragraphs where the topic is discussed.

Recommendation	Response
<p><b>Identity information holdings</b></p> <p><b>18.</b> Elections Canada should ensure that it collects only the identity information permitted by the <i>Canada Elections Act</i>. (13–17)</p>	<p><b>Elections Canada’s response.</b> Elections Canada agrees with the recommendation and will take the following steps to comply by 31 March 2009:</p> <ul style="list-style-type: none"> <li>• Elections Canada will purge from its database all information on individuals under 18 years of age.</li> <li>• Elections Canada will contact its suppliers to request that they provide information only for individuals 18 years of age or older. Until they have implemented this change, Elections Canada will filter the files received from its suppliers and will remove the records of individuals under 18 years of age before processing the files.</li> </ul> <p>However, pursuant to subsection 540(2) of the <i>Canada Elections Act</i>, Elections Canada is required to keep, for at least two years, documents that relate to the updating of the National Register of Electors. After that period and subject to the consent of the Librarian and Archivist of Canada, Elections Canada will destroy CD-ROMs, diskettes, or other physical media on which the data was provided.</p> <p>Elections Canada notes that information on these individuals under 18 years of age has not been included in the National Register of Electors or on lists of electors.</p>

Recommendation	Response
<p><b>Management of information quality</b></p> <p><b>37.</b> Passport Canada should implement a comprehensive quality management system to ensure the quality of eligibility decisions, the quality of data entry, and the quality of the information in the Central Index, the database for issuing passports. It should develop explicit goals for data quality and should measure and report on the extent to which it meets them. (19–36)</p>	<p><b>Passport Canada’s response.</b> Passport Canada agrees that a more comprehensive quality management system should be pursued. Passport Canada will define the concepts of quality of eligibility decisions, quality of data entry, and quality of the information in the Central Index for issuing passports in the context of its operations; develop explicit goals and performance measures; and examine a reporting system that permits monitoring of performance. Consultations with organizations in other countries and with Canadian organizations—such as those mentioned in the report—will be pursued by the end of fiscal year 2009–2010.</p> <p>Implementation of the comprehensive quality management system:</p> <ul style="list-style-type: none"> <li>• An improved capability has been created and allows employees to ensure that remarks included in electronic files are clear and intelligible. This has improved the quality of information contained in the Central Index. [Completed].</li> <li>• Passport Canada will sample all business channels to review its data-entry error rate. Passport Canada will also examine critical elements, including the verification of the documentary evidence of citizenship information submitted against information retained in its Central Index. [End of fiscal year 2008–2009].</li> <li>• Passport Canada will explore the feasibility of conducting ad hoc verification of information, based on sampling and a risk-based approach, with the Vital Statistics offices in certain provinces. [End of fiscal year 2008–2009].</li> </ul>

Recommendation	Response
<p><b>A whole-of-government approach</b></p> <p><b>73.</b> The Treasury Board of Canada Secretariat should</p> <ul style="list-style-type: none"> <li>• take action to standardize identity management practices and increase interoperability within the Government of Canada, with particular focus on the use of vital events information and online authentication;</li> <li>• establish governance arrangements—such as clear mandates for interdepartmental committees—to manage interdepartmental initiatives concerning identity information and to achieve common results; and</li> <li>• lead an assessment to identify the challenges (technical, financial, legislative, or policy) in current identity information management initiatives and determine whether current arrangements support effective and efficient delivery of government services while protecting privacy, and act on the results of the assessment.</li> </ul> <p>(38–72)</p>	<p><b>Treasury Board of Canada Secretariat’s response.</b> Agreed. In the context of policy suite renewal, the Treasury Board of Canada Secretariat is enhancing government security policy instruments to address identity management. Specifically, these instruments will support the management of business processes related to the validation of identity information and online authentication, and will encourage interoperability by ensuring that common direction and guidance is prescribed around identity management practices.</p> <p>The new Policy on Government Security will address the authority for interdepartmental committees to lead in the domain of identity management, including interdepartmental identity information initiatives. The implementation of the new policy and related instruments is expected to commence next year with full implementation expected within three years.</p> <p>The Secretariat will undertake an assessment to identify the challenges associated with existing identity management initiatives and make recommendations to the Secretary regarding the necessary and appropriate measures required to address the challenges identified.</p> <p>The assessment will be informed and directed by new governance arrangements, which will be established by the renewed Policy on Government Security and related directives. The Secretariat’s assessment will inform the evaluation of the policy over the next three to five years.</p>

