

THE INFORMATION MANAGEMENT AGENDA IN AUSTRALIA

John Grant

**Chief General Manager,
Government Services & Information Environment Group
National Office for the Information Economy (NOIE)**

Australia

John Grant is the Chief General Manager of the Government Services & Information Environment Group of the National Office for the Information Economy, responsible for encouraging the intelligent use and application of information and communication technology to create opportunities to transform service delivery through better customer focus and access, greater availability of information, and improved government processes.

John has experience and a proven record in program development and implementation, policy development and corporate management. Prior to joining NOIE in June 2001, John headed up the division in the Australian Competition and Consumer Commission charged with promoting compliance with the prohibition on price exploitation arising from the implementation of the *New Tax System*, and the GST in particular.

From 1996 to 1999 John headed up the Office of Small Business in a period in which significant reform took place in relation to regulation and fair-trading, including implementation of the Business Entry Point. Previously, John has been involved in a wide range of industry policy and program issues including government information and communications technology policy and the then 150% research and development tax concession.

John has a Bachelor of Arts degree with majors in history and accounting.

INTRODUCTION

This paper looks at how the Australian Government has progressed and addressed information management and its associated technical, governance, policy and cultural issues. Recognition of the value of information, particularly when 'networked', has led to consideration of approaches to information management across the whole-of-government.

Information management is integral to an effective public sector. Relevant, timely and quality data that is readily available, within relevant legislative boundaries, promotes greater returns on public investment. Decreased storage and communication costs and increased accessibility to government information, among other things, assists high-performing agencies to be proactive and improve responsiveness, flexibility and accountability. It helps them make more effective decisions with better policy and service outcomes.

The application of ICT to information management has created new and dynamic approaches to the way information is used – enabling segmentation, aggregation and manipulation. This capability enables innovative analysis and application of data.

- In government the historical model of a single agency owning a policy has increasingly given way to shared policy development, shared program administration and shared service delivery.

The new information management paradigm is creating productivity gains and improving the effectiveness of public and private sector organisations alike. Technology is supporting the increasing business need to better share information, research and data within and across agencies, and between the public and private sectors. Government effectiveness increasingly is underpinned by the degree to which it is network-enabled.

This *Network-Enabled Government* necessitates greater multi-agency and whole-of-government interaction. ICT is a key enabler for this interaction. The Australian Government has also recognised that not all activities will require multi-agency and whole-of-government approaches – but these approaches are on the increase.

(For the purpose of this paper, the term ‘whole-of-government’ also relates to ‘multi-agency’ activities – that is activities where more than two agencies may be involved.)

BACKGROUND

Australian Government Public Sector Reform

In Australia, reform of Australian Government information management has been on the public sector reform agenda since the 1997 report *‘Management of Government Information as a National Strategic Resource’*.

This saw ‘information management’ as a principle agent for change in the Australian Public Service (APS) – a key factor in the continuous improvement process¹. As the e-government agenda has progressed from getting services on-line into transforming government processes – and network-enabling government - these two agendas have become inextricably linked.

Key elements of both public sector reform and the e-government agenda is the use of ICT to support cross-agency coordination and collaboration. The benefits of information sharing between agencies include:

- better awareness, understanding and capacity building;
- improved policy and program delivery and integration;
- reduced duplication of effort and resources; and
- less fragmentation from the perspective of the customer.

Early experiences and lessons from cross agency information sharing in Australia

The Australian Government – like others - has substantial investments in information collection, analysis and storage. This information is traditionally ‘housed’ and used within business units.

¹ *Management of Government Information as a National Strategic Resource*, 1997, p. xvii

These 'siloed' approaches are breaking down as the demand continues to rise for networked approaches and for personalised solutions. Finance and human resource frameworks (and infrastructure) to support agency operations and that operate across the whole-of-government have been refined over decades. However, the use and application of ICT to support whole-of-government information and knowledge management requirements is relatively new. To date, opportunities for integration have been mostly agency to agency rather than multi-agency or whole-of-government.

Examples of innovative projects requiring cross-agency information sharing include:

- Business Entry Point (BEP) Content Syndication Project. The BEP was established to act as a portal, or one-stop-shop, for small businesses to find information and interact with government.
 - Through an XML interface, partnering organisations and intermediaries are able to publish government business content from the Business Entry Point, either in its entirety or as selected items, on their own sites.
 - The BEP continues to maintain all the content and links and, because syndication partners pull content from the BEP and refresh it into their cache daily, they are always assured of publishing the most up to date content. This service is provided free of charge.
- Australians Working Together (AWT). AWT is part of the Government's broader welfare reform package. It offers a balanced package of incentives, obligation and assistance, providing better linkages across key agencies using innovative IT solutions. A number of Australian Government departments are jointly responsible for the AWT package with Centrelink acting as the gateway.

Early cross-agency initiatives have brought a number of issues to the forefront. A particular issue has been the importance of creating a consistent user experience (for citizens dealing with a range of government entities). As the use of ICT and demand for online services has expanded, the need for shared systems and consistency of approach has become increasingly apparent.

To achieve this, the disparate ways in which agencies collect, analyse and store information need to be connected and synchronised. Until recently, there have been few comprehensive whole-of-government frameworks or guidance to assist agencies in collaborative activities.

WHOLE OF GOVERNMENT FRAMEWORKS: FOUNDATION BUILDING

Cross-agency collaboration has created challenges, both technical and non-technical, associated with sharing information across government and with other sectors. These include:

- governance models;
- integrating across jurisdictions - Integrated Service Delivery Models
- ensuring interoperable systems and data;
- investment;
- developing a trusted and secure online environment;
- privacy implications; and
- changing the 'silo' culture.

Australia has made some progress in developing whole-of-government frameworks to address these matters. These frameworks act as strong foundations for multi-agency and whole-of-government actions.

GOVERNANCE

AUSTRALIAN GOVERNMENT

Under existing legislative frameworks Australian Government agencies manage their information and knowledge within vertical enterprises. They include the Financial Management and Accountability Act and the Public Service Act. These frameworks do not preclude multi-agency and whole-of-government approaches; but neither do they act to encourage them.

Individual Australian Government departments and agencies are responsible for their own ICT investment, strategy, development, implementation and support. They develop on-line service strategies for their organisations in accordance with government decisions and the overall outcomes and outputs budgetary framework.

Consequently, the Australian Government has been working to achieve a governance framework that facilitates whole-of-government approaches to information management but recognises existing/past approaches. In this context, the Australian Government has elected to adopt a coordinated leadership-based approach to information management and ICT governance. This is characterised by the formulation of networks and consensual decision-making.

Under this approach, decision making and direction setting for specific whole-of-government issues is informed by inter-agency committees, promoted and coordinated where required by a central agency and implemented at agency level. Cabinet approval is sought when required.

Also, the nature of information holdings by government and the applications to which that information is put vary enormously across and within agencies. Accordingly there is no one solution to this issue.

Key elements of the Australian Government governance model are:

The National Office of the Information Economy (NOIE), which has direct responsibility for the development and coordination of advice to the government on information economy issues. It:

- provides leadership and a focal point within the federal public service on strategic issues driving e-government;
- generates collaborative activity in the information economy;
- provides frameworks and coordinating whole of government approaches;
- provides information, advice and key whole of government services;
- facilitates research and innovation; and
- promotes information sharing between agencies.

The On-line Council of Ministers that was formed in recognition of the need for greater cooperation on on-line issues to promote consistency across federal, state and local governments. As a Ministerial Council it operates within the Council of Australian Governments (COAG) protocols, comprising of the Australian Government Minister for Communications Information Technology and the Arts, a Minister from each state and territory, and the President of the Australian Local Government Association. It is the peak government forum across jurisdictions for consultation and coordination on the information economy.

The Information Management Strategy Committee (IMSC) is the primary Australian Government body concerned with development of strategies for governance and ICT investment for multi-agency and whole-of-government initiatives. It is responsible for:

- setting collaborative strategies and achieving cooperation across federal agencies in order to transform government processes and deliver more integrated services;
- facilitating a 'big picture' approach to ICT issues with agencies responsible for individual ICT arrangements;
- encouraging a cooperative approach to decisions on standards, investment, security, privacy, shared infrastructure and reuse of intellectual property; and
- ensuring that decisions reflect the impact and benefits across government, rather than on individual agencies alone.

The Chief Information Officers Council (CIOC) reports to the IMSC. Membership is drawn from key central agencies that are significant users of ICT. Working groups have been established to consider security infrastructure; authentication; identify management; sourcing and channel management. It also promotes information and knowledge sharing.

To achieve all of these goals requires adaptations of governance and finance frameworks as well as public service culture within agencies. IMSC advocates a standards, principle and best practice based approach that recognises diversity and the need for adaptability, yet also the value of consistency and enables future flexibility. The following principles were developed to support network-enabled government:

- Agencies will continue to manage their own information and communications technology in terms of strategy, development, implementation and support.
- Agency management of ICT will be enhanced if there is improved information and knowledge sharing across government including 'better practice'.
- Guidelines and shared processes are important to optimise the business returns to government from ICT investment. These should:
 - be developed and managed through a cooperative governance model that is responsive to government priorities and policies;
 - promote interoperability and re-use of software or systems, to maximise future opportunities for improving government programs and services, and to promote better value for money; and
 - address public confidence and trust in the overall framework of ICT being used by the government.
- The premise that information content may at some time be transferred across agency boundaries should underpin decisions when agencies are designing new systems.
- Security and privacy is essential to ICT supported business processes.
- A strategic focus on business outcomes and efficiency gains is required for funding Australian Government ICT.
- Investment and funding models must accommodate the development of shared approaches to system development and Intellectual Property (IP).
- The integrity of shared architecture and systems should be protected by an agreed Quality Assurance process.

With its emphasis on collaboration rather than centralised control, this model relies on individual agencies recognising the additional value that can be realised from collaboration with other agencies to meet a need or requirement that each agency would be unable to meet alone. For example:

CROSS-JURISDICTION - INTEGRATED SERVICE DELIVERY MODELS

The demand for integration occurs not just at cross-agency level but also cross-jurisdictions. This reflects an operational structure under which both customers and policy responsibilities sometimes are shared both between agencies and across jurisdictions.

A working group under the cross-jurisdictional Online Council of Ministers - the Integrated Transaction Reference Group (ITRG) - is developing a collaboration framework to promote further service integration across the tiers of government. The collaboration framework consists of an overarching set of collaboration principles and a multi-tiered system of agreements that will support a nationally consistent approach to integrated service delivery.

Figure 1 depicts the integrated service delivery framework.

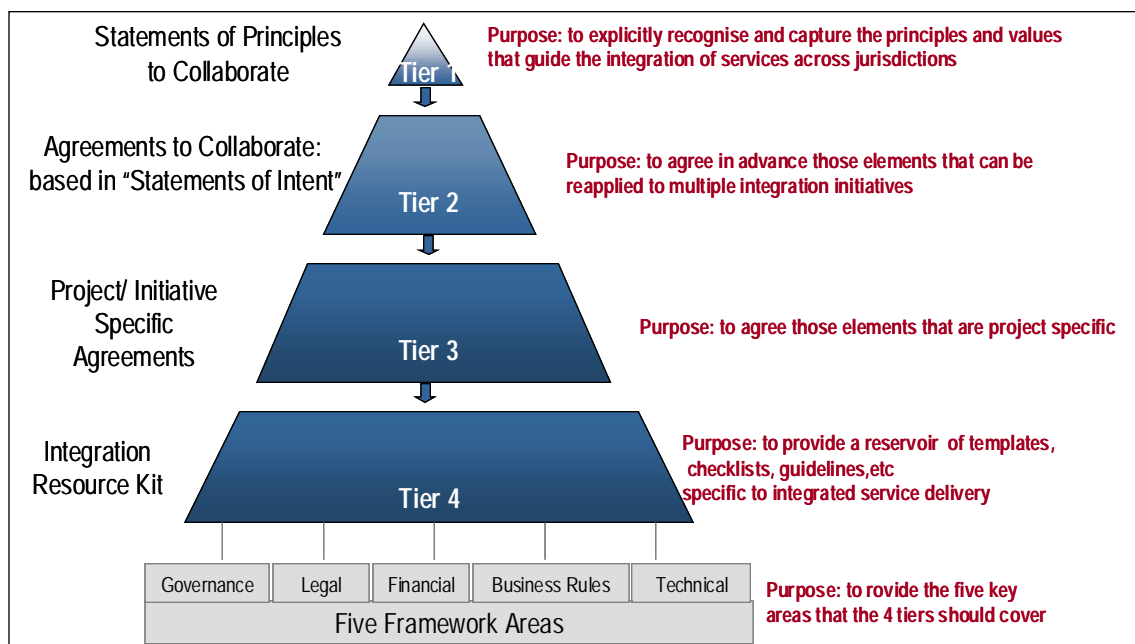


Figure 1: The Integrated Service Delivery Framework

The Integrated Service Delivery Framework provides an incremental process to achieve agreement across jurisdictions to collaborate. Starting with high-level Principles and working down to project specific initiatives, the Triangle defines tiers of agreements that have broad application across all collaborative initiatives.

In effect, the triangle defines a process where potential partners can move in incremental steps from low risk general principles to detailed legal agreements as the needs and outcomes of a particular initiative are better understood. When parties agree to collaborate, the already accepted Principles and Statements of Intent guide them at the detailed legalistic, operational and application development levels.

One critical issue identified in developing the framework is the necessity to resolve customer ownership. This is particularly important in preserving accountability and responsibility for service quality and outcomes. Clear lines of accountability and responsibility for service quality and outcomes for customers are essential. This also takes into account the unique subject expertise that is delivered by each constituent agency involved.

A pilot is currently underway to develop an Agreement to Collaborate between Centrelink (an Australian government welfare payment agency) and the Western Australian government. Participating agencies in Western Australia will, subject to customer consent, be able to utilise Centrelink data to confirm customer eligibility for services offered by them. Over time, it is anticipated that this framework will be expanded to encompass the not-for-profit and private sectors.

INTEROPERABLE SYSTEMS & DATA

Technical interoperability is about the ability to transfer and use information in a uniform way across multiple organisations and information technology systems. It is critical to furthering the development of integrated service delivery as well as integral to the realisation of the benefits of e-commerce, both for industry and government. A high level of interoperability will advantage business in particular because it reduces the need to invest in multiple systems in order to interact with government online.

The *Interoperability Technical Framework* was recently released for use by all Australian Government agencies. It was developed collaboratively over the past year and is an overarching set of policies, standards and guidelines which define the way agencies have agreed to do

business with each other at a point in time. The Framework is dynamic, adaptable and flexible enough to represent changes in circumstance as technologies, standards and Agency needs change.

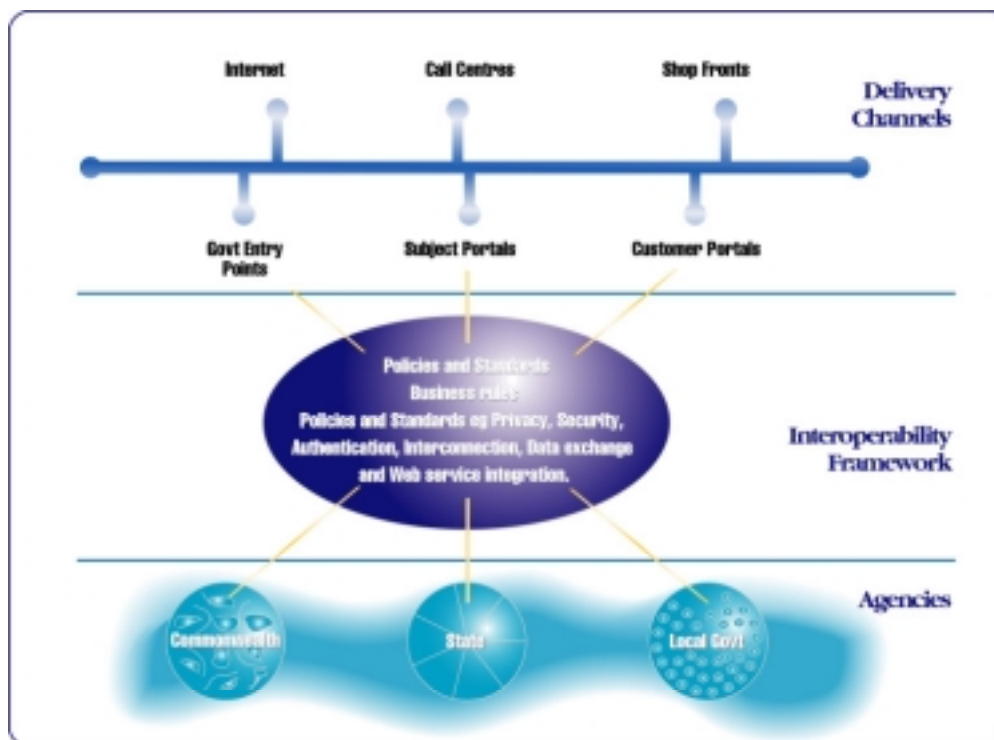


Figure 2

Figure 2 illustrates where interoperability sits in terms of delivering integrated services to citizens. Agencies or jurisdictions exist as independent and separate entities who, from time to time, join together to deliver an integrated service or set of information through various delivery channels. Technical interoperability which consists of business rules, security and integration, is the glue that brings these two layers together to facilitate the seamless delivery of the product to the delivery channels.

Building on the success of the Australian government *Interoperability Technical Framework*, NOIE is currently developing National Interoperability Principles with the other jurisdictions.

Interoperability also fosters collaboration between agencies and industry. Some of the key aspects of interoperability are already in place through individual agency agreements and adoption of best practice. For example:

- there is already extensive consistency around the use of metadata definitions;
- a practical example of interoperability is the recently completed pilot project, the XML Clearinghouse. This is a collaborative space where agencies can share “XML” or “web services” artefacts at the point of development. The Clearinghouse will, in essence, be a library for programmers’ documents.

INVESTMENT

Costs and benefits within and across agencies are not necessarily evenly distributed in whole of government activities, particularly with information sharing. The development of integrated services that cut across several agencies and are delivered through a common system depends on a clear understanding of who pays, how the benefits are derived and/or distributed, and what period the investment is expected to cover.

Under the existing budgetary system, funding for ICT is provided on an agency-by-agency basis and investing in cross-agency initiatives or infrastructure can be difficult. The IMSC is developing an ICT investment strategy that addresses shared outcomes, outputs and investment where appropriate.

SECURE & TRUSTED ON-LINE ENVIRONMENT

A secure and trusted on-line environment is necessary to enable agencies to exchange information and data with each other and with the non-government sector. There are three main characteristics of information security in the Australian Government:

- confidentiality – information should only be available to those who rightfully have access to it
- integrity – information should be modified only by those who are authorised to do so; and
- availability – information should be accessible to those who need it when they need it.

Currently, individual agencies are responsible for the development of appropriate security policy, plans and procedures within a whole-of-government policy, the *Protective Security Manual*.

CIOC working groups are developing whole of government frameworks that will support a trusted and secure on-line environment to underpin information and resource sharing. These include:

- establishing trusted and secure infrastructure that allows agencies to exchange data, information and knowledge in a secure on-line environment;
 - Currently, the agencies are able to securely communicate with each other through Fedlink, an encrypted communications service. However, this may not be sufficient for the future environment.
 - The IMSC is reviewing the existing architecture of Australian Government secure systems with a view to developing a new, optimised secure architecture for whole-of-government;
- an Authentication Framework to enhance the security of the transactions between business and individuals and government agencies, allows for consistent user experiences across government agencies and allows agencies to determine an appropriate level of authentication based on their business requirements;
- frameworks that manage the identity of individuals and government employees to underpin authentication;
 - The Minister for Justice recently announced a major initiative to combat identity fraud for individuals interacting with government. A key element of this is the on-line verification of primary identification documents; and
- secure ways of identifying employees that enhances trust between agencies working together thus facilitating cross-agency collaboration;
 - The IMSC is developing a whole-of-government approach to the identity management of permanent, non-permanent employees and contractors of government agencies.

PRIVACY

Maintaining the privacy of individuals and businesses is a key issue in Australia. Governments tend to ensure that policies and operations consider privacy implications to maintain a trust relationship with citizens – individuals, businesses and communities.

Privacy laws have a significant impact on cross-agency sharing of information and data, limiting analysis and the reuse potential of information. A lack of a common understanding of the Privacy Act across agencies compounds this issue as differing interpretations further constrain information sharing.

In Australia, this issue is being addressed by the government health sector to underpin a cross-agency information sharing initiative, *HealthConnect*. *HealthConnect* is a pilot project to determine the value and feasibility of an Australia-wide network of electronic health records. A joint federal, state and territory research and development project, it involves both the design of electronic health records and the construction of e-health building blocks – such as privacy, consent, security and information standards – which are the basic elements needed to underpin not only *HealthConnect* but also all future e-health initiatives. The project is guided by a number of cross-jurisdictional, agency and sector committees.

To underpin this, the *National Health Privacy Code*, a national privacy framework for health information, is being developed. Currently, there are differences in privacy standards that apply across jurisdictional, public, and private sector boundaries. This framework will be a single set of rules that could be implemented in each jurisdiction. It will regulate not only how information should be handled in a person's one-to-one relationship with a health provider, but also the exchange of individual health information on a much wider scale between hospitals, pharmacists,

other health providers, health researchers, law enforcement agencies, government departments and individuals.

The code is intended to provide a template for the development of any future regulation in this area, thus ensuring a consistent, national set of standards. The code is based around existing federal, state and territory legislation, and contains new elements designed to enhance and facilitate the safe exchange of personal health information between jurisdictions and across electronic health information networks. When finalised, Governments will consider whether changes to their current laws or administrative practices are required.

CULTURE CHANGE

Increasingly, the Australian Government is recognising that merely having the technical capacity to collaborate does not of itself dissolve the other institutional and cultural barriers to collaboration. We also need to build a shared understanding of the benefits of collaboration between agencies and with other stakeholders, and to underpin these desired outcomes with new processes and systems that better support and reward cooperation.

Formalised cooperative ventures with other organisations - from high level government wide committees to communities of practice for government practitioners, sharing learnings and promoting best practice, developing in depth case studies all are approaches being adopted to improve our information and knowledge management.

Knowledge management plays a key part in creating this culture - not only formal knowledge management of concrete information objects, but also informal knowledge management, the capacity to know where expertise lies and to be able to access it when needed. These systems will eventually be extended not just to the whole of government, but beyond government, and into the community.

Culture changing is best demonstrated through the number of innovative collaborative projects that are occurring.

In addition to the ones that I've already mentioned today, federal, state and territory Governments have agreed to work together, and in partnership with Indigenous communities, to improve coordination and delivery of government services and help communities find sustainable solutions to local problems. Under the Council of Australian Governments, the Indigenous Communities Coordination Taskforce (ICCT) is leading coordination across agencies. Have agreed to work in partnership with indigenous communities to support them find and manage sustainable solutions to local problems. Currently there are trials with eight communities based on local and specific agreements. Those agreements are going to be very much-focused on outcomes agreed between government and the people in the community that we're working with, with negotiated benchmarks that allow both the community and government to be able to measure progress towards what it is that the community wants to achieve.