

Information Management Strategy 2015-2019

Centre for Education Statistics and Evaluation



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Executive summary

The purpose of this strategy is to provide a five-year framework for the development of information management (IM) in the NSW Department of Education.

The NSW Government and Commonwealth Government have initiated a number of wide-ranging care, education and training reviews and reforms since 2012. This has caused a significant surge in business transformation activities for the Department. These range from empowering schools to make local decisions, through policy decisions at the state level, to funding decisions at the Commonwealth level. The Department requires more information and data to plan, measure and report change, and to inform decision-making across all levels of the organisation.

In February 2013, the Department's Executive established the Information Governance Group (IGG). This group has overarching responsibility for strengthening IM across the Department, to ensure that information is functional and reliable for the Department to operate efficiently and effectively. The initial focus of the group was to oversee a number of projects that were necessary to the establishment of the business intelligence (BI) capability for the Department. The IGG also focussed on other tactical projects, including data governance which is required to support the roll-out of BI. During this time, the IGG also supported the development of tools, policies and processes to enable the exchange of information between the Department and external agencies, and to support data linkage.

The tactical approach, while necessary for implementing the BI capability and meeting urgent needs such as data exchange with other government agencies, does not necessarily address more strategic IM priorities. A strategic approach involves a comprehensive plan that addresses the Department's organisation-wide information needs. The tactical approach on the other hand, involves smaller, focused, less impactful plans.

The strategy outlined in this document articulates the principles, vision and objectives necessary to support the development of IM practices and services.

This strategy exists in a whole-of-government context. While this strategy focusses on strengthening IM for the Department's internal operations and management, it is consistent with and builds on the NSW Government's IM agenda. As such, this strategy leverages the NSW Government's evolving IM framework approach, as well as IM industry best practice (such as those recommended by Gartner¹).

Lastly, this is a living document. It is owned by the IGG that will oversee and champion its implementation, ensure accountability, and conduct annual reviews to ensure that it remains relevant and strategically focussed as the needs and priorities of the Department change over time.

Scope

The scope of this strategy pertains to information owned by the Department, or in the case of externally owned information, handled by the Department. However, information relating to document and records management, web content management, and knowledge management is out of scope. This is to keep the scope of the work manageable and achievable.

It should be noted that a separate IT strategy exists. Both the IM strategy and IT strategy exist to support the Department's corporate priorities, but in different ways. The IT strategy relates to the services and technology to deliver the technology solutions for the Department. The IM Strategy focusses on information data, and how it can be best managed to provide value to support corporate goals. The Information Technology Directorate (ITD) is a consumer of the IM strategy.

Audience

The strategy outlined in this internal-facing document is applicable at the enterprise level to all portfolios and business units in the Department. It is expected that as a minimum, all staff including staff in NSW public schools will understand their IM responsibilities included in the departments Code of Conduct as a standard condition of employment or engagement.

1 Gartner, Inc. is an independent American information management and information technology research and advisory firm that provides management and technology insight.

What is information?

Information broadly describes facts and data that people use in the course of their day-to-day work. It can be held on an electronic file, a spreadsheet, a paper file, a sheet of paper, an ICT system, or 'in people's heads'. Information should be considered a corporate asset owned by the business for the purpose of accomplishing the Department's objectives.

Why does the Department need an Information Management Strategy?

The Department has both an information challenge (the consistent interpretation and use of information across multiple user groups) and a data challenge (the collection, integration, and integrity of granular data items and individual records).

Currently, the Department is managing its information assets in 'silos'. The existence, whereabouts, completeness, quality and value of information owned by a business area is often unknown to other business areas. Concerns, at times misinformed, about privacy and sensitivity prevent the sharing of information within the Department. This is compounded by the lack of widely available protocols around data use and data release, which could ease or abolish the barriers around use of information. Pockets of unavailable information can lead to policy development, policy decisions and formulation of response to the Department's Executive, Ministers, and Parliament that are not as fully informed as they could be. It is imperative to ensure that the information captured by the Department leads to better decision-making and, ultimately, better outcomes for students.

Evidence-based decision-making is increasingly important in the current environment of significant changes and reform for the Education sector in NSW. A coordinated approach, entailing both the introduction and improvement of capability and competency in information management, is vital to inform and enable evidence-based decision-making.

Once informed and enabled, the effectiveness of evidence-based decision-making will eventually depend on evidence/perspectives. Three types of evidence/perspectives are suggested (Head 2008) as especially relevant:

- systematic research ("scientific")
- program management experience ("practice")
- judgement²

These disparate bodies of knowledge become multiple sets of evidence that inform and influence policy, and lead eventually to decision-making outcomes.

Vision

The vision provides focus and direction to IM in the Department.

"Improve the management and use of information within the Department to support planning, accountability, and effective decision-making."

Principles

The IM vision will be realised by adhering to the following principles:

1. Value information as a corporate asset
2. Champion the use of information
3. Provide access to information that is appropriate to roles
4. Actively promote the sharing of information
5. Provide high quality, relevant information services
6. Build IM that supports compliance
7. Provide a trusted source of truth
8. Promote standardisation and consistency
9. Build the future while supporting the present.

Principle 1 – Value Information as a corporate asset

Information is a vital corporate asset. Like other assets, information requires organisation, categorisation, and good management. Information should not only support business operations, but drive insight and strategic decision-making. Effective management of information requires ownership, policy and processes.

Principle 2 – Champion the use of information

Use of information should be championed within the Department, which entails continually challenging how information is used and its effectiveness. Best use of existing data should be made, and collection of data that is needed for a legitimate and strategic purpose should be promoted. Actively promote and support evidence-based decision-making and showcase the benefits of effective IM.

Principle 3 – Provide access to information that is appropriate to roles

Every staff member in the Department should be trusted to handle information in a way that is appropriate to their role. The default position of the Department is that a staff member should be able to access information unless there is a specific commercial, legal or ethical reason not to.

2 Head, B 2008, 'Three Lenses of Evidence Based Policy', The Australian Journal of Public Administration, vol. 67, no. 1, pp.1-11.

IM will facilitate this by:

- providing tools to enable staff to get information through self-service
- providing assisted service for those who require specialist assistance
- supporting business units by ensuring that they have access to information under appropriate security and privacy models.

Principle 4 – Actively promote the sharing of information

Information should, per the Open Government agenda, be proactively shared and released where appropriate to do so. This should be in accordance with protocols that safeguard information security, legislative requirements, and policy decisions and agreements.

IM will leverage 'open data' tools to publish suitable information, making it available to all government and non-government agencies, and the people of NSW.

Principle 5 – Provide high quality, relevant information management services

A corporate IM service function should support the organisational capability of the Department in relation to its information assets, ensuring that effective information use is extended throughout the organisation.

In general:

- IM service functions and practices should be designed to support the specific organisational needs of the Department in relation to its information assets
- An appropriate governance model needs to be applied to IM.

Principle 6 – Build IM that supports compliance

Create and maintain IM processes so that information is managed to support compliance with all legislative requirements, and are aligned with the whole-of-government strategy.

Principle 7 – Provide a trusted source of truth

A trusted source of truth should be provided and be complemented by a business intelligence (BI) capability that is available for strategic reporting and decision-making. All medium and high-value information assets as identified by the information owners within the Department will supply data to this trusted source. The trusted source will meet all information quality and accountability standards required to support effective planning and decision-making at all levels of

the Department.

Principle 8 – Promote standardisation and consistency

Information should be standardised and consistent across the Department through an enterprise information architecture process. This aims to support accurate and consistent understanding, interpretation and use of information across the organisation and outside of the organisation.

In general:

- information items and their definitions should be defined so that they are clear and unambiguous, for use by users and their business processes
- enterprise common data model and system data models will be linked to the business items and definitions to guide overall data delivery.

Principle 9 – Build the future while supporting the present

IM strategy and the frameworks within which it will be applied must support current corporate priorities, and apply processes to adapt as priorities change. It must remain closely aligned with the Department's corporate strategy³ and with the IT strategy⁴, ensuring all organisational capabilities are in synergy to benefit the Department.

Objectives

This IM strategy aligns with the Department's corporate and ICT strategies, and will support the following high-level IM objectives:

Effective IM governance

- To have clearly defined governance structures and IM services and competencies in place
- To have a growing organisational culture that embodies collaboration, the sharing of information, knowledge and skills across the Department
- To have clearly defined and communicated ownership and stewardship of all information assets in the Department and clear processes and protocols for approval for use and release of data for the Department
- To have transparency around the sources and lineage of information ie data derivation process, including any business rules that have been applied.

Effective IM policy & processes

- To have clearly defined and communicated IM frameworks

³ DEC 5 Year Strategic Plan 2012-2017, DEC, NSW.

⁴ DEC Strategic Information Technology Plan 2013-2017, DEC, NSW.

and processes that can be easily understood and are user-friendly

- To enable the Department to clearly define the business terms and articulate their requirements for Meta Data, Data Quality and Master Data Management.

Execute business transformation – IM enablement

- To have a clearly defined business transformation program to support the execution of IM initiatives.
- To have a highly skilled, motivated and engaged workforce that understands and accepts its role in IM and is equipped to make the best use of the capability available.

Appropriate information architecture

- To have integrated architecture to meet the strategic and tactical IM needs of the Department now and into the future.

Improved data quality

- To have established standards and processes for ongoing quality improvement for data within the Department's control and to exert leverage on processes affecting the quality of data for which the Department is an end user.

Access to information

- To enable access to the right information, by the right people, at the right time
- To ensure that data at the granular level is available.

Provide a “whole-of-education” view

- To have a trusted source of truth, to enable reporting and analysis that is across the education sector (ie at the state level and sectoral level) and across community groups.

Access to effective analytics and reporting tools

- To have a range of self-service and assisted-service information expressions through visualisation, reporting and analytical capabilities, to enable users to gain insights, conduct analysis and support evidence-based decision-making.

Enable proactive release of information

- To have information, in the form of data sets, reports and publications proactively released in a manner that is transparent and accountable.

Advocate for improvement in data literacy

- To advocate leveraging the NSW Public Sector Capability Framework to develop the Department's workforce towards having the necessary level of knowledge, skills and understanding to appropriately analyse, display and interpret data, so to contribute to effective decision-making.

Business priorities

The Department exists in a complex and changing environment, with multiple policy initiatives operating at both the Commonwealth and State levels. To ensure that this IM Strategy aligns and supports the Department's priorities, it is necessary to take a high-level scan of influencers and initiatives that affect the Department as an organisation, and then focus on specific areas of interest around information management for the Department's initiatives, portfolios, directorates and business units.

Through multiple interviews across the Department's portfolios, the stakeholders' views, business priorities, challenges and strengths are identified. Combined with evidence from a review of key documents, these will be analysed to formulate the IM framework, themes and initiatives for the Department.

The following section describes, at a high level, the key influencers for the Department.

1. Commonwealth Funding Reforms

The **White Paper on Reform of The Federation** in outlining the responsibilities of State government and the demarcation between Commonwealth and State Governments, affects any current **National Partnership Agreements (NPAs)** the Department is involved in. It affects how education will be funded, formulated, and delivered. It also influences how the Commonwealth Government responds to the Productivity Commission, in terms of Commonwealth funding, arrangements, and regulation. A **Reform of Federation - data sharing** - NSW position paper released by the Senior Management Council in August 2014 is a precursor to a wider data sharing arrangement between the Commonwealth and State Governments that will involve many of the Department's business units.

The **Gonski Reform**, possibly the most significant of the education reforms, determines the level of funding a school receives. Each school would get a base level of Commonwealth and State funding, plus additional money or loadings to take into account the school's size and location and the individual needs of students. The funding is against the Schooling Resource Standards (SRS) model, and will eventually lead to 70% of the monies for NSW schools going to the schools for principals and the school community to decide on funding priorities.

The **National Education Reform Agreement (NERA)**, the new funding model formerly known as Gonski, operates from 1 January 2014. It is seen as a driver for Commonwealth and State coordination around the various funding and regulation arrangements in the education space. Many **NPAs** and other **Commonwealth funding arrangements** that target specific need areas are coming to a close. Some are subjected to current

Commonwealth decisions and reviews based on Productivity Commission inquiries. Until they cease, some will remain in 'base funding', but funding increases may continue. Decisions around data retention and disposal will need to be made.

The 21st century learning model outlines new ways of teaching. It influences and informs areas such as the design of buildings and teaching spaces, and the development and implementation of the Australian curriculum. New data collection practices, underpinned by robust data governance processes, will aid and inform decision-making across a multitude of business areas of the Department.

More transparency on how Commonwealth funding were derived would assist the Department manage in the area of State funding to non-government schools and childcare providers. Once this is achieved, robust IM will be required to manage this changeable information.

2. NSW Government Workforce Reforms

There are a number of significant changes in the NSW government sector. The **Government Sector Employment (GSE) Act 2013** introduces reforms in the structure and management of the NSW government workforce. For the Department, this means a significant change in current practices around staff recruitment. The Department anticipates that the **Public Service Commission (PSC)** will require more detailed information on workforce management to demonstrate compliance. Much of this data may not be available. Where it exists, it may spread across both paper and electronic documents, making data difficult to access. Where there is a need to collect new data, the Department could benefit from standards on data collection to ensure that any new data applications have a strong focus on capturing and producing the right information.

The change in focus from the current system to one demonstrating capability for public sector employees necessitates the generation of a vast amount of data, in paper and electronic formats. Much data in this context will be personal data created as a by-product of the recruitment process: for instance, results of online aptitude tests and work place assessments.

The Department will require strong privacy management that provides clear guidance on how to capture, use and manage personal information in relation to current and prospective employees. The Department also needs to have the data use and release protocols in place to ensure that personal data is used appropriately when meeting PSC reporting requirements.

3. NSW Government Financial Management Reforms

The **NSW Financial Management Transformation Program** aims to move away from reporting on service groups, to program-based reporting. For the Department (and other agencies), this means a significant change to a system of

allocating program spending that can aggregate to the portfolio level. Data provided by the Department to Treasury will need to interface with a new Treasury-built application from 2017.

This has synergy with the Department's Program Management Office's (PMO) (Office of the Secretary) longer term goals. The PMO currently has the role of overseeing the implementation of the **Expenditure Review Committee's** efficiency targets for the Education and Communities cluster. The PMO is attentive to changing the focus from program-level targets, savings, and efficiency gains to return on investment (ROI) reporting that talks to outcomes on students and learning. This requires the ability to link (both at a conceptual and data level) resource input, activities and outcomes. Much of the data required does not yet exist, and what does exist is siloed and not integrated. Collecting new data or using the existing data to meet these goals will take careful planning to ensure that data collected is consistent with other data in the Department and can be linked.

From an IM perspective, this requires data collection standards and protocols. If new data systems are to be built, a data-centric system design approach will ensure that the required level of data granularity is built-in to support linkage, analysis and reporting requirements.

4. NSW2021 Plan

The NSW Government target areas as outlined in the **NSW2021 Plan** remains a key driver. The Department's corporate priorities are aligned to this plan. Lack of data in some areas significantly limits the ability to report on the target areas. A planned approach to identify gaps in data, and a planned way of addressing these gaps through a data development and collection agenda was identified as a need by the stakeholders, not only for NSW2021, but for many other business units.

A **Corporate Performance and Planning Blueprint** has been developed by Corporate Planning (Office of the Secretary) that will lead to a planning and reporting framework for the Department. This guides consistent processes for planning and reporting against **NSW2021**. A dashboard that drills down from the Department's corporate plan to portfolio/directorate levels is to be created to support the monitoring of corporate performance.

5. NSW Commission of Audit Recommendations

The need to elevate the priority for better IM is identified in the **NSW Commission of Audit Final Report 2012**. The report outlines ways to improve public sector management and service delivery in NSW. IM is seen to be crucial to supporting most of the themes, such as transparency and evidence-based decisions making. In response to this recommendation, the Department has already made headway through the establishment of clearer IM governance (the IGG), commencement of the BI program, and the establishment of the Centre for Education Statistics and Evaluation (CESE) in 2012.

Through this IM Strategy 2015-2019, the Department will continue to build on these foundations by defining and propagating an understanding of what constitutes good IM practices, and implement the competencies and services in a way that will be sustainable.

The Department is also leading in the NSW Government's **Open Government** agenda: through active participation at the executive and practitioner level in inter-agency forums; and through the proactive provision of the Department's data via the CESE Datahub (linked to NSW Government's data.nsw).

The following section describes the more specific priorities that were identified for individual business units.

1. Public Schools NSW – Learning & Business Systems (LBS); Learning and Engagement; Learning and Leadership; High Performance (HP); LSLD Professional Learning; and Schools Finance

Public Schools NSW is involved in numerous reforms. Local Schools Local Decisions (LSLD), the Rural and Remote Education Blueprint for Action, the School Excellence Framework (SEF), and Great Teaching, Inspired Learning (GTIL) all work together to enhance the learning outcomes of student through greater emphasis on professional development and standards for educators across New South Wales. The Education Act 1990 amendments will enable the registration and accreditation of public schools with the NSW Education Standards Authority (NESA). NESA will also capture data on teacher accreditation. The Department will require access to data held by NESA.

The Rural and Remote Education Blueprint for Action aims to reduce the gap in educational achievement between rural and urban schools. The NERA incorporates the National Plan for School Improvement and the new needs-based funding arrangements to be applied in public schools from 2014 which will require annual data reporting.

The Department also has commitments at the state level to the National Assessment Program, with NAPLAN testing being planned to go online in 2017. A number of reform-influenced initiatives are underway to introduce new teaching and learning performance metrics that cover teaching and learning areas. The focus is on areas such as: PLAN (Planning Literacy and Numeracy), a system to capture schools' student assessment from K to Year 12; extension to Essential Secondary Science Assessment (ESSA); testing capabilities around 21st century skills; teacher standards (Australian Professional Standards for Teachers); and school performance.

Schools also hold a wealth of data, much of which is hosted in multiple third-party supplier applications. The ability to access student assessment data that is consistent across schools, and that can be linked to the Department's corporate data is an

important priority. This would provide more depth to data than is currently available.

Learning and Leadership Directorate's work is central to the work of teachers and improving student outcomes. Significant amounts of data are managed through Early Learning and Primary Education (e.g. Best Start and PLAN data), Secondary Education (Voc Ed data) and Specialist Programs.

Learning and Engagement Directorate as part of their work captures and coordinates the range of data available that is required by the Department's Executive and Minister's Office. This includes NERA data reporting and performance metrics, and covers data for its four units across disability data, counselling, suspension and Aboriginal Education and Child Wellbeing data. The ability to link school data and specialist support provisions trends with asset management and workforce planning would provide more forward planning and analysis than currently available.

High Performance has identified the accurate and consistent interpretation and use of information across multiple user groups as a critical issue. Data analysis and presentation need to be guided by a set of principles that take account of such things as the data structure, validity, reliability and comparability, assumptions, limitations, and degrees of confidence. There is strong support for the development of data collection and share registers, ensuring purpose and appropriate use are clear.

Overall, Public Schools NSW requires IM support in relation to IM governance, data governance, data collection, data use, data share, data retention, information ownership and stewardship map, information security, data quality management, metadata management, information asset management, privacy management, and BI.

2. Office of Education (OoE) - State Training Services (STS)

STS is in the process of implementing the Smart and Skilled Reform, which will lead to improvement in the breadth and volume of vocational education and training (VET) data for the Department: across all student, course, provider, purchaser-purchasee arrangement, funding, financial, and reporting levels. STS will require the support of BI tools to bring together a vast amount of data to provide the ability to report on and monitor service provider and funding, student participation and outcomes.

The Commonwealth government has passed Unique Student Identifier (USI) legislation, which requires all VET students to register for a USI from January 2015. All Registered Training Organisations (not just those that receive public funding) will be required to submit information on training activity to the National Centre for Vocational Education and Research (NCVER) that will be known as 'total VET activity' or 'TVA'.

The USI and TVA reforms will present opportunities to gain insights into the training journey of individual students, irrespective of where they are and where they have moved from. The ability to add student income survey data into BI would add depth to decision-making.

IM focus areas supporting STS include: BI that is tailored to meet the needs of Smart and Skilled; data governance that clearly outlines the roles and responsibility between STS, other business units of the Department and service providers; and data protocols (collection, use, and release) to enable appropriate handling of information with both internal and external parties. It should be noted that STS's Information Risk and Management unit has significant IM capabilities, and provides internal IM services to STS.

3. Office of Education (OoE) - Early Childhood Education and Care Directorate (ECECD)

ECECD is responsible for influencing and enabling the delivery of quality education and care to young children in NSW. It does this through policy, funding and regulation. The National Quality Framework (NQF) aims to raise quality and drive continuous improvement and consistency in Australian education and care services. As the Regulator for NSW, ECECD ensures compliance with the NQF. As part of the NQF, the National Quality Standard applies to most ECEC services, including long day care, family day care, preschool/kindergarten, and outside schools hours care services.

ECECD is also responsible for enabling universal access to early childhood education and achieves this primarily by supporting the delivery of Early Childhood Education through Government and community preschools.

The Productivity Commission inquiry into early learning and childcare, in conjunction with the White Paper on Reform of The Federation, will determine how the Commonwealth fund early childhood education and care, and how these will be regulated at the national level.

Overall, ECECD requires more data, both the Department and non-government, to support robust analysis across the sector. This includes more granular data on participation on non-government child care providers, which is held by the Commonwealth. Data held by the ABS is also desired, including ABS demographic data. The ability to link early childhood data with school data would provide increased ability to analyse and understand the impact of early childhood education and care on a child's performance and outcome at school.

4. Office of Education - Higher Education (HE)

HE advises the NSW Government on issues concerning HE in NSW. HE is also the steward for data on student enrolments in higher education data from the Commonwealth. HE has

key areas of interest, which include analysis of the 'demand-driven system', growth areas for target student cohorts, and cross-sectoral VET-Higher Education pathways. As such, HE is particularly interested in having access to data that support these focusses, especially linked data across school student performance data, Australian Tertiary Admission Rank (ATAR) data, and university admission, enrolment and performance data.

HE would benefit from IM tools and services that provide data and reports as an assisted service.

5. Office of Education (OoE) – Strategic Information and Reporting (SIR)

SIR hosts CESE which has the remit to provide evidence-based information for the education sector in NSW. Core functions of CESE include statistics and data collection, evaluation and strategic analysis. CESE also has the function of strengthening IM for the Department, including provision of BI. Through CESE, the Department is actively participating in the government's Open Government agenda. The CESE Datahub is a public facing resource, which provides research, evaluation and data on the education sector. The internally facing BI tool provides staff members in the Department with integrated data to support the core business of the Department.

Policies, tools and processes that facilitate the acquisition of data to feed into the Datahub, and support the appropriate use and sharing of information is therefore a high priority. CESE, on behalf of the Department, has created DEC Open Data Policy, a data governance framework, an overarching agreement to enable cross-government data sharing, and a number of guidelines, including managing complex requests, and data linkage. CESE's ongoing priorities are to consolidate the Datahub, acquisition of more data (including external publicly-available data) that is applicable to the education sector, and providing information services for clients inside and outside of the Department.

6. Office of the Secretary (OoS)– Program Management Office; Strategic Delivery Directorate; and Corporate Planning

OoS's responsibilities include enterprise program management, executive support, preparation and co-ordination of various briefings for the Minister and Secretary; oversight and co-ordination of all Cabinet processes and timelines; corporate risk management; and corporate governance, planning and reporting.

One of the two key business priorities in relation to information is the PMO ROI reporting requirements. This requires that the internal Learning Management and Business Reform (LMBR) program, which delivers a major IT system for the Department,

provides the required in-system data design to meet the ROI reporting requirements. The second of the two key business priorities is the Corporate Performance and Planning (CPP) reporting, which aligns to the NSW2021 Plan. A CPP blueprint has been created, which will be referenced by each key business unit within the Department to produce their own strategic plan.

OoS requires IM support in the form of a data use protocol, BI, and data centric system design.

7. Corporate Services – People and Services (P&S)

P&S is preparing for Industrial Relations reforms, in parallel to efforts for the GSE Act 2013. These reforms affect the way in which the Department as an employer engages with, hires, manages and pays staff. There is a heightened need for data, such as teacher accreditation data held by BOSTES, and clear, transparent process for data exchange. Performance planning and development data in relation to human capital management within the Department is also required in relation to meeting new reporting requirements for PSC.

For P&S, significant IM support is required that relates to focus areas including privacy management, data-centric system design, information asset management, and data sharing.

8. Corporate Services – Finance ('Corporate Finance')

Corporate Finance is leading in determining the best arrangement around responsibilities for financial management as an outcome of LSLD, which impacts both Schools Finance (in the Schools portfolio) and Corporate Finance. This is in parallel to it increasing focus on the Treasury NSW's Financial Management Transformation Program.

From an information point of view, Corporate Finance requires master data linkages between differing data sets. This is to enable access to data for 'what if' scenario analysis, and analysis of existing data to determine and compare costs. Overall, Corporate Finance requires IM including BI and data governance, master data management, and data-centric system design considerations that support 'design-in' of data at the required levels of detail so to support budget and report layering.

9. Corporate Services – Asset Management, Planning and Demography (P&D)

P&D has key responsibilities for the Department around the State Infrastructure Strategy. This 20-year strategy, released by Infrastructure NSW in October 2012, requires each NSW government department to have a strategic plan for delivering assets. In addition, Treasury NSW requires each NSW government agency to produce a Total Asset Management Plan (TAM) every year. It is a strategic approach to physical asset

planning and management, whereby the Department aligns its ten-year asset planning with its service delivery priorities and strategies. TAM policy is part of the overall NSW capital expenditure submission framework.

Asset planning within the Department currently relies on information that is sourced across paper and electronic documents on local shared drives. Asset Management requires greater visibility and control over systems, and more rigour in how data is managed, shared and used. In addition, access to the BI tool is seen as necessary for the ability it will give to link asset with non-asset data. Asset Management requires broad IM support, in IM focus areas that include IM governance, data governance, data collection, and geospatial enablement.

10. Corporate Services – Information Technology Directorate (ITD)

ITD is responsible for delivering technology solutions and services for the Department. ITD is the steward of a collection of items under the umbrella of enterprise data architecture (EDA). These items include blueprints and enterprise (or 'common') data models. Their purposes are to align IT programs and data systems with the business strategy, to guide successful data integration and data delivery. This is at the application and application services layers. While these are created and maintained by ITD, good practice dictates that business areas should have visibility and ownership of these blueprints.

ITD also requires IM support to instigate clearer governance for reference data and master data, and in labelling information under the latest NSW Government classification scheme¹. ITD also identified the lack of a policy relating to data retention and disposal. Data governance is also required in relation to the data ITD owns and stewards for ITD, such as those for Information Security Management System (ISMS), Service Catalogue, and EDA.

Business priorities have also been identified for other business units eg OoE - External Policy and Relations. These focus on reforms external to the Department, and therefore these have been embedded in the section above that describes key influencers.

This summary is not a complete stock-take of all business operations, initiatives and priorities. However, business units clearly share a number of common IM requirements. These commonalities form the key IM focus areas that will be considered in the following chapters, to identify and categorise the IM needs of the Department.

¹ Office of Finance & Services 2013, DFS C2013-5 NSW Government Information Classification and Labelling Guidelines v1.1, OFS, NSW. This supports the implementation of The Premier's memorandum, M2012-15 Digital Information Security Policy.

The following is a list of the focus areas identified in this chapter:

- information governance
- data governance
- information ownership and stewardship map
- IM services
- data collection protocol
- data collection register
- information asset management
- data quality management
- metadata management
- master and reference data management
- enterprise data architecture
- information flow diagram
- data-centric system design
- information security
- privacy management plan
- data use protocol
- data linkage
- BI tools
- Advanced analytics tools (BI extensions)
- geospatial enablement
- data sharing
- open data
- data release protocol (incorporating privacy considerations)
- data retention and disposal.

IM Framework

In creating this strategy document, the NSW Government's IM framework approach⁶ is referenced. That approach, which was developed by Office of Finance and Services (OFS), primarily exists to support Open Government. It evolves as needs arise and the collective knowledge around IM grows. An IM framework template for the Department was created (Figure 1) using the OFS's approach as a reference point. The template describes the IM processes for the Department, structured around the key stages of the information life cycle: capture, distribute, use, maintain, and dispose.

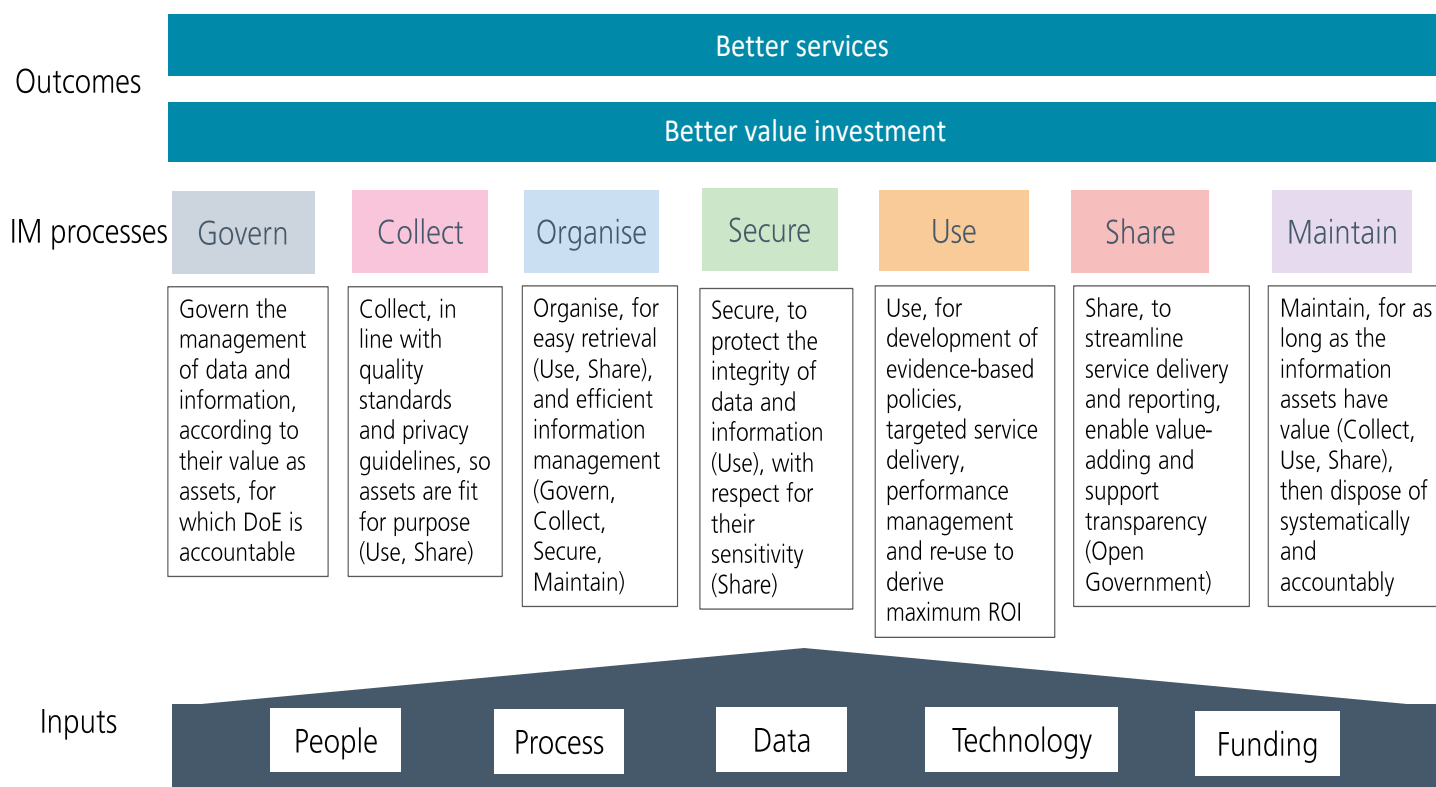


Figure 1: Information management framework template for the Department

The IM focus areas, or 'IM outputs', identified in the above section on business priorities, have been analysed against the Department's IM framework template. IM best practices were then applied to distil the analysis and complete the IM framework for the Department. Figure 2 below shows the completed IM Framework⁷.

An IM output can be a practice, a policy, or a standard (i.e. approach, process, protocol, standard, register, and so forth).

⁶Office of Finance & Services 2013, Information Management – A Common Approach, OFS, NSW.

⁷DEC Information Management Framework 2014-2017, DEC, NSW. This document contains detailed description of each of the IM Outputs.

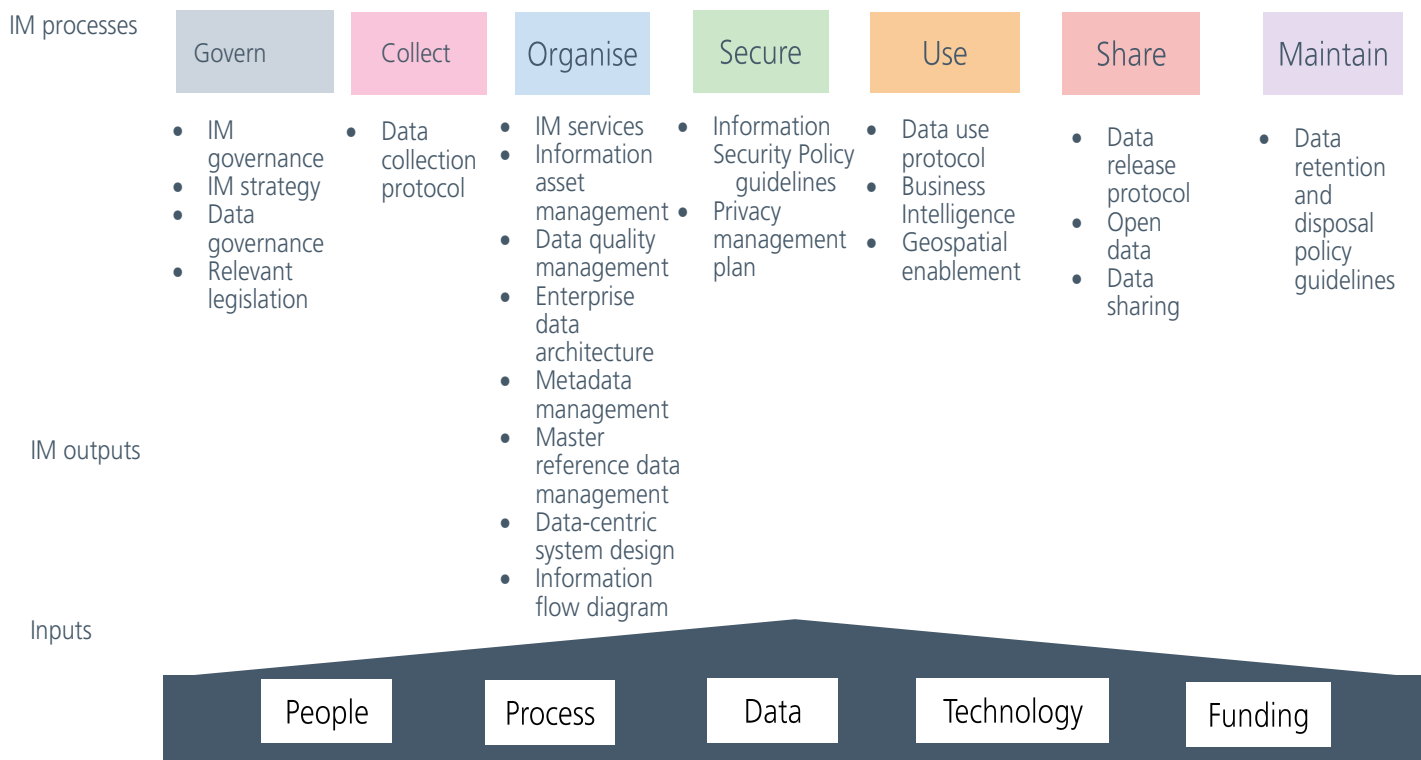


Figure 2: Information management framework for the Department

IM processes and outputs

This section describes in detail each of the IM processes identified in the above section, 'IM framework', in the context of the Department. A selection of the key IM outputs ('IM focus areas') identified in the earlier section 'business priorities', is also presented in this section. The purpose is to illustrate how an output relates to a given IM process, and to outline how the various outputs may be developed in a 'building blocks' manner for the Department. This will inform the development of the IM initiatives to achieve the strategy objectives.

For example, under the 'Organise' IM process, information asset management (IAM) identifies the physical data holdings, whereas metadata management (MeM) defines the business vocabulary and the technical glossary. Both can be developed in parallel and in an 'incremental build' manner.

IM process 1: Govern

Information governance and data governance have both been established within the Department. Both are necessary. Information governance provides the overall policies, processes and controls necessary for managing information across the Department. Data governance deals specifically with data and is necessary to facilitate collection, use, sharing and data disposal.

1.1 Information governance

Figure 3 shows an enterprise view of a typical large organisation, which separates its infrastructure technology, application, information, and business organisational capabilities. Information governance refers to the controls applied to the information organisational capability layer.

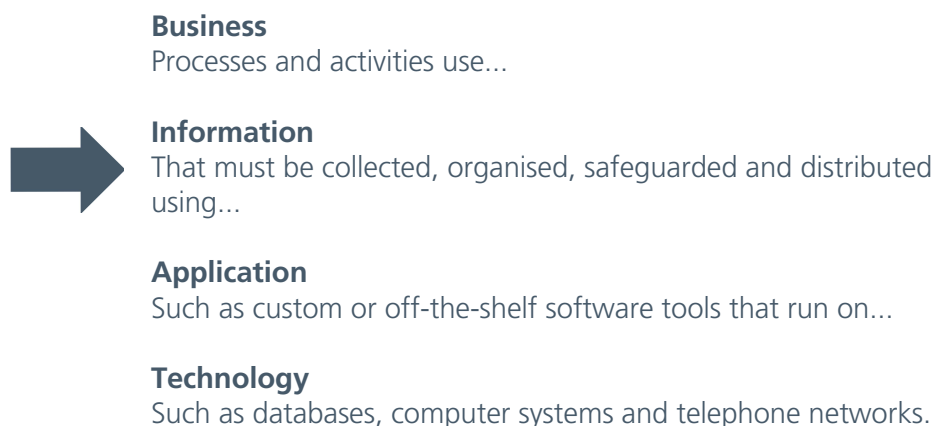


Figure 3: Enterprise Architecture, with the information organisational capability highlighted

The IGG provides the highest level of controls and governance for the Department's information. As a cross-portfolio group, it provides the necessary decision-making forum for managing information across the Department. The existence of this group is of critical importance towards achieving successful IM for the Department.

For the IGG to continue to be effective, it needs the following:

- A charter, as outlined in its terms of reference. This should include an annual review of the terms of reference and membership to ensure that all the Department's portfolios are represented, at the right level
- Visions, principles and objectives to guide decision-making. Note: these are contained in the BI and IM strategies
- Clear agreement on how IM services work within the Department.

Currently, there are a number of business units that perform IM functions. These units are found in STS, P S, NSW Public Schools, Finance, Asset Management and OoE. They provide a range of services, including data collection, reporting, analysis, data cleansing, and policy and procedure creation. These units are represented through membership in the IGG.

The IM Unit, SIR, has a department-wide focus, specifically to support the IGG to ensure a strategic and long term focus on IM efforts for the Department as a whole. As a matter of priority, the operating model for IM for the Department should be identified and agreed. For the Department, a federated IM model is recommended. This has a central IM function responsible for strategy, coordination, standards, policy and delivery of core IM services (such as an enterprise BI capability). Local IM services are located and line-managed within portfolios or business units, providing IM services at the portfolio or business unit level. All IM services, regardless of where they are located, comply with the Department's policies and standards. A communication strategy behind this will inform business units of the IM focus, processes and expectations. Any exceptions in compliance will be identified and considered e.g. differences in the data release protocols. All major IM-related matters are to be reported to the IGG.

The IM unit, SIR, provides the means to implement and support IM work across the Department. It will provide IM functions such as:

- secretariat to IGG, ensuring that IGG can function effectively
- central practice, policies and procedures for the Department's information e.g. the Department can do IM Strategy, MoUs

- advocacy for instilling good IM practices across the Department e.g. data collection principles
- facilities to identify what data is available and how it can be shared appropriately
- processes for access to data.

Over time, the Department could consider enhancing the local IM units to be local 'centres of excellence' around specific domains such as: locational intelligence (geospatial visualisation); data collection; analytics; and data linkage.

1.2 Data governance

Data governance refers to the overall management of data so that it is available, usable, accurate, complete, and is used appropriately. Data Governance applies to the whole life cycle of data, from its creation to disposal. The IM unit, SIR, is responsible for implementing and supporting data governance.

The Department has a data governance framework which was specifically used to support the development and roll-out of BI to a large number of users. This included the identification of people in the roles of owners and stewards who define the condition for use and sharing of information. It also defined the processes to ensure that data is used appropriately, within the bounds of the privacy legislation. The need to expand data governance (beyond the support of BI) has been a priority for many stakeholders. Some see it as risk mitigation, while others recognise it as an opportunity to create controls that will support an increase in sharing of data. Elements of data governance that require inclusion are:

- privacy management - providing guidance on privacy and how to classify and manage personal information
- updates to the current DEC Enterprise Data Policy, and related implementation guidelines.

Stakeholders see data governance as an enabler to achieving:

- the exchange of information within the Department, and between the Department and other agencies to support research, evaluation and reporting
- greater clarity of the roles and responsibility in data provision and use, between the Department as a purchaser, the service providers, and the Commonwealth Government. This is important for the management of data exchange to support STS's Smart and Skilled, and ECECD's need for more data from the Commonwealth
- acquisition of data from government and non-government agencies to support CESE's goal of providing a 'one-stop-shop' for education data and statistics.

IM Process 2: Collect

Acquisition of data through data collection supports the Department's programs, policy decision-making, CESE's Datahub, research, evaluation, reporting, and responsibilities as the collector of State and Territory data for the Commonwealth Government. The Department collects a lot of data, but there are also many gaps. The need to enhance the Department's ability to systematically address gaps in data, either through primary collection (e.g. surveys), proactive collection and collation of external data that is applicable to the education sector, or through enhancing or building a new data application, has been identified by a number of stakeholders. This is to address a wide range of business needs, such as comparative analysis eg what is the cost of a year 6 student in NSW against another state/national average.

Currently, there are a number of data collection protocols in the Department's business units, which can be leveraged to provide a framework for the IGG to adopt. The

Department would benefit from a **data development agenda** arising from a data collection framework.

Principles to consider are:

- all data collected has a clear purpose for collection and use
- all data has identified owners, stewards and administrators
- reporting requirements should be considered before data systems are designed to ensure that data output meets requirements
- the Department's enterprise common data model should be referenced
- the Department's business dictionary and technical glossary should be referenced
- data quality should be considered upfront, by building in data collection, validation and quality processes
- roles and responsibilities should be defined in the collection and maintenance of data
- the requirements under privacy legislation should be considered.

The IM unit, SIR, would be responsible for advocating the data collection framework at the Department-wide level.

IM Process 3: Organise

A large part of IM involves the application of processes, tools and policies to make information accessible, consistent and of good quality. Under the grouping 'organise', work is needed for information asset management, data quality management and metadata management. The IM unit, SIR, would be responsible for implementing and supporting these at a department-wide level.

3.1 Information Asset Management

Information asset management refers to the process of identifying and registering the Department's information holdings, and making it visible to all business units. An information asset register includes details on data owner, location, information type, category, content, the policy that is applicable, the use protocol, and release protocol. Many stakeholders identified the need for an enterprise information asset register.

Sub registers would include DEC data collection register which focusses on data collected by the Department; DEC open data register which focusses on data that is suitable to share publically, typically available through an open data tool such as CESE Datahub; and DEC data sharing register which provides details on data that is shared between the Department and other organisations, supported by memoranda of understanding (MoUs) and related schedules.

3.2 Data Quality Management

For a number of specific data sets, the Department has implemented robust processes to identify poor quality data and to remediate to an acceptable standard. This includes the Department's data collection and cleaning process to produce schools official census collections. A holistic solution that includes remediation, not just prevention, of poor data quality does not exist in any significant way. This strategy has identified a need to address data quality that is proactive, addressing remediation as well as prevention, and sustainable.

This requires a number of focus areas to effectively implement data quality management:

- data quality policy: the overarching policy for data quality in the Department
- data quality management approach: the approach for data quality management in the Department, that includes a framework for data quality, a strategy for data quality that also addresses the organisational aspects of data quality management, and a data quality plan
- data quality standards: the statements and standards, specific to the Department, against which data quality is to be defined, measured and reported
- data quality issues register: a communication tool to support data quality management in the Department, that highlights the issues and records what is being done to remediate and prevent data quality issues.

3.3 Metadata Management

Metadata refers to information that describes data. Examples of a metadata holding would be a business dictionary that is relevant to the Department, a data dictionary, or a thesaurus.

Metadata can also include detailed information that describes the purpose of that data, why that data was collected, the applicable data quality statements, context, business rules, and so on. Metadata provides users of data an understanding of the data.

The Enterprise Information Management Program (EIMP, 2009-2012) delivered a prototype metadata management system. A small, focussed list of technical business terms was added. On the whole, the working prototype demonstrated that metadata management would be beneficial to the Department, and a more enterprise-strength and full-featured metadata management tool to effectively network all the different types of business terms and data would do the job.

This strategy identified the need for an increased focus on metadata management, and will build on the deliverables from the EIMP. Components include:

- a DEC Business Dictionary
A business dictionary for the Department contains vocabulary and terms such as 'student', 'school', 'school type', 'Full Time Equivalent', and 'staff'. It facilitates general common understanding of terms. Each term is given a definition that is clear, unambiguous and, from the Department's point of view, not contextualised specifically to any of its business units, processes or systems.
- a DEC Technical Glossary
A technical glossary for The department contains terms which are specific to a business process. Each term has context and business rules wrapped in the definition. The technical glossary facilitates common understandings of terms that are specific to a business process, or sub-process. For example:
 - o A student in the school enrolment process could have the definition: 'A student is a person who has been assigned an enrolment registration number and goes to a NSW public school'
 - o A student in the Commonwealth Department of Education reporting process could have the definition: 'A student is a person who has been identified as enrolled and actively attending a given NSW public school on the census date'.

At the technical glossary level, all terms must be present. For example, 'Birth Date' is not present in the business dictionary as it is a natural language. In the technical glossary for the school enrolment process, it would be present with the definition: 'Birth date of the applicant who is a potential student for a NSW public school'.

- Data Dictionaries
A data dictionary contains terms which correspond directly to a data item that exists in an IT system.

A data dictionary contains terms which correspond directly to a data item that exists in an IT system. Some may be relevant to a business user as these are business-facing data items e.g. on a computer screen or a report. Some terms are relevant only to IT practitioners as these exist as data fields in the IT system which the business will never get to know or need to know about. Either way, the definition of the term may be further contextualised to the IT system that holds the data item, and can include the expected format in the definition. For example:

- o In the school enrolment IT system, ERN, the logical data 'Birth Date' could have the definition: 'Birth date of the applicant or student, in character format dd/mm/yyyy'. A data dictionary is not directly within the scope of IM. A DD is created for each IT system by the related IT project, and belongs to the system owner. The system owner is typically a senior manager, in some cases the executive director, of the business unit that is the key user of the system. However data lineage from the DDs to the business dictionary and technical glossary is within the scope of IM.
- Data Lineages
A data lineage defines, for example:
 - o How a term in a technical glossary links, or has a 'lineage', to one or more terms in the business dictionary
 - o How a term in a data dictionary has a lineage to one or more terms in the technical glossary.A lineage comes in two forms: 'comes from', or 'derived from'. It facilitates a common understanding of how the data interrelates, thus a common understanding of each term and any subtle differences between the terms.

3.4 Master/Reference Data Management

Master Data Management (MDM) is a comprehensive method of defining and managing critical reference-type data of an organisation. The intent is to provide a single point of reference. When properly done, MDM will streamline data sharing among personnel and business units within the Department. It will facilitate computing in multiple system architectures, platforms, and applications.

Reference Data Management, on the other hand, is a less comprehensive method, whereby the reference-type data is defined and managed for a specific business area or system of an organisation. Reference data is then typically propagated out to be used by other areas with little or no consideration of these areas' modus operandi.

The Enterprise Information Management Program (EIMP, 2009-2012) acquired and installed master data management software. This was re-adapted to be a master and reference data management (MRDM) tool, to provide the Department with the ability to load and manage reference data for the LMBR Program. LMBR is using it to manage reference/lookup codes. It is not being used as a run-time service, but rather a repository with data feeds into ebs4 (student management application) and Synergy (student well-being application). The MRDM is managed by Common Services Team within ITD.

3.5 Enterprise Data Architecture

Enterprise data architecture refers to a collection of blueprints and enterprise data models that are specifically designed to align IT programs and IT assets with the business strategy, to guide integration and successful data delivery at the application and application services layer. Enterprise Data Architecture is currently maintained by ITD. It is relevant to IM in that a set of data lineages need to be maintained between the DEC Business Dictionary and the EDA common data model. This would facilitate a wider, common understanding of the Department's data assets. The IGG provides ownership and oversight of the enterprise data model.

3.6 Data-centric system design

This standard provides a guide to incorporating strategic, operational and administrative data needs into the process and system design methodologies. This ensures 'design-in' of data at required levels of detail to support business needs, such as budget and report layering.

3.7 Information flow diagram

An information flow diagram provides visual presentation of the flow of information between the business units, their business systems, and from the Department to external parties. A number of stakeholders have expressed the need for an information flow diagram for the purpose of:

- analysing the current information flows related to their business unit, to determine their options in response to major reforms and initiatives that require changes in the way they collect or use data
- understanding the bigger-picture impact of changes in information on information flows or content in existing information flows
- understanding other potential sources of data that exists within and outside the Department, which they may be able to leverage from.

IM Process 4: Secure

'Secure' centres the efforts of the Department on keeping information secured, and underpinning stronger guidance around privacy management.

ITD is responsible for information security. IM support will be provided to instigate clear governance in labelling information under the latest NSW Government classification scheme. The Privacy Management Plan for the Department was produced by the Department's Legal Services. This provides guidance for privacy management.

Security requirements are guided by the NSW Government Digital Information Security Policy. IGG is responsible for the oversight of implementation of digital information security for the Department.

IM Process 5: Use

The strategy has also identified a need to further develop protocols to guide the use of data. The term 'use' refers to data use and access within the Department. An expressed area of need was stronger guidance around privacy management.

'Use' will consider how information (and in particular, data) can be analysed, synthesised, evaluated (in terms of its worth, quality, and limitations for a particular purpose), interpreted (what data tell us), and weighed (for competing evidence).

'Data literacy' is a human capability that will be treated under the auspices of human capital management. Data literacy will be addressed by People and Services (P S) instruments as listed below. These instruments will collectively cater for the development of the Department's workforce to improve the data literacy level of the Department, which entails understanding basic principles such as statistical significance, error of measurement, and the difference between nominal, ordinal, interval and ratio scales. This reliance on human capital management will be highlighted in the business transformation for IM, where it will be ensured that the Department understands data literacy is a distinct human capability that will support strategic IM in the Department.

- NSW Public Sector Capability Framework
- Role description
- Capability summary
- Learning and Development Plan

5.1 Business Intelligence

Much of the Department's strategic and management information requirements will be delivered through its BI capability over the coming two years. The ability to easily access integrated, quality data for analysis and reporting is required by all portfolio areas. The years 2014-2015 establishes BI foundations, with an emphasis on delivering a set of core data to executive and senior management across the Department, including school principals. The Department received both capital and recurrent funding to 'start up' BI. The next phases, consolidation and growth will need:

- 'Business as usual' operating and funding model to maintain and grow BI
- updated BI strategy, as the current strategy reaches to the end of 2015
- sustained support through training, communications and change management
- greater emphasis on analytics and servicing of 'high end' users
- greater emphasis on grass roots change management to support the culture of informed decision-making as users become more attuned to information being available.

5.2 Geospatial enablement

A number of stakeholders have identified the need for a geospatial tool to aid analysis. Visual presentation of multiple sets of data, shown geospatially can enable powerful analysis. Data on the location of students, schools and providers can be overlaid on different boundaries and population data to produce layered maps and heat maps that provide rich visualisation. From a technology point of view, the Department has significant geospatial capability. The platform and software available from the Asset Management Division and BI Program are potential tools to expand out to provide users with geospatial maps and analytical capability, especially for planning and program evaluation.

IM Process 6: Share

The term 'share' refers to when data is provided to an external agency or made publically available. Sharing of data between the Department and external parties happens for all portfolios. An expressed area of need was stronger guidance around privacy management.

The IGG has to date overseen the development of:

- information sharing MoU that has also been adopted as a whole of government template
- guidance for managing complex data requests (for the purpose of research)
- data handling for open data release.

IM Process 7: Maintain

'Maintain' refers to retaining an information asset, or parts of an information asset, as long as it has value, and then disposing it systematically and accountably. The Department requires a formal data retention and disposal policy that is across the Department and will be referenced to by its portfolios and directorates, and adapted to their individual needs as required.

IM outputs and themes of work

IM outputs from the processes described can be considered in the following way:

- foundational enablers - these are foundational to building strategic IM
- practice enablers - these are foundations to build a practice (e.g. data governance)
- IM strategic delivery (e.g. BI, geospatial intelligence)
- IM transformation and value delivery (e.g. training and ongoing change management).

These can be grouped into themes that represent logical, effective groupings of the required IM activities in relation to the needed IM processes and outputs. These themes also represent the 5-year goal areas for the improvement of organisational information management for the Department.

Theme 1: Establish and maintain foundations for strategic IM

Having a robust information organisational capability for the Department requires that the foundations for strategic IM are created. This theme plans and implements these.

Theme 2: Facilitate the business transformation

Effective adoption of IM requires a significant degree of organisational change. This theme ensures that the business units across the Department will recognise, adopt and incorporate this organisational capability into their day-to-day work, and the staff will be provided with the required level of education, training and support to achieve this.

Theme 3: Step up to strategic data governance

With enablement through strategic IM foundations (Theme 1), shift data governance from a tactical to a strategic level. This includes applying data governance to all programs and projects that involve data. All aspects of data management are considered, including responsibilities and analysis of downstream data impacts.

Theme 4: Organise the information assets

This theme involves identifying and organising the information assets, registering the Department's information holdings and making this visible to all business units. Once completed, this theme will be one of the key enablers for strategic data governance.

Theme 5: Improve data management

This theme concerns identifying, organising and managing data to improve the consistency and quality of data. Many IM processes and outputs are brought under this theme as they are interrelated and best managed as a program of work. Once complete this theme will be one of the key enablers for strategic data governance.

Theme 6: Consolidate business intelligence

The current BI roll-out is due for completion in November 2015. This theme involves a number of work items that would shape the 'next phases' of BI. Consideration should be guided by the extent to which BI has been able to support corporate goals, the level of uptake, and value for money, informed by the BI program data and the evaluation of the BI program findings. As the tool and technologies are bedded-down, there needs to be continuing efforts on the 'people side': training, communication, and change to support transformation.

Theme 7: Develop analytic capability

This theme involves provision of tools to support advanced analytics that are over and above the standard BI suite of reporting, dashboard, and quantitative analysis tools.

Roles and responsibilities

The IGG is the owner of Information Management Strategy 2015-2019. IGG is chartered by the Executive to oversee the improvement of IM across the Department. It has responsibility for ensuring that the strategy is implemented.

The IM business unit, located in Strategic Information and Reporting (SIR), is the steward for the strategy. It is responsible for driving the IM strategy to enable business transformation around the Department's information organisational capability. The IM business unit is responsible for establishing initiatives associated with implementing the IM strategy.

Conclusion

The Information Management Strategy 2015-2019 sets out the strategy for the department to become an effective manager of its' information assets . By making information that is collected, used and shared by the Department accessible, consistent and of good quality, the strategy will lead to better decision-making and, ultimately, better learning, teaching, training, and community involvement outcomes for all people in NSW.

Appendix A. Relevant legislation

There are a number of different laws which affect, both directly and indirectly, how the Department creates and manages information. These should be considered by all IM policies, standards and processes. The DEC Privacy Management Plan (PMP) provides details and guidelines on the interpretation of each.

- Obtaining and providing information, as outlined in the *Education Act 1990 (NSW Legislation)*
- Provision and exchange of information, as outlined under Chapter 16 of the *Children and Young Persons (Care And Protection) Act 1998*
- *Government Information (Public Access) Act 2009 (NSW) (GIPAA)*
- *Privacy and Personal Information Protection Act 1998 (NSW) (PPIPA)*
- *Health Records and Information Privacy Act 2002 (NSW) (HRIPA)*
- *Privacy Code of Practice General) 2003*
- *Workplace Surveillance Act 2005*
- *Surveillance Device Act 2007*
- *Crimes Act 1900 (NSW)*
- *Children (Education Care Services) National Law NSW*
- *Apprenticeship and Traineeship Act 2001*
- *Social Security (Administration) Act 1999 (Cth)*
- *Migration Act 1958 (Cth)*
- *Family Law Act 1975*
- *Guardianship Act 1987*
- *Public Interest Disclosures Act 1994*
- *Workplace Injury Management and Workers Compensation Act 1998*
- *Teaching Service Act 1980*

Appendix B. Enterprise information management - definitions

Enterprise Information Management (IM)

Enterprise IM is about effective management of all information assets of an organisation. An information enabled organisation recognises the need to support its work through evidence-based decision-making and the importance of high quality information to support this decision-making process. The quality and timeliness of these decisions depends on getting the right information to the right people, in the right format, at the right time.

All staff interact and work with information at various times by generating, reviewing, analysing, using and sharing it. Staff in an information enabled organisation understand that they all have a responsibility in relation to this information.

‘Information Management is fundamental to becoming an information-enabled organisation.’

IM vs. Information and Communications Technology (ICT)

ICT refers to anything related to computing and communications technology, such as networking, hardware, software (applications), the Internet etc. ICT departments exist for managing the computers, networks and other technical areas of their businesses. ICT relates to the management of these resources as ‘containers’ into which information is stored, managed, transported or visualised. IM is about the management of the information ‘contents’. Though closely linked, as the effective management of the contents is enabled by having the appropriate containers, they are separate functions within the organisation. IM is a primarily a business led function and ICT primarily a technology led function.

‘IM is about contents and ICT is about the containers.’

Information Assets

Information assets are sets or collections of related information corresponding to a business object (or set of related business objects) that have enduring value to the business.

Human, physical and financial resources have long been recognised as valuable assets that help to achieve organisational goals. The management and use of such assets have always been carefully controlled, with investments made to enhance and maintain them.

Information is also valuable assets. IM is about effective management of all aspects of business data and its scope includes information that is both internal and external and is not limited to information stored in a database. Information assets include operational data, text, graphical, audio-visual, electronic, databases, hardcopy records, corporate publications and expertise and specialist knowledge stored in people’s heads.

‘Information Assets do not all live in databases.’

Information Governance

Information Governance, or IM Governance, is the set of multi-disciplinary structures, policies, procedures, processes and controls implemented and used to manage information in such a way that it supports the organisations immediate and future regulatory, legal, risk, environmental, operational and strategic requirements.

In the broader context, Information Governance deals with the contents of information and not the containers in which it is kept. It ensures that information is of an agreed level of quality and that it can be effectively exploited by the business.

Information Governance entails the sponsorship and authority mechanisms that define the overall brief and control the approaches to managing information for the organisation. An Enterprise Information Governance approach must be fully integrated within the wider remit and overall context of Business Vision, Strategy, and Operations. Information Governance ensures that this integration is effective and complete.

Robust governance capability defines a common foundation of clear ‘Rules of Engagement’ for the Information Governance mandate:

- Ownership and stewardship.
- Authorities and responsibilities.
- Controls.

These are most often articulated in detail through policies, procedures, methodologies and standards.

Enterprise Information Governance must integrate seamlessly with Business and ICT Governance, and must include industry legal and regulatory requirements.

‘Information Management will not be successful without strong Governance.’

Enterprise information management definitions continued

Information Management Services

IM Services are the various services being delivered to the organisation and being governed by the IM Governance model in place. Services include, but are not limited to, the setting of IM policies and controls, Enterprise Information Modelling and Architecture, Standards and Quality Controls, Data Warehouses, Reporting and Analytics.

To ensure that the IM Services are appropriately focussed and to assist with communication of the IM Services brief it is important to establish and adopt an IM Services Charter which comprises a Vision Statement and Statement of Duties.

'A successful IM Services capability requires an adopted Charter comprising Vision Statement and Statement of Duties.'

Appendix C. List of acronyms used in this report

ABS	Australian Bureau of Statistics
ATAR	Australian Tertiary Admission Rank
BAU	Business as Usual
BI	Business Intelligence
CESE	Centre for Education Statistics and Evaluation
CoP	Community of Practice
CP	Corporate Planning
CPP	Corporate Performance and Planning
DD	Data Dictionary
DG	Data Governance
DGSC	Data Governance Sub-committee
DQ	Data Quality
DQM	Data Quality Management
ECE	Early Childhood Education
ECECD	Early Childhood Education and Care Directorate
EDA	Enterprise Data Architecture
EIMP	Enterprise Information Management Program
EPR	External Policy and Relations
ESSA	Essential Secondary Science Assessment
GSE	Government Sector Employment Act 2013
HE	Higher Education
HP	High Performance
IAM	Information Asset Management
ICT	Information and Communications Technology
IGG	Information Governance Group
IM	Information Management
IMU	Information Management Unit
ISMS	Information Security Management System
ITD	Information Technology Directorate
LMBR	Learning Management and Business Reform
LMS	Learning and Management Systems
LSLD	Local Schools Local Decisions

Appendix C. List of acronyms used in this report continued

MDM	Master Data Management
MeM	Metadata Management
MDRM	Master and Reference Data Management
MoU	Memorandum of Understanding
NERA	National Education Reform Agreement
NESA	NSW Education Standards Authority
NPA	National Partnership Agreement
NQF	National Quality Framework
OFS	Office of Finance Services
OoE	Office of Education
OoS	Office of the Secretary
P D	Planning and Demography
P S	People Services
PCG	Program Control Group
PLAN	Planning Literacy and Numeracy
PMO	Program Management Office
PPR	Policy, Planning Reporting
PSC	Public Service Commission
SDD	Strategic Delivery Directorate
SEF	School Excellence Framework
SIR	Strategic Information and Reporting
STS	State Training Services
TAM	Total Asset Management
TVA	Total VET Activity
USI	Unique Student Identifier
VET	Vocational Education and Training

A network diagram with various sized nodes and connecting lines on a teal background.

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