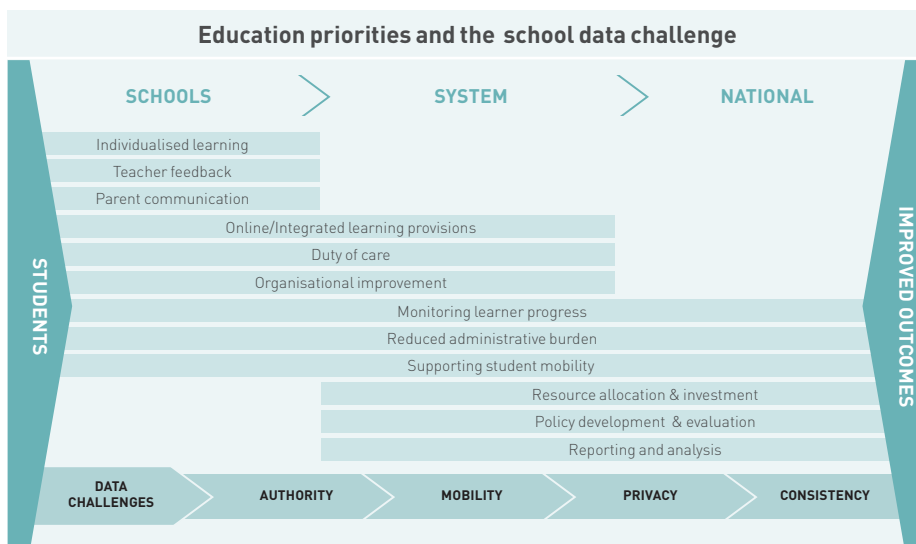# LEARNING SERVICES ARCHITECTURE

The right information, in the right place, at the right time

The Challenge

Schools know that to get the best outcomes they need to have as much good quality data as possible about learners and the process of learning. The number of potential data sources is increasing daily as schools adopt new tools and services to support learning, administration and communication. This creates a challenge to bring information together in the right place at the right time to provide an optimal learning experience for every student. Schools need the benefit of a service architecture without the headache of being IT architects.
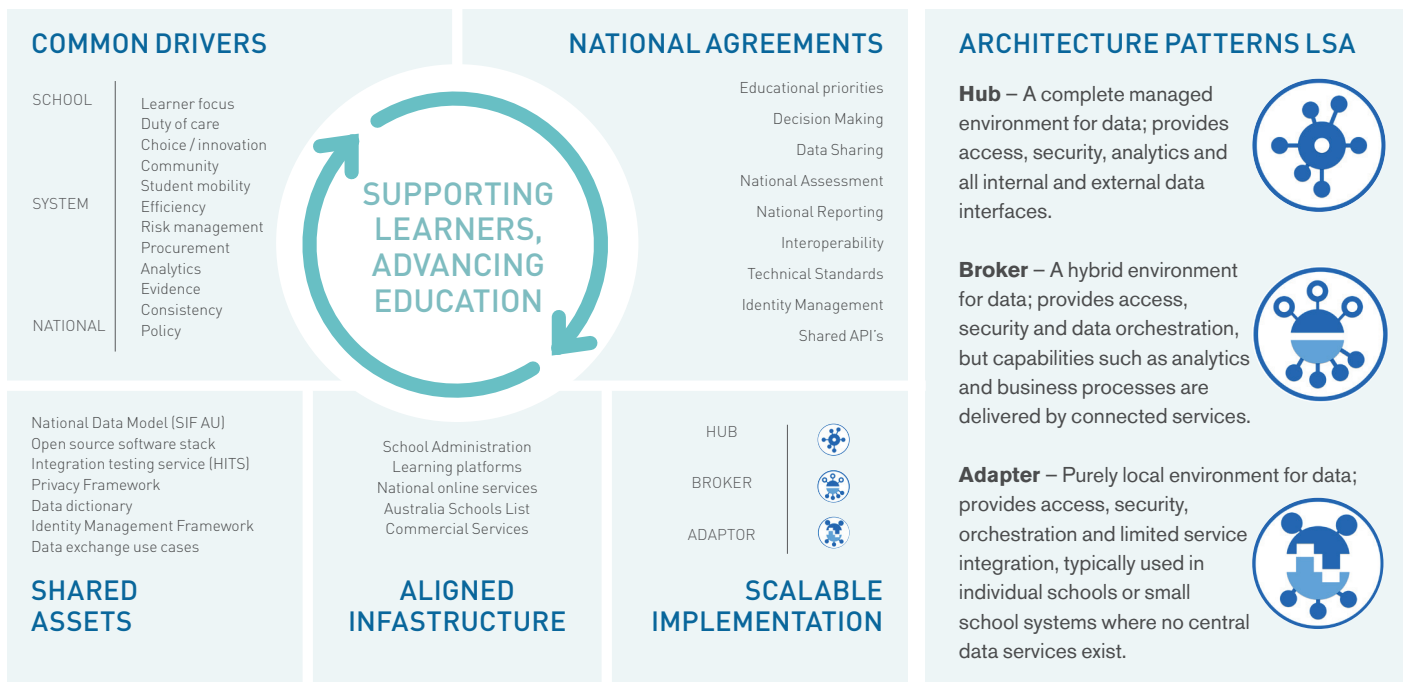
Supporting students in their journey through schooling also means sharing information between school and home, and with other schools, school authorities and service providers. The ability to share student information reliably and safely is paramount.

The Learning Services Architecture

The Learning Services Architecture (LSA) is a nationally coordinated response to the opportunities and challenges presented by the explosion in the use of ICT in education technology in school education. The LSA is based on established policies, common business processes and nationally agreed interoperability standards.

The standards are maintained by education authorities from all States and Territories in conjunction with suppliers of education ICT products. The LSA exists to simplify the delivery of learning services and to ensure that education data can be used consistently by schools and school authorities nationally.

Education priorities and the school data challenge

STUDENTS	SCHOOLS	SYSTEM	NATIONAL	IMPROVED OUTCOMES
	Individualised learning			
	Teacher feedback			
	Parent communication			
	Online/Integrated learning provisions			
	Duty of care			
	Organisational improvement			
	Monitoring learner progress			
	Reduced administrative burden			
	Supporting student mobility			
		Resource allocation & investment		
		Policy development & evaluation		
		Reporting and analysis		

DATA CHALLENGES	AUTHORITY	MOBILITY	PRIVACY	CONSISTENCY

COMMON DRIVERS

SCHOOL
- Learner focus
- Duty of care
- Choice / innovation
- Community
- Student mobility

SYSTEM
- Efficiency
- Risk management
- Procurement
- Analytics
- Evidence
- Consistency

NATIONAL
- Policy

SUPPORTING LEARNERS, ADVANCING EDUCATION

NATIONAL AGREEMENTS

- Educational priorities
- Decision Making
- Data Sharing
- National Assessment
- National Reporting
- Interoperability
- Technical Standards
- Identity Management
- Shared API's

ARCHITECTURE PATTERNS LSA

Hub – A complete managed environment for data; provides access, security, analytics and all internal and external data interfaces.

Broker – A hybrid environment for data; provides access, security and data orchestration, but capabilities such as analytics and business processes are delivered by connected services.

Adapter – Purely local environment for data; provides access, security, orchestration and limited service integration, typically used in individual schools or small school systems where no central data services exist.

SHARED ASSETS

- National Data Model (SIF AU)
- Open source software stack
- Integration testing service (HITS)
- Privacy Framework
- Data dictionary
- Identity Management Framework
- Data exchange use cases

ALIGNED INFRASTRUCTURE

- School Administration
- Learning platforms
- National online services
- Australia Schools List
- Commercial Services

SCALABLE IMPLEMENTATION

- HUB
- BROKER
- ADAPTOR

What is the LSA?

An agreed national approach for integrating information systems that exchange data about learners in schools, ensuring that systems work together effectively and safely.

The Benefits of the LSA

Schools benefit from:
- a unified view of information about every learner
- reduced administrative burden
- flexibility and choice

School Systems benefit from:
- consistent, well-managed school data
- rich analytics and decision-support
- consistent approaches to managing information privacy and risks
- common approach to service integration
- Simplified procurement

Education Solution Providers benefit from:
- a nationally consistent integration interface
- market choice by schools
- nationally agreed school business information contracts – common ways in which core school processes exchange and use student data.

Making it Real – National Information Contracts

Australian school authorities are progressively implementing ICT infrastructure employing nationally agreed data interoperability standards. Jurisdictions have now committed to an Interoperability Roadmap leading up to 2020 showing when school authorities in the states and territories expect to support data transfer for specific business processes in schools, through a unified interface based on the LSA and centralised integration hubs.

New national learning infrastructure, such as the national online assessment platform being used for NAPLAN Online and the Australian Schools List, have been designed to integrate with stakeholder systems using interoperability standards from the LSA.

NSIP has developed National Data Exchange Information Contracts in conjunction with school authorities and solution providers to ensure alignment with the real world of school operations and to take full advantage of the national interoperability standards. Exchanges have been defined to support solutions that perform core school processes including:
- Enrolment
- Attendance
- Timetable
- Grading
- Finance
- NAPLAN registration
- NAPLAN results
- Wellbeing
- Assessment

This list of information contracts is growing and in the near future will include Curriculum Planning and national reporting. Choosing systems aligned to the LSA provides confidence that they will work together to provide quality data about students now and into the future. NSIP ensures that providers involved in data exchanges have the technical tools and training to ensure their systems are interoperable.

How to get involved?

Government schools:
- Contact NSIP to be put in touch with the Department and supplier contacts in your location. LSA-based systems are available or under implementation in all States and Territories.

Catholic and Independent schools:
- Contact NSIP to be put in touch with authority or suppliers contacts in your location. LSA-based solutions are being developed for non-government schools in: Tasmania, Queensland, Victoria and Western Australia. The Australian Government is also developing automated processes for national reporting based on SIF.

If you are working in any school with a systems provider and would like to know how NSIP can help them to be part of the LSA, please contact NSIP. NSIP provides tools, training and advice to help all solution vendors participate in the LSA. If you want to know more about the LSA, who is implementing it in your sector, or who your suppliers should talk to so they can be part of this national initiative, please contact us.

For more information visit:
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