

Schools Digital Strategy

Summary – Service Need and Alignment
Investment Logic Map (ILM)

To be an education leader in a digital world

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Overview

Scope

This presentation outlines the opportunity (service need) for the **Schools Digital Strategy (SDS)** to support the NSW Government’s objective of making NSW Australia’s best education system and one of the finest in the world. It also identifies strategic alignment with other NSW Government initiatives.

Purpose

This presentation is intended to **enable conversations with key project stakeholders** in the Department of Education (DoE) and Gate 0-equivalent discussions with Central Agencies.

Contents	Pg	Gate 0 Requirements
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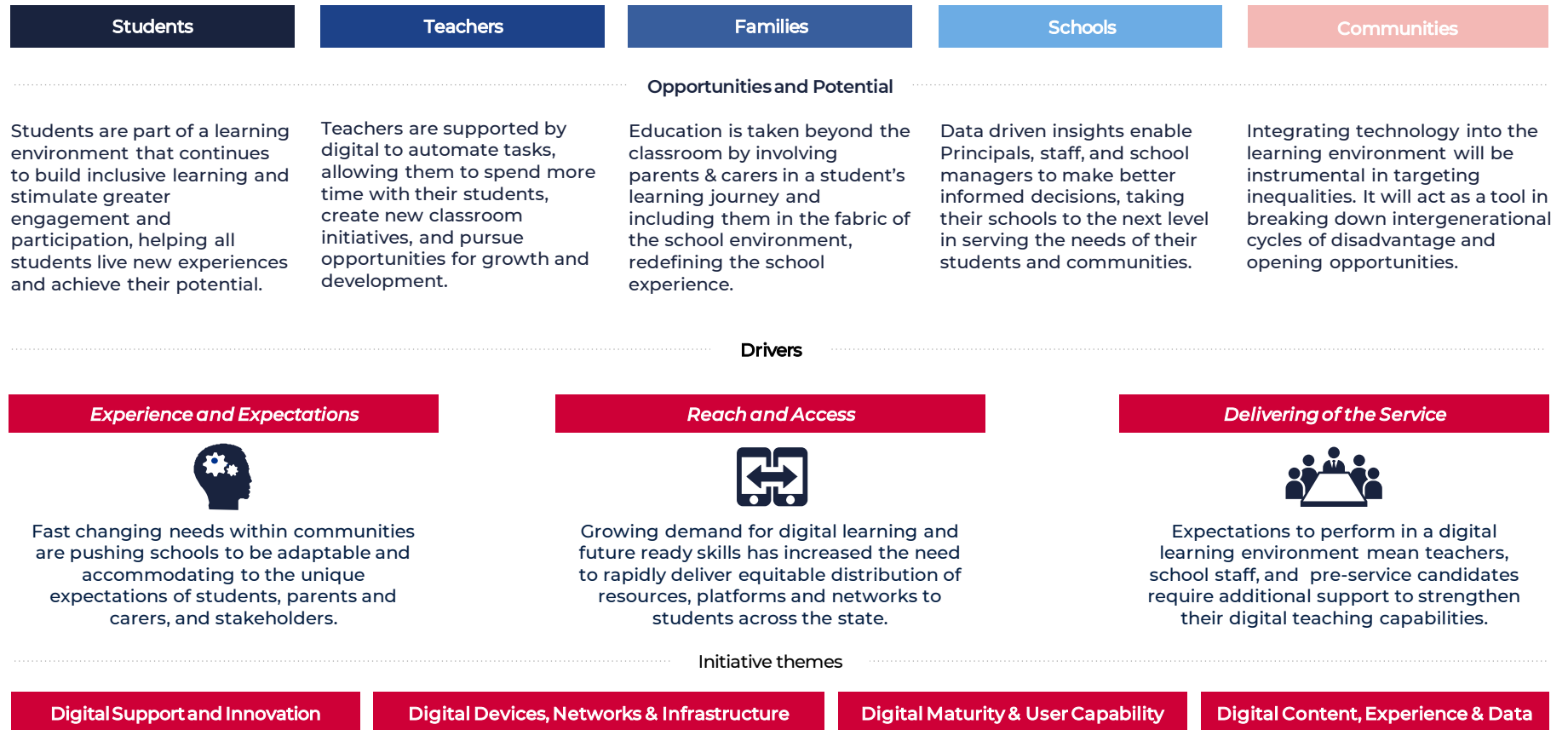
Opportunity

A shift in investment focus from upgrading ICT to optimising digitally supported education to help realise the potential of every student and teacher in the state and transform the way we operate.

The Schools Digital Strategy (SDS) is an opportunity to build on the milestones that have been achieved already by improving human-centred approaches to design, delivery, and governance.

It will drive student outcomes, increase equity, improve service and experiences and enhance efficiency.

An Investment Logic Map (ILM) for the SDS has been co-developed with DoE and NSW Treasury stakeholders. It articulates the opportunities, drivers, and initiatives that the SDS should implement. Outputs from this exercise are attached in the appendices.



SDS Overview

The SDS will build on existing initiatives to achieve the next level of digital integration and maturity across the NSW education system, with a focus on students, teachers and schools.

DoE has developed the SDTS to capitalise on digital opportunities and prepare students and staff for the skills of a rapidly changing digital world. It is aligned with initiatives being delivered by a number of other NSW Government agencies.

The strategy will be delivered in four horizons:

1. Horizon 0 – core design, pilots, and business case development;
2. Horizon 1 – prioritising investments, implementation, and change management;
3. Horizon 2 – capability development and embedding innovation and cultural change; and
4. Horizon 3 – developing sector leading expertise and full inter-departmental integration.

Investments in each Horizon will be designed, appraised, and prioritised in the context of the specific needs and requirements of students, teachers, and schools across the state.

The four major areas of investment as part of the SDTS are outlined on the right.



Digital Content, Experiences & Data

In addition to up-skilled staff enabled by digital, schools will require the development of digital training and curricula to be compatible with devices and networks, enable the integration of digital learning & teaching in the classroom, and provide students with the skills for the workforce of the future.



Digital Devices, Network & Infrastructure

Investing in closing digital access gaps in all schools across the state will be significant in ensuring all students have equitable opportunities to learn and develop, contribute to their learning environment, and realise their aspirations and potential.



Digital Maturity & User Capability

Digitising administration and compliance requirements and automating processes will reduce the burden on teachers, allowing them to spend more time with their students, provide additional curricular support to those in need, and design and implement new initiatives to deliver an engaging learning experience.







Digital Support & Innovation

To ensure a thriving learning environment, investments will support the development of an agile culture where teachers and pre-service candidates are equipped to drive innovation and change and receive the necessary digital support to deliver quality education and customer services.

SDS Strategic Alignment

The SDS aligns with and builds on a range of DoE, NSW Government and Premier's Priorities. These will inform the ongoing development and appraisal of initiatives across the horizons of the SDS.

Digital Content, Experiences & Data	Strategy/Initiative	Premier's Priorities	Strategic Alignment of the SDS	
<ul style="list-style-type: none"> Place the customer at the centre Data informed insights and decision-making Transform operations and streamline processes 	Digital NSW		Government made easy World class public services	<ul style="list-style-type: none"> Deliver customer-centric education services Enhance data analytics and reporting capabilities to inform teaching and investment Digitising and automating processes to reduce burdens and increase efficiency.
<ul style="list-style-type: none"> Continued student engagement and learning for all students. All young people are well prepared for higher education, training, and work. The education system reduces the impact of disadvantage. 	DoE Strategic Plan 2018 - 2022		Lifting education standards	<ul style="list-style-type: none"> Increase student engagement and participation Equip students with the digital, technical, and communication skills of the future workforce Close the digital divide between schools with equitable access to resources and opportunity.
<ul style="list-style-type: none"> Deliver reliable digital access to all learning spaces and environments Support future-focused learning and teaching, collaboration, and digital resource access. 	Connecting Metro/Country Schools Programs		Lifting education standards	<ul style="list-style-type: none"> Strengthen the physical infrastructure to support digital uptake and use in learning spaces Connect schools across the state in collaborative learning experiences.
<ul style="list-style-type: none"> Provide programs for faster more reliable digital connectivity to compliment the NBN rollout Prioritise skills and support programs to target youth unemployment in key sectors. 	20-Year Economic Vision for Regional NSW		World class public services Lifting education standards	<ul style="list-style-type: none"> Boost digital connectivity and utilise existing and ongoing network rollout Equip students with in-demand skills and competencies.

The alignment of specific investments/initiatives to the various strategies in place will be a key input to the appraisal and prioritisation of initiatives in the Program Business Case. This is a working draft, inputs from the Business Plan and Accountability Framework will be included at a later stage.

SDS Benefits

The SDS will deliver strategic benefits to students, teachers, parents, schools and the NSW Community and economy.

The associated benefits of the SDS have been identified by DoE through developing and testing of five hypotheses with student teachers, schools, and stakeholders.

The hypotheses are as follows:

1. School is the agency – schools are informed, empowered, and resourced to drive their digital journey;
2. Shift the digital literacy maturity of the system – teachers, principals, and staff are equipped for digital literacy, leadership, and innovation;
3. Innovation at the edge and the centre – Incubation and innovation happens in schools, learning-spaces and coordinated pilot programs;
4. Immediate feedback, assessment, and collaboration – there is an understanding of individual student’s strengths and needs as they progress through the education system; and
5. Connectedness and integration – people and students are digitally connected to improve equity and access.

The five hypotheses form a continuous improvement loop.



Improving school and student management efficiency

Digitising inefficient administration processes and making decisions easier through platforms that provide insight rather than data and 'just work' will enable school leadership and support staff to become effective business managers



Improving the customer experience

Moving transactions to digital and communications easier and more effective will align our schools with contemporary community expectations of service in the digital age which will improve the customer experience for all who interact with the school.



Giving time back to teachers and staff

Augmenting the teaching experience with digital assistance, PD and training, improving the understanding of learning progress, and assisting teachers to design learning interventions personalised to the student's needs will allow teachers to spend less time planning and assessing, and more time teaching and improving learning outcomes.



Improving equity and access

Moving to higher digital device ratios and enabling improved access to high quality teaching and learning resources to support learning outcomes will improve the equity of access to digital for all students, and allow those with different learning needs to access relevant learning resources more effectively.



Improving equity and access

Generating valuable insights from data and analytics can enable improved student outcomes through understanding of who needs support and who needs extension, allowing trend analysis of long term and inter-year / inter-school learning patterns, identifying interventions and leading to informed teacher decision making.

The contribution of individual investments in the strategy to each of these benefit categories will be appraised via Cost Benefit Analysis within the construct of a Program Business Case described on the next slide.

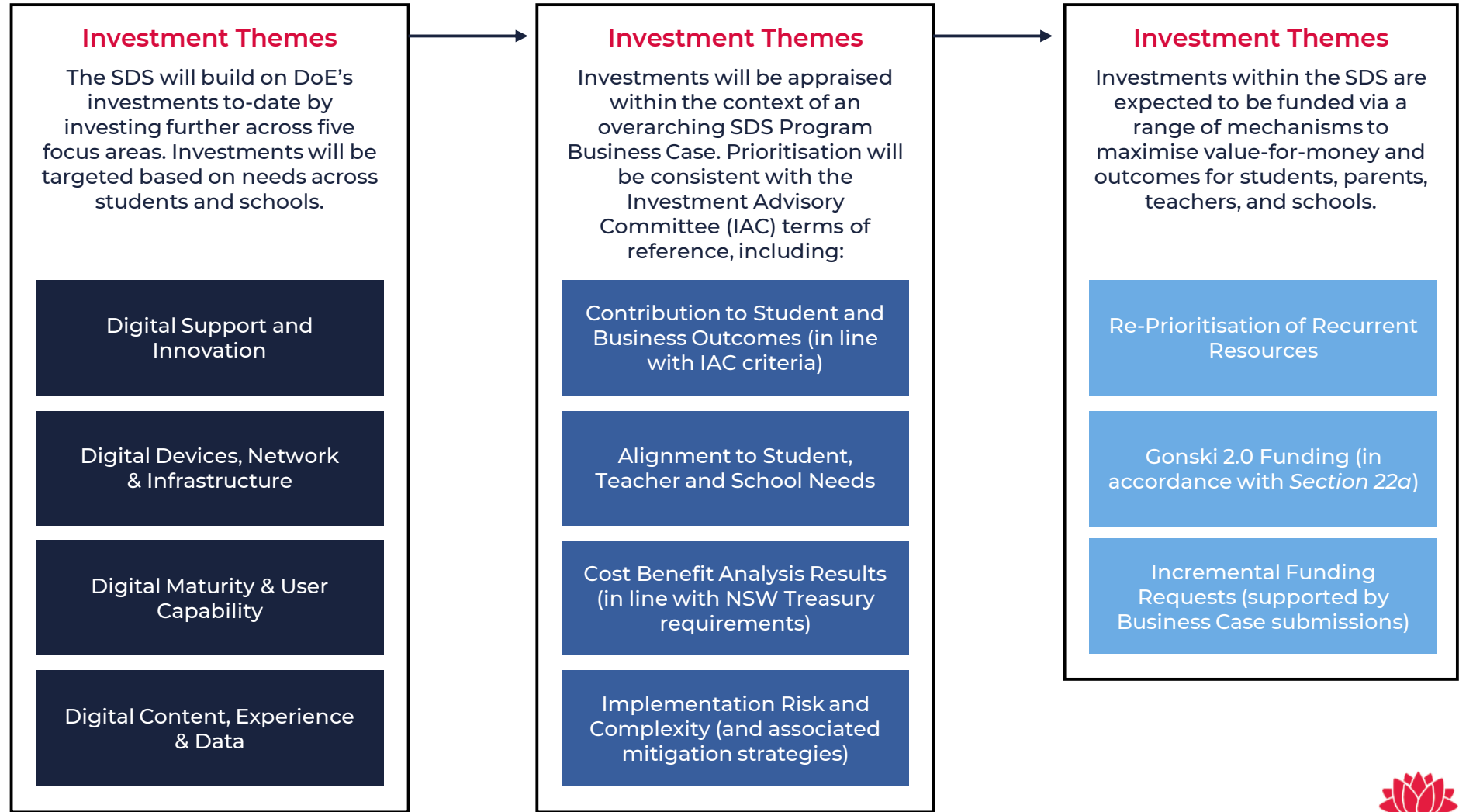
Investment Pathway

Realising the strategic benefits of the SDS will require investment in key initiatives across multiple investment areas.

STRATEGIC BENEFITS	INVESTMENT THEMES				POTENTIAL INITIATIVES	MEASURES OF SUCCESS
	Digital Support & Innovation	Digital Devices, Network & Infrastructure	Digital Maturity & User Capacity	Digital Content, Experience & Data		
Improving school and student management efficiency	●	●	●	○	<ul style="list-style-type: none"> Establish benchmarked tools to improve student administration and management; Improve data collection, storage, and accessibility capabilities to track changes in digital maturity and performance. 	<ul style="list-style-type: none"> Reallocation of time of staff and managers to high-value tasks and activities; Cost savings and increased return on investment from data-driven administration processes and investments.
Improving the customer experience	○	○	●	●	<ul style="list-style-type: none"> Develop tools and platforms for communication and collaboration between teachers, schools, families, and the DoE; Streamline processes requirements for students and parents and carers. 	<ul style="list-style-type: none"> Improved student, parent and carer satisfaction in school and department services; Greater participation from parents, carers, and stakeholders in school environment.
Giving time back to teachers and staff	●	○	●	○	<ul style="list-style-type: none"> Empower teachers and schools to independently innovate and deliver digital teaching and learning environments; Use digital and process streamlining to limit administration and compliance tasks. 	<ul style="list-style-type: none"> Improved on-the-job satisfaction and well-being outcomes for teachers; Increase in time invested in targeted professional development and digital up-skilling.
Improving equity and access	●	●	○	●	<ul style="list-style-type: none"> Strengthen capabilities and increase ICT services to complement digital rollout; Involve schools in the end-to-end delivery process and planning to highlight localised needs and opportunities. 	<ul style="list-style-type: none"> Improved academic, well-being, and life-time socioeconomic outcomes for students; Increased macro-economic and social outcomes for local, NSW, and national economies and communities; Faster incorporation of new curricula and programs in response to technology and innovation disruptions;
Data-driven student outcomes	●	●	●	●	<ul style="list-style-type: none"> Embed enhanced data, analytics, and reporting capabilities in individual schools; Establish an integrated central data strategy with support frameworks for data collection and analytics; 	<ul style="list-style-type: none"> Delivery cost savings achieved by streamlining and standardising networks.

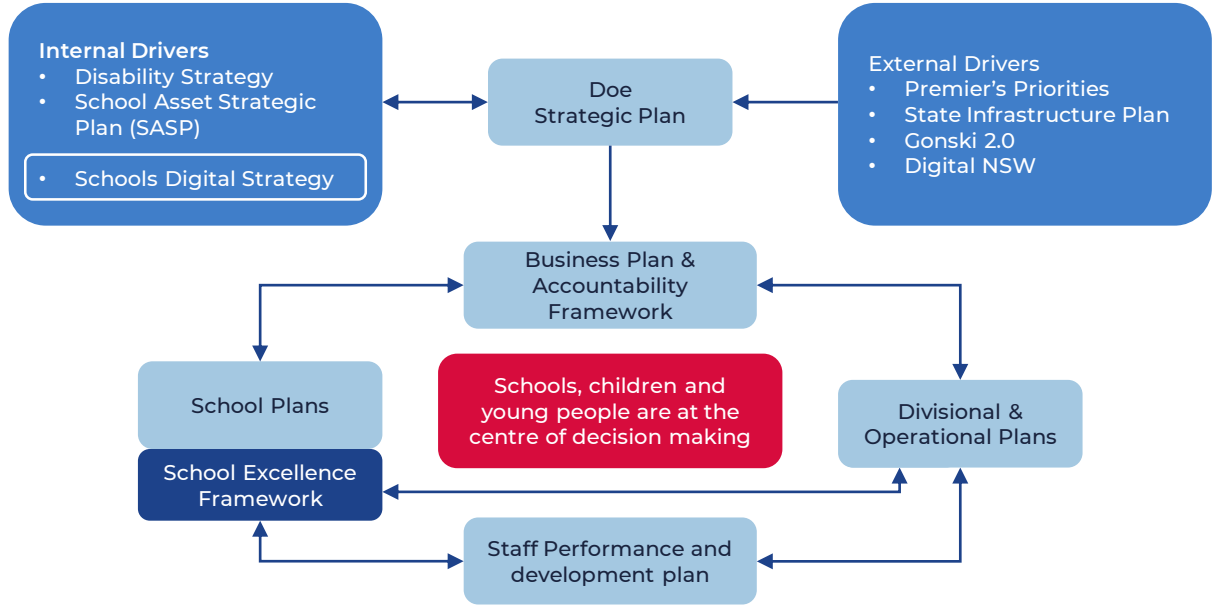
SDS Program Business Case

Investments are to be scoped, prioritised, and funded within the context of an overarching SDS Program Business Case and DoE's Business Plan and Accountability Framework.. The Program Business Case will align the SDS with the DoE *Strategic Plan 2018-2022*, NSW Government Strategic Objectives and relevant Premier's Priorities. It will establish the service need and requirements, and the frameworks and supporting governance arrangements for the monitoring and realisation of investments based on committed resources.

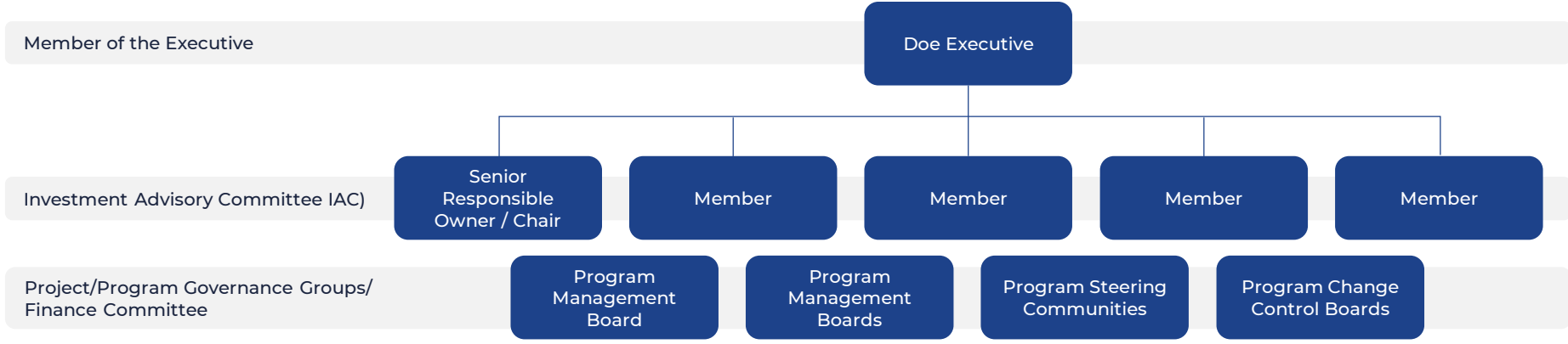


DoE Strategic Governance

Business Plan & Accountability Framework

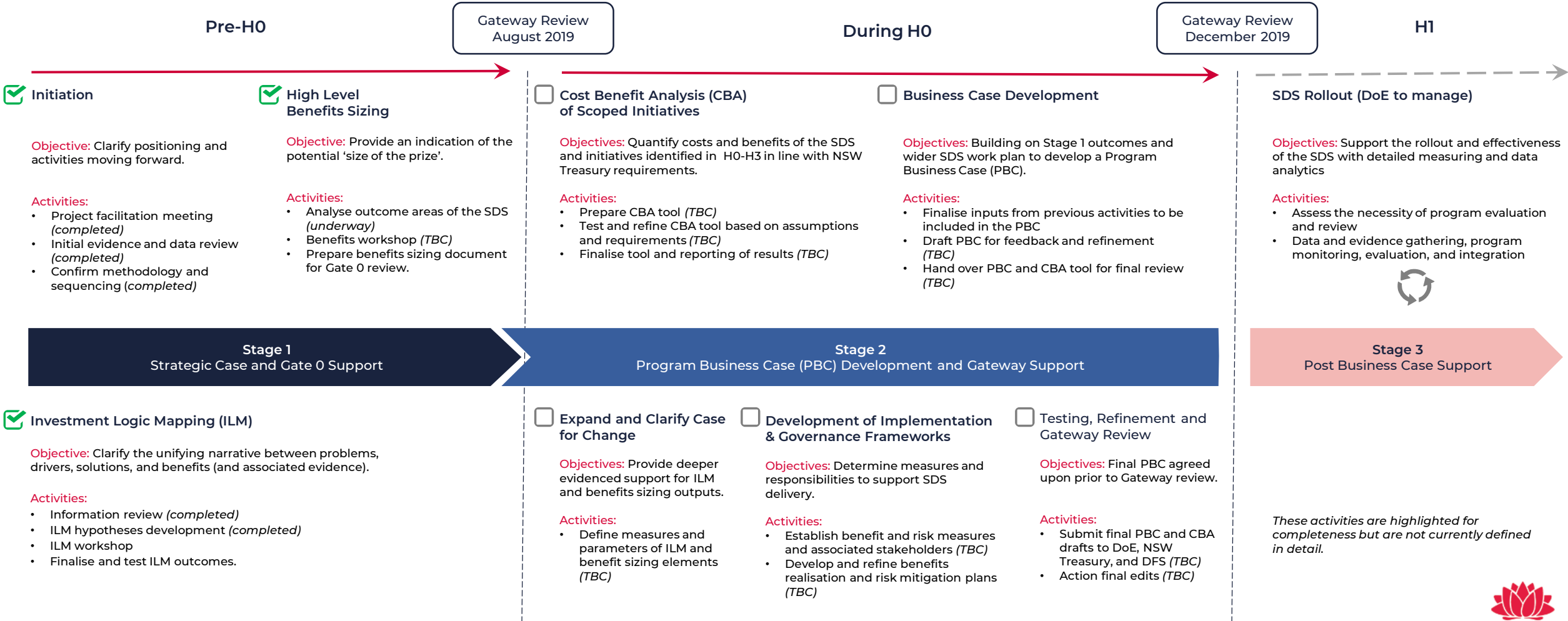


Investment Advisory Committee (IAC)



Next Steps – Program Business Case

The Program Business Case development will integrate with and build on, work already underway as part of the SDS.



Attachment 1:

ILM Outputs

ILM Outputs

An ILM exercise was undertaken and tested with DoE business unit representatives to confirm the alignment and logic of the strategic investment areas, impacts, and associated current state challenges and opportunities being addressed in the SDS. This formed an input to the Strategy development and the Program Business Case development approach.

Opportunity	Impacts	Requirements	Benefits
<p>Improved digital equity for students</p> <p>Access to digital devices increases the quality of teaching and learning resources to support all students, and allows students with different learning needs to access relevant learning resources more effectively.</p>	<ul style="list-style-type: none"> • Bridge gaps in access to digital technology, skilled support staff, and strong networks; and • Higher ratios of digital devices provides each student with greater access to the relevant learning resources they need. 	<ul style="list-style-type: none"> • Strengthen foundational capabilities and support to build digital equity; • Establish avenues to integrate existing distribution channels where appropriate; and • Involve schools in the end-to-end delivery process to enable them to plan and implement new capabilities and measure their success. 	<ul style="list-style-type: none"> • Delivery cost savings achieved by streamlining and standardising networks; • Consistent ICT use is positively associated with enhanced learning outcomes for students (in academic and post-school socioeconomic measures); and • Foster an inclusive and collaborative culture for teachers, school managers, support personnel, and staff.
<p>Improved student engagement and learning outcomes</p> <p>Generating insights from data and analytics increases the understanding of individual student needs and allows trend analysis of learning patterns to inform teacher decision making.</p>	<ul style="list-style-type: none"> • Insight over the effectiveness of teaching initiatives on a student's learning journey from K-12 • Data-driven decisions identify students who need support including through personalised learning and welfare support; and • Capabilities enable greater inclusion of all students in the learning environment. 	<ul style="list-style-type: none"> • Embed enhanced data, analytics, and reporting capabilities in individual school; • Establish an integrated central data strategy with support frameworks for data collection and analytics; and • Re-orient the service model to better support teaching and learning outcomes and empower and scale innovation at the edge. 	<ul style="list-style-type: none"> • Improved life-time socioeconomic outcomes for students and related multiplier effects on the economy and community; • Increased in-school performance and well-being of students; and • Faster incorporation of new curricula and programs into the learning environment in response to technology and innovation disruptions.


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Opportunity	Impacts	Requirements	Benefits
<p>Improved customer experience for students and families</p> <p>Making digital transactions and communications smoother, less complicated experiences for teachers, students, and families improves customer satisfaction.</p>	<ul style="list-style-type: none"> • Develop fit-for-purpose communication tools gives carers access to relevant school and student information in real time; • Enable rapid digitally-enhanced feedback within communities; and • Pragmatic and empathetic responses to complex student and carer needs. 	<ul style="list-style-type: none"> • Drive digitally enabled tools and platforms for communication and collaboration between teachers, schools, families, and the DoE; and • Use digital to streamline processes and paperwork requirements for students and parents and carers 	<ul style="list-style-type: none"> • Improved student, parent and carer satisfaction in school and department services; • Increased and improved collaboration between teachers, schools, and families; and • Enhanced awareness of learning progress and outcomes for students.
<p>Teachers' time is refocused to the classroom</p> <p>Administrative and compliance burden is minimised, allowing teachers to spend more time on professional development and enhancing the student learning experience.</p>	<ul style="list-style-type: none"> • Less time is lost to administrative and compliance tasks; • More flexibility for teachers to undertake professional development opportunities; and • Real-time data and information on student performance and classroom initiatives is readily accessible to teachers 	<ul style="list-style-type: none"> • Empower teachers and schools to independently innovate and deliver digital teaching and learning environments; • Invest in standardised digital and automated processes to streamline administration and compliance; and • Engage appropriately qualified support staff to handle administrative and compliance activities. 	<ul style="list-style-type: none"> • Improved academic and well-being outcomes for students receiving Increased attention from teachers; • Reduced burden on teachers improves on-the-job satisfaction and well-being outcomes; and • Increase in time invested in targeted professional development and digital up-skilling, which shares a positive association with student outcomes.

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Opportunity	Impacts	Requirements	Benefits
<p>School management and support staff are effective business managers</p> <p>Digitising heavily manual administration processes improves school and student management efficiencies, including resourcing and asset-use decisions.</p>	<ul style="list-style-type: none">• Real-time data is available to teachers and parents on student participation, learning and development progress, and outcomes;• Schools are able to monitor and understand teacher utilisation and performance; and• Real-time data is available for digital asset and network usage	 <ul style="list-style-type: none">• Establish digital maturity assessment and benchmarking within and across schools;• Improve data collection, storage, and accessibility capabilities to track changes in digital maturity and performance; and• Develop user-friendly tools to improve student administration and management.	<ul style="list-style-type: none">• Reallocation of school managers and support staff time to identifying and developing teaching and learning opportunities, teacher development, and well-being;• Evidence-based planning and implementation of new digital and skill capabilities maximise return on investment; and• Operational cost savings from reduced administration and informed decision-making in response to localised needs.

ILM Outputs

An ILM exercise was undertaken and tested with DoE business unit representatives to confirm the alignment and logic of the strategic investment areas, impacts, and associated current state challenges and opportunities being addressed in the SDS. This formed an input to the Strategy development and the Program Business Case development approach.

Motivators	Examples	Underlying Drivers	Overarching Consequences
<p>Inconsistent access and equity to digital resources</p> <p>Schools across NSW are inconsistent in their use of technology and digital-orientated curriculum. Greater equity in digital resources is needed to ensure all students are adequately prepared for their future.</p>	<ul style="list-style-type: none"> • Only 19.5 per cent of all schools have one device per student or better, 73 per cent have one device for every four students or better, and 7.5 per cent have one device for every four students or more; and • Students and teachers are not getting the relevant digital learning resources they need. 	<ul style="list-style-type: none"> • Teachers, staff, and students have inconsistent access to digital resources due to highly variable distribution, network constraints, and the inability to access quality support; and • Varying degrees of digital uptake between schools to support teaching, learning and the adoption of digital curriculum, including school input in the end-to-end delivery process. 	<ul style="list-style-type: none"> • Growing costs of inefficient and overlapping delivery channels and networks; • Inequitable outcomes for students, limiting equitable access to opportunities; and • Stifled development of inclusive and collaborative culture for teachers, school managers, support personnel, and staff.
<p>Isolated data sources</p> <p>The Department of Education has extensive amounts of data but is not well equipped to consistently generate high-level insights from the data and analytics.</p>	<ul style="list-style-type: none"> • Only marginal visibility of a students learning journey from K-12; • Schools and teachers may be slower to identify and help students in need of support; and • Less than optimal uptake of technology and resources to boost student inclusion and remove barriers to learning. 	<ul style="list-style-type: none"> • Limited access to enhanced collaboration and content development tools for teachers, reducing opportunities for digitally enhanced learning; and • Limitations across student records and data collection, processing, and storage. 	<ul style="list-style-type: none"> • Decrease in the potential socioeconomic outcomes for students and benefits to the wider community and economy; • Less than optimal in-school performance and well-being of students; and • Inflexibility to adapt curricula and programs in response to technology and innovation disruptions.


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Motivators	Examples	Underlying Drivers	Overarching Consequences
<p>Admin and compliance burden on teachers</p> <p>Teachers are having to spend more time on labour-intensive administrative and compliance tasks that could be directed to planning, preparing and delivering quality teaching.</p>	<ul style="list-style-type: none"> • Ninety-one per cent of teachers report teaching and learning is hindered by admin, compliance and reporting requirements; • Reduced professional development capacity for teachers; and • Gathering and reporting of student performance is time consuming and limited 	<ul style="list-style-type: none"> • Teachers are having to spend increasing time on admin and compliance requirements which are accompanied by complicated and/or overlapping processes; and • Insufficient engagement of appropriately qualified support staff to manage and action admin and compliance requirements. 	<ul style="list-style-type: none"> • Less than optimal academic and well-being outcomes for students receiving less attention from teachers; • Growing burden on teachers increases stress and job dissatisfaction; and • Teachers have less time to invest in professional development and digital up-skilling, reducing capability to develop classroom initiatives and opportunities.
<p>Poor interactive experience for students and families</p> <p>Parents and carers have to navigate multiple channels to interact with teachers and schools. From administrative tasks to upcoming activities and learning progress, the experience can be dislocated and inefficient.</p>	<ul style="list-style-type: none"> • Parents and carers have limited access to information relevant to schools and students; • Ineffective capacity to receive community feedback; and • Inconsistent responses to complex student and carer needs. 	<ul style="list-style-type: none"> • Parents and carers are having to navigate multiple channels to interact with schools and curricula; and • Teachers and staff often have insufficient time in their work hours to address student and parent and carer concerns. 	<ul style="list-style-type: none"> • Student and parents and carers are dissatisfied with school and department services; • Slow and ineffective communication between schools and teachers and parents and carers; and • Limited transparency of learning progress and outcomes for students.

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Motivators	Examples	Underlying Drivers	Overarching Consequences
<p>Inefficient school and student management processes</p> <p>Student administration and school management processes are often manually completed. School managers are subsequently spending too much time on administrative tasks instead of developing and supporting teachers.</p>	<ul style="list-style-type: none">• Ninety-one per cent of teachers report teaching and learning is hindered by admin, compliance and reporting requirements;• Reduced professional development capacity for teachers; and• Gathering and reporting of student performance is time consuming and limited	 <ul style="list-style-type: none">• The time utilisation of school leadership is constrained by heavily manual time consuming tasks;• Insufficient delivery of wellbeing capabilities by digital systems; and• No clear state-wide digital standards or tools to capture maturity assessments and benchmarking of individual schools.	<ul style="list-style-type: none">• Reduced capacity for school managers and support staff to lead teaching and development and support teacher and student wellbeing;• Lost productivity; and• Continued growth in unnecessary operational cost and increasing admin and compliance requirements on schools.

END

Summary – Service Need and Alignment Investment Logic Map (ILM)

To be an education leader in a digital world