



Ref FOI18-7

[REDACTED]

Dear [REDACTED]

I refer to your application received by ACT Health on 6 March 2018 in which you sought access to the following information under the Freedom of Information Act 2016 (the Act).

"Each monthly clinical operations report/scorecard and any reports done by PricewaterhouseCoopers (PWC) on performance reporting/data produced in the last 12 months"

I am an Information Officer appointed by the Director-General under section 18 of the Act to deal with access applications made under Part 5 of the FOI Act.

Decision on access

As you are aware ACT Health deferred access to one document being a draft report provided to ACT Health by PWC regarding the System-Wide Data Review, mid-point Assessment. This document informed a Cabinet submission and a report that has now been tabled in the Legislative Assembly by the Minister for Health and Wellbeing. As this process has now concluded, ACT Health is providing this report.

Charges

Processing charges are not applicable for this request because as less than 50 pages of documentation is being provided.

Online publishing – disclosure log

Under section 28 of the Act, ACT Health maintains an online record of access applications called a disclosure log. Your original access application and my decision will be published in the disclosure log not less than three days but not more than 10 days after date of decision. Your personal contact details will not be published.

You may view the ACT Health disclosure log at <http://www.health.act.gov.au/public-information/consumers/freedom-information/disclosure-log>.

Ombudsman review

My decision on your access request is a reviewable decision as identified in Schedule 3 of the Act. You have the right to seek an Ombudsman review of this outcome under section 73 of the Act within 20 working days from the day that my decision is published in ACT Health disclosure log, or a longer period allowed by the Ombudsman.

If you wish to request a review of my decision you may write to the Ombudsman at:

The ACT Ombudsman
GPO Box 442
CANBERRA ACT 2601

Via email: actfoi@ombudsman.gov.au

ACT Civil and Administrative Tribunal (ACAT) review

Under section 84 of the Act, if a decision is made under section 82(1) on an Ombudsman review, you may apply to the ACAT for review of the Ombudsman decision.

Further information may be obtained from the ACAT at:

ACT Civil and Administrative Tribunal
Level 4, 1 Moore St
GPO Box 370
Canberra City ACT 2601
Telephone: (02) 6207 1740
<http://www.acat.act.gov.au/>

Should you have any queries in relation to your request, please do not hesitate to contact the FOI Coordinator on 6205 1340 or email HealthFOI@act.gov.au.

Yours sincerely



Karen Doran
A/g Deputy Director-General
Corporate

30 August 2018



ACT
Government
Health

ACT HEALTH SYSTEM-WIDE DATA REVIEW

MID-POINT ASSESSMENT

DRAFT v1.4 2018.01.17

Overview

Background

On 14 February 2017 the Minister for Health and Wellness announced an ACT Health System-Wide Data Review with Terms of Reference released 28 March 2017.

In the early phases of the System-Wide Review, there was significant program planning to address the Terms of Reference, and the 175 external review recommendations since 2012. The external review recommendations were assigned across 14 frameworks over nine informatics domains that once implemented, would embed the fundamentals of best practice end to end data management.

This document is the Mid-Point Assessment of the ACT Health System-Wide Data Review which consolidates current System-Wide Review activities, related best practice data initiatives, and the future longer term reforms that impact the ACT Health System and its stakeholders. This together forms the ACT Health Performance Reporting and Data Strategy.

Scope

The ACT Health Performance Reporting and Data Strategy outlines the vision for performance reporting and data management in ACT Health. It provides an actionable plan to embed best practice data, reporting, and analytical frameworks that will inform evidence based decisions to drive system performance. The Strategy will support enhanced outcomes for the community in line with ACT Health's core values of care, collaboration, excellence and integrity.

The strategy covers the five year period 2018-2022 which is a relatively short period for a strategic document and it is recognised that the organisational, information and technology environment will change rapidly in this time. For this reason the strategy elements are outlined based on technology and capabilities available at the time of writing, but future programs are included to ensure that the strategy is flexible and prepared to adapt to changes in the healthcare environment, particularly in relation to data, analytics and information management.

Through the implementation stages the strategy will be frequently reviewed and validated against the System-Wide reviews overall delivery plan.

Structure of the document

- Section 1 – ACT Health Performance Reporting and Data Strategy

This section outlines the ACT Health Performance Reporting and Data Strategy including the strategic vision, primary stakeholders and benefits, implementation stages, informatics domains and the data management dimensions which underpin the work program activities established under the strategy.

The strategy on a page approach is an effort to think more broadly than just the vision alone and considers the needs of stakeholders whilst simultaneously providing a blueprint on which the strategic programs are built.

- Section 2 – What this strategy means to stakeholders

Looks at what the strategy means for the primary stakeholders and identifies the benefit objectives which will be enabled at each implementation stage.

- Section 3 – Implementation stages

Describes the three strategy implementation stages which will provide direction and ensure activities are focused and coordinated.

- Section 4 - Work program activity roadmap and activities by like groupings (known as Domains).

This section provides a coherent view of current and future activities established under the strategy and maps these against complexity and opportunity and also groups the activities by informatics domain.

The existing System-Wide Review deliverables and outcomes have formed the basis of the near term activities (to June 2018) with additional activities identified and mapped against the second and third implementation stages.

- Section 5 – Work program activity detail

Lists the details of the work program activities and their high-level implementation plans.

- Section 6 – Future programs

Provides a high-level view of the future programs which will be enabled as the activities on the roadmap are completed and the performance reporting and data management at ACT Health matures over time.

- Section 7 – Activity artefacts

The list of policies and procedures that will be produced as a result of this strategy and the benefit that each of these provides.

ACT Health Performance Reporting and Data Strategy

Vision

Best practice performance and data management that enables evidence based decisions to drive system performance and outcomes for the community in line with ACT Health's core values of care, collaboration, excellence and integrity.

Stakeholder benefits

Consumers



Consumers and citizens can access data and information that empowers them to feel in control and involved in their own care.

Clinical and other health service providers



Highly informed clinical and health service providers are empowered to continuously improve clinical practice through timely access to data and information.

Non-clinical workforce



Organisational management and non-clinical support services use accurate and timely data and information to inform decision making and priorities.

ACT Health System



The health system operates at an optimal level through greater transparency on the quantity and quality of health services required and provided to the population.

Broader ACT Government



Has access to data and information about the population's health allowing for better risk factor prediction and management of population-level programs or interventions.

Teaching, Training and Research



Well thought out governance arrangements for secondary uses to support teaching, training and research activities.

Implementation stages

1. Embed



Implementing the recommendations from the system-wide review to establish the foundations of a robust and quality assured health data and information system.

2. Optimise



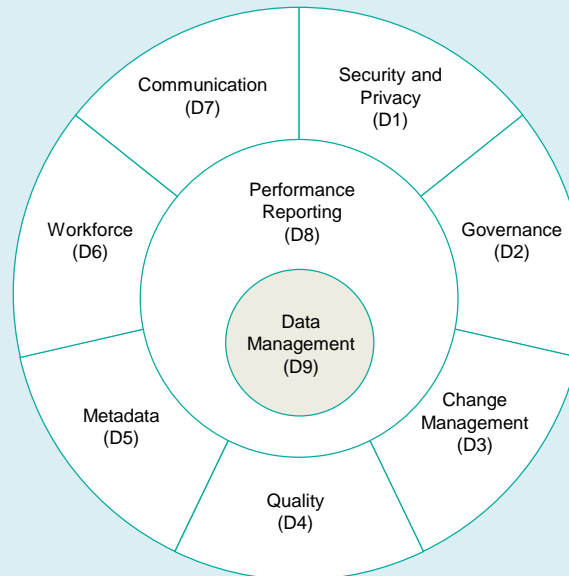
Enhance and build on the foundations to extract greater value from existing datasets to inform timely and evidence-based decision making.

3. Innovate



Investing in technology to become a data backed, insight led health system that has analytics embedded into core processes to drive continuous improvement and change.

Informatics Strategy (9 Domains)



Data management dimensions

Secure. Information and systems are secure and accessible by those who have the appropriate access.

Accurate. The data correctly describes what it was intended to measure, it is complete and allows for revision in a timely manner.







Appropriate. The outputs are relevant to needs of stakeholders through a single source tailored view depending on role and requirement.

Timely. The data required to meet internal management and external stakeholder reporting requirements are available at the required time.

Accessible. Stakeholders have sufficient understanding of the data that is made available and how to access it.

What this strategy means for stakeholders

- Milestone One
- ACT Health development activity
- Milestone Two
- Milestone Three
- Future programs

Primary stakeholders	The informatics strategy will ...	Benefits to the stakeholder over the implementation stages		
		Embed	Optimise	Innovate
 Consumers	Empower consumers and citizens to access data and information that helps them to feel in control and involved in their own care.	✓ Published information that is accurate. ● D8.2 ● D8.3 ● D9.2	✓ Timely access to appropriate information that helps them to make informed choices about their health care. ● D8.7	✓ Consumers can access data and information that is personalised and relevant. ● D8.15 ● A ● D
 Clinical and other health service providers	Enable highly informed clinical and health service providers to continuously improve clinical practice through timely access to data and information.	✓ Provided secure and accurate information to help them deliver the best care for their patients. ● D2.1 ● D3.1 ● D4.1 ● D4.3 ● D9.2	✓ Timely access to the appropriate information in the right place at the right time to support clinical decision making. ● D2.8 ● D8.7 ● D8.8 ● D8.9 ● D8.11 ● D8.12 ● D8.13 ● D8.14	✓ Less time spent finding out about a patient and more time spent caring for them. ✓ Access to self service tools. ● A ● D ● F
 Non-clinical workforce	Support organisational management and non-clinical support services to use accurate and timely data and information to inform decision making.	✓ Provided secure and accurate information to support performance reporting and review. ● D2.1 ● D3.1 ● D4.1 ● D4.3 ● D9.2	✓ Non-clinical information is triangulated to allow the evaluation of business measures. ● D2.8 ● D8.8 ● D8.9 ● D8.11 ● D8.13 ● D8.14	✓ Accurate and timely data and information to inform decision making and priorities. ✓ Access to self service tools. ● B ● C ● E
 ACT Health system	Support the health system to operate at an optimal level through greater transparency on the quantity and quality of health services required and provided to the population.	✓ Accurate data provides the foundation to evaluate the efficiency and quality of the health system. ● D2.1 ● D3.1 ● D4.1 ● D4.2 ● D4.3 ● D8.1 ● D9.2	✓ Appropriate and timely reporting to inform service planning, evaluation and business management. ● D4.5 ● D8.12 ● D8.13	✓ Linked data and analytics is used to translate consumer needs into health policies and programs (or services). ● B ● C ● D ● E ● F
 Broader ACT Government	Provide access to data and information about the populations health allowing for better risk factor prediction and management of population-level programs or interventions.	✓ Access accurate data about the health services provided in ACT. ✓ Understand the importance of quality health data and the value it can provide to the whole of government ● D2.1 ● D3.1 ● D4.1 ● D4.3 ● D8.1 ● D9.2	✓ The ACT population has improved access to services through using linked health data to inform population-level service utilisation and need. ● D4.5 ● D8.10 ● D8.12 ● D8.13	✓ The ACT population has improved health and well-being through using linked data to identify social determinants which inform risk factor prediction and identification of preventative programs or interventions. ● B ● C
 Teaching, Training and Research	Establish well thought out governance arrangements for secondary uses to support teaching, training and research activities.	✓ Establishing appropriate governance arrangements and scoping requirements ● D2.7	✓ Access to secure, accurate and timely data to inform research, policy program and practices ● D8.10 ● D8.13	✓ Linked data is used to inform research, policy program and practices ● B ● C

Implementation stages

The implementation stages provide direction and ensure activities are focused and coordinated

1. Embed



Implementing the recommendations from the system-wide review to establish the foundations of a robust and quality assured health data and information system.

The **embed stage** will be implemented over the next six months to 30th June 2018.

- This stage includes implementing the recommendations for the System-Wide Review to establish the foundations of a robust and quality assured health data and information system.
- Activities in this stage include developing a series of frameworks (including security, data governance, change management, training, costing and performance reporting) which will provide a clear understanding of the foundational domains and pillars required support sustained system change.

2. Optimise



Enhance and build on the foundations to extract greater value from existing datasets to inform timely and evidence-based decision making.

The **optimise stage** will be implemented over a two year period from July 2018 to June 2020.

- This stage includes enhancing and building on the foundations of the embed stage to extract greater value from existing datasets to inform timely and evidence-based decision making.
- Activities in this stage include analysis of data management and analytics resourcing requirements, development of staff training packages, consultation with key stakeholder to define performance reporting requirements and needs, design and build of new performance reporting suites.

3. Innovate



Investing in technology to become a data backed, insight led health system that has analytics embedded into core processes to drive continuous improvement and change.

The **innovate stage** will be implemented over a two year period from July 2020 to June 2022.

- This stage includes investing in technology to become an evidenced based, insight led health system that has analytics embedded into core processes to drive continuous improvement and change.
- The core feature of this stage is a focus on population health through the use of health analytics and linked data; the use of financial incentives and contractual methods to encourage working towards shared outcomes; and investing in the right technologies to share information.

To 30th June 2018

To 30th June 2020

To 30th June 2022

Data management dimensions which underpin all work program activities



Secure



Accurate



Appropriate



Timely



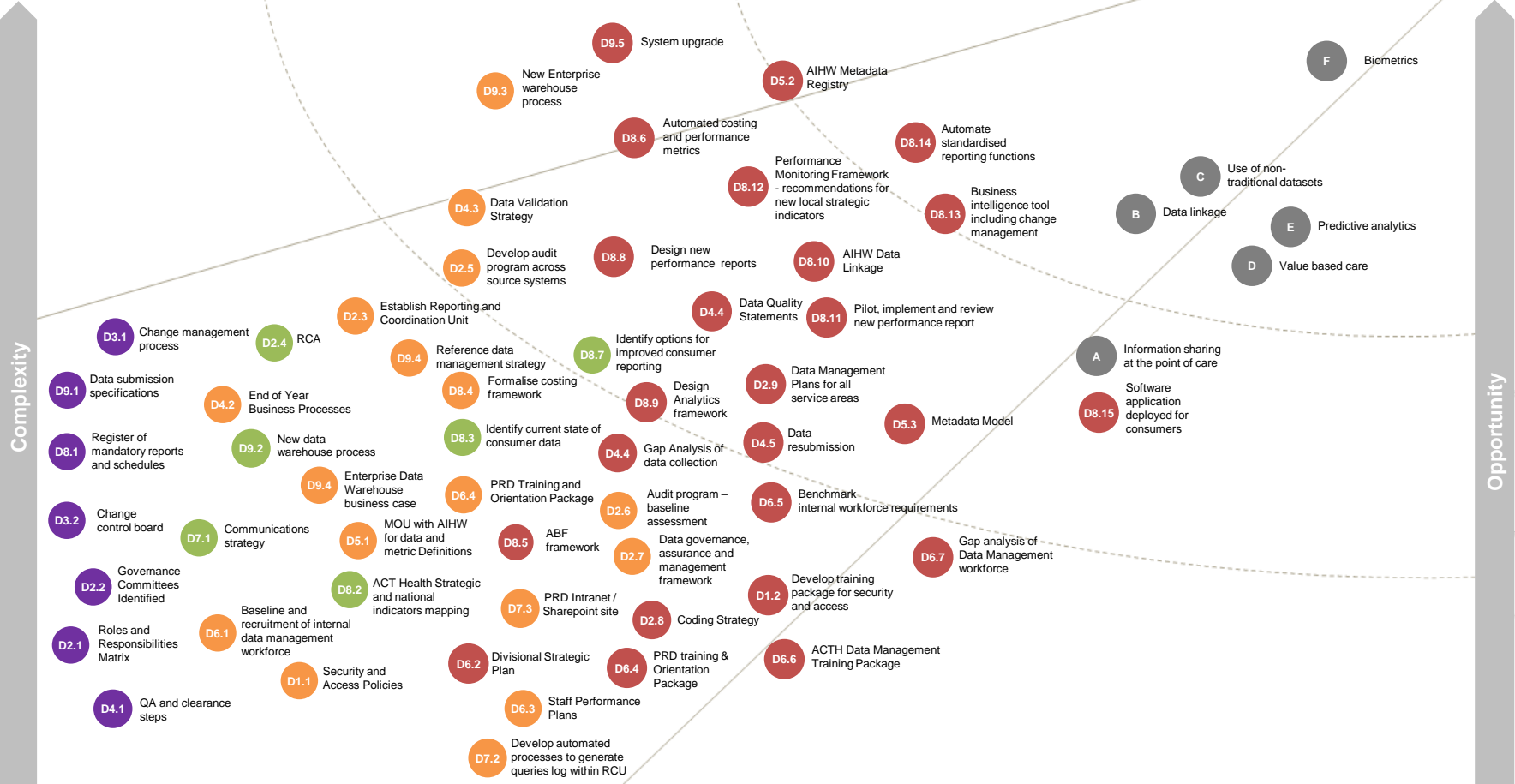
Accessible

Work program activity roadmap

- Milestone One
- Milestone Two
- Milestone Three
- ACT Health development activity
- Future programs

Vision: Best practice performance and data management that enables evidence based decisions to drive system performance and outcomes for the community in line with ACT Health's core values of care, collaboration, excellence and integrity.

Future



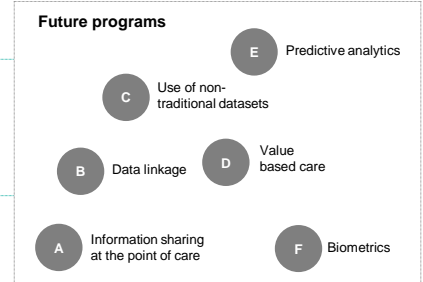
Opportunity



Work program activities by informatics domain

- Milestone One
- Milestone Two
- Milestone Three
- ACT Health development activity
- Future programs

Domains	Embed - 30 th June 2018	Optimise - 30 th June 2020	Innovate - 30 th June 2022
D1. Security and privacy		D1.1 Security and Access Policies	D1.2 Develop training package for security and access
D2. Governance	D2.1 Roles and Responsibilities Matrix D2.2 Governance Committees Identified	D2.3 Reporting and Coordination Unit D2.4 RCA D2.5 Develop Audit program across source systems	D2.6 Audit program – baseline assessment D2.7 Data governance, assurance and management framework D2.8 Coding Strategy D2.9 Data management plans for all service areas
D3. Change Management	D3.1 Change management process D3.2 Change control board		
D4. Quality	D4.1 QA and clearance steps	D4.2 End of Year Business Processes D4.3 Data Validation Strategy	D4.4 Gap Analysis of data collection (W&C PILOT) D4.5 Data Quality Statements D4.6 Data resubmission
D5. Metadata		D5.1 MOU with AIHW for data and metric definitions D5.2 AIHW Metadata Registry	D5.3 Metadata Model
D6. Workforce	D6.1 Baseline and recruitment of internal data management workforce	D6.2 Divisional Strategic Plan D6.3 Staff Performance Plans D6.4 PRD Training and Orientation Package	D6.5 Benchmark internal workforce requirements D6.6 ACTH Data Management Training Package D6.7 Gap analysis of Data Management workforce
D7. Communication	D7.1 Communications strategy	D7.2 Develop automated processes to generate queries to within RCU D7.3 PRD Intranet / Sharepoint site	
D8. Performance Reporting	D8.1 Register of mandatory reports and schedules D8.2 ACT Health Strategic and national indicators mapping D8.3 Identify current state of consumer data	D8.4 Formalise costing framework D8.5 ABF framework ESWL PILOT D8.6 UCPH PILOT Automated costing and performance metrics	D8.7 Identify options for improved consumer reporting (PILOT) D8.8 Design new performance reports and formalise data management plan Mental Health PILOT D8.9 Design Analytics framework D8.10 AIHW Data Linkage D8.11 Pilot, implement and review new performance report D8.12 Performance Monitoring Framework - recommendations for new local strategic indicators D8.13 Business intelligence tool including change management strategy D8.14 Automate standardised reporting functions D8.15 Software application deployed for consumers
D9. Data Management	D9.1 Data submission specifications D9.2 New data warehouse process	D9.3 Enterprise Data Warehouse business case D9.4 Reference data management strategy	D9.5 System upgrade



Work program activity detail (1 of 4)

- Milestone One
- Milestone Two
- Milestone Three
- ACT Health development activity
- Future programs
- D** Develop
- I** Implement
- R** Review

Domain	ID	Name	Description	Implementation phase				Dependency
				Embed 30 March 2018	Embed 30 June 2018	Optimise 30 June 2020	Innovate 30 June 2022	
D1. Security and Privacy	● D1.1	Security and access policies	Develop policies outlining encryption measures for certain data elements; conditions of use (including storage and disposal) of data; and access controls and audit procedures across source systems	D				Nil
	● D1.2	Develop training package for security and access	Develop, implement and review staff training package (D6.6)			D/I	R	D1.1
D2. Governance	● D2.1	Roles and responsibilities matrix	Management and organisational structures to support the delineation of roles and responsibilities across the data management system	D		R	R	Nil
	● D2.2	Governance committees identified	Initial internal ACT Health and external governance committees identified	D		R	R	Nil
	● D2.3	Establish Reporting and Coordination Unit	Establish a Unit within ACT Health that is responsible for reporting and the coordination of reports. The unit will include a help desk and assess all reports being provided and rank them in terms of priority	D/I		R	R	Nil
	● D2.4	RCA	Investigate the extent, and where possible, the root cause of the current data issues	D				Nil
	● D2.5	Develop audit program across source systems	Engage external consultants to develop an audit program across the source systems, including audit processes for change to recorded data, and data management activities	D		I	R	Nil
	● D2.6	Audit program – baseline assessment	Undertake an initial baseline assessment and rollout annual audit program			I	R	D2.5
	● D2.7	Data governance, assurance and management framework	Develop and implement framework		D	I	R	Nil
	● D2.8	Coding Strategy	Develop and implement a data coding strategy that addresses quality, workforce and education requirements across the directorate		D	I	R	Nil
	● D2.9	Data management plans for all service areas	Create a data management plan that defines roles and responsibilities for all data management for examples essential reporting, timeframes, policy issues and comprehensive data specifications			D		Nil
D3. Change Management	● D3.1	Change management process	Integrate existing change management processes for source systems with established processes across the data management system. Establish change management policies and processes across the data management system. Establish processes to manage changes to reporting requirements	D	I	R	R	Nil
	● D3.2	Change Control Board (CCB)	Establish a Change Control Board (CCB) to oversee the change management process	D	I	R	R	D3.1

Work program activity detail (2 of 4)

- Milestone One
- Milestone Two
- Milestone Three
- ACT Health development activity
- Future programs
- D** Develop
- I** Implement
- R** Review

Domain	ID	Name	Description	Implementation phase				Dependency
				Embed 30 March 2018	Embed 30 June 2018	Optimise 30 June 2020	Innovate 30 June 2022	
D4. Quality	● D4.1	Quality Assurance and Clearance Steps	Clearly defined quality assurance and clearance steps for all data reporting and analysis that is released from the PRD Branch	D/I		R	R	Nil
	● D4.2	End of year business processes	Ensure quality assurance oversight of the end of year processes is embedded	D/I		R	R	Nil
	● D4.3	Data validation strategy	Develop documentation and implement for end to end data validation processes including SQL coding standards for best practice data management including from initial extraction from source system to warehouse to validation queries for staff to reporting to internal and external agencies.		D/I	R	R	Nil
	● D4.4	Gap analysis of data collection	Undertake gaps in data collection that are currently not reported		D			
	● D4.5	Data quality statements	Develop data quality statements which will provide a guide to users re the quality of the datasets reported			D	R	Nil
	● D4.6	Data resubmission	Assess and resubmit national data sets 15/16 to 17/18 post Data Validation Strategy and D4.4			D		D4.3
D5. Metadata	● D5.1	MOU with AIHW for data and metric definitions	Approve agreement with AIHW to develop and embed consistent standards and documentation for data collection and metric calculation	D	I	R	R	Nil
	● D5.2	AIHW Metadata registry	Establish availability and access to AIHW's metadata registry to support discovery, interpretation and use of data to all users across the directorate			D		D5.1
	● D5.3	Metadata Model	Develop consistent standards and supporting documentation for data collection. Establish a metadata model to support consistent interpretation of data from source systems to usage			D		Nil
D6. Workforce	● D6.1	Baseline and recruitment of internal data management workforce	Perform a baseline assessment of current skills and capabilities. Analyse all existing PRD position descriptions and determine mandatory qualifications and current training on data management	D				Nil
	● D6.2	Divisional strategic plan	Develop a strategic plan for the BPIDS Branch	D	I	R	R	Nil
	● D6.3	Staff Performance Plans	Develop performance plans for all staff		D	R	R	Nil
	● D6.4	PRD Training and Orientation Package	Develop a training framework which includes a data management orientation module		D/I	R	R	Nil
	● D6.5	Benchmark internal workforce requirements	Analyse all existing PRD position descriptions and determine mandatory qualifications and current data management training requirements			D		D6.1
	● D6.6	ACTH data management training package	Develop and implement a training package in appropriate collecting, storage, access, and release of Health Information, including security and ethics training			D/I	R	D1.2
	● D6.7	Gap analysis of data management workforce	Perform a gap analysis of the data management workforce			D		D6.5

Work program activity detail (3 of 4)

- Milestone One
- Milestone Two
- Milestone Three
- ACT Health development activity
- Future programs
- D** Develop
- I** Implement
- R** Review

Domain	ID	Name	Description	Implementation phase				Dependency
				Embed 30 March 2018	Embed 30 June 2018	Optimise 30 June 2020	Innovate 30 June 2022	
D7. Communication	D7.1	Communication strategy	Communication strategy post Mid-Cycle Review	D	I	R	R	Nil
	D7.2	Develop automated processes to generate queries log within RCU	Develop a log containing all queries received by RCU. Queries should be differentiated according to topic and referred to subject matter experts.	D	I	R	R	D2.3
	D7.3	PRD intranet/Sharepoint site	Develop and make live an internal intranet/Sharepoint site	D	I	R	R	Nil
D8. Performance Reporting	D8.1	Register of mandatory reports and schedules	Develop an internal register of all mandatory reports and schedules. This will include intended audience for the report, an relative importance.	D/I		R	R	Nil
	D8.2	ACT Health Strategic and national indicators mapping	Undertake a review of existing mandatory report metrics against national standards to improve comparability and align with best practice. <ul style="list-style-type: none"> Publish findings on website for consumers 		D/I	R	R	Nil
	D8.3	Identify current state of consumer data	Conduct a review of the current state of consumer data, including what is available and the method of delivery. <ul style="list-style-type: none"> Publish findings on website for consumers 		D			Nil
	D8.4	Formalise costing framework	Develop and publish a costing framework which specifies a schedule for hospitals to submit costings; incorporates a costing data specification; outlines a costing review and validation process; and includes and urgent issue escalation process	D	I	R	R	Nil
	D8.5	ABF framework	Develop a framework that identifies all categories, classifications, issues and priority areas			D		Nil
	D8.6	Pilot automated costing of UCPH	Pilot the automated costing and performance metrics for UCPH. Incorporate feedback where required		D	I/R		Nil
	D8.7	Identify options for improved consumer reporting	Identify options and provide recommendations for consumer data availability and delivery		D			D8.3
	D8.8	Design new performance reports	Design new operation reports for ABF, costing and workforce.		D	I	R	D8.2
	D8.9	Design Analytics Framework	Establish new Analytics Framework that will provide advanced analytics capability		D	I	R	Nil
	D8.10	AIHW Data Linkage	Establish the linkage of data with NSW and VIC			D		Nil
	D8.11	Pilot, implement and review new performance report	Pilot, implement and review new performance report			D/I	R	D8.8

Work program activity detail (4 of 4)

- Milestone One
- Milestone Two
- Milestone Three
- ACT Health development activity
- Future programs
- D** Develop
- I** Implement
- R** Review

Domain	ID	Name	Description	Implementation phase				Dependency
				Embed 30 March 2018	Embed 30 June 2018	Optimise 30 June 2020	Innovate 30 June 2022	
D8. Performance Reporting	● D8.12	Performance Monitoring Framework - recommendations for new local strategic indicators	Conduct a review of strategic indicators and provide a recommendation for new local strategic indicators			D		Nil
	● D8.13	Business intelligence tool	Select and deploy a visual toolset and BI platform			D		Nil
	● D8.14	Automate standardised reporting functions	Assess the options to automate standardised reporting functions allowing skilled analytics staff to use their time more efficiently on complex insight driven analytics.			D		Nil
	● D8.15	Software application deployed for consumers	Deploy software application to allow consumers access information in an easy, timely and secure manner.				D/I	Nil
D9. Data Management	● D9.1	Data submission specifications	Develop specifications for data submission from various systems and sources to meet external reporting requirements	D		R	R	Nil
	● D9.2	Data warehouse process	Develop data warehouse process monitoring reports	D				Nil
	● D9.3	Enterprise Data Warehouse business case	Develop a Business Case to support the development of a new data warehouse	D				Nil
	● D9.4	Reference data management strategy	Reference the data management strategy which defines responsibilities for data and information management, and reporting. It defines solution overview, Architecture Goals and Constraints, Infrastructure Architecture, Application Architecture, Integration Architecture, High-level Data Architecture and Security Architecture.	D	D	D	D	Nil
	● D9.5	Re-develop and design system	Perform a whole of ACT Health system upgrade	D	D	D	D	Nil

Future programs

A high level view of the future programs which will be enabled as the activities on the roadmap are completed and the performance reporting and data management at ACT Health matures are outlined below. These will be monitored and reviewed on a regular basis to ensure the strategy is flexible and prepared to adapt to changes in the healthcare environment.

ID	Name	Description	Complexity
A	Information sharing at the point of care	A patient's healthcare information should follow them around the healthcare system, across the boundaries of individual IT systems. Secondary care clinicians should be able to query GP systems in real time and obtain a contemporaneous view of the medical history that we hold on that patient. Similarly GPs should be able to query the hospital systems in real time and obtain a contemporaneous view of the medical history, correspondence and results that they hold on a patient. This data should be no more than a few minutes old.	
B	Data linkage	Data linkage is a method of bringing together information about people, places and events in a way that protects individual privacy. Data integration allows better use of data that is already available, it can be a cost effective and timely way of gathering more information for statistical and research purposes. Linking data will allow expanded analytics to gain insight into secondary care and other health service usage in ACT. Once access to other health data is enabled, it will also allow a greater understanding of primary care, residential aged care facilities and indigenous health in the region.	
C	Use of non-traditional datasets to inform population health and prevention	Collaborating with organisations outside of health to access new non-traditional datasets will allow for a more holistic understanding of the ACT population. The data sources and example analytics may include; social media (what health issues are local people discussing on social media?), retail transaction history (how much fruit and vegetables are people buying?), transport (how are people travelling to access healthcare?), climate data (what impact does weather have on GP / community / acute service utilisation?). Additional sources of data may include; social services, education, tax statistics, justice records.	
D	Value based, patient centred care	A shift in the emphasis from reporting that focuses on services and processes to reporting that is focused on patients and the outcomes and experiences that they experience as they move through the healthcare system. It enables economy wide joined up patient care through systems integration, interoperability and information sharing across all providers and General Practices encompassing Primary, Community, Secondary, and Mental Health.	
E	Predictive analytics	<p>Predictive analytics methodologies use a wide range of descriptive information about a person's characteristics and circumstances to predict their likely health outcomes in the future. Predictive models can be developed to identify those at high risk of an adverse health episodes and the information will then be used to provide them with preventative care and treatment before their condition deteriorates.</p> <p>From a whole of government perspective predictive population focused analysis will add value to;</p> <ul style="list-style-type: none"> Population and patient – identifying patterns that predict people with the greatest need as early as possible Intervention – targeting interventions to population cohorts that will benefit most through earlier intervention Economic – realise benefits through earlier interventions to avoid preventable events such as hospitalisation and emergency department presentations Social – enabling people to stay well in their community 	
F	Biometrics	<p>Biometrics in healthcare takes two forms;</p> <ol style="list-style-type: none"> Authentication controls to secure access to sensitive patient record, protecting confidentiality and adding audit controls. Patient identification and registration management which remedying clerical and administrative issues and improve the speed and ease of work processes. 	
	Investment in emerging technologies	New technologies such as blockchain, artificial intelligence, the Internet of Things (IoT) and augmented reality have been identified as emerging technology megatrends and their applicability and value to healthcare will continue to be monitored to ensure the strategy remains flexible and future focused.	

Activity artefacts (by domain) (1 of 3)

Domain	Document name	SWR	Tier level	Purpose	Benefit	Activity reference
D1. Security and privacy	System Access Control Policy	Indirect	Tier 1	Policy governing allowed activities of users to access resources within a system; stipulates different level of access for each user.	<ul style="list-style-type: none"> Access to sensitive/personal consumer data is restricted from general viewing (access granted on a by user basis). 	D1.1 Security and access policies
	System Access Control Audit Procedure	Indirect	Tier 1	Audit of system access control to ensure functioning as described in policy document.	<ul style="list-style-type: none"> Provides assurance that the policy document is being enforced as intended. 	
	Protective Security Policy Framework	Indirect	Tier 1	Provides policy, guidance and better practice advice for governance, personnel, physical and information security.	<ul style="list-style-type: none"> Identifies responsibilities to manage security risks, process and protocols 	
	Protective Security (Information Handling & CYBERSEC) Procedure	Indirect	Tier 1	Standardised security document to be used for handling cyber information.	<ul style="list-style-type: none"> Creates streamlined, secure processes across the organisation for handling sensitive information. 	
D2. Governance	Data Steward and Custodian Policy	Direct	Tier 1	Specific role for an individual to take ownership of all data, the policy defines a set of principles for the management and maintenance of data and information assets.	<ul style="list-style-type: none"> Assigned business ownership and accountability for data. Clearly defined roles and responsibilities for the creation, storage and consumption of data. 	D2.1 Roles and responsibilities matrix
	Data Steward and Custodian Procedure	Direct	Tier 1	Establishing procedures to permit and review access to information as required.	<ul style="list-style-type: none"> Established forum to manage improvement data quality as an ongoing priority. 	D2.7 Data governance, assurance and management framework
	Register of Business Systems	Direct	Tier 1	Consolidated list of all business systems and the data that is used by each.	<ul style="list-style-type: none"> Ensures data is used to support organisation analytics and reporting originates from an agreed single source of truth. 	D2.5 Develop audit program across source systems
D3. Change Management	Request for IT/IM Change Policy	Direct	Tier 1	Policy outlining processes required for a change in Information Technology /Information Management structure	<ul style="list-style-type: none"> Allows agility for constantly developing data environment, when requirements change there is a process to follow. 	D3.1 Change management process
D4. Quality	Data Quality Policy	Direct	Tier 1	Ensure that data within the department is of high quality and is able to support its intended use	<ul style="list-style-type: none"> Improves services and decisions making Informs strategic development Ensures regulatory compliance Ensures robust benchmarking 	D4.1 Quality Assurance and Clearance Steps
	Data Quality Guidelines	Direct	Tier 1	Provides a list of intended qualities regarding data (e.g. objectivity, accuracy etc)		
	Data Quality Assurance Procedure	Indirect	Tier 1	Used to profile data to discover inconsistencies/errors /anomalies and/or performing data cleaning		
	Data Quality Assurance Checklist	Indirect	Tier 1	Informs the assurance procedure - highlights checks that should be performed	<ul style="list-style-type: none"> Data is managed consistently across and within data domains Data is governed by common standards and definitions. Data is shared and managed securely. 	D4.5 Data quality statements
	Data Quality Statement Procedure	Indirect	Tier 1	Process of creating document, provides guidance as to what should be considered in order to complete Data Quality Statement Template		
	Data Quality Statement Template	Indirect	Tier 1	Document created to inform users of the data quality		
	Data Warehouse Data Validation Procedure	Indirect	Tier 1	Implement validation procedure for data entering data warehouse	<ul style="list-style-type: none"> Tests data completeness, quality and performance Ensures data is not corrupted on refresh or upload 	D4.3 Data validation strategy

Activity artefacts (by domain) (2 of 3)

Domain	Document name	SWR	Tier level	Purpose	Benefit	Activity reference
D5. Metadata	Data Standards Policy	Indirect	Tier 1	Develop policy that ensures consistent standards for data collection and metric calculation	<ul style="list-style-type: none"> Data interoperability between systems Data integration Allows data and information to be shared, understood and used by multiple parties. 	
	Patient Registration Activity Data Standards	Indirect	Tier 1	Subset of main data standards policy - applicable to only patient registration		
	Emergency Department Patient Activity Data Standards	Indirect	Tier 1	Subset of main data standards policy - applicable to only emergency department patient		
	Admitted Patient Activity Data Standards	Indirect	Tier 1	Subset of main data standards policy - applicable to only admitted patient		
	Non-Admitted Patient Activity Data Standards	Indirect	Tier 1	Subset of main data standards policy - applicable to only non-admitted patient		
	Mental Health Patient Activity Data Standards	Indirect	Tier 1	Subset of main data standards policy - applicable to only mental health patient		
	Metadata Documentation Policy	Indirect	Tier 1	Metadata is the data that provides information about one or more aspects of the data; the documentation policy will look to summarise basic aspects of the data	<ul style="list-style-type: none"> Consistency of definitions –contains information about data that helps reconcile the difference in terminology Clarity of relationships – resolves ambiguity and inconsistencies when determining the associations between entities stored throughout the data environment. Clarity of data lineage – it can maintain auditable information about users, applications and processes for create, deleting or changing data. 	<p>D5.1 MOU with AIHW for data and metric definitions</p> <p>D5.2 AIHW Metadata registry</p> <p>D5.3 Metadata Model</p>
	Metadata Documentation Procedure	Indirect	Tier 1	Implement procedure for recording information about metadata		
	Data Set Specification Template	Indirect	Tier 1	Specifies what data fields are required to prepare a certain dataset		
	Data Element Template	Indirect	Tier 1	Used to specify what values should be available for each data element	<ul style="list-style-type: none"> Data is captured in a consistent and standardised manner. Clearly defined data dictionary will enable the organisation to understand and use available data. Increased knowledge sharing and transparency of data within the organisation. Consistent application of data definition within the organisation. 	
	Data Dictionary		Tier 1	Documents the basic definitions of all aspects of data collection, for each field that can be collected this will provide information about potential values it can take, what format it is in, any interrelations with other elements of data.		
	Register of Reports	Direct	Tier 1	Central register containing a list of all current reports	<ul style="list-style-type: none"> Provides easy access to all reports which are custom built for different purposes. Will ensure users are able to view full suite of offerings. 	

Activity artefacts (by domain) (3 of 3)

Domain	Document name	SWR	Tier level	Purpose	Benefit	Activity link
D8. Performance Reporting	Data Request and Reporting Policy	Direct	Tier 1	Policy detailing what should be included in the development of a new performance report and/or data request associated	<ul style="list-style-type: none"> Reduces the number of different channels for incoming requests. Provides better oversight of the number and type of requests coming through. Facilitates the structured prioritisation and delegation of incoming requests. Reduced ambiguity of requests to enable more timely provision of the relevant data, analytics and report to the client. Data is shared and managed securely Improved user satisfaction Improved insight driven reporting which meets users needs and assists them to make decisions. More defined development processes and QA 	
	Data Request and Reporting Procedure	Indirect	Tier 1	Outlines steps required for the development of new report/data request		
	Data Request Form	Indirect	Tier 1	Standardised request form for data		
	Data Request Classification Form	Indirect	Tier 1	Supporting document to the data request form with more detail		
	Data Release Policy	Indirect	Tier 1	Standardised policy for any document releases		
	Register of Released Information	Direct	Tier 1	Central register containing a list of all released information		