



Health Informatics Society Australia Ltd.

A Vision for an Australian Healthcare System Transformed by Health Informatics

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Health Informatics Society of Australia

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Summary

In the issue of the Medical Journal of Australia¹ published just prior to the November 2007 election, a number of commentators including the Federal Minister and Shadow Minister reflected on the Australian health system and their plans for its future. The members of the Health Informatics Society of Australia (HISA)² believe there is a yawning gap in this analysis both in terms of the size of the problem and how it might be fixed.

There is a looming crisis in the health care system from an unprecedented simultaneous bulging in demand and reduction in workforce. Ten-fold improvements in productivity will soon be required³ and this can only happen if the work of those in healthcare is leveraged and healthcare consumers become more engaged in the process. Health informatics is critical to both strategies.

The need for eHealth is more than for efficiency alone however, health informatics is now seen as an increasingly important weapon against disease in its own right and there is mounting evidence that when used properly both health outcomes and consumer satisfaction can be improved⁴. Health informatics is also an essential component of any quality and safety agenda for Australia.

HISA strongly holds the view that Australia lacks a vision for the health system and in particular how it could be transformed by health informatics. HISA believes it is both essential and urgent that there be an agreed vision and an appropriately resourced plan.

In October this year the US based eHealth Initiative published their 'Blueprint: Building Consensus for Common Action'⁵. The 'Blueprint' appeared to accurately and succinctly articulate a desirable vision of a healthcare system transformed by health informatics which was appropriate to Australia. HISA undertook a survey of its members and supporters to test whether this was so and to expand on the vision for the Australian context. The survey had more than 200 respondents and showed overwhelming support for the vision which in summary for Australia was:

1. **Engaging Consumers** - Patients will be fully engaged in their own healthcare, supported by information and tools that enable informed consumer action and decision making, working hand-in hand with healthcare providers. Tools that support consumer engagement are well designed and customized to the diversity of consumers. These tools are integrated into the delivery of care, and are conveniently available outside healthcare settings as well.
2. **Transforming Care Delivery at the Point of Care** - Australian patient care is high quality, patient centred, for a lifetime, and reflects a coordinated and collaborative approach. Complete, timely and relevant patient-focused information and clinical decision support tools are available as part of the provider's workflow at the point of care. High quality and efficient patient care is supported by the deployment and use of interoperable health IT and secure data exchange between and across all relevant stakeholders.
3. **Improving Population Health** - Electronic healthcare data and secure health information exchange are utilised to facilitate the flow of reliable health information among population health and clinical care systems to improve the health status of populations as a whole. Information is utilised to enhance healthcare experiences for individuals, eliminate health disparities, measure and improve healthcare quality and value, expand knowledge about effective improvements in care delivery and access, support public health surveillance, and assist researchers in developing evidence-based advances in areas such as diagnostic testing, illness and injury treatment, and disease prevention.

¹ http://www.mja.com.au/public/issues/187_09_051107/contents_051107.html

² HISA is a scientific society that was established in 1993 which has as its aim to improve healthcare through health informatics. It provides a national focus for health informatics, its practitioners, industry and users. It advocates on behalf of its members and provides opportunities for learning and professional development in health informatics. See www.hisa.org.au

³ Dr Peter Flett – Pathology Workforce in WA, Keynote Address AACB The Business of Pathology Conference, Sydney November 2007

⁴ Sir Muir Gray – The Third Healthcare Revolution, Keynote Address Medinfo, Brisbane August 2007

⁵ Health Initiative Blueprint: Building Consensus for Common Action <http://www.ehealthinitiative.org/blueprint/>

4. **Aligning Financial and Other Incentives** - Healthcare providers are rewarded appropriately for managing the health of patients in a holistic manner. Meaningful incentives help accelerate improvements in quality, safety, efficiency and effectiveness. Quality of care delivery and outcomes are the engines that power the payment of providers.
5. **Managing Privacy, Security and Confidentiality** - In Australia's fully-enabled electronic information environment designed to engage consumers, transform care delivery and improve population health, consumers have confidence that their personal health information is private, secure and used with their consent in appropriate, beneficial ways. Technological developments have been adopted in harmony with policies and business rules that foster trust and transparency. Organisations that store, transmit or use personal health information have internal policies and procedures in place that protect the integrity, security and confidentiality of personal health information. Policies and procedures are monitored for compliance, and consumers are informed of existing remedies available to them if they are adversely affected by a breach of security. Consumers trust and rely upon the secure sharing of healthcare information as a critical component of high quality, safe and efficient healthcare.
6. **Policy and Implementation** - Policy development and implementation bodies, both government and private deliver clear and insightful leadership of eHealth programs within the health sector. They have a deep understanding of the cultural and operational complexities of the area and ensure that programs are appropriately structured and funded to be successful.

Respondents scored our current performance against this vision poorly but acknowledge that it will not be easy to attain.

HISA takes no issue with the list of challenges for the healthcare system listed by Armstrong et al⁶ in their MJA paper namely:

- *The next Australian Government will confront major challenges in the funding and delivery of health care.*
- *These challenges derive from:*
 - *Changes in demography and disease patterns as the population ages, and the burden of chronic illness grows;*
 - *Increasing costs of medical advances and the need to ensure that there are comprehensive, efficient and transparent processes for assessing health technologies;*
 - *Problems with health workforce supply and distribution;*
 - *Persistent concerns about the quality and safety of health services;*
 - *Uncertainty about how best to balance public and private sectors in the provision and funding of health services;*
 - *Recognition that we must invest more in the health of our children;*
 - *The role of urban planning in creating healthy and sustainable communities; and*
 - *Understanding that achieving equity in health, especially for Indigenous Australians, requires more than just providing health care services.*
- *The search for effective and lasting solutions will require a consultative approach to deciding the nation's priority health problems and to designing the health system that will best address them; issues of bureaucratic and fiscal responsibility can then follow.*

⁶ Bruce K Armstrong, James A Gillespie, Stephen R Leeder, George L Rubin and Lesley M Russell, Challenges in health and health care for Australia, MJA 2007; 187 (9): 485-489, http://www.mja.com.au/public/issues/187_09_051107/arm11047_fm.html

Indeed many of the written comments from the survey reported here support these views. There is however the implication by the absence of comment in their paper, and the papers by Abbott⁷, Roxon⁸ and Capolingua⁹, that health informatics is seen merely as an enabling technology with the presumption that if you get the other plans in place, eHealth will somehow sort itself out. We, on the other hand, believe this to be a major and complex engineering project of the scale of a Snowy Mountains Scheme that can only happen properly with a good plan and the resources to implement it.

This paper contains a vision that is strongly supported for application in Australia by those who have an understanding of health informatics. While it should be tested more widely, this should not delay the urgent development of a national resourced plan that would get us to a vision like this one. That plan should include strategy development, a business case, an implementation plan and a benefits realisation plan.

Too often in the past there has not been a good understanding of what needs to be done and the constancy of purpose that is required to get it done. Australia needs political champions who can provide the necessary leadership in collaboration with the healthcare community to move us quickly to a new healthcare system transformed by health informatics.

⁷ Tony Abbott, Good health systems, getting better, MJA 2007; 187 (9): 490-492

⁸ Nicola Roxon, Taking leadership — tackling Australia's health challenges, MJA 2007; 187 (9): 493-495

⁹ Rosanna Capolingua, A mandate to strengthen the health system, MJA 2007; 187 (9): 497-499

Introduction

Background

In the issue of the Medical Journal of Australia¹⁰ published just prior to the November 2007 election, a number of commentators including the Federal Minister and Shadow Minister reflected on the Australian health system and their plans for its future. The members of the Health Informatics Society of Australia (HISA)¹¹ believe there is a yawning gap in this analysis both in terms of the size of the problem and how it might be fixed.

There is a looming crisis in the health care system from an unprecedented simultaneous bulging in demand and reduction in workforce. Ten-fold improvements in productivity will soon be required¹² and this can only happen if the work of those in healthcare is leveraged and healthcare consumers become more engaged in the process. Health informatics is critical to both strategies.

The need for eHealth is more than for efficiency alone however, health informatics is now seen as an increasingly important weapon against disease in its own right and there is mounting evidence that when used properly both health outcomes and consumer satisfaction can be improved¹³. Health informatics is also an essential component of any quality and safety agenda for Australia.

HISA strongly holds the view that Australia lacks an agreed vision for the health system and in particular how it could be transformed by health informatics. HISA believes it is both essential and urgent that there be an agreed vision and an appropriately resourced plan.

In November 1999, following wide consultation, the Australian National Health Information Management Advisory Committee released a plan called 'Health Online - A Health Information Action Plan for Australia'. This was followed by a revision in 2001¹⁴. Health Online was put to the nation, and to the world, as the consensus view of the vision and path for Australia in the domain that has since been called eHealth.

Eight years later most would agree that not much of the plan has been done. Elsewhere, over the same period, there have been high level reports¹⁵ showing large scale benefits from eHealth with major national programs now initiated in countries including the UK, Canada and the US. Yet here in Australia there is no plan and (apart from some work around standards, identifiers and terminology) we have seen little work of substance. There is a wide frustration with the slow pace of progress and a growing resentment at the lack of Government leadership and engagement with the health community in the area¹⁶. It is indicative that last year the Federal Government spent less than half of its budget allocation¹⁷ which was in any event only around one tenth the commitment of that shown for example by the Canadians for the same period.

¹⁰ http://www.mja.com.au/public/issues/187_09_051107/contents_051107.html

¹¹ HISA is a scientific society that was established in 1993 which has as its aim to improve healthcare through health informatics. It provides a national focus for health informatics, its practitioners, industry and users. It advocates on behalf of its members and provides opportunities for learning and professional development in health informatics. See www.hisa.org.au

¹² Dr Peter Flett – Pathology Workforce in WA, Keynote Address AACB The Business of Pathology Conference, Sydney November 2007

¹³ Sir Muir Gray – The Third Healthcare Revolution, Keynote Address Medinfo, Brisbane August 2007

¹⁴ Health Online- A Health Information Action Plan for Australia. National Health Information Management Advisory Council.

[http://www.health.gov.au/internet/hconnect/publishing.nsf/Content/7746B10691FA666CCA257128007B7EAF/\\$File/actplan2.pdf](http://www.health.gov.au/internet/hconnect/publishing.nsf/Content/7746B10691FA666CCA257128007B7EAF/$File/actplan2.pdf)

¹⁵ eHealth is Worth it -The economic benefits of implemented eHealth solutions at ten European sites.

Karl A. Stroetmann, Tom Jones, Alexander Dobrev, Veli N. Stroetmann <http://www.ehealth-impact.org/download/documents/ehealthimpactsept2006.pdf> and Information Technology - Benefits Realized for Selected Health Care Functions. US Government Accounting Office <http://www.gao.gov/new.items/d04224.pdf>

¹⁶ HISA Submission to the Boston Consulting Group NEHTA Review, August 2007 -

http://www.hisa.org.au/files/doc/submission_to_BCG_NEHTA_Review_v4_Public_Release.pdf

¹⁷ DoHA Annual Report <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/2006-2007-annual-report> s

In May 2007 the Australian Health Information Council prepared a 'Preliminary Strategic Work Plan'¹⁸ describing the role of AHIC and the other bodies involved in the Governance of eHealth and went some way to describing what was happening in Australia currently. The document however falls short of providing a vision or a plan although it does recommend their future development.

In October this year the US based eHealth Initiative published their 'Blueprint: Building Consensus for Common Action'¹⁹. This was a collaboration of nearly 200 organisations representing the many diverse stakeholders in healthcare, including clinicians, consumers, employers and healthcare purchasers, healthcare IT suppliers, health plans, hospitals and other providers, laboratories, the life sciences industry, pharmacies, public health agencies, and state and regional leaders. The release of the eHI Blueprint represents Phase I of a two-phase process, offering multi-stakeholder consensus on a first set of guiding principles, strategies and actions in five key areas: engaging consumers; transforming care delivery; improving population health; aligning financial and other incentives; and managing privacy, security, and confidentiality.

The 'Blueprint' appeared to accurately and succinctly articulate a desirable vision of a healthcare system transformed by health informatics which was appropriate to Australia. HISA undertook a survey of its members and supporters to test whether this was so. The survey also expanded on elements of the Australian policy environment and asked respondents to identify potential levers and barriers. The survey was undertaken so that the information collected could accelerate the development of an agreed and resourced national plan. This paper provides the findings from that survey.

¹⁸ AHIC Preliminary Strategic Work Plan <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-ehealth-ahic>

¹⁹ Health Initiative Blueprint: Building Consensus for Common Action <http://www.ehealthinitiative.org/blueprint/>

The Survey

There were 219 respondents to the survey from a cohort of 1,468. Respondents included healthcare providers, health informatics practitioners and those with direct clinical and operational involvement in the health system from small, medium and large organisations. Respondents rated importance, current performance and degree of difficulty for each component vision strategy statement derived from six focus areas, namely:

1. Engaging Consumers
2. Transforming Care Delivery at the Point of Care
3. Improving Population Health (Data sharing capabilities and initiatives)
4. Aligning Financial and Other Incentives
5. Managing Privacy Security & Confidentiality
6. Policy and Implementation

The first five focus areas were drawn from the eHI Initiative Blueprint while the last was developed by HISA specifically for this survey to extend it into the Australian Healthcare context. Each of the focus areas had a set of strategy statements either drawn from the eHI Initiative Blueprint or developed for the survey. There were 42 questions in all. 26 called for scoring on a scale of 1 to 7. While there were 6 open questions inviting comment on perceived levers and barriers.

Findings

A large and broad group of those involved in healthcare with knowledge of the eHealth domain strongly support the vision statements that were presented. Overall they ranked importance an average of 6 out of 7. The participants considered Australia's current performance to be low, with an overall ranking of 2.8 out of 7. A comparison is shown graphically in Figure 1. Realising the vision though was not seen as easy, with the overall degree of difficulty being rated as 4.9 out of 7.

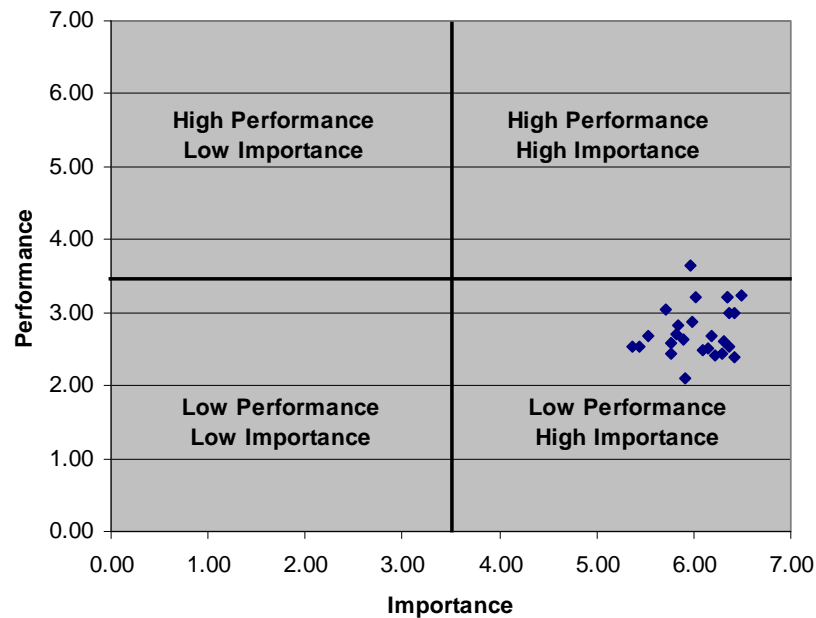


Figure 1 - Australia's current performance vs importance for each vision statement as rated by survey participants

Figure 2 shows the same data plotted by rank emphasizing the lack of alignment between importance and performance. It indicates a lack of planning and is not explained by degree of difficulty.

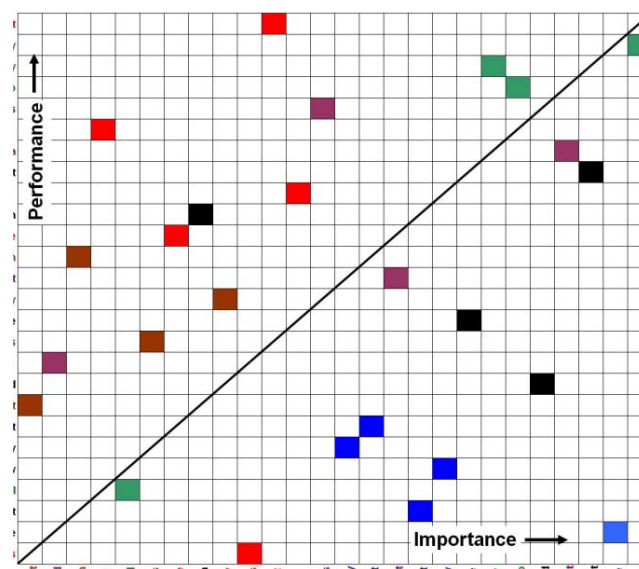


Figure 2 - Plot of current performance rank vs importance rank

Australia Rates the Vision

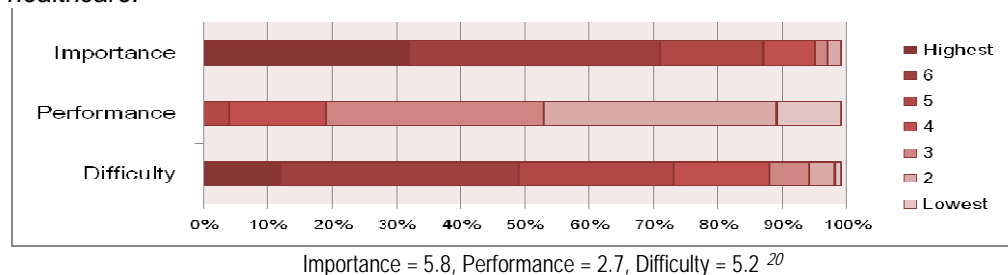
This section shows the vision for each focus area with their corresponding strategy statements. The result of the scoring is shown in a vertical stacked bar of the percentage of respondents scoring '1' through to '7'; the darker the bar the higher the score. Underneath each graph the weighted average score for importance, performance and difficulty is shown.

Following this are combined tables of ranks for importance, performance and degree of difficulty. The detailed methodology, results and analysis of the 882 text responses to open questions follows this.

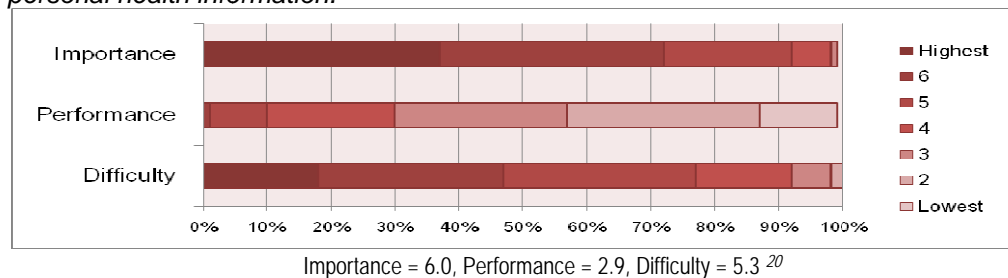
1) Engaging Consumers

Patients will be fully engaged in their own healthcare, supported by information and tools that enable informed consumer action and decision making, working hand-in hand with healthcare providers. Tools that support consumer engagement are well designed and customized to the diversity of consumers. These tools are integrated into the delivery of care, and are conveniently available outside healthcare settings as well.

- a. **Consumer Engagement in Healthcare** - *We fully understand the Australian health consumer's needs and have effectively educated them in how to take control of their own healthcare.*

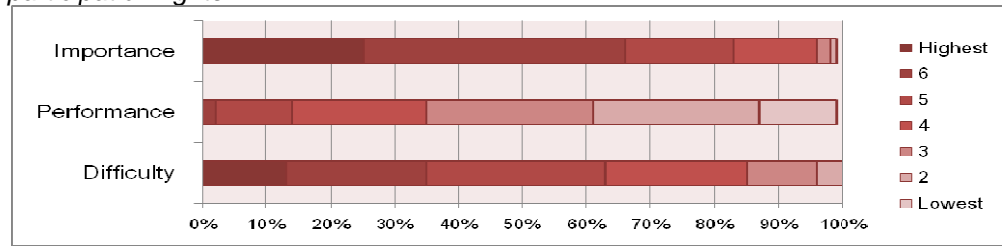


- b. **Consumer Access and Control of Personal Health Information** - *We fully involve consumer organisations, healthcare providers and supporting industry participants in creating consensus principles and standards that support consumer control of electronic personal health information.*



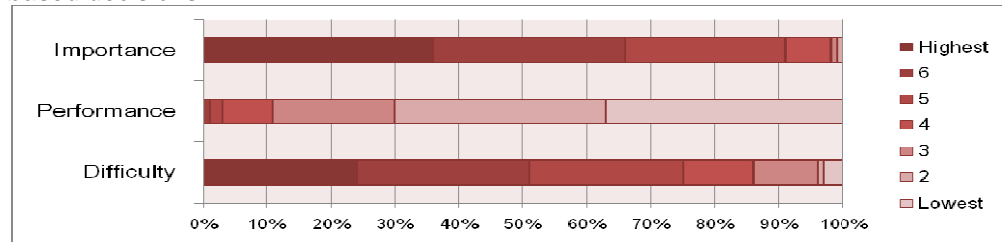
²⁰ Weighted average of scores from 1 (lowest) to 7 (highest)

- c. **Consumer Participation and Transparency** - Australia has defined the organisational requirements for consumer participation and transparency and requires compliance with those requirements. We ensure that consumers are aware of their information and participation rights.



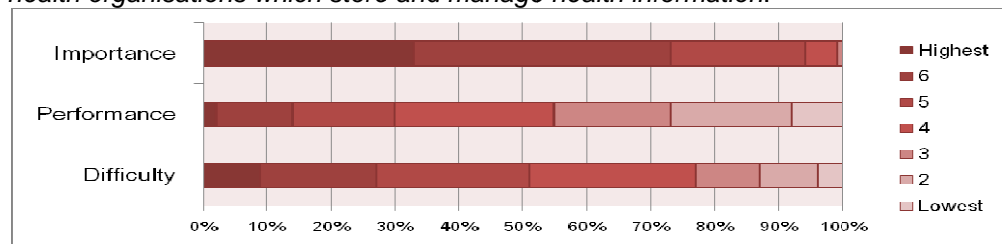
Importance = 5.7, Performance = 3.0, Difficulty = 4.9²⁰

- d. **Consumer Access to Electronic Health Information Tools and Services** - Where electronically available, consumers are able to acquire historical data from providers, government, insurers and other entities to generate a more complete longitudinal record that is incorporated into accessible tools and interfaces. These systems support the variety of levels of health literacy in the community and assist consumers in making evidence based decisions.



Importance = 5.9, Performance = 2.1, Difficulty = 5.3²⁰

- e. **Consumer Trust** - Australia has publicly available information policies on the handling of health information and has incorporated these policies in accreditation processes for health organisations which store and manage health information.

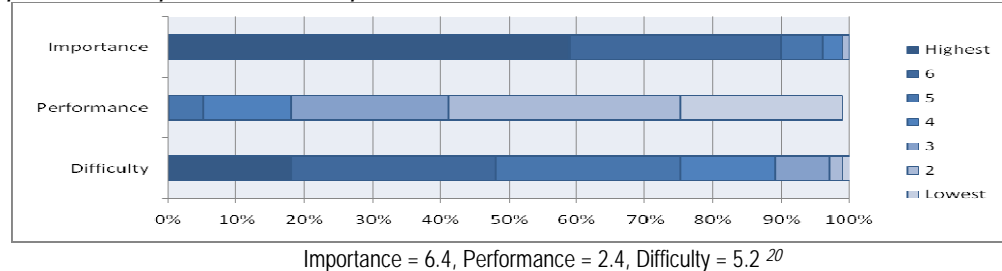


Importance = 6.0, Performance = 3.6, Difficulty = 4.5²⁰

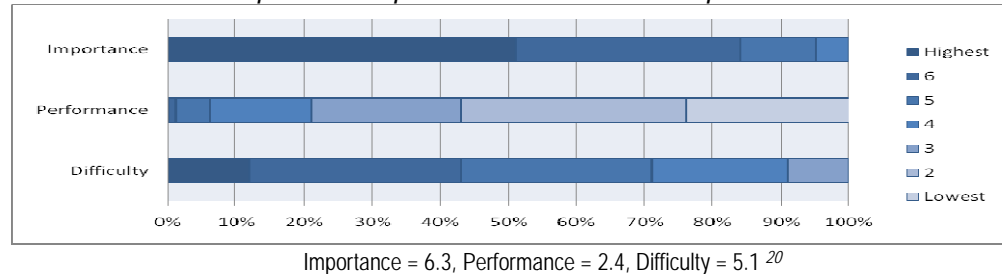
2) Transforming Care Delivery at the Point of Care

Australian patient care is high quality, patient centred, for a lifetime, and reflects a coordinated and collaborative approach. Complete, timely and relevant patient-focused information and clinical decision support tools are available as part of the provider's workflow at the point of care. High quality and efficient patient care is supported by the deployment and use of interoperable health IT and secure data exchange between and across all relevant stakeholders.

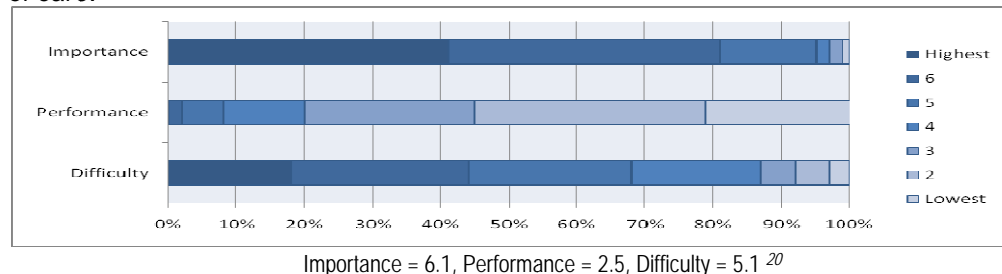
- a. **Patient Centred Care** - Australia has standards-based eHealth systems supporting new models of care delivery that are patient-centred, for a lifetime, and physician-guided, reflecting a coordinated, collaborative approach. To ensure care delivery is truly patient-centred, the systems also provide meaningful, understandable and useful information for patients and providers at the point of care.



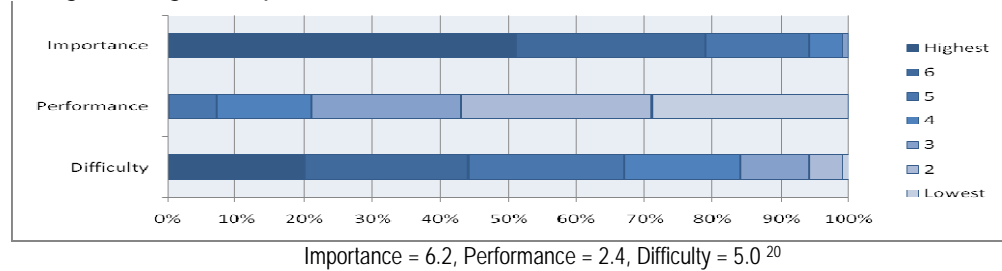
- b. **Patient and Clinician-Centred Workflow** - We facilitate the transformation to patient-centred care by making more complete, timely and relevant patient-focused data and clinical decision support tools available in a secure manner to clinicians, the broader healthcare team and patients as part of the workflow at the point of care.



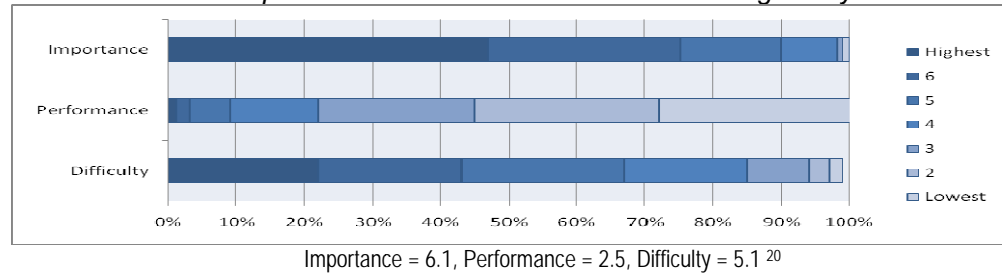
- c. **Broad Engagement** - In Australia all healthcare providers regardless of size, specialty, or location, and especially small practices are engaged and supported in both local and national efforts to make patient-focused electronic health information available at the point of care.



- d. **Change Management** - The Australian health policy developers and those who implement the policies understand the breadth of work practice changes required to productively implement eHealth systems. They make a considerable investment in the engagement of thought leaders and influencers at all levels within the organisations undergoing change. The engagement of these leaders is combined with appropriate education to support the change management process.



- e. **Understanding Reality** - Australian health policy developers and the health managers who implement the policies have a realistic understanding of the size of the task, the resources that are required and the time frame over which change likely occur.

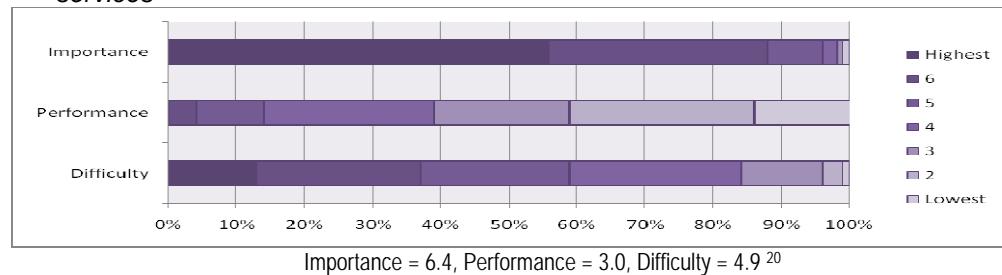


3) Improving Population Health

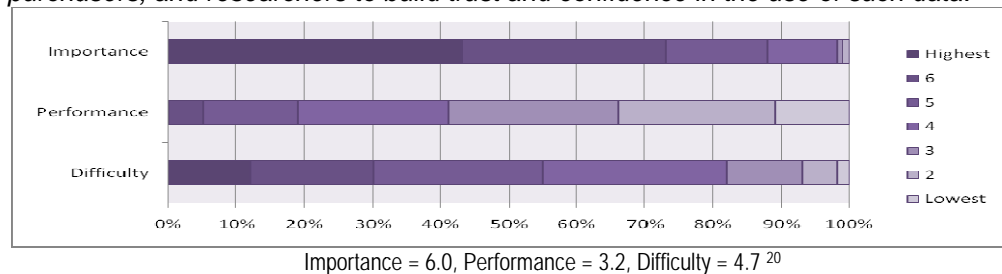
Electronic healthcare data and secure health information exchange are utilised to facilitate the flow of reliable health information among population health and clinical care systems to improve the health status of populations as a whole. Information is utilised to enhance healthcare experiences for individuals, eliminate health disparities, measure and improve healthcare quality and value, expand knowledge about effective improvements in care delivery and access, support public health surveillance, and assist researchers in developing evidence-based advances in areas such as diagnostic testing, illness and injury treatment, and disease prevention.

- a. **Recognition of the Population Health Value of Clinical Health Data** - Clinical data that is derived from the care delivery process is broadly and effectively used for improving population health, including but not limited to the following critical areas:

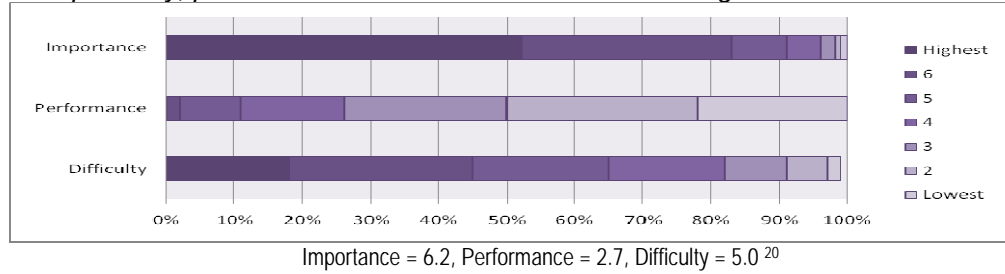
- (1) Improving the quality, safety, efficiency and effectiveness of healthcare
- (2) Monitoring, detecting and responding to hazards and threats, to protect the public's health
- (3) Expanding knowledge about disease, diagnosis and appropriate treatments and services



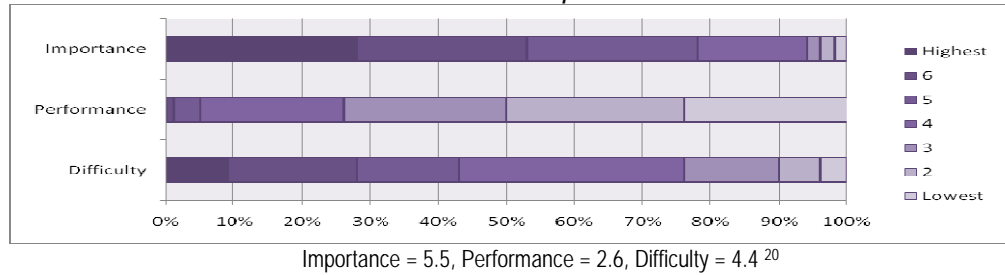
- b. **Abiding by a Common set of Principles and Policies** - Everyone who utilises clinical data derived from the care delivery process for population health purposes does, in addition to abiding by current federal and state laws, rules and regulations, abide by a common set of principles and policies developed through a transparent, open process involving multiple stakeholders, including but not limited to consumers, providers, payers, purchasers, and researchers to build trust and confidence in the use of such data.



- c. **Use of a Common Data Set** - Healthcare organisations use the clinical data derived from electronic clinical data systems in a “one data source, multiple uses” approach. There is widespread implementation of a set of common data elements, standards for interoperability, policies and business models for data sharing.



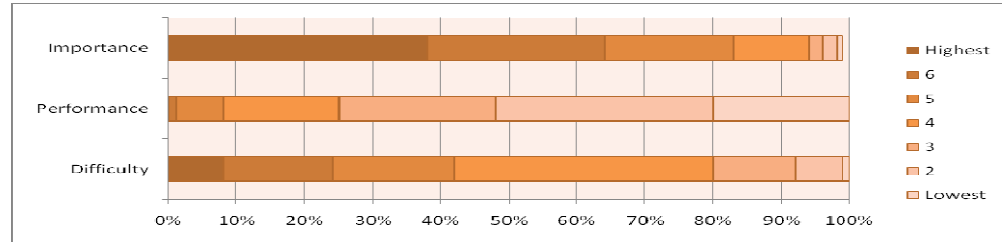
- d. **Financial Incentives will be Required** - Financial benefits or incentives have been established to equitably compensate the healthcare organisations which capture the data but do not receive the benefits from the data capture work.



4) Aligning Financial and Other Incentives

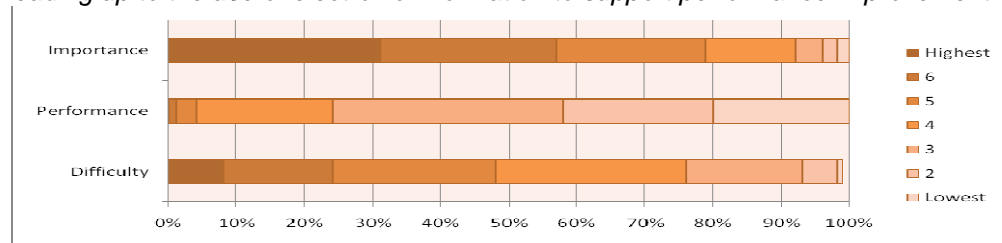
Healthcare providers are rewarded appropriately for managing the health of patients in a holistic manner. Meaningful incentives help accelerate improvements in quality, safety, efficiency and effectiveness. Quality of care delivery and outcomes are the engines that power the payment of providers.

- a. **Meaningful Incentives** - The financing or incentive programs supporting health IT are meaningful and result in improvements in quality, safety, efficiency or effectiveness in health care.



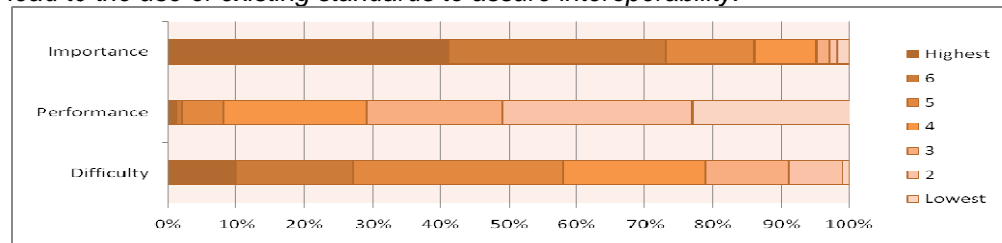
Importance = 5.8, Performance = 2.6, Difficulty = 4.5²⁰

- b. **Phased Approach** - The financing or incentive programs utilise a phased approach involving eHealth beginning with the clinical implementation of eHealth systems and leading up to the use of electronic information to support performance improvement.



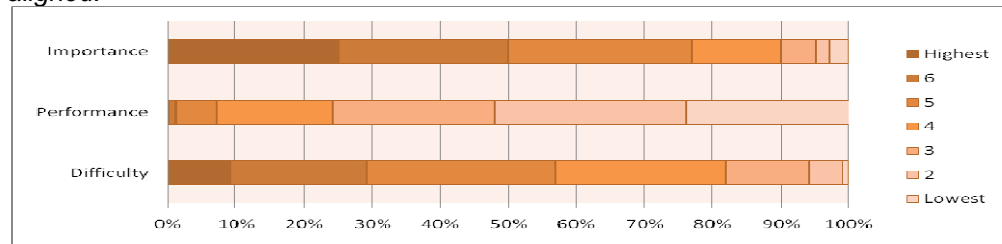
Importance = 5.5, Performance = 2.7, Difficulty = 4.5²⁰

- c. **Assure Interoperability** - The financing or incentive programs involving eHealth systems lead to the use of existing standards to assure interoperability.



Importance = 5.9, Performance = 2.6, Difficulty = 4.6²⁰

- d. **Cost Reflects Benefit** - Stakeholders that benefit share some equitable portion of the cost related to eHealth systems financing or incentives. Equity has been achieved through detailed studies that ascertained specifically who benefits, and by how much. This information ensured that incentive programs were meaningful, phased, and appropriately aligned.

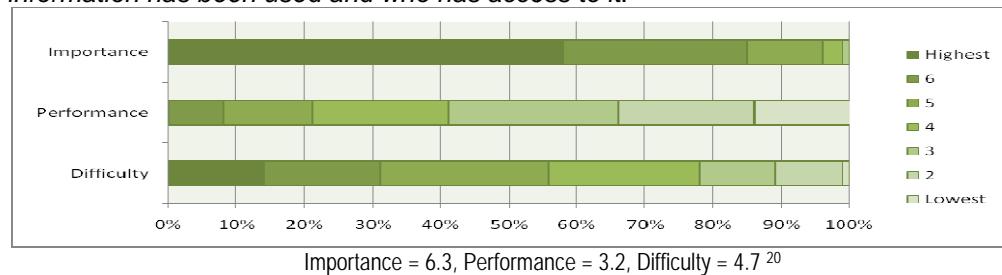


Importance = 5.4, Performance = 2.5, Difficulty = 4.7²⁰

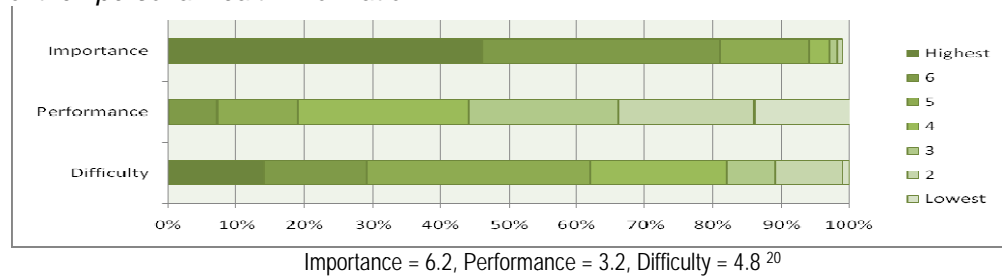
5) Managing Privacy, Security and Confidentiality

In Australia's fully-enabled electronic information environment designed to engage consumers, transform care delivery and improve population health, consumers have confidence that their personal health information is private, secure and used with their consent in appropriate, beneficial ways. Technological developments have been adopted in harmony with policies and business rules that foster trust and transparency. Organisations that store, transmit or use personal health information have internal policies and procedures in place that protect the integrity, security and confidentiality of personal health information. Policies and procedures are monitored for compliance, and consumers are informed of existing remedies available to them if they are adversely affected by a breach of security. Consumers trust and rely upon the secure sharing of healthcare information as a critical component of high quality, safe and efficient healthcare.

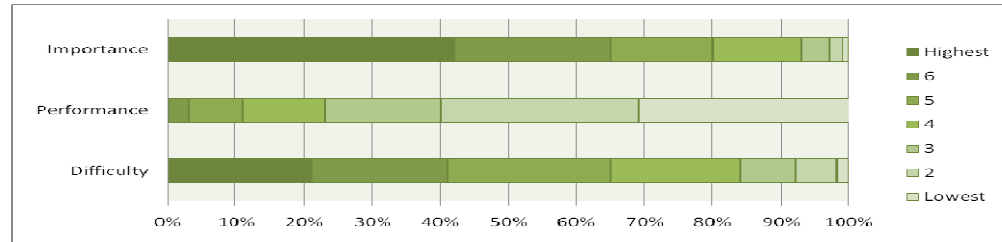
- a. **Transparency** - Policies for the permissible use of personal health information by those other than the patient are clearly defined, accessible, and communicated in an easily understood format. In addition individuals have the right to know how their personal health information has been used and who has access to it.



- b. **Collection and Use of Personal Health Information** - Personal health information of the individual consumer is obtainable consistent with applicable federal and state law. It is accurate, up-to-date, and limited to what is appropriate and relevant for the intended use. Consumers have a right to the privacy of their personal health information, taking into account existing exceptions under law. Consumers are apprised when they have a choice in how their personal health information is used and shared and when they can limit uses of their personal health information.

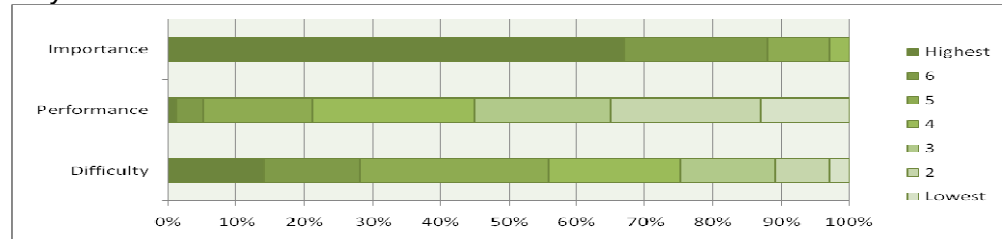


- c. **Individual Control** - Individuals are able to limit when and with whom their identifiable personal health information is shared. Individuals are able to delegate these responsibilities to another person. Individuals are able to readily obtain an audit trail that discloses by whom their personal health information has been accessed and how it has been used.



Importance = 5.8, Performance = 2.4, Difficulty = 5.0²⁰

- d. **Security** - Measures are implemented to protect the integrity, security, and confidentiality of each individual's personal health information, ensuring that it cannot be lost, stolen, or accessed or modified in an inappropriate way. Organisations that store, transmit, or use personal health information have in place mechanisms for authentication and authorization of system users.

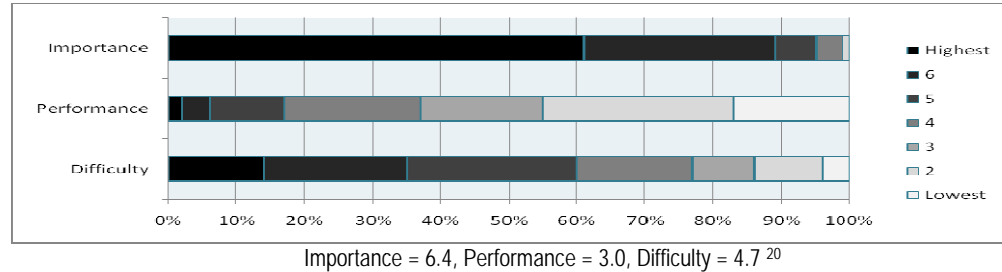


Importance = 6.5, Performance = 3.2, Difficulty = 4.6²⁰

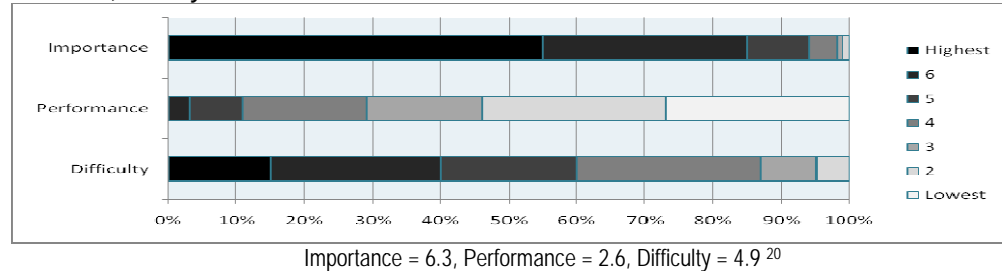
6) Policy and Implementation

Policy development and implementation bodies, both government and private deliver clear and insightful leadership of eHealth programs within the health sector. They have a deep understanding of the cultural and operational complexities of the area and ensure that programs are appropriately structured and funded to be successful.

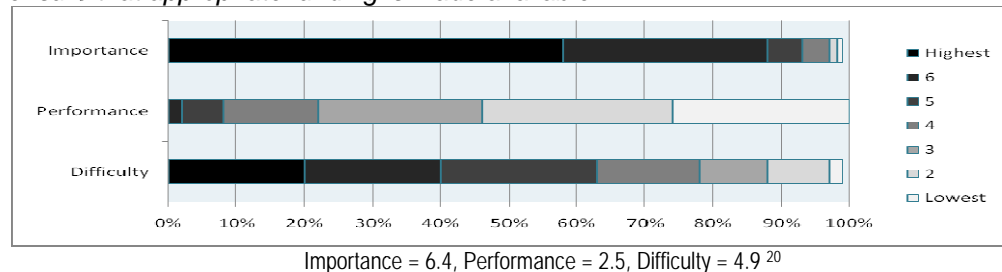
- a. **Recognition of eHealth Benefit** - *The Federal and State Governments recognise and accept that eHealth systems and process are a central enabler of transformational change in healthcare.*



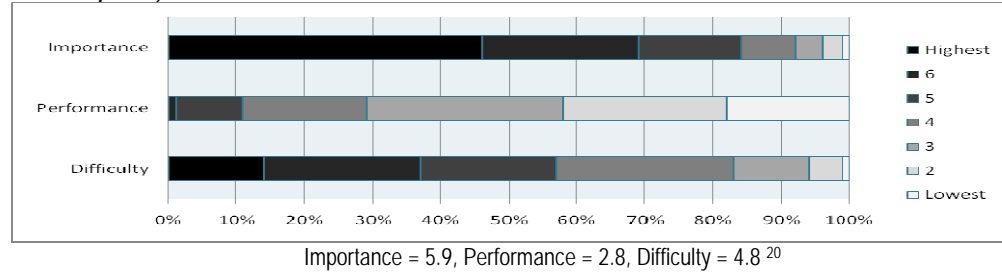
- b. **eHealth Governance Structure** - *Australia has a fully functional governance framework for e-Health that makes it clear who should be doing what and what their accountabilities and responsibilities are. This covers consumers, the Commonwealth, the States and Area Health Services, GP Divisions, NEHTA, AHMAC, AHIC, eHMAC, NEHTA, Standards Australia, and system vendors.*



- c. **Recognition of the Funding Commitment Required for Effective Change** - *There is a recognition that the current levels of investment in Health IT are not sufficient to enable the improvements in efficiency and safety that the public expect. The relevant funding authorities have a clear appreciation of the level of funding required and a commitment to ensure that appropriate funding is made available.*



- d. **Understanding of the Structure and Culture of the Health Environment** - *There is a recognition that the inherently conservative nature of the health sector means that management of the introduction of technology and new processes needs to be undertaken in a consultative way that is sensitive to local needs (top down system imposition is not a viable option).*



Strategy Statement Lists Ranked by Importance, Performance and Degree of Difficulty

Presented below are strategy statement lists ranked by importance, performance and degree of difficulty.

Table 1 –Strategy Statement List Ranked by Importance (Most to Least Important)

1. Security
2. Patient Centred Care
3. Recognition of eHealth Benefit
4. Recognition of the Population Health Value of Clinical Data
5. Recognition of the Funding Required
6. Transparency
7. Collection and Use of Personal Health Information
8. eHealth Governance Structure
9. Patient and Clinician-Centred Workflow
10. Change Management
11. Use of a Common Data Set
12. Broad Engagement
13. Understanding Reality
14. Abiding by a Common set of Principles and Policies
15. Consumer Access and Control of PHI
16. Consumer Trust
17. Consumer Access to EHI Tools and Services
18. Assure Interoperability
19. Understand Structure & Culture of Health
20. Consumer Engagement in Healthcare
21. Meaningful Incentives
22. Individual Control
23. Consumer Participation and Transparency
24. Phased Approach
25. Financial Incentives Will be Required
26. Cost Reflects Benefit

Table 2 – Strategy Statement List Ranked by Performance (Best to Worst)

1. Consumer Trust
2. Security
3. Transparency
4. Collection and Use of Personal Health Information
5. Abiding by a Common set of Principles and Policies
6. Consumer Participation and Transparency
7. Recognition of the Population Health Value of Clinical Data
8. Recognition of eHealth Benefit
9. Consumer Access and Control of PHI
10. Understand Structure & Culture of Health
11. Consumer Engagement in Healthcare
12. Phased Approach
13. Use of a Common Data Set
14. Assure Interoperability
15. eHealth Governance Structure
16. Meaningful Incentives
17. Financial Incentives Will be Required
18. Recognition of the Funding Required
19. Cost Reflects Benefit
20. Broad Engagement
21. Understanding Reality
22. Patient and Clinician-Centred Workflow
23. Individual Control
24. Change Management
25. Patient Centred Care
26. Consumer Access to EHI Tools and Services

Table 3 - Strategy Statement List Ranked by Degree of Difficulty (Least to Most Difficult)

1. Financial Incentives Will be Required
2. Consumer Trust
3. Meaningful Incentives
4. Phased Approach
5. Security
6. Assure Interoperability
7. Transparency
8. Collection and Use of Personal Health Information
9. Cost Reflects Benefit
10. Recognition of eHealth Benefit
11. Abiding by a Common set of Principles and Policies
12. Understand Structure & Culture of Health
13. Recognition of the Population Health Value of Clinical Data
14. Recognition of the Funding Required
15. Consumer Participation and Transparency
16. eHealth Governance Structure
17. Individual Control
18. Use of a Common Data Set
19. Change Management
20. Broad Engagement
21. Patient and Clinician-Centred Workflow
22. Understanding Reality
23. Consumer Engagement in Healthcare
24. Patient Centred Care
25. Consumer Access and Control of PHI
26. Consumer Access to EHI Tools and Services

Detailed Methodology

The survey was conducted over a 10 day period from the 16th to the 27th of October 2007. An invitation to complete an electronic survey was sent by email to 1,468 members and supporters of HISA; 532 opened the email. At the close of the survey period 219 responses had been received of which 163 were complete.

The survey invitation process was separated from the actual survey to ensure that survey responses could not be matched to an individual and yet it was possible to monitor access to the site to ensure the survey was not biased from any person providing multiple responses.

Survey Design

The survey sought opinions on the perceived importance of the vision statements, the perceived success so far in achieving the vision and how hard it was thought it would be to get to the future state. The survey instrument is shown at Appendix A.

A semi-quantitative approach was taken for a section of the survey. Respondents were asked to rank importance, performance and difficulty using a 7 point scale, an extension of the more commonly used 5 point Likert scale. Previous work has shown this to be the least number of points to approximate a continuous scale allowing reasonable use of statistical tools.

The first five focus areas were drawn from the eHI Initiative Blueprint while the last was developed by HISA specifically for this survey to extend it into the Australian Healthcare context. Each of the focus areas had a set of strategy statements either drawn from the eHI Initiative Blueprint or developed for the survey.

The semi-quantitative component of the survey was supplemented by the addition of open questions allowing a written response. The prompts used were:

- Initiatives that would assist Australia achieving the vision
- Barriers that would prevent or restrict Australia achieving the vision

The text responses to these questions were grouped according to theme using an affinity diagramming technique and mind-mapping. Comments which contained multiple themes were broken up and the individual themes grouped appropriately. The resultant themes and their associated comments were then ranked according the number of comments appearing under that theme (as % of total number comments submitted for that focus area). A discussion of the top themes for each focus area was then used to provide further insight into the scores.

A complete affinity diagram analysis of the themes can be found in Appendix B.

Detailed Results and Analysis

Demographics

The survey cohort comprised current HISA members plus delegates to HISA's annual Health Informatics Conference (HIC) as well as past attendees to HISA's annual Aged Care conference for the past 3 years (1,468 potential respondents).

Questions were asked to allow categorisation of respondents according to their roles and places of work. Analysis of these occupational demographics showed a contribution from most major segments of the health and health informatics workforce.

Results from the question around role were:

Doctors	12%
Nurses	10%
Healthcare Managers	10%
Academics	14%
Allied Health Professionals	4%
Other Healthcare	8%
Health IT Technologist	46%
Other	19%

Multiple responses were allowed to these questions explaining a total of 123% and indicating many see themselves with multiple roles. There were respondents from all of the role options with a good spread. Perhaps unsurprisingly, the role that most respondents identified with was that of Health IT Technologists, but there was good representation from doctors, nurses, academics and health care managers. While 46% of respondents reported being Health IT Technologists only 28% were from a healthcare systems vendor indicating a strong representation from the technologists within the healthcare workplace. This is reinforced by the majority reporting that they come from a healthcare establishment. Those from Government departments and service suppliers are however also well represented in the sample.

Results from the question around place of work were:

I work for a university	14%
I work for a healthcare establishment	32%
I work for a healthcare systems vendor	11%
I work for a government department	18%
I work for a healthcare services supplier	8%
Other	17%

Results from the question around organisation size were:

Less than 10	12%
11 to 50	16%
50 to 200	7%
200 to 1000	9%
Greater than 1000	56%.

As in the other questions there was a spread of respondents from all sized organisations although most came from large ones.

In summary the survey sample comprised of people with a broad spread of occupations, workplace types and sizes. This lays the foundation for an analysis which is broadly representative of the Australian healthcare community and unlikely to be unduly biased with an over representation of any one specific group other than that they have an understanding of health informatics.

Overall Importance, Performance, and Degree of Difficulty

All surveys were included in the analysis. Mean and standard deviation of the scores for each strategy statement is shown in Table 4. The standard deviation of the performance scores indicates a wide variation of results but most scores nevertheless fall in the high importance low performance quadrant. This was a consistent profile over most results and is easily observed from reviewing the raw data scores found in Appendix A.

Table 4 - Average scores and standard deviation across performance, importance and degree of difficulty for each strategy statement

Strategy statement	Importance (Avg)	Performance (Avg)	Difficulty (Avg)	Importance (Std Dev)	Performance (Std Dev)	Difficulty (Std Dev)
Question 4: Consumer Engagement in Healthcare	5.82	2.69	5.19	1.19	1.02	1.31
Question 5: Consumer Access and Control of PHI	5.98	2.87	5.26	1.03	1.23	1.29
Question 6: Consumer Participation and Transparency	5.70	3.03	4.91	1.11	1.31	1.34
Question 7: Consumer Access to EHI Tools and Services	5.91	2.09	5.28	1.06	1.13	1.51
Question 8: Consumer Trust	5.97	3.64	4.47	0.93	1.54	1.54
Question 11: Patient Centred Care	6.42	2.40	5.23	0.91	1.14	1.38
Question 12: Patient and Clinician-Centred Workflow	6.30	2.43	5.10	0.85	1.18	1.24
Question 13: Broad Engagement	6.14	2.51	5.07	0.96	1.22	1.52
Question 14: Change Management	6.22	2.42	5.04	1.00	1.24	1.54
Question 15: Understanding Reality	6.10	2.48	5.12	1.09	1.33	1.51
Question 18: Recog of the Pop Health Value of Clinical Data	6.36	3.00	4.89	0.93	1.38	1.36
Question 19: Abiding by a Common set of Principles and Policies	6.01	3.20	4.70	1.11	1.38	1.44
Question 20: Use of a Common Data Set	6.19	2.68	5.03	1.16	1.34	1.55
Question 21: Financial Incentives will be Required	5.45	2.55	4.44	1.41	1.21	1.51
Question 24: Meaningful Incentives	5.78	2.59	4.47	1.33	1.22	1.35
Question 25: Phased Approach	5.54	2.69	4.52	1.41	1.17	1.35
Question 26: Assure Interoperability	5.89	2.63	4.64	1.32	1.33	1.45
Question 27: Cost Reflects Benefit	5.36	2.52	4.69	1.43	1.24	1.37
Question 30: Transparency	6.34	3.20	4.68	0.96	1.48	1.55
Question 31: Collection and Use of Personal Health Information	6.18	3.22	4.76	0.96	1.48	1.55
Question 32: Individual Control	5.76	2.43	4.99	1.42	1.38	1.56
Question 33: Security	6.49	3.23	4.61	0.84	1.45	1.56
Question 36: Recognition of eHealth Benefit	6.42	2.99	4.70	0.95	1.50	1.66
Question 37: eHealth Governance Structure	6.31	2.61	4.92	1.01	1.40	1.44
Question 38: Recognition of the Funding Required	6.36	2.53	4.90	1.03	1.30	1.65
Question 39: Understand Struct & Culture of Health	5.85	2.82	4.83	1.45	1.28	1.46

These scores were used to rank the strategy statements in the order of their importance and performance. We have used this technique as a tool to assess strategic alignment. In an aligned organisation the plot of importance versus performance has an aggregation of points along the 45° line²¹. The outliers from this line then represent areas where too much or too little focus has been applied.

The plot of ranks of performance versus importance is shown in Figure 3. This shows a wide scatter and little alignment between the importance of any issue and its performance. These results are indicative of an enterprise without a good plan that was being followed. In such environments there is a strong likelihood of wasted investment, frustrated teams and lack of progress.

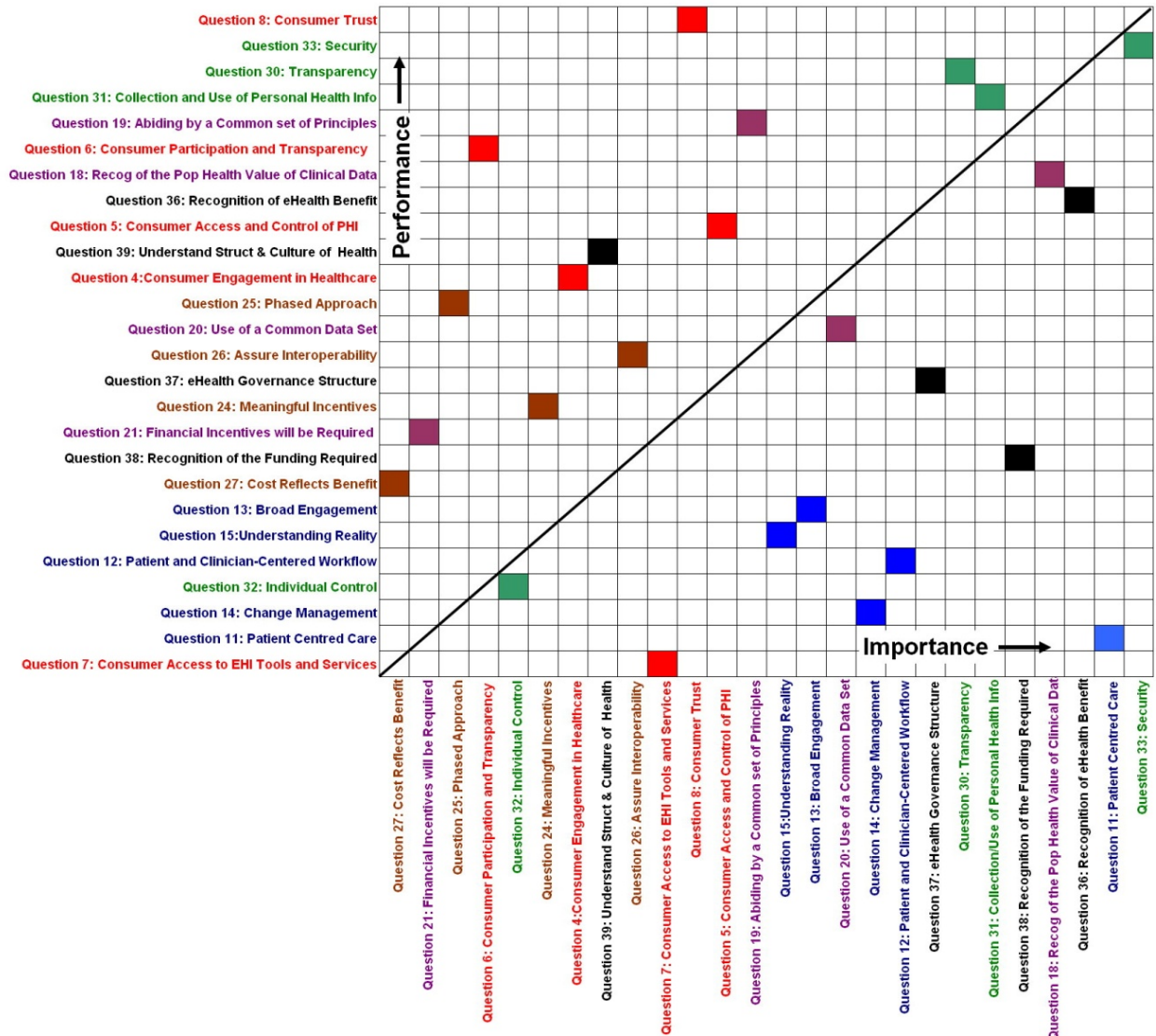


Figure 3 - Ranking of performance versus importance for all strategy statements

²¹ An example of this can be seen with HISA's own member satisfaction survey http://www.hisa.org.au/files/doc/2007_Membership_Survey_Full_Graph.pdf

The weighted average scores for the performance versus importance for each vision strategy statement are plotted against each other in Figure 4. These scores cluster around the least desired quadrant of low performance and high importance and provide a strong indicator of how the survey respondents considered Australia to be performing in its transition to the vision described. This poor performance is as you would expect from the lack of alignment shown in the analysis above.

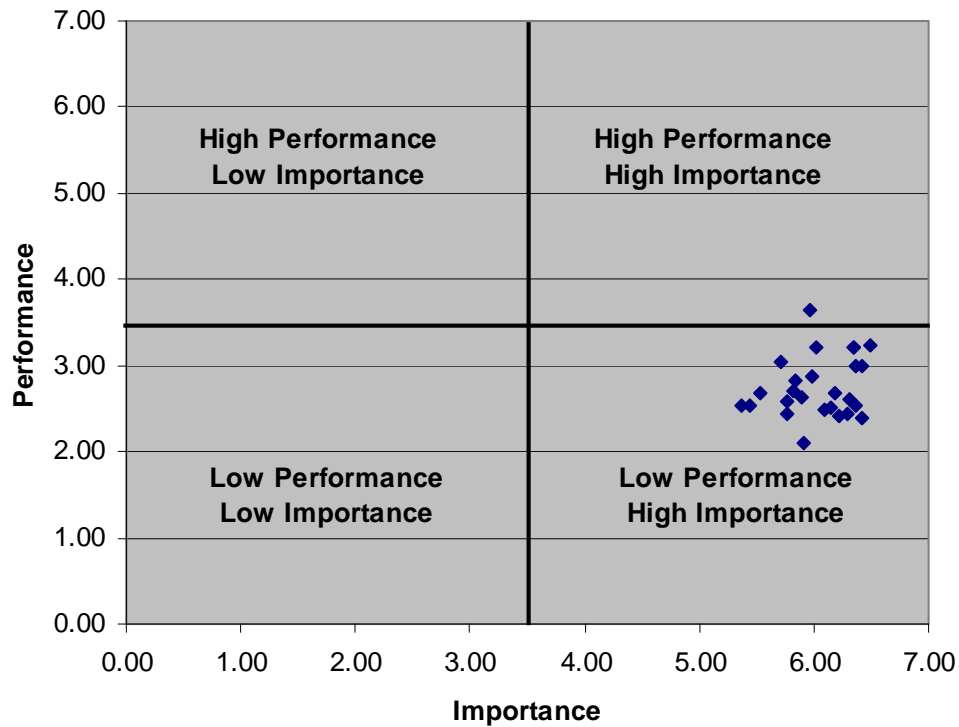


Figure 4 - Australia's absolute performance in any of the vision focus areas the performance versus importance scores

Results and Analysis by Focus Area

1) Engaging Consumers

Patients will be fully engaged in their own healthcare, supported by information and tools that enable informed consumer action and decision making, working hand-in-hand with healthcare providers. Tools that support consumer engagement are well designed and customized to the diversity of consumers. These tools are integrated into the delivery of care, and are conveniently available outside healthcare settings as well.

This vision was considered more difficult to deliver than others; it would require a high degree of leadership and educational investment from both Federal and State Governments. Its success would be dependent on the availability of high performance broadband infrastructure' and the availability of health information in a consumer assessable format. These are two areas which would require significant investment. The accessibility of information would also require significant coordination between industry and governments

Responses to the strategy statements within this vision focus area are contained in Table 5. Respondents believed these issues to be of high importance and low in performance. The absolute scoring of each strategy statement allowed them to rank against each other and against all the strategy statements contained in the survey. The results of this ranking analysis are contained in Figure 5. The strategy statements generally rated lower in importance and higher in performance compared with many of the other issues raised in the survey. The exception to this was question 7, regarding consumer access to electronic information tools, which rated the lowest in performance. With an average difficulty score of 5.02 compared with the average for all issues of 4.86 these issues were considered more difficult to deliver. In terms of importance, the strategies, apart from question 7, were all ranked in the top half.

Responses to the text questions are mapped under key themes in Table 6. To accelerate our transition to this vision, respondents felt that educating the public and providing them with easy access to information were key issues. The issue of education was recognition of the substantial culture change that would be required to fully engage a broad base of consumers. The access issue was heavily supported by a feeling that the communication infrastructure (access to broadband) needed to be improved if we are to be successful. Leadership from government in supporting these investments and promoting consumer engagement was also considered important for success.

In terms of the issues that could restrict our transition to this vision, the overwhelming issue was a deep concern regarding the lack of collaboration between the State and Federal health authorities and the need for coordination to be successful in this area. This was supported by the concern that this sort of change would require clear leadership from both Federal and State governments, as well as health managers and leaders throughout the health system. Engaging the consumer is a significant culture change that would require a broad based response from all those involved with health. Of the top 3 issues raised the final one was that of privacy laws. There was recognition that consumers could not be effectively engaged unless they understood and were comfortable with the way in which their health information was being handled.

Table 5 – Consumer Engagement: Average scores for importance, performance and degree of difficulty

Strategy Statement	Importance Score	Performance Score	Difficulty Score
Question 4: Consumer Engagement in Healthcare We fully understand the Australian health consumer's needs and have effectively educated them in how to take control of their own healthcare	5.82	2.69	5.19
Question 5: Consumer Access and Control of PHI We fully involve consumer organisations, healthcare and supporting industry participants in creating consensus principles and standards that support consumer control of electronic personal health information.	5.98	2.87	5.26
Question 6: Consumer Participation and Transparency Australia has defined the organisational requirements for consumer participation and transparency and require compliance with those requirements. We ensure that consumers are aware of their information and participation rights.	5.70	3.03	4.91
Question 7: Consumer Access to EHI Tools and Services Where electronically available, consumers are able to acquire historical data from providers, government, insurers and other entities to generate a more complete longitudinal record that is incorporated into accessible tools and interfaces. These systems support the variety of levels of health literacy in the community and assist consumers in making evidence based decisions.	5.91	2.09	5.28
Question 8: Consumer Trust Australia has publicly available information policies on the handling of health information and has incorporated these policies in accreditation processes for health organisations which store and manage health information.	5.97	3.64	4.47

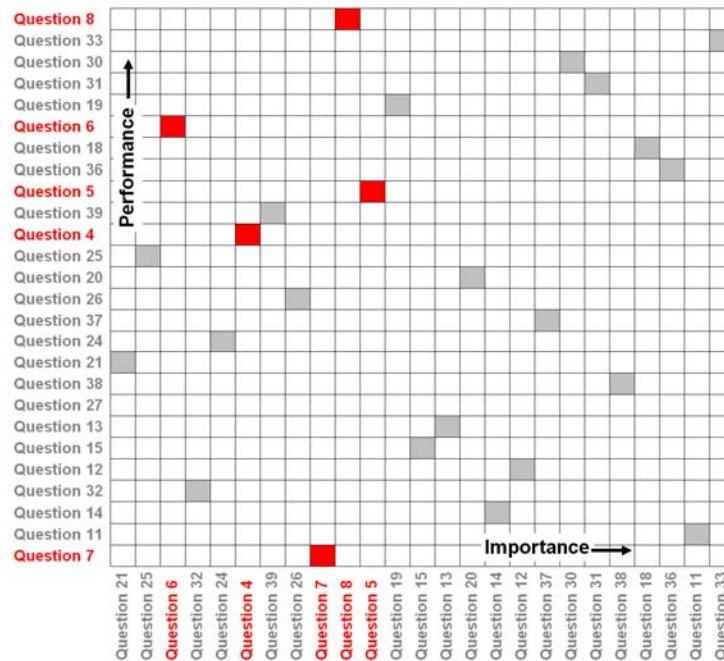


Figure 5 - Performance versus Importance ranking for the Consumer Engagement strategy statements (in red) in comparison to all strategy statements

Table 6 - Themes appearing in comments from Engaging Consumers

Type	Theme in comments	% Occurrence
Assisting our progress to the vision	Developing public knowledge and debate	15%
	Access to Information	12%
	Leadership	10%
	Infrastructure	10%
Restricting our progress to the vision	Lack of Broad Collaboration	20%
	Lack of Leadership	12%
	Lack of Clear, Uniform and well understood and debated Privacy Laws	11%
	Lack of Funding	10%

2) Transforming Care Delivery at the Point of Care

Australian patient care is high quality, patient-centred, for a lifetime, and reflects a coordinated and collaborative approach. Complete, timely and relevant patient-focused information and clinical decision support tools are available, as part of the provider's workflow, at the point of care. High quality and efficient patient care is supported by the deployment and use of interoperable health IT and secure data exchange between and across all relevant stakeholders.

Overall 'Transforming Care Delivery At The Point Of Care' was seen as the most important but poorest performing focus area. It is an activity that will require significant leadership from both governments and healthcare managers and clinicians. It will require substantial investment in systems, infrastructure (including broadband) and the training of healthcare professionals and consumers.

Responses to the strategy statements within this vision focus area are contained in Table 7. Respondents believed these issues to be high importance and low in performance. With an average difficulty score of 5.11, compared to an average of 4.86 for all statements, the strategies were considered more difficult to implement.

The ranked importance versus performance results are shown in Figure 6. In comparison with other results these strategies are clustered together as the lowest performing, highest importance strategies. Clearly the survey respondents feel deeply about the need to transform the care delivery process and are concerned at the lack of progress. Of all the strategy statements the delivery of patient centric care was considered the most important.

To accelerate our progress towards the vision, there was strong agreement that this would take extensive collaboration amongst all the stakeholders. Most importantly this collaboration should include the extensive involvement of the health consumer. The importance of the implementation process was also raised, including the opportunity to look at implementation models from other countries and the need to have a coordinated process across all the industry providers. It was also noted that we need to start small and start soon. To coordinate a transformation such as this would require strong leadership from Federal and State Governments as well as a substantial development of the stakeholder skill sets.

The lack of broad collaboration was also raised as the most significant issue that could restrict transition to this vision. Close behind this was the need for funding. There was a realization that a significant transition such as this would require funding at many levels including systems development and education. A lack of relevant skills to support the transition was also raised along with the need for strong leadership. It was recognized that leadership was required at multiple levels not only within the Government but also at various management levels of healthcare providers.

Table 7 - Average scores for importance, performance and degree of difficulty; Transforming Care Delivery at the Point of Care

Strategy Statement	Importance (Avg)	Performance (Avg)	Difficulty (Avg)
Question 11: Patient Centred Care Australia has standards-based eHealth systems supporting new models of care delivery that are patient-centred, for a lifetime, and physician-guided, reflecting a coordinated, collaborative approach. To ensure care delivery is truly patient-centred, the systems also provide meaningful, understandable and useful information for patients and providers at the point of care.	6.42	2.40	5.23
Question 12: Patient and Clinician-Centred Workflow We facilitate the transformation to patient-centred care by making more complete, timely and relevant patient-focused data and clinical decision support tools available in a secure manner to clinicians, the broader healthcare team and patients as part of the workflow at the point of care.	6.30	2.43	5.10
Question 13: Broad Engagement In Australia all healthcare providers regardless of size, specialty, or location, and especially small physician practices are engaged and supported in both local and national efforts to make patient-focused electronic health information available at the point of care.	6.14	2.51	5.07
Question 14: Change Management The Australian health policy developers and those who implement the policies understand the breadth of work practice changes required to productively implement eHealth systems. They make a considerable investment in the engagement of thought leaders and influencers at all levels within the organisations undergoing change. The engagement of these leaders is combined with appropriate education to support the change management process.	6.22	2.42	5.04
Question 15: Understanding Reality Australian health policy developers and the health managers who implement the policies have a realistic understanding of the size of the task, the resources that are required and the time frame over which change likely occur.	6.10	2.48	5.12

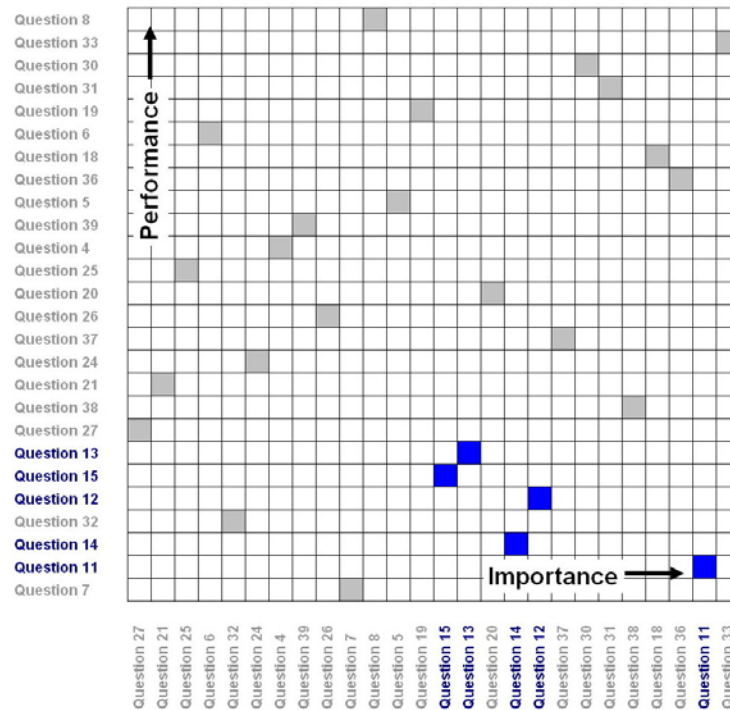


Figure 6 - Performance versus Importance ranking for the “Transforming Care Delivery at the Point of Care” strategy statements (in blue) in comparison to all strategy statements

Table 8 - Themes appearing in comments from Transforming Care Delivery at the Point of Care

Type	Theme in comments	% Occurrence
Assisting our progress to the vision	Broad Collaboration	15%
	Implementation	12%
	Leadership	12%
	Skills Development	11%
Restricting our progress to the vision	Lack of Broad Collaboration	18%
	Lack of Funding	13%
	Lack of Leadership	11%
	Lack of Skills Development	10%

3) Improving Population Health

Electronic healthcare data and secure health information exchange are utilised to facilitate the flow of reliable health information among population health and clinical care systems to improve the health status of populations as a whole. Information is utilised to enhance healthcare experiences for individuals, eliminate health disparities, measure and improve healthcare quality and value, expand knowledge about effective improvements in care delivery and access, support public health surveillance, and assist researchers in developing evidence-based advances in areas such as diagnostic testing, illness and injury treatment, and disease prevention.

This vision focus area was considered easier to deliver than most of the others. The strategies show some alignment of importance to performance indicating there was more coordination in this area than in others. Given the government investment in research databases through NCRIS²² and the activities of other national health data bodies, this is reassuring. Respondents considered that the availability of database infrastructure, broad collaboration between institutions holding health data and the provision of suitable remuneration for the collection of public health data were important for progression in this vision focus area.

Responses to the strategy statements within this vision focus area are contained in Table 9. Respondents believed these issues to be high importance and low in performance. With an average difficulty score of 4.77, compared to an average of 4.86 for all statements, these strategies were considered less complex to implement. As with all the results in this survey the strategies were all considered highly important and the performance was consistently low.

The ranked importance versus performance results are shown in Figure 7. While these data were not well aligned, they did show some correlation of performance with importance, with lower importance strategies generally ranking lower in performance. The most important issue was that of recognition of the importance of population health information, clearly the respondent community felt that this awareness was essential to sustain the commitment for progression to this vision.

Looking at the textual responses to the question of what would assist the progression towards this vision one of the leading themes was infrastructure, largely in the form a common national databases. There has been some progress in this area with the activities of NCRIS and other national bodies responsible for health data, and perhaps this has led to the slightly better alignment of these results. The other leading theme was incentives, with the clear response that there would need to be a remuneration process established to fairly compensate those involved in recording the data. As in the previous vision areas, broad collaboration was considered essential. In this situation collaboration was largely related to the sharing of data from existing information repositories.

In terms of the issues that would restrict progress to this vision, again there was the concern that the lack of collaboration would severely slow progress. This was a clear leader in terms of the level of concern. The main emphasis was on the need for collaboration between Federal and State Governments and within their respective bureaucracies. The second most significant theme was culture change, where the issue was largely one of changing the attitude toward data collection and the quality of the collected data. For this to occur there was also concern that there would not be significant leadership at all levels to drive the required change. Finally, the issue of appropriate incentives was considered important to drive the data collection process.

²² The National Collaborative Research Strategy, see <http://www.ncris.dest.gov.au/faq.htm>

Table 9 - Average scores for importance, performance and degree of difficulty; Improving Population Health

Strategy Statement	Importance (Avg)	Performance (Avg)	Difficulty (Avg)
Question 18: Recognition of the Pop Health Value of Clinical Data Clinical data that is derived from the care delivery process is broadly and effectively used for improving population health, including but not limited to the following critical areas: <ul style="list-style-type: none"> Improving the quality, safety, efficiency and effectiveness of healthcare Monitoring, detecting and responding to hazards and threats, to protect the public's health Expanding knowledge about disease, diagnosis and appropriate treatments and services 	6.36	3.00	4.89
Question 19: Abiding by a Common set of Principles and Policies Everyone who utilises clinical data derived from the care delivery process for population health purposes does, in addition to abiding by current federal and state laws, rules and regulations, abide by a common set of principles and policies developed through a transparent, open process involving multiple stakeholders, including but not limited to consumers, providers, payers, purchasers, and researchers to build trust and confidence in the use of such data.	6.01	3.20	4.70
Question 20: Use of a Common Data Set Healthcare organisations use the clinical data derived from electronic clinical data systems in a "one data source, multiple uses" approach. There is widespread implementation of a set of common data elements, standards for interoperability, policies and business models for data sharing.	6.19	2.68	5.03
Question 21: Financial Incentives will be Required Financial benefits or incentives have been established to equitably compensate the healthcare organisations which capture the data but do not receive the benefits from the data capture work.	5.45	2.55	4.44

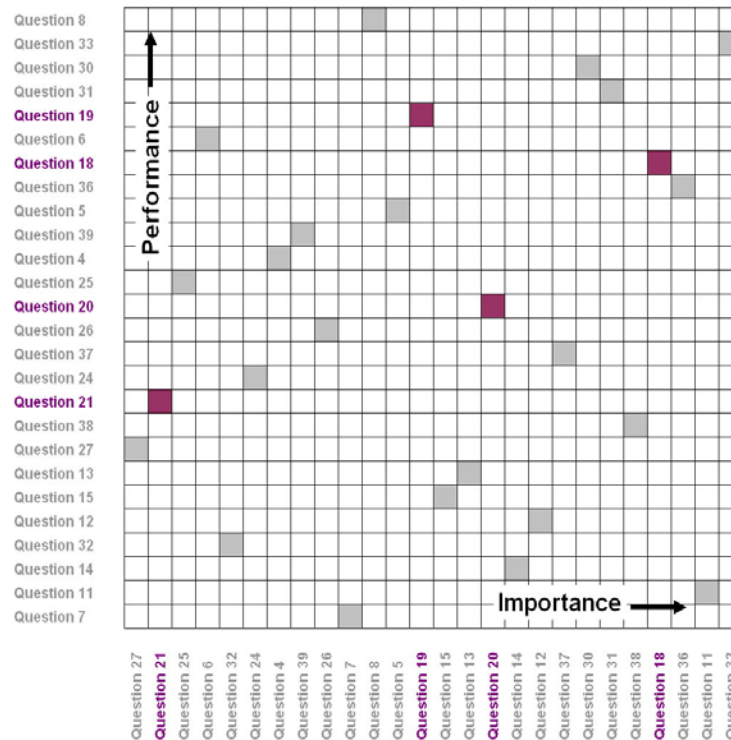


Figure 7 - Performance versus Importance ranking for the Improving Population Health strategy statements (in purple) in comparison to all strategy statements asked.

Table 10 - Themes appearing in comments from Improving Population Health

Type	Theme in comments	% Occurrence
Assisting our progress to the vision	Infrastructure	15%
	Incentives	15%
	Broad Collaboration	12%
	Knowledge & Skills Development	10%
Restricting our progress to the vision	Lack of Broad Collaboration	19%
	Difficulty with Culture Change	14%
	Lack of Leadership	12%
	Lack of Incentives	11%

4) Aligning Financial and Other Incentives

Healthcare providers are rewarded appropriately for managing the health of patients in a holistic manner. Meaningful incentives help accelerate improvements in quality, safety, efficiency and effectiveness. Quality of care delivery and outcomes are the engines that power the payment of providers.

While still considered highly important by the survey community this vision focus area was ranked lower than most other vision focus areas. The leading concern of respondents was to ensure such a funding system delivered a better quality of healthcare. The implementation of such a program would require a clear vision for the development of healthcare in Australia and the close involvement of people in the healthcare industry who understand its operation and the motivations of those involved. To deliver this would require a detailed business case, substantial and consistent long term funding together with strong leadership.

Responses to the strategy statements within this vision focus area are contained in Table 11. Respondents believed these issues to be high importance and low in performance. With an average difficulty score of 4.58, compared to an average of 4.86 and all the strategy statements rating below the average, these strategies were considered less difficult to implement.

The ranked importance versus performance results are shown in Figure 8. While there was some alignment between performance and importance the alignment was not substantial. Again these results indicate a lack of strategy to guide investment and the development of projects. Interestingly the highest ranking strategy statement was question 26, which was not directly related to the provision of funding, but rather how best to use that funding to build a more effective health system. Another interesting point is that while respondents clearly believed that incentives are important as indicated by the absolute scoring of these strategy statements, they ranked this strategy area as a lower importance than most others in this survey.

Looking at the textual responses to the question of what would assist the progression towards the Vision the issue of “what the incentive was paid for” rated as the most significant theme in the responses and there were a range of behaviours and outcomes suggested as targets for payments. Other key themes were the need to ensure that such a program had stable and long term funding, that business case for the funding was robust, demonstrating long term benefits and there was the leadership in government to roll out and sustain this program.

In terms of issues that would restrict the transition to this vision there a number of issues that scored highly. The primary issue was that of leadership, principally within the Federal and State Governments to overcome the bureaucratic barriers to the delivery of such a program. The ability to provide long term fund at a suitable level and the required culture change within the healthcare industry were also considered important. Other issues were the need for to have the right people involved in the program development that understood how healthcare clinically and commercially operates and have an insight into the motivation of the people involved.

Table 11- Average scores for importance, performance and degree of difficulty; Aligning Financial and Other Incentives

Strategy Statement	Importance (Avg)	Performance (Avg)	Difficulty (Avg)
Question 24: Meaningful Incentives The financing or incentive programs supporting health IT are meaningful and result in improvements in quality, safety, efficiency or effectiveness in health care.	5.78	2.59	4.47
Question 25: Phased Approach The financing or incentive programs utilise a phased approach involving eHealth beginning with the clinical implementation of eHealth systems and leading up to the use of electronic information to support performance improvement.	5.54	2.69	4.52
Question 26: Assure Interoperability The financing or incentive programs involving eHealth systems lead to the use of existing standards to assure interoperability.	5.89	2.63	4.64
Question 27: Cost Reflects Benefit Stakeholders that benefit share some equitable portion of the cost related to eHealth systems financing or incentives. Equity has been achieved through detailed studies that ascertained specifically who benefits, and by how much. This information ensured that incentive programs were meaningful, phased, and appropriately aligned.	5.36	2.52	4.69

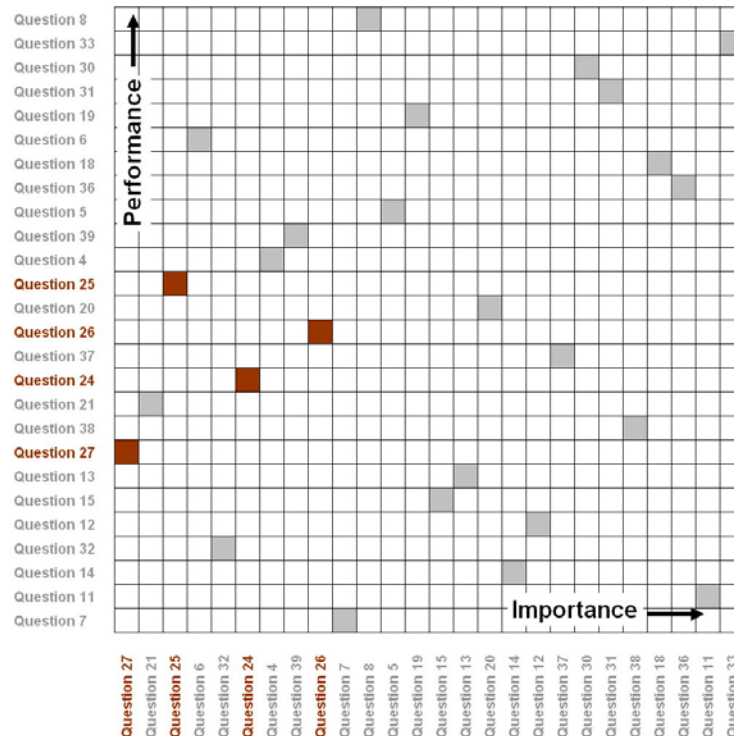


Figure 8 - Performance versus Importance ranking for the Financial and Other Incentives strategy statements (in brown) in comparison to all strategy statements

Table 12 - Themes appearing in comments from Aligning Financial and Other Incentives

Type	Theme in comments	% Occurrence
Assisting our progress to the vision	Incentive alignment: Benefits linked to what is paid	20%
	Adequate Funding	11%
	Business Case	11%
	Leadership	9%
Restricting our progress to the vision	Lack of Leadership	21%
	Shortage of Funding	13%
	Culture Change Resistance	11%
	Lack of Broad Collaboration	7%
	Poor Understanding the clinical & commercial environments	7%
	Poor Motivation	7%

5) Managing Privacy Security and Confidentiality

In Australia's fully-enabled electronic information environment designed to engage consumers, transform care delivery and improve population health, consumers have confidence that their personal health information is private, secure and used with their consent in appropriate, beneficial ways. Technological developments have been adopted in harmony with policies and business rules that foster trust and transparency. Organisations that store, transmit or use personal health information have internal policies and procedures in place that protect the integrity, security and confidentiality of personal health information. Policies and procedures are monitored for compliance, and consumers are informed of existing remedies available to them if they are adversely affected by a breach of security. Consumers trust and rely upon the secure sharing of healthcare information as a critical component of high quality, safe and efficient healthcare.

This vision was ranked midway in terms of its difficulty to implement and showed the best alignment of performance to importance. The strategy statements, while still well down in their absolute performance score, were ranked higher than most of the other strategy statements in this study, perhaps reflecting the current level of activity in the public debate on privacy. Respondents felt that engaging both consumers and industry stakeholders in the discussion on privacy was critical to success. The need was to educate these communities on the on the benefits and risks in securely sharing information and engage them in the development of appropriate privacy processes. Collaboration and leadership on these issues throughout government and industry was also considered critical for progress.

Responses to the strategy statements within this vision focus area are contained in Table 10. The Survey community believed these issues to be of high importance and low in performance. These strategy statements attracted an average difficulty of implementation score of 4.74, compared to an overall average of 4.86 and were ranked in the middle in terms of their difficulty to implement.

The ranking of the strategy statements in terms of their importance and performance is given in Figure 7. Apart from the statement relating to individual control of information (Question 32), this was the highest ranking group of strategy statements in terms of performance and importance. There has been considerable focus on privacy outside the area of health and there is a major review of Australian

privacy laws in progress, which has had extensive public consultation. These issues may have contributed to the higher ranking of these strategy statements.

The highest ranking individual issue was that of security, and ensuring that information stored was safe from unauthorized access or loss. This is fundamental to ensuring that consumers have sufficient trust in the systems they use to feel confident in using them.

The textual responses on issues that would contribute to our progress toward the stated vision ranked 'Developing Public Knowledge And Debate' as the most important issue. This issue was primarily related to establishing the discussion with health consumers so that have a balanced understanding of the benefits and risks associated with sharing information, and a clear understand of how their information is managed now. Policy development to control the use of information was also considered important. The creation of secure systems to manage according to established policies was also considered important. As in many of the other strategy areas the broad collaboration across government and those controlling the data was also critical for success.

In regard to the issues that would restrict our progress towards the vision, collaboration and policy development were the two highest ranking themes in the responses, emphasizing that the lack of either of these elements could derail the progress. Leadership was the next highest ranking theme, with the emphasis on the need for leadership within both government and health management to ensure not only the right policies are developed but that there are also effectively implemented. Finally, the broader need for educating the entire stakeholder community was raised, particularly in relation to the value of privacy and the security of the information systems begin proposed.

Table 13 - Average scores for importance, performance and degree of difficulty; Managing Privacy Security and Confidentiality

Question	Importance (Avg)	Performance (Avg)	Difficulty (Avg)
Question 30: Transparency Policies for the permissible use of personal health information by those other than the patient are clearly defined, accessible, and communicated in an easily understood format. In addition individuals have the right to know how their personal health information has been used and who has access to it.	6.34	3.20	4.68
Question 31: Collection and Use of Personal Health Information Personal health information of the individual consumer is obtainable consistent with applicable federal and state law. It is accurate, up-to-date, and limited to what is appropriate and relevant for the intended use. Consumers have a right to the privacy of their personal health information, taking into account existing exceptions under law. Consumers are apprised when they have a choice in how their personal health information is used and shared and when they can limit uses of their personal health information.	6.34	3.20	4.68
Question 32: Individual Control Individuals are able to limit when and with whom their identifiable personal health information is shared. Individuals are able to delegate these responsibilities to another person. Individuals are able to readily obtain an audit trail that discloses by whom their personal health information has been accessed and how it has been used.	5.76	2.43	4.99
Question 33: Security Measures are implemented to protect the integrity, security, and confidentiality of each individual's personal health information, ensuring that it cannot be lost, stolen, or accessed or modified in an inappropriate way. Organisations that store, transmit, or use personal health information have in place mechanisms for authentication and authorization of system users.	6.49	3.23	4.61

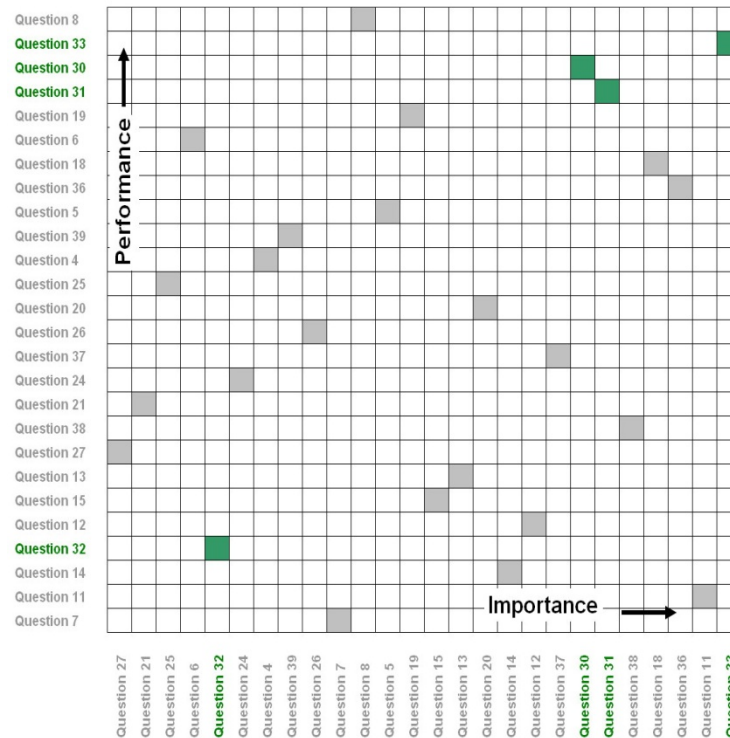


Figure 9 - Performance versus Importance ranking for the Privacy strategy statements (in green) in comparison to all strategy statements.

Table 14 - Themes appearing in comments from Managing Privacy Security and Confidentiality

Type	Theme in comments	% Occurrence
Assisting our progress to the vision	Developing Public Knowledge and Debate	20%
	Policy Development	19%
	Systems Requirements	15%
	Broad Collaboration	9%
Restricting our progress to the vision	Broad Collaboration	15%
	Policy Development	15%
	Leadership	13%
	Developing Stakeholder Knowledge	13%
	Developing Public Knowledge and Debate	13%

6) Policy and Implementation

Policy development and implementation bodies, both government and private deliver clear and insightful leadership of eHealth programs within the health sector. They have a deep understanding of the cultural and operational complexities of the area and ensure that programs are appropriately structured and funded to be successful.

This vision was ranked midway in terms of its difficulty to implement. The strategy statements displayed poor alignment between importance and performance indicating an area with a lack of a guiding plan. The most important strategy statement focused on the need for the government to strongly believe in the importance of eHealth systems and processes in improving Australian healthcare. The survey respondents felt that the related themes of the development of stakeholder commitment and broad collaboration were important to the success of this strategy segment. Leadership and the recognition of the conservative health culture also needed to be addressed for success.

Responses to the strategy statements within this vision are contained in Table 12. Respondents believed these strategies to be high in importance and low in performance. These strategy statements attracted an average difficulty of implementation score of 4.84 compared to an average score of 4.86, ranking this group of strategies midway in terms of implementation difficulty compared to the other strategy sets in this study.

The ranking of strategy statements in terms of importance and performance is given in Figure 8. As in a number of the other strategy sets, there is poor alignment between performance and importance ranking, indicating a lack of overarching strategy or coordination in this area. The highest ranking and most important issue of this set was the recognition of the benefits of eHealth by government. There appears to be a sense that the government does not fully believe in the benefits that could be delivered through eHealth systems and processes and that this must be addressed.

The text responses on issues that would assist in the progression toward this vision had the development of stakeholder commitment as its leading theme. This reflected the need for broad stakeholder involvement in the development of successful policy and the already complex array of bodies that need to be consulted and engaged. Again leadership, and within that theme the creation of a vision, were identified as key issues for success. In this vision focus area the need for an appropriately resourced plan that was effectively implemented was a consistent element of the responses. Governance and the appropriate control of plan implementation were also ranked highly.

In regard to issues that would restrict our progress toward this vision, the leading theme was the potential absence of collaboration between all the parties required for effective policy development, particularly the need for collaboration between Federal and State health authorities. Other important themes were developing stakeholder commitment and leadership, which reflected the same sentiments expressed in the “assisting progress to the vision” section. The final major theme was culture change, recognizing the conservative culture of healthcare and the need to address that in development and deployment of any new policy.

Table 15 - Average scores for importance, performance and degree of difficulty; Policy and Implementation

Question	Importance (Avg)	Performance (Avg)	Difficulty (Avg)
Question 36: Recognition of eHealth Benefit The Federal and State Governments recognise and accept that eHealth systems and process are a central enabler of transformational change in healthcare.	6.42	2.99	4.70
Question 37: eHealth Governance Structure Australia has a fully functional governance framework for e-Health that makes it clear who should be doing what and what their accountabilities and responsibilities are. This covers consumers, the Commonwealth, the States and Area Health Services, GP Divisions, NEHTA, AHMAC, AHIC, eHMAC, NEHTA, Standards Australia, and system vendors.	6.31	2.61	4.92
Question 38: Recognition of the Funding Required There is a recognition that the current levels of investment in Health IT are not sufficient to enable the improvements in efficiency and safety that the public expect. The relevant funding authorities have a clear appreciation of the level of funding required and a commitment to ensure that appropriate funding is made available.	6.36	2.53	4.90
Question 39: Understand Struct & Culture of Health There is a recognition that the inherently conservative nature of the health sector means that management of the introduction of technology and new processes needs to be undertaken in a consultative way that is sensitive to local needs (top down system imposition is not a viable option).	5.85	2.82	4.83

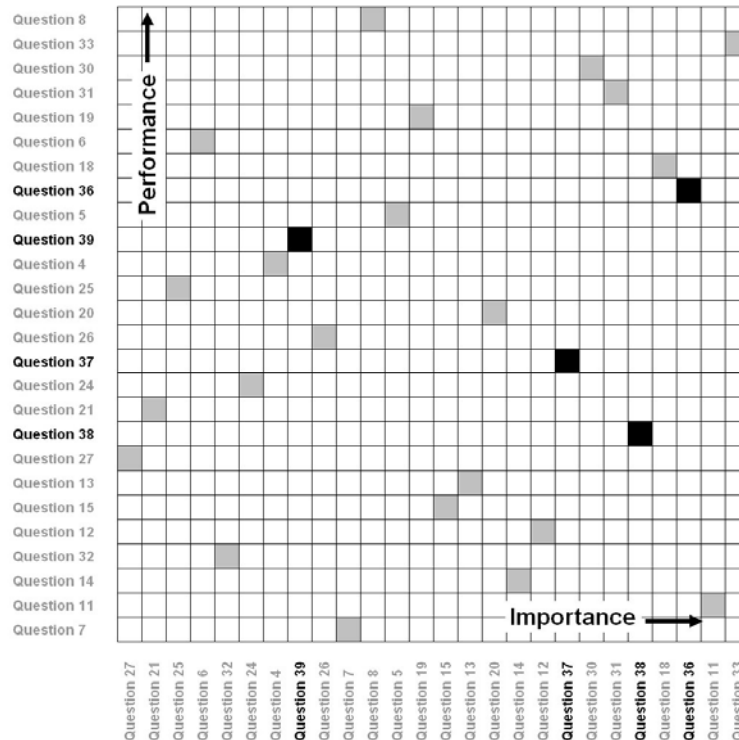
**Figure 10 - Performance versus Importance ranking for the policy and Implementation questions (in black) in comparison to all strategy statements.**

Table 16 - Themes appearing in comments from Policy and Implementation

Type	Theme in comments	% Occurrence
Assisting our progress to the vision	Developing Stakeholder Commitment	17%
	Leadership	16%
	Governance	13%
	Implementation	10%
Restricting our progress to the vision	Lack of Broad Collaboration	18%
	Little Developing of Stakeholder Commitment	15%
	Lack of Leadership	12%
	Resistance to Culture Change	8%

Conclusion

HISA takes no issue with the list of challenges for the healthcare system listed by Armstrong et al²³ in their MJA paper namely:

- *The next Australian Government will confront major challenges in the funding and delivery of health care.*
- *These challenges derive from:*
 - *Changes in demography and disease patterns as the population ages, and the burden of chronic illness grows;*
 - *Increasing costs of medical advances and the need to ensure that there are comprehensive, efficient and transparent processes for assessing health technologies;*
 - *Problems with health workforce supply and distribution;*
 - *Persistent concerns about the quality and safety of health services;*
 - *Uncertainty about how best to balance public and private sectors in the provision and funding of health services;*
 - *Recognition that we must invest more in the health of our children;*
 - *The role of urban planning in creating healthy and sustainable communities; and*
 - *Understanding that achieving equity in health, especially for Indigenous Australians, requires more than just providing health care services.*
- *The search for effective and lasting solutions will require a consultative approach to deciding the nation's priority health problems and to designing the health system that will best address them; issues of bureaucratic and fiscal responsibility can then follow.*

Indeed many of the written comments from the survey reported here support these views. There is however the implication by the absence of comment in their paper, and the papers by Abbott²⁴, Roxon²⁵ and Capolingua²⁶, that health informatics is seen merely as an enabling technology with the presumption that if you get the other plans in place, eHealth will somehow sort itself out. We, on the other hand, believe this to be a major and complex engineering project of the scale of a Snowy Mountains Scheme that can only happen properly with a good plan and the resources to implement it.

This paper contains a vision that is strongly supported for application in Australia by those who have an understanding of health informatics. While it should be tested more widely, this should not delay the urgent development of a national resourced plan that would get us to a vision like this one. That plan should include strategy development, a business case, an implementation plan and a benefits realisation plan.

Too often in the past there has not been a good understanding of what needs to be done and the constancy of purpose that is required to get it done. Australia needs political champions who can provide the necessary leadership in collaboration with the healthcare community to move us quickly to a new healthcare system transformed by health informatics.

²³ Bruce K Armstrong, James A Gillespie, Stephen R Leeder, George L Rubin and Lesley M Russell, Challenges in health and health care for Australia, MJA 2007; 187 (9): 485-489, http://www.mja.com.au/public/issues/187_09_051107/arm11047_fm.html

²⁴ Tony Abbott, Good health systems, getting better, MJA 2007; 187 (9): 490-492

²⁵ Nicola Roxon, Taking leadership — tackling Australia's health challenges, MJA 2007; 187 (9): 493-495

²⁶ Rosanna Capolingua, A mandate to strengthen the health system, MJA 2007; 187 (9): 497-499

Appendix A – Survey Instrument and Results

Australian eHealth Strategy and Policy Survey
Response Status: Completes and Partial
Filter: No filter applied
Nov 08, 2007 6:03 PM PST

eHealth Strategy and Policy in Australia

This survey looks to identify the components of a comprehensive eHealth strategy and where Australia stands now in the design and implementation of such a strategy.

The survey is divided into 6 focus areas, each with an overall vision statement, together with a further set of statements defining aspects of the vision in terms of what a future eHealth environment should look like.

You are asked to assess the vision and the future eHealth environment (in the context of Australia) in terms of:

- 1. The importance of that particular aspect of the future vision.
- 2. How successful Australia has been so far in achieving that aspect of the vision.
- 3. How hard it will be to achieve that aspect of the vision in the future.

For each vision statement you will also be asked to provide your comments on the activities that would help Australia progress toward that vision and also activities that would hinder our progress.

This is an important opportunity to influence our national position on eHealth and your contribution is valuable.

1. Tell us About Yourself

This survey is designed to maintain your privacy, it does not record your email address or any identifying details. So, to allow us to better analyze the results we would like you to answer a few questions about yourself. Just click on the boxes which best fit your background:

I am a doctor	26	12%
I am a nurse	21	10%
I am a healthcare manager	21	10%
I am an academic	29	14%

I am an allied health professional	8	4%
I am a healthcare professional in other areas	16	8%
I am a health IT technologist	98	46%
Other, please specify	41	19%

2. Tell us About Yourself

Could you now tell us about the type of organisation that you work for. Click on the box which best fits your organisation:

I work for a university	30	14%
I work for a healthcare establishment	67	32%
I work for a healthcare systems vendor	24	11%
I work for a government department	38	18%
I work for a healthcare services supplier	16	8%
Other, please specify	36	17%
Total	211	100%

3. Tell us About Yourself

Just one more question about the size of the organisation that you work for. Click on the box which best describes the number of staff in your organisation:

Less than 10	25	12%
11 to 50	33	16%
50 to 200	15	7%
200 to 1000	20	9%
Greater than 1000	118	56%
Total	211	100%

Focus Area 1: Vision for Engaging Consumers

Patients will be fully engaged in their own healthcare, supported by information and tools that enable informed consumer action and decision making, working hand-in-hand with healthcare providers. Tools that support consumer engagement are well designed and customized to the diversity of consumers. These tools are integrated into the delivery of care, and are conveniently available outside healthcare settings as well.

In terms of the above vision statement, the following questions look to characterise Australia's position in progressing toward that vision. The questions are based on a series of statements defining critical aspects of a potential future eHealth environment. We would like you to rate each of these future states in terms of:

1. The importance of that particular aspect of the future vision.
2. How successful Australia has been so far in achieving that aspect of the vision.
3. How hard it will be to achieve that aspect of the vision in the future.

We are asking you to provide your response on a 1 to 7 scale where 1 is the lowest level outcome and 7 is the highest outcome.

After the vision statement questions you will also be asked to provide your comments on the activities that would help Australia progress toward that vision and also activities that would hinder our progress.

4. Consumer Engagement in Healthcare

We fully understand the Australian health consumer's needs and have effectively educated them in how to take control of their own healthcare.

	Lowest	2	3	4	5	6	Highest
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.							
Importance of the statement	1 0%	4 2%	5 2%	17 8%	34 16%	83 39%	67 32%
Australia's current performance	21 10%	76 36%	72 34%	32 15%	9 4%	1 0%	0 0%
How hard will it be to achieve	2 1%	8 4%	13 6%	32 15%	51 24%	79 37%	26 12%

5. Consumer Access and Control of Personal Health Information

We fully involve consumer organisations, healthcare providers and supporting industry participants in creating consensus principles and standards that support consumer-control of electronic personal health information.

	Lowest	2	3	4	5	6	Highest
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.							
Importance of the statement	1 0%	0 0%	3 1%	13 6%	43 20%	73 35%	78 37%

Australia's current performance	26 12%	64 30%	57 27%	41 20%	19 9%	2 1%	1 0%
How hard will it be to achieve	1 0%	6 3%	13 6%	31 15%	62 30%	60 29%	37 18%

6. Consumer Participation and Transparency

Australia has defined the organisational requirements for consumer participation and transparency and require compliance with those requirements. We ensure that consumers are aware of their information and participation rights.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	0 0%	2 1%	5 2%	28 13%	36 17%	86 41%	53 25%
Australia's current performance	25 12%	55 26%	55 26%	43 21%	25 12%	5 2%	1 0%
How hard will it be to achieve	1 0%	8 4%	22 11%	47 22%	58 28%	46 22%	27 13%

7. Consumer Access to Electronic Health Information Tools and Services

Where electronically available, consumers are able to acquire historical data from providers, government, insurers and other entities to generate a more complete longitudinal record that is incorporated into accessible tools and interfaces. These systems support the variety of levels of health literacy in the community and assist consumers in making evidence based decisions.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	0 0%	2 1%	2 1%	14 7%	51 25%	63 30%	75 36%
Australia's current performance	76 37%	69 33%	39 19%	16 8%	4 2%	3 1%	0 0%
How hard will it be to achieve	6 3%	3 1%	21 10%	22 11%	49 24%	56 27%	49 24%

8. Consumer Trust

Australia has publicly available information policies on the handling of health information and has incorporated these policies in accreditation processes for health organisations which store and manage health information.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	0 0%	0 0%	3 1%	11 5%	43 21%	84 40%	68 33%
Australia's current performance	17 8%	40 19%	37 18%	52 25%	33 16%	24 12%	4 2%
How hard will it be to achieve	8	18	21	54	48	37	18



9. Initiatives that would assist Australia achieving the vision
139 Responses

10. Barriers that would prevent or restrict Australia achieving the vision
142 Responses

Please proceed to Focus Area 2: Transforming Care Delivery at the Point of Care, by pressing the submit button at the bottom of the page.

You have now completed the questions for 1 of the 6 focus areas.

Focus Area 2: Vision for Transforming Care Delivery at the Point of Care

Australian patient care is high quality, patient-centered, for a lifetime, and reflects a coordinated and collaborative approach. Complete, timely and relevant patient-focused information and clinical decision support tools are available, as part of the provider's workflow, at the point of care. High quality and efficient patient care is supported by the deployment and use of interoperable health IT and secure data exchange between and across all relevant stakeholders.

In terms of the above vision statement, the following questions look to characterise Australia's position in progressing toward that vision. The questions are based on a series of statements defining critical aspects of a potential future eHealth environment. We would like you to rate each of these future states in terms of:

1. The importance of that particular aspect of the future vision.

2. How successful Australia has been so far in achieving that aspect of the vision.
3. How hard it will be to achieve that aspect of the vision in the future.

We are asking you to provide your response on a 1 to 7 scale where 1 is the lowest level outcome and 7 is the highest outcome.

After the vision statement questions you will also be asked to provide your comments on the activities that would help Australia progress toward that vision and also activities that would hinder our progress.

11. Patient Centred Care

Australia has standards-based eHealth systems supporting new models of care delivery that are patient-centered, for a lifetime, and physician-guided, reflecting a coordinated, collaborative approach. To ensure care delivery is truly patient-centered, the systems also provide meaningful, understandable and useful information for patients and providers at the point of care.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	1 1%	1 1%	0 0%	5 3%	10 6%	54 31%	102 59%
Australia's current performance	42 24%	59 34%	40 23%	22 13%	9 5%	0 0%	0 0%
How hard will it be to achieve	3 2%	4 2%	13 8%	24 14%	46 27%	52 30%	31 18%

12. Patient and Clinician-Centered Workflow

We facilitate the transformation to patient-centered care by making more complete, timely and relevant patient-focused data and clinical decision support tools available in a secure manner to clinicians, the broader healthcare team and patients as part of the workflow at the point of care.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	0 0%	0 0%	0 0%	8 5%	20 11%	58 33%	88 51%
Australia's current performance	43 25%	57 33%	38 22%	26 15%	8 5%	1 1%	0 0%
How hard will it be to achieve	2 1%	1 1%	15 9%	34 20%	48 28%	53 31%	20 12%

13. Broad Engagement

In Australia all healthcare providers regardless of size, specialty, or location, and especially small physician practices are engaged and supported in both local and national efforts to make patient-focused electronic health information available at the point of care

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	1 1%	0 0%	3 2%	4 2%	24 14%	70 40%	71 41%
Australia's current performance	38 22%	58 34%	43 25%	20 12%	10 6%	3 2%	0 0%
How hard will it be to achieve	5 3%	9 5%	8 5%	32 19%	42 24%	45 26%	31 18%

14. Change Management

The Australian health policy developers and those who implement the policies understand the breadth of work practice changes required to productively implement eHealth systems. They make a considerable investment in the engagement of thought leaders and influencers at all levels within the organizations undergoing change. The engagement of these leaders is combined with appropriate education to support the change management process.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	1 1%	0 0%	1 1%	8 5%	26 15%	49 28%	89 51%
Australia's current performance	51 29%	48 28%	38 22%	25 14%	12 7%	0 0%	0 0%
How hard will it be to achieve	4 2%	8 5%	17 10%	29 17%	40 23%	42 24%	34 20%

15. Understanding Reality

Australian health policy developers and the health managers who implement the policies have a realistic understanding of the size of the task, the resources that are required and the time frame over which change likely occur.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	1 1%	0 0%	2 1%	14 8%	26 15%	49 28%	82 47%
Australia's current performance	50 29%	47 27%	40 23%	23 13%	10 6%	3 2%	1 1%
How hard will it be to achieve	4 2%	5 3%	16 9%	31 18%	42 24%	37 21%	39 22%

16. Initiatives that would assist Australia achieving the vision

91 Responses

17. Barriers that would prevent or restrict Australia achieving the vision

85 Responses

Please proceed to Focus Area 3: Improving Population Health, by pressing the submit button at the bottom of the page.

You have now completed the questions for 2 of the 6 focus areas.

Focus Area 3: Vision for Improving Population Health

Electronic healthcare data and secure health information exchange are utilized to facilitate the flow of reliable health information among population health and clinical care systems to improve the health status of populations as a whole. Information is utilized to enhance healthcare experiences for individuals, eliminate health disparities, measure and improve healthcare quality and value, expand knowledge about effective improvements in care delivery and access, support public health surveillance, and assist researchers in developing evidence-based advances in areas such as diagnostic testing, illness and injury treatment, and disease prevention.

In terms of the above vision statement, the following questions look to characterise Australia's position in progressing toward that vision. The questions are based on a series of statements defining critical aspects of a potential future eHealth environment. We would like you to rate each of these future states in terms of:

1. The importance of that particular aspect of the future vision.
2. How successful Australia has been so far in achieving that aspect of the vision.

3. How hard it will be to achieve that aspect of the vision in the future.

We are asking you to provide your response on a 1 to 7 scale where 1 is the lowest level outcome and 7 is the highest outcome.

After the vision statement questions you will also be asked to provide your comments on the activities that would help Australia progress toward that vision and also activities that would hinder our progress.

18. Recognition of the Population Health Value of Clinical Health Data

Clinical data that is derived from the care delivery process is broadly and effectively used for improving population health, including but not limited to the following critical areas:

Improving the quality, safety, efficiency and effectiveness of healthcare

Monitoring, detecting and responding to hazards and threats, to protect the public's health

Expanding knowledge about disease, diagnosis and appropriate treatments and services

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	1 1%	0 0%	2 1%	4 2%	13 8%	53 32%	92 56%
Australia's current performance	25 15%	44 27%	33 20%	41 25%	16 10%	7 4%	0 0%
How hard will it be to achieve	1 1%	5 3%	20 12%	42 25%	37 22%	40 24%	21 13%

19. Abiding by a Common set of Principles and Policies

Everyone who utilizes clinical data derived from the care delivery process for population health purposes does, in addition to abiding by current federal and state laws, rules and regulations, abide by a common set of principles and policies developed through a transparent, open process involving multiple stakeholders, including but not limited to consumers, providers, payers, purchasers, and researchers to build trust and confidence in the use of such data.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	0 0%	2 1%	1 1%	16 10%	25 15%	50 30%	70 43%
Australia's current performance	19 11%	38 23%	41 25%	36 22%	23 14%	9 5%	0 0%
How hard will it be to achieve	3 2%	9 5%	18 11%	44 27%	41 25%	30 18%	20 12%

20. Use of a Common Data Set							
Healthcare organizations use the clinical data derived from electronic clinical data systems in a “one data source, multiple uses” approach. There is widespread implementation of a set of common data elements, standards for interoperability, policies and business models for data sharing.							
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	2 1%	1 1%	3 2%	9 5%	14 8%	51 31%	86 52%
Australia's current performance	36 22%	45 28%	39 24%	25 15%	14 9%	4 2%	0 0%
How hard will it be to achieve	3 2%	10 6%	15 9%	28 17%	33 20%	45 27%	30 18%

21. Financial Incentives will be Required							
Financial benefits or incentives have been established to equitably compensate the healthcare organisations which capture the data but do not receive the benefits from the data capture work.							
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	4 2%	3 2%	4 2%	26 16%	40 25%	40 25%	46 28%
Australia's current performance	40 25%	43 26%	39 24%	34 21%	6 4%	1 1%	0 0%
How hard will it be to achieve	6 4%	10 6%	22 14%	54 33%	24 15%	31 19%	15 9%

22. Initiatives that would assist Australia achieving the vision
64 Responses

23. Barriers that would prevent or restrict Australia achieving the vision
64 Responses

Please proceed to Focus Area 4: Aligning Financial and Other Incentives, by pressing the submit button at the bottom of the page.

You have now completed the questions for 3 of the 6 focus areas.

Focus Area 4: Vision for Aligning Financial and Other Incentives

Healthcare providers are rewarded appropriately for managing the health of patients in a holistic manner. Meaningful incentives help accelerate improvements in quality, safety, efficiency and effectiveness. Quality of care delivery and outcomes are the engines that power the payment of providers.

In terms of the above vision statement, the following questions look to characterise Australia's position in progressing toward that vision. The questions are based on a series of statements defining critical aspects of a potential future eHealth environment. We would like you to rate each of these future states in terms of:

- 1. The importance of that particular aspect of the future vision.
- 2. How successful Australia has been so far in achieving that aspect of the vision.
- 3. How hard it will be to achieve that aspect of the vision in the future.

We are asking you to provide your response on a 1 to 7 scale where 1 is the lowest level outcome and 7 is the highest outcome.

After the vision statement questions you will also be asked to provide your comments on the activities that would help Australia progress toward that vision and also activities that would hinder our progress.

24. Meaningful Incentives						
The financing or incentive programs supporting health IT are meaningful and result in improvements in quality, safety, efficiency or effectiveness in health care.						
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	Highest
Importance of the statement	2	3	3	17	30	60

Importance of the statement	1%	2%	2%	11%	19%	26%	38%
Australia's current performance	32	51	36	26	11	1	0
	20%	32%	23%	17%	7%	1%	0%
How hard will it be to achieve	1	11	19	59	29	25	13
	1%	7%	12%	38%	18%	16%	8%

25. Phased Approach

The financing or incentive programs utilize a phased approach involving eHealth beginning with the clinical implementation of eHealth systems and leading up to the use of electronic information to support performance improvement.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	3	3	6	20	35	41	48
	2%	2%	4%	13%	22%	26%	31%
Australia's current performance	31	34	53	31	5	2	0
	20%	22%	34%	20%	3%	1%	0%
How hard will it be to achieve	1	8	27	44	37	25	13
	1%	5%	17%	28%	24%	16%	8%

26. Assure Interoperability

The financing or incentive programs involving eHealth systems lead to the use of existing standards to assure interoperability.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	3	2	3	14	21	51	64
	2%	1%	2%	9%	13%	32%	41%
Australia's current performance	38	44	31	33	9	2	1
	24%	28%	20%	21%	6%	1%	1%
How hard will it be to achieve	2	13	18	32	48	27	16
	1%	8%	12%	21%	31%	17%	10%

27. Cost Reflects Benefit

Stakeholders that benefit share some equitable portion of the cost related to eHealth systems financing or incentives. Equity has been achieved through detailed studies that ascertained specifically who benefits, and by how much. This information ensured that incentive programs were meaningful, phased, and appropriately aligned.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	4	3	8	20	43	40	39
	3%	2%	5%	13%	27%	25%	25%
Australia's current performance	38	42	36	25	9	1	0
	25%	28%	24%	17%	6%	1%	0%

How hard will it be to achieve	2	8	18	39	43	31	14
	1%	5%	12%	25%	28%	20%	9%

28. Initiatives that would assist Australia achieving the vision

52 Responses

29. Barriers that would prevent or restrict Australia achieving the vision

50 Responses

Please proceed to Focus Area 5: Managing Privacy, Security and Confidentiality, by pressing the submit button at the bottom of the page.

You have now completed the questions for 4 of the 6 focus areas.

Focus Area 5: Vision for Managing Privacy, Security and Confidentiality

In Australia's fully-enabled electronic information environment designed to engage consumers, transform care delivery and improve population health, consumers have confidence that their personal health information is private, secure and used with their consent in appropriate, beneficial ways. Technological developments have been adopted in harmony with policies and business rules that foster trust and transparency. Organizations that store, transmit or use personal health information have internal policies and procedures in place that protect the integrity, security and confidentiality of personal health information. Policies and procedures are monitored for compliance, and consumers are informed of existing remedies available to them if they are adversely affected by a breach of security. Consumers trust and rely upon the secure sharing of healthcare information as a critical component of high quality, safe and efficient healthcare.

In terms of the above vision statement, the following questions look to characterise Australia's position in progressing toward that vision. The questions are based on a series of statements defining critical aspects of a potential future eHealth environment. We would like you to rate each of these future states in terms of:

1. The importance of that particular aspect of the future vision.
2. How successful Australia has been so far in achieving that aspect of the vision.
3. How hard it will be to achieve that aspect of the vision in the future.

We are asking you to provide your response on a 1 to 7 scale where 1 is the lowest level outcome and 7 is the highest outcome.

After the vision statement questions you will also be asked to provide your comments on the activities that would help Australia progress toward that vision and also activities that would hinder our progress.

30. Transparency

Policies for the permissible use of personal health information by those other than the patient are clearly defined, accessible, and communicated in an easily understood format. In addition individuals have the right to know how their personal health information has been used and who has access to it.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	0 0%	1 1%	2 1%	5 3%	17 11%	42 27%	91 58%
Australia's current performance	23 15%	31 20%	39 25%	31 20%	21 13%	12 8%	0 0%
How hard will it be to achieve	2 1%	15 10%	17 11%	34 22%	38 25%	27 17%	22 14%

31. Collection and Use of Personal Health Information

Personal health information of the individual consumer is obtainable consistent with applicable federal and state law. It is accurate, up-to-date, and limited to what is appropriate and relevant for the intended use.

Consumers have a right to the privacy of their personal health information, taking into account existing exceptions under law. Consumers are apprised when they have a choice in how their personal health information is used and shared and when they can limit uses of their personal health information.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	0 0%	2 1%	2 1%	5 3%	21 13%	55 35%	73 46%
Australia's current performance	23 15%	31 20%	34 22%	40 25%	19 12%	11 7%	0 0%
How hard will it be to achieve	1 1%	16 10%	11 7%	31 20%	52 33%	23 15%	22 14%

32. Individual Control

Individuals are able to limit when and with whom their identifiable personal health information is shared. Individuals are able to delegate these responsibilities to another person.

Individuals are able to readily obtain an audit trail that discloses by whom their personal health information has been accessed and how it has been used.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	2 1%	3 2%	6 4%	20 13%	24 15%	36 23%	66 42%
Australia's current performance	50 32%	45 29%	27 17%	19 12%	12 8%	4 3%	0 0%
How hard will it be to achieve	3 2%	10 6%	12 8%	30 19%	38 24%	31 20%	32 21%

33. Security

Measures are implemented to protect the integrity, security, and confidentiality of each individual's personal health information, ensuring that it cannot be lost, stolen, or accessed or modified in an inappropriate way.

Organizations that store, transmit, or use personal health information have in place mechanisms for authentication and authorization of system users.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	0 0%	0 0%	1 1%	5 3%	14 9%	32 21%	104 67%
Australia's current performance	21 13%	34 22%	32 20%	37 24%	25 16%	7 4%	1 1%
How hard will it be to achieve	4 3%	12 8%	22 14%	30 19%	44 28%	21 14%	22 14%

34. Initiatives that would assist Australia achieving the vision
49 Responses

35. Barriers that would prevent or restrict Australia achieving the vision
47 Responses

Please proceed to Focus Area 6: Policy and Implementation, by pressing the submit button at the bottom of the page.
You have now completed the questions for 5 of the 6 focus areas.

Domain 6: Policy and Implementation

Policy development and implementation bodies, both government and private deliver clear and insightful leadership of eHealth programs within the health sector. They have a deep understanding of the cultural and operational complexities of the area and ensure that programs are appropriately structured and funded to be successful.

In terms of the above vision statement, the following questions look to characterise Australia's position in progressing toward that vision. The questions are based on a series of statements defining critical aspects of a potential future eHealth environment. We would like you to rate each of these future states in terms of:

1. The importance of that particular aspect of the future vision.

2. How successful Australia has been so far in achieving that aspect of the vision.

3. How hard it will be to achieve that aspect of the vision in the future.

We are asking you to provide your response on a 1 to 7 scale where 1 is the lowest level outcome and 7 is the highest outcome.

After the vision statement questions you will also be asked to provide your comments on the activities that would help Australia progress toward that vision and also activities that would hinder our progress.

36. Recognition of eHealth Benefit

The Federal and State Governments recognise and accept that eHealth systems and process are a central enabler of transformational change in healthcare.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

	Lowest	2	3	4	5	6	Highest
Importance of the statement	1 1%	1 1%	0 0%	6 4%	9 6%	45 28%	97 61%
Australia's current performance	27 17%	44 28%	29 18%	32 20%	17 11%	6 4%	3 2%
How hard will it be to achieve	6 4%	16 10%	14 9%	27 17%	40 25%	33 21%	23 14%

37. eHealth Governance Structure

Australia has a fully functional governance framework for e-Health that makes it clear who should be doing what and what their accountabilities and responsibilities are. This covers consumers, the Commonwealth, the States and Area Health Services, GP Divisions, NEHTA, AHMAC, AHIC, eHMAC, NEHTA, Standards Australia, and system vendors.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

	Lowest	2	3	4	5	6	Highest
Importance of the statement	1 1%	1 1%	1 1%	6 4%	14 9%	47 30%	87 55%
Australia's current performance	43 27%	42 27%	27 17%	29 18%	13 8%	4 3%	0 0%
How hard will it be to achieve	2 1%	8 5%	12 8%	42 27%	31 20%	39 25%	23 15%

38. Recognition of the Funding Commitment Required for Effective Change

There is a recognition that the current levels of investment in Health IT are not sufficient to enable the improvements in efficiency and safety that the public expect. The relevant funding authorities have a clear appreciation of the level of funding required and a commitment to ensure that appropriate funding is made available.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.

	Lowest	2	3	4	5	6	Highest
Importance of the statement	1 1%	2 1%	0 0%	7 4%	8 5%	47 30%	91 58%
Australia's current performance	41	43	37	22	10	3	0

Australia's current performance	26%	28%	24%	14%	6%	2%	0%
How hard will it be to achieve	3	14	16	23	36	31	31
	2%	9%	10%	15%	23%	20%	20%

39. Understanding of the Structure and Culture of the Health Environment							
There is a recognition that the inherently conservative nature of the health sector means that management of the introduction of technology and new processes needs to be undertaken in a consultative way that is sensitive to local needs (top down system imposition is is not a viable option).							
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Lowest	2	3	4	5	6	Highest
Importance of the statement	2	5	6	13	23	36	73
	1%	3%	4%	8%	15%	23%	46%
Australia's current performance	28	38	45	28	16	2	0
	18%	24%	29%	18%	10%	1%	0%
How hard will it be to achieve	2	8	17	40	31	35	22
	1%	5%	11%	26%	20%	23%	14%

40. Initiatives that would assist Australia achieving the vision
50 Responses

41. Barriers that would prevent or restrict Australia achieving the vision
49 Responses

You have now completed all survey questions, please press the submit button below to finalise the survey.

Appendix B – Mind Map of Affinity Themes from Text Responses

