

MEMORANDUM TO THE BOARD

12 MAY 2010

AGENDA ITEM 9

INFORMATION SYSTEMS STRATEGIC PLAN FY 10/11

Purpose

The purpose of this report is to provide the Board with an Information Systems Strategic Plan (ISSP) for FY 10/11 and obtain Board approval for this. The plan identifies those items in the work programme that are in the IS Capital Plan for FY 10/11, noting that the capital items are also presented to the Board as a component of the overall DHB Capital Plan.

The Chief Information Officer will attend the Board meeting to present this material and answer questions.

Introduction

This ISSP for FY10/11 is presented to the Board at a time when there continues to be significantly high levels of demand expressed locally and beyond, and a reshaping of information technology in the health sector is occurring. At the same time there is a need to undertake work at a reasonable pace so it is done well with time to settle new systems and processes into place. The two are not immediately compatible.

The key drivers shaping the ISSP in this and subsequent years are as follows. No priority order is implied in the sequence of the listing, as typically several of these drivers interact to shape parts of the work programme:

- SCR building programme, which has diverse requirements;
- Legacy system replacement, with risk reduction and business benefits;
- Information, Communications and Technology (ICT) reliability and responsiveness, in both technology and services;
- Operational improvements or initiatives by the DHB, for instance to meet health targets, or advance patient safety;
- Health Waikato Capital Plan projects which have ICT components or implications, for instance clinical devices with digital networking requirements;
- Regional initiatives, both services and enabling technologies;
- National Health Information Technology Board (NHITB) National Plan which is out in draft for consultation at time of writing this plan (attached for information);
- Shared Services Agency priorities - those they select and those they don't: a confidential first plan is known to be with responsible ministers at this time;
- National initiatives, e.g. from Ministry of Health, Department of Internal Affairs;
- Life cycle requirements – such as application maintenance;
- Clinical information and systems planning;
- Primary-secondary integration, especially the Midland EOI which continues to evolve;
- IS business as usual operations;
- Technology advancement itself.

The environment is highly turbulent. It requires us to maintain focus on the key projects whilst also remaining responsive to changing priorities and adjusting course or investments as the situation warrants.

This plan represents our best effort right now at presenting the certain, probable and possible. Most of the work items listed in this plan as prioritised and budgeted are clear, unequivocal, and likely to remain “as is” for the duration of the year. Some, however, will almost certainly be reshaped or reprioritised, such as when regional initiatives firm up or the Acute Services building gets closer to commissioning. Some of the projects listed in this plan are or will become subject to events or planning outside the Waikato District Health Board, for instance those within the purview of the Shared Services Agency.

The approach to managing through these fluid business circumstances is to update the plan quarterly with key stakeholders, and use standard DHB processes to approve any revisions arising from such reviews, including the Board.

As with last year, the work programme is intended to be the least ambitious it can be under the circumstances. It is still probably more than can be achieved within the timeframes implied. The intent is to at least start all the work listed here which is certain at the outset of the year, and to have completed a reasonable amount of it by the end of the financial year.

The proposed IS Capital Plan for FY10/11 is \$18.635m for approvals, or \$12.685m expected cash spend. This compares with an initial IS Capital Plan for FY09/10 of \$12.550m, with projected spend this year of around \$7.500m, and FY08/09 of \$13.350m, for which the capital expenditure out-turn was \$8.500m.

The proposed IS Opex budget for FY10/11 is \$26.40m (including \$7.524m for depreciation), compared with FY09/10 of \$20.183m with expected out-turn of \$24.456m. In FY08/09 the IS operating budget was \$18.412m (inclusive of \$3.802m depreciation) and out-turn of \$18.909m.

The overall work programme for FY 10/11 will be composed of projects from several sources:

- Continuing work from FY 09/10 capital plan;
- Un-started work prioritized and carried forward from FY09/10;
- New IS capital projects for FY 10/11, both local and regional;
- Non-capital IS projects carried over from FY 09/10; and new work for FY10/11;
- National initiatives.

Each of these components is described in this report. The ISSP overview of projects is provided in the following table; those items currently in the FY10/11 IS Capital Plan and District Annual Plan are identified as such.

Work programme overview FY10/11

The high-level work programme for 2010/11 is outlined in the following table. Relevant points to note are:

- The list includes key work items funded by Capex and/or Opex budgets;
- Where numbers are provided they are shown in 000s;
- Financial year figures are cash for that year; total approval figures for whole projects are shown in the ‘Total project \$ value’ column;
- All FY09/10 projects finishing in the current financial year have been removed;
- Overall the capital component of this updated plan is largely the same as that previously tabled to the Board in March 2010: some items previously for FY10/11 were moved forward to FY 09/10 on approval by the Board in April 2010;
- All projects listed in the IS Capital Plan at March 2010 are included in the table for completeness, however some are only relevant in later financial years;
- Budgetary figures for FY 11/12 are also included for completeness.

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
Desktop >2k	370	This provision covers larger desktops, multi-function devices and other peripherals that cost more than \$2k each	370	370	150	No total project value; annual sum applies. Not included in 10/11 DAP.
Desktop replacement	1,200	The cyclic replacement of desktops as they age, including moving to newer technologies.				Opex budget, annual figure. Included in 10/11 DAP.
Patient Management System (iPM) – Release 7001	350	Design, testing and implementation of a range of enhancements to the DHB's Patient Management System for ED, patient record tracking, and ACC patients.				Started 2008; budget uplift approved April 2010. Completes August 2010; carry forward from 09/10. Not included in 10/11 DAP.
Patient Management System (iPM) – Release 9001	786	Design, testing and implementation of a range of enhancements to the DHB's Patient Management System.	300	300	0	Started July 2009. \$486k approved already. Completes August 2011. Included in 10/11 DAP.
Patient Management System (iPM) - database upgrade	400	Was to upgrade the database to a newer version. Now included in the clinical and corporate platform upgrade project.		0		Project now merged with clinical platform upgrade.
Pharmacy system phase 1 – planning, scoping and analysis	300	Planning, scoping and analysis of requirements for pharmacy information system with Health Waikato. The hospital pharmacy system must be replaced and medicine supply chain issues addressed.		200	0	Approved in Plan in 08/09; delayed start to work in 09/10; carry forward to 10/11. Included in 10/11 DAP.

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
Pharmacy system phase 2 - implementation	2,500	Implementation of new hospital pharmacy management system, and other systems, reporting, and solutions to meet information flow requirements from the Phase 1 study.	2,500		800	Total budget may need review once Phase 1 work is done. Included in 10/11 DAP.
Waikato clinical systems programme - planning study	100	The definition of requirements of Health Waikato clinicians for information, systems, and access to them, including a review of actual and preferred clinical processes and information outputs. (This is what a planning study covers). There are potentially 10 distinct components to the overall programme.				Opex funded. A programme brief is under consideration by the Programme Board. There is a strong driver to meet in the SCR build programme targets, for instance the Waikato Clinical Centre. Included in 10/11 DAP.
Regional clinical systems planning study	100	Regional clinical systems planning study to determine the regional approach, deployment models, and product set for Midland convergence. Will be driven in part by the Regional Clinical Services Plan.	0	0		Moved to Opex funded, currently at lower level (100k). Included in 10/11 DAP.
Licensing True-Up	200	Annual contractual commitment to pay for volume increases, particularly for desktop office software suite and user access growth.	200	200	200	No total; annual sum applies. Not included in 10/11 DAP.
Capacity augment	200	Supports incremental growth in demand for storage and processing capacity during the	200	200	200	No total; annual sum applies. New \$ for FY10/11.

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
		year which is not covered by other projects.				Not included in 10/11 DAP.
Waikato Campus New Computing Facility	600	The planning, design and facility provisioning of a new computing facility at Waikato campus (under new ED). This provides for the relocation of small and departmental systems from Hockin and throughout the campus into a properly designed facility meeting modern computing standards. This is complementary to the major DHB data centre in Hamilton which is used for enterprise local and regional systems.	600	600	0	Some funds also being provided by SCR budget. Included in 10/11 DAP.
Unified Communications – Phase 2: Design	500	Detailed Solution Design for DHB voice and collaboration services. There is a strong emphasis on the replacement of aging equipment such as PABX with new technologies and addressing the risk and timeframes associated with the SCR building programme.				Design starts soon in 09/10 focused on SCR-related remediation work; continues in 10/11 on new work. Not included in 10/11 DAP.
Unified Communications – Phase 3 Implementation	2,250	Procurement and deployment of the following services within Waikato DHB: Land & Mobility Telephony Integration, IP telephony & Handsets, Voice Mail, Voice Response, Unified Communications, Voice and Video Conferencing Platform,		1,250	1,000	Start delayed until 10/11. Will be tackled in two parts: with two business cases: SCR-related remediation, then new works later. Included in 10/11 DAP.

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
		T-Hospital & Rural Voice Integration.				
e-referrals	200	Rollout Waikato-wide of the pilot solution to participating GPs and practices using MedTech32 and BPAC applications.		100		Delayed start to work in 09/10; some carry forward to 10/11. Included in 10/11 DAP.
Enterprise Reporting phase 3	700	Requirements definition, selection and deployment of Business Intelligence tools and upgrade to Data Warehouse. Service configuration.	700	700	0	Included in 10/11 DAP.
Intranet	600	Major overhaul and upgrade of the DHB Intranet and supporting technologies: in three phases: Planning & Architecture; Design; Implementation.	0		600	Some planning work will start in FY10/11. Not included in 10/11 DAP.
Workflow management	600	Will include: Business Process Repository: design and implementation; Business Case Workflow: design and implementation; Forms (clinical and corporate) planning study; and SharePoint Design study.	0		0	Work on Payroll forms brought forward but in new line item. Not included in 10/11 DAP.
Integrated Oral Health system	1,400	New application, reporting, infrastructure and connectivity across School Dental Service (SDS) and Hospital Oral Health department, and supporting infrastructure. Supports implementation of the Community Oral Health strategy.	1,400	1,100	300	Revised for 10/11, as estimated budget now at 1.4m compared with 900k showing in March 2010 DHB Capital Plan. Included in 10/11 DAP.

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
Lab services IS renewal Phase 2 - implementation	4,300	Implementation of new Laboratory System, based on an approved business case. Significant process improvements and fit with new laboratory build.		1,900	600	Business case approved by Minister in 09/10; total project budget is \$4.3m compared with March 2010 capital plan provision of \$3.8. Included in 10/11 DAP.
Payroll and HR forms management	100	Interim initiative to automate the completion and workflow of approval forms for leave, pay variations and suchlike.		100		Approved into Plan April 2010; carry forward to 10/11 required. Not included in 10/11 DAP.
Clinical Workstation Phase 2	600	Deliver CWS enhancements and electronic acknowledgement of results for clinicians; migration of lab and radiology data from legacy systems to clinical data repository for improved clinician access to data.	0			Started in 2008; completing in 10/11, carry forward required. Not included in 10/11 DAP.
Server consolidation and virtualisation phase 2	494	Delivers a new platform that consolidates a large number of small legacy applications and databases; manages the migration of these to the new platform.	0			Started in 2008; completing in 10/11, carry forward required. Further phase needed to finish legacy system clean up; needs scoping for a firm proposal to be tabled. Not included in 10/11 DAP.

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
Cardiology Information System	TBD	Provision of a new Cardiology Information system, supporting a range of clinical services.	0			Residual project from Waikato part of PACS/RIS; delayed due to vendor delivery problems; aiming to complete in Q2 FY10/11. Not included in 10/11 DAP.
HRIS – Waikato interim project	300	An interim project covering position management implementation and data cleaning, improved reporting, and an organisation charting tool.				Started in 2009; completing in 10/11, carry forward required. Not included in 10/11 DAP.
Regional HRIS /Payroll/Rostering	6,000	A regional HRIS/Payroll and Rostering and Payroll Service consolidation project based on the scope and benefits work undertaken in Midland during 2009.	6,000	1,500	1,500	Highly unpredictable item, more likely to change than remain as is. Current provision is as per 2009 costings, with recovery of \$3m over life of system. Local system needs urgent replacement – decision required in calendar 2010. Action and timing depend on Shared Services Agency priorities. Appetite for re-start on a regional project will have to be tested before a local solution

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
						could be considered. Included in 10/11 DAP.
FMIS replacement – Waikato/BOP DHB.	4,000	The complete overhaul or replacement of the Financial Management Information System currently in use. Proposed as project to be undertaken jointly with BOP.	0	0	0	Currently in 13/14; may have to come forward as current solution requires upgrade; action and timing depend on Shared Services Agency priorities.
Midland Region Connected Health Network Phase 2- Implementation	1,000	Detailed design and implementation of a regional health network based on MOH standards for Connected Health across the sector. Delivers infrastructure for seamless connectivity for participating health sector providers.	1,000	1,000	0	Regional business case with Midland CEO Group now. Budget represents Waikato share of project cost. Included in 10/11 DAP.
Regional Clinical Platform	3,000	Future iteration of the clinical hardware and operating environment. Anticipates that by 2012 there will be one instance of patient management and enterprise clinical systems regionally.	0	0	0	Later years
Regional PAS (Lorenzo) migration / implementation	3,000	Future iteration of the clinical systems. Anticipates that by 2012 there will be one instance of patient management and enterprise clinical systems regionally.	0	0	0	Later years

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
Clinical data repository (CDR)/Community Laboratory results repository.	800	A shared repository for laboratory and other clinical results potentially across all providers in the Midland Region. As scoped this is a component of the Waikato Community Laboratory Strategy, and an early implementation on the new Clinical Platform. Reduced testing, clinician access to a wider set of clinical data on presenting patients.	800		0	Budget will require review once scoping and analysis work is done, as may extend to be the regional repository; has convergence with regional CCM-IS work. Included in 10/11 DAP.
DSP virtual Test and Development	60	The creation of a full suite of testing and development environments on the virtualised data services platform, covering the Tier 1 applications.				Completing in 10/11, some carry forward required.
Enterprise service bus	1,000	A technology solution to manage the exchange of data between systems and users in a structured, standardised and managed approach.			800	May need to come forward to meet other regional projects. Planning will commence in FY10/11
PKI and certificate authority	200	This project will deploy an infrastructure that is capable of generating certificate. These certificates are required for various project that need to implement secure encrypted connections as per industry best practices. For example, wireless connectivity will require certificates.		200	0	Started in 09/10, will complete in FY10/11. Some carry forward required.
IS security upgrades (Anti-malware)	250	Provision of new anti-malware software for the DHB providing			0	Approved 09/10, will complete in 10/11;

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
		additional protection against SPAM and intrusion.				some carry forward required. Included in 10/11 DAP.
Call centre consolidation	0	Creation of centralised or virtual call centre, consolidating a dispersed workforce who deals with both out-bound and in-bound calls to services. Predominantly an organisational change rather than technology project. Not yet fully scoped.				Now an FY11/12 item;
Regional chronic care management study	0	A fully regional project sponsored by GMs Planning and Funding to define, architect and test key IS requirements for chronic care and disease management. Later phases will determine how these are commissioned and deployed.				Regional project, Opex funding from GMs Planning and Funding. Included in 10/11 DAP.
Service Centre Operations Manager (SCOM)	139	This project will extend the current SCOM deployment to monitor all Waikato DHB servers. Monitoring will reduce exposure to failures by proactively alerting of potential issues before they arise. Monitoring will also provide historical data that will aid capacity planning and allow reporting on conformance to service level agreements.			0	Approved into Plan by Board April 2010. Will complete in 10/11; carry forward required. Included in 10/11 DAP as part of IS Security Strengthening.
System Centre Configuration	332	This project will upgrade the current System Management			0	Approved into Plan by Board April 2010. Will

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
Manager (SCCM)		Service (SMS) product to SCCM. SCCM has advanced patch management and vulnerability compliance measures over SMS. These technologies will reduce vulnerability to malicious threats by allowing better management of devices. This includes advancements in application distribution and reporting.				complete in 10/11; carry forward required. Included in 10/11 DAP as part of IS Security Strengthening.
Anti-virus software and implementation	485	Selection, design, acquisition and deployment of a new anti-virus solution.			0	Approved into Plan by Board April 2010. Will complete in 10/11; carry forward required. Included in 10/11 DAP as part of IS Security Strengthening.
Clinical Workstation Phase 3	200	Project to improve the technical solution for electronic clinical document management, uploading to the clinical data repository and distribution.	200	200	0	Included in 10/11 DAP.
Clinical and corporate platform upgrades	1,200	Consolidation, integration and upgrade of processing and storage for enterprise level clinical and corporate systems which have now started to reach end of life. Maintains operational continuity.	1,200	300	900	Funding ideally required to be all in 10/11 financial year, but needs more detailed work on the plan to achieve this. Project also uses existing Opex for total funding. Included in 10/11 DAP.

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
Oncology/MRI network upgrade	80	Provides for upgrade to current local network, improved network management and integration with DHB network.	80	80	0	
Regional Desktop SOE project	500	Prospective project to define and design a standard desktop regional operating environment.	500	500	0	Extent of regional scope depends on other DHBs participating. Included in 10/11 DAP.
Acute Services management	1,500	Provision of ICT for the operation of a new ED and two floors of acute beds above the new ED. Currently in detailed definition and estimating phase.	1,500	1,000	500	Needs closer estimation after scoping currently underway is completed. Requires most of the funds in 10/11. Included in 10/11 DAP.
Clinical systems remote access	300	Provides access to Waikato DHB systems to clinicians and other users outside the DHB. Significant clinician productivity.	300	300	0	Meets a range of remote access needs registered on the Demand List. Included in 10/11 DAP.
Supply chain/FMIS/procurement enhancements	100	Upgrade of supply chain enabling systems.	100	100	0	For supply chain system enhancements. Included in 10/11 DAP.

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
IS Operational management toolsets	200	Anticipates upgrades in later years of IS operational management toolsets being deployed this year.	0	0		Item superseded by SCOM & SCCM for now; move provision to later years. Not included in 10/11 DAP.
Enterprise call management and asset tracking	100	Expansion of existing solution to cover a wider range of support services.	100	100		Provision for tactic response to pressing business needs. Included in 10/11 DAP.
Oracle/ProPharma XML gateway	75	Provision of a new solution to provide connectivity between the DHB and its key supplier, ProPharma.	75	75		Supply Chain enhancement. Included in 10/11 DAP under SC heading.
Inventory management technology enabler	60	Main objective is the replacement or upgrade of scanners used in inventory management and processing.	60	60		Supply Chain enhancement. Included in 10/11 DAP under SC heading.
Waikato Clinical Centre ICT requirements	TBD	Provision of ICT for the operation of the new Waikato Clinical Centre, which is currently at site preparation stage. Will require a detailed definition and estimating phase first.	150	150		Entirely new item to IS Plan. Initial planning scoping and analysis required in FY 10/11. Full value of project can only be determined once scoping work is completed. Not included in 10/11 DAP.

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
Other building programme ICT requirements	TBD	Provision of ICT for the operation of several new Waikato DHB facilities most of which are currently at preparation stage. Will require a detailed definition and estimating phase first.	100	100		Entirely new item to IS Plan. Initial planning, scoping and analysis required in FY10/11. Full value of project can only be determined once scoping work is completed. Covers Forensic MH, Renal Services relocation, and Rehab hub developments. Not included in 10/11 DAP.
1 July 2011 changes	TBD	Annual cycle of MOH-driven changes for national collection reporting, requiring local changes, predominantly to patient management system and extracts.				Usually an Opex cost but may need significant changes to Extracts next year. Not included in 10/11 DAP
Connected Health for Waikato Phase 2	TBD	A new initiative to provide services to make use of the infrastructure provided in the initial Connected Health for Waikato project, particularly for wireless services.				New project to meet a range of connectivity requirements; builds on infrastructure provisioned in initial project. Initial planning to be done in FY10/11. Not included in 10/11 DAP.

Project	Total project \$ value at May 2010	Description	For capital approval 10/11	FY10/11 capital budget, May 2010	FY11/12 capital budget, May 2010	Notes
Novell decommissioning	TBD	A project to remove the Novell Netware directory and remaining GroupWise infrastructure and cut completely over to a Microsoft environment.				Will have to be completed using operational budget and resources. Not included in 10/11 DAP.
Corporate systems and information processing simplification	TBD	This project is intended to reduce the considerable complexity in the corporate systems environment, particularly in information flows and silos between systems. It would create operational efficiency, improve data accuracy, and potentially provide some hard benefits as well.				A new initiative for 10/11. It will have to be substantially completed using operational budget and resources. However some capital plan items are relevant to this. Not included in 10/11 DAP.
			18,435	12,685	7,950	

FY09/10 Work Programme

Status of programme

This section provides a summary update on what has happened to the FY09/10 IS Plan approved by the Board in May 2009. It covers only those items which have neither finished nor been carried through into the FY10/11 plan. Board members will be aware of progress with the FY09/10 work programme through regular updates, and the completion of work during the year. Projects still continuing into 10/11 have been included in the table in the previous section of this plan.

Work item	Description	Status as at May 2010
Electronic discharge summaries	Complete functionality to create and send discharge summaries electronically to GPs. Included in Clinical Workstation Phase 2 above.	Completes in October 10
Corporate records management	Implement good recordkeeping for corporate records, meet Public Records Act 2005.	Project runs to June 12
Client Administration System: Theatre Views	Implementation and enhancement of Advanced Theatre Views Module, Patient contacts, and Future booking module for access to theatre information through CWS.	On hold until business need is clear
Single Sign-on	Implementation of a Single Sign-on capability driven by PeopleSoft, through Active Directory.	Was deferred to 10/11; to be addressed in part next year.
Clinical Workstation Phase III: Planning	Planning phase for Electronic Ordering for RAD, LAB and PHARM. CWS Phase 3 has now become focused on clinical document management process improvement	Was deferred to FY10/11; will defer again until 11/12 at least.
Clinical Workstation Clinical Whiteboard	Deployment of Clinical Whiteboard functionality; enhancements to Document Upload and presentation of information	Was cancelled. May yet be taken up in 10/11 as part of Acute Services.
Performance Management – Phase 1	Requirements analysis and deployment of Clinical Service Performance Dashboards.	Was deferred to FY10/11; will defer again until 11/12 at least
Inter-RAI	Design and deployment of a standards-based mobile assessment tool for older persons requiring home based services.	Continuing.
Enterprise Architecture	Continuation of work by IS on the development of components of the DHB's enterprise architecture with particular emphasis at present on technology infrastructure and data management.	Continuing.
Information privacy and sharing policy review	A review of the current policy, provisions and practice to ensure the framework for control and sharing of patient information is clear, understood and communicated to all parties.	Being addressed in part through the Community Laboratory Results working group.
Diabetes information service.	Creation of a Waikato repository for planning and reporting on diabetes across all providers.	Covered by the Regional Diabetes Information Service (RDIS)
Information governance and data quality	Continue push on data quality and seek management commitment to improving the quality and use of information.	A formal Patient Information Governance Board has been established, sponsored

Work item	Description	Status as at May 2010
		jointly by the COO and CIO.
Disaster recovery planning	Focused activity on plans for recovery of current systems in the event of a disaster.	Active item now and again in FY 10/11.
IT Effectiveness	Continuation of current programme focused on the achievement of service quality targets in FY09/10.	Continuing project and will be reported on again to Audit and Risk Management Committee.

Prioritisation

Even with increased resources for IS capital and operational budgets over the last two years the demand for projects and services continues to exceed supply. To deal with this situation, IS has a 'Demand List', a simple register recording, at high-level, those requests which are likely to be of a significant work level or complexity.

During 2009 we made improvements to our processes for managing the Demand List. It is now reviewed weekly by relevant IS managers and team leaders. Further improvement work is being undertaken now to formalise the IS Service Request process and this will result in more improvements being applied in 2010/11.

Those items that can be dealt with through existing project commitments or within "business as usual" resources are directed in those directions. The remainder of demand items is referred for planning and architecture review, and consideration of technical and funding requirements. Currently this list has around 220 entries (see attachment at end of report).

The annotation on the list indicating attention in FY10/11 means that the item is subject to the process described immediately above. It does not automatically mean there are resources available to undertake further work. For example, not all the items in the Tier 2 and Tier 3 Health Applications have been included in the FY10/11 Plan for further investment; they will have to remain in the prioritisation queue, particularly if capital investment is required.

This is a continuing area of risk for the DHB, the good news being that a more systematic approach is being applied, as described above, and there is a regular flow of work being undertaken.

Regional initiatives

At this stage, within IS planning, only two regional projects are firmly positioned in the 10/11 work programme – these are Midland Region Connected Health Network, and Chronic Care Management – Information Systems. The other projects covered in this section have a regional component or potential but are not, at time of writing, sufficiently formalised that way to warrant confirming them as such.

Midland Region Connected Health Network – is an integrated health network for health providers in the Midland Region, using MOH Connected Health standards, initially covering DHBs and PHOs but extensible to all health providers. The business case for this has been completed and is with the Midland CEO Group. It has strong support from the National Health Board business unit and the National Health IT Board. The matter of funding is currently under discussion. Our view is that this is the keystone project to undertake as it underpins all and any other regional systems initiative or business initiative that depends on ICT.

Chronic Care Management–Information Systems (CCM-IS) is a programme being undertaken jointly with the General Managers’ – Planning and Funding at a regional level. Some of the activity is local (and included in the Waikato DHB section as required) but some is to be undertaken regionally to meet the requirements for clinical practice and patient flow between districts.

Another item that may be included in this section is the **Community Laboratory Results Repository**. This is part of the Waikato Community Laboratory Strategy approved by the Board in 2005. There is strong desire for a local results repository, but it appears to make more sense as a regional or sub-regional initiative. It is related to CCM-IS as well as acute clinical practice in primary and secondary care.

More generally we already expect that during the course of this year other projects will emerge. The new, draft National Health IT Plan states an emphasis on regional provision of systems and will require a revision of the Regional IS Plan, which will still of course require agreement by the five Midland DHBs to become any sort of reality. The other activity in FY10/11 that may become a driver for regional IS initiatives is the **Regional Clinical Services Plan** – right now the specific impetus from this is too early to call, but a **Regional Clinical Systems Planning Study** has been provisioned in this ISSP.

Projects included in this plan with a regional tag are in later years and assume that by FY12/13 there will be consensus and commitment to the establishment of single patient management and clinical systems across the region, even if right now we do not know quite how this will happen.

As for corporate functions, it is too early to say ‘what’, ‘when’ or ‘how much’ for most of what may eventuate. The planning proposition is for the regional integration of support services functions within 5 years.

This plan contains a work item called **Regional Desktop SOE project**, the goal of which is to define and design a standard desktop operating environment. This work needs to be done for Waikato in the coming year, and the extent to which it is regional depends on the relevance and a priority of it for other DHBs in Midland. We will certainly be putting this proposition to them, and it is a logical follow-on project from Connected Health.

Two further regional items are identified in this plan, acknowledging the previous interest at a Midland CEO level: they are **Regional Human Resource/Payroll/Rostering Information Systems (HRIS)** and **Regional Financials Information System (FMIS)**. The former initiative has been provisioned in this plan as fully regional whilst the latter is scaled as a sub-regional Waikato/Bay of Plenty project. Both of these are highly sensitive to decision-making by the Shared Services Establishment Board, with both local and regional decisions likely to follow from conclusions by that entity.

The HRIS requirement is immediate for Waikato as there is considerable risk in our current legacy system and right now there is no clear way forward other than reverting to re-starting our local project; the FMIS need is not much better off however there are shared service options emerging and an early indication that the Shared Services Agency may prioritise this area for early action. We would expect to have greater clarity on both of these by the end of Quarter 1 of FY 2010/11.

National initiatives

The most significant development nationally of relevance to this plan is the release of the National Health IT Board’s (NHITB) **National IT Plan** – in draft for consultation, with an expectation of finalisation by the end of June 2010. This plan builds on the Health Information Strategy Advisory Committee (HISAC) priorities for completion by June 2010 (now June 2011). The HISAC focus was on electronic transactions such as e-referrals, e-

ordering, sending and receiving documents, and e-prescribing. HISAC also had an ambitious 2014 Vision and goal around personal access to electronic health records.

The National IT Plan incorporates both of these goal sets. More immediately it adds to the current goals a focus on regionalisation, standardisation and consolidation of patient management and clinical systems.

Waikato's plan includes such of those items as can be usefully tackled; the others will have to wait for sequential priority. Some preliminary regional work around the clinical workstation has already been initiated by Midland CIOs. However as in previous years the challenge is going to be in getting agreement across the region to standard systems, configurations and common clinical and service processes which the systems support.

Almost of as much significance for this ISSP is the work of the **Shared Services Establishment Board** (SSEB) project, an initiative that came out of the 2009 Ministerial Review Group report. An initial round of scoping and definition work has been undertaken by the SSEB across the range of support services. They have a heavy focus on creating initiatives and services that will meet a targeted cumulative saving of \$700m over five years.

The positioning of the SSEB is less clear-cut than that of the NHITB, and their priorities are similarly less well-known. We are aware that an initial proposal has been created by the project, submitted to the SSEB and also put to the responsible Ministers. We understand that financial management is one of five priorities being considered. As noted in the section on regional initiatives above we expect to have greater clarity on this by the end of Quarter 1 of FY 2010/11.

In addition to the work identified above there are also national level initiatives occurring that are likely to require incorporation in the Waikato work programme. Of particular note are those occurring as part of the Quality Improvement Committee's National Quality Improvement Programme, specifically:

- NZ Incident management system (for which Waikato is the lead DHB);
- Safe Medication Management.

These seem likely to require priority and funding once there is a clear level of definition as to system requirements, however it is too early to make even a provisional budget estimate for the coming financial year. The work coming out of the Safe medication management initiative will need to be considered as part of the Pharmacy Phase 1 project which is included in this ISSP as an FY10/11 work item.

It is relevant to note that the National Quality Improvement Committee is also being morphed into a permanent ministerial committee at the time of writing so we should expect to see continuing drive on these initiatives once this establishment has been completed.

Approvals

The approval of the work programme, capital plan proposal, and carried forward items are all subject to the Waikato DHB capital expenditure policy, management delegations, and Ministry of Health Capital IT Expenditure guidelines. Work items of significant expenditure will involve the development and approval of a business case.

This summary ISSP work programme will be the basis of a wider revision of the Information Systems Strategic Plan to be completed in 2010/11. This revision will include the wider regional plan, relevant national initiatives, and accommodate reprioritisation of items as indicated above.

Recommendation

THAT

The Board:

- 1) Receive the report.
- 2) Approve the proposed work programme and approach for FY10/11.
- 3) Approve the carry forward to projects and budgets from FY 09/10.
- 4) Approve the IS Capital Plan for FY 2010/11 of Waikato and regional projects.

ALAN GRAINER
CHIEF INFORMATION OFFICER

Portfolio Summary with demand count

Information Services Portfolio	Total Demand
Clinical Portfolio	78
Cardiology	1
Laboratory	5
Radiology	2
Patient Administration	11
Pharmacy	2
Clinical Portal	16
Tier 2 Health Applications	2
Tier 3 Health Applications	39
Corporate Portfolio	24
Financial Management	5
Human Resources	5
Corporate Applications	14
Infrastructure Portfolio	114
Environment Work stream	4
Infrastructure Applications Work stream	13
Interoperability Work stream	11
Life Cycle Management Work stream	12
Core Technology Platform Work stream	43
Security and Authentication Work stream	6
Workspace Work stream	25
Architecture and Management Portfolio	8
Planning and Architecture	6
Operational Excellence	2

Detailed Portfolio Breakdown with active 09/00

Information Services Portfolio	Active in 09/10	Total Demand
Clinical Portfolio		78
Cardiology		1
CIS Platform	✓	
Laboratory		5
Lab Services IS Renewal Phase <input type="checkbox"/>	✓	
Lab Services IS Renewal Phase 2	✓	
CDR upgrade/Community Lab results	✓	
CDR upgrade/Community Lab results - External Funding	✓	
Lab Reporting System Upgrade	✓	
Radiology		2
PACS/RIS	✓	
RIS/PACS Upgrade	✓	
Patient Administration		11
iPM v700 <input type="checkbox"/> Implementation	<input checked="" type="checkbox"/>	
iPM v900 <input type="checkbox"/> Enhancements & Implementation	✓	
iPM database upgrade	✓	
Database upgrade from 2000 - SQL 2008 + Migration to DSP	✓	
Clinical Whiteboard	<input checked="" type="checkbox"/>	
Bed Management	<input checked="" type="checkbox"/>	
Theatre Views	<input checked="" type="checkbox"/>	
Theatre/Acute Forms Process Automation	<input checked="" type="checkbox"/>	
iPM Theatre Improvements - Electronic Acute for	<input checked="" type="checkbox"/>	
RUS to iPM	<input checked="" type="checkbox"/>	
Automation of Prof Darers Rotation in IPM and CWS	<input checked="" type="checkbox"/>	
Pharmacy		2
Pharmacy system Phase <input type="checkbox"/> Planning	✓	
Pharmacy system Phase 2 Implementation	✓	
Clinical Portal		16
Clinical Workstation Phase 2	✓	
Regional Clinical Platform (PAS, EHR, Clinicals)	✓	
Regional PAS (Lorenzo) - Migration & Implementation	✓	
Regional Clinicals: CWS, Bed Management, ED	✓	
Clinical Workstation Phase 3	✓	
CWS - Electronic Ordering Phase <input type="checkbox"/> : Planning	✓	
Clinical Services Performance Dashboard	✓	
CWS Health Check P2	✓	

Lakes Deployment	✓	
Call logging in iPM or CWS	✓	
CWS and PLATO script upgrade	✓	
Clinical Results Viewer Development Environment	✓	
CWS patient label checklist	✓	
CWS Ph2 (1001/2001/3001)	✓	
Electronic Ordering	✓	
Electronic Discharge Summary	✓	

Tier 2 Health Applications		2
Replacement of PLATO (Maternity system)	✓	
Integrated Oral Health - School Dental Services	✓	

Tier 3 Health Applications		39
Digital Imaging System	<input checked="" type="checkbox"/>	
Pixarray radiography system	<input checked="" type="checkbox"/>	
Regional Cardiology Database (Acute Predication)	✓	
Endobase system : reporting software (hardware \$40k, software \$85k)	✓	
Treatment Planning System	✓	
Chemotherapy Booking System	✓	
IS Paperless Electronic Radiation System	✓	
Sleep lab system 2009	✓	
e-referrals	✓	
Acute Services Management	✓	
e-referrals BPAC	✓	
Waikato Clinical Centre	✓	
Provisional IS requirements for levels 2 & 3 of the Acute Services building	✓	
Provision for IS New ED Requirements	✓	
Acute Theatre List Application	✓	
Attendants System	✓	
WRDS SQL Upgrade	✓	
Winscribe Upgrade	✓	
Remote Winscribe	✓	
Winscribe MH Te Awamutu	✓	
Dictation Software - Talk to Health and Safety	✓	
Glucometer	✓	
Chemtronics PID development	✓	
Radiance/point of care upgrade	✓	
Aesculapius oncology database	✓	
WebCOMRAD	✓	
Diabetes USB Data Cable Software v.□ for blood glucose meters	✓	
Diabetes Accu-Check 360	✓	
Chemtronics Implementation	✓	
SHIP SMS	✓	
SHIP	✓	
Melbourne University Echocardiography Database	✓	
Diff IQ Software for cellavisioning	✓	
Stedman's Medical Dictionary	✓	

Electronic Patient Monitoring	✓	
Install of Webhealth kiosk	✓	
July 1 2010 Changes	✓	
NCAMP	✓	
TestSafe	✓	

Corporate Portfolio	24
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Financial Management		5
Inventory Management Technology Enabler	<input type="checkbox"/>	
FMS replacement (Waikato/BOP)	<input type="checkbox"/>	
FMS Supply chain/procurement enhancements	<input type="checkbox"/>	
Enterprise call management and asset tracking	<input type="checkbox"/>	
Capex Form and Capital Process Automation	<input type="checkbox"/>	

Human Resources		5
Human Resources IS - Waikato	<input type="checkbox"/>	
Regional HRIS/Payroll/Rostering	<input type="checkbox"/>	
PeopleSmart	<input type="checkbox"/>	
PeopleSoft HRIS Options Review	<input type="checkbox"/>	
Navigo Position Management	<input type="checkbox"/>	

Corporate Applications		14
Infra PDS Portal install	✓	
Purchasing Infra Rollout	✓	
Infra - Payroll	✓	
Infra for Viscom	✓	
Corporate Records Management	✓	
Silent One Upgrade	✓	
One Staff Upgrade	✓	
Corporate Services Charter	✓	
Project One	✓	
Portfolio Establishment	✓	
Project Server 2010 Upgrade	✓	
Asset management Chemtronics	✓	
Contracts Management (Outsourcing) Database	✓	
Risk Register Application Development	✓	

Infrastructure Portfolio	4
---------------------------------	----------

Environment Workstream		4
Waikato Campus New Computing Facility	<input checked="" type="checkbox"/>	
Facilities Remediation	<input checked="" type="checkbox"/>	
Waikato Campus New Computing Facility	<input checked="" type="checkbox"/>	
Facilities Remediation Phase 2	<input checked="" type="checkbox"/>	

Infrastructure Applications Workstream		3
Patient call system upgrade for wards 2,23,26,2	✓	

Patient call system upgrade	✓	
Migration of File and Messaging	☒	
Unified communications Phase I	✓	
Unified communications Phase 2: Design	✓	
Unified communications Phase 3: Implementation	✓	
Archiving Tool	☒	
Exchange 2010 Upgrade	✓	
2010 Upgrade - PS+ SPS	✓	
Duress System/Nurse call/Intercom	✓	
Service Center Operations Manager (Conficker Response)	✓	
System Centre Configuration Manager (Conficker Response)	✓	
IS Operational Management Toolsets	✓	

Interoperability Workstream		☐☐
Oracle/Pro Pharma XML Gateway	✓	
Enterprise Reporting Phase 2	✓	
Enterprise Reporting Phase 3	✓	
Workflow Management	✓	
Enterprise Service Bus	✓	
Mental Health KPI - MoH Reporting	✓	
Build NNPAC extract data and processes in enterprise data warehouse	✓	
Rhapsody Version Upgrade to v 3.4	✓	
Enterprise Scheduling	✓	
MDM	✓	
RPI	✓	

Life Cycle Management Workstream		☐2
Licensing True-Up	✓	
Alpha Platforms Decommission or Support?	☐	
EOL Application Stream	☐	
Novell Decommissioning	☐	
Platform Upgrades	☐	
Application Lifecycle Upgrades: Corporate	☐	
Media Site Recorder upgrade	☐	
Application Lifecycle Upgrades: Clinical	☐	
Decommissioning legacy data	☐	
Chairman Residual Data	☐	
Radiology Data	☐	
Pharmacy Data	☐	

Core Technology Platform Workstream		43
Development of Ward Telemetry (also in Nursing)	☐	
Video Conferencing Equip	☐	
RFID Project	☐	
Capacity Augment	☐	
Citrix Expansion-Remote Access	☐	
Medical Grade Network	☒	
Server Consolidation & Virtualisation Phase 2	☐	

Regional Health Network Phase <input type="checkbox"/>	<input type="checkbox"/>	
Regional Health Network Phase 2	<input type="checkbox"/>	
Clinical Platform upgrades	<input type="checkbox"/>	
EVA 4400-8400 Upgrade	<input checked="" type="checkbox"/>	
DSP Virtual Test & Development	<input type="checkbox"/>	
Oncology/MRI network upgrade	<input type="checkbox"/>	
Clinical Systems Remote Access	<input type="checkbox"/>	
Infrastructure Vision and Strategy	<input type="checkbox"/>	
Medical Grade Network Phase 2	<input type="checkbox"/>	
MGN -Hamilton Waikato Sites	<input type="checkbox"/>	
MGN - Hamilton Partner Sites	<input type="checkbox"/>	
PACS Network management improvement	<input type="checkbox"/>	
Location Based Services /RFID	<input type="checkbox"/>	
Clinician Remote Access Trial	<input type="checkbox"/>	
Clinical Sys Remote Access (RAD)	<input type="checkbox"/>	
WinTec connection to Intranet - Talk to Mary Anne Gill	<input type="checkbox"/>	
IP Readdressing	<input type="checkbox"/>	
Oncology/Radiology/MRI Network segments outside of IS Control	<input checked="" type="checkbox"/>	
Oncology Radiology Network	<input checked="" type="checkbox"/>	
Wireless Phase 2 - Usage	<input checked="" type="checkbox"/>	
Mobile Working	<input checked="" type="checkbox"/>	
VC	<input checked="" type="checkbox"/>	
Community Workers	<input type="checkbox"/>	
Taylor's remote Access request	<input type="checkbox"/>	
PathLab Connectivity	<input type="checkbox"/>	
Cancer Center - Remote access to Tauranga Hospital	<input type="checkbox"/>	
Remote Breast screen Concerto Access	<input type="checkbox"/>	
Remote PACS	<input type="checkbox"/>	
PACS/RIS access requirements	<input type="checkbox"/>	
VPN access	<input type="checkbox"/>	
Corporate Platform Upgrade	<input type="checkbox"/>	
Clinical Platform Upgrade	<input type="checkbox"/>	
Clinical Platform SQL 2005	<input type="checkbox"/>	
Profile Management	<input type="checkbox"/>	
iPM/CWS Dev/Test/Train environments	<input type="checkbox"/>	
DSP Upgrade	<input type="checkbox"/>	
Security and Authentication Workstream		6
Waikato DHB Security Upgrade	<input type="checkbox"/>	
Single Sign-On	<input type="checkbox"/>	
PKI & Certificate Authority - Phase <input type="checkbox"/>	<input type="checkbox"/>	
Information Systems Security Upgrades (Anti-Malware)	<input type="checkbox"/>	
Anti-Virus (Conficker Response)	<input type="checkbox"/>	
Conficker tidy up activities	<input type="checkbox"/>	
Workspace Workstream		25
Other Building Programme ICT Requirements	<input type="checkbox"/>	
Desktop >\$2k	<input type="checkbox"/>	

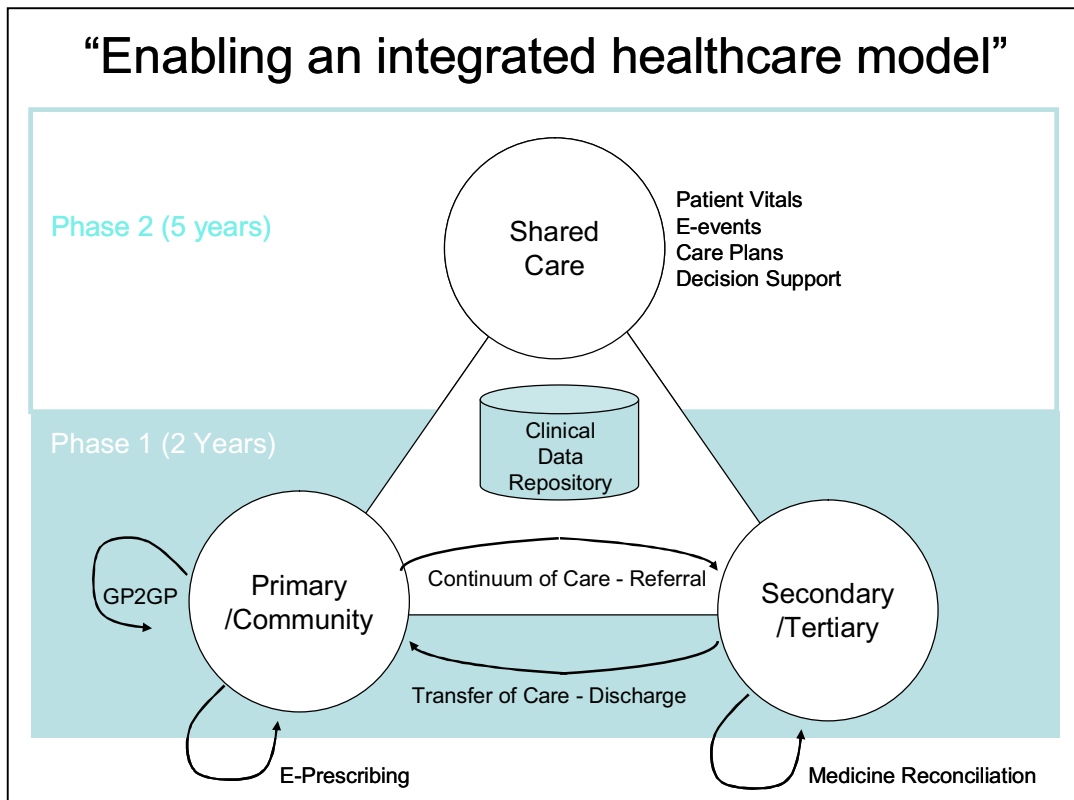
Desktop Office and OS design and implementation	<input type="checkbox"/>	
Intranet	<input type="checkbox"/>	
CRISP	<input type="checkbox"/>	
Desktop SOE Project	<input type="checkbox"/>	
Workspace Vision and Strategy	<input type="checkbox"/>	
Photo uploading from remote Citrix PC's	<input type="checkbox"/>	
Desktop Replacement (4-year cycle)	<input type="checkbox"/>	
Forensics <input type="checkbox"/> 5 Desktops	<input type="checkbox"/>	
Café PC's Lockdown	<input type="checkbox"/>	
Vascular Lab PCs	<input type="checkbox"/>	
XP SP 3 or Windows 7 - XP SP2 Mainstream support ends	<input type="checkbox"/>	
IS OPEX for Desktop	<input type="checkbox"/>	
Desktop Standard Build	<input type="checkbox"/>	
Excel 2007 Installation (non-standard, select users)	<input type="checkbox"/>	
Office 2007 upgrade	<input type="checkbox"/>	
Office 2010	<input type="checkbox"/>	
Printing Strategy	<input type="checkbox"/>	
Scanning	<input type="checkbox"/>	
Scan to email on MFD	<input type="checkbox"/>	
Bar Code Printer Upgrade (<input type="checkbox"/> 7 units)	<input type="checkbox"/>	
Bar Code Fleet Upgrade	<input type="checkbox"/>	
Ricoh CPC	<input type="checkbox"/>	
Citrix Expansion	<input type="checkbox"/>	

Architecture and Management Portfolio		8
Planning and Architecture		6
Lifecycle Vision	<input type="checkbox"/>	
Platform Vision	<input type="checkbox"/>	
Clinical Vision	<input type="checkbox"/>	
Corporate Vision	<input type="checkbox"/>	
Regional Clinical Review	<input type="checkbox"/>	
Regional Clinical Systems Planning Study	<input type="checkbox"/>	
Operational Excellence		2
IT Effectiveness	<input type="checkbox"/>	
Training Programme	<input type="checkbox"/>	

National Health IT Plan

Draft for Discussion

April 2010



ITHealthBoard

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Tony Cooke

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Health IT Cluster - <http://www.healthit.org.nz>

and on the IT Health Board website

<http://www.ithealthboard.health.nz> by mid May 2010

For more information please contact: enquiries@ithealthboard.health.nz

1 Introduction

The Minister of Health, Hon Tony Ryall received advice from the Ministerial Review Group Report in July 2009 that the leadership of health IT must be strengthened within the context of improving the overall performance of the health system. In October 2009 the Minister directed the newly formed National Health IT Board to create the first National Health IT Plan for the sector, based on achieving the eHealth Vision¹:

*“To achieve **high quality health care and improve patient safety**, by 2014 New Zealanders will have a core set of personal health information available electronically to them and their treatment providers regardless of the setting as they access health services.”*

The National Health IT Board understands that it will take more than a national plan to achieve the vision. Equally, without a plan we will fail. The challenge therefore is to create a plan that drives a culture of innovation, partnership and respect to support health sector leaders to make appropriate health IT investments in the context of the whole sector. Like any long term plan we must build a strong foundation first.

Person-centred healthcare has been a mantra within clinical circles for more than 10 years, yet the information solutions to support this have not materialised. Every day clinicians are managing patient care, while working around the fact that information is held in separate locations, creating barriers to a better, sooner and more convenient health experience. The plan recognises the critical role clinicians play in leading the development of integrated clinical pathways to improve the design and operation of health IT solutions.

New Zealand does not have the luxury of continuing with the fragmented, organisation centric approach to health IT investments. Economics, demographics and scientific discoveries are stressing health systems both here and around the world. The benefits on offer to the health system by utilising information more effectively must be captured by: enabling new models of care, improving patient safety, or, through other general productivity improvements. We must also develop the human capability to identify opportunities and achieve desired outcomes.

Many insights have been gleaned from formal meetings with leadership groups and informal discussions with individuals who have extensive front line experience in the health system. I trust that we have reflected your ideas appropriately in this first draft of the National Health IT Plan and that after reading it you will see some of your own thinking in it. Most importantly, I hope you are engaged in the challenge of achieving the eHealth Vision.

Please take time to read this plan and understand both the priorities set out as well as the impacts it could have on the way healthcare is delivered in your part of the health system. I welcome your engagement and feedback on this, the draft National Health IT Plan.

Graeme R. Osborne, Director - National Health IT Board

PS. To the members of the National Health IT Board, thank you for your support and guidance.

¹ National Health IT Board (formerly HISAC) eHealth Vision Statement, Feb 2009

2 Strategic Drivers

On a range of measures, the public funded New Zealand health system compares relatively well internationally.

In the past 30 years, strong uptake of information solutions by individuals and organisations across the health sector helped to create a health information system which was the envy of the world. A National Health Index (NHI) since the early 1980s, a national cancer register dating back to the 1930s, and by the end of the 20th century almost universal usage of computer systems by General Practitioners, are a few examples.

However, the investment in the next generation of health information solutions has reached a plateau and the way forward is not so clear. Early adoption and successful use of early generations of health information solutions may mean that it has taken longer for the sector to recognise the lack of recent progress.

The Ministerial Review Group Report (July 2009) states that we can do better. In particular the sector has a significant way to go in transforming its services into 'patient or person-centred' and has not made the most of the opportunity to gain healthcare service improvements through the leadership of clinicians and their clinical networks. In addition, the fragmented nature of the relationship between healthcare service delivery; and the managers of capital investment, workforce planning and health IT solutions are holding back the potential of the NZ health system.

Health sectors around the world are challenged by the increasing cost of healthcare caused by a range of drivers. The most significant are:

- aging populations
- global competition for an increasingly expensive medical workforce
- increases in the prevalence and complexity of chronic illness
- advancements in medicine and science
- increased public, consumer and patient expectations.

It is clear that health IT solutions can and will play a significant part in supporting, enabling, and in some cases creating, sustainable healthcare solutions for the future. For example involvement of patients in their own care can only be enabled through access to their own information.

One of the weaknesses of the health system is that we do not take the time to design, make explicit and implement better models of care. Information solutions are both a barrier and an enabler. They are a barrier because they are not delivering required information to the clinician and patient at the point of care. They are an enabler because they are a prerequisite to supporting an integrated model of care.

Another weakness is that there are too many initiatives and individual projects without taking the context of the whole "system" into account. A stronger sense of the direction has been created recently by the Minister of Health, in response to a scarcity of resources and the need for sustainability in the face of increasing demand. Our only option is to rigorously prioritise our work plans in order to maximise available resources and progress.

2.1 Prioritisation

We have established links to the following health sector priorities as part of the planning process:

1. Minister's six health targets:
 - Shorter stays in emergency departments
 - Improved access to elective surgery
 - Shorter waits for cancer treatment
 - Better help for smokers to quit
 - Increased immunisation
 - Better diabetes and cardiovascular disease service.
2. National Services and Vulnerable Services
3. Better, Sooner, More Convenient initiative
4. Shared Services Opportunities.

The plan will support these health priorities, although notes that one investment in a health information solution often supports a number of health priorities, however the links are not always direct. Conversely, several information solutions may be required to support one priority.

The plan uses 'focus areas' to make the link between these priorities and the projects that make up the plan.

3 Purpose

“The next generation of health information solutions must be person-centred, optimising the patient’s experience as they engage with the health system through a range of clinical pathways.”²

The principal challenge of a health IT strategy is not necessarily the strategy itself but how it is delivered. Previous strategies have gained support and international recognition and yet implementation of the information solutions identified, have been problematic and have fallen short of expectations.

The National Health IT Plan sets out to meet the implementation challenge by drawing together the diverse strands that make up the health sector IT today, and placing them into a coherent programme of work over the next 5 years.

The plan will define and progress the development of a sustainable, effective nationwide information and technology environment that

- fosters safety and quality care
- is person-centred
- is provider-friendly
- increases productivity of the system as a whole.

² *Innovators Prescription* – Clayton Christenson, 2009

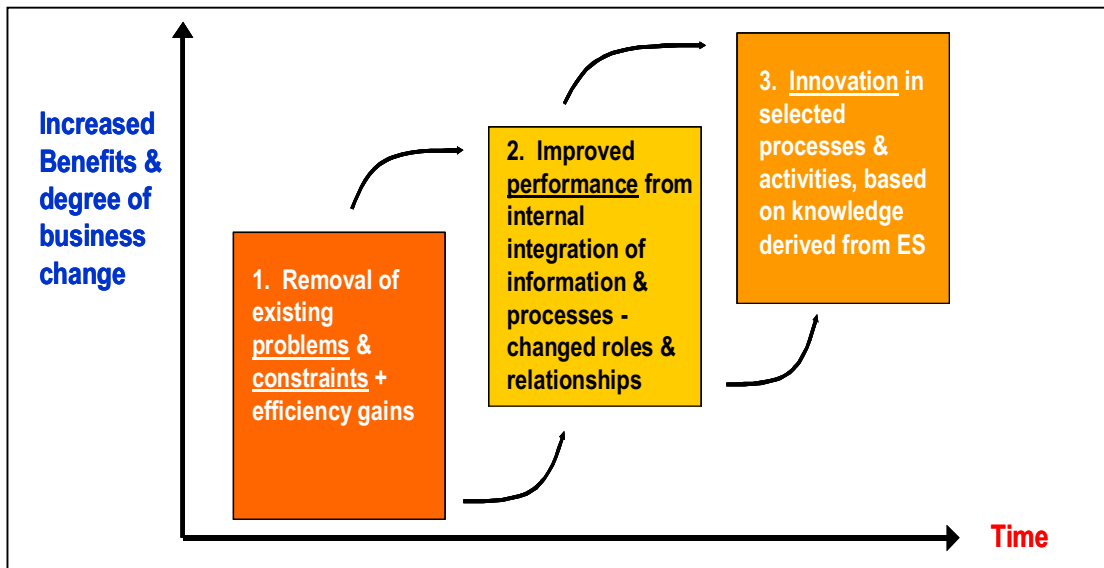
4 Our Approach

The National Health IT Board has identified the following success factors:

1. The engagement of clinicians and health workers in identifying opportunities for healthcare quality improvements and in solving related problems by agreeing on new or improved models of healthcare delivery
2. Engaging with healthcare IT vendors in an open and transparent way to develop health information solutions that enable the new models of healthcare delivery
3. Information solutions must be certified against agreed standards to ensure information can be shared securely and safely.

What is different about this plan is:

1. It is strongly aligned to the plans of the National Health Board, and plans of the other NHB sub-committees responsible for workforce and capital, the future Quality and Safety Commission and the Shared Services Establishment Board
 - a. Information solutions need to support the long term planning framework for health service design
 - b. Investments will be focused on a small number of key projects coordinated across the District Health Boards, Primary Healthcare and the Ministry of Health.
2. Clarity of thinking around sharing patient information and involvement of consumers. The principle is that health information is owned by the individual person / patient, with clinicians and health organisations having the role of custodians of that information. However, this principle does not change the understanding that clinicians should share information to maintain continuum of care for patients (using their professional judgement).
3. Accountability for delivery of the plan is owned by sector leaders. The plan works on the basis of tight-loose-tight. It is tight on priorities and expectations of what is required and who is accountable. How the deliverables in the plan are achieved is the responsibility of the owner of each initiative/project in the plan. The IT Board will be tight again on monitoring and reviewing the benefits and results of each initiative and the plan as a whole.
4. A planning approach which understands that incremental change leads to transformational change. The three phase interactive planning model developed by Dr Peppard of Cranfield University illustrates in the following diagram.



The approach acknowledges that there is a high level of frustration in achieving a national approach to person-centred health information. We must learn from previous approaches to investing in health IT solutions over recent years that have not achieved the results expected. In New Zealand that has included: WAVE (2001), the Health Information Strategy (2005) and most recently Key Directions and the National Systems Development Programme.

We need to learn from international efforts in similar countries to ourselves, namely Canada, Denmark, Scotland and Wales, and engage with them where appropriate.

4.1 Alignment with other plans

This plan aligns with the National Health Board plan by:

- Prioritising health IT investments that support the delivery of national services
- Aligning this plan with the DHB regional planning
- Engaging in the long term planning of health services

This plan aligns with the Workforce plan by enabling:

- Greater efficiency of human resources
- Supporting change in practices eg. Nurse prescribing
- Job satisfaction and safer medical practice
- Pooling of scarce human resource eg. enabling remote access and access to specialised skill sets.

This plan aligns with the Capital plan by:

- Consolidating to less instances of high cost information solutions
- Consistent long term planning for a capital intensive part of the sector
- Reallocation of existing capital investment intentions to a reduced number of longer term sustainable investments.

5 Governance

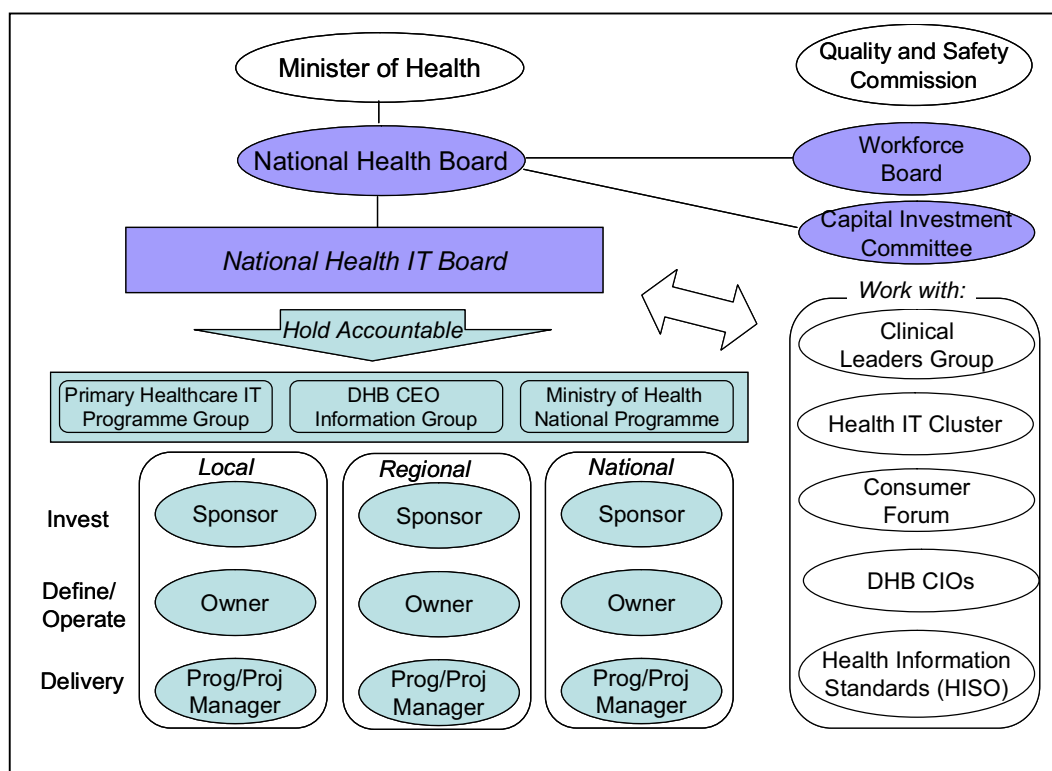
Overall governance of the National Health IT Plan is the responsibility of the National Health IT Board, supported by a number of key sector groups representing: clinicians, consumers, DHBs, primary care and vendors.

Governance is about leadership and oversight. The challenge for governors of this plan is to:

- ◆ Encourage, shape and bring together diverse opinions to create a clear sense of direction
- ◆ Have the courage to sustain investments over a period of time to provide the platform of transformational change.
- ◆ Maintain energy and interest amongst stakeholders and remove barriers to progress.

There are three bodies accountable for delivery of the plan: DHB CEO Information Group, Primary Healthcare IT Programme Group and Ministry of Health National Programme.

The following diagram represents the groups that the board will work with and hold accountable to achieve the Health IT Plan.



It will be critical that national standards are agreed for new or improved models of care, clinical pathways and information. This is why the Clinical Leadership Group has been established reporting through to the National Health IT Board.

A strong partnership with health IT vendors is important for the success of the plan. The Health IT Cluster and the National Health IT Board are working together to establish a joint understanding of priorities, plans, standards and opportunities.

6 The Plan

Ministerial Review Group Recommendation (July 2009):

“The National Health IT Board will, on behalf of the NHB, work with the sector to develop a National IT Plan (including a national IT architecture framework) to advance HISNZ. This plan will be a rolling plan with local, regional, and national views, and a short, intermediate, and long-term perspective that it is aligned with the National Health Workforce Plan and National Health Capital Plan”³

More recently the government has stated that it is “committed to ensuring that New Zealanders get better, faster and more convenient health services and information technology has a key part to play in enabling us to achieve this.”⁴

6.1 eHealth Vision drives a Two Phase Plan

*“To achieve **high quality health care** and **improve patient safety**, by 2014 New Zealanders will have a core set of personal health information available electronically to them and their treatment providers regardless of the setting as they access health services.”*

In order to achieve this vision, we have developed a two phase approach:

Phase 1 Consolidate, Co-operate and Foundation

(Jan 2010 – December 2011)

Focuses on delivering key solutions to provide the:

- easy access to health information
- transfer of health information between healthcare organisations
- capture of clinical event information into a regional clinical data repository
- improvement of primary healthcare practice management systems
- consolidation of systems used in secondary and tertiary settings into regional platforms.

Phase 2 Shared Care (March 2010 – December 2014):

Will commence with a design and proof of concept phase and will deliver a Shared Care capability covering:

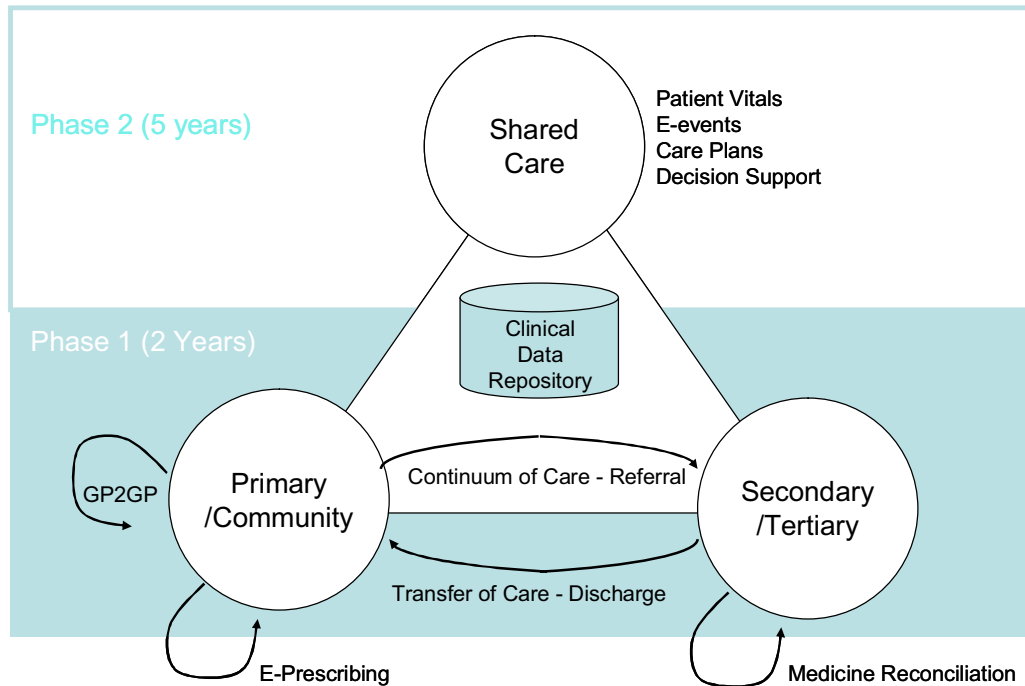
- Patient Vitals: This is historical patient information eg. Demographics, problems, medications, warnings and access to more detailed e-events (labs, radiology and medication history)
- Care plans: This is future patient information that captures the plan for the patient’s future course of care. The single plan incorporates the need for a multi-disciplinary approach to support integrated care
- Decision support: Supporting reference information to support the optimal delivery of care and clinical risk assessment.

³ MRG Report, Annex 3 Recommendations, July 2009

⁴ Jonathan Coleman, 2 October 2009, Speech to open Health Informatics NZ Conference

The eHealth Vision is based on the assumption that over the next 5 to 10 years, a shared care record is complementary to the health IT solutions utilised by healthcare organisations to operate their business.

“Enabling an integrated healthcare model”



In Phase 1 we continue to support the current activity in the sector focusing on the Continuum of Care which includes: e-referrals, transfer of care, safer medications management and improving primary care systems. This will create a standard set of interfaces that will feed into regional clinical data repositories.

Phase 1 has a stretch goal of ensuring each region has a foundation set of systems and platforms. There is a recognition that not all health care organisations, or their regions, are starting from the same position. This phase is about bringing each of the regions up to the same level.

We think that this is achievable in an 18 month to 2 year period, but we will reassess this target after the regional plans have been developed.

In Phase 2, we start to develop the concept of a shared care record. Based on the experience in Denmark, the creation of a core set of personal health information that can be trusted by an individual and their carers, is directly related to the quality of the information being transferred (event information) between healthcare organisations. This is the function of the regional clinical data repository.

It is expected that this phase will be a series of iterative steps where multi-disciplined care teams agree specific health pathways for specific conditions. Possible early candidates for this approach are maternity care, early childhood, and chronic conditions.

The benefits that will be enabled by this approach include:

- Measuring the outcomes of care and make it visible to clinicians
 - This information will act as a catalyst for changes in practice
- Information to support consist of diagnosis and treatment
- Reducing rework, retesting and multiple data entry
- Facilitating patient self management, remote monitoring and telemedicine
- Providing a means to generate follow-ups, alerts and medical warnings.

6.2 The six focus areas of the Plan

The plan focuses on six process areas that we believe will generate the most benefits and where there is the greatest opportunity to make an impact. Therefore the emphasis is on developing clinical information solutions. The selection has been made to balance support for current initiatives, while also setting a direction for the future. The areas cover key needs in the delivery of information and applications.

6.2.1 Quality Information for Primary Healthcare

The information models for the health sector need to change from a fragmented approach to a 'bottom up' model that recognises the different ways information can be utilised by different users. The key principle behind this focus area is that each healthcare organisation is responsible for investing in the right information solution needed to support their service. It recognises the custodian role each organisation plays to safely, collect, store, make available and maintain patient information according to agreed standards.

Projects of interest: Quality Improvement for Primary Healthcare, Practice Management System requirements study, Map of Medicines review, new screening initiatives.

Benefits: Reduces Transcription error, reliable communication and transfer of patient information, Improves quality of patient information.

6.2.2 Continuum of Care

This is a foundation for shared care. Health Information solutions need to recognise that healthcare is continuous, however there are also recognised hand-over points. This focus area starts to drive the development of standards for the core patient summary data and a safe clinical process for the hand-over of care. It also includes a component of medication information.

Projects of interest: GP2GP Information Transfer, e-referrals, e-discharges, after hour's access to primary healthcare information, GP access to hospital based clinical information.

Benefits: Measures quality, Improves co-ordination between practitioners, Supports improved skills and knowledge.

6.2.3 Safe Medications Management (SMM)

A programme called safe medication management is already in place to address significant issues with the safe use of medications. The initial goal to implement electronic medicine reconciliation at the point of entry and exit to/from hospital care. This plan supports e-prescribing, dispensing, medicine reviews in the hospital and extends it into the community.

Projects of interest: Medicine reconciliation, e-referrals (medicine information), e-discharges (medicine information), community e-prescribing.

Benefits: Reduces adverse medication events, Improves use of medicines.

6.2.4 Clinical Support

Information solutions are required to support a single sign-on, fast, easy to use, common view of detailed clinical data to support diagnosis and treatment. While supporting access to information for all authorised clinicians, this area mainly focuses on secondary and tertiary care.

Projects of interest: Clinical workstations, clinical data repositories, RIS/PACs, laboratory systems, specialist clinical systems.

Benefits: Improves access to diagnostics, Cost savings through reductions in repeat tests, Better use of workforce (after hours radiology).

6.2.5 Safe Sharing of Information

Safe sharing of health information is only possible with a robust and reliable data and network infrastructure. This will involve the implementation of the already agreed policy on the safe sharing of information (Health Information Security Framework).

This area is made up of a set of enabling investments that underpin the other focus areas. It is a necessary pre-requisite for the development of a shared care plan.

Projects of interest: Recipient and Provider Identity (NHI, HPI replacement), Connected Health, Shared Care Plan

Benefits: Allows interoperability through identifiers and standards enables shared care record, increases patient responsibility through access to their own record.

6.2.6 Patient Administration

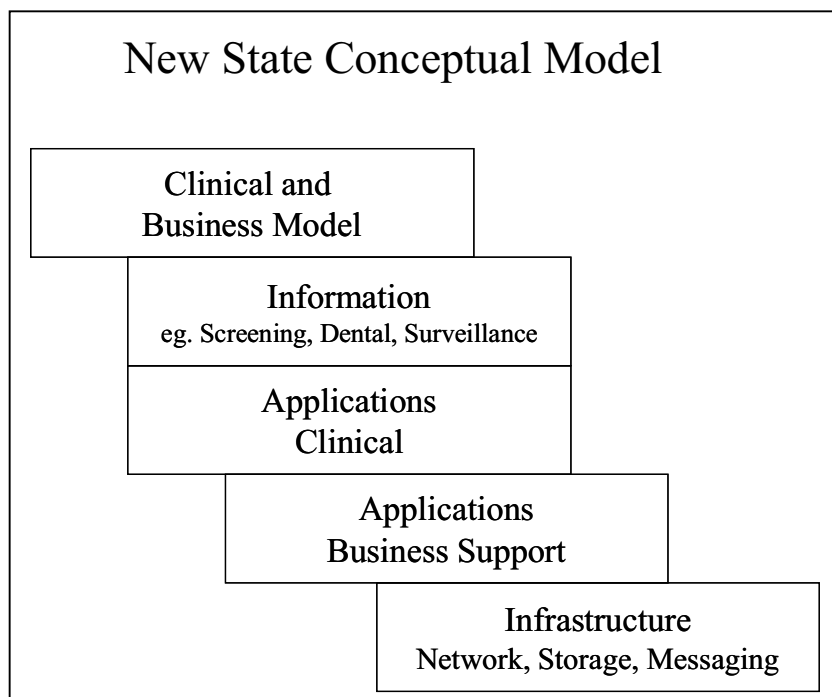
There are a number of DHBs who operate patient administration systems which will shortly no longer be supported by the vendor. These are core systems within that manage patient information including: demographics, appointments, medical records coding and tracking where the patient is in hospitals. It is difficult to build clinical information systems without getting this core application in place. These are large and complex projects that typically take up to two years and require significant investment. There are opportunities to consolidate on a limited number of software solutions and move towards consolidated solutions at a regional level.

Projects of interest: Replacement of legacy Patient Administration systems, improvement of business processes to optimise the patient journey.

Benefits: Reduces the costs and risks of legacy systems, enables more streamlined patient services.

6.3 Conceptual Model

A new way of conceptualising the overall information solution for the health sector is to understand it as a series of stepped components all linked to one another. One component cannot exist without the other. The top components drive the configuration/shape of the lower components. Typically, many functions of the lower components are required to support even a single component at the top level.



The conceptual model has been utilised to split the plan into digestible components as set out in the diagram above and described more fully in the following table.

Component/Layer	Description	Example(s)
Clinical and Business Model	This describes how clinical and business work flows at a high level. It defines how national, regional and local services will be delivered.	Integrated Care Model
Information	This is the information required to support the clinical and business model. It helps build knowledge and capability in the workforce.	National Collections Screening, Patient information, Decision Support
Applications	These are the applications which working together support the information required to support the clinical and business model. There are two classes of applications; clinical and business support	Electronic Health Record HR/Payroll
Infrastructure	This is the supporting infrastructure required to run and access the applications	Hardware, operating system, network, security, datacentre, data standards

Example: information requirements for Cardiothoracic Surgery

Firstly, in the top component, there is a requirement for a clear and consistent model of clinical care which involves screening and access to cardiothoracic services, surgical treatment, followed by rehabilitation and lifelong maintenance.

Then, the clinical information to support this model will be a set of data which has the following components:

- Vital patient data – required as common reference information on the patients medical condition eg current medications, current problem list, current allergies
- Speciality patient data (tests, co-morbidities) – required to treat heart disease
- Sub-specialty patient data – required specifically for cardiothoracic surgery.

In addition a clinical pathway will help define the journey that a patient with this condition should make through the health system (regardless of location or referred practitioner). This will form the basis for the patient’s customised shared care plan.

Given that this is a national service, the information needs to be available to clinicians wherever they are practicing, and to patients wherever they are living. Clinicians and patients will therefore need a “view” of the patient’s information which is tailored to their needs.

The data itself will be collected at source, and added to the regional clinical data repository where the patient resides. Clinicians (even if outside the region) will have access to this information, and also to a combined national view if the patient has relevant information sitting in more than one region. The clinical applications which support the process of treatment may be different, but will nevertheless store the data in the regional repository in a standard way. The regional repository will then “present” a view in a standard way to applications wanting to access the patient’s data.

Some of the infrastructure required to support this scenario will require a common patient identifier (the NHI), an authorised user (verified through the HPI), a standard view which is based on standard data item types (common list of medicines or procedures, etc) delivered over a national network which is available 24 hours a day, 7 days a week. Also an audit trail of access will be created to allow the patient visibility on who has accessed or updated their data and when.

6.3.1 Clinical/Business Model

The clinical and business model which health sector information solutions need to support are discussed in other sections of this plan, however some of the highlights are:

- Reduce patient harm
- Improve timeliness of preventative actions and interventions
- Reduce unnecessary medical and/or surgical intervention
- Develop standard clinical and business models for national services

- Enable patient self-management – make patients co-producers of their own health care to take the burden away from a diminishing and aging health workforce
- Multi-disciplinary care plans to manage complex long term conditions
- Greater standardisation and consistency of service delivery to improve quality and efficiency
- Economies of scale to achieve sustainable and cost effective services in the face of growing demand.

6.3.2 Information

Information is an essential ingredient of an effective clinical and business model. Information acts as the aide memoir to good health care. Computerised information management allows data to be selected, and presented in the right context and the right time to make it useable. Information supports good clinical decision making; it enables a planned approach to the patient's care; it enables practitioners to measure outcomes and improve their clinical practice over time; it enables research into new and better treatments.

The plan endorses information solutions which support the following functions and their associated outcomes.

- Clinical decision support – providing the practitioner with a clear set of diagnostic or treatment options
- Clinical pathways – providing the practitioner with an evidence based plan on which to base the patient's individual care plan
- National collections – measuring outcomes; recording use of procedures and medications; recording mortality and cancer incidence
- Screening – checking otherwise healthy individuals, and referring for early intervention where appropriate to help prevent the onset of chronic illness or loss of life
- Immunisation – applying preventative treatment to avoid the onset of communicable diseases
- Quality indicators and clinical audit – measuring the quality of care and benchmarking the practitioner or practitioner team to a recognised standard of care
- Primary Care – recognising the importance of high quality primary care data and processes as the anchor for the delivery of effective patient care.

6.3.3 Applications

Applications are the software tools used to process and manage information. They are the modus operandi of computerised data collection and digital presentation.

Applications typically perform specialised functions and support specific processes which are required to be adhered to. Hence a finance system enshrines the doctrine of double sided bookkeeping and helps “freeze the process” around this methodology to prevent arithmetic errors. Administrative and medical applications have the potential to do the same, except the rules are not yet clearly defined. Medical applications are in a period of rapid development and increasing functionality.

The downside of this evolutionary process is that it is hard to pick winners, and the requirements keep changing as the script is only partially written.

Applications are divided into two broad types; clinical applications which support patient care, and business support applications which support traditional business functions such as financial accounting, payroll and procurement.

The plan has been selective about the clinical applications it wants to focus on as it endeavours to tackle those investments of most overall value to the sector. Five focus areas have been selected for further investment and standardisation over the next two years.

6.3.4 Infrastructure

Infrastructure is the foundation upon which applications are run. They are the roads and railway tracks of computer systems. Without strict standards in this area, chaos can ensue. To illustrate this point, imagine a NZ with three different gauges of railway track. This means that each engine and carriage can only run on its bit of track. When moving to a different sized track, the wagons have to be unloaded and then reloaded on to a different track. Engines and carriages cannot be re-used on other tracks and without considerable delays and costs involved in conversion. This is why a nationally standardised infrastructure is so important.

6.4 Current State

The NZ health ICT sector is characterised by a large number of individual systems dispersed amongst DHBs, central government agencies, primary care, Private Hospitals, Rest Homes and a large number of Non-Government Organisations (NGOs). All are “patient-centric” in their own right, but when attempts are made to view the information about a patient as a whole, it is quickly apparent that the information is so fragmented and inconsistent that, like assembling a jigsaw puzzle with missing pieces, it becomes an impossible task.

Even where larger, more integrated systems exist within DHBs, there is much duplication of data and function. Information is retrieved and processed in an inconsistent manner leading to unnecessary variation. Furthermore, the same system implemented at a number of providers is not necessarily compatible. This is because of the ability to customise the configuration and data within the same type of system. Often customisations are introduced to support local requirements which have grown up in response to local knowledge and circumstances rather than in response to good practice and standards.

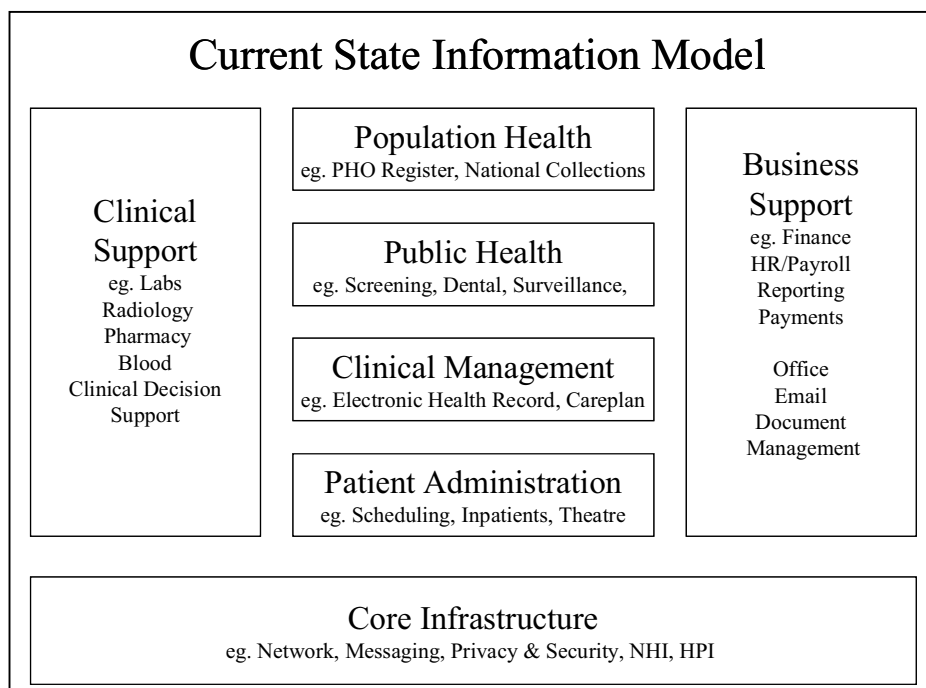
Investment in information systems has been uneven. Some health organisations have achieved significant gains and clinicians have a high dependency on systems which then drives further demand and investment, especially on the infrastructure required to support an increasing number of users, storage and availability. Other organisations continue to soldier on despite under-investment and a lack of resources or scale. However this leads to constant fire-fighting where success is counted as keeping your head above water rather than making any forward momentum.

However some gains have been made, especially through convergence within regions on a common set of systems. This has enabled a degree of co-operation and knowledge sharing amongst IT staff supporting the same type of software.

Regional networks are in place, and recent years have seen an increasing number of systems hosted externally.

Some of the risks and barriers to progress in the current state have been recognised as;

- A complex suite of systems which all try to co-exist but do not readily talk to one another. The affect is that of an island archipelago rather than an intact “land” mass of information. Such fragmentation has led to independent development of many solutions to essentially the same set of problems.
- An unmet demand for improved infrastructure to support 24 x 7 access to information by clinical users who are critically dependent on the computer systems to perform their tasks. In many organisations, items such as lab results, clinic letters, and images are only held electronically.
- A lack of clear direction and consistency in approach. DHBs have operated as autonomous entities each making decisions about their own system solutions and configuration. There is no master plan which recognises the investment and effort which needs to be made for all health care organisations.
- A lack of recognition and understanding from executive leadership about IT priorities and long term investment requirements.
- Maintaining a balance of skilled and knowledgeable staff in a climate where such skills are sought after by other organisations willing and able to pay more. Also such specialist skills are hard to find outside of the major urban areas.



A survey of the current systems environment (primarily for the 21 DHBs) has been conducted. The survey identified 90 different functional categories, each of which represents a system or a functional module of a system.

The diagram above breaks down this complex picture into meaningful focus areas. It maps applications/systems into seven broad areas of similar functionality.

The difficulty this presents for health sector information management is that if each functional area represents a system, then to achieve an integrated care model, the number of interfaces becomes very large and complex resulting in an environment which is very complex and costly to maintain and modify to changing requirements.

6.5 Future State Goals and Objectives

One way of reducing this complexity is to reduce the overall number of instances of each application, and thus the number of interfaces that have to be maintained. This is a key design objective of this plan.

To migrate from current state to future state the plan sets the following goals:

1. Population Health and Shared Care functions need to be delivered as national systems.
2. Some Public Health functions such as screening need to stop building separate systems and instead develop registers, and supporting processes, based on populations of interest (eg. children under 5 years of age). They need to leverage data from existing clinical information systems.
3. Clinical Support, Clinical Management, and Patient Administration functions need to be delivered regionally.
4. Business Support functions need to be delivered as one or two instances nationally.
5. Infrastructure needs to be delivered as a mix of national, regional and local components all working according to the same technical and operational standards.

In the following tables, italics are used where the project is planned but not yet approved or scoped.

6.5.1 Information Objectives

The plan seeks to address major gaps in good quality information across the sector. The focus is on standards for primary health, and national standards for all categories of health information.

The following investments in **Quality Information for Primary Healthcare** are proposed.

Projects	Objectives	National/Regional Implication	Lead Agency	Delivery Date	Milestone
PMS Requirements Study	Define a set of requirements for General Practice Management Systems. <i>Implement changes to PMS systems and certify them.</i>	The 5 main PMS systems will be certified against these requirements. <i>New standards will become part of general practice systems</i>	GNZ	Jul-2010	Requirements agreed
QI4GP	Design and implement a primary healthcare information model.	A set of health data for primary care which can be used to maintain quality indicators	RNZCGP	Jun-2011	Dataset agreed
Map of Medicine evaluation	Evaluate Map of Medicines for use in the New Zealand primary healthcare environment	Evaluation may recommend use of the tool	RNZCGP	Jul-2010	Evaluation completed
Clinical Pathways	<i>Development of standard clinical pathways across primary and secondary sectors</i>	<i>A common approach to the development of clinical pathways co-ordinated regionally</i>		<i>Jun-2012</i>	<i>Clinical Pathways in use</i>
Data Concepts Dictionary	Define a common set of data elements used throughout the health sector, focussing on the high value clinical information initially. Use GP2GP and SMM projects as starting points.	Standardised clinical dataset published and available for use in data collections and systems. Forms the basis for standardised interfaces between systems.	NHBBU	Sep-2010	Initial set of standards HISO endorsed and published
Core National Data Standards	<i>Embed core national data standards for reporting and transfer across all health care systems</i>	<i>Common data standards are widely used throughout systems in the NZ health sector</i>	<i>Vendors</i>	<i>Jun-2014</i>	<i>Core standards in use</i>

6.5.2 Clinical Application Objectives

The plan has been selective about the clinical applications it wants to focus on as it endeavours to tackle those investments of most overall value to the sector.

The following investments in **Continuum of Care** are proposed.

Projects	Objectives	National/Regional Implication	Lead Agency	Delivery Date	Milestone
GP2GP	Transfer a patient's healthcare record from one GP system to another electronically.	Patients can move their complete health record between any GP in NZ	GPNZ	Nov-2010	Electronic transfer in use
E-Referrals	Phase 1: Implementation of electronic referrals on a regional basis. Phase 2 & 3: End-to-end e-referrals solution including decision support <i>Standardised e-referral templates available</i>	Centre of excellence for e-referrals. Will use similar approach in other regions. <i>All GPs have the capability of generating an e-referral to secondary care</i>	Auckland DHBs Auckland DHBs <i>All DHBs</i>	Nov-2010 Dec-2011 <i>Jun-2012</i>	GPs can refer electronically to all services End-to-end electronic use <i>E-referrals in use</i>
E-Discharges	Develop a transfer of care standard between secondary and primary <i>Implement transfer of care standard. Allow GPs to upload information from the discharge summary.</i>	Clinically led national standard agreed <i>GPs will see the same format for discharge summaries across NZ</i>	CLG <i>All DHBs</i>	Jun-2010 <i>Jun-2011</i>	Standard specified and agreed <i>E-Discharge standard in use</i>

The following investments in **Safe Medications Management (SMM)** are proposed.

Projects	Objectives	National/Regional Implication	Lead Agency	Delivery Date	Milestone
Universal List of Medicines	Create Universal List of Medicines	ULM becomes embedded within information systems in the sector	Pharmac/Medsafe	Jun-2010	Pilot use in pharmacy systems
Medicines Reconciliation	Pilot of electronic medicines reconciliation using Medchart (iSoft) and eDS (Orion)	Will provide lessons learnt for electronic MR for other DHBs	Taranaki/Counties		Pilot use in two DHBs
E-Medications	Pilot of E-Medications (e-prescribing, administration and review)	Will provide lessons learnt for e-medications for other DHBs	Otago		
<i>E-Medications Rollout</i>	<i>E-Medications rollout across Primary and Secondary services</i>		SMM		

The following investments in **Clinical Support, Safe Sharing** and **Patient Administration** are proposed.

Projects	Objectives	National/Regional Implication	Lead Agency	Delivery Date	Milestone
Hospital Laboratory	Replace old hospital laboratory system.	Three other DHBs in Midland requiring to replace their systems will use this instance	Waikato		New system in use
Regional PACS	Implement PACS archive (Carestream) for Central Region allowing images to be shared, and economies of scale for DR/Backup		Cap Coast		
Regional PACS	Implement common RIS and PACs solution (Agfa)		Auckland DHBs		One instance in use in 3 DHBs
Oncology	Investigating one national system				
Cardiothoracic	Investigating one national system				
Renal	Investigating one national system				
Shared Care Plan	Develop prototype for shared care plan in partnership with lead vendors				
Safe Sharing Policy	Develop policy for shared care in conjunction with prototype and Consumer Forum				
Recipient Provider Index	Replace NHI and HPI and Address Register with new national system	Allows reliable access to patient and clinician identifiers nationally	NHBBU	Jul-2012	Old NHI & HPI system replaced
Connected Health	Allow clinical users to sign-on once to allow access to patient information across a region		Midland		
Patient Administration	Patient Administration System Replacement	Replace obsolete PAS systems in DHBs			

6.5.3 Business Support Application Objectives

Business Support Application Investments will be facilitated by the Shared Services Establishment Board, but co-ordinated as part of the overall National Health IT Plan.

Possible projects include Finance, HR/Payroll, Email, and Document Management.

Further information, not available at this time, is required in order to complete this part of the plan.

6.5.4 Infrastructure Objectives

Infrastructure investments will be co-ordinated and funded at both regional and national levels.

Possible projects include regional data centres, common authentication directory, implementation of security standards, national licensing for some infrastructure services.

Further information, not available at this time, is required in order to complete this part of the plan.

7 Implementation of the Plan

The National Health IT Board has presented in this inaugural Health IT Plan a new set of health IT priorities within the context of the National Health Board. It is therefore important that the board supports health organisations, at national, regional and local levels, to understand the expectations of the plan and the impact on current plans and commitments.

The plan will be finalised by 30 June 2010, after the discussion period with sector groups has concluded. The more detailed regional planning will be completed by 30 September 2010. Thereafter the regional and national plans will be reviewed annually. A communications plan with key messages and facts will be developed prior to release of the final version in July 2010.

The board will work with the three accountable groups (Primary Healthcare IT Programme Group, DHB CEO Information Group, and the Ministry of Health National Programme) during the period up to 30 September 2010, to develop detailed implementation plans. The initial focus of these plans will be to achieve Phase 1 milestones in the next 18 months.

Centres of Excellence

The approach to implementation will be to trial innovations in different settings where they are most likely to succeed. Support the development of people capability and leverage that capability for national rollouts.

Sector Architecture

A group of sector architects has been formed to develop a detailed national information systems and infrastructure architecture. The group represented members from DHB, primary healthcare and the Ministry of Health to get a comprehensive approach.

Connection across other social services

We will also take opportunities to engage with other government agencies in the areas of Education, Social Development, Housing, and Local Authorities.

8 Measures of Success

Three critical measures of success for this plan are:

1. Clinical Governance:
 - ◆ Clinicians and Clinical Networks confidently lead the identification of quality improvements, the development of new or improved clinical pathways, and the design of information solutions
 - ◆ They partner with sector leaders and IT professionals to deliver 'fit for purpose' information solutions
 - ◆ Improvements in quality and overall health outcomes are measured openly and new improvements are identified for clinical pathways and related systems.
2. Agreed Work plan for health IT investments
 - ◆ A small number of major sector level health IT investments are under development each year based on the priorities identified in national plans and the benefit to the sector as a whole
 - ◆ Current information systems are leveraged to deliver on new clinical and business support requirements
 - ◆ People across the sector will have clarity on whether information solutions are delivered at a national, regional or local level.
3. Supporting Increased Self Care, Care Teams and Remote Support
 - ◆ Support for patient involvement and engagement in their health journey will be a design requirement for new health information solutions
 - ◆ The national shared care information solution will be the natural starting point for the delivery of new health IT solutions
 - ◆ Projects that support workforce issues, for example, effective remote access to specialist clinical expertise, will have a high priority.

9 Issues and Risks

There are a number of current issue and risks, including:

1. Healthcare organisations have already planned their health IT initiatives and projects for the 2010/11 year:

Mitigated by:

- ◆ Clear signals have been provided to DHBs from February 2010
- ◆ Regional planning will be the forum to address the prioritisation challenge.

2. Consumers will have a wide range of views in relation to a single health IT plan extending from frustration with the lack of progress to concern for the privacy of their information.

Mitigated by:

- ◆ The board will engage with consumers through the consumer forum and directly with community groups
- ◆ Privacy impact reviews will be completed on all health IT solutions
- ◆ Projects will need to ensure clinicians and patients are informed about changes to, and the operation of, health IT solutions.

3. Health IT Vendors have had mixed signals and are set up to work with a fragmented sector

Mitigated by:

- ◆ Vendor partnership meetings will be held on a 6 monthly basis to build relationships and reset the model of engagement between the sector and vendors
- ◆ This plan will generate new opportunities for those vendors who are able to demonstrate products and services that enable the objectives of the plan.

10 Appendices

10.1 Guiding Principles

Any successful health information solution has to harness people, process and technology in the right balance.

Overall principles.

- a) The plan is all-of-sector focussed
- b) The plan has a greater emphasis on regional and national systems
- c) The plan aligns strongly with other sector initiatives

The following set of guiding principles will help those directly involved to understand the approach. Many of these were developed as part of a draft Joint District Health Boards and Ministry of Health Work Plan for Information Management and Technology in April 2009.

10.1.1.1 People Guidelines

- The community will understand and support appropriate use of, and access to, electronically stored personal health information
- Health practitioners will have clearly defined roles when collecting, using and sharing personal health information.
- People will be more involved in the collection and use of their personal health information.

10.1.1.2 Implementation Guidelines

- Clinicians are integral to the development and ongoing use of personal health information solutions.
- Information improvements will be prioritised to enable clinicians to optimise their resources (time, facilities and equipment) and focus on the delivery of quality health care.
- Clinical networking and health care support functions (e.g payroll, financial and procurement, IT etc) will be facilitated on a regional or national shared basis.
- Administrative processes will be simplified and automated wherever possible
- Management information (for example, reporting against external contracts) will be a by-product of day to day administrative and clinical work processes (and not an end in itself)
- National consistency of key processes is maintained and information systems can work together seamlessly wherever possible.
- Information requirements for new or redesigned services will be taken into account early in the planning process.

10.1.1.3 Technology Guidelines

- Information will be recorded, stored, viewed and managed electronically throughout the health system.
- Electronic information is centred on each individual patient/person.
- Information solutions will use nationally adopted and agreed standards whenever possible
- Clinical delivery tasks will be made easier and safer through the use of supportive technologies (such as clinical decision support systems).

- Systems and processes will be consolidated and run as shared services wherever possible

10.2 Audience

The audience for this plan is wider than just the IT community. It will require considerable investment so it is targeted at key decision-makers. It will require the support of those who are directly affected by it. It will also be influenced by many parties involved in the use of information to improve the quality of healthcare.

Decision-makers (Funders)	Influencers	Directly Affected
National Health Board C level execs in DHBs (CEO, CFO, COOs) Primary Care Leadership Boards of DHBs Pharmac ACC MoH	Minister of Health Privacy Commission Health & Disability Commissioner Treasury Other govt ministries & ministers Academics Reference Groups Professional bodies (eg College of GPs, RAs) Other health committees	DHB CIOs CIOs of PHO/MSOs Health IT Vendors Shared Service Agency(s) NHBBU Information

10.3 Business Case Evaluation Criteria

The following criteria were developed to assist with the evaluation of business cases (all business cases with a capital value greater than \$500,000) by the National Health IT Board.

Criteria	Criteria Detail
Alignment with National IT Plan	<p>Is this a good fit to the functionality required?</p> <p>Does it have wider implications for use elsewhere in health sector?</p> <p>Is it a mainstream application already widely accepted?</p> <p>Is this project an innovation where we are looking for innovation?</p> <p>Does it align with strategic NHB/IT Board priorities?</p>
Clinical and management leadership and engagement	<p>Does this project have strong sponsorship and buy-in from clinical leadership and management?</p> <p>Is a single project sponsor (accountable for delivery of benefits) clearly identified and supported?</p> <p>Does the implementation team demonstrate commitment and capability?</p>
Project Risk	<p>Is the project likely to succeed?</p> <p>Is there a robust project management approach and is there commitment to this?</p> <p>What is the organisation's past track record in delivering similar projects?</p>
Vendor track record and reliability;	<p>Does the vendor have a good track record of implementation and support?</p> <p>Consider reference checks and vendor one-on-one</p>
Fit to application and technology architecture	<p>Is this a good fit to existing infrastructure?</p> <p>Does it meet software certification standards, and interfacing standards?</p> <p>Does the solution reduce overall complexity?</p>
Cost effective	<p>Is this the most cost effective solution (capex & opex over 5 years)?</p> <p>Have other more cost effective options been considered (eg outsourcing)?</p>
Risk if does not proceed	<p>Is there a compliance risk?</p> <p>Is this a replacement for a system which is/will be no longer supported?</p>

For more information please contact: enquiries@ithealthboard.health.nz