

2 About the HealthSMART strategy

2.1 The HealthSMART program

2.1.1 Overview

The Department of Human Services (DHS) established the Office of Health Information Systems (OHIS) in July 2003. OHIS was set up to implement *Victoria's Whole-of-Health Information and Communication Technology Strategic Plan 2003-2007*, to be delivered by the HealthSMART program.

The strategic plan was developed with stakeholder consultation to ensure that appropriate priorities were identified across the sector. A steering committee, comprised of senior DHS and health agency representatives, oversaw its development.

It was endorsed by the Board of Health Information Systems (BHIS) at its inaugural meeting in November 2003. In December 2003, the Minister for Health formally launched the HealthSMART strategy.¹

The HealthSMART program is key to the realisation of this strategy. It was conceived as a four year, \$323 million information technology program to be delivered by June 2007 in selected agencies across the Victorian Public Health System (VPHS); including health services, rural Information and Communication Technology (ICT) alliances, and community-based health service providers.

It involves replacing obsolete, unsupported computer software applications with capable, industry-standard products; and introducing new software systems to support the transformation of health care. At the same time ICT infrastructure and hardware is being either replaced or developed to support the new applications and information systems.

It has since become a six year program, with a current estimated cost to completion of at least \$360 million² and is the most far-reaching ICT change program ever undertaken in the VPHS.

¹ Victorian Department of Human Services 2003, *Whole-of-health Information and Communication Technology Strategic Plan 2003-2007*, Department of Human Services, Melbourne.

² This is a DHS estimate and is discussed further in Part 3 of this report.

2.1.2 Program objectives

The aims of the HealthSMART program are to provide ICT as an enabler to:

- improve health care services and outcomes for the public
- make the provision of health care more efficient
- better manage available resources
- attract, retain and support a highly-skilled workforce.

HealthSMART is expected to improve patient care, reduce the administrative burden on health care professionals, and ease the costs associated with updating technical infrastructure within the VPHS by adopting standardised approaches to information systems.

2.1.3 Scope of the program

Original scope

In its 2003 funding submission to government, DHS committed to delivering a number of computer applications and a supporting 'shared services'³ infrastructure.

Specifically DHS, through OHIS, committed to:

- replacing obsolete and unsupported financial and materials management systems in 10 health agencies and rural ICT alliances
- replacing obsolete and unsupported patient administration systems in 10 health agencies and rural ICT alliances
- implementing clinical systems that allowed for 'e-Prescribing', electronic scheduling, clinical tests ordering, and results reporting systems across all major Victorian hospitals
- developing a shared services ICT arrangement to support and maintain core applications along with the supporting infrastructure.

Scope variations

In November 2004 the BHIS approved the implementation of a Human Resources Management System, with payroll to be implemented in seven agencies, and rostering and occupational health and safety functionality to be implemented in two agencies⁴.

³ The HealthSMART shared service is the centralisation of certain ICT functions that were once performed separately by individual health agencies. Shared services are designed to allow agencies to share infrastructure, support mechanisms and achieve quality benefits and cost savings. HealthSMART Services infrastructure covers the technology, communications and support services required to host and support HealthSMART applications.

⁴ A payroll system was not in the original scope of the HRMS project, but was added to address the risk of a vendor exiting the market.

BHIS also endorsed the implementation of the Patient and Client Management (PCMS) application in an additional five agencies.

Figure 2A sets out the current approved project components of the program and the aims of each.

Figure 2A
HealthSMART program components

Portfolio	Projects	Aims
Resource Management Systems	Human Resources Management Systems (HRMS).	Modernise and standardise business processes associated with human resource management systems across the public health sector.
	Financial and Supply Management Information Systems (FMIS).	Modernise and replace financial and supply management information systems.
Patient and Client Management Systems	Patient & Client Management System (PCMS)—Integrated system for metropolitan health services and rural and regional health ICT alliances.	Enable the efficient processing of patient access and discharge. Enable a better view of the future demand for resources. Provide a resource scheduling capability. Increase the quality and safety of care through reliable identification of patients and clients.
	Client Management System (CMS) - Stand-alone system for community health services.	Increasing the efficiency of ambulatory care provision by reducing the number of non-attendees riot arriving to outpatient appointments.
Clinical Systems	Clinical Systems	Automate clinical care activities including prescribing, drug administration, investigation ordering and reviewing. Support clinical care to make informed decisions by providing efficient and effective access to patient data. Provide clinical information at the point of care and reduce the time spent by patients re-presenting to clinicians.
Technical services	Design, procure and implement technical and integration services HealthSMART central services	Provide ongoing central technical services to HealthSMART users.
Health Applications	Dental Health Services Victoria ICT Project	Focus on information systems that fall outside the current scope of the HealthSMART program, yet need to become aligned with its goals over time.
	Mental Health Systems	
	Victorian Ambulance Clinical Information System Project	Improve the use of information by the Victorian public health care agencies to support client care.
	Picture Archive Communication System Project	
Program Management Office	Program Management	Ensure that the activities of the project plan are delivered.

Source: VAGO based on OHIS information.

While each project component focuses on different functional areas, the interdependencies between each are critical to achieving the expected overall outcomes of the program.

2.1.4 Agencies participating in the program

The program was established as a partnership between DHS and the VPHS. Key to this approach was voluntary agency participation—whereby individual health agencies had the authority to decide whether and when they would participate in implementation of any of the applications procured for the program.

However, since there were a number of health agencies with obsolete FMIS and PCMS systems, it was expected that participation would be a matter of timing only—that is, *when* agencies would participate, not *whether* they would participate.

The voluntary participation policy was subsequently revised to ensure greater certainty around participation. From March 2006 the BHIS determined that any VPHS agency introducing a new or replacement application with functionality that could be delivered by one of the applications from the approved HealthSMART suite, was required to use the HealthSMART software application and the associated support services.

Figure 2B summarises the agencies currently participating in implementation of a HealthSMART program component.

Figure 2B
HealthSMART implementing agencies (as at December 2007)

Agency	FMIS	HRMIS	PCMS	CMS	CS
Metropolitan agencies					
Austin Health		●			
Eastern Health	●				
Northern Health	●		●		
Peninsula Health	●		●		
Southern Health	●	●			
Melbourne	●				
Peter MacCallum Cancer Institute	●				
St Vincent's Health		●			
Royal Women's Hospital		●	●		
Western Health	●				
Rural and regional ICT alliances					
Bendigo Health	●				
Gippsland Alliance			●		
Grampians Health		●			
Community Health Centres					
Western Region Health Centre				●	
Bendigo Community Health				●	

Source: VAGO based on analysis of OHIS data.

2.1.5 Program implementation timelines

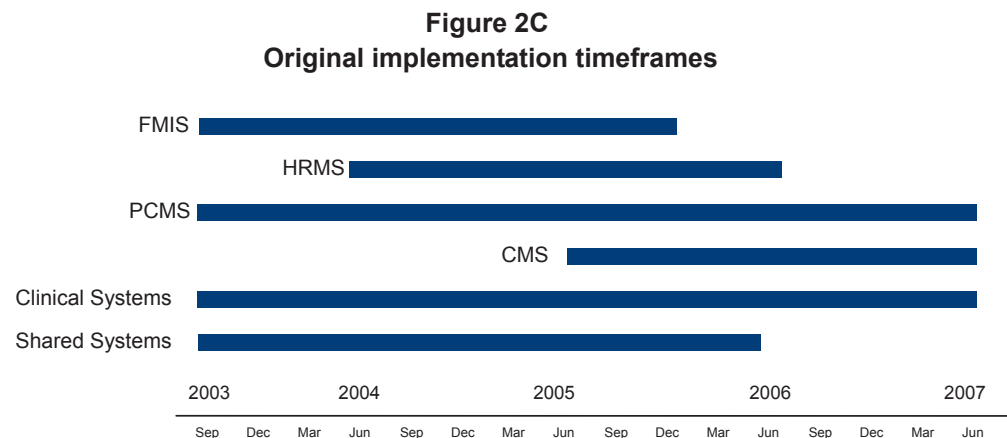
The HealthSMART strategy was originally planned to be implemented as a four-year program to be completed by June 2007.

OHIS has defined major milestones for the procurement, design and implementation phases for each application. Additional minor milestones are contained within these broad phases.

The approach taken to implementation was essentially to run parallel procurement processes for the identification and selection of software for each component. Once the procurement phase had been finalised for a particular project component, generally a parallel implementation was to be undertaken in the agencies that had elected to implement that software application.

At the same time the technical services component, particularly the shared services arrangements, had to be implemented in order to support the software.

Figure 2C shows the original timelines for each project component.



Source: VAGO based on OHIS data.

In August 2006 the BHIS authorised a two year extension to the program (to June 2009). This was due to program delays resulting from:

- difficulties in concluding the procurement processes (such as protracted negotiation about contract terms, especially for clinical systems)
- OHIS being unable to recruit adequately qualified and experienced staff to the program or health agencies
- delays in agencies committing to the project, leading to vendors reallocating resources to other projects
- delayed delivery—or delivery of incomplete—products, requiring substantial re-work and re-testing.

2.1.6 Approved cost of the program

The original approved cost budget for the program was \$323.4 million. This budget was for the implementation of the systems and the supporting infrastructure, but not for ongoing operating, maintenance and support costs.

Figure 2D breaks down the total cost budget against each project component, giving both the original cost budget approved in 2003, and the approved revised budget at June 2006. The reduction in the overall budget from \$323.4 million to \$310.7 million reflects both the scope changes approved by the BHIS, and the forecast actual total cost expected at that time.

Figure 2D
HealthSMART program budget

Project component	2003 \$ m	2006 \$ m	Change \$ m
Applications			
FMIS	26.3	26.8	0.5
HRMS	4.0	4.0	0.0
PCMS	50.0	39.0	-11.0
CMS	13.5	13.1	-0.4
Clinical	79.0	96.2	17.2
	172.8	179.1	6.3
ICT support			
Integration Services	8.1	12.5	4.4
Technical Services (includes HealthSMART Services)	38.1	31.4	-6.7
Enabling	11.7	6.6	-5.1
	57.9	50.5	-7.4
ICT infrastructure			
Technical Refresh	66.7	48.7	-18.0
Program management			
Directorate	4.0	7.3	3.3
Program management office	3.2	5.1	1.9
	7.2	12.4	5.2
Related health applications			
Dental	4.0	3.0	-1.0
Mental Health	8.8	11.0	2.2
Ambulance	6.0	6.0	0.0
	18.8	20.0	1.2
Total HealthSMART program	323.4	310.7	-12.7

Source: VAGO, based on OHIS data.

2.1.7 How program costs were to be funded

The funding model for the HealthSMART program requires implementation costs to be shared between DHS and health agencies. This is consistent with the partnership approach adopted for the program in the strategic plan.

In setting the level of agency contribution, DHS required each agency to contribute 30 per cent of the implementation costs for clinical systems, and 20 per cent of the cost for all other systems. DHS expected health agencies to fund their contribution by reallocating internal funds currently used for ICT systems and infrastructure.

Under the 'co-contribution' funding model DHS provides the bulk of the implementation costs. Specifically, the department:

- funds the license costs, state-wide planning, state-wide design and required technology
- funds vendor costs for agency implementations
- contributes to local project costs (particularly through funding of a project manager)
- covers running costs for the first twelve months of each agency's use of the system
- subsidises ongoing running costs of HealthSMART Shared Services until there is adequate uptake of the system.

Implementation costs to be borne by the health agencies include:

- funding of a project team (excluding the DHS-funded project manager position)
- funding for staff training (largely backfilling of staff attending training)
- funding of the integration of HealthSMART applications with local systems.

In addition, health agencies were expected to bear the operating and maintenance costs of each system beyond the first year after going live. These costs include:

- fees paid to HealthSMART Shared Services for hosting and support of HealthSMART applications
- any required agency infrastructure upgrades and maintenance—to keep infrastructure such as computers and communication networks in an adequate condition to effectively operate HealthSMART applications.

In its 2003 funding submission to government, DHS budgeted for \$250.5 million to be expended by DHS on the program with the balance of \$72.9 million to be funded by the health agencies involved in the program.

In June 2006, DHS increased its budget contribution for HealthSMART by \$34.8 million to \$285.3 million. Budgeted contributions required from health agencies fell by \$47.5 million, from \$72.9 million to \$25.4 million.

Figure 2E shows the combined effect on the required level of agency contributions flowing from the overall cost savings anticipated in the revised budget, and the increased contribution by DHS.

Figure 2E
Sources of funds for the HealthSMART program

	Original	Revised	Change
	\$ m	\$ m	\$ m
Treasury (new funds)	138.5	138.5	0.0
DHS (existing funds)	112	146.8	34.8
Treasury/DHS subtotal	250.5	285.3	34.8
Agency contributions	72.9	25.4	-47.5
Total	323.4	310.7	-12.7

Source: 2003 DHS funding submission and the June 2006 BHIS Financial Report.

2.2 Audit objective and scope

The objective of this audit was to assess whether the HealthSMART program is being effectively managed by the Department of Human Services and if it will achieve its original objectives.

The audit examined:

- the extent of achievement of implementation, milestones and budgeted costs
- the extent of realisation of the expected benefits as set out in the ICT strategy
- the effectiveness of overall monitoring and review of the program
- the soundness of controls in place to assure the probity of procurement processes.

The focus of the audit was on implementation of the core HealthSMART applications. It did not extend to a review of the implementation of the other dental, mental health and ambulance applications.

This audit was performed in accordance with the Australian auditing standards, and included such tests and procedures considered necessary.

The cost of the audit was \$310 000. This cost includes staff time, contractor and specialist fees, overheads and printing.