



**2004-2005**  
**Provincial Information Technology/Management Plan**  
**for**  
**the Health Sector**

*Revision 1.0*

## Document Information

Document title:	2004-2005 Provincial Information Technology/Management Plan
Document file name:	s:\projects\health sector it planning\2004-2005\2004-2005 provincial information technology-management plan v1.0.doc
Revision number:	1.0
Issued by:	CIO Forum
Issue Date:	October 2004
Status:	Final

## Revision History

This section provides control for the development and distribution of revisions to the Provincial Information Technology/Management Plan up to the point of approval. The Provincial Information Technology/Management Plan provides an ongoing reference for all health sector stakeholders.

<u>Revision</u>	<u>Date</u>	<u>Author</u>	<u>Description of change</u>
1.0	October 2004	CIO Forum	Final

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## 2004-2005

# Provincial Information Technology/Management Plan for the Health Sector

## 1. Executive Summary

Information technology (IT) investments are becoming an increasingly important factor in most new health program initiatives and in ensuring that we can sustain a high quality, accessible and sound provincial health system into the future. A coordinated approach to these investments across the health system is essential if we are to maximize IT's contribution to health system goals through wise and forward-thinking decision-making. Given the competing pressures for health funding, it is important we have a provincial approach to managing IT investments that is tightly aligned with provincial program strategies, supports front-line service delivery needs of health care providers/organizations and is accountable for achieving planned results. Saskatchewan will also want to be positioned to gain maximum leverage from the \$1.1B investment Canada Health Infoway will make in accelerating electronic health record developments in Canada over the next three to five years.

The Action Plan for Saskatchewan Health Care released in December of 2001 provided a long-term vision to guide decisions and investments: **building a province of healthy people and healthy communities**. To achieve this vision, the health plan outlined key goals along with a number of specific actions and initiatives for the short, medium and longer term. Many of these specific actions and initiatives require IT investments to enable Saskatchewan Health, the Regional Health Authorities and the Saskatchewan Cancer Agency to effectively and efficiently achieve their objectives.

The 2004-2005 Provincial Information Technology/Management Plan is the second comprehensive provincial plan of IT initiatives and projects being undertaken by Saskatchewan Health, the Regional Health Authorities, the Saskatchewan Cancer Agency and the Saskatchewan Association of Health Organizations.

Together, these organizations are cooperating and collaborating to better able to meet the information technology and management needs at the provincial and regional levels. The intent of the Plan is to provide strategic direction for IT/IM initiatives throughout the health sector so that health infostructure in Saskatchewan evolves in a strategic way with maximum benefits in supporting the health sector over time. Since health IT initiatives are increasingly complex and interdependent, the Plan addresses development of our infostructure, keeping in mind both program priorities and technology considerations. Given the tight timeframes associated with development of the new health regions, and the still evolving program planning and accountability processes, this year's IT/IM Plan has a nearer term (12 – 18 months) focus than will be the case in future years. Nonetheless, this year's Plan will provide important guidance for IT initiatives during 2004-05 and establishes a foundation for future planning in this area.

Information technology/management planning needs to be guided first and foremost by business requirements of the health sector. The Plan examined these needs from two (top down and bottom up) perspectives:

**Provincial Health Sector priorities** as described in the Action Plan for Health or included in other program strategies (e.g. primary care, telephone advice line, telehealth, Surgical Care Network, Quality Council, human resources, communicable disease management).

**Regional/Agency priorities** including the integration of services and systems across previous district lines, systems to support clinical services (e.g. lab, home care) and administrative functions (e.g. payroll and staff scheduling).

It is also critical that we make our IT investments strategically, ensuring future years investments will integrate with and build upon today's IT initiatives. In this regard, the IT Plan reflects the longer-term common vision we have as a health sector in working towards a common vision of an **Electronic Health Record (EHR)** in Saskatchewan.

Simply stated, the vision is about - **“getting the right information, to the right individual, at the right time, in the right place!”** to:

- improve quality of patient care through informed decision making
- improve the patient experience through the coordination of service delivery
- improve overall efficiency and sustainability of the health sector
- inform management decision-making and provide the necessary information base to support planning, outcome measurement, accountability and research.

An important concern as we move forward is the **management of the increasingly critical information resources** that are developed. Safeguarding privacy is a critical issue in maintaining public and provider confidence in improvements in our capacity to use and share information to improve health service delivery. Implementation of the Health Information Protection Act (HIPA) and an increased focus on policies and processes to ensure appropriate collection, use and disclosure of health information is expected to be a major focus in the coming year. Other information management issues to be addressed include a heightened focus on data quality and steps to improve the accessibility of aggregate data to support analysis, inter-regional comparisons, accountability and system-wide planning and reporting.

The **human** aspect is often overlooked when implementing new technology. Most planners tend to focus on the nuts and bolts of the hardware or the features of a particular software package, overlooking human and organizational barriers to successful adoption. The ultimate success of a new technology deployment, however, is measured by the increase in efficiency and effectiveness of those using it. Attention needs to be focused on providing effective training the end-users of the technologies with due attention to the potential benefits and impacts of information technology on their work processes.

Lastly, **IT infrastructure sustainability** will be a focus in the coming year. As a result of the recent amalgamation of health districts into health regions, many regions find themselves with varying PC platforms and systems that need to be replaced, upgraded or integrated. There is a need to collectively explore ways and means to establish a proactive approach that would enable regions to regularly refresh technology to ensure their staffs get the most from the regions investment in IT.

The health sector has recognized that there are efficiencies to be gained by providing services centrally where possible. This approach provides significant economic benefits including:

- Central hosting of applications – Reducing the need to duplicate services, staff, equipment and maintenance throughout the province.
- Centralized support – Improving the service delivery process by increasing the depth and breadth of experience of Technical Support and Help Desk staff.
- Standardizing implementation – Reducing cost and time to production for implementing applications. A collateral benefit is the reduction in maintenance and support due to standardized platforms, applications and operations.

The overall benefits of this approach are a lower cost of operation and improved service delivery.

To efficiently share information and information-processing resources across the health sector requires a high speed secure network. The health sector utilizes CommunityNet to provide a high-speed connection in at least one health facility per community. CommunityNet is a provincial government initiative that now provides high-speed access to most of the province of Saskatchewan, with the exception of some remote communities (e.g. in northern Saskatchewan).

As more and more mission critical clinical applications are hosted centrally, it will be important to take the steps necessary to manage the capacity and availability of the network from end-to-end (user to the centrally hosted servers) and to develop robust security and access logging systems to address privacy requirements in accordance with HIPA and the federal PIPEDA legislation. Accordingly, steps will need to continue to be taken in 2004-05 to further strengthen our infrastructure.

In summary, the increasingly ‘inter-connected’ nature of both the health system and the newer information technologies requires that we have a provincial approach to planning, architecting and coordinating IT investments if our health system is to capitalize on new health information technology developments into the future. We are fortunate in this regard, in that we have many of the technology building blocks in place with the Health Information Solutions Centre (HISC) and through the IT working relationships that have developed both within our provincial health system as well as with other provinces. Through a coordinated provincial approach we are well positioned to both influence and leverage the important IT developments and investments that will be taking place through Canada Health Infoway (Infoway). As we move forward in implementing the Action Plan for Health, collectively we now have an important opportunity to strengthen and formalize our processes for managing IT investments on a provincial basis. The Provincial Health Sector IT/IM Plan has an important role to play in guiding both regional and provincial IT investments, ensuring the health system can drive maximum benefit from investments in this area.

The following sections outline the provincial plan in four mutually interdependent layers:

1. Strategic program-driven provincial health sector initiatives
2. Continued development of electronic health records (EHR’s)
3. Staff Training & Technology Infrastructure Components
4. Stakeholder IT/IM Priorities and Projects

## 2. IT Planning for the Provincial Health System

### 2.1 Introduction

Information technology (IT) investments are an increasingly important factor in enabling new health program initiatives and in ensuring that we can sustain a high quality, accessible and sound provincial health system into the future. A coordinated approach to these investments across the health system is essential if we are to maximize IT's contribution to health system goals through wise and forward-thinking decision-making. Given the competing pressures for health funding, it is important we have a provincial approach to managing IT investments that is tightly aligned with provincial program strategies, supports the front-line service delivery needs of health care providers/organizations and is accountable for achieving planned results.

Information technology is becoming increasingly pervasive in the health system and this trend is expected to accelerate. Health is an information intensive sector, yet we have had very low levels of IT investment compared to most other industries. Most new initiatives to improve quality, outcomes and accountability will require better information and decision support tools at all levels across our health system – one that is so dependent on a series of 'micro' health care decisions beginning at the patient-provider level. Similarly, the need to 'network' providers across traditional geographic and program stovepipes to improve the quality and continuity of care, and to address both manpower and access challenges as service specialization and demographic shifts continue, is accentuating the need for effective IT solutions. Finally, changes in technology itself are increasing the opportunities – e.g. most medical instruments are now becoming 'digital'; communication networks can now provide cost effective support for new modalities such as telehealth; and new wireless technologies promise to make it much more practical for health professionals to access client records at the point of care in future.

In an environment where there are so many public, provider and financial pressures on the health system, information technology is a resource that must be continuously managed to yield increasingly visible results. Since IT spending is currently about 2% of health provincial health sector expenditures (vs. 5-10% in many information-intensive industries) - both existing and new expenditures must be strategized very carefully if we are to capitalize on IT as an enabler in supporting broader health system strategies. Major technology change is occurring, which is having a significant impact on how industries are managing IT. For example, price-performance improvements for communications and networking technologies are shifting the deployment of systems to centrally hosted environments, away from locally implemented systems for which increasingly skilled IT professional support is difficult to attract and retain. In the health sector, the need for collaborative and standards-based approaches to IT is underscored by the need for integration between systems to support care delivery teams and provide the comprehensive base of information necessary for decision making (e.g. access to lab and diagnostic results, drug profiles and consults). These trends are apparent across Canada.

In summary, the increasingly 'inter-connected' nature of both the health system and the newer information technologies requires that we have a provincial approach to planning, architecting and coordinating IT investments if our health system is to capitalize on new health information technology developments into the future. We are fortunate in this regard, in that we have many of the technology building blocks

in place with the Health Information Solution Center (HISC) and through the IT working relationships that have developed both within our provincial health system as well as with other provinces. Through a coordinated provincial approach we will be well positioned to both influence and lever the important IT developments and investments that will be taking place through Canada Health Infoway (Infoway). As we move forward in implementing the Action Plan for Health, collectively we now have an important opportunity to strengthen and formalize our processes for managing IT investments on a provincial basis.

## 2.2 Objectives of the Provincial IT/IM Planning Process

- Coordinate IT/IM planning across the health system, through a collaborative process that aligns with health system objectives at provincial & regional levels to address priority health service and information needs.
- Ensure alignment with government-wide IT developments (e.g. CommunityNet) to make the best use of shared IT infrastructure and facilitate more seamless delivery of services to the public across sector lines.
- Maximize effectiveness in delivering IT investments by maintaining a rolling three year strategic IT plan that defines the major projects and their inter-dependencies; optimizes use of IT resources and focuses on sustainable solutions; and ensures that our IT solutions will inter-operate through common standards and support sound information management practices.
- Lever our IT investments by maximizing opportunities for the re-use of IT solutions developed elsewhere and by attracting cost-sharing in areas where we are best positioned to lead in the country.

## 2.3 Key Components of the Provincial Health IT Planning Process

**Three Year IT Plan and Architecture**— A comprehensive ‘rolling’ plan is required at both the provincial, regional and major health agency (e.g. Cancer Foundation) levels. As part of the overall strategic planning process, the Department provides overall leadership in developing a provincial health IT plan by working closely with the Health Information Solution Centre (HISC), the health regions, Cancer Foundation and independent health care provider groups such as physicians and pharmacists. The Department will also continue to work with the government’s Information Technology Office to ensure that these IT strategies and architecture are consistent with government IT directions and exploit opportunities for common infrastructure. The provincial IT plan is informed by, and provides overall direction for, health agency IT plans and will be published annually once the Department’s Strategic Plan and Budget have been approved by government. HISC, as a major provincial delivery vehicle for health IT infrastructure, provides support and advice to health agencies in developing and updating their plans and provides support processes for then developing consensus on the selection and implementation of the appropriate systems solutions where provincial acquisition of common systems solutions is identified in the Plan.

IT planning will be guided by an overarching framework for health sector IT architecture solutions which ensures the components fit together over a longer-term horizon.

**IT Component of the Annual Health Authority Financial and Service Plan** - Each year, as part of the health plan/budget process, HISC and the health authorities

will provide information on their proposed IT budgets, particularly to identify planned IT system and major technology investments. The Department then reviews regional IT plans to assure they align with the region's health plan, are consistent with the provincial three year IT plan and architecture, adhere to provincial IT standards, integrate with other provincial and inter-provincial information technology developments and have attainable and well-defined metrics. Once approved as part of the region's budget/plan in the spring, the region can then proceed to execute on the plan without any further Department approvals. An annual compilation of approved project initiatives (including components of the Department's internal IT plan that are relevant to health system stakeholders) is then posted as an appendix to the three-year provincial health IT plan in order to facilitate ongoing project communication and coordination.

**Accountability for IT Investment Results** – Each year the Department will prepare an internal report on the progress achieved on the plan for the previous year. An ongoing monitoring process will ensure that IT projects across the health system are being evaluated and necessary steps taken to address deviations from project plans. It is important that lessons learned (both positive and negative) inform IT project planning and operational decisions for the future.

**Inter-provincial Health IT Coordination** – Saskatchewan will continue to play an active role in helping to shape the pan-Canadian agenda in this area, with a view to maximizing both the external funding and IT solutions that will help us move forward with our provincial IT agenda. The annual IT planning process will assist us in determining the areas where we can best influence pan-Canadian IT developments by being nearer the 'leading edge' vs. those areas where we should defer investing until pan-Canadian standards and solutions are both proven and available for re-use, at less cost.

**Information & Technology Standards Development** – Given the high degree of inter-connectedness of health information technology solutions, it is critical that we place appropriate emphasis at the front end of system design processes on technology architecture issues so that systems interfacing and migration costs as technologies change are minimized in the long term. It is also critical that we work with health care providers, managers and researchers to define what information needs to be collected, how it should be shared and protected, as well as the standards by which it is to be recorded, to assure information collected and transmitted by IT systems is useful, comparable and adheres to consistent information management policies. Many of these standards decisions must be pan-Canadian or industry-wide to be sustainable, but require both configuration and support by stakeholders within our provincial context to ensure the standards are implementable and support our provincial information and IT priorities. The Department will mandate and communicate IT standards decisions. Saskatchewan Health will also ensure that as a province we influence national standards developments and can provide the necessary support to IT project implementations in the province so that standards are correctly used.

**Note: Section 8 summarizes the health sector IT/IM planning process and the respective roles of the organizations in the province that are key players in implementing its components.**

### 3. Provincial Health Sector

#### 3.1 Vision, Goals and Actions of the Health Sector

“In December 2001, the government released Healthy People. A Healthy Province. The Action Plan for Saskatchewan Health Care. The health plan was the result of many months of careful study and consultation. It was built on the findings of the Fyke Commission on Medicare, the Saskatchewan Legislature’s Standing Committee on Health Care, and on the thoughts and opinions of thousands of residents from across our province.

The resulting health plan is a comprehensive blueprint to secure the future of our health system. It seeks to address immediate challenges in the system, while providing a long-term vision to guide future decisions and investments. While doing so, it adheres to **a clear vision: building a province of healthy people and healthy communities.**

To achieve this vision, the health plan outlines **four key goals:**

- Provide better access to health care services, including primary, hospital and emergency care;
- Improve health workplaces and address shortages of key health providers;
- Support good health and the prevention of illness for all Saskatchewan people; and
- Improve quality, efficiency and accountability measures to ensure long-term sustainability of our Medicare system.

To address these goals, the health plan outlines a number of specific actions and initiatives for the short, medium and longer term. These **key actions** are to:

- Establish primary health care teams of doctors, nurses and other health providers.
- Create a 24-hour toll-free telephone line offering immediate access to health advice.
- Create a province-wide network of community, northern, district, regional and provincial hospitals with clear service expectations for each category.
- Improve management of surgical waiting lists to ensure fair, timely access to surgery for Saskatchewan people.
- Provide \$3 million in new funding to train more health providers and to offer return-service bursaries for students studying in selected health programs.
- Provide funding to train 240 ambulance attendants to become emergency medical technicians.
- Improve province-wide planning and reduce duplication by forming 12 regional health authorities to replace the current 32 health districts.
- Create Canada’s first Quality Council, to promote excellence and effective health spending.
- Increase support for health research in Saskatchewan to help encourage more effective, evidence-based health care.”<sup>1</sup>

Information and information technologies have an important role to play in ‘enabling’ many of these key actions. The following section outlines some of the elements of the IT/IM plan, which support provincial health sector priorities.

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<sup>1</sup> Annual Report 2001 –2002, Saskatchewan Health

## **3.2 Province-Wide Goals and Actions supported by Information Technology**

### **3.2.1 Primary Health Care**

Primary Health Care involves providing services to individuals, families, communities and populations. It includes a proactive approach to preventing health problems before they occur and ensuring better management and follow-up once a health problem has been identified. Since many of the factors that effect health occur outside of the health system, primary health care works proactively with intersectoral partners and community groups to address broader community needs.

This vision for primary care requires closer collaboration and information sharing between primary health care providers. Information and communications technology (ICT) will be a key facilitator in supporting network/team collaboration and information sharing to achieve improved client outcomes.

Using ICT in the future, teams will be able to collaborate and share patient information securely and appropriately. ICT solutions can support team adoption of new approaches to effectively meet health needs before acute episodes of illness or chronic disease develop and to manage them when they are already present.

In supporting primary health care provider's operational and clinical goals and objectives, well designed IT solutions can, as a byproduct, provide Saskatchewan Health and RHAs with data for health system planning, monitoring, evaluation, and research.

The vision for primary care teams involves new approaches to effectively meet health needs before acute episodes of illness or chronic disease develop. Two key focuses for the teams are expected to be:

- adopting proactive approaches to reach high-risk populations prior to experiencing health problems; and,
- introducing screening and monitoring programs to support early detection, intervention and health promotion. Tools to support and facilitate changes in service delivery are being developed or modified for implementation by teams.

A provincial strategy will be developed over the next 2-3 years, as a component of the broader IT Plan, for supporting primary care program goals through the use of ICT solutions. The first step in this process will be to define the business requirements for primary care. Since service models for primary care will evolve over the new few years to reflect program and community needs, IT solutions will need to be adaptive and refined through evaluation and experience.

This effort will be led by Saskatchewan Health in collaboration with the RHAs and HISC. Collaboration in this area through WHIC will be pursued, including opportunities for Primary Health Care Transition funding to support the definition of IT requirements and initial pilots and evaluation of new systems solution to support primary care delivery.

### **3.2.2 Saskatchewan Surgical Care Network**

The Saskatchewan Surgical Care Network (SSCN) is dedicated to creating a more reasonable, fair surgical system for all Saskatchewan people. Over the past year, the SSCN has been working with key partners to improve the system's effectiveness, organization and efficiency, so that those who require surgery receive it within appropriate time frames.

Waiting times for surgery are a major concern for Saskatchewan people. In order to ensure adequate and appropriate access to surgical services in the province, the SSCN is overseeing the following actions which require supporting information technology solutions.

The SSCN oversaw the development of a province-wide computerized Surgical Patient Registry during 2003-2004. The registry tracks all patients needing surgery in the province and facilitates the implementation of consistent tools for physicians to assess the priority of patients for surgery.

The public now has access to better wait list information regarding all Regional Health Authorities (RHAs) providing surgery. RHAs, physicians and the department use the information from this registry to make informed decisions regarding wait list issues and capacity requirements.

HISC provides information technology infrastructure (central servers, secure network, help desk, technical support) required to support the ongoing operation of the Surgical Patient Registry.

In 2004-2005 HISC will facilitate the procurement of a shared surgical information system for use by mid-sized health regions.

### **3.2.3 Telehealth**

Telehealth involves the use of information and communications technology to support access and delivery of health services over distance.

Telehealth Saskatchewan's strategic direction is defined by the recommendations of an external evaluation completed in 2000, a provincial strategic planning session held in November 2001 and Saskatchewan's Action Plan for Health Care. The Action Plan for Health Care describes an expanded telehealth network linking the provincial, regional, community and northern hospitals. The goals are to improve access to health services and encourage optimal use of the province's specialist resources.

Telehealth Saskatchewan uses two-way video conferencing and medical peripherals to provide a wide range of educational programming and clinical consultations to fifteen communities in Saskatchewan.

During the year 2003-2004 the telehealth sites were connected to the health information network to modernize the underlying technology and reduce telecommunications costs incurred in providing this service in rural Saskatchewan. To support this new telehealth technology environment, a scheduling system was implemented. As the number of sites and opportunities for utilizing telehealth and video conferencing technologies increases (for tele-consultations, professional education and meetings), a system was needed to assist with the scheduling of telehealth sessions and ensure we can make the best use of telehealth in supporting the delivery of health services in remote communities.

### **3.2.4 Communicable Disease Management**

Saskatchewan Health and the Regional Health Authorities are working together to put in place, a comprehensive public health software application to support the delivery of public health services for managing communicable and sexually transmitted disease. The need for a timely and responsive case management system, which is capable of receiving real-time reports of suspicious lab test results, flagging potential disease outbreaks and supporting investigative casework, has been underscored by heightened public concern about diseases such as SARS and the West Nile virus.

The Public Health Information System (PHIS) was developed by the British Columbia Centre for Disease Control Society (BCCDC) for use in British Columbia and is now in use or planned for use in all of the regional health authorities in the Province of British Columbia. Health Canada on advisement of the provincial, territorial and federal representatives on the Canadian Integrated Public Health Surveillance Collaborative (CIPHS) believes that the PHIS software has application throughout Canada. In April 2000, BCCDC and Health Canada reached an agreement to use PHIS as the public health case management component of CIPHS. Health Canada has retained the intellectual property rights for the PHIS application, is funding the continued development of the application and will license the PHIS application free of charge to any public health agency.

PHIS is an automated, integrated, client health record and reporting system that supports public health provider interventions, tracking, follow-up, case management and surveillance. The system is designed to be used province wide, providing access to one client record by multiple public health providers and programs anywhere in a given province, and for access to and sharing of communicable disease surveillance and immunization information.

During 2003-2004, Saskatchewan Health and Saskatoon Health Region pilot tested the new software in Saskatoon. The Communicable Disease and Sexually Transmitted Disease Units also started using the case management portion of the system. As the pilot progressed, the decision was made to proceed with implementation of the system throughout the province. During the later part of the year, user training was conducted, a framework for data sharing was defined, along with privacy and security procedures and the system became operational with most of the health authorities taking full advantage of the electronic case management capabilities of the system.

In 2004-2005 management and surveillance analysis reporting will be made available, an electronic interface from the Provincial Laboratory system will be tested, access to the Person Registry System will become available and we will be evaluating the possible conversion of the historical information from the Saskatchewan Health Communicable disease electronic records. We will also be working with Health Canada, Canada Health Infoway and the other provinces and territories to further the development of PHIS.

### 3.2.5 Academic Health Sciences Network

The College of Medicine at the University of Saskatchewan accepts significant educational responsibilities as they guide University medical students through their journey to graduation; mentor post-graduate physicians to competent specialists and researchers; and offer continuing medical education to physicians in practice. The College shares Information Technology issues common to other members of the University community and embraces much of the strategic vision for IT at the University of Saskatchewan ([http://www.usask.ca/its/strategic\\_plan/index.html](http://www.usask.ca/its/strategic_plan/index.html)). As the College works towards a distributed model of medical education both the students and faculty will move beyond the University and its larger medical institutions into centers of health care delivery throughout the province. As a result, the College will need “anytime, anywhere” access to IT resources within the domains of both Health and Education. Students and faculty should be able to work seamlessly in either domain regardless of their primary affiliation and we should work towards the creation of linkages for the simultaneous use of resources from both environments. Further, we will need to link Faculty with their research peers nationally and internationally through research networks such as CA\*net 4.

Access to computing and information resources is a fundamental part of medical education and research. Every student in every discipline must be ICT-literate, both to support his/her learning and to be competitive in the workforce after graduation. We must also ensure that faculty and staff have the opportunity to develop and use the IT skills they require to be successful. Regardless of their area of specialization, both students and practitioners will require ready access to foundation-level services such as e-mail, internet, and basic productivity software, and will need tools to reach across disciplines in pursuit of clinical and research questions.

Advances in distributed and asynchronous learning promise to enrich learning and expand the delivery of health care services. The College of Medicine will invest in videoconferencing hardware and network infrastructure to collaborate with the sites and programs of Telehealth Saskatchewan. Medical researchers will mine data repositories to study population health issues. Faculty will mentor students as they interact with patients via telemedicine. Continuing Medical Education programs will reach practitioners in their communities reducing their requirement for travel while broadening the opportunities for study. Medical students will participate in common seminars and lectures despite training at locations throughout the province. Information Technology will be a key in the restructuring of the Medical School at the University of Saskatchewan.

The demands of Academic Medicine for videoconferencing capacity will require cooperation with Telehealth Saskatchewan; access to the HISC bridge/gateway services; data collaboration via Webex; and will probably lead to an increased demand for Quality of Service bandwidth over the health stream of CommunityNet. Wireless access to the University of Saskatchewan from within Saskatoon Health Region will allow students to remain connected to online resources despite studying within health facilities. An ability to connect to Telehealth and CommunityNet from

within the facilities of the University of Saskatchewan will ease the demand on booking physical space for academic activities.

Health research will require access both to health databases as well as to the information and computing resources of the University community with an ability to collaborate between researchers of other provinces/countries. Students and faculty of the College of Medicine need access to the provincial resources of both health and education with links to the rest of the world. Consideration of the constraints and requirements of each domain will become vital to effective IT planning and deployment within the scope of academic medicine.

## 4. Building Towards an Electronic Health Record

### Electronic Health Record Vision

Our common vision for an Electronic Health Record (EHR) in Saskatchewan, simply stated is:

**“getting the right information, to the right individual, at the right time, in the right place!” to:**

- improve quality of patient care through informed decision making
- improve the patient experience through the coordination of service delivery
- improve overall efficiency and sustainability of the health sector
- inform management decision-making with improved communications tools built on a standardized technical architecture.

The terms Electronic Health Record (EHR) and Electronic Patient Record (EPR) are widely used and tend to mean different things to different people and jurisdictions. In an effort to lend clarity to our discussions here in Saskatchewan, we have chosen to adopt Health Canada’s Office of Health and the Information Highway (OHII) January 2001 definitions as our working definitions.

**Incident Record:** Selected data generated each time an individual interacts with a health care professional. One record is created for each interaction. For example, a record would be created when a physician prescribes a drug for a patient; another record would be generated by a pharmacist when the patient has the prescription filled. Relevant medical and administrative information would be included.

**Patient Record:** A series of all incident records for an individual that is generated by a specific health provider (e.g. a physician or a hospital). Each provider generates one series of records (i.e. equivalent to a hospital or family physician’s paper chart). Provider records may be paper-based, electronic or both (e.g. some department of a hospital being automated, others not).

**Health Record:** All patient records that are generated over an individual's lifetime by all the health care providers who provided services to that individual. There may be many series of records for an individual. Given the number of health care providers, organizations and locations where a person may receive services (physician offices, hospitals, community services, pharmacies, etc.), it is only practical to bring this information together into an accessible record if it is electronic and can be accessed across a secure communications network (hence **electronic** health records or EHR’s).

To facilitate this functionality, an EHR requires five key components.

*Person Identifier:* A universal code that uniquely identifies each individual within the health system.

*Provider Identifier:* A universal code that uniquely identifies each health care provider within the health system.

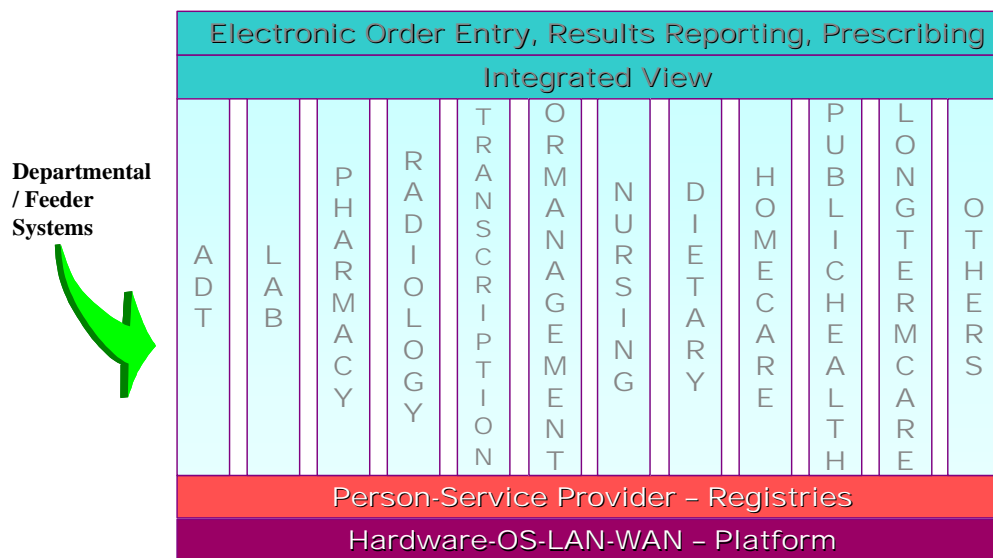
*Facility Identifier:* A universal code that uniquely identifies each institution or centre that provides services within the health system.

*Health Information:* Health data in a standardized format (e.g. lab orders and results, diagnosis, x-rays, prescriptions) that are the result of interactions between individuals and their health care providers.

*Administrative Information:* Standardized data that support administrative functions, such as billing.

It is understood that privacy legislation and security standards must be in place to ensure that electronic records and the information they contain are protected.

The following diagram illustrates the various components or building blocks that need to come together at a regional level as we build towards an EHR.



**Figure 1 – Components of an EHR**

The foundations of the EHR consist of the **Infrastructure** required for the various information systems to run on, as well as the **Registries**, which act as the directory to uniquely identify the persons and service providers within the health sector. Persons are registered once by the health system and the relevant demographic information is made available electronically to each department system. This will reduce information flow bottlenecks and will lead to patients not having to repeat the same information (name, address, allergies, next of kin) to different service providers.

The departmental systems (i.e. **ADT, Lab, Pharmacy, Radiology, Transcription, OR Management, Nursing, Dietary, Home Care** etc.) enable the entry and viewing of timely and accurate health care information by authorized users within each department. Information generated from these various departmental systems will be fed electronically to provide an **Integrated or Common View** of the data. Health service providers will have access to up-to-date client information, from across the continuum of care, to assist them in decision-making and health planning. Eventually, service providers will be provided with information systems that will enable them to electronically submit **Orders, Review Results** and **Prescribe** medication or treatment.

Through a collaboration of the nine large health regions in Western Canada, a report ([A Regional Foundation](#)), explores a consistent approach, vision, and defined architecture for an EHR from a regional perspective and is available from the Western EHR Regional Collaborative (WERC) ([www.werc-canada.org](http://www.werc-canada.org)). The Regina-Qu'Appelle and Saskatoon health regions are members of this collaborative. WERC was created to accelerate delivery of the Electronic Health Record (EHR) within the member regions

and is closely linked with the Western Health Information Collaborative (WHIC) and provincial initiatives such as Alberta we//net and SHIN.

In Saskatchewan, the overarching strategy is to implement commonly configured (common data definitions, tables, processes etc.) components of the **EHR** in each of the Regional Health Authorities and the Saskatchewan Cancer Agency thereby creating **EPRs**. Over time and as technology and fiscal resources permit, these commonly configured EPRs will be connected together to create a provincial EHR. How and what information will be contained in the provincial EHR is yet to be determined.

The following sections describe how we are approaching each of the EHR components from both a provincial and regional level.

## 4.1 Registries

In order to enable us to uniquely identify the persons, the providers and facilities of interest to the health sector there needs to be a directory of the persons or clients, the providers and the facilities of interest to the health sector since many care providers and service locations will be involved in a person's care over time. These directories or registries are considered fundamental building blocks towards the realization of Electronic Health Records. Saskatchewan has chosen to collaborate with other jurisdictions on the development of 2 of these sector wide registries – Client and Provider.

### 4.1.1 Client Registry

#### Provincial Strategy

A common Client Registry will facilitate the accurate, consistent, unique identification of clients. With the increasing focus of health care delivery on the needs of the individuals receiving care, a client registry and identification of health service recipients are key elements of any health service encounter.

Areas of collaborative opportunities identified by the Western Health Information Collaborative (WHIC) ([www.whic.org](http://www.whic.org)) participants include standards development, which can be divided into two categories: messaging standards and standards around client authentication, matching records (duplicates) and data (content). Specific activities and next steps include the analysis, development and reconciliation of the business processes, business function lists and messaging requirements; identification of client authentication requirements including matching and data standards; and identification of jurisdiction-level (WHIC and large regions) opportunities, roles and responsibilities.

In related projects, Infoway is collaborating with the Newfoundland & Labrador Centre for Health Information and Capital Health Region of Edmonton on separate projects related to the building of a reusable client registry, a directory of people being served within the health care system. It provides the mechanisms required to uniquely identify a patient across a diverse set of point-of-care systems, within a region, a province or even nationwide.

**Jurisdictional Client Registry – “Best of Breed” Solution.** Working with the Newfoundland & Labrador Centre for Health Information (NLCHI), this initiative supports the development of a reusable "jurisdictional client registry" by using "best of breed" components from existing systems and capitalizing on NLCHI's knowledge and experience in this area. The final deliverable is a reusable client registry solution and toolkit to support implementation in other jurisdictions.

**Regional Client Registry – Regional Enterprise Master Person Index.** Led by Capital Health of Edmonton, this project, as part of the organization's overall electronic health record strategy, involves the development of an enterprise master person index (EMPI) solution that will allow for the unique identification and matching of patient information from different sites. It will also eventually support the identification of patients who are referred into the

region from other jurisdictions. The EMPI solution, for use by health regions and other jurisdictions across Canada, will integrate with jurisdictional (i.e., provincial) client registries.

Saskatchewan has received funding from Infoway to begin planning for a Shared Client Index solution, building on work done in other provinces. This planning will be in parallel with Saskatchewan Health's plan to improve the Person Registry System.

The Saskatchewan Shared Client Index will be linked to regional Enterprise Master Patient Index (EMPI's - also known as CPI/Registration systems) as well as Saskatchewan Health's Person Registry System. In the meantime, opportunities for regions to access data using an existing web-based application (PRS View) will be explored to improve covered patient identification and record linkage through use of the Health Service Number (HSN).

### **Regional Strategy**

Traditionally hospitals implemented Admission/Discharge/Transfer (ADT) information systems to assist them in managing the movement of patients that were receiving care within their facility. Over time the ADT systems evolved to include a Central Patient Index (CPI) function that permitted the hospitals to register patients once and make this information available to other departments in the hospital, not just admitting. As other departmental information systems (i.e. Laboratory Information Systems) were being implemented, it became evident that efficiencies could be gained if the information from the CPI would be fed electronically to the other departmental systems.

CPI/Registration (CPI/Reg) systems support the business functions of uniquely identifying clients/patients as well as capturing and storing information regarding client/patient demographics (i.e. CPI) and visits/encounters (i.e. ADT) at the regional level.

The CPI/Reg system will be used region wide to register clients/patients for all program areas. Client demographic information will be shared electronically with the other departmental systems through electronic interfaces.

Commonly configured CPI/Reg systems are being implemented for each of the 10 small and mid-sized RHAs through the Integrated Clinical Systems (ICS) project. The Regina-Qu'Appelle Health Region (RQHR), the Saskatoon Health Region (SHR) and the Saskatchewan Cancer Agency will continue with their existing systems.

## **4.1.2 Provider Registry**

### **Provincial Strategy**

The Provider Registry is a standards-based repository of core provider data supplied by authorized sources (e.g. profession registrars), and available to authorized consumers (e.g. Regions). Uniquely identifying providers at the provincial level will facilitate the transmission of health information between participating organizations and is one of the fundamental building blocks towards the realization of the pan-Canadian EHR.

As part of WHIC, HISC is leading the effort to implement the WHIC Provider Registry System (PRS) in Saskatchewan. Each province is responsible for implementing their own PRS within their technical infrastructure. Provider data may be comprised of information about physicians, dental surgeons, pharmacists, nurses and other practitioners.

### **Regional Strategy**

The Provider Registry System will be interfaced, where and when appropriate, with regional information systems.

Working in collaboration with WHIC partners, HISC is leading a project to facilitate use of the Provider Registry by health regions. An initial phase of the project is to understand requirements of provider information from a regional health authority perspective, build functionality and interfaces into the PRS that address these regional requirements, facilitate the uptake of PRS data by regional health authorities by providing business and technical resources, and create a toolkit that other jurisdictions can lever to increase uptake of PRS data at the regional level.

Subsequent phases will consist of integrating PRS information into regional systems. This will include the business and technical analysis, business process changes, development of the technical solution and finally the implementation process in both Regina-Qu'Appelle Health Region (RQHR) and the Saskatoon Health Region (SHR).

The processes, utilities, templates and documentation developed through the implementations at the RQHR, SHR, and other implementations across the WHIC provinces will be used as input into the generation of the reusable Toolkit.

## 4.2 Laboratory Information

### Provincial Strategy

The WHIC jurisdictions have developed a common vision and common business model for laboratory information exchange through consultation and workshops with the four western provinces, several regions within those provinces and other provincial jurisdictions.

Future requirements for effective laboratory information exchange are expected to be met through several components: appropriate order, results and supporting repositories; messaging and nomenclature standards; and linkages to the EHR and to clinical data and public health repositories. This vision and model of laboratory information exchange supports improvements in lab test ordering, provides effective laboratory results for physicians and other providers; supports efficiency, quality and cost containment; and enables and accelerates the building of the EHR. Infoway is expected to announce first investments in developing these components and the requisite national standards in the next six months – investments which will likely enable Saskatchewan to begin implementing proven solutions in this area in 18 – 24 months.

Saskatchewan's strategy at this time is to populate a province-wide laboratory database using interfaces from the Provincial Lab system and over time from the available regional laboratory information systems. The information in the database will, in the short term, be made available to physicians using a web viewer until the national standards are developed to enable messaging to physician practice management systems. In the longer term, the database is expected to include electronic order entry and results review capabilities, based on reusable solutions being developed elsewhere in Canada through Infoway funding.

### Regional Strategy

In a region, the Laboratory is responsible for collecting and analyzing a large variety of specimens from patients, then reporting the results to clinicians, wards and other agencies. A Laboratory Information System (LIS) system is usually capable of receiving orders, managing lab test data throughout the lab test processing cycle, generating and distributing result reports.

The LIS will be implemented for use across the region. Client demographic information will be provided using an electronic interface from the regional CPI/Reg system. The LIS will be able to transmit test results using an electronic interface to other departmental systems, the integrated regional common view, and the province-wide laboratory results repository.

Commonly configured LIS systems is being implemented for each of the 10 small and midsized RHAs through the ICS program.

It is the intent to have Saskatoon and Regina health regions provide lab results from their respective LISs using an electronic interface to the province-wide laboratory results repository. Until the provincial client and provider registries are in place, separate provincial repositories may need to be developed for each regional lab system since client and provider identifiers cannot be reconciled accurately across regional lab systems.

## 4.3 Pharmacy Information

### Provincial Strategy

Saskatchewan implemented the first on-line drug claims adjudication program in Canada in 1989. Since several other provinces have implemented systems with newer technology and some additional functions to support dispensing at the pharmacy level, such as drug interaction checking. Messaging standards for claims have also been developed; the most recent work is the new PECS standard based on HL7 version 3 messaging standards which is nearing completion.

With the increasing complexity and cost of pharmaceuticals, the focus of new systems developments in this area has been to provide prescribers with access to client drug profile information and other decision supports. Saskatchewan, like several other jurisdictions, has piloted access to drug profile information in settings such as emergency rooms and physician offices. One of the limitations of our provincial system in supporting clinical uses was that only data on drugs and people covered by the Drug Plan was captured. This limitation was addressed in 2003-2004 through the ADAPT project, which was initiated at Saskatchewan Health following a legislative change last Fall permitting the capture of all drugs prescribed in the province whether insured by the Drug Plan or not.

Alberta has done the most extensive development work in developing a complete systems solution to support electronic prescribing, through its Pharmaceutical Information Network (PIN) project, a cornerstone project of the Alberta Wellnet initiative ([www.albertawellnet.org](http://www.albertawellnet.org)). The primary goal of PIN is to deliver improved quality of care by providing healthcare professionals with the information and tools needed to make optimal drug therapy decisions. PIN is a next-generation pharmacy network that has been developed in consultation with healthcare professionals from many disciplines.

PIN provides end-to-end automation of the prescribing and dispensing process. Physicians use an active medication profile to gain an accurate understanding of current medications, consult the decision support tools to assist with medications decisions and create or change medications through Computerized Physician Order Entry (CPOE) at the point of care. PIN has been designed to be time neutral in patient encounters and to accommodate physician workflows. Patients are provided with a printed paper prescription that is also stored in a central repository. Patients continue to choose the pharmacy of their choice. Pharmacists retrieve prescriptions electronically and with fewer issues to be resolved at the point of dispensing since the prescriptions are legible and have been checked for common problems during entry. Dispensing records are matched with prescribing records so that compliance can be more easily determined and addressed by healthcare providers.

Saskatchewan Health and HISC, with funding from Infoway, are exploring how PIN could be adapted to fit into the environment in Saskatchewan given the province's investment to date in the existing drug plan network. The Pharmacy Information Program (PIP) is exploring the possible transition steps for integrating the PIN prescribing software with our drug plan network, including:

- replicate data from the existing dispensing database once all retail pharmacy prescriptions in the province are being captured and utilize the

PIN 'viewer' application to provide access to provincial drug profiles to pharmacies, hospitals and physicians

- provide ability for providers to enter data directly into the web-based PIN application, for example to record 'holds' on prescriptions that a client has discontinued, or information available on drug monographs, formularies, etc.
- allow providers to begin utilizing PIN services such as drug-drug and drug allergy checking
- implement HL7 version 3 messaging for clinical pharmacy from all pharmacies
- implement electronic order entry by physicians, either through the PIN web application or through HL7 v3 messaging from physician EPR systems.

### **Regional Strategy**

Regionally, the services provided by hospital pharmacies include dispensing/distributing of drugs to patients. A hospital pharmacy system enables the processing of prescriptions using one common formulary and multiple drug costs and formulas.

A hospital pharmacy system will be implemented for use across the region. Client demographic information will be provided using an electronic interface from the regional CPI/Reg system. In the future this pharmacy system will be able to transmit dispensing records using an electronic interface to other departmental systems, the integrated viewer, physician practice management systems and the provincial drug data repository.

A commonly configured hospital pharmacy system is being implemented through the ICS program for use by the 10 small and mid-sized RHAs.

The Regina Qu'Appelle Region, Saskatoon Health Region and the Saskatchewan Cancer Agency have existing pharmacy systems which should be capable of being interfaced to the provincial drug repository in future once pan-Canadian standards are developed.

## 4.4 Home Care Information

### Provincial Strategy

Home Care in Canada is often defined as “an array of services enabling Canadians, incapacitated in whole or in part, to live at home, often with the effect of preventing, delaying, or substituting for long-term care or acute care alternatives.”<sup>2</sup>

Saskatchewan Health annually sets fee guidelines for home care services and requires health regions to provide monthly reporting services rendered.

The Saskatchewan Client Information Profile (SCIP-A) is the current tool used to conduct home care functional assessments in Saskatchewan. In 2003-2004 Saskatchewan Health began planning the introduction of interRAI’s MDS-HC with two health regions – Saskatoon and Prince Albert Parkland. MDS-HC has been developed by interRAI in an effort to create a common assessment language for individuals receiving community-based services.

### Regional Strategy

In a region, home care refers to the business functions of providing service or assistance, by an approved service provider, to community-based clients. A home care administration system facilitates the flow of information across the continuum of care and facilitates the execution of the business functions of home care programs.

The home care administration system will be implemented for use across the region. Client demographic information will be provided using an electronic interface from the regional CPI/Reg system. The home care administration system will be able to transmit home care service event information using an electronic interface to other departmental systems, the integrated viewer and the provincial home care assessments repository in future.

A commonly configured home care administration system is being implemented for use by all RHAs through the ICS program.

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2 Health Canada. Report on Home Care (prepared by the Federal/Provincial/Working Group on Home Care, a Working Group of the Federal/Provincial/Territorial Subcommittee on Long Term Care), 1990.

## 4.5 Radiology Information

Radiology refers to the business of performing diagnostic images of a patient and interpreting the results. A Radiology Information System (RIS) provides a simple and effective way for radiologists, clinicians and other staff to enter and retrieve exam data, maintain patient records, and manage schedules.

A Picture Archiving and Communications System (PACS) involves computerized management and distribution of diagnostic images such as x-rays, CT, and MRI. These diagnostic images are incorporated into PACS in one of two primary ways:

- digital-ready diagnostic imaging equipment directly creates a digital image; or
- images are produced in the traditional manner from 'film-based' equipment and converted to a digital format by scanning. For example, conventional x-ray equipment produces pictures, which are later scanned into digital format and incorporated in the PACS.

The images are easier to handle in digital format and can be moved almost instantly between sites, unlike film. The technology can improve access to diagnostic imaging services in rural areas by sending the images electronically to sites where a radiologist is present; this is especially key in urgent care situations. Other benefits include faster image retrieval and reduced storage space requirements.

### Provincial Strategy

With recent announcements concerning equipment funding and the expansion of the number of CT sites, this is an opportune time for developing a future plan given the cost of both radiology equipment and related RIS/PACS systems.

Saskatchewan has received funding from Infoway to develop a provincial strategy for Diagnostic Imaging in order to define the program requirements, business case, architecture, funding requirements and project plan necessary for moving forward with an integrated Provincial RIS/PACS solution in the future.

### Regional Strategy

Other than continuation of the small-scale pilot with the Stentor technology in Saskatoon, no further investments are recommended until the above provincial strategy for RIS/PACS is complete.

## **4.6 Transcription Information**

Transcription services refer to the business functions of transcribing, storing and distributing documents that have been dictated by a clinician regarding a patient's visit and services received within the health system (e.g., discharge summary, diagnostic imaging interpretation, physiotherapy report, etc.).

After an extensive evaluation process, it was decided that none of the short-listed vendors from the ICS RFI sufficiently met the requirements.

### **Provincial Strategy**

Until such a time as a decision is made with respect to a common transcription solution for the 5 mid-sized regions, HISC will centrally host the transcription modules of the CPI/Reg systems. Regions are responsible for funding the software license fees and implementation services from the vendors.

### **Regional Strategy**

Focus on enhancing the dictation components as required.

## 4.7 Long Term Care Information

Long term care (LTC) generally refers to the provision of accommodation, health and related services in an institutional setting to the aged, and people with disabilities whose needs cannot be met in the community. While, theoretically, long-term care can refer to the entire continuum of long term care services from home care to housing to nursing home, it generally refers to the care provided in special-care homes and long-term care units in hospitals and health centres.

The challenge for health care planners is to find efficient ways of using existing resources to meet changing needs.

### Provincial Strategy

A number of years ago, Saskatchewan Health and the health districts identified the following needs:

- to establish a standardized assessment process in LTC that was more client centred and systematized care planning capabilities
- to provide a means for health districts to collect standardized LTC Quality Indicators
- to improve the quality of data available to health districts and Saskatchewan Health
- to develop a tool with greater sensitivity for identifying resident needs.

In 1995, after a comprehensive review and consultation process, the Minimum Data Set / Resource Utilization Groups (MDS/RUGs) was chosen as the preferred assessment and classification system.

In 1999, after an extensive process, Momentum Healthcare's (Momentum) ([www.momentum.ca](http://www.momentum.ca)) MDS 2.0 for Long Term Care (MDS 2.0 LTC) was selected as the preferred application software.

In 2000, SHIN was asked to:

- centrally host the MDS 2.0 LTC application including the province data repository,
- facilitate the acceptance and routine use of the MDS 2.0 LTC application software across all long term care facilities in the province and
- support the ongoing operations of the MDS 2.0 LTC application.

Besides the RUGs reporting, the RHAs are expected to report Facility Based: Resident Assessment Protocols (RAPs), Quality Indicators, Outcome Measurement Scales, and Clinical Report.

## 4.8 Nursing Information

Nursing Information System Saskatchewan (NISS) is a documentation system used by not only nursing personnel but also other disciplines such as physiotherapists, occupational therapists, physicians, and dietitians for the recording and monitoring of patients' health information. It is useable for all patient populations, including but not limited to acute, long-term care and home care. NISS meets accreditation standards, legal requirements for documentation and MIS reporting requirements. NISS also contains a methodology to measure nursing workload.

NISS has a client base of over 300 across Canada with an estimated 25,000 personnel using the system. In Saskatchewan, the 12 Regional Health Authorities use it in the majority of their facilities. Outside Saskatchewan there are 119 NISS clients in six Provinces and Territories. NISS is part of the curriculum for nursing students at a number of educational institutions in Canada including SIAST in Saskatchewan.

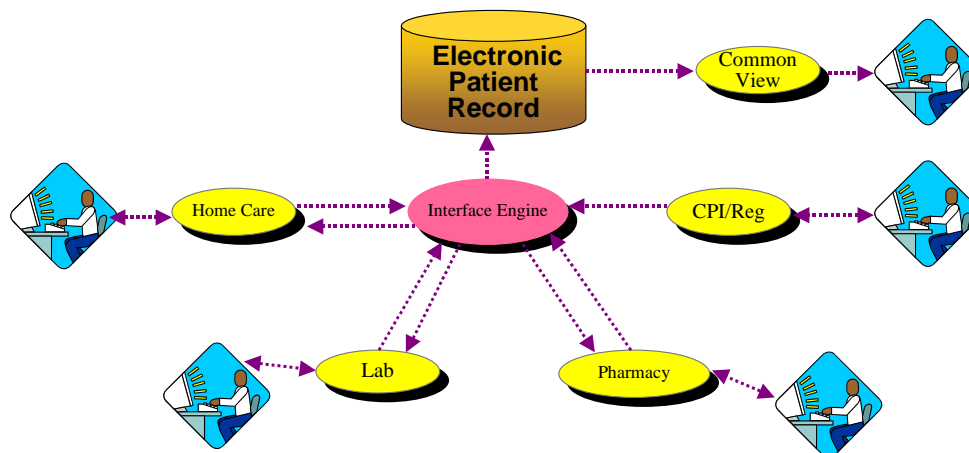
NISS is a user driven system and to ensure the product remains current regular systematic evaluations of NISS occur. Revisions and development of new modules and/or forms continue in response to users needs and evidence based practice issues. NISS was developed in a manual form with the long-term vision being a computerized nursing system. Currently automation of NISS is underway with beta testing of the system occurring in the Melfort Hospital, Kelsey Trail Health Region. Caregivers are currently collecting the Admission Assessment & History at the patient's bedside in the acute care unit using a laptop computer through a wireless network. Developing care plans and recording for care in the computer system began this week. Reports are printed and placed on the patient's health record at the time of discharge.

The computerization of NISS as part of an Electronic Health Record requires further development in the areas of workload measurement, implementing other flowsheets for recording care, auditing, emergency room and home care documentation.

NISS is being computerized by Encom Information Systems Inc. of Markham, Ontario ([www.encomsystems.com](http://www.encomsystems.com)) and SAHO through a Business Partner Agreement that was established in 1998. SAHO's Nursing Consultants provide consulting and alpha testing to ensure the system meets the standards and principles of the manual NISS system. SAHO retains the intellectual property rights to NISS.

## 4.9 Exchanging Information Electronically – Interfaces

To facilitate the exchange of information between the various health information systems, an interface engine approach is being implemented. The approach is graphically represented below.



**Figure 2 – Interface Engine Approach.**

The adopted messaging standard is HL7. Health Level Seven (HL7) is a set of rules that allows different health service software applications to speak to each other. First developed in 1987, HL7 has become the de facto standard for the electronic exchange of clinical and administrative data in North American health services. HL7 standardizes the protocols and structure for exchanging key sets of health data at the application level – the seventh level of the ISO's open systems model.

HL7 Version 2.x series of messages are widely implemented throughout the world of healthcare. However, there is neither a consistent view of the data that HL7 moves nor the data's relationship to other data. HL7 is flexible in that it contains many optional data elements and data segments, making it adaptable to almost any site. While providing great flexibility, its selectable options also makes it impossible to have reliable conformance tests of any vendor's implementation and also forces implementers to spend more time analyzing and planning their interfaces to ensure that both parties are using the same optional features.

HL7 Version 3 addresses these and other issues by using an object-oriented development methodology and a Reference Information Model (RIM) to create messages. It will be the most definitive standard to date. Using rigorous analytic and message building techniques and incorporating more trigger events and message formats with very little selectability, HL7's primary goal for Version 3 is to offer a standard that is definite and testable, and provide the ability to certify vendors' conformance.

The transition from Version 2 to Version 3 will need to be taken into consideration as part of the planning process.

## **4.10 Common View**

Common View is defined as the ability to view different types of health information (e.g. registration information, lab results, dispensed medication, transcribed documents) relating to a patient using a single-method of access within a local health region.

### **Provincial Strategy**

This capability was originally a component of the vision for the ICS program, but no suitable vendor solution was available. In 2003-2004, further analysis was undertaken to review requirements and determine next steps given the continuing evolution in technologies. This analysis confirmed that Sunrise Clinical Manager from Eclipsys (<http://www.eclipsnet.com>) continues to be the most viable solution.

### **Regional Strategy**

The common view system will be implemented for use by authorized clinical users across the region.

A commonly configured common view system will be implemented for use by the 5 mid-sized RHAs through the ICS program.

## **4.11 Physicians**

### **Provincial Strategy**

The Physician Desktop Pilot Project is a joint undertaking between the Saskatchewan Medical Association (SMA), SHIN and Better Health Global (the software vendor of Vividesk). Saskatchewan Health is a key partner in the Pilot.

The main focus of the project was to provide a common desktop and set of clinical tools to a pilot group of physician users for their use and evaluation. There were 59 SMA member physicians participating in the Pilot. The bundle of services featured access to on-line medical resources, on-line forums and personal productivity functionality. Participants received access to four Saskatchewan Health web-based applications including Drug Profile, Person Registry, Provincial Lab Results and Internet Claims Submission. The bundle also included Secure E-mail. Installation of software and hardware for users was completed in December 2002. After a three-month period, a detailed evaluation of the project was undertaken. In May 2003 the results of an evaluation of physician satisfaction and user experience with a pilot project implementation was completed.

This evaluation provides the feedback needed to further develop a strategy with the physician community.

### **Regional Strategy**

Some RHAs are granting permission to physicians and/or Primary Health Care Teams to access existing regional information systems (i.e. CPI/Reg, LIS, etc.).

This is expected to become more prevalent and the RHAs, in consultation with the SMA, wish to develop a consistent approach to how they grant physician access to regional information systems, manage security and patient consent.

## 5. Maintaining the Foundation

In recent years the IT investments made in the health sector have resulted in a solid foundation to build on. However, as we continue to make additional investments, on new initiatives, we must not overlook the investments required to continue to maintain the foundation. To guide future investment decisions, we will move towards classifying IT investments in the following categories:

Investments required to continue to **Support the Business (a.k.a. status quo)**:

- investments necessary to support day-to-day operations including power, facilities, hardware and software maintenance
- investments forced by regulatory compliance, or need to replace unsupported or worn-out assets (e.g. memory, storage)
- investments required to upgrade or replace existing assets (e.g. hardware platforms, application versions, technology refresh cycles)

Investments required to further **Enable the Business**:

- investments designed to support a growth business strategy (e.g. more users, more locations)

Investments required to **Transform the Business**:

- investments designed to support a transformation business strategy (e.g. new applications, electronic interfaces, Clinical Data Repository, Common View, Order Entry, EHR)

### 5.1 People

#### 5.1.1 User Training

Training is often overlooked when implementing new technology. Most planners tend to focus on the nuts and bolts of the hardware or the features of a particular software package. The ultimate success of a new technology rollout, however, is measured by the increase in efficiency and productivity of the personnel.

If end-users are trained for self-sufficiency in the use of computer systems and related operational procedures, then:

- End-users will spend less time spent seeking support and more time on required tasks and deliverables.
- There will be a reduction in redundant, remedial technical support requests, lowering IT support costs.

- End-users will make fewer errors and mistakes leading to faster, more reliable results.
- End-users will feel better about their skills leading to improved morale and better results.
- Detailed knowledge of systems functionality will lead to improved workflows and internal procedures.

Approaches to meeting this need varies from RHA to RHA. Some RHAs have invested in setting up dedicated Training Rooms equipped with PCs, etc and have full-time Trainers on staff. Others have facilitated their staff's access to training available from local community colleges and other training suppliers.

### **5.1.2 IT Staff**

The need for trained IT resources in the health sector will continue over the next few years – especially in the mid and small size RHAs. Market-competitive compensation, ongoing training and back-up support to enable staff to keep pace with technology, and manageable workloads and expectations will be critical factors in the retention of these human resources. Currently many RHAs are running with limited staff and over utilized IT departments. As a consequence, IT departments have just enough time to deal with the everyday problems and little to no time to properly plan upcoming initiatives. This situation does little to facilitate the successful completion of the many projects that are planned over the next few years.

The focus of the provincial IT Plan and Architecture on a more consistent set of priorities and technologies should facilitate needed planning for the ongoing development of IT staff in the health sector.

## 5.2 Infrastructure

### 5.2.1 Common Desktop

A common approach for graphical user-to-system interfaces promotes efficiency in the work setting by minimizing retooling and retraining requirements. Consistency of how users interact with systems aids in reducing the learning curve when new applications are added or when staff moves from area to area. The standardization of user commands and functions also helps to ensure consistency in the way applications will operate. Tools such as single sign-on and common desktop views are examples.

Common client (PC) platforms are required to achieve the goal of common desktop views. As a result of the recent amalgamation of health districts into health regions, many regions find themselves with various PC platforms.

Many regions use thin client (Citrix) technology to expand the use of applications region wide. Citrix is also used by HISC.

There is a desire to collectively explore ways and means to establish a proactive approach that would enable regions to regularly refresh technology to ensure their staff get the most from the region's investment in IT. Possible alternatives may include:

- technology refresh leasing for PCs, notebooks, printers, servers and network devices
- provincial pricing for software licenses such as Citrix and Microsoft products
- provincial strategy to maintain the currency of Office Automation products (i.e. Word, Excel, Power Point, Outlook, Access, Publisher, Visio, Project, etc) – possibly a common upgrade cycle for these products, where the costs are spread more evenly across budget cycles

### 5.2.2 Centralized Hosting and Technical Support

The health sector has recognized that there are efficiencies to be gained by providing services centrally where possible. This approach provides significant economic benefits including:

- Centralized hosting of applications – Reducing the need to duplicate services, staff, equipment and maintenance throughout the province.
- Centralized support – Improving the service delivery process by increasing the depth and breadth of experience of Technical Support and Help Desk staff.
- Standardizing implementation – Reducing cost and time to production for implementing applications. A collateral benefit is the reduction in maintenance and support due to standardized platforms, applications and operations.

The overall benefits of this approach are a lower cost of operation and improved service delivery.

### 5.2.3 Network

The biggest benefit of a network is the ability to efficiently share information-processing resources across the health sector.

The vast geographic distances encountered in Saskatchewan result in high operating charges and make the construction of a cost-effective network very challenging. There are only two realistic alternatives:

- Reduce network traffic to reduce bandwidth requirements.
- Capitalize on existing network infrastructure to expand capability to reach outlying areas.

Bandwidth requirements will be reduced by the use of Citrix and Windows Terminal Server where possible. Web technology implementations also provide strategic architecture solutions in network bandwidth management.

The health sector utilizes CommunityNet to provide a high-speed connection in at least one health facility per community for each health organization.

CommunityNet is a provincial government initiative that provides high-speed access to most of the province of Saskatchewan. Strategic implementations of active directory architectures are also key to seamless communications across the health sector in the province.

Responsibility for the network is shared between the RHAs and HISC.

As more and more mission critical clinical applications are hosted centrally, it will be important to take the steps necessary to manage the capacity and availability of the network from end-to-end (user to the centrally hosted servers).

As we have migrated the Telehealth Network to make use of CommunityNet, we now need to explore the potential of additional technologies such as:

- Voice Over IP and
- Video Conferencing.

These technologies present some challenges in terms of the design and management of the network which will need to be addressed to assure the performance of other critical applications is not adversely affected.

## 6. Attending to Administrative Systems

### 6.1 Payroll

SAHO has changed their focus and the name of their Payroll Systems Department to Information Services to better reflect their broader focus of administrative systems for their members. SAHO worked on the implementation of the Joint Job Evaluation (JJE) completing the majority of work by the end of August, 2004.

Work also continued on the completion of development of Internet Personnel Front End (iPFE). This replaces the batch front end Payroll Front End (PFE). The first phase of iPFE is designed to replace the functionality of PFE and provide an online entrance to the SAHO Payroll System. It is also designed to position SAHO and its membership with the ability to grow functionality based on their requirements. This phase of development will be completed by the end of November, 2004, including the budgeting module. To date Heartland and Mamawetan Churchill River health regions are live on iPFE, Saskatoon Health Region is currently running parallel. SAHO, Cronus and the health regions are reviewing the go live schedule for the remaining regions and will update their plan within the next week.

Due to the Director position being vacant until the end of August, 2004 and due to the heavy workload maintaining the current batch system and the development of several initiatives many of the enhancements in iPFE; Web Portal, Web Reports and the batch Payroll system have been delayed. SAHO is currently reviewing the enhancement list to determine the status and continued need. SAHO is also moving to a release methodology and will work with Cronus to develop plans for all enhancements to determine which release they will go into. These plans will be completed by the end of October, 2004. A sequence of activities were undertaken to standardize the coding of payroll information, implement the new joint evaluation and MIS codes and to migrate all health region staff to the SAHO payroll system in 2003-2004. SAHO is focusing on the steps identified by the payroll task force.

Steps are being taken, as recommended in the review, to address the risk mitigation and governance recommendations of the report; transition all staff to the SAHO payroll solution; fully define payroll-scheduling system interfacing requirements; and strike a provincial software license agreement for strengthening the interface with the ESP scheduling product and enable regions to begin the implement scheduling in areas where they most need it.

Saskatchewan Health and SAHO will work with Regina Qu'Appelle health region to ensure that the necessary interfaces can be implemented for their proposed DLGL system.

Initiative	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Complete current enhancements	<p><b>IPFE</b> – SAHO is currently completing the first development phase of IPFE as well as the rollout to the remaining regions – expected completion is within 2004-2005.</p> <p><b>Web Portal</b> – reviewing project plan to merge Membernet</p> <p><b>Web Reports</b> – continuing enhancements of reports offered on the web</p> <p><b>Payroll Batch</b> – Implementation of Saskatchewan Cancer</p> <p>JJE for Provider Groups (SEIU, CUPE, SGEU)</p> <p>Upgrade AS400 Operation system to V5R2</p> <p>New Tape Drives</p> <p>Upgraded disk space</p> <p>Implementation of Vision Suite product – Disaster Recovery</p>		✓	✓		
Explore options for scheduling on a provincial basis	Scheduling is included in the first phase of iPFE – reviewing with the Regions on its working from their perspective		✓	✓		
Add additional users	All Health Regions will be on iPFE in this year. Implementation plan in place for Sask. Cancer Agency.		✓	✓		

Initiative	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Determine additional enhancements desired	Continue to work with Regions on an ongoing basis to determine additional reporting and enhancements requirements.		✓	✓		
Move toward standardized codes and procedures	Standardized codes and procedures have been documented and reviewed with the Regions. Included in Phase 1 of iPFE.		✓	✓		
Explore and implement interfaces as appropriate	SAHO, the Department, and Regions, continue to develop strategies as required for scheduling and implementing an integrated HRMS solution to further facilitate the efficient management of Saskatchewan's Health human resources. Other interfaces will also be explored.		✓	✓		

## 6.2 Financial

The Guidelines for Management Information Systems in Canadian Health Service Organizations (MIS Guidelines) are a set of national standards for gathering and processing data, and reporting financial and statistical data on the day-to-day operations of a health service organization. They also provide a framework for integrating clinical, financial and statistical data when service recipient costing is done.

Saskatchewan Health requires monthly financial reporting using MIS Guidelines and has developed a common chart of accounts, as well as a method by which regions can submit this data electronically. A series of statistical measures have also been established through the budget planning process, which is attached to the MIS financial codes.

### **6.3 Other**

Options for a facility management system, which could be used by regions and Saskatchewan Health to maintain and manage a provincial inventory of building assets, will be investigated. Several facilities/regions are currently using a system locally, but there is no consistent inventory of the health sector's building assets to support capital planning processes and asset management.

## 7. Stakeholder Priorities

This section outlines the priorities of each of the following stakeholders:

- HISC
- RHAs
- SCA
- Saskatchewan Health

*The items in italics indicate the current state.*

*The items in bold italics indicate accomplishments in 2003-2004.*

### 7.1 HISC Priorities

The priorities for HISC are in the following areas:

- Service Support and Service Delivery
- Integrated Clinical Systems
- Client Registry
- Provider Registry
- Pharmacy Information Program
- RIS/PACS
- Physicians
- Electronic Patient Records

The following sections describe each priority in more detail.

### **7.1.1 Service Support and Service Delivery**

HISC provides the following services to the health sector:

- Centrally hosting of clinical and administrative systems
- Help Desk and Technical Support Services
- High-speed Secure Network
- E-mail Gateway - Linking all regional e-mail systems
- Web Site Hosting - Reliable, secure platform for web sites
- Web Conferencing
- Telehealth Support

The following tables list each service along with the customers using or planning to use the services in 2004-2005.

Service	Customer	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Central Patient Index / Registration System	<b>Five Hills</b>		✓	✓	✓	✓
	<b>Cypress</b>		✓	✓	✓	✓
	<b>Sunrise</b>		✓	✓	✓	✓
	<i>Prince Albert</i>	✓	✓	✓	✓	✓
	<b>Prairie North</b>		✓	✓	✓	✓
	Sun Country				✓	✓
	Heartland				✓	✓
	Mamawetan				✓	✓
Laboratory Information System	<b>Five Hills</b>		✓	✓	✓	✓
	<i>Cypress</i>	✓	✓	✓	✓	✓
	<b>Sunrise</b>		✓	✓	✓	✓
	<i>Prince Albert</i>	✓	✓	✓	✓	✓
	<b>Prairie North</b>		✓	✓	✓	✓
	Sun Country				✓	✓
	Heartland				✓	✓
	Mamawetan				✓	✓
Pharmacy Information System	<b>Five Hills</b>		✓	✓	✓	✓
	<b>Cypress</b>		✓	✓	✓	✓
	<b>Sunrise</b>		✓	✓	✓	✓
	<b>Prince Albert</b>		✓	✓	✓	✓
	<b>Prairie North</b>		✓	✓	✓	✓
	Sun Country				✓	✓
	Heartland				✓	✓
	Mamawetan				✓	✓

Service	Customer	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Home Care Admin System	<i>Five Hills</i>	✓	✓	✓	✓	✓
	<i>Cypress</i>	✓	✓	✓	✓	✓
	<i>Sunrise</i>	✓	✓	✓	✓	✓
	<i>Prince Albert</i>	✓	✓	✓	✓	✓
	<i>Prairie North</i>	✓	✓	✓	✓	✓
	<b>Sun Country</b>		✓	✓	✓	✓
	<b>Heartland</b>		✓	✓	✓	✓
	<i>Kelsey Trail</i>			✓	✓	✓
	<i>Mamawetan</i>			✓	✓	✓
	<i>Keewatin Yattée</i>			✓	✓	✓
Long Term Care Assessment System	<i>Sun Country</i>	✓	✓	✓	✓	✓
	<i>Five Hills</i>	✓	✓	✓	✓	✓
	<i>Cypress</i>	✓	✓	✓	✓	✓
	<i>Regina</i>	✓	✓	✓	✓	✓
	<i>Sunrise</i>	✓	✓	✓	✓	✓
	<i>Saskatoon</i>	✓	✓	✓	✓	✓
	<i>Heartland</i>	✓	✓	✓	✓	✓
	<i>Kelsey Trail</i>	✓	✓	✓	✓	✓
	<i>Prince Albert</i>	✓	✓	✓	✓	✓
	<i>Prairie North</i>	✓	✓	✓	✓	✓
	<i>Mamawetan</i>	✓	✓	✓	✓	✓
LTC Electronic Patient Record	<i>Cypress</i>	✓	✓	✓	✓	✓
	<i>Regina</i>	✓	✓	✓	✓	✓
	<i>Heartland</i>	✓	✓	✓	✓	✓
	<i>Prince Albert</i>					

Service	Customer	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Renal Data Management System	<i>Cypress</i>	✓	✓	✓	✓	✓
	<i>Regina</i>	✓	✓	✓	✓	✓
	<i>Sunrise</i>	✓	✓	✓	✓	✓
	<i>Saskatoon</i>	✓	✓	✓	✓	✓
	<i>Kelsey Trail</i>	✓	✓	✓	✓	✓
	<i>Prince Albert</i>	✓	✓	✓	✓	✓
	<b><i>Prairie North</i></b>		✓	✓	✓	✓
	<i>Five Hills</i>			✓	✓	✓
Surgical Patient Registry	<i>Five Hills</i>	✓	✓	✓	✓	✓
	<i>Cypress</i>		✓	✓	✓	✓
	<i>Regina</i>		✓	✓	✓	✓
	<i>Sunrise</i>		✓	✓	✓	✓
	<i>Saskatoon</i>		✓	✓	✓	✓
	<i>Prince Albert</i>		✓	✓	✓	✓
	<i>Prairie North</i>		✓	✓	✓	✓

Service	Customer	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Help Desk and Technical Support	<i>Sun Country</i>	✓	✓	✓	✓	✓
	<i>Five Hills</i>	✓	✓	✓	✓	✓
	<i>Cypress</i>	✓	✓	✓	✓	✓
	<i>Sunrise</i>	✓	✓	✓	✓	✓
	<i>Heartland</i>	✓	✓	✓	✓	✓
	<i>Kelsey Trail</i>	✓	✓	✓	✓	✓
	<i>Prince Albert</i>	✓	✓	✓	✓	✓
	<i>Prairie North</i>	✓	✓	✓	✓	✓
	<i>Mamawetan</i>	✓	✓	✓	✓	✓
	<i>Keewatin Yattée</i>	✓	✓	✓	✓	✓
	<b>Athabaska</b>		✓	✓	✓	✓
	<i>College of Physicians and Surgeons</i>	✓	✓	✓	✓	✓
	<i>Department of Family Medicine</i>	✓	✓	✓	✓	✓
	<i>Saskatchewan Cancer Agency</i>	✓	✓	✓	✓	✓
<b>Saskatchewan Registered Nurses Association</b>			✓	✓	✓	
Central Hosting	<i>Dept of Family Medicine</i>	✓	✓	✓	✓	✓

Service	Customer	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Network	<i>Sun Country</i>	✓	✓	✓	✓	✓
	<i>Five Hills</i>	✓	✓	✓	✓	✓
	<i>Cypress</i>	✓	✓	✓	✓	✓
	<i>Regina</i>	✓	✓	✓	✓	✓
	<i>Sunrise</i>	✓	✓	✓	✓	✓
	<i>Saskatoon</i>	✓	✓	✓	✓	✓
	<i>Heartland</i>	✓	✓	✓	✓	✓
	<i>Kelsey Trail</i>	✓	✓	✓	✓	✓
	<i>Prince Albert</i>	✓	✓	✓	✓	✓
	<i>Prairie North</i>	✓	✓	✓	✓	✓
	<i>Mamawetan</i>	✓	✓	✓	✓	✓
	<i>Keewatin Yattée</i>	✓	✓	✓	✓	✓
	<b>Athabaska</b>		✓	✓	✓	✓
	<i>Drug Plan</i>	✓	✓	✓	✓	✓
	<i>SMA</i>	✓	✓	✓	✓	✓
	<i>SAHO</i>	✓	✓	✓	✓	✓
	<i>Saskatchewan Cancer Agency</i>	✓	✓	✓	✓	✓
	<i>College of Physicians and Surgeons</i>	✓	✓	✓	✓	✓
<i>Dept of Family Medicine</i>	✓	✓	✓	✓	✓	

Service	Customer	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
E-mail "Gateway"	<i>Sun Country</i>	✓	✓	✓	✓	✓
	<i>Five Hills</i>	✓	✓	✓	✓	✓
	<i>Cypress</i>	✓	✓	✓	✓	✓
	<i>Regina</i>	✓	✓	✓	✓	✓
	<i>Sunrise</i>	✓	✓	✓	✓	✓
	<i>Saskatoon</i>	✓	✓	✓	✓	✓
	<i>Heartland</i>	✓	✓	✓	✓	✓
	<i>Kelsey Trail</i>	✓	✓	✓	✓	✓
	<i>Prince Albert</i>	✓	✓	✓	✓	✓
	<i>Prairie North</i>	✓	✓	✓	✓	✓
	<i>Mamawetan</i>	✓	✓	✓	✓	✓
	<i>Keewatin Yattée</i>	✓	✓	✓	✓	✓
	<b>Athabaska</b>			✓	✓	✓
	<i>Sask Health</i>	✓	✓	✓	✓	✓
	<i>SAHO</i>	✓	✓	✓	✓	✓
	<i>SRNA</i>	✓	✓	✓	✓	✓
	<b>Health Quality Council</b>			✓	✓	✓
Web Site Hosting	<i>Sun Country</i>	✓	✓	✓	✓	✓
	<i>Heartland</i>	✓	✓	✓	✓	✓
	<i>Kelsey Trail</i>	✓	✓	✓	✓	✓
	<i>Prince Albert</i>	✓	✓	✓	✓	✓
	<i>Prairie North</i>	✓	✓	✓	✓	✓
Web Conferencing	<i>Five Hills</i>	✓	✓	✓	✓	✓
	<b>Heartland</b>		✓	✓	✓	✓
	<b>Telehealth</b>		✓	✓	✓	✓
	<b>College of Medicine</b>		✓	✓	✓	✓
	<b>Health Quality Council</b>		✓	✓	✓	✓

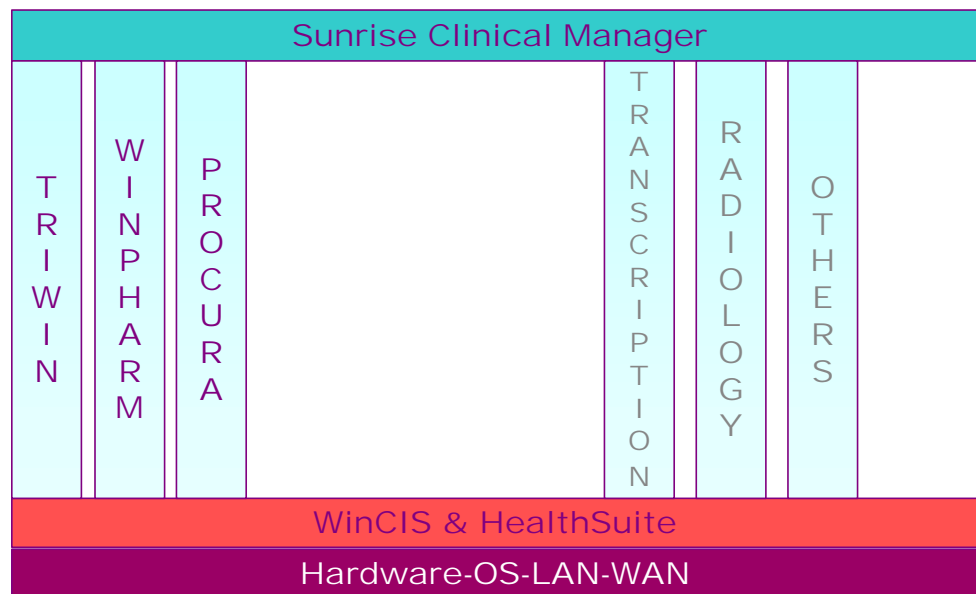
Service	Customer	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Telehealth Support	<b>Sun Country</b>			✓	✓	✓
	<b>Five Hills</b>			✓	✓	✓
	<b>Cypress</b>			✓	✓	✓
	<b>Regina</b>			✓	✓	✓
	<b>Sunrise</b>			✓	✓	✓
	<b>Saskatoon</b>			✓	✓	✓
	<b>Heartland</b>			✓	✓	✓
	<b>Kelsey Trail</b>			✓	✓	✓
	<b>Prince Albert</b>			✓	✓	✓
	<b>Prairie North</b>			✓	✓	✓
	<b>Mamawetan</b>			✓	✓	✓
<b>Keewatin</b>			✓	✓	✓	

### 7.1.2 Integrated Clinical Systems (ICS)

The objective of this initiative is to provide a series of commonly configured, centrally hosted and supported departmental systems for use initially by the following mid-sized RHAs:

- Cypress,
- Five Hills,
- Sunrise,
- Prairie North,
- Prince Albert Parkland.

Each system will enable the entry and viewing of timely and accurate health care information by authorized users within each department. The information collected from the various departmental clinical systems, across the continuum of care, will be available for viewing by authorized health service providers. They will have access to integrated and up-to-date client information to assist them in decision-making and health planning.



**Figure 3 – ICS**

It is anticipated that the initiative will eventually extend to include other RHAs and continue to support efforts at a provincial and national level with respect to electronic health records. The vision will be accomplished through RHAs working collaboratively to identify and implement common applications that provide benefits to the health care system and support the provision of patient care. These common applications will support administrative and clinical health care components of the RHAs.

7.1.2.1 CPI/Reg

After an extensive evaluation process, the decision was made to remain with the existing suppliers and to upgrade to the latest available versions of RISE Health System's (RISE) ([www.riseinc.com](http://www.riseinc.com)) HealthSuite for Prince Albert Parkland and Momentum Healthcare's (Momentum) ([www.momentum.ca](http://www.momentum.ca)) WinCIS for Five Hills, Cypress, Sunrise and Prairie North.

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Five Hills	<b>Upgrade from Momentum Registration Plus to WinCIS in Moose Jaw</b>  regional roll-out tied to primary health care site system requirements		✓			
				✓	✓	✓
Cypress	<b>Upgrade from Momentum Registration Plus to WinCIS in Swift Current</b>  regional roll-out		✓			
				?		
Sunrise	<b>Upgrade Momentum WinCIS in Yorkton</b>  regional roll-out		✓			
				✓		
Prince Albert Parkland	<b>Using RISE Healthsuite in Prince Albert</b>  Extend use of HealthSuite in Prince Albert		✓			
				✓		
Prairie North	Upgrade from Momentum Registration Plus to WinCIS in Battlefords  Implement in Lloydminster		✓			
				✓		
Sun Country	Implement in 1 location  Regional Roll-out					
					✓	
						✓

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Heartland	Implement				✓	
Mamawetan Churchill River	<i>using Momentum WinCIS locally</i> HISC WinCIS				✓	

7.1.2.2 Laboratory

After an extensive evaluation process, Triple G Systems Group's (Triple G) ([www.tripleg.com](http://www.tripleg.com)) TriWin LIS (Microsoft Windows NT-based) was selected.

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Five Hills	<b>Triple G TriWin Implemented in Moose Jaw</b>		✓			
Cypress	Triple G TriWin Implemented in Swift Current	✓	✓			
Sunrise	<b>Triple G TriWin Implemented in Yorkton</b>		✓			
Prince Albert Parkland	<b>Triple G TriWin Implemented in Prince Albert</b>		✓			
Prairie North	<b>Triple G TriWin Implemented in Battlefords</b>  Implement in Lloydminster		✓		✓	
Sun Country	Implement HISC TriWin in 1 location  Regional Roll-out				✓	✓
Heartland	Implement HISC TriWin				✓	
Mamawetan Churchill River	<i>using unsupported Northern Software</i>  Implement HISC TriWin	✓	✓	✓	✓	

7.1.2.3 Pharmacy

After an extensive evaluation process, the decision was made to remain with Interactive Business Systems' (IBS) ([www.winpharm.com](http://www.winpharm.com)) WinPharm hospital pharmacy system.

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Five Hills	<b>Upgrade to IBS WinPharm 5.0 in Moose Jaw</b>		✓			
Cypress	<b>Upgrade to IBS WinPharm 5.0 in Swift Current</b>		✓			
Sunrise	<b>Upgrade to IBS WinPharm 5.0 in Yorkton</b>		✓			
Prince Albert Parkland	<b>Upgrade to IBS WinPharm 5.0 in Prince Albert</b>		✓			
Prairie North	<b>Upgrade to IBS WinPharm 5.0 in Battlefords</b>		✓			
	<b>Implement in Lloydminster</b>		✓			
Sun Country	<i>using WinPharm locally</i>	✓	✓			
	Migrate to HISC WinPharm				✓	
Heartland	Implement HISC WinPharm				✓	
Mamawetan Churchill River	HISC WinPharm				✓	

7.1.2.4 Home Care

After an extensive evaluation process, Develus's ([www.goprocura.com](http://www.goprocura.com)) Procura Health Management System was selected.

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Five Hills	<i>Develus Procura Implemented</i>  <b>implemented across the region</b>	✓	✓			
Cypress	<i>Develus Procura Implemented</i>  regional expansion	✓	✓	✓		
Sunrise	<i>Develus Procura Implemented</i>  regional expansion	✓	✓	✓		
Prince Albert Parkland	<i>Develus Procura Implemented</i>  regional expansion	✓	✓	✓		
Prairie North	<i>Develus Procura Implemented</i>  regional expansion	✓	✓	✓		
Sun Country	<b>Develus Procura implemented across region</b>		✓			
Heartland	<b>Develus Procura implemented across region</b>		✓			
Kelsey Trail	Implement HISC Procura		✓	✓		
Mamawetan Churchill River	<i>no system</i> HISC Procura	✓	✓	✓		
Keewatin Yattée	<i>no system</i> HISC Procura	✓	✓	✓		

#### *7.1.2.5 Radiology*

During 2004-2005, HISC will support the provincial group that is developing a provincial strategy for diagnostic imaging in order to define program requirements, a business case, architecture, funding requirements and a project plan necessary for moving forward with an integrated Provincial RIS/PACS solution.

#### *7.1.2.6 Transcription*

Assist Sunrise Health Region to implement the Momentum WinCIS Transcription module for use by the region.

7.1.2.7 Interfaces

Quovadx's ([www.quovadx.com](http://www.quovadx.com)) enterprise integration engine – QDX Integrator (formerly Cloverleaf) is currently implemented in both the Regina Qu'Appelle and Saskatoon RHAs.

The following table outlines the interfaces that are planned for the regions involved in the ICS program.

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Five Hills	<p><b>From CPI/Reg to Lab</b></p> <p>From CPI/Reg to Pharmacy and Home Care</p> <p>From Home Care to Momentum AR</p> <p>From Home Care to SAHO Payroll</p>		✓			
Cypress	<p>From CPI/Reg to Lab</p> <p>From CPI/Reg to Pharmacy and Home Care</p> <p>From Home Care to Momentum AR</p>		✓	✓		
Sunrise	<p><b>From CPI/Reg to Lab</b></p> <p>From CPI/Reg to SCM</p> <p>From Lab to SCM</p> <p>From CPI/Reg to Pharmacy and Home Care</p> <p>From Home Care to Momentum AR</p> <p>From Home Care to SAHO Payroll</p>		✓	✓ ✓		
Prince Albert Parkland	<p>From CPI/Reg to Lab, Pharmacy and Home Care</p> <p>From Home Care to SAHO Payroll</p>		✓			

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Prairie North	From CPI/Reg to Lab, Pharmacy and Home Care  <b>From Home Care to ORMED AR</b>  From Home Care to SAHO Payroll		✓  ✓			
SAHO	From Home Care to SAHO Payroll		✓	✓		

7.1.2.8 Common View

This capability was originally a component of the vision for the ICS program, but no suitable vendor solution was available. In 2003-2004, further analysis was undertaken to review requirements and determine next steps given the continuing evolution in technologies. This analysis confirmed that Sunrise Clinical Manager (SCM) from Eclipsys Corporation (<http://www.eclipsnet.com>) best met the requirements.

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Five Hills	Implement SCM in 1 hospital				✓	
Cypress	Implement SCM in 1 hospital				✓	
Sunrise	Implement SCM for use by clinicians located in the Yorkton hospital ICU, ER and OR departments			✓		
Prince Albert Parkland	Implement SCM in 1 hospital				✓	
Prairie North	Implement SCM in 1 hospital				✓	

### **7.1.3 Client Registry**

During 2004-2005, HISC in collaboration with Infoway, Saskatchewan Health, RHAs and SCA, will begin planning for a Shared Client Index solution, building on work done in other provinces. This planning will be in parallel with Saskatchewan Health's plan to improve the Person Registry System.

The Saskatchewan Shared Client Index will be linked to regional Enterprise Master Patient Index (EMPI's - also known as CPI/Registration systems) as well as Saskatchewan Health's Person Registry System. In the meantime, opportunities for regions to access data using an existing web-based application (PRS View) will be explored to improve covered patient identification and record linkage through use of the Health Service Number (HSN).

### **7.1.4 Provider Registry**

During the upcoming year, HISC in collaboration with Infoway, Saskatchewan Health, Regina Qu'Appelle and Saskatoon Health Regions will work together to improve the interfacing and functionality of the Saskatchewan WHIC PRS with the following authorized sources:

- College of Physicians and Surgeons
- College of Dental Surgeons
- Saskatchewan Pharmaceutical Association

And the following authorized consumers:

- Drug Utilization Review (College of Physicians and Surgeons)
- Regina Qu'Appelle Health Region or
- Saskatoon Health Region.

### **7.1.5 Pharmacy Information Program**

During 2004-2005, Saskatchewan Health and HISC, with funding from Infoway, will explore how PIN could be adapted to fit into the environment in Saskatchewan given the province's investment to date in the existing drug plan network. The Pharmacy Information Program (PIP) will explore the possible transition steps for integrating the PIN prescribing software with our drug plan network, including:

- replicate data from the existing dispensing database once all retail pharmacy prescriptions in the province are being captured and utilize the PIN 'viewer' application to provide access to provincial drug profiles to pharmacies, hospitals and physicians

- provide ability for providers to enter data directly into the web-based PIN application, for example to record 'holds' on prescriptions that a client has discontinued, or information available on drug monographs, formularies, etc.
- allow providers to begin utilizing PIN services such as drug-drug and drug allergy checking
- implement HL7 version 3 messaging for clinical pharmacy from all pharmacies
- implement electronic order entry by physicians, either through the PIN web application or through HL7 v3 messaging from physician EPR systems.

### **7.1.6 RIS/PACS**

See section 7.1.2.5

### **7.1.7 Physicians**

The evaluation of the Physician Desktop Pilot provided the feedback needed to further develop a strategy to encourage the use of information technology with the physician community. HISC and Saskatchewan Health will continue to work with the Saskatchewan Medical Association in this area and monitor developments and experiences in other jurisdictions which may be of benefit.

HISC continues to host the Electronic Patient Record system for the Department of Family Medicine. 100% of all medical students out of the University of Saskatchewan do training at the 3 Department of Family Medicine clinics. Continued and enhanced support for the expanded roll out of the EPR system will strategically put information technology tools in the hands of the young physicians graduating in Saskatchewan.

### **7.1.8 SCM in Saskatoon**

HISC will continue to support Saskatoon Health Region in their efforts to expand the use of SCM within the region.

### **7.1.9 SCM in Regina**

HISC will continue to support Regina Qu'Appelle Health Region in their efforts to begin the implementation of SCM.

## 7.2 Regional Priorities

The following priorities were initially gathered from the RHAs prior to the 2004-2005 Provincial Budget being finalized. The section was then updated in August 2004, after the RHAs submitted their final 2004-05 IT plans for approval as part of the overall budget planning process.

The following sections outline the regional priorities in the following areas:

- Clinical Systems
- Administrative Systems
- Infrastructure
- Service Support and Service Delivery

The descriptions have been copied from the individual RHA & Agency plans.

*The items in italics indicate the current state.*

***The items in bold italics indicate accomplishments in 2003-2004.***

## 7.2.1 Clinical Systems

### 7.2.1.1 CPI/Reg

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	Using CPIS/ADT HISC WinCIS – 1 location Regional Roll-out	✓	✓	✓	✓	✓
Five Hills	using Momentum Registration Plus <b>HISC WinCIS Implemented in Moose Jaw</b> Regional roll-out tied to primary health care team requirements	✓	✓	✓	✓	✓
Cypress	using Momentum Registration Plus <b>HISC WinCIS Implemented in Swift Current</b>	✓	✓			
Regina Qu'Appelle	using Ennovation Extend to Region	✓	✓	✓	✓	
Sunrise	using Momentum WinCIS <b>HISC WinCIS Implemented in Yorkton</b> Regional roll-out	✓	✓	✓	✓	
Saskatoon	Install Ennovation Convergence Release Product Enhancements Regional Rollout	✓	✓	✓	✓	
Heartland	HISC WinCIS				✓	

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Kelsey Trail	<i>using Momentum WinCIS in Melfort and Nipawin</i>  Extend WinCIS to Tisdale  Consolidate into one database serving entire region.	✓	✓	✓  ✓	✓	
Prince Albert Parkland	<i>using HISC HealthSuite</i>	✓	✓	✓		
Prairie North	<i>using Momentum Registration Plus</i>  <b>HISC WinCIS implemented in Battlefords</b>  HISC WinCIS in Lloydminster	✓	✓	✓		
Keewatin Yattée						
Mamawetan Churchill River	<i>using Momentum WinCIS in La-Ronge</i>  Application Upgrade and Regional Deployment  HISC WinCIS	✓	✓	✓	✓  ✓	

7.2.1.2 Provider Registry

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country					✓	✓
Five Hills					✓	✓
Cypress						
Regina Qu'Appelle	<b>HISC Provider Registry</b>		✓	✓		
Sunrise						

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Saskatoon	<i>HISC Provider Registry</i>		✓	✓		
Heartland						
Kelsey Trail						
Prince Albert Parkland						
Prairie North						
Keewatin Yattée						
Mamawetan Churchill River						

7.2.1.3 Laboratory

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	<p><i>no system</i></p> <p>HISC TriWin – 1 location</p> <p>Regional Roll-out</p>	✓	✓	✓	✓	✓
Five Hills	<p><i>using Triple G Triwin</i></p> <p><b>HISC TriWin Implemented in Moose Jaw</b></p> <p>Regional roll-out tied to primary health care team requirements</p>	✓	✓	✓	✓	✓
Cypress	<p><i>using HISC TriWin in Swift Current</i></p>	✓	✓	✓		
Regina Qu'Appelle	<p><i>using SCC</i></p> <p>Lab software replacement</p> <p>Extend Lab collection to Region</p>	✓	✓	✓	✓	
Sunrise	<p><i>no system</i></p> <p><b>HISC TriWin Implemented in Yorkton</b></p> <p>HISC ICS – Regionally</p>	✓	✓		✓	

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Saskatoon	IBM Hardware and SCC Software Upgrade  <b>Convert ADT Interface to HL7 TCP-IP</b>  Upgrade Transfusion Information System  Lab Results to: <ul style="list-style-type: none"> <li>✓ Provincial Lab Repository (Pending signoff)</li> <li>✓ Cancer Registry</li> <li>✓ SHR Pharmacy</li> <li>✓ PHIS</li> </ul> Cytology Information System	✓	✓	✓		
Heartland	HISC TriWin				✓	
Kelsey Trail	using Triple G LIS in Melfort and Tisdale  Upgrade to Triple G TriWin Extend to Nipawin  Consolidate into one database serving entire region	✓	✓	✓		
Prince Albert Parkland	<b>HISC TriWin Implemented in Prince Albert</b>	✓	✓			
Prairie North	<b>HISC TriWin implemented in Battlefords</b>  HISC TriWin in Lloydminster  HISC TriWin in Meadow Lake		✓	✓		✓
Keewatin Yattée						

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Mamawetan Churchill River	<i>using unsupported Northern Software</i>  HISC TriWin in La- Ronge	✓	✓	✓	✓	

7.2.1.4 Pharmacy

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	using WinPharm Migrate to HISC WinPharm	✓	✓	✓	✓	
Five Hills	using WinPharm <b>HISC WinPharm Implemented in Moose Jaw</b>	✓	✓			
Cypress	using WinPharm <b>HISC WinPharm Implemented in Swift Current</b>	✓	✓			
Regina Qu'Appelle	using PCSI Pharmacy Upgrade Extend to Region	✓	✓	✓	✓ ✓	
Sunrise	using WinPharm <b>HISC WinPharm Implemented in Yorkton</b> HISC ICS – Regionally	✓	✓		✓	
Saskatoon	<b>Upgrade BDM Pharmacy</b> Lab results to Pharmacy		✓ ✓	✓		
Heartland	HISC WinPharm				✓	
Kelsey Trail	WinPharm running across the region Interface with CPI/Reg Consolidate into one database serving entire region	✓	✓	✓	✓ ✓	
Prince Albert Parkland	using WinPharm <b>HISC WinPharm Implemented in Prince Albert</b>	✓	✓			

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Prairie North	<i>using WinPharm</i> <b>HISC WinPharm Implemented in Battlefords</b> <b>HISC WinPharm implemented in Lloydminster</b> HISC WinPharm in Meadow Lake	✓	✓		✓	
Keewatin Yattée						
Mamawetan Churchill River	Research region needs		✓			

7.2.1.5 Home Care

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	<b>HISC Procura implemented</b>  Regional Roll-out		✓			
			✓	✓		
Five Hills	<i>using HISC Procura</i>  <b>Extend use to entire region</b>  Potential MDS Home care pilot	✓	✓	✓		
			✓		✓	✓
Cypress	<i>using HISC Procura</i>  <b>Extend use to entire region</b>	✓	✓	✓		
			✓			
Regina Qu'Appelle	<i>using Procura, Masterfiles, CCS2</i>  HISC Solution	✓	✓	✓	✓	
Sunrise	<i>using HISC Procura</i>  Extend use to entire region	✓	✓	✓		
				✓		
Saskatoon	Investigate/ implement Procura as a replacement for the Garman system  Potential MDS Homecare Pilot		✓	✓	✓	
			✓	✓		
Heartland	<i>using CCS2</i>  <b>HISC Procura Implemented</b>  Extend use of Procura to rest of region	✓	✓			
				✓		
Kelsey Trail	<i>using CCS2</i>  Implement HISC Procura  Interface with CPI/Reg, Presto, ESP	✓	✓	✓		
			✓	✓		
				✓		

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Prince Albert Parkland	<i>using HISC Procura</i>	✓	✓	✓		
	Regional Implementation		✓	✓		
	MDS-Home Care			✓		
Prairie North	<i>using HISC Procura</i>	✓	✓	✓		
	Extend use to entire region		✓	✓		
	Install in Lloydminster				✓	
Keewatin Yattée	<i>no system</i>	✓	✓			
	HISC Procura			✓		
Mamawetan Churchill River	<i>no system</i>	✓	✓			
	HISC Procura			✓		

7.2.1.6 Radiology

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	HISC RIS (DI)			✓	✓	✓
Five Hills	<b>Computed Radiography</b> RIS/PACS		✓	✓ ✓		
Cypress	HISC ICS		✓	✓		
Regina Qu'Appelle	Implement RIS & PACS		✓	✓		
Sunrise	HISC ICS				✓	
Saskatoon	<i>Rollout Cerner Quadris to Nuclear Medicine, SCH and SPH</i>  <b>Upgrade Stentor Image Viewer</b>  Interface Radiology to SCM	✓	✓	✓		
Heartland	HISC ICS					
Kelsey Trail	<i>using standalone systems for stats collection</i>  Explore using RIS/PACS	✓	✓ ✓	✓ ✓		
Prince Albert Parkland	<i>using HISC HealthSuite</i>  PACS Radiology	✓	✓	✓		
Prairie North	HISC ICS - The PNRHA has recently purchased two digital imaging systems – one in the Battlefords and one in Lloydminster.		✓	✓		
Keewatin Yattée						
Mamawetan Churchill River	<i>using Momentum WinDI</i>  Application Upgrade	✓	✓	✓	✓	

7.2.1.7 Transcription

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	Upgrade Dictaphone equipment – WGH  HISC ICS – Weyburn HISC ICS – Estevan HISC ICS - Regional		✓	✓  ✓	✓  ✓	✓  ✓
Five Hills	HISC ICS  Dictation System		✓	✓  ✓	✓	
Cypress	HISC ICS		✓	✓		
Regina Qu'Appelle						
Sunrise	Momentum WinCIS Transcription Module at YHRC  Extend to rest of region			✓  ✓	✓	
Saskatoon	Upgrade Dictaphone to XP version and add Voice Option  Interface Dictaphone to Haver office			✓  ✓		
Heartland	HISC ICS					
Kelsey Trail						
Prince Albert Parkland	<i>using HISC HealthSuite</i>  HISC ICS  Ageing Dictation System - replace	✓	✓	✓  ✓		
Prairie North	HISC Transcription		✓		✓	
Keewatin Yattée	<i>using Dictaphone and MS Office</i>	✓	✓	✓		

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Mamawetan Churchill River	<i>using Dictaphone and MS Office</i>  Upgrade Dictaphone Equipment	✓	✓	✓	✓	

7.2.1.8 Interfaces

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	<i>using Payroll to Finance</i>  HISC ICS  ESP Staff Scheduling to SAHO Payroll		✓	✓	✓  ✓  ✓	
Five Hills	<i>using ADT/CPI to Lab and ADT/CPI to Cbord Dietary System and ADT/CPI to 3M</i>  <b>HISC CPI/Reg to Lab Implemented</b>	✓ ✓ ✓	✓			
Cypress	<i>using Payroll to Finance and Scheduling to Payroll</i>  HISC CPI/Reg to Lab	✓ ✓	✓ ✓	✓ ✓		
Regina Qu'Appelle	From Lab to HISC		✓	✓		
Sunrise	<b>HISC CPI/Reg to Lab Implemented</b>  HISC ICS		✓	✓	✓	
Saskatoon	Lab interfaces to various  Radiology to SCM  Cardiology to SCM  Pharmacy to SCM  <b>Replace ADT interface with TCP-IP HL7 from Enovation to Lab</b>  Dictaphone interface to Haver office		✓  ✓  ✓  ✓	✓  ✓  ✓  ✓		
Heartland	HISC ICS				✓	

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Kelsey Trail	<i>using CPI/Reg to Lab and ESP Staff Scheduling to SAHO Payroll</i>	✓ ✓	✓	✓		
	CPI/Reg to NISS, WinPharm		✓	✓		
	CPI/Reg to Procura and Procura to Presto and NISS to MDS and CPI/Reg to Abstracting			✓ ✓ ✓ ✓		
Prince Albert Parkland	<i>using Procura to Ormed HIS System</i>	✓	✓	✓		
	HISC ICS CPI/ADT with TriWin CPI/ADT with WinPharm CPI/ADT with Procura			✓		
Prairie North	HISC CPI/Reg to Lab			✓		
Keewatin Yattée						
Mamawetan Churchill River						

7.2.1.9 Long Term Care

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	Move all Regional Facilities to HISC MDS/RUGS		✓	✓		
Five Hills	<i>using HISC MDS/RUGS</i>	✓	✓	✓		
Cypress	<i>using HISC MDS/RUGS</i>	✓	✓	✓		
	<i>using HISC Care Manager in Southwest</i>	✓	✓	✓		
Regina Qu'Appelle	Implement Momentum Care Manager		✓	✓		
Sunrise	<i>using HISC MDS/RUGS</i>		✓	✓		
Saskatoon	Implement Momentum MDS	✓	✓	✓	✓	
Heartland	<i>using HISC MDS/RUGS</i>	✓	✓	✓		
	<i>using HISC Care Manager in Prairie West</i>	✓	✓			
	Review feasibility of implementing Care Manager throughout the region			✓		
Kelsey Trail	<i>using MDS Rugs</i>	✓	✓	✓		
	Interface from NISS			✓		
Prince Albert Parkland	<b>HISC MDS/RUGS Rollout to Rural Communities</b>		✓			
	Care Manager		?			
Prairie North	Implement MDS in all facilities and consolidate on one database		✓	✓		
Keewatin Yattée	<b>HISC MDS/RUGS</b>		✓			

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Mamawetan Churchill River	<i>using HISC MDS/RUGS</i>	✓	✓	✓		

7.2.1.10 Health Records Abstracting

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	using Med2020 WinRecs  <b>Med2020 WinRecs to Regional Instance</b>  Migrate St. Joseph to Regional Instance	✓	✓  ✓	   ✓		
Five Hills	using Med2020 WinRecs and 3M	✓	✓	✓		
Cypress	using Med2020 WinRecs	✓	✓	✓		
Regina Qu'Appelle	Replace Med2020 functionality		✓	✓		
Sunrise	using Med2020 WinRecs and 3M  Convert to 3M region wide	✓	✓	✓  ✓		
Saskatoon	Upgrade Med2020 to WinRecs version			✓		
Heartland	<b>Standardize Med2020 WinRecs</b>		✓			
Kelsey Trail	using Med2020 WinRecs and Ormed Abstracting  Interface with CPI/Reg  Explore Implementing 3M	✓	✓	✓  ✓  ✓		
Prince Albert Parkland	using Med2020 WinRecs	✓	✓	✓		
Prairie North	Consolidate to one system				✓	
Keewatin Yattée	using Med2020 WinRecs	✓	✓	✓		

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Mamawetan Churchill River	<i>using 3M</i>	✓	✓	✓		

7.2.1.11 Nursing

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	Development of electronic NISS				✓	
	Interface with CPI/Reg				✓	✓
	Interface with MDS Rugs				✓	✓
Five Hills						
Cypress						
Regina Qu'Appelle	SCM from HISC		✓	✓	✓	
Sunrise						
Saskatoon	Enhance SCM		✓	✓	✓	
Heartland						
Kelsey Trail	<i>Develop electronic nursing system with Encom</i>	✓	✓	✓	✓	
	Interface with CPI/Reg		✓	✓	✓	
	Interface with MDS Rugs				✓	
Prince Albert Parkland						
Prairie North	Extremely interested		✓		✓	✓
Keewatin Yattée						
Mamawetan Churchill River						

7.2.1.12 Primary Care

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	Primary Care Information System				✓	✓
Five Hills	Primary Care Information System			✓	✓	
Cypress						
Regina Qu'Appelle	Telehealth Hub for South Saskatchewan		✓			
Sunrise						
Saskatoon	<b>Enable Telehealth access at all Region sites</b>		✓			
	<b>Connect Sites</b>		✓			
Heartland	Primary Health Care Project			✓		
Kelsey Trail	Explore Primary Care Information System		✓			
Prince Albert Parkland	Specifications					
Prairie North	Need a system			✓	✓	
Keewatin Yattée	<i>using Telehealth</i>	✓	✓	✓		
Mamawetan Churchill River						

7.2.1.13 Other Clinical Systems

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	<p><i>using Sask Health provided SIMS, PHIIS, MHIS; ABI; Ambulance Billing Newborn Registration</i></p> <p>Implement Addictions Information System</p> <p><b>Implement new PHIS</b></p>	✓	✓	✓		
Five Hills	<p><i>using Sask Health provided SIMS, PHIIS, MHIS</i></p> <p><b>Surgical Patient Registry</b></p> <p>Public Health Information System (iPHIS)</p> <p>Renal Dialysis Information System</p>	✓	✓	✓		
Cypress	<p><i>using Sask Health provided SIMS, PHIIS, MHIS, ABIIS</i></p> <p><i>using MIQS</i></p>	✓	✓	✓		
Regina Qu'Appelle	<p><i>using MIQS</i></p> <p><b>Surgical Patient Registry</b></p> <p>CD PHIS</p>	✓	✓	✓		
Sunrise	<p><i>using Sask Health provided SIMS, PHIIS, MHIS</i></p> <p><i>using MIQS</i></p> <p><b>Surgical Patient Registry</b></p> <p><b>Implement new PHIS</b></p>	✓	✓	✓		

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Saskatoon	<i>using Sask Health provided SIMS, PHIIS</i>	✓	✓	✓		
	<i>using MIQS</i>	✓	✓	✓		
	<b>Surgical Patient Registry</b>		✓			
	Computation Food and Nutrition		✓	✓	✓	
	Synapse MHS			✓		
Heartland	<i>using Sask Health provided SIMS, MHIS</i>	✓	✓	✓		
	<b>iPHIS</b>		✓			
Kelsey Trail	<i>using Sask Health provided SIMS, PHIIS, MHIS</i>	✓	✓	✓		
	<i>using MIQS</i>	✓	✓	✓		
Prince Albert Parkland	<i>using MIQS</i>	✓	✓	✓		
	<b>Surgical Patient Registry</b>		✓			
	<b>Public Health Information System</b>		✓			
	OR Scheduling			✓		
	Triage Classification			✓		
Prairie North	<b>using MIQS</b>		✓	✓		
	<b>Surgical Patient Registry</b>		✓			
Keewatin Yattée	<i>using Sask Health provided SIMS, ABI</i>	✓	✓	✓		
	MHIS and PHIS			✓		
Mamawetan Churchill River	<i>using Sask Health provided SIMS, PHIIS, MHIS, Newborn Registration</i>	✓	✓	✓		
	Implement PHIS		✓			
	Implement Addictions Information System		✓			

## 7.2.2 Administrative Systems

### 7.2.2.1 Payroll

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	<i>using SAHO Payroll</i>	✓	✓	✓		
	<i>using SAHO Payroll interfaced with ESP Staff Scheduling</i>		✓	✓		
	Regionalize payroll structure			✓		
Five Hills	<i>using SAHO Payroll</i>	✓	✓	✓		
Cypress	<i>using SAHO Payroll and QHR</i>	✓	✓	✓		
	QHR Upgrade		✓			
Regina Qu'Appelle	<i>using SAHO Payroll</i>	✓	✓	✓		
	Implement DLGL HR		✓	✓		
Sunrise	<i>using SAHO Payroll and MediSolution</i>	✓		✓		
	<b>Consolidate Payroll</b>	✓	✓			
	Implementation of HRIS					
Saskatoon	<i>using SAHO Payroll</i>	✓	✓	✓		
Heartland	<i>using SAHO Payroll</i>	✓	✓	✓		
Kelsey Trail	<i>using SAHO Payroll interfaced with ESP Staff Scheduling</i>	✓		✓		
	<b>Regionalize payroll structure</b>		✓			
Prince Albert Parkland	<i>using SAHO Payroll</i>	✓	✓	✓		

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Prairie North	<i>using SAHO Payroll and Phoenix Payroll in Lloydminster</i>	✓	✓	✓		
Keewatin Yattée	<i>using SAHO Payroll</i>	✓	✓	✓		
Mamawetan Churchill River	<i>using SAHO Payroll</i>	✓	✓	✓		
SAHO	Enhancements  Interface with Home Care?  Interface with Staff Scheduling?	✓	✓  ✓	✓		

7.2.2.2 Staff Scheduling

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	<i>using ESP Staff Scheduling</i>	✓	✓	✓	✓	
	Expand ESP Staff Scheduling		✓	✓		
	Upgrade ESP (Or move to Provincial Central Host)			✓	✓	
Five Hills						
Cypress	<i>using ESP Staff Scheduling</i>	✓	✓	✓		
	ESP Upgrade		✓	✓		
Regina Qu'Appelle	Implement DLGL Staff Scheduling		✓	✓		
Sunrise	<i>using ESP Staff Scheduling in old AVHD</i>	✓		✓		
	<b>Upgrade ESP</b> Implement ESP in the region		✓			
Saskatoon	Rollout ESP Staff Scheduling		✓	✓		
Heartland	Investigate benefits and costs		✓	✓		
Kelsey Trail	<i>using ESP Staff Scheduling</i>	✓	✓	✓		
	Expand ESP Staff Scheduling to entire region			?		
Prince Albert Parkland	<i>using ESP Staff Scheduling</i>	✓	✓	✓		
Prairie North	<i>using ESP Staff Scheduling in North Battleford and Lloydminster</i>	✓	✓	✓		
Keewatin Yattée						
Mamawetan Churchill River						

7.2.2.3 Financial

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	<i>using Momentum</i>  <b>Regional Deployment</b>  Application Upgrade  Commitment Accounting	✓	✓  ✓  ✓	✓   ✓		
Five Hills	<i>using Momentum</i>  Salary and Benefits Budgetting	✓	✓  ✓	✓  ✓		
Cypress	<i>using Momentum</i>  Move Momentum	✓	✓  ✓	✓		
Regina Qu'Appelle	<i>Using GEAC</i>  <b>Finance Budget Module</b>  <b>Upgrade Finance Accounting Software</b>  Upgrade of accounting packages		✓  ✓  ✓	✓   ✓		
Sunrise	<i>using Momentum and Presto</i>  <b>move to Consolidated Momentum Financials and Materials Management</b>	✓	✓			
Saskatoon	Upgrade Oracle Financials to Oracle 11i  Data mapping to HL7 V3 RIM - Oracle HTB and HI  Upgrade DynaMed materials management  EDI strategy		✓   ✓	✓  ✓  ✓		

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Heartland	<i>using Momentum</i>  <b>Materials Management</b>  Budget Program	✓	✓  ✓	✓   ✓		
Kelsey Trail	<i>Regionalize Ormed's Presto financial systems</i>  Interface with Procura  Explore Interfaces with other systems	✓	✓	✓  ✓	   ✓	
Prince Albert Parkland	<i>using Ormed HIS</i>	✓	✓	✓		
Prairie North	<i>using Ormed HIS</i>  Budgeting Software	✓	✓  ✓	✓		
Keewatin Yattée	<i>using Ormed HIS</i>	✓	✓	✓		
Mamawetan Churchill River	<i>using Presto - DOS</i>  Application Upgrade	✓	✓  ✓	✓		

7.2.2.4 Other Administrative Systems

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	<p><i>using CADD:FM Master architectural drawings, Integrated Space Inventory System (ISIS), Facility Management applications, health applications, Computerized Maintenance Management Systems (CMMS)</i></p> <p>Nutrition and Food Services</p> <p>Human Resources Management System</p> <p>Regional Web site</p> <p>EDI strategy</p>	✓	✓	✓	✓	✓
Five Hills	<p><i>using CADD:FM Master architectural drawings, CMMS</i></p> <p>Automated Building Control Systems and Centralized Monitoring</p>	✓	✓	✓	✓	✓
Cypress						
Regina Qu'Appelle	<p><i>using CADD:FM ISIS, Facility Management applications, health applications, CMM)</i></p>	✓	✓	✓		
Sunrise						

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Saskatoon	<i>using CADD:FM Master architectural drawings, ISIS</i>	✓	✓	✓		
	Electronic Document Management System strategy		✓	✓		
	EDMS Pilot			✓		
	Web refresh:					
	✓ <b>External Site</b>	✓	✓			
	✓ Internal Site		✓	✓		
Heartland						
Kelsey Trail						
Prince Albert Parkland	<i>using CADD:FM Master architectural drawings, ISIS</i>	✓	✓	✓		
Prairie North						
Keewatin Yattée						
Mamawetan Churchill River						

Many RHAs make use of applications developed and supported by CADD:FM Management Services Ltd. (<http://www.caddfm.com>), an information services consulting firm specializing in Facility Management applications.

Provincial options for inventory management of building capital assets will be reviewed in 2004-2005.

### 7.2.3 Infrastructure

#### 7.2.3.1 Networks, PCs and Servers

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	Regionalize IT Infrastructure		✓	✓		
	Connect Sites via CommunityNet		✓			
	Consolidate email - Exchange 2000			✓	✓	
	Upgrade to W2003/.Net/XP			✓	✓	
	IT Asset replacement		✓	✓	✓	✓
	Secure Remote Access		✓	✓		
Five Hills	<b>Connect LaFleche and RockGlen to C-Net</b>		✓			
	Active Directory			✓	✓	
	Exchange 2003				✓	
Cypress	<b>Fiber Install – between Hospital and RHO</b>		✓			
	Server consolidation		✓	✓		
Regina Qu'Appelle	PC & Peripheral Refresh			✓		
	Storage Array Network			✓		
	Upgrade Network Equipment			✓		

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sunrise	Upgrade networks, PCs, servers		✓	✓	✓	
	Active Directory		✓	✓		
	Expand Citrix Farm		✓			
	Network ready New Facility				✓	
	Implement Regional Fax Server Solution				✓	
	Implement Fibre Channel Backbone					✓
Saskatoon	IT Asset replacement	✓	✓	✓	✓	✓
	Active Directory		✓	✓	✓	
	District Domain Consolidation		✓	✓	✓	
	Site connectivity via CommunityNet	✓	✓			
	Consolidate email		✓	✓		
Heartland	<b>New PC deployment, replace NT 4.0 Servers workstation</b>		✓			
	Active Directory			✓		
	Common Exchange Server			✓		
	Regional Domain			✓		
Kelsey Trail	<i>Regionalize Network to one domain</i>	✓				
	<b>Move to Active Directory and Extend WAN to include physician clinics</b>		✓			

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Prince Albert Parkland	Infrastructure Rollout and Integration Project.		✓	✓		
	<b>Integration of Associate Members into Region</b>		✓			
	Migrate to Microsoft Active Directory		✓	✓		
	Office 2003 Upgrade			✓		
	PAPHR Intranet			✓		
Prairie North	<b>Migration to a Regional Wide Area Network</b>		✓			
	Active Directory			✓		
	Exchange 2003			✓		
	Citrix Servers			✓		
	Network Infrastructure Upgrades			✓		
	Replace/upgrade PCs		✓	✓		
	OS upgrades		✓	✓		
Keewatin Yattée	Upgrade Hardware, Software		✓	✓		
	Active Directory			✓		
Mamawetan Churchill River	Computer Redeployment / Technology Refresh	✓	✓	✓	✓	✓
	<b>Active Directory/Exchange 2003</b>		✓			
	Virus Protect Upgrade			✓		

All RHAs are making use of the services provided by Community Net.

Many use Citrix to serve applications regionally.

Combination of thin clients, desktop PCs and portables.

Desire to develop sector wide technology refresh strategy.

Microsoft is dominant supplier of operating system and office automation software (i.e. Windows 2000, XP, Word, Excel, PowerPoint, Access, Publisher, Visio, Project etc.).

7.2.3.2 Telehealth

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	<b>Enable Telehealth in Region</b>  Expand to additional Sites		✓			
			✓	✓	✓	
Five Hills	<b>Install Telehealth equipment and suite in Moose Jaw Union Hospital</b>  Expand cnet and Telehealth in rural areas for phc teams Central Butte; Assiniboia; Gravelbourg Telehealth		✓	✓		
					✓	✓
Cypress	<b>Install Telehealth equipment and suite in Cypress Regional Hospital</b>		✓			
Regina Qu'Appelle	Implement South Saskatchewan Hub		✓	✓		
Sunrise	<b>Telehealth in Yorkton</b>  Conversion to CNet for Telehealth in Canora and Melville  Cnet upgrade for Telehealth to Esterhazy, Kamsack and Preeceville  Equipment mobility within YRHC		✓			
				✓		
				✓		✓
Saskatoon	<b>IP enable Telehealth</b>  Enhance Video Conferencing capability	✓	✓			
			✓	✓		
Heartland	<b>Telehealth</b>  Telehealth Expansion	✓	✓			
			✓	✓		

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Kelsey Trail	<p><i>Telehealth running on ISDN</i></p> <p><b>Upgrade to IP based Community Net</b></p> <p>Expand Telehealth sites as appropriate</p>	✓	✓	✓		
Prince Albert Parkland	<p><b>Telehealth move to Community Net</b></p>		✓			
Prairie North	<p><b>Telehealth in 3 sites</b></p> <p>Move to IP</p>		✓	✓		
Keewatin Yattée	<p><i>using Telehealth</i></p>	✓	✓	✓		
Mamawetan Churchill River	<p>Sandy Bay Video Conferencing Unit</p> <p>Network Architecture Upgrade</p> <p><b>Implement IP Radiology</b></p>	✓	✓	✓		

7.2.3.3 Telephony

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	Regional Telephony Solution Strategy		✓	✓	✓	
	Pilot VOIP telephony			✓		
	Installing VOIP in 1 Location			✓	✓	
	Expanding VOIP to rest of region				✓	✓
Five Hills	VOIP phone service			✓	✓	
Cypress	Explore VOIP, wireless, telecom integration			✓		
Regina Qu'Appelle	Review Switchboard Services		✓			
Sunrise	VOIP Solution implementation at YRHC			✓		
Saskatoon	Consolidate Switchboard		✓	✓		
	Complete Telephone Switch upgrades	✓				
	Pilot VoIP telephony		✓			
Heartland						
Kelsey Trail	<b>Installing VOIP in Parkland Place</b>		✓			
	Expand VOIP to Melfort Hospital				✓	
	Expand VOIP to rest of region					✓
Prince Albert Parkland	Voice Communication Strategy			✓		
Prairie North						
Keewatin Yattée	<i>using Centrex region wide</i>	✓	✓	✓		

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Mamawetan Churchill River	La Ronge Health Centre IP Telephony Upgrade			✓		

### 7.2.4 Service Support and Service Delivery

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Sun Country	<i>using HISC Help Desk, Central Hosting, Network Email Gateway Web Site Hosting</i>	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓		
Five Hills	<i>using local IT tier I and II support in conjunction with HISC Help Desk, Central Hosting, Network Email Gateway</i>  Website Development – Internet  Wireless Data Connectivity – Extranet  On-line Policy Manuals - Intranet	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓   ✓  ✓		
Cypress	<i>using HISC Help Desk, Central Hosting, Network Email Gateway</i>  Disaster Recovery Plan	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓		
Regina Qu'Appelle	<i>using HISC Network</i>	✓	✓	✓		
Sunrise	<i>using HISC Help Desk, Central Hosting, Network Email Gateway</i>	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓		
Saskatoon	<i>using HISC Network</i>	✓	✓	✓		
Heartland	<i>using HISC Help Desk, Central Hosting, Network Email Gateway</i>	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓		
Kelsey Trail	<i>using HISC Help Desk, Central Hosting, Network Email Gateway</i>	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓		

Region	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Prince Albert Parkland	<i>using HISC Help Desk, Central Hosting, Network Email Gateway</i>	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓		
Prairie North	<i>using HISC Help Desk, Central Hosting, Network Email Gateway</i>  Install/Expand Intranet  Convert Website  Set-up staff training labs in Lloyd and Meadow Lake	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	  ✓  ✓  ✓		
Keewatin Yattée	<i>using HISC Help Desk, Central Hosting, Network Email Gateway</i>	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓		
Mamawetan Churchill River	<i>using HISC Help Desk, Central Hosting, Network Email Gateway</i>  <b>Develop and launch website</b>	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓  ✓	✓ ✓ ✓ ✓		

### 7.3 Saskatchewan Cancer Agency

The selection and implementation of a Clinical Management System (CMS) for the Saskatchewan Cancer Agency will be a major undertaking. Since a CMS will change the way the Agency operates, there are a number of preparation and supporting projects that must be done in the same time frame. These projects will lead to the acquisition and installation of an integrated Clinical Management System that includes electronic health records, automated decision support tools, management information and replacement of the existing Registry/Health Records system.

The selection process began in early 2003-2004. The first phase of implementation began in mid 2003-2004 with completion expected in 2004-2005. The second phase of implementation is expected to begin in 2004-2005 with completion in 2005-2006.

The Saskatchewan Cancer Agency is acquiring two new linear accelerators for the purpose of providing radiation treatments to cancer patients. One linear accelerator will be installed in the Allen Blair Cancer Centre in Regina and the second one will be installed in the Saskatoon Cancer Centre. The equipment is expected to be commissioned for use in the first quarter of 2004.

A Verify and Record System is required for use with the linear accelerators. The Verify and Record System is a key component of the CMS in that it captures patient and radiation treatment information as part of the electronic record for the cancer patient. Therefore the selection of a CMS vendor was targeted for mid-December, 2003, so that the Verify and Record component is available for linear accelerator commissioning in 2004.

Saskatchewan Cancer Agency will continue to use the services provide by HISC where feasible. Current services utilized include:

- HISC Help Desk
- Network
- Email Gateway.

### 7.4 Saskatchewan Health Priorities

Project	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Security Infrastructure	Work with HISC and the Health Authorities to put in place a supporting infrastructure, including Active Directory and support for PKI.	✓	✓	✓	✓	
SIMS	Move code base to the new .net framework in preparation to transfer the application to HISC.		✓	✓		
SAIL Oxygen	The current system will no longer function when the Health Registration Database is converted from to SQL from Ingres. It will need to be re-developed using the current application tool kit.		✓	✓	✓	
Provincial Water Lab	Full implementation of the new water quality lab system,		✓	✓		
Provincial Water Lab	Interfaces to Environment & Resource Management's new system			✓	✓	
Vital Statistics	Upgrade the current system to the current application development technology environment and implement on-line death registration for Funeral directors.		✓	✓	✓	
New Born	Online Births tied directly into the Vital Statistics system and the PRS.				✓	✓

Project	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Health Registration	Complete conversion of the Person registry system (PRS) to the current technical architecture.		✓	✓	✓	
Passport	Online verification of Vital Statistics information by the Federal Passport Bureau.					✓
Health Card Renewal	Renewal or replacement of existing health cards and an accompanying update of the coverage information.			✓	✓	
Legal Framework in place to allow the roll out of access to PRS	Access to the Person Registry System (PRS).		✓	✓		
Client Drug Profiles (ADAPT)	Implementation changes to the current Drug Plan system to allow collection of all prescriptions issued to a person in the province and provide appropriate access to drug profiles to pharmacies, emergency rooms and primary care settings to support prescribing  Design changes to the drug plan system to allow for integration with an online prescribing system, likely Alberta's PIN system.		✓	✓		

Project	Description	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Physician Claims System	Roll out the new Internet claims submission system for fee for service Physicians.  Convert the statistical component of the claims system to new technology to facilitate analysis and reduce cost.		✓	✓		
Tobacco Control Tracking	Completion of initial system for tracking enforcement of legislation in preparation of transferring the system to HISC.			✓		

## 8. IT Planning Cycle

<i>Government Annual Planning and Budget Cycle</i>		<i>Health System Annual Planning and Budget Cycle</i>	<i>IT Planning Cycle</i>
	May-June	<p><i>Health and Finance collaborate to prepare recommendations for expenditure ranges for regional health authorities including:</i></p> <p>An assessment of what activities Treasury Board/Cabinet can expect in regional health authorities in order to meet financial targets.</p> <p>An assessment of what public reaction might be if numbers are released prematurely.</p>	<p>IT Environmental Scan to include:</p> <ul style="list-style-type: none"> <li>• Provincial &amp; regional program priorities and information implications</li> <li>• IT parameters defined by central gov't</li> <li>• New IT trends, technologies and architectures for health applications</li> <li>• Inter-prov. IT developments (e.g. Canada Health Infoway investment strategy)</li> <li>• Impacts of new standards, policies, legislation or reporting requirements</li> <li>• Evaluation of last year's IT plan delivery</li> </ul> <p>Based on the scan, CIO Forum recommends updates to the three-year provincial health system IT Plan. Input is also sought from other players (e.g. Quality Council, SMA, etc.) and proposed updates to the IT Plan are reviewed with Leadership Council.</p>
Call for Plans issued to departments with expenditure ranges, updated planning guidelines, etc.	June		<p><i>Preliminary</i> Provincial IT plan is established by Health based on this input. IT planning parameters for regions, SCF, HISC and the Department are then established.</p>
	Late June-July	Health issues Regional Health Authority Call for Plans with Cabinet-approved multi-year expenditure range.	Provincial health IT plan and planning parameters for regions/SCF/HISC are issued as a component of the Call.
Department works with central agencies to develop/review strategic plans and prepare for Cabinet Planning Conference	July-August	<p>Department begins work with the Ministers Forum, Leadership Council and regional health authorities to:</p> <ul style="list-style-type: none"> <li>• Discuss/clarify planning expectations;</li> <li>• Consult on department's strategic plan;</li> <li>• Review regional health authorities' operational plans.</li> </ul>	<p>IT Planning parameters are reviewed with the CIO Forum and the needs of regions (both individually and collectively) for IT planning support by HISC or Health are identified</p> <p>HISC provides planning support where required to regions.</p> <p>Through the CIO Forum, Health &amp; HISC lead any updating of the IT architecture that is required to support delivery of the IT Plan.</p>
Results of Cabinet Planning Conference communicated to dept's with updated fiscal information and confirmed budget strategy (Call for Estimates)	October	Department provides updated financial information (RHA Call for Estimates) to Minister's Forum, Leadership Council and regional health authorities.	Based on initial planning and priority identification at the regions, SCF, HISC and Health, the CIO Forum establishes any short-term task groups necessary for further assessing the implications of joint IT solutions so that regions understand the implications for their local budgets/plans.

<b><i>Government Annual Planning and Budget Cycle</i></b>		<b><i>Health System Annual Planning and Budget Cycle</i></b>	<b><i>IT Planning Cycle</i></b>
Cabinet policy committees review departmental and cross-agency plans (excluding Health)		Regional health authorities have four weeks to finalize and submit budget and plans.	Based on this assessment, and the IT planning parameters, regions/SCF/HISC complete and submit their IT plans as part of the overall budget/plan process.
	Early November	Regional Health Authority budgets and plans are reviewed by RHA Budget Review Panel with officials from Health, Finance and Executive Council.  This is not a budget approval process. Information is gathered to help finalize Health's budget submission and strategic plan.	IT plans are reviewed as a component of the plan review process to ensure they are consistent with program, funding and IT planning/architecture parameters.  Major IT projects are identified in these plans.
Cabinet policy committee reviews Health's plan	November	Health submits strategic plan for review. Health submits budget to Treasury Board.	<i>Proposed</i> Provincial IT plan is included in the strategic plan submitted by the Department.
Treasury Board review of plans and budget (including Health)	November-January	<ul style="list-style-type: none"> <li>• Treasury Board provides direction to Health following initial budget review.</li> <li>• Health returns to Regional Planning Council, Leadership Council and regional health authorities with revised direction.</li> <li>• Health returns to Treasury Board with revised budget.</li> </ul> <p>This iterative process continues until budget finalized.</p>	Provincial IT plan is updated as the budget process unfolds to reflect changes in both program priorities and financial resources.  CIO Forum and Leadership Council input is sought as needed and revised direction communicated to regions.
Cabinet review of plans and budget	February		
	March	Regional Health Authorities receive confirmation from Minister on their final budget as well as any direction the Minister may wish to provide regarding the RHA operational and service plans.	Provincial IT Plan finalized and regional/SCF/HISC IT plans are approved – defines funding, architecture and delivery expectations for all major IT projects.
Throne Speech Budget Speech	March	Public release of RHA plans	
Department annual report released	July-Aug.	RHA annual reports	

## **8.1 IT Service Delivery Roles**

The following organizations each play a role and have responsibilities in efficiently and effectively using information technology as a strategic tool in achieving the Vision, Goals and Actions of the Health Sector.

- Regional Health Authorities (RHA),
- Saskatchewan Cancer Agency (SCA),
- the Saskatchewan Association of Health Organizations (SAHO),
- the Health Information Solutions Center (HISC) and
- Saskatchewan Health.

Their respective roles and responsibilities with respect to the delivery of information technology services in the health sector are outlined below.

### **Regional Health Authorities and Saskatchewan Cancer Agency**

The primary role of the RHAs and the SCA is to provide efficient and effective health services. The roles of the IT organizations of the RHAs and SCA are therefore as follows:

- Support care providers, support essential business processes, support vision and goals of RHA/SCA by providing care providers and managers with technology and information systems required – via HISC where appropriate
- Support health sector collaboration and information exchange
- Promote the use of IT and IM best practices.

### **Saskatchewan Association of Health Organizations**

SAHO's mission is to serve its membership through leadership, advocacy, support and programs.

The role of the Payroll and Systems department of SAHO is as follows:

- Provide payroll services to SAHO members
- Support health sector collaboration and information exchange
- Promote the use of IT and IM best practices.

### **Health Information Solutions Centre**

The primary role of HISC is to provide IT services to the health sector, including:

- Provincial Health Sector IT Strategy Coordination (Leadership Council)
- Standards, policy coordination and mandating/articulation
- Maintain provincial IT plan (i.e. compilation of approved projects)
- Annual report on progress against plan
- Privacy/Security framework in accordance with provincial standards
- Provincial information requirements and products (goal is to achieve use of de-identified data)

- Consulting, project delivery, architecture, high-speed secure network, help desk and technical support, application hosting and support, security administration, provincial data repositories and central indexes
- Support health sector collaboration and information exchange
- Promote the use of IT and IM best practices.

### **Saskatchewan Health**

The department's role is primarily to provide the leadership necessary to achieve the vision, goals and actions defined in Section 3.1. From an IT perspective the department is responsible for the following:

- Transition plan to devolve service delivery
- Concentration on standards, frameworks versus software development
- Department IT solutions (Provincial Lab, Vital Stats, Drug Plan Claims Processing, Person Registry System)
- Support health sector collaboration and information exchange
- Promote the use of IT and IM best practices
- Policy driven funding.