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REPORT ON CAPITAL — A two year summary of investment in the Saskatoon Health Region

2005-2007

Fiscal years



- Message from the Vice President
- Major Construction Projects
- Medical Equipment Investments
- Support Capital Investments
- IT Investments

2005—07 : Years in Review



It is my pleasure to provide the Saskatoon Health Region's internal community and its many stakeholders with this overview of the capital investment made within Saskatoon Health Region in the 2005-06 and the 2006-07 fiscal years.

This is our second report of this nature and is meant to serve two purposes. Primarily, the intent is to chronicle and report on the capital investment that was made. And second, to take this opportunity to recognize and thank Saskatchewan Health and the donors to the hospital foundations which have made this investment possible.

In the past two fiscal years we have had a significant amount of building construction activity that has addressed several key areas of need and investment in clinical areas. In addition, Saskatchewan Health has provided targeted funding towards the replacement of a number of key systems in the Medical Imaging and Nuclear Medicine Departments, ultimately preparing the region for the installation of a Picture Archiving Communication System (PACS).

Within the health care industry, the need for constant and ongoing capital investment will always be present—that is largely the nature of our business—ever evolving and changing. However, we are in the particularly challenging time as our buildings and technology continue to age with relatively minimal reinvestment. In addition, the need for investment in new technologies presents competing demands.

The SHR's new Strategic Plan will provide direction for establishing investment priorities over this next 3 years. In addition, the Region moves towards the establishment of a Capital Allocation and New Technologies Review Committee and an IT Steering Committee. Both of these committees will be instrumental in guiding the future investments in capital.

I would like to thank the many project managers and staff who each year support the capital program by managing construction projects, meeting with stakeholders, tendering and negotiating contracts, installing and commissioning equipment and training staff to work with their new equipment and surroundings. The coordination of these efforts is not without a lot of energy, collaboration and hard work. Thank you to you all!!

Sandra Blevins RN, BScN, MBA, CHE

Vice President, Clinical and Operations Support Services



COMPLETED CONSTRUCTION

Several major construction projects were completed during 2005-2007 within the Saskatoon Health Region and its affiliates. These projects served to enhance current infrastructure as well as to create new resources and services for our clients, staff, and health care community, and include:

Les & Irene Dube Center of Care (Breast Health Centre—Saskatoon City Hospital

Registration/Finance Renovation—Saskatoon City Hospital

Siemens Center Emergency Room Consultation Area—Royal University Hospital

Cardiac Catheterization Lab Renovation & Installation of New Lab—Royal University Hospital

Digital Bi-plane Angiography Suite—Relocation & Installation of New Lab—Royal University Hospital

Registration Relocation/Ambulatory Services—Royal University Hospital

Neonatal Intensive Care Unit Renovations—Royal University Hospital

5th Floor Observation Unit—St. Paul's Hospital

Community Dialysis Centre—New Program/location—St. Paul's Hospital

The Les and Irene Dube Center of Care was made possible through the most generous contributions of the public and corporate sponsors provided to the SCH Foundation's Center of Care Campaign.

The Project involved relocating several regional services to alternate locations in order to transform the space into a state of the art imaging and diagnostic center that is focused on providing timely access and support to women and men experiencing breast disease.

This major capital campaign provided the entire commitment for capital equipment. Operating funding has been provided through the Region's global budget.

Equipment included in this center includes: Nuclear Medicine) Gamma Camera, Full Field Digital Mammography System, Prone Stereotactic Breast Biopsy/Upright Breast Biopsy System, Ultrasound, and a major upgrade to the MRI. All included in a beautiful and serene environment.

Thanks to the efforts of many volunteers and the staff of the SCH Foundation!



LES AND IRENE DUBE
Centre of Care

HUMBOLDT HOSPITAL REDEVELOPMENT



The Humboldt Health Services Redevelopment Project involves construction of a new state of the art health facility in the City of Humboldt to replace the existing St. Elizabeth's Hospital facility and consolidate all community-based services, currently housed in a separate building, together with acute care services in the same facility. This will integrate acute care with home care, public health, mental health, and health promotion services which will enhance the coordination of care and improve access to health services in the community of Humboldt and the surrounding communities.

In fiscal year 2006-07 there was a great deal of progress on this project, including approval by Saskatchewan Health of the Functional Program and Concept Plan in April 2006. With this approval the project entered the Schematics and Design

Development phase with the required Design Development Report being submitted for Saskatchewan Health review in July 2006. Subsequent revisions to the Design Development Report were submitted in October 2006 and March 2007.

Notice of formal approval to proceed to the Completion of Working Drawings and Contract Documents phase was received from Saskatchewan Health in early April 2007. This is a significant milestone in that it moves the project into what can be referred to as the "delivery" phase. Accordingly, project timelines have now been finalized. Working drawings are expected to be completed by January 2008 with the tender advertised and awarded the following month in February. Construction will begin in March 2008 with completion expected by June 2009. Finally, commissioning and occupancy of the new building is scheduled for July 2009.

Appreciation is extended to the many communities and RMs that have continued to pledge financial support to this project and are working towards obtaining their pledge commitments.

- STAFF AND PHYSICIANS
- COMMUNITY OUTREACH
- SUPPORT SERVICES
- ADMINISTRATION

HUMBOLDT HEALTH SERVICES REDEVELOPMENT PROJECT

PRIME CONSULTANT: friggstad downing henry architects

ASSOCIATE ARCHITECT: LM Architecture Group

Major Planning Activities in 2005—07

In addition to the completed construction in 2006-07, there were significant resources allocated to the planning of several major construction projects. This extensive planning work is required prior to projects proceeding to the execution phase. These projects include:

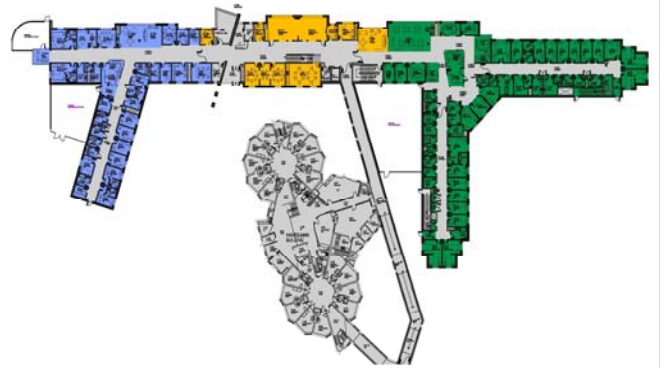
RUH Inpatient Mental Health Facility — Working Drawing phase is currently underway and project is scheduled for fall 2007 tender. Construction is targeted for completion in early 2009.

Humboldt Health Services Redevelopment Project — The project is scheduled for an early 2008 tender with construction targeted for completion in spring 2009.

Oliver Lodge Redevelopment Project — this project is currently proceeding to Design Development stage with a targeted tender date of early 2008.

Project Hope—Youth Stabilization & Treatment Centre — facility construction targeted to start in spring 2008 with completion by 2009.

Maternal and Children's Planning — grant for planning was received in 2006/07 from Saskatchewan Health.



Inpatient Mental Health Facility Concept Plan

CLINICAL EQUIPMENT

Renewal of medical capital equipment infrastructure is a key priority for Saskatoon Health Region. Over the past two years, medical capital equipment replacements have been largely driven by urgent needs to purchase equipment on a contingency (short notice) basis. Consequently, a high proportion of available capital funds were used to address these urgent needs.

Responding to these priorities comes at the expense of the implementation of a longer term renewal plan for equipment replacement. This makes asset allocation decisions less than ideal due to the inability to optimize purchases through the development of longer term, vendor-negotiated replacement contracts for equipment. Saskatoon Health Region continues to benefit from a strong relationship with the hospital foundations that help contribute towards the gap in capital funding. A consolidated asset management plan has helped to streamline this relationship. Medical capital purchases were made for diverse set of clinical programs which range across the continuum of care.



Ultrasound Machine

In total, \$6.4 million was committed or spent on purchases of 256 pieces of medical capital equipment for over 42 different clinical areas in 2006-07 and \$8.8 million in 2005-06.

Multi-year renewal plans for medical capital equipment were initiated or continued for the purchase of anaesthesia machines (11 machines purchased), bedside monitoring equipment (59 monitors purchased), and dialysis machines (9 purchased). Development and implementation of these renewal plans require extensive coordination from planning, evaluation and purchase and installation. Equipment purchases often create opportunity to introduce new or enhanced technologies for improved safety, diagnostic potential and care processes. Introduction of new/enhanced technologies also requires extensive staff and physician training on the safe use and maintenance of the new equipment — this is a necessary component of the investment.

We were very pleased with the level of collaboration and decision making that was evident in pursuing these multi year purchases, these decisions are not easy to reach as they require change in practice, reviews of clinical standards and the engagement and cooperation of many stakeholders from across multiple sites and disciplines. Success was noted in the purchase decision of the new bedside monitoring equipment at SCH, which will form the basis for renewal and replacement at the other acute sites over the next 5 years.



**Cardiac Stress
Testing Equipment**



Neonatal Ventilator



**Chronic Renal
Replacement Therapy Machine**

Clinical Equipment Replaced in 05-06

<i>Site</i>	<i>Type of Equipment</i>	<i>Total Cost</i>
RUH	Digital Biplane Angiographic Unit	211,519
RUH	RUH Cath Lab Replacement	2,183,403
RUH	DI Equipment to Facilitate Biplane	51,493
RUH	IE 33 Ultrasound System	248,805
RUH/SPH	Digital Chest X-Ray Unites	937,198
SPH	SPH Ultrasound Replacement	216,380
SPH	CT Replacement	1,250,133
RUH	Micromax Ultrasound System—Funded 1/2 by UofS and 1/2 by Contingency	60,734
RUH	Neurotelemetry with Doppler Stimulator	141,001
RUH/SPH	Coloscopes	102,940
RUH/SPH	Gastroscope	61,618
RUH	Otoacoustic Emission System	52,642
RUH	VNG Machine	37,814
RUH	Sleep Lab Monitoring Computers	13,036
RUH	Nasopharyngolaryngoscope	8,968
RUH/SCH/SPH	Video Equipment	37,326
RUH/SPH	Bronchoscope for OR	39,579
SCH	Duodenoscopes	77,176
SCH	Processor and Monitor	40,677
SCH	Fiberoptic Bronchoscope	17,446
SPH	Pediatric Bronchoscope	8,547
RUH	Transcranial Doppler System (TCD)	61,221
RUH	Neurosurgery Drill Kit (Midas Rex)	71,015
RUH	Pediatric Transport Defibrillators	30,211
RUH	Ultrasonic Tumor Aspirator	201,242
RUH	Ultrasonic Tumor Aspirator	201,242
RUH	Pediatric Apnea Monitoring Equipment	10,888
RUH	Anaesthetic Gas Monitor	16,654
RUH	Epidural Positioning Device	6,566
RUH	Gemstar Infusion Pump	5,794
RUH/SCH/SPH	Glide Scope	22,828
RUH/SCH/SPH	Standard Bipap	23,005
SCH	Physiological Monitoring Equipment	597,807
SPH	Headlight System	5,258
SPH	Orthopedic Power Equipment	42,651

Clinical Equipment Replaced in 05-06 Cont'd

<i>Site</i>	<i>Type of Equipment</i>	<i>Total Cost</i>
SPH	Transport Monitor	13,319
SPH	End Tidal CO2 Modules and Cables	6,123
SPH	TEC 7 Vaporizers	18,332
SPH	LTV ventilator & LTV Transport Battery System	22,804
SPH	Prismaflex CRRT & Blood Warmer	75,733
Wakaw	Emergency Room Light System	2,294
SPH	Sensomedics Pulmonary Function System—Funded by SPHF	44,563
RUH/SCH/SPH	Force FX-C Electrosurgical Generator (3 Units) - Integrated Priority—One Unit funded by RUH Foundation	17,809
Watson/Lanigan	Patient Total Lift	6,886
Lanigan Hospital	Stryker Go-Bed with Optimal Mattress & Electric Rose Bed with Mattress	15,743
Nokomis Health Centre	Rose Bed with Optimal Mattress	3,144
Parkridge	Alenti Bath Chairs	31,720
Parkridge	Bariatric Equipment	99,096
Parkridge	Arjo Patient Stand & Walk-Aid	10,593
RUH	Pediatric Cribs	111,464
RUH	Versa Care air Bed	15,351
RUH	Tilt Table (Replaced by Miscellaneous Equipment)	3,870
RUH	Arjo Whirlpool Tub	15,515
RUH	Hard Springfield Crib with Accessories	16,500
RUH	Ministand with Power Base, Large and Small Bandsling	3,303
SCH	Alenti Lift Hygiene Chair	9,720
St.Mary's Villa	Rose Beds Model FL14E3	65,133
Various	Beds & Ceiling Track Systems	9,633
Wynyard	Stryker 5th Wheel Stretcher	7,252
RUH	Biological Refrigeration	26,751
RUH	Pathologist Microscope	17,956
SCH	Dual Channel Whole Blood Aggregometer	7,226
SCH	Embedding Centre	10,872
SCH	Sorvall Cell Washer (Changed to Pathologist Microscope)	19,420
SCH	Microtome	30,435
SCH	Collection Centre	3,236
RUH	Automatic DNA Extractor—Integrated Priority	90,793
RUH	Cytogenics Workstations (3 Units) Contingency	121,418

Clinical Equipment Replaced in 05-06 Cont'd

<i>Site</i>	<i>Type of Equipment</i>	<i>Total Cost</i>
SCH	LMO11 Payroll Slip Sealer	6,270
SPH	Sterilzer System	87,634
SPH	F7N Steamtable	7,101
SPH	Porta Count Machine	15,147
SCH	Cart for Processor & Monitor	6,167
St. Mary's Villa	Hobart 30 Quart Mixer Unit	8,924
Lanigan	EX 655C Washer—Funded by Department	14,666

Clinical Equipment Replaced in 06–07

<i>Site</i>	<i>Type of Equipment</i>	<i>Total Cost</i>
RUH	Digital Biplane Angiographic Unit	1,908,309
RUH	Infinia Hawkeye System	676,200
RUH	Philips BV Pulsera Mobile C-Arms	289,638
RUH/SCH/SPH	Computerized Radiology Systems	1,131,988
RUH	Digital Chest X-Ray Unit	463,439
RUH	iU22 Ultrasound System	216,380
RUH	Sonos 5500 System Upgrade	47,327
RUH	Colonscope (Video Stack)	54,267
SCH	Ophthalmology Lane (SHR Commitment)	13,460
SPH	Nasopharyngolaryngoscope	9,125
RUH	Therapeutic Video Gastroscope	33,317
Delisle Primary Health	Pagewriter Trim III Cardiograph	8,040
RUH	Pediatric Monitors	174,280
RUH/SPH	Operating Room Tables	169,303
RUH	Digital Strap Recorder	10,143
RUH	Trackit Channel Redorder	20,187
RUH	Level 1 Fast Fluid Warmer	19,474
RUH	Anesthetic Gas Module	10,203
SPH	Electrocautery Machine	33,524
RUH	O Stress Cardiac Stress System	46,589
RUH	Lifepack Monitor and Defibrillator	16,859
SCH	Adult Ventilator	64,450
RUH	Rapid Infuser	16,778
RUH	Cytovision Spot AXm Automatic Scanning System	82,786
RUH	Intellivue MP50 Physiological Monitor with Mult-Measurement Server	37,210
RUH	Autoclave Statim 5000 Sterilizer	8,545
RUH	1040 Seamless Dental Chair with Footswitch—Funds from Sask-Health Targeted Pediatric Dentistry	9,149
RUH	PAC 1 Cart 3420 Institutional unit—Funds from SaskHealth—Targeted Pediatric Dentistry	6,897
SPH	Voyager LW Canadian Incubator and Accessories	97,169
SPH	Gemstar Therapy Pump with Docking Station (7 units)	41,417
RUH	Babylog 8000 Ventilator with Babylink and PSV/VG	168,572
SPH	OPM1 Movena/S7 Integrated Video Camera	41,348

Clinical Equipment Replaced in 06–07 Cont'd

<i>Site</i>	<i>Type of Equipment</i>	<i>Total Cost</i>
SPH	Force FX-C Electrosurgical Generator	811
SPH	Flexible 0 Degree Intubation Tube—Pediatric Bronchoscope	1,942
RUH	Pediatric Cribs—88,000 Funded by Children's Foundation	127,692
RUH	ICU Sport Beds	274,902
Parkridge	Maxi Rest Electric Bed with Mattress and Scale	13,661
Parkridge	Bariatric Low Air Loss Mattress System	10,279
Parkridge	Ceiling Track Patient Lift System	24,244
Rural Health Centres	Chemistry Analysers	183,328
Lanigan	Chemistry Analyzer from St. Elizabeth's Hospital	39,875
SPH	ENT Microscopes	41,724
RUH	Gas Chromatograph System	82,842
RUH	Smart Cycler Vision II	17,511
RUH	Liquichip Workstation	80,074
RUH	CW2 Plus Sorvell Cell Washer	8,543
RUH	Dual Channel Whole Blood Aggregometer	66
SCH	Microtome	32
SCH	Pathology Lab	8,570
St.. Mary's Villa	T-900 Dextor Washer Extractor with Microprocessor	9,953
RUH	Medtester 5000C CMMS Connectivity Bundle with Waveform Module	8,432
SCH	Hobart Push Through Utensil and Pot Washer	39,494
Various	Regionalization & Telecom	50,437
Various	Pharmacy Interface with Lab	30,515
Various	SHR Infonet Refresh Project	15,019
Various	CPAS/Home Care Project	160,633
Various	Med 20/20 Project	24,211
SCH	Dictaphone Upgrade	1,504
SCH	Physiological Monitoring Equipment	764,935
SPH	Physiological Monitoring Equipment—Funds from SPHF	137,551
RUH	Glidescope GVL System	9,303
RUH	System 5000 Electrosurgical Equipment	15,147
RUH	ENT—3000 Nasopharyngoscope	10,317
RUH	Olympus Video Bronchoscope—Funds from RUHF	29,239

Clinical Equipment Replaced in 06–07 Cont'd

<i>Site</i>	<i>Type of Equipment</i>	<i>Total Cost</i>
RUH	Force FX-C Electrosurgical Generator	18,438
RUH	Intellivue MP 30 Monitoring System & Multimeasurement Server	13,356
RUH	Draeger Air Shields Isolette—Funds from RUHF	30,207
RUH	LP20 Defib/Monitor with Packing Pkg for Cath Lab—funds from RUHF	21,394
RUH	Anesthetic Gas Module, NBP Parameter, Plethysmography Module—Funds from RUHF	14,967
RUH	Prismaflex CRRT Machine with Blood Warming System—Funds from RUHF	74,214
RUH	Microscope & Digital Imaging System—Funds from SPHF	20,359
Watrous Hospital	Golvo 7007 Patient Lift—Donations	7,895
SPH	1-Stat 1 Clinical Analyzer (3 units)	31,637
RUH	Thermotron DCS-5 Cytogenetic Drying Chamber (downpayment) - Funds from deferred revenue	12,996
SCH	Reichert Advantage Examination Chair	5,063
SPH	LP12—Biphasic Wave Form Defibrillator (Shipkit Config) for SPH Air Ambulance (two unit) Funds from Deferred Revenue	46,539
RUH	Q Stress Cardiac Stress System—Funds from Deferred Revenue	45,726
RUH	Intellivue Monitoring Equipment—Funded by Department	52,262
RUH	Auto-print II Strip Packager & Bar Code Recall System—Funds from Department	37,722
Public Health	Sanyo CFC—Free Dual Sliding Door Fridge—Funds from Department	8,881
SCH	Ophthalmology Lane—U of S commitment	12,500

MEDICAL IMAGING

Significant re-investment in the region's medical imaging equipment has occurred over the past 2 years. The funding for this equipment came from designated funding from the Department of Health. This investment will prepare the Medical Imaging Department to install a PACS and digitalize the departments operations.

2005 Medical Imaging Equipment

RUH – Advantage Windows Workstation – Advanced 3D workstation

Purchased Feb. 8th, 2005 - Installed April 15th, 2005 - Capital cost - \$91,421

SPH – Multi-Slice CT scanner – (40 slice CT system)

Purchased August 24th, 2005 - Installed Nov. 2005 - Capital cost—\$1,247,766

This new multi-slice CT scanner at St. Paul's Hospital enables high resolution images, ultra-fast scanning speed, a broad range of clinical applications, and sophisticated image post processing tools, unimaginable just a few years ago, have placed multi-slice CT into the radiology spotlight.

SPH – Digital Radiology System – VR single plate system (DR)

Purchased August 24th - Installed Nov. 2005 - Capital cost - \$376,963

Better and faster image information. The overriding advantage of digital technology is that digital images offer consistently excellent image quality at a lower dose. No retakes necessary. All images are immediately available and a whole range of digital image processing possibilities resulting in the highest quality.

Digital integration saves time. The automated digital workflow allows for the timesaving handling of patient and administrative data via RIS and PACS integration. Also shortened image acquisition times and faster image distribution increase department efficiency.

2006 Medical Imaging Equipment

RUH – Infinia Hawkeye – Gamma Camera with SPECT CT (Nuc Med)

Purchased August 4th 2006 - Installed November 7th, 2006 - Capital cost—\$687,659

Infinia Hawkeye's integrated nuclear medicine/CT solution harnesses the power of GE's exclusive Hawkeye single photon emission computed tomography (SPECT)/CT imaging to help physicians more precisely diagnose and locate disease. Hawkeye system significantly improves patient management across a range of common pathologies, including heart disease, prostate cancer, and thyroid cancer. The future of nuclear medicine lies at the intersection of SPECT and CT technologies, the Infinia Hawkeye's unparalleled versatility, unmatched image quality, and significant productivity benefits boost physicians' diagnostic confidence and improve patient outcomes.

RUH, SCH, SPH – Computerized Radiology Systems (CR)

Purchased September 2006 - Installation Nov. & Dec. 2006 - Capital cost—\$1,138,304

Computed Radiography (CR) is a system for cassette based digital radiography and can be used at all conventional diagnostic work spots. Computerized Radiology serves a wide field of applications from intensive care units in emergency departments, to general radiography, pediatrics and orthopedics. The implementation of Computerized Radiology systems into SHR allows our Medical Imaging Departments to be ready for the integration into the filmless world in the fall of 2007.

RUH – 2 Mobile Intra Operative mobile C-arms

Purchased September 2006 - Installed November 2006 - Capital cost—\$289,638

The 2 mobile Intra Operative C-arms have been introduced to support the intra operative imaging requirements in the Operating Rooms within SHR. These systems support many surgical procedures that require “live Fluoroscopy imaging during the operation procedure”.

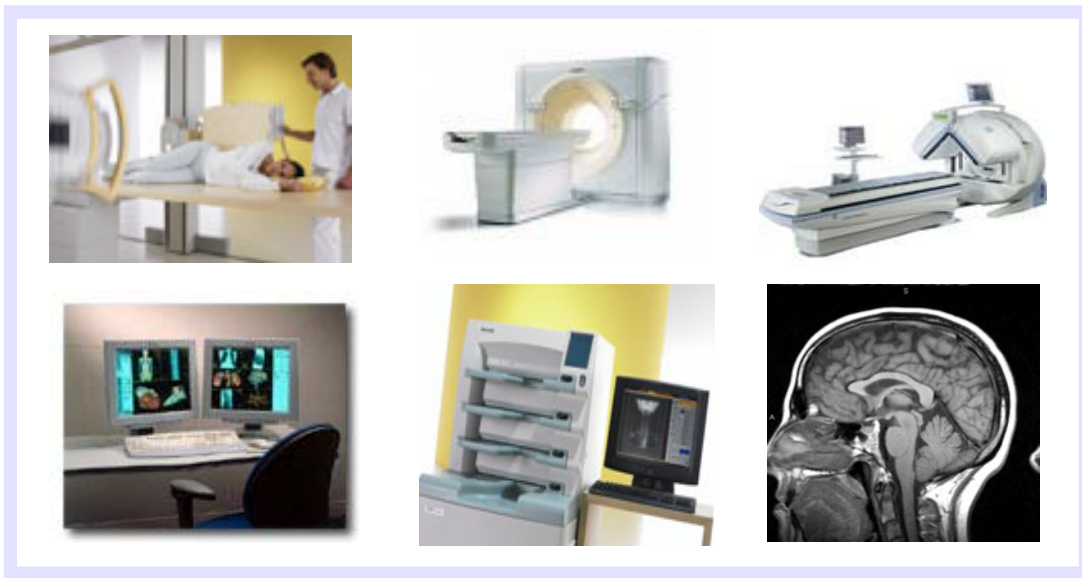
RUH – (2 units) Digital Radiology System TH dual plate system (DR)

Purchased August 24th 2005 - First unit installed Feb 5, 2006; Second unit installed May, 2006

Capital cost - \$1,012,606

RUH – Bi-Plane Digital Angiography System

Purchased Feb 14th 2005 - Installed Jan 2007 - Capital cost—\$2,157,159.00



RUH – Cardiac Catheterization Lab System

Purchased February 14th, 2005 - Installed April 2006 - Capital cost—\$2,109,705

The Allura Xper features the real-time imaging algorithm Xres, enabling clinicians to see and work in the smallest vessels of the heart. In addition Xper technology, allows clinicians to personalize settings and access an intuitive user interface while ensuring that it is integrated with the IT network. Allura Xper FD family include superb interventional tools: Allura 3D-CA for a 3D impression of the coronary vessels for improved stent placement and lesion assessment and Stent Boost for improved stent visualization in coronary arteries during interventions.



Building Infrastructure

In order to maintain building infrastructure and medical equipment, a third type of capital is required: support capital. These investments enable the Health Region to support its clinical services by engaging in information management, food production, equipment processing, and facility maintenance, among other services. 2004-05 saw a modest investment in support capital, highlighted by the following:

Building Infrastructure Renewal

Over the past two years, many infrastructure renewal projects were completed including extensive skylight replacements, chillier renewals, and the relocation/consolidation of client registration services at Royal university Hospital. As infrastructure resources are typically scarce when compared to need, it is always a challenge to find cost-effective alternatives to traditional projects. In 2006, the SHR undertook a pilot project to remediate and renew four roofs using a polyurethane spay foam system. As this approach is typically 20–25% of the cost of traditional roofing system replacements, it appears to be an attractive alternative. The outcomes of these four renewals will be monitored and evaluated throughout the 2007-08 fiscal year.

The SHR Facilities and Engineering Services department will continue to research cost-effective, innovative solutions to traditional infrastructure needs in order to maximize the scarce investment resources at hand.

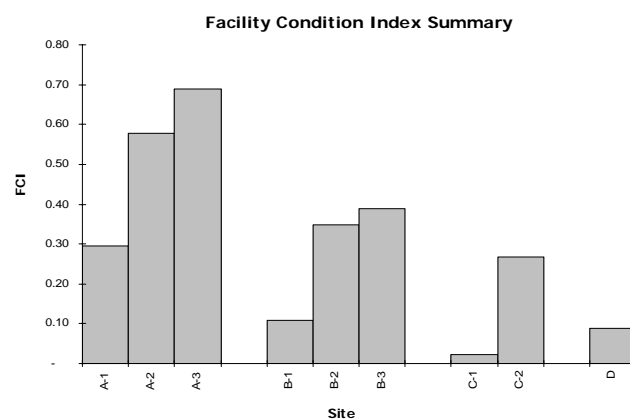
Facility Assessment

In 2006, the Saskatoon Health Region (SHR), in partnership with Saskatchewan Health, undertook a pilot project to quantify the physical infrastructure needs of four urban SHR sites.

This project involved contracting a firm to conduct physical assessments of the sites and to configure the related software tool.

The physical assessments provided a baseline for the software platform which will play a critical role in future infrastructure decisions. The assessment information enables the modeling of different funding and investment scenarios which provide decision makers the ability to measure the impact of investment decisions on the physical condition of our facilities, measured by the Facility Condition Index (FCI). The FCI, measured on a scale of zero to one, represents a facility's immediate infrastructure needs as a percentage of its replacement value, lower being better.

As a testament to the success of the pilot project, the remainder of SHR facilities will be assessed in 2007-08



IT Renewal & Investment

Beginning in early 2005 there were one-time infusions of funds to upgrade SHR infrastructure exceeding \$2.2M (for network and computer hardware) coming from both regional and provincial sources. These investments supplemented the **IT asset renewal program** (annual cost of \$1.2M) for desktops, servers and network infrastructure equipment in order to assist SHR to get back on track with an evergreen strategy. This funding was in addition to approved capital projects directly related to clinical and support applications such as Lab and Diagnostic Imaging. The net result and early wins of this additional investment for infrastructure upgrades and IT staff has reduced unplanned outages by over **100%** and improved reliability and bandwidth capability in all areas (significantly stabilizing those with single points of failure) by as much as **50%**. The above also represents replacement of over **50%** of all rural desktop computers and printers. Another significant initiative was the upgrade of all 150 Lab workstations at all 3 acute facilities from 12 year old WYSE terminal technology to new desktops.

In 2006 ITS began an aggressive program to replace, consolidate and downsize SHR's output management fleet from over 1100 devices to 750. The \$1.8M project completely refreshed the urban area regional output fleet and was totally self-funded (no net new funding) from the return on investment and reduced 5-year total cost of ownership (**annual cost savings > \$150K**).

During 2006-2007 clinical programs and business units continued to drive increased and exponential demands for IT investment. Major upgrades and implementations were begun and/or completed in key areas of LIS (Lab Information System—SCC), Pharmacy (Centricity), DI (RIS/PACS), Regionalization (rural rollout of enterprise systems), Risk Mgmt (AEMS—adverse event management system), Oracle Financials and Materials Management (Dynamed), Home Care/CPAS (Procura), and Patient Registration/Identifier (Client Patient Index, Enovation). These clinical projects (several costing well over \$1M—\$2M) and other business demands subsequently drove numerous infrastructure related projects to further improve overall reliability, increased bandwidth and network redundancy for purposes of disaster recovery and business continuity (for 7 x 24 uninterrupted operations).

In 06-07 fiscal year, while SHR and other regions continued to lag in areas of mainstream technologies, the above business demands were a catalyst and driver to invest in more current technologies related to voice/data convergence and small pockets of wireless in all 3 urban hospitals as well as West Winds Primary Health Center (a successful Greenfield VoIP—voice over IP pilot opportunity).

The **Laboratory Information Systems upgrade** began in fall 2006. the project has 3 distinct components: hardware upgrade (complete March 07), chemistry-haematology-microbiology-pathology software upgrade (target for completion June 2007), Transfusion Medicine software implementation (target for completion December 2007). The project will enhance the current information management capabilities for the laboratory by moving to an up to date consolidated software platform supported by improved hardware with increased performance standards. Upon completion, the upgrade will also provide the laboratory information infrastructure needed to support our future goals of expanded electronic data transfer, rural data integration and enhanced management reporting capabilities.

Support Services Projects

Approval was received in March 2007 to purchase call management software for the **Switchboards** in the three Saskatoon acute care hospitals. This software will automate many of the manual processes currently used by these switchboard offices, with the potential for calls to be answered more quickly and accurately.

Food Distribution Centre Project

Improving the temperature of patient meals and staff working conditions are anticipated results of the project which centralizes meal tray assembly and ware washing functions for the Saskatoon acute care facilities. In the plan is that all meal trays will be assembled at SCH and transported in chilled carts to SPH and RUH. Within these carts, hot foods will be heated while cold foods remain cold just prior to delivery to the patient. Soiled meal trays will return to SCH for warewashing. This \$5 million project is expected to be completed in 2009 and result in significant operational savings.



IT Investment Summary

2005-06

Infrastructure

<i>Site</i>	<i>Type of Equipment</i>	<i>Total Cost</i>
Various	MDI Refresh Project	76,505
Various	Enterprise Wireless Technology Strategy	119,679
Various	SHR SAN Backup Project	209,611
SCH	HP Server for capital lease schedule SHR20051229	61,277
SCH	Server X366 3.16GHZ/667MHZ 1MB L2 GB0/BAY Macquarie capital lease SHR20051005	28,220
Various	Regional Domain Renewal	47,411
Various	St. Elizabeth's Integration IT Project	8,874
Various	Westwind Primary Health Center Project	221,511

Systems & Solutions

<i>Site</i>	<i>Type of Equipment</i>	<i>Total Cost</i>
Various	Disaster Recovery Project	29,846
Various	Pharmacy Interface with Lab	4,760
Various	SHR Infonet Refresh Project	42,929
Various	CPAS/Home Care Project	188,641
Various	Pharmacy Upgrade Project	152,487
Various	Dictaphone Upgrade Project	143,476
Various	Oracle 11i Project	154,594
Various	Seagate Update Project	2,386
Various	Enovation Development Project	62,860
Various	Med 20/20 Project	142,489
Various	Sunrise Clinical Manager Project	107,242
Various	Risk Recording Project	47,061
Various	Space Inventory Database	37,711

IT Investment Summary

2006-07

Infrastructure

<i>Site</i>	<i>Type of Equipment</i>	<i>Total Cost</i>
Various	Infrastructure—Network Core	506,797
Various	Infrastructure—PBX Powerplant	20,512
Various	Infrastructure—Data Centre	18,211
Various	Infrastructure—UPS	27,537
SPH	Infrastructure—BDC Replacement	22,411
Various	Infrastructure—Business Continuity	186,570
Various	Server Lease Renewals	85,110
SPH	Cooling Unit	8,032
Various	Regionalization & Telecom	50,437
Various	Westwind Primary Health Center Project	46,953
Various	SHR SAN/Backup	28,876
SPH	Cisco Catalyst 3750 Switches—Funds from SPHF	38,441

Systems & Solutions

<i>Site</i>	<i>Type of Equipment</i>	<i>Total Cost</i>
Various	Voice Mail Upgrade Project	45,873
Various	Approach Database	27,013
Various	Disaster Recovery	19,691
Various	Pharmacy Interface with Lab	30,515
Various	SHR Infonet Refresh Project	15,019
Various	CPAS/Home Care Project	160,633
Various	Oracle 11i Project	425,959
Various	Enovation Development Project	24,474
Various	Med 20/20 Project	24,211
Various	Space Inventory Database	40,105
Various	Switchboard Consolidation Software Licence (Downpayment)	61,079
Various	Facility Assessment Software	556,631



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