

# National Health IT Board Case Study

## New RIS/PACS paves the way towards regional IT investment

When Hawke's Bay District Health Board was replacing its Radiology Information System (RIS) and Picture Archiving Communication System (PACS), the environment had changed in the five years since first implementing its RIS/PACS.

District Health Boards were now exploring ways of sharing services and clinical information. There was an increase in contracting out the provision of clinical services, and sharing clinical information was essential.

The National Health IT Plan was taking a 'whole system' view to guide and prioritise the delivery of health solutions at a national, regional or local level.

The Central Region Information Services Plan was being developed and Hawke's Bay DHB was collaborating with the other Central Region DHBs to agree a common platform for IT investments.

As a result, Hawke's Bay DHB needed to select a system that met clinical and local requirements, but which also fit within the context of national and regional strategies.

### Approach

As an experienced 'second generation' PACS site, Hawke's Bay DHB was well equipped to evaluate RIS/PACS options. The DHB knew what it wanted, and were mindful that clinicians strongly favoured an on-site system.

The previous system was housed off-site using an application service provider with images transferring via a telecommunications link. The model was costly and had experienced some connectivity problems.



After a comprehensive evaluation process, Hawke's Bay DHB has implemented the latest version of the Carestream Health system, V 11.0. The Central Region proposes to use Carestream as a RIS/PACS provider, and Hawke's Bay DHB will be a reference site.

### What benefits has RIS/PACS delivered?

Radiologists and clinicians say the new PACS has great functionality.

Urologist, Dave Mason, says, 'we can now get excellent image definition that really helps in operating theatre'.

Once orders are scanned into the system the process is virtually paperless.

Kai Heddeker says this system 'has taken us really close to a completely electronic health record for radiology'.

Electronic ordering will take 'paperless' one step further and will be introduced as soon as the transition to the new system is complete.'

### If you want to know more about RIS/PACS contact

#### Lead radiologist

Kai Heddeker

[kai.heddeker@hbdhb.govt.nz](mailto:kai.heddeker@hbdhb.govt.nz)

#### PACS administrator

Mike Macrill

[michael.macrill@hbdhb.govt.nz](mailto:michael.macrill@hbdhb.govt.nz)

By sharing what was learned, resources and expertise, Hawke's Bay DHB represents the collaborative approach the National Health IT Board is looking for towards building regional platforms to support information sharing and clinical care.

## What is better about this RIS/PACS?

The new RIS/PACS is integrated with the Patient Administration System. PACS administrator Mike Macrill says, 'It doesn't matter which information system you are in, RIS, PACS, or PAS, all information unique to the patient is in each. This system has delivered a one-stop shop for clinical information.'

'We can now store examinations with a large number of diagnostic images, such as cardiology or other specialist studies. The ability to keep whole studies reduces the risk of missing something vital.'

Workflow has significantly improved, data entry steps reduced and CD production has ceased, saving time and money. Disaster recovery and back up is comprehensive. Long- and short-term storage is duplicated on separate servers and back up tapes are taken daily, one stored on site and one off site.

Primary health care providers were already able see images for their patients, now they can also track the status of radiology examinations.

## Challenges encountered

Much work went into implementing the system. 'We underestimated the amount of work involved. We needed resources for longer, which created conflicts between operational and project work for staff and for the vendor.'

'Never underestimate training requirements,' Mike says. Because of the increased functionality, the system was harder to use. Demand for one-on-one training was hard to meet in the busy roll-out period.

The new version of the RIS meant migrating data was untried and proved to be a difficult task. Interestingly, PACS migration was straightforward.

Clinicians have a single login to a clinical workstation and can link to other clinical systems from there. Opening PACS was slow after the go-live. Because clinicians move between wards and access many workstations this created significant issues.

The system is highly customisable which made it a challenge to keep configuration to a minimum and maintain the interests of a regional standard rather than a local approach.

Report development was delayed as other priorities took precedence. Additional data feeds to the data warehouse may be needed which will add extra time and cost.

## Next steps

Electronic ordering and a fully paperless process.

Adding images from local private radiology providers to the PACS store.

Alignment with integration and archiving concepts for the central region.

## Key project partners

Clinical leaders: Kai Heddeker, radiologist and PACS administrator Mike Mackrill.

Carestream Health and Health HB PHO

Central Region DHBs chief information officers

Information technology for operational help desk, application and technical support.

## Contacts

**Executive sponsor**  
Warrick Frater

**Sponsor**  
Mandy Robinson

**Lead Radiologist**  
Kai Heddeker

**Project Manager**  
Mike Lunnon

**PACS Administrator**  
Mike Macrill