

e-Health: Australia vs England 2015

Health Information Technology Ashes
Series (HITAS)

HISA NSW 2008

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The Ashes 1882

Cricket Game England vs Australia



Topics



- Why change & what could be achieved?
- What will have been achieved in 2015?
- What needs to change for us to win?



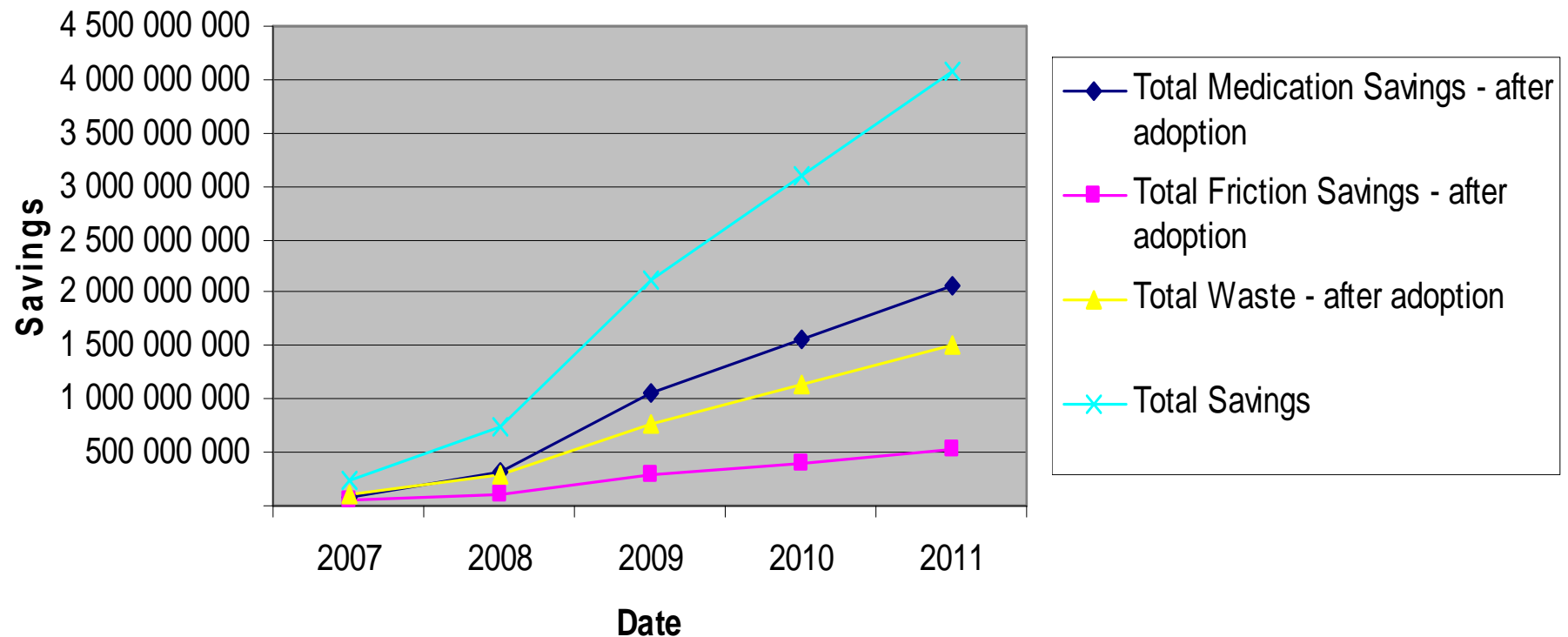


Australia

Total Hard Savings



Total Hard Savings - Australia



1 CITL: The Value of Computerized Provider Order Entry in Ambulatory Settings

2 GAO Information Technology Benefits Realized for Selected Health Care Functions, October 2003, <http://www.gao.gov>

3 HealthGrades Quality Study, Patient Safety in American Hospitals. July 2004.

4 Franciscan Health System Enterprise Scheduling Management Benefits Study November, 2002

Topics



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HITAS: The Two Teams

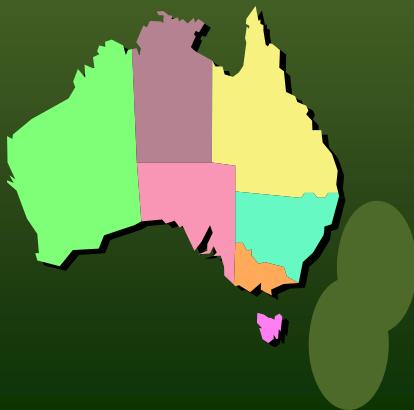


National Health Service in England



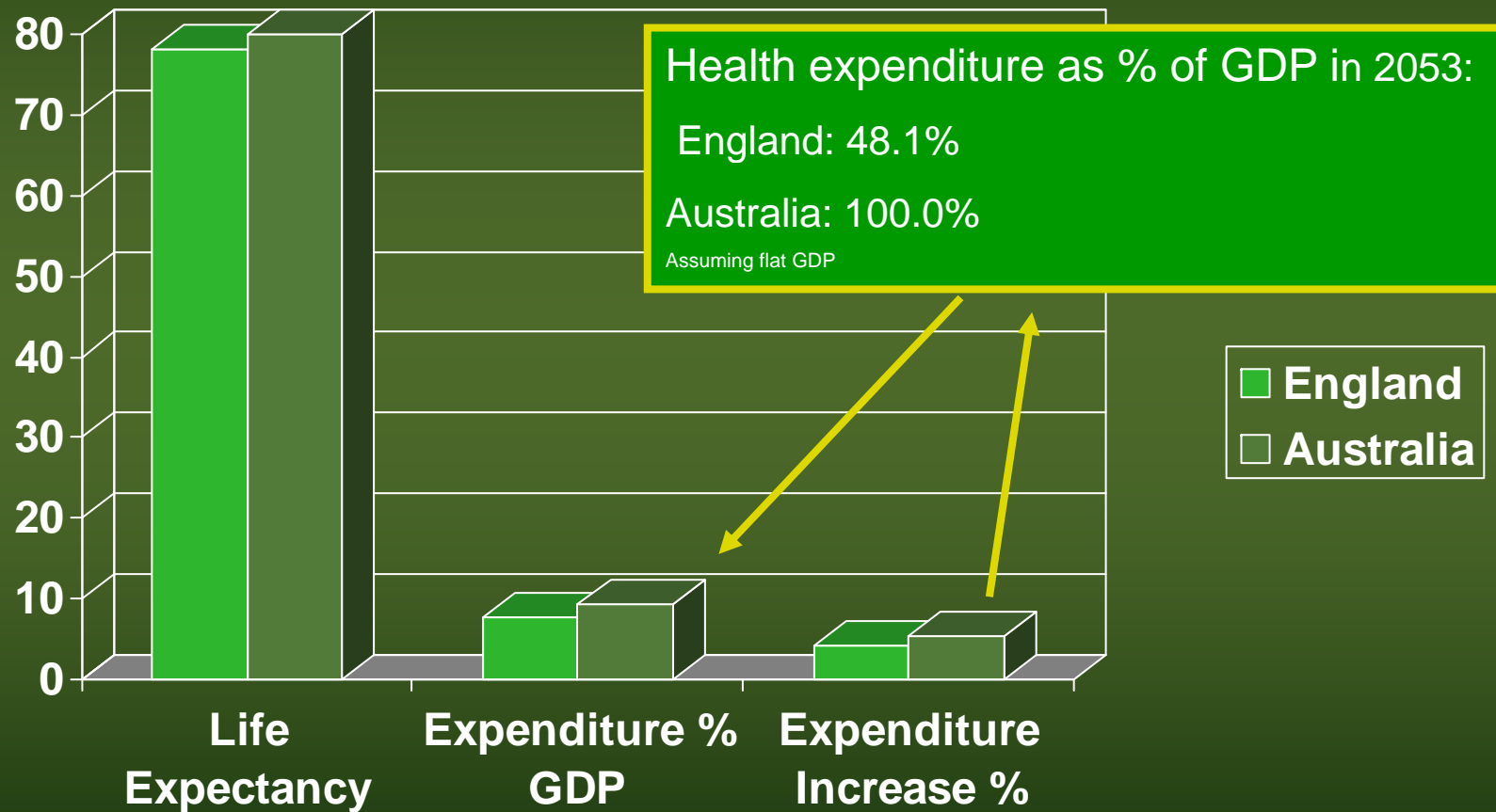
- Population 50M
- 1.2 million employees
- 35,000 General Practitioners (GPs)
- 9,000 GP practices
- 26,000 Hospital consultants
- 170 Acute hospitals + 130 others
- 13 million referrals
- + 180 'independent/private' hospitals

Australian Health "System"



- Population 21M
- Federal responsibility for primary care
- State responsibility for hospitals
- 729 public sector hospitals
- 81,153 beds
- 140,000 employees
- 40,000+ General Practitioners (GPs)
- 532 'independent/private' hospitals

Life Expectancy and Expenditure Comparison



What will be achieved in 2015?

Based on current run rate



- National IT Strategy
- Funding/Business Model
- Plans
- Technology and architectures
- Geography and infra-structure
- Software
- Implementation models
- Change management

National IT Strategies?



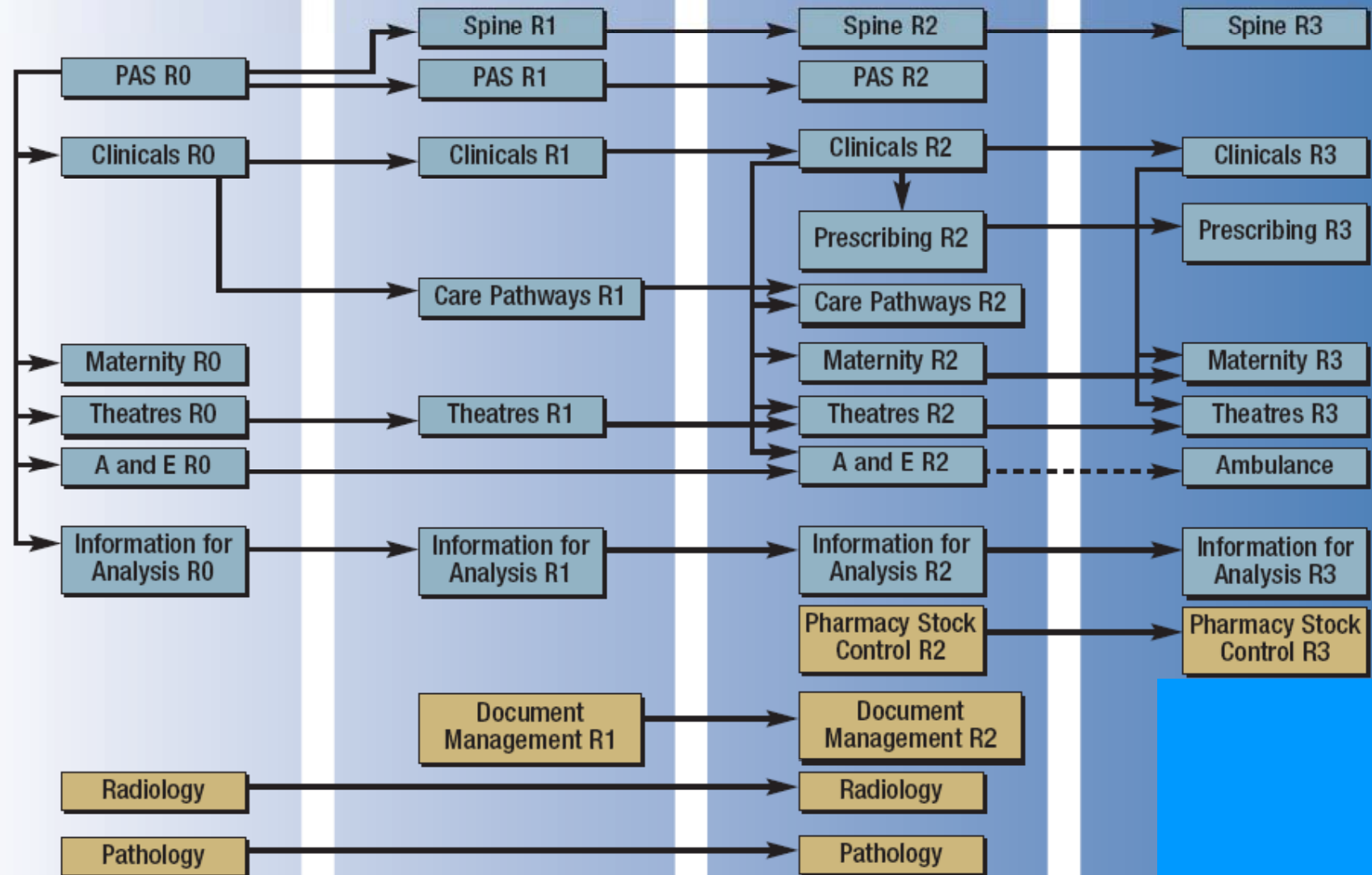
England NHS

- Connecting for Health Strategy
- Central control (changing to give Trusts more choice)
- 10 year plan (funded)
 - Choose & Book (scheduling)
 - Spine (EHR, identifiers)
 - South
 - London
 - North East
 - North West
 - East Midlands

Australia

- NeHTA work program
 - Unique Healthcare Identification
 - *E-Health Interoperability*
 - *Clinical Communications*
 - *Identity Management*
 - *Secure Messaging*
 - *Shared Electronic Health Record*
 - *Supply Chain*
- NSW: eMR foundation project
- Vic: HealthSmart
- SA: careconnect.sa
- Qld: developing strategies/plans
- WA: InfoHealth - developing strategies/plans
- ACT: developing strategies/plans

England NHS Release Strategy





EMR (SEHR) Adoption Model

| | | 2006 | 2005 |
|---------|--|-------|-------|
| Stage 7 | Medical record fully electronic; CDO able to contribute to EHR as byproduct of SEHR | 0.0% | 0.0% |
| Stage 6 | Physician documentation (structured templates), full CDSS (variance & compliance), full PACS | 0.1% | 0.1% |
| Stage 5 | Closed loop medication administration | 0.5% | 0.5% |
| Stage 4 | CPOE, CDSS (clinical protocols) | 3.0% | 1.9% |
| Stage 3 | Clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology | 18.0% | 8.1% |
| Stage 2 | CDR, CMV, CDSS inference engine, may have Document Imaging | 38.8% | 49.7% |
| Stage 1 | Ancillaries – Lab, Rad, Pharmacy | 18.9% | 20.5% |
| Stage 0 | All Three Ancillaries Not Installed | 20.7% | 19.3% |

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2015



| Eng | Aus |
|-----|----------|
| Yes | |
| Yes | |
| Yes | NSW, Vic |
| Yes | NSW, Vic |
| Yes | Qld |
| Yes | Yes |
| Yes | Yes |
| Yes | Yes |

How do our investment levels compare?



| Country | Stage | Expenditure | Ex per head | Time Frame |
|-----------|---------------------------|-------------------------------|-------------|------------|
| UK | Modernising IT | \$15B | \$288 | 10 yrs |
| Australia | Developing Strategy/Plans | Announced projects: \$3.7B | \$185 | ? yrs |

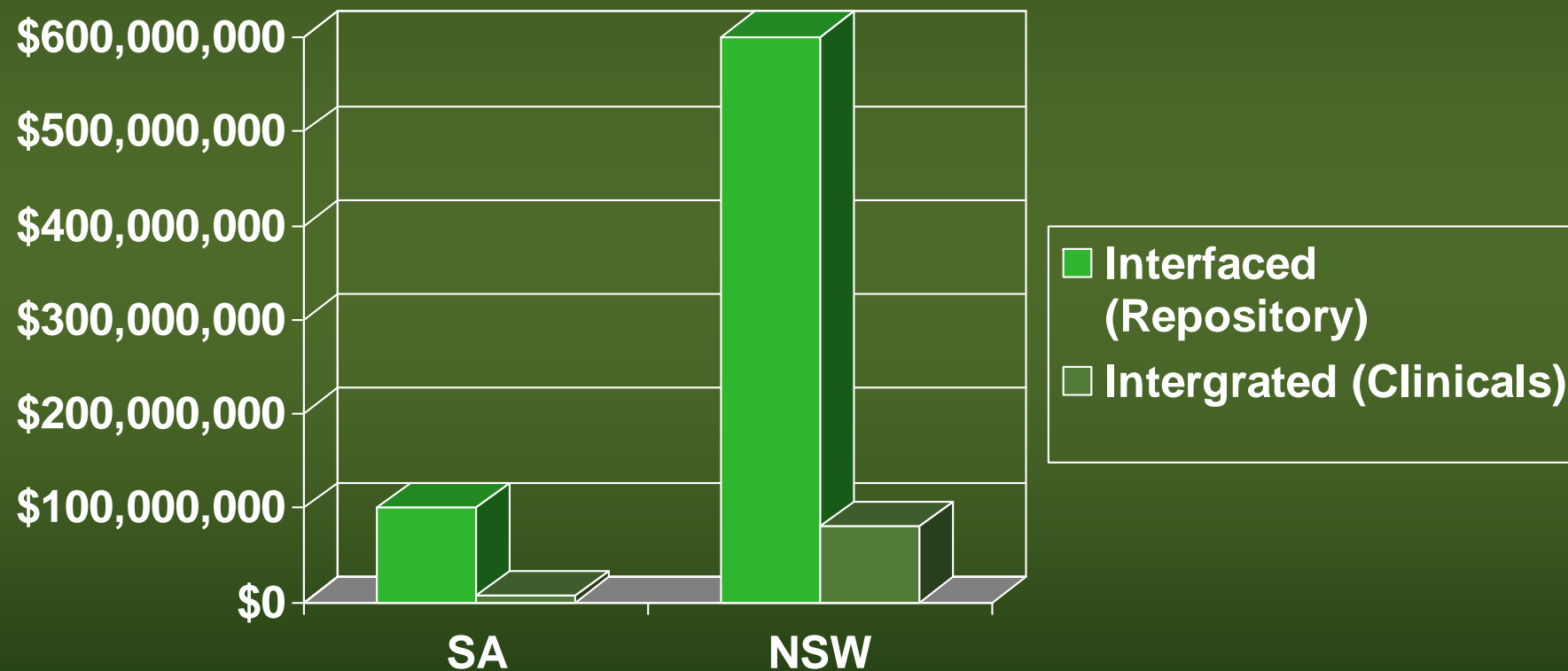
Notes:

- Source: MedInfo 2004 (Sept) and NEHTA 2007
- \$ are in AUD

Integration/Implementation Model Cost Considerations



Relative Cost of True Integration and Interfaced (repository) Models



Integrated models are an order of magnitude less expensive to implement

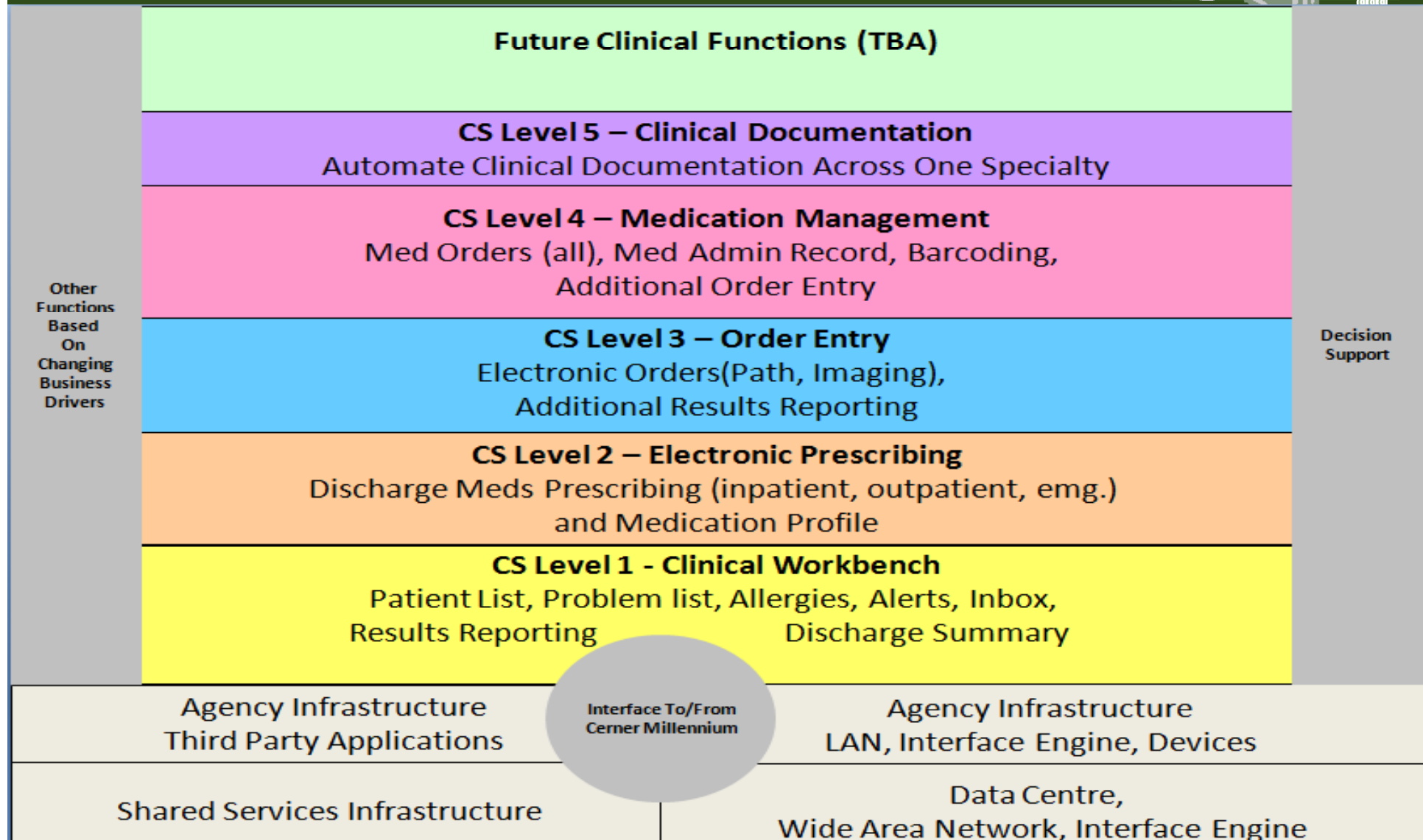
Estimates/projections based on population basis and published project costs

Key delivery systems

| | |
|--|--|
| • NHS Care Records Service | - 371,277 registered users |
| • Choose and Book | - 4,654,247 bookings made |
| • Electronic Transmission of Prescriptions (ETP) | - 30,581,484 prescription messages issued |
| • N3 Network for the NHS | - 20,157 connections |
| • NHSmail | - 268,622 registered users |
| • Digital Picture Archiving and Communications Systems | -13,886,418 patient studies -305,044,652 images |
| • GP IT - | |
| ➤ Quality Management and Analysis System | - 100% GP site deployment |
| ➤ GP to GP record transfer | - 2 nd live trial completed |

*all data correct at 06/08/2007

Australia – Victoria Approach



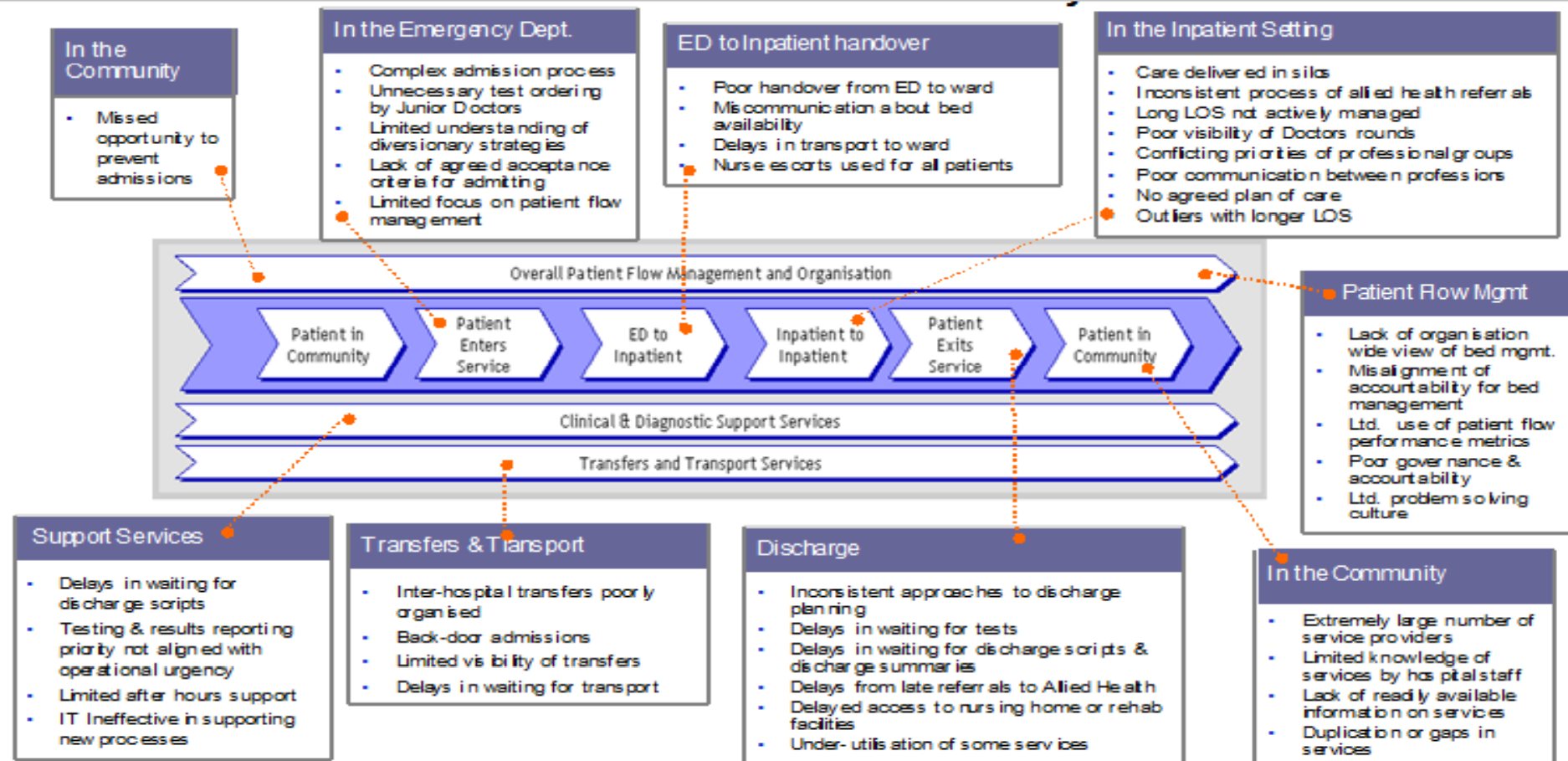
Australia – NSW Approach



Often find issues common to Area Health Services

NSW HEALTH
Confidential

... "right information. right place. right time"



Better Health Good Health Care

NSW HEALTH

Forward Strategy

Proposed eMR Coverage

NSW HEALTH
... "right information. right place. right time"



2006

FY '08/'09

| Area Health Services | Master Indexes | | Clinical History | | Core Clinical Applications | | | | | | | | Critical Diagnostic Services | | | Allied Health Services | | | | |
|----------------------|----------------|----------------|--------------------------|---------------------|----------------------------|--------------------|-------------------------------|----------------------|-------------------|----------------------|------------------|------------|------------------------------|------------|-------------------------|-------------------------|-------------|--------|--------|-------|
| | Patient Index | Provider Index | Electronic Health Record | Image Archive | Patient Admin & Scheduling | Core Clinical Comp | Electronic Discharge Referral | Emergency Department | Operating Theatre | Intensive Care Units | Community Health | Radiology | Radiology | Physio | Diet | Allied Health | | | | |
| | (A/R) | (A/R) | (A/R) | | (A/R) | (A/R) | (A/R) | (A/R) | (A/R) | (A/R) | | (A/R) | (A/R) | (A/R) | | | | | | |
| CHW | AUD Center | Unlinked N/A | Health Link | *in PACS (isolated) | *Gen FMS | *Gen N/ SB | Health care | Health care | *CRSOS | *Edgys | N/A | *Gen Basic | *Gen Basic | *Gen Basic | *Gen Basic | *Gen Basic | | | | |
| GS4/6 | AUD Center | Unlinked N/A | N/A | *in PACS (isolated) | *ISOT IPM | N/A | N/A | *EDS/6 | *CRSOS | *CRS | *MS Access | N/A | *CHME | *HOREP | *CON Private Radio Film | *Bath & R/N | *AMPC | *CBORD | *AHMS | |
| GW4/6 | AUD Center | Unlinked N/A | N/A | *in PACS (isolated) | *ISOT IPM | N/A | N/A | *EDS/6 | *CRSOS | *CRS | *MS Access | N/A | *CHME | *HOREP | *CON Private Radio Film | *Bath & R/N | *AMPC | *CBORD | *AHMS | |
| H4/6 | FM | Unlinked N/A | Health Link | *Gen FMS | *ISOT IPM | *Gen N/ SB | *Global | *ISOT FMS | *Edgys | *CRSOS | *CRS | *MS Access | N/A | *CHME | *HOREP | *CON Private Radio Film | *Bath & R/N | *AMPC | *CBORD | *AHMS |
| NC4/6 | AUD Center | Unlinked N/A | N/A | *in PACS (isolated) | *Gen FMS | N/A | N/A | *EDS/6 | *CRSOS | *CRS | *MS Access | N/A | *CHME | *HOREP | *CON Private Radio Film | *Bath & R/N | *AMPC | *CBORD | N/A | |
| NS4/6 | AUD Center | Unlinked N/A | N/A | *in PACS (isolated) | *Gen FMS | N/A | *Global | *EDS/6 | *CRSOS | *CRS | *MS Access | N/A | *CHME | *HOREP | *CON Private Radio Film | *Bath & R/N | *AMPC | *CBORD | *AHMS | |
| SB4/6 | AUD Center | Unlinked N/A | N/A | *in PACS (isolated) | *ISOT IPM | N/A | *Global | *EDS/6 | *CRSOS | *CRS | *MS Access | N/A | *CHME | *HOREP | *CON Private Radio Film | *Bath & R/N | *AMPC | *CBORD | *AHMS | |
| SW4/6 | AUD Center | Unlinked N/A | N/A | *in PACS (isolated) | *Gen FMS | *Gen N/ SB | *Gen | *EDS/6 | *CRSOS | *CRS | *MS Access | N/A | *CHME | *HOREP | *CON Private Radio Film | *Bath & R/N | *AMPC | *CBORD | *AHMS | |
| SW4/6 | AUD Center | Unlinked N/A | Health Link | *in PACS (isolated) | *ISOT IPM | *Gen N/ SB | *Gen | *EDS/6 | *CRSOS | *CRS | *MS Access | N/A | *CHME | *HOREP | *CON Private Radio Film | *Bath & R/N | *AMPC | *CBORD | *AHMS | |

Legend: Strategic Decision Advanced (Blue), Strategic Decision Shared (Green), Tactical Coverage (Yellow), Limited or No Coverage (Red)



| Area Health Services | Master Indexes | | Clinical History | | Core Clinical Applications | | | | | | | | Clinical Diagnostic Services | | | Allied Health Services | | |
|----------------------|----------------|----------------|-----------------------|---------------------------|----------------------------|---------------------|----------------------------|----------------------|-------------------|----------------------|--------------------|-----------|-------------------------------|-------------------------------|---|------------------------|--------|---------------|
| | Patient Index | Provider Index | Bedroom Health Record | Image Archive | Patient Admin & Scheduling | Core Clinical Corps | Bedroom Discharge Referral | Emergency Department | Operating Theatre | Intensive Care Units | Community Health | Radiology | Radiology Archive & Correlate | Digital Dictation & Voice Rec | Radiology | Pharmacy | Diet | Allied Health |
| | (A/R) | (A/R) | (A/R) | | (A/R) | (A/R) | (A/R) | (A/R) | (A/R) | (A/R) | | (A/R) | (A/R) | (A/R) | | | | |
| (A/R) | | | | | | | | | | | | | | | | | | |
| CHW | *AUD Center | *TED | *Healthlink | *in PACS (isolated) | *Center PAS | *Center | *Center | *Center | *Center | *Endops | | *TED | *TED | *Both DO &VR | *Center Patient | *STOCCA | *CBORD | *AHMS |
| GS4/6 | *AUD endox | *TED | *Healthlink | *in PACS (isolated) | *ISCT IPM | *Center | *Center | *Center | *Center | *None | *CHIME | *TED | *TED | *Both DO &VR *None | *Vistral | *AMFAC | *CBORD | *AHMS |
| GW4/6 | *AUD endox | *TED | *Healthlink | *in PACS (isolated) | *ISCT IPM | *Center | *Center | *Center | *Center | *None | *CHIME | *TED | *TED | *Both DO &VR *None | *Center Patient | *AMFAC | *CBORD | *AHMS |
| HNE4/6 | *AUD endox | *TED | *Healthlink | *Centrally at John Hunter | *ISCT IPM | *Center | *Center | *Center | *Center | *None | *CHIME | *TED | *TED | *Some DO No VR *None | *AUSLAB | *STOCCA *AMFAC | *CBORD | *AHMS |
| NC4/6 | *AUD Center | *TED | *Healthlink | *in PACS (isolated) | *Center PAS | *Center | *Center | *Center | *Center | *None | *CHIME | *TED | *TED | *Both DO &VR *None | *Vistral *Midpath | *STOCCA *AMFAC | *CBORD | TED |
| NSCC4/6 | *AUD Center | *TED | *Healthlink | *in PACS (isolated) | *Center PAS | *Center | *Center | *Center | *Center | *None | *CHIME | *TED | *TED | *Limited DO *None | *AUSLAB *Patient | *STOCCA | *CBORD | *AHMS |
| SES4/6 | *AUD endox | *TED | *Healthlink | *in PACS (isolated) | *ISCT IPM | *Center | *Center | *Center | *Center | *GE *None | *CHIME | *TED | *TED | *Both DO &VR *None | *Dentrix *QMI LAB | *STOCCA | *CBORD | *AHMS |
| SW4/6 | *AUD Center | *TED | *Healthlink | *in PACS (isolated) | *Center PAS | *Center | *Center | *Center | *Center | *Phillips *None | *Center Millennium | *HDSREP | *AGFA Film | *Both DO &VR *None | *Center Patient *Center Midpath *AUSLAB | *STOCCA | *CBORD | *AHMS |
| SW4/6 | *AUD endox | *TED | *Healthlink | *in PACS (isolated) | *ISCT IPM | *Center | *Center | *Center | *Center | *GE *None | *CHIME | *TED | *TED | *Limited DO *None | *Center Patient | *AMFAC | *CBORD | *AHMS |

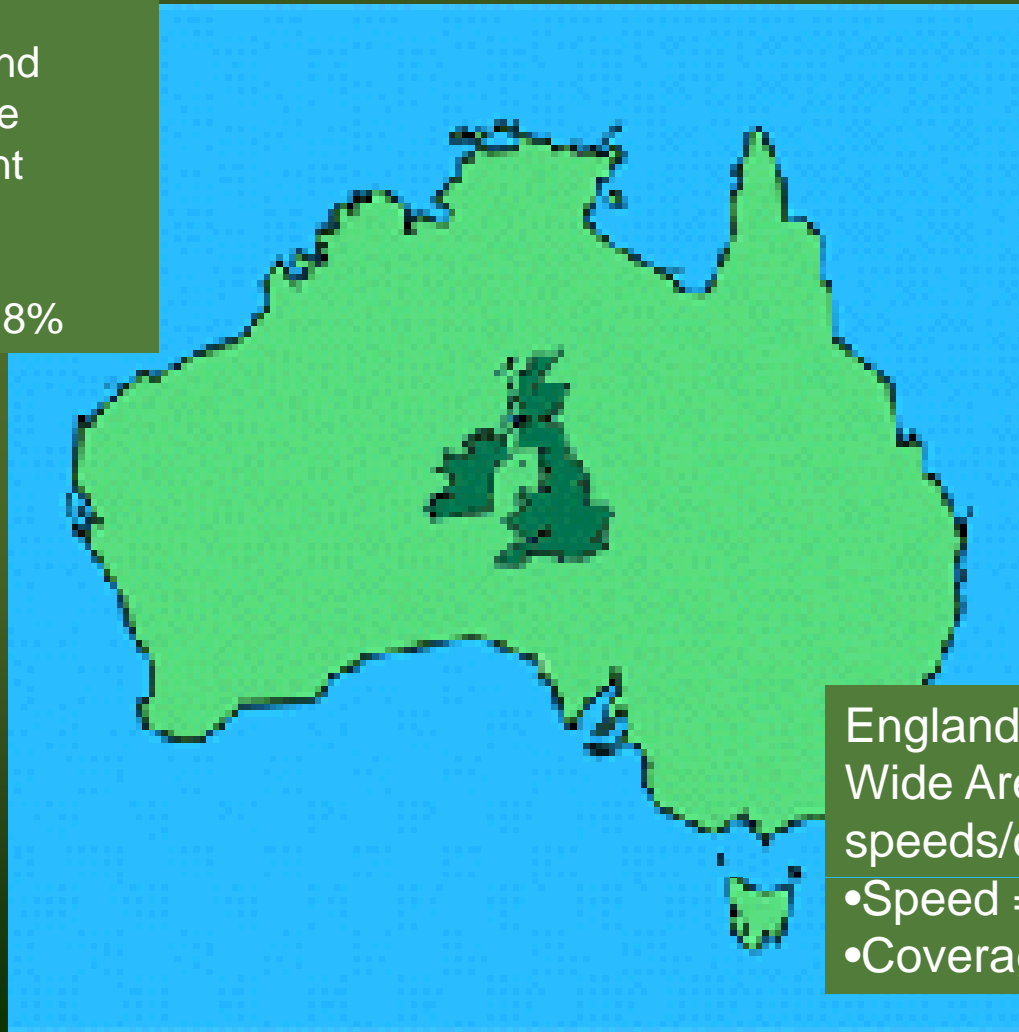
Legend: Strategic Decision Advanced (Blue), Strategic Decision Shared (Green), Tactical Coverage (Yellow), Limited or No Coverage (Red)

Infrastructure, Geography and Telecommunications (Australia/British Isles)



Australia
Mobile Broadband
speeds/coverage

- Speed = Current 14.4Mb/Sec (40 Mb/sec in 2009)
- Coverage = 98.8%



England
Wide Area Broadband
speeds/coverage

- Speed = Current 2 Mb/sec
- Coverage = 64-80%

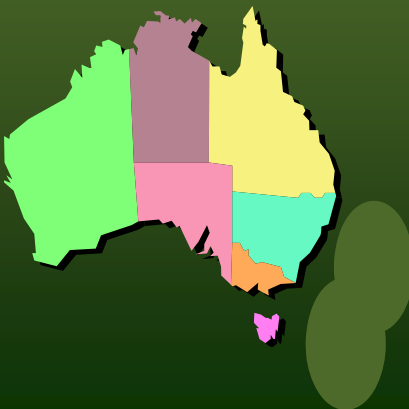
Application Vendor Selection



National Health Service in England



Australian Health "System"



| | |
|---------------|----------|
| Choose & Book | Selected |
| Spine | Selected |
| South | Selected |
| London | Selected |
| North East | Selected |
| North West | Selected |
| East Midlands | Selected |

| | |
|-----|----------------------|
| NSW | Selected |
| Vic | Selected |
| SA | Selected; PAS legacy |
| Qld | ?; PAS legacy |
| WA | ?; PAS legacy |
| Tas | ?; PAS |
| ACT | ?; PAS legacy |
| NT | Selected; PAS legacy |

Hits Based on Current Run Rate



| | Eng Score | Aus Score |
|---|-----------|-----------|
| Win the toss: decision... | Bat | |
| National IT Strategy | 6 | lbw |
| Funding | 6 | Caught |
| Plan | 6 | 4 |
| Architecture | 6 | 4 |
| Standards | 6 | 6 |
| Infrastructure (Telecoms, networks, Hardware) | 4 | 4 |
| Software vendor selection complete | 6 | 2 |
| Change management | Caught | lbw |
| Implementation models | 6 | 2 |

Topics



- Why change & what could be achieved?
- What will have been achieved in 2015?
- What needs to change for us to win?



Is it too late?



"This thing can be done".

Fred Spofforth, Australian Bowler who refused to
give in and went on to devastate the English
batting, 1882

A Model Health System for Australia

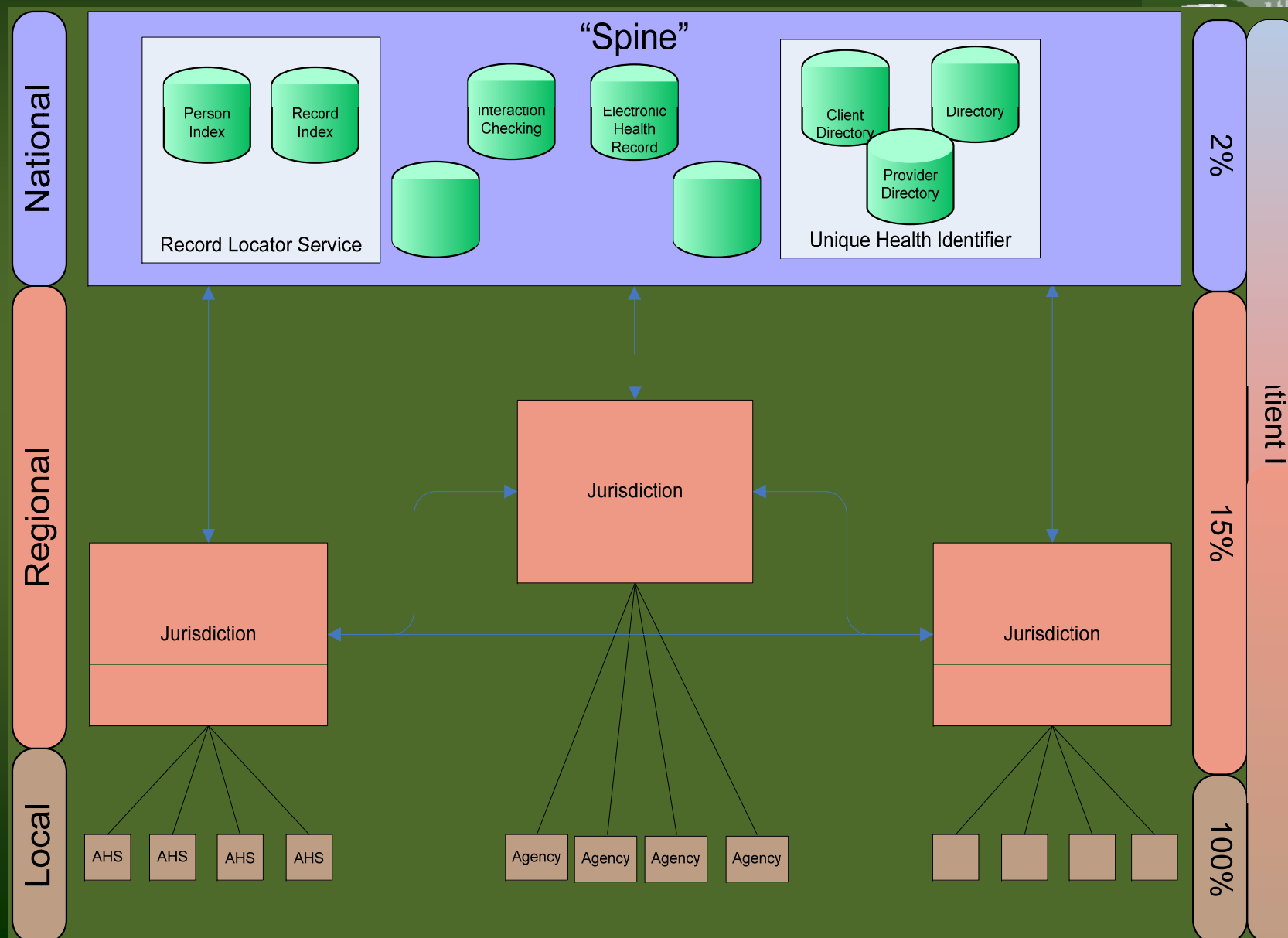


Significant structural problems:

Poor use of information technology, where better investments and usage could not only reduce administrative costs but also support more continuity of care, better identification of patients at risk, greater safety and more patient control

Reference: Andrew Podger AO, Adjunct Professor, ANU, "A Model Health System for Australia", Asia Pacific Journal of Health Management 2006; 1:1

One Example of a SEHR for Australia



Implementing Clinical Systems - a “Complex Collaborative Task”



- How Complex Is the Collaborative Task?
- ✓ ☒ ___ The task is unlikely to be accomplished successfully using only the skills within the team.
- ✓ ☒ ___ The task must be addressed by a new group formed specifically for this purpose.
- ✓ ☒ ___ The task requires collective input from highly specialized individuals.
- ✓ ☒ ___ The task requires collective input and agreement from more than 20 people.
- ✓ ☒ ___ The members of the team working on the task are in more than two locations.
- ✓ ☒ ___ The success of the task is highly dependent on understanding preferences or needs of individuals outside the group.
- ✓ ☒ ___ The outcome of the task will be influenced by events that are highly uncertain and difficult to predict.
- ✓ ☒ ___ The task must be completed under extreme time pressure.
- If more than two of these statements are true, the task requires complex collaboration.

- Eight Factors That Lead to Success
- 1. Investing in signature relationship practices
- 2. Modeling collaborative behavior
- 3. Creating a “gift culture”
- 4. Ensuring the requisite skills
- 5. Supporting a strong sense of community
- 6. Assigning team leaders that are both task- and relationship-oriented
- 7. Building on heritage relationships
- 8. Understanding role clarity and task ambiguity

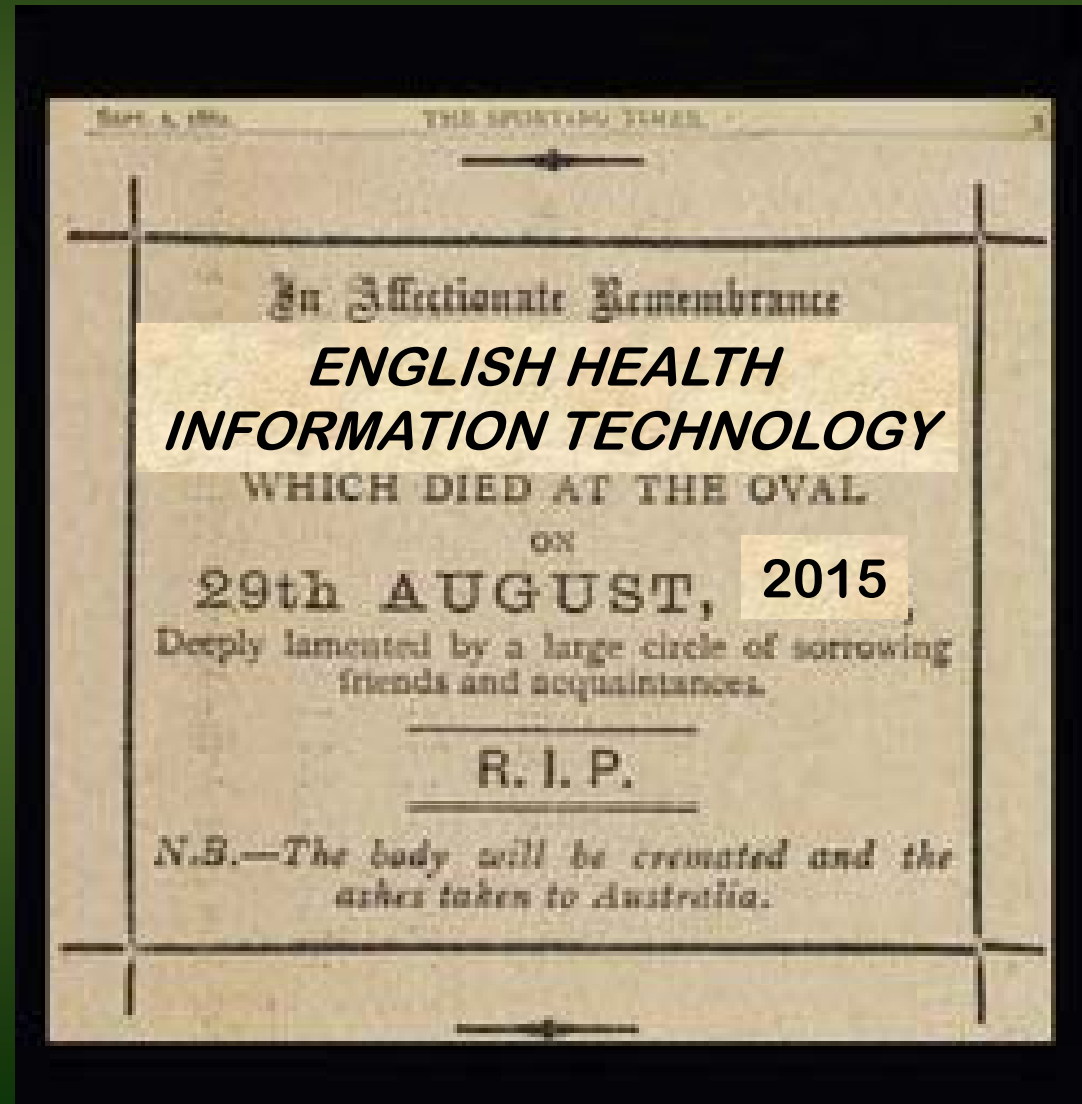
Ref: “Eight Ways to Build Collaborative Teams”, Gratton and Erickson, Harvard Business Review, Nov 2007

What needs to change for us to win (succeed)?



- National Health IT Strategy for Australia 10+ year
- Funding increase at both State and Federal levels with joint responsibility
- Behave as single health system
 - Create seamless processes across care settings
 - Only possible with IT support
- Act
 - You are the most critical drivers of change in healthcare information technology
 - We need you on our team!!!

The Ashes V2.0



Questions?

Thank you

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