



Queensland Health

Skills Development Centre

Queensland Government

'Clever Dummies'

Innovation Through Simulation

The Queensland Health Skills Development Centre
Experience

Presentation to SIAA

capability ■ *safety* ■ *innovation*

Purpose

- Outline the challenges facing healthcare in Qld
- Show what Qld has in simulation to meet the challenges
- Describe how we are going to use the resources we do have

The Demographic Landscape

- 2020 population trend
 - 45% aged over 45
 - 4.8m population (one third increase)
 - 17.4% school aged
 - One of only two states to have positive growth workforce
- Qld second most populous State 2038
- Largest indigenous population 2006
- 1 in 7 people living alone by 2020
- Multicultural population

Workforce Landscape

- Aging Workforce
- 30% of medical workforce are IMGs
- 4 medical schools 312-465 (2006-2010)
- Specialisation
- Greater career flexibility (over 50% ♀)

Delivery Landscape

- Increased use of outpatient practice
- E-health
- Internationalisation
- Gap between specialist and generalist
- Technology reliance

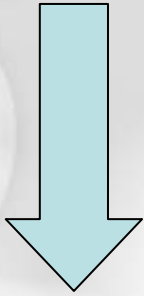
Historical Landscape

- Overly regulated labour market
- Lack of exertion of rights by the employer
- Learned college decision making timeframes
- Lack of imperatives (Radiologists ³⁰⁰ in 1m v 70 in 1m in UK)
- EU Working Time Directive)

Aviation v Healthcare Timeline

Use and Application of VR and Simulation

Current
position of
aviation and
defence



2005

2004

2003

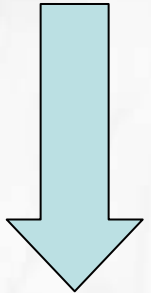
2002

2001

capability ■ *safety* ■ *innovation*

Timeline contd...

Optimistic
assessment
of position of
health



2000

1999

1998

1997

1996

1995

capability ■ *safety* ■ *innovation*

Innovation Landscape



capability ■ *safety* ■ *innovation*

The Queensland Response



capability ■ *safety* ■ *innovation*

The Queensland Health Skills Development Centre

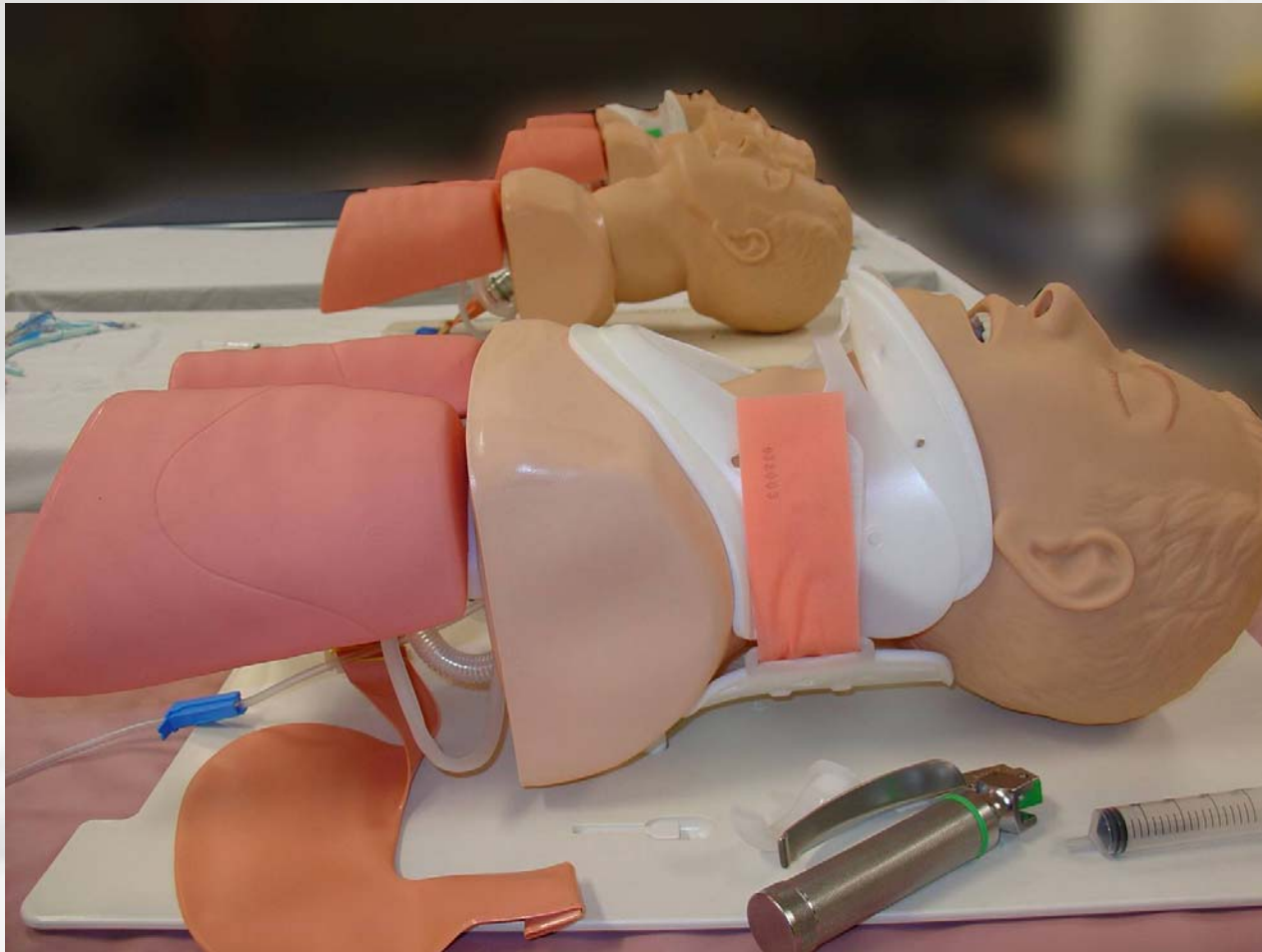
- Part of Innovation & Workforce Reform Directorate
- \$13m
- 3500square metres
- 10 domains
- High-end virtual reality and simulation
- \$5.7m annual operating budget

Purpose built synthetic environment



capability ■ *safety* ■ *innovation*

Procedural skills



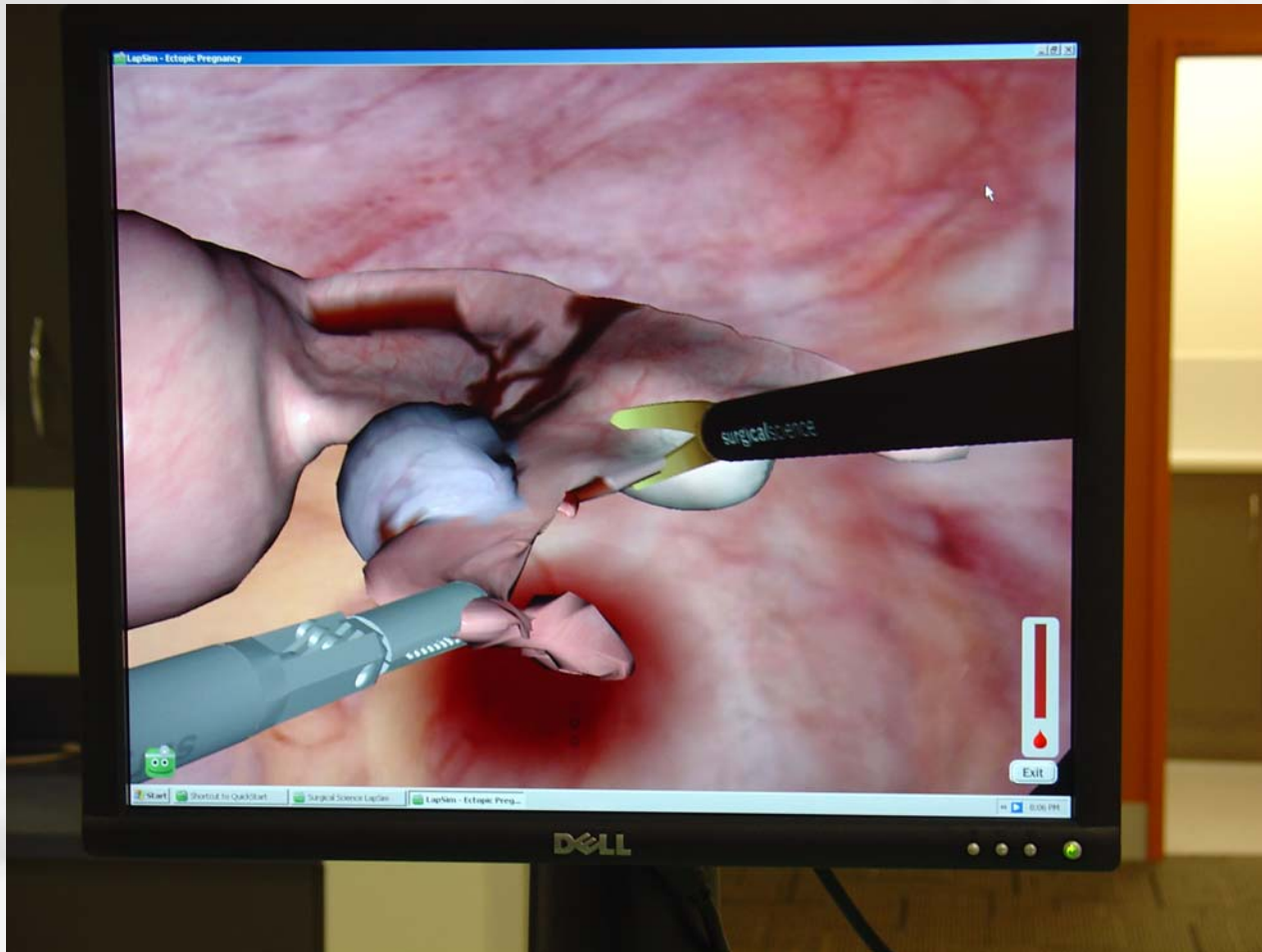
capability ■ *safety* ■ *innovation*

Embracing all ages & specialities



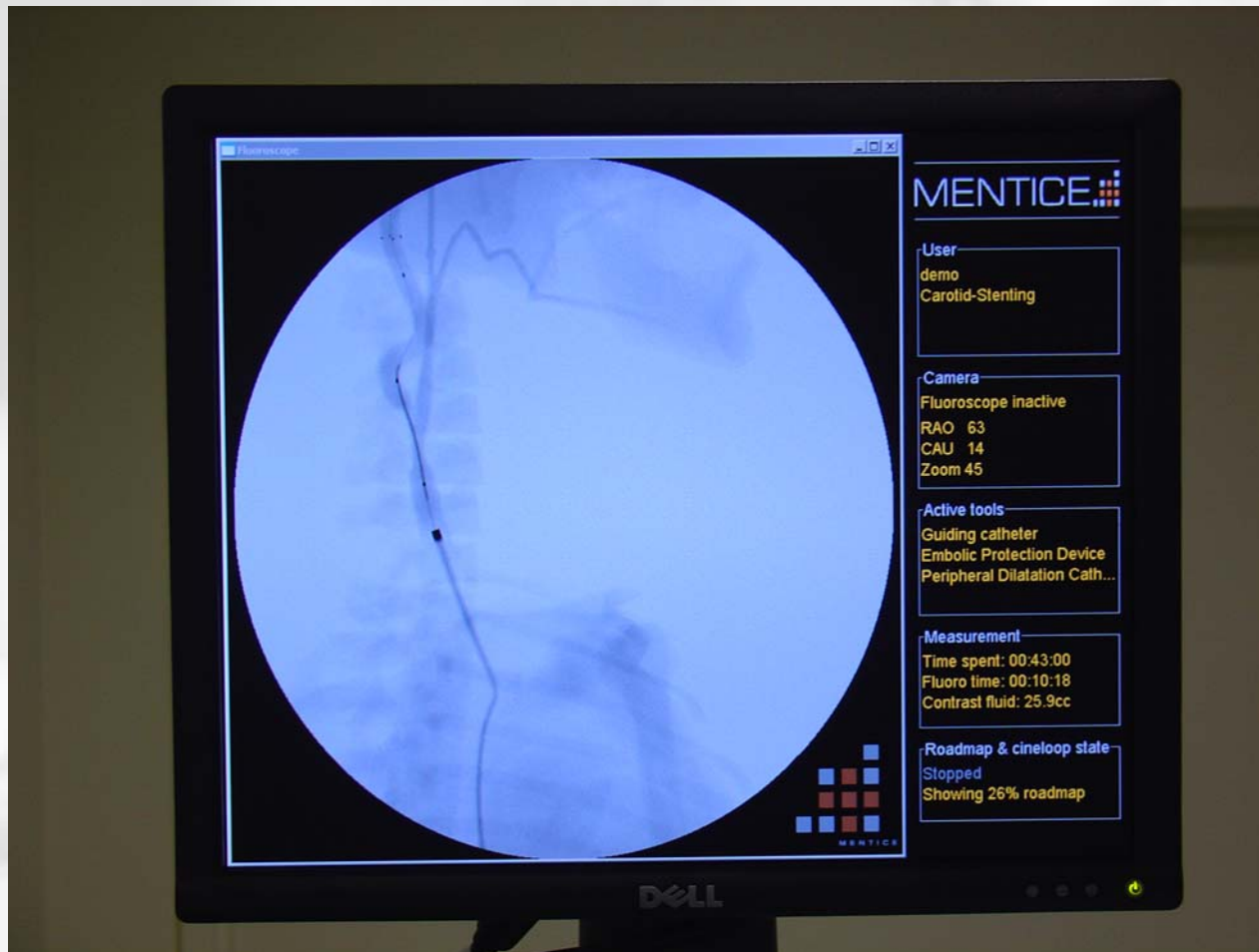
capability ■ *safety* ■ *innovation*

Surgical Skills



capability ■ *safety* ■ *innovation*

Increasing Sophistication



capability ■ *safety* ■ *innovation*

GE Trainer



capability ■ *safety* ■ *innovation*

Opportunity for Reform



capability ■ *safety* ■ *innovation*

Immersive environments



capability ■ *safety* ■ *innovation*

Hi-Fidelity manikin

What you get nowadays for \$400k



capability ■ *safety* ■ *innovation*

Team training



capability ■ *safety* ■ *innovation*

Debriefing



capability ■ *safety* ■ *innovation*

Multi-trauma and nursing



capability ■ *safety* ■ *innovation*

Communication Skills Domain

Reducing levels of litigation



capability ■ *safety* ■ *innovation*

E Learning



capability ■ *safety* ■ *innovation*

Spot the Manikin!



capability ■ *safety* ■ *innovation*

Workforce Reform

- International Medical Graduates
- Different training experience
- Remediation
- Scope of practice
- ‘Work hardened’ clinical staff

International Medical Graduates

- Acknowledgement of reliance
- Assessment
- Rapid immersive learning
- Placement
- Mentoring

Different Training Experience

- PS2 generation
- See one...do one...teach one
- PoP (Practice on Plastic)
- Sufficient clinical placements
- Virtual reality and simulation

Remediation

- Identification of poor practice
- Safety issues
- Assessment & rapid immersive training
- Validity and reliability of VR and Simulation

Scope of Practice

‘The alternative health workforce’

- Transitioning of procedures through flexible workforce;
- Nurse anaesthetists;
- Colonoscopy; and
- Advanced ED practitioners #NOF

Work-hardened Workforce

- Undergraduate training
- Use of simulation and virtual reality
- Scenarios and Real Life Experiences

The Future – At a Crossroads

- Everyone competing for limited highly paid medical workforce where availability is the determinant for healthcare delivery

OR

- Highly flexible workforce where proficiency is the determinant for healthcare delivery

capability ■ *safety* ■ *innovation*

Age & Gender of Medical Registrants

