



# Cost Benefit Analysis Forum

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WHO IS BENEFITING? | 17 JULY 2015



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Infrastructure

# Economic value in a social infrastructure context

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# Overview

- NSW Health system and capital investment
- Health Infrastructure's role
- Economic vs social infrastructure dichotomy
- Health benefits assessment – issues and challenges
- Life cycle economics to drive value add
- Wider economic contributions
- Impacts of health capital investments in regional development



# NSW Public Hospital System

- The biggest public system in Australia servicing a population of >7.2 million
- More than 225 public hospitals
- Around 106,000 staff
- OpEx budget \$19.6b in 2015/16
- CapEx budget \$1.4b in 2015/16
- Asset base as at June 2014
  - \$22b replacement value
  - \$13b written down value



**17,000**

people spend the night in a public hospital



**6500**

people are seen by our emergency departments (EDs)



**5600**

people are admitted to a public hospital



**3383**

NSW Ambulance responses



**1000**

patients have their surgery (emergency or planned) performed in our public hospitals



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# NSW State Health Plan – Towards 2021

- 3 directions
  1. Keeping people healthy
  2. Providing world-class clinical care
  3. Delivering truly integrated care
- Making it happen – 4 strategies:
  1. Supporting & developing workforce
  2. Supporting & harnessing research and innovation
  3. Enabling eHealth
  4. Designing and building future-focused infrastructure



# Health Infrastructure's role



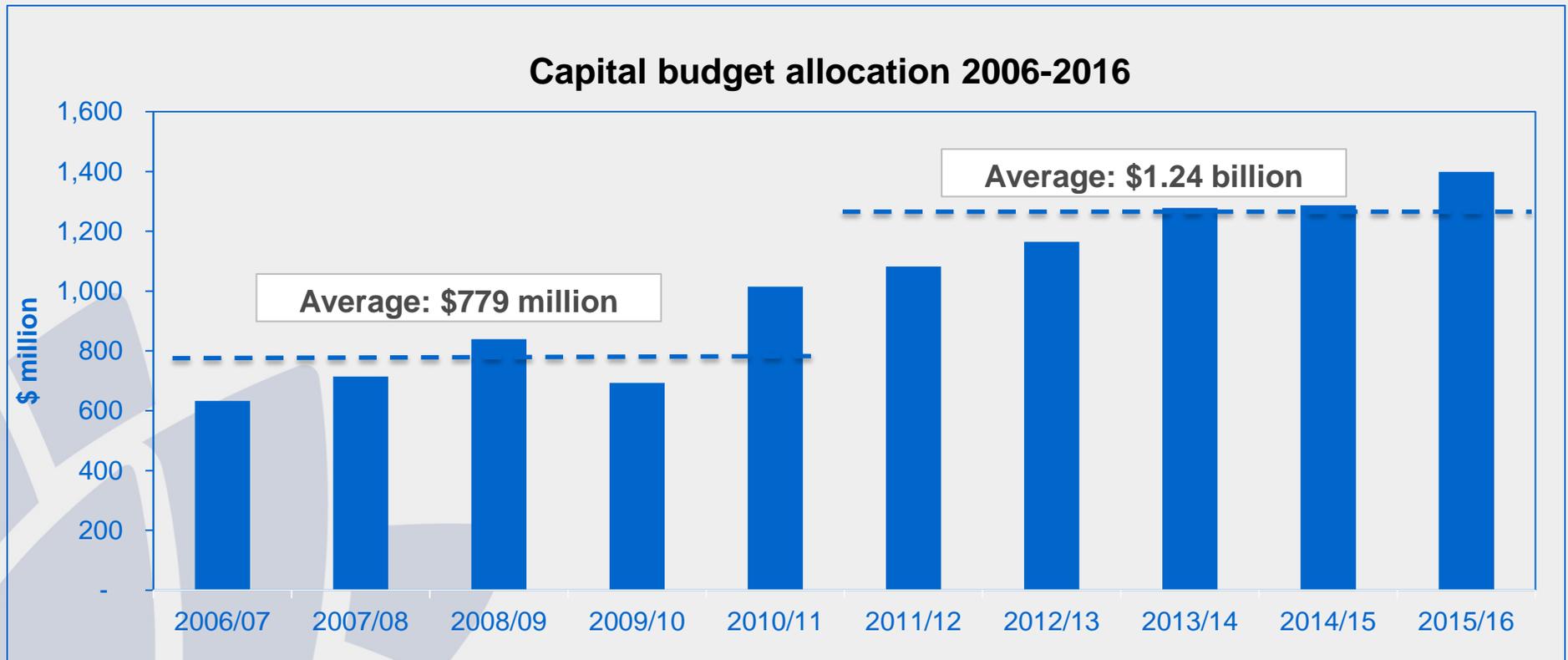
- Planning, procurement and delivery of capital projects
- Public private partnership planning, management and delivery
- Other complex sourcing initiatives eg Northern Beaches
- Capital planning advisory to Local Health Districts
- Driving innovation & delivering value adding solutions
- Providing solutions, technical advice & AusHFG



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# Health capital Investment

***Over \$5bn capital investment over the four years 2015/16 - 2018/19***



Source: NSW Treasury Budget Papers



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# The changing context of capital investment

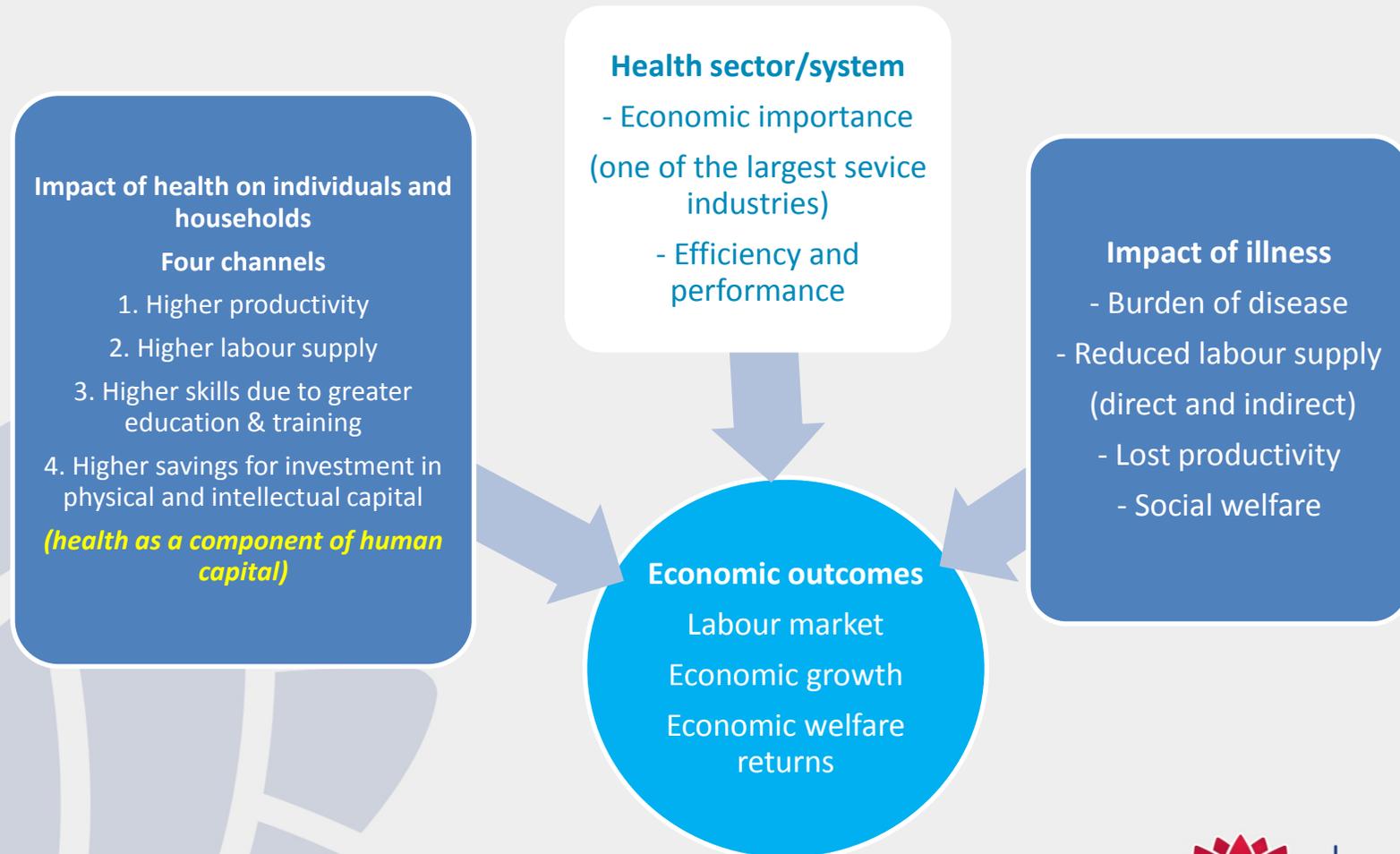
- Challenges and investment drivers
  - changing service demand (growth / ageing population)
  - chronic diseases
  - workforce
  - new model of care
  - ageing asset stock
  - technology / eHealth
  - community expectations
- Catalytic impact on operating efficiency
- Integrated patient-focused care from primary to tertiary treatment



# Hospitals as social infrastructure?

- Hospitals are traditionally viewed as social infrastructure
  - Provision of non-market services
  - Social benefit derived from services
  - Government funded
- Economic value has to-date been evaluated in the context of social infrastructure
  - Health status of patients
  - Social and welfare outcomes (equity / equality)
- Literature review: sound theoretical frameworks and empirical evidence of the impact of health on the economy

# Impact of health on the economy



# Three dimensions of economic value

- Health gains of patients and improved health status of the population
- Health system efficiency to support a better and sustained system: improved clinical outcomes, cost efficiency and performance
- Wider economic contributions to the economy

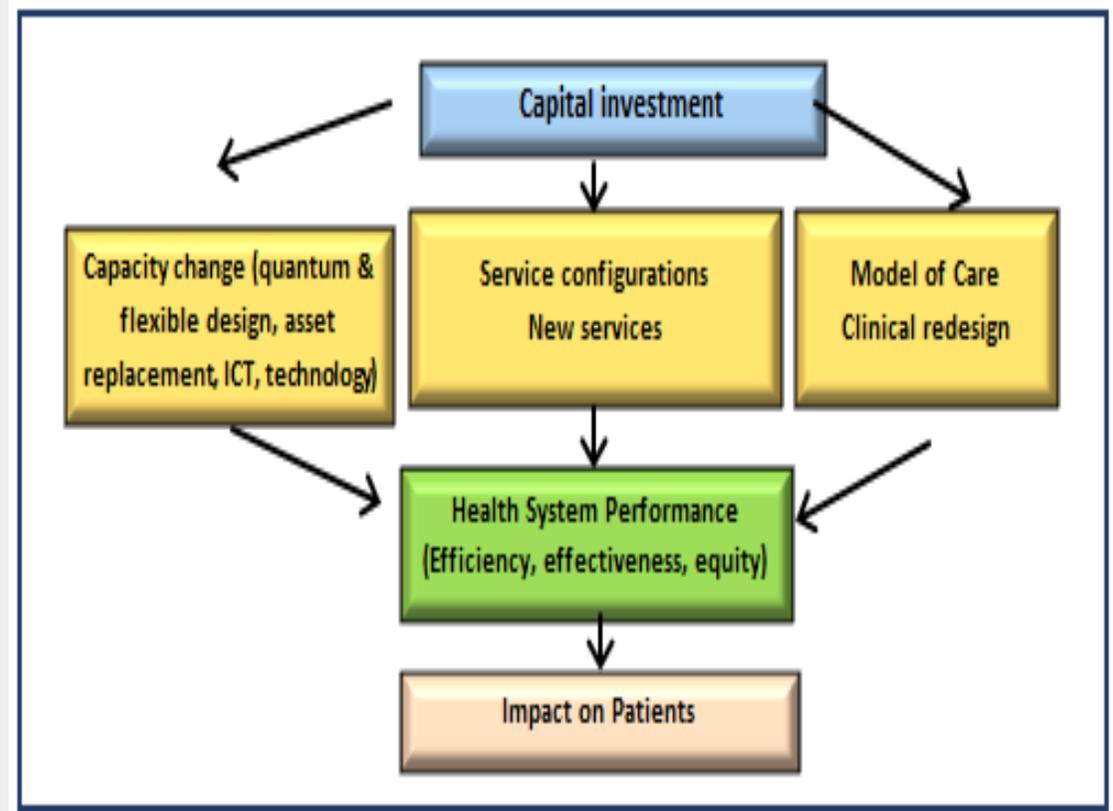


# Health benefit assessment – HI's journey

- **Project level:** Monetisation of patients' health outcomes and health system efficiency.
  - ❖ Estimation of reduction in pain and suffering
  - ❖ Methodology developed since 2011
  
- **Portfolio (macro) level:** Consideration of the impact of health capital investment on the economy
  - ❖ Health assets as productive infrastructure
  - ❖ Impact on labour participation and productivity
  - ❖ Influence on economic growth
  - ❖ Stimulating regional development

# Project level – Impact of capital on services

- Capital investment is not separable from service and delivery
  - Efficiency in patient flow
  - ICT
  - New models of care
  - Service innovation
  - Adaptable
  - Future proof



# Health benefits assessment method development

- Project level: assessing two main sets of benefits by service stream
  - ❖ To *patients* arising from better quality health services, with improved access and less waiting time.

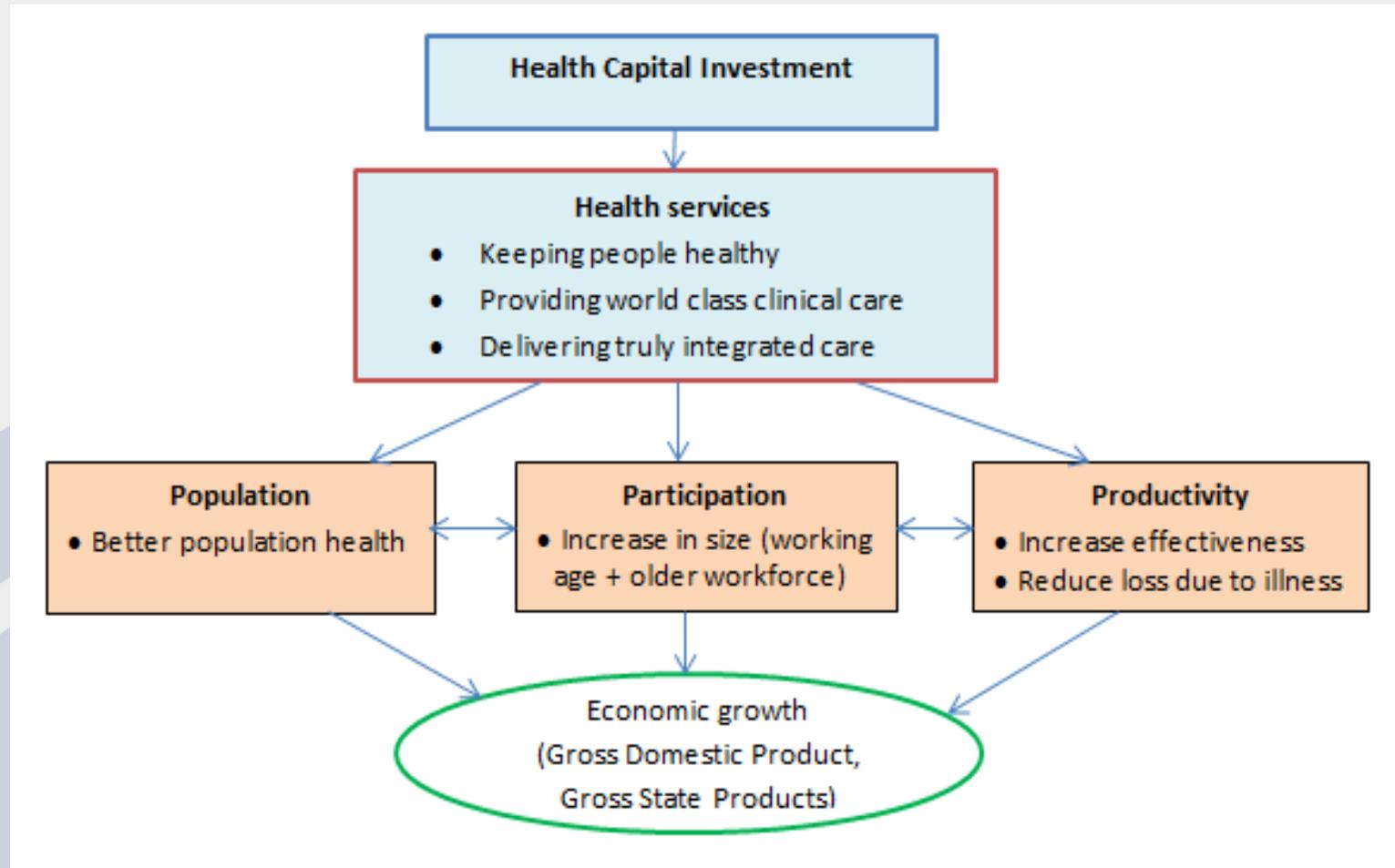
Patients	Health System
Improved health outcomes (e.g. mortality, quality of life)	Improved hospital operating efficiency and performance
Reduced waiting times for care	Reduced and/or avoided resource costs (operating and capital) from providing appropriate care in a lower cost setting (e.g. avoided treatment costs, delayed capital costs)
Improved timeliness and quality of care	
Reduced length of hospital stay	
Better management of chronic disease	

# Life cycle economics

- Capital price
- Functional vs technical lifespan
- Total cost of ownership
- Life cycle planning
- Activity based funding & costing



# Macro linkages – health capital investment and the economy



# Wider economic impacts

- **What would an economy be without hospitals?**
- **Employment impacts of hospital construction**
- **Increase in workforce participation and productivity**
  - ❖ Annual loss in workforce participation from chronic disease is approximately 537,000 person-years of participation in full-time employment and 47,000 person-years of part-time employment (AIHW, 2009)
  - ❖ Sufferers of a chronic disease earn between 1.0% – 5.4% less than healthy counterparts (Productivity Commission, 2010)
  - ❖ Estimated productivity loss at \$730m if each employee in NSW loses a day of work as a result of ill health
- **Indirect impact on workforce participation**
  - ❖ Approximately 937,000 children (26%) are cared for by grandparents (ABS, 2012)
  - ❖ If illness to these carers can be treated more quickly and effectively, they are able to return to the child care duties

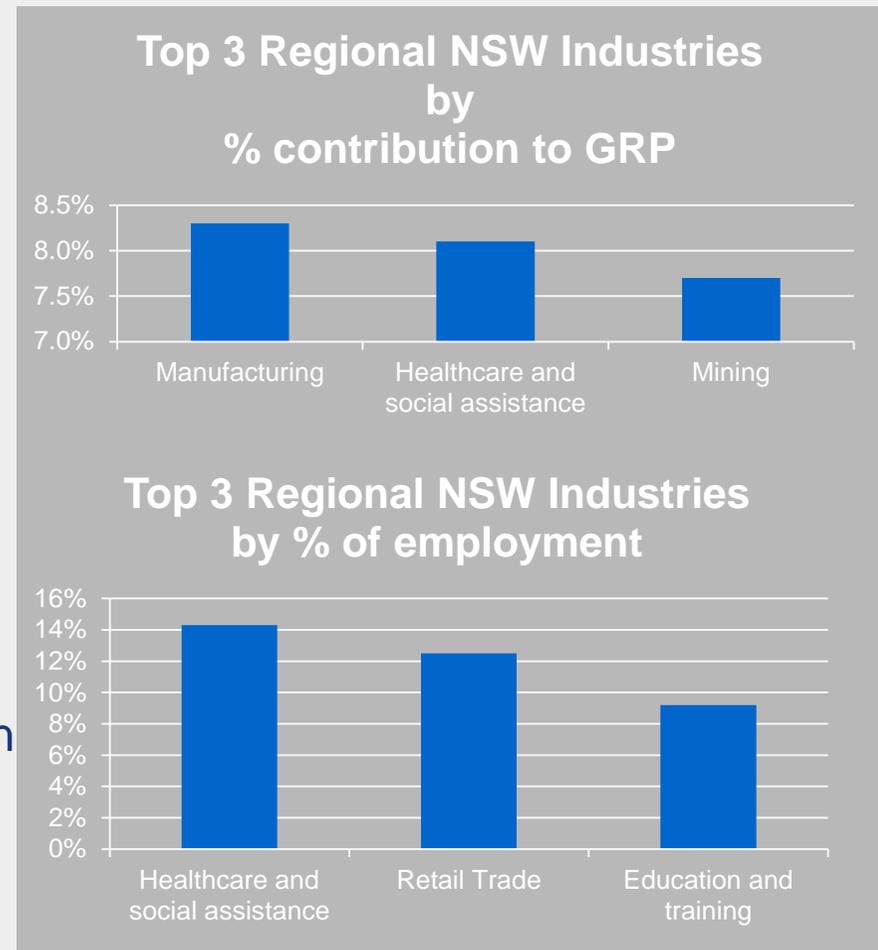
# Wider economic impacts

- **Urban renewal catalyst**
- **Workforce development and business investment**
  - ❖ Quality health systems attract business investment and a highly skilled workforce
- **Mitigating the impact of ageing population**
  - ❖ Aged dependency ratio is expected to increase in NSW from 20.9% in 2010/11 to 34.2% in 2031/32
  - ❖ A quality health system will help to ensure a healthy population, encouraging older people to stay in workforce and mitigate declines in the participation rate



# Economic and community impacts of hospitals in regional NSW

- Regional NSW
  - Home to 2.9m people (40% of NSW)
  - ≈33% of NSW Gross State Product
- Public hospitals = locus of regional health care sector
  - Economic stability and employment to regional communities
- Local hospital is key component of the Healthcare and Social Assistance industry in Regional NSW
- Over \$2bn (≈50% of capital funding) will be invested in regional/rural hospitals and health facilities in the next four years



# Our journey continues

- Health capital investment requires a system and forward looking strategic approach
- Better use of life-cycle economics to maximise catalytic impact on health system efficiency (adaptability and future focused)
- Foster the use of cost benefit analysis
- More dialogue on the wider economic benefits of health capital investments – health is an economic investment
- Ongoing research on measuring health capital investments in regional development





Thank you



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