

The Siemens logo is displayed in a bold, teal, sans-serif font in the upper right corner of the slide. The background of the slide features a futuristic, digital-themed illustration with a central orange and red globe, surrounded by concentric circles, glowing lines, and various data-like elements such as small squares and dots in shades of yellow and orange.

Picture the Future: Australia

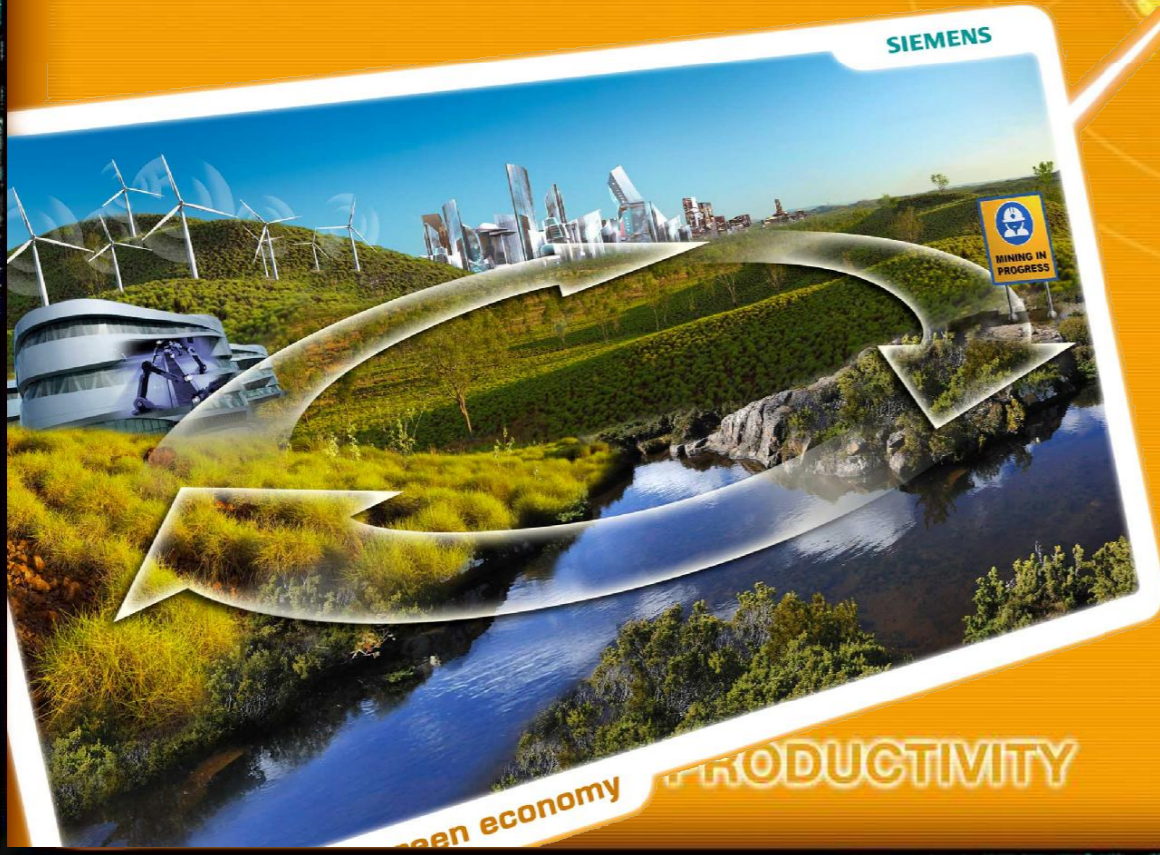
Productivity



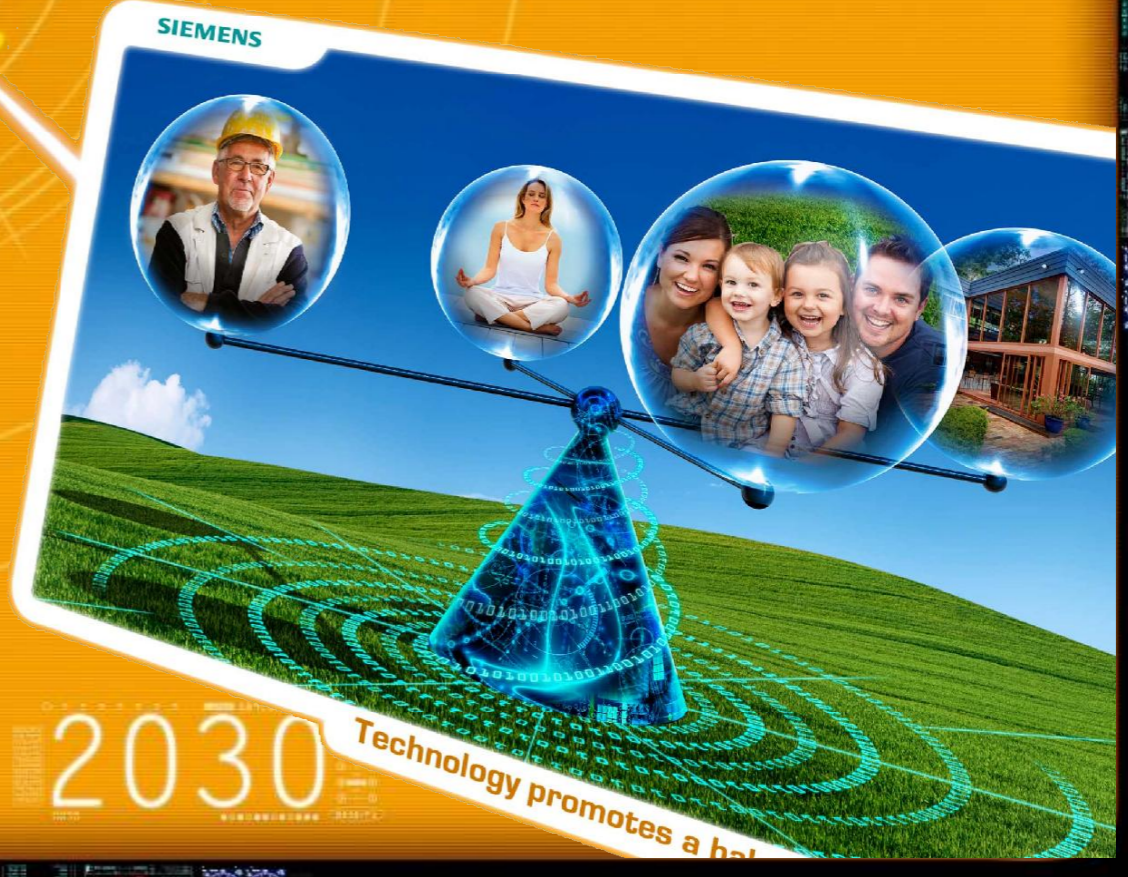
Australia - world innovator



Seamlessly connected



Green economy PRODUCTIVITY



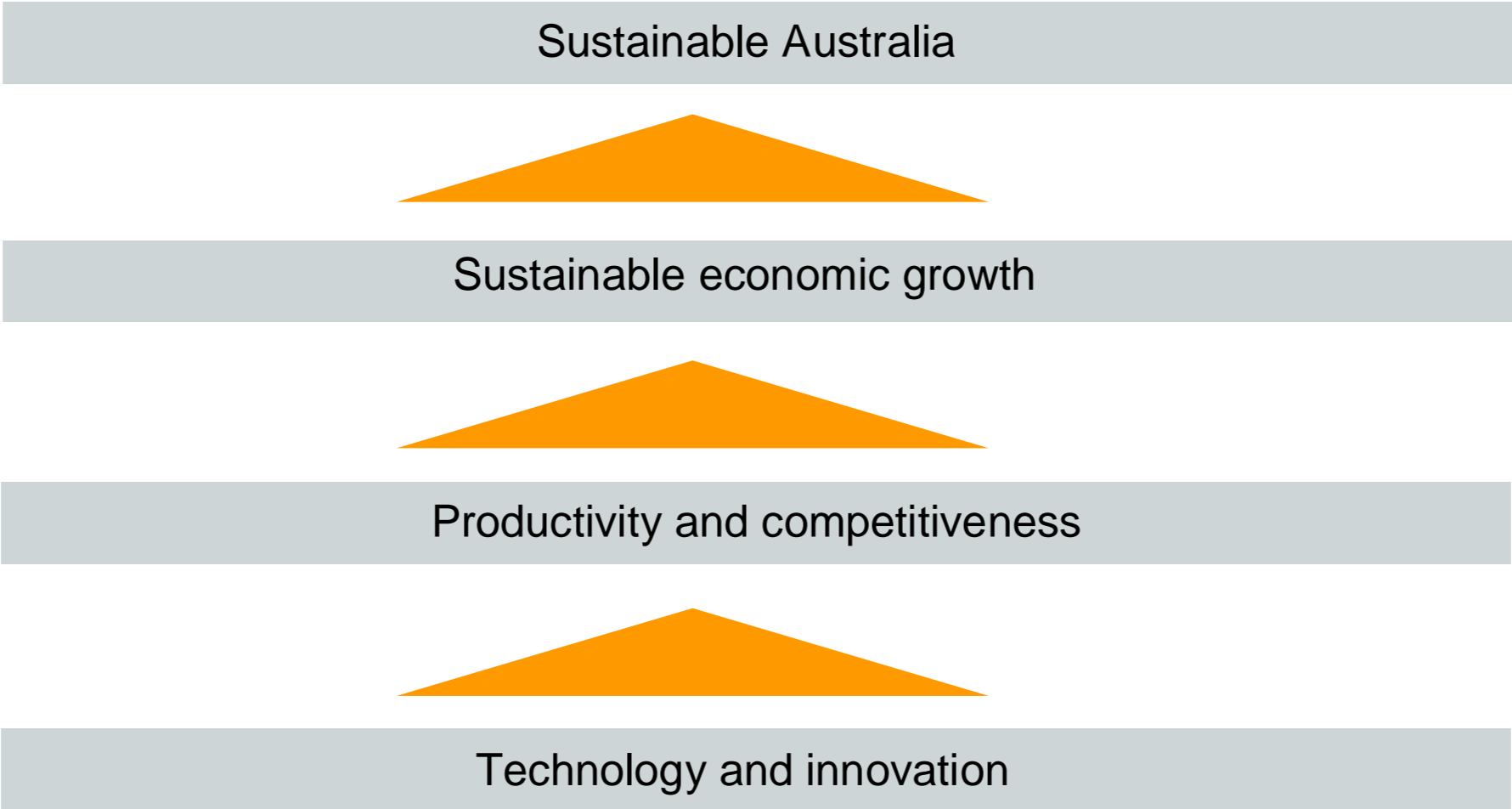
2030 Technology promotes a hal

Picture the Future



Productivity

Importance of productivity



Improving productivity means we can afford more

Present

Ford Falcon



\$36,950

Can of Coke



\$1.20

Sony TV

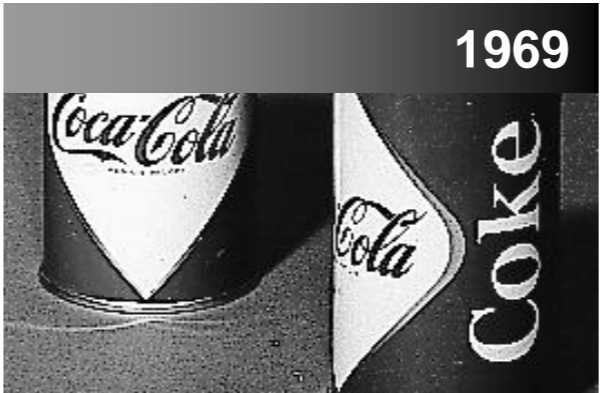


\$996

Past



\$2,590



\$0.09



\$334

ABS Cat. No. 6302.0 Average Weekly Earnings, Australia, 1960 -2010, ABS
ABS Cat. No. 4102.0 Australian Social Trends, 1996, ABS
Siemens Market Research

Improving productivity means we can afford more

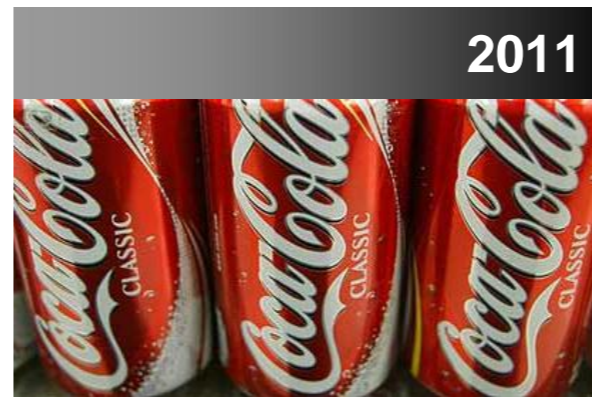
Present

Ford Falcon



30 weeks

Can of Coke



2 minutes

Sony TV



4 days

Past



60 weeks



3 minutes



4 weeks

ABS Cat. No. 6302.0 Average Weekly Earnings, Australia, 1960 -2010, ABS
ABS Cat. No. 4102.0 Australian Social Trends, 1996, ABS
Siemens Market Research

Climate change

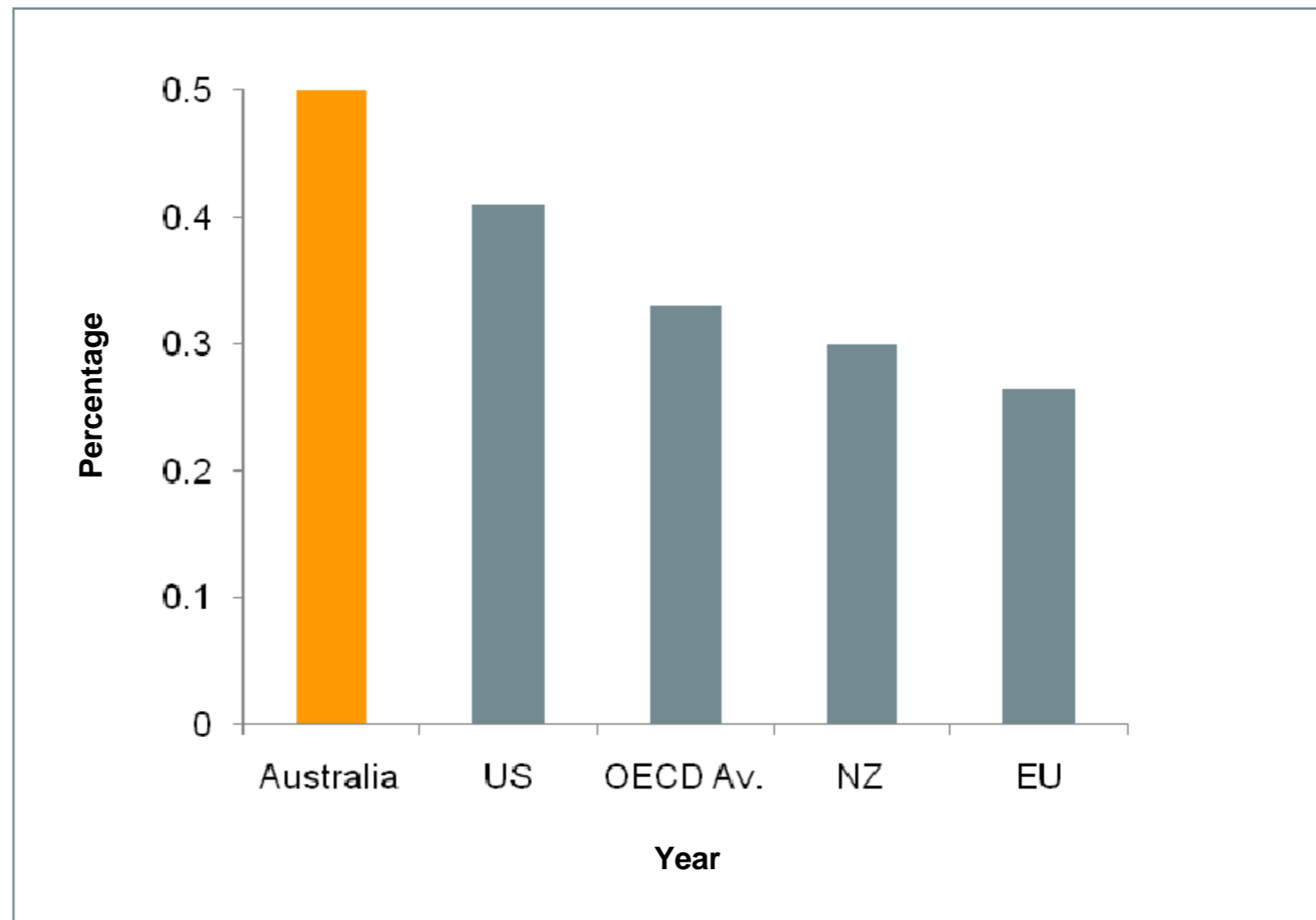
Australia - highest emissions in OECD



Global megatrends



Fuel emissions intensity of GDP in OECD (2007)



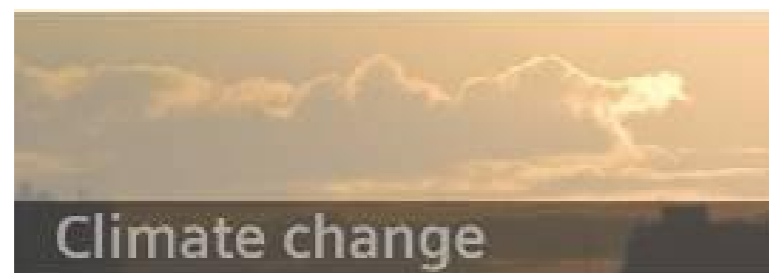
Source: OECD (2010), *OECD Factbook 2010: Economic, Environmental and Social Statistics*

Demographic change

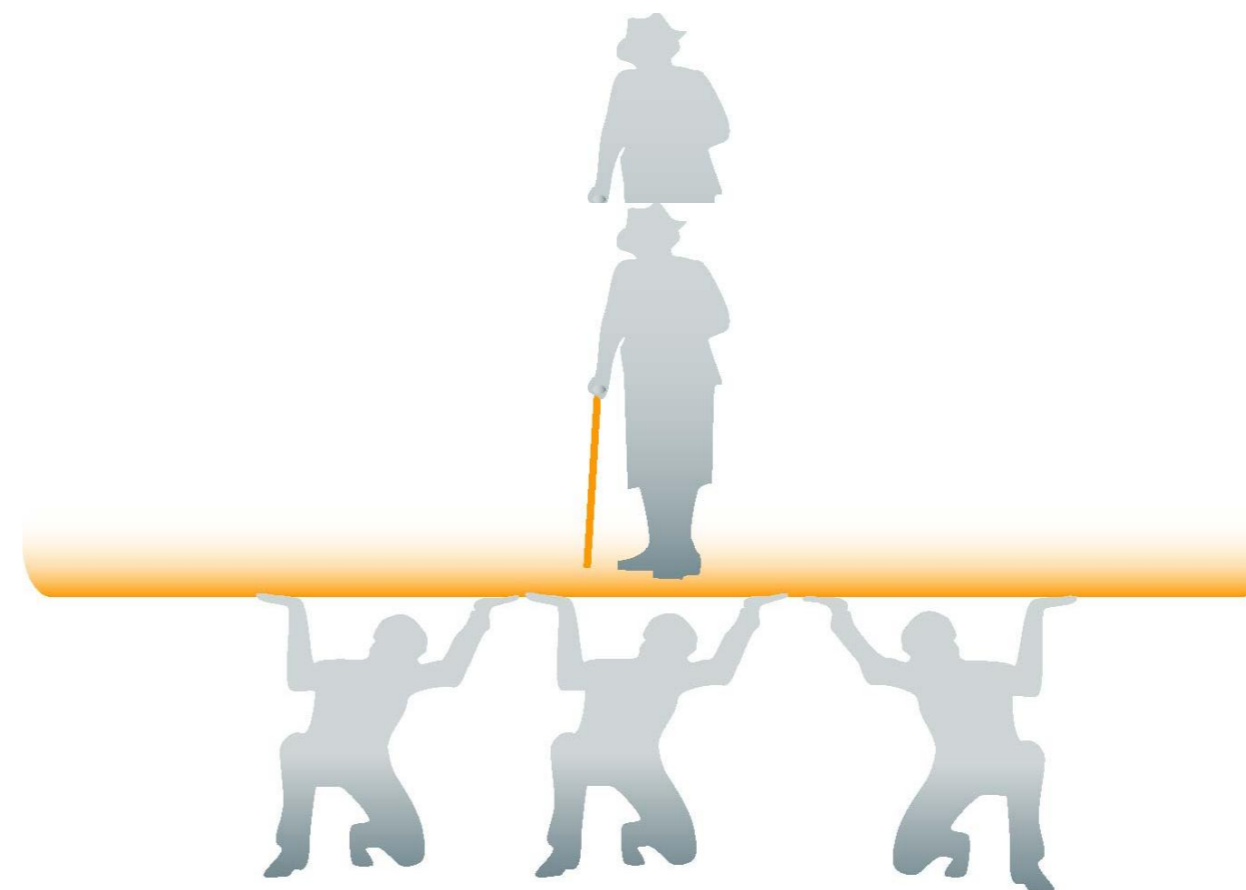
Australia's population is ageing



Global megatrends



Ratio of workers to retirees



2001: Five to one ratio of workers to retirees

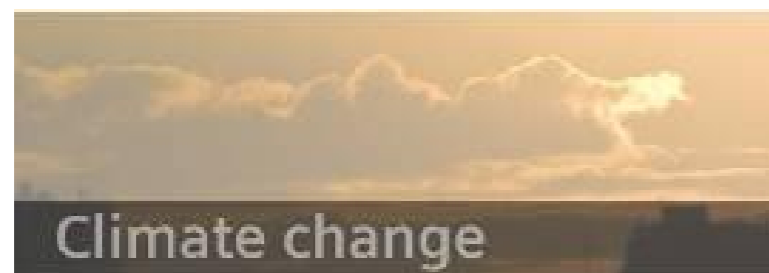
Source: Treasury - Commonwealth of Australia 2010, Intergenerational Report 2010

Demographic change

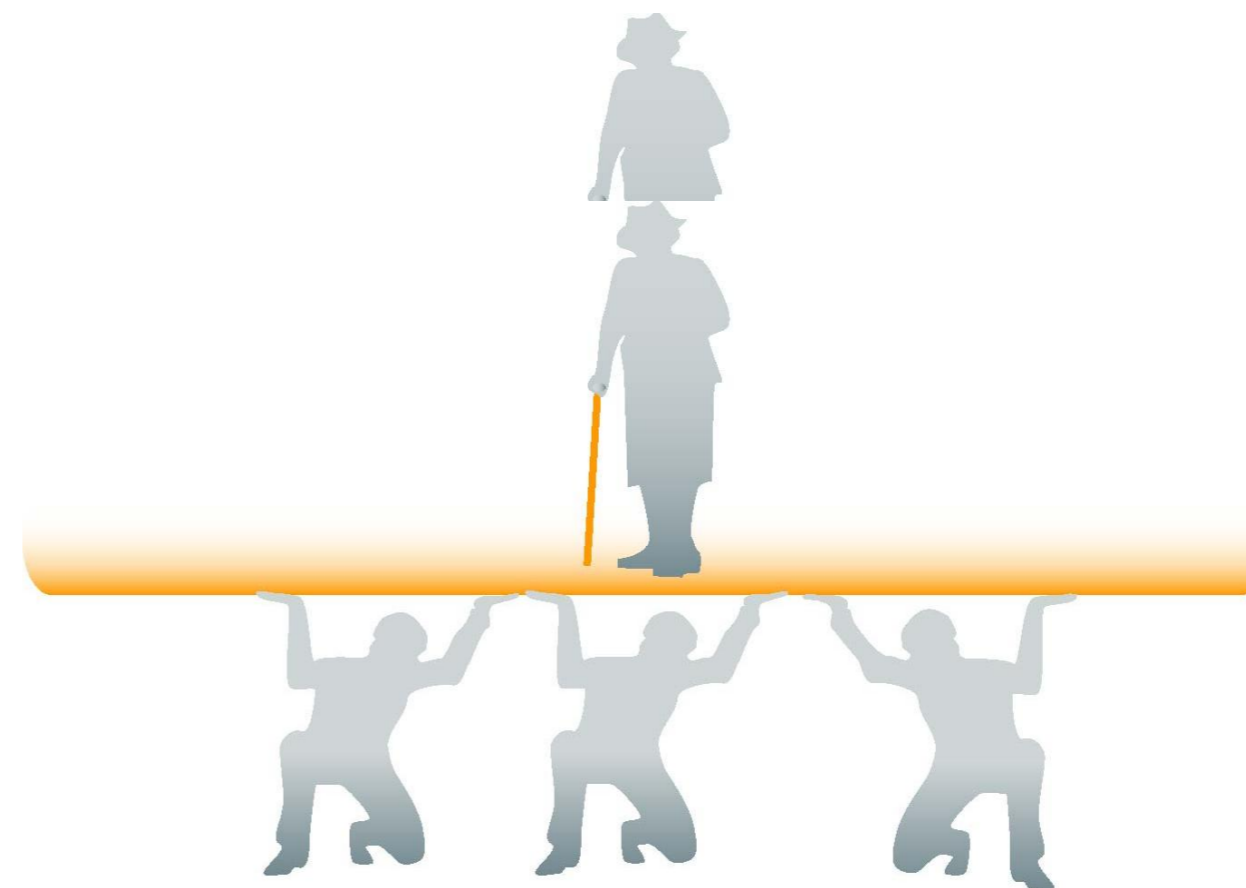
Australia's population is ageing

SIEMENS

Global megatrends



Ratio of workers to retirees



2030 with productivity improvements

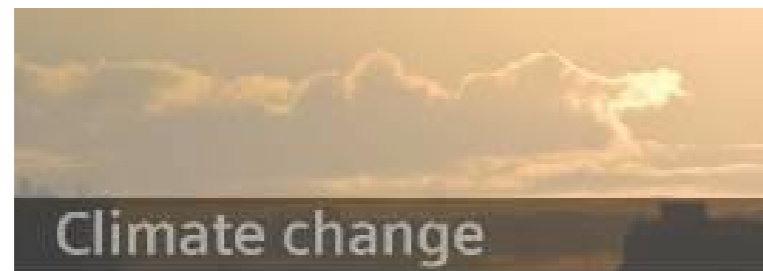
Source: Treasury - Commonwealth of Australia 2010, Intergenerational Report 2010

Urbanisation

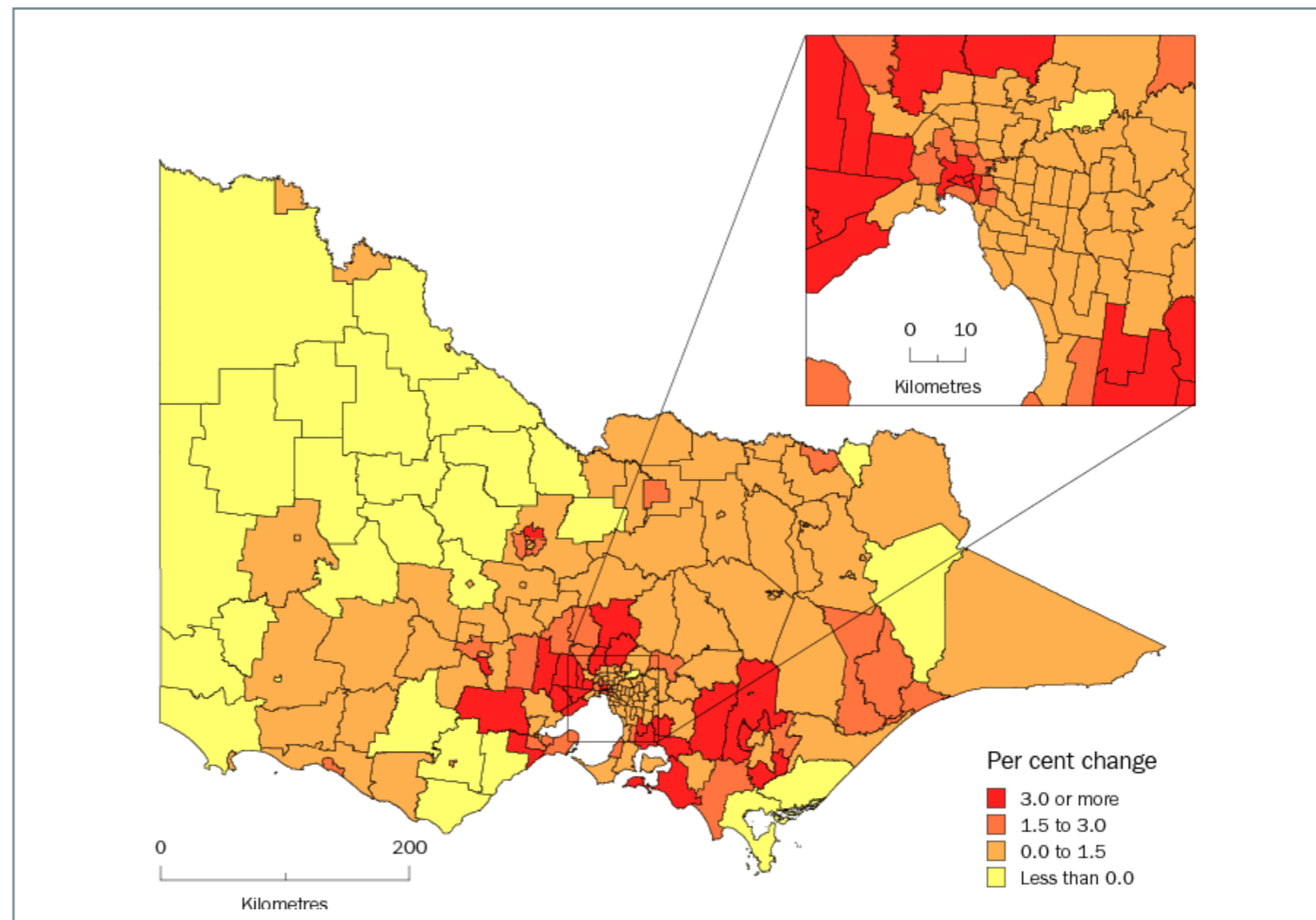
Urban congestion is impacting productivity



Global megatrends



Population change in Victoria (2009-10)



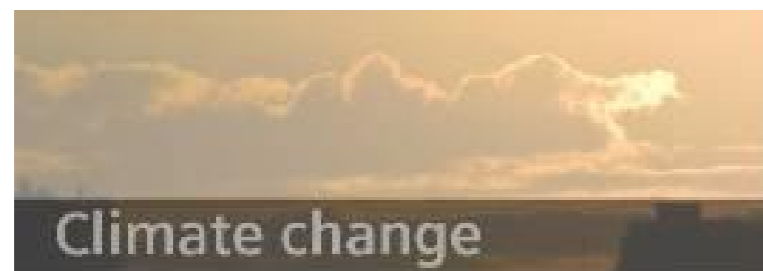
Source: ABS Cat. No. 4613.0 Australia's Environment; Issues and Trends, Jan 2010, ABS

Globalisation

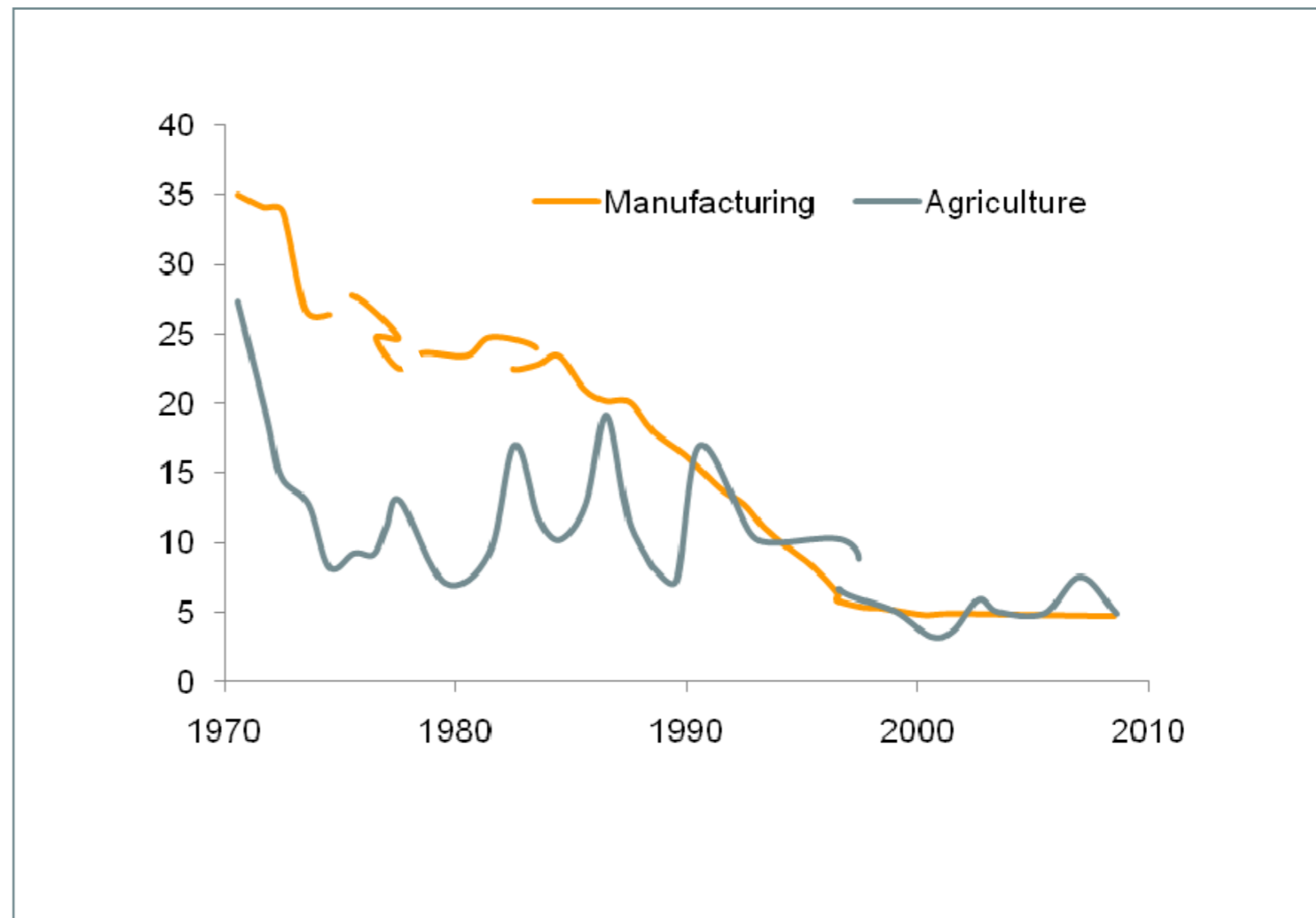
Trade barriers are decreasing



Global megatrends

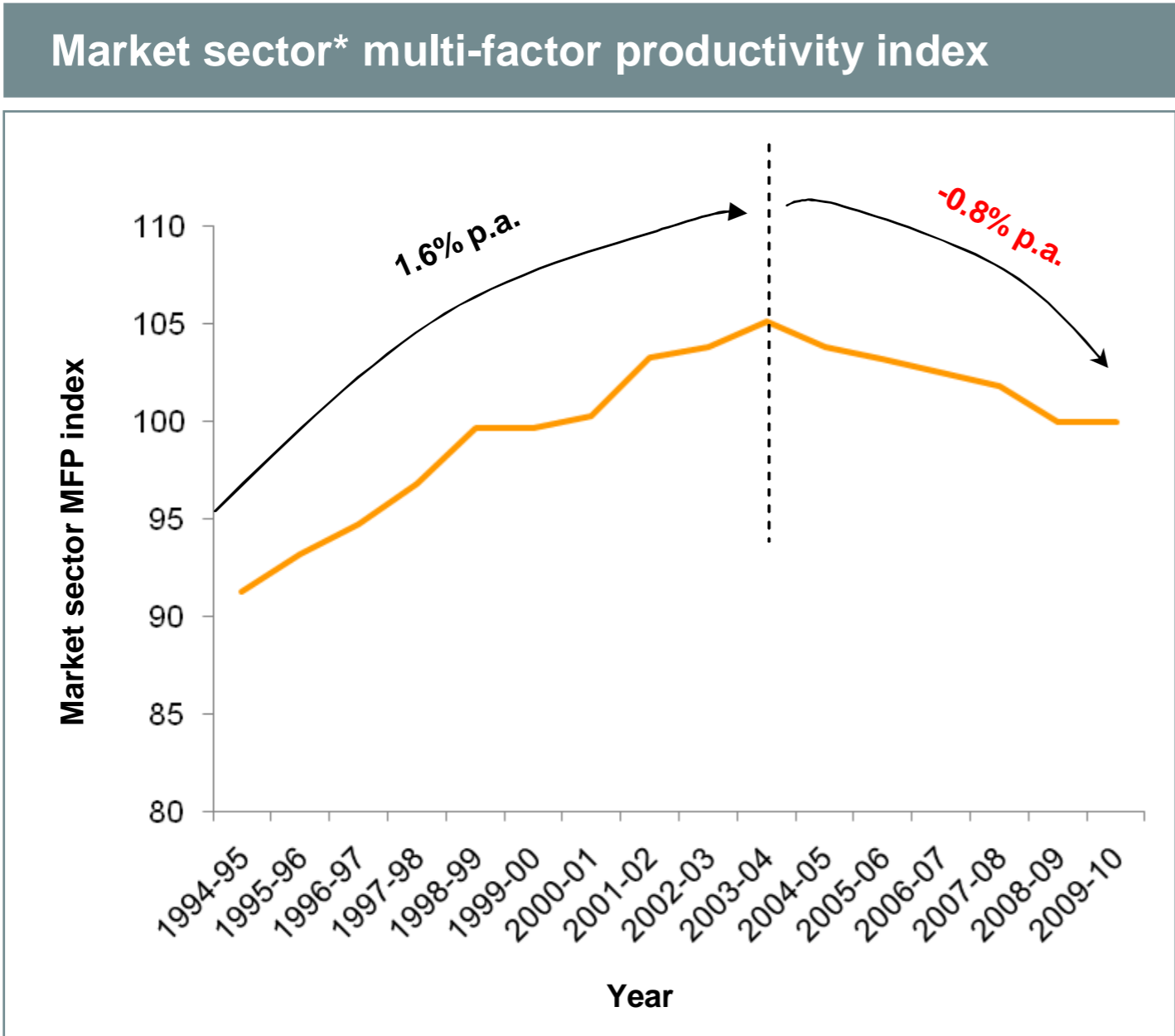


Effective rates of assistance (1970-71 to 2008-09)



Source: Productivity Commission 2010, Trade & Assistance Review 2008-09

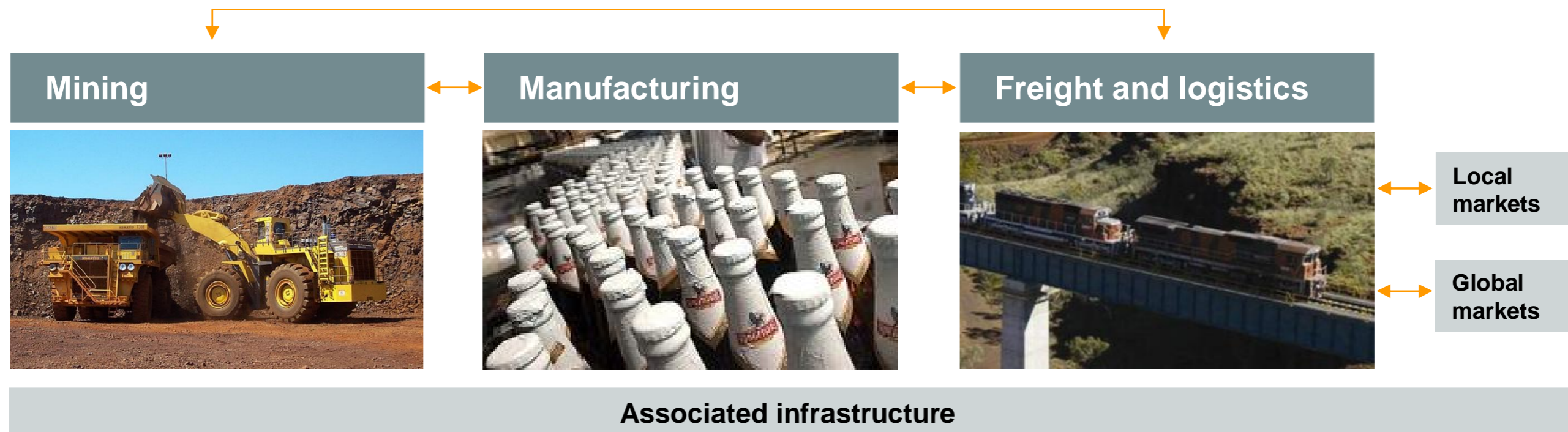
Australia's productivity is on the decline



Market Sector	Annual Change
Mining	- 4.6% p.a.
Capital	70%
Labour	77%
Output	29%
Electricity, gas, water	- 4.3% p.a.
Capital	41%
Labour	47%
Output	10%
Manufacturing	- 1.2% p.a.
Capital	26%
Labour	-6%
Output	0%

Source: ABS Cat. No. 5260.0.55.002 Experimental Estimates of Industry Multifactor Productivity, Australia: Detailed Productivity Estimates, 2010, ABS.
 *Market Sector excludes Public administration and safety (O); Education and training (P); Health care and social assistance (Q);

Case studies



The mining, manufacturing and freight and logistics industries...

- Contribute 24% to Australia's GDP*
- Consume 50% of Australia's electricity and natural gas[#]
- Contribute 70% to exports[^]
- Account for 16% of employment[~]

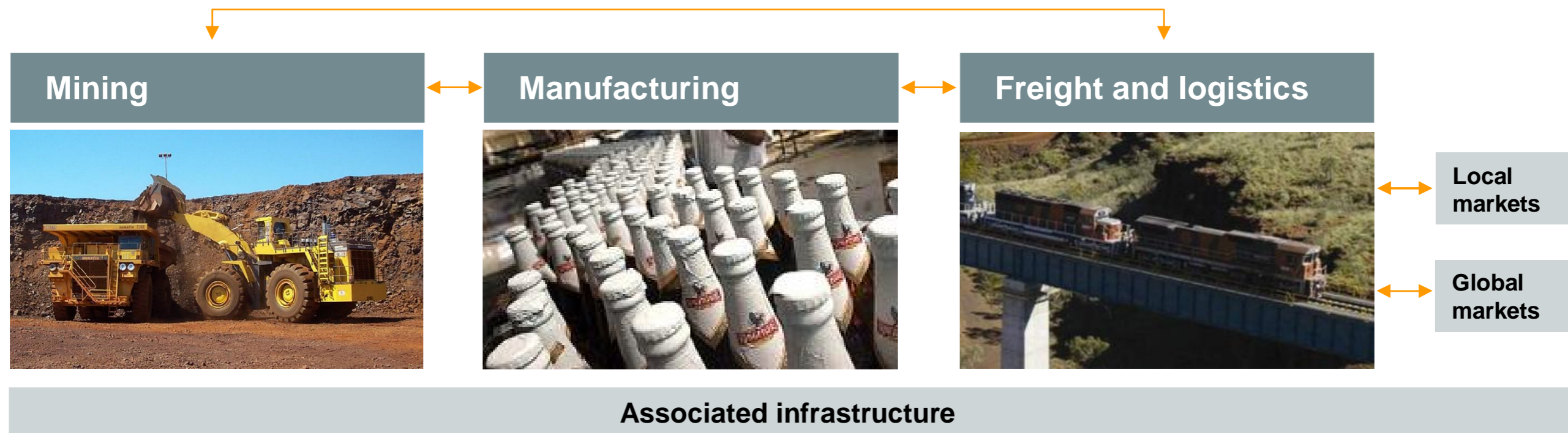
* ABS Cat. No. 5206 GDP Chain volume measures, 2010, ABS

[#] ESAA 2009, Electricity Gas Australia

[^] DIISR 1/09/2010, Australia's Exports Fact Sheet

[~] ABS Cat. No. 6291.0.55.003 Labour Force, Australia, Detailed, Quarterly, Nov 2010, ABS

Case studies

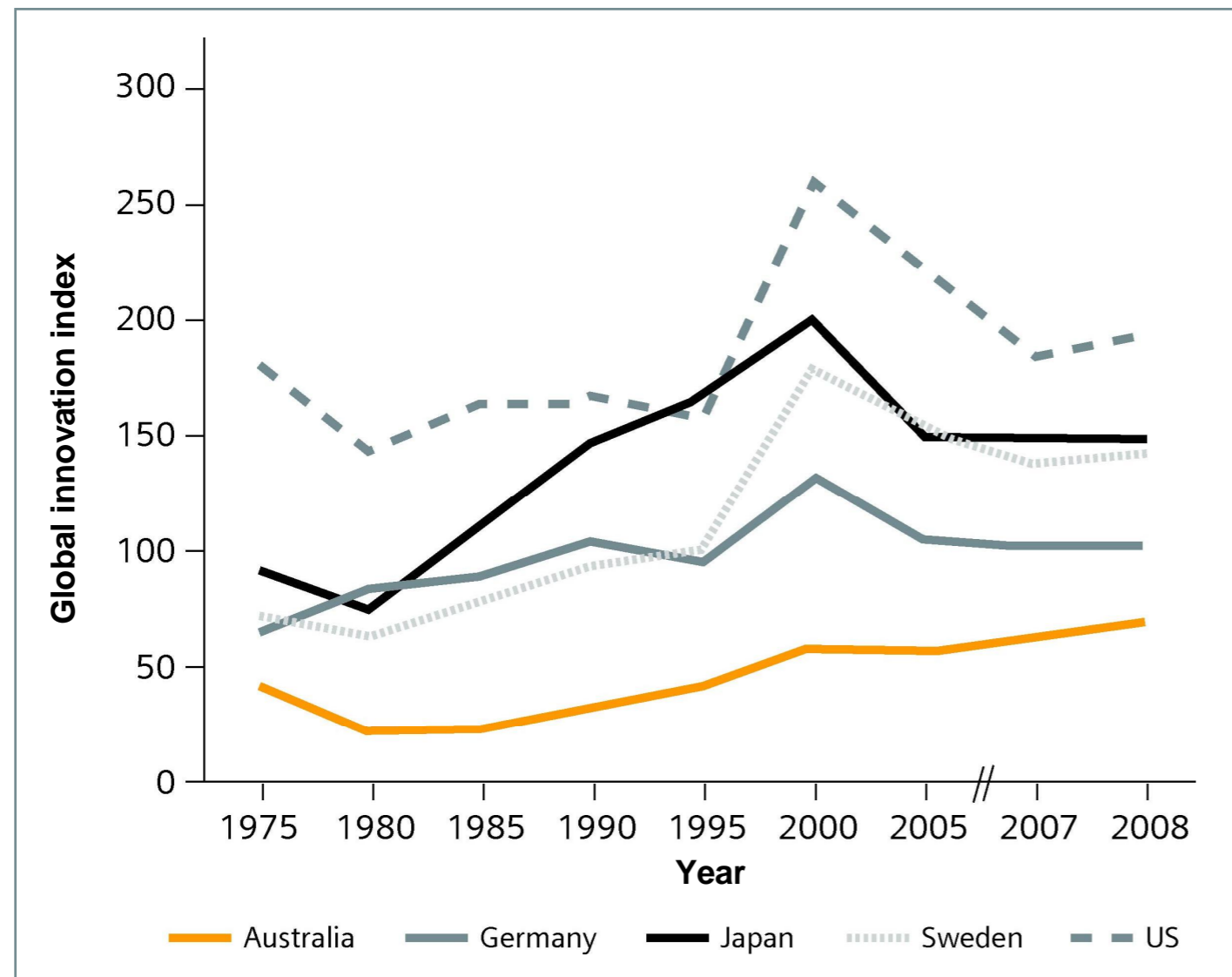


Challenges

- Mining boom
- Infrastructure investment
- Over regulation
- Global competition

Australia's innovation effort is lagging

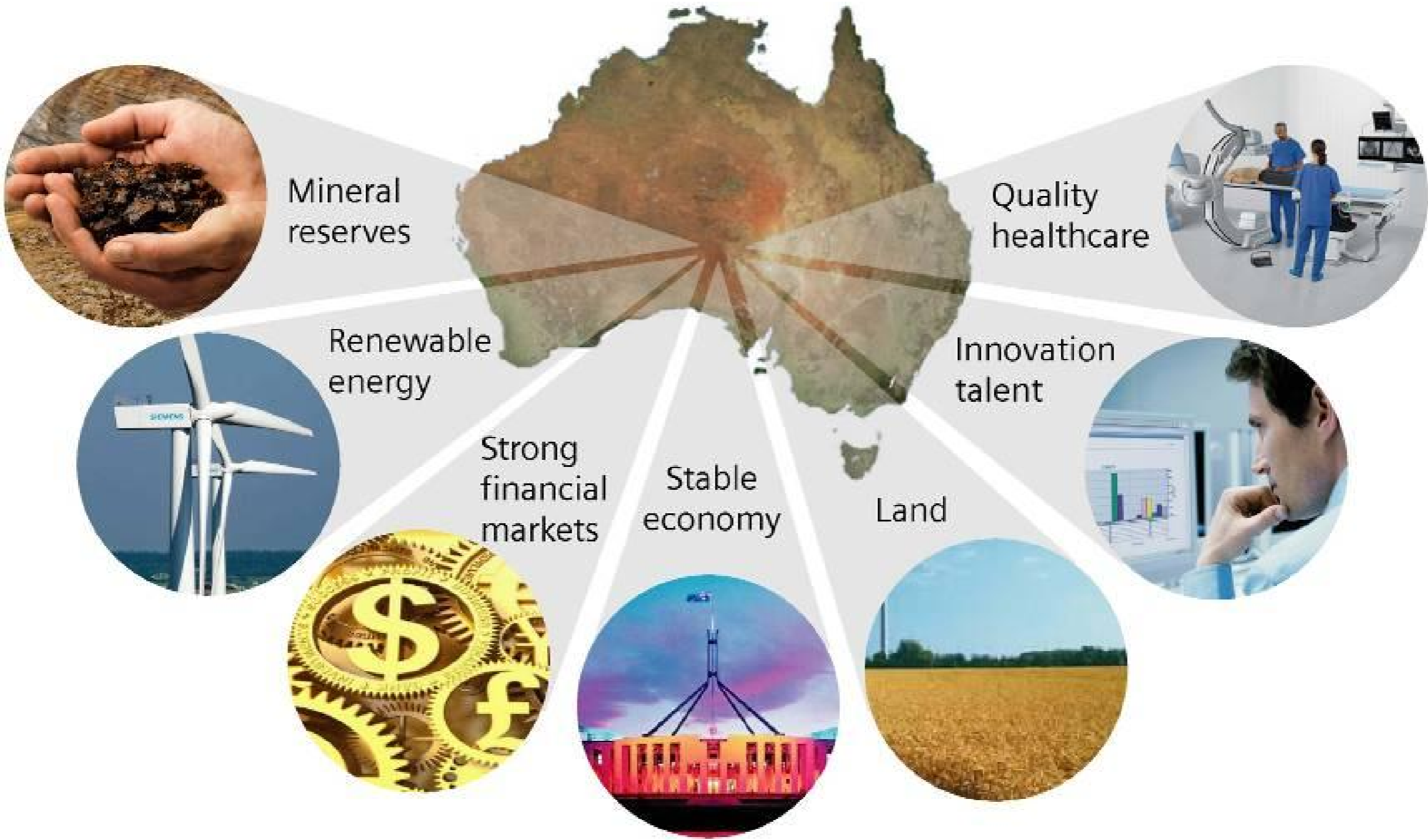
Australia's Innovation Index



Source: Gans, J and Hayes, R; Assessing Australia's Innovative Capacity: 2009 Update

- Innovation is key to increasing productivity
- Ranked last for firm – university collaboration
- R&D investment needs to be better
- Focus on improving commercialisation
- Losing the battle to retain innovative talent

Australia has productivity enablers



A vision for the future

Improving productivity through technology and innovation

SIEMENS

Digitalisation and automation



Freight and logistics optimisation



Environmental sustainability



Collaborative innovation



Information and communications technology

Digitalisation and automation

Digital environments



Industrial automation



Lifecycle management



2020

- Collaborative mechatronic design
- Integrated automation systems
- Advanced system lifecycle management

2030

- Digital shadow
- Augmented reality
- Self-learning systems

Freight and logistics optimisation

Integrated logistics



Intelligent infrastructure



Alternative Energy



2020

- Real-time scheduling and routing
- Intelligent traffic management systems
- Clean fuels

2030

- Digital freight networks
- Advanced wireless communication
- Hydrogen fuel cells

Environmental sustainability

Raw material efficiency



Energy efficiency



Clean energy



2020

- Additive manufacturing
- Smart energy management systems
- 20% renewable energy

2030

- Minimal lifecycle impact
- Autonomous energy optimisation
- 40% renewable energy

Collaborative innovation



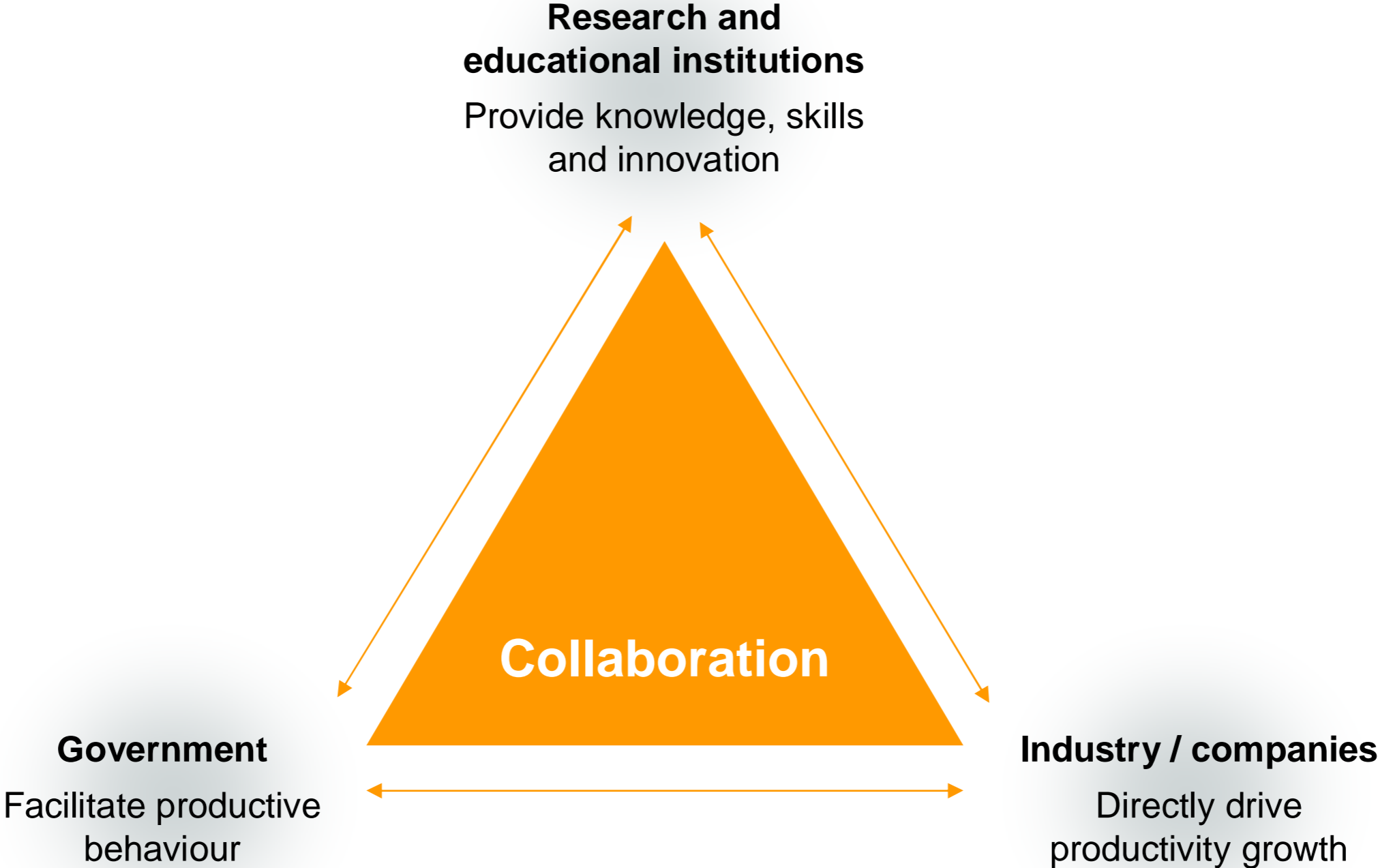
2020

- Virtual labs
- Emerging innovation hubs
- Reduced barriers to collaboration

2030

- Strong open innovation
- Top 10 global ranking
- World renowned innovation hubs

How can Australia improve productivity?



SIEMENS

Australia - world innovator

SIEMENS

Seamlessly connected

SIEMENS

green economy

PRODUCTIVITY

SIEMENS

2030

Technology promotes a hal

Picture
the
Future

