

# Economic Benefit Study on Value of Spatial Information – Australian Experience

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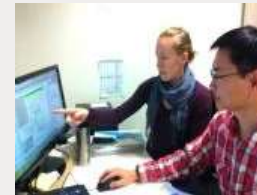
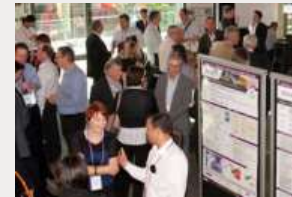
# The Australia and New Zealand Cooperative Research Centre for Spatial Information

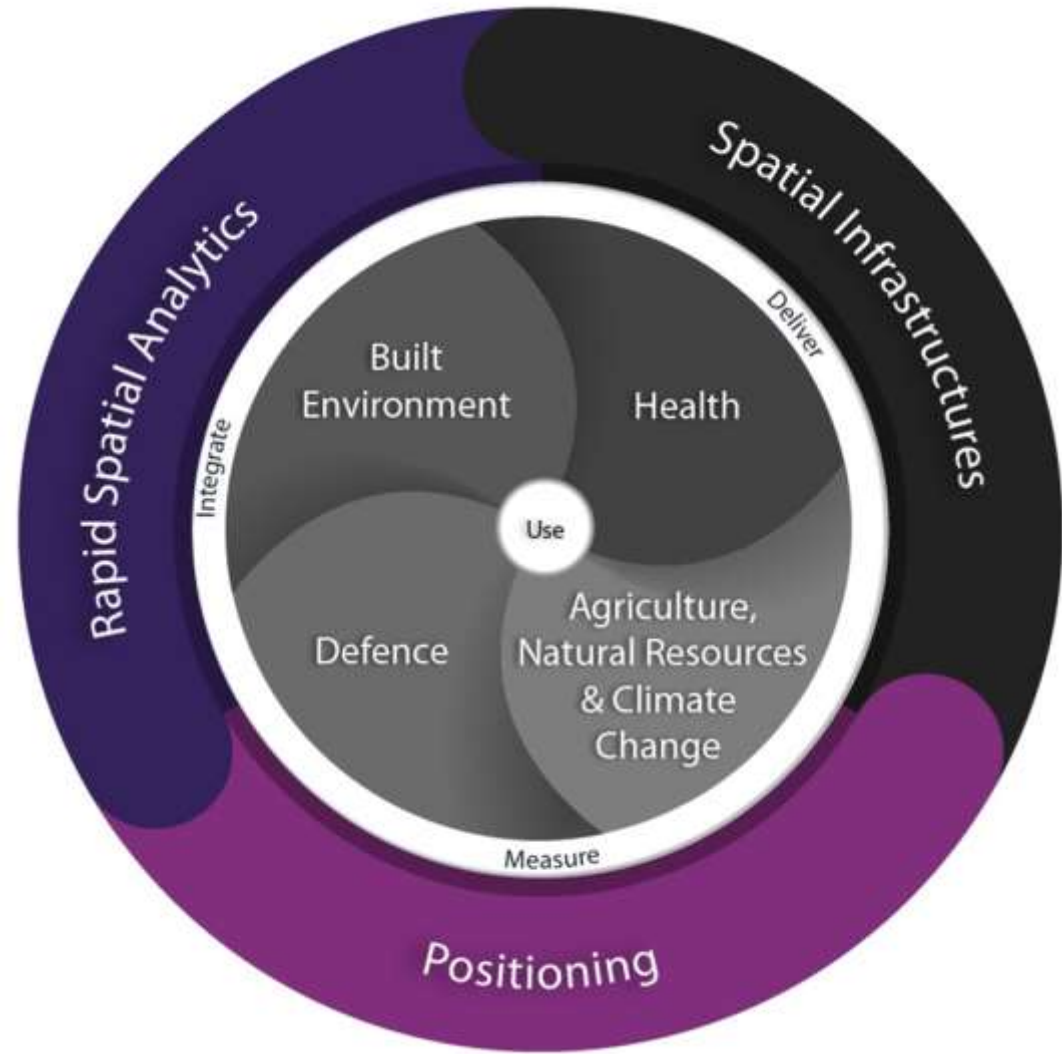
First funded in 2004 - joint venture of about 100 government, academic and private sector organisations (until 2018)

Undertakes user led research involving spatial technologies to solve complex problems of national significance for Australia and New Zealand

Overall goal is to accelerate the spatial enablement of Australia & New Zealand

National Positioning Infrastructure, strengthening skilled capacity, supporting industry growth, 'open data', productivity improvements



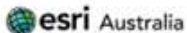
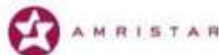


- Measure
- Integrate
- Deliver
- Use

# Research partners...

# Government partners...





Spatial Intelligence | Human Technology



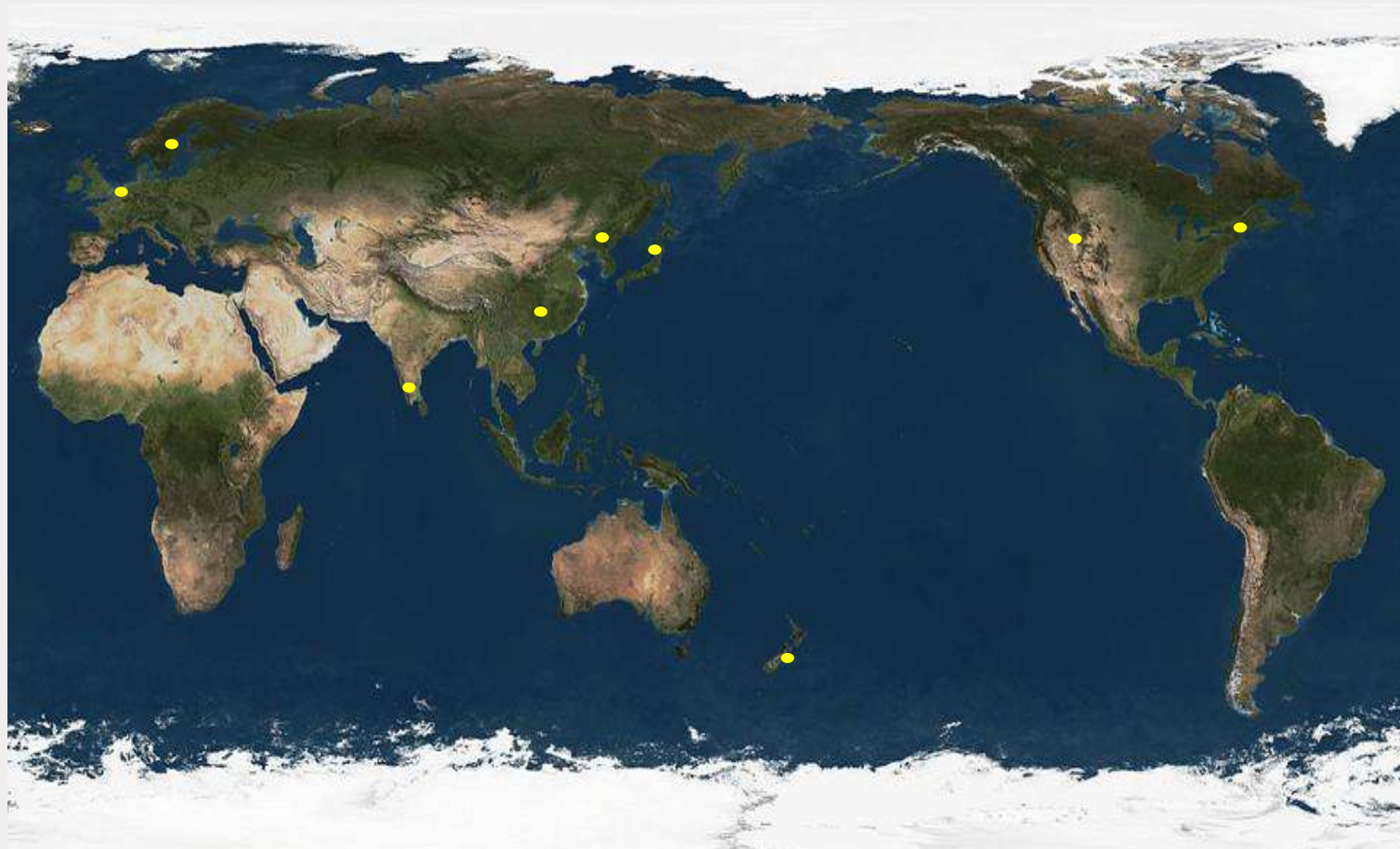


# International Collaborations

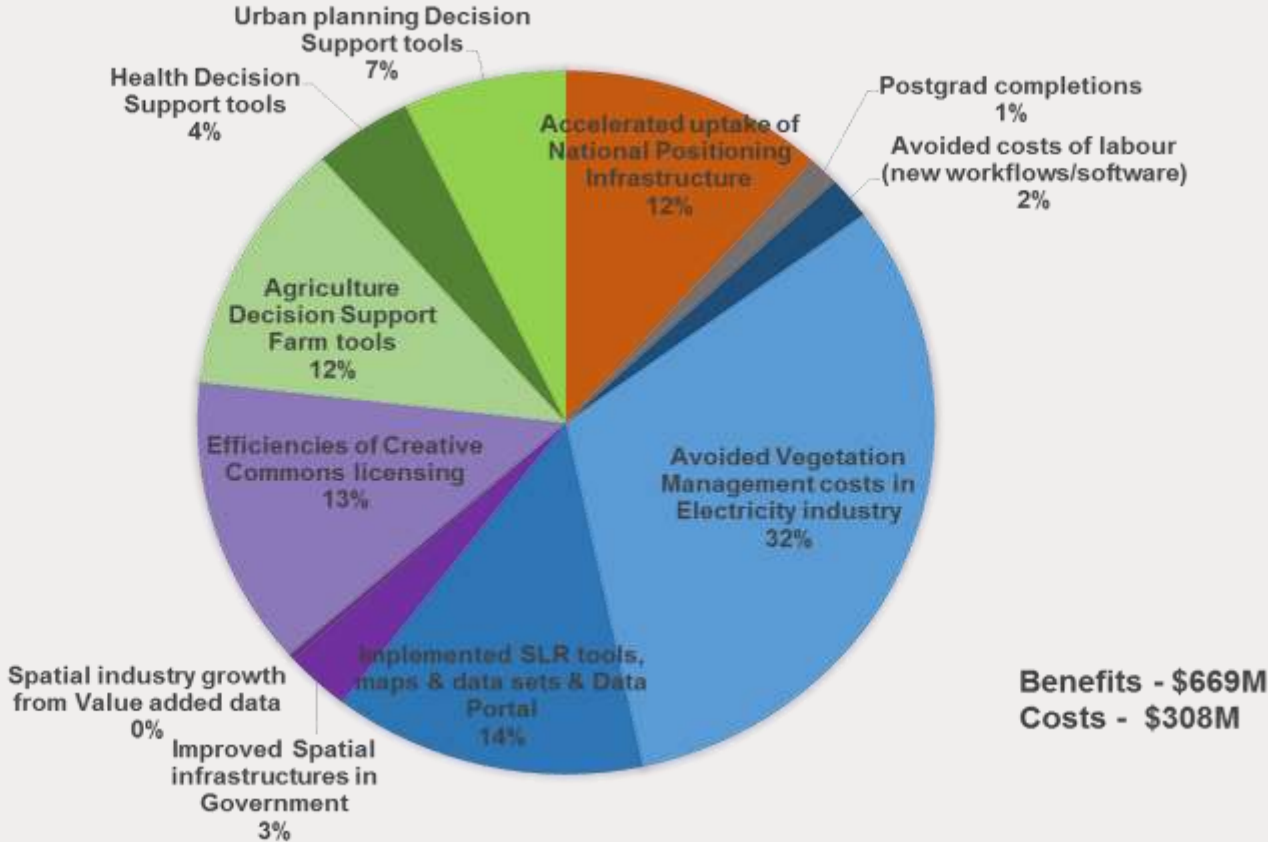


future  
position

17°00' N, 177°00' E  
21°14' 50.00"

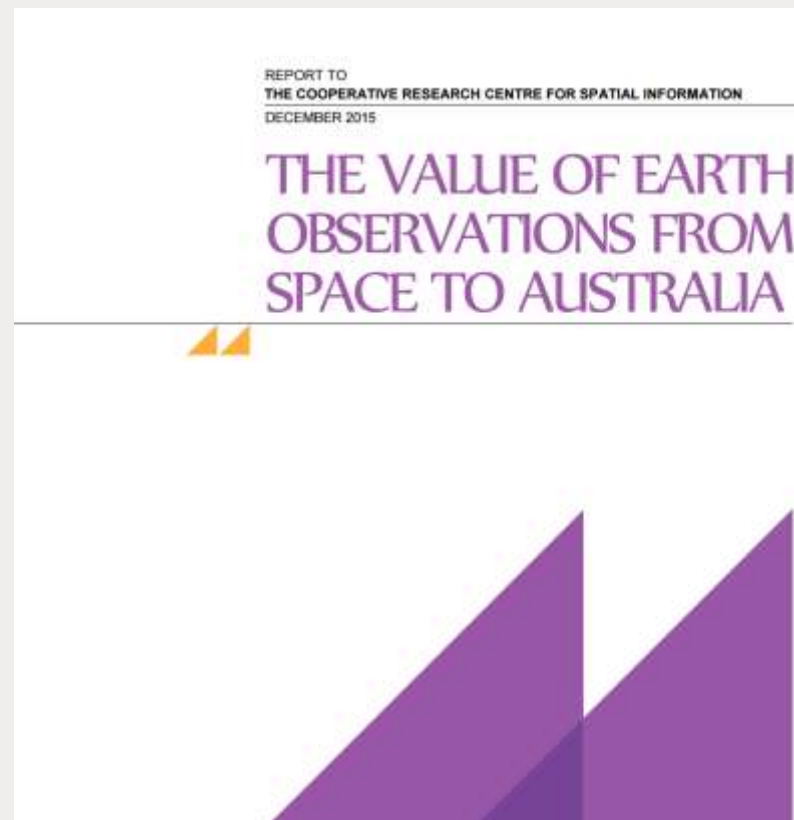
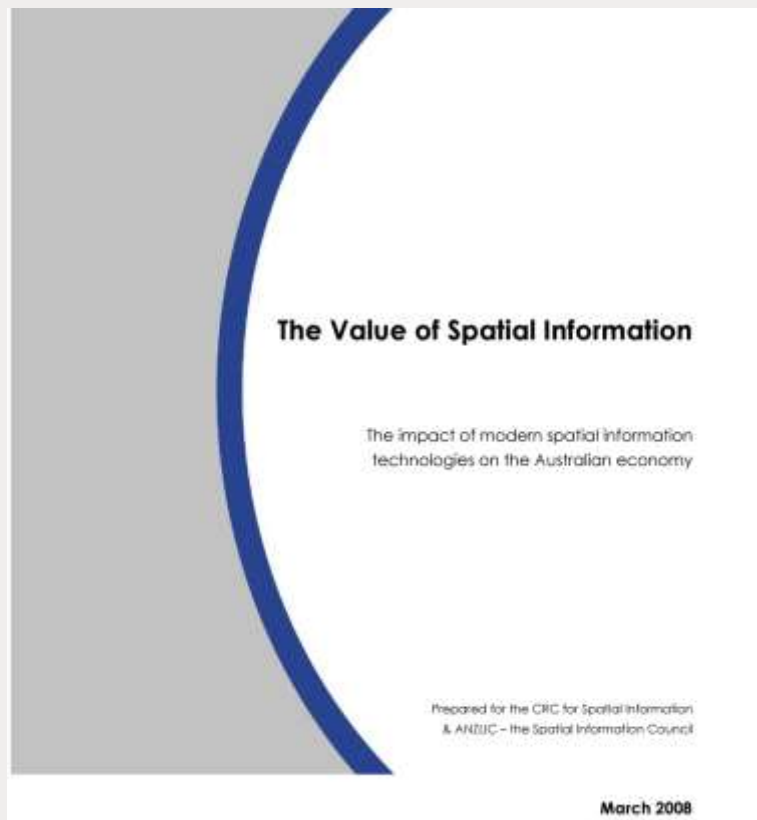


# Impact



**Initial Impact:**  
Benefits – \$305M  
Costs – \$187M

# Previous work





# Previous work

## Economic Benefits of GNSS

### ACIL Allen Consulting Report

This report on the economic benefits of GNSS technology and applications to Australia, was prepared by ACIL Allen Consulting for the Australian Government's Space Coordination Office. The report, which was published in June 2013, provides an overview of economic and social benefits, experience, and prospects for the use of augmented GNSS in agriculture, mining, construction, utilities, surveying and land management, road transport, rail, maritime, and aviation activities.

#### Economic Benefits

Augmented GNSS services have delivered economic benefits to Australian industry through improvements in productivity and more efficient use of resources. On the basis of the findings of this report it is estimated that:

- By 2012 Australia's real GDP was between A\$2.3 billion and A\$3.7 billion higher than it would have been without the accumulated productivity improvements arising from augmented GNSS; and
- By 2020 ACIL Allen's projections are that real GDP could be between A\$7.8 billion and A\$13.7 billion higher than it would otherwise have been.

A copy of the ACIL Allen report can be downloaded via the link below.

#### Disclaimer

Please note that Locata does not own the copyright in the ACIL Allen report. Locata was not involved in its preparation. Locata does not take any responsibility for the accuracy of the statements and the economic and statistical information contained in the report.



May 05, 2015

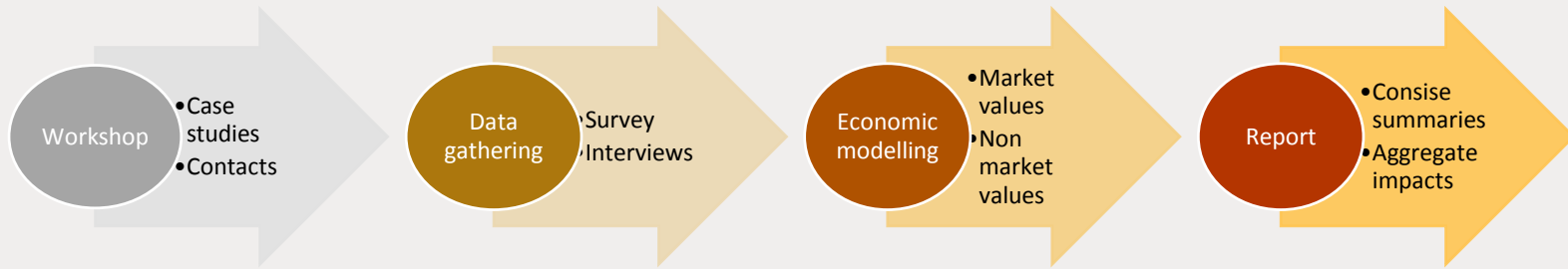
## Geospatial contributes \$21 billion to the Canadian GDP

Prashant Shukle, Director General of [Canada Centre for Mapping and Earth Observation](#) (CCMEO) at Natural Resources Canada, invited the Canadian geospatial community to a pre-release discussion of the just released [Canadian Geomatics Environmental Scan and Economic Value Study](#) of the contribution of the geospatial sector to the Canadian economy. The Canadian study was conducted by Hickling Arthurs Low Corporation with partners ACIL Allen Consulting, Fujitsu Canada and ConsultingWhere. According to Prashant

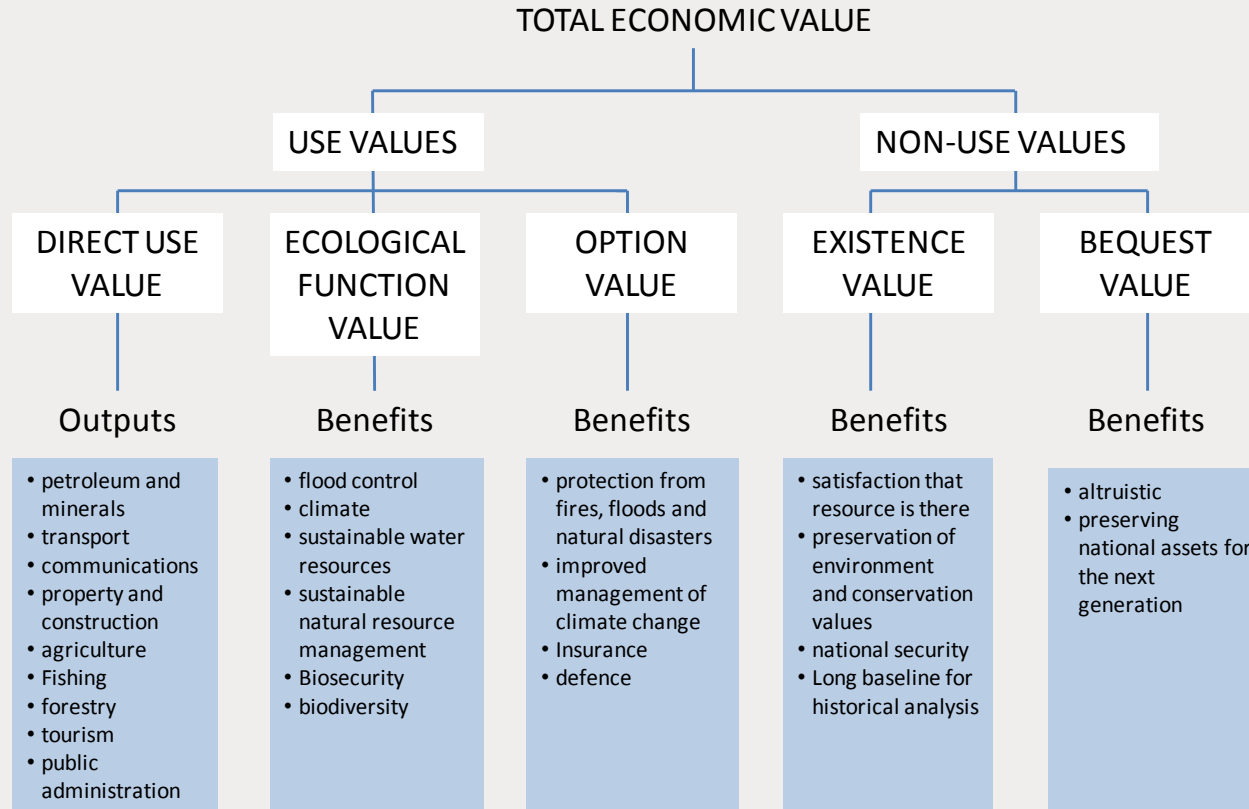


*"For the first time, we have quantified not only the contributions of Canada's geomatics sector to the economy in terms of GDP and employment, but we have captured the significant economic and non-economic benefits to Canada's economy, society and environment that the adoption and use of geospatial information (GI) makes possible.*

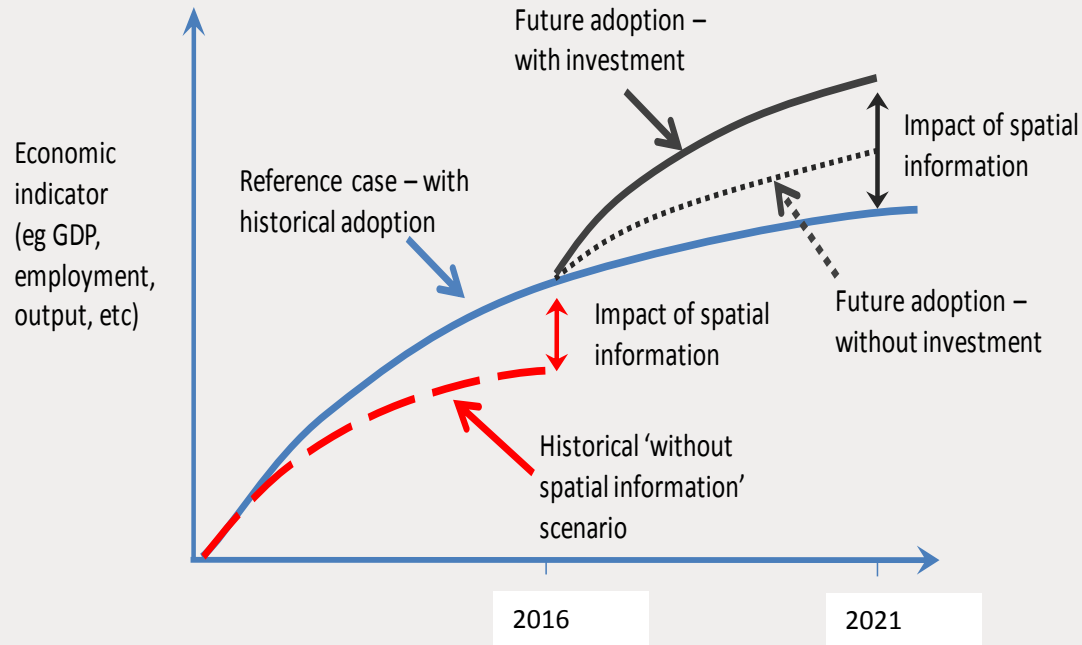
# Process



# Components of value

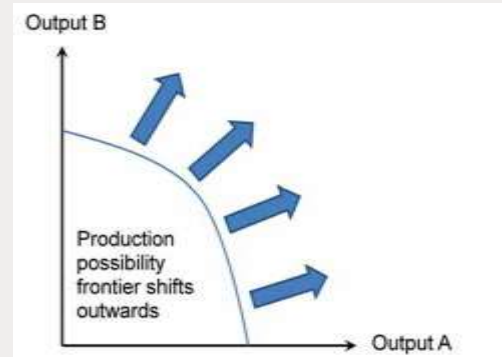


# Economic impact assessment



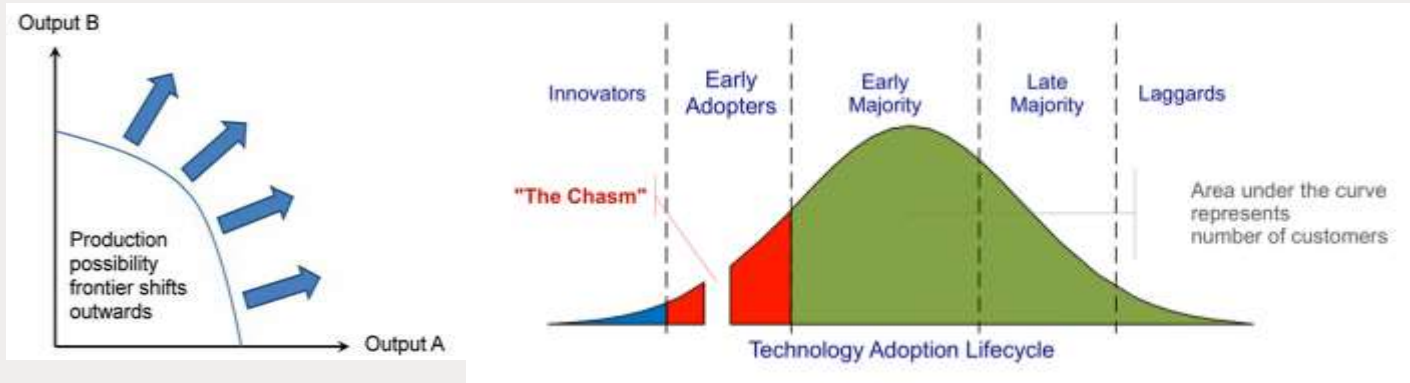
# 1. Direct use - productivity analysis

- Increased output per resource input
- Lower costs
- Developing new markets
- Increasing productivity increases overall economic capacity

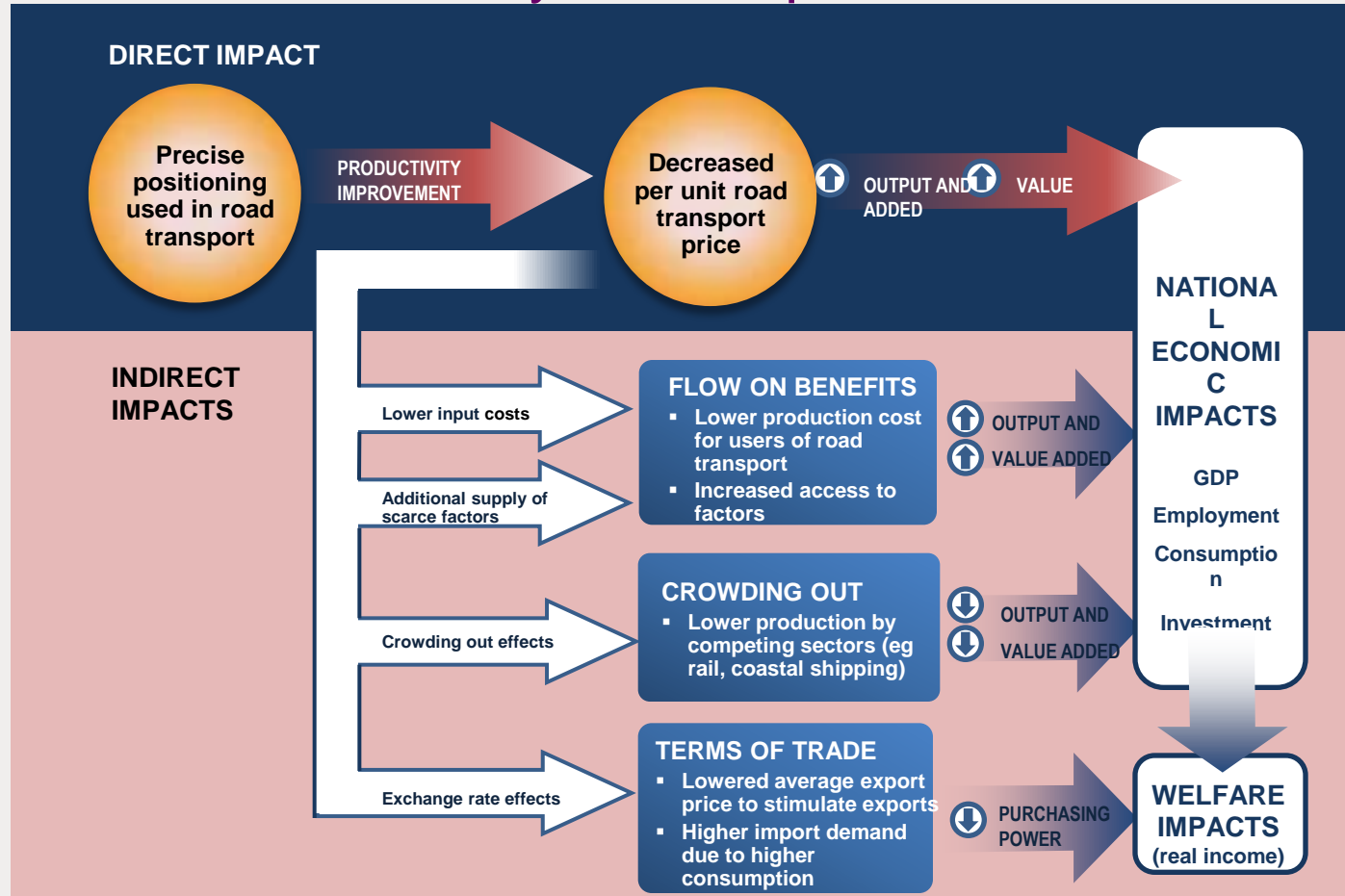




↑ productivity x adoption  
= direct impact



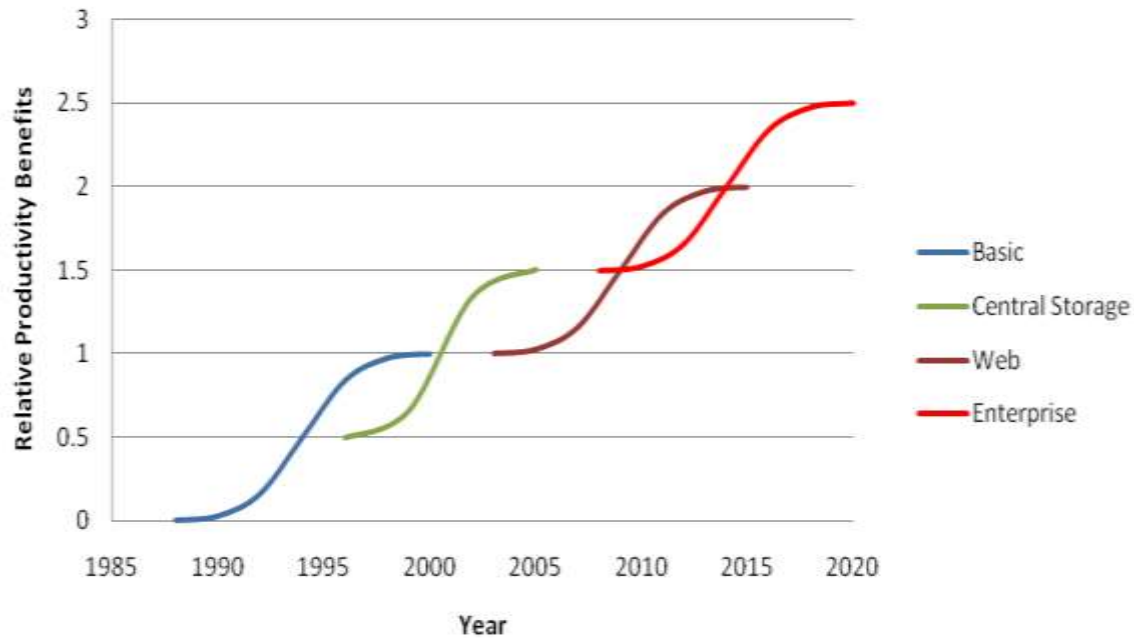
# Economy wide impacts



# Online survey – questions

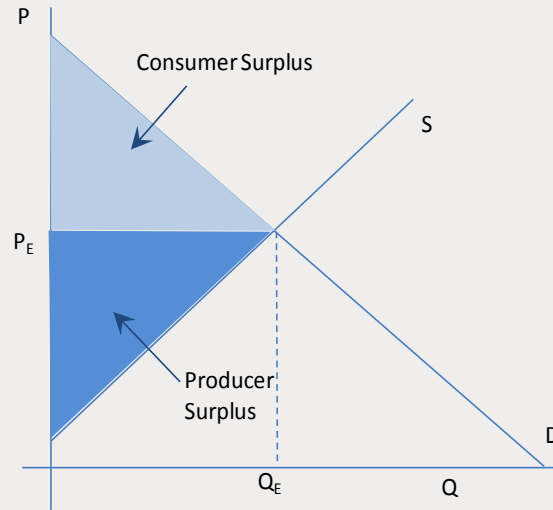
- Productivity
  - Major benefits (>30% improvement in productivity or costs)
  - Significant benefits (10%-30% improvement in productivity or costs)
  - Minor benefits (<10% productivity or costs)
  - No benefit
  - Negative benefit
- To what extent are these productivity impacts being adopted across the sector in which you operate
- Costs to achieve these productivity impacts
  - R&D
  - Set up costs
  - Recurrent costs

## Geospatial Adoption Waves



# 2. Non market benefits - economic welfare analysis

- Consumer and producer surplus
  - Willingness to pay surveys
- Draw on existing studies where available





# NSW Project Methodology

The following tasks were involved:

- Review the **use and application** of spatial services by business, government and the community;
- Review **existing literature** of applications of spatial information that could provide information on economic impacts of this application;
- **Identify specific users** of these applications for further survey either by direct interview or questionnaire;
- The data obtained will be used to update **earlier estimates of productivity impacts** by sector for Australia ;
- Document the **direct & in-direct** economic impact of spatial information; and
- Develop **Computable General Equilibrium model to estimate the macro / micro economic impacts** for spatial information

# Selection criteria choice of the case studies in the economic benefit analysis.

- Significant **impact** on the **costs** of meeting government policy objectives and in government service delivery
- Relevant to **anticipated investment** decisions
- Significant **economic/employment impacts**
- **Relevant** to **current** government/industry policy and investment **plans**
- Significant **value chain impact** - use/creation of value added products/growth in related and supporting industries
- Significant **societal benefit**

# Some case studies

- Transport and infrastructure
- Planning and construction
- Agriculture
- Mining
- Logistics/ courier and despatch services
- Financial services
- Location analytics – retail, media
- Land use
- Health and human services
- Environmental monitoring
- Emergency services
- Local government
- Navigation
- Policy formulation

# Deliverable

Submit a report of no more than 50 pages. The findings need to be reported clearly.

For example:

- By 20XX NSW's real GDP was between \$X billion and X billion higher than it would have otherwise been without the accumulated productivity improvements arising from Spatial Information.
- By 2020 our projections are that real GDP could be between \$X billion and \$X billion higher than it would otherwise have been.
- In addition by 2020, through the identified impacts of research and development in the following identified areas (XYZ) our projections are that real GDP could be between \$X billion and \$X billion higher than it would otherwise have been.

Thank you !!!