



**REGIONAL  
AUSTRALIA**  
INSTITUTE

# Stocktake of Regional Research: Summary Report and Gap Analysis

October, 2012

# Executive Summary

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Since the Regional Australia Institute (RAI) was established in late 2011, many researchers and users of research in regions and government have spoken to RAI about the on-going challenge of connecting with relevant existing knowledge about regional development.

The Stocktake of Regional Research is a first step in creating a long term solution to this issue. The project provides people involved in regional development with easier access to the latest knowledge. The project also supports researchers who want to see their work taken up and used for the benefit of regions to connect their insights to decision makers.

To achieve this, the Stocktake of Regional Research has delivered the following products to help overcome the fragmentation of regional knowledge in Australia:

- The RAI Regional Knowledge Base - a searchable and updateable online literature and data source database. The Regional Knowledge base is now publicly available on the RAI website and provides easy access to:
  - Approximately 1 500 pieces of highly relevant regional research produced since 2000 (this number is still growing), and
  - Over 270 sources of data on regions.
- A gap analysis (this report) to guide and refine RAI's future research agenda and provide advice to others who are considering future priorities for regional research.
- A summary of 50 the most influential research of the last decade which represent essential reading for anyone interested in regional issues (report published separately on the RAI website).

The analysis of regional development research has identified gaps against each of the four RAI research themes. Research captured in the RAI Regional Knowledge Base has been compared with the proposed research program of RAI's four research themes: Theme 1 - Position and Potential; Theme 2 - Realising Opportunities; Theme 3 - Successful Transitions; and Theme 4 - Better Services and Engagement.

As part of the Stocktake Project, a systematic review was undertaken of the research literature related to regional Australia. This systematic review was coupled with hand searches and a canvassing of grey literature. The systematic review question settled on was: 'Based on the body of Australian and international evidence since 2000, what factors most affect the long-term prosperity and most fulfil the potential of regional Australia?'

To assist with the cataloguing of the captured research items in the RAI Regional Knowledge Base, a list of 50 topics was created which, in turn, were bundled into five groups: Population and People; Economy; Environment and Energy; Industry; and, Process. Every item of research was categorised against one of these topics. The 1 415 research items were categorised 3 409 times against the full range of 50 topics. The top 15 topics represent 50% of all categorised research items. Although the literature search revealed that there is a substantial amount of research available of relevance to regional Australia policy development, it also revealed that the body of research is fragmented by both topic and RAI theme.

The most categorised research topic was 'Aboriginal and Torres Strait Islander Peoples' with 219 items categorised against it, or approximately 15% of the total number of captured research items. 'Health' was the second most prominent topic. The topics in the Process group – 'Managing Change', 'Community

Engagement', 'Regional Development Processes' and 'Governance' – featured prominently, with three of the four in the top 15, and the fourth ranked 16th.

16 of the 50 topics did not capture a great deal of research, containing just 20 or fewer research items in each. No research at all was captured on two of the 50 topics – 'Wholesale' and 'Waste'. Topics in the Economic group captured a surprisingly low level of research relative to the other four topic groups.

An online survey was also conducted to inform the project. Respondents identified a number of key research gaps. The most frequently mentioned research gaps were Sustainability, Education and Aboriginal and Torres Strait Islander Peoples, and Economic Growth. Interestingly, however, these topics are, in fact, among the most prevalent captured in the RAI Regional Knowledge Base, tending to indicate a lack of awareness of or access to available research materials among respondents.

When considered against the four RAI themes, there was considerable variation in research coverage. It is estimated that 60% of research captured in the RAI Regional Knowledge Base relates to both Theme 3 and Theme 4. It is further estimated that 40% of research relates to Theme 1. However it is estimated that just 10% of captured research relates to Theme 2.<sup>1</sup> In contrast, in the assessment of policy maker demand for research by theme, Theme 2 shows the biggest supply-demand research gap. Theme 3 shows the smallest supply-demand research gap. The relative size of these gaps should inform any future weighting of effort by RAI among its four themes.

The literature search found limited international research that was either applicable or had been customised to the Australian experience. The literature search also found that there was not a great deal of evaluation research which helps policy makers determine how prior interventions have performed.

During consultations, policy makers expressed the view that most academic research was of little relevance to them and they relied more on institutional reports ('grey literature') which, in turn, often drew on academic research. During the consultation process it also became clear that there is no obvious or centralised convenor of a research agenda for regional Australia and its attendant policy issues. It was likewise evident that there were significant differences in views among policy makers on the one hand, and researchers on the other, about what issues were most important in terms of current and future research requirements.

Overall the Stocktake of Regional Research has found that:

- the research literature of relevance to regional Australia is large but highly fragmented;
- the research literature is largely unknown to and often considered irrelevant by policy makers;
- RAI's four research Themes adequately cover the scope of research and areas of interest that RAI will need to take into account in its work; and
- there is enormous scope and demand for additional research work.

As part of the literature reviews dozens of potential topics of future RAI research have been identified under each theme. In addition, it further distilled from this six priority research questions. The details of these are included in Table 3. The six priority research topics are:

- The Asian Century: Opportunities and Implications for Regional Australia
- Maximising the Benefits of the Resources Boom for Regional Australia: Determining the Policy Options

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<sup>1</sup> These shares do not add up to 100% because a number of individual research items relate to more than one theme.

- Harnessing the Benefits of High Speed Broadband in Regional Australia for Improved Service Delivery
- Productivity in Regional Australia: Defining a Menu of Options
- Case Studies on Realising Opportunity in Regional Australia: Successes, Transformations, Possibilities
- Intervention Methodology: Good Outcomes from Good Policy

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# 1. Project Summary and Background

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On 18 June 2012 the Regional Australia Institute announced it was undertaking a *Stocktake of Regional Research* project (Stocktake Project). At the time of the announcement the RAI Chairman, Mr Mal Peters, described the undertaking as “the first comprehensive review of all research undertaken on regional communities in the 21<sup>st</sup> Century” and as representing the opening of RAI’s portfolio of research projects. This Project Summary and Gap Analysis have been prepared for launch by RAI on 30 October 2012.

The Stocktake Project has involved a large number of activities, leading to a number of substantial outputs. This project summary provides details on all project activities as well as presenting the final research gap analysis which will help inform RAI’s future research agenda.

RAI’s research agenda has been aligned with four themes, namely:

- Theme 1 - Position and Potential: potential for new growth and prosperity in each region;
- Theme 2 - Realising Opportunities: understand how opportunities for growth and development can translate into tangible benefits for regions;
- Theme 3 - Successful Transitions: develop better strategies for communities in transition to enable them to cope with change; and
- Theme 4 - Better Services and Engagement: better ways of engaging regional communities and delivering services.

The Stocktake Project incorporated the following activities:

- Development of a Systematic Review Protocol to identify and capture relevant research
- Creation and population of a searchable and updateable literature database - RAI Regional Knowledge Base
- Creation of a database of regional data and evidence sets which was incorporated into the RAI Regional Knowledge Base
- Conducting an online survey of RAI stakeholders
- Consulting with RAI stakeholders (researchers and policy makers) across the country
- Preparation of four literature reviews (per RAI’s four research themes)
- Preparation of a gap analysis to guide and refine RAI’s future research agenda
- Determining the most influential research

## 2. Introduction to the Gap Analysis

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This project summary incorporates an analysis of gaps in regional development research as they relate to RAI's research agenda. Gaps have been identified against each of the four RAI research themes. Gaps in the literature have also been captured by topic in the RAI Regional Knowledge Base.

This project summary and gap analysis should be read in conjunction with the separate literature reviews prepared for each of the four RAI themes, which provide greater detail on the gaps and research needs for each theme. The objective of the gap analysis is to help inform the development of RAI's future research agenda.

To assist with the cataloguing of research items into the RAI Regional Knowledge Base and with the completion of the gap analysis, a set of 50 topics was created and bundled into five groups: Population and People; Economy; Environment and Energy; Industry; and, Process. The topics have been largely drawn from the Australian Bureau of Statistics (ABS) statistical categories, but also customised to accommodate the preponderance of research issues relevant to researchers and policy makers working on regional policy issues in Australia.



## 3. Systematic Review Protocol

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The first major task of the Stocktake Project was to produce a comprehensive review of the relevant research and grey literature. The objective was to:

- provide a baseline of information for RAI's investment strategy;
- include the captured research in an updateable and searchable online database;
- raise awareness amongst policy makers and other stakeholders about the scale and diversity of work under way in relation to key regional issues; and
- clarify the key research gaps and opportunities for synthesising information to inform (national, state and local Australian) policy makers.

It was concluded *ex ante* that the body of literature that could be captured in the RAI stocktake was potentially vast. Early assessments suggested that the total amount of potentially relevant pieces of work could exceed 10,000 items from a population in the tens of thousands. However, it was noted that these items would cover a wide array of subject matter, at different levels of detail, have different foci, be of variable quality and be intended for different purposes and audiences.

A key requirement of the project was that the stocktake be based on an efficient research design so that RAI's future research agenda could be based on evidence that is internally consistent and transparent. To achieve this, a Systematic Review Protocol was developed which:

- identified literature that is within scope versus outside scope of the assessment;
- categorised the literature in a systematic and consistent manner; and
- provided a robust, defensible and transparent evidence base to say something more precise and targeted about regional development in Australia.

### 3.1 Systematic Review Methodology

To compile and tabulate the regional development literature, RAI adopted the systematic review (SR) approach of the United Kingdom's Overseas Development Institute (ODI).

A systematic review attempts to identify, appraise and synthesise all the empirical evidence that meets specified eligibility criteria to answer a predetermined research question. Researchers conducting systematic reviews use explicit methods aimed at minimising bias in order to produce more reliable findings that can be used to inform decision-making<sup>1</sup>.

The ODI SR approach involves seven generic steps:

- Deconstruct the research question by population, intervention, outcome and comparator (if available) – these elements form the basis of search strings.
- Produce a protocol that describes definitions, search strings, search strategy, inclusion and exclusion criteria, and approach to synthesising the literature identified.
- Pilot the protocol and, if necessary, revise the search strategy.
- Conduct systematic searching (i.e. study retrieval) of academic databases and perform hand searching of institutional websites.

- Screen retrieved studies, using pre-defined inclusion and exclusion criteria on relevance by title, abstract and full text. Often the screening process is piloted to ensure each researcher screens consistently.
- Characterise studies that have been included in the final analysis by intervention, study quality, outcomes, and/or by research design and type of analysis.
- Extract relevant quantitative and/or qualitative data, synthesise evidence, and, if possible, perform meta-analysis if applicable.

In order to minimise the potential for bias in the review process, the SR must:

- be based on a clearly defined and documented closed-frame research question;
- document a search protocol. A search protocol identifies the broad search strategies, pre-defined search strings, and uniform inclusion/exclusion criteria for the SR. Documenting the search protocol up front increases transparency of the SR, and makes the process more repeatable.

## 3.2 The proposed Systematic Review question

SRs generally aim to answer one well-defined closed-frame research question that identifies (1) the population of interest (P), (2) the intervention of interest (I), (3) a comparator (C) (a control or reference intervention, where this is available or relevant), and (4) the outcomes (O) that are of interest – (PICO).

RAI has 15 key focused research questions that revolve around its four core research themes (refer Annex B). For the purposes of the SR RAI stocktake, RAIs four research themes and 15 sub-questions need to be reduced to a single, and preferably closed-frame, research question. The systematic review question settled on was:

**Based on the body of Australian and international evidence since 2000, what factors most affect the long-term prosperity and most fulfil the potential of regional Australia?**

Following the PICO framework, under this SR question the following factors were considered: (1) the population of interest are communities of regional Australia (the term regional Australia was defined as non-metropolitan Australia); (2) the intervention (I) are the factors to which the population is exposed; and (3) the outcome (O) is long-term prosperity. Note that there is no control group (C) in the research question, as regional development does not take place within a controlled experimental framework.

The proposed SR question was preferred to undertaking SR on each RAI key theme or sub-question. The proposed SR question:

- is a largely closed-form question that closely follows the PICO format of SR, and is consistent with other problem statements that have been used in international SR studies to synthesise literature on the effects of macro- and micro-level policy;
- allows the RAI research theme and/or sub-questions to be answered as a subset of the overarching question. For example, understanding the factors that accelerate decline in long-run regional prosperity can be used to address how to better empower people and regions involved in transition to manage impacts on their situations;
- explicitly identifies the main objective of regional development to be long-term regional prosperity. The working definition of prosperity for this review is more encompassing than pure economic prosperity, and is more aligned to wellbeing as measured by genuine

progress indicators now being used internationally, by the ABS and Australian state governments;

- focuses on empirical exploration on contextual factors as compared to theoretical exploration. The overarching question allows for possible exploration between co-variables and context which influence the linkage between factors and outcomes that are complex and non-linear. An exploration of the empirical evidence for these factors, their relative strength and pathways of influence, will produce evidence-based insight;
- focuses on long-term interventions and outcomes. Regional development policy typically focuses on long-term implications of policy. A focus on the longer-term is also appropriate for the RAI stocktake;
- focuses on literature accumulated since 2000. This cut-off is important for the manageability of the SR process;
- focuses on international and Australian literature. This is important because it allows international comparisons and lessons to be drawn; and
- addresses the priorities that some Australian regional development experts believe need to be resolved.

Further details on the Systematic Review Protocol, methodology, search strings, definitions and scope are contained in Annex C.

## 4. Consultation process

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An important part of the Stocktake Project was the consultations conducted with policy makers and researchers around the country. 60 people were interviewed during the project. Interviewees were equally divided between policy makers and researchers, and approximately evenly distributed across the eight states and territories.

The consultation process was separated into three phases:<sup>2</sup> (1) developing the consultation lists; (2) developing and undertaking the online survey; and (3) developing and undertaking the face-to-face and telephone consultations.

### 4.1 Definitions

For the purposes of the consultations, researchers and policy makers were defined as follows:

- Researchers conduct research into issues of relevance to regional development and regional policy. Researchers can come from academic institutes, think tanks, and other private and non-government organisations.
- Policy makers refers to those with authority over governmental policy matters. Policy makers can be Ministers and their policy advisers, as well as officials working in government departments and agencies (at Commonwealth, state and local levels).
- Stakeholders are other organisations or individuals with involvement or a relevant interest in regional development and policy issues. They are often policy influencers, and may include, for example, Regional Development Australia (RDA) committees, relevant industry bodies such as the Australian Regional Tourism Network, taskforces, committees and business chambers.

The policy makers and researchers to be interviewed were identified based on the following set of selection criteria:

- understanding of regional Australia issues, the research-policy nexus, as well as possible insights into research gaps;
- assessed accessibility and knowledge;
- those domiciled regionally, as much as possible;
- across Australia, seeking a spectrum of expertise across topics and processes; and
- representing a mix of organisations.

A semi-structured interview guideline was developed. The consultations covered many issues, including:

- grey literature;
- views on the most influential pieces of research;
- views on gaps in current research;
- potential uses and needs for the database; and
- additional relevant strategic issues.

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<sup>2</sup> The three phases of activity will occur concurrently and have overlapping dependencies.

## 5. Online Survey – Summary of Results

An online survey of 323 RAI stakeholders was conducted in August 2012. The survey sought to elicit views on the main research issues confronting researchers and policy makers working on regional Australia development policy to inform RAI's future research agenda.

The online survey covered the following topics:

- the most influential pieces of research;
- grey literature coverage;
- likely uses of the database;
- preliminary views on the gaps in existing research and data; and
- willingness to beta-test the database.

There were 113 responses. They provided very detailed answers to open questions. Almost half the respondents were from New South Wales and two-thirds were from regional areas. Of the 113 respondents, only 15% were policy makers with researchers and general stakeholders making up the rest.

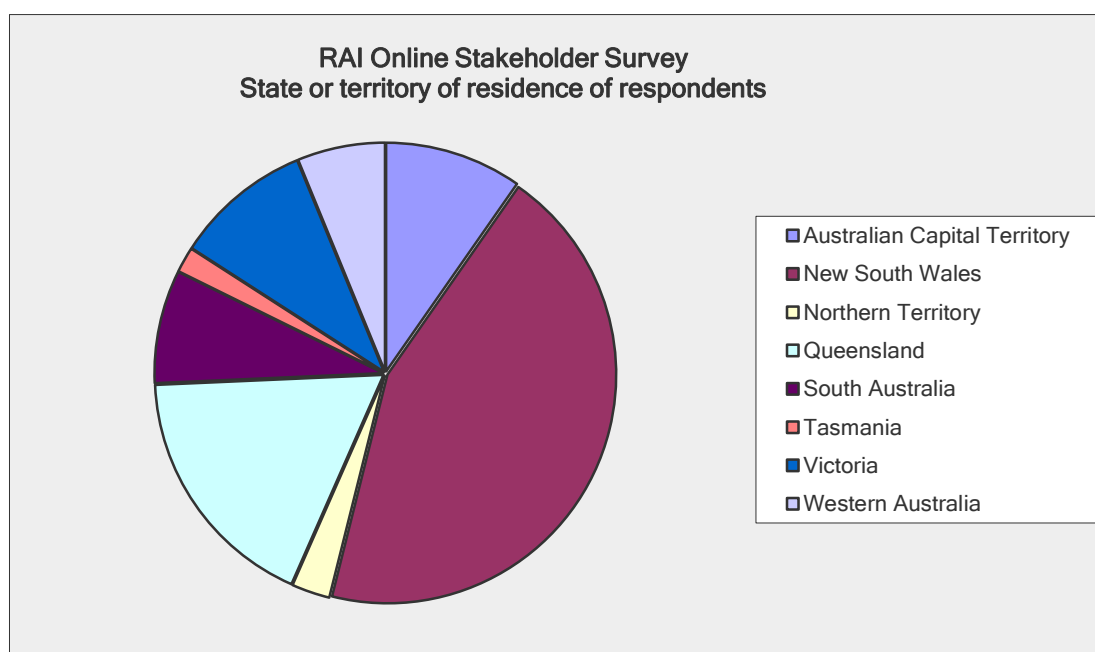


Figure 1: State or Territory of Residence of Respondents

### Current research

The consultation process captured a great deal of information related to respondents' current research, which was fed into the literature review process. Repeated words in the current research responses included:

- community
- regional development
- NSW
- local government
- rural
- services

### Future research priorities

A great deal of information on respondents' future research priorities was captured.

Repeated words in the responses include:

- regional
- development
- communities
- economic
- energy
- government

### Influential organisations

Survey respondents were specifically asked for details on organisations that have been influential in the regional development space. Repeated responses include:

- CSIRO
- RIRDC (Rural Industries Research and Development Corporation)
- ABS
- CQU (Central Queensland University)
- CHURP (Centre for Housing, Urban and Regional Planning – The University of Adelaide)
- OECD
- RAI
- DPIs
- BITRE (Bureau of Infrastructure, Transport and Regional Economics)
- UTS (University of Technology, Sydney)

### Influential authors

Respondents were likewise asked about influential authors of research. The most common responses were:

- Andrew Beer
- John Rolfe
- Paul Collits
- Tony Sorenson
- Brian Dollery

## Gaps

With a view to informing this gap analysis, respondents were asked about their experience in dealing with research gaps. This is dealt with later in the report at greater length, but the survey response showed:

- 86.9% of respondents had experienced gaps.
- Economic Growth and Sustainability were the two most significant gaps identified.
- Other significant gaps included Productivity, Education and Training, Innovation Science and Technology.
- Further comments on gaps included the need for regional level and up-to-date data, repeated qualitative findings, regional cities, economic growth in small communities, real-time impact data, specialist research for regional and rural areas, and research linkages.

## Ways a research database could be useful

Respondents were asked specifically about how RAI stakeholders might best obtain value from the RAI Regional Knowledge Base. Answers included:

- Finding others doing similar research/potential collaborators
- Grey literature
- Knowledge of research in particular regions
- One-stop shop
- Stopping duplication
- Awareness of and access to current research

## Other databases people use

- ABS/Census
- Google Scholar
- REMPLAN
- OECD
- BITRE

## 6. Data and Evidence Database

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### 6.1 Description of database

As part of the Stocktake Project a database of Australian national and state statistics and evidence for regional development, which was incorporated into the RAI Regional Knowledge Base.

The databases were collected and collated to assist RAI research, especially research focused on RAI's Theme 1, Position and Potential. The sources in this database all relate to domestic (Australian) data and evidence. Both primary and secondary data sources are included.

The database element of the RAI Regional Knowledge Base was developed in two phases. The first phase was developed and then sent to some key stakeholders for review. After review, and taking into account feedback from the consultation process and online survey, the database within the RAI Regional Knowledge Base was then significantly expanded in a second phase of development. It was prepared using Microsoft Excel and has over 275 individual databases, many of which have subordinate databases. About one-third of the data sets are drawn from the Australian Bureau of Statistics.

The Position and Potential theme is intended to provide foundational evidence and knowledge about the status and potential of regional Australia. RAI's formative work has identified that the development of regional policy in Australia lacks accessible and robust benchmark information.

### 6.2 Sample of the RAI Regional Knowledge Base Data Content

Table 1 shows samples of available databases extracted from the database element of the RAI Regional Knowledge Base. Databases have been ordered by host organisation and categorised against the 50 topics. Some databases are noted as regional profiles. The database is fully searchable.



Acronym	Source Organisation	Name of Data Resource	Topic	Data Available
MS	My School	My School	Education and Training	Compare schools across Australia
NIEIR	National Institute of Economic and Industry Research	The State of the Regions (SOR) report	Regional Profile	Regional performance, equality and inequality, economics
PC	Productivity Commission	Population and Migration: Understanding the Numbers	Population and Migration	Includes population growth, fertility and mortality, overseas migration
PHIDU	Public Health Information Development Unit	A Social Health Atlas of Australia	Health	Various health indicators for Australia
RBA	Reserve Bank of Australia	RBA Statistical Resources	Economic Growth	Various statistical resources, particularly economic indicators
TRA	Tourism Research Australia	Tourism Research Australia	Tourism	Tourism businesses, forecasts, surveys etc
BITRE	Bureau of Infrastructure, Transport and Regional Economics	Spatial trends in Australian population growth and movement	Population and Migration	Summary of key trends in population growth and decline across Australia's regions
BOM	Bureau of Meteorology	Bureau of Meteorology	Climate and Natural Resources	Weather, climate and water
BREE	Bureau of Resources and Energy Economics	Australian Petroleum Statistics	Electricity Gas and Water	Monthly national and state petroleum statistical information
BREE	Bureau of Resources and Energy Economics	Resources and Energy Quarterly	Mining	Values of resources and commodities and current information of interest
CGC	Commonwealth Grants Commission	State Revenue Sharing Relativities	Government Administration	Information on state and federal government finances and grants
CSIRO	Commonwealth Scientific and Industrial Research Organisation	CSIRO Data Access Portal	Agriculture, Forestry and Fisheries	Provides access to data published by the CSIRO
DAFF	Department of Agriculture, Fisheries and Forestry	Australia's Agriculture, Fisheries and Forestry at a glance	Agriculture, Forestry and Fisheries	Key features of Australian agriculture, fisheries and forestry industries
WA-DRDL	Department of Regional Development and Lands	Reports on particular regions and issues	Regional Profile	One-off reports on various regional issues, including farming in the Ord
WA-DRDL	Department of Regional Development and Lands	Pastoral Land Condition Report	Agriculture, Forestry and Fisheries	The conditions of pastoral lands in WA
WA-DT	Department of Transport	Plans and Projects	Transport	Plans and projects for infrastructure and transport in WA
WA-GDC	Gascoyne Development Commission	Gascoyne Development Commission	Regional Profile	Regional profile including economy, infrastructure, tourism, horticulture, fishing

*Table 1: Excerpt of databases in the database element of the RAI Regional Knowledge Base*

The database element of the RAI Regional Knowledge Base has a list of key organisations across Australia, both at a national level, as well as for each state and territory, including government, quasi-government and non-government entities. The database element of the RAI Regional Knowledge Base also provides the next level of detail of datasets held by each organisation. This includes the name of the dataset, industry sector(s), a brief indication of the data available, and the nature of the data, scale, year(s) and specific web links.

## 6.3 Database functionality

The database element of the RAI Regional Knowledge Base has been prepared to allow for easy searching of the database through the use of filters. Based on the columns in the datasets spreadsheet, database users will be able to filter information by:

- source organisation;
- category/industry sector(s);
- whether the data is primary or secondary;
- the frequency of data collection;
- the scope of the data (for example, the states to which it applies, regions, or industry groups; and
- year(s) available.

This allows database users to exclude irrelevant data sources and search for multiple categories simultaneously. Once users have found the relevant data sources they can link to that data source directly from the spreadsheet.

## 7. 50 Influential Pieces

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Another requirement of the Stocktake Project was an estimation of the 50 most influential pieces of research from among the research captured in the RAI Regional Knowledge Base.

### 7.1 Objective

The objective of seeking to determine the 50 most influential pieces of research was to obtain a clearer understanding of what research had, for better or worse, most influenced the thinking of researchers and policy makers in working on regional development issues in Australia.

### 7.2 Methodology

The first decision was to have a larger list. They settled on the number of 50, which they thought might represent 5% of the population of the RAI Regional Knowledge Base. Because the population of the RAI Regional Knowledge Base has expanded beyond initial expectations, the list of 50 now represents a smaller percentage than originally intended.

In order to identify the 50 most influential pieces of regional research, combination of consultation methods with researchers, stakeholders and policy makers in the field, as well as online tools such as Google Scholar's Citations Gadget was relied upon.

The consultation process began with the supplementation of RAI's subscriber list. RAI requested that current subscribers encourage their extended networks to subscribe to the RAI mailing list to allow for a broader holistic engagement process for the project.

Next, an online survey was sent out to the increased subscriber list. This survey covered a range of topics, including views on the most influential authors, organisations and individual pieces of research. A wide range of helpful feedback was provided by 113 respondents.

Face-to-face (and where this was not possible, telephone) interviews with around 60 policy makers, researchers and stakeholders around Australia were conducted. Those interviewed were forthcoming in views on influential regional research, authors and organisations.

When compiling the list of the 50 most influential pieces of research, a scoring method based on survey and consultation responses was used. This was supplemented by desktop research, including the use of Google Scholar and its useful Citations Gadget, which shows how many citations a particular piece of research has achieved within Google Scholar's database. Google Scholar also allows the user to click through to the citing links.

The RAI has not sought to make a critical analysis of each piece of research, or the soundness or relevance of its conclusions.

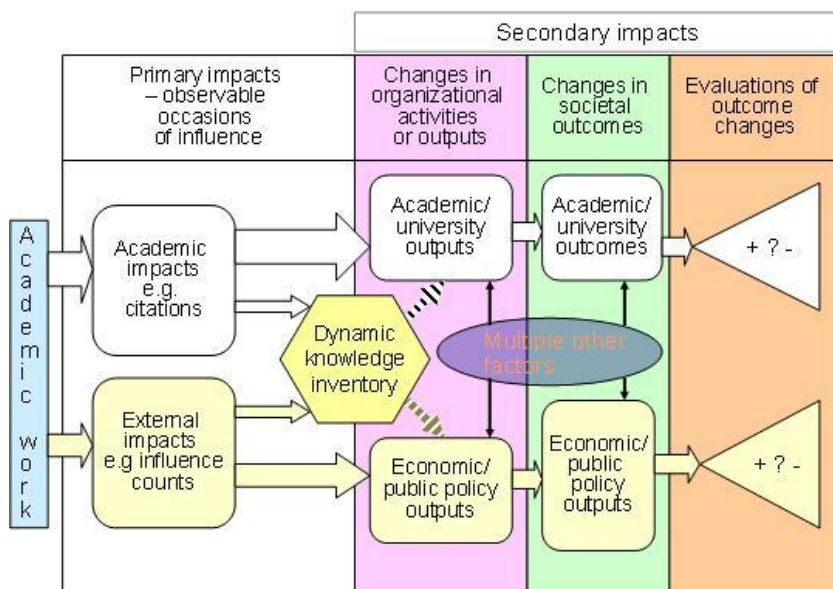


Figure 2: Influence of Research Work (London School of Economics)

## 7.3 One-page summaries

Once the list of 50 was compiled one-page summaries of each of the 50 pieces of research were developed. These briefly outline the title, author, year and abstract or key findings of the research, followed by an analysis of why that particular piece of research is thought to be influential, as well as a discussion of the potential limitations of the research for use in policy making or the need for complementary analysis.

## 7.4 Reflections on the 50 Pieces of Research

In terms of the final list of 50 pieces of research, some results were more clear-cut than others. For example, the Productivity Commission, Organisation for Economic Co-operation and Development (OECD) and Andrew Beer were all thought to be highly influential in regional research by many of those who responded to the survey or participated in interviews.

Beyond these top three, the top 20 or so authors were clearly influential in regional research according to the results of the consultation process, receiving multiple mentions across the survey and interviews. The remaining 30 or so authors and organisations were still all mentioned numerous times by those consulted, but not to the same extent as those in the top 20 or so.

A limitation to this list of 50 is that the process had to rely to some extent on citation of an influential author and organisation, rather than a specific piece of research. In some cases, a particular paper, book or other form of research had clearly been more influential than another work by the same author or organisation. However in other cases it was more difficult to single out one piece of research. To do this, the process has relied on survey and consultation views where possible, Google Scholar and their own judgement.

The majority of the top 50 pieces of research deal with: regional economic growth; the status of regions; regional policy; and other high-level economic and social development-related issues. There are a smaller number of more specialised works within the top 50, such as one

that is concerned with ecological economics issues in tropical regional Australia, or a paper on the consolidation of local government. This aligns with the findings of the literature reviews and gap analysis that the broad-brush issue of how to achieve economic and social development in regional Australia is at the forefront of policy maker, researcher and stakeholder minds.

## 7.5 Usefulness for policy makers

In terms of the relevance or usefulness of the top 50 pieces of research for policy makers, there are clearly many research resources available that could be used by policy makers to understand a regional development policy situation or issue better or identify policy options.

However, on the whole, most research is not easily accessible or digestible for policy makers. It is telling that the work of the Productivity Commission and OECD was considered the most influential (by both policy makers and researchers), as both of these organisations develop research that is squarely targeted at the work and needs of policy makers.

Academic items or books in the top 50 pieces of research, on the other hand, are not as easily accessed by policy makers.

Hence, ways of distilling the lessons from these high quality and informative research pieces into a format that can be readily accessed, used and adopted by policy makers would be highly beneficial, and improved policy making outcomes would potentially follow.

*Table 2: A selection of examples from the top 50 pieces of research*

Title	Author(s) / Editors
The New Rural Paradigm: Policies and Governance	Organisation for Economic Co-operation and Development (OECD)
Government Drought Support	Productivity Commission
Developing Australia's Regions: Theory and Practice	Andrew Beer, Alaric Maude, Bill Pritchard
Regional Development: Some issues for policy makers	Tony Sorensen
Regional Economic Development: Analysis and Planning Strategy	Robert J. Stimson, Roger R. Stough, Brian H. Roberts
A future for regional Australia: Escaping global misfortune	Ian Gray, Geoffrey Lawrence
Investing in regions: Making a difference	Grattan Institute
State of the Regions report	National Economics
The Murray-Darling Basin Sustainable Yields project	Commonwealth Science and Industrial Research Organisation (CSIRO)
Australian Farm Surveys results 2009-10 to 2011-12	Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES)

## 8. Gap Analysis Methodology

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The gap analysis has been compiled on the following basis:

- Interviews with 60 policy makers and researchers across the country and their views on gaps in the current stock of regional research.
- In an online survey, responses were received from 113 RAI stakeholders with their views on research gaps.
- Research captured in the RAI Regional Knowledge Base was reviewed by topic and by RAI theme.
- The captured research was compared with the identified gaps to provide suggestions about future research priorities.

Following completion of a systematic review of the literature, coupled with hand searches and a canvassing of grey literature, 1415 research items were captured in the RAI Regional Knowledge Base. In addition to comparing the research captured in the RAI Regional Knowledge Base with the proposed research program of RAI's four research themes, a list of 50 topics was created which, in turn, were bundled into five groups: Population and People; Economy; Environment and Energy; Industry; and, Process. Every item of research was categorised against one of these topics.

## 9. Production of Research by Year

The project was interested to know the ebb and flow of captured research by year of publication. See Figure 3 below for details. As might be expected, there was a gradual increase in the volume of material captured from 2000 onwards. Likewise, there is a drop off for the part-year of 2012. There was a pronounced dip in research in 2002, for which there is no clear explanation.

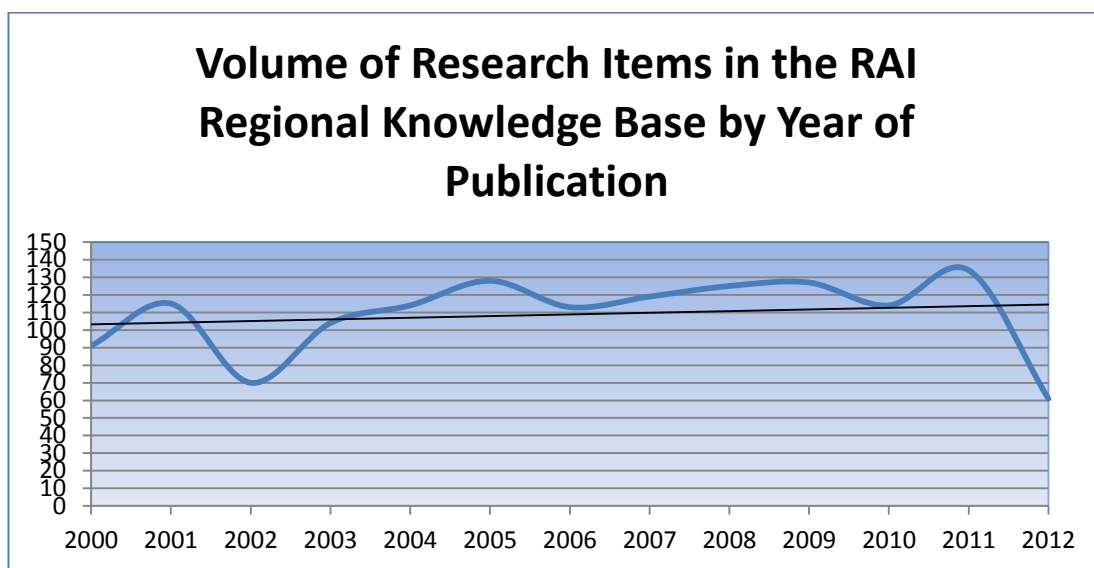


Figure 3: Volume of Research by Year of Publication

## 10. Stakeholder views on gaps

Before analysing the gaps identified in the RAI Regional Knowledge Base, it is useful to consider the views of stakeholders regarding gaps in the current literature on regional issues. An online survey was conducted. The graph below shows the top 10 gaps identified by survey respondents by topic.

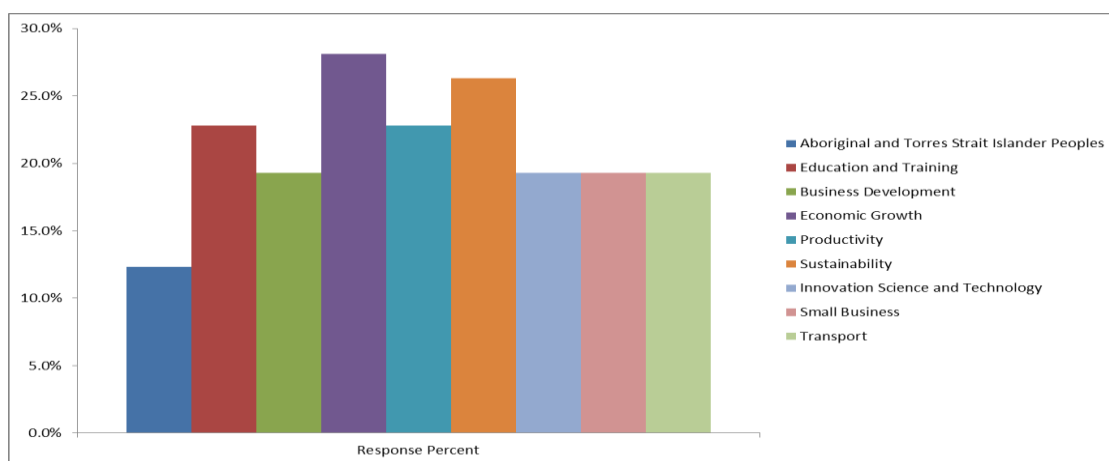


Figure 4: Top 10 gaps in research according to survey respondents

Numerous survey respondents and interviewees specifically identified data gaps as being highly significant. Stakeholders commented on the infrequency of data collection (e.g. the Census of Population and Housing and the Agricultural Census), and the inability to obtain certain types of data in small enough regional areas. It is noted that the new database of databases - which has been incorporated into the RAI Regional Knowledge Base – has been produced to respond to this demand for data. The database element of the RAI Regional Knowledge Base now contains over 250 datasets (which often incorporate many subordinate datasets) of relevance to regional Australia policy.

Some other gaps identified during the consultation process include the need for research on:

- The role of regional cities
- Connecting international trade modelling to research on farm strategies and agricultural value chains
- Broad-based regional economic development: its drivers, constraints and risks
- Evaluation of past policy interventions, including the need for more interdisciplinary research
- Psychological and identity issues relating to 'place' and self-perception
- Local government capital raising
- Local and civic leadership

As the gap analysis will later show, there is a divergence in the gaps identified during the survey work by stakeholders (see Figure 4) and what was actually captured in the literature search. Stakeholders identified topics such as Sustainability, Education and Aboriginal and Torres Strait Islander Peoples, and Economic Growth as research gaps whereas, in fact, these topics are among the most prevalent captured in the RAI Regional Knowledge Base. RAI does



not have a definitive explanation for this divergence. It may be that even though the above topics are the most represented in the RAI Regional Knowledge Base they are still, in the view of stakeholders, under-researched. Or, it may be that stakeholders do not have complete access to the research and are unaware of its existence or availability. In RAI's view, the latter conclusion is more tenable.

## 11. Coverage by Topic

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All research entered into the RAI Regional Knowledge Base was categorised according to a list of 50 topics, which, in turn, were bundled into five groups – Industry, Environment and Energy, Economy, Population and People, and Process. See Annex A for more details.

Each item of research listed in the RAI Regional Knowledge Base was categorised against a single topic or where the research item cut across another topic it was categorised against a second topic. The vast majority of identified research has been entered into the RAI Regional Knowledge Base. Hand searching of grey literature is continuing which will result in more items being added to the RAI Regional Knowledge Base but which will not alter the thrust of the advice contained in this gap analysis.

As at the time of writing 1415 research items had been identified, filtered and entered into the RAI Regional Knowledge Base. These were categorised into the 50 topics 3409 times indicating that, on average, each report was matched against approximately 2.5 topics. The distribution across the 50 topics is shown in Annex A, with the number of research items categorised into each topic appearing in brackets after the topic.

15 topics had the highest level of research items entered. See Figure 5 for details. There are a number of interesting things to note:

- Three of the four 'Process' topics (Managing Change, Community Engagement, Regional Development Processes) were included in the top 15 results, with the fourth, Governance coming in at 16<sup>th</sup>. There was more research relating to Aboriginal and Torres Strait Islander Peoples than any other single topic – 219 items were categorised against this topic, or approximately 15% of the total number of captured research items.
- However, the issue of health is covered in both the 'Industry' group (Health and Community Service Industries) and the 'Population and People' (Health) group. When all health-related research items are combined it produced the highest number of results (336).
- If the topic of labour is excluded, there was a relatively low level of research items identified that relate to topics in the 'Economy' category. Similarly, if research items categorised against the topics of Agriculture, Forestry and Fisheries and Health and Community Service Industries are omitted, the remaining 12 topics in the 'Industry' group produced relatively few results.
- There were only four research items categorised against each of Property and Business Services and Manufacturing, three for Retail and nine covering Construction.
- The mining sector is driving considerable prosperity and change in regional Australia, yet only 33 research items were captured in the research review and categorised against the Mining topic.

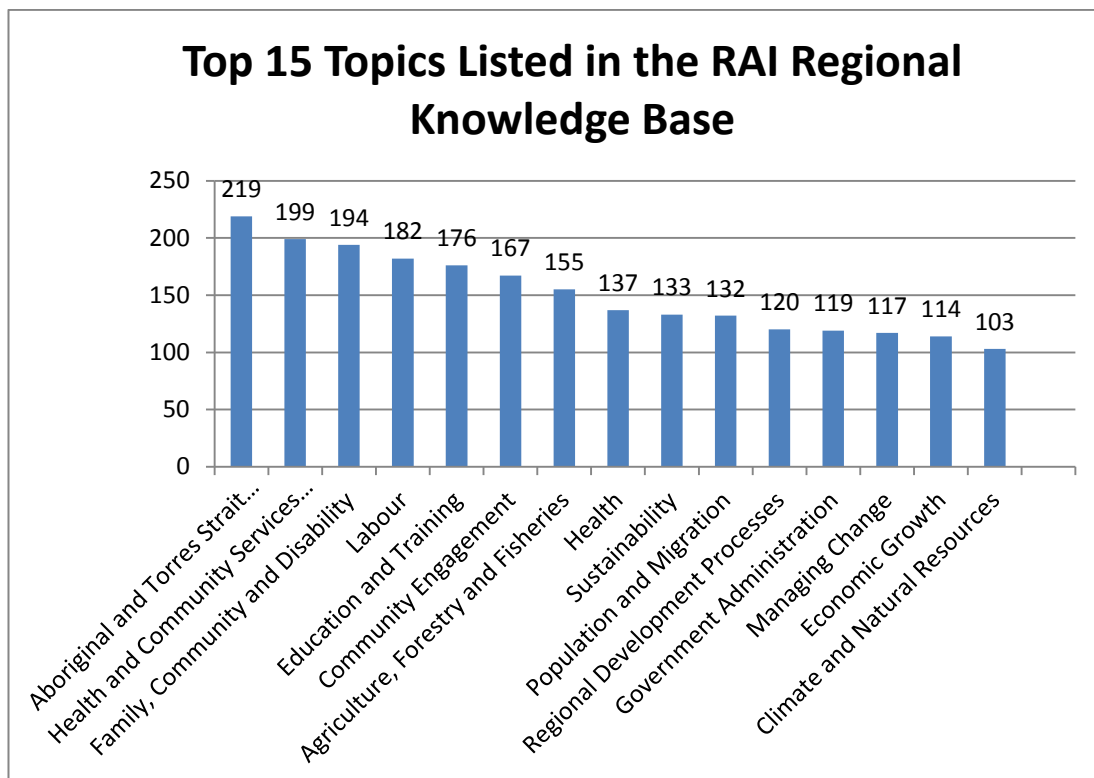


Figure 5: Top 15 topics listed in the RAI Regional Knowledge Base

There were 16 topics which captured 20 or less research items each. These were: Construction, Finance, Manufacturing, Property and Business Services, Retail, Small Business, Wholesale, Energy, Greenhouse Gas Emissions, Waste, Foreign Investment, Prices and Prices Indexes, Trade and International Market Access, Wealth and Saving, Leisure and Sport, and Ethnicity. Out of these, two topics had no research items catalogued at all, namely Wholesale and Waste.

## 12. Coverage by Theme

The RAI themes are obviously not packaged by topic or sector. Accordingly, to help analyse the research gap by theme, the coverage in the RAI Regional Knowledge Base by RAI Theme was estimated, as depicted in Figure 6. It is estimated that 60% of research captured in the RAI Regional Knowledge Base relates to Theme 3 – Successful Transitions and Theme 4 – Better Services and Engagement, respectively. It is further estimated that 40% of research relates to Theme 1 – Position and Potential. Just 10% of research relates to Theme 2 – Realising Opportunities.

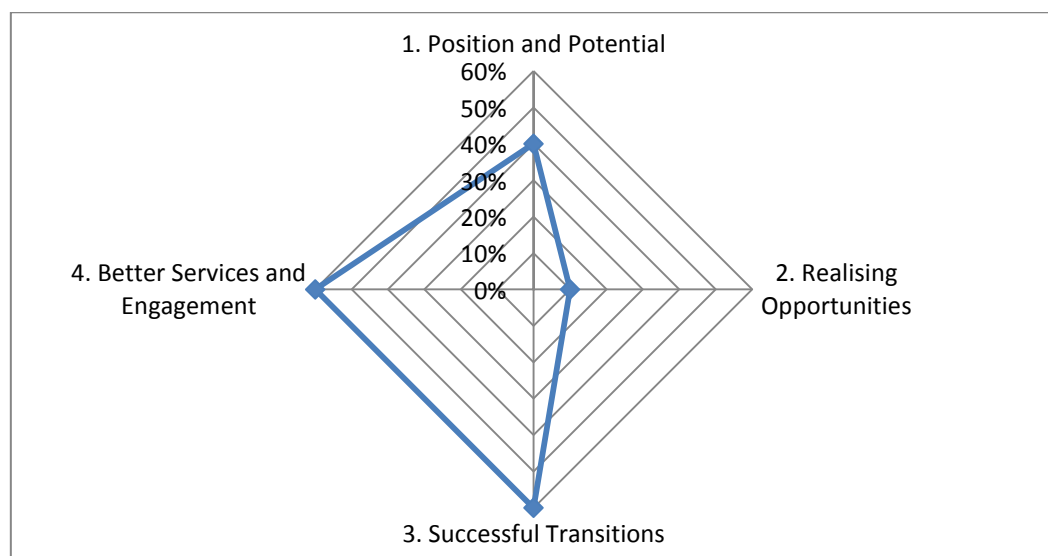


Figure 6: Extent of Coverage in the RAI Regional Knowledge Base – By Theme

## 13. Knowledge Gaps

Having established the coverage of research in the RAI Regional Knowledge Base by theme, the project sought to compare this with their estimate of policy maker demand for research by theme in order to determine an approximation of any supply-demand research gap by theme. They did not formally survey policy makers on their relative demand for research according to RAI's themes. But based on conversations with about 30 policy makers across Australia their demand for research according to RAI's themes was estimated. A rating of 1-4 was used, 4 being the highest level of demand, to rate policy maker demand for research related to each theme.

In order of demand, policy makers relative demand for research by theme is as follows:

4. Theme 2 – Realising Opportunities
3. Theme 1- Position and Potential
2. Theme 3 – Successful Transitions
1. Theme 4 – Better Services and Engagement

Figure 7 depicts this supply-demand gap. The conclusion is particularly enlightening in the case of Theme 2, which shows the largest gap in supply and demand by theme. Similarly, the smallest assessed gap is in Theme 3. The research gaps in Theme 4 are relatively modest, especially in comparison to Theme 1 and Theme 2.

RAI, at some later stage, may consider specifically surveying its policy maker stakeholders to verify these estimates. Further, this view is based on an assessment of demand from policy makers. It is, of course, possible that researchers may have very different demands. The project has attempted to rank the relative demand of policy makers for research by theme, their assessment is that the relative differences in demand are modest.

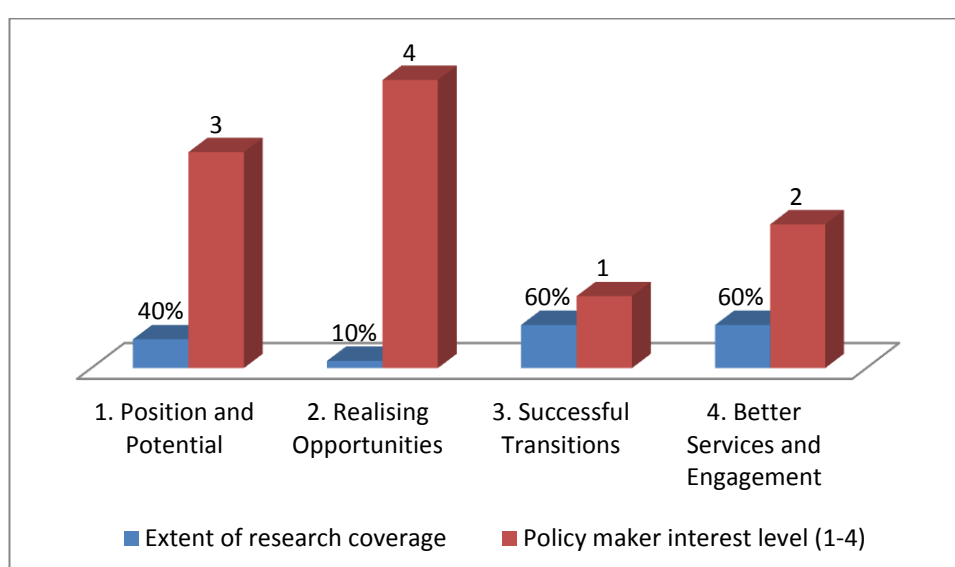


Figure 7: Coverage in the RAI Regional Knowledge Base compared with estimated policy maker interest

## 14. Literature Review – Theme 1

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A literature review was prepared for each of the four themes. After considering research gaps and the objectives of each theme, research topics for each theme were suggested.

### 14.1 Conclusions for Theme 1: Position and Potential

- The majority of these research items relate to ‘Position’ rather than ‘Potential’. The biggest opportunity for RAI to add value and plug research gaps in relation to Theme 1 is to focus relatively more of its resources on researching the idea and practice of achieving potential.
- There are perhaps 1000 PhD theses under way in Australia at the moment which relate to regional Australia issues.
- There has been limited work done on the important issue of the drivers of change in the Australian regional development context which trace through the pathway from determining position to identifying and then achieving potential.
- There was a considerable amount of research identified during the literature review relating to sustainability issues, but less on the concept of renewal of rural communities.
- The main suggested macro-level research topics to be addressed under Theme 1 relate to potential, international experience, productivity and drivers of change.

### 14.2 Research Suggestions for Theme 1

RAI’s Theme 1 proposes three research questions:

- What is the status of regions around Australia?
- What defines regional potential and to what extent are different regions realising their potential?
- Which regions are experiencing similar social or economic challenges and what do we know about the drivers of these challenges?

Based on consultations and review of the literature, these three questions seem to be broadly relevant but require greater definition. As noted above, the preponderance of information gathered within the RAI Regional Knowledge Base related to the status of regions. The much bigger gap was the identification and analysis of potential. On balance, and considering what has been captured in the RAI Regional Knowledge Base and what the researcher community is currently working on or considering working on, future RAI work against this theme should focus more on ‘potential’ issues rather than ‘position’ issues. Notwithstanding the often reflexive response from policy makers that more data is needed, the enormous content in the database element of the RAI Regional Knowledge Base tends to suggest that the challenge is more one of accessibility rather than availability.

The work on ‘potential’ issues needs to straddle two levels. The first level of work is to develop a broad base of readily communicable knowledge products of the history of

localised examples of achieved potential. This work needs to be very practical, focused on multiple, small, micro-level examples of achieved potential in regional Australia, possibly going back as far as 50 years, but focusing on the last 10-15 years. This could potentially be prepared in the format of a publication series and could be a staple product of RAI. Such a product needs to be written in a readily accessible format, be brief, use a consistent case study methodology, and be particularly tailored to the tastes and needs of a policy-making readership. Although there may be complications in producing such a series of research-based outputs, particularly relating to the contestability of assumptions and conclusions, this is the sort of product that policy makers frequently reported needing – a way to distil and demystify the complicated pathway from position to potential. A suggested approach would be to identify a large number of micro-level examples of successful regional development from around Australia, using an agreed methodology to define success. The individual case studies, prepared in a highly consistent way, would then seek to shed light on the pathway and processes that led to the successful outcomes. These short briefing notes should, it is suggested, be succinct, descriptive and relatively superficial, rather than detailed and exhaustive. The idea, over time, would be to develop a large series – in the hundreds – of reports which shine a light on the innumerable examples of success in Australia's regional development, such that a useful body of evidence becomes available and grows over time.

An intermediate requirement for RAI's research program is to determine how to help policy makers identify and define 'potential'. It should not be assumed that a clear and uniform understanding of 'position' exists and automatically leads to a clear understanding of 'potential'. Therefore, as part of its research agenda, or its general service offering to its stakeholders, RAI needs to provide some form of guidance or knowledge product that helps policy makers at all levels define and determine potential. This process/research/toolkit needs to incorporate knowledge on identifying and ameliorating constraints as it is often the case that constraints or market failures in one form or another reside between 'position' and 'potential'.

The second level of work should be at the more macro level, looking at higher-level drivers of successful change in Australia's regions. Suggested research topics for Theme 1 include:

- A global review of the most successful potential-to-outcomes examples of large-scale, transformative regional development policies/initiatives that have occurred in comparable countries.
- A comprehensive mapping of where the gaps between identified potential and realised outcomes in regional Australia are greatest.
- The comparative extent of the interconnectedness of regional Australia versus metropolitan Australia with international markets, and the prospects and evidence that this provides to further fulfil regional Australia's potential.
- Identify the initiatives or changes that have, over time, tended to produce the highest productivity gains in regional Australia.

## 15. Literature Review – Theme 2

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### 15.1 Conclusions for Theme 2: Realising Opportunities

- As noted in the literature review, the demand for research on Theme 2 is essentially in two parts. The first part relates to macro-level, generic and systematised pathways to realising opportunity. That relates to concepts such as drivers of change. That could be anything from leadership to a new technology. The second part relates to location- and event-specific evidence of instances of realised opportunities. This could be in the form of case studies or evaluations of successfully realised opportunities. There is a need to focus at both levels.
- The project found few examples of literature that effectively ‘showed the way’ to realising opportunity or which provided evidence or recommendations as to how potential had been successfully realised in a way that could be in any sense replicated.

### 15.2 Research Suggestions for Theme 2

Of the many senior policy makers spoken to on the idea of realising opportunities, some spoke in terms of ‘transformative opportunities’ and the importance of focusing on large-scale, nation-changing initiatives. Others spoke in more specific terms, for instance of the Darling Downs not taking advantage of its potential to be a large national centre, a home for both mining and food production on a massive scale, akin to the Texas Triangle of Austin, Houston, Dallas-Fort Worth and San Antonio.

Conversely, stakeholders also did not speak of the National Broadband Network in this vein; they argued its nation-building benefits would be highly dispersed and raised concerns about its relative opportunity cost. Most discussions where the idea of transformative opportunities arose related to large, localised initiatives. Examples included resource sector-driven change in Greater Gladstone, Pilbara Twin Cities, or the area around the Olympic Dam project. Researchers, on the other hand, were rather more interested in the underlying research relating to processes, mechanisms and drivers of change that help realise potential. This was only of passing interest to policy makers.

Taking into account a) the stock of research captured in the RAI Regional Knowledge Base, b) the feedback in the online survey, and c) the responses in the consultations, suggested research topics for Theme 2 include:

- Identifying commonalities among the drivers of change (or high performance factors) for regional development – is it policy, endogenous drivers, exogenous shocks, technological imperatives or other? What, specifically, are they and how do they operate and what are the implications of these for policy makers at the local, state and federal levels?
- Is there evidence that specific transformative opportunities produce significant, sustainable benefits for regional communities? If so, to what extent should policy makers



focus on location- and industry-specific initiatives? What guidance can be given to local governments about how to capture maximised sustainable benefits?

- Gladstone is reportedly the world's largest single destination at the moment for foreign direct investment. What is the best way for policy makers to help extend and maximise the benefits of this capital flow for community advantage?
- Inter-generational benefits – what is the role of levies or taxation that are applied and credited to permanent funds designed to capture wealth for future generations of regional communities from current large-scale investment programs, particularly in the non-renewable sector?
- Identified, assessed and specific opportunities to be realised from the 'Asian Century' i.e., a menu of opportunities, mindful of potential, differentiated by region and sector.

## 16. Literature Review – Theme 3

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### 16.1 Conclusions for Theme 3: Successful Transitions

- There was a reasonable amount of research which related to the government's role in assisting with successful transition, but relatively little on the topic of community leadership, which was frequently cited by policy makers as an area of keen interest in relation to this theme.
- Policy makers are interested in very practical elements of transition management: how to package a structural adjustment program in a time of rapid change; how to sensitise planning requirements to cater for a massive ramp up in housing in rural areas; how to avoid a lag in investment in supporting public infrastructure in an area adversely affected by rapid and large-scale private investment. Research work should help respond to this.
- Other future RAI work against Theme 3 should include a focus on the importance and functioning of local leadership, ways to preserve localised social capital, and successful approaches to local economic diversification.

### 16.2 Research Suggestions for Theme 3

Of all four themes, the gap between the stock of research and policy maker interest is smallest for Theme 3, i.e. Theme 3 is the equal most covered topic in the RAI Regional Knowledge Base and is assessed to be considered of least importance to policy makers of all four themes.

A key practical task for RAI is to ensure that its work against Theme 3 is sufficiently practical and applicable to policy makers working on real-world issues, and to make its research accessible and relevant. RAI needs to avoid the risk of building on the already substantial conceptual stock of work on 'successful transitions' and instead focus relatively more on the most practical issues wherever possible.

Policy makers do, of course, have an interest in managing change and assisting successful transitions. Policy makers recognise there is no simple formula to achieve successful transitions. They feel extremely uncertain about the best way to proceed: how to package a structural adjustment program in a time of rapid change; how to sensitise planning requirements to cater for a massive ramp up in housing in rural areas; how to avoid a lag in investment in supporting public infrastructure in an area adversely affected by rapid and large-scale private investment. To the extent possible, research work needs to help answer these questions too. In addition, other suggested research topics for Theme 3 are:

- Research into the extent to which preparedness for change in a regional environment ensures more successful outcomes. This research would ideally be strongly based on case studies.
- A series of reports detailing in practical terms examples of successful transitions that occurred in various regional Australian locations in different contexts over time.

- Research into successful international experience of policy responses that helped achieve successful transitions which may be applicable in regional Australia.
- What policy responses to the crowding out effects of major resource sector investment have helped mitigate the worst excesses of the resources curse and have helped communities transition to a more diversified economy?
- Detailed research into the relevance and effectiveness of local level leadership on achieving successful transitions and managing change.
- Research that helps policy makers form policy which manages adverse effects on social capital from change caused by policy or other exogenous factors.

# 17. Literature Review – Theme 4

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## 17.1 Conclusions for Theme 4: Service Delivery

- Theme 4 focuses on two related elements. The first is about delivery of services to regional Australia. This entails the type and extent of services, as well as modes of delivery, and reflections on past successes and failures and the role that innovation and technology might play to improve or make more efficient the delivery of services. It also necessarily treats the issue of equity versus efficiency, the role or otherwise of subsidies, and the competing concepts of individualism versus social welfare/entitlement.
- The project has taken a broad view for the purposes of this literature review of ‘services’ – health, education, human services, justice, policing and emergency services, as well as infrastructure components such as roads, telecommunications, energy and water. They have also tried to capture other topics that might be considered by regional communities as ‘essential services’ such as postal services and banking.
- Much of the research relating to services unsurprisingly falls into the topics of ‘Industry – Health and Community Services Industries’, ‘Population and People – Family Community and Disability’ and ‘Population and People – Education and Training’. Some research also falls into ‘Population and People – Housing’.
- Approximately 10% of research captured in the RAI Regional Knowledge Base relates to education. A similar proportion relates to family, community and disability – much of this focuses on delivery methodologies. Perhaps double that, around 20%, of research relates to health sector matters – mental health, rural medical services (including dental), and aged care.
- The preponderance of research relating to Theme 4’s service delivery element relates to health and education matters, less so to community and human services, and to a much lesser extent on other infrastructure-type issues such as telecommunications, water, energy and roads. There was also relatively more research than we expected to find on engagement processes.
- The research gaps in Theme 4 are relatively modest, especially in comparison to Theme 1 and Theme 2.

## 17.2 Research Suggestions for Theme 4

As noted above, Theme 4 is the equal most covered topic in the RAI Regional Knowledge Base. The project’s assessment is that Theme 4 is considered of second least importance to policy makers of all four themes.

Based on an assessment of the gaps and priorities of policy makers, the following research topics are recommended:

- Mapping, by service, of regional differences in access to services across Australia.
- How can the NBN best support service delivery in regional Australia?

- Related to the question above, how can broader innovation in service delivery be encouraged and achieved?
- Investigating methods for improved coordination of service delivery across different levels of government.
- Financing techniques to allow local governments to provide more and better services, including on a cost-recovery basis.
- By service, reviewing international policy making experience and consider its applicability to Australia.
- How can regional areas achieve better access to financial services at the business and household level?

## 18. Significant Areas Beyond RAI Themes

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There was no evidence from the literature search and the literature reviews that the four RAI themes do not adequately cover the breadth of research issues with which RAI will need to contend. However, there is a strong argument for RAI to weight its effort across the four themes based on the identified supply-demand research gap for each theme. Furthermore, and as RAI contemplates its theme-based research agenda, it should also seek to respond to variations and gaps in the research as has been shown across the 50 topics.

## 19. Conclusions

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In addition, the Stocktake of Regional Research has provided some general conclusions about the current stock of research on regional Australia:

- The literature search has revealed a substantial amount of research available that is of relevance to regional Australia policy development. But the coverage of that research is fragmented by both topic and RAI theme.
- The literature search found limited international research that was either applicable or had been customised to the Australian experience.
- There is not a great deal of evaluation research, which would help policy makers figure out which interventions have worked under different circumstances.
- Policy makers, during consultations, expressed the view that most academic research was of little relevance to them and they relied more on institutional reports ('grey literature') which, in turn, however, often drew on academic research
- There was no clear driver or convenor of a research agenda for regional Australia and its attendant policy issues. However, it was clear that policy making was not at the heart of the research agenda.
- There were significant differences in views among policy makers and researchers about what was important in terms of research requirements.

## 20. Six Priority Research Areas

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The literature reviews and gap analysis have identified where large and small gaps in the literature exist. In addition, the literature reviews and gap analysis have proposed a large range of macro-level areas of further research as well as a number of very specific areas. The gaps have been delineated by RAI theme and by topic.

Noting the terms of reference, and taking into account all of the foregoing, the following are suggested as six priority areas of effort:



Table 3: Suggested Priority Research Topics for RAI

#	Research Question	Primary Theme	Secondary Theme
1	<b>The Asian Century: The Opportunities and Implications for Regional Australia.</b> It is widely recognised that this century will witness an enormous expansion of Asia's economic power. Australia, including regional Australia, is already benefiting from this. However, there is scope to research in much greater depth and with much greater precision the specific and untapped opportunities this represents for regional Australia. Tracing through, by country and by sector, what are the most likely future economic opportunities for regional Australia that will arise over the next 50-75 years from the continuing expansion of Asia's economic size and increasing demand? What does regional Australia need to do to position itself to benefit from this opportunity? Are there risks inherent in this change that regional Australia needs to mitigate?	Theme 2: Realising Opportunities	Theme 3: Successful Transitions
2	<b>Maximising the Benefits of the Resources Boom for Regional Australia: Determining the Policy Options.</b> What are the best ways for policy makers to help extend and maximise the benefits (and minimise the costs) of resource sector-related inward capital flows into specific locations in regional Australia for localised and sustainable community advantage? What is the menu of options for policy makers and what is the possible array of outcomes? How can policy options be sequenced to dovetail in with major resource sector projects to avoid time lags? What policy responses to the crowding-out effects of major resource sector investment have in the past helped mitigate the worst excesses of the resources curse and have helped communities transition to a more diversified and resilient economy?	Theme 3: Successful Transitions	Theme 2: Realising Opportunities
3	<b>Harnessing the Benefits of High Speed Broadband in Regional Australia for Improved Service Delivery.</b> The largest government-led service delivery initiative in Australia, both now and over the next several years, is the roll-out of high speed broadband, both the National Broadband Network and next generation mobile telephone services. How can the arrival of these technologies and infrastructure best support enhanced service delivery in regional Australia? What are the specific ways of best leveraging off the high speed broadband to maximise its economic and social value in regional Australia? There is likely to be a very large number of possibilities. Specifically, what are they? What's required to be done? What level of government should pursue which initiatives? How will the private sector pursue identified opportunities?	Theme 4: Better Services and Engagement	Theme 2: Realising Opportunities
4	<b>Productivity in Regional Australia: Defining a Menu of Options.</b> Productivity improvements will be critical to regional Australia's economic and social future. What are the specific opportunities for regional Australia to pursue productivity-enhancing initiatives? What is the role of government to support this? Is the answer in 'hard' investments in, for example, infrastructure? Or does the answer lie in softer investments such as improved access to localised health services? Or what is the optimal mix of responses? Is the scope for productivity gains greater in regional Australia than	Theme 2: Realising Opportunities	Theme 3: Successful Transitions

#	Research Question	Primary Theme	Secondary Theme
	metropolitan Australia? If so, what is the menu of options and who is responsible for what? To what extent can productivity gains in regional Australia benefit the country overall?		
5	<b>Case Studies on Realising Opportunity in Regional Australia: Successes, Transformations, Possibilities.</b> There is mixed knowledge in policy circles of examples of successful progression along the position-potential-opportunity continuum. What is the historical evidence for achieved potential in regional Australia? Using a large number of brief case studies, what is the recent history of potential in regional Australia having been identified and opportunities successfully realised? What are the commonalities of these successes? What are the lessons for policy makers, especially at the local level? Based on the research results, what tools will best assist policy makers to replicate these successes in their own localities? Building on this catalogue of researched evidence, how can policy makers successfully facilitate and catalyse major transformative opportunities in regional Australia. What have been the most successful potential-to-outcomes examples of large-scale, transformative regional development policies/initiatives that have occurred in Australia and comparable countries in the last 50 years? Mindful of regional Australia's position and potential, and based on international and Australian successes, what are the lessons and ideas that the current generation of policy makers need to understand and consider to help enhance their and community confidence to plan and instigate future major transformative initiatives?	Theme 1: Position and Potential	Theme 2: Realising Opportunities
6	<b>Intervention Methodology: Good Outcomes from Good Policy.</b> Policy makers and researchers alike are keen to constantly examine more effective methodological approaches to develop and improve wellbeing in regional Australia, and to help realise opportunities, and the ability of different levels of government to influence and lead this process. The evidence strongly suggests there is no particular intervention methodology which best suits each location, issue or moment. But given the fundamental importance of optimising the possible suite of intervention methodologies, further research and evaluations of past approaches is required. How might a full range of interventions and policy options be best defined and described, including differentiated for various levels of government and forms of institutions? What is the role of leadership in a successful policy intervention, especially local level and civic leadership? What is the role of private business, and entrepreneurship, in successful policy interventions? How can those resources and know-how be harnessed? What are the optimal roles for institutions in policy interventions? Are new institutions needed? Or adjusted institutions? How can additional resources be attracted to underpin policy interventions? Do interventions appropriately incorporate existing potential and competitive advantages of the regions?	Theme 1: Position and Potential	Theme 4: Better Services and Engagement

# Annex A: The 50 Topics

## Agreed topics for RAI Stocktake of Regional Research

For the purposes of the RAI Searchable Database, a set of 50 'topics' was created to support the cataloguing of listed research. These topics will allow uniform analysis of research gaps, as well as allow ready searching and updating of the RAI Regional Knowledge Base. The topics have been largely drawn from the Australian Bureau of Statistics (ABS) statistical categories, but also customised to accommodate the preponderance of research issues relevant to researchers and policy makers working on regional policy issues in Australia. The number of individual items categorised into each topic are show in brackets after the topic. Each of these topics in the RAI Regional Knowledge Base will be linked to the relevant statistical databases at ABS and to the database element of the RAI Regional Knowledge Base. Details of ABS statistical categories are at:

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/viewcontent?readform&view=ProductsbyTopic&Action=expandwithheader&Num=1>

### Population and People

Aboriginal and Torres Strait Islander Peoples (219)  
Crime and Justice (57)  
Culture and Heritage (42)  
Leisure and Sport (13)  
Education and Training (176)  
Ethnicity (9)  
Family, Community and Disability (194)  
Health (137)  
Housing (57)  
Household Characteristics (39)  
Population and Migration (132)  
Wellbeing and Prosperity (81)  
Women and Gender (27)

### Economy

Business Development (40)  
Economic Growth (114)  
Foreign Investment (6)  
Government Administration (119)  
Income (55)  
Labour (182)  
Household Finances (60)  
Prices and Price Indexes (4)  
Productivity (21)  
Trade and International Market Access (16)  
Wealth and Saving (4)  
Competitiveness (26)

### Environment and Energy

Climate and Natural Resources (103)  
Energy (20)  
Environmental Management (86)  
Greenhouse Gas Emissions (11)  
Land Use and Management (74)  
Sustainability (133)  
Waste (0)

### Industry

Agriculture, Forestry and Fisheries (155)  
Construction (9)  
Electricity Gas and Water (63)  
Finance (18)  
Health and Community Service Industries (199)  
Innovation Science and Technology (96)  
Manufacturing (4)  
Mining (33)  
Property and Business Services (4)  
Retail (3)  
Small Business (12)  
Tourism (24)  
Transport (27)  
Wholesale (0)

### Process

Regional Development Processes (120)  
Community Engagement (167)  
Governance (101)  
Managing Change (117)

## Annex B: RAI research themes and questions

Research theme	Research questions
Position and Potential	<p>What is the status of regions around Australia?</p> <p>What defines regional potential and to what extent are different regions realising their potential?</p> <p>Which regions are experiencing similar social or economic challenges and what do we know about the drivers of these challenges?</p>
Realising Opportunity	<p>What are the most important opportunities for economic growth in regions?</p> <p>Which regions have significant unrealised potential?</p> <p>What industry, government (or other changes) could be made to increase the benefits that flow to regional communities from these opportunities?</p> <p>What are the costs of development and how can these be best managed?</p>
Successful Transitions	<p>What do social and economic transitions mean for regional communities and what are the perspectives of people involved?</p> <p>What can we learn from past transitions in regional Australia or overseas?</p> <p>What can government, industry (and communities) do to assist the regional transition process?</p> <p>How can we better empower regions and people directly involved in transition to manage the impacts on their situations?</p>
Services and Engagement	<p>What are the key challenges for regional services delivery (compared to metropolitan areas) and how do these vary for regional areas?</p> <p>What are the different models for service delivery that have been tested and implemented in regional Australia? How successful are they?</p> <p>Are there opportunities for integration or use of new technology that may enhance services in regional areas?</p> <p>How effective is regional engagement in decision making and are there opportunities for better devolving decision-making power to the regional level?</p>

# Annex C: Systematic Review Protocol

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## Context for the Systematic Review

The overarching question of what factors contribute to long-term growth and decline in regional prosperity in Australia is highly complex, and has been grappled with in the Australian context several times before (see for example, Beer et al., 2004, Bureau of Transport and Regional Economics, 2003, Maude, 2004, Charters et al., 2011, Sorensen, 2000). The general consensus is the question remains unsatisfactorily answered. In part, this is due to a lack of consensus on what the 'right' questions are to ask and, importantly, a lack of a consistent terminology to accurately conceptualise the issues.

The challenge of identifying what factors contribute towards regional prosperity has multiple bases. Building on Collits (2012) these include that:

- the 'goal' of regional development is not agreed and has changed over time;
- there is no broadly accepted measure of what regional development 'success' includes;
- regional development terms are not well defined and different disciplines have different meanings for the same terms;
- there is no universally accepted theory or theories of what contributes to regional growth or decline;
- regional development is a multifaceted concept that is determined by a multiplicity of factors. Moreover, there is often a long lead time between changes in regional communities and observed outcomes. This means it is difficult to establish clear causal links between actions and interventions and regional outcomes; and
- the policy intervention agenda in Australia has shifted from top-down to community-driven approach embracing concepts of 'localism', and understanding that 'what works' changes over time.

It is broadly recognised that there is no simple solution that addresses the socioeconomic performance of all rural communities (Collits, 2000 and 2008). At the same time, the systemic nature of many of the issues facing regional Australia, and the fact that local communities may lack specialist resources needed to address these issues, suggest that purely locally tailored strategies may not work either (Hogan et al., 2012).

## Defining Key Terms

### What do we mean by regional Australia?

The term 'regional Australia' broadly refers to the non-metropolitan areas of the nation that lie beyond the major capital cities and their immediate surrounding suburbs.

## Drawing useful distinctions between regional Australia based on population size

Location and allocation theories of regional development emphasise that populations (1) are drawn to regions in part because of resource availability or proximity, and that (2) at some level of population agglomerations tend to become self-reinforcing, meaning that they draw in people and skills simply because their population and economic size create their own new opportunities.

We know that there are broad and distinct differences in the structure and trajectory of many regional Australian communities, and that these differences often appear to relate to population size (as well as to economic attraction poles such as natural [e.g. mining] resources).

## What do we mean by factors?

The performance of a regional economy will be influenced by the contexts within which it operates. These factors (conditions, circumstances, causes or influencing elements) require a necessarily broad definition at this stage in the systematic review. A broad definition is important to avoid limited recovery from the literature of deductive work which tests pre-ordained theories about what contributes to strong regional community development.

The purpose of the review is to map and assess the quality of the literature that links factors with long-term growth (or decline) of regional prosperity.

Compiling an exhaustive list of strictly defined factors prior to undertaking the systematic review is neither possible nor desirable. It is anticipated that these factors (conditions) will be found both to emerge inductively from research and to be tested deductively based on theorised conditions for growth or decline. Earlier research in the Australian and international context has provided guidance on factors that could be used (see section 4).

Drawing on Collits (2012) at the outset, the assembled literature will be distinguished and filtered between 'factors that affect regions' and 'regional factors' in the Australian context.

- Factors that affect regions are 'aspatial' factors that affect all regions in Australia. Income taxation policy is one such example, and swings in global commodity prices and exchange rates are another (to the extent that Australia is a price taker in international markets). In many cases, these non-regional policies may have greater impacts on regions than regional policies.
- Regional factors are factors that affect a specific region. Investments in local physical infrastructure, the location of university campuses, and local resource endowments are all examples of regional factors.

## What do we mean by 'have an effect'?

The SR literature seeks to establish causality between an intervention and an outcome. This reflects its roots in synthesising science and medical literature, often based on controlled studies.

For the RAI stocktake, the SR approach will use the noun 'effect' loosely. This loose approach recognises that there are no strict, clear causal linkages between factors, and outcomes are often difficult to directly observe in regional Australia. This inherent complexity means we prefer to take a pragmatic approach that will seek to identify plausible relationships between factors and outcomes, recognising that these relationships occur in complex environments where:

- many other factors are at play and influence outcomes;
- that there is often a long lead time between changes in regional communities and observed outcomes;
- many 'effects' and relationships between interventions and outcomes are not policy or factor neutral.

## What do we mean by long-term?

Change within regional communities can occur within short (<1 year), medium (1-5 years) or long timeframes (5+ years).

The RAI stocktake should focus on longer-term relationships between interventions and outcomes. This is because:

- regional development policy typically has a long-term focus, i.e. governments generally take a long-term focus when investing in physical and social infrastructure and essential services;
- there can be significant lags between the implementation of interventions and the achievement of outcomes; and
- longer-term change is typically more stable and evident than short-term change.

Clearly, shorter-term factors (such as government drought support, global financial crisis fiscal response) will affect the longer-term prosperity of regions. The key to the RAI stocktake is to synthesise information that allows us to understand what factors most affect the ability of regions to best prosper over the longer term, including in the context of these shorter-term random shocks and anomalies.

## What do we mean by (regional) prosperity?

For many years development literature focused on measures of economic wealth (GRP, household income or consumption) as a proxy measure of prosperity. It is generally now recognised that these regional economic production and consumption measures are but two of many different ways that current and potential future prosperity can be measured.

Literature also shows that increasing regional production and consumption does not necessarily translate into greater 'prosperity', and that economic indicators of progress may provide an incomplete or inaccurate picture of life and wellbeing in some rural areas. For example, some regions are asset rich but income poor (for example farming in the Basin), or wealth and income in some areas is under-recognised by the use of family trusts, income splitting and other tax devices used to legally reduce reported income and production (Sorensen, 2000).

The perceived inadequacy of economic measures of prosperity as a proxy for overall wellbeing is one reason why Australian Commonwealth and several state governments now measure national/regional progress with a range of progress indicators. These measures generally consider tangible measures of economic progress (production and consumption, income and wealth), tangible and intangible human and social wellbeing (health, education and training, work, family cohesion), and tangible and intangible elements of the environment (biodiversity, land and air quality, others)<sup>ii iii iv</sup>.

For the purpose of the RAI stocktake and SR review, regional prosperity will be defined in a broad sense, likely to be consistent with frameworks now used by the Commonwealth.

Compiling an exhaustive list of strictly defined prosperity indicators prior to undertaking the systematic review is neither possible nor desirable. It is anticipated that these indicators of prosperity (conditions) will be found both to emerge inductively from research and to be tested deductively based on theorised conditions for growth or decline in prosperity. Earlier research in the Australian and international context has provided guidance on factors that could be used in the literature synthesis.

## Systematic Review of Methodology

The proposed methodology for the RAI stocktake is to:

1. Identify articles relevant to the research question using search strings to search literature databases and to collate relevant papers from websites, stakeholders and other databases.
2. Employ a filtering process.
3. Input data into the RAI research database - RAI Regional Knowledge Base.
4. Consult with RAI to determine the scope of the quality assessment for the mapped literature on a sub-set of the 50 most influential papers, to be identified through stakeholder consultation.

These steps are set out in the following sections, which show how the steps will be delivered in order to provide a comprehensive review, which avoids researcher bias, and secures the replicability and validity of the results.

## Identification of Literature

The available primary research includes single, comparative, longitudinal and multiple case studies and research published in peer review journals. It also includes grey literature including evaluation reports from government, non-government and private agents.

Relevant articles may exist across a wide range of subject areas including social science research, institutional studies, natural resource management, regional development, structural adjustment, essential services, governance, macro- and micro-economics, political economy, adaptive management and others.

For manageability the geographic scope for the review will be restricted based on the search criteria set out below.

### Geographic scope

The scope of the review will be limited to regional Australia and international regional literature.

### Date range

The review will concentrate on literature published from 2000 onwards.



## Language

The review will only cover papers published in English.

## Factors (interventions) and outcomes

The proposed key factors (interventions) and outcomes of interest included in the search are derived from earlier research on factors affecting regional development outcomes in Australia and overseas (Sorensen, 2000, Beer et al., 2004, Maude, 2004).

The difficulty in establishing clear unidirectional causality between 'interventions' and 'outcomes' in regional development work is noted, and as a result the project has taken a pragmatic approach to identifying plausible relationships between 'factors' and 'outcomes'. Part of this approach recognises that intervention factors and outcomes are often interchangeable; for example, labour force participation and productivity are clearly drivers of regional economic prosperity. At the same time, these factors can be outcomes of regional investments in education and training or workforce development programs.

## Search Strategies

### Primary databases

The evaluation will involve a comprehensive search of Australian, US, Canada and Western Europe electronic databases:

- **Australian (Informit) group of databases<sup>v</sup>:** This group includes: the Agriculture and Natural Resources databases - Australian Bibliography of Agriculture, Australian Rural Research in Progress and Completed Australian Rural Research Projects; the ASIAROM social sciences and Asia databases (APECLIT, ASIANRES, BERITA, BIPE' INDBIO' INTAN MAS, PDIB PDIR); and ATSIROM, the 11 Aboriginal and Torres Strait Islander databases.
- **International databases:** ProQuest, which includes the Australasian Journal of Regional Studies, Australasian Journal of Environmental Management and Rural Society journals, in addition to numerous others. The project will continue to look at the results produced by the search string in ProQuest, which sorts results by relevance, until the results are being routinely excluded by the filtering criteria.

### Key journals

The project will complete hand searches of the following key Australian journals:

- Australian Planner; Journal of Australian Studies; Sustaining Regions; Urban Futures.

### Websites of relevant organisations

The project will complete website searches for relevant organisations including but not limited to:

- **Australian research institutes:** SWINBURNE<sup>vi</sup>, UWA Centre for Regional Development<sup>vii</sup>, UniSA Centre for Regional Engagement<sup>viii</sup>, ANU NIRRA<sup>ix</sup>, UNE IRF<sup>x</sup>, Uni Tas Institute for Regional Development<sup>xi</sup>.

- **Australian government departments:** Commonwealth Grants Commission<sup>xii</sup>; Murray Darling Basin Authority; Regional Development Australia; State Department of Primary Industries<sup>xiii</sup>; Infrastructure and Transport; australia.gov.au.
- **International regional development institutes:** Berkley Institute for Urban Regional Development <sup>xiv</sup>; Olds Institute for Community Regional Development<sup>xv</sup>; International Food Policy Research Institute, World Bank, OECD<sup>xvi</sup>.

Search capability differs considerably from website to website and therefore a simplified search strategy will be adopted to enable a consistent approach. Many websites are not able to process long Boolean searches. As a result, a shortened Boolean search containing terms related to only the interventions and/or outcomes of interest will be used, where appropriate, modified to reflect the requirements of each website. These modifications will include changes to wild cards, removal of brackets and application of filters to return particular types of document. For websites with very limited functionality, only the term 'regional development' will be used.

Each website will be searched using two methods: the first search will use the website search function (in many cases this is powered by Google). The second search will target the publication or research section of the site (if one exists) using either a dedicated publication search or by browsing relevant libraries.

For each website the first 50 returns by method will be assessed for relevance. Results will be recorded together with coding to show the search criteria used.

## Consultations with experts, stakeholders and organisations

Stakeholders will be identified in cooperation with RAI. These stakeholders will be contacted and asked to provide key literature references and suggestions of additional organisations and/or websites that can be searched for grey literature.

This process will identify relevant studies and will generate a reference set of key papers that can be used to check whether the automated literature searches are returning the most relevant papers, as identified by experts. Expert recommendation will assist rather than determine the search strategy. The Project Plan has more details on the consultation process.

## Search String Identification

The search terms proposed for the electronic searches are detailed below.

There are an extremely large number of terms and synonyms that could be used in database searches for factors affecting long-term regional prosperity. There is a need to place a limit on the number of terms that can be included in the search string. This was done by:

- running an initial test search using words and phrases for sensitivity;
- identifying search terms that return the most useful and relevant publications, as agreed with RAI; and
- constraining future search to the agreed terms.

107 different syntax combinations have been tested to formulate the optimal search string for use in this systematic review, some of which are below:

(Region\* OR Rural) AND (communit\* OR populat\* OR locat\* OR geograph\* OR innovat\* OR educat\* OR "Health Service\*" OR "education service\*" OR polic\* OR Tax\* OR Govern\* OR Incentiv\* OR regulat\* OR Adapt\* OR clust\* OR Capital OR Access\* OR (Infrastructure AND Invest\*) OR Aboriginal\* OR Indigenous OR Agricultur\* OR Environment\* OR sport\* OR training OR famil\* OR disab\* or water\* or mining OR "land use" OR resourc\* OR skill\* OR cultur\*) AND ("econom\* Growth" OR Prosper\* OR "econom\* Development" OR "Social Development" OR "Regional Development" OR (demograph\* AND (structur\* OR Change)) OR Wellbeing OR declin\* OR Employ\* OR unemploy\* OR participat\* OR productiv\* OR stabil\* OR Transit\* OR hours\* OR affordabl\* OR Mortality OR Morbidity OR Crim\* OR Income OR consum\* OR "Labour Mobility" OR lifestyle OR sustainab\*)

The research items not excluded during the title/abstract review and full-text review processes were then uploaded into the RAI Regional Knowledge Base.

## Key Themes

Key themes identified by earlier reviews of regional development literature.

### Australia (Charters et al., 2011)

- Governance
- Economic
- Infrastructure
- Population and Social
- Natural Resource Use Management
- Cultural and Land Rights

### Australia (Sorensen, 2000)

- Biophysical Resource Endowment
- Geographical accessibility
- Human and social capital
- Demography
- Changing lifestyle preferences
- Space transforming technologies
- New production technologies
- Public infrastructure investment
- Business management and development
- International events

### Australia (Beer et al., 2004, Beer, 2010)

- Labour market development and analysis

- Indigenous people's development
- Technology transfer and industry clustering
- Community development
- Social capital, health and welfare
- Social sustainability
- Regional analysis
- Regional governance
- Environmental management and Environmental
- Science
- Regional economic modelling
- Forecasting the social, economic and environmental futures of regions
- Regional governance
- Innovation and mechanisms for technology diffusion
- Social wellbeing and regional progress
- Regional labour markets as drivers of social and economic outcomes

### Australia (Maude, 2004)

Maude (2004) reviewed regional development research and policies in Australia for the period 1994-2002. He identified a number of key themes within the Australian literature on regions including research into:

- Divergence and convergence in regional incomes and growth trajectories
- The processes of resource dependent regional growth
- Spatial centralisation of the economy
- New forms of spatial divide within the Australian space economy
- The social construction of regional identity and regional problems
- Differentiation between the capital cities
- The processes of differentiation in rural and non-metropolitan Australia
- Indigenous issues
- Suburbanisation versus centralisation in metropolitan areas
- The regional effects of economic reform
- Regional policy debates
- Industry clusters

Maude (2004) also suggested a range of 'neglected themes' within Australian research, including:

- New manufacturing industries such as biotechnology
- The role of technology parks and technopoles
- Regional innovation systems
- Networks
- Learning regions

- The application of regulation theory
- The role of social capital in regional development
- International capital flows

Other studies have emphasised drivers such as:

- Well integrated and stable governance - need for role of government in maintaining fundamental policy settings for enhanced competitiveness and reduced uncertainty with respect to private sector investment;
- Role of businesses as a key driver of economic development - in particular alleviation of impediments facing private sector investment in regional and rural areas;
- Evaluation and evidence-based policy - identified growing need for more evidence base of 'what works';
- Development of human and social capital;
- Internal (endogenous) development strategies, industry clusters and innovation -stimulating growth from within the assisted regions themselves, within a context of global competitiveness and a balanced approach to attracting external direct investment; and
- Long-term locational approach - assessments have stressed the benefits of taking a long-term locational approach to build on the comparative advantage of particular regions rather than direct firm-specific subsidies that can lead to inefficient bidding.

The 2012 Commonwealth Budget (investing in Australia's regions) sets an agenda around:

- Health
- Workforce participation
- Infrastructure
- Education and skills
- Improved service delivery
- Environmental sustainability

## Europe

Recent studies<sup>3</sup> in Europe have focused on:

- Improving the regional skills base
- Stimulating co-operation and collaboration
- Improving and strengthening large scale regional infrastructure;
- Improving and strengthening small scale regional infrastructure;
- Mobilising capacity
- Stimulating research and innovation
- Stimulating entrepreneurship
- Establishing the evidence base
- Delivering essential services

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<sup>3</sup> [http://ec.europa.eu/research/eurab/pdf/eurab\\_05\\_041\\_wg3\\_finalreport-nov05\\_en.pdf](http://ec.europa.eu/research/eurab/pdf/eurab_05_041_wg3_finalreport-nov05_en.pdf)

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<http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1370.0~2010~Main%20Features~Home%20page%20%281%29>

iii <http://www.communityindicators.net.au/>

iv [http://www.communityindicators.net.au/data\\_framework](http://www.communityindicators.net.au/data_framework)

v [http://search.informit.com.au/databases;mode=compilation;compilation=INFORMIT\\_ELIBRARY](http://search.informit.com.au/databases;mode=compilation;compilation=INFORMIT_ELIBRARY)

vi <http://www.lilydale.swinburne.edu.au/crd/welcome.htm>

vii <http://www.crd.uwa.edu.au/>

viii <http://www.crd.uwa.edu.au/>

ix <http://nirra.anu.edu.au/>

x <http://www.ruralfutures.une.edu.au/>

xi <http://www.utas.edu.au/ird/>

xii <http://www.cgc.gov.au/publications2>

xiii [http://www.pir.sa.gov.au/regions/regional\\_impact\\_assessment](http://www.pir.sa.gov.au/regions/regional_impact_assessment) <http://www.business.nsw.gov.au/invest-in-nsw/regional-nsw/regional-development-australia-nsw>

xiv <http://iurd.berkeley.edu/>

xv <http://www.oldsinstitute.ca/>

xvi [http://www.oecd.org/departement/0,3355,en\\_2649\\_34413\\_1\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/departement/0,3355,en_2649_34413_1_1_1_1_1,00.html)