RDA Orana

Infrastructure Plan

Qualitative Infrastructure Assessment and Prioritisation

Final 1 | 6 June 2016

Job number 240292

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Document Verification

ARUP

Job title		Infrastructure Plan			**Job number** 240292
Document title		Qualitative Infrastructure Assessment and Prioritisation			**File reference**
Document ref					
Revision	**Date**	**Filename**	RDAO Infrastructure Assessment Report V1.docx		
Draft 1	29 Mar 2016	**Description**	First draft		
			Prepared by	Checked by	Approved by
		Name	Jim Chesterfield	Chris John	Simon Farnbach
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Final report	6 May 2016	**Filename**			
		Description			
			Prepared by	Checked by	Approved by
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		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
				Issue Document Verification with Document	✓

Contents

1 Executive summary

Based on the review of key documents and stakeholder engagement, it is clear that the Orana region would benefit from significant infrastructure investment. Improvements to various infrastructure networks are required to meet existing and future demands and to facilitate future economic growth.

Arup and Regional Development Australia Orana (RDAO) have worked together over a period of months to develop a list of prioritised infrastructure projects to address key issues and capitalise on opportunities for improving infrastructure across the Orana region. The process has included consultation and discussion with stakeholders and has comprised:

- Identification of issues, opportunities and priorities through a literature review and stakeholder engagement
- Shortlisting of projects through collaborative workshops and stakeholder engagement
- Detailed analysis and prioritisation of projects through qualitative multi-criteria assessment

The outcomes of this prioritisation are shown in Table 1. Projects are given a Priority rating according to a combined assessment of Impact, Strategic Fit and Economic Merit.

The Maturity of each project is also assessed against the criteria of each of the first three stages of Infrastructure NSW's Major Project Assurance Framework: Justification; Strategic Assessment; and Business Case – a project that meets all of the criteria is described as "investment decision ready" by Infrastructure NSW.

Table 1 Orana Project Prioritisation Outcomes

		Maturity (increasing left to right)				
		No Maturity Categorisation	**Justification**	**Strategic Assessment**	**Business Case**	**Total**
Priority	**High**			7	1	**8**
	Medium	1	2	2	1	**6**
	Priority	8	3	2		**13**
	Total	**9**	**5**	**11**	**2**	**27**

As Table 1 highlights, the maturity of planning varies across the projects. The availability of information with which to assess the projects also varies.

Other than the projects for which detailed business cases are available, we encourage RDAO to investigate the remaining projects further. We believe these further investigations will assist in increasing the maturity of the projects and hence developing them so they can more effectively seek funding for development. These data gaps should be addressed if Orana is to compete with other regions for State or Federal funding.

2 Introduction

2.1 Background and context

The purpose of the project is to provide RDAO with information on the issues and development priorities for the Orana region, identify a shortlist of possible infrastructure investments and undertake an analysis of their relative merit. This would support funding decisions and enable RDAO to articulate the infrastructure priorities for the region to stakeholders and key decision makers.

As part of Phase 2 of Arup's engagement with RDAO, Arup developed a Regional Profile report for the Orana region based on extensive stakeholder engagement and a review of key literature. The report produced as part of Phase 2 examined the existing and emerging key industries, as well as opportunities and impediments to economic growth to develop a list of priorities for the region.

The priorities for the Orana region were reported as:

- Water infrastructure
- Roads, rail and air
- Tertiary education
- Mobile coverage and NBN
- Tourism infrastructure
- Primary and secondary education, health and housing

Figure 1 illustrates the breadth of these priorities on a scale between critical infrastructure and important lifestyle enablers.

Figure 1 Orana Regional Priorities

RDAO and Arup worked with stakeholders through a collaborative mapping process to investigate issues and opportunities related to the provision of infrastructure (or planned infrastructure projects) in the region. This yielded more than 300 initiatives. This group of initiatives was then distilled into a list of 27 projects in the Orana region which were taken forward for assessment, as below.

Table 2 Orana Projects

Project Category	Project Name
Road	Dubbo Freightway construction
Road	Purvis Lane reconstruction
Road	Coonabarabran bypass
Road	North / South Rail link intermodal hubs
Road	Intermodal hub at Narromine
Road	Dixons Long Point road
Road	Golden Highway upgrade
Rail	Hunter Rail corridor upgrade
Rail	Coonamble to Dubbo Rail
Rail	Dubbo-Toongi railway re-instatement
Rail	Rail upgrades between Orange and Dubbo
Rail	GrainCorp Project Regeneration
Air	Dubbo airport project
Air	Mudgee airport project
Water	OROC weather radar
Water	Albert Priest Channel water supply pipeline
Energy	The Solar Energy eXchange Initiative
Energy	Hera Resources mine
Energy	Dubbo Zirconia project
Energy	33 tower wind farm at Bodangora
Telecoms	Mobile coverage along major highways required
Telecoms	Mobile coverage beacons
Telecoms	NBN coverage to regional centres
Waste	Regional waste recycling or Transfer facility
Waste	Organic processing facility
Social/Tourism	Lightning Ridge Opal Centre
Social/Tourism	World class agricultural tertiary facility

3 Methodology

3.1 Summary

The below table summarises the assessment framework that has been developed specifically for this project to enable assessment of multiple types of projects at different stages of maturity and with differing extents of information available. The framework uses the following three categories to assess, drawn from recognised frameworks as follows:

Strategic Fit	• Infrastructure Australia Assessment Framework for Initiative Prioritisation • NSW Treasury Guidelines
Economic Merit	• Infrastructure NSW State Infrastructure Strategy
Maturity	• Infrastructure NSW Major Project Assurance Framework and State Infrastructure Strategy

Table 3 Assessment framework

Analysis		Criteria	Considerations	Weighting		Framework
Priority	**Strategic Fit**	Impact	*Significance*	25%	100%	Infrastructure Australia Assessment Framework for Initiative Prioritisation
			Economic impact			
			Social impact			
			Environmental impact			
		Policy Alignment	*Regional priorities*	25%		NSW Treasury Guidelines
			NSW priorities			
			National priorities			
	Economic Merit		*Expected Economic Efficiency*	50%		Infrastructure NSW State Infrastructure Strategy
Maturity	**Assurance Framework for "investment decision readiness"**	Justification	*Project rationale*	33%	100%	Infrastructure NSW Major Project Assurance Framework and State Infrastructure Strategy NSW Treasury Guidelines for Capital Business Cases
			Need			
			Options			
			Outcome			
		Strategic Assessment	*Objectives*	33%		
			Stakeholder support			
			Project governance			
			Project plan			
		Business Case	*Options Assessment*	33%		
			Cost Benefit Analysis			
			Scope			
			Project Brief			
			Risks			
			Market interest			

3.2 Inputs

The initial intention was to undertake a rapid cost benefit analysis (CBA) of the shortlisted projects based on information to be provided by the various stakeholders involved in each initiative. However, as the shortlisted projects were investigated in detail it become clear that the projects are at different stages of development – with many in the conceptual stage – and as such the detailed project information that would be required to support cost benefit analysis is in many instances unavailable. As such, it is not considered possible to undertake a rapid CBA at this point.

An approach with more of an emphasis on qualitative rather than quantitative assessment is therefore considered more appropriate and practical. This approach for assessing and prioritising projects is explained below in further detail in Section 3.3.

It utilises established processes that are used by leading independent infrastructure assessors, is aligned to capital business case development and funding processes used by NSW Treasury and digs deeper into how each project aligns with policies and priorities at regional, State and Federal levels.

We believe however that there would be merit in completing more detailed cost benefit analysis should detailed information be made available. This further level of assessment would strengthen the case for seeking project funding.

3.3 Qualitative assessment approach

Initiatives are assessed through a multi-criteria analysis framework (the framework) modelled on existing approaches and guidelines from leading independent authorities Infrastructure Australia (IA) and Infrastructure NSW (INSW). The framework also incorporates NSW Treasury recommendations for developing preliminary business cases from the NSW Treasury Guidelines for Capital Business Cases.

Infrastructure NSW – in its State Infrastructure Strategy – applies a three part test to its assessment of infrastructure initiatives:

- Strategic Fit
- Economic Merit
- Completed Assurance Processes

These three categories form a high level structure for the assessment. Strategic fit and economic merit make up the assessment of project priority. The assurance component assesses the level of confidence with the planning analysis undertaken to date. Table 6 illustrates the framework in full, with a more detailed explanation of each component of the criteria in Appendix B.

3.3.2 Strategic fit

Strategic fit is assessed using two important structures:

1. Impact

Contained within Infrastructure Australia's Initiative and Project Prioritisation Process is an Assessment Framework that we draw upon to assess impact. IA prioritises initiatives based on "significance" and the various impacts of the problem or opportunity the initiative is targeted at addressing.

- Significance – defined in the *Infrastructure Australia Act 2008* to include infrastructure in which investment will materially improve national productivity. In the context of this prioritisation, a problem or opportunity of significance is an infrastructure problem or opportunity which, when addressed, will result in a material improvement to productivity - regionally or nationally;
- Economic impact – a problem includes limiting productive capacity; reducing productivity; constraining economic capability; constraining global competitiveness. An opportunity addresses a major economic constraint;
- Social impact – a problem results in, maintains or exacerbates issues of social exclusion and/or quality of life, such as access to services and employment. An opportunity addresses major social issues; and
- Environmental impact – a problem results in adverse environmental impact. An opportunity addresses an adverse environmental impact.

2. Policy alignment

Policy alignment is a strong theme in the NSW Treasury Guidelines for Capital Business Cases. The framework thus considers the alignment of the initiative to:

- Regional priorities – alignment with and likely contribution to the regional priorities (for either Orana or Far West) identified in Phase 2;
- NSW priorities – including the state infrastructure strategy, mandated government priorities, agency business plans etc.; and
- National priorities – such as IA's Australian Infrastructure Plan and Infrastructure Priority List and RDAO policies and plans.

3.3.3 Economic merit

Economic Merit is accounted for through a qualitative assessment of expected economic efficiency. That is, the likelihood that economic benefits will exceed economic costs. Where little or no information has been provided on the costs and benefits of a proposed initiative and a qualitative assessment of "value for money" is not feasible, the multi-criteria analysis process will assign a neutral score to the economic efficiency criteria (i.e. it will assume a BCR of 1.0). This aligns with the approach used in INSW's State Infrastructure Strategy Prioritisation Assessment.

3.3.4 Assurance

Given the variance in depth and breadth of detail available for the initiatives under assessment, the assurance component of INSW's assessment criteria is an important component of the framework that assesses the level of confidence with the planning analysis undertaken to date and therefore the level of confidence that can be attributed to the assessment built on this data.

Infrastructure NSW uses its major project assurance framework to assess whether funding should be reserved for a particular project or program. Under this framework, projects are deemed to be "investment decision ready" when they have passed through Stage 2 of the major project assurance framework. This is the point at which funding can be substantively committed to the project and the process of procurement can commence. The major project assurance framework aligns with Treasury Gateway Review procedures (i.e. government "hold point" assessment) and thus provides a good structure for assessing whether a project has "ticked all the boxes" necessary to receive funding.

Figure 2 below illustrates the INSW assurance framework. Stages 0, 1 and 2 form the structure of the assurance framework of the qualitative assessment framework used for this analysis shown in Table 6.

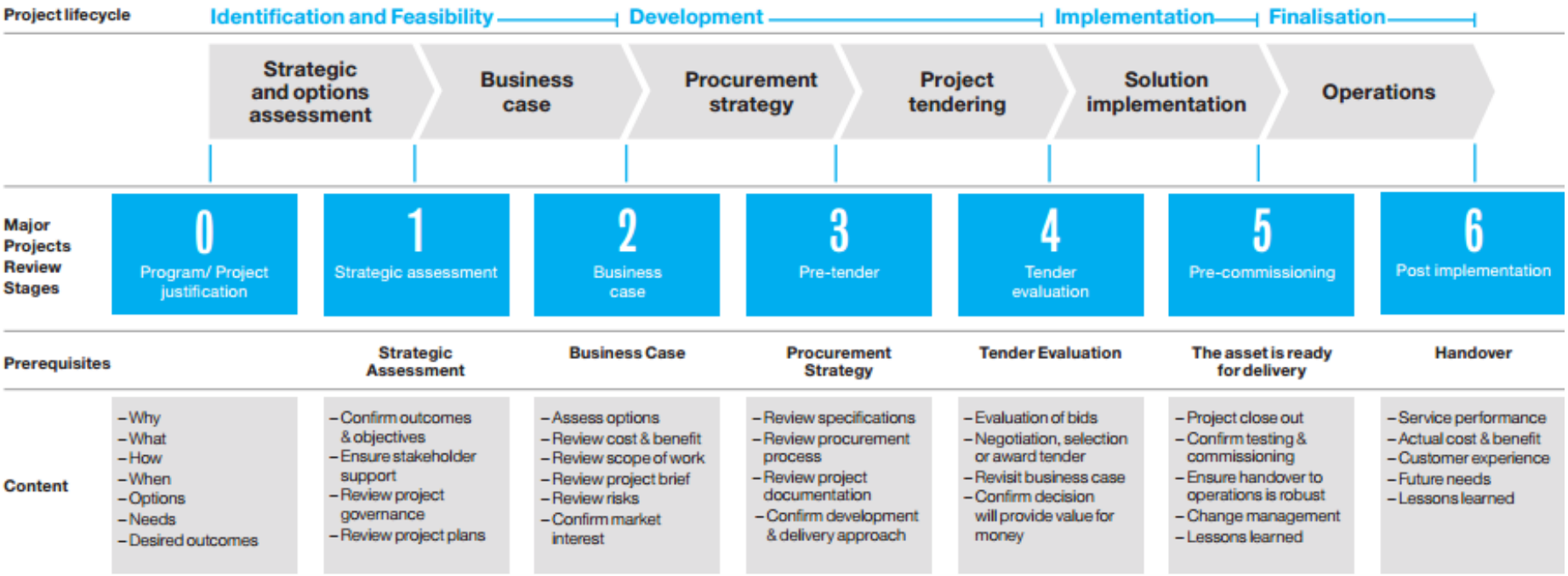

Figure 2 INSW major project assurance framework (INSW State Infrastructure Strategy Update 2014)

- Stage 0 – Justification

  As the figure above shows, Stage 0 – Justification – is a preliminary stage of planning. It involves establishing the need for the project, identifying the options and articulating the desired outcomes. Projects at this stage are not yet ready for investment and require further investigation.

- Stage 1 - Strategic Assessment

  This stage is complete once stakeholders have been engaged and support the initiative, a plan is in place for governance and the planning components that were articulated at a high level in the Justification stage (such as outcomes and timing) have been further refined. A project that reaches this stage has a clear plan to move forward, but hasn't yet refined the scope or articulated the benefits and costs enough to justify investment.

- Stage 2 – Business Case

  A decision on whether a project should be invested in can be made once it has met the requirements of Stage 2. A Business Case assesses the merits of the options identified in previous planning in terms of costs and benefits, identifies a proposed scope and takes stock of the risks. The information developed for this stage can be summarised in a project brief that details all of the important information that a decision-maker needs.

Basing this analysis on INSW's "investment decision readiness" criteria allows the assurance component of the framework to assess the "investment decision readiness" of the prioritised initiatives.

3.4 Qualitative assessment ratings

Under a multi-criteria analysis framework, each project under consideration is scored according to a qualitative assessment of how well it meets each criteria. Converting this qualitative assessment into a score allows the summation of each criterion's score into a total score (according to the weighting attributed to each criterion – see Section 3.6 and Appendix B) which can be compared across initiatives.

This assessment uses a scale based on rankings suggested by the Australian Transport Council Guidelines shown below.

Table 4 Assessment ratings (Source: Australian Transport Council Guidelines Volume 3)

Assessment Rating	Description	Score
Strongly negative	Major negative impact with serious, long term effects that may be irreversible	-3
Moderately negative	Moderate negative impact over any timeframe which may be managed	-2
Slightly negative	Minimal negative impact, probable short term and able to be managed or mitigated	-1
Neutral	No discernable impacts or impacts have yet to be determined	0
Slightly positive	Minimal positive impact, possible only short term or confined to a limited area	1
Moderately positive	Moderate positive impact, over any timeframe, which may provide new opportunities or improvements	2
Strongly positive	Major positive impacts resulting in substantial long term improvements	3

Based on the information available, scoring has been undertaken qualitatively. In instances where there is insufficient data to undertake a rating and where meaningful qualitative analysis is not feasible, the multi-criteria analysis process may assign a neutral score.

3.5 Prioritisation framework

Initiatives are given a "priority" rating according to their Strategic Fit and Economic Merit. As Figure 3 illustrates, each initiative is "mapped" according to its multi-criteria analysis scores for economic merit and strategic fit.

"High priority" initiatives are those with high scores in both criteria; initiatives with mid-range scores in both categories are classed as "medium priority"; and initiatives with scores below the relevant thresholds in both strategic fit and economic merit are defined as "priority" due to their relatively lower impact and alignment to policy. NB. All projects included in the assessment are however deemed to be the Priority projects for the region, hence the reason we have avoided the term "Low Priority".

The Assurance criteria is demonstrated by the size of the blue circle, indicating the maturity of the project/information available to base an assessment on. Figure 3 demonstrates how smaller dots indicate low multi-criteria assurance scores, and vice versa.

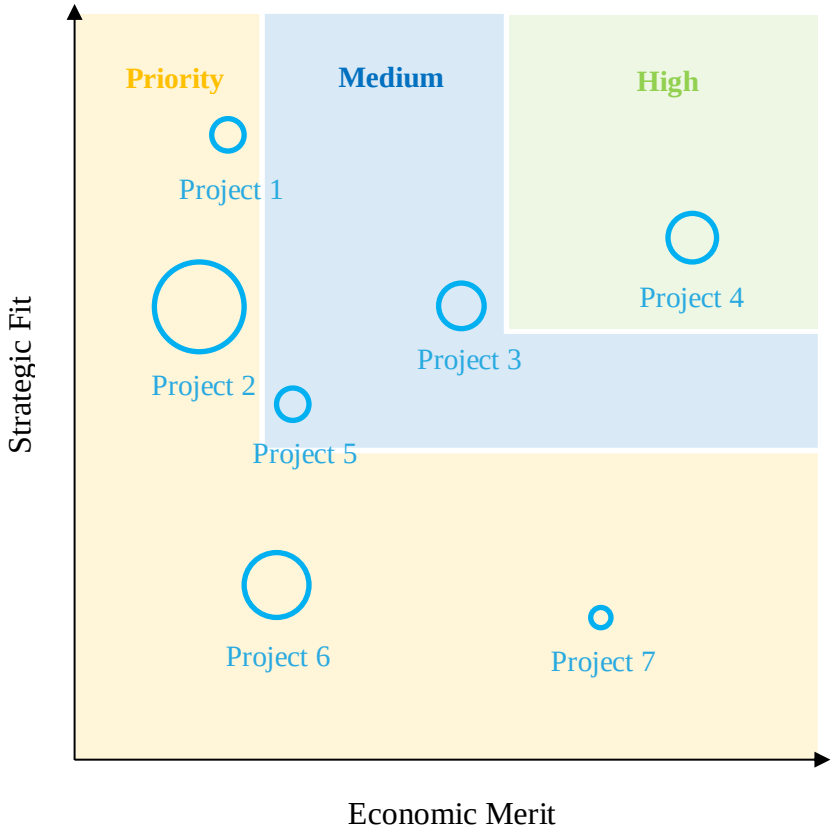

Figure 3 Conceptual mapping of multi-criteria analysis scores

The thresholds for each category of assessment and prioritisation are shown below.

Table 5 Prioritisation thresholds

Priority Thresholds		>=
High	Strategic Fit	1.75
	Economic Merit	1.75
Medium	Strategic Fit	1.25
	Economic Merit	0.75
Priority		Other
Maturity Thresholds		>=
	Business Case	3
	Strategic Assessment	2
	Justification	1
	Not	Other
Strategic Fit thresholds		>=
	High	2
	Medium	1
	Low	Other
Economic Thresholds		
	Significant	3
	Positive	1 or 2
	Neutral	0
	Low	-1

3.6 Assessment framework

Combining the qualitative assessment methodologies discussed above gives us a holistic framework for qualitatively assessing the Priority of projects. This is based on Strategic Fit and Economic Merit, and the Maturity of the planning of those projects against the first three stages of INSW's Assurance Framework – a state that INSW calls "investment decision readiness". Table 6 illustrates the qualitative assessment framework as well as the weightings given to each criteria. Appendix B gives a more detailed definition of each criterion.

Scoring a project against each of the criterion and applying the weighting gives as assessment of Priority and Maturity. For example, a water project that would alleviate a significant and urgent shortage will have strong positive social and economic impact and will attract a high Impact score. If regional, state and federal policies and strategies align with addressing water shortage it would also receive a strong Policy Alignment score - and these two scores will combine into a strong Strategic Fit score. This approach is applied to the other key assessment elements of the framework to build up the overall Priority and Maturity assessments for each project.

Table 6 Assessment framework

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			Need			
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			Project governance			
			Project plan			
		Business Case	*Options Assessment*	33%		
			Cost Benefit Analysis			
			Scope			
			Project Brief			
			Risks			
			Market interest			

4 Assessment and prioritisation

Table 7 shows the outputs of the assessment for the projects in the Orana Region. At this stage of prioritisation, there are a number of projects which were identified through the stakeholder consultation for which data is not available – these are highlighted in Table 7 and have not been assessed. However, these are included as priority projects as they were identified as such during the earlier phase and further analysis if the projects become better defined may indicate strategic fit and economic merit.

Table 7 Orana Project assessments (Note SF = Strategic Fit, EM = Economic Merit)

Project	Category	SF	EM	Priority	Maturity
Dubbo Freightway Construction	Road	2	2	High	Strategic Assessment
Purvis Lane Reconstruction	Road			Priority	
Coonabarabran Bypass	Road	1.5	1	Medium	Justification
North / south rail link intermodal hubs	Road			Priority	
Intermodal hub at Narromine	Road	2.5	1	Medium	Justification
Dixons Long Point Road	Road			Priority	
Golden Highway Upgrade	Road	3	2	High	Strategic Assessment
Hunter Rail Corridor Upgrade	Rail	1.5	0	Priority	Justification
Coonamble to Dubbo Rail	Rail			Priority	
Dubbo-Toongi Railway Re-instatement	Rail	1	0	Priority	Justification
Rail upgrades between Blayney and Bathurst	Rail			Priority	
GrainCorp Project Regeneration	Rail	2	2	High	Business Case
Dubbo airport project	Air	1.5	2	Medium	Business Case
Mudgee airport project	Air	2	3	High	Strategic Assessment
OROC weather radar	Water	2.5	3	High	Strategic Assessment
Albert Priest Channel water supply pipeline	Water	3	2	High	Strategic Assessment
The Solar Energy eXchange Initiative	Energy	3	2	High	Strategic Assessment
Hera Resources Mine	Energy	1	-1	Priority	Justification
Dubbo Zirconia Project	Energy	2	3	High	Strategic Assessment
33 tower wind farm at Bodangora	Energy	2	1	Medium	Strategic Assessment
Mobile coverage along major highways required	Telecoms			Priority	
Mobile coverage beacons	Telecoms	2	0	Priority	Strategic Assessment
NBN coverage to regional centres	Telecoms			Priority	
Regional Waste Recycling or Transfer Facility	Waste	1.5	1	Medium	
Organic Processing Facility	Waste	1.5	2	Medium	Strategic Assessment
Lightning Ridge Opal Centre	Social/Tourism	1	0	Priority	Strategic Assessment
World class agricultural tertiary facility	Social/Tourism			Priority	

4.1 Road

Information for assessment was available for four of the seven road projects identified through the stakeholder engagement process. Figure 4 illustrates the outcomes of the assessment.

Road projects are a high priority in the Orana region. Phase 2 identified improving infrastructure as a key priority, and this aligns closely with the NSW State Infrastructure Strategy (which includes $1 billion for increased road connectivity in regional centres) and Infrastructure Australia's Australian Infrastructure Plan (which prioritises connectivity and freight movement).

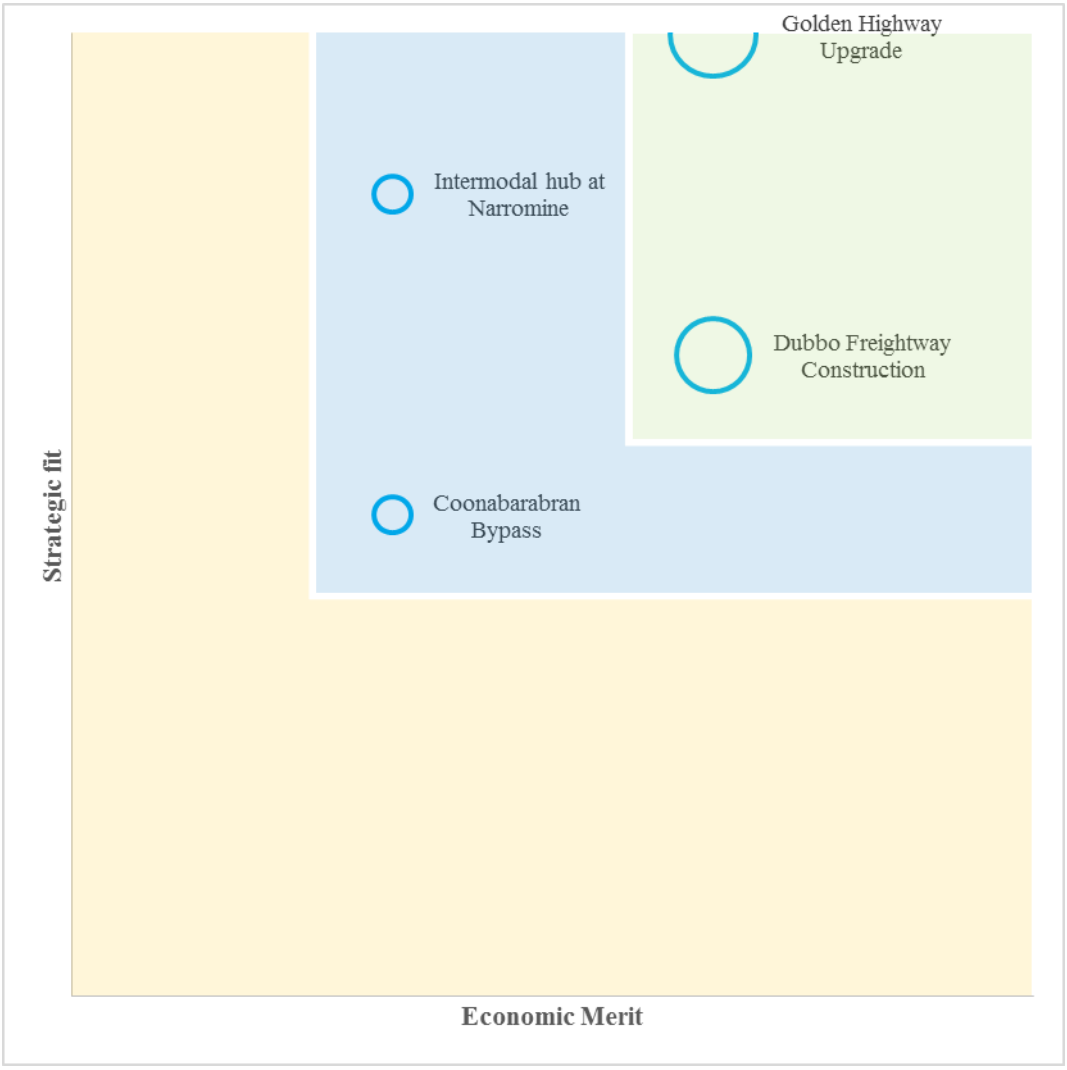

Figure 4 Orana Road Projects

This is reflected in the strong strategic fit of the four projects assessed. Both Golden Highway and Dubbo Freightways Construction are high priority projects with a high level of maturity. These projects should therefore be progressed towards investment decision readiness.

It is clear from Infrastructure Australia's recommendations that the potential of the Inland Rail corridor to increase freight productivity and reduce impacts is

substantial – an Intermodal hub at Narromine would contribute to this and therefore presents a strong opportunity for regional productivity improvement. However, this project's impact is strongly linked to the development of Inland Rail which IA identifies as a long term (10-15 year) priority.

Several NSW strategies including Infrastructure New South Wales's State Infrastructure Strategy have identified the need for a bypass at Coonabarabran. The Newell Highway Corridor Strategy lists the Coonabarabran Bypass as a Medium Term priority for town bypasses over the next 20 years. The NSW Long Term Transport Master Plan points to a program of town bypasses to improve travel within towns, reduce delays caused to freight traffic and increase safety.

Table 8 Orana Road Projects

Project	Category	SF	EM	Priority	Maturity
Dubbo Freightway Construction	Road	2	2	High	Strategic Assessment
Purvis Lane Reconstruction	Road			Priority	
Coonabarabran Bypass	Road	1.5	1	Medium	Justification
North / south rail link intermodal hubs	Road			Priority	
Intermodal hub at Narromine	Road	2.5	1	Medium	Justification
Dixons Long Point Road	Road			Priority	
Golden Highway Upgrade	Road	3	2	High	Strategic Assessment

4.2 Rail

The three rail projects which were assessed are depicted in Figure 5. Two further rail projects were identified in the full priority list. Although the upgrade of rail freight capacity and intermodal shift aligns strongly with the priorities of IA, INSW and Orana, only one of the projects is considered high priority.

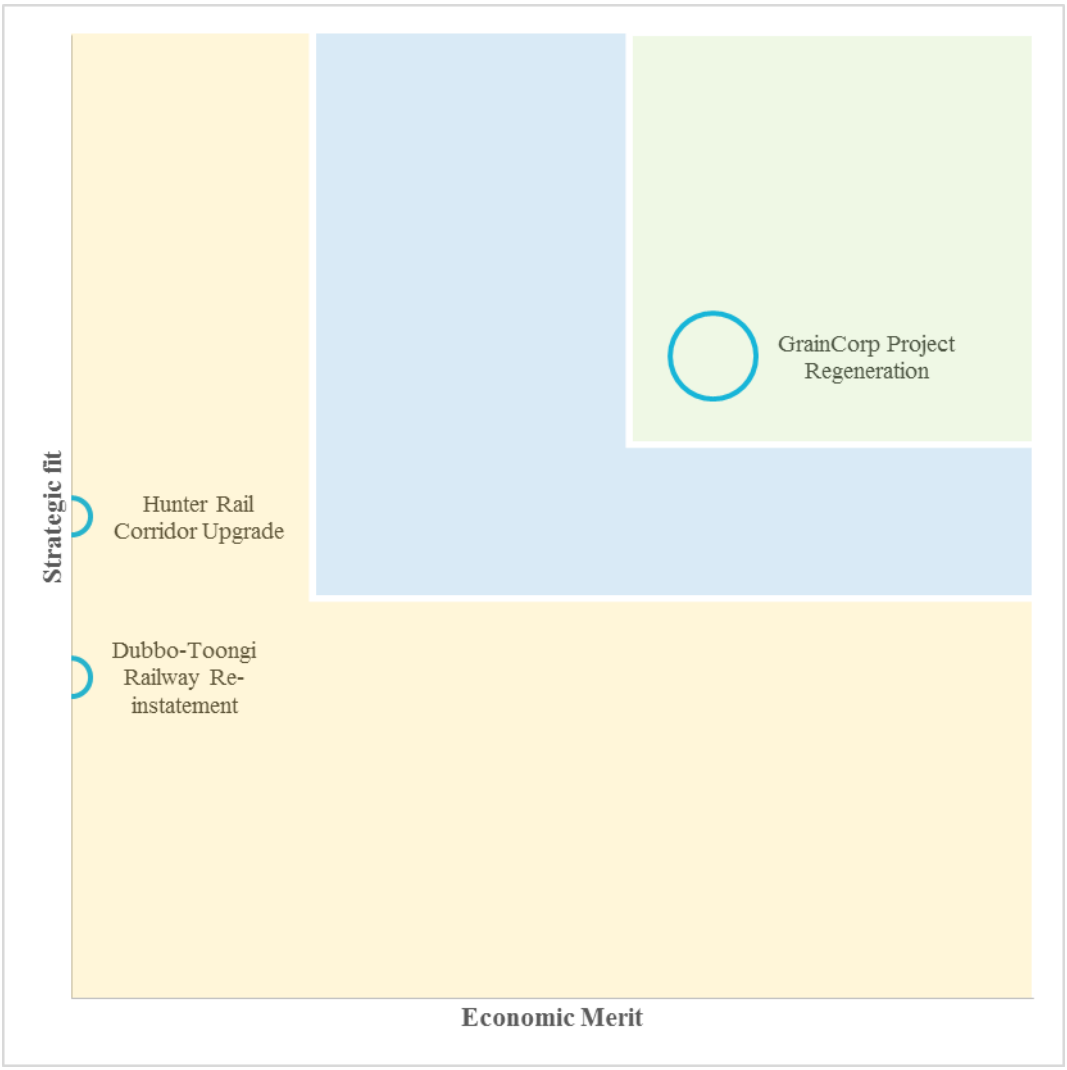

Figure 5 Orana Rail Projects

The Hunter Rail Corridor Upgrade and Dubbo-Toongi Railway Re-instatement rely on private funding and, based on the information received, have not yet met the requirements for investment.

GrainCorp's upgrade of existing infrastructure is a system scale initiative and would be expected to offer widespread productivity benefits. GrainCorp has completed the investment planning and is progressing with the first stage of this project.

Table 9 Orana Rail Projects

Project	Category	SF	EM	Priority	Maturity
Hunter Rail Corridor Upgrade	Rail	1.5	0	Priority	Justification
Coonamble to Dubbo Rail	Rail			Priority	
Dubbo-Toongi Railway Re-instatement	Rail	1	0	Priority	Justification
Rail upgrades between Blayney and Bathurst	Rail			Priority	
GrainCorp Project Regeneration	Rail	2	2	High	Business Case

4.3 Air

Air travel is a key component of connectivity in the remote regions of NSW. Two air projects in Orana were considered. Figure 5 illustrates the outcomes of the assessment. The NSW Government has flagged regional Tourism as a priority by creating a Regional Tourism Infrastructure Fund, which was announced in the State's 2014-15 Budget to assist the Government to meet its target of doubling overnight visitor stays by 2021. These projects also align with IA's recommendations to prioritise connectivity.

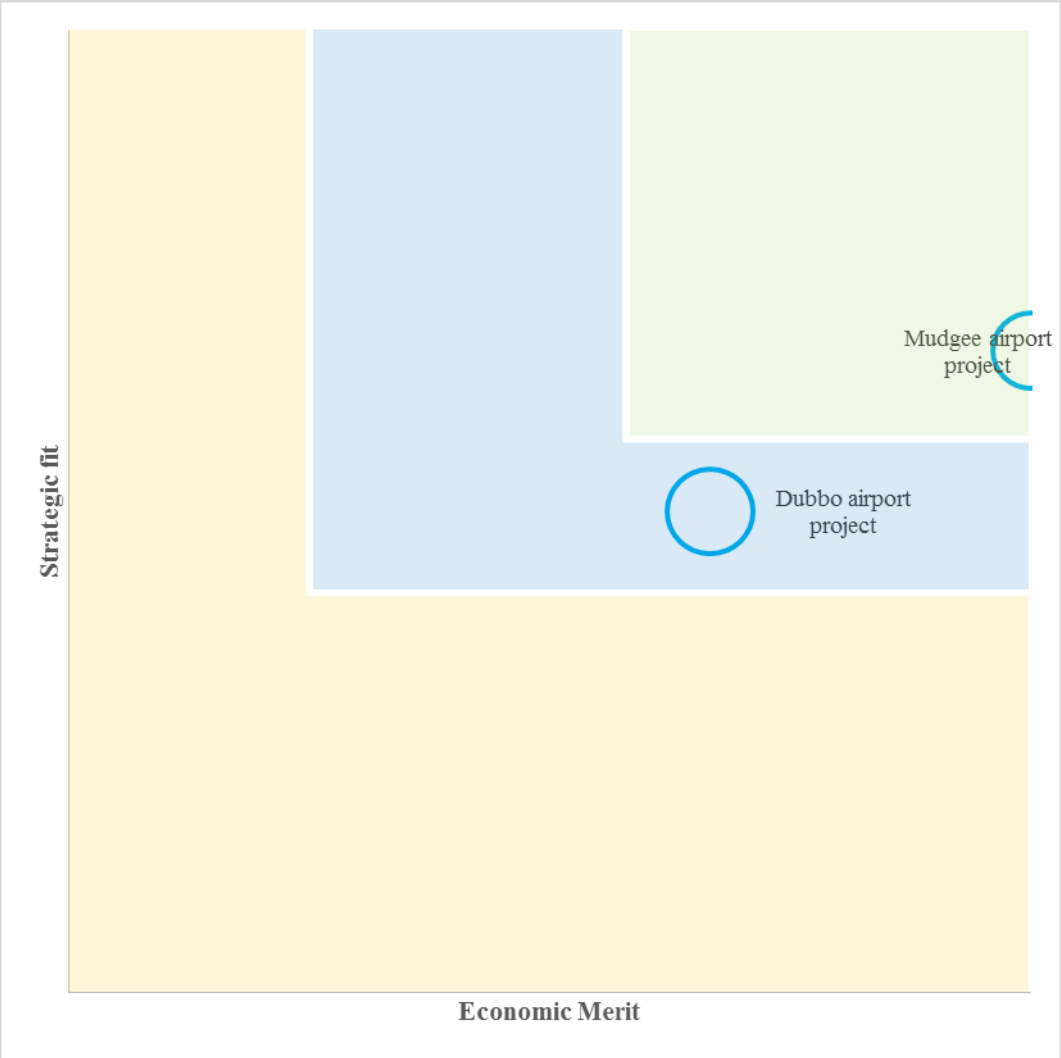

Figure 6 Orana Air Projects

The Dubbo Airport upgrade has received funding from the Regional Tourism Infrastructure Fund to proceed.

The Mudgee Airport Master Plan shows strong potential benefits for the area and has been identified as a high priority. The Master Plan contains most of the components required for business case development.

Table 10 Orana Air Projects

Project	Category	SF	EM	Priority	Maturity
Dubbo airport project	Orana	1.5	2	Medium	Business Case
Mudgee airport project	Orana	2	3	High	Strategic Assessment

4.4 Water

Phase 2 identified water reliability and security as a key priority for Orana. This aligns with the priority that NSW gave water supply and security in its 2014 State Infrastructure Strategy. The Government has committed to a $1 billion program of investment based on economic need for enhanced water security across the state.

Figure 7 shows that the two water projects were assessed as high priority.

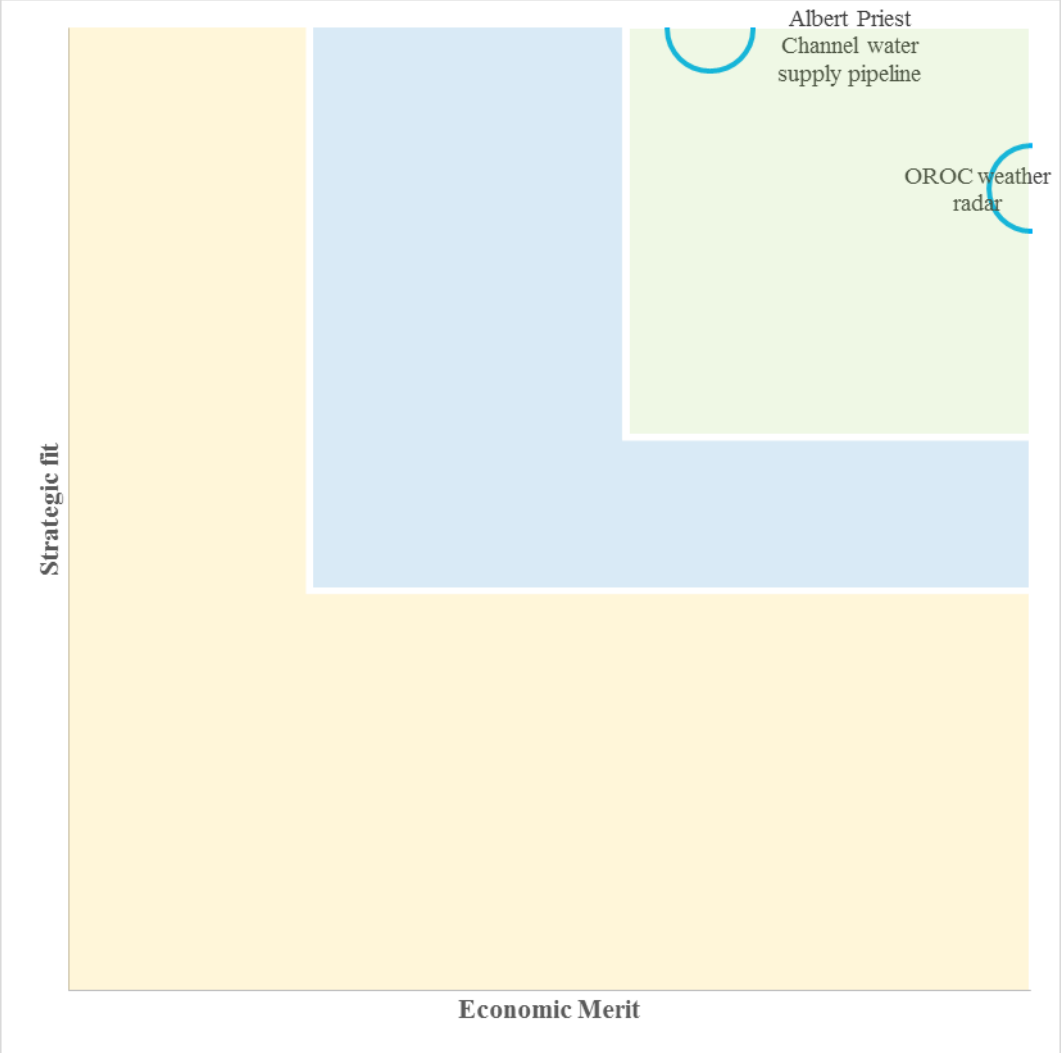

Figure 7 Orana Water Projects

Converting the Albert Priest Channel to a pipeline is aligned with current policy. Infrastructure Australia recommends that governments should increase funding for investments in projects and technologies that make better use of existing infrastructure, as well as infrastructure that supports a transition to a more sustainable economy. IA's Infrastructure plan also highlights that water supply can be augmented without resorting to new dams.

The OROC Weather Radar would have wide-ranging benefits across both a large area and a range of industries. Moreover, the high social impact that weather events

can have on regional communities adds weight to the merit of this relatively low cost initiative.

Table 11 Orana Water Projects

Project	Category	SF	EM	Priority	Maturity
OROC weather radar	Water	2.5	3	High	Strategic Assessment
Albert Priest Channel water supply pipeline	Water	3	2	High	Strategic Assessment

4.5 Energy

Three energy projects in Orana were considered. Figure 8 illustrates the outcomes of the assessment. Renewable energy is a high priority at all levels of government. The Phase 2 report identified renewable energy as a key priority for the region. The 2012 NSW State Infrastructure Strategy named energy production in the regions as a priority and IA's Australian Infrastructure Plan recognises that infrastructure must play its part in supporting a more sustainable economy.

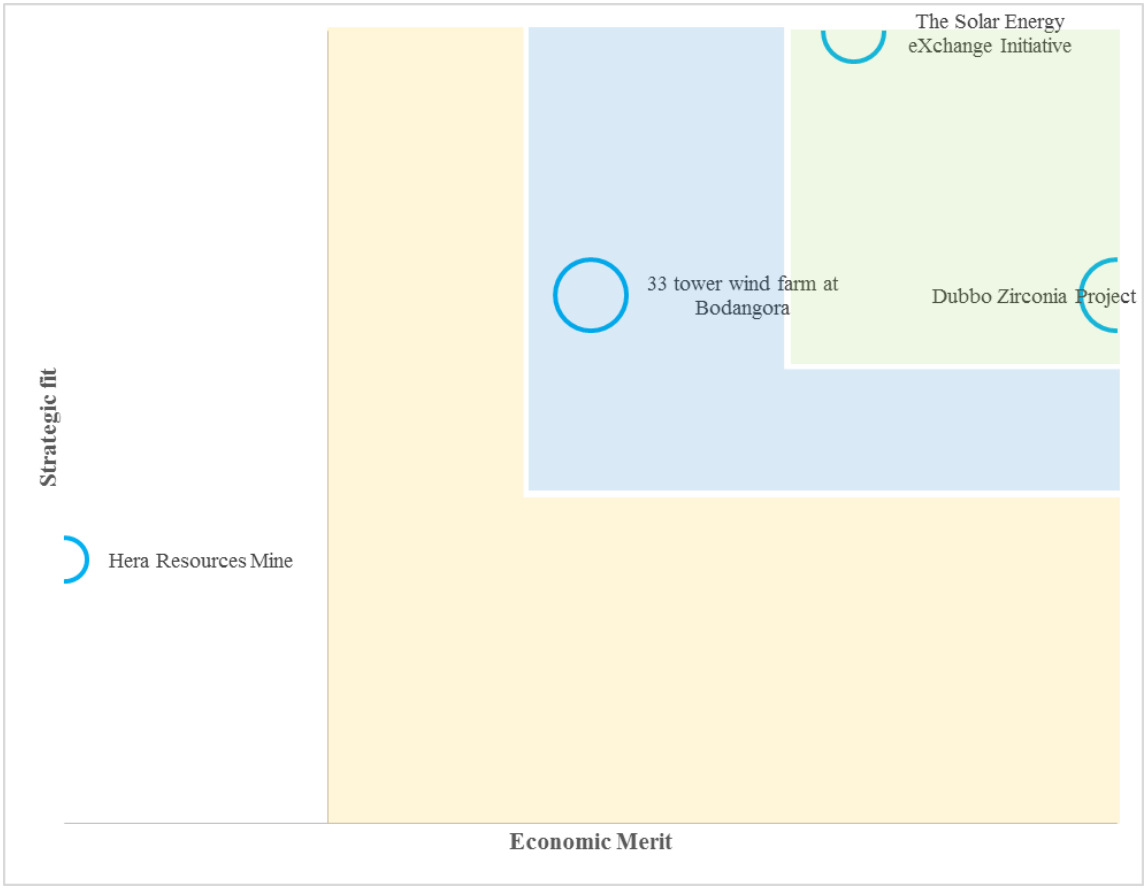

Figure 8 Orana Energy Projects

The Solar Energy eXchange Initiative has received in principal support at a number of levels of government and supports the Phase 2 priority of pursuing opportunities for renewable energy.

The Dubbo Zirconia Project would likely generate significant economic growth in the region and opportunity for employment, and is already progressing in line with the mature planning that is in place.

The Bodangora wind farm project would add to the energy resilience of the region and is being pursued by a private investor.

The Hera Resources Mine project is a proposed direct grid connection for the mine and proposed mines in the area as an alternative to the gas turbine which currently provides energy for the mine. The information provided indicates very high costs compared to the benefits which would be dependent on the development of a number of proposed mine sites nearby.

Table 12 Orana Energy Projects

Project	Category	SF	EM	Priority	Maturity
The Solar Energy eXchange Initiative	Energy	3	2	High	Strategic Assessment
Hera Resources Mine	Energy	1	-1	Priority	Justification
Dubbo Zirconia Project	Energy	2	3	High	Strategic Assessment
33 tower wind farm at Bodangora	Energy	2	1	Medium	Strategic Assessment

4.6 Telecoms

Information was available to assess one telecommunications project in Orana. Figure 9 illustrates the outcomes of the assessment.

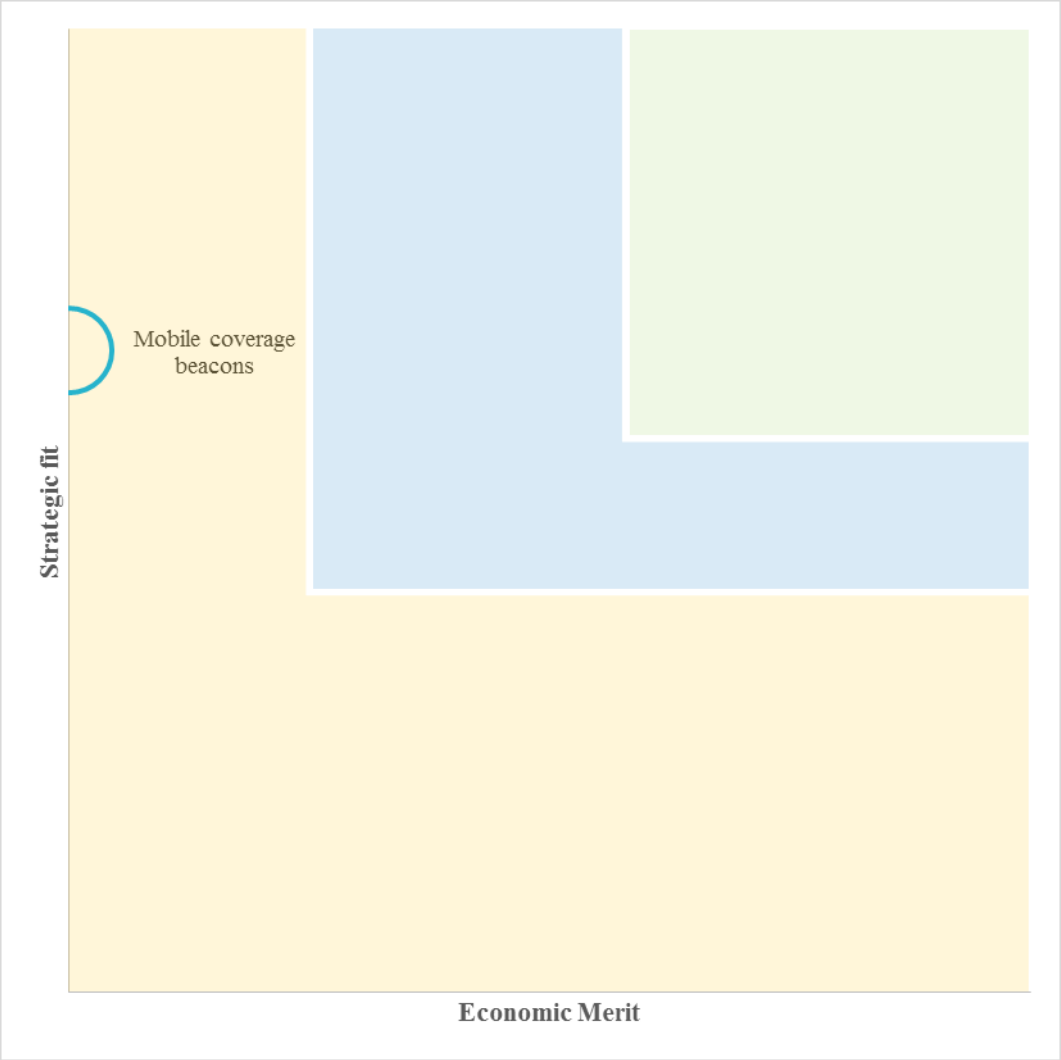

Figure 9 Orana Telecoms Projects

Recommendation 4.4 of IA's Infrastructure Plan is that the Australian Government should remove barriers to entry for mobile network providers in regional Australia to facilitate improvements in coverage, competition and service quality. The federal government's Mobile Black Spot Program is an opportunity to support the rollout of improved mobile coverage in the Orana region. Applications to round 2 of the program are due in June 2016, and working with mobile network operators and infrastructure providers to take up this opportunity should be a priority for the region.

NBN coverage to regional centres is a key priority for the area. The lack of high speed internet connections has a high impact on regional residents and constrains the productivity of business and potential emerging industries, however there is no specific project to asses using the framework. NBN coverage is thus included in the list of priority projects but not assessed. Mobile coverage along highways is

similarly a strong priority for the area without being a specific project under assessment.

Table 13 Orana Telecoms Projects

Project	Category	SF	EM	Priority	Maturity
Mobile coverage along major highways required	Telecoms			Priority	
Mobile coverage beacons	Telecoms	2	0	Priority	Strategic Assessment
NBN coverage to regional centres	Telecoms			Priority	

4.7 Waste

Two waste projects in Orana were proposed and assessed. Figure 10 illustrates the outcomes of the assessment.

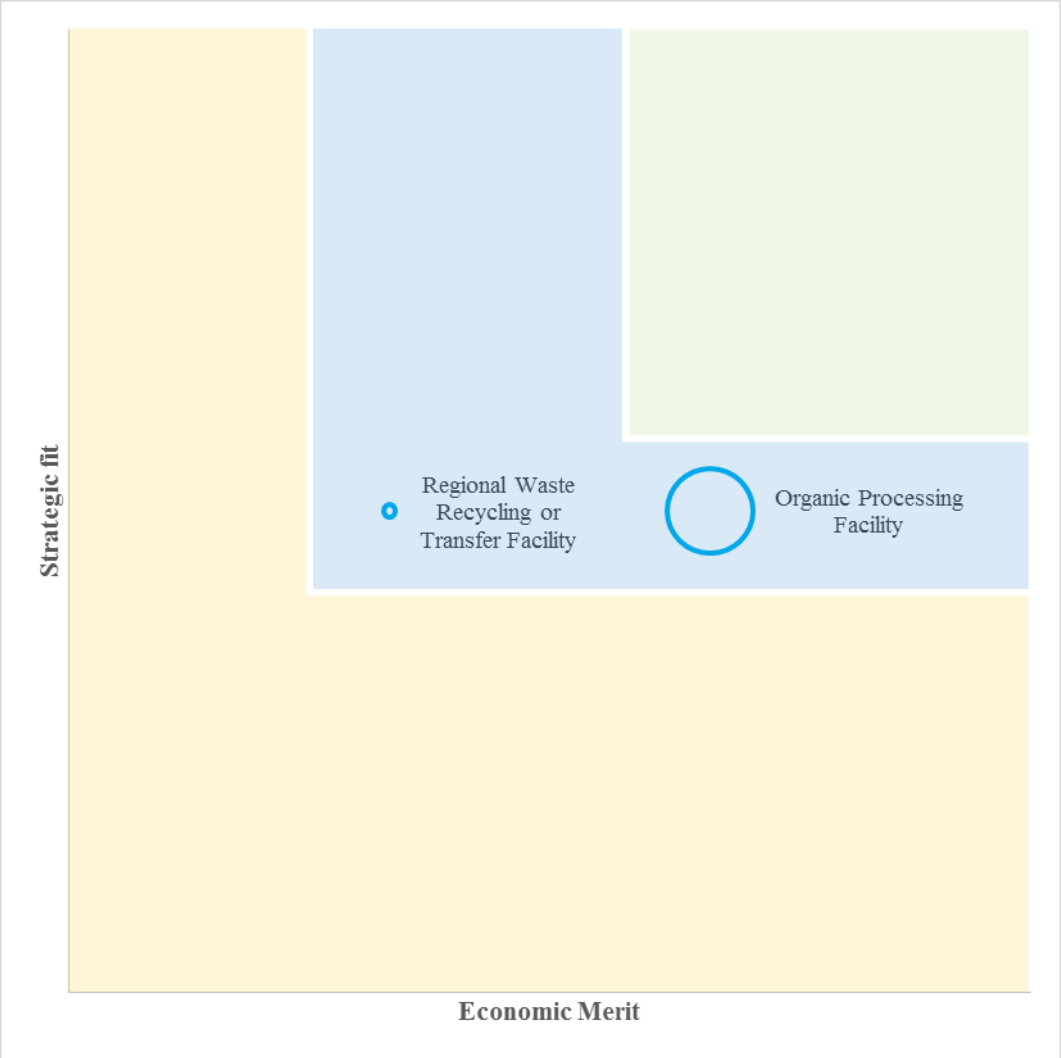

Figure 10 Orana Waste Projects

Two waste projects were proposed to help address the increasing costs of landfill and remoteness of infrastructure in the Orana. Due to the geographically remote locations and small scale of most Local Government Areas west of Dubbo, it is not economically viable for each Council to provide waste management facilities. An organic processing facility would add a new industry to the region and reduce the environmental impact of waste disposal, and a recycling facility would provide a service that is currently not available throughout the region.

Table 14 Orana Waste Projects

Project	Category	SF	EM	Priority	Maturity
Regional Waste Recycling or Transfer Facility	Waste	1.5	1	Medium	
Organic Processing Facility	Waste	1.5	2	Medium	Strategic Assessment

4.8 Social/Tourism

Two social/tourism projects in Orana were considered – information was available to assess one of them. Figure 11 illustrates the outcomes of the assessment.

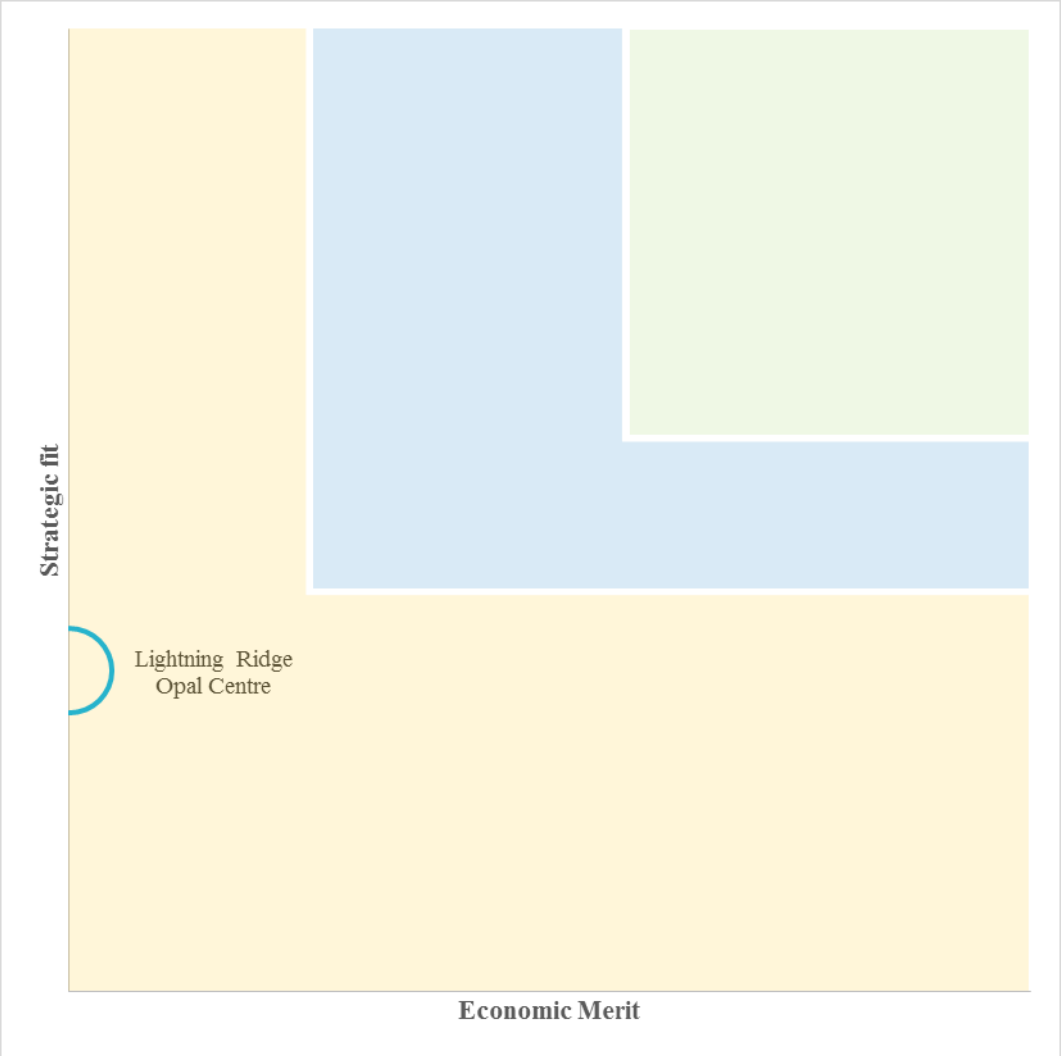

Figure 11 Orana Tourism Projects

The lightning Ridge Opal Centre would create strong localised benefits and contribute to the 2014 State Infrastructure Strategy priority to develop regional cultural and tourism infrastructure. The project is seeking philanthropic and grant funding to meet costs.

Table 15 Orana Tourism Projects

Project	Category	SF	EM	Priority	Maturity
Lightning Ridge Opal Centre	Social/Tourism	1	0	Priority	Strategic Assessment
World class agricultural tertiary facility	Social/Tourism			Priority	

5 Appendix A: Project Summaries

Dubbo Freightway

Construction of a freightway ring road around Dubbo

Priority
High Priority

Location
Dubbo, NSW

Category
Road

Strategic Fit
High

Economic Merit
Positive

Maturity
Strategic Assessment

Investment decision readiness

Proposed initiative

Council's Dubbo Road Transportation Strategy includes a freight way ring road to be constructed in stages around the periphery of Dubbo. It would be designed to facilitate heavy vehicle movements both within and around Dubbo, but is located close enough to the urban edge that sufficient light vehicle usage will occur as to largely eliminate the need for major road upgrades nearer the urban centre.

Current status

The Strategy has been completed, incorporating traffic modelling. Engineering Design work, environmental approvals are under way for early projects in the Strategy.

Next steps

Suggested next steps include stakeholder engagement around the options identified in the strategy, further cost benefit analysis on the other components of the Strategy, prioritisation of options, defining the scope of suggested next stages and preparing business cases in line with Treasury's guidelines such that market interest can be tested and government funding may be sought.

Possible funding sources

NSW Government committed $50M for the duplication of the LH Ford Bridge.

Funding could be sought for further components of the Strategy from the Government's Rebuilding NSW regional funding outlined in the SIS 2014.

Alignment

Infrastructure Australia Plan Recommendation 4.1: State and territory governments should deliver long-term regional infrastructure plans.

The NSW Long Term Transport Master Plan points to a program of town bypasses to improve travel within towns, reduce delays caused to freight traffic and increase safety.

Coonabarabran bypass

Re-routing the Newell Highway around the Coonabarabran town centre

Priority
Priority

Location
Coonabarabran, NSW

Category
Road

Strategic Fit
Medium

Economic Merit
Positive

Maturity
Justification

Investment decision readiness

Problem

As town centres have developed along the Newell Highway the local traffic volumes have increased over time. The increasing interaction of local traffic with inter-regional traffic has started to impact on the highway's efficiency and safety. Moreover the increased number of vehicles travelling through towns, including freight vehicles, increases traffic delays and increases the potential for excessive noise pollution.

Proposed initiative

Bypassing Coonabarabran will help solve these congestion problems and reduce the social impact of heavy vehicles on the town. It will improve travel within the town, reduce delay for freight vehicles and improve road safety by reducing interaction between local and thoroughfare traffic as well as between vehicles and pedestrians.

Current status

A preferred corridor has been identified in the Newell Highway Corridor Strategy, however further investigation is required.

Next steps

The Newell Highway Corridor Strategy lists the Coonabarabran Bypass as a Medium Term priority for town bypasses over the next 20 years. The likely timeframe is probably around 5 years.

Possible funding sources

Funding for upgrade of the Newell Highway will likely come solely from the State budget.

Alignment

Infrastructure Australia Plan Recommendation 4.1: State and territory governments should deliver long-term regional infrastructure plans.

The Newell Highway Corridor Strategy lists the Coonabarabran Bypass as a Medium Term priority.

Intermodal Hub at Narromine

A transport facility for interchange between road and Rail

Priority
Priority

Location
Narromine NSW

Category
Road

Strategic Fit
High

Economic Merit
Positive

Maturity
Justification

Investment decision readiness

Problem / Opportunity

Under current arrangements, rail freight travelling the corridor between Melbourne and Brisbane passes through Sydney's metropolitan rail network, often resulting in significant delays. Travel time is also unreliable as priority is given to passenger services and metropolitan freight transfer. The Inland Rail initiative seeks to bypass the Sydney network and provide a direct freight route to the region.

Proposed initiative

Inland Rail will require intermodal transfer facilities along the route. This project involves the construction and operation of an intermodal transport facility located between Dubbo and Narromine within the Central West of NSW to cater for train services utilising the Melbourne to Brisbane Inland route.

Current status

The project and any investment decision are contingent on the progression of the Inland Rail proposal. The Inland Rail initiative needs to be considered in conjunction with other investments in the corridor including the Newell Highway.

Little work has been completed, however Infrastructure Australia has undertaken analysis on the Melbourne to Brisbane Rail Corridor and recommends augmentation.

Next steps

Infrastructure Australia considers this to be a longer term (10-15 years) initiative and the Inland Rail business case is still under development.

Possible funding sources

Given the alignment to Infrastructure Australia's Infrastructure Priority List, Federal funding contributions should be sought for this initiative once the Inland Rail proposal has progressed.

Alignment

Infrastructure Australia lists the Inland Rail proposal in its Infrastructure Priority List.

Golden Highway Upgrade

Incremental upgrade of the Golden Highway to support future growth

Priority
High Priority

Location
NSW

Category
Road

Strategic Fit
Medium

Economic Merit
Positive

Maturity
Justification

Investment decision readiness

Problem

The Golden Highway strategically links the Port of Newcastle with its hinterland for freight movements by road. The highway also links many communities and underpins employment, education and tourism across the region. Passenger and freight demand is forecast to double in the coming decades.

Much of the corridor is presently fit for purpose, however there are impediments that cause safety and operational concerns for users and communities. As demand increases, such concerns will also escalate. The passenger and freight demand along the Golden Highway is forecast to more than double over the next 10-20 years.

Proposed initiative

Investment in passing lanes, town bypasses and favourable gradients will enhance the capability of the Golden Highway and complement the role of Newcastle as a distribution hub for inland NSW.

Current status

Scoping study, demand analysis, and reports have been prepared for RDAO Hunter and RDAO Orana. Funding was received for only the preliminary research.

Next steps

The scoping and demand analysis should be progressed to business case development and cost benefit analysis which could support application to existing NSW funding programs.

Possible funding sources

The scale of the short to medium term projects suggests that these enhancements may be addressed through current NSW programs, such as Fixing Country Roads and Bridges for the Bush.

Funding for the Golden Highway has reached $2 million including $200,000 from Freight Pinch Point Safety Program.

Alignment

The NSW Long Term Transport Masterplan identifies Golden Highway as a planned upgrade.

Hunter Rail Corridor Upgrade

Strengthening capacity between Hunter coal mines and Newcastle Port

Priority
Priority

Location
Hunter Rail Corridor NSW

Category
Rail

Strategic Fit
Medium

Economic Merit
Neutral

Maturity
Justification

Investment decision readiness

Problem / Opportunity

The Hunter Rail Corridor underpins the NSW coal export industry by connecting the Hunter Valley coal industry to Newcastle Port. Operational and capacity constraints mean that if export contract volumes were to increase past thresholds that would require a new Terminal 4 at the port, the capacity of the network would need to be augmented.

Proposed initiative

ARTC's objective in its infrastructure strategies has been to provide track capacity ahead of demand. This project maintains that objective for the freight route for the transportation of coal from the Mid-Western, Muswellbrook and Singleton regions through to the port of Newcastle for export. It identifies current and future constraints on the capacity of the network, the options to resolve these constraints and a proposed course of action to achieve increased coal throughout should exports increase.

Current status

There has been little change in the coal market environment over the past year. Volume expectations remain closely aligned with those in ARTC's 2014 Strategy. The forward scope of work is thus little changed and export contract thresholds have not yet been met to justify capacity upgrades.

Next steps

ARTC should continue to maintain its annual strategy process and take a long term view of service needs and capacity constraints.

Possible funding sources

ARTC would derive benefit from increased through put and would be expected to be the primary funder of any required augmentation and operational efficiency programs.

Alignment

INSW SIS 14: Efficient freight transport to ports and markets.

Dubbo-Toongi Railway Re-instatement

Upgrading of railway for use by Zircon Mine

Priority
Priority

Location
Dubbo-Toongi NSW

Category
Rail

Strategic Fit
Low

Economic Merit
Neutral

Maturity
Justification

Investment decision readiness

Problem
With the development of a large Zirconia mine in Dubbo, the transport costs of reagents will be significant. Moreover, there will be social impact associated with transporting approximately 240,000 tonnes of reagents via Obley Road per annum.

Rail may be an option, but the Dubbo-Toongi section of the Dubbo-Molong Railway was closed in 1984 and bulk grain facilities were dismantled and taken away in the mid-1980s.

Proposed initiative
AZL has designed its Dubbo Zirconia processing facility adjacent to this railway line specifically to be able to take advantage of any potential transport efficiencies that could be delivered by utilising rail transport directly from Newcastle Port.

However, AZL is upgrading road access so initial transport operations will begin by road.

Current status
Alkane has funded consultants and studies including costings of the railway upgrade (Indec Consulting in 2002 and CR Rail in 2011) and a dilapidation survey (Toongi Siding) by Lycopodium in March 2015.

Next steps
Once the plant is fully operational and reagent supply and use is confirmed, the feasibility of a three trains per week transport will be re-evaluated.

AZL should prepare further analysis to determine the business case and a proposed timing for the upgrade.

Possible funding sources
The economic efficiency of this project is a matter for AZL through analysis of its productivity gains. However, the state government may contribute to achieve the social impact of mode shift to rail.

Alignment
IA Recommendation 1.7: Governments should increase funding for investments in projects and technologies that make better use of existing infrastructure.

GrainCorp Project Regeneration

Upgrades to increase the efficiency of grain transport nationally

Priority
High Priority

Location
National

Category
Rail

Strategic Fit
Medium

Economic Merit
Positive

Maturity
Business Case

Investment decision readiness

Opportunity

Project Regeneration is a $200M project delivering a more efficient and reliable network for all of GrainCorp's customers, unlocking lower transport rates and higher grain prices for growers across the network.

Proposed initiative

The key objectives of the Project are:

- To implement a new operational model
- To create an export bundled service
- To improve rail productivity and reliability enabling GrainCorp to reduce rail rates by a minimum of $5 per tonne
- Intermodal shift of 1 million tonnes from road to rail across GrainCorp's east coast network
- Reduced freight rates of a minimum of $5 per tonne

The scope includes new country site with new high speed over rail loaders, new over-rail loading equipment at existing sites, upgrades to existing rail infrastructure and capacity expansion with 11 sites in NSW invested in during 2015.

Current status

Project Regeneration is well underway. GrainCorp has announced the first tranche of $60 million to upgrade 13 of the country sites this year.

Possible funding sources

GrainCorp is funding the project.

Alignment

INSW SIS 14: Efficient freight transport to ports and markets.

Dubbo Airport Runway

Strengthen the runway and upgrade lighting

Priority
Priority

Location
Dubbo NSW

Category
Air

Strategic Fit
Medium

Economic Merit
Positive

Maturity
Business Case

Investment decision readiness

Problem / Opportunity

Investment in the airport and removal of operating restrictions will allow it to support an increase in tourism and overnight visitor stays.

Proposed initiative

This initiative will strengthen the runway and upgrade lighting.

Current status

The New South Wales Government announced $7.4 million in December 2015 to strengthen the runway and upgrade lighting as part of the Regional Tourism Infrastructure Fund.

Next steps

The project is entering the construction phase.

Possible funding sources

The New South Wales Government funded the project from the Regional Tourism Infrastructure Fund.

Alignment

Recommendation 4.2: The Australian Government should prioritise investment in regional infrastructure where the population is growing quickly and where the bulk of our regional economic growth can be found.

Mudgee Airport

Road relocation, terminal fit out, extension of water and sewer services

Priority
High Priority

Location
Mudgee, NSW

Category
Air

Strategic Fit
High

Economic Merit
Significant

Maturity
Strategic Assessment

Investment decision readiness

Opportunity

The recently completed Airport Master Plan for the Mudgee Regional Airport Project identifies initiatives to increase the capacity of the airport to support growth in regional tourism.

Proposed initiative

The project would involve the implementation of priorities that were identified in the recently completed Airport Master Plan. Major initiatives include the relocation of George Campbell Drive, the relocation of fencing, taxiway extension, terminal fit out, extension of water and sewerage services, noise assessment and ground handling support.

Key objectives of this project are to support the existing airport activities and to further the growth and expansion of the airport and to help realise the future opportunities and growth for aviation activities at Mudgee airport.

Current status

An Airport Master Plan has been developed for Mudgee Regional Airport.

Next steps

Develop a more granular business case and project plan for the required infrastructure and explore relevant funding methods for implementation.

Possible funding sources

Positive NPV based on cost projections support the project being funded. Funding should be sought from the Regional Tourism Infrastructure Fund and supplemented by internal funding if necessary to progress the project.

Alignment

The NSW Government has flagged regional Tourism as a priority by creating a Regional Tourism Infrastructure Fund, which was announced in the State's 2014-15 Budget.

OROC Weather Radar

Installation of Weather Radar in Central and Western New South Wales

Priority
High Priority

Location
Dubbo, NSW

Category
Water

Strategic Fit
High

Economic Merit
Significant

Maturity
Strategic Assessment

Investment decision readiness

Problem / Opportunity

The Orana Region is poorly serviced by the Bureau of Meteorology's (BOM) weather radar network. Some coverage is provided by the Namoi radar in the north east and the Wagga Wagga radar in the south. However, these radars provide limited benefit to the region due to their reduced accuracy beyond a radius of 200km. The area is the most poorly serviced compared to similar regions across South East Australia. Agricultural productivity, mining activities, the aviation industry and emergency services are all heavily reliant on accurate and real time weather information.

Proposed initiative

To have a fully operational and funded Weather Radar Service to Central and Western New South Wales. This would have a broad range of benefits including economic, agricultural, mining, fire management, aviation, water management, social, emergency, personal safety and environmental.

Current status

In September 2008 CENTROC and OROC made a joint submission to the Bureau of Meteorology for a weather radar station to be located in Central NSW in Dubbo. In October 2008 CENTROC and OROC offered a similar funding proposal to Infrastructure Australia for the construction of a weather radar station at Dubbo in Central NSW. Both of these attempts to gain funding were unsuccessful.

Next steps/Possible funding sources

The Bureau of Meteorology has indicated that if the project proponents are able to secure some funding from alternative sources, that this would be favourable in the radar assessment process. OROC has a number of opportunities for further funding, with possible candidates including through Commonwealth Programs such as the Regional Development Australia Fund, the National Partnership Agreement on Natural Disaster Resilience or National Emergency Management Projects or Infrastructure Australia partnership with the mining and/or agricultural sector.

Alignment

Recommendation 1.8: Infrastructure operators should generate, collect and use data to drive greater productivity in infrastructure and service delivery.

Albert Priest Channel water supply pipeline

Installation of a new pipeline to enable the decommission of the existing pipeline

Priority
High

Location
Nyngan and Cobar NSW

Category
Water

Strategic Fit
High

Economic Merit
Positive

Maturity
Strategic Assessment

Investment decision readiness

Problem / Opportunity

The only secure water source for the Nyngan and Cobar region is currently supplied from the Macquarie River via the 67km Albert Priest Channel to the Bogan River at Nyngan. It is estimated that 25% of the water extracted from the Macquarie River is lost along the Albert Priest Channel. The NSW Government has provided funding for Stage 1 of an off river storage facility to provide additional capacity during severe drought conditions. However, studies have shown that this needs to be supplemented by additional storage and a pipeline to provide adequate water security.

Proposed initiative

The initiative would involve the installation of a pipeline from Nyngan to Cobar to enable the existing pipeline decommission.

Current status

The estimated cost is $70-$75 million. Funding has already been obtained to replace approximately 30 km of the 130km pipeline. $17.1 million has been obtained for stages 1 and 2 of the project.

The design and contract documents have been completed and the project is advertised for tender. The Department of Primary Industries has allocated funds to complete a business case which has already commenced.

Next steps

Complete a business case and further funding.

Alignment

Recommendation: 1.7 Governments should increase funding for investments in projects and technologies that make better use of existing infrastructure. Recommendation 4.3: Regional infrastructure investment should respond to each community's particular needs. Recommendation 4.6: Governments should commit to increasing information on the feasibility, economic viability and sustainability of new water resource developments and infrastructure in priority catchments.

Solar Energy Exchange Initiative

Investment in solar energy to power the region and export to cities

Priority
High Priority

Location
Regional NSW

Category
Energy

Strategic Fit
High

Economic Merit
Positive

Maturity
Strategic Assessment

Investment decision readiness

Problem / Opportunity

Inland NSW, west of the Great Dividing Range, covers the sunniest area in NSW. The opportunity would be initially for inland NSW to produce its own energy so that it can increase its self-sufficiency, and help signal the move to renewable energy. The second stage of the project would be to export the electricity produced to urban centres with only slight modifications to the existing network.

Proposed initiative

The SEXI Proposal is a $200M program, and consists of six separate projects, with five of the projects being concentrating solar thermal (CST) and the sixth being a photovoltaic project. The projects would be built at separate locations, owned and operated by their respective Council, showcase solar technology development and provide energy for a stereotypical town.

Current status

27 councils, the NSW and federal Governments have already provided formal support for the proposal. A bid was lodged and subsequently rejected by ARENA in November 2015.

Next steps

The SEXI board should seek funding to improve the business case and undertake a full cost benefit analysis. Crowd funding could be an option. Funding should then be sought from both state and federal government on the basis for this business case and strong policy alignment.

Possible funding sources

Funding should be sought from both the state and federal government on the basis of this business case and strong policy alignment. The ARENA application should be further explored.

Alignment

IA Recommendation 7.2: Building on the Energy White Paper, governments should work with the private sector.

IA Recommendation 1.8: Infrastructure operators should generate, collect and use data to drive greater productivity in infrastructure service delivery.

IA Recommendation 7.1: Australia's energy and transport sectors should deliver emissions reductions in line with international commitment.

Hera Resources Mine

Gold Mine

Priority

Priority

Location

Nymagee NSW

Category

Energy

Strategic Fit

Medium

Economic Merit

Low

Maturity

Justification

Investment decision readiness

Problem / Opportunity

The township of Nymagee grid electrical infrastructure is a low capacity Single Wire Earth Return (SWER) line incapable of servicing industrial electricity demand. Aurelia Metals developed the Hera Gold Mine, 5km south if Nymagee, in 2014, and installed a standalone LNG fired power station to supply the electrical requirements of the Mine and associated infrastructure. Further potential mining developments under consideration would require access to electricity above the existing grid capacity.

Proposed initiative

The project is for the construction of a power line connecting to the existing 132kV Nyngan-Cobar line at Canbelego or Hermidale and running 132kV power line to the township of Nymagee and the Hera Mine Site operated by Aurelia Metals. If completed, the project would provide lower price grid electricity for the existing Hera Mine and potential mine developments.

Current status

Scoping Study and preliminary costings have been obtained by Aurelia Metals.

Next steps

Aurelia Metals should examine whether it should proceed with the project given its plans for further mine sites and the possibility of third party sites.

Possible funding sources

At this stage, Aurelia Metals would likely need to fund this as it would be the sole material beneficiary and there's no obvious case for market failure requiring government intervention. If it could seek guarantees from third parties that mine sites are proceeding it could potentially enter into power supply contracts to recoup costs, or explore joint funding models.

Alignment

Aligns with the RDAO Orana Initiative to support emerging industries, specifically mining.

Dubbo Zirconia Project

Zircon mining and processing facility

Priority
High

Location
Dubbo NSW

Category
Energy

Strategic Fit
High

Economic Merit
Significant

Maturity
Strategic Assessment

Investment decision readiness

Problem / Opportunity
The DZP is centred on a world class resource of zirconium, niobium, hafnium and rare earths contained within the Toongi trachyte. At a mining rate of 1Mtpa the resource will last 80 years and generate new exports from Australia and 230 new jobs in regional NSW. The mineral processing facility on site will add value to the rare metals on site before export.

Proposed initiative
The Dubbo Zirconia Project is a $1.3B mining/mineral processing development located 25km south of Dubbo.

Current status
This State Significant Development was approved in May 2015 and is currently working on securing project finance. Outotec has been appointed Early Contractor Involvement and Engineer Procure Construct for 35Ha mineral processing facility. The concept of reopening the Dubbo-Toongi section of the Dubbo-Molong Railway (closed in 1984) has been approved by DPE subject to final design and consultation with the relevant agencies. AZL will review the feasibility for the rail transport upgrade three years after commencing the development.

Next steps
Given the project seems to have passed most of the statutory hurdles and is progressing to private funding, the next steps lie with the operator.

Possible funding sources
The Dubbo Zirconia Project is almost entirely dependent upon private funding. However, AusIndustry did provide $3.3M in 2006 as a Commercial Ready Grant which AZL used to construct a demonstration pilot plant at ANSTO Minerals facility at Lucas Heights. The strategy to fund the DZP consists of selling a strategic stake in the project to a potential offtake partner, Export Credit Agency funding and Direct Bank Finance.

Alignment
The project will support the growth of existing and emergent industries and would maximise opportunities for growth in a productive regional economy.

33 Tower Wind Farm at Bodangora

Renewable energy wind farm project

Priority
Medium Priority

Location
Bodangora NSW

Category
Energy

Strategic Fit
High

Economic Merit
Positive

Maturity
Strategic Assessment

Investment decision readiness

Proposed initiative

The proposed Bodangora wind farm has an expected capacity of approximately 100 MW comprising around 33 wind turbines, a substation, access tracks and an electrical collection system of underground and overhead cables.

Current status

Infigen received Project Approval from the NSW Planning Assessment Commission for the proposed Bodangora wind farm in August 2013. Funding uncertainty in the renewable sector as a result of the RET negotiations meant that while the project had been approved, funding could not be guaranteed and so the project was essentially put on hold.

Next steps

The recent agreement to reach a target of 33000GWh provides the opportunity for the project to move forward again.

Possible funding sources

This project would be funded by private company Infigen, capitalising on Renewable Energy Target subsidies from the Federal government.

Alignment

Infrastructure Australia Plan Recommendation 7.1: Australia's energy and transport sectors should deliver emissions reductions in line with international commitments.

Infrastructure Australia Plan Recommendation 7.2: Building on the Energy White Paper, governments should work with the private sector.

Mobile Coverage Beacons

Mobile coverage along major transportation routes

Priority
Priority

Location
Orana, NSW

Category
Telecoms

Strategic Fit
High

Economic Merit
Neutral

Maturity
Strategic Assessment

Investment decision readiness

Problem / Opportunity
Investment is needed to improve coverage along major transport routes, in small communities and locations prone to experiencing natural disasters.

Proposed initiative
In NSW, round one of the Mobile Black Spot Program will deliver up to 144 new mobile base stations and lead to improved coverage across some 14,000 square kilometres of the State.

Current status

Work is now underway to fix up to 795 mobile phone black spots across regional NSW and outer Sydney. This work is funded by a $92 million combined investment from the NSW and Commonwealth Governments and mobile network providers. All sites are scheduled to be operational by the end of 2018.

Next steps

A further $60 million has been committed by the Government for round two of the programme. The Government has announced the commencement of the competitive selection process for round two, with applications due from mobile network operators by 14 June 2016. The locations to be funded under round two are expected to be announced in the second half of 2016. Sites that were not successful in round one should work with mobile network operators and mobile network infrastructure providers who are eligible to apply for third round of funding.

Possible funding sources
Federal government Mobile Black Spot Programme

NSW government invested $24M in round one and may be expected to invest in round two a similar amount. The mobile carriers themselves would need to invest the rest.

Alignment

Recommendation 4.4: The Australian Government should remove barriers to entry for mobile network providers in regional Australia to facilitate improvements in coverage, competition and service quality.

Regional Waste Recycling or Transfer Facility

Collective response from councils for waste recycling

Priority
Medium Priority

Location
NSW

Category
Waste

Strategic Fit
Medium

Economic Merit
Positive

Maturity
No Categorisation

Investment decision readiness

Problem / Opportunity

Due to the geographically remote location of most Local Government Areas West of Dubbo, it is not economically viable for each Council to individually collect, store, sort and transport recyclables to appropriate waste management facilities. By themselves, these councils cannot offer recycling services, however this project would be through a collective approach to the problem. This would result in a significant diversion of waste from landfill, employment opportunities on both the site and the transportation of waste. The project site could be cooperatively owned and operated by Western Region Councils offering a possible revenue stream, reducing reliance on State and Commonwealth funding.

Proposed initiative

The project would consist of a receiving location, a sorting facility and a packaging facility for dispatch to Sydney. This facility would be located near the Cobar Railway line, which is still in operation and can provide a suitable transportation alternative to trucks. The facility could also be used to receive waste from Sydney and dispose of in a new landfill using an existing open cut mine.

Current status

No funding has been secured for this project. It is a concept project that would require consultation and agreement from all levels of government and private funding. No planning activities appear to have been undertaken.

Next steps

The further step would be to progress to a strategic assessment, including establishing clear objectives, engaging with stakeholders, establishing a governance strategy and creating a plan to take the project to business case.

Possible funding sources

Private operators may be interested if the business case supports their profit incentives. At this stage, councils should fund a strategic assessment which may allow them to lobby government for funding to prepare a full business case.

Alignment

Recommendation 1.7: Governments should increase funding for investments in projects and technologies that make better use of existing infrastructure.

Organic Processing Facility

Organic waste processing facility to reduce landfill waste

Priority
Medium Priority

Location
Orana, NSW

Category
Waste

Strategic Fit
Medium

Economic Merit
Positive

Maturity
Strategic Assessment

Investment decision readiness

Problem / Opportunity

The project is driven by the increasing cost of landfilling and proposes a domestic organics collection service to divert organic waste from landfill. There will also be benefits to the environment through reduced greenhouse emissions from landfill and to the local economy through the stimulus created in establishing an organics processing industry.

Proposed initiative

Establishment of a regional composting facility in Dubbo (the Dubbo Regional Organics Processing Plant or DROPP) is proposed at Council's Whylandra Waste and Recycling Centre. DROPP will be an “enclosed” Tunnel Composting system sized for an initial production rate of 14,000 tonnes p.a. of AS4454 grade compost. Feedstock will be sourced from the local region but mainly from a new “third bin” organics collection service to be introduced by the participating councils.

Current status

Council has proceeded with a 3 month trial of a Food Organics-Garden Organics collection service starting in February 2016.

Next steps

Council should proceed with seeking funding for the remainder of the capital cost. If no public funding can be obtained, high level assessment of costs and potential income suggests that the facility may be a viable commercial investment.

Possible funding sources

Council has accepted an offer of $3.26m of funding under the NSW Environment Protect Authority's Waste Less, Recycle More - Organics Infrastructure program towards the capital costs of the DROPP. A further $3.67M is required to cover to the remaining capital cost involved in establishing the DROPP.

Alignment

The facility fits strategically within the state and national policy to reduce landfilling of recoverable materials in particular organics. RDAO initiatives: Economic Diversification & Sustainability. Work under this priority involves identifying, researching and promoting opportunities to identify, diversify and strengthen key industries throughout the region.

Lightning Ridge Opal Centre

Opal related scientific research, education, and culture and travel development

Priority
Priority

Location
Lightning Ridge NSW

Category
Tourism

Strategic Fit
Medium

Economic Merit
Neutral

Maturity
Strategic Assessment

Investment decision readiness

Opportunity
The Australian Opal Centre (AOC) is a not-for-profit facility dedicated to opal-related scientific research, education and training, heritage and arts, travel, cultural and economic development.

Proposed initiative

The new Australian Opal Centre will contain: the world's premiere public collection of Australian opal, opalised fossils and related materials, spectacular permanent and temporary exhibitions, scientific testing and research laboratory, including fossil preparation facilities, research library and archives, collection storage and curatorial facilities, space and facilities for conferences, exhibitions and events, lapidary and jewellery teaching workshop, discovery room for education programs, commercial spaces including gift shop and cafe, high security vault for high-end Australian opal, underground courtyards and gardens, offices and other amenities.

Current status

There has already been more than $1 million in local, state and federal grants and private donations.

Next steps

The cost benefit analysis should be finalised and used to complete a full business case for seeking investment.

Possible funding sources

The AOC should continue to seek grant funding and private investment.

Alignment

The 2014 NSW State Infrastructure Strategy prioritised developing regional cultural and tourism infrastructure. It slated $300 million to invest in an Environment and Tourism Program to support the regional visitor economy and allocations from a State-wide $600 million cultural infrastructure strategy to develop regional creative hubs and cultural infrastructure

6 Appendix B: Detailed Assessment Criteria

Analysis			Criteria	Definition	Framework
Priority	**Strategic Fit**	Impact	*Significance*	Nationally significant infrastructure is defined in the Infrastructure Australia Act 2008 to include infrastructure in which investment will materially improve national productivity. In the context of this prioritisation, a problem or opportunity of significance is an infrastructure problem or opportunity which, when addressed, will result in a material improvement to productivity - regionally or nationally.	Infrastructure Australia Assessment Framework for Initiative Prioritisation
			Economic impact	Includes limiting productive capacity; reducing productivity; constraining economic capability; constraining global competitiveness. Opportunity addresses a major economic constraint.	
			Social impact	Results in, maintains or exacerbates issues of social exclusion and/or quality of life, such as access to services and employment. Opportunity addresses major social issues.	
			Environmental impact	Results in adverse environmental impact. Opportunity addresses an adverse environmental impact.	
		Policy Alignment	*Regional priorities*	Alignment with and likely contribution to the regional priorities (for either Orana or Far West) identified in Phase 2	NSW Treasury Guidelines for Capital Business Cases TPP08-05
			NSW priorities	Alignment with and likely contribution to State policy, priorities and plans, particularly: - the State Plan - State Infrastructure Strategy 2012 - SIS Update 2014 - the Long-Term Transport Master Plan - Mandated priorities or strategic objectives of Government - Agency business plans - Regional growth plans	
			National priorities	Alignment with and likely contribution to Federal policy, priorities and plans, particularly: - Infrastructure Australia Australian Infrastructure Plan - Infrastructure Australia Infrastructure Priority List - Regional Development Australia policies and plans	
	Economic Merit		*Expected Economic Efficiency*	Likelihood that economic benefits will exceed economic costs. Where little or no information has been provided on the costs and benefits of a proposed initiative and a qualitative assessment of "value for money" is not feasible, the multi-criteria analysis process will assign a neutral score to the economic efficiency criterion (i.e. it will assume a BCR of 1.0).	Infrastructure NSW State Infrastructure Strategy

Analysis			Criteria	Definition	Framework
Maturity	**Assurance Framework for "Investment Readiness"**	Justification	*Project rationale*	Have the why, what, how and when been established?	Infrastructure NSW Major Project Assurance Framework and State Infrastructure Strategy NSW Treasury Guidelines for Capital Business Cases TPP08-5
			Need	Has the need for the project been established? Is there a clear problem that it will mitigate or opportunity it will capitalise on? The rationale for the service need must be identified by unmet need or demand which cannot be addressed through existing service delivery arrangements (TPP08-5).	
			Options	Have other options to meet the need been considered?	
			Outcome	Has a desired outcome of the initiative been identified?	
		Strategic Assessment	*Objectives*	Can the desired outcome of the initiative be stated in meaningful objectives? Evaluating options should be based on the objectives of the proposal. The objectives must be specified in terms of the result sought and not specified in terms of the services to be delivered (TPP08-5).	
			Stakeholder support	If stakeholders are relevant to the development of the scope, agencies must identify the key stakeholders at the start of the planning process and document: - the business or user issues and/or impacts and - how these issues and/or impacts will influence or are integrated into the scope of the service. This consultation should be documented and clearly identify the issues that have been included or excluded from the service scope (TPP08-5).	
			Project governance	Governance structures (or any planned improvements) proposed or identified to ensure the project is successfully taken through to the final business case (TPP08-5).	
			Project plan	Is a plan in place to take the initiative to the next stage?	
		Business Case	*Options Assessment*	Has the proposal defined a range of realistic alternative service delivery options, considered a base case option and considered prevention and early intervention and demand management strategies (TPP08-5)?	
			Cost Benefit Analysis	Identify and provide economic and financial analysis of the key costs and benefits of these options, including disaggregated estimates for key intended beneficiaries (TPP08-5).	
			Scope	Describe the scope and timing of the initiative succinctly and coherently so readers can easily understand the proposed service and expected service levels (TPP08-5).	
			Project Brief	A project brief incorporating the required components of a preliminary business case for investment readiness that can be presented for preliminary funding application.	
			Risks	The proposal should: - identify the major risks inherent in each of the options - identify the impact and likelihood of these risks occurring - identify critical assumptions and dependencies (TPP08-5)	
			Market interest	Is there any noted interest from the market?	

7 Appendix C: Detailed Assessment

7.1 Dubbo Freightway Construction

The freightway has been classified as of high priority and with a high strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	Significant productivity improvements may be achieved. The initiative would reduce the impact of river crossing flood bottlenecking and therefore reduce the economic impact on the area. This would also improve freight within a non-local area. The initiative would have the social impact of catering for 7500 new dwellings. The project would impact on the environment through the increase of heavy transportation activity throughout the area.	2	2
		Policy Alignment	The initiative aligns with the following policies. NSW 2014 SIS: Efficient freight transport to ports and markets and increased connectivity for regional centres NSW SIS 2012: Improving Local Transport, access to markets, bulk export freight. The Orana NSW Regional Plan and the Orana Economic Profile both identified the existing lack of capacity for logistics and freight as a hindrance to the prosperity of the region. Supporting good transport access to Dubbo was identified by the Long Term Transport Masterplan and the western regional transport plan. The Main Western Rail Strategy identifies Dubbo as an area that requires a rail upgrade at a high priority. Hyder Consulting (2013) and the Orana Regional Plan highlights the importance of the Golden Highway as a key freight route and identify opportunities to meet the transportation needs along the Golden Highway through upgrades. - Infrastructure NSW identified a rail project between Orange and Dubbo		
	Economic Merit		Numbers included in stakeholder submission based on transport modelling and cost benefit analysis indicate material economic merit	2	
Maturity	Assurance Framework for "investment decision readiness"	Justification	The project rationale has been articulated, with needs established, options identified and desired outcomes stated.	3	
		Strategic Assessment	Objectives have been stated. However, stakeholder engagement is not evident. Governance structures have not yet been identified but the delivery of the project would be under council.	2	
		Business Case	The Dubbo Road Strategy sets out the necessary strategy and how it has been derived. A CBA for the bridge crossing has been completed.	1	

7.2 Coonabarabran Bypass

The project is classified as of medium priority and medium strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	Economically there would be productivity gains due to the increased transport efficiency. The growing number of vehicles within towns, especially freight vehicles, increases localised congestion and traffic delays and increases the potential for excessive noise pollution. Therefore, by bypassing Coonabarabran, these negative social impacts would be avoided in the town. The local environment would be impacted by the construction of the bypass.	1	1.5
		Policy Alignment	The following policies where aligned with the bypass: Orana phase 2: Improve infrastructure. Orana initiatives; infrastructure. NSW SIS 14 Efficient freight transport to ports and markets. A combined reservation of at least $3.1 billion to improve existing road and rail networks, including freight productivity improvements along four critical corridors (the Newell RMS Newell Highway Plan - Newell Highway Corridor objectives: Improve the amenity of towns and regional centres by removing through-traffic from major town centre main streets, particularly in Moree (Stage 2), Parkes, Coonabarabran and West Wyalong. The NSW Long Term Transport Master Plan prioritises a program of town bypasses to improve travel within towns, reduce delays caused to freight traffic and increase safety. The State Infrastructure Strategy (Infrastructure NSW) identified the need for a bypass at Coonabarabran at the Newell/Oxley Highway.	2	
	Economic Merit		The productivity of the freight and transit corridor would be improved. This could increase the number of freight movements. However, the project is based on social objectives rather than economic benefits.	1	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Rationale and need are touched on in NHCS Options not discussed but it is assumed the state government has assessed options in progressing its strategic planning to the current status	2	
		Strategic Assessment	Some objectives stated. Government has likely done stakeholder engagement around the Newell plan. Governance is implied in the Newell plan	1	
		Business Case	Next step would be to assess options and begin the planning phase.	0	

7.3 Intermodal Hub at Narromine

The project has a medium priority and a high strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	Strong potential for productivity improvement. Economic benefits from the opportunity to increase productive capacity of the rail corridor. Potential to create jobs and generally increase freight productivity. Some potential for adverse environmental impacts. However, this is likely immaterial as the changes and increases in productivity of the large infrastructure corridor will probably drive a positive impact.	3	2.5
		Policy Alignment	Orana Phase 2: Improve infrastructure RDAO Orana Initiatives: Infrastructure, whole of government planning INSW SIS 14: Efficient freight transport to ports and markets INSW SIS 12: Access to markets - bulk export freight IA plan: Productive cities, productive regions - Connectivity - Moving goods and services across the economy more efficiently IA in its IPL recommends that the Melbourne to Brisbane corridor be strengthened Far West Regional Plan identifies need for intermodal hub in the region	2	
	Economic Merit		The Infrastructure Australia recommendations outlines that an inland rail corridor would increase freight productivity substantially and this would ultimately impact on the economic merit of such an initiative. However, the high level estimates provided don't give a clear indication that the direct benefits of this specific project outweigh the costs. The business case will depend on the long term plan for inland rail	1	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Brief overview in general of the rationale, need has been touched on but not fully established, no consideration of other options, outcome is clear. IA's analysis is supportive however.	2	1
		Strategic Assessment	Some very limited objectives for initial infrastructure are given, no evidence of stakeholder engagement, governance structures or planning. Some very high level limited estimates have also been made.	1	
		Business Case	Some very high level estimates have been made.	0	

7.4 Golden Highway Upgrade

The project has a high priority and a high strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	The initiative would have clear productivity improvements. The upgrade would have significant economic rationale due to the improvement of freight transportation to an important corridor. The impact is great in terms of scale and materiality. The upgrade would have social impacts as the town bypasses would improve amenity and road safety. However, there is no obvious improvement to the environment.	3	3
		Policy Alignment	The project is a specific priority for both local and state authorities. Orana Phase 2: Improve infrastructure. RDAO Orana infrastructure initiatives. INSW SIS 14: Increased connectivity for regional centres. $1 billion to improve the road network to meet the demands of regional growth areas, including the Illawarra, Lower Hunter, North Coast and Central Coast; Efficient freight transport to ports and markets. The Transport for NSW Long Term Transport Masterplan, Hyder Consulting, identifies Golden Highway as a planned upgrade, a key freight mover. Funding for the Golden Highway has reached $2 million and $200,000 from Freight Pinch Point Safety Program. Orana Regional Plan, the Golden Highway Strategic Corridor and the Newell Highway Corridor Strategy aligns opportunities to move freight along Golden Highway (generally State Government).	3	
	Economic Merit		If demand analysis and scoping studies gave strong indications of the impact, there should be a strong economic case for mitigation.	2	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Some options have been proposed, an outcome is loosely identified, the rationale is clear and there is a suggestions that the justification/need has previously been established in "Scoping study" and reports.	3	
		Strategic Assessment	The development of an appropriate governance structure is recommended. There is some appreciation of how to take the project to the next stage and objectives have been loosely identified.	3	
		Business Case	A scoping analysis and some study of the impacts and the options has been undertaken.	1	

7.5 Hunter Rail Corridor Upgrade

The project has been classified as a priority and a medium strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	Productivity gains from mitigating throughput constraints will be relevant and capacity augmentation will be necessary if export contracts reach the threshold for constructing a fourth terminal at Newcastle Port Economic: improvements to the network will result in increased throughput and incrementally improve efficiency Social: Environmental: expanding throughput capacity may breach environmental approval limits - indicates some environmental impact	1	1.5
		Policy Alignment	Orana Phase 2 to improve infrastructure. Orana business investment Initiatives. INSW SIS 14: Efficient freight transport to ports and markets. A combined reservation of at least $3.1 billion to improve existing road and rail networks, including freight productivity improvements along four critical corridors INSW SIS 12: Access to markets. Bulk export freight. IA Plan: We need infrastructure that: Strengthens our global role as an exporter of resources, services and products, with improved networks and gateways that boost connectivity.	2	
	Economic Merit		The initiative at present does not intend to proceed to construction, although it has continued to pursue environmental approvals for the project. Not viable yet: "Significant growth beyond 208 mtpa is expected to be met by the PWCS development of Terminal 4 (T4). Development of T4 had been triggered by producers entering into contracts for the threshold volumes required to initiate the project and this was reflected in the 2012 Strategy. On 2 May 2013, PWCS announced that through a contractual handback process the requirement for Terminal 4 (T4) had been un-triggered. As a result it does not intend to proceed to construction at this stage, though it has continued to pursue environmental approvals for the project."	0	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Strategy covers rationale, options, outcomes	2	1.3
		Strategic Assessment	Some stakeholder consultation (RCG, NCIG, HVAU, HVCCC) and objectives.	1	
		Business Case	"This document is a strategy document and the indicative project costs are generally orders of magnitude only unless a project is in or close to construction. Costs are not ARTC's anticipated outturn costs as there are too many unknowns at the strategy phase to attach any reliability to the estimates. Scope and construction conditions are progressively better defined until a project cost is established for approval by the industry in accoRDAOnce with the HVAU."	1	

7.6 Dubbo-Toongi Railway Re-instatement

The project has been classified as a priority project and a medium strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	The initiative would create construction jobs during the construction phase. Jobs for transport personnel and revenue from those using the rail infrastructure would have also have economic impacts. Furthermore, there would be a reduction in the number of trucks between Newcastle Port and Toongi which would have positive impacts for road users within these regions. Greenhouse gas emissions would also be reduced as compared with transporting freight via road.	1	1
		Policy Alignment	Shifting freight from road onto rail would align with policy statements issued by Transport for NSW. INSW SIS 14 o Efficient freight transport to ports and markets. A combined reservation of at least $3.1 billion to improve existing road and rail networks, including freight productivity improvements along four critical corridors (the Newell, Golden, New England and Great Western Highways) Dubbo Local Government 2013/2014 Economic Development Action Plan supports the proposal to reopen the railway line. However, the initiative was not identified in April 2014 master list	1	
	Economic Merit		The economic efficiency of the project is a matter for the AZL to determine based on their productivity gains. However, the state government may wish to contribute based on the social impacts that the conversion from road to rail may have.	0	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Rationale, need and outcomes clear.	3	1.3
		Strategic Assessment	Criterion not met.	0	
		Business Case	Some cost and benefit estimations.	1	

7.7 GrainCorp Project Regeneration

The project has been classified as a high priority project and a high strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	Reduction in freight costs Large increases in productivity	2	2
		Policy Alignment	Road to rail mode shift INSW o Efficient freight transport to ports and markets supporting industry IA We need infrastructure that: • Strengthens our global role as an exporter of resources, services and products, with improved networks and gateways that boost connectivity;	2	
	Economic Merit		GrainCorp is funding it for profit	2	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Already funded - assume criteria are met	3	3
		Strategic Assessment	Already funded - assume criteria are met	3	
		Business Case	Already funded - assume criteria are met	3	

7.8 Dubbo Airport Project

The project has a medium priority and a medium strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	The project would be essential to increase the useful life of the runway. The runway has seen rapid deterioration since the introduction of heavier and more frequent services to the airport.	1	1.5
		Policy Alignment	Regional Tourism Infrastructure Fund - This airport funding is being drawn from the Regional Tourism Infrastructure Fund, which was announced in the State's 2014-15 Budget to assist the NSW Government to meet its target of doubling overnight visitor stays in Dubbo by 2021. The Dubbo 2013/2014 Economic Development Action Plan, the National Infrastructure Plan (Infrastructure Australia) and Orana Regional Organisation of Council (OROC) aligned with two strategies suggesting Dubbo Regional Airport as an opportunity for business expansion for the aviation/logistic (hub) industry.	2	
	Economic Merit		Investment has already been made. Strong benefits outlined.	2	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Investment has already been made.	3	3
		Strategic Assessment	Investment has already been made.	3	
		Business Case	Investment has already been made.	3	

7.9 Mudgee Airport Project

The project has a high priority and a high strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	The project would have potential productivity gains. The upgrade of the airport would indicate a significant opportunity to support the growth of airport operations in the future. Socially, the project would support the increase of repeat services which would result in increased mobility and connectedness with the rest of the state and country. The project also has the potential to create more full time employment opportunities. However, there would be an increased environmental impact due to the increase in air travel.	2	2
		Policy Alignment	RDAO Orana initiatives of Infrastructure and business investment. SIS 14 - Connectivity, Develop regional cultural and tourism infrastructure SIS 12 - Connecting people IA Plan: Connectivity: Deliver efficient infrastructure to connect people to jobs, goods to markets and Australia to the world. Would allow for the moving goods and services across the economy more efficiently Mid-Western Region Economic Development Strategy identified the need to develop Mudgee Airport Infrastructure	2	
	Economic Merit		Using supplied info Rate 6% Capital cost $1,400,000.00 Annual cost 5000 Annual income $25,290.00 $109,824.00 $31,000.00 Periods 20 PV $505,314.49 BCR 1.36	3	
Maturity	Assurance Framework for "investment decision readiness"	Justification	The airport master plan gives rational and the need for upgrades, stages option and the outcome for the site.	3	2.3
		Strategic Assessment	Master plan entails the components of strategic assessment including objectives, stakeholder engagement, tenure and ownership and regulatory context and a staged plan for implementation.	2	
		Business Case	The master plan contains most of the components that would be required for the development of a business case.	2	

7.10 OROC weather radar

The radar has been classified as having a high priority and a high strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	Significant economic benefits would result from the weather radar, primarily from weather damage mitigation, optimisation of resource use and enhanced agricultural production. These would include significantly improved fire management, hazard reduction, optimisation of river operations, improved aviation outcomes, better emergency and patient management, improved on-farm decision making, better mine site management and reduced off-site impacts. The project would have substantial social benefits mostly in the areas of enhanced safety during extreme weather, improved emergency management and better individual decisions across local Councils, State Emergency Service and the NSW Rural Fire Service. Broad environmental benefits from the radar covering mitigation of impacts and improved environmental outcomes through more targeted allocation of environmental water, better controlled burns leading to less intense bushfires and reduced chance of off-site contamination from chemicals and fertilisers.	2	2.5
		Policy Alignment	Orana phase 2: water security and improve infrastructure. RDAO initiatives for infrastructure and whole of government planning. SIS 14: water supply and security SIS 12: water infrastructure, social infrastructure IA PLAN: Making better use of networks through investment and technology. Data helps operators to improve network efficiency and save costs. Invest in technology and information to support productive regional infrastructure. More information to support water infrastructure for irrigated agriculture Recommendation 1.8: Infrastructure operators should generate, collect and use data to drive greater productivity in infrastructure service delivery. Recommendation 4.3: Regional infrastructure investment should respond to each community's particular needs.	3	
	Economic Merit		Based on the information gathered in the case studies, the findings of this report indicate that the business case for this funding is strong: Whilst the installation cost of a Doppler weather radar is estimated at $2.5 million for a Doppler weather radar, the case studies indicated losses of around $3 million in a single flood could have been avoided by better weather radar. The radar would also boast benefits of approximately $1.25 million/annum to agriculture from the provision of better weather radar in the Region and integration of this information into the cropping enterprises of the Macquarie Valley.	3	
Maturity	Assurance Framework for "investment decision readiness"	Justification	GHD report covers the need, options and required outcome	3	2.3
		Strategic Assessment	GHD report includes the required strategic assessment components including stakeholder engagement, objectives etc. but does not seem to take account of project governance or plan for implementation	2	
		Business Case	The GHD report includes an options assessment, scope, requirements, market interest and some indication of the costs and benefits of the project.	2	

7.11 Albert Priest Channel Water Supply Pipeline

The project has been classified as of a high priority and a high strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	The pipeline would offer significant productivity gains. The project would offer significant water savings and increased water availability and offset the need for other infrastructure. The drought protection given by the pipeline would offer a reduction in social harms and stresses to regional communities. Environmentally the pipeline would reduce the amount of water taken and subsequently lost from the Macquarie River.	3	3
		Policy Alignment	Phase 2: improve infrastructure. RDO initiatives: diversification and sustainability, infrastructure SIS 14: Water supply and security SIS 12: Water infrastructure IA Plan: In the water sector, supply may be readily expanded without constructing new dams. Depending on the local environment, recharging suitable aquifers, making better use of surplus water produced by industry or smarter use of stormwater flows can supplement supply or change patterns of demand. Recommendation 1.7: Governments should increase funding for investments in projects and technologies that make better use of existing infrastructure. Cobar Community Strategic Plan identified Pipe the Priest Channel (2013-2016). Better use of technology to increase the efficiency of regional industries Sustainability and Resilience - Deliver infrastructure that is resilient to dynamic risks and supports a transition to a more sustainable economy Project identified by General Manager of Bogan Shire Council (BSC) through collaboration map (ref 163). Also identified in workshop (ref WS13). Bogan Shire Council identified as responsible authority.	3	
	Economic Merit		Economic benefits would be the result of offsets and productivity. Have assumed the business case is strong given $17M of funding has already been allocated for early stages and another business case is underway	2	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Assuming justification is complete if $17M has been allocated and progressing to business case for the remainder	3	2.3
		Strategic Assessment	Assuming strategic assessment is complete if $17M has been allocated and progressing to business case for the remainder	3	
		Business Case	Governance - Bogan Shire Council identified as responsible authority. Assuming there is a clear business case for the sections that have funding - and business case for the remainder is under development	1	

7.12 Solar Energy eXchange Initiative

The project has been classified as of a high priority and high strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	The economic case for the photovoltaic project is strong. The project would increase the independence and resilience of the regional communities and provide employment opportunities. The project would also contribute to the effort to reduce climate change. This initiative has strong environmental merits due to the reduction in carbon emissions, offsetting of the grid energy offtake and the deferring or negating of the need for grid augmentation.	3	3
		Policy Alignment	Orana Phase 2: Pursue opportunities for renewable energy To date, motions of in principle support for the SEXI Proposal have been passed by: • 27 Councils • Four Regional Organisations of Councils – being OROC, Centroc, RAMROC and Western Division Councils of NSW • The NSW Legislative Council • The Senate Data is an IA priority.	3	
	Economic Merit		Based on the figures provided the net present value for the photovoltaic project is strongly positive.	2	
Maturity	Assurance Framework for "investment decision readiness"	Justification	The need is justified based on the opportunity based on isolation, grid contribution and resilience.	3	
		Strategic Assessment	Support from stakeholders including from the government. There is already a plan that is acceptable at a strategic level. Objectives for the project are clear. Governance arrangement have already been set.	3	
		Business Case	Options have been identified but have not been fully assessed. Cash schedule has been created and benefits have been articulated for the photovoltaic but not for the other project. More detail is required to support a full business case. The scope and brief of the project is clear, however the risk identification is unclear. Market interests, such as councils and governments are on board.	1	

7.13 Hera Resources Mine

The project has been classified as a priority project with a medium strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	The mine would have productivity gains. The environmental impact is unclear as construction is likely to have impact on the environment. Further analysis might assess whether gas turbine may be less carbon intensive than local supply if it's coming from coal Some economic impact if other mines are likely to process the materials. There would be some small social gain from taking heavy vehicles of the road.	1	1
		Policy Alignment	Aligns with the RDAO Orana Initiative in that it is a business investment and that projects under this initiative are targeted toward creating a positive business environment within the region and promoting positivity across the nation and the world. Supporting emerging mining industries (refer to Phase 2 report priorities)	0	
	Economic Merit		The cost of the project would be $38 million which is significant considering that there would be no income stream developed from this project. The annual cost savings for vehicle movement would be a saving of $100,000. The energy cost savings are not quantified.	-1	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Rationale has been developed, but not options.	2	
		Strategic Assessment	No stakeholder engagement, governance or project plan has occurred. Presumption that scoping study has further analysis.	2	
		Business Case	Some preliminary assessment of costs and scope.	1	

7.14 Dubbo Zirconia Project

The project has been classified as of high priority and high strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	Productivity is evident. The economic opportunity for the project is significant as the project has provided a good indication of the benefits to local beneficiaries. Furthermore, the project itself is likely to generate significant economic return. There would be great social opportunities for employment and industry and the project would also allow for the upgrading of local infrastructure. However, it is unclear as to whether the mine itself will have a social impact. As with any mining project, the environmental impact is likely to be fairly significant. However, an Environmental Impact Statement (EIS) has been prepared and the project has been modified to reduce the impact.	2	2
		Policy Alignment	The project will support the growth of existing and emergent industries and would maximise opportunities for growth in productive regional economies and support sustainable regional communities.	2	
	Economic Merit		The initiative must have economic merit for the project to progress to this stage as the strategic driver for the project is a return on its investment for its shareholders.	3	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Justification is assumed to be complete as the project has progressed from plan to pilot to early stage commercialisation to seeking full funding.	3	
		Strategic Assessment	Strategic assessment is assumed to be complete as the project has progressed from plan to pilot to early stage commercialisation to seeking full funding	3	
		Business Case	Business case is assumed to be complete as the project has progressed from plan to pilot to early stage commercialisation to seeking full funding	2	

7.15 33 tower wind farm Bodangora

The project has been classified as of a medium priority and high strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	Productivity is evident. Economically the company must be working to a renewable energy target (RET) based business case and so must be viable under the RET. There appear to be great social impacts based on the significant difficulties with community consultations. Environmental benefits of implementing renewable energy technology and the impact this has on reducing the reliance on traditional environmentally damaging technologies.	2	2
		Policy Alignment	Phase 2 Orana: to pursue opportunities for renewable energy. SIS 12: Energy Production in the Regions. Identified through the Wellington Shire Major Projects.	2	
	Economic Merit		Assuming a positive BCR (based on RET) if Infigen is still pursuing	1	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Project has progressed far beyond justification	3	
		Strategic Assessment	Stakeholder consultation: Information sessions were held at the Comobella Hall on 2-3 September 2011.	3	
		Business Case	There are still some points to overcome around the wind farm guidelines and retailers entering into long term contracts with new wind farms after the resolution of RET uncertainty.	2	

7.16 Mobile coverage beacons

The project has been classified as a priority and high strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	Good economic impact to support business and industry in the region and social impact for the communities. productivity improvements.	2	2
		Policy Alignment	Orana Phase 2 • Improve infrastructure SIS 12 • Social Infrastructure IA Efficiently connecting people and businesses to information • Recommendation 4.4: The Australian Government should remove barriers to entry for mobile network providers in regional Australia to facilitate improvements in coverage, competition and service quality.	2	
	Economic Merit		No real information available on costs and benefits - however the federal government is subsidising what is essentially private infrastructure because there is a social benefit and the commercial payoff is not sufficient for the private sector	0	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Fully Funded government program	3	2
		Strategic Assessment	Fully Funded government program	3	
		Business Case	Case needs to be made for the black spots in Orana so that application can be made	0	

7.17 Regional waste recycling or transfer facility

The facility has been classified as of medium priority and medium strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	Would impact on productivity as it would improve the community's scale of recycling and access to recycling facilities. The economic benefits of the project are unclear. The social impacts would be the ability of the community to access adequate recycling facilities. The environment would benefit due to increased uptake of recycling by the community. However, there could be an increased use of heavy transportation to transport waste which would impact negatively on the environment.	2	1.5
		Policy Alignment	IA: Support fast-growing regions with coordinated, long-term planning and investment. Pool resources to support more efficient services and greater competition. The Mid-Western Region Economic Development Strategy identifies the need to provide waste infrastructure. The Draft Walgett Shire Community Strategic Plan 2012 identified the need for the provision of waste management facilities. Bourke Shire Community Plan 2012-2022 identified improving wastewater services. REMPLAN (2012) identified the Orana Bio-Economy Project is an important regional waste recycling facility initiative.	1	
	Economic Merit		The revenue derived from this project is dependent on the scale of the project. If this project is of a similar scale to that of the Clyde and Banksmeadow projects, this development could potentially earn significant profits for the project operator, but can also potentially reduce costs to Western regional councils who are currently disposing recyclables in landfill sites due to the high costs of transportation to appropriate waste management facilities for recycling. The waste levy is currently not applicable in this part of the State therefore offering a financial incentive for waste to be sent to Cobar for sorting, recycling and in some cases, disposal.	1	
Maturity	Assurance Framework for "investment decision readiness"	Justification	The rational is clear, whilst the need is clear but is yet to be fully established. The two options have been identified and the outcome has been stated.	1	
		Strategic Assessment	Criterion not met		
		Business Case	Criterion not met		

7.18 Organic processing facility

The facility has been classified as of medium priority and medium strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	This facility would have a strong Productivity. The facility would allow for a more affordable waste collection and employment opportunities for the community. The environmental impacts of the project are reduced carbon emissions and the production of organic compost which could be used for soil enrichment.	2	1.5
		Policy Alignment	The facility fits strategically within the state and national policy to reduce landfilling of recoverable materials in particular organics. RDAO initiatives: Economic Diversification & Sustainability. Work under this priority involves identifying, researching and promoting opportunities to identify, diversify and strengthen key industries throughout the region.	1	
	Economic Merit		Rate 6% Capital cost $6,930,000.00 Annual cost $1,360,000.00 Annual income $350,000.00 $1,200,000.00 Periods 20 PV $10,848,377.89 BCR 2.57,	2	
Maturity	Assurance Framework for "investment decision readiness"	Justification	The rationale, need, options and outcomes are clear (without the report being available for assessment)	3	
		Strategic Assessment	Objectives are clear and stakeholders (both councils and users) have been engaged and it is assumed that the report contains some consideration of governance and forms the basis of a plan, although council surveys suggest local support is not in favour of the project.	2	
		Business Case	Market interests have been gauged through workshops. Stakeholders (ratepayers) are in support of organics collection with price sensitivity. The report that is referred to has not been made available, but it is assumed that it contains the options assessment, some cost benefit analysis, identifies scope. There may be some analysis of risk also.	2	

7.19 Lightning Ridge Opal Centre

The centre has been classified as a priority project with a medium strategic fit.

Analysis		Criteria	Assessment	Score	
Priority	**Strategic Fit**	Impact	The impact of the centre on productivity is unlikely to be large but is likely to have some strong local benefits. The centre has the potential to bring in significant tourism and trade activity to the area and could therefore have a reasonable economic benefit. The project has already had a significant social impact on the local, regional and state economy through increased tourism and the associated retail and services, a strengthened opal mining industry nationally, employment and training outcomes. The environmental impact seems immaterial, especially due to the environmental considerations of the building.	1	1
		Policy Alignment	The Inland NSW Tourism (2013) Outback NSW Regional Destination Management Plan identified the need to support the Lightning Ridge Opal Centre	1	
	Economic Merit		Not clear that project will be economically efficient.	0	
Maturity	Assurance Framework for "investment decision readiness"	Justification	Project has progressed beyond options and outcome	3	2.7
		Strategic Assessment	Progressed beyond Strategy	3	
		Business Case	CBA is in draft Site selection has presumable been the result of options assessment Scope and timing established Risk assessment not clear Market interest has been tested but perhaps not fully established - will become clear once EI and business case released	2	

8 Glossary of terms

CBA	Cost Benefit Analysis
EIS	Environmental Impact Statement
PV	Photovoltaic
RET	Renewable Energy Target