

# Strengthening Communities

A Rubric to support place-based  
strategic planning in response to  
Regional Strengths & Infrastructure Gaps



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## Online

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## Acknowledgement of Country

Infrastructure Australia proudly acknowledges the Traditional Owners and Custodians of Australia, and their continuing connections to the land, waters and communities. We pay our respects to them and to their Elders past, present and emerging. In preparing for the future of our infrastructure, we acknowledge the importance of looking beyond the immediate past to learn from Aboriginal and Torres Strait Islander peoples' unique history of land management and settlement, art, culture and society that began over 65,000 years ago.

As part of Infrastructure Australia's commitment to reconciliation, we will continue to develop strong, mutually beneficial relationships with Aboriginal and Torres Strait Islander partners who can help us to innovate and deliver better outcomes for Aboriginal and Torres Strait Islander communities, recognising their expertise in improving quality of life in their communities.

### Note on the artwork

The artwork *Moving Along Pathways* was created by Kamilaroi/Gamilaraay artist Dennis Golding, specifically for Infrastructure Australia's first Reconciliation Action Plan. The artwork depicts examples of Australia's first infrastructure.

Pathways and river systems are prominent in the artwork and reference the pathways First Nations peoples formed on land and water for transport and communication of knowledge and stories. Images of waterholes, campsites and boomerangs within the artwork acknowledge First Nations cultural practices, technology and places for gathering that continue to be operated today.



# Executive Summary

Australia is a landscape of interconnected yet diverse communities, and the nation will benefit when every place is fulfilling its potential. An integrated view is required, as Australia's communities depend on one another, with each supporting and playing a role in their respective regions. Building on the strengths of our communities will also carry benefits for Australia as a whole.

Building on the nationally significant challenges and opportunities identified in the *2019 Australian Infrastructure Audit*, the *2022 Regional Strengths and Infrastructure Gaps* report identified regional strengths and priority Infrastructure Gaps in each region in Australia. Identified strengths included key existing assets and regional growth industries. Infrastructure Gaps may be addressed by infrastructure reform initiatives or physical infrastructure investments, delivered by governments, private industry or communities.

Submissions were invited upon the release of the *2022 Regional Strengths and Infrastructure Gaps* report to strengthen the evidence base and inform potential future areas of analysis. In addition to providing additional data, submissions also emphasised the value of a further dissection of regions to provide a granulated geographic view of challenges to better support strategic planning. Common themes such as managing the impacts of the COVID-19 pandemic, strategic planning, impacts of major projects and challenges in collaboration, funding and infrastructure delivery were raised by stakeholders throughout the consultation.

As a response to this feedback, the Strengthening Communities Rubric (the Rubric) provides a tool to guide the identification and analysis of strengths, Infrastructure Gaps and enablers for successful communities in all geographies. Expanding on the methodology used for the *2022 Regional Strengths and Infrastructure Gaps* report, the Rubric provides a guide to undertaking a place-based analysis and collecting an evidence base that will help determine how to achieve better outcomes for a community.

The Rubric can be used to inform planning, reform and investment, in addition to identifying opportunities across sectors to build and strengthen a place's foundations. Completing the Rubric for a place will also assist in providing a point of comparison to other communities of a similar type, and in the identification of collaboration opportunities.

In addition to building on the evidence in the *2022 Regional Strengths and Infrastructure Gaps* report, the Rubric responds to the recommendations included in the *2021 Australian Infrastructure Plan* to facilitate place-based thinking in planning processes and drive strategic policy and investment discussions.

## The Strengthening Communities paper:

- Encourages stakeholders to use the Rubric and **engage with us** by sharing thoughts and insights.
- Demonstrates **alignment with Infrastructure Australia's existing tools and frameworks**
- **Presents an overview of place-based approach**, covering different definitions and Infrastructure Australia's approach
- Describes the **Strengthening Communities Rubric**.



# Engage with us

The *Strengthening Communities* paper expands on the methodology used in the *2022 Regional Strengths and Infrastructure Gaps* report. We encourage you to share your feedback and insights with us.

Further updates are expected to the Rubric in response to its application and feedback provided by communities as the tool is utilised.

The process of taking a place-based approach and the tools available to undertake these analyses will continue to evolve. The Rubric should be seen as one tool in your toolbox, to adapt to suit the context of your place, and to prompt strategic thinking and collection of evidence from which to build upon.

**Share feedback** by sending an email to [mail@infrastructureaustralia.gov.au](mailto:mail@infrastructureaustralia.gov.au).



Stanley, Tasmania



# Alignment with Infrastructure Australia's existing tools and frameworks

The [\*2021 Australian Infrastructure Plan\*](#) (the Plan) makes place the starting point for infrastructure planning, by identifying the different needs of Australia's diverse geographies and harnessing the unique qualities of each place. The Rubric supports the Plan's recommendations for a place-based approach to infrastructure. The Rubric also builds on Infrastructure Australia's existing tools and frameworks which complement the Rubric and provide different functions. These include:

- Multi Criteria Analysis (MCA), which was created for the [\*2021 Australian Infrastructure Plan\*](#) to map impacts, support metrics and prioritise infrastructure reform. The MCA methodology is outlined in the [\*2021 Reform Priority List\*](#).
- [\*A guideline to applying theory of change\*](#), which was created for the [\*2021 Australian Infrastructure Plan\*](#) to map the relationship and interdependencies between actions, immediate outcomes and ultimate outcomes, including change agents and KPIs.
- [\*Regional Infrastructure Gaps Prioritisation Framework\*](#), which was created for the [\*2022 Regional Strengths and Infrastructure Gaps\*](#) project to prioritise regionally significant Infrastructure Gaps (infrastructure challenges and opportunities).
- The [\*Infrastructure Australia Assessment Framework\*](#) (the *Assessment Framework*), which provides guidance for determining whether infrastructure proposals are nationally significant and suitable for inclusion in Infrastructure Australia's [\*Infrastructure Priority List\*](#). The *Assessment Framework* also includes guidance to adopt a place-based approach, aligned to our assessment criteria. Technical guides supporting the *Assessment Framework* include:
  - The [\*Guide to program appraisal\*](#) identifies place-based programs as taking a cross-sectoral view of the interrelated infrastructure and amenity needs of a place, and identifies how and when these should be delivered.
  - The [\*Guide to multi-criteria analysis\*](#), designed for proponents wishing to use MCA to support the options analysis for a Stage 2 submission to Infrastructure Australia.
  - The [\*Guide to economic appraisal\*](#) describes various economic appraisal techniques and how to apply them when developing a submission to Infrastructure Australia.
  - The [\*Guide to risk and uncertainty analysis\*](#) describes tools that can help you understand and manage risks and uncertainties when developing an infrastructure proposal. These tools include qualitative risk assessment, probability-based analysis, sensitivity analysis, scenario analysis and real options analysis.

# A place-based approach

## Definitions of place-based approaches

Varying definitions exist which describe a place-based approach. The Queensland Government highlights that place-based approaches are designed to meet the unique requirements of the local community.<sup>1</sup> The Victorian Government notes that by applying a place lens, we can support whole of government and whole of community responses to interconnected factors at a local level.<sup>2</sup> Place-based models, such as the Greater Sydney Commission's Place-based Infrastructure Compacts, provides a model where government, industry and the community are brought together to match housing and jobs growth with timely and cost-effective delivery of infrastructure.<sup>3</sup>

### Queensland Department of Communities, Housing and Digital Economy<sup>4</sup>

“Place-based approaches are **collaborative, long-term** approaches to build thriving communities delivered in a **defined geographic location**. This approach is ideally characterised by **partnering and shared design, shared stewardship, and shared accountability** for outcomes and impacts. Place-based approaches are often used to respond to complex, interrelated or challenging issues—such as to address social issues impacting those experiencing, or at risk of, disadvantage, or for natural disasters.

Place-based approaches provide **community members and stakeholders** (citizens, industry, diverse non-government organisations and all levels of government) with a **framework** for identifying and responding to **local needs** and improving social, economic and physical wellbeing in a particular location.”

### Victoria: A framework for place-based approaches<sup>5</sup>

“Place-based approaches **target the specific circumstances of a place** and **engage local people** as **active participants in development and implementation, requiring government to share decision-making**. Place-based approaches can **complement the bigger picture** of services and infrastructure. They engage with issues and opportunities that are driven by complex, intersecting local factors and require a cross-sectoral or long-term response.”

In looking at place-based approaches, there are several common core elements in how they are described. At its core, a place-based approach considers local context, so interventions are not one-size-fits all, but trans-disciplinary and focused on the bigger picture.

Place is an increasingly important lens for decision-makers because it promotes development by enabling each community to make greater use of its own strengths and potential. Place-based approaches are necessary to aid the development of strategies and decisions which work with, rather than against, a place's innate strengths. In addition, a place-based approach incorporates the benefits of harnessing local knowledge, understanding issues through the confluence of local drivers and recognising that a top-down approach to policy development, service provision or decision-making isn't always useful. In this way, the role of the Rubric helps to provide guidance on a more systematic and uniform way of considering local context.

# Infrastructure

## Australia's approach to place

Infrastructure Australia's approach to place aims to reflect and celebrate the unique landscape of the nation's interconnected and diverse communities. It recognises geographic diversity as a national strength and core to Australia's identity.

This is explored in Infrastructure Australia's *2021 Australian Infrastructure Plan*, where a place-based approach is described as taking a cross-sectoral view of the interrelated infrastructure and amenity needs of a place and connects infrastructure decision-making with the needs of the community at a local level. When place is the starting point for infrastructure planning, it provides a clear lens for identifying the different needs of Australia's communities. It can help to adapt and customise infrastructure solutions to the local context, promote integrated solutions and connect decisions with local needs. Beyond its immediate impact on planning and development decisions, the concept of making place the starting point informs a recommended overall approach to, and central reference point for, sector-based reforms.

Each place has specific needs, however there are a set of common principles which are shared across Australia's communities. Outlined below are the key considerations to unlock the full potential of Australia's diverse geographies, by harnessing the identity and uniqueness of each place.

Government has a long history of engaging with communities and working towards local solutions. Most of these principles come as second nature to the governments and professionals who make decisions on Australia's places. However, there is still room for improvement to ensure a place-based approach. Many local governments and regional organisations are active in advocating for solutions to their identified challenges and opportunities, in addition to the work undertaken by State, Territory and Federal Governments. However, often the advocacy for single projects or policy interventions is not supported by a cross-sectoral view of the interrelated needs of a community. In addition to evaluating the benefits of individual projects, we also need to analyse how we prioritise strategic investment or reform to unlock key communities which have the potential to contribute to their regions, states and territories, and the nation.

Efforts to approach problems holistically can be hindered by the way that governments are structured, which promotes more sectorised approaches. Leading with place can help to break down silos relating to disciplines, broadening beyond more narrow focus to embrace models which view place in its entirety, rather than zeroing in on isolated components.

The following considerations for place should act as a guide for not only those making decisions, but also for the broader community to use as a clear set of expectations.

### Related reading:

- Place chapters of the *2021 Australian Infrastructure Plan*.
- Infrastructure Australia's *Infrastructure Decision Making Principles*
- Infrastructure Australia's *Sustainability Principles*
- Infrastructure Australia's *Resilience Principles*

### Meaningful community engagement

Local stakeholders have valuable perspectives and insights for their communities which can be harnessed to develop targeted responses to issues. By seeking community views early, trust and value can be built, ensuring that all stakeholders are invested in decision-making processes and outcomes. Meaningful community engagement can help to build long-term partnerships based upon a shared vision.

### The International Association for Public Participation (IAP2) Australasia's definition of community engagement<sup>6</sup>

IAP2 Australasia defines community engagement as 'an intentional process with a specific purpose of working across organisations, stakeholders and communities to shape the decisions or actions of the members of the community, stakeholders or organisation in relation to a problem, opportunity or outcome.'

The linking of the term 'community' to 'engagement' serves to broaden the scope, shifting the focus from the individual to the collective. A community may be a geographic location (community of place), a community of similar interest (community of practice), or a community of affiliation or identity (such as industry or sporting club).

## Respect culture

Taking a place-based approach is not a new idea in Australia. Infrastructure Australia acknowledges the foundation of place-based approaches in many Aboriginal and Torres Strait Islander communities. Place is an essential organising feature of Australia's Aboriginal and Torres Strait Islander economy and communities, with attachment to land, kinship relationships and cultural heritage all important considerations for strategic planning. By building strong relationships and better understanding our nation's history, the rich cultures and knowledge systems of Aboriginal and Torres Strait Islander peoples and their custodianship of the Australian landscape, we can draw out further opportunities for collaboration and respect.

## Collaboration

There is no single policy, government department, organisation or program that can solve complex and long-term challenges for a place. These long-term challenges often result from a confluence of factors, therefore a sectoral or siloed approach is not always appropriate. Collaboration and partnerships across sectors are often needed, in addition to ongoing capacity and capability building amongst all stakeholders. This helps to align fragmented interventions, ensuring decision-making is coordinated, and supports the pursuit of long-term outcomes through integrated strategic planning.

There are varying models of collaboration and barriers can include organisation capacity (limited resources, unequal access to information, conflicting priorities), personnel capacity (expertise, empowerment) and decision-making capacity (trust, power imbalance, level of engagement, organisational inertia).

## Develop a shared local vision

Each tier of Australia's government is responsible for direct and indirect policy levers that together, guide the direction of urban settlement. The development of a bespoke vision for a place will help to guide planning and underpin policy and investment at different levels of government. A vision for a place

should be jointly developed with local stakeholders and consider its character, strengths and gaps. This vision should then be realised by taking a more 'joined up' approach to governance, including across different levels of government and improving coordination across sectors.

## Acknowledge complexity

A place-based approach is needed to respond to complex, intersecting local challenges. Within a local setting there are interdependencies and flow-on effects between aspects of that place. There are ongoing challenges in ensuring visions and strategies within different levels of government or within a single level of government, are aligned vertically, as well as horizontally between different portfolios. Shared actions between stakeholders is often required.

## Leveraging existing strengths

A focus which incorporates leveraging existing strengths helps to move beyond a 'gaps' and 'needs' only based perspective. Incorporating a focus on strengths, such as existing assets and industries, allows for the opportunities to build upon these and draws more on the language of possibility and opportunity, while still acknowledging the challenges experienced. A focus on existing assets helps the decision-making process, to make efficient use of what is already there and guiding directions to re-purpose, re-build or extend.

## Evidence-based decision-making

An evidence-based approach to decision-making is based on a combination of using critical thinking and the best available evidence. Leveraging data and technology allows decision-makers to be better informed. Sources of data can be both quantitative and qualitative, including local knowledge from stakeholders accumulated over time, through reflections on past experiences.

## Don't lead with solutions

Often the first reaction to addressing a challenge is to jump to a solution, particularly in areas of priority need. However, without first engaging with the community, identifying strengths and gaps and understanding interdependencies for a place, the solution may not be the best fit or consider accompanying interventions which may be required.

## Resilience

Infrastructure Australia's resilience definition focuses on the functionality or capacity of a system, rather than solely on one component. It also focuses on shared (rather than individual) responsibility at all



levels of government, industry and the community. This approach requires a shift in focus from resilience of the assets themselves – to the contribution of assets and networks to the resilience of the system. It requires strengthening the asset, network, and sector, as well as strengthening places, precincts, cities, and regions. Taking a systems view requires defining the outcomes and assets needed across all levels, including place considerations of local priorities and multiple issues at once.

A community's connection to and investment in a place is at the heart of resilience, building shared value, community capacity and contributing their knowledge of how things work 'on the ground'. A place-based perspective to resilience helps understand the capacity of the communities to withstand or adapt to change. Resilience of a place does not only refer to contingencies in formulating

responses to shocks and stresses, but also considers long-term strategies to face social, economic and environmental challenges.

### Close the loop

Given the certainty of change and dynamic nature of places at different times, a challenge for decision-makers is to respond effectively to identified challenges and opportunities. Tracking progress, sharing learnings and evaluating outcomes after solutions are implemented are important steps in closing the loop and move towards a shared vision.

Place-based approaches often do not have a distinct end – while the facilitation of a formal intervention might conclude, the new ways of working, enhanced relationships, improved outcomes and even potentially the developed structures may continue. Evaluation can be easy to establish, but the implementation can be challenging, as the work is dynamic and long-term.



Cobar mine pit, New South Wales

# Strengthening Communities Rubric

The *Strengthening Communities Rubric* (the Rubric) provides a tool to guide the completion of a place-based analysis. **Figure 1** outlines the framework of the Rubric across five steps. The Rubric draws on the categorisations established through *2022 Regional Strengths and Infrastructure Gaps*, ensuring complementarity between the two documents.

**Figure 1:** Framework of the Strengthening Communities Rubric





Through this series of steps, the Rubric guides users in undertaking both a qualitative and quantitative analysis. Some elements of the Rubric may not be applicable to every place, and it is encouraged that users make those choices guided by a place's strategic focus, availability of data and/or particular issues of interest for further investigation. It is important to consider whether each element is relevant to the selected place, and whether there is adequate information available to be able to respond.

Undertaking a place-based analysis using the Rubric as a guide will help to improve understanding of a place's attributes and deepen the understanding of how a community can grow and evolve, allowing proponents to monitor and determine scope for improvement in identified areas. Maximum value is achieved through continual place-based analysis, in order to create a dynamic evidence base and up-to-date insights to respond to ever-changing needs.

Benchmarks or targets have not been included in scope, due to differing policy objectives and data availability across Australia. However, these could be considered as an addition by stakeholders using the tool in order to provide indicators of progress. It is acknowledged that there will always be new ways of measuring success and attributes, particularly for different infrastructure sectors. The Rubric is not exhaustive but provides a base which can be adapted for each community. It is expected that every analysis will be different because every place is different – it is about what makes sense for the selected place.

# At what geography should you undertake a place-based analysis?

The Rubric can be used as a guide to undertake a place-based analysis at any selected geographic area.

While there is no set size for a place boundary, the larger the boundary, the greater the complexity in terms of problems and opportunities, solutions, stakeholder groups, governance, delivery and assessing benefits. Every place is different, and it is important to recognise the benefits and disadvantages in undertaking analysis at different scales.



## Place: Settlements, regions and community types

Place is best defined in collaboration with local people to identify a geographic area that is meaningful to them. In this context, a 'place' might be a settlement or larger region.

A settlement can be described as an individual urban centre or clusters of related urban centres. Regions can be functional (considering social and economic relationships), administrative (connected to government functions and powers, e.g. local government areas) and statistical (for the purpose of collected statistical data, e.g. boundaries as defined by the Australian Bureau of Statistics (ABS)).<sup>7</sup> There is also no single definition of what constitutes a 'region', due to these definitions being developed for varying purposes.

Infrastructure Australia's community classifications and descriptions, as outlined in Chapter 3 of the 2022 Regional Strengths and Infrastructure Gaps report, have been developed as a starting point for a more nuanced consideration of community types across Australia. This is further expanded in Step 1 of the Rubric.

### Regional Development Australia (RDA)



#### Regional Development Australia (RDA)

regions were used as the geography for the 2022 Regional Strengths and Infrastructure Gaps analysis.

The challenges in the differing scale of geographic sizes of the RDA regions across the nation is acknowledged, with differing characteristics within a region being more pronounced in some regions. This was captured within the scope of the approach, noting that the methodology contained in the 2022 Regional Strengths and Infrastructure Gaps and expanded in the Rubric can be adapted and applied to differing geographies.



## Where can information be sourced to inform a place-based analysis?

The starting point is to identify the various organisations which hold data and have resources available, in order not to re-invent the wheel. It is also important to consider how these organisations currently interact and their relationships to one another. By identifying the key players in a place, you can then begin to understand what data or insights they hold.

**Key stakeholders** may include:

- All levels of government: Local, State/Territory and Federal
- Joint/Regional organisations of Councils
- Regional Development Australia (RDAs)
- Infrastructure bodies
- Peak bodies
- Universities
- Other interest groups (e.g. Industry sectors, community groups).

These organisations will hold reports, tools and data, such as:

- **Planning and Strategy** documents. These documents provide overall direction and often including vision, goals, implementation and timelines. In some cases, they are required by legislation.
- **Needs assessments and studies, including** Documents/tools which explore needs, growth, capacity, demand, utilisation. Often in a specific defined area or sector.
- **Audits** which examine existing assets, looking at areas such as condition and maintenance
- **Datasets or mapping tools which** available to support analysis. Some may require 'cleaning' or extraction in order to utilise
- **Submissions** provided to third parties.

The content of these resources could be sector specific or cross-cutting (e.g. jobs/economic development, resilience). Available resources may also align, be smaller or be larger than your chosen level of geography for an analysis. Resources at a smaller geography provides greater granularity and at a larger geography greater context with the place's surrounds.

# When should you undertake a place-based analysis and what are the benefits?

While communities benefit from consideration of place at all points, there are a number of critical times where this is especially beneficial.

This includes when the community is receiving major investment or intervention, accommodating a large transformation or is stagnant and wants to create a plan for change. Benefits are maximised with ongoing place-based analysis, rather than a single 'snap-shot', in order to ensure an up-to-date evidence base.

Infrastructure plays a critical role in the success of any community, however there are other attributes, such as governance and economies, which must also be considered to more fully understand the success of a place. An understanding of all these elements for a place will support more informed decision making that helps to deliver improved social, economic, environmental and governance outcomes for Australian communities. With a thorough evidence base can aid decision-makers in informed decision-making which is aligned with a place's strengths and needs. This includes developing an understanding of how communities can best position themselves for a major intervention. Major infrastructure investment can be an anchor for growth, but it isn't necessary in every place, where smaller specific interventions may first be required.

Completion of the Rubric will assist in developing a relative understanding of a place as it fits into the diversity of Australia's communities. In addition, it will also guide the development of a place-based understanding of key existing assets, growth industries, infrastructure and other measures of success relating to how a place is progressing.

These findings can be used to:

- Inform and advance **strategic planning**;
- Identify and resolve **data gaps**;

- **Advocating** for identified challenges and opportunities;
- **Inform investment decisions**; and
- Pursue **collaboration opportunities**.

## Strategic planning

Strategic planning is vital in providing a long-term vision for Australia's communities, through enabling sustainable and resilient infrastructure planning and delivery, as well as prudent public investment decisions which deliver the greatest benefits.

Through consultation on the *2022 Strengths and Infrastructure Gaps* project, stakeholders noted concerns over short-sighted infrastructure decision making due to constraints, including an absence of existing strategic and integrated plans. Thorough place-based analysis provides a lens to inform the development of strategic planning, understand opportunities and consider priority initiatives for investment.

## Data gaps

Drawing on existing sources of high-quality data and research is critical in undertaking a place-based analysis, which in turn help to build a strong evidence base for decision making.

### Existing sources of data

The Australian Government's Bureau of Communications, Arts and Regional Research is currently developing a *Regional Data Hub*, as a new central source of data for Australia's regions. The Hub is intended to improve access to regional data, not replace existing sources. Other sources of national data includes the *Progress in Australian Regions and Cities Dashboard*, which brings together information from a range of different sources.

The Australian Bureau of Statistics *Data by region*, also provides data by various statistical geographies. *RDA* committees across Australia also provide various sources of evidence base for their respective regions.

The Regional Australia Institute's *Insight portal* provides data and measures across key themes including at local government area and RDA level. These are just some examples, in addition to the open data which is made available through State, Territory and local governments.

Where challenges exist, acknowledging the limitations impacting the scope of an analysis is important. This will also highlight priority areas of data gaps where they may be opportunities to collect information in areas of need, in order to better demonstrate the impact of identified challenges or opportunities.

**Table 1:** Data gaps and potential avenues to resolve

Data gaps	Avenues to resolve
Data is not currently collected.	<ul style="list-style-type: none"> <li>• Consultation with data owner, or possible future data owner. At a federal level, this could include consultation with the Bureau of Communications, Arts and Regions. This could also include relevant state, territory or local government, industry and other organisations.</li> <li>• Creation of new datasets, including both qualitative or quantitative data.</li> <li>• Participation and/or creation of open data platforms or data sharing agreements.</li> </ul>
Data is not available over a time series to analyse trends.	
Data is not publicly available.	
Data is not available or able to be aligned to the selected geographic scale.	
Data requires 'cleaning' in order to be utilised (e.g. duplicates, errors).	

## Advocating for identified challenges and opportunities

The role of advocacy has been increasing over recent years for many stakeholders such as local governments, regional organisations, peak bodies, state and territory governments. A coordinated approach to strengthen relationships with other levels of government and a range of stakeholders is seen as a valuable tool for receiving funding, services and programs to build communities. Place-based analysis supports advocacy by developing a strong evidence base for communities to demonstrate priority areas of need.

## Inform investment and development of solutions

The Rubric does not determine what solutions are needed but provides guidance for undertaking a place-based analysis to help bridge the gap between identifying challenges, opportunities and considering specific solutions.

Completion of the Rubric will assist in inform potential investment and the development of solutions, whether they be built projects or reform. Existing progress on solutions will vary from place to place, from initial early-stage proposals to investment-ready proposals. Solutions may be addressed at any level of government.

### Infrastructure Australia's *Infrastructure Priority List (IPL)*

The IPL is a list of unfunded nationally significant investments, providing decision makers with advice and guidance on specific infrastructure investments that will underpin Australia's continued prosperity. Any individual or organisation (but most commonly governments and industry) can submit a proposal to Infrastructure Australia to be considered for inclusion.

## Collaboration opportunities

Undertaking a place-based analysis allows communities with shared experience to come together to share knowledge and practice. A place-based analysis also crosses traditional sectors or silos, helping to enable coordination between stakeholders. Alignment to collaborate may be through common community characteristics or challenges where learnings can be shared to support growth.

Comparisons of like communities can provide benchmark opportunities to ascertain maturity of a place, as well as identify opportunities for strengthening different sectors.

**Gateway Cities Alliance<sup>8</sup>**

The Gateway Cities Alliance is an example of a collaborative and collective approach between the City of Newcastle, Wollongong City Council, the City of Greater Geelong and the Committee for Geelong.

Newcastle, Wollongong and Geelong share numerous features including large and diverse populations, critical assets and infrastructure and connectivity with state capital cities which allows these cities to act as a release valve for larger metropolitan areas.



# Strengthening Communities Rubric

Step 1:	Understanding place through Australia's geography	
Step 2:	Demographic and economic indicators	
Step 3:	Strengths	<div>Key existing assets</div> <div>Key growth industries</div>
Step 4:	Infrastructure	<div>Identify Infrastructure Gaps</div> <div>Prioritise Infrastructure Gaps</div> <div>Evaluation of Infrastructure assets</div>
Step 5:	Enablers and tools for success	<div> <div>Social inclusion</div> <div>Strategic land use</div> <div>Economic and industry</div> </div> <div> <div>Livability</div> <div>Governance</div> <div>Environment</div> </div>

# 1. Understanding place through Australia's geography

How do you describe your place as it fits into the diversity of Australia's communities, including its key linkages and dependencies?

Recognising the diversity of areas across Australia, Infrastructure Australia's *2022 Regional Strengths and Infrastructure Gaps* project considers the differing definitions and classifications of various community types. Classifying a place may help to support infrastructure investment prioritisation, analysis, planning, policy development and collaboration between settlements which have similar characteristics, challenges and opportunities.

The strength of Australia lies in this diversity, but also in the ability of communities with shared experience to come together and to share knowledge and practice. All Australian communities, of all scales, are important. Our objective is to support communities with shared characteristics to leverage common experience and shared resources to support growth.

The location of communities across Australia impacts and reflects key areas of production, supply and markets, which play a critical role in growing the economy. Close proximity and linkages to neighbouring communities also increase access to services. Closeness to other communities can decrease the cost of growth and provides benefits in attracting and retaining skilled labour and young families. When a settlement is in a reasonable proximity, it may encourage city to regional migration by ensuring a feeling of closeness and connectedness to existing social and workplace contacts. This is particularly evident when there is an ease of commute to neighbouring larger settlements.



## Further reading

- Chapter 3 of *2022 Regional Strengths and Infrastructure Gaps*
- Place chapters of the *2021 Australian Infrastructure Plan*.

## Community classifications

The following community classifications and descriptions have been developed as a starting point for a more nuanced consideration of communities across Australia, rather than being intended to be universally applied across all sectors or contexts.

The classifications includes population guides as a common reference point, though not an absolute single or minimum threshold for consideration. We also note that places which have substantial temporary populations (e.g. due to tourism or temporary workers) which should also be considered alongside other unique attributes.

In developing these descriptions, greater emphasis has been placed on the broader attributes and role of a settlement in a greater region. The use of a common set of classifications can help to support collaboration, knowledge sharing and identifying commonalities and connections between communities. In creating these definitions it is also acknowledged that classifying can create division, and that communities may share characteristics with various definitions. Definitions should be used to support collaboration, not as a basis for exclusivity.

Historically and by necessity, significant communities, settlements have been labelled differently by governments, industry and communities themselves. The characteristics and objectives that support classification systems vary. These classifications help support an understanding of appropriate policy responses, infrastructure investment and promote shared knowledge and practice.

**Table 2:** Infrastructure Australia's community classifications

	Description of common attributes	Examples	Population
<b>Fast-growing Cities</b>	As the capital of their respective state or territory, each capital city plays a significant role in their home state and the national economy. Fast-growing Cities are large capitals with diverse and dynamic economies, heavily connected to other major cities in the Asia-Pacific region, and with higher than average population growth.	Sydney, Melbourne, Brisbane and Perth	>2 million
<b>Smaller Capitals</b>	As the capital of their respective state or territory, smaller capitals have a collaborative metropolitan economy, with several established industries. They typically provide a range of important services to their surrounding regional settlements.	Adelaide, Canberra, Hobart and Darwin	<2 million
<b>Satellite Cities</b>	Satellite Cities are within commutable distance, or receive benefits from their physical proximity, to their larger neighbouring capital cities. Typically they have economies that are largely dominated by a few industries and provide a range of important services to their surrounding regions, similar to Regional Hubs. They also can share some major services, such as airports, water supply and major hospitals, with their larger neighbours.	Gold Coast, Newcastle, Sunshine Coast, Central Coast, Wollongong, Geelong, Mandurah	Typically >80,000
<b>Regional Hubs</b>	Regional Hubs typically have over 50,000 residents. Service provision is largely self-contained. These settlements generally are not within commutable distance nor physically proximate to a capital city or Satellite City. Instead, they independently provide key economic and social amenities for their network of surrounding communities. Regional Hubs may have multiple industry specialisations. They function as a central point of access to essential infrastructure, services and employment.	Townsville, Cairns, Bendigo, Toowoomba, Ballarat, Albury–Wodonga, Mackay, Launceston, Alice Springs, Bundaberg, Rockhampton, Tamworth, Wagga Wagga	Typically >50,000
<b>Regional Centres</b>	Regional Centres have populations above 10,000 which provide economic and social amenity for surrounding Small Towns, Rural Communities and Remote Areas. Local economies can have scale, however often have limited industry diversity with a concentration of a key industry or specialisation.	Broome, Dalby, Mareeba, Kingaroy, Ulverstone, Gawler, Devonport, Geraldton, Gladstone	>10,000

	Description of common attributes	Examples	Population
<b>Small Towns</b>	Small Towns with populations under 10,000 provide smaller scale services and rely on nearby Regional Centres or Regional Hubs. They typically have lower growth rates, one dominant industry and associated supporting life-services.	Casino, Castlemaine, Yanchep, Goolwa, Katherine, Wynward, Weipa, Derby , Wadeye	200 – 10,000
<b>Rural Communities</b>	Rural Communities are settlements with fewer than 200 people. These areas are categorised with low growth rates and often support the employees and families of single businesses, and their families. These communities may lack a clear and established centre.	Kiwirrkurra, Carrieton, Muttaborra	<200
<b>Remote Areas</b>	Remote Areas cover a wide expanse of the Australian continent outside of recognised settlements. These areas cater for significant economic activity, particularly associated with resources, agriculture and other primary industries. Some of these rates are characterised by seasonal growth, or relatively high growth rates. In absolute numbers, growth is often low.	This includes many outstations and homelands, as well as pastoral and resource leases.	<200

## Step 1: Understanding place through Australia's geography

Exercise	Description
<p><b>Undertake an analysis of a selected place (settlement or region) in the context of Australia's geography and community types.</b></p> <p><b>Consider linkages, dependencies, role in service provision, key industries, identity, population, and similar communities.</b></p>	<i>Insert description of place.</i>

## 2. Demographic and economic indicators

### What are your place's key demographic and economic indicators?

Understanding key demographic and economic indicators is crucial to understanding place and informing strategic planning. Historical trends, such as population growth rates, may indicate that a place's numerous factors are working, in order to attract new residents. An age profile with a younger demographic with scope to increase population naturally, and which may require relatively less demand on long term health services, may provide greater scope to maintain and enhance local productivity, including by having a relatively larger population contributing to the revenue base.

The scale of growth for different community types is a critical consideration, as increases in smaller communities have larger impacts on local economies and infrastructure. It is also noted that some smaller community types may not be focused on growth, due to their location or physical capacity. The indicators below may not be applicable for these communities who focused on self-sufficiency rather than growth.



#### Further reading

- [Australian Bureau of Statistics](#), including Census data.
- Australian Government's [Centre for Population](#), which works with state, territory and local governments to better understand Australia's population growth patterns and likely implications for governments at all levels.

### Step 2: Demographic and economic indicators

Key indicators are listed below to assist in gaining an understanding of place.

It is encouraged that additional indicators are included in consideration of the context of a place. For example, places with a focus on tourism or temporary workforces will also want to monitor non-resident populations. It is also recommended that the time period of data used to indicate trends is outlined in the description column, which will be subject to data availability and the individual context of each place.

Upon completing an understanding of key demographic and economic indicators, it is important to consider whether the outcomes are aligned to the growth strategies for your community or whether action is required to address disparities.

Indicator	Trend	Description
<b>Estimated resident population</b>	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Decreasing	<i>Insert data and description.</i>
<b>Annual population growth</b>	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Decreasing	<i>Insert data and description.</i>

Indicator	Trend	Description
<b>Aboriginal and Torres Strait Islander population</b>	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Decreasing	<i>Insert data and description.</i>
<b>Working age population</b>	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Decreasing	<i>Insert data and description.</i>
<b>Participation rate</b>	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Decreasing	<i>Insert data and description.</i>
<b>Number of employed persons</b>	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Decreasing	<i>Insert data and description.</i>
<b>Number of businesses</b>	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Decreasing	<i>Insert data and description.</i>
<b>Number of jobs</b>	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Decreasing	<i>Insert data and description.</i>
<b>Approvals for dwelling units</b>	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Decreasing	<i>Insert data and description.</i>
<b>Gross Regional Product</b>	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Decreasing	<i>Insert data and description.</i>
<b>Population density (e.g. Persons per square km)</b>	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Decreasing	<i>Insert data and description.</i>



# 3. Strengths

What strengths does your place have, including key existing assets and growth industries?

Strengths, or competitive advantages, provide the framework for a community to build a pathway for future economic growth and population attraction. Understanding existing endowments, in the form of both key existing assets and growth industries, also provides a basis for communities to leverage when understanding infrastructure needs, developing solutions to address challenges or formulating growth strategies.

In addition to rating both key existing assets and growth industries, it is recommended that a PESTEL analysis is undertaken to identify potential risks.

## What is a PESTEL Analysis?

A PESTEL analysis is a tool to systematically identify external forces which may be potential risks. An understanding of these external forces will help future planning or maintenance of an identified strength. This will also help to inform a more detailed risk assessment in key areas.

- **P**olitical: Impacts of government, government policy and political stability
- **E**conomic: Impacts of the economy and its performance
- **S**ocial: Impacts of the social environment and emerging trends
- **T**echnological: Impacts of the rate of technological innovation, development and adoption
- **E**nvironmental: Impacts of the surrounding environment
- **L**egal: Impacts of legal factors, including policy and legislation.



## Further reading:

- Categorisation and methodology contained in Section 5.2 and Appendix A of [2022 Regional Strengths and Infrastructure Gaps](#).

## Step 3a: Existing assets

Existing assets may include natural, economic or social assets which provide value, competitive advantage, and/or a point of difference for the region.

Categories of existing assets are provided below as a starting point. The descriptions provided under each category of assets are not absolute. When undertaking this step of the analysis it is encouraged that your description thinks outside of the categorisation description as it suits the context of your selected place.

Asset	Description	Rating (Performance of strengths)	PESTEL analysis (Risks)
<b>Climate and topography</b> Climatic conditions and a geography which enables high industry productivity for both traditional and emerging industries, such as agriculture and forestry, tourism and renewable energy production.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Community infrastructure</b> Arts, cultural, sporting and recreational facilities which offer enhanced amenity and cohesion for residents, provide destinations to attract visitors and increase associated spend, and support community resilience in times of natural disaster.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Cultural heritage</b> First Nations sites and landscapes provide connection to country and culture. Beyond this significant cultural offering is also heritage-listed assets, locations and places which reflects the historical legacy of a place, enhances social capital and provides opportunities for investment, attraction and revitalisation.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Defence assets</b> Significant defence assets, including bases and training facilities, benefit both directly and indirectly from their presence. There are substantial flow on effects from their presence, with employees contributing to the spending and services in regional economies.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>

Asset	Description	Rating (Performance of strengths)	PESTEL analysis (Risks)
<b>Education and research institutions</b>  Australia is home to education and research facilities at every scale. Large tertiary institutions provide education and employment opportunities to locals, draw in international students, and deliver world-class research outputs. Skills training and specialised research facilities also deliver substantial social and economic value for local communities, in helping to address skills shortages and to develop emerging industries.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Energy infrastructure</b>  Communities with effective energy infrastructure benefit from robust traditional energy supply, transmission or distribution infrastructure, or renewable energy generation, storage and distribution assets. This helps both enhance local energy security and offer economic opportunity through the transmission of power.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Gateway ports</b>  Gateway ports provide key access points across Australia – both sea and air. These critical points of entry and exit support trade and economic development by supporting supply chains, providing access to goods which support industry and community demand.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Health infrastructure</b>  Health infrastructure assets in Australia vary greatly in their scope and size, from large-scale hospitals with world-leading research capacity to small scale, community-run facilities in Remote Areas. This infrastructure can encompass primary, secondary or tertiary care facilities.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>

Asset	Description	Rating (Performance of strengths)	PESTEL analysis (Risks)
<b>Major attractions</b> Australia is home to many major attractions which support local employment and attract visitor spending. These attractions range from alpine resorts and zoos to theme parks and motorsports facilities.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Natural environments</b> From extensive coastline and World Heritage Listed landscapes to National Parks and the ‘endless horizons’ of our outback, the natural environments throughout Australia not only attract tourism spend but deliver an enviable quality of life for residents and support vibrant flora and fauna.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Natural resources</b> With most of Australia’s mining and resource extraction operations located in regional Australia, the industry’s value to the regions is immense. Beyond economic value, these resources support substantial direct and indirect employment opportunities.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Specialised precincts</b> As towns and centres grow, many of our communities are seeing the value in placemaking initiatives which deliver innovation and entrepreneurship through co-location. Examples include health, education and knowledge precincts; and the co-location of specialised industry operations.	<i>Insert description of existing asset(s), if applicable.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>

Asset	Description	Rating (Performance of strengths)	PESTEL analysis (Risks)
<b>Strategic location</b> Strategic location plays a vital role in connecting communities and markets. Most of Australia's freight and supply of goods moves through Australia's regions, and a community's strategic location in relation to key areas of production, supply or markets can play a critical role in supporting and growing its economy, as well as enhancing access to services.	Insert description of existing asset(s), if applicable.	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.
<b>Transport infrastructure</b> Accessible transport infrastructure enhances physical connectivity for residents and delivers economic stimulus by providing opportunity for high productivity movement of goods. These assets may include significant road and rail routes which see heavy use by, or provide critical access for, freight or passengers.	Insert description of existing asset(s), if applicable.	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.
<b>Tourism brand</b> Distinct combinations of natural, social and economic assets are central to the popularity of destinations for domestic and international visitors. Many communities across Australia are capitalising on strengths such as food and wine trails or natural environments to develop their tourism brand.	Insert description of existing asset(s), if applicable.	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.
<b>Water infrastructure</b> Water is critical to the economic and social wellbeing. Access to high-quality water infrastructure encompassing supply, storage and distribution assets ensures communities can meet the competing demands and remain competitive.	Insert description of existing asset(s), if applicable.	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Undertake a PESTEL analysis of the asset, including Political, Economic, Social, Technological, Environmental and Legal considerations.

## Step 3b: Growth industries

Growth industries are those which have a strong existing presence and show potential for growth and/or to develop competitive advantage.

The rating for each industry could consider the following criteria, where data is available.

- Significant representation in existing employment or economic output figures, with figures drawn from the most recently available data.
- Significant representation in projected employment or economic output.
- Strong emphasis on growth potential and strategic intent in research material, including regional plans and strategies, local government plans and strategies, and state or federal government plans and strategies. Where this is the case, research materials should demonstrate that the industry also has an existing presence in the region, or sufficient enabling infrastructure to allow for the industry to establish itself within the region.
- Strong emphasis on growth potential in stakeholder consultation.

Industry	Description	Trajectory	Rating (Significance considering above criteria)	PESTEL analysis (Risks to the industry, including Political, Economic, Social, Technological, Environmental and Legal considerations)
<b>Healthcare and social assistance</b>	<i>Insert description of industry relating to place.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Declining <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Growing	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the risks to the industry, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Manufacturing</b>	<i>Insert description of industry relating to place.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Declining <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Growing	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the risks to the industry, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Agriculture, forestry and fishing</b>	<i>Insert description of industry relating to place.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Declining <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Growing	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the risks to the industry, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Energy</b>	<i>Insert description of industry relating to place.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Declining <input type="checkbox"/> Stable/ Constant <input type="checkbox"/> Growing	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the risks to the industry, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>



<b>Aerospace</b>	<i>Insert description of industry relating to place.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Declining <input type="checkbox"/> Stable/Constant <input type="checkbox"/> Growing	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the risks to the industry, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Defence</b>	<i>Insert description of industry relating to place.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Declining <input type="checkbox"/> Stable/Constant <input type="checkbox"/> Growing	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the risks to the industry, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Tourism</b>	<i>Insert description of industry relating to place.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Declining <input type="checkbox"/> Stable/Constant <input type="checkbox"/> Growing	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the risks to the industry, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Mining</b>	<i>Insert description of industry relating to place.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Declining <input type="checkbox"/> Stable/Constant <input type="checkbox"/> Growing	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the risks to the industry, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Knowledge sector</b>	<i>Insert description of industry relating to place.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Declining <input type="checkbox"/> Stable/Constant <input type="checkbox"/> Growing	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the risks to the industry, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>
<b>Transport</b>	<i>Insert description of industry relating to place.</i>	<input type="checkbox"/> N/A <input type="checkbox"/> Declining <input type="checkbox"/> Stable/Constant <input type="checkbox"/> Growing	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<i>Undertake a PESTEL analysis of the risks to the industry, including Political, Economic, Social, Technological, Environmental and Legal considerations.</i>

# 4. Infrastructure

What are the Infrastructure Gaps and Infrastructure assets that create challenges or opportunities for your place?

An infrastructure analysis can be undertaken by understanding both the Infrastructure Gaps (challenges and opportunities) for a place at a sector level, in addition to drilling down to an understanding of infrastructure assets within each sector.

## What is an Infrastructure Gap?

An Infrastructure Gap is a challenge or opportunity significant to a place, where infrastructure may form part of the solution. Solutions may be infrastructure reform initiatives or physical infrastructure investments delivered by any level of government, as well as private industry or communities. Infrastructure interventions may only form part of the solution and this will vary within the context of each place.



### Further reading:

- Appendices of the *Strengthening Communities* report

## Step 4a: Identify Infrastructure Gaps

Identification of Infrastructure Gaps at a sector level provides a lens to inform strategic planning, understanding opportunities and consideration of solutions for investment or reform. Infrastructure Gaps can be identified through stakeholder feedback and through existing sources (publicly available documentation relating to the challenges and opportunities within each region, inclusive of reports and strategic documents).

This methodology is utilised for regional analysis in Infrastructure Australia's *2022 Regional Strengths and Infrastructure Gaps* and can be applied to any selected geography.



### Further reading:

- Appendix A of Infrastructure Australia's *2022 Regional Strengths and Infrastructure Gaps*.

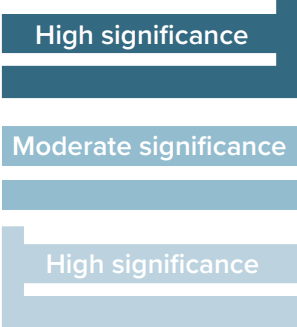
Sector	Sub-sector	Infrastructure Gap	Description
Social infrastructure	Arts and culture infrastructure	Provision and quality of arts and culture infrastructure	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
	Green, blue and recreation infrastructure	Provision and quality of green, blue and recreation infrastructure	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
	Early, primary and secondary education	Capacity, quality and access to early, primary and secondary education	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
	Further education and skills training	Access to further education and skills training	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
	Health and aged care	Access and capacity of health and aged care	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
	Housing	Availability, diversity and affordability of housing	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
Energy	-	Distribution, transmission and generation of energy	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
Place and economic development	-	Industry-enabling infrastructure to support growth and innovation	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
Sustainability and resilience	-	Natural disaster resilience	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>

Sector	Sub-sector	Infrastructure Gap	Description
<b>Telecommunications</b>	-	Broadband and mobile connectivity	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
<b>Transport</b>	<b>Freight infrastructure</b>	Capacity, connectivity and quality of freight infrastructure	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
	<b>Road infrastructure</b>	Capacity, connectivity and quality of road infrastructure	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
	<b>Public transport infrastructure</b>	Capacity, connectivity and quality of public transport infrastructure	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
	<b>Air transport infrastructure</b>	Capacity, connectivity and quality of air transport infrastructure	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
<b>Waste</b>	-	Waste management and resource recovery	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>
<b>Water</b>	-	Water security	<i>Insert description of Infrastructure Gap (challenges and opportunities), if applicable.</i>

## Step 4b: Prioritise Infrastructure Gaps

Infrastructure Australia's *Regional Infrastructure Gap Prioritisation Framework* can be used to determine key areas of priority and focus, using a weighted approach of multi-criteria analysis and stakeholder priorities. As part of the developed framework, stakeholder prioritisation is recommended as a key input, which could be ascertained through varied means (e.g. workshops or surveys). This methodology is utilised for regional analysis in Infrastructure Australia's *2022 Regional Strengths and Infrastructure Gaps* and can be applied to any selected geography as a filter to identify priority Infrastructure Gaps.

**Figure 2:** Regional Infrastructure Gaps Prioritisation Framework (diagram)

Category		Scoring
<b>Quality</b>	The significance of the gap relevant to the quality of services	
<b>Access</b>	The significance of the gap relevant to access to services	
<b>Affordability</b>	The significance of the gap relevant to the affordability of services	
<b>Economic</b>	The significance of the gap relevant to economic growth	
<b>Environmental</b>	The significance of the gap relevant to environment and sustainable practices	
<b>Social</b>	The significance of the gap relevant to educational/health/justice outcomes	
<b>Governance</b>	The significance of the gap relevant to enabling well-informed evidence based and transparent decision-making	
<b>Local stakeholder priorities</b>	Prioritisation by stakeholders during regional workshop ranking exercise	Score assigned to each gap based on <b>local stakeholder priorities</b>

### Overall significance rating

Using the *Regional Infrastructure Gap Prioritisation Framework*, Infrastructure Gaps are scored against each of the seven criteria using a 3-point strength-based scale. Scores are tallied across each of the seven categories for an overall significance rating.

The significance of Infrastructure Gaps was assessed relatively within the region, with significance scores allocated for each gap in each category as follows:

- **High significance** for the scoring category being assessed (**3 points**). This score indicated that the Infrastructure Gap impacts across the entirety of the region and the severity of its impact on this population is high, for instance, a region with widespread mobile blackspots impeding on access to services and economic opportunity.
- **Moderate significance** for the scoring category being assessed (**2 points**). This score indicated that:
  - The Infrastructure Gap impacts across the entirety of the region and the severity of its impact on each of the scoring categories for this population is low to moderate, for example a region where air transport access is limited across the region, but access via other means of transport is sufficient for the majority of residents.

- That the impact of the Infrastructure Gap is localised to a partial area of the region and the severity of its impact on each of the scoring categories for this population is high, for example where remote areas of a region lacks access to health infrastructure.
- **Low significance** for the scoring category being assessed (**1 point**). This score indicated that the impact of the Infrastructure Gap is localised to a partial area of the region and the severity of its impact on each of the scoring categories for this population is relatively low, for example where a centre would benefit from improved precinct planning to enable industry growth but enabling infrastructure is already in-place to support development more broadly throughout the region.

## Local stakeholder priorities

Using the *Regional Infrastructure Gap Prioritisation Framework*, a score is given to each Infrastructure Gap based upon stakeholder prioritisation rankings, with the lowest-priority gap receiving a score of one (1) and remaining Infrastructure Gaps designated a progressively higher score corresponding to their increasing priority according to the stakeholder prioritisation.

## Priority Infrastructure Gaps

To identify priority Infrastructure Gaps, the overall significance rating and local stakeholder priorities weighted scores were combined. The overall significance rating was weighted at two-thirds value and the local stakeholder priorities score was weighted at one-third value. This approach allows for a balance between placing emphasis on the research through the criteria assessment and valuing stakeholder views.

**Table 3:** Illustrative table for prioritising Infrastructure Gaps

Category	Criteria	Gap 1	Gap 2	Gap 3.... (continue columns as needed)
<b>Quality</b>	The significance of the Infrastructure Gap relevant to the quality of services.	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>
<b>Access</b>	The significance of the Infrastructure Gap relevant to access to services.	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>
<b>Affordability</b>	The significance of the Infrastructure Gap relevant to the affordability of services.	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>
<b>Economic</b>	The significance of the Infrastructure Gap relevant to economic growth.	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>
<b>Environmental</b>	The significance of the Infrastructure Gap relevant to environment and sustainable practices.	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>



<b>Social</b>	The significance of the Infrastructure Gap relevant to educational / health /justice outcomes.	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>
<b>Governance</b>	The significance of the Infrastructure Gap relevant to enabling well-informed, evidence based and transparent decision-making	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>	<i>Insert 3-point score</i>
<b>Overall significance rating</b>		<b>Total of above scores</b>	<b>Total of above scores</b>	<b>Total of above scores</b>
<b>Local stakeholder priorities</b>		<b>Stakeholder ranking</b>	<b>Stakeholder ranking</b>	<b>Stakeholder ranking</b>
<b>Priority Infrastructure Gaps</b> (2/3 Overall significance rating + 1/3 Stakeholder ranking)		<b>Weighted overall score</b>	<b>Weighted overall score</b>	<b>Weighted overall score</b>

**Further reading:**

- Appendix A of Infrastructure Australia's [\*2022 Regional Strengths and Infrastructure Gaps\*](#)

## Step 4c: Evaluation of infrastructure assets and networks

Following identification and prioritisation of Infrastructure Gaps at a sector level, it is recommended that relevant infrastructure assets and networks are also assessed for their Adequacy, Condition and Capacity. A comprehensive analysis of asset performance is a significant undertaking which requires additional capacity and capabilities to be built over time.

The outcomes of **Step 4a** and **4b** can be used to guide the selected assessment of infrastructure assets and networks: not all infrastructure assets/networks may be relevant for every place.

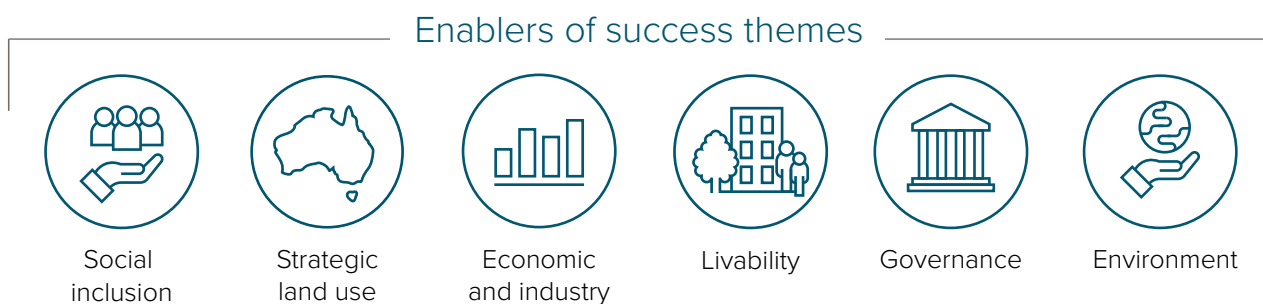
Infrastructure assets and networks			
Category	Criteria	Ranking	Description
Adequacy	<b>Quality</b> Consider ease of use, services available with minimal disruption, variance in quality and the safety/security for users.	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Insert description of the analysis of infrastructure asset.
	<b>Access</b> Consider comparable services across all places, services on demand when users need them and improved access for disadvantaged groups.	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Insert description of the analysis of infrastructure asset.
	<b>Affordability</b> Consider whether pricing reflects usage and costs to deliver the service, affordability for an average household and costs distributed fairly based on users' ability to pay.	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Insert description of the analysis of infrastructure asset.
Condition	Consider maintenance and asset management.	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Insert description of the analysis of infrastructure asset.
Capacity	Consider provision, utilisation rates and ability to support existing and projected growth.	<input type="checkbox"/> N/A <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Insert description of the analysis of infrastructure asset.

# 5. Enablers and tools for success

## Does your place have the key enablers and accompanying tools for success?

Across six themes, this section explores key enablers for successful communities and accompanying examples of tools which could be utilised to drive change. The steps in each of the following six themes guide you in undertaking this analysis in the context of your selected place. Both the enablers and tools are provided as examples and as a starting point to illustrate how each theme might be supported. These enablers and tools will not always be applicable to each place and it is recommended that each analysis is tailored to each place's local context.

**Figure 3:** Enablers of success themes



The following table provides guidance on rating the enablers and accompanying examples of tools. This analysis should be accompanied with a description of the analysis, in order to assist in the identification of potential areas of priority or improvement.

**Table 4:** Ratings guide for enablers and tools

Enabler rating	Tool rating
<b>Low:</b> Enabler is not present and requires solutions to be developed or implemented.	<b>Not present:</b> The policy tool example is not currently present.
<b>Medium:</b> Enabler is present, however requires solutions to be developed or implemented in order to strengthen.	<b>Present:</b> The policy tool example is currently present, however requires solutions to strengthen.
<b>High:</b> Enabler is present, requiring little to no interventions.	<b>Mature:</b> The policy tool example is currently present, requiring little to no interventions.

Across all these identified themes above, sustainability and resilience should be considered and integrated to deliver better outcomes for communities. Infrastructure Australia's Sustainability and Resilience Principles provide a foundation for that consideration.



### Further reading on sustainability and resilience:

- Sustainability and resilience chapter of the [2021 Australian Infrastructure Plan](#).
- Infrastructure Australia's [A Pathway to Infrastructure Resilience](#)
- Infrastructure Australia's [Sustainability Principles: Infrastructure Australia's approach to sustainability](#)

# Social inclusion

## Does your place provide equal opportunities for participation in society for all?

People in any society can face disadvantages, including unemployment, low income, low literacy and numeracy, lack of access to services, disability, poor health, mental health issues, or discrimination. Social inclusion focuses on disadvantage, or barriers, to being included in the community and understanding how those barriers are connected to each other. Improving social inclusion is a source of economic strength and higher living standards. Having an inclusive society avoids the costs incurred when people are excluded – from jobs, from businesses and from accessing social services.

### Social inclusion strategies

Social inclusion strategies use a number of approaches<sup>9</sup> to focus action:

- **Place:** People may be socially excluded because of where they live e.g. an isolated community may face different disadvantages than an inner-city community. Action is focused on addressing the combination of barriers faced by a particular community.
- **Group:** People may be socially excluded as part of a group that often suffers a number of disadvantages at once, e.g., people living with a disability. Action is focused on addressing the combination of barriers they face.
- **Event:** People may be socially excluded due to the impact of important events during their lives that trigger the creation of barriers, e.g., illness, death of a family member, going to prison, or losing a job. Action is focused on preventing barriers from building up when these events happen and helping people stay on track.
- **Issue:** People may be socially excluded and face a particular barrier that is so challenging it needs to be addressed before it is possible to move on, e.g., homelessness, long-term unemployment, or a drug addiction. Action is focused on the most difficult barrier faced by people who are socially excluded, which in turn may help them to then address other barriers

**Lifecycle:** People may face a barrier that is so challenging it needs to be addressed before it is possible to move on, e.g., homelessness, long-term unemployment, or a drug addiction. Action is focused on the most difficult barrier faced by people who are socially excluded, which in turn may help them to then address other barriers.



### Further reading:

- [Socio-Economic Indexes for Areas \(SEIFA\)](#), product developed by the ABS that ranks areas in Australia according to relative socio-economic advantage and disadvantage.
- [Inclusive Australia's Social Inclusion Index](#)
- [Australia's Disability Strategy 2021-2031](#)
- The Australian Institute of Health and Welfare [People with disability in Australia](#) report
- The [National Agreement on Closing the Gap](#)
- The Australian Government's National Mental Health Commission, including [National Reports](#)

## Step 5a: Social inclusion

Enabler	Enabler rating	Tool to enable	Tool rating	Description
People of all cultural and linguistically diverse backgrounds are welcomed and valued.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Cultural and Linguistic Diversity (CALD) Strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present Mature	<i>Insert description.</i>
Traditional Owners and First Nations Peoples are valued and respected.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Reconciliation Action Plan	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
People with a disability are supported to reach their full potential, as equal members of the community.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Disability Strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Population is supported in their mental health needs.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Mental Health Strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Inclusive employment opportunities and practices.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Employment Strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>

# Strategic land use

Is strategic land-use planning integrated and supported to ensure economic, social and environmental factors are managed?

Planning for the future of a growing and changing community is critical to mitigate challenges and identify opportunities. Strategic land-use planning frameworks, which differ across state and local governments, provide a long-term land use vision. However, the structure of statutory and strategic planning processes can often mean there is a lack of connection between the strategic vision for a place and the practical tools used to implement this vision on the ground. A lack of integration of land-use and infrastructure planning also increases challenges in prioritisation and sequencing for development. Strategic integration requires time and sustained commitment at all levels of government, as the administrative process of updating and aligning plans and statutory instruments will necessitate meaningful community engagement and cross-sectoral collaboration.



## Further reading:

- Infrastructure Australia's [\*Planning Liveable Cities\*](#)

## Step 5b: Strategic land use

Enabler	Enabler rating	Tool to enable	Tool rating	Description
Planning and development supported by publicly accessible data and tools.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Interactive and spatial planning and development data and tools which draw on best practice.	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Clear articulation of areas for geographic expansion and/or intensification.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Up-to-date, long-term local plan	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Land supply to cater for growth.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Growth monitoring programs (including land use and development)	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Housing supply targets informed by objective market demand.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Housing Strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Existing land-uses and densities adequately reflect needs of the community and vision for growth	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Strategies or incentives for qualifying uses/development in areas of need	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>



# Economic and industry

## Does your place have a resilient and growing economy and industries?

The characteristics of Australia's community types helps to understand the potential growth paths for communities and the role of infrastructure in supporting that development.

The *2022 Regional Strengths and Infrastructure Gaps* report explores how, as communities grow, dominant industries may develop due to a range of local factors, such as available natural or human capital. As communities develop these specialisations, associated industries develop creating vertical integration within a region and become a component of local identity. These economies of scale entrench dominant industries and provide a platform for growth and prosperity. However single specialisations can present vulnerabilities of communities to changes in industry fortune, such as the emergence of competition, substitutes, technological advancement. A lack of diversity in the economic base may also be subject to future changes in government policy and national priorities.

As skills and resources become more diverse, the opportunity for diversification of local industry and business will emerge. This diversification can create economic resilience and support a broader cross section of workforce participation and growth the attractiveness of a community. However, successful diversification of specialisation requires access to the skills and resources to support it. This is often dependent on overall community population and scale.

The population threshold to support diversification is impact by factors such as climate, remoteness, population density, socio-economic and other factors. The threshold can therefore vary based on conditions. This imprecise boundary complicates decision making in communities on the best path of economic growth. Communities with the characteristics of scale and relevant strengths may be best placed to pursue diversification while smaller communities with more narrow strengths may be better placed to build on incumbent strengths and getting that adjacency.



### Further reading:

- Section 3.3.2 (Economic Diversity) and Section 3.4 (Specialisation and diversification as growth paths) in the *2022 Regional Strengths and Infrastructure Gaps* report
- Regional Australia Institute: *The impacts of specialisation and diversification on Australia's mid-sized towns*

## Step 5c: Economic and industry

Enabler	Enabler rating	Tool to enable	Tool rating	Description
Successful, innovative and growing industries	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Economic Development Strategy (including assessment of local economy, strengths, weaknesses, opportunities and challenges)	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Local businesses are engaged and supported to grow	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Business incentive schemes	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>

Governments regularly engage with the private sector	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Government-business collaboration forums	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Business and industry are attracted to invest in the area	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Investment Prospectus	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>

# Liveability

## Does your place offer high levels of liveability?

Places with high levels of liveability draw and retain existing residents and businesses. Liveability considerations are cross-cutting, encompassing the other themes in this section as well as the Infrastructure Gaps which impact every-day life. In addition, liveability considers enablers as safety and amenity. It is possible to grow our communities and retain their liveability and unique character. Creating liveable places is intrinsically linked to economic growth and will play a key role in maximising the opportunities of population growth in our communities in the future.

### Defining liveability

Infrastructure Australia's *Planning Liveable Cities* outlines that a liveable community is one in which it is easy and comfortable to carry out day-to-day life, for a range of different people. It should be 'safe, attractive, socially cohesive and inclusive, and environmentally sustainable; with affordable and diverse housing linked by convenient public transport, walking and cycling infrastructure to employment, education, public open space, local shops, health and community services, and leisure and cultural opportunities'.<sup>10</sup>

## Step 5d: Liveability

Enabler	Enabler rating	Tool to enable	Tool rating	Description
A diverse day and night-time economy	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	A day and night-time economy strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Residents and visitors feel safe (e.g. low crime rates).	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Crime Prevention Through Environmental Design (CPTED) strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Walkability	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Walkability Strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Visual character	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Local identity/character strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Active volunteer and community organisations.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Volunteer Strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>

# Governance

Are all levels of government committed to collaboration and engagement? Are resources allocated using an evidence-based approach?

Collaborative governance allows for a better and shared understanding of complex problems involving many stakeholders, allowing these stakeholders to work together, pursue innovation and agree on solutions. Community engagement as part of the development of strategies and plans allows for the incorporation of useful input borne from lived experience, in addition to improving the investment of stakeholders in the decision-making process. Shifting entrenched, siloed approaches to planning is one of the key challenges to change. The establishment of enduring governance models and investment in capability is necessary to deliver results.

Demonstrated competence from all levels of public administration which has the necessary power to make, coordinate and fund decisions, increases the likelihood of meeting community goals. Transparent evidence-based decision making uses relevant information to make it clear why a choice is being made.

The governance of Anchor Institutions and Anchor Collaboratives can help to support the places and communities in which they operate.

## What is an Anchor Institution and Anchor Collaborative?<sup>11</sup>

Anchor Institutions are defined as large entities that are based in, and have a long-term commitment to, a suburb, town, city, or defined region, that demonstrates that commitment by intentionally deploying its economic power to strengthen local communities.

Where Anchor Institutions come together to adopt an Anchor Collaborative approach to harness and align their resources and efforts. This often occurs through formal agreements around a specific mission or other shared vision within a defined place-based community. This also allows for organisations to multiply the impact of their individual efforts and budgets.



### Further reading:

- Place-based outcomes for communities chapter of the [\*2021 Australian Infrastructure Plan\*](#).

## Step 5e: Governance

Enabler	Enabler rating	Tool to enable	Tool rating	Description
Intra and inter-government collaboration	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Regional local government collaboration bodies	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Alignment of strategic plans and objectives	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Joint growth vision, developed with input from all relevant stakeholders.	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Domestic or international collaboration	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Sister cities or other relevant partnerships	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>

Effective community engagement	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Community Engagement Strategy, including established processes to undertake digital, hybrid and in-person engagement.	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Data availability for decision making	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Open data sharing arrangements and data creation/capture.	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Incoming and outgoing grants are efficiently managed	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Governance and processes to inform priority setting for incoming and outgoing grants.	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Budget processes involve strategic analysis of funding.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Monitoring processes on funding and outcomes.	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Pursuing key priorities with relevant external stakeholders	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Advocacy Strategy.	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>

# Environment

## Does your place deliver stewardship and sustainable management of the local environment?

Australia's environment is diverse, unique and essential to our survival. Natural environments not only support flora and fauna, they also attract tourism spend and help to deliver an high quality of life for residents. Protecting environments ensures that communities have adequate resources to need now and into the future, with increasing threats from climate change, weather extremes and population growth. Infrastructure Australia's work highlights the importance of supporting sustainable outcomes and building resilience.

### Natural environments

Natural environments were the most frequently highlighted key existing asset for regions through the [2022 Regional Strengths and Infrastructure Gaps](#) project, emphasising the role and importance these assets play in communities across Australia.



#### Further reading on sustainability and resilience:

- Sustainability and resilience chapter of the [2021 Australian Infrastructure Plan](#).
- Infrastructure Australia's [A Pathway to Infrastructure Resilience](#)
- Infrastructure Australia's [Sustainability Principles: Infrastructure Australia's approach to sustainability](#)

## Step 5f: Environment

Enabler	Enabler rating	Tools to enable	Tool rating	Description
A strategy for transitioning to a net zero future, including for government's own operations	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Net Zero Strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Community has or is transitioning to a circular economy model	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Circular economy strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Biodiversity is preserved and enhanced	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Biodiversity strategy	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>
Innovation through raising profile of best practice environmentally sustainable development	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Local demonstration projects	<input type="checkbox"/> Not present <input type="checkbox"/> Present <input type="checkbox"/> Mature	<i>Insert description.</i>



# Appendices





## Arts and culture infrastructure



<b>Infrastructure Gap:</b>	Provision and quality of arts and culture infrastructure can be identified as an Infrastructure Gap where access to existing infrastructure is limited or where improvements in quality are needed.
<b>Infrastructure assets:</b>	Museums, theatres, libraries, performance spaces, art studios/galleries, natural assets of cultural value (e.g. Uluru).

Access to high quality arts and cultural infrastructure delivers a range of benefits such as improving social cohesion, enhancing liveability, protecting heritage, facilitating economic development, developing creative industries, increasing tourism potential, provide connection to country and playing a vital role in the reconciliation process.

Arts and culture also enables success by providing for the exchange of ideas and building the identity of a community, with residents seeking these activities for both stimulation and relaxation. When cultural and artistic activities are well recognised, it helps to define and promote a community domestically and internationally.

Arts and cultural infrastructure includes the buildings and spaces that accommodate or support cultural activities, production and events. Infrastructure outside of Fast-Growing Cities tends to be operated by councils, volunteers and not-for profits. Social and economic benefits are also often difficult to quantify, which creates barriers for investment.



### Further reading:

- Chapter 8 Social Infrastructure in the *2021 Australian Infrastructure Plan*.

## Green, blue and recreation infrastructure



**Infrastructure Gap:** Provision and quality of green, blue and recreation infrastructure has been identified as an Infrastructure Gap where access to existing infrastructure is limited, requires protection or where improvements in quality are needed.

**Infrastructure assets:**

- Green infrastructure: Parks/fields, walking tracks, cycle tracks, street trees, verges, rooftop gardens and green facades.
- Blue infrastructure: Waterways, wetlands, beaches, jetties, wharves, harbours, foreshores and surf lifesaving.
- Recreation infrastructure: Sport facilities/fields/stadiums, community facilities, playgrounds, skate parks, public swimming pools.

Green, blue and recreation infrastructure include both natural and built spaces which people use for active transport, to play sports and exercise, to relax, to learn and connect with their communities. This infrastructure can provide a wide range of social, environmental and economic benefits, build resilience and increase the health and wellbeing of communities.



### Further reading:

- Social Infrastructure in the *2021 Australian Infrastructure Plan*.

## Early, primary and secondary education



**Infrastructure Gap:** Capacity, quality and accessibility of early, primary and secondary education can be identified as an Infrastructure Gap where the existing infrastructure capacity is constrained, improvements in quality are needed or access is limited.

**Infrastructure assets:** Early childhood education, primary education and secondary education facilities.

Enhancing the capacity, quality and accessibility of early, primary and secondary education infrastructure is a key factor in delivering high-quality educational outcomes for children, which has flow-on effects in building local capacity by attracting workers, families and long-term residents. The availability of a choice of public, private and independent education options is also an important consideration. Success outcomes include high rates of student performance, attendance and educator retention.

Education infrastructure for early, primary and secondary education is the buildings, facilities and campuses which supports the delivery of high-quality educational outcomes for children.



### Further reading:

- Social Infrastructure in the [\*2021 Australian Infrastructure Plan\*](#).



## Further education and skills training



**Infrastructure Gap:** Access to further education and skills training can be identified as an Infrastructure Gap where access to tertiary education, TAFE or other skills training facilities is limited. The scope of this challenge varies relating to the context of a region or place and may also include where there is an identified needs to address sector shortages, support employment pathways, skills and economic development where infrastructure may form part of the solution.

**Infrastructure assets:** Universities, TAFEs and other education/training facilities.

Access to these facilities can provide education opportunities to locals, draw in inter-state and international students, and deliver world-class research outputs. Skills training and specialised research facilities also deliver substantial social and economic value for local communities, particularly in helping to address skills shortages.

### Prompts for consideration:

- Demonstrated excellence in research and innovation in specialisations, both unilaterally and collaboratively with other recognised institutions of higher learning domestically and internationally, as well as with government and industry.
- Further education and training facilities have ability to pivot to new skills agendas, in areas of current and prospective economic significance.
- Education and training facilities align with key growth industries.
- Low incidence of skills shortages in key growth industries.
- High rates of educational attainment.



### Further reading:

- Chapter 8 Social Infrastructure in the *2021 Australian Infrastructure Plan*.



## Health and aged care



**Infrastructure Gap:** Access to and capacity of health and aged care infrastructure can be identified as an Infrastructure Gap where access to or capacity of full-service health and aged care facilities is limited.

**Infrastructure assets:** Primary care facilities (GPs), Acute care facilities (Hospitals), aged care (including independent living, universal housing, assisted living, residential aged care and palliative care facilities)

Access to full-service health and aged care facilities is crucial in promoting and maintaining a healthy society, particularly in the face of population growth and an ageing population.

Health and aged care infrastructure is delivered by a variety of public and private providers in a range of settings, and includes illness prevention, health promotion, the detection and treatment of illness, specialist treatments, rehabilitation, palliative and end-of-life care. Access to tele-health services relates to Telecommunications infrastructure.



### Further reading:

- Social Infrastructure in the *2021 Australian Infrastructure Plan*.

## Housing



**Infrastructure Gap:** Availability, diversity and affordability of housing can be identified as an Infrastructure Gap where there are housing supply needs affecting availability, need for increased diversity of dwelling types to support the existing and future population or affordability challenges.

**Infrastructure assets:** Social housing and crisis accommodation.

Housing and accommodation is critical to attracting and retaining residents and workers. Housing is provided using a diversity of models. These can range from the model of private ownership, which is common in Australia and not commonly regarded as infrastructure; to provision through government and community social housing programs, which in delivering public good is infrastructure.

Consideration of the Infrastructure Gap looks at the broader housing market, noting that public and private housing markets are inextricably linked and there are flow-on effects from an undersupply of affordable and social housing which increases pressure on the private housing market. These issues constrain growth as workers and their families cannot find available, affordable and appropriate housing. Lack of appropriate housing can also exacerbate social issues and negatively affect health and wellbeing. In many instances demands on housing have been intensified by the COVID-19 pandemic.

### Prompts for consideration:

- Is there a diversity of housing types, sizes and tenures available, which match the current and future desires of the community? This could consider housing tenure trends and the alignment of strategic planning intent and demographics with dwelling stock types.
- Are housing options in the community affordable? This could consider:
  - Provision of adequate social housing
  - Dwelling price to income ratio
  - Rates of mortgage or rental stress
  - Average housing and rental prices
  - Relative affordability in comparison to neighbouring larger settlements, increasing attraction of living in community
  - Homelessness rates.
- Is housing in the community easily available? This could consider:
  - Future supply of housing land, including both greenfield and infill opportunities
  - Social housing availability and wait-lists
  - Housing vacancy rates

- Over-crowding rates
- Average housing construction costs
- Development and building approval rates
- Housing supply targets.

**Further reading:**

- Social Infrastructure chapter of the *2021 Australian Infrastructure Plan*.
- *Australian Housing and Urban Research Institute*, which provides peer reviewed primary research across housing, homelessness, cities and urban policy areas.

## Energy



**Infrastructure Gap:** Distribution, transmission and generation of energy can be identified as an Infrastructure Gap where there are opportunities to increase energy security, reliability, affordability or lower emissions.

**Infrastructure assets:** Assets which support gas, wind, solar, hydro, biomass, transmission line, coal, CCGT, peaking gas and liquids.

Energy underpins the Australian way of life. It powers homes, helps people and goods to move around and keeps essential social services running. It also contributes significantly to the economy, not least by fuelling every Australian business.

Ensuring an adequate, affordable and sustainable energy supply as critical for both residents and industry. Infrastructure challenges include maintaining and upgrading existing infrastructure (production, storage, transmission), as well as potential opportunities for expansion of existing capabilities to improve energy security or provide opportunity for scale, including in renewables. This includes existing generation and transmission networks alongside infrastructure for renewable energy, including solar, wind, tidal, biomass or emerging technologies such as hydrogen.



### Further reading:

- Energy chapter of the [\*2021 Australian Infrastructure Plan\*](#).



## Industry-enabling infrastructure to support growth and innovation



**Infrastructure Gap:** Industry-enabling infrastructure to support growth and innovation can be identified as an Infrastructure Gap where challenges are cross-cutting, such as digital connectivity, transport, water, and energy security that constrain growth and innovation in a range of sectors.

**Infrastructure assets:** All categories

A lack of effective planning and associated infrastructure delivery can impede new opportunities to support growth and innovation in key existing and emerging industries such as tourism, agribusiness, manufacturing, and the resources sector. High functioning industries are able to be optimised, productive and innovative when their current and future needs are met by infrastructure provision in all relevant sectors.

### Prompts for consideration:

- Are industries supported by a framework to sequence infrastructure investment based on industry-specific, place-based needs?
- Do major developments consider opportunities for shared infrastructure and reduced costs by undertaking joint assessment of enabling infrastructure requirements?
- Are there areas zoned for development for uses which are needed in the community which currently cannot proceed due to the provision of enabling infrastructure?



### Further reading:

- Place-based outcomes for communities chapter of the [\*2021 Australian Infrastructure Plan\*](#).

## Natural disaster resilience



**Infrastructure gap:** Natural disaster resilience can be identified as an Infrastructure Gap where infrastructure resilience is a key area of concern, with a need to plan, design, build and operate infrastructure in a way that prepares for the increasing incidence of events such as bushfire, flooding, drought, heatwaves or severe storms.

**Infrastructure assets:** Stormwater, coastal protection and bushfire protection.

A whole-of system, all-hazards approach to resilience planning that focuses on strengthening an infrastructure asset, network and sector, is crucial for the infrastructure operations. Infrastructure assets, networks and sectors which have been planned, designed, built and operated in a way that prepares for the increasing incidence of shocks and stresses.

Achieving resilience requires a shift in focus from the resilience of assets themselves, to the contribution of assets to the resilience of the system. This approach requires consideration not only of how to strengthen the asset, network and sector, but also how to strengthen the place, precinct, city, and region that the infrastructure operates within. It requires considering the role of each asset within the broader network and/or system and a shift from individual to shared responsibility.

Australian communities that are able to anticipate, resist, absorb, recover, transform and thrive in response to shocks and stresses, are able to more easily realise economic, social and environmental outcomes.

### Ten opportunities for a systemic approach to managing risk

Source: Infrastructure Australia's [A Pathway to Infrastructure Resilience](#)

- 1. Improve strategic alignment of resilience governance:** Governance that adopts a systemic view of risk and establishes the accountability and resourcing.
- 2. Manage uncertainty through scenario planning:** A common set of future scenarios to streamline planning and support cross-sector coordination and shared responsibility.
- 3. Improve data collection and sharing for informed planning, action and decision-making:** Coordinating, sharing and standardising critical disaster and climate data.
- 4. Adopt place-based approaches for resilience:** Planning tools and data to consider multiple place-based issues and address resilience and community needs.
- 5. Embed resilience into land use planning and development decisions:** Planning systems that value and set resilience as policy objectives, incorporate new and emerging data, capture local opportunities.



- 6. Improve infrastructure investment decision-making:** Agreed mechanisms and guidance for quantifying the projected economic, social, environmental and governance implications of the impacts associated with managing uncertainty or resilience.
- 7. Collect and share information on asset and network vulnerability:** A shared understanding of the impacts to interconnected systems.
- 8. Value blue and green infrastructure:** Improving the understanding, valuation and governance of the green and blue infrastructure.
- 9. Build trust through more inclusive decision-making:** Including communities and informing them about the risk, uncertainty and trade-offs related to infrastructure services and their livelihoods.
- 10. Embed traditional ecological knowledge in decision-making:** Draw on traditional ecological knowledge to manage land and natural resources and mitigate-risk.



#### Further reading:

- Sustainability and resilience chapter of the *2021 Australian Infrastructure Plan*.
- Infrastructure Australia's *A Pathway to Infrastructure Resilience*.
- Infrastructure Australia's *Sustainability Principles: Infrastructure Australia's approach to sustainability*.

## Telecommunications



**Infrastructure Gap:** Broadband and mobile connectivity can be identified as an Infrastructure Gap where digital connectivity is a challenge and current infrastructure does not ensure user, business and industry needs are met.

**Infrastructure assets:** Assets which support broadband and mobile networks

Digital infrastructure which meets user, business and industry needs through speed, capacity and affordability of connection continues to innovate and play a vital role in communities. The presence of reliable, fast and affordable digital infrastructure supports communities access to better health, education and services. The impacts of this gap are wide-ranging, with some remote communities suffering from social exclusion as a result of limited or non-existent telecommunications infrastructure. Optimising the speed and capacity of existing digital connections in some major centres has been identified as a key enabler of growth.

### Prompts for consideration:

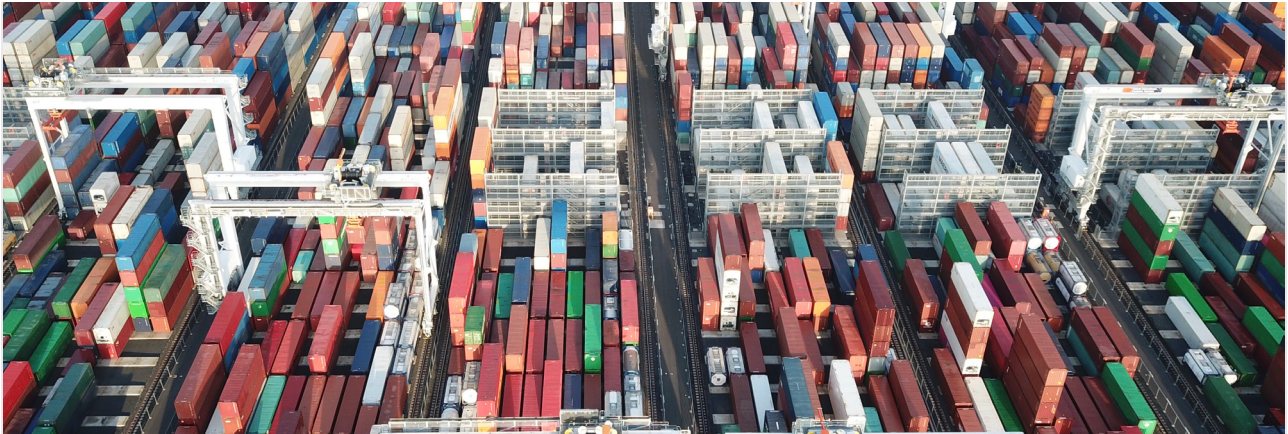
- Are domestic connections able to handle combined recreational and home usage for work, education and health?
- Does existing or planned digital infrastructure meet business and industry need?
- Is there a range of affordable connection options available?
- Is mobile coverage widespread, with little to no black spots identified in areas of need?
- What does stakeholder feedback and consumer telecommunication complaints about services?
- Do First Nations people in the community have equal levels of digital inclusion?



### Further reading:

- Telecommunications and digital chapter of the [\*2021 Australian Infrastructure Plan\*](#).
- [\*Australian Digital Inclusion Index\*](#), which uses survey data to measure digital inclusion across three dimensions of Access, Affordability and Digital Ability.
- The Australian Government's [\*2021 Regional Telecommunications Review\*](#).

## Freight infrastructure



**Infrastructure Gap:** Capacity, connectivity and quality of freight infrastructure can be identified as an Infrastructure Gap where there are opportunities to reduce conflict of uses, improve efficiency, access and support export markets and industry.

**Infrastructure assets:** Container/bulk ports, rail, intermodal facilities and all other assets listed in road infrastructure and air transport infrastructure

Freight infrastructure which provides for the movement of goods to support industry and community demand. Freight infrastructure encompasses roads, railways, ports and intermodal facilities and the capacity of these assets to facilitate the effective and efficient movement of freight. The capacity, connectivity and quality of these assets supports import and export markets and industry.

**Prompts for consideration:**

- Is there reliable access for supply chains under all conditions?
- End-to-end supply chain linkages
- Is there evidence of conflict of uses and congestion delays affecting freight?



**Further reading:**

- Transport chapter of the *2021 Australian Infrastructure Plan*.
- *National Freight and Supply Chain Strategy* and *National Action Plan*.

## Road infrastructure



**Infrastructure Gap:** Capacity, connectivity and quality of road infrastructure can be identified as an Infrastructure Gap where there are opportunities to allow for efficient movement of people by road.

**Infrastructure assets:** Roads, bridges, tunnels, level crossings

Road infrastructure enhances physical connectivity for residents and delivers economic stimulus by providing opportunity for high-productivity movement of goods. This is particularly crucial factor for Australia's regions, where access by road may be the only feasible means of reaching communities or primary industry operations.

**Prompts for consideration:**

- Constraints and delays during peak hours
- Connectivity between centres and employment hubs
- Incidences and locations of traffic accidents



**Further reading:**

- Transport chapter of the *2021 Australian Infrastructure Plan*.



## Public transport infrastructure



**Infrastructure Gap:** Capacity, connectivity and quality of public transport can be identified as an Infrastructure Gap where current infrastructure does not sufficiently connect people and places through public transport.

**Infrastructure assets:** Rail stations, rail lines, rail stabling, bus terminals, bus stops, busways, cruise ship terminals.

Public transport connects people and places, linking to centres of employment and improving amenity, liveability and wellbeing for communities.

**Prompts for consideration:**

- Frequency of services
- Integration of public transport and active transport modes
- Availability of real-time information and journey planning tools
- Connectivity between centres, employment hubs and dwellings.
- Proportion of journeys to work by public and active transport



**Further reading:**

- Transport chapter of the *2021 Australian Infrastructure Plan*.

## Air transport infrastructure



**Infrastructure Gap:** Capacity, connectivity and quality of air transport can be identified as an Infrastructure Gap where there are opportunities to improve air access.

**Infrastructure assets:** Airport building, airport runway

Air transport provides vital means of access for residents, workers and emergency services. This is a particularly pressing issue for some rural and Remote Areas, where air transport is a vital means of access for residents, workers and emergency services, particularly during the wet season.

**Prompts for consideration:**

- Domestic and international connections and routes
- Inbound and outbound demand



**Further reading:**

- Transport chapter of the [\*2021 Australian Infrastructure Plan\*](#).



## Waste



**Infrastructure Gap:** Waste management and resource recovery infrastructure can be identified as an Infrastructure Gap where there are opportunities to more efficiently manage resources and waste.

**Infrastructure assets:**

- Waste to disposal (landfill)
- Waste to recycling (material recovery facilities, resource recovery facilities)
- Recycled product creation (remanufacturing and processing for reuse)
- Energy recovery flows (incinerators, hazardous waste treatment facilities)

Waste management and resource recovery infrastructure enables communities to efficiently manage resources and waste. There are also opportunities for the regions to develop circular economy capacity through leveraging unique strengths such as biomass productions, however seizing these opportunities requires investment in specialised infrastructure.

**Prompts for consideration:**

- Circular economy models
- Levels of diversion of waste from landfill
- Local resource recovery infrastructure and services.



**Further reading:**

- Waste chapter of the *2021 Australian Infrastructure Plan*.

## Water



**Infrastructure Gap:** Water security can be identified as an Infrastructure Gap where water supply is insufficient, unreliable or expensive.

**Infrastructure assets:** Water pipeline, dam, water treatment plan, sewage treatment plant, sewage pipeline and desalination, irrigation.

Water security is essential to life, as well as a crucial factor in enabling population and industry growth, feasibility of entry into new industry such as hydrogen production, and providing basic liveability for rural and remote populations which may lack access to quality reticulated water systems. Industry sectors such as agriculture, mining and manufacturing are particularly dependent on water quality and security.

The security of Australia's water resources is under increasing pressure from climate change, weather extremes, population growth, changing user expectations, changing land use and ageing infrastructure. Access to high-quality water infrastructure encompassing supply, storage and distribution assets ensures Australia's regions can meet the competing demands of these stakeholders and remain competitive.

**Prompts for consideration:**

- Are non-climate dependent water sources available?
- Is economic output adversely affected by water supply or quality?
- Does the water supply meet needs for both residents and industry?



**Further reading:**

- Water chapter of the [2021 Australian Infrastructure Plan](#).
- [Town and city water security definition and diagnostic](#) (February 2021: Public report prepared by Aither for the Department of Agriculture, Water and Environment).

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