



**DIGITAL4ALL**

# **Digital Infrastructure Co-Investment Guide**

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## Introduction

The Australian Government is recognised as the responsible entity for setting and implementing the legislative, policy and program mechanisms to ensure that all Australians have access to reliable and affordable telecommunications.

Telecommunications services across the country are provided through a mixture of fixed, wireless and satellite based networks operated by a number of licensed carriers. Technology innovation and development means that telecommunications infrastructure remains in a constant state of upgrade, expansion or replenishment.

The standard and capability of telecommunications infrastructure deployed across the country is very much dependent on a number of defining factors. These include:

- The scale, demand and nature of the local market,
- The complexity and challenges created by the local landscape and environment,
- The remoteness of the market and its distance from primary transit infrastructure, and
- The level of corporate and government operations within or adjacent to the location.

All of these factors contribute to any business case developed to support the investment for new or improved infrastructure and the sustainable delivery of ongoing services. As a result there is often a challenge to achieve this in remote and regional areas. The irony is that the role of telecommunications in these outlying areas is often significant to their sustainability and wellbeing.

This guide has been developed from extensive experience gathered over a number of years and across several States, working on the improvement of regional and remote telecommunications infrastructure. Through this experience the Principal of Optimi Digital, Jim Wyatt, has identified a role for a range of third party stakeholders to influence the standard and capacity of telecommunications investment applied within each locality. The consideration of such an approach could greatly improve the level and capability for Local Government and Regional Development bodies to optimise the standard of telecommunications infrastructure deployed into regional, rural and remote parts of Australia under initiatives such as the National Broadband Network and the National Mobile Coverage Program.

This approach is likely to also assist in addressing any telecommunications infrastructure priorities that are identified through the respective Regional Strategic Plans and Investment Blueprints associated with the ongoing Economic Development focus across regional Australia. The involvement of this 'Co-Investment can often prove to be the defining factor in achieving a viable business case for enhanced infrastructure deployment and investment.

## Aim

The aim of this *Digital Infrastructure Co-Investment Guide* is to offer regional community leadership with ideas and strategies to build an effective business case, to improve local digital infrastructure, through leveraging contributions from third party stakeholders such as Local Government Authorities, industry, communications providers and other regional development organisations.

This Co-Investment Guide proposes to:

- Optimise the benefits of digital infrastructure for regional Australia by expanding it into areas not previously covered.
- Speed up the viability for the deployment of new digital infrastructure projects in regional Australia so that the economic and social benefits can be captured earlier; and
- Leverage other infrastructure developments to augment the roll out of new digital infrastructure.

## Principles for Co-Investment

The following principles set out the conditions upon which any Co-Investment exercise should be explored.

1. *Evidence of a deficiency:* It is vital that the nature and scope of any deficiency in digital services, access and capabilities is fully understood prior to engaging in an undertaking to rectify this. Many requests for investment start out based on anecdotal concerns and this needs to be properly validated. Strategies for achieving this are provided in this Guide.
2. *Investment Viability:* In many cases, a question of economic viability exists as to the feasibility for service providers to make the necessary investment in digital infrastructure, particularly in remote areas. The lack of action on the part of such providers to address an identified deficiency is clear evidence of this. The other demonstration of this is in the deployment of a lower grade technology to meet an obvious need or demand.
3. *Government intervention:* Government should not be obliged to act as the 'funder of first resort' to address these deficiencies. The onus should be on local parties to maximise their own assets, commercial demand and available powers to improve the viability for investment in digital infrastructure.
4. *Cost benefit:* Each option for Co-Investment should be supported by a sustainable business case. Given the potential use of local public assets or regulatory powers to affect any development there should also be clear evidence of community support and consultation.

## **Background**

‘Digital infrastructure’ refers to telecommunications based facilities that support networks for voice and data (terrestrial, mobile, fixed-wireless and satellite), other types of data or sensor networks, the management of Information Technologies and the provision of television or radio transmission. This Co-Investment Guide offers a cohesive approach to identify, examine and then develop propositions to support improved backhaul (transit) and “last mile” connectivity, particularly in regional areas of Australia. There is an emphasis on projects that demonstrate improved social, economic and cultural benefits.

The Guide is designed to assist third party stakeholders to identify their role in such projects and to encourage them to actively contribute towards digital infrastructure investment in support of their community or region. Co-investment refers to any third party contributions in support of planned investments by Governments (Federal/State/Local) and telecommunications carriers or service providers. The emphasis is on achieving an expansion of coverage or improved standard of capability (technology based) through an agreement with the proponent developer in return for valued contributions that mitigate cost or development effort.

Government (Federal/State/Local) can also assist some Co-Investment projects through leveraging of its own infrastructure. This is on top of any subsidies funding (Grant) programs. An example of this in Western Australia is the Regional Mobile Communications Project (RMCP). Third party access rights were secured on Telstra’s towers under the project that has assisted in the expansion of Emergency Services Radio Networks. A similar approach involving Government owned or controlled land or assets could be leveraged to enable other service providers including NBN Co to install wireless or fixed line infrastructure facilities in locations designated for satellite coverage only.

## **The Role of Optimi Digital**

Optimi Digital can provide an important role to assist communities and regional organisations in identifying and prioritising their co-investment projects and then reaching agreements with development parties to leverage these contributions. Our focus is on identifying all the potential stakeholders that can add value to a particular development project such that the maximum benefits are derived for the lowest cost.

Optimi Digital can also assist in establishing a community co-investment plan as the mechanism for the development and then implementation of any co-investment project. We have extensive experience both from Government and the private sector in the development and management of these plans and can act as a Lead Advocate for digital infrastructure improvement, facilitating all agreement processes required between a developer and any contributing organisation(s).

## Identifying priority communities for co-investment

Often Government subsidies are awarded on a priority basis. The allocation of industry investment can also follow a similar approach although this is more likely to reflect commercial returns. The following criteria has been identified from previous experience as the most likely to be used in identifying those communities that would benefit the most from improved digital infrastructure and as such present a priority to explore options for Co-Investment:

- A community with a significant population and/or expected high future rates of population growth;
- A community adjacent to a major industrial or resources based project;
- A community with a concentration of public facilities (such as schools, hospitals, libraries, police stations, fire stations) not currently serviced by high capacity networks;
- A community aligned with a significant Federal/State Government development policy such as the Regional Centres Development Plan known as the “Super Towns” project in Western Australia;
- A community which is in close proximity to proposed new infrastructure corridors, highways and transport routes; and
- A community served by an existing digital community hub or resource centre.

Optimi Digital has developed a number of assessment tools to help communities compile data in support of their priority status. This data is relevant when developing an effective investment business case. See the Toolbox at [www.optimidigital.com.au](http://www.optimidigital.com.au) .

## Identifying Co-Investment sources

Co-investment in support of a digital infrastructure development can occur in a number of forms, including:

- Direct cash contributions to the developer as payment for additional infrastructure. This includes financial contributions from Local Government, private businesses and not-for-profit organisations;
- Assistance to remove or amend physical or regulatory barriers to the deployment of digital infrastructure;
- Allowing a developer to co-locate new digital infrastructure with existing infrastructure;
- Agreeing to the collocation of assets with other construction projects by State Governments, utilities and Local Councils such as undergrounding power, streetscape work, new bridges, roads, rail corridors, pipe lines and land developments; and
- Granting access rights to property, infrastructure assets or easements that enable more cost effective infrastructure deployment.

Optimi Digital has developed a set of templates for assessing and identifying the potential for such co-contributions when building an effective business case. See the Toolbox at [www.optimidigital.com.au](http://www.optimidigital.com.au) .

## **Developing a Community Co-Investment Plan**

Optimi Digital can assist in the preparation of Community Co-Investment Plan. This is likely to start with an audit of potential contributions, particularly in identifying what telecommunications infrastructure is located in or near the community and future planned infrastructure assets. The next step is to assess the existence of any viability gap for the deployment of the preferred infrastructure coverage or capability. This will need to be tested through negotiations with a prospective provider or developer.

Once this has been determined a business case can then be developed including an assessment of the impact of any Co-Investment contributions to closing the viability gap. A positive result occurs where the Co-Investment contributions result in a closing of the gap. If a shortfall remains then additional work may be required to address this or further negotiations need to take place with the developer to reach an acceptable outcome.

Once the business case has been established, the third party stakeholders will need to work with the carrier/provider/developer to frame an Agreement to deliver on the proposed contributions in return for the desired digital infrastructure outcome. Optimi Digital can assist in framing such an agreement. The Community Co -Investment Plan is then finalised setting out the details of the contributions, actions necessary to provide this to the developer and the timetable that the improved digital infrastructure is to be delivered within.

## **Determining what the problem is and how to address it**

As previously indicated under the Principals for Co-Investment it is important to be able to clearly identify the deficiency in the digital infrastructure capabilities of your locality. Often the first sign of any deficiency are regular complaints of poor or intermittent services. Another obvious sign is where existing services are provided through a technology that is limiting in its capacity or performance. This is often the case for the following:

1. Wireless connectivity in hilly terrain or where properties are located in and around dense foliage.
2. Properties served by early forms of satellite technology.
3. Properties served by ADSL where they are located on the extremities of a community or at the furthest distance from the telephone exchange.
4. Communities where recent expansion has extended away from existing telephone exchange locations or mobile tower sites.
5. New subdivisions that develop outside of the existing “town limits”, in particular where this occurs in undulating landscapes or adjacent to forested areas.
6. Communities that are served by satellite or microwave backhaul and there has been exponential growth in data traffic to and from the location. This can sometimes be due to increased business activity in the area of the establishment of large scale industrial activity that utilises the existing connectivity.

Assessing the deficiency in wireless based connectivity can be particularly difficult and in many cases what is an issue for one person can prove to be of little consequence to others. It is recommended that a locality consider undertaking the following steps when deciding if it intends to pursue improvements to mobile coverage in the area:

- Consult existing Mobile Network Operators to ascertain what they believe to be the standards of coverage in the area,
- Review published coverage maps and compare these to “on the ground” circumstances to identify prospective barriers to coverage,
- Survey the population (home owners and business) to gauge particular trouble spots,
- Look for areas prone to issues where there has been recent growth in population or phone users. Increased usage without upgrades to transmission capacity can result in service deficiencies,

Another common issue that is experienced is a result of the transformation of mobile phone usage trends and patterns that have emerged over the past 5 years. With the increased usage of “smart phones” that enable both voice and internet services there is a need for a higher level of connectivity than in previous times when people just used their handset to talk. As a result people who reside closer to the edge of a mobile phone cell (coverage area) can experience problems, particularly with data connections.

This is often represented by the number of “bars” showing signal strength that the handset is achieving. In the past many people in regional areas may have fitted “in car” mounting kits with external booster antenna into their vehicles to increase their ability to use their phones as they travelled around the region. However, with the increase in usage of “smart phone” many people prefer to use these in a “hand held” fashion, which negates the ability to access the broadest coverage on offer. This in turn translates into increased mobile access issues perceived by the community.

One good way for a community to gain an accurate assessment of mobile coverage issues is to use a technology like Mobile Pulse™, see <http://www.marketclarity.com.au/products/mobilepulse/mobile-pulse-community-assessment>. This is an application downloaded onto a person’s phone that can help to pinpoint where loss of mobile broadband connectivity occurs and how often. Market Clarity offers a special Community Assessment package that can be incorporated as part of any overall “Needs Assessment”. Optim Digital can assist you in the preparation and conduct of a “Needs Assessment” and to make arrangements for accessing the Mobile Pulse™ product through Market Clarity.

## **Next Step**

If you wish to know more about undertaking a “Needs Assessment”, developing a Community Co-Investment Plan or just approaching your local telecommunications carrier about services improvement, then contact us via [www.optimidigital.com.au](http://www.optimidigital.com.au) or phone 0408945944.