

CROWN CASTLE AUSTRALIA

RESPONSE TO

THE DEPARTMENT OF
COMMUNICATIONS, INFORMATION
TECHNOLOGY AND THE ARTS

FOR THE

BROADBAND CONNECT INITIATIVE

JANUARY 2006



1. INTRODUCTION

Crown Castle is pleased to present this submission to DCITA in relation to the proposed Broadband Connect program. Since 2001, Crown Castle has invested more than \$500 million dollars developing a business that allows co-users of telecommunications infrastructure an environmentally and economically efficient way to deploy communications services throughout Australia. The Crown Castle business was formed through acquisitions of approximately 700 towers from each of Optus and Vodafone, resulting in a portfolio of around 1,400 wireless towers. This makes Crown Castle the largest independent owner of wireless towers in Australia, and the second largest tower owner behind Telstra. Crown Castle's infrastructure covers 85%¹ of the population of Australia.

The central recommendation of this submission is that DCITA allocate part of the Broadband Connect program towards wireless infrastructure that:

- is **technology independent** allowing the market to determine the best wireless technology to service the target region, thereby making the contributory capital a self sustaining investment;
- has **shareable** network elements to improve the economics for wireless operators in "marginal" regions;
- is managed by a party **independent of the carriers** to promote sharing and competition;
- promotes a holistic and portfolio wide rollout approach to achieve **economies of scale** and maximise efficiencies in construction; and
- provides a subsidy structure that not only benefits the first broadband provider deploying to an area, but provides **benefits to future providers** as well.

Funding wireless tower infrastructure will provide DCITA with an effective, equitable and economically efficient means of meeting the principles of the Broadband Connect program.

2. WIRELESS IS KEY TO FILLING THE BROADBAND GAPS

Different broadband delivery technologies are suited to different population densities.

- Fixed networks typically suit urban density areas where fibre/copper runs can pass the maximum number of homes in short distances;
- Wireless networks are well suited to regional areas that have no access to fibre and the potential user is too far from the exchange to receive ADSL; and
- Satellite networks suit very remote areas where there is no access to a backbone telecommunications network.

¹ 85% of the Australian population is within 10km of a Crown Castle tower.

Crown Castle believes that, in many instances, wireless broadband offers a more cost effective, and faster, network deployment to low density populations compared to fixed technologies. Wireless is likely to provide more viable economics for the marginal populations being targeted by the Broadband Connect initiative. Emerging broadband wireless-based technologies promise to further improve the economics by delivering significantly improved geographic coverage and capacity per base station.

There is also a growing demand for the flexibility, the rapid service installation and the portability offered by wireless broadband. This is evidenced by Unwired's growing penetration in the Sydney market. Portability could similarly offer significant benefits to regional and rural businesses.

Crown Castle believes that the major barrier for broadband wireless providers is the high capital expenditure associated with civil tower infrastructure. Initial discussions regarding a subsidised infrastructure approach to regional broadband deployment have been well received by a number of existing regional broadband providers including Austar, iBurst (Commander Communications) and Comms Logic.

3. WIRELESS CARRIERS NEED COST EFFECTIVE, LOW CAPEX TOWERS

In high density areas new wireless network deployment can utilise a range of structures including high rise buildings. However, in the lower density areas being targeted by "Connect Australia", nearly all service providers deploying wireless installations will require tower infrastructure to provide vertical aperture. The lack of existing structures in the target areas means that the deployment costs for marginal areas could become prohibitive. Typically, at least 60% (between \$130,000-\$200,000) of total capital expenditure for establishing a wireless base station is incurred in site related items, such as:

- Site location and acquisition;
- The construction of the equipment tower; and
- Upgrading and access to power supply.

Each of the above items is common to the carriers on a site regardless of the wireless technology or service being deployed.

4. UP-FRONT FUNDING IS REQUIRED TO ALTER THE MARGINAL ECONOMICS

4.1. Investment in Carrier Grade networks

The current HiBIS funding approach delivers incentives to providers in the form of a per subscriber subsidy, received after the individual subscriber receives the service. For wireless services this has often resulted in smaller operators investing in lower cost WiFi style network deployments that are not scalable and will struggle with technology and capacity upgrade requirements.

The deployment of a carrier-grade network is better suited to achieving long-term community benefits and is more appropriately encouraged through an up-front subsidy. This would provide carriers with the appropriate incentives to match the significant up-front investment profile required of scaleable and future proof networks. This would provide these regional areas with services that are comparable to those available in denser urban areas.

4.2. Economies of scale in construction and operation

The deployment of wireless towers undertaken on a portfolio wide basis can benefit from significant cost efficiencies in planning, construction and operation. A portfolio based approach also requires the certainty of up-front funding arrangements.

Construction costs can then be reduced through competitive pressure that can be generated for large deployments. Similarly, systems and process costs for a large portfolio should lead to lower per unit operating costs. These cost savings translate into more efficient spend and lower access costs for the carrier – further improving the economics for marginal areas.

5. CROWN CASTLE CAN PLAY THE INDUSTRY SUPPORT ROLE

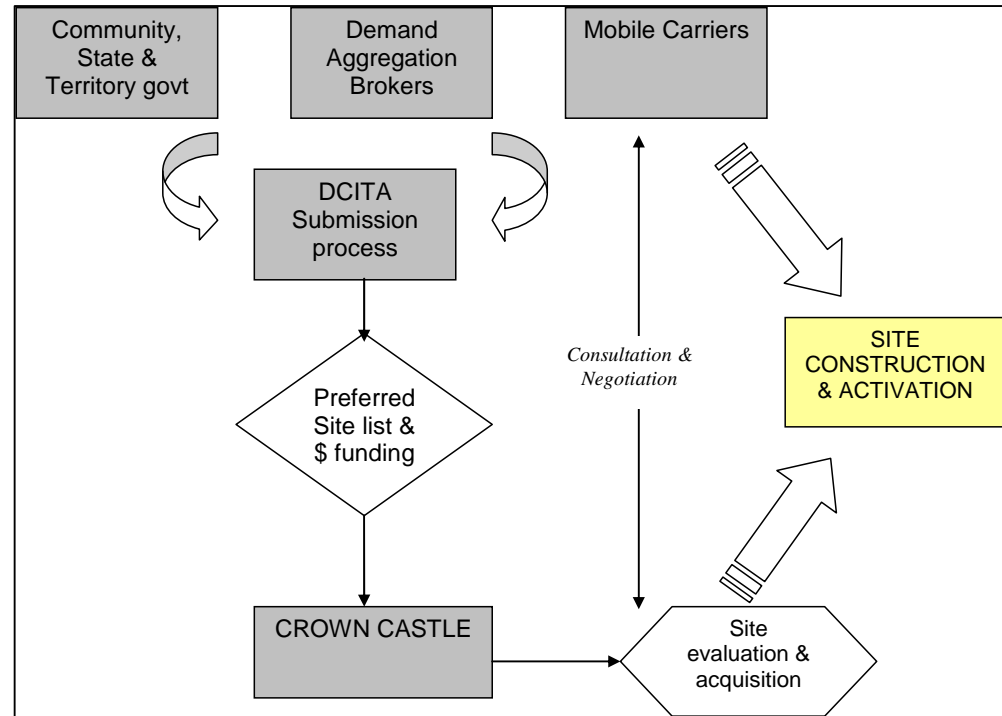
To facilitate a meaningful wireless broadband deployment, Crown Castle would recommend that a portion of Broadband Connect funding be allocated towards the construction of wireless tower infrastructure. More specifically a contribution of \$50 million over 3 years should be allocated to fund around 300 towers, depending on specifications. This could potentially support 200+ population centres with wireless broadband services. Crown Castle would be prepared to contribute towards any core investment that DCITA makes towards this wireless tower infrastructure.

The shared infrastructure would include a dedicated wireless tower, compound space and access to power. This infrastructure would have the benefit of providing an effective subsidy to all wireless providers who wish to service that area – not just the initial broadband provider.

6. THE PROPOSED SHARED INFRASTRUCTURE INVESTMENT MODEL

Crown Castle advocates the following method for managing the process of selecting and funding the construction of a portfolio of regional wireless towers infrastructure.

1. DCITA manages a process of consultation between government, community, demand aggregation brokers and carriers to determine the most appropriate locations for wireless tower infrastructure.
2. Funding allocation and tower numbers are agreed with Crown Castle.
3. In consultation with the nominated carrier, Crown Castle approaches landholders and negotiations are undertaken to secure the site. Relevant planning approvals are obtained for construction. Once approval is obtained, a minimum 10 year lease term is negotiated with the initial carrier.
4. Crown Castle undertakes the construction of the wireless tower infrastructure sites and facilitates the installation of the broadband equipment on the site. The site is then ready for activation and use by customers.



7. CONCLUSION

While fixed and satellite technologies will each suit particular situations, wireless broadband has a substantial role to play in delivering a cost effective and rapidly deployed means of meeting the broadband needs of lower density regional areas.

Crown Castle believes that it is uniquely placed to assist in meeting Broadband Connect's objectives through a portfolio based development of wireless tower infrastructure. This approach offers a more sustainable, equitable and economically efficient use of government funds given that it is:

- A technology neutral platform which encourages technological innovation and is scalable; and
- Can be operated as an open access network, providing the benefits to each wireless carrier offering services to a region, and removing potential barriers to entry.

Crown Castle has created a successful business through the facilitation of site sharing by all wireless carriers including Telstra, Optus, Vodafone, Hutchison, Unwired, iBurst, state emergency services radio networks and many small regional carriers. These customers are attracted to Crown Castle sites due to the compelling value proposition of shared sites over the cost of carrier owned and operated sites.

Crown Castle would welcome the opportunity to discuss this proposal personally with the Broadband Connect DCITA team to explore the potential that would be realised from instigating this proposal. Any queries may be directed in the first instance to Mr Udhay Mathialagan – Director Strategic Development and Commercial Operations on (02) 9495 9016.