



CENTRAL NSW
COUNCILS

Centroc

**Submission to the State Standing Committee
on Broadband and other Telecommunications
Services in Rural and Regional NSW**

26 February 2010

Executive Summary

Central NSW Council has lodged a series of submissions to both the State and Federal Governments regarding the need for upgrade of broadband in our region.

Central NSW Councils (Centroc) represents over 236,000 people covering an area of more than 70,000sq kms comprising the Local Government Areas of Bathurst, Blayney, Boorowa, Cabonne, Cowra, Forbes, Harden, Lachlan, Lithgow, Oberon, Orange, Parkes, Upper Lachlan, Weddin , Wellington, and Young.

While Central NSW has struggles with the ongoing problems associated with poor broadband outlined in previous submissions where there has been little change in terms of improvement, the region also presents the case that as a growing and important part of the NSW and national economy in a globe coming to terms with climate change and population pressures. This case can be summarised in the following points:

- location - proximity to Sydney and Canberra in the context of climate change and population increase landuse pressures
- A strong, diverse economic base built on agriculture and mining manufacture and tourism
- significant backbone capacity with some communities where the teledensity make a good business case for further investment
- co-operative, strategic and hands on approach to sustaining and growing our region

To illustrate these points, case studies of specific communities and industries are provided - particularly around the growing clusters of transport logistics, health, green technologies and education.

Consultation has been undertaken with the 16 member lgas of Centroc. This consultation has provided information regarding transport logistics, educational, health and business needs.

Should the Standing Committee like past submissions referring to issues around lack of access to broadband affecting health, education, business and locational preference in Central NSW these are available from the Centroc website at centroc.com.au

Centroc seeks to work with stakeholders including the Federal and State Governments on progressing Fibre to the Premises of this region.

Location - proximity to Sydney and Canberra in the context of climate change and land use pressures

Populations such as Sydney are growing, where the Keneally report of 2008 suggested a 40% increase by 2036 and the Intergeneration report 2010 suggests a national population in current trends of 35.9 million by 2050.

The Central NSW location is significant in the context of this growth in a nation adapting to climate change.

As the Murray dries, forcing production north in NSW, and increasing temperatures force food production east, the Central NSW region will become more critical in meeting Australia's food needs. This will become more pronounced as the Cumberland Plain surrounding Sydney experiences increasing landuse pressure.

The cost of transport will increase and so proximity to market will be more critical. Here intermodal transport hubs such as those in Parkes, Bathurst and Blayney become more important. The Parkes Hub is a case study below.

To facilitate the growth in production required over time, education and farm management technologies supported by high speed broadband become more critical.

Issues around agricultural production are further discussed below.

As population pressures increase particularly in the capital cities, some market driven decentralisation to the west of Sydney will be facilitated by early roll out of the National Broadband Network in this region.

A strong, diverse economic base built on agriculture and mining manufacturing and tourism

Central NSW has a broad economic base built on agriculture and mining, both of which are broadband hungry and are becoming more so. The breadth and complexity of the region's product is a significant point of difference with our region's long term resilience.

The main irrigation sources for the large agricultural holdings in the region are the Macquarie River in the east and the Lachlan River in the west. The main irrigation dams are Wyangala, Carcoar and Windemere, which have a combined dam volume of 5.4 million ML.

The region contains a wealth of natural resources that form a solid base for a number of expanding industries. Manufacturing, mining and agriculture form the backbone of the region's economy.

The size and diversity of the region's industrial base has created a



Snapshot of the Central West RDA region -the lga's of Lithgow, Oberon, Bathurst, Blayney, Orange, Cowra, Cabonne, Weddin, Forbes, Parkes, Bland, Lachlan

Home to an expanding mining sector in coal, gold & copper. A manufacturing sector worth ~A\$1,421 million pa. Significant natural resources -the Lachlan and Macquarie Rivers, hardwood and softwood forests and rich mineral deposits.

Major industries

-agribusiness -tourism
-mining -manufacturing
-food processing
-services

Competitive Advantage

- extensive freight, commuter road and rail infrastructure
-rich in natural resources eg gold, copper, timber and water supplies
-close to the major population and market centres of Sydney, Canberra, Wollongong and Newcastle
-one of the most diverse regional economies (I & I NSW)
- strong education and service sectors

Mining Rapidly developing including coal, copper and gold, worth over A\$550 million pa. One of the most heavily prospected regions in Australia, new opportunities are emerging, including North Parkes and A\$440 million Cadia gold mines.

Agriculture Worth over A\$600 million pa. Wool, cattle, wheat, horticulture and viticulture.

Manufacturing A large food & beverage sector worth ~ A\$690 million. Machinery & equipment manufacturing worth A\$245 million and A\$165 million respectively

highly skilled, affordable and flexible labour force and both land and facilities that are very competitively priced. Innovative import replacement businesses with a growing “green” bent are finding capacity, affordability and welcome in this region. For example, please see the case study on Race Dental.

Extensive rail and freight networks link the region to Sydney and the ports. Three intermodal transport depots at Parkes, Bathurst and Blayney give access by road or rail to 82 per cent of Australia's population within 24 hours, including direct access to Port Botany.

The Centroc Water Security Study has identified three broad areas of activity to deliver water security to the region to 2059 in the context of climate change. The Study can be downloaded from centroc.com.au. The region has already commenced co-operative activity in delivering on security into the future.

With significant business in agriculture, mining, manufacturing and tourism, there is already a need for high speed broadband throughout the region. As work practices change, this will only increase.

Many commercial enterprises in the Centroc region have a strong export focus. These enterprises vary between agriculture and mining with some manufacturing. These businesses are concerned that they are struggling with inefficiencies and higher costs as a result of poor data communications infrastructure. Many have complained that they find the Next G Mobile Network inadequate for “main stream” data use.

In regional Australia many businesses are not located in the “high street.” Mining is a major employer in our region and obviously these entities need significant broadband. They are located well out of the major centres. Similarly many industrial parks and commercial centres are often too far away from the telephone exchange to access broadband over copper infrastructure.

A recent example is Cadia mine, which plans upgrades to its mining activities to include international remote operations and requires very significant upgrades to its broadband capability, reliability and speed.

Tourism is a special case in point in Central NSW due to its symbiotic relationship with the agricultural sector. The region's environmentally significant tourist attractions, have, for example, attracted Australia's first conservation based luxury resort, Emirates, Wolgan Valley resort and spa. This is the first hotel in the world to achieve carbon neutral certification from an internationally accredited greenhouse gas certification scheme. By their very nature such tourism attractions are in more remote locations but they are attempting to attract clientele who would expect high speed broadband access and who would be the key players likely to consider future investment in the region.

From a 2010 Regional Development Australia Central West survey of businesses that have recently relocated to the region:

Race Dental

Race Dental specialises in the manufacture of dental prosthetics. The company is currently located in rented premises in North Ryde and needs space to accommodate growth in its business due to changes in the regulatory environment and the demand for import replacement.

Key Considerations in relocating to Cowra Shire were

- *cost of land/industrial premises versus cost of metropolitan rental. It is more cost effective to refurbish an existing building including the installation of water tanks and generators required to operate at a regional location than to rent an additional floor at their current premises in North Ryde.*
- *lower cost of living /median house prices /average wages compared to metropolitan areas*
- *lifestyle for staff*
- *access to transport infrastructure. While the costs of air freight do not differ from Sydney, it is quicker to freight product from the Laboratory in Cowra via air to Mascot than from North Ryde.*
- *available workforce*
- *enthusiasm and support for business by Council and Government agencies in the region*
- *impressed by latent advantages of doing business in region.*

As consumers become more knowledgeable about the internet they also have increasing expectations in terms of viewing and purchasing tourism and travel products online.

- **Comparison with Sydney**

The majority of Centroc councils employ Business Development Managers whose principle role is to encourage businesses, often from metropolitan centres, to move to their particular towns. The business parks in many of the towns are unable to offer broadband to all sites. Business may not relocate to our regions without comparable speed, costs and uptime on broadband.

Many of the businesses in the Centroc region provide support and service industries for copper and gold mines who have weathered the Global Financial Crisis well.

The amount of competition in regional areas is poor. This is not only in transmissions speeds and costs but also in the selection of ISPs with commercial grade capacity. This is evidenced by the variability of performance in our region.

Many local ISPs suffer from congestion which is a result of high cost of backhaul which would be overcome by the NBN wholesale development.

Ai Group CEO Heather Ridout found that over 93% of companies indicated that the internet has had a positive impact on their efficiency/productivity. 66% of businesses believe their business will benefit greatly from faster broadband. 69.7% of regional firms would see a great benefit from faster broadband.

These figures illustrate that regional businesses are aware they are behind and we seek to have this gap addressed.

- **Comparison with international**

The commitment of many of our international competitors to broadband availability applies pressure to our regional business. Our ability to compete against places such as Singapore, UK and the USA are seriously affected by the current network.

The USA has begun a similar process to the NBN, under the new president and this will also put pressure on our agri-business as the farm lobby in the United States is very powerful. The wine industry, mining and particularly the education industries will all suffer if our areas are left on "the back burner" with the FTTP roll out.

We have several universities who compete for international students and broadband is a basic delivery mechanism for these services. With a target market of Asia and the Middle East our

Broadband Central NSW and Addressing Climate Change Risk

Climate Change poses particular risks to rural communities in Central NSW.

Farmers will be required to adapt their agricultural practices. There will be increased land-use pressure on major centres with development threatening arable land and placing additional pressure on already strained water resources.

Supporting outlying communities with high speed broadband increases their ability to diversify their industry and improve business efficiencies - for the agricultural sector in particular it allows industry and producers to access the information necessary for climate adaptation in a timely manner.

Reducing Transport Emissions

Central NSW is a large region covering over 70,000 sq km –the same size as Tasmania.

There is a great deal of unnecessary travel that could be avoided by strategically using web conferencing, running webinars and delivering services online as well as encouraging small home based businesses and working from home.

Case Study Cumnock in the Cabonne Shire

When Cumnock offered home rentals for \$1 they were able to attract residents with purpose who could use web based technology for innovative and creative work from home - reducing the need to travel and keeping a small community prospering.

universities are competing with other English speaking institutions (eg USA).

The UK, Singapore, Holland and the USA are all headed down a similar path to FTTP with some aggressive timetables. It is important to note that all regard this infrastructure as a basic item for regional sustainability and development.

The situation in Central NSW is one of having lower service levels than our metropolitan brethren in a nation competing in a very competitive international environment. This reduces the competitive advantage of our industries and communities.

- **Issues for regional development**

Retention and attraction of staff is a key component of regional development and the perception of poor education opportunities is a key disincentive. Whilst the attraction of work and lifestyle is strong, the negative impacts of limited access to broadband is seen as critical to family education and development. This has a negative impact over locational preference into the region. These concerns are particularly strong in the mining, medical and professional services employment area.

Members report there are also industrial parks, freight hubs and airports whose tenants are keen to have broadband as soon as possible.

Vineyards and livestock producers in the Centroc region report suffering now with a lack of broadband facilities. This shortfall is impacting on their ability to promote product to both the domestic and international markets. Some are attempting to use the Next G Mobile Network for their data but this is proving expensive and inadequate for their needs. Many of these businesses are within short distances to telephone exchanges which are fed by fibre optic.

Given the population pressures, the location of the region and the pressures anticipated due to climate change Central NSW is well positioned for development and to be a key player in the nation's future.

Co-operative, strategic and hands on approach to sustaining and growing our region

The region's capacity to co-operate when tackling challenges such as water security, transport, economic development and telecommunications cannot be understated.

The office of Broadband, Communications and the Digital Economy described the co-operative work undertaken by Centroc members as of national significance.

Tourism in Central NSW -a special case

Tourism continues as one regions growth industries with Central NSW having a diverse and large number of small to medium tourism operators.

The Central NSW Tourism region totals over 6700. The internet provides tourism industry with far reaching opportunities to offer virtual tourism product and develop and enhance relationships with their customers.

Consumers have increasing expectations in terms of viewing and purchasing tourism and travel products online.

*Central NSW offers a diverse range of tourism experiences, resulting in key economic benefits including employment, increased consumer spend and economic diversification. **Of note is the relationship between tourism and other product in the region for example farm gate, farm stay and cellar door.** Central NSW is building product based on these relationships through programming like Brand Orange and the 100 Mile Dinner.*

Due to the network infrastructure and subsequent limited access, Central NSW operators fall short of the requirements to operate within a mainly ICT driven sector. The region's continued success will rely heavily on advancements to and from major source markets.

The region has developed strategic work in both transport and water infrastructure that will secure development to the middle of this century. Securing broadband has been identified as the next critical step in assuring regional prosperity.

The strategic work undertaken recognises the effects of climate change and the rapidly growing national and global populations. It also clearly demonstrates the region's co-operation and offers confidence to the Federal Government regarding such a substantial investment.

For more information on Centroc's strategic work such as the Centroc Water Security Study or the Central West NSW Transport Needs Study, please go to centroc.com.au or ring our staff on 0428 690 935.

- **Centroc as "fibre to the premises" ready**

All exchanges bar one in the Centroc area are fed by Fibre Optic. As a result the extension of FTTP either by aerial or terrestrial roll out can be achieved quickly and comparatively economically. This will vary depending on the availability of power reticulation either by pole or underground. Obviously newer estates will be underground where some of these have service conduits available.

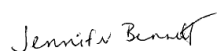
Centroc has a regional electricity contract with Country Energy. Country Energy has experience in rolling out overhead optic fibre and there may be some scope to use this existing regional relationship to fast track the roll out in this area.

Please find following commentary regarding some of our region's centres and their specific needs for broadband.

Please contact Ms Jennifer Bennett, Executive Officer of Centroc with any further enquiries on 0428 690 935.

Thank you for providing this opportunity.

Yours sincerely



Jennifer Bennett
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Central NSW Councils
Centroc

CASE STUDY - PARKES NATIONAL LOGISTICS HUB

Nationally Significant – Technology Dependent – Fibre Ready

New telecommunications infrastructure such as the National Broadband Network (NBN) will enhance the smooth storage, analysis and transmission of information that is crucial to the successful operation of Australia's largest logistics companies setting up at Parkes' National Logistics Hub.



Parkes is universally recognised as a strategically significant location for transport and logistics. From Parkes, 16 million people or over 80% of the Australian population can be reached in less than 12 hours. All capital cities in mainland Australia are readily accessible by road and rail with good access to Australia's largest ports.

Major investment opportunities exist for businesses looking to take advantage of Parkes' significant potential for logistics, manufacturing and distribution. This includes large fully equipped industrial sites and advanced multi-modal facilities. The opportunity exists to relocate from our packed cities and centralise national warehousing and distribution operations. These businesses will require the high speed and reliable telecommunications that the NBN will bring.



Australia's largest and most successful transport and logistics companies have recognised the immense strategic importance of the Parkes Hub development. Transport companies with significant landholdings and operations in the Hub include SCT Logistics, Asciano and Linfox. SCT Logistics currently operates an intermodal (road/rail) terminal, which includes a 10,000 square metre warehouse facility and is actively looking to develop new operations across almost 300 hectares of land. Asciano has NSW State Government approval for the development of a 100 million dollar intermodal freight terminal on their 327 hectare site.

High speed and reliable telecommunications infrastructure is vital to the transport and logistics industry. Today's freight logistics sector is seeking e-Fulfilment and is accordingly highly dependent on technology at every level of operation. This includes the delivery of services such as the movement, packaging and monitoring of goods as well as business management.

Parkes is fortunate in having fibre optic telecommunications infrastructure already in the ground. Twin fibre optic cables pass through Parkes joining Brisbane and Melbourne, and a third fibre optic cable connects Parkes with Sydney. This infrastructure provides a high level of redundancy and is the perfect platform upon which to develop a communications HUB for national freight logistics.

It is essential that Parkes remains competitive with the rest of the nation by ensuring high speed broadband is available across the entire Parkes National Logistics Hub.

For more information see <http://www.parkeshub.com.au>.

Lithgow

The Lithgow Local Government Area is the most easterly local government area in the Centroc region. Bordering the World Heritage Listed Blue Mountains, Lithgow's proximity to Sydney has been identified as significant component of the local government area's economic development planning. Where the Blue Mountains and Western Sydney are experiencing landuse pressure and housing shortages, Lithgow has room to move.

In seeking to attract more residents community workshops have identified the need:

- to diversify the economic base by engaging niche market sectors
- to support industry structures which point to emerging opportunities in the technology sector
- to encourage cultural development as a means of attracting cultural industries

These proposals were all identified as being dependent on a broadband rollout operational beyond the CBD.

One of Lithgow's strengths in attracting such industries is its location on the rail service to Sydney.

Lithgow has also been identified by the Minister of Innovation as being one of the **new "Innovative Regions" placing it in an excellent position to encourage businesses through specific business support services to develop this culture of innovation.**

Small and medium sized businesses in Lithgow will have greater access to Australian Government business assistance with the extension of Enterprise Connect's Innovative Regions Centre operations into the region. Lithgow has been confirmed as one of eight regions nationally to benefit from the placement of an Innovative Regions facilitator as part of the Rudd Government's \$50 million a year Enterprise Connect Network.

The network, with a national centre based at Deakin University in Geelong, aims to boost small business productivity, innovation and competitiveness through the development of region-specific strategies to encourage business growth. Facilitators collaborate with State and local governments, business organizations and individual businesses on regional innovation strategies to help business grow. Specific focus is given to projects that develop partnerships, networks and alliances.

(Regional Development Australia, 2010)

With a strong industrial and manufacturing history that continues today with coal mining and power generation, Lithgow is committed to supporting the future of these industries by adopting best practice for future generations. It is also well placed to be at the forefront of a **new Green Economy** with Delta Electricity positioning itself as a centre of innovation in electricity generation and regional support from Centres of Excellence such as the Flannery Centre being built in nearby Bathurst, with its support for training in **"green skills"**.

Building on its proximity to the World Heritage Blue Mountains and the Lithgow region's own inherent natural beauty, the LGA is also leading Australia as a **conservation-based tourism destination.**

It is the location for **Australia's first conservation based luxury resort**, Emirates, Wolgan Valley resort and spa, which is the first hotel in the world to achieve carbon neutral certification from an internationally accredited greenhouse gas certification scheme.

The carbon neutral status for Wolgan Valley was made possible through a combination of initiatives including large scale environmental rehabilitation programs, removal of cattle from the property and protection of existing remnant vegetation areas.

While Lithgow and neighbouring Oberon boast such world recognised natural attractions, by their very nature such sites are outside the current reach of broadband.

Lithgow's economic development planning also calls for the exploration of further decentralisation of State and Federal government functions from metropolitan areas, as Lithgow already accommodates such operations, eg. State Debt Recovery Services, and also has the potential capacity to accommodate additional decentralized functions.

Lithgow City Council is one of thirty-three NSW councils allocated an interest free State Government loan to fund infrastructure projects and stimulate local employment. Lithgow council has been allocated \$4,897,000 for the Wallerawang Sewerage Treatment upgrade which will increase the capacity of the treatment plant by nearly 50% ensuring the provision of adequate sewerage infrastructure for a new 130 lot residential sub-division in Wallerawang. Lithgow Economic Development planning has identified the need to increase such infrastructure for future population increase. Alongside this, broadband rollout will be critical for attracting such future growth.

Lithgow's community has great scope for growth in the filmmaking and ICT industries with many filmmakers in the region supported by a network of ICT professionals, Centroc's Film Central and Charles Sturt University's Theatre Media Department. The filmmaking department of Lithgow High School has, for a number of years now, been producing award winning films, including this year's winner of the Panasonic Film Award and the Robyn Anderson Award, "Wind Girl" - a film focusing on wind-farming in the region. With high speed broadband locals would be enabled to produce content for new digital television.



The Bathurst Region located on the Macquarie River, is one of Australia's fastest growing regional centres. Offering the best of both worlds, Bathurst reflects a vibrant regional city with a population of 38,000 within 2 1/2 hours drive from Sydney.



The Region and its residents embrace the cosmopolitan, laid back lifestyle and welcome anyone who chooses to enjoy the many benefits this brings. With major industries including manufacturing, property and business, retail and education, Bathurst thrives as an attractive, affordable and dynamic location offering excellent services and facilities.

Bathurst has a steady population growth rate (1.4%) which is higher than the average growth rate for the Central NSW region and the NSW state average. Current projections forecast Bathurst to have a population of 50,000 by the year 2031. Bathurst has a total land area 3,821.90 having key agricultural, mining and forestry activities.

Bathurst is served by excellent highway and rail transportation systems (passenger and freight). Bathurst is strategically placed on the convergence of three major regional highways - the Great Western Highway, the Mid Western Highway and the Mitchell Highway.



Council is a major land developer within the region, releasing over 100 lots in the year 2010 and owner of much of the industrial land available within the Shire. Bathurst also boasts underground wiring for easy access for the National Broadband Network working in partnership with Country Energy to move overhead wiring underground in older parts of the City.

Bathurst has growing education cluster currently of 55 institutions in the area, catering to all levels and ages from Pre-School to Tertiary Education like University or TAFE. There are a variety of public and private primary schools with many being in close proximity to residential areas with well established and reliable school transport. These features continue into High

School with Bathurst being home to many private institutions striving for excellence with boarding available.

Over one-third of students attending Bathurst institutes are from outside the region with a significant proportion from overseas, and the educational sector employs directly over 2000 employees.

These institutions not only provide excellent education, but also many of their students reinvest their skills into the local economy, providing our city with some of the best skills on offer.

The region has many innovative concepts in development including The Australian Centre for Science Technology and Emerging Industries and the Flannery Centre. These to name only two demonstrate that Bathurst has an established unique and solid technology base with a business community and Regional Council that is willing to grow and support new opportunities.

Case Study: The Australian Centre for Science Technology and Emerging Technologies

The Australian Centre for Science Technology and Emerging Industries was first proposed in 2000, with the concept of establishing a first class technology centre in Bathurst. The project has since progressed to feasibility and conceptual illustrations have been prepared.

The Australian Centre for Science Technology and Emerging Industries “will open the door for Australian inventiveness to steal a march on other countries in breaking into export markets with next generation goods and services”.

The establishment of “The Australian Centre for Science Technology and Emerging Industries Bathurst” (ACSCEI) has also drawn wide support including Educational Institutions and both public and private sectors. *“The resulting designed synergistic environment will help promote the cross fertilization of technologies and the greater demand for shared facilitation”* (Forgan: 2003: 79)

The Centre will have wide spread benefits for both the community and education and industry sectors. Through the creation of new employment opportunities and support of existing and emerging industries, the establishment of ACSTEI will achieve great economic and social benefits not only for Bathurst but the Central NSW region.



WOODS BAGOT Australian Centre for Science Technology & Emerging Industries Stage 1 - Concept Perspective View



Case Study: The Flannery Centre

Central West Group Apprentices (CWGA) and Skillset plans to construct a new single storey building for Skillset and CWGA. It is intended to accommodate 180 students and 38 staff.

The site is a greenfield site in Bathurst located adjacent to the existing TAFE site and within 500m of CSU, the Technology park and Mount Panorama.

The primary aims of this facility are to;

- a) provide technical and “green skills” training for apprentices and trainees
- b) assist small and medium enterprises adopt low carbon business models
- c) be a learning centre for individuals and community to adopt a low carbon lifestyle.

The aim of the Flannery Centre’s design is to create an energy efficient building that meets the immediate and long term teaching and training needs whilst providing the Central West region with a “live” example of sustainability in practice using conventional materials and construction methods.

ORANGE CITY



Broadband infrastructure is key to the development of a number of opportunities for growth in Orange City. Orange is investing in the North Orange Bypass as well as securing water to 2059. The next gap to be addressed for the sustainable development of the Orange is broadband infrastructure.

As a regional centre, Orange has a strong industrial, agricultural and mining base. Its importance to the region as a centre for health services, most recently cancer care services, has been recognised with State and Federal investment.

As advised in earlier submissions to the Federal Government, there is a significant gap in broadband services in Orange.

Industrial sites

As industry becomes more mechanised and cost efficiencies drive competitive success, the availability of vfb (very fast broadband) will be the determinant of success or failure. The industrial estates in Orange are populated by very capable engineering, mining and manufacturing firms. These firms are important users of vfb where the ability to communicate and transfer information provides the potential for increased economic development. For example the Newcrest mining company is prepared to locate and extend its operational mining control centre in Orange to provide efficiencies across its global mining concerns; this will require certainty and vfb service.

Newcrest will, subject to adequate broad band coverage, be investing in the city of Orange in significant terms. One of the premier developments will be a Mine Services Centre (MSC) that will house all support services for Newcrest's global operations. The MSC will create an additional 150 jobs in Orange in engineering, maintenance and community relations. It will also house a flying squad that can be dispatched to all Newcrest sites within a matter of hours to deal with breakdowns, programmed shutdowns and emergent situations. The MSC will require vfb to send large and complex files via the internet to multiple sites and contractors.

Newcrest will also be investing in a remote control centre for all operations. This will see all open pit, underground, mill and concentrator operated from Orange. The collective additional developments from Newcrest will see an extra \$20 M plus injected into the local economy each year.

Engineering firms that have regional, national and international contracts and expertise need the vfb to compete in the market for jobs and transfer of large data across the world. The two local firms – Hort's Engineering and Lovick's Engineering - are two examples of local firms that are able to grow their market and skill base by utilising vfb to both attract new contracts and then to send their results to other places.

Areas such as Leewood Industrial Estate, Narambala, the old Sale-yards as well as the rapidly expanding CBD of Orange and the proposed DPI redevelopment site have need of vfb.. Several businesses at the Orange Airport have expressed the same need as Bankstown Airport.

These and a number of other firms in Orange provide or could provide a range of services to Newcrest Mining operations in design, servicing, construction, maintenance, and availability

of vfb is crucial to providing such service. There is the further opportunity to deepen the capacity of these and other firms by using the vfb to diagnose and fix problems in machinery, equipment and manufacturing both regionally and internationally.

Manufacturers in the Orange area, be they white goods (Electrolux with a workforce of over 600) or frozen foods, will use vfb to ensure that their inventory and production targets are reflecting the needs of customers, are allocated efficiently to warehouses and utilise the best transport options. Similarly to engineering firms the vfb will facilitate improved communications between various process components in the manufacturing processes. This communication will ensure better allocation of resources, reduce unnecessary use of materials and power, ensure better cost control and thereby increase efficiencies and competitiveness.

Mining sites

Newcrest mining company operates the Cadia Valley Operations which mine gold and copper. This modern mining operation directly employs 900 people and engages a further 300 contractors. The company contributes \$300 000 pa into the community through support for community activities and organisations. The estimate of input into the Orange economy is 14% of the gross regional product (GRP) which is approximately \$224m. The operation of the Cadia mines is highly reliant on vfb for its controls and sequencing of materials production.

Health and Education Sites/Services

Orange, the Health hub of the region

The construction of the new Orange Health Service, Bloomfield Campus is a \$250m project which is due for completion in 2011. This service is designed to provide the most modern health service in regional NSW and to support the full range of health diagnostics. The Campus will be operating two linear accelerators in its radiotherapy treatment facility. There is a current bid to establish a Regional Cancer Centre of Excellence in Orange to services north west Central and Southern NSW with mobile and internet driven diagnostics and treatment plans in cancer care. This model will utilise the new push for digitised medical records with internet access and video links to provide GPs of patients in remote and rural settings with very fast access to diagnosis and patient treatment plan preparation. This access will ensure that patient receive a treatment plan within a week rather than the current 6 weeks, and all the attendant issues is concern and fear that foies with extended periods of waiting for a metropolitan patient appointment, travel and the unknowing of outcomes over such a long time.

The Bloomfield Campus has a significant role to play in the teaching of medical students through the University of Sydney's School of Rural Health, the CSU School of Dentistry. Both of these require vfb to ensure lectures can be sent to other campuses and training and access are available in a timely manner. The speed of broadband can be a determinant in the mind of the student in deciding not only where to study, but also where to locate when they graduate.

The Orange Health Service, Bloomfield Campus is also the site for the NSW Mental Health Service which provides a teaching facility for mental health as well ad support and service provision.

Education

CSU orange campus has increased its enrolments in 2010 by 18% in Orange in its new courses of dentistry, physiotherapy, and pharmacy; the agricultural business management course is also increasing its numbers. There has been over \$65m committed by the Federal government in the new courses, especially in the health sciences, and these are now heavily reliant on vfb as course lectures and provided live to other campuses (such as Dubbo, Bathurst, Wagga Wagga and Albury) via the internet. As additional students reside in Orange to study at the university there is increasing demand for vfb to access CSU sites, do research, download notes and resources, conduct interaction, etc

The numbers at CSU in Orange in Health Sciences and Agribusiness are expected to double over the period 2009 to 2014, from 451 students to 865 students.

The training sector is a vibrant industry offering a range of services and vocational opportunities, many of which require students to access the internet for resources and information.