



*Empowering, by creating
better connections*

High level strategic planning Lake Macquarie City Council



Certified System Quality ISO 9001 SAI GLOBAL	Certified System Environment ISO 14001 SAI GLOBAL	Certified System Health & Safety AS/NZS 4801 SAI GLOBAL	Certified System OHS ISO 45001 SAI GLOBAL	ES&A APPROVED GET ACCREDITED GET BUILT GET ACCREDITED
---	--	--	--	---

High level strategic planning Lake Macquarie City Council

UCG creates fibre networks that support smart city solutions with the most effective coverage.

Project summary

In 2020, Lake Macquarie City Council (LMCC) engaged UCG as a consultant to help achieve their Fibre City Future Strategy. During the project, LMCC identified three major objectives:

- (1) Provide a fast, reliable broadband connection to over 40 of LMCC's operating buildings and facilities (including office buildings, libraries, aquatic centres and many more);
- (2) Provide a network capable of supporting smart city assets and infrastructure to be installed in several public spaces across the LGA; and
- (3) In response to the COVID-19 Pandemic, help deliver a network that provides fibre connectivity to residents and business premises.

Identifying 'demand locations'

Through facilitating workshops with LMCC stakeholders and using standard GIS tools, UCG identified all of Council's essential buildings and facilities, as well as several public spaces that attract high levels of community activity. Identifying these 'demand locations' and rating them in order of priority enabled Council to make informed decisions about where to deploy fibre and smart city assets. Using this data, UCG created a conceptual fibre network design that would connect all demand locations.

Network design

Utilising GIS tools, UCG assessed the quality of network by calculating the percentage of demand locations within range of the network route's effective coverage. By using this methodology, fibre routes were altered to capture more demand locations, thereby optimising connectivity to commercial and community services and maximising ROI (return on investment).

Preparing cost estimates and deployment strategies

Cost estimates for deployment were made under the assumption that LMCC would build and own the new fibre network. To reduce initial capital expenditure, it was recommended Council take advantage of 'opportunistic build' by installing underground cable pathways during upcoming civil projects.

Ownership models

Exploring different ownership models can further reduce fibre deployment costs. Adopting a 'build and own' model provides the greatest flexibility but requires upfront capital expenditure. After considering Council's objectives, it was recommended that LMCC proceed with a new and innovative ownership model which was called the 'collaborative approach'. UCG facilitated conversations with several potential telecommunications collaborators through a series of workshops. This process enabled LMCC to choose their preferred collaborating partners and proceed to build a pilot project.

Benefits for Council

- ✓ Create bespoke solutions that align with Council's strategic plan
- ✓ Optimise bespoke solutions to meet Council's objectives
- ✓ Provide cost estimates and strategies to reduce capital expenditure
- ✓ Assess and introduce potential shared collaborating partners

Benefits for the community

- ✓ Community feedback is used to help prioritise outcomes
- ✓ Identifying the best solutions to meet community needs
- ✓ Create a roadmap to future-proof the community
- ✓ Maximise potential economic opportunities for small and medium businesses
- ✓ Attract new interstate and international business and tourism

