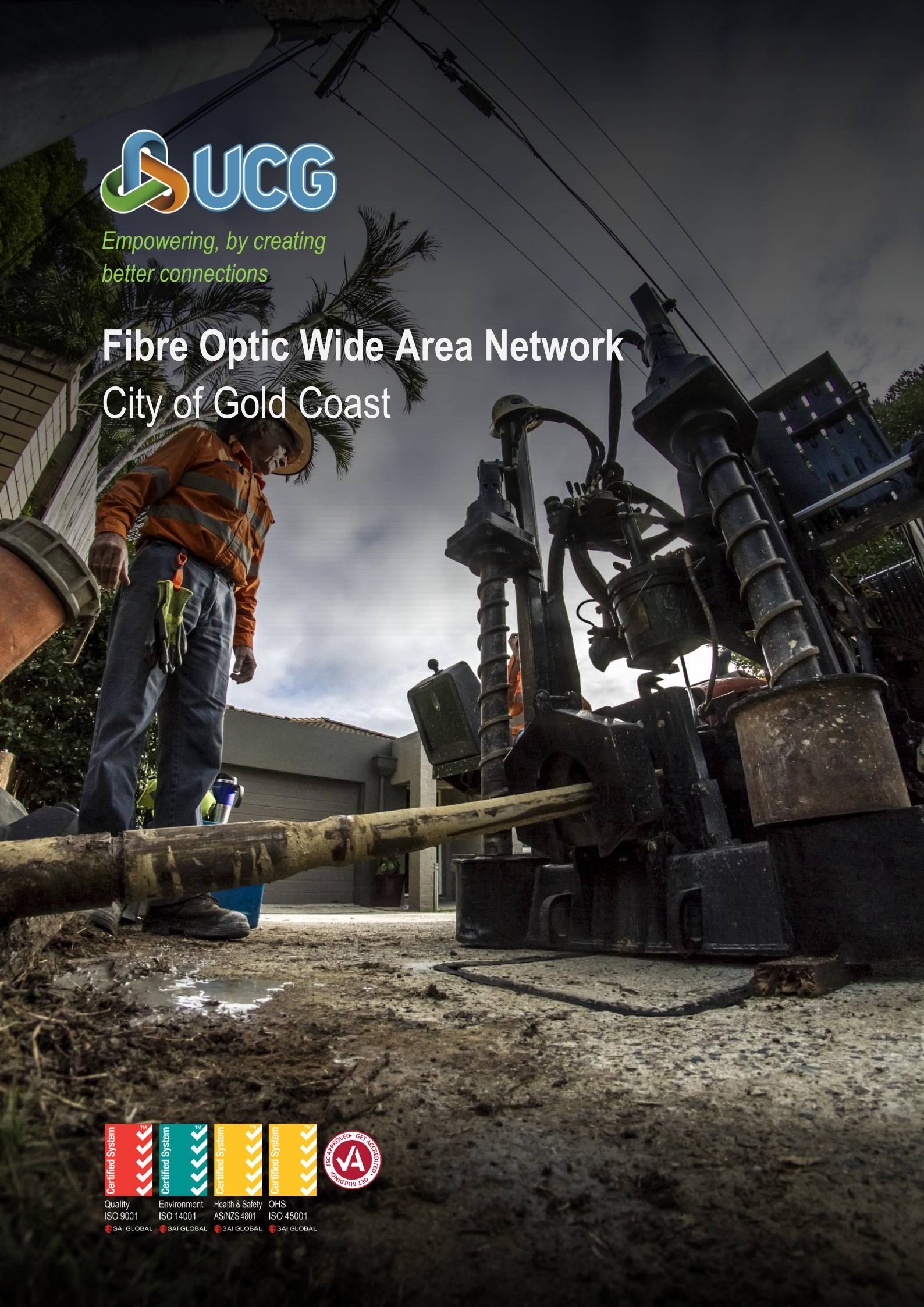




*Empowering, by creating  
better connections*

# Fibre Optic Wide Area Network City of Gold Coast



Quality  
ISO 9001

SAI GLOBAL



Environment  
ISO 14001

SAI GLOBAL



Health & Safety  
AS/NZS 4801

SAI GLOBAL



OHS  
ISO 45001

SAI GLOBAL



# Fibre Optic Wide Area Network

## City of Gold Coast

*UCG is a leading supplier of a wide range of telecommunications design, construction, support and project management services, with specific knowledge and expertise in building transmission fibre networks and wide area networks.*

### Description of works

In December 2016, the City of Gold Coast (CoGC) awarded UCG the contract to design and construct a fibre optic wide area network (WAN). UCG installed 11 kilometres of the 864-core fibre backbone from the University Hospital in Southport to the Broadbeach South light rail station and a further 10 kilometres between University Hospital to the Helensvale heavy rail station, expanding the total network length to 21 kilometres.

Following the Commonwealth Games in 2018, UCG was appointed as one of three design and construct contractors to deliver the 'Central Loop' fibre project, connecting Burleigh, Robina, Mudgeeraba and Nerang to the network in a fully redundant loop. UCG was awarded a further 6 kilometres of 432 fibre backbone as well as Wi-Fi access points to multiple areas of interest around the Gold Coast including Southport China Town, HOTA (Home of the Arts), Chevron Island and several foreshore areas.

### Network design and innovation

UCG supplied a high-capacity cable unique to the Australian market, comprising an 864-core Spider Web Ribbon fibre (SWR). SWR fibre is an innovative advancement in fibre density, which reduced the cable diameter by 35%. The smaller diameter increases cable bend performance, resulting in faster pulling speed and more cable per drum for less weight. All these features result in reduced freight and installation costs, storage space, installation time, and vastly reduced space requirements for splicing enclosures.

The network consists of high-capacity backbone cable and fibre access nodes that were used to transmit streaming, high-definition pictures from the 550 security cameras used city-wide during the Commonwealth Games and to run other digital systems such as traffic management and public Wi-Fi. UCG built the network in a busy urban environment and within the light rail corridor, which presented many challenges in dealing with workplace safety and minimising disruptions to the travelling public.

### Operation and maintenance

In 2019, UCG was awarded the operations and maintenance contract for the City of Gold Coast fibre network, and now delivers planned and reactive maintenance, spares management and minor works services across more than 100 kilometres of fibre, the City of Gold Coast's 230 Wi-Fi access points and its MPLS switching environment.

### Duration of contract

December 2016 to present

### Value of contract

Phase 1: \$4.5 million  
Phase 2: \$1.5 million  
Plus ongoing maintenance

### Scope of works

Full turnkey, end-to-end solution including:

- ✓ Scoping
- ✓ Land access, compliance and statutory approvals
- ✓ Fibre optic cable design
- ✓ Construction and contractor management
- ✓ Installation, testing and commissioning
- ✓ Ongoing operation and maintenance