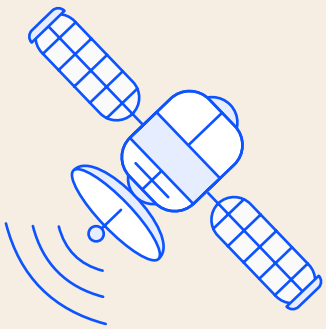
Building satellite infrastructure to connect global communities – Technical use case



Our client is a global satellite company providing connectivity to millions of people around the world. The company is launching a new geostationary satellite constellation and required comprehensive ground infrastructure to transmit and receive data traffic, and backhaul it to their data centres.

Solution details

1 Ground infrastructure design

- Collaboration with the client on the base design of the ground infrastructure, including satellite receiving antennas' location and design, high capacity requirements for high connectivity and data centre access.
- Potential locations for satellite receiving stations identified in areas where the client was able to secure and licence spectrum. Locations are brownfield (colocated in existing Telstra sites) and greenfield sites.

2 Site construction and connectivity

- Construction of multiple satellite receiving stations to the client's specifications, with power and carriage services supplied to each site.
- Backhaul connectivity to transmit high volumes of data from each satellite receiving stations to data centres using a mixture of our existing fibre footprint and thousands of kilometres of new fibre.
- The client manages its own core network connecting each data centre using our dark fibre, while we provide high-capacity services between the satellite
- receiving stations and data centres.

3 Colocation

- Access and rack space in Telstra InfraCo fixed network sites across multiple regional areas.
- We provided a tailored installation in world-renowned third party data centres in major metro areas of Sydney, Brisbane and Melbourne.

4 Testing, activation and service management

- Testing and activation of the sites to ensure the sites operate to client requirements.
- Tests included cable specifications, data loss, and handoff points.
- The client manages active equipment on their network, which operates over the infrastructure we have provided. Our services are monitored 24/7 and we have processes to identify and urgently remediate any issues.

Assets and expertise to match the unique demands of satellite services

The client's infrastructure design demanded small satellite receiving stations throughout regional Australia. We used the scale of our vast infrastructure portfolio to provide assets and expertise where the client needed them.

- Multiple Telstra InfraCo fixed network sites provide colocation in regional areas.
- Hundreds of fixed network sites used for localised access to the backbone network spanning over 2,000 km.
- Using approximately 4,500 km of our dark fibre, including 1,200 km of new build.
- Our partnership with the client saw us draw on our experience and expertise of owning and operating satellite assets, including ground stations at Oxford Falls in NSW, Gnangara and Merredin in WA and Bendigo in VIC.