



Solution: Cradlepoint's NetCloud Service for Branch ■ **Industry:** Construction ■ **Use Case:** 5G

Taylor Construction Breaks Ground on New Technologies with 5G as Foundation

Next-Gen Applications at Construction Sites Enabled by 20X Performance of 5G Through Cradlepoint Solutions



We are ready and waiting for 5G. We need next-gen mobile networking to run our next-gen applications.”

Christian Neyle,
IT Manager, Taylor Construction

Success Story Highlights

Challenge — At Taylor Construction, next-gen applications represent a future of competitiveness driven by real-time data. From smart sensors in the ground to mixed-reality headsets and 8K video streaming for improved on-site safety, opportunities abound. However, visionary innovation was accompanied by an unavoidable question: How can we have flexible connectivity that's fast enough to accommodate all of these high-bandwidth applications?

Solution — As soon as 5G for business became available in Australia, Taylor took action. The company identified a construction site where it could trial Telstra's Enterprise Wireless service plan and Cradlepoint's NetCloud Service for Branch, delivered through an E3000 5G-optimized router with a ruggedized W2005 5G Wideband Adapter built for outdoor placement.

Benefits — With a flexible 5G for business solution in place, Taylor already is seeing the WAN speeds and coverage it needs — including 20 times the performance of their 4G connection — to support an exciting range of bandwidth-heavy connected devices and applications on construction sites. It's what the company needed to ensure real-time information will drive superior cost efficiency and exceptional client satisfaction for years to come.

Background & Challenges

Established in 1994, Taylor designs, constructs, and develops diverse projects for all sectors — from project inception to completion. With more than 250 team members, Taylor serves its clients across core divisions including construction, fitout, and refurbishment and property.



Wired broadband doesn't work for us. In some cases, the job would be half over before we could get a connection."

Christian Neyle,
IT Manager, Taylor Construction



Inflexibility of Wired Connectivity at Construction Sites

Taylor's presence at building sites can span from a few months to a few years, depending on the scope of the project — and there's always a need to get operations up and running immediately. Wired broadband takes too long to deploy, is complicated to decommission, and is difficult to relocate on the job site.

Connection Performance Insufficient for High-Bandwidth Technologies

Inside and around construction trailers, the company already was using Cradlepoint's NetCloud Service for Branch and AER2200 routers to connect laptops, tablets, printers, and architectural printers via Wi-Fi for the local-area network (LAN) and LTE as the WAN link — sending data back and forth between sites, the data center, and the cloud.

In addition, Taylor is always looking for ways to add new technologies to further improve cost-efficiency and their ability to meet vital deadlines. For example, they were preparing to add these next-gen tools:

- **Holographic Building Visualization:** Microsoft HoloLens is a type of mixed-reality smart glasses that Taylor employees and customers can wear on-site to render a virtual model of the building or elements of the construction process such as holographic structural steel, framing, or electrical schematics.
- **Wide-Area Safety Scanning:** 360-degree 8K streaming and QR code scanning from wireless video cameras enables digital induction tracking, which improves risk management by automating the process of ensuring every person on site has completed safety training.
- **IoT Structural Sensing:** Smart sensors affixed to rebar and embedded in concrete aggregate and send data to the Cradlepoint router, then onto the cloud. This can help Taylor determine if concrete is poured correctly and track any shifting of the concrete for years to come.
- **Real-Time Design Display:** The Taylor team needs to be able to make changes to digital blueprints in real time and display on tablets and large monitors in the trailer.
- **Large-Site Failover:** The IT team also would like to investigate replacing their expensive back-up fiber line with 5G, gaining fiber-like speeds with the diversity of a wireless connection.

“To some people, this is science fiction; to me, this is the next generation of business,” said Neyle, whose team had been investigating next-gen apps for quite awhile. “We had worked through the kinks and received buy-in from upper management. But we needed a mobile network that could support all of those technologies.”

However, there’s a key challenge: All of these devices and applications require real-time data, which is only possible with lots of bandwidth, low latency, and constant uptime at the edge of the network.

4G is an excellent option for many situations, but it can’t support the level and scope of innovation that Taylor is implementing.

“We are ready and waiting for 5G. We need next-gen mobile networking to run our next-gen applications,” Neyle said.



Solution

When the world’s first 5G for business solution was released in Australia, the Taylor team was ready to begin reaping the benefits. At one construction site, the company began to trial the 5G solution, which includes Cradlepoint’s NetCloud Service for Branch, W2005 5G Wideband Adapter, and E3000 5G-optimized enterprise branch router, along with Telstra’s Enterprise Wireless service plan.

The combination of Telstra 5G’s faster speeds, lower latency, and greater capacity; built-for-5G hardware; and cloud control gives Taylor everything necessary to roll out the high-bandwidth applications it needs to build a digitally transformed future with highly scalable growth.

Benefits

Flexibility & Reliability of Wireless WAN at the Network’s Edge

Cradlepoint’s cloud-managed branch solution enabled Taylor to deploy 5G very quickly; going forward, they can easily move the hardware around whenever necessary. Cradlepoint’s ruggedized routers and adapters have built-in security features and can be cloud-managed from anywhere, providing an all-in-one solution for temporary or long-term Wireless WAN.

“We think the reliability of the cellular broadband is as good or better than wired broadband,” Neyle said.

Exponential Performance Improvement

The on-site performance of 5G has been 20X the 4G connection.

“Our 5G trial was very successful. We were fortunate to learn a few things, and we were very pleased with the Cradlepoint 5G solution and the network performance,” Neyle said.

Designed for Outdoor Use

Cradlepoint's ruggedized W2005 endpoint is exactly what Taylor needed to accommodate its widespread construction projects. This adapter is designed to be installed outdoors for optimal signal acquisition. With an IP67 rating, the hardened metal casing of the W2005 is architected to withstand extreme temperatures, water, and high winds.



Our construction sites are rugged and technically demanding. The Cradlepoint 5G solution is just what we need: high-performing and enterprise-grade, top to bottom.”

Christian Neyle,
IT Manager, Taylor Construction



Highly Replicable for Widespread Adoption

After the success of its 5G trial, Taylor plans to roll out 5G at every construction site that has coverage, which means they can begin leveraging the exciting new technologies and applications that they feel will contribute to their success for years to come.

[Learn more at **cradlepoint.com/5GMeansBusiness**](https://www.cradlepoint.com/5GMeansBusiness)