

Case Study: **University of Oxford**



Unleashing the network potential at the University of Oxford

As one of the world's most prestigious universities and with buildings dating back to the 11th century, the University of Oxford needed a wireless network technology refresh across multiple central admin buildings and library's including the famous Bodleian Library. Following a formal procurement and competitive tender process, the university's IT team selected a wireless network solution from Telent based on the Mist wireless network technology from US-based manufacturer Juniper Networks.

The project was planned to be deployed in three phases, and this consisted of an initial proof of concept, a pilot project and the main project deployment for the central IT team at the university. Telent facilitated the installation and support of the logistics of all phases of the project. This included the overall coordination and roll out to support the university's management of the programme. Complex and large-scale environments such as university campuses benefit by working with experienced partners such as Telent to unlock the potential of next-generation technologies.

The long-term solution for a first-class deployment

With multiple departmental buildings to cover, the central IT team needed to roll out this new hardware seamlessly. University of Oxford needed the support of a partner with the expertise and knowledge to ensure a successful transition to the new wireless technology.

Telent was the preferred bidder to supply and install the hardware, wireless surveying and provide Juniper-based design and software support. This was to ensure that all communications remained fully optimised and high-performing across the departmental buildings. The University of Oxford central IT team planned the deployment of access points and following the initial proof of concept, the project progressed to a pilot roll out of 100 access points, before the main project deployment of 1,800 access points.

The project was seen as a prestigious win for both Telent and Juniper and it was critical that the implementation was carefully planned with the University's IT team. With many of the buildings being centuries old, potential installation challenges were overcome by using the existing access point brackets for the new access points. The Juniper team also delivered bespoke, multi-staged video training for all engineers.

A network refresh that achieves the grade

The technology refresh included installing new wireless access points to provide an upgraded wireless network, ready to offer improved Wi-Fi coverage and performance in the selected university buildings. The initial proof of concept included a testing regime of the new Juniper Mist network to a few select areas. When this proved to be successful, the pilot project of approximately 100 access points was introduced across multiple buildings to test specific access requirements and individual device performance. The main project roll out of 1800 access points then followed across the chosen University buildings and departments, which was completed in the summer of 2022.

The Mist solution from Juniper Networks also introduced a new approach to operational support and solution management through the application of artificial intelligence (AI) and machine learning (ML) capabilities. This allows the access points to anonymously report performance data from across the network to a central data lake. AI and ML technologies analyse the data from all Mist solutions to deliver personalised monitoring, diagnostic reports and configuration recommendations, ensuring optimised network performance and bandwidth strength at all access points. This approach aims to both improve the user experience and simplify the support of the wireless solution.

As the main project progressed, Telent also opened discussions regarding Wi-Fi upgrades with several of the independent colleges that support their own IT infrastructure and are not a part of the central IT function at the University of Oxford. Ten colleges and departments are progressing Wi-Fi upgrade projects with Telent based on the Juniper Mist technology, including Jesus College and Reuben College.

