



Our esteemed St Rumbold's Cathedral Tower got its connectivity revamped to modern times using fibre optic network cabling installed by Black Box in a very efficient and professional manner. The end result fully answers our expectations.

Koen Verspecht, Advisor-Teamleader IT, City of Mechelen

Belgian iconic monument St. Rumbold's Cathedral Tower gets its IT network infrastructure revamped with Black Box

Background

St Rumbold's Cathedral is a medieval church built in the 15th century (year 1452) and is one of the most visited tourist attractions in the heart of the city of Mechelen in Belgium. Reaching almost 100m in height, the cathedral's tower serves as an iconic monument for the city, being its main tourist attraction.

Listed in the UNESCO World Cultural Heritage, the tower attracts vast amounts of daily visitors and, in the past, was visited by the likes of Louis XV, Napoleon and King Albert I.

The tower is characterised by its spiral staircase with 538 steps all the way to the top, and is composed of several chambers including a belfry which houses the huge bells, the clock chamber with the clock mechanism, the crane chamber, the carillon chamber, and a skywalk. The tower is also known for holding the Mechelen Carillon School which attracts students from all over the world who come to study Carillon playing, which was largely started in Mechelen.

Challenge

The St Rumbold's Cathedral's existing network was composed of old copper cabling which offered a low bandwidth of less than 100MB, a slow internet connection, no support for multimedia and there was only a limited amount of security cameras. Therefore Black Box was asked to optimise the cabling infrastructure throughout the tower in order to improve overall network connectivity and speed.



Client:

Tourism of Mechelen, Belgium

Geographical Region:

Belgium

Website:

<https://toerisme.mechelen.be/ascent-of-st-rumbolds-tower>

Technology Solution Provided:

Design and installation of a fibre optic cabling system

Solution:

Installation
Cabling system



The narrowness of the building and steepness of the spiral staircase presented a real challenge in terms of the design and installation of the cable runs. The fact that tourists would be following the same route as the cabling to the top of the tower, meant that any materials used would have to be robust, future-proofed and in keeping with the fabric of the listed building.

Solution

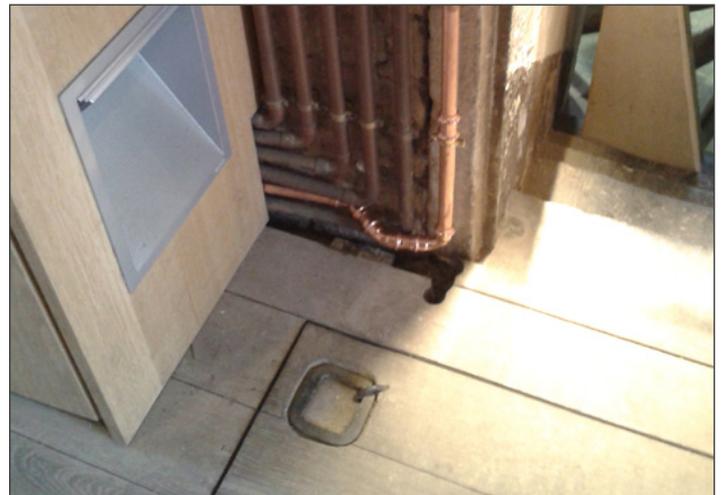
An innovative network design was developed utilising optical fibre cabling and a copper pipe conduit system routed up and around the stairwell and branching out to each chamber over the seven floors of the tower. The metal conduit provides great protection against damage and crushing, while the fibre cabling effectively distributes 10/40GB ethernet throughout the site.

In all, Black Box ran 22 Km of fibre optic cabling (Single-mode OS2:40GB and Multi-mode OM3:10GB). The Single-mode solution was used to cover the outer tower connectivity. The Multi-mode fibre proved to be an effective economical solution to cover the inner LAN connection up and around the spiral staircase to each floor of the tower and acts as a reinforcement backup to the Single-mode cabling solution in the event of connectivity failure.

Outcome

Work was phased in over several stages during a time-span of 3 months. Black Box successfully implemented a high speed network infrastructure within time and budget with no interruption of the venue's daily activities. The end results not only enabled a complete AV and multimedia overhaul over the seven floors but also provides connectivity to cameras on top of the tower that broadcast live video of the city, and also stream Carillon Concerts held on a weekly basis. The renovation has added value to the tourist experience and benefits the city by luring more visitors to the monument.

Fibre optic cable is one of the fastest growing transmission media for new cabling installations and upgrades, backbone cabling and to-the-desktop applications. With 40 years of experience in the structured cabling arena, Black Box Network Services has the expertise and engineering skills to design, install, terminate, test and maintain fibre infrastructure solutions (Multi-mode OM1 to OM4, Single-mode OS1/OS2, MPO and blown fibre), delivering projects with consistency, quality and speed.



Request a free consultation:

Let us assist you in your project and answer any questions related to your application.

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