# Case Study
# Cardiff and Vale College

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| **Customer** | Cardiff and Vale College |
| **Location** | Cardiff, Wales |
| **Requirements** | A high performance, reliable network. |
| **Equipment** | Category 6$_A$ F/FTP Cable, Environ ER Racks, OM4 MTP Fibre Category 6 & Category 5e patch leads |
| **Customer's View** | "It was vital that we had a technically proven cabling infrastructure solution for the foundation of our IT network at our new college premises. The number of students using the college along with members of the surrounding community who would be taking advantage of the onsite facilities dictated that a reliable, consistent product be installed. The Excel system that has been installed by TWL Voice and Data has provided exactly what we required. Our student base are enjoying a first class venue with a first rate network to run it." *Evan Davies - Director of Information Services and Technology* |

**excel**
without compromise.

Cardiff and Vale College (CAVC) is one of the largest colleges in the country, they have over 20,000 students each year and a large staff team of industry experts, sector specialists and knowledgeable and experienced support teams.

The College is teaching people in top class industry facilities and centres of excellence across Cardiff and the Vale of Glamorgan; in the community and in workplaces across the region, Wales and the world.

The college does not just focus on qualifications but also developing the skills individuals and employers require for future success. During 2015 82% of students progressed to further study or employment within two months of completing their course. This included 850 students progressing onto university level study.

## The Requirement

The college was expanding to incorporate a new city centre campus. This campus was to form part of the Canal Parade development covering 16,000 square metres. The campus was to incorporate a huge range of specialist teaching facilities as well as providing amenities for the community including The Classroom restaurant, Urbasba salon and spa, theatre, coffee shop, supermarket and more.

Due to the number of additional on-site facilities and the high number of students that would be working in the building at any given time, the need for a good quality telecoms system for fast internet access was deemed crucial.
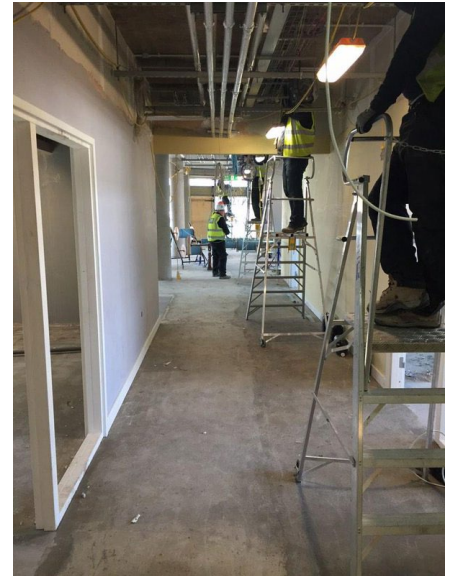
## Sourcing a Partner

It was essential that the college chose a quality cabling solution that would provide a superior infrastructure system with the capacity to support future growth as and when required.

Cardiff and Vale College had been referred to TWL Voice and Data by their current IT supplier who already had a strong relationship with the installer after the successful completion of a number of other projects.

TWL Voice and Data were established in 2003 and have built up an impressive reputation and client base that is underpinned by a wealth of understanding and knowledge about commercial unified communications.

TWL offer services including commercial telephone systems, refurbished telephone systems, voice & data cabling, call recording, competitive rates on telephone lines and calls, mobile solutions and a wide range of ADSL and Fibre broadband packages.



## The Right Product

TWL Voice and Data recommended the Excel cabling infrastructure solution for this project. Choosing the right solution is critical, as it no longer provides just the connectivity for an IT system, it is the foundation of a modern building management system (BMS). Making the right choice at this stage creates a future proof, high performance, flexible platform which supports efficiency and cost benefits.

The Excel product portfolio is designed, manufactured, supported and delivered without compromise and is distributed exclusively by Mayflex, a provider of Converged IP Solutions.

Excel products are Delta verified. Excel has invested in such test and verification programmes for over 15 years, Third party verifications are seen as an independent tick in the box.  As well as testing the component and channel, the manufacturing facilities are visited for spot checks to ensure the consistent quality in the manufacturing process.

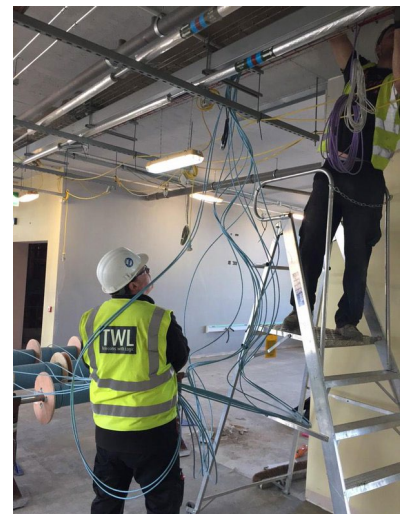TWL are an Excel Cabling Partner, an accreditation which demands regular training, assessment and attendance at briefing events where solution, industry, best practice updates are provided. What's more with this official accreditation in place, TWL were able to provide the college with a comprehensive 25 year warranty.

## Design and Installation

Excel Category $6_A$ F/FTP cable has been designed to exceed the ISO/IEC, TIA and CENELEC for Category $6_A$/Augmented Category 6 component requirements. This delivers Class EA/Augmented Category 6 link performance over distances of up 90 metres which supports the applications including 10GBASE-T, 10 Gigabit Ethernet, making this product perfect for an educational environment.

Excel External grade Category $6_A$ U/FTP cable is designed to offer performance with the protection to allow it to be installed externally. This was the ideal choice for connecting external equipment such as IP Cameras or Wireless Access Points.

Both cables are constructed in the S foil configuration, where the two pairs are wrapped together in a foil. By using two sets of two pairs reduces the diameter and weight of cable. The smaller cable diameter has reduced the cable cross-sectional area, helping in many areas notably the cable is occupying less space in the cable conduits.

This solution offers future proofing for all runs within the system, as PoE devices and wireless Access Points move to higher speeds and wattages.

The Environ ER800 is a versatile range of 800 mm wide racks fitted with a wave design mesh front door and wardrobe style double mesh rear doors. Designed to accommodate a load of up to 600 kg they offer features that make this rack suitable for a wide range of applications in the data, security, audio visual and telecommunication arenas. For this project a 42U and 47U rack were chosen to house all panels and active equipment in 5 x comms rooms.

The ER series allows for passive and active equipment to be housed in the same racks if needed whilst still tending to the individual needs of the switches, servers and active equipment that needs air flow to be able to access the rack and heat to dissipate as needed.

It was vital that the project was finished to schedule with the academic year starting in September. The volume of student's onsite requiring access to the network would mean delays to the project would not be acceptable.

The team at TWL very often work 7 days a week ensure the project was completed on time.

## The Result

The new city centre campus opened to students in September 2015 ready for the 2015/16 academic year.

The 4000 students, working across 200 different courses, now not only have access to a whole host of on-site facilities but they can also be assured of fast and easy access to the network enabling them to experience the best possible learning environment.

"This is a huge step forward for the further education system, and these facilities will truly allow pupils and staff to improve standards, which will benefit the whole of the South Wales region"

**Andrew Nicholson**, Managing Director, TWL Voice and Data.

**TWL**
Telecoms with Logic

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Coleg Caerdydd a'r Fro

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