

The ‘Beautiful Game’ Comes to Life in Qatar’s Al Thumama Stadium with Intelligent Infrastructure Solutions from Belden

 CASE STUDY

Customer

In 2010, it was announced that Qatar would host the world’s most prestigious football tournament, the FIFA World Cup Qatar 2022™.

Since then, Qatar has been a hive of activity, as it designed and built eight new stadiums for the tournament, including Al Thumama Stadium, which would serve as one of the host stadiums. The venue integrates the latest information and broadcast technology available in this digital era to support sustainability and the ultimate fan experience.

The design of this 40,000-seat stadium reflects the look of a gahfiya, a traditional woven head cap worn by men and boys across the Middle East. Inside, in addition to the pitch itself, the venue also features an Aspetar Hospital clinic to help football players recover from injuries.

After the tournament is concluded, the facility will be used to host other types of sporting events.

The task

The Supreme Committee for Delivery & Legacy (SC), which is the governmental entity that was responsible for the delivery of stadiums and other infrastructure for Qatar 2022, wanted to deploy the latest and most advanced technology to give fans the best experience possible while they watch their

The Al Thumama stadium has the latest and most advanced technology to give fans the best experience while they watch their favourite team play.



favourite team play. The SC also wanted to prioritise sustainable design and operations, including an energy-efficient data center. As a result, they were searching for installers and manufacturing partners with expertise in intelligent passive infrastructure for LANs, WLANs and data centers.

The goal was to establish AI Thumama Stadium as the only venue in the Middle East with an intelligent infrastructure capable of supporting artificial intelligence and IoT.

Because the stadium will be used for many kinds of events - each with its own technology and network requirements - real-time visibility of network ports and fibre links were important.

The network and data center solutions chosen for this project needed to be easy to install, agile and flexible to deploy, and scalable to support future technology demands.

Discovery

Integrator Cluster Security Services and Belden along with our local partner AI Mazrouei - ICAS Qatar have an established and trusted relationship when it comes to designing, supplying, installing, testing and commissioning cabling systems and data center solutions for intelligent buildings.



Belden's infrastructure solutions have been deployed in many facilities throughout the Middle East, so the company is already recognised for its expertise and high-performance products. Belden also offers the most advanced RFID-based intelligent cabling system available, which is used by many organisations in the area to ensure high security, maximum reliability and constant uptime.

For these reasons, Belden, AI Mazrouei - ICAS and Cluster Security Services were chosen to work together to provide AI Thumama Stadium's intelligent infrastructure.



Solutions

Cluster Security Services and Belden designed networking and data center solutions for Al Thumama Stadium in partnership with architectural and engineering consultants Arab Engineering Bureau (AEB) and Turner & Townsend.

More than 520,000 meters of advanced Category 6A cabling and 120,000 meters of fibre cabling were installed to support the information and broadcast technology inside the stadium. A building management system (BMS) and access control systems (ACS) were also installed.

The data center solution provided by Belden features a containment system design. Cabinets with perforated doors create separate aisles for hot and cold air. Some access control system (ACS) racks were also deployed, along with fibre raceways, intelligent power distribution units (PDUs) and environmental sensors and controllers.

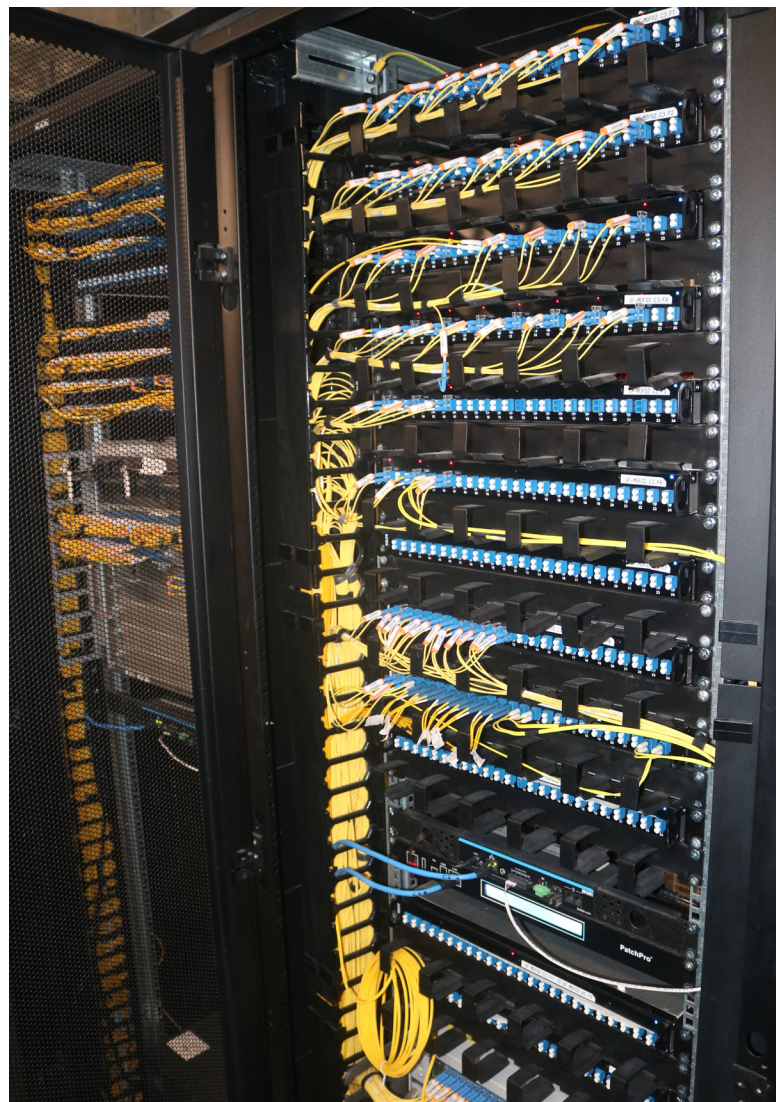
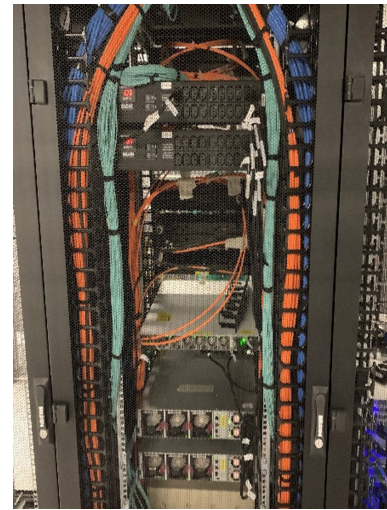
To ensure security and reliability, Belden's PatchPro® Intelligent Patching System was also deployed. It uses RFID technology for wireless identification of patch cords and real-time monitoring of unintended physical changes to network infrastructure. Network managers are immediately notified of changes, so they can be addressed before problems arise.

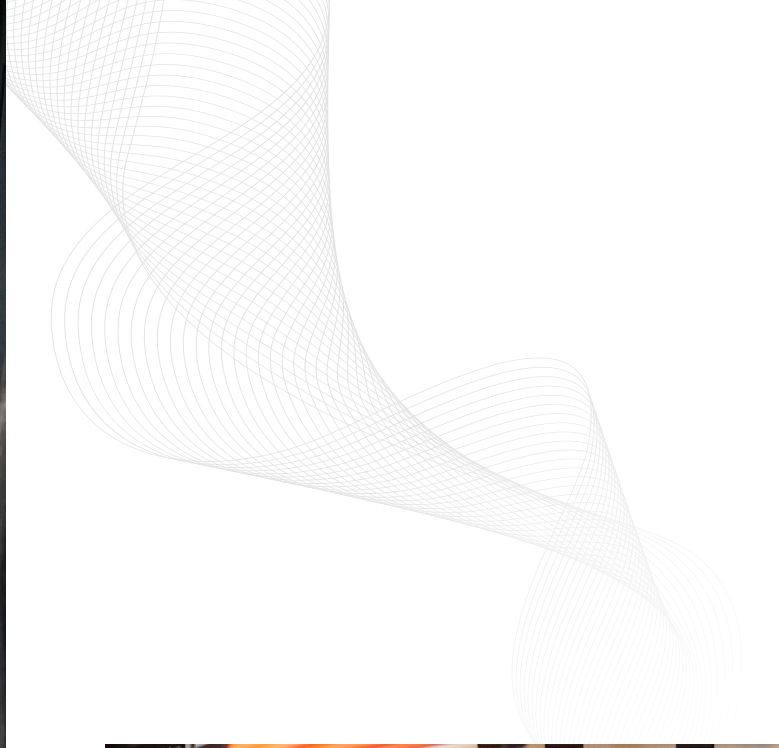
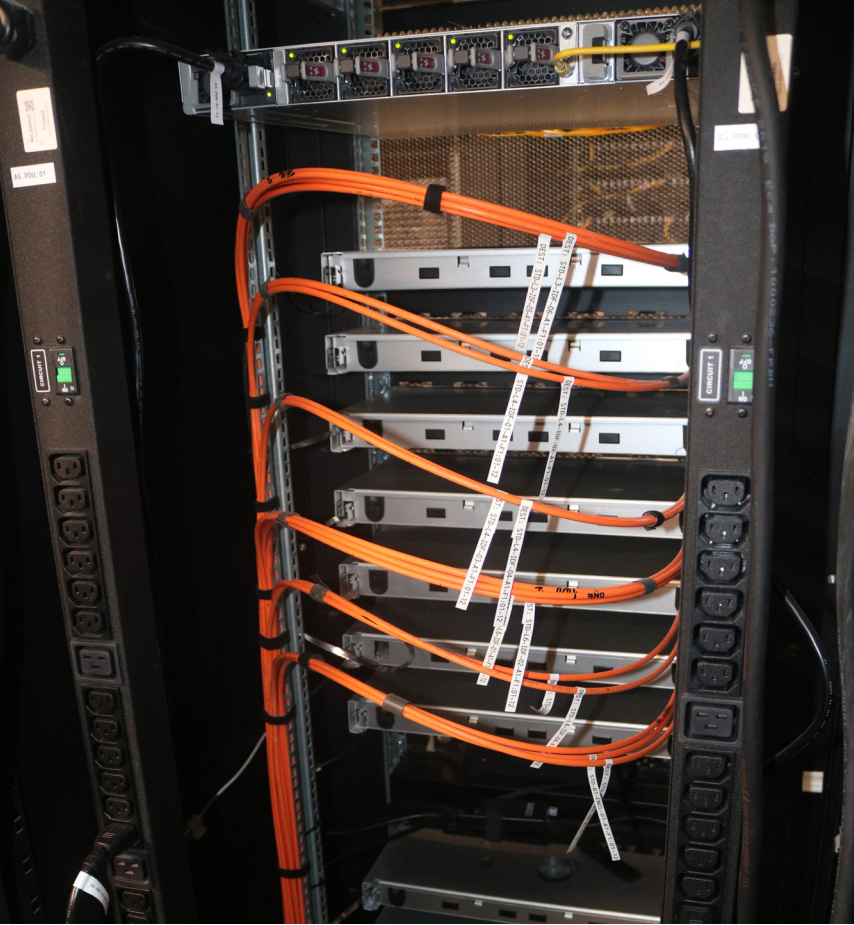
Result

The end-to-end solution provided by Belden allowed Qatar's Supreme Committee for Delivery & Legacy to achieve its goal of providing the best technology and broadcast experiences to fans inside and outside the stadium - all through a high-performance infrastructure.

Systems were put to the test during the FIFA Arab Cup Qatar 2021™, and the technology performed perfectly.

Similarly, Al Thumama Stadium's world-class infrastructure also proved to be robust enough to support the demands of the FIFA World Cup™ in 2022.





About Belden

Belden Inc., a global leader in high quality, end-to-end signal transmission solutions, delivers a comprehensive product portfolio designed to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. With innovative solutions targeted at reliable and secure transmission of rapidly growing amounts of data, audio and video needed for today's applications, Belden is at the center of the global transformation to a connected world. Founded in 1902, the company is headquartered in St. Louis, USA, and has manufacturing capabilities in North and South America, Europe and Asia.

For more information, visit us at [belden.com](https://www.belden.com).



© 2023 | Belden, Hirschmann, GarrettCom, Tofino Security, Lumberg Automation and the Belden logo are trademarks or registered trademarks of Belden Inc. or its affiliated companies in the United States and other jurisdictions. Belden and other parties may also have trademark rights in other terms used herein.