Ephesus Can Rejuvenate with Its Lumadapt Lighting

The first company to bring LED lighting to a North American sports venue, Ephesus has moved the needle again with its Lumadapt product.

For the company’s latest innovation, its fourth generation of LED sports lighting technology, Ephesus created a purpose-built solution for arenas that deliver lighting solutions for today’s needs. From broadcast, fan experience and player performance standpoints, Lumadapt gives arenas the flexibility to adjust its lighting system to accommodate needs as they change over time.

Previously, the company developed color temperature tuning, where the lights could change from warm white to cool white, depending on the activity occurring in the arena, whether it was a hockey or basketball game, convention or dinner.

Now, the company has introduced color — red, green, blue and amber — into the same fixture to create more entertainment options. At the Herb Brooks Arena in Lake Placid, N.Y., home to the 1980 Winter Olympics “Miracle on Ice” hockey game, red, white and blue lighting is projected onto the playing surface during time outs and intermissions in recognition of the Miracle on Ice game.

Lumadapt also gives arenas beam-tuning capability, to change the light coming out of the fixture from a narrow to a wide beam to accommodate the different uses for the arena floor. For example, one venue is used for both hockey games and tennis matches. The tennis court extends beyond the width of the hockey rink. Rather than having to incorporate supplemental lighting, using Lumadapt’s fixtures, the beam angles can be adjusted to wide beam for tennis.

Additionally, the lighting can be segmented to black out one part of the arena, while leaving another section illuminated. This provides an added layer of safety as walkways can be lit while the rest of the arena is dark. While much of competition can be lit while the rest of the arena is dark. While much of competition can be lit while the rest of the arena is dark.

“With the features offered in Lumadapt’s fixtures, venues have more flexibility and can mix and match to create unlimited fan experiences,” said Mike Quijano, director of marketing at Ephesus. “We can create dynamic flashing scenes and generate excitement in the venues. We can accommodate whatever event is being held in that venue today and into the future.”

Designed to last at least 10 years, Lumadapt accomplishes with one fixture what it may take other products multiple systems to achieve. “When you add it all up, with the value you get from Lumadapt, there’s nothing else like it in the market,” said Quijano. “And it’s so easy to install.” The company has completed installations in NHL-scale arenas in three days. “It’s really easy to take your arena from yesterday’s technology to the future in less than a week.”

Prior to installing Lumadapt, a team of Ephesus engineers and lighting designers analyze the arena, reviewing the height of the catwalk and the location of the cameras so the fixtures can be placed to optimize player and broadcast performance.

“We take a fresh look because as LED sports lighting has become the de facto standard, new specifications have been written,” said Quijano. “We come in with, not only a fixture in the system, but also a design and the project management support to implement that solution to meet the facility’s requirements.”

In addition to installations in new facilities, Lumadapt is being installed in numerous renovation and retrofit projects. (See University of Dayton, page 6A). “Executives see our sports lighting as a way to bring new life to their venues,” said Quijano.

Two recent retrofit projects include the Herb Brooks Arena project mentioned earlier and the Hobey Baker Rink at the Princeton University. “The Herb Brooks Arena is an example of a traditional and iconic venue adopting a new technology to develop new traditions,” said Quijano, “taking that old building with its history and creating new fan experiences to enable people to relive all the events and excitement that has happened there over the years.”

The Hobey Baker Rink was constructed in 1923. “At an almost 100-year-old venue, you run into some unique challenges,” said Quijano. “The old venues may not have been designed like buildings today, with a catwalk and easy access to the fixtures, making it more challenging to meet the player and broadcast experience requirements. Hobey Baker is a vintage arena that has worked hard to preserve its history over the past 100 years, and yet, we were able to provide a futuristic lighting solution that many people did not think possible until very recently. It’s created an excitement they have never had.”

“Many of these older arenas are intimate and iconic,” said Quijano. “We’re able to give them new functionality without affecting their iconic look and feel.”

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The evolution of the student athlete’s experience on campus has become more robust than in the past. Universities are very competitive as they recruit talented student athletes who are looking for programs that field the best teams, have the best facilities and give them the best opportunity to improve their skills, particularly those who are striving for a professional career.

“Colleges are elevating their recruiting game with features and the quality of facilities because they’re trying to entice very young high school students, as well as their parents,” said Don Barnum, AIA, DLR Group principal. Barnum leads the firm’s Global Sports Studio. “Sophomores and juniors, 16- and 17-year-olds, have a different perspective than most adults and even current student athletes. Schools are catering to what recruits want, which is to be wowed by bells and whistles.”

A common feature schools are using to attract student athletes is a type of lounge or recreation area adjacent to or part of the locker room. These spaces, which are typically designated areas for each sport, can include game rooms, pool tables, TVs and couches. They allow student athletes to relax and have a break from their rigorous schedules. Another area of importance to student athletes is the weight room. Every student athlete wants to get stronger and improve their performance, and a modern weight room helps them achieve their goals. On the flip side, parents are interested in their kids’ health and wellness, so they tend to look at academics, the sports medicine area and how their child will be cared for.

During the design process, DLR Group meets with coaches and administrators individually in an information gathering session to determine teams’ needs. “We need to understand the team’s practice and game procession so we can design the building that responds to their specific needs,” said Barnum. “If multiple teams are sharing a building, we find the commonality of their activities and design accordingly. It may be the performance venue is the only thing they share every day.”

The most commonly used or continuously used space, such as the weight room or equipment room, becomes the building’s focal point at the center of the design. For example, at the University of Houston, DLR Group designed a shared building for men’s and women’s basketball. At the center are the administrative and shared areas — coaches offices, weight rooms and sports medicine facilities, while the training courts are separate and radiate out from the center.

“Teams need to practice at the same time, so the solution is to give them their own space,” said Barnum. Many universities want sports-specific training facilities to stay competitive with their peers. “At the University of Texas, we designed the baseball facility with their clubhouse, lounges, pitching labs, hitting labs and strength conditioning area dedicated to the baseball team,” said Barnum. Softball and other sports are treated the same way. Student athletes have large demands on their time and the NCAA defines how much time they can spend with their coaches and the program. “This leads us to focus on creating operational efficiencies,” said Barnum. “Coaches want to have a precise procession of activities scheduled to maximize their available time with their student athletes. They don’t want to have parts of their practice spread out over a distance because that takes up valuable practice time. We design their facilities to accommodate their need for proximity.”

“Our goal is to make the lives of the coaches and student athletes more efficient, easier and better through the design of the building,” said Barnum.
Outfitting a college campus with video displays for its sports programs goes far beyond the in-bowl displays found in stadiums and arenas. The high-resolution LED technology available today competes with the older LCD displays that can be found in more traditional locations on college campuses. With LED displays coming in a larger format than an LCD display, they’re starting to be placed in unique locations.

Daktronics, the world leader in large-screen video displays, also has a line of products that can be installed in any location on a college campus.

“LCD displays are available up to about 85 inches,” said Jay Parker, vice president of Daktronics, “but if you want to go to an 150- or 200-inch diagonal display, you’re going to want an LED display.” To make a large-scale display with LCD technology requires multiple screens with mullions separating the image. LED displays are seamless, without mullions to divide the screen and interfere with the image.

At five to seven years, the life span of LED displays is almost double what could be expected from LCD displays, which, with its extended usage on college campuses, can be just three years. Over the long term, this helps athletic departments save money. LED displays are now being used by collegiate sports programs everywhere from the weight room to the locker rooms, training tables, facility entrances, halls of fame, as a press backdrop and even in the practice facility.

“The unique placement of LED displays has a lot to do with recruiting efforts,” said Parker. “At the training table or in the weight room, it also gives entertainment value to student athletes. These displays can make workouts go by a lot more quickly.”

A major trend is the placement of LED displays in the entrances to an athletic department office or the football office, welcoming visitors, whether they’re donors, sponsors, alumni, student athletes, friends or family. One of the challenges with this location is the large amount of ambient light that typically comes through a multitude of windows. With LCD displays, on sunny days, it could be difficult to see the image. With LED displays, that’s no longer a problem as their improved brightness can compete with the sunlight, allowing the images on the screen to be seen.

In practice facilities, coaches can show replays of drills and plays in real time and visually give their players immediate feedback.

In the press conference area, the displays are serving as a backdrop with logos and images for the team’s sponsors. Trying to use LCD displays as a backdrop is a challenge as the slower refresh rate makes it difficult for photographers to take pictures. With the advanced technology in LED displays, that’s no longer an issue.

Daktronics’ LED displays can be found on college campuses across the country. The University of Oklahoma welcomes visitors with displays in the main lobby of the athletic department’s office. The University of Missouri does the same in their football offices. Oklahoma and Missouri also have displays in their weight room. Practice facility displays have been installed at Alabama, UCLA, Georgia, Missouri, Notre Dame and Oklahoma. UConn recently added a series of LED displays that complement the finished look of its Hall of Fame. The University of Minnesota has high-resolution displays on the outside of the athletic department that then moves inside, providing a welcoming and unique theme as people enter.

“The large-screen LED video displays are bigger than traditional LCD displays, deliver a cleaner, brighter image and have more impact on the audience,” said Parker.

Daktronics Outfits Collegiate Sports Departments with Its LED Displays

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NORTHERN STATE UNIVERSITY
Name of facility: Regional Sports Complex
Description: New football stadium and softball ballpark
Architect of record: Co-Op Architecture
Sports designer: DLR Group
Contractor: Quest Construction | McCownGordon Construction
Est. cost: $26 million
Start date: April 2020
Completion date: August 2021
Location: Sioux Falls, S.D.

UNIVERSITY OF OKLAHOMA
Description: Softball ballpark
Architect of record: Populous

UNIVERSITY OF TEXAS
Name of facility: Darrell K. Royal Texas Memorial Stadium
Description: South end zone and football training facility renovation
Architect of record: Populous
Contractor: Hersel Phelps
Est. cost: $175 million
Start date: Summer 2019
Completion date: August 2021
Location: Austin, Texas

TEXAS A&M UNIVERSITY
Description: Swimming and diving facility expansion
Architect of record: Populous
Completion date: Fall 2020
Location: College Station, Texas

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Topps Premium Seating has a plan to transform uncomfortable, tight bleacher sections at college stadiums across the country.

“We take under-sold and under-utilized stadium sections and deploy our full product line to convert them into a variety of premium seating experiences,” said Deron Nardo, president of Topps.

Using Topps’ diverse product line, a college can transform a very plain seating arrangement of bleachers into a multi-tier experience that generates higher revenues.

Topps lineup of breathable, AirFlow stadium seats includes bolted-on mesh Bleacher Seats, a new Slim-Line Row Seat for the narrow treads that exist in many college stadiums, Cool Comfort + Premium Row Seats with a High-Back option, Swivel Seats, Drink Railing and Topps Table Units. Each product creates a unique experience at a different price point, enhancing the fan experience.

“We’re not a seating vendor, we are a seating partner…a consultant,” said Nardo. “We analyze each college’s seating offerings and provide them with ideas to drive revenue. Our ultimate goal is to put products in stadiums that increase revenue for venue owners and create a better experience for the fans. We’re really a seating ROI consultant.”

Another key element of a Topps’ renovation is how colleges can rejuvenate a seating bowl without the need for a major demolition and construction project or the multi-hundred million-dollar price tag that comes with it.

“We can affect the fan experience without the school needing to spend big money that requires significant fundraising,” said Nardo. “Topps’ solutions come with the added benefit of downsizing the stadium’s seating capacity, a result many schools are seeking. By taking advantage of the company’s products, one of Topps’ clients was able to not only reduce their seating capacity by 10,000 seats, but also create a completely new seating product matrix to sell to fans.

“In many places, the optics at stadiums are terrible because there are entirely too many seats,” said Nardo. “There isn’t an infinite number of solutions to make venues more manageable from a size standpoint. We can rightsize a venue from a capacity standpoint while creating tiers of premium seating products. Otherwise, it’s just a concrete bowl with tightly packed bleachers…not exactly the most welcoming environment.”

Topps’ early successes came in MiLB, MLB and with the PGA Tour, but the company has identified the multi-venue college campus as the next great opportunity.
One of the current market trends in collegiate athletics is the placement of student athletes and fans at the core of the business and the emphasis from universities on serving those core customers.

For student athletes, colleges are striving to serve their academic needs, focusing on career development, keeping them healthy through injury prevention and sports medicine, and providing social interactions through locker rooms, lounges and other spaces that help recruit top student athletes.

“We’re seeing quite a bit of work in the football operations realm,” said Travis Noble, the collegiate sports market leader at Mortenson. “It’s an arms race. Colleges are trying to boost their ability to recruit the top athletes by enhancing the student athlete experience.”

Colleges are often challenged with finding the funding to accomplish all of their goals, forcing them to make difficult choices and establish funding priorities. Through its data analytics group, Mortenson keeps a database of the nation’s leading collegiate programs in terms of the kinds of spaces, programs and type of work, along with where they’re making improvements or expansions that address student athletes’ needs. With this data, Mortenson can create benchmarks that help their customers invest their funds in projects that will have the most impact.

On a macro level, Mortenson helps colleges target their spending on improvements for the student athlete or fan experience. On the micro level, the company keeps track of specific programs, such as sports medicine, strength training and recruiting areas like the locker rooms and lounges.

“Using this information, we can help colleges maximize their spend to get the greatest return on their investment,” said Noble. “We see this predominantly with football programs, but it’s also used for other programs. Mortenson also helps colleges create additional revenue generation opportunities through the development of premium spaces in under utilized areas. For one client, Mortenson constructed a bunker club in the stadium’s end zone, using the space beneath the seating bowl to create a fluid and social environment for fans to gather before the game and during halftime. “This becomes an add-on sale for the university where it can be included in some packages, but could also be used to upgrade other packages,” said Noble. Using technology created to improve the construction process, Mortenson has developed a virtual environment or panoramic 360-degree video for fans and potential sponsors and donors to get the look and feel of a facility that’s under design and construction. It gives these audiences a sense of the size and scale of the project and the finishes used and can help them determine where and how they want to contribute to the project. This can lead to larger donations and earlier ticket sales.

Another trend Mortenson is noticing is a move to smaller, more sports-specific venues with sight lines that are appropriate for the size of the playing surface. Hockey-only facilities provide a prime example. The sight lines for basketball, with its smaller court, are vastly different than for hockey, with its larger rink and the glass separating the seating bowl. A basketball arena may be designed for 15,000-18,000 seats, whereas collegiate hockey is moving to a closer, more intimate setting that may only include 6,000-8,000 seats.

“We keep the customers long-term vision at the forefront of what we do,” said Noble. “We’re helping them make decisions to improve the student athlete and fan experience, while also improving their business strategy.”
Las Vegas is a Hot Spot for Collegiate Sports

The Sports and Entertainment Capital of the World, Las Vegas is home to the University of Nevada, Las Vegas (UNLV), a member of the Mountain West Conference. In addition to hosting home games for the Runnin’ Rebels, the destination annually hosts college football’s Las Vegas Bowl, which, beginning in 2020, will feature a team from the Pac-12 Conference facing off against a team from either the Big Ten Conference or Southeastern Conference. The city also hosts basketball championships for the Pac-12, Mountain West, West Coast, and Western Athletic conferences.

“Las Vegas has something for everyone and the city itself is part of the overall sports experience,” said Desiree Reed-Francois, UNLV’s athletic director. “We have 150,000 hotel rooms, venues of every size, an incredible airport and 294 days of sun. In Las Vegas, we know the galvanizing power of intercollegiate sports and we have all the attributes of success.”

Las Vegas’ world-class facilities include UNLV’s 18,000-seat Thomas & Mack Center, home of the Runnin’ Rebels men’s basketball team, along with the city’s 20,000-seat T-Mobile Arena (home to the NHL’s Vegas Golden Knights) and the 10,000-seat Las Vegas Ballpark (home to the AAA Las Vegas Aviators). Additionally, the $2 billion Allegiant Stadium is the future home of the NFL’s Raiders and UNLV football, upon its opening in 2020. “What’s unique about Las Vegas is our service ethos,” said Reed-Francois. “If we don’t have the space, we’ll build the space.”

UNLV has the nation’s top-ranked Hospitality College, and the university’s graduates help keep the city’s tradition of excellent customer service alive. “We take great pride in the customer service we provide,” said Reed-Francois. “Hospitality is part of our DNA.”

To take advantage of the myriad of entertainment options in the city, UNLV works with a variety of corporate partners to put together fan entertainment packages. “We want to make sure we’re meeting the needs of our customers,” said Reed-Francois.

Visiting teams are impressed with the overall atmosphere of customer service and hospitality in Las Vegas. “We’ve proven we can support college events,” said Reed-Francois. “Putting on a great sporting event is about people and that’s where our town excels. We’re creating spaces and places for people to mix and mingle and network. We offer a range of packages, from the all-you-can-eat family plan to corporate VIP options and student-friendly competitions that will nurture your social media community or impress your clients.”

In May of this year, the NCAA rescinded its policy that prevented its national championships from being held in states that allow sports betting. Now that the ban has been lifted, UNLV is working with the city, the Las Vegas Convention and Visitors Authority and its corporate partners to bid on NCAA championships. “We’re going to be aggressive,” said Reed-Francois. “We want to make sure every opportunity is explored. We know what our great city has to offer and we want to share that with the rest of the country and be competitive in this space. We’re really enthused about the opportunity to host championships. Our student athletes now have the opportunity to play a championship event in their own backyard.

“UNLV and Las Vegas can provide a unique sports experience,” said Reed-Francois. “What makes a great sporting event are the memories and there’s no better place to create memories than Las Vegas.”

Las Vegas Is a Hot Spot for Collegiate Sports

The city of Las Vegas annually hosts the Las Vegas Bowl. In 2018, the Mountain West’s Fresno State Bulldogs beat the Pac-12’s Arizona State Sun Devils, 31-10.

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