

# Fan Experience Attains New Heights at Ukrainian Venue



## Arena Lviv helps ensure successful UEFA Euro 2012 with first deployment of Video Surveillance Manager

### EXECUTIVE SUMMARY

**Customer Name:** Arena Lviv Stadium

**Industry:** Sports and Entertainment

**Location:** Ukraine

**Number of Employees:** 50

#### Challenge

- Meet rigorous stadium requirements demanded by international sports governing body
- Help ensure comfort and safety of visitors and transform fan experience

#### Solution

- Cisco Connected Stadium with data, voice, video, safety and security, digital signage, point-of-sale, and building management on single IP platform
- Cisco Video Surveillance Manager providing secure, policy-based access to live and recorded video
- Cisco MXE 3000 Series Media Experience Engine, making video content available in any format for use throughout stadium

#### Results

- Greater protection of people and assets, quickly and easily, from centralized location
- Wide acclaim for secure and expert management of capacity crowds at Euro 2012
- Simple integration with third-party video analytics applications

### Challenge

After winning a closely-fought international bidding contest for the Euro 2012 football championship, co-hosts Poland and Ukraine faced significant challenges in bringing their infrastructures up to standard. During the five years between their selection and the competition's kick-off, both countries had to work hard to help ensure their facilities would comply fully with the standards demanded by UEFA.

It was the first time that either country had hosted a major soccer championship, and the event was seen in Ukraine as a prime opportunity to promote the country. Each nation needed four high-quality stadiums to meet bid obligations, with minimum capacities defined by the various competition stages. With antiquated arenas, deemed inadequate for a contest that would be watched globally on TV and online by millions, Ukraine opted to build two brand-new stadiums: one publicly financed at Lviv; the other developed privately at Donetsk.

Oleksiy Zhukovin, general manager at Arena Lviv, says: "In Lviv we already had two sports venues, so a greenfield site five miles from the city center was chosen. This would afford ongoing economic stimulus while providing a new model for self-sustaining sports and entertainment facilities." That was a key objective for the state body, Derzhinvestproekt, which commissioned the new facility.

The vision for Arena Lviv Stadium was to create an ultra-modern venue capable of accommodating a large media presence. With the world's attention on Euro 2012, security of people and assets was especially important. Needing to protect a vast area (incorporating seating for 35,000 spectators, 450 VIP boxes, concert halls, clubs and restaurants, and extensive underground car parking) the stadium management team was keen to find an end-to-end solution.

"One of the main reasons we chose to work with Cisco was the fact that physical security systems were an intrinsic element of its overall approach, and took advantage of the underlying Cisco Borderless Network architecture," says Zhukovin.

The physical security solution is part of a wider Cisco® Connected Stadium vision. This holistic approach provides sports and entertainment venues with a robust business model that delivers enhanced experiences, generates new revenue opportunities, and streamlines day-to-day operations.



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Oleksiy Zhukovin  
General Manager  
Arena Lviv Stadium

### Solution

To realize this vision, Lviv became the first stadium in the world to deploy Cisco Video Surveillance Manager (VSM). This comprehensive software suite helps enable easy management of video systems and the retrieval of live or recorded video anywhere, anytime via a web browser interface on a variety of clients. “We liked the way VSM fully optimizes intelligence in our underlying Cisco routers and switches, transforming stadium security with rich functionality that’s simply not possible using traditional analog systems,” says Zhukovin.

These new features include the ability to:

- Manage expanding video systems in terms of number of cameras, storage, multiple remote locations, and bandwidth constraints
- Securely provide access to various users, from any location, to enhance collaboration
- Support various vendor devices (cameras, encoders, access control systems, and so on) and applications (command and control, video analytics, and more)
- Integrate video with other networked applications

To further enhance its video capabilities, Lviv added the Cisco MXE 3000 Series Media Experience Engine, a media transformation appliance that makes video content available in any format, on any device.

Cisco Digital Media Players as well as Cisco LCD Professional Series Displays are placed throughout the stadium and are intended for displaying HD live and on-demand video, graphics, web-pages, and so on. Managing, scheduling and publishing of media content is performed by Cisco Digital Media Manager. Cisco Show and Share makes it possible to create video communities and share media information.

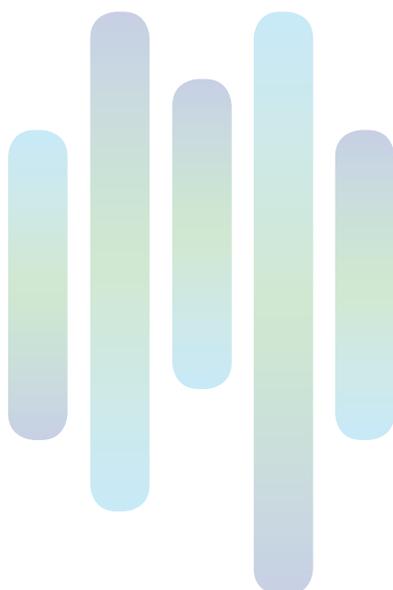
Mobility is another key design feature. A Cisco Unified Wireless Network, based on the latest 802.11n Wi-Fi standard, provides reliable coverage for mobile devices with over 160 access points. Zhukovin says: “Our Cisco wireless network allows staff to quickly exchange information and receive reports on the operation of the stadium’s systems. It also makes a positive contribution to income by encouraging fans to arrive earlier and use our bars, cafes and restaurants.”

The wireless LAN also provides a platform to deliver new and interactive experiences for spectators via laptops, mobile phones, and tablets. This content could include advance arrival instructions, video footage and playbacks, pre-match message boards, gaming, statistics, or online sales channels such as ticket sales and merchandising.

By adding Cisco Unified Communications, the venue benefits from potential call savings from Cisco Unified IP Phones (models 6941, 7942, 7965 and 7975) and flexible communication options that can be used, for example, to allocate work schedules. As well as deploying click-to-call features on PCs, the stadium has introduced session initiation protocol clients on mobile phones, allowing calls to be routed cost effectively via the Cisco Wireless LAN. A Cisco Unified Contact Center, equipped with the Cisco Unified Workspace tool, supports 30 agents and provides fans with highly efficient reception and ticket office services.

### Results

Euro 2012 finished up breaking records both for aggregate and average stadium attendances. The figures were an impressive 1,440,896 and 46,491 respectively. Capacity crowds of 33,000 attended all three of the Group B matches played at Arena Lviv, involving teams from Denmark, Germany, and Portugal, while the fan-zone in Lviv city center notched up an aggregate attendance of 465,000 people over the course of the contest. With a capacity of 27,000, the fan-zone recorded a throughput of 100,000 fans on a single day.



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General Manager  
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The investment in Cisco VSM rapidly paid back at the Euro 2012 Football Championship. For example, by helping enable integration of the stadium’s surveillance system with its central management suite, the solution helped avoid an over-intrusive police presence at matches. It also maximized the utilization and effectiveness of 222 Cisco Video Surveillance IP Cameras deployed outside the ground and another 51 inside. These video endpoints provide round-the-clock surveillance with six workstations for monitoring video feeds located in the main control room, each of which can access content from any surveillance camera.

“Cisco Video Surveillance Manager is a big advantage,” says Zhukovin. “It means we can closely control the number of people entering the stadium, react to any situation, and avoid problems. At the second Euro 2012 match, for example, about 10,000 people had not arrived with 30 minutes to go before kickoff. We were able to eliminate potential flash points caused by congestion, and direct fans safely and quickly to other turnstiles.”

In addition, the stadium used its wireless network to deploy a cashless payment system to reduce queuing at electronic point-of-sale terminals and so maximize turnover. Automated ticket sales allowed spectator access to permitted areas. At Euro 2012, ticket sales were handled directly by UEFA, and its ticket codes were integrated with the stadium’s installed ticket recognition software. All fast-food outlets, bars, and restaurants at the stadium used wireless-connected automated catering systems to improve quality of customer service.

Post-competition, rapid strides have been made in adapting the stadium. Zhukovin says: “Thanks to Cisco, we can hold large-scale spectacles such as football games, concerts, and parties along with regular events like conferences, corporate events, photo sessions, and tours. Additional ideas like a go-kart club and new car test drives have also been made possible. We are creating a new local sports infrastructure, too, which will include a table tennis club, mini-football pitches, basketball courts, a shooting range, and a gym.”

Business expansion has boosted interest from advertisers. The stadium’s business plan anticipates an initial 50 percent of revenues from regular events, and 25 percent apiece from large-scale and additional events. Arena Lviv is currently in talks with local football team FC Karpaty as a possible new home venue.

### Next Steps

The stadium is looking at ways to leverage its Cisco VSM investment and improve security further still. One idea under consideration is integrating VSM with video analytics applications and surveillance feed analysis programs, a move that could be easily achieved without having to make expensive complete equipment upgrades in technology or infrastructure.

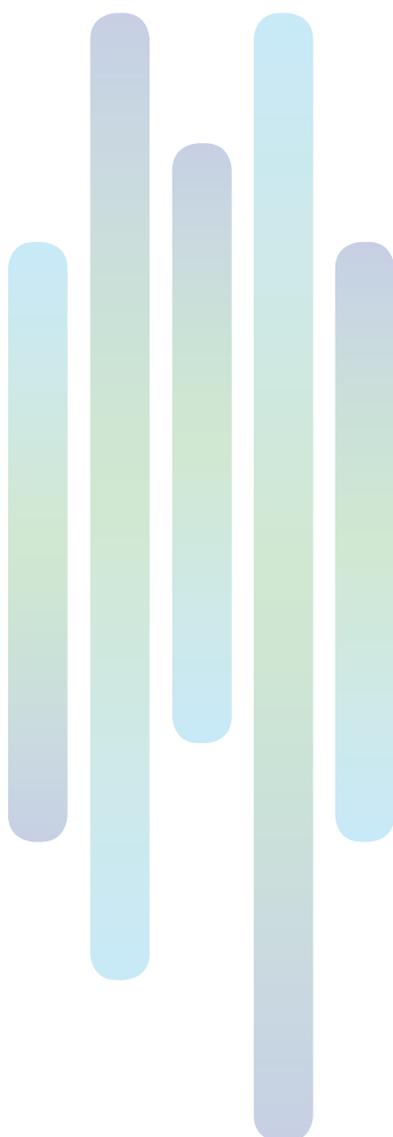
### For More Information

To learn more about Cisco Physical Security solutions, go to [www.cisco.com/go/physec](http://www.cisco.com/go/physec)

For further information on Cisco Connected Stadium, go to: [www.cisco.com/web/strategy/sports/connected\\_stadium.html](http://www.cisco.com/web/strategy/sports/connected_stadium.html)

For further information on Cisco Borderless Networks, go to: [www.cisco.com/go/borderless](http://www.cisco.com/go/borderless)

For further information on Cisco Collaboration, go to: [www.cisco.com/go/collaboration](http://www.cisco.com/go/collaboration)



## Product List

### Physical Security

- Cisco Video Surveillance Manager
- Cisco Video Surveillance IP Cameras

### Video

- Cisco MXE 3000 Series Media Experience Engine
- Cisco Digital Media Manager
- Cisco Show and Share
- Cisco Digital Media Players
- Cisco LCD Professional Series Displays

### Routing and Switching

- Cisco Catalyst 6509, 4506, 4948, 3560 and 3750 Series Switches
- Cisco Nexus 5010 and 2248 Series Switches
- Cisco ASR 1002 Routers
- Cisco Intrusion Prevention System 4270 and 4260
- Cisco ASA 5500 Adaptive Security Appliance
- Cisco Security Monitoring, Analysis and Response System
- Cisco Secure Access Control Server 1121

### Unified Communications

- Cisco Unified Communications Manager
- Cisco Unified IP Phones 6941, 7942, 7965, and 7975
- Cisco Unified Contact Center Express
- Cisco Unified Workspace

### Wireless

- Cisco Unified Wireless Network
- Cisco Aironet 3502 Access Points
- Cisco Aironet 1522 Outdoor Mesh Access Points
- Cisco Wireless Control System Standard
- Cisco 3310 Mobility Services Engine



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