

# Case Study.

## CAE delivers a ground breaking solution for the Millennium Stadium - Transforming the fan experience for the next decade

In June 1999 the sporting landscape of the United Kingdom was transformed with the opening of the Millennium Stadium in Cardiff. Having already demonstrated exceptional vision by building the only British stadium with a retractable roof, the Stadium, with support from the Welsh Rugby Union and Welsh Assembly, were ready to transform live sports entertainment. Deploying a multimedia solution using technology never before seen in Europe, CAE has set the foundation to work with the Stadium on a fan experience that is unparalleled.

### Key Facts

- Opened in June 1999
- Capacity for 74,500 spectators
- Average of 1.3 million visitors per year
- 124 suites and 7 lounges
- 27 liquor outlets, 23 food outlets and 13 merchandise outlets
- Home of Welsh rugby
- Host to some of the World's leading sporting and entertainment events
- 2012 Olympic venue

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# Millennium Stadium

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### The Challenge

The Millennium Stadium is truly iconic and has an established pedigree in being able to host logistically demanding events within an innovative building. Over the first decade of operation the desire to deliver the best possible fan experience has not been diminished and the link is clearly established between this and the commercial success that is vital to the Welsh economy.

Recognising the advances that had been made in technology and the potential for IT to transform businesses, a project was initiated that encompassed the core network, media displays and audio visual delivery capability.

The goal was to establish a partnership, underpinned by a technology solution, which delivered an immediate Wow factor for the fans and a platform for future growth and innovation.

Attracting the best events is an extremely competitive market and when considered in conjunction with the toughest economic climate in decades, Return on Investment had to be demonstrable, with a proper understanding of the impact the solution would have on wider society and the environment.

The project had to be delivered with minimum disruption to the ongoing operation of the Stadium resulting in tight deadlines for each stage of completion and the requirement to build up an intimate knowledge of the building and workings of an event.

The final piece was to be able to demonstrate a commitment to last 10 years, which would provide both operational excellence and industry leading technical ability.

Alex Luff from the Stadium revealed, "CAE showed an unmatched ability to understand our business model and translate it into a solution that was exciting and made clear financial sense".

### The Solution

This is a project on a large scale and every component is vital to the overall experience.

**Establishing the Goals:** Irrespective of how good technology is purported to be, it will deliver nothing if it is not directly tied to the goals of a business. For any media experience content is key and the technology serves as a delivery mechanism that has to maximise its effectiveness.

At project initiation, and throughout all other phases of the project, the focus was always on what content would be valuable and how screens would be best positioned for the fans. Using demonstrations, mock-ups, full site surveys, customer experience videos and practical knowledge a full understanding was gained and utilised in the delivery stages.

### Key Objectives

- To provide the most compelling match experience for the fan
- Demonstrate a tangible commercial impact
- Highlight opportunities for sponsors and event organisers
- Be operationally and environmentally cost effective
- Deliver a technology Wow factor
- Be a catalyst for immediate and future transformation

### Services Delivered

- Design and scope
- Strategic consultancy
- Project management
- Site survey
- Cabling (data and power)
- Physical installation and mounting
- Documentation
- Maintenance
- Event support

**Managing the Project:** The full solution was brought together from many different suppliers and had to meet strict deadlines dictated by the Stadium's calendar of events. CAE's overall project management was vital in being able to plan against critical milestones and factoring in the unique risks of operating in a stadium environment.

Such expertise in management meant that components were delivered seamlessly and with no disruption to the ongoing operation of the Stadium. Every sign off point was clearly defined and allowed those supervising the project to be assured by each major milestone.

**The Underpinning Platform:** A fully resilient, scalable, reliable and secure network was deployed to manage the sheer volume of information required by a rich media experience. Based on a Cisco core design this part of solution may not be considered glamorous in the overall scheme, but the CAE design was paramount in being able to underpin the success of all other areas of technical deployment.

**Implementation Logistics:** Three constituent parts made up the major part of the implementation with each necessitating a different set of skills.

Part of the project was the deployment of two replacement jumbo screens. Delivering a high definition experience the screens are leading edge and impressive in scale. Following a detailed specification the old screens had to be lowered then the new screens assembled and hoisted to a specially prepared gantry supported by the stadium roof.

A completely new media fibre, data and power cabling infrastructure was required. A total of over 75,000 metres of cable was laid within the stadium covering all corners and screen positions. This was integrated into the existing infrastructure without compromising the exacting standards already on display at the Stadium.

The final component of the installation was a total of 400 large format LCD screens and accompanying media players mounted in the stands, concourses, concession areas and hospitality areas of the stadium. Every installation was carefully mapped on to the stadium schematic and then precisely positioned on installation.

Every screen posed a different challenge and included bespoke brackets that would provide adequate support and an aesthetically pleasing finish.

**Technical Firsts:** The technology Wow factor is delivered by the first European deployment of Cisco StadiumVision coupled with a uniquely designed studio.

The complete solution provides:

- Full HD Studio able to deal with latest OB and internal HD feeds
- 4 High Definition Cameras
- 2 independent live streaming in house video channels
- 5 external video channels
- Full suite including editing, graphic interlace and action replay capabilities
- Full granular day parting and zone control over all media displays

This required rapid understanding of an emerging technology and the ability to demonstrate functionality to all stakeholders in the Stadium so that the opportunity of the content strategy would be maximised.

**A Decade of Support:** Following the implementation CAE is responsible for working in partnership with the Stadium to deliver a truly outstanding event day experience including ongoing support of the content strategy, management of the studio environment and successful operation of the complete system.

This is a trusted relationship that is capable of dealing with high pressure and is consistently thinking of new ways to reap the benefits of the solution.

## Technology Deployed:

- Cisco LAN
- Cisco StadiumVision
- 400 LCD screens (40" and 52")
- 400 Cisco Digital Media Players
- Bespoke brackets
- 2 x 109.3 square metre Led jumbo screens
- HD compatible television studio with cameras and editing

## Benefits:

- Complete Stadium coverage
- Fully tailored and customisable media content
- Unique fan experience keeping people in the stadium leading to increased spend
- Increased sales from content available to advertisers and event organisers
- Enhanced reputation as a leading event venue in the United Kingdom and Europe
- Transformation platform from future growth
- Clear return on investment
- Operational and environmental efficiency

## CAE Technology Services

CAE is a leading IT value added reseller offering a unique combination of solutions and services in all core infrastructure areas, including networking, data centre, virtualisation and client. Recognised by industry awards and as one of the best companies to work for by the Sunday Times, CAE has a demonstrable track record of technical excellence and outstanding customer service.

## It works

For the first time outside of the USA a stadium is equipped with a solution that will engage fans attending an event by transforming the experience they have and adding measurable value to the commercial proposition of a stadium through media.

However, this is only the beginning and the next phases of development are already underway to build on an outstanding platform.

CAE's Managing Director praised the project, "To be able to work with the vision and enthusiasm of the Millennium Stadium has been an absolute delight and CAE is thrilled to have established a partnership through IT that can enhance their standing as a leading venue in the World."

The Group Chief Executive of the WRU, Roger Lewis commented, "The system in the Millennium Stadium will be the envy of venues not only across Europe but across the sporting world. We have gone to the best technology providers in the marketplace and the results we will achieve are truly amazing. I am delighted with the support and expert guidance we have received from CAE."

First Minister of Wales, Carwyn Jones said, "Making sure the stadium retains its deserved iconic status as one of the finest major event venues in the world by providing an unparalleled spectator experience is an endeavour the Welsh Assembly Government is delighted to support. This puts us in a great position to take advantage of the Olympic opportunity in 2012. The Stadium attracted more than 1 million paying spectators last year and makes an important contribution to the Welsh economy as well as making a positive impact on the recognition and reputation of Wales around the World."

Our knowledge. Your business.

**It works.**