



## Customer

Royal Belgian  
Football Association  
(RBFA)

## Location

Tubize, Belgium

# Replay Centre and Training Hub at RBFA Headquarters

## Overview

The Royal Belgian Football Association required a bespoke Video Assistant Referee (VAR) solution that could be operated by semi-professional referees and assist their match officials in reviewing video footage to correct clear and obvious errors during Belgian Pro League matches.

It also had to be certified by FIFA's Quality Programme for Video Assistant Refereeing (VAR) technology. Ease of use was vital so that referees could operate it for themselves. The system had to be future proofed so that it could easily encompass more cameras and support new revenue streams.

## Solution at a Glance

- ▶ Purpose built VAR replay centre and training hub within the RBFA headquarters acts as a showpiece for Belgian refereeing excellence
- ▶ Provides VAR support for all 280+ matches in the Belgian Pro League schedule
- ▶ Semi-professional referees are responsible for operating the VAR system
- ▶ VAR system output and camera recording the VAR team within the VOR are shared to the host broadcaster, providing fans at home a behind the scenes look at VAR reviews
- ▶ Evertz MAGNUM Scheduler orchestrates automatic setup and routing for each VAR booth based on match day schedule
- ▶ DreamCatcher™ Content Management nodes create growing files of all angles for the duration of every match
- ▶ 5 DreamCatcher VAR Capture nodes permit the recording of 80 HD-SDI signals at once





## Solution at a Glance

- ▶ 5 DreamCatcher VAR Payout nodes generate a tailored VAR user interface providing simultaneous support for 5 matches, each in their own dedicated VAR booth
- ▶ Each VAR booth contains positions for 3 VAR team members (Replay Operator, VAR and AVAR) as well as 8 monitors for watching video feeds from the match and operating the VAR server.
- ▶ High speed fiber connectivity between each Pro League team stadium and Tubize provides contribution for the incoming video feeds required for VARs to review as well as the return signals to the host broadcaster and pitchside Referee Review Area (RRA) used during on-field reviews.
- ▶ Evertz 10G networking backbone provides a completely scalable solution, allowing additional DreamCatcher servers to be easily connected and create a larger cluster as camera and match counts increase
- ▶ Easy training clip import right from the network attached storage within the training centre.user interface providing simultaneous support for 5 matches, each in their own dedicated VAR booth

## Customer: Royal Belgian Football Association (RBFA)

The Royal Belgian Football Association was founded in 1895 and is the official representative of Belgian football, with a mission to administrate and organise Belgian football. In 1904, RBFA became a founding member of FIFA, the international governing body of association football, and followed this in 1954 by becoming a founding member of UEFA, the Union of European Football Associations.

Initially based in Brussels, RBFA is currently housed in a purpose built facility in Tubize, which opened in 2021. This eco-friendly headquarters has athletic facilities, auditoriums, an e-sports room, offices to house RBFA's 230-plus employees and a state-of-the-art referee training centre that aims to get the best out of the nation's referees so they may excel on a global stage.

When RBFA was designing its new Proximus Basecamp in Tubize, it wanted to include a dedicated VAR replay and referee training centre capable of modernising Belgian professional football.

# The History of the Project

The Video Assistant Referee (VAR) technology was first introduced to professional football as a means of correcting 'clear and obvious errors' and 'serious missed incidents'. In 2016, the International Football Association Board (IFAB) agreed that the technology should be properly explored and amended its Laws of the Game so that trials could be conducted.

The Royal Belgian Football Association was one of the first domestic football leagues to take part in these trials, initially running offline tests using the Evertz DreamCatcher™ VAR platform.

The DreamCatcher™ solution, which is certified by FIFA's Quality Programme for Video Assistant Refereeing (VAR) Technology until 2027, acts as an extension of the referee, providing VAR teams with an advanced platform that assists them in making a definitive decision in the shortest possible time. VAR Replay Operators can quickly zoom, rewind and adjust the playback speed of video on all broadcast cameras while remaining frame accurate to ensure the correct outcome is taken. Whenever a VAR decision is required, every single broadcast camera, VAR server output and VOR camera is recorded, and this material is then moved to offline archive storage.

Alongside its renowned ease of use, reliability and stability, DreamCatcher™ VAR was chosen because it is the only technology on the market that allows referees to manage the system themselves, without the need for an

industry trained operator with extensive prior knowledge of slow-motion replay systems. By training referees from lower divisions and amateur leagues to act as Replay Operators for VARs, RBFA can tap into the real-world experience of people who truly understand the game, thus making the whole VAR process smoother, faster and more accurate.

"Having referees as operators has many benefits," says Stephanie Forde, Operations Director for RBFA's Professional Refereeing Department. "Their refereeing skills allow them to watch the game differently and be more confident about the decisions they make. If something is being queried, they immediately know what camera angles to check and what to look for, which speeds up the decision-making process. Also, it is much easier to trust someone who has real refereeing experience earned from time spent on the pitch."

The success of the offline trial led to online VAR testing during the 2017-2018 Belgian Pro League season. To facilitate this, RBFA entered a technology partnership with Evertz and Studiotech Belgium (STB) so that a fleet of vans - mobile Video Operation Rooms (VOR) - could be created, each equipped with an Evertz DreamCatcher™ VAR. Initially one VOR was built, but this was soon joined by three more so that VAR could be used at every league match. By the time they were decommissioned in 2021, these versatile mobile units had provided VAR for 900 matches in the Belgian Pro League.



# The Challenge

When RBFA was designing its new Tubize Basecamp, it wanted to include a dedicated VAR replay and referee training centre capable of modernising Belgian professional football.

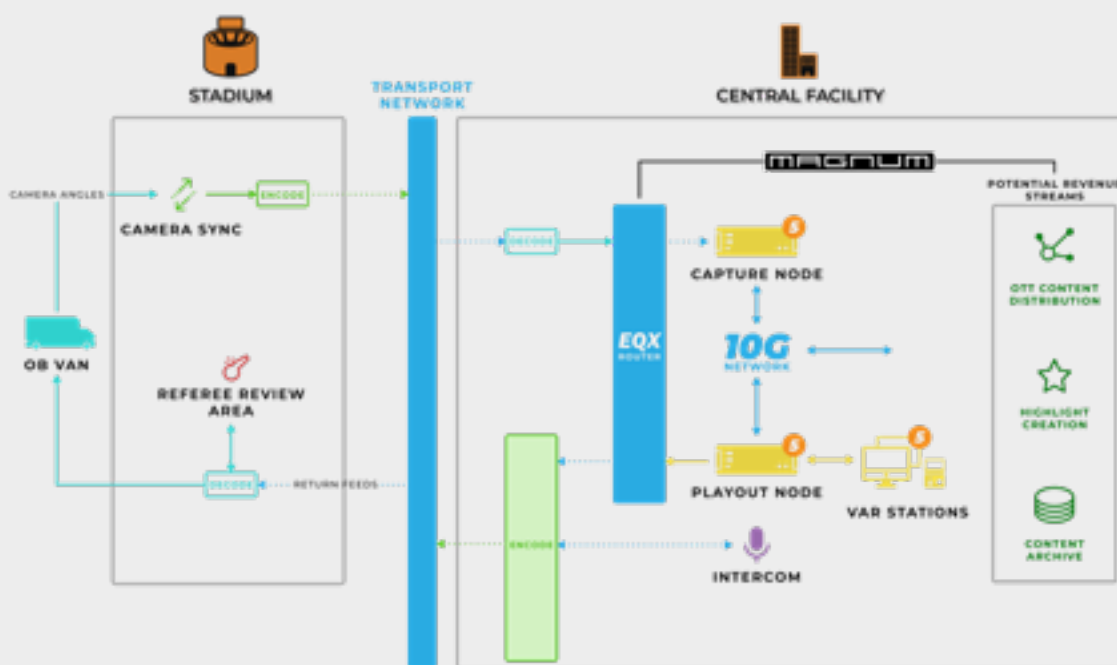
The makeup of the personnel within the VAR team places an emphasis on efficient and innovative training delivery. The new Replay Centre needed to provide a central meeting point where VAR team members could be trained on VAR technology and protocols in a communal, group-oriented approach. Incorporating multiple booths so that everyone could be in one place and training at the same time was imperative, as was access to a system that automatically stores a file of all camera angles from each live match in both native and transcoded formats to create a

database of clips for training and education. The creation of this database was a requirement so that the next generation of Video Assistant Referees could learn from real life examples.

RBFA also wanted its VAR technology centralised at Tubize so that it could reduce its reliance on mobile VORs. Driving vans to different stadia every weekend was risky because traffic jams or accidents could easily prevent them arriving in time to do their job. In addition, each van was using fuel – as were the VAR teams travelling to training and match assignments. Thanks to the reasonably central location of Tubize, RBFA felt it could significantly reduce its carbon footprint if it centralised all VAR technology and staff in one place.

“Our previous experience with Evertz and Studiotech Belgium clearly showed that both companies were capable of delivering everything we were asking for, particularly in terms of hardware and software that could be controlled and operated by amateur referees,” says Dieter De Naeyer, VAR Project Manager. “Also, Evertz offered exceptional support that we were very happy with. We felt Evertz wanted to grow with us as they were willing to implement our ideas and suggestions to improve their product”

## SYSTEM OVERVIEW



# The Solution

To satisfy RBFA's needs, Evertz and STB have installed a comprehensive technological solution that incorporates 12 interconnected cluster of Evertz DreamCatcher™ VARs for capture and playout; a flagship Evertz EQX routing solution, and an Evertz MAGNUM-OS control, orchestration, monitoring and analytics system that allocates resources throughout the facility and allows staff to organize signals, systems and operator stations for each game or training session. Other Evertz products used in the facility includes modular video conversion equipment, timing and camera synchronization tools.

All 16 of the top-flight stadiums that hold Belgian Pro League matches are connected to Tubize Basecamp over a dedicated high speed fibre network, which facilitates the transport of camera angles from the football pitch to the centralized VAR hub. Each host stadium delivers between five and 15 camera feeds, which arrive as HD-SDI baseband signals and are distributed around the VAR centre by the EQX router. The router also disperses the signals to the DreamCatcher™ cluster for record. Once a VAR decision has been reached, the VAR server output, offside line server output and privacy logo slate are returned to the stadium hosting the match via the transport network for display on the pitch side referee review area RRA, which allows the on-field referee to visualise footage of the incident should an on-field review be required.

Inside the VAR centre there are five booths permitting a maximum of five concurrent matches to benefit from VAR assistance. Each booth can be assigned to a scheduled match, or used as a hot-swappable backup if the room is not operating at full capacity. On occasions where multiple games are played in one day, this centralisation of VAR technology makes for much greater efficiency as the same equipment can be used for consecutive matches rather than being tied to one game, which was the situation

before when RBFA was relying on mobile VORs. In addition, personnel costs are also reduced because VAR teams no longer need to be physically at a stadium so can therefore cover multiple games in a day.

The five review booths are each equipped with eight monitors displaying a selection of inputs for monitoring and the DreamCatcher™ VAR user interface, which permits visualization and control of all camera angles from the match. The MAGNUM-OS scheduler application is the overarching orchestrator of resources throughout the facility and provides the ability to organize signals, systems and operator stations into games.

The centre also has an engineering/supervisor station so that tech support has a central command post. This also allows a VAR manager and senior officials to watch all matches and VAR teams to judge how they are performing during games and training sessions.

The reduction in equipment wear and tear is also noticeable as the DreamCatcher™ VAR systems are no longer being moved around the country in a van. Having a centralised location for all its VAR technology also means that RBFA has the flexibility to cover any match, regardless of the number of cameras involved, because VAR resources can be allocated to create the most efficient workflows.

Moving VAR operators into the new HQ has reinforced the importance of referee development to RBFA's strategy. As a federation that is at the forefront of innovation, the RBFA is already planning to expand the scope of the Evertz solution to include an additional VAR booth for a sixth concurrent game, an easy-to-use simulator system for independent VAR team training and an in-house production station to generate OTT content monetization. These changes will utilize the existing resources already available for the current VAR solution.

